

**Safety Regulation Group** 

## **CAP 661**

## **Mandatory Permit Directives**

For Aircraft Operating on a Permit to Fly

www.caa.co.uk

#### **Safety Regulation Group**

## **CAP 661**

## **Mandatory Permit Directives**

For Aircraft Operating on a Permit to Fly

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ISBN 978 0 11792 643 1

First published December 1995 Reprinted January 2012 (incorporating revisions to date)

CAP 661 is frozen at this amendment. Please see www.caa.co.uk/MPDS for MPDs after this date.

Enquiries regarding the content of this publication should be addressed to:
Airworthiness Strategy and Policy Department, Safety Regulation Group, Civil Aviation Authority,
Aviation House, Gatwick Airport South, West Sussex, RH6 0YR.

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Published by TSO (The Stationery Office) on behalf of the UK Civil Aviation Authority.

Printed copy available from:

TSO, PO Box 29, Norwich NR3 1GN Telephone orders/General enquiries: 0844 477 7300

Fax orders: 0870 600 5533

www.tso.co.uk/bookshop E-mail: caa@tso.co.uk Textphone: 0870 240 3701



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#### **FOREWORD**

January 2012

#### MANDATORY PERMIT DIRECTIVES

#### **FOREWORD**

Mandatory Permit Directives (MPDs) are published by the Civil Aviation Authority in accordance with British Civil Airworthiness Requirements (BCAR) Chapter A5-8. They summarise the mandatory actions that are required to be complied with by UK Owners and Operators of Permit to Fly aircraft.

Owners and Operators must ensure that aircraft operating on Permits to Fly comply with Modifications, Inspections and Service Bulletins that have been classified Mandatory by the CAA. These MPDs have been compiled from publications such as CAP 476 – Mandatory Aircraft Modifications and Inspections Summary, Type Acceptance Data Sheets, Type Approval Data Sheets, Airworthiness Approval Notes, Manufacturers Service Bulletins and Letters to Owners/Operators.

The design standard of a microlight is defined in either a Type Acceptance Data Sheet for microlights meeting the intent of BCAR Section S or Type Approval Data Sheet for a microlight constructed by a CAA Approved Organisation. The MPDs for type accepted microlights make reference to the Type Acceptance Data Sheet whereas for type approved microlights the specific subject matter is listed.

Enquires regarding MPDs should be made to the United Kingdom Civil Aviation Authority, AD Unit, Airworthiness Strategy and Policy Department, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR. Phone: +44 (0)1293 573150/3238 Fax: +44 (0)1293 573993 Email: ad.unit@caa.co.uk.

This is the last Amendment to CAP 661, the publication is now frozen and will be available for reference purposes only at <a href="https://www.caa.co.uk/CAP661">www.caa.co.uk/CAP661</a>.

Future MPDs will be available to view and download at <a href="http://www.caa.co.uk/MPDS">http://www.caa.co.uk/MPDS</a> and individual MPDs will continue to be sent out via the CAA Publications Notification Service to all subscribers of Safety Critical Information.

As the Alphabetical Index and Numerical Index in CAP 661 will be frozen, a separate Alphabetical Index will be available at <a href="http://www.caa.co.uk/MPDS">http://www.caa.co.uk/MPDS</a>, which will be updated every time a new MPD is published.

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#### 2012/1

Issue Date: January 2012

#### MANDATORY PERMIT DIRECTIVES

#### **REVISION TRANSMITTAL SHEET ISSUE NO 2012/1 DATED JANUARY 2012**

The following replacement pages are enclosed:

Alphabetical Index dated January 2012 replacing Alphabetical Index dated July 2011.

Numerical Index dated January 2012 replacing Numerical Index dated July 2011.

The following enclosed new MPDs should be filed following MPD No. 2011-006-E

MPD Number	Aircraft Type/Engine Type/Propeller/Equipment:
G-2011-007 G-2011-008-E Corr. G-2011-009-E R1 G-2011-010	Rotorsport UK MT-03, MTOSport and Calidus gyroplanes Martin-Baker Injection Seats (The original MPD was not published in CAP 661) Rotax 912 and 914 engines (The original MPD was not published in CAP 661) Nanchang CJ-6A

File this revision transmittal sheet following the foreword page. Remove Revision Transmittal Sheet Issue No 2011/2.

This is the last amendment to CAP 661. The January 2012 edition will remain on the CAA website for reference purposes. MPDs will still be available to view and download from the CAA website: http://www.caa.co.uk/MPDs. Individual MPDs will continue to be sent out via the CAA Publications Notification Service to all subscribers of Safety Critical Information.

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## **MANDATORY PERMIT DIRECTIVES**

#### PART 1

#### **MANDATORY PERMIT DIRECTIVES INDEX**

This index lists aircraft, engines, propellers and equipment types alphabetically with applicable MPDs followed by MPDs listed numerically.



# United Kingdom Civil Aviation Authority

#### **Alphabetical Index**

January 2012

Please Note: This list is frozen as at the January 2012 amendment. Please see <a href="https://www.caa.co.uk/MPDS">www.caa.co.uk/MPDS</a> for a separate Alphabetical Index which will be updated each time a new MPD is published.

Aircraft Type	MPD Number
Aerial Arts/Cyclone Airsports/Pegasus Aviation/Cosmik Aviation	
Aerial Arts 110SX / Chaser	1995-065
Aerial Arts 130SX / Alpha and Alpha Mk 2	1995-064
Aerial Arts 130SX / Cyclone 70 and 130SX / Firefly	1995-067
Aerial Arts Chaser S	1995-011
Aerial Arts and Cyclone Chaser S Series and Aerial Arts 110SX/Chaser	2000-001
Aerial Arts / Cyclone Hovercraft 110SX / Cyclone 70	1995-066
Aerial Arts / Medway Microlights 130SX / Half Pint	1995-063
Aerotech International Sorcerer	1995-009
Aerotechnik EV-97 Eurostar, EV-97A Eurostar, EV-97 Eurostar SL, EV-97 teamEurostar UK	2010-003
Airborne Edge Microlights	2005-012
Aircraft of a type previously issued with a Certificate of Airworthiness but now operating on a UK CAA Permit to Fly	1995-001 R5
Airwave Gliders / Chargus Nimrod / Chargus	1995-076
Airwave Gliders / Hornet Microlights Nimrod / Hornet 250	1995-072
Airwave Gliders / Mainair Sports Nimrod / Triflyer	1995-075
Airwave Gliders / Ultrasports Nimrod / Tripacer and Nimrod 165 / Tripacer	1995-074
Alpavia Fournier RF3	1995-001 R5
American Aerolights Eagle 215B	1995-024
American Aerolights Eagle 430B	1995-025
American Aerolights with modifications by J May and R Martin (UK) Eagle Amphibian	1995-057
AMF Microflight Chevvron 2-32	
AMF Microflight Chevvron 2-32A, 2-32B, and 2-32C	
AMF Microflight Chevvron 2-32B and 2-32C	
ARV Aviation ARV 1 Series	1995-001 R5
Auster Aircraft Auster Series	1995-001 R5
Auster Aircraft Taylorcraft Plus D	1995-001 R5

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Aircraft Type	MPD Number
Aviasud Engineering Aviasud Mistral	1997-011 2002-003
Avid Aircraft Series	2002-002
Avions Fairey SA Tipsy Nipper T66 Series	
Bolkow Apparatebau Bolkow Bo 208 Series	1995-001 R5
British Aerospace BAC Canberra, Jet Provost all Mks	2006-005 R1
British Aerospace BAC 167 Strikemaster all Mks	
British Aerospace BAC 167 Strikemaster up to Mk 90 and BAC 145 Mk 55	1995-101 R1
British Aerospace BAC 167 Strikemaster all Mks and BAC 145 Mk 55	1995-109 R1 1997-014
British Aerospace Canberra Series	1995-105 1996-001 1997-002 1997-004 1997-017 1998-010 1998-011 1999-011 R1
British Aerospace Jet Provost Series	1995-106 R1
British Aerospace Jet Provost T Mk 52	1995-098 1995-100 1995-107 R2
British Aerospace Jet Provost and Strikemaster Series	2002-001 R1
British Aerospace Jet Provost T Mk 52, BAC 167 Strikemaster all Mks and BAC 145 Mk 55	1995-102
CASA 1-131 (Bucker 131 Jungman)	1995-087
Cessna Aircraft Cessna 120	1995-001 R5
CFM Metal-Fax Shadow Series B and Shadow Series B-D	. 1995-082
CFM Shadow Series B and BD	2003-004
CFM Shadow B, BD, C, CD Series, Shadow Series D Serial No 339 and Type approved Shadow DD fitted with a slipper tank	2004-002 R1



## **Alphabetical Index**

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Aircraft Type	MPD Number
CFM Shadow B, BD, CD, D, DD, Streak Shadow and Starstreak	
Shadow Series	2004-007 R1
CFM Shadow B, BD, C, CD, D, DD, Streak Shadow and Starstreak Shadow Series	2004-008 R1
CFM Shadow Series B, C and D, Streak Shadow and Star Streak	1998-013 R2
CFM Shadow Series C and CD	2002-010
CFM Shadow Series D and DD	2003-005 R1
CFM Shadow D, Shadow D-D and Streak Shadow	2002-004 R1
CFM Shadow D, Shadow D-D and D-SS	2005-002
CFM Shadow D, D-D Series, Streak Shadow and Starstreak Shadow Series	2005-003
CFM Shadow, Streak Shadow and Star Streak Series	2001-002 R2
CFM Streak Shadow, Star Streak and amateur built Shadow D Series fitted with a slipper tank	2003-019 R2
Chargus Gliding Company Chargus Titan	1995-078 R1
Chilton Aircraft Chilton DW1, DW1A and DW1B	1995-001 R5
Chrislea Aircraft Chrislea CH3 Super Ace	1995-001 R5
Cyclone Airsports and Solar Wings Pegasus Quantum and Pegasus Quasa	r 2002-005
De Havilland Aircraft DH80A Puss Moth	1995-001 R5
De Havilland Aircraft DH82A Tiger Moth	1995-001 R5
De Havilland Aircraft DH83 Fox Moth	1995-001 R5
De Havilland Aircraft DH85 Leopard Moth	1995-001 R5
De Havilland Aircraft DH87B Hornet Moth	1995-001 R5
De Havilland Aircraft DH94 Moth Minor	1995-001 R5
Dragon Light Aircraft Dragon 150 and Dragon 200	1995-060
Druine / Rollason Druine D62 Condor Series	1995-001 R5
Dyn Aero MCR including the ULM version	1999-013
Dyn Aero MCR-01, MCR-01 Club and MCR-01 ULC	2011-002-E
Dyn Aero MCR-01 Club and ULC	
Dyn Aero MCR-01 VLA, Club and ULC	2005-014 Corr.
Dynamic WT9 UK	2009-002
Eipper Aircraft Quicksilver MX	1995-026
Eipper Aircraft Quicksilver MX II	1995-027
Escapade	2007-009
Europa aircraft	2005-004

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Aircraft Type	MPD Number
Europa Tri-gear aircraft	2000-008
Europa and Europa XS aircraft	
Europa (excluding Europa XS)	2007-006
Eurowing Goldwing	1995-034
Extra Flugzeugbau EA-230	
Flexiform Skysails / Lancashire Microlight Solo Striker / Microtrike	1995-032
Flexiform Skysails / M J Hadland Willow	1995-053
Flexiform Skysails / Mainair Sports Solo Sealander / Merlin and Solo Striker / Merlin	1995-030
Flexiform Skysails / Mainair Sports Solo Sealander / Rapier and Solo Striker / Rapier	1995-031
Flexiform Skysails / Mainair Sports Solo Sealander /Tripacer and Solo Striker / Triflyer	1995-029
Flexiform Skysails / Mainair Sports Striker Dual / Gemini, Sealander Dual / Gemini, Dual Sealander / Triflyer, Dual Striker / Triflyer, Striker Dual / Triflyer Striker Dual / Tri-flyer 440, Striker Dual / Lancaster, Striker / Tri-flyer 440, Striker / Tri-flyer and Dual Striker / Micro Trike 440	
Flexiform Skysails / Ultrasports Solo Sealander / Tripacer and Solo Striker / Tripacer	
Flight Design CT2K	2005-001
Flight Design CT2K and CTSW	2007-001
Fly Buy Ultralights	2004-013
Fly Buy Ultralights Ikarus C42 variants FB UK, FB 80, FB100 and FB100 VLA	2007-007
Freedom Fliers Pterodactyl Ptraveller (Canard Variants)	1995-038
Gemini Flash 2, Gemini Flash 2 Alpha and Mainair Mercury	2000-003
Gyroplanes	1997-007
Harvest Air (Maintenance) DHC-1 Chipmunk 22 Mighty Munk	1995-001 R5
Hawker Hurricane	2008-001
Hiway Hang Gliders Demon / Skytrike	1995-049
Hiway Hang Gliders / Mainair Sports Demon / Triflyer	1995-050
Hiway Hang Gliders / Ultrasports Demon / Tripacer	1995-043
Hornet Microlights (Templeward) Hornet Dual Trainer Raven	1995-010
Huntair Pathfinder 1 (or Mk 1)	1995-035



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Aircraft Type	MPD Number
Hunting Percival Aircraft Percival P66 Pembroke C Mk 1	. 2000-005
Iniziatire Industriali Italiane Sky Arrow 650	. 2005-009 R1
Iniziative Industriali Italiane Sky Arrow 650T	
Jabiru J200, J400, J230, J430, J250, J450, J160, SP Tricycle, SP	0000 004
Taildragger, UL Tricycle, UL-C and UL-D	
Jabiru LSA, SP, UL and J160	
Jabiru UL-C, UL-D, J160-C, LSA55/2J, LSA55/2K, LSA55/3J, ST and ST3	
J A Hunt Huntwing Avon and Hunt-Avon Blade	
J A Hunt Huntwing / Hunt-Avon Skytrike	
Jordan Aviation Jordan Duet Series 1	
Jurca MJ-5 Sirocco Series	
Kolb Twinstar Mk III	. 1997-010
Luscombe Airplane Luscombe 8F	. 1995-001 R5
Luton LA5 Major	. 2003-011
Magni M24C	. 2011-001-E
Mainair Sports microlights	. 1995-005 R1
Mainair Sports two seat microlights	. 2001-004
Mainair Sports Flash and Flash 2	. 1995-012
Mainair Sports Flash 2 Alpha and Mercury	. 1995-021
Mainair Sports Gemini Sprint X / Triflyer, Sprint X / Puma and Sprint X / Sprint Triflyer 440	. 1995-068
Mainair Sports Gemini trike	. 1995-016
Mainair Sports Pegasus Quik	
Mainair Sports Pegasus Quik and Quantum IS-912	. 2004-012
Mainair Sports Pegasus Quik fitted with a Rotax 912 ULS engine	. 2003-006
Medway Microlights and Southdown International two seat microlights	. 2001-006
Medway Microlights / Southdown International Puma Sprint, Raven and Raven X	2005-011
Micro Aviation (NZ) B20, B22 and B22S Bantam	. 1999-006 R1
Micro Aviation (NZ) B22 and B22S Bantam	. 1999-010
Micro Biplane Aviation Tiger Cub 440	. 1995-033
Micro Biplane Aviation Tiger Cub 440 Romain modified	. 1995-048
Micro Engineering Aviation MEA Mistral	. 1995-077

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Aircraft Type	MPD Number
Microlights – All Type Accepted two seat weight-shift	2001-009
Microlights fitted with warp drive propellers	1995-103
Midland Ultralights Sirocco 377GB	1995-097
Midland Ultralights Sirocco 377GB and Sirocco 377GB (Modified)	1999-005 R1
Miles Aircraft M14A Hawk Trainer 3	1995-001 R5
Nanchang Aircraft NAMC CJ-6A	
North American / Noorduyn / Canadian Car and Foundry Harvard Series	1995-001 R5
P&M QuikR	2009-007 R1
Pegasus Aviation Cyclone AX3	1997-012
Pegasus Aviation Cyclone AX3 and AX2000	1998-005
Pegasus Aviation Cyclone AX2000	1999-001
Pegasus Aviation Pegasus Quasar IITC and Quantum	1998-015
Pegasus CKT	2009-006
Pegasus Quantum and Quasar	2009-005
Pegasus Quik up to Serial Number 8037	2004-009
Pegasus Quik	2006-010 2006-012 R1
Pegasus Quik, Quik GT450, QuikR	
Pegasus and Solar Wings XL Wings	1998-002 R1
Percival Aircraft Piston Engine Provost	1995-001 R5
Percival Aircraft Proctor and Vega Gull	1995-001 R5
Piper Aircraft Piper J3C-65 and Piper J3C-65 (Modified)	1995-001 R5
Piper Aircraft Piper L18C and Piper L18C (Modified)	1995-001 R5
Piper Aircraft Piper L21B (Modified)	1995-001 R5
Piper Aircraft Piper L4H	1995-001 R5
Piper Aircraft Piper PA-12	1995-001 R5
Pitts S-1T and Pitts S-2A	1995-001 R5
Powerchute Systems International Powerchute Kestrel	2003-002
Quenchurst Skyriders Phantom	1995-037
Quicksilver Enterprises Murphy modified Quicksilver MXL	1995-073
Rans S.4 and S.5 Series	2003-016
Rans S.6 Series	
Ron Wheeler Aircraft Sales Scout Mk 1, Mk 2 and Mk 3	1995-081
Rotorsport UK MTOSport Gyroplane	2010-005 R1

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Aircraft Type	MPD Number
Rotorsport UK MT-03 and MTOSport and Calidus Gyroplanes	
Rotary Air Force Marketing RAF 2000 and RAF 2000 GTX-SE	. 2003-007 . 2004-011 . 2006-003 . 2009-001
Rotorway International Rotorway Executive	
Rotorway International Rotorway Executive and Rotorway Executive (Modified)  Rotorway International Rotorway Executive 90	. 1997-001 R2 . 1997-006 . 1998-004
Rotorway International Rotorway Executive, Rotorway Executive (Modified), Rotorway Executive 90 and Rotorway Executive 162F	. 1995-094 R1
Rotorway International Rotorway Executive, Rotorway Executive (Modified) and Rotorway Executive RW-152	. 2000-002
Rotorway International Rotorway Executive, Rotorway Executive (Modified), Rotorway Executive 90 and Rotorway Executive RW-152	. 1999-014
Rotorway International Rotorway Executive 162F	. 2003-010
Savannah Microlights	. 2008-003 . 2010-007 . 2010-009
Scintex - Aviation Piel and Scintex CP301 Series	
Scintex - Aviation Scintex CP1310 Series  Skyranger UK Skyranger	. 2004-003 . 2006-007 . 2006-008
Societe Aeronautique Normande Jodel D150	. 1995-001 R5
Societe Aeronautique Normande Jodel DR1050 (Modified)	. 1995-001 R5
Solar Wings Pegasus Flash and Pegasus Flash 2	. 1995-083 . 1995-084
Solar Wings Pegasus Flash 2	
Solar Wings Pegasus Q-Wing and Quasar Wing	. 1995-017

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Aircraft Type	MPD Number
Solar Wings Pegasus XL-R liquid cooled	. 1995-014
Solar Wings Pegasus XL-R Wings	. 1995-020
Solar Wings Pegasus XL-R, Flash and Flash 2	. 1995-006
Solar Wings Typhoon / Solar Trike	. 1995-061
Solar Wings / Brooks Typhoon / Brooks Prone	. 1995-062
Solar Wings / F Tarjani (UK) Typhoon / Tarjani Trike	. 1995-055
Solar Wings / Hiway Hang Gliders Typhoon / Skytrike	. 1995-041
Solar Wings / Hornet Microlights Typhoon / Hornet	. 1995-040
Solar Wings / Mainair Sports Photon / Triflyer	. 1995-047
Solar Wings / Mainair Sports Typhoon / Triflyer	. 1995-039
Solar Wings / Ultrasports Panther XL and Typhoon XL / Panther	. 1995-046
Solar Wings / Ultrasports Typhoon (Variants)	. 1995-042
Southdown International two seat microlights	. 2001-006
Southdown International Raven, Raven X and other microlights fitted with the Raven Wing	1995-008
Southdown International Raven X	
Southdown International / D Richards Sprint / Cougar	
Southdown International / Medway Microlights Puma Sprint, Raven and Raven X	
Southdown International / Ultrasports Raven / Puma	. 1995-059
Southdown Sailwings Lightning DS Puma / Puma and DS Mk 1 / Lightning DS Puma 440	1995-069
Southdown Sailwings Lightning / Wildcat	
Southdown Sailwings / Mainair Sports Lightning DS / Triflyer and Lightning DS / 440 Triflyer	
Southdown Sailwings / Ultrasports Lightning / Tripacer	. 1995-051
Sportavia-Putzer Fournier RF4D, Fournier RF5 Series and Sportavia RF5B	1995-001 R5
Stephens Akro and Laser Z200	. 2001-003
Strojirny Prvni Petilesky/Let Narodni Podnik Keinovice Yak C.11 Strojirny Prvni Petilesky YAK C.18A	2004-004 R1
Sukhoi SU-26M, SU-26M2 and SU-26MX	2004-004 R1
Teman Aircraft Teman Mono-Fly	1995-058
Thruster Air Services Thruster T600 Series	2001-014 2003-003
Thruster Air Services Thruster T600, T300 and TST	. 2010-006 R1
Thruster Aircraft Thruster T300	. 1995-095
Thruster Aircraft Thruster TST	1995-110

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Aircraft Type	MPD Number
Thruster Aircraft Thruster TST and Thruster T300	1995-015
Ultraflight Lazair III	1995-044
Ultralight Flight Mirage Mk 1 and Mk 2	1995-071
Varga Aircraft Varga 2150A Kachina	1995-001 R5
Vickers Supermarine Spitfire Series	1995-089 R1
Vickers Supermarine Spitfire all marks except XVIII	1995-092
Vickers Supermarine Spitfire and Seafire all marks	1999-007
VPM M14 and VPM M16	2009-004
Weedhopper of Utah Weedhopper JC-24-B	1995-070
Westland Gazelle AH. Mk 1, HT. Mk2 and HT. Mk 3	2002-007
Westland Gazelle AH. Mk 1, HT. Mk 2, HT. Mk 3 and HT. Mk 4	2001-013 R2 2002-011 R1 2003-012
X' Air Mk1	2004-001
Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak C.11, 18 and 52	1998-016 R2
Yakovlev Yak 50	
Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak 50 and 52	1997-020 R1 1998-001 R2
Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak 52	1998-017 R5 2000-004 2004-004 R1 2004-006
Yakovlev Yak 55 and Yak 55M	2004-004 R1
Zenair CH 601XL Operating on a Permit to Fly administered by the LAA	2008-006 R1

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Engine Type	MPD Number
Ivchenko A1-25TL engines	2005-006
Rolls-Royce Avon Mk 1 and Mk 102	1998-006
Rolls-Royce Avon Mk 1, 100 and 200 Series	
Rolls-Royce Avon Mk 122 Series	1998-018
Rolls-Royce Avon Mk 203 and Mk 207	1996-002
Rolls-Royce Merlin Series	2010-004
Rolls-Royce Viper Mk 202 and Mk 535	1998-007
Rotax 912UL, 912ULS and 912 ULSFR	2007-003 R2
Rotax 912 and 914	
Propeller Type	MPD Number
	4005 004 DE
MT-Propeller MTV-3	
MT-Propeller MTV-9	
Equipment Type	MPD Number
Aircraft fitted with Sutton Harnesses	2001_012 P2
Fire Fighting Enterprises Portable Fire Extinguishers	2009-008
Full Lotus Industries aircraft floats	1999-002
Light aircraft (including rotorcraft) below 2730 kg	1998-019 R1
Martin-Baker Ejection Seats	2011-008 Corr
Portable Halon 1211 Fire Extinguishers	2010-002
UK registered ex-military aeroplanes fitted with ejector seats	1995-091
Purolator In-line Fuel Filters.	2008-004
SICLI Portable Fire Extinguishers	2009-011
Trelleborg Hydro K Hoses	2010-001

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MPD Number	Aircraft/Engine/Propeller/Equipment
1995-001 R5	Aircraft of a type previously issued with a Certificate of Airworthiness but now operating on a UK CAA Permit to Fly
1995-002	Extra Flugzeugbau EA-230
1995-003	Extra Flugzeugbau EA-230
1995-004	Gyroplanes
1995-005 R1	Mainair Sports microlights
1995-006	Solar Wings Pegasus XL-R, Flash and Flash 2
1995-007	Southdown International Raven X
1995-008	Southdown International Raven, Raven X and other microlights fitted with the Raven Wing
1995-009	Aerotech International Sorcerer
1995-010	Hornet Microlights (Templeward) Hornet Dual Trainer Raven
1995-011	Aerial Arts Chaser S
1995-012	Mainair Sports Flash and Flash 2
1995-013	Solar Wings Pegasus Flash and Pegasus Flash 2
1995-014	Solar Wings Pegasus XL-R liquid cooled
1995-015	Thruster Aircraft Thruster TST and Thruster T300
1995-016	Mainair Sports Gemini trike
1995-017	Solar Wings Pegasus Q-Wing and Quasar Wing
1995-018	AMF Microflight Chevvron 2-32
1995-019	AMF Microflight Chevvron 2-32B and 2-32C
1995-020	Solar Wings Pegasus XL-R Wings
1995-021	Mainair Sports Flash 2 Alpha and Mercury
1995-022	Avions Fairey SA Tipsy Nipper T66 Series
1995-023	Percival Aircraft Piston Engine Provost
1995-024	American Aerolights Eagle 215B
1995-025	American Aerolights Eagle 430B
1995-026	Eipper Aircraft Quicksilver MX
1995-027	Eipper Aircraft Quicksilver MX II
1995-028	Flexiform Skysails / Ultrasports Solo Sealander / Tripacer and Solo Striker / Tripacer
1995-029	Flexiform Skysails / Mainair Sports Solo Sealander / Tripacer and Solo Striker / Triflyer
1995-030	Flexiform Skysails / Mainair Sports Solo Sealander / Merlin and Solo Striker /Merlin

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MPD Number	Aircraft/Engine/Propeller/Equipment
1995-031	Flexiform Skysails / Mainair Sports Solo Sealander / Rapier and Solo Striker / Rapier
1995-032	Flexiform Skysails / Lancashire Microlight Solo Striker / Microtrike
1995-033	Micro Biplane Aviation Tiger Cub 440
1995-034	Eurowing Goldwing
1995-035	Huntair Pathfinder 1 (or Mk 1)
1995-036 R1	Flexiform Skysails / Mainair Sports Striker Dual / Gemini, Sealander Dual / Gemini, Dual Sealander / Triflyer, Dual Striker / Triflyer, Striker Dual / Triflyer, Striker Dual / Triflyer, Striker Dual / Tri-flyer 440, Striker / Tri-flyer and Dual Striker / Micro Trike 440
1995-037	Quenchurst Skyriders Phantom
1995-038	Freedom Fliers Pterodactyl Ptraveller (Canard Variants)
1995-039	Solar Wings / Mainair Sports Typhoon / Triflyer
1995-040	Solar Wings / Hornet Microlights Typhoon / Hornet
1995-041	Solar Wings / Hiway Hang Gliders Typhoon / Skytrike
1995-042	Solar Wings / Ultrasports Typhoon (Variants)
1995-043	Hiway Hang Gliders / Ultrasports Demon / Tripacer
1995-044	Ultraflight Lazair III
1995-045	J A Hunt Huntwing / Hunt-Avon Skytrike
1995-046	Solar Wings / Ultrasports Panther XL and Typhoon XL / Panther
1995-047	Solar Wings / Mainair Sports Photon / Triflyer
1995-048	Micro Biplane Aviation Tiger Cub 440 Romain modified
1995-049	Hiway Hang Gliders Demon / Skytrike
1995-050	Hiway Hang Gliders / Mainair Sports Demon / Triflyer
1995-051	Southdown Sailwings / Ultrasports Lightning / Tripacer
1995-052	Aviasud Engineering Aviasud Mistral
1995-053	Flexiform Skysails / M J Hadland Willow
1995-054	Southdown International / D Richards Sprint / Cougar
1995-055	Solar Wings / F Tarjani (UK) Typhoon / Tarjani Trike
1995-056	Jordan Aviation Jordan Duet Series 1
1995-057	American Aerolights with modifications by J May and R Martin (UK) Eagle Amphibian
1995-058	Teman Aircraft Teman Mono-Fly
1995-059	Southdown International / Ultrasports Raven / Puma
1995-060	Dragon Light Aircraft Dragon 150 and Dragon 200
1995-061	Solar Wings Typhoon / Solar Trike
1995-062	Solar Wings / Brooks Typhoon / Brooks Prone
1995-063	Aerial Arts / Medway Microlights 130SX / Half Pint
1995-064	Aerial Arts 130SX / Alpha and Alpha Mk 2
1995-065	Aerial Arts 110SX / Chaser

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Aerial Arts / Cyclone Hovercraft 110SX / Cyclone 70
Aerial Arts 130SX / Cyclone 70 and 130SX / Firefly
Mainair Sports Gemini Sprint X / Triflyer, Sprint X / Puma and Sprint X / Sprint Triflyer 440
Southdown Sailwings Lightning DS Puma / Puma and DS Mk 1 / Lightning DS Puma 440
Weedhopper of Utah Weedhopper JC-24-B
Ultralight Flight Mirage Mk 1 and Mk 2
Airwave Gliders / Hornet Microlights Nimrod / Hornet 250
Quicksilver Enterprises Murphy modified Quicksilver MXL
Airwave Gliders / Ultrasports Nimrod / Tripacer and Nimrod 165 / Tripacer
Airwave Gliders / Mainair Sports Nimrod / Triflyer
Airwave Gliders / Chargus Nimrod / Chargus
Micro Engineering Aviation MEA Mistral
Chargus Gliding Company Chargus Titan
Southdown Sailwings Lightning / Wildcat
Southdown Sailwings / Mainair Sports Lightning DS / Triflyer and Lightning DS / Triflyer 440
Ron Wheeler Aircraft Sales Scout Mk 1, Mk 2 and Mk 3
CFM Metal-Fax Shadow Series B and Shadow Series B-D
Solar Wings Pegasus Flash and Pegasus Flash 2
Solar Wings Pegasus Flash and Pegasus Flash 2
Solar Wings Pegasus Flash and Pegasus Flash 2
Solar Wings Pegasus Flash 2
CASA 1-131 (Bucker 131 Jungman)
AMF Microflight Chevvron 2-32
Vickers Supermarine Spitfire Series
Superseded by MPDs 1997-001 and 1997-003
UK registered ex-military aeroplanes fitted with ejector seats
Vickers Supermarine Spitfire all marks except XVIII
British Aerospace Jet Provost Series
Rotorway International Rotorway Executive, Rotorway Executive (Modified), Rotorway Executive 90 and Rotorway Executive 162F
Thruster Aircraft Thruster T300
AMF Microflight Chevvron 2-32A, 2-32B and 2-32C

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MPD Number	Aircraft/Engine/Propeller/Equipment
1995-097	Midland Ultralights Sirocco 377GB
1995-098	British Aerospace Jet Provost T Mk 52
1995-099	British Aerospace Canberra Series
1995-100	British Aerospace Jet Provost T Mk 52
1995-101 R1	British Aerospace BAC 167 Strikemaster up to Mk 90 and BAC 145 Mk 55
1995-102	British Aerospace Jet Provost T Mk 52, BAC 167 Strikemaster all Mks and BAC 145 Mk 55
1995-103	Microlights fitted with warp drive propellers
1995-104	AMF Microflight Chevvron 2-32A, 2-32B and 2-32C
1995-105	British Aerospace Canberra Series
1995-106 R1	British Aerospace Jet Provost Series
1995-107 R2	British Aerospace Jet Provost T Mk 52
1995-108	British Aerospace BAC 167 Strikemaster all Mks and BAC 145 Mk 55
1995-109 R1	British Aerospace BAC 167 Strikemaster all Mks and BAC 145 Mk 55
1995-110	Thruster Aircraft Thruster TST
1996-001	British Aerospace Canberra Series
1996-002	Rolls-Royce Avon Mk 203 and Mk 207
1996-003	Cancelled at Amendment 2009/2
1996-004 R1	Jurca MJ-5 Sirocco Series
1997-001 R2	Rotorway International Rotorway Executive 90
1997-002	British Aerospace Canberra Series
1997-003 R1	Rotorway International Rotorway Executive and Rotorway Executive (Modified)
1997-004	British Aerospace Canberra Series
1997-005	Rotorway International Rotorway Executive
1997-006	Rotorway International Rotorway Executive 90
1997-007	Gyroplanes
1997-008 R1	Superseded by MPD 1998–017
1997-009	Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak 52
1997-010	Kolb Twinstar Mk III
1997-011	Aviasud Engineering Aviasud Mistral
1997-012	Pegasus Aviation Cyclone AX3
1997-013 R1	British Aerospace Jet Provost Series
1997-014	British Aerospace BAC 167 Strikemaster all Mks and BAC 145 Mk 55
1997-015	British Aerospace Jet Provost T Mk 52
1997-016	British Aerospace BAC 167 Strikemaster all Mks
1997-017	British Aerospace Canberra Series
1997-018	AMF Microflight Chevron 2-32B and 2-32C

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MPD Number	Aircraft/Engine/Propeller/Equipment
1997-019 R2	Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak 50 and 52
1997-020 R1	Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak 50 and 52
1998-001 R2	Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak 50 and 52
1998-002 R1	Pegasus and Solar Wings XL Wings
1998-003	Rotorway International Rotorway Executive
1998-004	Rotorway International Rotorway Executive 90
1998-005	Pegasus Aviation Cyclone AX3 and AX2000
1998-006	Rolls-Royce Avon Mk 1 and Mk 102
1998-007	Rolls-Royce Viper Mk 202 and Mk 535
1998-008	Vickers Supermarine Spitfire and Seafire all marks
1998-009	Rotorway Executive 90
1998-010	British Aerospace Canberra Series
1998-011	British Aerospace Canberra Series
1998-012	British Aerospace BAC 167 Strikemaster all Mks and BAC 145 Mk 55
1998-013 R2	CFM Shadow Series B, C and D, Streak Shadow and Star Streak
1998-014	Pegasus Aviation Cyclone AX3 and AX2000
1998-015	Pegasus Aviation Pegasus Quasar IITC and Quantum
1998-016 R2	Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak C.11, 18 and 52
1998-017 R5	Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak 52
1998-018	Rolls-Royce Avon Mk 122 Series
1998-019 R1	Light aircraft (including rotorcraft) below 2730kg
1998-020	Yakovlev/Aerostar SA/Intrepinderea De Av Bacau Yak 50 and 52
1999-001	Pegasus Aviation Cyclone AX2000
1999-002	Full Lotus Industries aircraft floats
1999-003 R1	MT-Propeller MTV-9
1999-004 R1	MT-Propeller MTV-3
1999-005 R1	Midland Ultralights Sirocco 377GB and Sirocco 377GB (Modified)
1999-006 R1	Micro Aviation (NZ) B20, B22 and B22S Bantam
1999-007	Vickers Supermarine Spitfire and Seafire all marks
1999-008 R1	British Aerospace Jet Provost and Strikemaster Series
1999-009	Vickers Supermarine Spitfire and Seafire all marks
1999-010	Micro Aviation (NZ) B22 and B22S Bantam
1999-011 R1	British Aerospace Canberra Series
1999-012	British Aerospace Canberra Series

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MPD Number	Aircraft/Engine/Propeller/Equipment
1999-013	Dyn'Aero MCR including the ULM version
1999-014	Rotorway International Rotorway Executive, Rotorway Executive (Modified), Rotorway Executive 90 and Rotorway Executive RW-152
2000-001	Aerial Arts and Cyclone Airsports Chaser S Series and Aerial Arts 110SX/Chaser
2000-002	Rotorway International Rotorway Executive, Rotorway Executive (Modified) and Rotorway Executive RW-152
2000-003	Gemini Flash 2, Gemini Flash 2 Alpha and Mainair Mercury
2000-004	Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak 52
2000-005	Hunting Percival Aircraft Percival P66 Pembroke C Mk 1
2000-006 R1	Westland Gazelle AH. Mk 1, HT. Mk 2, HT. Mk 3 and HT. Mk 4
2000-007	Rolls-Royce Avon Mk 1, 100 and 200 Series
2000-008	Europa Tri-gear aircraft
2001-001	Rolls-Royce Avon Mk 1, 100 and 200 Series
2001-002 R2	CFM Shadow, Streak Shadow and Star Streak Series
2001-003	Stephens Akro and Laser Z200
2001-004	Mainair Sports two seat microlights
2001-005	Thruster Air Services Thruster T600 Series
2001-006	Medway Microlights and Southdown International two seat microlights
2001-007 R1	Superseded by MPD 2001-013
2001-008 R1	Cancelled at R1
2001-009	Microlights - All Type Accepted two seat weight-shift
2001-010	J A Hunt Huntwing Avon and Hunt-Avon Blade
2001-011	British Aerospace Canberra Series
2001-012 R2	Aircraft fitted with Sutton Harnesses
2001-013 R2	Westland Gazelle AH. Mk 1, HT. Mk 2 , HT Mk 3 and HT. Mk 4
2001-014	Thruster Air Services Thruster T600 Series
2002-001 R1	British Aerospace Jet Provost and Strikemaster Series
2002-002	Avid Aircraft Series
2002-003	Aviasud Engineering Aviasud Mistral
2002-004 R1	CFM Shadow D, Shadow D-D and Streak Shadow
2002-005	Cyclone Airsports and Solar Wings Pegasus Quantum and Pegasus Quasar
2002-006	Westland Gazelle AH.Mk 1, HT.Mk 2 and HT.Mk 3
2002-007	Westland Gazelle AH.Mk 1, HT.Mk 2 and HT.Mk 3
2002-008	Aviasud Engineering Aviasud Mistral
2002-009 R2	Yakovlev Yak 50
2002-010	CFM Shadow Series C and CD
2002-011 R1	Westland Gazelle AH.Mk 1, HT.Mk 2, HT Mk 3 and HT.Mk 4

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MPD Number	Aircraft/Engine/Propeller/Equipment
2003-001 R1	Rotary Air Force Marketing RAF 2000 and RAF 2000 GTX-SE
2003-002	Powerchute Systems International Powerchute Kestrel
2003-003	Thruster Air Services Thruster T600 Series
2003-004	CFM Shadow Series B and BD
2003-005 R1	CFM Shadow Series D and DD
2003-006	Mainair Sports Pegasus Quik fitted with a Rotax 912ULS engine
2003-007	Rotary Air Force Marketing RAF 2000 and RAF 2000 GTX-SE
2003-008 R1	Cancelled 13 August 2010
2003-009 R1	Cancelled 13 August 2010
2003-010	Rotorway International Rotorway Executive 162F
2003-011	Luton LA5 Major
2003-012	Westland Gazelle AH. Mk 1, HT. Mk 2, HT Mk 3 and HT. Mk 4
2003-013	Iniziative Industriali Italiane Sky Arrow 650T
2003-014	Iniziative Industriali Italiane Sky Arrow 650T
2003-015	Westland Gazelle AH. Mk 1, HT. Mk 2, HT. Mk 3 and HT. Mk 4
2003-016	Rans S.4 and S.5 Series
2003-017 R1	Rans S.6 Series
2003-018 R1	Rans S.6 Series
2003-019 R2	CFM Streak Shadow, Star Streak and amateur built Shadow D Series fitted with a slipper tank
2004-001	X' Air Mk 1
2004-002 R1	CFM Shadow B, BD, C, CD Series, Shadow Series D Serial No 339 and Type Approved Shadow DD fitted with a slipper tank
2004-003	Skyranger UK Skyranger Series
2004-004 R1	Strojirny Prvni Petilesky/Let Narodni Podnik Kunovice Yak C.11 aeroplanes Strojirny Prvni Petilesky Yak C.18A Yakovlev Yak 50 Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak 52 Yakovlev Yak 55 and Yak 55M Sukhoi SU-26M, SU-26M2 and SU-26MX Nanchang Aircraft NAMC CJ-6A
2004-005 R1	Fly Buy Ultralights Ikarus C42 variants FB UK, FB, FB100 and FB100 VLA
2004-006	Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak 52
2004-007 R1	CFM Shadow B, BD, C, CD, D, DD Streak Shadow and Starstreak Shadow Series

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MPD Number	Aircraft/Engine/Propeller/Equipment
2004-008 R1	CFM Shadow B, BD, C, CD, D, DD Streak Shadow and Starstreak Shadow Series
2004-009 R2	Pegasus Quik up to serial number 8037
2004-010 R1	Flight Design CT2K
2004-011	Rotary Air Force Marketing RAF 2000 and RAF 2000 GTX-SE
2004-012	Mainair Sports Pegasus Quik and Quantus IS-912
2004-013	Fly Buy Ultralights
2004-014	Aerial Arts/Cyclone Airsports/Pegasus Aviation/Cosmik Aviation
2004-015	Aerial Arts/Cyclone Airsports/Pegasus Aviation/Cosmik Aviation
2005-001	Flight Design CT2K
2005-002	CFM Shadow D, DD and D-SS
2005-003	CFM Shadow D, DD Series, Streak Shadow and Starstreak Shadow Series
2005-004	Europa aircraft
2005-005	Westland Gazelle AH.Mk1, HT.Mk2 and HT.Mk3
2005-006	Ivchenko AI-25TL engines
2005-007	Mainair Sports Pegasus Quik
2005-008	Gyroplanes
2005-009 R1	Iniziative Industriali Italiane Sky Arrow 650
2005-011	Medway Microlights/Southdown International Puma Sprint, Raven and Raven X
2005-012	Airborne Edge Microlights
2005-013 Corr.	Dyn-Aero MCR-01 Club and ULC
2005-014 Corr.	Dyn-Aero MCR-01 VLA, Club and ULC
2006-001	Jabiru J200, J400, J230, J430, J250, J450, J160, SP Tricycle, SP Tail dragger, UL Tricycle, UL-C, UL-D
2006-002	Jabiru LSA, SP, UL and J160
2006-003	Rotary Air Force Marketing RAF 2000 and RAF 2000 GTX-SE
2006-004 R1	British Aerospace BAC 167 Strikemaster all Mks
2006-005 R1	British Aerospace BAC Canberra, Jet Provost all Mks
2006-006	Savannah Microlight all
2006-007	Skyranger UK Skyranger
2006-008	Skyranger UK Skyranger Series
2006-009	Skyranger UK Skyranger
2006-010	Pegasus Quik
2006-011	Cancelled at Amendment 2009/2
2006-012 R1	Pegasus Quik
2006-013	Superseded by MPD 2009-001
2006-014	Flight Design CT2K

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MPD Number	Aircraft/Engine/Propeller/Equipment				
2007-001	Flight Design CT2K and CTSW				
2007-002 R2	British Aerospace Jet Provost and Strikemaster Series				
2007-003 R2	Rotax 912UL, 912ULS and 912ULSFR engines				
2007-004 R1	Europa and Europa XS				
2007-005 R2 Coi	r. Europa and Europa XS				
2007-006	Europa excluding Europa XS				
2007-007	Fly Buy Ultralights Ikarus C42 variants FB UK, FB 80, FB100 and FB100 VLA				
2007-008	Fly Buy Ultralights Ikarus C42 variants FB UK, FB 80, FB100 and FB100 VLA				
2007-009	Escapade				
2008-001	Hawker Hurricane				
2008-002	Dyn Aero MCR-01 Club and ULC				
2008-003	Savannah microlights				
2008-004	Purolator In-line Fuel Filters				
2008-005 R1	Yakovlev/Aerostar SA/Intreprinderea De Av Bacau Yak 52				
2008-006 R1	Zenair CH 601XL Operating on a Permit to Fly administered by the LAA				
2009-001	RAF 2000 and 2000 GTX-SE				
2009-002	Dynamic WT9 UK				
2009-003	RAF 2000 and 2000 GTX-SE				
2009-004	VPM M14 and VPM M16				
2009-005	Pegasus Quantum and Quasar				
2009-006	Pegasus CKT				
2009-007	PEM QuikR				
2009-008	Fire Fighting Enterprises Portable Fire Extinguishers				
2009-009	Fire Fighting Enterprises Portable Fire Extinguishers				
2009-010	Superseded by MPD 2010-003				
2009-011	SICLI Portable Fire Extinguishers				
2010-001	Trelleborg Hydro K Hoses				
2010-002	Portable Halon 1211 Fire Extinguishers				
2010-003	Aerotechnik EV-97 Eurostar, EV-97A Eurostar, EV-97 Eurostar SL, EV-97 teamEurostar UK				
2010-004	Rolls-Royce Merlin Series Engines				
2010-005 R1	Rotorsport UK MTOSport gyroplane				
2010-006 R1	Thruster Air Services Thruster T600, T300 and TST				

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MPD Number	Aircraft/Engine/Propeller/Equipment
2010-007	Savannah microlights
2010-008 R1	Superseded by MPD 2011-006
2010-009	Savannah microlights
2010-010	Jabiru
2011-001-E	Magni M24C
2011-002-E	Dyn'Aero MCR-01
2011-003-E	Rotax 912 and 914
2011-004-E	Thruster T600
2011-005 R1	Pegasus Quik, Quik GT450, QuikR
2011-006-E	Rotorsport UK MT-03, MTOSport and Calidus gyroplanes
2011-007	Rotorsport UK MT-03, MTOSport and Calidus gyroplanes
2011-008 Corr	Martin-Baker Ejection Seats
2011-009-E R1	Rotax 912 and 914 engines
2011-010	Nanchang Aircraft NAMC CJ-6A
	2010-007 2010-008 R1 2010-009 2010-010 2011-001-E 2011-002-E 2011-003-E 2011-004-E 2011-005 R1 2011-006-E 2011-007 2011-008 Corr 2011-009-E R1

Please Note: This list is frozen as at the January 2012 amendment. Please see <a href="https://www.caa.co.uk/MPDS">www.caa.co.uk/MPDS</a> for a separate Alphabetical Index which will be updated each time a new MPD is published.

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	United Kingdom
	<b>Civil Aviation Authority</b>
Civil Aviation	

**MPDs** 

# **MANDATORY PERMIT DIRECTIVES**

#### PART 2

MANDATORY PERMIT DIRECTIVES filed numerically



MPD No: 1995-001 R5

Issue Date: 31 March 2007

#### MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-001 R5 AIRCRAFT OF A TYPE PREVIOUSLY ISSUED WITH A CERTIFICATE OF AIRWORTHINESS BUT NOW OPERATING ON A UK CAA PERMIT TO FLY

**Subject:** Airworthiness Directives.

**Applicability:** All aircraft of a type previously issued with a Certificate of Airworthiness but now operating on a UK CAA Permit to Fly.

**Compliance:** At issue of the Permit to Fly and at each renewal of the Certificate of Validity, compliance must be shown with applicable Airworthiness Directives for airframe, engines, propellers and equipment from the following sources:

CAP 476 – Mandatory Aircraft Modifications and Inspections Summary – Issue 287 CAP 747 – Mandatory Requirements for Airworthiness – Latest Issue Latest Foreign Airworthiness Directives from the State of Design and EASA

The original MPD became effective on 29 December 1995. Revision 1 became effective on 30 January 2004. Revision 2 became effective on 30 January 2005. Revision 3 became effective on 31 July 2005. Revision 4 became effective 28 February 2006. Revision 5 becomes effective 31 March 2007.

An alternative means of compliance or variation to the compliance time that provides an acceptable level of safety may be be used if approved by the Certification and Approvals Department of the CAA. Applications should be made to the Civil Aviation Authority, Certification and Approvals Department, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR.

Enquiries regarding this MPD should be referred to the Civil Aviation Authority, Policy and Standards Department, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: +44 (0) 1293 573150/3238 Fax: +44 (0)1293 573993 E-mail: ad.unit@srg.caa.co.uk

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-002 EXTRA FLUGZEUGBAU

Subject: Flight Controls – Inspection of aileron actuator arm.

Applicability: Extra Flugzeugbau EA-230 aeroplanes.

Compliance: Before further flight, inspect the aluminium alloy aileron actuator arms Part No. 1113 for cracking using a magnifying glass in accordance with Extra Flugzeugbau Service Bulletin No 1/89 including amendment 1. Cracked actuating arms must be replaced before further flight. Repeat inspection before each subsequent flight. Where the manufacturer supplied aluminium alloy aileron actuator arms Part No. 230/1.4-1 are fitted inspect these parts for cracking using a magnifying glass before further flight. Repeat inspection at intervals not exceeding 50 flight hours. The fitment of steel aileron actuator arms Part No. 230/1.4-2 terminates the requirement for the above inspections using a magnifying glass. Any cracks found must be reported to the CAA. The fitting of alternative alloy or steel arms Part Nos. 230/1.4-1 or 230/1.4-2 must be in accordance with a CAA approved modification.

Note: The manufacturers SB 1/89 including amendment 1, requires the aileron actuator arms to be inspected by the pilot on each pre-flight check regardless of the Part No. fitted.

This MPD becomes effective on 29 December 1995 and supersedes CAA AAD 005-08-89 which superseded CAA AAD 010-06-89.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-003 EXTRA FLUGZEUGBAU

Subject: Fuselage – Fuselage structure reinforcement.

Applicability: Extra Flugzeugbau EA-230 aeroplanes.

Compliance: Prior to further aerobatic flight. For aircraft with more than 1000 flight hours compliance is required not later than 25 flight hours and for aircraft with less than 1000 flight hours compliance is required not later than 100 flight hours.

Modify by reinforcing the fuselage structure in accordance with Extra Flugzeugbau Service Bulletin No. 230-1-91.

This MPD becomes effective on 29 December 1995 and supersedes CAA AAD 003-11-91.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-004 GYROPLANES

Subject: Inspection of driveshaft and safety collar.

Applicability: All single seat gyroplanes.

Reason: It has been brought to CAA's attention that it is possible for the ends of the flexible pre-rotator drive shaft to be incorrectly secured. It could be catastrophic if either end of the drive shaft became free as it could strike the propeller or damage the rotor hub.

Compliance: Inspection required before next flight. To be carried out by gyroplane inspector and noted in aircraft log book.

- The flexible drive shaft is secured at each end by the outer sleeve of the shaft fitting into sockets in the drive gear at the engine end and in the rotor pinion mounting at the rotor hub end. Each of these sockets is fitted with a set screw which fits into a shallow groove on the ferrules at each end of the outer casing of the flexible shaft. These grooves on the outer casing must be correctly aligned with the set screws to ensure correct security of the drive shaft. The following inspections must be carried out at each end of the drive shaft:-
  - (a) Remove the set screw, having first noted the amount of aluminium end ferrule projecting from the end socket. This should correspond with the distance of the centre line of the tapped hole normally occupied by the set screw from the face of the socket. If these dimensions do not correspond, the flexible drive shaft is incorrectly fitted, as it is possible to clamp the drive shaft ferrule at positions away from the groove in such a way that the drive is held by friction instead of positively located by the set screw in the groove. (See Figure 1).
  - (b) Check that the set screw has a flat face at the threaded end. If it has a domed end like a normal bolt, this must be refaced to allow full engagement in the groove in the ferrule. (See Figure 2).
  - (c) Check for correct wirelocking of set screw after re-assembly.

continued overleaf

MPD No: 1995–004 Page 2 of 4

2 Check that the flexible drive shaft is correctly restrained in position on the aircraft by a safety collar mounted on the rotor pylon positioned approximately 10" below the rotor head cluster plates. (See Figure 3). This safety collar is a loose fit around the shaft which must be able to move freely up and down as the flying controls are moved. (See Figure 4).

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 001-02-87 Revision 1.

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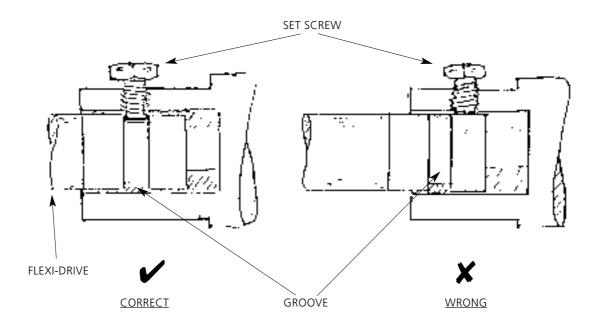


Figure 1



Figure 2

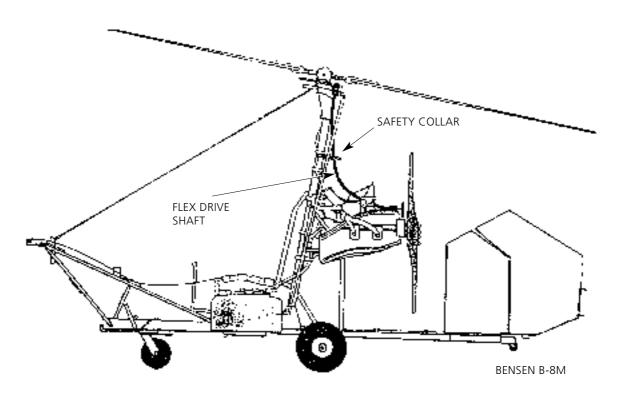


Figure 3

Figure 4 Pre-Rotator Drive Safety Strap 10" 4 TOP CLUSTER PLATE 18 S.W.G. MILD STEEL MAST ¾" RAD ALL BENDS 1/4 B.S.F. R.H Δ PACKING PIECES

% ALLOY
4 OFF (TYPICAL) SCALE 1/2 1 " RAD VIEW A.A WRAP MAST WITH ADHESIVE TAPE IN AREA OF STRAP
 STRAP MUST CLEAR FLEXIBLE DRIVE IN ALL CONTROL COLUMN POSITIONS Ο,

4 10 4 9ge 4 of 4 MPD No: 1995–004

MPD: 1995–005 R1 MAINAIR SPORTS

MPD No: 1995-005 R1

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

Subject: Inspection of the main vertical strut (pylon) for cracks or deformation.

Applicability: Mainair Sports microlights as detailed in Mainair Sports Airworthiness Bulletin No 17.

Compliance: Inspect the main vertical strut (pylon) for cracks or deformation in accordance with Mainair Sports Airworthiness Bulletin No 17.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 003-10-85. Revision 1 (editorial amendment) becomes effective on 18 January 2001.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995-006 SOLAR WINGS** 

Subject: Fuel System cleaning and inspection.

Applicability: Solar Wings Pegasus XL-R, Flash and Flash 2 microlights with Trike Serial Nos prefixed with SW-TB.

Compliance: Before next flight clean and inspect fuel system in accordance with Solar Wings Service Bulletin No 0002.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 006-07-86.

#### **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

	MPD:	1995-007	SOUTHDOWN INTERNATIONAL
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Subject: Noise certification – Modification to exhaust stub.

Applicability: Southdown International Raven X microlights with Serial Nos detailed in Southdown International Modification No SIB 0014.

Compliance: Before 1 April 1986 embody Southdown International Modification No SIB 0014 to the exhaust stub.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 008-08-86.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-008 SOUTHDOWN INTERNATIONAL

Subject: Wing tuning and geometry adjustments.

Applicability: Southdown International Raven, Raven X and other microlights fitted with the Raven wing from and including Constructors Serial No SN2122/0015.

Compliance: During next flight check wing tuning in accordance with Southdown International Service Bulletin No 003. If any faults are identified, application of Service Bulletin No 004 is required before further flight.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 004-09-86.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-009 AEROTECH INTERNATIONAL

Subject: Drawshaft screw replacement.

Applicability: Aerotech International Sorcerer microlights Serial Nos SR102/R440B/01 to SR102/R440B/05 inclusive.

Compliance: Before further flight unless previously accomplished inspect the reduction drive assembly and replace the drawshaft screw with a bolt in accordance with Aerotech International Service Bulletin No 001.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 002-11-87.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-010	HORNET MICROLIGHTS	(TEMPLEWARD)	

Subject: Propeller attachment bolts – Mod HR110.

Applicability: Hornet Microlights (Templeward) Hornet dual trainer Raven microlights.

Compliance: Before next flight replace chromium plated propeller attachment bolts with zinc plated bolts in accordance with Hornet Microlights (Templeward) Service Bulletin No S1006.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 001-10-88.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-011 AERIAL ARTS

Subject: Hang-point bracket (top box) inspection and replacement.

Applicability: Aerial Arts Chaser S microlights.

Compliance: Before next flight inspect the hang-point bracket (top box) in accordance with Cyclone Airsports Service Bulletin No CH006 Issue 3.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 041-09-89.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-012 MAINAIR SPORTS

Subject: Flight Limitations.

Applicability: Mainair Sports Flash and Flash 2 microlights.

Compliance: As detailed in Mainair Sports Service Bulletin No 33. The limitations for the Flash 2 Alpha have been superseded by MPD 1995-021.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 006-10-89.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995-013 SOLAR WINGS** 

Subject: Flight Limitations.

Applicability: Solar Wings Pegasus Flash and Pegasus Flash 2 microlights.

Compliance: As detailed in Solar Wings Service Bulletin No 0025.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 007-10-89.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995–014 SOLAR WINGS** 

Subject: Monopole Length.

Applicability: Solar Wings Pegasus XL-R liquid cooled microlights.

Compliance: Before next flight measure the length of the monopole tube in accordance with Solar Wings Service Bulletin No 0026.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 008-10-89.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-015 THRUSTER AIRCRAFT

Subject: Defective joystick eyebolts.

Applicability: Thruster Aircraft Thruster TST microlights Serial Nos 011 to 123 inclusive and Thruster T300 microlights Serial Nos 089-T300-373 to 378 inclusive.

Compliance: Before next flight inspect the lower end of the joystick assembly in accordance with Thruster Aircraft Service Bulletin No 001.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 001-01-90.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-016 MAINAIR SPORTS

Subject: Front Stub heavy landing overload damage.

Applicability: Mainair Sports Gemini trike microlights up to Serial No 534.

Compliance: Before next flight inspect the front stub in accordance with Mainair Sports Service Bulletin No 34.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 015-07-90.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995–017 SOLAR WINGS** 

Subject: Inspection of the wing trailing edge.

Applicability: Solar Wings Pegasus Q-Wing and Quasar Wing microlights.

Compliance: Before next flight inspect the wing trailing edge in accordance with Solar Wings Service Bulletin No 0032.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 010-08-91.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-018 AMF MICROFLIGHT

Subject: Wing cover – top surface.

Applicability: AMF Microflight Chevvron 2-32 microlights Serial Nos 004 onwards.

Reason: There has been an incident of detachment of a portion of the top surface wing covering resulting in partial loss of control. The wing in question had recently been recovered and due to insufficient cleaning of the bond surface on the wing ribs.

Compliance: Prior to further flight and at each daily inspection, inspect the top surface wing covering in accordance with AMF Microflight Service Bulletin No 011.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-019 AMF MICROFLIGHT

Subject: Replacement of engine big end bearings.

Applicability: AMF Microflight Chevvron 2-32B and 2-32C microlights.

Compliance: Replace the engine big end bearings in accordance with AMF Microflight Service Bulletin No 029.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 018-02-92 which superseded CAA AD 017-11-91.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995–020 SOLAR WINGS** 

Subject: Replacement of leading edge / cross boom bolts.

Applicability: Solar Wings Pegasus XL-R wings before 1 June 1993 Serial Numbers SW-WA-0000 to SW-WA-1583 and T0000000XL to T9999999XL and Serial No 6580.

Compliance: Replace the leading edge to cross bar bolts on both sides in accordance with Solar Wings Service Bulletin No 0041.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 007-06-93.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-021 MAINAIR SPORTS

Subject: Flight Limitations.

Applicability: Mainair Sports Flash 2 Alpha and Mercury microlights.

Compliance: As detailed in Mainair Sports Service Bulletin No 41.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 004-12-93.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-022 AVIONS FAIREY SA

Subject: Societe Fairey SA modifications.

Applicability: Avions Fairey SA Tipsy Nipper T66 Series aeroplanes.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with the following Societe Fairey SA modifications:-

- TN 134 Replacement of elevator operating rod Part No. T66-C/512 by the tie rod Part No. T66-C/5009.
- TN 141 Replacement of Magneto contact cut-outs by new cut-outs Part No. 10F/11714.
- TN 142 Inspection of the cylinder heads of the Stamo 1400 engines for cracks.
- TN 158 Installation of a stall warning device.

This MPD becomes effective on 29 December 1995 and supersedes the requirement previously published in CAP 474 – Foreign Airworthiness Directives Volume III.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-023 PERCIVAL AIRCRAFT

Subject: Air Reservoirs – Ultrasonic crack detection of type B13 vessels.

Applicability: Percival Aircraft Piston Engine Provost aeroplanes.

Compliance: As detailed in British Aircraft Corporation Civil Technical Instruction No 106.

This MPD becomes effective on 29 December 1995 and supersedes CAA AD 2462 PRE 80.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-024 AMERICAN AEROLIGHTS

Subject: Type acceptance data sheet.

Applicability: American Aerolights Eagle 215B microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-1 Issue 3.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-025 AMERICAN AEROLIGHTS

Subject: Type acceptance data sheet.

Applicability: American Aerolights Eagle 430B microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-2 Issue 3.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–026 EIPPER AIRCRAFT

Subject: Type acceptance data sheet.

Applicability: Eipper Aircraft Quicksilver MX microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-3 Issue 2.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-027 EIPPER AIRCRAFT

Subject: Type acceptance data sheet.

Applicability: Eipper Aircraft Quicksilver MXII microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-4 Issue 2.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-028	<b>FLEXIFORM</b>	<b>SKYSAILS</b>	(WING)	/ ULTRASPORTS	(TRIKE)

Subject: Type acceptance data sheet.

Applicability: Flexiform Skysails / Ultrasports Solo Sealander / Tripacer and Solo Striker / Tripacer microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-5 Issue 2.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

	MPD: 1995-029	FLEXIFORM SKYSAIL	.S (WING) /	/ MAINAIR	<b>SPORTS</b> (	(TRIKE)
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Subject: Type acceptance data sheet.

Applicability: Flexiform Skysails / Mainair Sports Solo Sealander / Tripacer and Solo Striker / Triflyer microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-5A Issue 2.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-030	FLEXIFORM SKYSAILS	(WING) / MAINAIR	SPORTS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Flexiform Skysails / Mainair Sports Solo Sealander / Merlin and Solo Striker / Merlin microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-5B Issue 4.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

	MPD: 1995-031	FLEXIFORM SKYSAILS	(WING) / MAINAIR SP	<b>ORTS (TRIKE)</b>
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Subject: Type acceptance data sheet.

Applicability: Flexiform Skysails / Mainair Sports Solo Sealander / Rapier and Solo Striker / Rapier microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-5C Issue 3.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

# MPD: 1995–032 FLEXIFORM SKYSAILS (WING) / LANCASHIRE MICROLIGHT (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Flexiform Skysails / Lancashire Microlight Solo Striker / Microtrike microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BM0-5D Issue 1.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–033 MICRO BIPLANE AVIATION

Subject: Type acceptance data sheet.

Applicability: Micro Biplane Aviation Tiger Cub 440 microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-6 Issue 6.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-034 EUROWING

Subject: Type acceptance data sheet.

Applicability: Eurowing Goldwing microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BM0-7 Issue 6.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-035 HUNTAIR

Subject: Type acceptance data sheet.

Applicability: Huntair Pathfinder 1 (or Mk 1) microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-8 Issue 6.

This MPD becomes effective on 29 December 1995.

MPD No: 1995-036 R1

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-036 R1 F	LEXIFORM SKYSAILS (WING)	/ MAINAIR SPORTS (TRIKE)
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Subject: Type acceptance data sheet.

Applicability: Flexiform Skysails / Mainair Sports Striker Dual / Gemini, Sealander Dual / Gemini, Dual Sealander / Triflyer, Dual Striker / Triflyer, Striker Dual / Triflyer, Striker Dual / Tri-flyer 440, Striker Dual / Lancaster, Striker / Tri-flyer 440, Striker / Tri-flyer and Dual Striker / Micro Trike 440 microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-9 Issue 6.

This MPD becomes effective on 29 December 1995. Revision 1 (editorial amendment) becomes effective on 18 January 2001.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–037 QUENCHURST

Subject: Type acceptance data sheet.

Applicability: Quenchurst Skyriders Phantom microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BM0-10 Issue 2.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–038 FREEDOM FLIERS

Subject: Type acceptance data sheet.

Applicability: Freedom Fliers Pterodactyl Ptraveller (Canard Variants) microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-11 Issue 2.

This MPD becomes effective on 29 December 1995.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-039 SOLAR WINGS (WING) / MAINAIR SPORTS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Solar Wings / Mainair Sports Typhoon / Triflyer microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BM0-12 Issue 2.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-040 SOLAR WINGS (WING) / HORNET MICROLIGHTS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Solar Wings / Hornet Microlights Typhoon / Hornet microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BM0-13 Issue 2.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-041 SOLAR WINGS (WING) / HIWAY HANG GLIDERS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Solar Wings / Hiway Hang Gliders Typhoon / Skytrike microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No. BMO-14 Issue 3.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-042 SOLAR WINGS (WING) / ULTRASPORTS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Solar Wings / Ultrasports Typhoon (Variants) microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No. BMO-15 Issue 2.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-043 HIWAY HANG GLIDERS (WING) / ULTRASPORTS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Hiway Hang Gliders / Ultrasports Demon / Tripacer microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No. BM0-16 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-044 ULTRAFLIGHT

Subject: Type acceptance data sheet.

Applicability: Ultraflight Lazair III microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No. BMO-18 Issue 1.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-045 J A HUNT

Subject: Type acceptance data sheet.

Applicability: J A Hunt Huntwing / Hunt-Avon Skytrike microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No. BMO-17 Issue 2.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-046	<b>SOLAR WINGS</b>	(WING) / ULTRASPORTS (	(TRIKE)

Subject: Type acceptance data sheet.

Applicability: Solar Wings / Ultrasports Panther XL and Typhoon XL / Panther microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No. BMO-19 Issue 2.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-047 SOLAR WINGS / MAINAIR SPORTS

Subject: Type acceptance data sheet.

Applicability: Solar Wings / Mainair Sports Photon / Triflyer microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-20 Issue 2.

This MPD becomes effective on 29 December 1995.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-048 MICRO BIPLANE AVIATION

Subject: Type acceptance data sheet.

Applicability: Micro Biplane Aviation Tiger Cub 440 Romain modified microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-21 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-049 HIWAY HANG GLIDERS

Subject: Type acceptance data sheet.

Applicability: Hiway Hang Gliders Demon / Skytrike microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-22 Issue 1.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-050 HIWAY HANG GLIDERS (WING) / MAINAIR SPORTS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Hiway Hang Gliders / Mainair Sports Demon / Triflyer microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-23 Issue 2.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–051	SOUTHDOWN SAILWINGS (	(WING)	) / ULTRASPORTS (	TRIKE)

Subject: Type acceptance data sheet.

Applicability: Southdown Sailwings / Ultrasports Lightning / Tripacer microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-24 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-052 AVIASUD ENGINEERING

Subject: Type acceptance data sheet.

Applicability: Aviasud Engineering Aviasud Mistral microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-25 Issue 1.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-053 FLEXIFORM SKYSAILS (WING) / M J HADLAND (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Flexiform Skysails / M J Hadland Willow microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BM0-26 Issue 1.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 1995-054 SOUTHDOWN INTERNATIONAL (WING) / D RICHARDS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Southdown International / D Richards Sprint / Cougar microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-27 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-055 SOLAR WINGS (WING) / F TARJANI (UK) (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Solar Wings / F Tarjani (UK) Typhoon / Tarjani Trike microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BM0-28.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 1995–056 JORDAN AVIATION IN ASSOCIATION WITH DESIGNABILITY

Subject: Type acceptance data sheet.

Applicability: Jordan Aviation Jordan Duet Series 1 microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BM0-29.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-057 AMERICAN AEROLIGHTS

Subject: Type acceptance data sheet.

Applicability: American Aerolights with modifications by J May and R Martin (UK) Eagle Amphibian microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BM0-30 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-058 TEMAN AIRCRAFT

Subject: Type acceptance data sheet.

Applicability: Teman Aircraft Teman Mono-fly microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-31 Issue 2.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 1995–059 SOUTHDOWN INTERNATIONAL (WING) / ULTRASPORTS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Southdown International / Ultrasports Raven / Puma microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-33 Issue 1.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-060 DRAGON LIGHT AIRCRAFT

Subject: Type acceptance data sheet.

Applicability: Dragon Light Aircraft Dragon 150 and Dragon 200 microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-34 Issue 2.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995–061 SOLAR WINGS** 

Subject: Type acceptance data sheet.

Applicability: Solar Wings Typhoon / Solar Trike microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-35 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-062 SOLAR WINGS (WING) / BROOKS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Solar Wings / Brooks Typhoon / Brooks Prone microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-36 Issue 1.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-063 AERIAL ARTS (WING) / MEDWAY MICROLIGHTS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Aerial Arts / Medway Microlights 130SX / Half Pint microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-37 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995-064 AERIAL ARTS** 

Subject: Type acceptance data sheet.

Applicability: Aerial Arts 130SX / Alpha and Alpha Mk 2 microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-38 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995-065 AERIAL ARTS** 

Subject: Type acceptance data sheet.

Applicability: Aerial Arts 110SX / Chaser microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-39 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-066 AERIAL ARTS (WING) / CYCLONE HOVERCRAFT (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Aerial Arts / Cyclone Hovercraft 110SX / Cyclone 70 microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-40 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995-067 AERIAL ARTS** 

Subject: Type acceptance data sheet.

Applicability: Aerial Arts 130SX / Cyclone 70 and 130SX / Firefly microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-41 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-068 MAINAIR SPORTS

Subject: Type acceptance data sheet.

Applicability: Mainair Sports Gemini Sprint X / Triflyer, Sprint X / Puma and Sprint X / Sprint Triflyer 440 microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-42 Issue 3.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-069 SOUTHDOWN SAILWINGS

Subject: Type acceptance data sheet.

Applicability: Southdown Sailwings Lightning DS Puma / Puma and DS Mk 1 / Lightning DS Puma 440 microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-43 Issue 3.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–070 WEEDHOPPER OF UTAH

Subject: Type acceptance data sheet.

Applicability: Weedhopper of Utah Weedhopper JC-24-B microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-44 Issue 1.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-071 ULTRALIGHT FLIGHT

Subject: Type acceptance data sheet.

Applicability: Ultralight Flight Mirage Mk 1 and Mk 2 microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-45 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–072	<b>AIRWAVE</b>	<b>GLIDERS</b> (	(WING)	/ HORNET	MICROLIGHTS (	(TRIKE)

Subject: Type acceptance data sheet.

Applicability: Airwave Gliders / Hornet Microlights Nimrod / Hornet 250 microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-47 Issue 2.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-073 QUICKSILVER ENTERPRISES

Subject: Type acceptance data sheet.

Applicability: Quicksilver Enterprises Murphy modified Quicksilver MXL microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-48 Issue 1.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–074 AIRWAVE GLIDERS (WING) / ULTRASPORTS (*
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Subject: Type acceptance data sheet.

Applicability: Airwave Gliders / Ultrasports Nimrod / Tripacer and Nimrod 165 / Tripacer microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-49 Issue 1.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-075 AIRWAVE GLIDERS (WING) / MAINAIR SPORTS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Airwave Gliders / Mainair Sports Nimrod / Triflyer microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BM0-50 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-076 AIRWAVE GLIDERS (WING) / CHARGUS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Airwave Gliders / Chargus Nimrod / Chargus microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-51 Issue 1.

This MPD becomes effective on 29 December 1995.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-077 MICRO ENGINEERING AVIATION

Subject: Type acceptance data sheet.

Applicability: Micro Engineering Aviation MEA Mistral microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-52 Issue 1.

This MPD becomes effective on 29 December 1995.

MPD No: 1995-078 R1

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–078 R1 CHARGUS GLIDING COMPANY
Subject: Type acceptance data sheet.
Applicability: Chargus Gliding Company Chargus Titan microlights.
Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-53 Issue 1.
This MPD becomes effective on 29 December 1995. Revision 1 (editorial amendment) becomes effective on 18 January 2001.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–079 SOUTHDOWN SAILWINGS

Subject: Type acceptance data sheet.

Applicability: Southdown Sailwings Lightning / Wildcat microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BMO-54 Issue 1.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 1995-080 SOUTHDOWN SAILWINGS (WING) / MAINAIR SPORTS (TRIKE)

Subject: Type acceptance data sheet.

Applicability: Southdown Sailwings / Mainair Sports Lightning DS / Triflyer and Lightning DS / Triflyer 440 microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BM0-56 Issue 2.

This MPD becomes effective on 29 December 1995.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–081 RON WHEELER AIRCRAFT SALES

Subject: Type acceptance data sheet.

Applicability: Ron Wheeler Aircraft Sales Scout Mk 1, Mk 2 and Mk 3 microlights.

Compliance: Prior to the issue or the renewal of a Permit to Fly compliance must be shown with Type Acceptance Data Sheet No BM0-58 Issue 1.

This MPD becomes effective on 29 December 1995.

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995-082 CFM METAL-FAX** 

Subject: Air intake muffler and propeller pitch change.

Applicability: CFM Metal-Fax Shadow Series B and Shadow Series B-D microlights Serial Nos KO16, KO18, KO20, KO21, KO22, KO23, KO27, O24, O26, O28 and O29.

Reason: To conform to the Noise Certification requirements introduced on 1 April 1986. This MPD is raised to record the mandatory requirement shown in Type Approval Data Sheets Nos BM-6 Issue 3 and BM-19 Issue 2.

Compliance: Before the 1 April 1986 embody Mod 008 which requires the replacement of the foam air filter with a Rotax intake muffler, the carburettor main jet changed to No 155 and the Newton propeller changed in accordance with CFM Metal – Fax Service Bulletin No 2.

This MPD becomes effective on 29 December 1995.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995-083 SOLAR WINGS** 

Subject: Propeller mounting bolt torque on Rotax 462 liquid cooled engines.

Applicability: Solar Wing Pegasus Flash and Pegasus Flash 2 microlights.

Reason: There have been several reported cases of propeller bolts becoming loose on Pegasus aircraft fitted with Rotax 462 engines and bass wood propellers, which can lead to the bolts breaking. Moisture and temperature changes can cause the propeller hub to swell in moist conditions and shrink in dry conditions. This MPD is raised to record the mandatory requirement shown in Type Approval Data Sheets Nos BM-10 Issue 3 and BM-17 Issue 3.

Compliance: Before further flight and thereafter every week or after any sudden climatic change, check for correct propeller bolt torque in accordance with Solar Wings Service Bulletin No 0024.

This MPD becomes effective on 29 December 1995.

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995-084 SOLAR WINGS** 

Subject: Tyre Pressure.

Applicability: Solar Wing Pegasus Flash and Pegasus Flash 2 microlights.

Reason: The original tyre pressure recommended in the operator's handbook for the aircraft was 12 psi. Operational experience with the Pegasus Q-Wing has shown better puncture resistance and front brake performance with 22 psi pressure. This MPD is raised to record the mandatory requirement shown in Type Approval Data Sheets Nos BM-10 Issue 3 and BM-17 Issue 3.

Compliance: Before next flight, unless previously accomplished the tyre pressure must be checked and reset at 22 psi on all three wheels and the pilots' handbook amended in accordance with Solar Wings Service Bulletin No 0029.

This MPD becomes effective on 29 December 1995.

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 1995-085 SOLAR WINGS** 

Subject: Fuel tank venting system.

Applicability: Solar Wings Pegasus Flash and Pegasus Flash 2 microlights.

Reason: Following an accident to an aircraft, investigation has shown that the fuel tank venting system should be modified to cover situations where the tanks have been over filled and the aircraft is being taxied over rough ground. This MPD is raised to record the mandatory requirement shown in Type Approval Data Sheets Nos BM-10 Issue 3 and BM-17 Issue 3.

Compliance: Before next engine start, unless previously accomplished embody Modification 0018 which requires the addition of a tee piece and drain pipe to the fuel tank venting system in accordance with Solar Wings Service Bulletin No 0014.

This MPD becomes effective on 29 December 1995.

MPD No: 1995-086 R1

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-086 R1 SOLAR WINGS

Subject: Propeller attachment on Rotax 462 liquid cooled engines.

Applicability: Solar Wings Pegasus Flash 2 microlights.

Reason: A Pegasus Flash 2 operator had the propeller bolts shear on his aircraft. It appears that during the normal checks the nylocks used for locking the bolts were tightened instead of the bolt itself, which in fact threads into the prop fuselage. This MPD is raised to record the mandatory requirement shown in Type Approval Data Sheet No BM-17 Issue 3.

Compliance: Before next flight, unless previously accomplished embody Modification 0019 which increases the diameter of the propeller attachment bolts in accordance with Solar Wings Service Bulletin No 0019.

This MPD becomes effective on 29 December 1995. Revision 1 (editorial amendment) becomes effective on 1 December 1998.

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-087 CASA (BUCKER)

Subject: Weld failure on landing gear.

Applicability: CASA 1-131 (Bucker 131 Jungman) aeroplanes.

Reason: While taxying back from a normal landing the pilot found the aircraft difficult to steer and vibration developed. The aircraft swung violently to the left and the left-hand wing struck the ground. Examination revealed that the welded joints on the radius rod sleeve of the left-hand landing gear had failed. The radius rod had then separated from the oleo leg which had folded forward.

Compliance: At the next opportunity and thereafter following any heavy landing and at each Permit to Fly renewal inspect the landing gear welds for cracking. (See Figure 1 overleaf).

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 170.

MPD No: 1995–087 Page 2 of 2

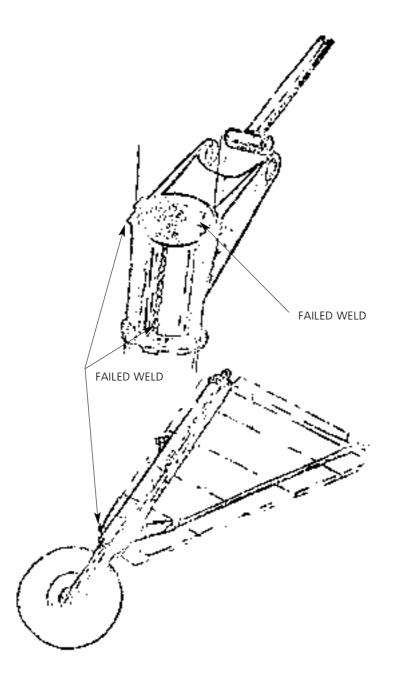


Figure 1

### **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-088 AMF MICROFLIGHT

Subject: Loose propeller blades.

Applicability: AMF Microflight Chevvron 2-32 microlights.

Reason: Two cases have been reported of loose propeller blades on the ground adjustable pitch propeller. It is believed to be due to shrinkage of the wooden root.

Compliance: Prior to each flight inspect for loose propeller blades in accordance with AMF Microflight Service Bulletin No 19.

This MPD becomes effective on 29 December 1995.

MPD No: 1995-089 R1

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–089 R1 VICKERS SUPERMARINE

Subject: Cracking of chassis pintles.

Applicability: Vickers Supermarine Spitfire Series aeroplanes.

Reason: As a result of landing gear failure on an RAF Spitfire aircraft, the CAA sent a telegram/ telex on 13 July 1976 to the owners of all civil registered Spitfire aircraft, requiring examination of the chassis pintles. Subsequent to the inspection we have been informed that when four new spares were crack tested, two of them were found to be cracked.

Compliance: Prior to installation, all replacement chassis pintles must be checked for cracking using either of the following inspections:

(1) By referring to CSDE Schedule for Historic Aircraft (Flying) Part 5G Section 3, examine the port and starboard chassis pintles using NDT Technique Spitfire/MAG/1.

or

(2) Examine the port and starboard chassis pintles using a suitable Magnetic Particle Technique in accordance with the appropriate procedures given in CAAIP Leaflet 4-7.

Report any cracked chassis pintles found to Mr A C Love, Aircraft Certification Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44 (0) 1293 573726.

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 367. Revision 1 becomes effective on 18 January 2001.

| MPD No: 1995-090 R1

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 1995–090 R1 ROTORWAY EXECUTIVE

Subject: Replacement of main sprocket attachment bolts (Item No 8, Part No E00-2407 on Rotorway Exec 90 drawing No E49-2001 and Item No 15, Part No E22-1110 on Rotorway Exec drawing No E52-2000).

Applicability: Rotorway Executive and Executive 90 helicopters.

Compliance: Superseded by MPDs 1997–001 and 1997–003.

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 1220. Revision 1 becomes effective on 20 January 1997.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-091 EX-MILITARY JET AEROPLANES - GENERAL

Subject: Ejector seat restraint check.

Applicability: UK registered ex-military aeroplanes fitted with ejector seats.

Reason: The initial investigation of a recent accident indicates that an ejector seat was not fully latched in the restraint position due to possible interference of incorrectly stowed attachments.

Compliance: Prior to further flight operator's of all aeroplanes fitted with ejector seats, whether operable or disarmed should ensure that seats are latched in the restraint position in accordance with the manufacturer's instructions. Additionally, ensure that the manufacturer's instructions regarding the seat and parachute harnesses are fully complied with for individual fitment prior to each flight.

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 1337.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-092 VICKERS SUPERMARINE

Subject: Spar Booms re-manufactured from L105.

Applicability: Vickers Supermarine Spitfire aeroplanes all marks except XVIII.

Reason: Original spar booms constructed of nested square tubes to DTD 273 (modern accepted substitute is L63) were replaced with tubes constructed of L105 or alloys of similar composition. In some cases these have been subjected to hardening treatment with the aim of achieving L63 properties. Material test certificates show ultimate tensile stress and 0.2% proof stress of individual tubes and these parameters may be compared with specifications as follows (noting that DTD 273 specified 0.1% proof stress and from this an allowable 0.2% proof stress has been calculated):

Material Specification	UTS	0.2% Proof Stress	See Note Below
BS L63	450 MPa (minimum)	370 MPa (minimum)	
DTD 273	448 MPa (minimum)	355 MPa (minimum)	(i)
BS L105	400 MPa (minimum)	290 MPa (minimum)	(ii)

Aircraft load factor limitations and aerobatics limitations allowable for a particular aircraft will depend on the properties of the materials fitted as shown on the appropriate material test certificates for each tube of each replacement spar fitted, as follows:

- (i) If all tubes are at least equivalent to DTD 273 numbers given above, original limitations will apply and aerobatics (with the exception of spinning and flick manoeuvres) will be permitted in accordance with published Pilots Notes. Note: This will not override limitations on previously issued Permits to Fly.
- (ii) If any single tube fails to meet DTD 273 but all meet or exceed L105, load factor limits of +4.5/-2.0g will apply and aerobatics (with the exception of spinning and flick manoeuvres) will be permitted in accordance with published Pilots Notes provided that a g meter is fitted and operational. Note: This will not override limitations on previously issued Permits to Fly. The further limitation, "in turbulent conditions do not exceed 250kt IAS" will also apply.

continued overleaf

MPD No: 1995–092 Page 2 of 2

(iii) If any single tube fails to meet L105 but the aircraft has been given a Permit to Fly previously, the aircraft should not fly until appropriate limitations have been determined and agreed by the CAA. In this event owners / operators should specify the limitations they wish to fly within and provide a substantiation of the validity of these to the CAA for approval. Application for approval of such a major modification should be on form AD282.

Credit may be given where heat treatment was applied after material release and properly documented, subject to agreement by the CAA.

#### Compliance:

- Before further flight owners / operators should compare the material test certificates appropriate to each tube of each replacement spar of each aircraft to determine the appropriate limitations. If all tubes are in accordance with i) or ii) above, flight may continue within the limitations specified. However, failing this further flight is prohibited pending CAA agreement in accordance with iii) above.
- 2 Before Permit renewal, for each aircraft, the owners / operators must submit copies of the material test certificates appropriate to each tube of each replacement spar to the CAA for addition to the database. The CAA will re-issue the Permit to Fly accordingly.
- Pilots Notes applicable to specific aircraft should be revised to show the appropriate limitations.

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 1362.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-093 BRITISH AEROSPACE

Subject: Control column cracking.

Applicability: British Aerospace Jet Provost Series aeroplanes.

Reason: A case has occurred on a military Jet Provost where the upper part of a Post-Mod 1759 control column has cracked at the aft lugs which form part of the breakable joint. British Aerospace are under no obligation to support Jet Provost aircraft that operate on civilian Permits to Fly, so, as an interim measure, until suitable formal arrangements can be made, the CAA are assuming responsibility for disseminating continued airworthiness information that the Design Authority (British Aerospace) has classified as Mandatory.

Compliance: Before further flight inspect and NDT the control column aft lugs in accordance with BAe CSTI / JET PROVOST / 93. Note: The reference to the T Mk 52 aircraft is potentially misleading; this Special Technical Instruction applies to all aircraft fitted with Post Mod 1759 control columns. All ex-Royal Air Force Jet Provost aircraft are Post Mod 1759.

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 1353.

MPD No: 1995-094 R1

Issue Date: 28 November 2003

#### MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to fly.

MPD: 1995-094 R1 ROTORWAY INTERNATIONAL

Record compliance with this MPD in the aircraft log book.

Subject: Tail rotor drive belt failure.

**Applicability:** Rotorway International Rotorway Executive, Rotorway Executive (Modified), Rotorway Executive 90 and Rotorway Executive 162F helicopters.

**Reason:** On 18 March 1994, a Rotorway Executive 90 suffered a failure of its rear tail rotor drive belt while in a low hover. A hard landing was made, the crew were not injured. Investigation of the failed drive belt by Rotorway International suggested that it may have been over-tensioned. Rotorway have stated that this over-tension could have been a result of binding of the idler pulleys and pivots, caused either by bottoming out or stiffness in the movement of the pivot arms. As the belts stretch, all the belts are tensioned by moving the tail rotor shaft rearward. The first (forward) belt is the one which is checked for proper tension, due to accessibility.

**Compliance:** Whenever tensioning the tail rotor drive belts, the idler pulleys and pivots should be checked to ensure that the pivots are not binding or have not "bottomed" causing the rearwards belts to be over tensioned, as this will probably not be detectable by checking the tension on the first belt in the normal way.

l	The original MPD became effecti	ve on 29 December 19	95 and superseded Le	etter to Owners

Operators No 1368. Revision 1 becomes effective on 5 December 2003.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-095 THRUSTER AIRCRAFT

Subject: To restore compliance with BCAR Section S.

Applicability: Thruster Aircraft Thruster T300 microlights.

Reason: It has been found that due to product improvements and modifications developed both Thruster (UK) Ltd and Tempest Aviation Ltd that Thruster T300 microlights have exceeded the maximum take-off weight authorised. In order to bring T300's into compliance with BCAR Section S, several modifications have to be made. This MPD is raised to record the mandatory requirement shown in Type Approval Data Sheet No BM-34 Issue 3.

Compliance: Within six months of the issue date of Thruster Aircraft Service Bulletin No TAS/SB02 Issue 2, modify the microlight in accordance with the bulletin. An alternative means of compliance is to restrict occupancy to one person by removal of the second seat and advising the CAA accordingly. The Permit to Fly will then be re-issued reflecting the reduced occupancy.

This MPD becomes effective on 29 December 1995.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-096 AMF MICROFLIGHT

Subject: Engine top rear mounting bolt.

Applicability: AMF Microflight Chevvron 2-32A, 2-32B and 2-32C microlights.

Reason: The engine is mounted to the frame with 3 off M8 bolts through the top aluminium casting, threaded into the crankcase. The occurrence has involved the thread stripping in the casting possibly due to hydraulic load applied in torque tightening the bolt with the thread locking compound used, which could strip the thread in the casting.

Compliance: Prior to further flight unless previously accomplished inspect the three engine top rear mounting bolt threads, including the tapped holes for signs of stripping in accordance with AMF Aviation Enterprises Service Bulletin No 033.

This MPD becomes effective on 29 December 1995.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-097 MIDLAND ULTRALIGHTS

Subject: Elevator Pushrod – Inadequate clearance through fuselage frame.

Applicability: Midland Ultralights Sirocco 377GB microlights.

Reason: The BMAA has notified the CAA of Defect No (94) 394, relating to a Sirocco 377GB microlight. The elevator push-pull control tube was found worn through where it passes through a fuselage frame. The tube wear is difficult to see without removing the control tube. The loss of this tube or its fouling would lead to loss of control of the aircraft. This defect has occurred during the previous 125 flying hours.

Compliance: Before further flight unless previously accomplished and thereafter every 50 flying hours the elevator push-pull control tube must be inspected for wear by a BMAA inspector.

BMAA inspectors are to sign the Airframe / Engine Log-book to confirm that the inspection has been carried out and report any similar defects to the BMAA Chief Inspector.

Enquiries regarding the inspection, should be referred to Mr D Marshall – BMAA Chief Inspector, 397 Bretch Hill, Banbury, Oxon, OX16 0JA.

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 1389.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-098 BRITISH AEROSPACE

Subject: Inspection of the mainplane spar upper attachment lugs.

Applicability: British Aerospace Jet Provost T Mk 52 aeroplanes.

Reason: Experience with another operator's version of the Jet Provost aircraft has revealed that a fault might exist which, if allowed to persist, could affect the airworthiness of your version of the aircraft. A Strikemaster operator, whilst carrying out the Ultrasonic technique of CSI / STRIKEMASTER / 29 Issue 12, (periodic NDT inspection of a mainplane attachment lug), reported a crack indication of 23% full screen height (FSH) at 6.5 on the timebase (T/B). This lug had been monitored since April 1994, when a 9% FSH indication was first reported. The wing was removed and the bush extracted, the cracking was greater than was expected from the NDT indication. Investigation at BAe determined that the technique should be made more sensitive and mainplanes which had revealed indications greater than the new parameters should be re-checked. As a result, CSTI / JET PROVOST / 96 has been issued to detect cracking in the faces of the mainplane upper spar lugs and the ultrasonic technique of CSI / JET PROVOST / 32 has been amended to include a revised examination standard.

Compliance: Within 5 flying hours inspect the mainplane spar upper attachment bolts in accordance with CSTI / JET PROVOST / 96 and the revised ultrasonic technique detailed in CSI / JET PROVOST / 32 on all aircraft which had a recorded examination standard of 5% screen height and above on last satisfaction of the ultrasonic examination of the mainplane spar upper attachment lugs.

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 1418.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-099 BRITISH AEROSPACE

Subject: Inspection of the inner and outer mainplane main spars.

Applicability: British Aerospace Canberra Series aeroplanes.

Reason: Experience with an operator's Canberra aircraft has revealed that a fault might exist which, if allowed to persist, could affect the airworthiness of your aircraft. During customer maintenance, exfoliation corrosion was discovered on the inner mainplane upper forward main spar. The corrosion extended into the spar flange and is attributable to the use of PK self-tapping screws in this area. BAe CSTI / CANBERRA / 118 has been issued which calls for NDT examination to detect laminar faults and turning faults in the inner and outer mainplane main spars upper and lower booms. It also calls for a visual examination for evidence of exfoliation corrosion in the spar extension vertical and horizontal flanges.

Compliance: Within 28 days carry out an NDT and general inspection of the inner and outer mainframe main spars in accordance with BAe CSTI / CANBERRA / 118.

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 1425.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-100 BRITISH AEROSPACE

Subject: Port and Starboard mainplane spar upper attachment lugs cracking.

Applicability: British Aerospace Jet Provost T Mk 52 aeroplanes.

Reason: Since the issue of Letter to Owners / Operators No 1418 (now MPD 1995-098) and CSTI / JET PROVOST / 96, further investigation, carried out by NDT specialists, has determined that cracking in the area indicated in Fig 3 of Appendix 1 to CSTI / JET PROVOST / 96 would not be detected using the ultrasonic technique called up by CSI / JET PROVOST / 32. This is covered by CSTI / JET PROVOST / 97, and applies to T Mk.52 aircraft. A new technique is being developed which will enable cracking in this region to be detected without removing the wing, and this will be issued as soon as it becomes available.

Compliance: Before next flight on all aircraft which have exceeded 7g or had a reported heavy landing since examination of the mainplane upper spar attachment lug was carried out with the wing removed.

- 1 Ensure the aircraft is safe for servicing.
- 2 Remove the aircraft wing(s) (ASM, Sect 3 Chap 2).
- Examine the upper attachment lug in accordance with Appendix 1 to CSTI / JET PROVOST / 96 Issue 1. Where there is no indication of cracking, recover the aircraft.
- Where there is a crack indication remove the bush from the upper attachment lug in accordance with current Servicing Procedures.
- 5 Examine the bore of the upper attachment lug in accordance with Appendix 3 to CSI / JET PROVOST / 32 and confirm the length and location of the crack(s). Retain the mainplane unserviceable and request advice as detailed below.

continued overleaf

MPD No: 1995–100 Page 2 of 2

Report full details of all wings examined under this instruction to British Aerospace, Military Aircraft Division, Warton Aerodrome, Preston, Lancashire PR4 1AX for the attention of the Technical Support Manager, Customer Support Department (W30).

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 1433.

| MPD No: 1995-101 R1

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 1995-101 R1 BRITISH AEROSPACE

Subject: Wing lower spar boom cracking.

Applicability: British Aerospace BAC 167 Strikemaster aeroplanes up to Mk90 and BAC 145 Mk55 aeroplanes which have exceeded 70 F.I.

Reason: British Aerospace have issued CSFI / STRIKEMASTER / 19 which advises operators of cases of cracks emanating from the bolt holes located in the inboard area of the port and starboard mainplane lower spar boom. The CSFI requires the following limitations to be complied with.

- 1 The maximum positive 'g' as detailed in Pilot's Notes Part 2 Chapter 1 para 5 and in the BAC Release Document, Section 6 (Manoeuvre Limitations) is restricted to 4.0g.
- 2 Aircraft may only fly for an additional 2 F.I. after receipt of this instruction.
- This limitation may be lifted after embodiment of Modifications 2275, 7044 and 7045 and the introduction of the Post Modification inspection requirements. Details of these modifications and subsequent inspections may be obtained from The Technical Manager Customer Support Department W30, British Aerospace, Military Aircraft Division, Warton Aerodrome, Preston, Lancashire PR4 1AX.
- Compliance: Comply with the limitations detailed in BAe CSFI / STRIKEMASTER / 19 Issue 5.
- A copy of the CSFI can be obtained from Mr A C Love, Aircraft Certification Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR Telephone +44 (0) 1293 573726.

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 1439. Revision 1 becomes effective on 1 December 1998.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-102 BRITISH AEROSPACE

Subject: Possible chafing / damage to electrical cable looms.

Applicability: British Aerospace Jet Provost T Mk 52, BAC 167 Strikemaster all Mks and BAC 145 Mk 55 aeroplanes.

Reason: During fault investigation of an apparent short circuit in the DC generating system, an operator discovered a chafe condition between heavy duty cables and the tread / anchor nut of a port mainplane trailing edge fairing attachment bolt. British Aerospace have issued CSTI / JET PROVOST / 98 and CSTI / STRIKEMASTER / 162 which calls for a visual examination for cable chafing / damage, repair / replacement of damaged cables, cable protection and encapsulation of the offending anchor nut assembly in sealing compound.

Compliance: Within 28 days carry out a visual inspection for cable chafing / damage, repair / replacement of damaged cables, cable protection and encapsulation of the offending anchor nut assembly in sealing compound in accordance with BAe CSTI / JET PROVOST / 98 or CSTI / STRIKEMASTER / 162 as applicable.

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 1440.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-103 MICROLIGHTS

Subject: Special Inspections – Warp Drive 'Standard Hub' propellers.

Applicability: Microlights fitted with Warp Drive propellers.

Reason: One of the hub plates of a Warp Drive propeller fitted to a Rotax 582 in a PFA aircraft was recently found to have cracked through fatigue after very few running hours. The propeller hub concerned was the Warp Drive 'Standard Hub', in which the hub consists of two flat aluminium plates with blades sandwiched between the two using plastic spacer blocks. The crack occurred in the plate adjacent to the propeller driving flange, which is the more highly loaded of the two plates. The crack propagated almost three-quarters of the way across the plate before being noticed during a pre-flight inspection. There is evidence that the crack may have developed in less than two hours operating time. There have been two earlier such occurrences, and as a result, Warp Drive introduced a design change in 1991 to incorporate a 1/8" thick steel disc adjacent to the 'engine side' hub plate to better spread the load. This is referred to as a 'Spacer Support Plate'. At the same time, the rear plate material was changed from 6061 to 2024 grade aluminium. Cracks present in 'pre-Mod' hub plates may result in the catastrophic failure of the propeller. All aircraft fitted with these propellers are administered by either the PFA or BMAA. Both organisations have issued instructions for Special Inspections.

Compliance: Before further flight comply with either:

- (a) PFA Special Inspection Warp Drive 'Standard Hub' Propellers Ref PFA / WDP / 001 dated 27 March 1995
- (b) BMAA Defect Report No: (95)-401 dated 4 April 1995

This MPD becomes effective on 29 December 1995 and supersedes Letter to Owners / Operators No 1443.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-104 AMF MICROFLIGHT

Subject: Fuel tank capacity.

Applicability: AMF Microflight Chevvron 2-32A, 2-32B and 2-32C microlights.

Reason: AMF Aviation Enterprises have issued Service Bulletin No 36 to remind owners and remove doubt regarding the fuel capacity of the Chevvron.

Compliance: Prior to further flight unless previously accomplished ensure that the fuel tank capacity meets the requirements of AMF Aviation Enterprises Service Bulletin No 036.

This MPD becomes effective on 29 December 1995.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–105 BRITISH AEROSPACE

Subject: Large epstein – Breakout of attachment holes.

Applicability: British Aerospace Canberra Series aeroplanes.

Reason: Several aircraft have been found on which breakout of the tapped special bolt holes, for the attachment of the lower tie plate to the larger Epstein Forging has occurred.

Compliance: Within 6 months from the effective date of this MPD carry out the one-off inspection of the Epstein Forging for evidence of threaded bolt hole breakout in accordance with BAe CSTI/CANBERRA/119. Where any hole breakouts are identified carry out the periodic inspection in accordance with BAe CSTI/CANBERRA/119.

A copy of the CSTI can be obtained from Mr R J Hardy, General Aviation Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44(0)1293 573309.

This MPD becomes effective on 13 November 1995.

MPD No: 1995-106 R1

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995–106 R1 BRITISH AEROSPACE

Subject: Control column cracked.

Applicability: British Aerospace Jet Provost Series aeroplanes.

Reason: A case has occurred where the upper part of a Post Mod 1759 control column has cracked at the aft lugs which form part of the column top to base pivot joint. As a consequence of this occurrence BAe CSTI/JP/93 (see Letter to Owners / Operators No 1353 to be issued as MPD 1995-093) was issued to confirm the integrity of control columns in service. A solution to prevent cracking of the control column is currently under investigation, pending availability of this solution it is recommended that the condition of the control columns is monitored.

Compliance: Within 150 flying hours of the satisfaction of BAe CSTI/JP/93 or within 28 days on those aircraft which have exceeded 150 flying hours since the satisfaction of BAe CSTI/JP/93, and subsequently at intervals of 150 flying hours. Inspect by NDT examination the control column lugs for cracks in accordance with BAe CSI/JET PROVOST/47.

A copy of the CSI can be obtained from Mr A C Love, Aircraft Certification Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44(0)1293 573309.

This MPD becomes effective on 13 November 1995. Revision 1 becomes effective on 1 March 1999.



MPD No: 1995-107 R2

Issue Date: 10 November 2006

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 1995-107 R2 BRITISH AEROSPACE

**Subject:** Port and Starboard mainplane spar upper attachment lugs cracking.

**Applicability:** All British Aerospace Jet Provost Series aeroplanes.

**Reason:** Cracking has occurred in the mainplane spar upper attachment lug in the outer surface and also from the bore of the lug. BAe CSI/JET PROVOST/32 was issued to introduce periodic inspections of both of these areas.

Cases have now occurred of mainplane spar upper attachment lugs which have satisfied BAe CSI/JET PROVOST/32 being found cracked beyond acceptable limits. Investigation has determined that the ultrasonic technique called up to detect cracking emanating from the bore of the lug cannot be relied upon to detect cracks round the full circumference of the lug and attempts to develop a technique which will guarantee the detection of cracking with the wing fitted have been unsuccessful.

BAe CSI/JET PROVOST/46 introduces a periodic inspection of the forward and aft faces of the mainplane spar upper attachment lug with the wing removed to check for cracking from the bore and retains the eddy current technique and recovery action detailed in BAe CSI/JET PROVOST/32 for cracking in the outer surface. BAe CSI/JET PROVOST/46 supersedes BAe CSI/JET PROVOST/32.

Following a review at BAe, this CSI was made applicable to all Jet Provost variants – this promulgated under Revision 2 of this MPD.

**Compliance:** At the next 150 flying hour servicing from the effective date of this MPD and subsequently at 150 flying hour intervals and also at each heavy landing or excess 'g' loading.

Inspect the port and starboard mainplane spar upper attachment lugs for cracking in accordance with BAe CSI/JET PROVOST/46 Issue 3.

A copy of the CSI can be obtained from Mr A C Love, Aircraft Certification Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, 2E Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44(0)1293 573726.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 15 November 2006.

#### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-108 BRITISH AEROSPACE

Subject: Control column cracked.

Applicability: British Aerospace BAC 167 Strikemaster all Mks and BAC 145 Mk 55 aeroplanes.

Reason: A case has occurred where the upper part of a Post Mod 1759 control column has cracked at the aft lugs which form part of the column top to base pivot joint. As a consequence of this occurrence BAe CSTI/SM/156 was issued to confirm the integrity of control columns in service. A solution to prevent cracking of the control column is currently under investigation, pending availability of this solution it is recommended that the condition of the control columns is monitored.

Compliance: Within 150 flying hours of the satisfaction of BAe CSTI/SM/156 or within 28 days on those aircraft which have exceeded 150 flying hours since the satisfaction of BAe CSTI/SM/156, and subsequently at intervals of 150 flying hours. Inspect by NDT examination the control column lugs for cracks in accordance with BAe CSI/STRIKEMASTER/51.

A copy of the CSI can be obtained from Mr R J Hardy, General Aviation Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44(0)1293 573309.

This MPD becomes effective on 13 November 1995.

| MPD No: 1995-109 R1

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

### MPD: 1995–109 R1 BRITISH AEROSPACE

Subject: Port and Starboard mainplane spar upper attachment lugs cracking.

Applicability: British Aerospace BAC 167 Strikemaster all Mks and BAC 145 Mk 55 aeroplanes (Pre Mod 7061) which have achieved 15 Fl or 1,000 flying hours. BAC 167 Strikemaster all Mks and BAC 145 Mk 55 aeroplanes (Post Mod 7061) which have achieved 40 Fl.

Reason: Cracking has occurred in the mainplane spar upper attachment lug in the outer surface and also from the bore of the lug. BAe CSI/STRIKEMASTER/29 was issued to introduce period inspections of both of these areas.

Cases have now occurred of mainplane spar upper attachment lugs which have satisfied BAe CSI/STRIKEMASTER/29 being found cracked beyond acceptable limits. Investigation has determined that the ultrasonic technique called up to detect cracking emanating from the bore of the lug cannot be relied upon to detect cracks round the full circumference of the lug and attempts to develop a technique which will guarantee the detection of cracking with the wing fitted have been unsuccessful.

BAe CSI/STRIKEMASTER/50 introduces a periodic inspection of the forward and aft faces of the mainplane spar upper attachment lug with the wing removed to check for cracking from the bore and retains the eddy current technique and recovery action detailed in BAe CSI/STRIKEMASTER/29 for cracking in the outer surface.

Compliance: At the next 150 flying hour servicing from the effective date of this MPD and subsequently at 150 flying hour intervals and also at each heavy landing or excess 'g' loading. Inspect the port and starboard mainplane spar upper attachment lugs for cracking in accordance with BAe CSI/STRIKEMASTER/50 Issue 3.

A copy of the CSI can be obtained from Mr A C Love, Aircraft Certification Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44(0)1293 573726.

This MPD becomes effective on 13 November 1995. Revision 1 becomes effective on 1 December 1998.

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1995-110 THRUSTER AIRCRAFT

Subject: To restore compliance with BCAR Section S.

Applicability: Thruster Aircraft Thruster TST microlights.

Reason: It has been found that due to product improvement modifications developed by both Thruster (UK) Ltd and Tempest Aviation Ltd that Thruster microlights have exceeded the Maximum All Up Weight Authorised. In order to bring TST's into compliance with BCAR Section S, modification action is required. This MPD is raised to record the mandatory requirement shown in Type Approval Data Sheet No BM-22 Issue 5.

Compliance: Before the renewal of the Permit to Fly modify the microlight in accordance with Thruster Aircraft Service Bulletin No TAS/SB01. An alternative means of compliance is to restrict occupancy to one person by removal of the second seat and advising the CAA accordingly. The Permit to Fly will then be re-issued reflecting the reduced occupancy.

This MPD becomes effective on 29 December 1995.

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

### MPD:1996-001 BRITISH AEROSPACE

Subject: Single breech starter (SBS) – Failed stud.

Applicability: British Aerospace Canberra Series aeroplanes (fitted with Single Breech Starter (SBS)) Sect. Ref 37F 4382141.

Reason: A case has occurred where a stud on an SBS has failed and was ingested into the engine causing damage.

Compliance: Before further flight from the effective date of this MPD and every 10 starter shots thereafter check the security of all nuts on the single breech starter in accordance with BAe CSI/ENGINE (CANBERRA)/33.

A copy of the CSI can be obtained from Mr A C Love, General Aviation Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44(0)1293 573726.

This MPD becomes effective on 26 April 1996.

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1996-002 ROLLS-ROYCE

Subject: Failure of right hand auxiliary gearbox bevel gear drive.

Applicability: Rolls-Royce Avon Mk 203 and Mk 207 engines fitted to Hawker Hunter aeroplanes.

Reason: A recent accident involving a Hunter aeroplane has been attributed to the loss of HP fuel pump drive following bevel gear failure in the right hand auxiliary gearbox. Subsequent investigation has revealed the omission of a roller bearing inner race in the gearbox at build. This led to a gradual deterioration in and eventual failure of, the drive train. It is possible that other Avon Mk 203 and 207 engines have also been built with this race missing. A dimensional check of the protrusion of the gearshaft beyond the end face of the tightening nut on the shaft will show if the gearbox build has been carried out satisfactorily. This MPD is issued to instruct a check of this dimension and defines action necessary, depending on the measurement obtained.

Compliance: Compliance with the actions defined is required before the next renewal of the Permit to Fly from the effective date of this MPD. The following actions are to be carried out by a person or organisation approved for the purpose by the CAA (See Note 1):

- 1 Gain access to the auxiliary gearbox drive cover (Part No. BA61339). This will involve removal of the engine from the airframe.
- 2 Unlock and remove the 8 nuts securing the cover and remove the cover.
- 3 Check that the gearshaft clamping nut (See Figure 1) is correctly locked with the cupwasher. If the nut is not correctly locked, this is indicative of a potential loss of clamping torque, and the gearbox is to be stripped to examine the condition of the gear train prior to further flight. (See Note 2).

continued overleaf

MPD No: 1996–002 Page 2 of 3

4 Measure the protrusion of the end face of the shaft from the end face of the nut (dimension X in Figure 1). If this dimension is 0.120"(3.0 mm) or less, the cover can be replaced, using new tabwashers and fresh jointing compound and the engine returned to service.

If the dimension is greater than 0.12" (3.0 mm) this is an indication that the inner race may be missing and the gearbox is to be removed before further flight. If, on subsequent strip, the inner race is found to be missing, the bevel gear drive train is to be replaced before being refitted to an engine. (See Note 2).

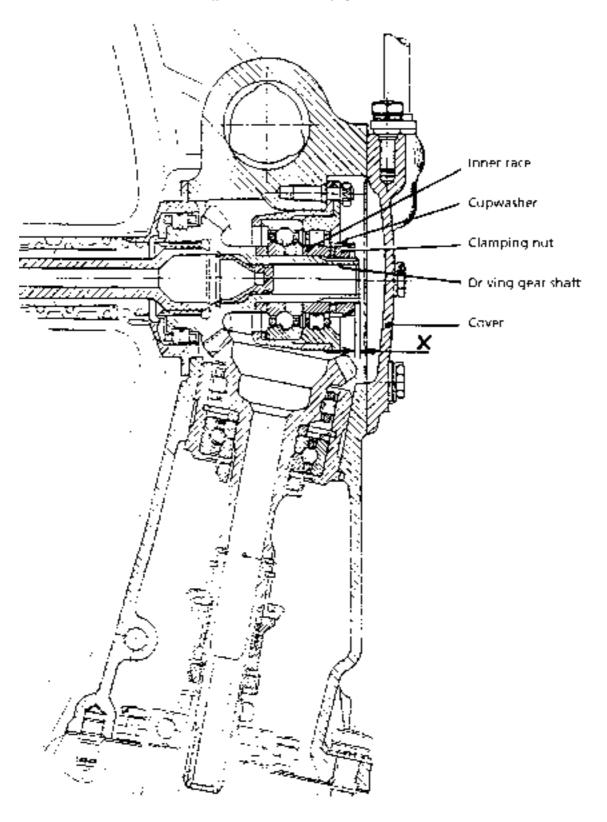
No action is required if it can be shown that checks in accordance with Rolls-Royce Military Aero Engines Ltd letter ref MSA/377 of 5 January 1996 have already been satisfactorily carried out by approved personnel. If the requirements of this MPD are satisfied, compliance is to be recorded in the engine logbook.

- Note 1: Where a CAA approved A8-20 exposition exists for the affected aircraft, and this A8-20 covers engine maintenance activity, the named person or organisation in the exposition may be considered as CAA approved to carry out the task. In cases where no A8-20 exposition exists, contact the local CAA Regional Office regarding approval of nominated personnel.
- Note 2: Any gearbox disassembly and rebuild required as a result of this MPD is only to be carried out by a person or organisation approved in the relevant A8-20 exposition for engine repair or overhaul, unless otherwise agreed by the CAA.

This MPD becomes effective on 3 May 1996.

MPD No: 1996–002 Page 3 of 3

Figure 1 Avon Mk. 203 & Mk. 207 Right hand auxiliary gearbox drive





| MPD No: 1996-004 R1

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1996-004 R1 JURCA
Subject: Wing Spar.
Applicability: Jurca MJ-5 Sirocco Series aeroplanes.
Reason: Refer to DGAC Airworthiness Directive 96-258 R1.
Compliance: Required as indicated in DGAC Airworthiness Directive 96-258 R1.
This MPD becomes effective on 12 November 1996. Revision 1 becomes effective on 1 December 1998.
continued overleaf

MPD No: 1996-004 R1 Page 2 of 5

BSAC

### CONSIGNE DE NAVIGABILITE

définie par la DIRECTION GENERALE DE L'AVIATION CIVILE

Les examens ou prodifications décrits ci dessous sont impératifs. La ron application des el laences conteques dans cette consigne extrathe l'inaphibide ex emi de l'elevacef concerné

#### JURCA

#### <u>Avions HJ-5</u>

Longeron de voilure

La présente Consigne de Navigabilité s'applique aux avions JURCA Type MJ-5 tous modèles et tous numéros de liasse de plans.

Suite & la rupture en vol d'une voilure lors d'évolutions acrobatiques, les mesures scivantes sont remdues impêratives à la date d'entrée en vigueur de la présente Consigne de Navigabilité :

- Pour les avions équipés de lungeron de voilore réalisé avec des semelles d'épaisseur 28 mm :
  - m-lavions nº 92 autorisé voltage (+ 6 g, 3 g) à la masse maximale de 770 kg

avions of Z6 , autorisé voltige (+ 6 g, - 3 g) masse limitée à 540 kg avions of Z1 F autorisé voltige (+ 6 g, - 3 g) masse limitée à 700 kg.

b- pour Lous les autres numéros de série et ceux dont le propriétaire ignore l'épaisseur des semelles, la praticise de mandeuvres acrobatiques est interdite et l'utilisation limitée à la catégorie U (i  $4.4\,$  g. -  $2.2\,$  g.). Lette restriction devia être signalée par l'apposition à bord d'une plaquette en vue du pilote indiquant :

#### ' YOUTIGE INTERDITE '

- Pour les avions équipés de longeron de voilure méafisé avec des semelles
  - d'épaisseur 33 mm : a- avions n° 75, 50, 46, 60 autorisés voltige (\* 6 g. 3 g) à la masse maximale de 770 kg avious en 41, 35, 41, 01 autorisés voltige (+ 6 g, - 3 g) masse limitas a 700 kg
  - b- pour foux les autres numéros de série, les propriétaires devront se mettre en rapport avec le concepteur pour définir, en fonction de la qualité de Unis utilisé el de la motorisation installée, la masse maximale permittant la pratique de mandeuvres acrobatiques dans les limites de la catégorie A (4 A g. - 3 g.). En l'attente de ces informations. les mesures édictées dans le paragraphe I)b s'appliquent.

. . . / . . .

n/JB

Date : 16/07/97 JURCA 96-258(A)R1 Avions HJ-5

CONSIGNE OF NAVIGABILITE (6): 96-258(A)R1 Page II\* 2 3560

3) La conception de des appareils de prévoit l'utilisation par un pilote seul à bord qu'installé en place event.

Mention de l'application de cette Consigne de Navigabilité ainsi que les limitations associées aux § 1)a et 7)a devront être portées sur le livret abronef et le carnet de route.

Concepteur : Monsieur Hammel 300000

3, Allee Desbordes 94430 CHENNEYTERE SHE MARKE Tel. 01 49 62 74 95

La présente Révision I remplace la CN 96-255(A) du 20/11/1995.

DATES B'ENTREE EN VIGUEUR :

CH originale : 07 NOVEMBRE 1996 Revision 1 : 26 JUILLET 1997

MPD No: 1996–004 R1 Page 4 of 5

C 5 A C

### AIRWORTHINESS DIRECTIVE

released by DIRECTION GENERALE DE L'AVIATION CIVILE.

respection and/or modifications pascribed below are mandatory. No person may operate a propositio which this

Alworthisess Directive applies except in accordance with the requirements of this Arworthisess Directive

Translation of 'Consigno de Navigabilité'

rel: 96-258(A)R1

In case of any difficulty, reference should be made to the French original issue.

#### JURCA

#### MJ-5 Airplanes

Wing span

This Airworthiness Directive applies to all JJRCA MJ-5 airplanes, of any model and drawing file number.

A report of a wing separation during aerobatle operations prompted this action. The following measures are made mandatory from the effective date of this Airworthiness Directive :

- 1) For all airplanes whose wing spar beem thickness is less than 28 mm : a- airplane S/N 92 : acrobatics manoeuvrers authorized (+ 6 g, 3 g) at the maximum weight of 770 kg airplane S/N 26 : acrobatics manoeuvrers authorized (+ 6 g, 3 g) at the limited maximum weight of 640 kg airplane S/N 21 F : acrobatics manoeuvrers authorized (+ 6 g, 3 g) at the limited maximum weight of 700 kg
  - at the limited maximum weight of 700 kg b- for the other S/N or those which the thickness is unknown by the owners acrubations maneuvers are prohibited, and the limited to those of utility category (+ 4.4 g, - 2.2 g.). This limitation must be displayed on a placard in clear view of the pilot stating:

#### " ACROBATICS MANEUVERS PROHIBITED "

2) For all airplanes whose wing spar boom thickness is 33 mm : a- airplanes 5/H 25, 50, 46 and 60 : acrobatics manoenviers authorized (+ 6 g, - 3 g) at the maximum weight of 770 kg airplanes 5/H 47, 35, 41 and 01 : acrobatics manoeuvrers authorized (+ 6 g, - 3 y) at the limited maximum weight of 700 kg

. . . . . . . . .

n/JB

July 16, 1997 JURCA 96-258(A)R1 MJ-5 Airplanes

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- b- for the other S/N, the owners must get into contact with the designer of the airplane in order to determine, according to the quality of wood used and to the engine installation, the maximum weight at which acrobable operations are allowed, in accordance with acrobatic category requirements (+ 6 g. 3 g.). Until this action is accomplished, the measures specified at paragraph 1)b apply.
- The design of these airplanes implies that, during solo flights, the gilat must use the front seat.

Aircraft and maintenance log books must mention the application of this Airworthiness Directive and the associated limitations of § 1)a et 2)a.

Designer : Monsieur Margel JURCA

3, Allée Desbordes

94430 CHENNEYLERE SUR NARNE - FRANCE

rel. (33) DI 49 52 74 95

This Revision 1 replaces the Airworthiness Directive 96-258(A) dated Royember 70, 1996.

### EFFECTIVE DATES :

Original AD : NOYEMBER 07, 1996 Revision 1 : JULY 26, 1997

MPD No: 1997-001 R2

Issue Date: 28 November 2003

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to fly.

### MPD: 1997-001 R2 ROTORWAY INTERNATIONAL

Subject: Mandatory requirements for UK approval.

Applicability: Rotorway International Rotorway Executive 90 helicopters.

**Reason:** The purpose of this MPD is to define the modifications and inspections required on the Rotorway Executive 90 helicopter for acceptance onto the UK register and to ensure continued airworthiness of the helicopter.

**Compliance:** Prior to the issue or the renewal of a Permit to Fly for a Rotorway Executive 90 helicopter, it must be established and certified that the following bulletins issued by Rotorway International have been complied with. Any repetitive inspection requirements must be incorporated into the applicable maintenance schedule for the helicopter:

Bulletin Number	Description
M-01	Replacement of main drive pulley bolts/Loctite on oil pressure plug.
M-02	Replacement Airframe tubes to improve structural integrity.
M-03	Mounting of Chain Oil Bath.
M-04	Reinforcement of passenger side skid tube.
M-05	Installation of replacement Tail Boom attachment brackets.
M-06	Main Sprocket attachment bolts.
M-07	'Gates' Tail Rotor drive belts.
M-08	Valve Stem Surface finish.
M-09	Main Rotor Blade Modification.
M-11	Secondary Drive Unit installation.
M-14	Engine cam gear life.
M-16	Throttle cable modification.
M-17	Dual throttle shaft weldment.
M-20	Inspection of tail rotor drive belt routing.
M-21	Inspection of secondary drive assembly.
A-09	Valve Train Inspections.
A-15	Main Rotor Blade Inspections.
A-18	Further Valve Train Inspections.
A-20	Tail Rotor Belt Tension.
A-21	Simplified method for checking tail rotor belt tension (See Note 1).
A-26	Secondary Drive Unit Keyway Inspection. (See Note 2).

continued overleaf

MPD No: 1997–001 R2. Page 2 of 2

- Note 1: See also MPD No. 1995-094 R1.
- Note 2: CAA regard the keyway inspection only as Mandatory. The replacement secondary bearing unit should be carried out if the regular monitoring (post flight) indicates that an over temperature situation has occurred with the three bearing installations.

Record compliance with this MPD in the aircraft log book

The original MPD became effective on 20 January 1997 and superseded MPD No.1995-090. Revision 1 became effective on 1 December 1998. Revision 2 becomes effective on 5 December 2003.

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-002 BRITISH AEROSPACE

Subject: Main undercarriage – Axle clamp locking bolt failure.

Applicability: British Aerospace Canberra Series aeroplanes.

Reason: A case has occurred where a main undercarriage axle clamp 2BA locking bolt has sheared causing the axle clamp assembly to partially undo, which in turn resulted in an incorrect sequence of operation of the main undercarriage.

Compliance: Within 7 days from the effective date of this MPD replace the main undercarriage axle clamp locking bolt and torque tighten the bolt in accordance with BAe CSI/CANBERRA/128. Check the locking bolt torque at each subsequent mainwheel change in accordance with the CSI.

A copy of the CSI can be obtained from Mr A C Love, General Aviation Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44(0)1293 573726.

This MPD becomes effective on 13 January 1997.

MPD No: 1997-003 R1

Issue Date: 28 November 2003

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to fly.

MPD: 1997-003 R1 ROTORWAY INTERNATIONAL

Subject: Mandatory requirements for UK approval.

**Applicability:** Rotorway International Rotorway Executive and Rotorway Executive (Modified) helicopters.

**Reason:** The purpose of this MPD is to define the modifications and inspections required on the Rotorway Executive helicopter for acceptance onto the UK register and to ensure continued airworthiness of the helicopter.

**Compliance:** Prior to the issue or the renewal of a Permit to Fly for a Rotorway Executive helicopter, it must be established and certified that the following bulletins issued by Rotorway Executive Incorporated and Rotorway International have been complied with, if applicable. Any repetitive inspection requirements must be incorporated into the applicable maintenance schedule for the helicopter.

### Part A Bulletins issued by Rotorway Executive Incorporated (pre-1990)

Bulletin Number	Description
85-09	Main Drive Chain repeat inspection. (See Note 1).
86-02	Main Drive Chain life. (See Note 1).
87-01	Modification to mounting of flying controls.
88-03	Minimum Alternator capacity requirement.
88-04	Landing gear inspection and life limit.
88-05	Vertical Fin Attachment Bracket and Bolt replacement.
88-07	Dellorto Carburettor Modification.
88-11	Safety Retainer.
89-01	Rotor Barrel Part Number E17-6100. (See Note 2).

continued overleaf

MPD No: 1997-003 R1 Page 2 of 2

### Part B Bulletins issued by Rotorway Executive International

Bulletin Number	Description
A-02	Replacement Airframe tubes to improve structural integrity.
A-05	Installation of replacement Tail Boom attachment brackets.
A-06	Replacement Main Rotor Shaft.
A-07	Installation of Electronic Ignition System.
A-08	Introduction of capacitance type fuel system.
A-09	Valve Train Inspection.
A-11	Main Sprocket attachment bolts replacement/inspection.
A-12	'Gates' Tail rotor belts.
A-13	Maintenance Instructions for lubrication of bearings.
A-14	Re-torque requirements for cylinder head bolts.
A-15	Main Rotor blade checks.
A-16	Prevention of Electrolytic corrosion in ignition systems.
A-18	Valve Train Inspections. (See Note 3).
A-19	Main Rotor blade modification.
A-20	Tail Rotor Belt Tension.
A-21	Simplified method for checking tail rotor belt tension. (See Note 4).
A-23	Inspection and monitoring of Secondary Drive Unit.
A-25	Tail Rotor BeiltTension (Cold Weather).
A-26	Secondary Bearing Unit Upgrade and keyway inspection. (See Note 5).
A-27	Component Lives.
A-28	Replacement of Elastomeric bearings.
A-29	Advice in respect of installing radio and avionic equipment.
A-30	Engine cam gear life.
A-31	Throttle cable modification.
A-36	Inspection of tail rotor drive belt routing.
A-39	Inspection of secondary drive assembly.

- Note 1: Applies to chain part number E22-1330 only. For other chain part numbers comply with current manufacturers life limits.
- Note 2: Where difficulty is experienced in balancing the tail rotor in the vertical plane, the rotor barrel must be replaced to avoid early fatigue failure.
- Note 3: The effectivity of this bulletin is stated as for the Executive 90 only. It has been confirmed by the manufacturer that it is equally applicable to the Executive helicopters.
- Note 4: See also MPD No. 1995-094 R1.
- Note 5: CAA regard the keyway inspection only as Mandatory. The replacement secondary bearing unit should be carried out if the regular monitoring (post flight) indicates that an over temperature situation has occurred with the three bearing installations.

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 20 January 1997 and superseded MPD No. 1995-090. Revision 1 becomes effective on 5 December 2003.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-004 BRITISH AEROSPACE

Subject: Airbrake operating jack failure.

Applicability: British Aerospace Canberra Series aeroplanes.

Reason: A case has occurred where a starboard airbrake operating jack end fitting has cracked circumferentially at the 'airbrake out' hydraulic banjo connection causing total loss of hydraulic pressure on shutdown of the port engine. Further examination revealed loss of hydraulic fluid through the cracked cylinder which is held in tension allowing the crack to be opened by 0.25 inch at its widest point. The cause of the incident was confirmed as catastrophic failure of the jack cylinder.

Compliance: At the next after flight servicing from the effective date of this MPD and subsequently every 7 days inspect the airbrake operating jack for cracks or failure in accordance with BAe CSI/CANBERRA/129.

A copy of the CSI can be obtained from Mr A C Love, General Aviation Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44(0) 1293 573726.

This MPD becomes effective on 12 February 1997.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-005 ROTORWAY EXECUTIVE

Subject: Engine cam gear life.

Applicability: Rotorway Executive helicopters.

Reason: The purpose of this MPD is to introduce a revised life limit for the cam gear in the engine following a number of failures in service. Failure of the cam gear results in engine failure.

Compliance: With effect from the date of this MPD, the engine cam gear life is reduced to 250 flight hours in accordance with Rotorway Executive International Advisory Bulletin Number A-30.

This MPD becomes effective on 18 April 1997.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-006 ROTORWAY EXECUTIVE

Subject: Engine cam gear life.

Applicability: Rotorway Executive 90 helicopters.

Reason: The purpose of this MPD is to introduce a revised life limit for the cam gear in the engine following a number of failures in service. Failure of the cam gear results in engine failure.

Compliance: With effect from the date of this MPD, the engine cam gear life is reduced to 250 flight hours in accordance with Rotorway Executive International Mandatory Bulletin Number M-14.

This MPD becomes effective on 18 April 1997.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-007 GYROPLANES

Subject: Propeller detachment.

Applicability: All gyroplanes fitted with Volkswagen engines.

Reason: An incident has occurred to an Everett Series 1 gyroplane where the propeller detached in flight due to the failure by rotating bending fatigue of the hollow bolt securing the propeller hub to the crankshaft. This MPD has been raised to require an inspection of the subject hollow bolt and to ensure that an appropriate means of positively locking the hollow bolt is used on re-assembly.

Compliance: For aircraft having satisfactorily completed five or more operating hours since the propeller/hub area was last disturbed, the requirements of this MPD must be carried out within the next five flying hours or by 31 May 1997, whichever is the sooner. For any other aircraft, the requirements of this MPD must be carried out before further flight.

Remove the propeller and hub from the crankshaft and carry out a detailed visual inspection of the hollow retaining bolt for condition and corrosion using a suitable magnifying glass and lighting. Additionally, carry out a dye penetrant inspection for cracking, paying particular attention to the area of the undercut between the thread and plain shank. If there is *any* doubt regarding the condition of the bolt, it must be replaced.

Re-assembly must be carried out using the engine manufacturer's recommended torque setting and an approved method of positively locking the bolt. The CAA must be advised of the results of the inspection and testing and the means used to lock the bolt on re-assembly.

Reports should be submitted to: Civil Aviation Authority

Aircraft Certification Section - 2E

Aviation House

Gatwick Airport South West Sussex RH6 0YR

continued overleaf

MPD No: 1997–007 Page 2 of 2

The Flight Release Certificate for the aircraft must be re-issued in accordance with the conditions of the Permit to Fly, and compliance with this MPD must be recorded in the aircraft log book.

This MPD becomes effective on 18 April 1997



| MPD No: 1997-008 R1

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-008 R1	YAKOVLEV / AEROSTAR SA / INTREPRINDEREA DE AV
	BACAU

Subject: Aircraft life extension.

Applicability: Yakovlev / Aerostar SA / Intreprinderea De Av Bacau Yak 52 aeroplanes.

Reason: Extension of the life to 5000 hours is permissible provided a number of modifications are installed.

Compliance: Superseded by MPD 1998–017.

This MPD becomes effective on 11 December 1997. Revision 1 becomes effective on 1 December 1998.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-009 YAKOVLEV / AEROSTAR SA / INTREPRINDEREA DE AV BACAU

Subject: Pneumatic system isolation.

Applicability: Yakovlev / Aerostar SA / Intreprinderea De Av Bacau Yak 52 aeroplanes.

Reason: The Yak 52 has a pneumatic engine starting system. It is possible to start the engine with the pneumatic system inadvertently switched off, by virtue of the pneumatic reservoir provided by the pressure stored in 'downstream' systems (undercarriage, flaps, brakes). There have been a number of incidents of loss of brake function on the ground which have resulted in substantial damage to other parked aircraft and airfield fixtures. Aerostar Service Bulletin No 7/95 introduces a modification which isolates the downstream pneumatic system.

Compliance: Within 12 months from the effective date of this MPD modify the pneumatic system to prevent recurrence. This can be accomplished by embodying Aerostar Service Bulletin No 7/95 or equivalent means approved by CAA. A copy of the bulletin and the parts necessary can be obtained from Yak UK Ltd or Aerostar SA in Romania. Addresses are as follows:

Yak UK Ltd Aerostar SA
Fullers Hill Grup Industrial Aeronautic Bacau

Lt Gransden Airfield Str Condorilor nr 9

Sandy Bacau
Beds SG19 3BP Cod 5500
Romania

Tel: 01767 651156 Tel: +40.34.172 006/175 070 Fax: 01767 651157 Fax: +40.34.172 023/172 259

This MPD becomes effective on 11 December 1997.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-010 KOLB

Subject: Seat pan and cushion.

Applicability: Kolb Twinstar Mk III microlights.

Reason: There have been a number of serious accidents on the Twinstar Mk III where the aircraft have impacted the ground at a high vertical speed but in a level attitude. Although the undercarriage design complies with BCAR Section S, severe impacts of this nature can result in undercarriage collapse and subsequent serious spinal injuries to the occupants. Mainair Sports issued Service Bulletin KSB1 Issue 1 on 7th August 1995 which introduced a more substantial seat pan design incorporating an aluminium seat pan and an energy-absorbent foam seat cushion. The bulletin was initially classified as 'Optional', but it has been determined that a Mandatory' classification is more appropriate.

Compliance: Within 12 months from the effective date of this MPD modify the seat pan and cushion in accordance with Mainair Sports Service Bulletin KSB1 Issue 1.

A copy of the bulletin may be obtained from Mainair Sports Ltd, Alma Industrial Estate, Regent Street, Rochdale, Lancs OL12 0HQ.

This MPD becomes effective on 11 December 1997.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-011 AVIASUD ENGINEERING

Subject: Interplane strut lower joints.

Applicability: Aviasud Engineering Aviasud Mistral microlights.

Applicability: An Aviasud Mistral suffered disconnection of a lower wing at the interplane strut lower joint just after take-off. The lower strut rod-end joint was examined by the French Authorities, and the cause of failure was found to be fatigue starting from a thread root. A coupling with a larger M10 diameter threaded portion incorporating rolled threads has now been specified by the manufacturer.

Compliance:

Before further flight from the effective date of this MPD comply with Part A (paragraph 1) of the Accomplishment Instructions.

Replace rod ends as required by Part A, noting the continued airworthiness requirements of Part B.

BMAA letter to Operators dated 15 November 1995 covering Aviasud Industries Service Bulletin dated 20 June 1995 refers.

#### Accomplishment Instructions:

#### Part A

- (1) Inspect the aircraft. The new standard of rod-end joints has an M10 diameter thread waisted down to 9mm thickness for the main body of the joint. If any smaller joint is discovered, it must be replaced as follows:
- (2) Detach the lower wings, or support the tips on padded trestles.
- (3) Remove the interplane struts.

continued overleaf

MPD No: 1997–011 Page 2 of 2

(4) Measure the distance between the centres of the interplane strut joint centres and keep for reference.

- (5) Remove the original end fitting insert from the lower end of the interplane strut and insert new M10 threaded inserts using Monel blind rivets in the original rivet holes.
- (6) Install rod end joint type DURBAL EM10 to achieve the same distance between centres as recorded in (4) above, and lock in place with a locknut.
- (7) Replace the interplane struts. Note the lower bolted connections attach via a spacer to adapt the 6mm bolt to the 10mm rod end eye.
- (8) Inspect the fuselage lower mainplane connections for distortion or corrosion. If satisfactory, replace the lower mainplanes.
- (9) Check that the interplane struts fit without binding. Check the roll control system for full and free movement.
- (10) The interplane strut connections must be inspected before further flight to determine the design standard. Joints below the M10 size must be replaced within 50 flying hours or before revalidation of the Permit to Fly, whichever is earlier.

Part B

The new type EM10 joints must be replaced every 900 flying hours. They must be replaced if there is any sign of corrosion or deformation.

General:

Compliance with this MPD must be signified by a BMAA inspector in the aircraft engine/airframe technical log.

Source of Materials:

A complete kit of parts for this modification can be obtained from Aviasud Industries, Rue Rudolph Diesel, 83600 Frejus, France.

For further information contact the Chief Technical Officer, British Microlight Aircraft Association, Bullring, Deddington, Oxford OX5 4TT, Tel 01869 338888.

This MPD becomes effective on 11 December 1997.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-012 PEGASUS AVIATION

Subject: Main beam fatigue failure.

Applicability: Pegasus Aviation Cyclone AX3 microlights.

Reason: Two examples of fatigue cracking have been reported on the main beam (running beneath the seats, connecting the lower cockpit tubes together and to which the wing struts are attached) of the Cyclone AX3. Pegasus Aviation have issued Service Bulletin No. 7, detailing inspection and modification.

#### Compliance:

Before further flight from the effective date of this MPD inspect/modify the aircraft in accordance with Pegasus Aviation Service Bulletin No. 7 Issue 3 as follows:

- (1) Up to 200 hours no action required.
- (2) Between 200 and 600 hours Carry out a dye-penetrant inspection of the main beam and subsequently every 100 hours. If signs of cracking are evident then the main beam must be replaced.
- (3) Over 600 hours Replace main beam.
- (4) After 6 August 1996 all existing type main beams must be replaced at 200 hours.

A redesigned main beam will be made available by Pegasus Aviation for component replacement.

continued overleaf

MPD No: 1997–012 Page 2 of 2

For further details contact:

Pegasus Aviation Elm Tree Park Manton Marlborough Wiltshire SN8 1PS

Tel: 01672 861578 Fax: 01672 861550

This MPD becomes effective on 11 December 1997.



MPD No: 1997-013 R1

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-013 R1 BRITISH AEROSPACE

Subject: Control column cracked.

Applicability: British Aerospace Jet Provost Series aeroplanes.

Reason: A case has occurred, where the upper part of a Post Mod 1759 control column has cracked at the aft lugs which form part of the column top to base pivot joint. To prevent cracking of the control column a packer is introduced to close the gap between the upper and lower control column assemblies.

Compliance: At the next Primary Servicing from the effective date of this MPD, modify the control column in accordance with BAe CSTI/JET PROVOST/99. This CSTI supersedes CSI/JET PROVOST/47 (MPD 1995-106 refers).

A copy of the CSTI can be obtained from Mr A C Love, Aircraft Certification Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44 (0)1293 573726.

This MPD becomes effective on 11 December 1997. Revision 1 becomes effective on 1 March 1999.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-014 BRITISH AEROSPACE

Subject: Control column cracked.

Applicability: British Aerospace BAC 167 Strikemaster all Mks and BAC 145 Mk 55 aeroplanes.

Reason: A case has occurred, where the upper part of a Post Mod 1759 control column has cracked at the aft lugs which form part of the column top to base pivot joint. To prevent cracking of the control column a packer is introduced to close the gap between the upper and lower control column assemblies.

Compliance: At the next Primary Servicing from the effective date of this MPD modify the control column in accordance with BAe CSTI/STRIKEMASTER/163. This CSTI supersedes CSI/STRIKEMASTER/51 (MPD 1995-103 refers).

A copy of the CSTI can be obtained from Mr A C Love, General Aviation Section, 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR Telephone +44 (0)1293 573726.

This MPD becomes effective on 11 December 1997.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-015 BRITISH AEROSPACE

Subject: Safety Ohmmeter – plastic coating damage.

Applicability: British Aerospace Jet Provost T Mk 52 aeroplanes.

Reason: Cases have occurred where Safety Ohmmeters have been vibro-etched to identify them and the etching has penetrated the plastic coating of the Safety Ohmmeter case exposing the base metal. In addition, the sealing on the heads of screws on the Safety Ohmmeter case has been found to be damaged or removed in-service. There is potential for static electrical discharge from any bare metal exposed on a Safety Ohmmeter case.

Compliance: Before the next use of test equipment from the effective date of this MPD inspect the Safety Ohmmeter for coating damage in accordance with CSTI/ MISCELLANEOUS (JET PROVOST)/61.

A copy of the CSTI can be obtained from Mr A C Love, General Aviation Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR Telephone +44 (0)1293 573726.

This MPD becomes effective on 11 December 1997.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-016 BRITISH AEROSPACE

Subject Safety Ohmmeter – plastic coating damage.

Applicability: British Aerospace BAC 167 Strikemaster aeroplanes all Mks.

Reason: Cases have occurred where Safety Ohmmeters have been vibro-etched to identify them and the etching has penetrated the plastic coating of the Safety Ohmmeter case exposing the base metal. In addition, the sealing on the heads of screws on the Safety Ohmmeter case has been found to be damaged or removed in-service. There is potential for static electrical discharge from any bare metal exposed on a Safety Ohmmeter case.

Compliance: Before the next use of test equipment from the effective date of this MPD inspect the Safety Ohmmeter for coating damage in accordance with CSTI/ MISCELLANEOUS (STRIKEMASTER)/ 62.

A copy of the CSTI can be obtained from Mr A C Love, General Aviation Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR Telephone +44 (0)1293 573726.

This MPD becomes effective on 11 December 1997.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-017 BRITISH AEROSPACE

Subject: Safety Ohmmeter – plastic coating damage.

Applicability: British Aerospace Canberra Series aeroplanes.

Reason: Cases have occurred where Safety Ohmmeters have been vibro-etched to identify them and the etching has penetrated the plastic coating of the Safety Ohmmeter case exposing the base metal. In addition, the sealing on the heads of screws on the Safety Ohmmeter case has been found to be damaged or removed in-service. There is potential for static electrical discharge from any bare metal exposed on a Safety Ohmmeter case.

Compliance: Before the next use of test equipment from the effective date of this MPD inspect the Safety Ohmmeter for coating damage in accordance with CSTI/ MISCELLANEOUS (CANBERRA)/ 62.

A copy of the CSTI can be obtained from Mr A C Love, General Aviation Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR Telephone +44 (0)1293 573726.

This MPD becomes effective on 11 December 1997.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1997-018 AMF MICROFLIGHT

Subject: Flap drive idler bracket.

Applicability: AMF Microflight Chevvron 2-32B and 2-32C microlights.

Reason: There is a possibility that the flap control lever can be moved past its stop when closing the flaps and moving the lever into the locked position. This can put undue load onto the idler bracket which is attached to the rear bulkhead on the LHS and 2 cases of partial failure have occurred. This may result in the flaps becoming unlocked in flight.

Compliance: Before further flight inspect the flap idler bracket behind the LH seat for signs of failure in the glassfibre laminate or bond to the rear bulkhead in accordance with AMF Aviation Enterprises Service Bulletin No 049. If any signs of failure are apparent, a repair must be accomplished before further flight. A repair scheme will be provided by the manufacturer on request. If no signs of failure are apparent, MOD 111 must be applied before accumulating a further 15 flying hours or 1 month whichever is sooner.

This MPD becomes effective on 10 September 1997.

MPD No: 1997-019 R2

Issue Date: 31 January 2010

## **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Flv.

#### MPD: 1997-019 R2 YAKOLEV / AEROSTAR SA / INTREPRINDEREA DE AV BACAU

Subject:	Fabric covered surfaces
Applicability:	Yakolev / Aerostar Sa / Intreprinderea De Av Bacau Yak 50 and 52 aeroplanes.
Reason:	There have been instances where Yak 50 and 52 aeroplanes have been imported into the UK with control surfaces covered with incorrect fabric or fabric in poor condition. In addition, there have been instances where the internal structure of these control surfaces was found to be corroded or was poorly repaired. Airworthiness Approval Notes for these aeroplanes issued after October 1996 require the replacement of the control surface fabric as a condition of obtaining a permit to fly. This MPD applies to earlier aeroplanes and also addresses the continued airworthiness of the types.
	This MPD has been revised to remove a typographical error from Paragraph 3 of the Compliance Section and a change of reference from Airworthiness Notice No 20 to Generic Requirement No 8.
	Within 6 months from the original effective date of this MPD comply with paragraph 1 of the following accomplishment instructions. At intervals not exceeding 3 years from the date of recovering comply with paragraph 2 of the accomplishment instructions.
	Accomplishment Instructions:
Compliance:	<ol> <li>Remove all control surface fabric and examine and repair the structure as necessary.         The control surfaces should then be recovered with appropriate fabric. Acceptable fabrics are:     </li> </ol>
	Ceconite 101 Poly-Fiber D-101A Poly-Fiber D-103 Airplane cloth mercerised cotton Grade A TSO-C15 Linen to Specification BS.9F1
	Equivalent materials may be acceptable, but such equivalence must be justified by the applicant to CAA.
	Refer to Generic Requirement No. 8 for further guidance.
	Compliance with this paragraph will not be required if the control surfaces have already been re-covered with one of the acceptable fabric materials listed above.

# Compliance Cont.

2. Notwithstanding the requirements of LAMS in regard to the internal inspection of flying control surfaces, the internal structure of the fabric-covered control surfaces shall be inspected for corrosion.

Note: To gain access, it may be necessary to remove or cut fabric to enable adequate inspection of the above areas. The fitment of Woods Rings or other repairs to fabric coverings to permit ease of re inspection should be in accordance with the relevant aircraft manufacturers requirements or as accepted by the CAA.

3. Record compliance with the appropriate accomplishment instruction in the aircraft logbook, listing the following:

Date of re-covering Materials used

#### Ensure compliance with this MPD is recorded in the aircraft logbook.

#### **Effective Date:**

31 January 2010

The original MPD became effective 11 December 1997 and Revision 1 became effective 14 December 1998.

- 1. This MPD was not published for consultation.
- 2. Enquiries regarding this MPD should be referred to the Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573309 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk

| MPD No: 1997-020 R1

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 1997-020 R1 YAKOVLEV / AEROSTAR SA / INTREPRINDEREA DE AV BACAU

Subject: Harnesses.

Applicability: Yakovlev / Aerostar SA / Intreprinderea De Av Bacau Yak 50 and 52 aeroplanes.

Reason: There have been a number of cases where the early 'ball-latch' harnesses mechanisms have failed under load. Because the consequences of this are potentially serious, these harnesses must be replaced with 'cone-latch' harnesses. The type of control column fitted to Yak 52 aeroplanes, serial numbers 780102 to 8910115 are fitted with a thumb-operated handbrake locking latch on the rear of the control column, and this can foul the 'cone-latch' harness. The thumb-operated handbrake locking latch must therefore be removed. Modification 53-U (53-Y) introduces a revised control column design that addresses this problem.

Compliance: Within 6 months from the effective date of this MPD revision comply with the following accomplishment instructions:

- 1 Determine the type of harness latching mechanism fitted.
- 2 If the aeroplane is fitted with a 'ball-latch' harness, replace with a 'cone-latch' harness.
- 3 Yak 50 only:

If the aeroplane is fitted with a thumb-operated handbrake locking latch on the rear of the control column, remove it. Alternatively, fit a post-Modification 53-U (53-Y) control column.

4 Yak 52 only:

If the aeroplane is within serial number range 780102 and 8910115, and the control column is pre-Mod 53-U (53-Y), remove the thumb-operated handbrake locking latch on the rear of the control column. Alternatively, fit a post-Modification 53-U (53-Y) control column.

5 Register compliance in the aeroplanes logbook.

continued overleaf

MPD No: 1997–020 R1 Page 2 of 2

6 Parts and installation instructions may be obtained from:

Aerostar SA AeroTrade International Yak UK Ltd Str Condorilor nr. 9 11 Ostasilor StrFullers Hill Bacau Bucharest Lt Gransden Airfield Cod 5500 Romania Sandy Romania Beds

SG19 3BP

This MPD becomes effective on 11 December 1997. Revision 1 becomes effective on 1 December 1998.

MPD No: 1998-001 R2

Issue Date: 31 January 2002

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-001 R2 YAKOVLEV / AEROSTAR SA / INTREPRINDEREA DE AV BACAU

Subject: Vedenyev / Ivchenko M-14P engine life limit.

**Applicability:** Yakovlev / Aerostar SA / Intreprinderea De Av Bacau Yak 50 and 52 aeroplanes.

**Reason:** Initial approval of the Yak 50 and 52 aeroplanes defined a conservative engine overhaul life of 1500 hours. This figure is quoted in all Airworthiness Approval Notes issued before December 1997. It has been established that this overhaul life is incorrect. The engines have a final life limit of 2250 hours after which they are required to be removed from service. There is no higher level of overhaul to extend the engine life beyond 2250 hours.

**Compliance**: Vedenyev / Ivchenko M-14P engines installed in Yakovlev / Aerostar SA / Intreprinderea De Av Bacau Yak 50 and 52 aeroplanes shall be removed from service at 2250 hours since new.

Note: The manufacturers documentation states intermediate overhaul periods during engine life, with the first overhaul at 750 hours, second overhaul at 1250 hours, third overhaul at 1750 hours with the engine becoming time expired at 2250 hours.

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 27 July 1998 and Revision 1 became effective on 13 November 2000. Revision 2 becomes effective on 4 February 2002.

MPD No: 1998-002 R1

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-002 R1 PEGASUS AVIATION

Subject: Lifing and redesign of leading edge bolt assembly.

Applicability: Pegasus and Solar Wings XL Wings.

Reason: A leading edge-to-crossboom bolt failed in 1997. This failure was to a post-Mod 110 standard (Service Bulletin No 0041) and was a fatigue failure of the AN-5 bolt shank. The leading edge bolt assembly has been redesigned by Modification PG123 to accommodate misalignment and incorporate larger 10mm bolts. (Drawing SW-90608). This is covered by Service Bulletin No 0087.

Compliance: Within 100 flying hours or 300 flights whichever is the sooner from the effective date of this MPD replace the original leading edge bolt assembly with the new 10mm bolt assembly in accordance with Pegasus Aviation Service Bulletin No 0087. The life of the new 10mm bolt assembly is 1000 flight hours, dependent on an annual inspection for corrosion and wear.

For further details contact:

Pegasus Aviation Ltd Elm Tree Park Manton Marlborough Wiltshire SN8 1PS

Tel: 01672 861578 Fax: 01672 861550

This MPD becomes effective on 27 July 1998. Revision 1 (editorial amendment) becomes effective on 18 January 2001.

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-003 ROTORWAY EXECUTIVE

Subject: Throttle cable.

Applicability: Rotorway Executive helicopters with single carburettor engines.

Reason: In some instances, the ball end of the throttle cable may catch inside the throttle cable clevis. When the cable slips free, it may cause a sudden drop in engine RPM.

Compliance: Within 10 flying hours or 3 months whichever is the sooner from the effective date of this MPD modify the throttle cable in accordance with Rotorway International Advisory Bulletin A-31.

This MPD becomes effective on 27 March 1998.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-004 ROTORWAY EXECUTIVE

Subject: Throttle cable.

Applicability: Rotorway Executive 90 helicopters.

Reason: In some instances, the ball end of the throttle cable may catch inside the throttle cable clevis. When the cable slips free, it may cause a sudden drop in engine RPM.

Compliance: Within 10 flying hours or 3 months whichever is the sooner from the effective date of this MPD modify the throttle cable in accordance with Rotorway International Mandatory Compliance Bulletin M-16.

This MPD becomes effective on 27 March 1998.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-005 PEGASUS AVIATION

Subject: Aileron control system.

Applicability: Pegasus Aviation Cyclone AX3 and AX2000 microlights.

Reason: There has been an example of a failure of an aileron return pulley bracket attachment, close to its mounting hole. In addition, it has been noticed that it is possible for the root batten extraction cord loop to engage over the aileron horn. Aileron control would be affected in both cases. These problems are addressed in Service Bulletin AX2010.

Compliance: Within 25 flight hours for aircraft that have completed more than 200 flights or 400 flight hours inspect and modify the aileron return pulley bracket and modify the batten extraction cord loop in accordance with Cyclone Airports Service Bulletin No. AX2010.

For further details contact:

Pegasus Aviation Ltd Elm Tree Park Manton Marlborough Wiltshire SN8 1PS

Tel: 01672 861578 Fax: 01672 861550

This MPD becomes effective on 27 July 1998.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-006 ROLLS-ROYCE

Subject: Expansion chamber to outer air casing flange joint – Bolt failure.

Applicability: Rolls-Royce Avon Mk 1 and Mk 102 engines.

Reason: There have been instances of the failure of bolts (Part No. RJ9207) in the joint between expansion chambers and the outer air casing. Such failures can lead to hot gas leaks which could cause flame breakout or compromise the integrity of surrounding airframe structure. Bolt failure has been attributed to insufficient torquing of the securing nuts.

#### Compliance:

(i) Engines fitted to aircraft:— Within 3 months from the effective date of this MPD and thereafter at intervals not to exceed 12 months or 125 flying hours (whichever limit is reached first) carry out the following checks on each engine. Remove the top cowling and fully lower the bottom cowling. Carry out a visual check of the bolts, and check the bottom cowling for bolt debris. If any debris is found, or any bolts are missing, the engine is to be rejected from service and all the subject bolts are to be replaced in accordance with the accomplishment instructions. Any engine rejections as a result of this inspection are to be reported to the CAA.

These inspections are no longer required if the bolts are renewed at an overhaul.

(ii) Uninstalled engines:— Renew bolts before fitting to the aeroplane in accordance with the accomplishment instructions.

continued overleaf

MPD No: 1998–006 Page 2 of 2

Accomplishment Instructions:

## Procedure for renewing bolts, expansion chamber to outer air casing, and tightening the nuts.

Note: During the following procedure for fitting new parts, the expansion chamber to outer air casing flange joint is not to be separated if at all possible. If the joint is separated, fit a new sealing ring GP.7462.

- Remove the combustion chambers as instruction in AP102C-1522-6A, Part 1, Sect 1, Chap 3.
- 2 Remove and discard the bolts, nuts and washers from the joint flange. If any fasteners are found to be loose, retain the parts for investigation.
- 3 Fit new bolts, nuts and washers.
- 4 Consider the seven bolt positions to be numbered consecutively round the flange, clockwise from the front, taking the three closely spaced positions as 1, 2 and 3.
- Using clean engine oil as a thread lubricant, lightly nip up the nuts at positions 1 and 5, then those at positions 3 and 6, and then those at positions 4 and 7.
- 6 Finally, lightly nip up the remaining nut at position 2.
- When the flange faces are in light contact with all fasteners lightly nipped, tighten the nuts to 90 lbin in the same sequence as before using a torque spanner.

The parts concerned are as follows, ref Schedule of Spare Parts AP.102C-1522-3A, Plate 9A, page 68J:

Bolt, expansion chambers to outer air casings	RJ9207
Nut	KJ4310
Washer	KJ4508

A record of accomplishment is required.

This MPD becomes effective on 27 July 1998.

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-007 ROLLS-ROYCE

Subject: Inspection and/or replacement of Joint Washer – augmentor and by-pass valve assembly to BFCU body.

#### Applicability:

- (a) Equipment in use BFCUs fitted to Rolls-Royce Viper Mk 202 and Mk 535 engines installed in Jet Provost/Strikemaster aeroplanes.
- (b) Equipment in store BFCUs fitted to Rolls-Royce Viper Mk 202 and Mk 535 held as spare or undergoing repair in engine bays or held in storage.

Reason: X-ray inspection of joint washers (Pt No V56539, Mod V 8185) from several production batches has recently found 17 with varying degrees of missing metal mesh reinforcing matrix. This finding suggests that defective joint washers may have been previously supplied and fitted to BFCUs in service. Potentially this fault also affects the earlier standard of reinforced joint washer (Pt No V44186, Mod V 3399) which was manufactured by the same source supplier.

Failure of an installed joint washer will result in an engine high pressure fuel leak.

Rig testing with defective joint washers has shown that the probability of joint washer rupture is greatest during the first 200 hours after installation.

Joint washer integrity is significantly impaired if the specified torque load is not applied to the four augmentor valve assembly securing nuts.

This MPD instructs the removal of all BFCUs in service potentially fitted with defective augmentor joint washers.

Note: This MPD applies only to BFCUs with joint washers to Pt No V56539, Mod V8185 standard, and Pt No V44186, Mod V3399 standard. Refer to the engine log book and/or BFCU log card to establish the joint washer modification standard.

continued overleaf

MPD No: 1998–007 Page 2 of 4

#### References

- (1) ST/Viper/36
- (2) Rolls-Royce Alert SB 73-A65

#### Compliance:

- (a) Equipment in use
  - (1) BFCUs which have completed less than 200 hours since new, overhaul or repair.
    - Within 30 flying hours from the effective date of this MPD.
  - (2) BFCUs which have completed more than 200 hours since new, overhaul or repair.

At next engine removal.

- (b) Equipment in storage
  - (1) Engines held as spares or in storage.

As for installed engines.

(2) BFCUs held as spare.

Replace/inspect joint washer before use on an engine.

#### Accomplishment Instructions:

- 1 (a) Gain access to the BFCU.
  - (b) Remove the BFCU in accordance with the procedure in the relevant Maintenance Manual.
  - (c) Inspect/replace joint washer and install replacement BFCU in accordance with the procedures in the relevant Overhaul and Maintenance Manuals. Carry out engine ground run in accordance with the Maintenance Manual.

Note: A joint washer used as a replacement must have packaging marked with 'RQSC: 12X-1018'. Alternatively a washer may be refitted provided it passes the inspections described in para 2 (a) to (c). The x-ray inspection specified must be carried out by an organisation approved by the CAA to carry out such activity.

2 (a) Magnetic Inspection

Using a hand magnet confirm that the joint washer is not attracted to the magnet.

- (b) Visual Inspection
  - (1) The joint washer must be uniformly smooth on both sealing surfaces. The joint washer sealing surfaces must not contain pits, voids, blisters or bubbles. The stainless steel matrix must be completely contained below the surface of the joint washer. A 'textured' visual effect due to the matrix beneath the surface is acceptable.

continued

MPD No: 1998–007 Page 3 of 4

(2) Any protruding matrix wire ends, 0.040 in (1,0mm) or more long, projecting from the external edges of the joint washer, are to be cut back cleanly to within 0.020 in (0,5mm) of the edge without damaging the edge. Protruding ends must not be pulled out of the joint washer.

#### (c) X-ray Inspection

The surface area of the joint washer is to be subjected to a 100% x-ray inspection to make sure that the stainless steel matrix is complete over the whole area of the joint washer. Any missing or incomplete strands with 0.040 in (1,0mm) of the edges at sides B, C and D are acceptable.

Internal 'stray wires' produced in the manufacturing process, completely contained within the joint washer material and revealed by the x-ray inspection, are acceptable between holes 2 and 3 and holes 3 and 4 (refer to figure 1). Internal 'stray wires' are not acceptable between holes 1 and 2, and holes 1 and 4.

The alignment/waviness of the stainless steel matrix should be parallel within plus or minus 10 degrees relative to sides B or C (refer to figure 1). Variations between these limits at any position on the joint washer are permissible, provided that such variations are in the form of smooth curves or waves, with no more than one wave across the width or depth of the joint washer. Local variations to a maximum of plus or minus 20 degrees are permissible at the following positions:

- (a) At side B between holes 2 and 3, in the direction parallel to side C.
- (b) At side C between holes 3 and 4, in the direction parallel to side B.
- (c) At side D between holes 4 and 1, in the direction parallel to side C.

At hole 5, there is to be a minimum of 4 strands of wire, parallel to the edge at side C between the outer extremity of the hole and the outer edge of the joint washer. Similarly, there is to be a minimum of 4 strands of wire, parallel to the edge at side C between the inner extremity of the hole and the inner diameter of the joint washer.

At hole 6, there is to be a minimum of 4 strands of wire, parallel to the edge at side C between the outer extremity of the hole and the outer edge of the joint washer. Similarly, there is to be a minimum of 4 strands of wire, parallel to the edge at side C between the inner extremity of the hole and the inner diameter of the joint washer.

At side D, there is to be a minimum of 4 strands of wire, parallel to the edge at side B between the inner and outer edges of the joint washer.

A record of accomplishment is required. The relevant log book entry is to indicate that the requirements of this MPD have been satisfied.

This MPD becomes effective on 27 July 1998.

continued overleaf

MPD No: 1998–007 Page 4 of 4

# ENGINE FUEL AND CONTROL – BFCU – INSPECTION OF AUGMENTOR AND BY-PASS VALVE ASSEMBLY JOINT WASHER

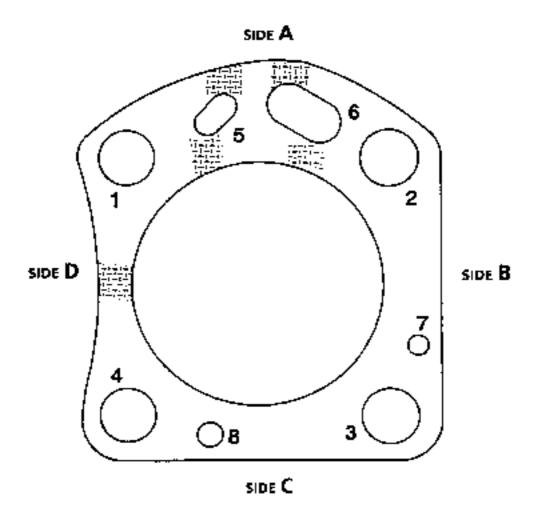


Figure 1 Plan view of Augmentor and By-Pass Valve Joint Washer

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-008 VICKERS SUPERMARINE

Subject: Undercarriage selection control unit.

Applicability: Vickers Supermarine Spitfire and Seafire aeroplanes all marks.

Reason: The cause of a recent wheels up landing by a Spitfire was found to be a jammed selection lever. Other aeroplanes were inspected and found to be in a similar condition such that potential for a jam existed. There is a 3/8 inch aluminium cube electrical cable guide block inside at the top of the undercarriage selection control unit, attached to the inside of the control unit by a 6 BA bolt. On some aeroplanes, where wiring has been re-worked using modern materials, this guide block is not used. If the guide block is unused and becomes loose it may become detached from its intended location and fall into the travel channel of the lever. If this occurs, it may prevent undercarriage down selection.

Compliance: Before further flight from the effective date of this MPD and therafter at intervals not exceeding 12 months, inspect to ensure that the 3/8 inch aluminium cube electrical cable guide block inside at the top of the undercarriage selection control unit is firmly attached. If the guide block is not required it may be removed and replaced with an appropriate self locking nut and washer in which case the 12 month repetitive inspection need not be undertaken. On two-seat aeroplanes, actions must address both undercarriage selection control units.

Record actions taken in the aeroplane log book.

This MPD becomes effective on 1 May 1998.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-009 ROTORWAY EXECUTIVE

Subject: Dual throttle shaft weldment.

Applicability: Rotorway Executive 90 helicopters.

Reason: The dual throttle shaft weldment (Part No. E15-9021) consists of a short sleeve attached to the throttle shaft by means of a rosette weld. This type of weld is made by drilling through the outer sleeve, then welding in the hole to join the two pieces. Slight misalignment could cause the weld to fatigue and break, resulting in loss of throttle control in the passenger (dual) collective stick.

Compliance: Within 10 flying hours or 3 months whichever is the sooner from the effective date of this MPD inspect/modify the passenger (dual) collective stick in accordance with Rotorway International Mandatory Compliance Bulletin M-17.

Do not fly the helicopter using the passenger (dual) collective control until the inspection and modification required by Mandatory Compliance Bulletin M-17 has been completed.

This MPD becomes effective on 27 March 1998.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 1998-010 BRITISH AEROSPACE

Subject: Airbrake operating jack end cap fitting – replacement.

Applicability: British Aerospace Canberra Series aeroplanes.

Reason: A case has occurred where a Starboard airbrake operating jack end fitting cracked circumferentially at the 'airbrake out' hydraulic banjo connection. This resulted in total loss of hydraulic pressure and fluid. The cause of the incident was confirmed as catastrophic failure of the jack body. Pending the results of the defect investigation CSI/CANBERRA/129 was issued to monitor the airbrake jack body and CSFI/CANBERRA/16 was issued to restrict the use of airbrakes to emergency use only. The defect investigation has been completed and confirmed that failure of the jack end cap fitting was due to multi-origin fatigue.

Compliance: At the next servicing opportunity from the effective date of this MPD replace the airbrake jack end cap fitting Pt. No. 103036600 with a newly manufactured part in accordance with CSTI/CANBERRA/120. Newly manufactured parts are now made from L160 material not the L77 that end fittings were originally manufactured from. Replacement in accordance with the CSTI renders further compliance with CSI/CANBERRA/129 (MPD 1997-004) and CSFI CANBERRA/16 unnecessary.

A copy of the CSTI can be obtained from Mr A C Love, Aircraft Certification Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44 (0)1293 573726.

This MPD becomes effective on 1 December 1998.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-011 BRITISH AEROSPACE

Subject: Mk 4 oxygen hose - contaminated.

Applicability: British Aerospace Canberra Series aeroplanes.

Reason: A white sticky powder has been found on the inside of the ice guard filter of a oxygen mask. Further examination revealed that the contamination had originated from the internal surface of the Mk 4 oxygen hose. Investigation has revealed that this problem is restricted to a batch of hoses manufactured by William Warne prior to June 1997.

Compliance: Not later than 7 days from the effective date of this MPD replace all Mk 4 oxygen hoses manufactured by William Warne prior to June 1997 in accordance with CSTI/SURVIVAL EQUIPMENT (CANBERRA)/68 Issue 2.

A copy of the CSTI can be obtained from Mr A C Love, Aircraft Certification Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44 (0)1293 573726.

This MPD becomes effective on 1 December 1998.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-012 BRITISH AEROSPACE

Subject: Mk 4 oxygen hose – contaminated.

Applicability: British Aerospace BAC 167 Strikemaster all Mks and BAC 145 Mk 55 aeroplanes.

Reason: A white sticky powder has been found on the inside of the ice guard filter of a oxygen mask. Further examination revealed that the contamination had originated from the internal surface of the Mk 4 oxygen hose. Investigation has revealed that this problem is restricted to hoses manufactured by William Warne prior to June 1997.

Compliance: Not later than 7 days from the effective date of this MPD replace all Mk 4 oxygen hoses manufactured by William Warne prior to June 1997 in accordance with CSTI/SURVIVAL EQUIPMENT (STRIKEMASTER)/67 Issue 2.

A copy of the CSTI can be obtained from Mr A C Love, Aircraft Certification Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR Telephone +44 (0)1293 573726.

This MPD becomes effective on 1 December 1998.

MPD No: 1998-013 R2

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-013 R2 CFM

Subject: Rudder fin post.

Applicability: CFM Shadow Series B, C and D, Streak Shadow and Star Streak aeroplanes.

Reason: There have been examples of cracking at the top of the rudder fin post where the fin post enters the boom tube. In addition, there is evidence that some microlights have been unofficially modified in this area.

Compliance: Before further flight from the effective date of this MPD inspect and, if necessary, replace/modify the rudder fin post in accordance with CFM Aircraft Service Bulletin No 12 Issue 1 dated 14 July 1998 or later CAA Approved issue.

Parts and installation instructions can be obtained from:

CFM Aircraft Ltd Unit 2D Eastlands Industrial Estate Leiston Suffolk IP16 4LL

This MPD becomes effective on 17 August 1998. Revision 1 becomes effective on 18 August 1998 and Revision 2 on 23 July 2001.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-014 PEGASUS AVIATION

Subject: Rudder bolt lifing.

Applicability: Pegasus Aviation Cyclone AX3 and AX2000 microlights.

Reason: There has been an example of cracking of one of the bolts attaching the rudder bracket to the fuselage. As this has been determined to have failed due to fatigue, additional saddle washers are introduced and a bolts replacement life of 1000 hours is introduced.

Compliance: From the effective date of this MPD in accordance with the following compliance times:

AX3 with less than 1000 hours: Inspection before further flight AX3 with more than 1000 hours: Replace parts before further flight

AX2000: Before further flight

carry out the instructions of Pegasus Aviation Service Bulletin No AX2016 dated 19 August 1998 or later CAA Approved issue.

Parts and installation instructions can be obtained from:

Pegasus Aviation Elm Tree Park Manton Marlborough Wilts SN8 1PS

Tel 01672 861578 Fax 01672 861550

This MPD becomes effective on 14 September 1998.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-015 PEGASUS AVIATION

Subject: Wing tip stitching inspection and repair.

Applicability: Pegasus Aviation Pegasus Quasar IITC and Quantum type microlights fitted with the Q2 and Bandit wings.

Reason: There has been an incident where a microlight fitted with a Q2 wing had a tip webbing detach after 970 hours due to stitch failure. It was found by test that the stitch strength had degraded due to the action of ultra-violet light. Service Bulletin No 0097 introduces an inspection and rectification by the addition of an ultra-violet light protection patch.

Compliance: Before further flight from the effective date of this MPD carry out the instructions of Pegasus Aviation Service Bulletin No 0097 dated 26 August 1998 or later CAA Approved issue.

Parts and installation instructions can be obtained from:

Pegasus Aviation Elm Tree Park Manton Marlborough Wilts SN8 1PS

Tel 01672 861578 Fax 01672 861550

This MPD becomes effective on 14 September 1998.

MPD No: 1998-016 R2

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 1998-016 R2 YAKOVLEV / AEROSTAR SA / INTREPRINDEREA DE AV BACAU

Subject: Inspection of uplock piston assemblies.

Applicability: Yakovlev / Aerostar SA / Intreprinderea De Av Bacau Yak C.11, 18 and 52 Series aeroplanes.

Reason: The uplock piston assembly in both nosewheel and main undercarriage pneumatic circuits is prone to the accumulation of dirt and moisture which can cause corrosion. In addition, deterioration in the rubber seals due to lack of lubrication has been noted. There has been an example where this corrosion has prevented the uplock catch releasing, resulting in a wheels-up landing. Revision 2 was introduced to exclude the Yak 50 which was included in error.

Compliance: Not later than the next 50 hour inspection from the effective date of this MPD, remove the uplock piston assembly (Yak 52 Part Number 524705-30) in both nosewheel and main undercarriage pneumatic circuits. Dismantle and internally inspect for corrosion in the piston and cylinder. Replace if corrosion is found. Inspect the seals and replace if necessary. Repeat this inspection every 200 flying hours or every third Permit to Fly renewal whichever is the sooner. Rubber parts are to be lubricated with an appropriate rubber grease.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 1 December 1998. Revision 1 becomes effective on 1 March 1999 and Revision 2 on 19 March 1999.



MPD No: 1998-017 R5

Issue Date: 5 March 2004

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

### MPD: 1998-017 R5 YAKOVLEV / AEROSTAR SA / INTREPRINDEREA DE AV BACAU

**Subject:** Airframe life limitations and overhaul life.

**Applicability:** Yakovlev Yak-52 aeroplanes (manufactured by Aerostar SA or Intreprinderea De Av Bacau).

**Reason:** It has been identified that this aeroplane type is subject to both airframe life limitations and to a defined overhaul life. It is emphasized that these lives must be assessed separately although any changes to the airframe life limitations would depend in part on the aeroplane being in compliance with the overhaul life requirements. This MPD is raised to Revision 5 as further information has become available that corrects some information provided in Revision 4.

#### Airframe life limitations

| Correspondence with the Design Authority, Yakovlev Design Bureau, has confirmed that there is an initial airframe life limit, which varies with the Series of the aeroplane.

The initial airframe life limit can be extended by the implementation of an approved maintenance and inspection programme.

#### Overhaul life

At initial manufacture the aeroplane is released for an overhaul life of a defined number of hours, landings and calendar time. This information is contained in an entry in the aeroplane log book.

The aeroplane can be released for a further period of operation subject to the implementation of an approved overhaul.

continued overleaf

MPD No: 1998-017 R5 Page 2 of 3

#### Compliance:

#### Airframe life limitations

There are some different limitations on individual aeroplanes depending on the build standard of the aeroplane. An individual aeroplane will fall into one of the Groups in the following table:

Group	Series	Modification State	Limitations
1	01 to 64 inclusive	Without Bulletins 59-R, 60-R and 107-BD incorporated	Load factors +5/-3g, non-aerobatic, initial airframe life 1000 flying hours, 5000 landings or 15 years from new.
2	01 to 64 inclusive	With Bulletins 59-R and 60-R incorporated and without Bulletin 107-BD incorporated	Load factors +7/-5g, aerobatic, no flick manoeuvres, initial airframe life 1000 flying hours, 6000 landings or 15 years from new.
3	01 to 64 inclusive 65 to 112 inclusive	With Bulletins 59-R, 60-R and 107-BD incorporated  With Bulletin 107-BD incorporated  With Bulletin 107-BD incorporated	Load factors +7/-5g, aerobatic, initial airframe life 1500 flying hours, 7000 landings or 20 years from new.
	113 and later	As factory built	

#### Notes:

1. Yak-52 serial numbers are made up as follows:

Example 899404 made up of 89 Year of manufacture

94 Series

04 Sequential aeroplane number

2. Modifications listed above are:

59-R Reinforcement of wing junction 60-R Replacement of fuselage beam

107-BD Fitting of reinforcement strap for the wing spar

- 3. Aeroplanes originally in one group, when suitably modified, can be treated as being in a higher group appropriate to their modification standard.
- Action in accordance with the following paragraphs:

Determine the series of aeroplane and whether modifications 59-R, 60-R and 107-BD have been embodied. The modification state of the aeroplane should be obtained from the aeroplane log books, but in the absence of this, positive visual inspection is acceptable.

Aeroplanes in Group 1 shall be placarded 'No aerobatics, max load factors +5/-3g' in both cockpits, in full view of the crew. Aeroplanes that are in Group 1 that are subsequently modified to be equivalent to Group 2 or 3 modification standard shall be treated as Group 2 or 3 aeroplanes in terms of limitations and placards.

Aeroplanes in Group 2 shall be placarded 'No flick manoeuvres' in both cockpits, in full view of the crew. Aeroplanes that are in Group 2 that are subsequently modified to be equivalent to Group 3 modification standard shall be treated as Group 3 aeroplanes in terms of limitations and placards.

continued overleaf

MPD No: 1998-017 R5 Page 3 of 3

When any of the initial airframe life limits is reached, a maintenance and inspection programme, approved by the Design Authority, Yakovlev, must be implemented in order to extend the airframe life. This programme must include the incorporation of Bulletins 59-R, 60-R and 107-BD if they are not already incorporated. The programme must also include activities to ensure compliance with the overhaul life requirements. The revised airframe life, as notified by Yakovlev, will be the lesser of the allowed number of hours, landings or years. Following receipt of the life extension from Yakovlev, the aeroplane log books must be suitably annotated to reflect the Yakovlev approved reference for the life extension and the revised airframe life. Embodiment of 59-R and 60-R must be in accordance with the documentation, equipment and technical standards prescribed in the Service Bulletins. A Permit Maintenance Release (PMR) must be issued certifying compliance with this MPD.

If the aeroplane has exceeded the calendar initial airframe life limit it may continue in service until the next annual inspection is due when the approved maintenance and inspection programme must be implemented.

#### Overhaul life

Before further flight from 30 June 2003, determine the overhaul life of the aeroplane from the latest relevant entry in the aeroplane log book. The overhaul life will be the lesser of the allowed number of hours, landings or years until the next overhaul.

If it is not possible to ascertain from the aeroplane log books when an overhaul was last carried out or the aeroplane has exceeded the allowed number of hours, landings or years since the last overhaul, it may continue in service until the next annual inspection is due when an overhaul must be carried out.

When the overhaul life is reached or when an overhaul is required as part of the annual inspection, an overhaul must be carried out in accordance with technical documentation approved by the Design Authority, Yakovlev, and the aeroplane released for a further period of service as specified in the approved documentation. Currently the further period of service specified by Yakovlev is 600 flying hours, 3500 landings or 16 years.

#### Additional information:

Yakovlev contact details are as follows:

Mr D K Dratch Chief Designer A S Yakovlev Design Bureau 68 Leningradsky Prospect Moscow 125315 Russia

Further information on the airframe life extension and the overhaul content may also be obtained from some UK Companies that specialise in these aeroplanes.

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 1 December 1998. Revision 1 became effective on 1 March 1999, Revision 2 on 30 June 2003, Revision 3 on 30 September 2003 and Revision 4 on 31 December 2003. Revision 5 becomes effective on 12 March 2004.



# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1998-018 ROLLS-ROYCE

Subject: Inspection of top temperature controller control linkage.

Applicability: Rolls-Royce Avon Mk 122 Series engines.

Reason: The CAA has recently been advised that an accident to a Hunter T7 in military service was attributed to disconnection of the top temperature controller control rod assembly (typical Part No. GP11283A) from its ball end piece (typical Part No. GP11286) (See figure 1). This disconnection led to loss of thrust control and eventual loss of the aeroplane. This MPD is issued to instruct a check on the assembly of the control linkage.

Compliance: Within 5 flying hours from the effective date of this MPD, then before each permit renewal and each time an engine is installed in an airframe, comply with the following accomplishment instructions.

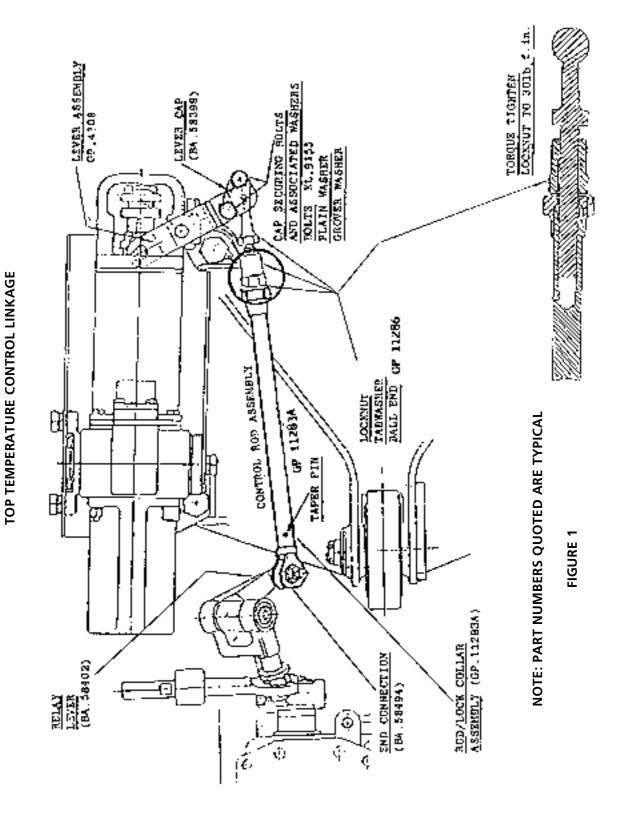
#### Accomplishment Instructions:

- 1 Gain access to the top temperature controller control rod assembly.
- 2 Examine the control rod for correct assembly.
- 3 Check the torque tightening on the nut securing the linkage. This torque should be a minimum of 30 lbfin as defined in STI/Avon/92. Do not disassemble the linkage if this torque level is satisfied.
- 4 If this torque level is <u>not</u> satisfied, inform the CAA, disconnect the assembly and inspect for signs of wear, or damage to the rest of the linkage. Evidence of wear or damage to the assembly is also to be reported to the CAA.
- If no damage or wear is evident, reassemble the control linkage in accordance with instructions contained in AP 102-1512 to 1517-6A Section 2 Chapter 6 para 52-56B. STI/Avon/92 should also be consulted, since this contains necessary torque tightening information for the locknut.

continued overleaf

MPD No: 1998-018 Page 2 of 3 Carry out a ground run to check for correct operation, in accordance with AP 101B-1300-6 5A3B Section 2 Chapter 4 SP211B. A record of accomplishment is required. The relevant log book entry is to indicate that the requirements of this MPD have been satisfied. This MPD becomes effective on 9 October 1998.

MPD No: 1998–018 Page 3 of 3





# UNITED KINGDOM CIVIL AVIATION AUTHORITY

MPD No: 1998-019 R1

Issue Date: 31 January 2002

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

# MPD: 1998-019 R1 LIGHT AIRCRAFT (INCLUDING ROTORCRAFT) BELOW 2730 KG

Subject: Flexible fuel tubing.

Applicability: Light aircraft (including rotorcraft) below 2730 kg.

Reason: A fatal accident occurred to a Montgomerie-Bensen gyroplane when the fuel tank contents sight tube became disconnected from the lower fuel tank outlet pipe and the pilot possibly distracted by the leaking fuel, lost control of the gyroplane. The sight tube, which was made from a clear PVC material with an internal reinforcement weave, had shrunk and become hard and brittle, due to prolonged exposure to gasoline fuel. MPD1998-019 was issued requiring an immediate inspection before the next flight and inspection of all fuel tube within three months. Whilst the compliance dates for this MPD have now passed there is still a need for newly constructed aircraft to be inspected and for guidance to inspectors during the annual inspection and renewal of the Permit to Fly. This MPD therefore requires continued vigilance on the part of owners and inspectors in seeking out and replacing defective and PVC fuel tubes.

Compliance: Prior to the issue or the renewal of a Permit to Fly, inspect all tubing used in fuel systems, including fuel delivery tubes, vent tubes and fuel sight gauge tubes for discoloration, shrinkage, degradation or embrittlement. Replace any tubing found to be defective or suspected of being PVC, with alternative tubing manufactured from an identifiable material suitable for use in gasoline fuel systems or where appropriate for the engine installation, two-stroke fuel/oil mixtures.

Inspections are to be carried out by an inspector suitably authorised by the CAA, PFA or BMAA and whose licence number or inspection number should be shown in the aircraft log book to record compliance with this MPD.

continued overleaf

MPD No: 1998-019 R1 Page 2 of 2

Note 1: PVC tubing is normally transparent and flexible when supplied, but progressively discolours and hardens with age and exposure to gasoline fuels and vapour. Commercial types of PVC tubing contain a coarse-mesh nylon thread reinforcement, woven on the 45 degree bias, which is visible within the tube. However, it should be noted that some kinds of commercial tubing incorporating the 45 degree bias woven reinforcement, whilst looking externally indistinguishable from PVC tubing, are not manufactured from PVC and therefore acceptable.

Note 2: Identification of replacement materials. The following British Standards have been identified and may be referred to by owners to assist in their selection of a suitable alternative:

BS ISO 4639: Rubber tubing and hoses for fuel circuits for internal - combustion engines.

BS EN ISO 7840: 1 995 Small craft - Fire resistant fuel hoses.

BS 2F 67: 1 980 Hose for aviation fuel and engine lubricating oil for aeronautical purposes.

BS 3G.100 : Part 2 : Section 3 : Subsection 3.13 : December 1973 General requirements for equipment for use in aircraft.

BS AU108 : Flexible pipes, rubber, for automobiles (now superseded).

Commercially available material manufactured from polyurethane, without plasticisers, marketed under various brand names such as "Blue Urethane" are also available. However when choosing a replacement material account should be taken of the purpose to which the tube is to be put and its location. Materials such as "Blue Urethane" should not be used in any area that could be impinged upon by a fire, unless a sight tube is essential.

#### Note 3: Inspectors should:

Satisfy themselves that the specification and quality of the fuel tubing, its cleanliness, the bore size of the replacement fuel tubing, and its fit onto the various end connections are suitable for the application. Suitable hose clips or equivalent must be used at the end connections, which provide adequate grip and prevent leakage of fuel or vapour.

Ensure that the routing and security of the tubing is such as to avoid engine hot spots and inverted 'U's in the pipe runs, after the tubing has been replaced.

Ensure adequate free flow and correct engine functioning at all power settings.

Note 4: Owners of aircraft with manufacturers support should seek the advice of the manufacturer when replacing fuel tubing, and comply with any additional recommendations issued in the form of service bulletins or instructions.

The original MPD became effective on 1 March 1999. Revision 1 becomes effective on 4 February 2002.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 1998-020 YAKOVLEV / AEROSTAR SA / INTREPRINDEREA DE AV BACAU

Subject: Fabric covered control surfaces.

Applicability: Yakovlev / Aerostar SA / Intreprinderea De Av Bacau Yak 50 and 52 aeroplanes.

Reason: This MPD was raised as a result of an occurrence to a Yak 52 aeroplane which was believed to have been covered with western materials in Russia, but which had, in fact, been covered with Russian fabric that does not meet the specifications listed in MPD 1997-019. Although this fabric was less than three years old, an in-flight failure of the fabric occurred, resulting in the loss of an elevator.

Compliance: Before further flight from the effective date of this MPD comply with the following accomplishment instructions.

#### Accomplishment Instructions:

- 1 From the aeroplane records, establish whether all the flying control surfaces have been inspected and the fabric has been replaced since the aeroplane was imported into the UK in accordance with paragraph 1 of MPD 1997-019 R1.
- 2 For aeroplanes where compliance with paragraph 1 of MPD 1997-019 R1 has been established no further action is required by this MPD.
- For aeroplanes where compliance with paragraph 1 of MPD 1997-019 R1 cannot be established carry out the accomplishment instructions of paragraph 1 of MPD 1997-019 R1.
- 4 Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 14 December 1998.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1999-001 PEGASUS AVIATION

Subject: Shortening of throttle lever and replacement of throttle stops.

Applicability: Pegasus Aviation Cyclone AX2000 microlights.

Reason: AX2000 throttle levers have been found to be bent under the pilot's 'load in opposition' case. Maximum opposition load on the current design long levers could potentially lead to problems at the link tube joints.

Compliance: Within 50 flying hours from the effective date of this MPD, modify the throttle lever and replace the throttle stops in accordance with the instructions in Pegasus Aviation Service Bulletin No AX2017 dated 4 January 1999 or later CAA Approved issue.

A copy of the Service Bulletin and parts can be obtained from:

Pegasus Aviation Elm Tree Park Manton Marlborough Wiltshire SN8 1PS

Tel 01672 861578 Fax 01672 861550

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 18 January 1999.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1999-002 FULL LOTUS INDUSTRIES

Subject: Hull cap zipper safety back-up.

Applicability: All aircraft fitted with any model of Full Lotus Industries aircraft floats.

Reason: The manufacturer has advised that there have been a few cases of float hull caps detaching from the float body. The manufacturer has produced a modification defined in Full Lotus Product Bulletin dated Nov. 20, 1998, which comprises the addition of nylon rope stitching to introduce a redundant load path.

Compliance: Within one month from the effective date of this MPD, modify all floats in accordance with Full Lotus Floats Product Bulletin dated Nov. 20, 1998.

Note: New production floats should incorporate this upgrade at manufacture. Full Lotus Industries have declared their intention to provide kits free of charge to existing owners who contact them by telephone on: 00 1 604 946 6106.

The address of the company is:

Full Lotus Industries Ltd 7400 Wilson Avenue Delta, British Columbia Canada, V4G 1E5

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 15 February 1999.

MPD No: 1999-003 R1

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1999-003 R1 MT-PROPELLER

Subject: Torque check of propeller blade root lag screws.

Applicability: MT-Propeller MTV-9 propellers as detailed in LBA AD 1999-081/2.

Reason: Refer to LBA AD 1999-081/2.

Compliance: Required as indicated in LBA AD 1999-081/2.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 26 February 1999. Revision 1 becomes effective on 25 March 1999.

MPD No: 1999–003 R1 Page 2 of 3



Lufttüchtigkeitsanweisung

LTA-Nr.: 1999-081/2

ersetzt: 99-081

Datum der Bekanntgabe: 25.03.1999

Mu<u>ster</u>: MT-Fyaceler

AD der ausländischen Behörde:

- kene ·

Geräte-Nr.: 32 130/65

MTV 9

<u>Technische Mr</u>tellungen des Herstellers:

MT-Propeller Technische Mittellung Nr. 17A vom 05 03 1999.

#### Betroffenes Luftfahrtgerät:

MT-Propeller MTV-9

· Baurelhon:

MTV-9-8-0 mit Propelerblärtem CL250-27 oder CL260-27.

- Werk-Nen.:

Alle Werkritzminish bis 98XXX oder Ersatzpläfter, die bis zum 31 12 1998 hergesjelt, worden

sinc\*

#### Betrifft:

Propellerblatter Ankorschrauben der Blattwurzelbetesligung (propeller blades, hlade root retention lag screws ATA-Code 61-10-00). Bruch der Ankerschrauben gurch unzureichendes Schrauben-Anzugsmobnent 1 ggf kann dieser Fehler den Verlust eines Propollerblattes im Huge verursachen und daderen zu schwerer Bethebsstorungen und Fluguinfatten führen.

#### Maßnahmen:

Im Rahmen dieser LTA sind folgende Maßnahmen vorgeschen.

- 1 Prüfung des Schrauben-Anzugsmomentes der Bleitwurzel-Ankersoltrauben.
- Wiederholung dieser Profung in (estgelegten Intervallen)
- 3. Austausch der Blattwurzel-Ankerschrauben

Alle erforderlichen Maßnahmen mussen nach der genannten Technischen Mittellung des Hersteters durchgeführt werden.

#### Prowers:

Nach dem Austausch der Blattwerze-Ankerschrauben gemäß den Vorgaben der Technischen Mitteilung des Perstellers konnen wetere intervallmäßige Prolongen entsprechene Pkt 2 onfallen.

#### Fristen

Für die Durchfuhrung der einzelnen Maßnahmen sind folgende Einsten festgelegt worden.

- 1. Innemalb der nächsten 50 Betriebsstunden (TIS, timp in service) oder bis zum 31.05.1999. Siehe auch
- 2. Alle 100 Betriebsstunden TIS oder 12 Monate.
- Vor dem nächsten Hug, wenn der den Prüfungen des Schrauben Anzugamomentes ein Lösen der Schraubenfestgestellt worden ist.

#### Himwe s

Die Prüfung des Schrauben-Anzugsanbrikerins (Pkt 1) muß vor dem nächsten Flug durchgeführt werden, wenn ungewöhnliche Vicralieren außreiten, die eurch dynamisches Wuchten nicht beseitigt werden könnign oder Riase im Übergang Blaithulse/Blat festgestallt werden oder Schrumpfmarken an der Rialtwurzel orkennbar sind.

Durch die vorgenannen Mangel ist die Luftmittigkeit des Luftdingerales doran sectrinatriigt, daß dis nach Ankinf der genannen if reten nut in Beineb genommen weiden dert, wehr die angeordneien Maßnahmen ordnungsgemaß dusdigeführt worden sind im Interesse der Sichoffen das I uftweheine intere in die sem I all das interesse des Acrossationum Aufschan die engegründen Maßnahmen überwegt, ist als Gründer icht, die solatige Votziehung dieser LTA anzubrehnn

#### Rechistoholisbolehrung

Began disser Verfogung kenn interhalb eines Monass nach Bekanntgabe Wittenschuch eingelegt werden. Der Wittenspruch ist schriftlich oder zur Nederschrift beim Luttanit Bundesamt, Hamran vBlank-St. 26. 361(8 frammittworg einzulegen. MPD No: 1999–003 R1 Page 3 of 3



### Airworthiness Directive 1999-081/2

### Luftfahrt-Bundesamt

Airworthiness Directive Section Hermann-Blenk-Str. 26 36108 Braunschweig Federal Republic of Germany

Effective Date: 25 March 1999

### MT-Propeller

Affected:

Kind of aeronautical product

Manufacturer.

Type:

Models affected.

AND THE STATE OF T

Serial numbers affected:

German Type Certificate No.:

Propeller

MT-Propeller, Airport Straubing Wallmühle, 94348 Atting, Germany

MTV-9

MTV-9-B version MTV-9-B-C equipped with propeller blades CL250-27 or

CL260-27

All propellers with serial numbers up to 98XXX or replacement blades

produced until 31 December 1998.

32.130/65

#### Subject:

Propeller blades, inspection of the torque and if applicable, replacement of the blade root lag screws.

#### Reason:

Because of the extremely high loads during some aerobatic manoeuvres on the affected propellers in combination with insufficient torque of the lag screws it is possible, that blade root lag screws fail. Broken lag screws were found occasionally during tear down inspections of the above mentioned propellers.

The actions specified by this AD are intended to prevent a blade separation in flight, which can result in loss of control of the aircraft.

#### Action:

The following actions are required by this Airworthiness Directive:

- The torque of the lag screws must be checked on the affected blades per overhaul manual E-220. A minimum torque of 88Nm (64 ftib) has to be applied.
- If lag screws with insufficient torque or broken lag screws are found, all lag screws must be replaced with new lag screws according the Service Bulletin of the manufacturer.
- If no lag screws with insufficient torque or no broken lag screws are found, the inspection must be repeated every 100 flying hours or every 12 month. This inspections is no longer required if new lag screws are installed.

#### Notes:

- All necessary actions must be performed on the basis of the mentioned Service Bulletin of the manufacturer.
- The inspection must be performed by an approved repair station or the manufacturer. An entry in the propeller log book is required.
- Replacement of lag screws must be performed by the manufacturer or a repair station, authorized by the
  manufacturer
- d. New lag screws MT-Propeller P/N A-983-85 can easily be identified by a hexagonal head.

#### Compliance:

Before the next flight, if unusual vibrations appear which can not be eliminated by dynamic balancing, or if cracks are visible in the transition area blade ferrule to blade shank or if shrinking marks are visible in the blade shank area.

Otherwise within the next 50 flying hours or until May 31, 1999.

#### Technical publication of the manufacturer:

MT-Propeller Service Bulletin No. 17A dated 05 March 1999. This Service Bulletin becomes herewith part of this AD and can be obtained from:

MT-Propeller Airport Straubing Wallmühle D-94348 Atting / Germany Tel. ++49 9429 9409-0; Fax ++49 9429 8432 Email: sales@mt-propeller.com

Enquiries regarding this Airworthiness Directive should be referred to Mr. Martin Borsum. Airworthiness Directive Section at the above address. Iax-no. 0049 531/2355-720. Please note, that in case of any difficulty, reference should be made to the German issue!

Record compliance with this MPD in the aircraft log book.

MPD No: 1999-004 R1

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1999-004 R1 MT-PROPELLER
Subject: Torque check of propeller blade root lag screws.
Applicability: MT-Propeller MTV-3 propellers as detailed in LBA AD 1999-082/2.
Reason: Refer to LBA AD 1999-082/2.
Compliance: Required as indicated in LBA AD 1999-082/2.

This MPD becomes effective on 26 February 1999. Revision 1 becomes effective on 25 March 1999.

MPD No: 1999-004 R1 Page 2 of 3



Lufttüchtigkeitsanweisung LTA-Nr.: 1999-082/2

ersetzt: 99-082

Luftfahri-Bussimami

Muster: MI-Propaler

Datum der Bekanntgabe: 25.03.1999

MTV 3

AD dor ausländischen Behörde:

- квле -

Technische Mittellungen des Herstellers: Gerate-Nr.:

MT Propeller Technische Mittellung Nr. 17A vom 05 03,1999 32 130/54

### Betroffenes Luftfahrtgerät:

MT-Propeller MTV-3

MTV-3-R-C mit Propellerblatiem L250-21 - Bauraiban:

Alle Werknummern bis 96XXX oder Ersatzblätter, die bis zum 31 12 1998 heigestellt worden. - Werk-Nm.:

eind.

### Betrifft:

Propelle-blatter, Ankerschrauben der Blattwurzelbefesbgung torobeiler blades, blade roch rotenlich füg sciews. ATA-Code 61-10-001 \* Bruch der Ankerschrauben durch unzbreichendes Schrauben-Anzugsminment \* gg\* kann dieser Fehler den Vertust eines Prope eitballes in: Flage verursachen und dadurch zu schweren. Betriebsstorungen und Flugunfallen führen

### <u>MaBnahmen:</u>

Im Rahmen dieser (TA sind (objecte Maßreibner wageveller)

- Prufung des Schrauber-Anzugsmomentes der Blattwurzei-Ankerschrauben.
- Wiscorholung bleser Profiting in festgelegten Intervallen.
- Austausch der Blattwurze Ankerschrauben.

Alle, erforderichen Maßnahmen müssen nach der gehannten Tophnischen Mittelung des Hersleilers durchgeführt werden.

Nach dem Austauson der Blattwurzei-Ankerschrauben gemaß dem Vorgaben der Technischen Mitteilung des Herstellers konnen wellere intervallmäßige Prüfungen entsprechand Pki 2 anlfallen.

Für die Durchführung der einzeiner Maßnahmen sind folgende Fristen festgelegt worden

- 1. Innernalbider nachsten 50 Betriebastunden (11S, time in service) oder bis zum 31.05.1999. Siehe auch
- Alle 100 Betnepsstungen TIS oder 12 Monate.
- Vor dem nachsten Flug, wenn bei den Profungen des Schrauben Anzugsinbrhehles ein Lösen der Schrauben. festgestellt wurden ist.

Die Prufung des Schrauben-Anzugsmomentes (Pkt I) muß vor dem intensten Flug durchgeführt werden, wenn ungewohnliche Witrationen auftreten, die durch dynamisches Wüchten nicht beseitigt werden können oder Risse im Übergang Blatthu se/Blatt festgesteit werden oder Schrumpfnarken an der Blattwurze erkenntzur sind i

Durch die vorgenemen Mangel at die Luftlichtigken des Luftlahtgernes derart been/rath(gl. def) en nech Adeuf der genehrten Enslan not in Belieb genommen weitigen dies weren die ergenochweer Maßnahmen ordnungsgemaß durchgefund worden am die militarien der Sigherfiel des Lotyersehrs das in diesem hat des interiories des Admisseum ein Aufschub der angebröheten Matthatmen überwegt, obes efforderlich, die salonige Volksehung dieser LTA anziendhen

#### Rephybalishbladining

Gegen diese Verlügung bann innerhalb wirds Morass nach Bekannigsbo Woortonuch engriegt werden. Die Widersprüch ist sowiffikhi ader zur Niederschrift beim Luftfand-(fundesjehrt, Hermanneßlenk-Still 26, 28108 Braunschweig einzulegen

MPD No: 1999–004 R1 Page 3 of 3



### Airworthiness Directive 1999-082/2

### Luftfahrt-Bundesamt

Airworthiness (Prective Section Hermann-Blenk-Str. 26 38108 Braunschweig Federal Republic of Germany

# MT-Propeller Effective Date: 25 March 1999

#### Affected:

Kind of aeronaulical product Propeller

Manufacturer: MT-Propeller, Airport Straubing Wallmühle, 94348 Atling, Germany

Type. MTV-

Models affected. MTV-3-B version MTV-3-B-C equipped with propeter stades 1250-21. Social numbers affected. All propollers with serial numbers up to 99XXX or replacement places.

produced until 31 December 1998.

German Type Certricate No. 32 130/54

#### Subject:

Propeller blades, inspection of the longue and dispplicable, replacement of the blade root lag screws.

#### Reason:

Because of the extremely high loads during some aerobatic mandeuvires on the affected propellers in combination with insufficient forque of the lag screws it is possible. that blade root lag screws fair. Broken lag screws were found accasionally during lear down inspections of the above mentioned propellers.

The actions specified by this AD are intended to prevent a blade separation in flight, which can result in loss of control of the aircraft.

### Action:

The following actions are required by this Airwortniness Directive

- The torque of the lag screws must be checked on the affected blades per overhaul manual E-220. A minimum torque of 88Nm (64 ftlb) has to be applied.
- 2. If lag screws, with insufficient sorque in bruken lag screws are found, all lag screws must be replaced with new lag screws according the Service Bulletin of the manufacturer.
- If no lag screws with insufficient torque or no broken lag screws are found, the inspection must be repeated every 100 flying hours or every 12 month. This inspections is no longer required if new lag screws are installed.

#### Notes:

- All honespary actions must be performed on the basis of the mentioned Service Bulletin of the manufacture;
- the inspection must be performed by an approved repair station or the manufacturer. An entry in the propeller og book is required.
- Replacement of lag screws must be performed by the manufacturer or a recair station, authorized by the manufacturer.
- d. New tag screws MT-Propeller P/N A-983-95 can easily be identified by a hexagona head.

#### Compliance:

Before the next flight life clusual vibrations appear which can not be eliminated by dynamic balancing, or If cracks are visible in the transition area blade form a to blade shank or if shrinking marks are visible in the blade shank area.

Otherwise, within the next 50 llying hours or until May 31, 1999.

#### Technical publication of the manufacturer:

MT-Propeller Service Builetin No. 17A dated 05 March 1999. This Service Builetin becomes herewith part of this AD and can be obtained from

MT Propeller Airport Straubing Wallmuhie D-94348 Atting / Germany

Tel +149 9429 9409-0 Fax ++49 9429 8432

Email, sales@ml-proceller.com

Enquise regarding the Anwestimess Directive should be referred to Mr. Martin Sinsum Artechturess Directive Section at the above address lawner, 0049 531/2/55-720. Please note, that in case of any officially reference should be marte to the Centrem should

MPD No: 1999-005 R1

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1999-005 R1 MIDLAND ULTRALIGHTS

Subject: Modification to stabilator and mountings.

Applicability: Midland Ultralights Sirocco 377GB and Sirocco 377GB (Modified) microlights.

Reason: Following an accident to a Sirocco 377GB involving the loss of the stabilator in flight, the AAIB made recommendations which were accepted by the CAA. Accordingly, all Sirocco 377GB and Sirocco 377GB (Modified) microlights must be modified to address the following points:

- 1. Improve the design of the cross shaft and locking mechanism to prevent detachment.
- 2. Improve the integrity of the leading edge joint to prevent separation of the stabilator upper and lower halves.
- 3. Improve the resistance of the structure to moisture.
- 4. Replace the tailplane pivot bearings by a type which will minimise the effects of moisture absorption.
- 5. Determine and control the tension limits for the elevator anti-balance tab return bungee.

A suitable modification has been produced and approved by the BMAA under MAAN 1336.

Compliance: Before further flight from the effective date of this MPD, the stabilator and mountings must be modified in accordance with MAAN 1336 or an alternative modification scheme approved by the BMAA or the CAA. After modification a flight test must be performed to show that the microlight is free from harmful vibration.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 22 March 1999. Revision 1 (editorial amendment) becomes effective on 18 January 2001.

MPD No: 1999-006 R1

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD:** 1999-006 R1 MICRO AVIATION (NZ)

Subject: Wing leading edge fabric – Inspection and modification.

Applicability: Micro Aviation (NZ) B20, B22 and B22S Bantam microlights with wings covered in dacron fabric.

Reason: Refer to New Zealand CAA AD DCA/MICRO/1. The NZ CAA AD has been reissued to introduce Micro Aviation (NZ) SB B22S/99/01.

Compliance: Required as indicated in New Zealand CAA AD DCA/MICRO/1.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 3 April 1999. Revision 1 becomes effective on 13 August 1999.

MPD No: 1999–006 R1 Page 2 of 2

DCA/MICRO/1 Wing Leading Edge Fabric - Inspection and Modification

Applicability: Micro Aviation (NZ) Lid model B20, B22 and B228 Barnam microlight aircraft with wings covered in dacron fabric.

Requirement: To prevent failure of the fabric covering the wings, accomplish the

followings:

1. Inspect the wing fabric from the leading edge back 400mm over the top surface for signs of chaffing against the wing ribs. Pay particular attention to the fabric in the area of the three inboard wing ribs on each wing. Press the fabric immediately each side of the each wing rib to ensue the fabric is capable of taking flight loads without ripping. It is the three inboard wing ribs on each wing that are most affected by ritaffing because of their position within the propeller's ipstream. Before further flight, repair or renew as necessary any fabric that shows signs of chaffing. Micro

Aviation (NZ) ttd S8 B22S/99/01 refers.

 Remove the fabric covering from the wings and inspect the inside of the fabric for evidence of chaffing. Repair or renew any fabric found chaffed. Instal. PVC Cap Strips PVN 8225-229-1 on.

the upper surface of each wing nb per SS 8225/99/01

Compliance: 1. Inspect before further flight.

 Inspection of inside of fabric and installation of PVC cap strips to be accomplished by 30 June 1999, unless PVC cap strips are:

already fitted.

Effective Date: 25 March 1999

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1999-007 VICKERS SUPERMARINE

Subject: Main landing gear support eye bolt.

Applicability: Vickers Supermarine Spitfire and Seafire aeroplanes all marks.

Reason: Several examples of cracked main landing gear support eye bolts have been found recently. The affected part is the eye bolt attaching the main landing gear locking pin crescent bracket ('spider') to the inboard support stay. Failure of the eye bolt may lead to collapse of the gear during landing, with potential turnover and consequent difficulty of escape.

Compliance: Within 10 landings from the effective date of this MPD, and thereafter at intervals not exceeding 100 landings, conduct a magnetic particle inspection to ascertain the integrity of the eye bolt. If any crack is found, replace with a new part before further flight.

If the eye bolts have been checked by magnetic particle inspection within the previous 100 landings from the effective date of this MPD, compliance is required within 100 landings of that inspection.

Report details of findings to the CAA Aircraft Projects Department (Mr A C Love, Fax: 01293 573976) as follows:

- whether cracks were found or not
- length and location of crack
- number of landings since the part was new

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 9 April 1999.

MPD No: 1999-008 R1

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1999-008 R1 BRITISH AEROSPACE

Subject: Undercarriage cable lives.

Applicability: British Aerospace Jet Provost and Strikemaster Series aeroplanes.

Reason: The subject cables have a life limit of 1200 flight hours. Cases have occurred where there is no evidence to show that cables were replaced within their published life and, on inspection, were found to be in a dangerously frayed condition.

Failure of any one of these cables will prevent correct operation of the undercarriage. Operation of the emergency blow down system in this situation will have no effect on the functioning of the undercarriage.

Compliance: Within 10 flying hours from the original effective date of this MPD confirm, by inspection of the aircraft records, the current life of undercarriage cables. If cables fitted cannot be confirmed to be within the 1200 flight hour life limit then they are to be replaced with serviceable cables before further flight. Replace cables at intervals not exceeding 1200 flight hours.

Note: For inspection of the undercarriage cables, in accordance with the applicable inspection procedures for the aeroplane, the aeroplane must be jacked and the cable must be cycled through the full range while the visual inspection of the cable is carried out.

Record compliance with this MPD in the aircraft log book.

For further details contact Mr A C Love, CAA Aircraft Projects Department, Fax: 01293 573976.

This MPD becomes effective on 28 May 1999. Revision 1 becomes effective on 12 November 1999.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

### MPD: 1999-009 VICKERS SUPERMARINE

Subject: Main landing gear pintle mount studs inspection.

Applicability: Vickers Supermarine Spitfire and Seafire aeroplanes all marks.

Reason: An incident has been reported of an in service failure of upper pintle mount studs resulting in undercarriage collapse.

Compliance: Within 30 days or 10 landings from the effective date of this MPD, whichever is the later remove and inspect the main landing gear pintle mount studs in accordance with the following accomplishment instructions.

### Accomplishment instructions:

- 1 Confirm that the material specification for the upper mount studs is correct in accordance with manufacturers design requirements.
- 2 Visually inspect for signs of cracking, fretting, corrosion, scoring or elongation of the upper mount studs.
- 3 At every 300 landings thereafter visually inspect the upper mount studs in accordance with paragraph 2.
- 4 If the upper mount studs exhibit signs of damage following inspection in accordance with paragraph 2, remove and inspect the mid and lower mount studs in accordance with paragraph 2.
- Replace any mount studs failing inspection and report details to the CAA Stansted Regional Office (Mr J Nicholas, Fax: 01279 466757).
- 6 Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 8 July 1999.

# **MANDATORY PERMIT DIRECTIVE**

in the United Kingdom operating on a UK CAA Permit to Fly.
MPD: 1999-010 MICRO AVIATION (NZ)
Subject: Flaperon control system – Inspection and modification.
Applicability: Micro Aviation (NZ) B22 Bantam microlights Serial Nos 145 and 146 and B22S Bantam microlights up to Serial No 99-018.
Reason: Refer to New Zealand CAA AD DCA/MICRO/3.
Compliance: Required as indicated in New Zealand CAA AD DCA/MICRO/3.
Record compliance with this MPD in the aircraft log book.
This MPD becomes effective on 15 July 1999.
continued overleaf

MPD No: 1999–010 Page 2 of 2

DCA/MICRO/3 Flaperon Control System - Inspection and Modification

Applicability: Micro Aviation (NZ) I to Bantam microlight aircraft model 822 S/N

145 and 746, and model 8225 up to 5/N 99-016.

Requirement: To prevent failure of the haperon cable, accomplish the followings-

 Inspect flaperon cable per Micro Aviation (NZ) Ltd 5B 8225/99/02, part ist. Replace any cable with a black outer covering before further.

tirght...

7. For the Bantam 8225 mode, only, replace the lower mounting

bracket per 53 6229/99/02, part (b).

Compliance: 1. Hefore father flight.

2, By 15 October 1999

Effective Date: 15 July 1999

MPD No: 1999-011 R1

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1999-011 R1 BRITISH AEROSPACE

Subject: Flap attachment bracket – Lugs cracking.

Applicability: British Aerospace Canberra Series aeroplanes.

Reason: A case has occurred of the inboard flap attachment bracket lug cracking. The cracks originated in the hinge bolt hole of the lug by which the flap is attached to the mainplane. Pending results of ongoing investigation into this failure, the original MPD required a 3 monthly periodic NDT examination of the flap to mainplane attachment lugs. The investigation is now complete and has confirmed the failure as stress corrosion cracking. Revision 1 of this MPD amends the periodicity of the inspection.

Compliance: Not later than 12 months from the original effective date of this MPD and thereafter at intervals not exceeding 12 months, inspect the flap to mainplane attachment lugs for cracks in accordance with CSI/CANBERRA/130 Issue 2.

Record compliance with this MPD in the aircraft log book.

A copy of the CSI can be obtained from Mr A C Love, Aircraft Certification Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44 (0)1293 573726.

This MPD becomes effective on 19 July 1999. Revision 1 becomes effective on 22 November 1999.

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1999-012 BRITISH AEROSPACE

Subject: Harley buckle – Cracked pivot pins.

Applicability: British Aerospace Canberra Series aeroplanes.

Reason: During bay maintenance of parachute harness assemblies, cases have been reported of longitudinal cracks in the spring pin type locking bar pivot pins on AML Harley buckles. This failure has been identified as hydrogen embrittlement and only affects buckles of certain part numbers and manufacture dates. Failure of the pivot pin can result in the locking bar becoming detached from the buckle allowing the webbing to slip through the buckle.

Compliance: Not later than 28 days from the effective date of this MPD, inspect all Harley buckles for cracked pins and repair, if necessary, in accordance with CSTI/SURVIVAL EQUIPMENT(CANBERRA)/69.

Record compliance with this MPD in the aircraft log book.

A copy of the CSTI can be obtained from Mr A C Love, Aircraft Certification Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44 (0)1293 573726.

This MPD becomes effective on 19 July 1999.

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1999-013 DYN'AERO

Subject: Elevator trim tab control.

Applicability: Dyn'Aero MCR aeroplanes, all serial numbers, including the ULM version.

Reason: Refer to DGAC AD 1999-385.

Compliance: Required as indicated in DGAC AD 1999-385.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 29 October 1999.

MPD No: 1999–013 Page 2 of 3

GSAC

# CONSIGNE DE NAVIGABILITE

défine parts DIRECTION GENERALE DE L'AVIATYIN CIVILE

Les esumens ou modifications délans invesseurs son regérgiés. La non approprié des exigences confenses dans celle consigne enfaire l'inquistice àu voi du l'abouné consemé.

### DYN'AERO

#### Aviana MCR

Commande de la biellene de labi (ATA 27)

### 1. MATÉRIELS CONCERNES

Avioris MCR toils numeros de série y compris, a version UCM.

### 2. RAISONS

il Medi produit un cas de rupture des nivers de fixation de la biellette de lab, cuimécrati a un magivais assemblage lequel autacipu sivoir des conséquences graves.

### 3. ACTIONS ET DELAIS D'APPLICATION

Les mesures suivantes sont rendues impératives des reception de la présente Consigne de Navigabliée :

a) Effectuer un contrôle de l'état de la bietelle de commande de 1et de l'empermage horizontal, sekin les indications du Brilletin Service DYN'AERO n° 29 (0001 du 14 septembre 1999)

Ce contrôle est à répéter à chaque visite de 50 houres où en cas de constat d'un jeu anormat du lab de l'empernage honzontal.

b) Lors de chaque visau cré-vol, vérifier l'absence de jeu du tat de l'emperinage nonzonte.

RBF - Bulletin Service CYNIAPRO nº 20 1 0001 du 14 septembre 1999

Ce Bullion Service est réspondé auprès de . CYNIAERO

19 rue de l'Avacion 21121 DANOIS FRANCE

Ment dinner l'application de la présente cansigne dans le livret d'aeroner.

### DATE D'ENTREE EN VIGUEUR :

DES RECEPTION A COMPTER DU 06 OCTOBRE 1999

n/JB

MPD No: 1999–013 Page 3 of 3

GSAC

# AIRWORTHINESS DIRECTIVE

released by DIRECTION GENERALE DE L'AVIATION CIVILE

Inspection and/or modifications arisented below the managery. No person may occur a product to which thus.

Advantages Develor incures except to decardate under the managements of the Advantages Conscile-

Translation of "Consigne de Navigabilité" - ref. : 1899-305(A).
In case of any deficulty, reference should be made to the French original assue.

### DYN:AERO

### MCR airpisnes

Elevator trim tab control (ATA 27)

#### 1. APPLICABILITY

MCH airplanes, all senal numbers, including the ULM version.

### 2 COMPLIANCE

One case of rivets failure of the elevator from tab assembly happened, due to a pac menulecturing that could have induced some serious damage.

### 3. ACTIONS AND DELAY

The collowing measures are made mandatory at the effective date of this Airworthiness Officials :

a) Check the elevator from tablessembly according to the UYNIAERO Service Bulliotic No. 20 I 0001 dated September 14, 1999.

This verification is due to every 50 norms TIS and in case of to establish an abnormal wear play of the elevator from tab.

b) Check the lack of wear play of the elevator trimitabilat each pre-flight check

REF. DYN AERO Service Bulletin No. 20 | 0001 dated September 14, 1999

This Service Buildin is available to : DYN'AERO

19, sue de l'Avialion 21121 GAROIS FRANCE

Record the application of the Anworthness Directive on the anoralt legbook.

EFFECTIVE DATE : ON RECEIPT FHOM OCTOBER 06, 1998

October 06, 1999

DYN'AERÓ MCR airplánés 1999-365(A)

4/16

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 1999-014 ROTORWAY EXECUTIVE

Subject: Gates main drive belts.

Applicability: Rotorway Executive, Rotorway Executive (Modified), Rotorway Executive 90 and Rotorway Executive RW-152 helicopters.

Reason: A case has occurred where a Rotorway Executive suffered a failure of a main drive belt during flight. Subsequent investigation revealed that the backing material of the Gates belt had broken away from the V section of the belt. Rotorway have advised that the Gates belt has a poor history of delamination and consider this to be because the backing material is bonded to the V section, rather than being interwoven with the V section as for Bando main drive belts.

Compliance: Before further flight from the effective date of this MPD, confirm by inspection the type of main drive belts installed. If Gates main drive belts are installed, replace each Gates belt with a Bando belt supplied by Rotorway.

Note: Both types of belt were supplied under the same Rotorway Part Number (P/N E23-1210), although the Gates type are labelled in blue and the Bando type are labelled in yellow.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 19 November 1999.

MPD No: 2000-001

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 2000-001 AERIAL ARTS / CYCLONE AIRSPORTS / PEGASUS AVIATION

Subject: Replacement of luff lines.

Applicability: Aerial Arts and Cyclone Airsports Chaser S Series microlights and Aerial Arts 110SX / Chaser microlights.

Reason: The pitch stability of the wing fitted to these microlights is sensitive to the tension of the luff lines. New luff lines according to drawing CH0317AQA Sheet 2 Issue C must be fitted. Cyclone Airsports Service Bulletin SB No. CH012 covering this subject was originally issued on 12 September 1996, but not incorporated into MPDs when they were introduced. This MPD retrospectively remedies this situation.

Compliance: Within 25 flying hours from the effective date of this MPD, replace the luff lines in accordance with Cyclone Airsports Service Bulletin SB No. CH012.

A copy of the Service Bulletin and parts can be obtained from:

Pegasus Aviation Elm Tree Park Manton Marlborough Wiltshire SN8 1PS

Tel 01672 861578 Fax 01672 861550

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 16 March 2000.

MPD No: 2000-002

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

### MPD: 2000-002 ROTORWAY EXECUTIVE

Subject: Chain oil bath assembly.

Applicability: Rotorway Executive, Rotorway Executive (Modified) and Rotorway Executive RW-152 helicopters.

Reason: Rotorway International have identified for the Rotorway Executive 90, following inservice experience of local cracking, that the conventional location and mounting method of the oil bath assembly is not satisfactory. This mounting arrangement is the same on the Rotorway Executive. This MPD has been raised for the Rotorway Executive helicopter to require the chain oil bath mounting to be re-located, eliminating the possibility of cracking of the main airframe.

Compliance: Before further flight from the effective date of this MPD carry out an inspection to determine the location of the chain oil bath assembly. If it is located on the forward lateral square airframe tube, then the following actions must be accomplished:

1 Before further flight.

A detailed visual inspection for cracking of the lateral tube in the area of the oil bath mounting holes must be carried out by a person authorised by the CAA.

- (a) If cracking is found, the oil bath must be removed and relocated in accordance with (2) below before further flight.
- (b) If no cracking is found, the oil bath must be re-located in accordance with (2) below prior to the next permit renewal, and

the local attachment area must be subject to a detailed visual inspection by a person authorised by CAA at periods not exceeding 5 flying hours until the modification has been embodied.

continued overleaf

MPD No: 2000-002 Page 2 of 2

2 In accordance with the results of (1) above.

The oil bath must be relocated onto the fore-aft square tube in accordance with Rotorway International Mandatory Bulletin M-03 or in accordance with an alternative CAA approved modification.

Following re-location, existing holes in the airframe must be addressed as directed in Rotorway International Mandatory Bulletin M-03.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 16 June 2000.

MPD No: 2000-003

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2000-003 MAINAIR SPORTS

Subject: Inspection of wing rigging.

Applicability: Gemini Flash 2, Gemini Flash 2 Alpha and Mainair Mercury microlights.

Reason: A number of fatal in-flight structural failures have occurred to wings fitted to some microlights. This is being investigated by the AAIB and BMAA, but initial investigations have suggested that the affected microlights may have had their rigging 'tuned' such that their characteristics have been altered beyond that which has been tested and approved.

Compliance: Before further flight from the effective date of this MPD, inspect to ensure that the wing settings are correct in accordance with Mainair Sports Service Bulletin No 43.

A copy of the Service Bulletin and further information can be obtained from:

Mainair Sports Ltd Unit 2B Crawford Street Rochdale Lancs OL11 3EX

Tel 01706 655134 Fax 01706 631561

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 16 June 2000.

MPD No: 2000-004

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

### MPD: 2000-004 YAKOVLEV / AEROSTAR SA / INTREPRINDEREA DE AV BACAU

Subject: Crack in elevator control system pulley.

Applicability: Yakovlev / Aerostar SA / Intreprinderea De Av Bacau Yak 52 aeroplanes.

Reason: A 19mm crack has been discovered in elevator actuation pulley Part Number 525100-80-3 (referred to as 'lever' in the Romanian parts catalogue). Failure of this component could result in loss of elevator control.

Compliance: Within 50 flying hours from the effective date of this MPD, inspect elevator actuation pulley Part Number 525100-80-3 for cracking on its periphery below the attachment for the balance weight bracket, at the point where the section reduces from 10mm to 7mm. Inspect using dye penetrant techniques. If the component is cracked, replace it before further flight. Repeat this inspection annually at renewal of the Permit to Fly.

For further details contact:

Aerostar SA Str Condorilor nr. 9 Bacau Cod 5500 Romania AeroTrade International 11 Ostasilor Str Bucharest Romania

Yak UK Ltd Fullers Hill Lt Gransden Airfield Sandy Beds

SG19 3BP

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 27 July 2000.

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 2000-005 HUNTING PERCIVAL AIRCRAFT

Subject: Forward spar web cracks.

Applicability: Hunting Percival Aircraft Percival P66 Pembroke C Mk 1 aeroplanes.

Reason: Cracks have been reported in the front face of the forward spar web emanating from the fastener holes of the web stiffener.

Compliance: Within three months from the effective date of this MPD, and repeated at each annual check thereafter, inspect the wing spar web as detailed below:

- Gain access to the forward face of the front spar through the wing access panel number 11 (both port and starboard).
- 2 Looking outboard, inspect the spar web paying particular attention to the lower edge of the spar web close to the lower stiffener.
- 3 If cracked, repair in a manner acceptable to the CAA.
- 4 If cracking is found report details to the CAA Stansted Regional Office (Mr J Nicholas, Fax: 01279 466757).
- 5 Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 21 June 2000.



MPD No: 2000-006 R1

Issue Date: 3 March 2003

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2000-006 R1 WESTLAND HELICOPTERS

**Subject:** Mandatory requirements for the issue of a Permit to Fly.

Applicability: Westland Gazelle AH.Mk 1, HT.Mk 2, HT.Mk 3 and HT.Mk 4 helicopters.

**Reason:** The purpose of this MPD is to define the modifications and inspections required on ex Ministry of Defence Gazelle helicopters for acceptance onto the UK register with a Permit to Fly and to ensure continued airworthiness of the helicopter. The following list of Eurocopter Service Bulletins was established following a review of DGAC Airworthiness Directives issued for the civil version of the Gazelle. The DGAC AD which made the Service Bulletin mandatory is also listed for ease of reference. Eurocopter Service Bulletin No 65.10 (DGAC 75-52-13) has been cancelled; therefore this MPD is raised to Revision 1 to delete reference to the SB from the following list.

**Compliance:** Prior to the issue or the renewal of a Permit to Fly for a Gazelle helicopter, it must be established and certified that the following Eurocopter Service Bulletins have been complied with, where applicable. Any repetitive requirements required by these Service Bulletins must be carried out at the intervals specified.

SB No.	Description	DGAC AD No.
01.01	Main gearbox cowlings.	72-126-1
05.04	Checking the pre-load of swashplate bearings.	73-36-3
67.01	Reduced travel of the tail rotor servo-control jack.	73-37-2
01.02 R1	Forward and rear main gearbox 'A' frames.	73-47-4 and 73-128-8
28.01 R1	Addition of a new sump on fuel tank.	73-72-5
28.02	Filter Le Bozec.	73-127-7
53.02	Addition of a deflector on the fuel tank vent.	74-12-9

continued overleaf

MPD No: 2000–006 R1 Page 2 of 2

SB No.	Description	DGAC AD No.
05.10	Special monitoring of main gearboxes during initial operation.	75-39-12
05.09 R1	Checking of oil pump/hydraulic unit drive gear and lubrication.	75-040-011 R1
05.07 R3	Inspection of tail rotor bearings, steel bushings and attachment straps on the tail rotor transmission system.	75-204-016 R1
01.10 R1	Checking the internal protection of landing gear cross-beam and rear arches.	76-227-17
05.16	Checking the correct operation of free wheel in cold weather. (Not applicable if SB 65.14 is embodied)	77-200-20
01.09 R1	Telec type 7502 noise filter.	77-204-19
01.17	Pyromeca cartridges for emergency flotation gear.	78-138-22
01.18	Non-rotating scissors/flared housing liaison.	79-73-25
01.16 R1	Attachment bolts for upper shackles of front and rear main gearbox 'A' frames.	79-250-26
65.19	Main gearbox input gear flange.	80-60-27
05.19 R3	Inspection of AU4 G1 inflating head installed on emergency flotation gear nitrogen cylinder.	80-061-028 R2
05.18 R1	Monitoring of landing gear legs.	80-98-29
05.20	Freewheel flange bearing monitoring.	82-62-30
65.22	Aft upper attachment lug on tail gearbox housing.	82-100-31
65.24 R1	Tightening of the main gearbox input gear slotted nut.	82-183-32
32.02	External protection of rear cross-tube/rear arch tubes abutment ends.	83-74-33
05.24	Monitoring low frequency low landing gear.	88-167-034
65.43 R1	Forward attachment of the intermediate gearbox.	92-011-036 R1
Telex Information No 00079 Dec 23, 1988	Check of the main rotor head pitch change rod.	1998-551-039

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 7 July 2000. Revision 1 becomes effective on 7 March 2003.

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2000-007 ROLLS-ROYCE

Subject: Engine modification standard and inspection programme.

Applicability: Rolls-Royce Avon Mk 1, 100 and 200 Series engines.

Reason: The CAA has been made aware that there may be Avon engines fitted to aeroplanes issued with a Permit to Fly which are to a modification standard which would not be considered suitable for service in military operation. This situation may arise when aeroplanes have been offered for disposal by an airforce during a period of modification of a fleet, but prior to the modification being incorporated in the particular engines fitted. Since the overall safety record assessment for military aircraft is based in part upon the engine airworthiness record in military service, all modifications deemed essential for military operation of these engines should be incorporated, or an equivalent level of safety should be established by inspection programme. This MPD is issued to ensure that engine modification standards and inspection programmes meet this requirement.

Compliance: Within 10 flights, 10 flying hours, or before renewal of the Permit to Fly, whichever is the sooner from the effective date of this MPD, examine the engine build records as follows:

(1) Ensure that the following modifications have been embodied; if any modification is not embodied, the engine must be removed from service pending embodiment:

#### Avon Mk 1 and 102

5480 - IGV ram

#### Avon Mk 109

5472 - HP fuel pipe revised clipping 5480 - IGV ram

continued overleaf

MPD No: 2000-007 Page 2 of 2

#### Avon Mk 122

5416 - BVCU filter

5472 - HP fuel pipe revised clipping

5480 - IGV ram

5511 - Fuel filter differential pressure switch material (if Normalair Garrett mod 2600, QI 9213, or STI/ELECT/445 not embodied)

5522 - Strengthened stage 3 blade lug

5530 - BVCU diaphragm material

#### Avon Mk 207

3775 - HP oil filter cover retaining bolt

4305 - Fuel filter differential pressure switch material (if Normalair Garrett mod 2600, QI 9213, or STI/ELECT/445 not embodied)

4345 (or 4428) - HP fuel transfer connections

(2) Examine the engine records to establish if the following modifications are embodied. If any particular modification is not embodied, then carry out the referenced Service Instruction (SI) inspection, and carry out repetitive inspections in accordance with SI requirements.

If the SI is already incorporated into the aeroplane maintenance schedule, this requirement is waived.

#### Avon Mk 109

Mod	Description	SI for pre-mod standard
	Governor pump filter retention Strengthened IGV operating lever	SI/Avon/75 SI/Avon/73

#### Avon Mk 122

Mod	Description	SI for pre-mod standard
5366	Governor pump filter retention	SI/Avon/76
5455	Mod 5430 flame tube replacement	SI/Avon/46
5540	Strengthened IGV operating lever	SI/Avon/74
5543	Redesigned LP turbine blade	SI/Avon/78

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 1 September 2000.

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 2000-008 EUROPA AIRCRAFT COMPANY

Subject: Nose gear leg to housing reinforcement.

Applicability: Europa Tri-gear aircraft.

Reason: An incident has occurred to a Europa Tri-gear aircraft where the nose gear housing parted from the nose gear leg on landing. If this situation were to occur whilst landing on soft ground there is a potential for the remains of the nose leg to dig in and for the aircraft to flip over and trap the occupants. The cause of the breakage was due to tensile failure of the weld between the upper part of the leg and the fork joint housing.

Compliance: Within 5 flying hours from the effective date of this MPD modify the nose gear by emboding Europa Aircraft Company Modification No 57 Issue 3.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 1 December 2000.

# UNITED KINGDOM CIVIL AVIATION AUTHORITY

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-001 ROLLS-ROYCE

Subject: Engine calendar life limits.

Applicability: Rolls-Royce Avon Mk 1, 100 and 200 Series engines.

Reason: Following an investigation into a fatal accident to a Hawker Hunter on 5 June 1998, the Air Accidents Investigation Branch have recommended that consideration be given to imposing calendar life limits on fuel and air systems fitted on Avon engines, since these systems may be subject to ageing effects.

It is recognised that ageing effects may not be confined solely to fuel and air systems. Corrosion of discs and blading, for example, may also be time dependent. The CAA has experience of accelerated corrosion occurring on engines fitted to aeroplanes of low usage, and the possibility of an age related failure to either the control units or core engine cannot be discounted.

The CAA has reviewed calendar life limits imposed in military service for the Avon series. In later years of operation UK (MOD) imposed calendar limits which varied between 10 and 20 years, depending on the mark number. Operation of these aeroplanes in civil operation however, may not be representative of military use, due to comparatively low utilisation of the type on the civil register and the application of a limit as high as 20 years is not considered appropriate.

Since the safety record for a substantial portion of the Avon fleet in military service was achieved with calendar limits imposed, it is considered that limits are appropriate for engines fitted to aircraft issued with a CAA Permit to Fly. This MPD introduces calendar life limits for Avon Mk 1, 100 and 200 Series engines. These limits are in addition to Group A part cyclic life limitations and overhaul limits already specified for these engines.

Compliance: Before 1 October 2001 achieve compliance with the following actions. Thereafter, compliance must be established at each renewal of the Permit to Fly for the aeroplane.

continued overleaf

MPD No: 2001-001 Page 2 of 2

Establish from engine records the date of last engine recondition or overhaul.(i.e. the last shop visit at which the engine was zero timed). This date may be taken as the day of dispatch from the facility in which the recondition/overhaul was carried out. If the engine was stored in accordance with the manufacturer's instructions immediately after recondition/overhaul, this date may be taken as the day upon which the engine was removed from storage.

- 2 Remove from service all engines which have been fitted for more than 15 years since either the date of last recondition/overhaul, or the termination of the subsequent storage period.
- 3 Engines and associated control systems removed from service as a result of this limitation may not be refitted until they are reconditioned/overhauled in accordance with manufacturer's instructions.

#### Alternative Means of Compliance:

The intent of this MPD is to prevent potential calendar time related engine deterioration developing to a point where engine integrity is compromised.

The CAA will consider alternative inspection/test and sampling programmes which can be shown to prevent unacceptable deterioration of engines in service. Operators may wish to propose such programmes in lieu of engine withdrawal from service. These programmes must, however, be underwritten by an approved BCAR A8-20 organisation or the manufacturer and must address all ageing related deterioration which could occur on the Avon engine series.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 18 May 2001.



MPD No: 2001-002 R2

Issue Date: 15 February 2002

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-002 R2 CFM

Subject: Cracking of tailplane spar leading edge spigot tubes.

Applicability: CFM Shadow, Streak Shadow and Star Streak Series aeroplanes.

**Reason:** A case has been reported of cracks developing in the male front spar spigot tube of the leading edge of the tailplane. This can result in disconnection of the front spar and loss of control of the aeroplane. Six months of feedback following the issue of the original Service Bulletin dated 15 May 2001, have revealed that the damage was likely to have been sustained as an isolated incident. As a result the Service Bulletin has been raised to issue 2, dated 15 November 2001 to reflect this information.

**Compliance:** At each routine inspection including pre-flight checks and at intervals not exceeding 20 flying hours, carry out the inspection/rectification action detailed in the Accomplishment Instructions of CFM Service Bulletin No 14 Issue 2 from the effective date of this MPD revision.

CFM Service Bulletin No 14 Issue 2 can be obtained from:

CFM Aircraft Ltd Unit 2D, Eastlands Industrial Estate Leiston Suffolk IP16 4LL

Tel: 01728 832353 Fax: 01728 832944

e-mail: HQ@cfm-aircraft.co.uk

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 15 May 2001 and Revision 1 became effective on 23 July 2001. Revision 2 becomes effective on 18 February 2002.



# UNITED KINGDOM CIVIL AVIATION AUTHORITY

MPD No: 2001-003

Issue Date: 9 August 2001

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-003 STEPHENS AKRO / LASER

Subject: Main spar inspections near the root. Flight limitations and aileron modification standards.

Applicability: Stephens Akro and Laser Z200 aeroplanes and derivatives sharing the same wing.

Reason: A cracked main spar on a Stephens Akro aeroplane has been reported in the UK. The aeroplane was withdrawn from service following the discovery of cracks (compression shakes) in the top surface of the main spar adjacent to the root ribs. Over stressing in flight almost certainly caused these cracks. Similar occurrences have been reported world wide for this aeroplane type and the Laser Z200.

Compliance: Before further aerobatic flight but not later than 50 flying hours from the effective date of this MPD inspect the condition of the main spar in accordance with the instructions detailed below. Thereafter inspect the main spar prior to each Permit to Fly renewal. Due to the nature of the cracking if at anytime the aeroplane exceeds the permitted flight envelope an inspection is required before further aerobatic flight.

Inspect the top surface of the main spar adjacent to the root ribs. Particular attention should be given to the area where cracks (compression shakes) have been found, approximately 0.25 inches inboard of the port and starboard root ribs on the upper spar surface. The full visible spar top surface should be inspected, as the bending loads are constant in this region. Since compression shakes are difficult to find, a suitably authorised aircraft inspector experienced in the inspection of wood defects should carry out the work.

Note: Flight limitations for this aeroplane are:

- for aerobatic flight a 'G' meter is to be installed and operational.
- maximum limit loads of +6g, -3g.

At the first inspection required by this MPD, confirmation is required that the aileron modification developed by Mr Leon Tolve reference S-502 dated 24 May 1985, introduced to eliminate wing aileron flutter problems, has been incorporated on the aeroplane.

continued overleaf

MPD No: 2001-003 Page 2 of 2

Report aileron modification confirmation and details of any adverse findings following each inspection by letter or fax to Mr A C Love, CAA Aircraft Projects Department (Fax: 01293 573976).

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 13 August 2001.



# UNITED KINGDOM CIVIL AVIATION AUTHORITY

MPD No: 2001-004

Issue Date: 3 September 2001

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-004 MAINAIR SPORTS

Subject: Upper torso restraint for passengers.

Applicability: Mainair Sports two seat microlights.

Reason: As a result of a recent fatal accident, AAIB Recommendation 2001-52 has been issued. This recommends that manufacturers of UK registered microlight aircraft provide upper body restraint to the rear seats where forward movement of a passenger could cause injury to the pilot. This recommendation was accepted by the CAA.

Compliance: At the next Permit to Fly renewal or before 25 January 2002, whichever is sooner, install shoulder straps for use by passenger, in accordance with Mainair Sports Service Bulletin No 45.

A copy of the Service Bulletin and further information can be obtained from:

Mainair Sports Unit B Crawford Street Rochdale Lancashire OL16 5NU

Tel: 01706 655134 Fax: 01706 631561

Email: flying@mainairsports.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 7 September 2001.



Issue Date: 10 October 2001

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-005 THRUSTER AIR SERVICES

Subject: Warp Drive propellers.

Applicability: Thruster Air Services Thruster T600 Series microlights fitted with Jabiru 2200A

engines.

**Reason:** A report has been received of a crack in the hub of a Warp Drive 2 bladed propeller fitted to a Jabiru 2200A engine on a Thruster T600 Sprint. Inspection of a Thruster T600N has identified hub cracking on an aircraft that had completed 196 hours.

**Compliance:** Before further flight from the effective date of this MPD check the propeller hub in accordance with the requirements of paragraph A of Thruster Air Services Service Bulletin TAS/SB07. Repeat the check prior to each flight. Ensure the propeller is correctly torqued in accordance with the requirements of paragraph B of Thruster Air Services Service Bulletin TAS/SB07. Report all findings to Thruster Air Services.

A copy of the Service Bulletin and further information can be obtained from:

Thruster Air Services Malthouse Ginge Near Wantage OX12 8QS

Tel: 01235 833305 Fax: 01235 833390

Email: gordon@thruster.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 12 October 2001.



Issue Date: 26 October 2001

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-006 MEDWAY MICROLIGHTS / SOUTHDOWN INTERNATIONAL

Subject: Upper torso restraint for passengers.

Applicability: Medway Microlights and Southdown International two seat microlights.

**Reason:** As a result of a recent fatal accident, AAIB recommendation 2001-52 has been issued. This recommends that manufacturers of UK registered microlight aircraft provide upper body restraint to the rear seats where forward movement of the passenger could cause injury to the pilot. This recommendation was accepted by the CAA.

**Compliance:** Before 31 December 2001 install shoulder straps for use by passenger, in accordance with Medway Microlights Service Bulletin No 0015.

A copy of the Service Bulletin and further information can be obtained from:

Medway Microlights Burrows Lane Middle Stoke Rochester Kent ME3 9RN

Tel: 01634 270780 Fax: 01634 270648

Email: medway@ravenmad.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 1 November 2001.

MPD No: 2001-007 R1

Issue Date: 26 November 2001

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-007 R1 WESTLAND HELICOPTERS

Subject: Main rotor head – Torsion tie bar.

Applicability: Westland Gazelle AH.Mk 1, HT.Mk 2 and HT.Mk 3 helicopters.

**Reason:** The French DGAC issued Airworthiness Directive 2001-374-040 following an accident involving a SA 341 G helicopter that was caused by the failure of the main rotor head torsion tie bar. The DGAC AD made Eurocopter Alert Telex SA341/342 No. 01.28 mandatory. MPD 2001-007 was raised to require compliance with that Alert Telex for ex Ministry of Defence Gazelle helicopters on the UK register with a Permit to Fly.

Compliance: Superseded by MPD 2001-013.

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 1 November 2001. Revision 1 becomes effective on 27 November 2001.

MPD No: 2001-008 R1

Issue Date: 5 December 2002

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-008 R1 HORNET MICROLIGHTS

Subject: Upper torso restraint for passengers.

Applicability: Hornet Microlights - Hornet Dual Trainer Raven microlights.

**Reason:** As a result of a fatal accident, the AAIB issued recommendation 2001-52. This recommends that manufacturers of UK registered microlight aircraft provide upper torso restraint to the rear seats where forward movement of the passenger could cause injury to the pilot. The CAA accepted this recommendation. The BMAA has advised the CAA that the Hornet Dual Trainer Raven is a side-by-side configuration; therefore compliance with the original MPD is not required.

Compliance: Cancelled at Revision 1.

The original MPD became effective on 23 November 2001. Revision 1 becomes effective on 9 December 2002.

Issue Date: 31 January 2002

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-009 MICROLIGHTS

Subject: Upper torso restraint for passengers.

Applicability: All Type Accepted two seat weight-shift microlights using one of the following trikes:

Cougar Puma
Garland Skytrike Puma 440
Gemini Tri-Flyer
Lancaster Tri-Flyer
Microtrike 440 440
Panther Willow

**Reason:** As a result of a recent fatal accident, AAIB recommendation 2001-52 has been issued. This recommends that manufacturers of UK registered microlight aircraft provide upper body restraint to the rear seats where forward movement of the passenger could cause injury to the pilot. This recommendation was accepted by the CAA.

**Compliance:** Before 30 April 2002 install shoulder straps for use by passenger, in accordance with British Microlight Aircraft Association (BMAA) Technical Information Leaflet (TIL) 105.

A copy of BMAA TIL 105 and further information can be obtained from:

British Microlight Aircraft Association
Bullring
Deddington
Banbury
Oxon
OX15 0TT

Tel: 01869 338888 Fax: 01869 337116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 4 February 2002.



Issue Date: 21 November 2001

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-010 J A HUNT

Subject: Upper torso restraint for passengers.

Applicability: J A Hunt Huntwing Avon and Hunt-Avon Blade microlights.

**Reason:** As a result of a recent fatal accident, AAIB recommendation 2001-52 has been issued. This recommends that manufacturers of UK registered microlight aircraft provide upper body restraint to the rear seats where forward movement of the passenger could cause injury to the pilot. This recommendation was accepted by the CAA.

**Compliance:** Before 31 December 2001 install shoulder straps for use by passenger, in accordance with British Microlight Aircraft Association (BMAA) Microlight Airworthiness Approval Note (MAAN) 1579.

A copy of BMAA MAAN 1579 and further information can be obtained from:

British Microlight Aircraft Association
Bullring
Deddington
Banbury
Oxon
OX15 0TT

Tel: 01869 338888 Fax: 01869 337116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 23 November 2001.



Issue Date: 31 January 2002

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-011 BRITISH AEROSPACE

**Subject:** Main undercarriage – Examination of fatigue critical features.

Applicability: British Aerospace Canberra Series aeroplanes.

**Reason:** Due to the fatigue life consumption of individual Canberra main undercarriages being unknown, an assessment of the fatigue critical features of the main undercarriage has been carried out and has recommended ongoing NDT examinations of these identified features. CSI/CANBERRA/131 has been issued detailing ongoing NDT examinations of fatigue critical areas of the main undercarriage in order to reduce the risk of fatigue failures.

**Compliance:** Not later than 6 months or 100 landings, whichever is the sooner from the effective date of this MPD and thereafter at intervals not exceeding 6 months or 100 landings, inspect the main undercarriage leg assemblies for cracks in accordance with CSI/CANBERRA/131.

Record compliance with this MPD in the aircraft log book.

A copy of the CSI can be obtained from Mr A C Love, Aircraft Certification Section 2E, Aircraft Projects Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Telephone +44 (0)1293 573726.

This MPD becomes effective on 4 February 2002.

MPD No: 2001-012 R2

Issue Date: 10 June 2002

## **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-012 R2 SUTTON HARNESSES

**Subject:** Sutton harnesses – Integrity and lifing.

Applicability: Aircraft fitted with Sutton harnesses.

**Reason:** There have been cases where original Sutton harnesses have failed due to deterioration in their condition. British Aerospace have issued Mandatory Technical News Sheet No 33 (CAA AD No 007-03-99) on this subject for De Havilland DH60, DH60G, DH60M, DH60X, DH82A, Queen Bee, DH83, and DH94 aircraft variants operating on a UK CAA Certificate of Airworthiness. This MPD has been raised to cover aircraft fitted with Sutton harnesses operating on a UK CAA Permit to Fly. Revision 2 aligns the replacement date where it is not possible to determine from the aircraft technical records the date of initial fitment of the Sutton harnesses with that identified in Technical News Sheet No 33.

**Compliance:** Not later than 10 flying hours or three months, whichever is the sooner from the original effective date of this MPD and thereafter at each Annual Check, inspect each Sutton harness for evidence of broken stitches, cuts and tears, chafing, signs of contamination due to acid, oil, grease or water, deterioration due to sunlight. Where any signs of degradation are found the harness is to be replaced before further flight.

An installed life of 9 years from the initial date of fitment is introduced for Sutton harnesses. If it is not possible to determine from the aircraft technical records the date of initial fitment of the Sutton harnesses, they are to be replaced not later than 1 July 2002.

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 4 February 2002. Revision 1 became effective on 12 April 2002. Revision 2 becomes effective on 12 June 2002.

MPD No: 2001-013 R2

Issue Date: 3 March 2003

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-013 R2 WESTLAND HELICOPTERS

**Subject:** Main rotor head – Torsion tie bar.

Applicability: Westland Gazelle AH.Mk 1, HT.Mk 2, HT.Mk 3 and HT.Mk 4 helicopters.

**Reason:** The French DGAC issued Airworthiness Directive 2001-587-041 (now at Revision 2) following an accident involving a SA 341 B helicopter that was caused by the failure of the main rotor head torsion tie bar. The DGAC AD made Eurocopter Alert Telex SA341/342 No. 01.29 mandatory. This MPD was raised to require compliance with the Alert Telex for ex Ministry of Defence Gazelle helicopters on the UK register with a Permit to Fly. The Alert Telex has been cancelled and replaced by Eurocopter Alert Service Bulletin 01.29; therefore this MPD is raised to Revision 2 to reflect this change.

**Compliance:** From the effective date of this MPD revision for torsion tie bars Part Nos 341A31-4933-00/ -01/ -02/ -03/ -04 and Part No 704A33-633-270 comply with the shorter service life limits for these torsion tie bars in accordance with Eurocopter Alert Service Bulletin SA341/342 No. 01.29.

Torsion tie bars Part Nos 341A31-4904-00/-01/-02/-03 have been declared non airworthy from 30 September 2001.

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 27 November 2001 and superseded MPD 2001-007. Revision 1 became effective on 5 January 2002. Revision 2 becomes effective on 7 March 2003.



Issue Date: 28 November 2001

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2001-014 THRUSTER AIR SERVICES

**Subject:** Warp Drive propellers.

**Applicability:** Thruster Air Services Thruster T600 models fitted with Jabiru 2200A engines and Warp Drive propellers with HP-L and HP2-914 hubs.

**Reason:** Thruster T600, 450 kg microlights were originally fitted with Warp Drive propellers consisting of 64" propeller blades and HP-L hubs. Cracks were found in a number of the HP-L hubs resulting in the issue of Service Bulletin TAS/SB07 on 21 September 2001. Further investigation using dye penetrant revealed that cracking was more widespread. Following a recommendation from Thruster Air Services the CAA suspended the Permits to Fly for the aircraft involved. Investigation has shown the cracking to be initiated by fretting fatigue.

A new hub, under designation HP2-914, is now available which Thruster considers is more robust than the HP-L version.

Thruster will be monitoring the nominated fleet leader aircraft, which will be fitted with an HP2-914 hub. This aircraft will have visual and dye penetrant inspections performed on the hubs at 25, 50, 100, 150 and 250 hours since new. In addition the second lead aircraft must be subject to the same inspection when it reaches the limit declared in SB TAS/SB08. Once both hubs have completed satisfactory inspection at each stage, Service Bulletin TAS/SB08 will be re-issued to increase the declared life limit of the hubs for any remaining aircraft.

**Compliance:** Before further flight from the effective date of this MPD replace HP-L hubs with HP2-914 hubs in accordance with Thruster Air Services Service Bulletin TAS/SB08.

Except for the fleet leader HP2-914 hubs in service may not exceed the life limit declared in the latest issue of Service Bulletin TAS/SB08.

Additionally all HP2-914 hubs must be removed in accordance with Thruster Pilots Operating Handbook and visually inspected at 25, 50, 100, 150 and 250 hours in the region defined in Appendix A of TAS/SB08. If any fretting is evident the hub must be rejected. If no fretting is evident the propeller may be re-fitted in accordance with Thruster Pilots Operating Handbook.

continued overleaf

MPD No: 2001-014 Page 2 of 2

A copy of the Service Bulletin and further information can be obtained from:

Thruster Air Services Malthouse Ginge Near Wantage OX12 8QS

Tel: 01235 833305 Fax: 01235 833390

Email: gordon@thruster.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 30 November 2001.

MPD No: 2002-001 R1

Issue Date: 16 January 2003

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2002-001 R1 BRITISH AEROSPACE

Subject: Elevator/rudder control system.

Applicability: British Aerospace Jet Provost and Strikemaster Series aeroplanes.

**Reason:** Cases have occurred of partial binding or complete seizure of the elevator/rudder concentric torque tube bearings causing an interconnection between elevator and rudder control systems. This interconnection has resulted in uncommanded rudder movement with the application of elevator control inputs and vice versa. Investigation has determined that bearing seizure was due to inadequate lubrication and water ingress in the elevator torque tube bearings. Aeroplanes subject to external storage are particularly prone to this occurrence.

#### Compliance:

- Before further flight from the effective date of this MPD, the pilots pre-flight checks are to be amended to include a specific requirement to check, during full and free control movements, for any indication of uncommanded rudder movement with application of elevator or visa-versa. Any indications of uncommanded rudder/elevator movement will necessitate immediate inspection action as per item 2.
- Within the next 6 months from the effective date of this MPD and annually thereafter or at the next Primary or Primary star maintenance (whichever is the sooner) and at subsequent Primary or Primary star maintenance, examine, with the rudder removed, the rudder torque tube bearings Section Reference No. 26PJ 9500428, Part No. TTS-22 for evidence of corrosion, water contamination and adequate lubrication. Replace any defective bearings.

Note: The Primary and Primary Star maintenance is that defined in the following publications or any equivalent scheduled maintenance action agreed by the CAA.

Jet Provost - AP101B-2303,4,5-5A1.

Strikemaster - B.A.C. 167 (All marks)-1A, 1B and 5.

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 16 February 2002. Revision 1 becomes effective on 23 January 2003.

Enquiries regarding this MPD should be made to the United Kingdom Civil Aviation Authority, Applications and Certification Section, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR. Phone: +44 (0)1293 573149 Fax: +44 (0)1293 573993

Issue Date: 20 March 2002

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2002-002 AVID AIRCRAFT

**Subject:** Provision of elevator down stop.

Applicability: Avid Aircraft Series aeroplanes all variants.

**Reason:** Without the fitment of an elevator down stop there is a danger that when the elevator is deflected fully downwards, the pitch control rod attachment fitting to the control column can become bent, due to contact with the control column torque tube. This could possibly lead to a crack in the attachment fitting with its subsequent failure due to fatigue.

**Compliance:** Before further flight from the effective date of this MPD, in accordance with Popular Flying Association (PFA) modification leaflet MOD/189/006.

- 1 Inspect the elevator control mechanism for (a) the presence of a control stop and (b) damage to the pitch control rod attachment fitting at the control column end.
- 2 (a) If no stop is fitted then install one in accordance with PFA modification leaflet MOD/189/006 and (b) if the control rod attachment fitting is damaged replace it with a serviceable item and report the fact to the PFA HQ engineering staff.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 22 March 2002.



Issue Date: 26 March 2002

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2002-003 AVIASUD ENGINEERING

Subject: Installation of slip-ball and cockpit placards.

Applicability: Aviasud Engineering Aviasud Mistral microlights.

**Reason:** As a result of a recent fatal accident, the AAIB issued recommendations 2001-75 and 2001-76, which recommended that the BMAA carry out investigations into the handling of the Aviasud Mistral aircraft with the canopy removed. Following flight tests of the aircraft, the BMAA recommended that the aircraft was not safe to be flown with the canopy removed, a slip-ball instrument should be fitted and an ASI calibration placard should be installed. The CAA has accepted these recommendations.

**Compliance:** Before 30 April 2002 or at the next permit renewal, whichever is the sooner, install a slip-ball and a cockpit placard requiring the canopy to be fitted for all flights, in accordance with British Microlight Aircraft Association (BMAA) Microlight Airworthiness Approval Note (MAAN) 1575.

Before 30 June 2002 or at the next permit renewal, whichever is the sooner, install an ASI calibration placard, in accordance with British Microlight Aircraft Association (BMAA) Microlight Airworthiness Approval Note (MAAN) 1575.

A copy of BMAA MAAN 1575 and further information can be obtained from:

British Microlight Aircraft Association
Bullring
Deddington
Banbury
Oxon
OX15 0TT

Tel: 01869 338888 Fax: 01869 337116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 28 March 2002.

Enquiries regarding this MPD should be made to the United Kingdom Civil Aviation Authority, Applications and Certification Section, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR. Phone: +44 (0)1293 573149 Fax: +44 (0)1293 573993

MPD No: 2002-004 R1

Issue Date: 20 June 2002

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2002-004 R1 CFM

Subject: Propeller hub mounting bolts.

**Applicability:** CFM Shadow D, Shadow D-D and Streak Shadow aeroplanes fitted with a Rotax 582 engine and a Precision propeller, where the propeller mounting bolts are installed through threaded holes in the gearbox output flange. This MPD is not applicable to aeroplanes where the propeller mounting bolts pass through plain holes in the gearbox output flange.

**Reason:** Two serious incidents have been reported of failure of the propeller hub mounting bolts used on CFM aeroplanes fitted with Rotax engines and Precision propellers. Both aeroplanes had recorded approximately 100 engine hours. Revision 1 is issued to clarify the applicability of the MPD.

**Compliance:** Before further flight from the effective date of this MPD revision, determine the time in-service of the propeller hub mounting bolts. Bolts that have either exceeded 25 hours time in-service or for which the time in-service is not known, must be replaced before further flight with new bolts in accordance with the instructions in CFM Service Bulletin No 16. New bolts must be replaced at intervals not exceeding 25 hours time in service.

CFM Service Bulletin No 16 can be obtained from:

CFM Aircraft Ltd Parham Airfield Woodbridge Suffolk IP13 9AF

Tel: 01728 720088 Fax: 01728 720087

e-mail: HQ@cfm-aircraft.co.uk

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 19 June 2002. Revision 1 becomes effective on 20 June 2002.

Enquiries regarding this MPD should be made to the United Kingdom Civil Aviation Authority, Applications and Certification Section, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR. Phone: +44 (0)1293 573149 Fax: +44 (0)1293 573993

Issue Date: 25 July 2002

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2002-005 CYCLONE AIRSPORTS / SOLAR WINGS

Subject: Primer bulb valves.

**Applicability:** Cyclone Airsports and Solar Wings Pegasus Quantum and Pegasus Quasar microlights fitted with primer bulbs.

**Reason:** A report has been received of in service problems arising from primer bulb outlet valves that become detached and being free to float around inside the primer bulb can block the outlet at random, causing engine failures or fuel starvation damage.

**Compliance:** Not later than 20 flight hours from the effective date of this MPD remove both primer bulb valves and secure the snap ring in accordance with Pegasus Aviation Service Bulletin No 111.

A copy of the Service Bulletin and further information can be obtained from:

Cyclone Airsports Ltd t/a Pegasus Aviation Elm Tree Park Manton Marlborough Witlshire SN8 1PS

Tel: 01672 861578 Fax: 01672 861550

Email: technical@pegasusaviation.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 29 July 2002.

Issue Date: 23 August 2002

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2002-006 WESTLAND HELICOPTERS

**Subject:** Main rotor drive - Clutch-to-free wheel and clutch-to-torque meter shaft attachment bolts.

Applicability: Westland Gazelle AH.Mk 1, HT.Mk 2 and HT.Mk 3 helicopters.

**Reason**: Eurocopter issued Service Bulletin 65.58 (now at Revision 1) following the discovery of an error in the Illustrated Parts Catalogue that resulted in a spare part delivery of incorrect attachment bolts (part number 22201BE060006L) for the clutch-to-free wheel and clutch-to-torque meter shaft assemblies. The French DGAC issued Airworthiness Directive 2002-363-042 making the actions required by the Service Bulletin mandatory. This MPD requires compliance with the Service Bulletin for ex Ministry of Defence Gazelle helicopters on the UK register with a Permit to Fly.

**Compliance:** Not later than 25 flight hours from the effective date of this MPD inspect the clutch-to-free wheel and clutch-to-torque meter shaft assemblies in accordance with Eurocopter Service Bulletin 65.58 to ensure that correct attachment bolts are installed.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 30 August 2002.

Issue Date: 23 August 2002

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2002-007 WESTLAND HELICOPTERS

Subject: TRW/Breeze 300 lb (136 kg) electric hoist installation: Pyrotechnic squib failure.

**Applicability**: Westland Gazelle AH.Mk 1, HT.Mk 2 and HT.Mk 3 helicopters fitted with 300 lb (136 kg) electric hoists.

**Reason:** Eurocopter issued Alert Telex 45.05 to inform operators that the emergency load jettison control system of the 300 lb Breeze electric hoist installation does not operate and to introduce the required modification to the control unit, which is common to Breeze and TRW installations. The French DGAC issued Airworthiness Directive 2002-370-043 making the actions required by the Alert Telex mandatory. This MPD requires compliance with the Service Bulletin for ex Ministry of Defence Gazelle helicopters on the UK register with a Permit to Fly.

**Compliance:** From the effective date of this MPD modify the junction box of applicable electric hoists in accordance with the time limits and modifications given in Eurocopter Alert Telex 45.05 to ensure that the emergency load jettison control system operates correctly.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 30 August 2002.



Issue Date: 13 September 2002

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2002-008 AVIASUD ENGINEERING

**Subject**: Installation of a new stall warning device and cockpit placard.

Applicability: Aviasud Engineering Aviasud Mistral microlights.

**Reason**: As a result of a recent fatal accident, the AAIB issued recommendation 2001-76, which recommended that the BMAA carry out an investigation into the effectiveness of the stall warning device installed on the Aviasud Mistral aircraft. Following flight tests of the aircraft, the BMAA recommended that the aircraft should be fitted with a new stall warning device. The CAA has accepted this recommendation.

**Compliance:** Before 1 November 2002 or at the next permit renewal, whichever is the sooner, install a new stall warning device and a placard requiring the device to be confirmed as operative before each flight, in accordance with British Microlight Aircraft Association (BMAA) Microlight Airworthiness Approval Note (MAAN) 1627.

A copy of BMAA MAAN 1627 and further information can be obtained from:

British Microlight Aircraft Association (BMAA)
Bullring
Deddington
Banbury
Oxon
OX15 OTT

Tel: 01869 338888 Fax: 01869 337116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 20 September 2002.



MPD No: 2002-009 R2

Issue Date: 18 September 2009

# **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Flv.

MPD: 2002-009	R2 YAKOVLEV
Subject:	Airframe Life Limitation
Applicability:	Yakovlev Yak-50 aeroplanes
Reason:	It has been identified that this aeroplane type is subject to an airframe life limitation. This MPD is raised to Revision 2 to remove references to overhaul life and relax the calendar aspect of the airframe life limitations. In addition this revision allows an alternative means of obtaining an airframe life extension to that provided by Yakovlev Design Bureau (YDB) and applies a new 600 hour interim airframe life limit which could be increased subject to appropriate approvals.  Correspondence with the Design Authority, Yakovlev Design Bureau (YDB), has confirmed that there is an initial airframe life limit of 300 hours from new.  This initial 300 hour airframe life limit can be extended to a maximum of 600 hours (interim airframe life limit) by the implementation of an approved maintenance and inspection programme. In the absence of airframe life extensions being granted by YDB, this 600 hour interim airframe life limit has been applied pending further review of what maintenance and inspection programme would be appropriate to extend the limit beyond this value.
Compliance:	Before further flight from the original effective date of this MPD, determine the total airframe hours of the individual aeroplane.  No action is required until the aeroplane reaches 300 airframe hours.  At 300 airframe hours a maintenance and inspection programme, appropriate to the individual aeroplane and approved by the Design Authority, Yakovlev, must be implemented in order to extend the airframe life beyond 300 hours. This programme must include the incorporation of Bulletin 50-079DK if it is not already incorporated. The revised airframe life, as notified by Yakovlev, will be the lesser of the allowed number of hours, aerobatic figures, landings or years. Following receipt of the life extension from Yakovlev, the aeroplane log books must be suitably annotated to reflect the Yakovlev approved reference for the life extension and the revised airframe life.

MPD: 2002-009 R2 Page 2 of 2

Note: Any aerobatic figure or landings limitation imposed by YDB may be set aside, as reliance on the airframe hours life extension limitation will be conservative for the operation of these aircraft in the UK. In addition, if an aircraft reaches a calendar airframe life extension limit applied by YDB before the aircraft reaches the hours limit, it may be possible to extend the calendar limit subject to an acceptable maintenance programme being in place. If such an extension is required, the CAA shall be consulted.

If the total hours are in excess of 300 airframe hours the aeroplane may continue to fly for a maximum of 50 airframe hours or 180 days, whichever is the sooner, but during this period aerobatic manoeuvres are prohibited. Approval for aerobatic manoeuvres will be reinstated following Yakovlev's notification of the revised airframe life.

# Compliance Cont:

As an alternative to obtaining an airframe life extension from YDB, it is acceptable to obtain an airframe hours life extension from an organisation approved by the CAA to issue such a document. Such an extension must originate from an acceptable design approved organisation and the approval for an airframe life extension must be signed by an authorised design signatory.

A Permit Maintenance Release (PMR) must be issued certifying compliance with this MPD.

The airframe life limit may not be extended beyond 600 hours (interim airframe life limit) until an appropriate approval has been granted.

#### Additional information:

Yakovlev contact details are as follows:

Mr D K Dratch Chief Designer A S Yakovlev Design Bureau 68 Leningradsky Prospect Moscow 125315 Russia

Currently there is one organisation approved by the CAA to issue airframe hours life extensions for the Yak-50 which is West London Aero Club Engineering at White Waltham Airfield.

Further information on the airframe life extension and the overhaul content may also be obtained from other UK Companies that specialise in these aeroplanes.

### Ensure compliance with this MPD is recorded in the aircraft logbook.

### **Effective Date:**

25 September 2009.

The original MPD became effective on 30 June 2003. Revision 1 became effective on 12 March 2004.

1. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573306 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk



Issue Date: 4 December 2002

## MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2002-010 CFM

**Subject**: Installation of ASI and altimeter correction placards.

**Applicability:** CFM Shadow Series C and CD aeroplanes.

**Reason:** Investigations undertaken by the BMAA have shown that due to the location of the static pressure source on this aeroplane type, the ASI and altimeter over-read significantly. This MPD requires placards to be fitted and an operators manual supplement to be added to indicate the necessary corrections.

**Compliance**: Before 1 January 2003 or at the next permit renewal, whichever is the sooner, install the correction placards in accordance with British Microlight Aircraft Association (BMAA) Service Bulletin 1661 Issue 1.

A copy of BMAA Service Bulletin 1661 and further information can be obtained from:

British Microlight Aircraft Association Bullring Deddington Banbury Oxon OX15 0TT

Tel: 01869 338888 Fax: 01869 337116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 9 December 2002.



MPD No: 2002-011 R1

Issue Date: 3 March 2003

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2002-011 R1 WESTLAND HELICOPTERS

**Subject:** Flight controls – Yaw control forward quadrant.

**Applicability:** Westland Gazelle AH.Mk 1, HT.Mk 2, HT.Mk 3 and HT.Mk 4 helicopters.

**Reason:** Some helicopters post mod S328 - Optimised Fenestron Assembly - have been noted to still have the pre-mod yaw control forward quadrant installed (p/n 341A.27.1510.03 standard). Due to typographical errors, this MPD is raised to Revision 1 to change the part no from p/n 341A.27.1520.03/.07 to p/n 341A.27.1510.03/.07.

**Compliance:** Not later than twelve months from the original effective date of this MPD examine the helicopters records to determine if modification S328 has been embodied. If so gain access to the starboard underside of the forward fuselage and physically **inspect** the forward yaw quadrant for conformity with AP 101C – 0901 to 0904 – 2, Mod Leaflet S328, Page 12, Drg. No. Gazelle / S328 Sheet 2. (As an alternative it is permissible to use EC(F) SA341 SB 65.26 figure 2).

- 1. If the yaw quadrant conforms to the drawing and is part marked 341A.27.1510.07 no further action is required.
- 2. If the yaw quadrant conforms to the drawing but is part marked 341A.27.1510.03 then using paint physically **re-identify** it as 341A.27.1510.07.
- 3. If the yaw quadrant does not conform to the drawing then **modify** it in accordance with AP 101C 0901 to 0904 2, Mod Leaflet S328. (As an alternative it is permissible to use EC(F) SA341 SB 65.26). Once modified, using paint, physically **re-identify** it as 341A.27.1510.07.

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 9 December 2002. Revision 1 becomes effective on 7 March 2003.



MPD No: 2003-001 R1

Issue Date: 2 July 2007

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-001 R1 ROTARY AIR FORCE MARKETING

Subject: Surface wind limitation.

Applicability: Rotary Air Force Marketing RAF 2000 and RAF 2000 GTX-SE gyroplanes.

**Reason:** As a result of a recent fatal accident, the AAIB has identified the need to consider the ability of pilots with limited experience on this type of gyroplane, operating in turbulent or gusty conditions.

**Compliance:** Cancelled at Revision 1 and superseded by MPD 2006-013.

The original MPD became effective on 23 January 2003. This MPD became effective upon receipt of MPD 2006-013.



Issue Date: 14 February 2003

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-002 POWERCHUTE SYSTEMS INTERNATIONAL

Subject: Anchor plate assembly.

Applicability: Powerchute Systems International Powerchute Kestrel microlights.

**Reason:** In May 2002, the CAA was advised that cracks had been found in the anchor plates of Powerchute Kestrel microlight aircraft. These cracks were not visible to the naked eye and could only be detected following disassembly using NDT techniques. Powerchute Kestrel microlight aircraft were subsequently grounded by the CAA pending investigation and identification of the appropriate corrective action by the BMAA.

**Compliance:** Before further flight from the effective date of this MPD, install a redesigned anchor plate assembly in accordance with British Microlight Aircraft Association (BMAA) Microlight Airworthiness Approval Note (MAAN) 1633.

A copy of BMAA MAAN 1633 and further information can be obtained from:

British Microlight Aircraft Association (BMAA)
Bullring
Deddington
Banbury
Oxon
OX15 0TT

Tel: 01869 338888 Fax: 01869 337116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 14 February 2003.



Issue Date: 30 April 2003

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-003 THRUSTER AIR SERVICES

**Subject:** Leading edge spar attachment bracket.

**Applicability:** Thruster Air Services Thruster T600 Series microlights.

**Reason:** During a routine airframe inspection of a Thruster T600N small cracks were found on the leading edge spar attachment bracket Part No 080-267; the cracks were located on the bend radius close to the outer edge of the bracket. The microlight had logged approximately 450 flying hours and since new had been tethered down outside when not flying. The tie down cables had been attached to the lift strut ends adjacent to the stainless brackets. It is likely that this particular microlight has undergone a significant number of cyclic stress reversals particularly due to being tethered outside in all weathers.

**Compliance:** Before further flight from the effective date of this MPD inspect the leading edge spar strut brackets for cracks in accordance with Thruster Air Services Service Bulletin TAS/SB09 Issue 2. At the same time an inspection is also required of the trailing edge, jury strut and rear lift cable brackets for cracks, as these brackets are all of a similar design. Replace any cracked brackets before further flight. Return cracked brackets to Thruster Air Services. Repeat these inspections prior to the first flight of the day. The pilot may perform these inspections.

A copy of the Service Bulletin and further information can be obtained from:

Thruster Air Services Malthouse Ginge Near Wantage OX12 8QS

Tel: 01235 833305 Fax: 01235 833390

Email: gordon@thruster.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 5 May 2003.

Enquiries regarding this MPD should be made to the United Kingdom Civil Aviation Authority, Applications and Certification Section, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Phone: +44 (0) 1293 573149 Fax: +44 (0) 1293 573993



Issue Date: 30 April 2003

# **MANDATORY PERMIT DIRECTIVE**

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-004 CFM

**Subject:** Installation of ASI and altimeter correction placards.

**Applicability:** CFM Shadow Series B and BD aeroplanes.

**Reason:** Investigations undertaken by the BMAA have shown that due to the location of the static pressure source on this aeroplane type, the ASI and altimeter over-read significantly. This MPD requires placards to be fitted and an operators manual supplement to be added to indicate the necessary corrections.

**Compliance:** Before 1 June 2003 or at the next permit renewal, whichever is the sooner, install the correction placards in accordance with British Microlight Aircraft Association (BMAA) Service Bulletin 1681 issue 1.

A copy of BMAA Service Bulletin 1681 and further information can be obtained from:

British Microlight Aircraft Association Bullring Deddington Banbury Oxon OX15 0TT

Tel: 01869 338888 Fax: 01869 337116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 3 May 2003.



MPD No: 2003-005 R1

Issue Date: 29 May 2003

# MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-005 R1 CFM

**Subject:** Installation of ASI and altimeter correction placards.

Applicability: CFM Shadow Series D and DD aeroplanes.

**Reason:** Investigations undertaken by the BMAA have shown that due to the location of the static pressure source on this aeroplane type, the ASI and altimeter over-read significantly. This MPD requires placards to be fitted and an operator's manual supplement to be added to indicate the necessary corrections. This MPD is raised to Revision 1 to cover homebuilt aeroplanes.

**Compliance:** Before 15 June 2003 or at the next permit renewal, whichever is the sooner; install the correction placards in accordance with British Microlight Aircraft Association (BMAA) Service Bulletin 1682 issue 1. For aircraft with serial number of the form PFA 161-\*\*\*\*, install the correction placards in accordance with Popular Flying Association (PFA) Bulletin MOD/161/001 before further flight from the effective date of this MPD at Revision 1.

A copy of BMAA Service Bulletin 1682 and further information can be obtained from:

further information can be obtained from:

British Microlight Aircraft Association

Bullring

Further information can be obtained from:

Popular Flying Association

Terminal Building

Bullring
Deddington
Banbury
Oxon OX15 0

Oxon OX15 0TT

Tel: 01869 338888 Fax: 01869 337116 Email: cto@bmaa.org Tel: 01273 461616 Fax: 01273 463390

West Sussex BN43 5FF

Shoreham Airport

Shoreham-by-Sea

Email: engineering@pfa.org.uk

A copy of PFA Bulletin MOD/161/001 and

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 3 May 2003. Revision 1 becomes effective on 2 June 2003.

Enquiries regarding this MPD should be made to the United Kingdom Civil Aviation Authority, Applications and Certification Section, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Phone: +44 (0) 1293 573149 Fax: +44 (0) 1293 573993



Issue Date: 13 May 2003

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-006 MAINAIR SPORTS

Subject: Pegasus Quik front engine mount spacer.

Applicability: Mainair Sports Pegasus Quik microlights fitted with a Rotax 912ULS engine.

**Reason:** The propeller on Pegasus Quik microlight aeroplanes is mounted behind the keel. During start up, there is considerable fore and aft flexing of the propeller blades and some rocking movement of the engine on the flexible engine mounts. Although, a spacer between the propeller hub and engine driving flange was introduced during design, propeller clearances on production microlights are small enough to give the possibility of a propeller strike.

**Compliance:** Before further flight from the effective date of this MPD, inspect the propeller in accordance with Action 1 of Mainair Service Bulletin 113. Until Mainair modification M100 is embodied, always start the engine with the control bar held back so the keel rises above the propeller disk. Not later than 25 flight hours from the effective date of this MPD embody Mainair modification M100, introduction of engine mount spacer, in accordance with Action 3 of Mainair Service Bulletin 113.

A copy of Mainair Service Bulletin 113 can be obtained from:

Mainair Sports Ltd Unit B Crawford Street Rochdale Lancashire OL16 5NU

Tel: 01706 655134 Fax: 01706 631561

Email: flying@mainairsports.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 16 May 2003.

Enquiries regarding this MPD should be made to the United Kingdom Civil Aviation Authority, Applications and Certification Section, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR Phone: +44 (0) 1293 573149 Fax: +44 (0) 1293 573993



Issue Date: 19 May 2003

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-007 ROTARY AIR FORCE MARKETING

**Subject:** Rotor blade inspection for cracks.

Applicability: Rotary Air Force Marketing RAF 2000 and RAF 2000 GTX-SE gyroplanes.

Reason: During a routine inspection of two different sets of RAF 2000 rotor blades small cracks were found at the trailing edge at about 81 inches inboard from the tip. The cracks were approximately 2½ inches long extending in a chordwise direction. investigation has identified that these are late examples of an earlier RAF blade design having completed 61 hours or less flight time.

Compliance: Before further flight from the effective date of this MPD inspect the rotor blades for cracks. Replace any cracked rotor blades before further flight. Return cracked rotor blades to Rotary Air Force Marketing Inc via the address shown below. Repeat the inspection prior to the first flight of the day. The pilot may perform this inspection.

Return blades to:

Newtonair (Gyroplanes) 6 Coombshead Road Highweek **Newton Abbot** Devon TQ12 1PY

Attn: Mr M H J Goldring

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 26 May 2003.



Issue Date: 7 July 2003

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-010 ROTORWAY INTERNATIONAL

Subject: Mandatory requirements for UK approval.

**Applicability:** Rotorway International Rotorway Executive 162F helicopters.

**Reason:** The purpose of this MPD is to define the modifications and inspections required on the Rotorway Executive 162F helicopter for acceptance onto the UK register and to ensure continued airworthiness of the helicopter.

**Compliance:** Prior to the issue or the renewal of a Permit to Fly for a Rotorway Executive 162F helicopter, it must be established and certified that the following bulletins issued by Rotorway International have been complied with. Any repetitive inspection requirements must be incorporated into the applicable maintenance schedule for the helicopter:

Bulletin Number	Description
M-09	Main rotor blade modification.
M-10	Fuel pumps inertia switch system.
M-10 M-11	Secondary drive unit installation.
M-12	
	Ignition sensor manufacturing defect.
M-13	Shielding of FADEC wiring harness.
M-14	Engine cam gear life.
M-15	Inspection of connecting rods.
M-16	Throttle cable modification.
M-17	Dual throttle shaft weldment.
M-18	Inspection of braided steel fuel hoses.
M-19	Fuel pressure equalisation kit.
M-20	Inspection of tail rotor drive belt routing.
M-21	Inspection of secondary drive assembly.
A-20	Tail rotor belt tension.
A-21	Simplified method for checking tail rotor belt tension (See Note 1).
A-26	Secondary drive unit keyway inspection (see Note 2).

continued overleaf

MPD No: 2003-010 Page 2 of 2

Note 1: See also MPD No. 1995-094 R1.

Note 2: CAA regard the keyway inspection only as Mandatory. The replacement secondary bearing unit should be carried out if the regular monitoring (post flight) indicates that an over temperature situation has occurred with the three bearing installations.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 14 July 2003.

Issue Date: 24 October 2003

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-011 LUTON AIRCRAFT / PHOENIX AIRCRAFT

**Subject:** Maximum total weight authorised.

Applicability: Luton LA5 Major aeroplanes.

**Reason:** The original Maximum Total Weight Authorised (MTWA) for the Luton LA5 Major aeroplane was 1100 lb. Phoenix Aircraft Ltd increased the MTWA to 1400 lb. A recent review of the data supporting the Phoenix Aircraft Ltd modification shows that the justification for an MTWA of 1400 lb is incomplete; and where it does exist it is marginal in some places. The consequence of operating the aeroplane at weights in excess of 1100 lb MTWA could be in flight structural failure with attendant loss of life.

**Compliance:** From the effective date of this MPD and irrespective of modification standard, the MTWA of the Luton LA5 Major aeroplane is set at 1100 lb. Documents detailing the limitations for the aeroplane are to be amended to state that the MTWA is 1100 lb.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 25 October 2003.



Issue Date: 28 May 2003

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-012 WESTLAND HELICOPTERS

**Subject**: Transmission system – Tail rotor (Fenestron) drive shafts.

Applicability: Westland Gazelle AH.Mk 1, HT.Mk 2, HT.Mk 3 and HT.Mk 4 helicopters.

**Reason:** A small number of tail rotor connecting shafts have been repaired to a standard that is not acceptable to the design organisation for the type, Eurocopter (France). The defective parts are to be removed from service and destroyed.

**Compliance:** Not later than 25 flight hours or 30 days whichever is the sooner from the effective date of this MPD proceed as follows:

#### 1. Investigation on Helicopter

(a) In accordance with the approved aircraft maintenance manual remove the tail boom to pylon drive shaft cover fairing in order to gain access to the Tail Rotor Connecting Shaft.

Note: The Tail Rotor Connecting Shaft is the third and final section of the tail drive shaft run.

- (b) At the forward end of the shaft adjacent to the mounting bearing inspect and note the part and serial numbers of the shaft.
- (c) If the part number and/or serial number cannot be seen on the exposed section of the shaft, then in accordance with the approved aircraft maintenance manual remove the Tail Rotor Connecting Shaft. Following removal, inspect the shaft and note the part and serial numbers.
- (d) If the part number or serial number match any of the following, the shaft is to be immediately retired from service and destroyed.
  - i) <u>Serial Numbers</u>: WAC712, WAD1106, WAD1134, WAD1147, WAD1195, WAD1285, (WAR)WA42, (WAR)WA227 or (WAR)WAD1111.
  - ii) Part Numbers: 341A34-5028-12, or 341A34-5031-12.

continued overleaf

MPD No: 2003-012 Page 2 of 2

(e) If the shaft has been removed then in accordance with the approved aircraft maintenance manual install a serviceable Tail Rotor Connecting Shaft.

- (f) In accordance with the approved aircraft maintenance manual refit the tail boom to pylon drive shaft cover fairing.
- (g) Record compliance with this MPD in the aircraft log book and on the associated component log card.

#### 2. Investigation of Spares Holdings

- (a) Inspect and note the part and serial numbers of all Tail Rotor Connecting Shafts held as spares.
- (b) If the part or serial numbers match any of those listed in paragraph 1 (d), the shaft is to be immediately destroyed.
- (c) Record compliance with this MPD on the associated component log card.

#### 3. Follow Up Action

If any Tail Rotor Connecting Shafts are found to match the part or serial numbers of those listed in paragraph I (d) then details are to be forwarded to: Mr L P Winnert, Aircraft Projects Dept, CAA Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, Fax: 01293 573976, Email: leon.winnert@srg.caa.co.uk

Please quote the part and serial numbers of shaft, registration of the helicopter to which it was fitted, or state if a spares holding item and the action taken to destroy the shaft.

This MPD becomes effective on 5 June 2003.



Issue Date: 5 June 2003

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-013 INIZIATIVE INDUSTRIALI ITALIANE

Subject: Engine mount.

Applicability: Iniziative Industriali Italiane Sky Arrow 650T aeroplanes.

**Reason:** The manufacturer, Iniziative Industriali Italiane, has advised that cracks have been detected on the engine mount of aeroplanes with high operating times, operated from grass airfields and used for training purposes.

**Compliance:** Not later than 10 flying hours from the effective date of this MPD inspect the engine mount for cracks in the welds in accordance with Iniziative Industriali Italiane Service Bulletin No. 01/02. Repeat the inspection at intervals not exceeding 100 flying hours. If cracks are found modify or replace the engine mounting in accordance with Iniziative Industriali Italiane Service Bulletin No. 01/02 before further flight. If the crack length exceeds 20mm, the engine mount must be replaced before further flight. A suitably authorised PFA inspector or CAA authorised person must carry out the inspection.

Not later than 31 December 2003 modify or replace the engine mounting in accordance with Iniziative Industriali Italiane Service Bulletin No. 01/02. Modification or replacement in accordance with the Service Bulletin terminates the requirements for repetitive inspections.

#### Notes:

- 1 All welding must be carried out by a suitably approved CAA welder.
- 2 The PFA or CAA Regional Office must be consulted regarding the implementation of the repair/modification requirements of the Service Bulletin.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 11 June 2003.



Issue Date: 5 June 2003

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-014 INIZIATIVE INDUSTRIALI ITALIANE

Subject: Nose gear support bulkhead.

**Applicability:** Iniziative Industriali Italiane Sky Arrow 650T aeroplanes.

**Reason:** The manufacturer, Iniziative Industriali Italiane, has advised that cracks have been detected on the nose gear support bulkhead (STA600) of aeroplanes with high operating times, operated from grass airfields and used for training purposes.

**Compliance:** Not later than 10 flying hours from the effective date of this MPD inspect the nose gear support bulkhead in accordance with Iniziative Industriali Italiane Service Bulletin No. 02/02. If cracks are found modify the nose gear support bulkhead in accordance with Iniziative Industriali Italiane Service Bulletin No. 02/02 before further flight. A suitably authorised PFA inspector or CAA authorised person must carry out the inspection.

Not later than the next 100 hour inspection or 31 December 2003 whichever is the sooner modify the nose gear support bulkhead in accordance with Iniziative Industriali Italiane Service Bulletin No. 02/02.

Note: The PFA or CAA Regional Office must be consulted regarding the implementation of the modification requirements of the Service Bulletin.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 11 June 2003.



Issue Date: 23 October 2003

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-015 WESTLAND HELICOPTERS

**Subject:** Tail rotor drive shafts – Flexible discs.

Applicability: Westland Gazelle AH.Mk 1, HT.Mk 2, HT.Mk 3 and HT.Mk 4 helicopters.

**Reason:** The French DGAC issued Emergency Airworthiness Directive U2003-394 following a report of incorrect installation of the special washers to the flexible discs of the inclined and horizontal drive shafts of the tail rotor transmission. The incorrect installation might initiate cracks at the attachment points of the flexible disc and then lead to flexible disc failure, causing loss of the anti-torque function. The DGAC AD made Eurocopter SA341/342 Alert Telex No 65.63 mandatory. This MPD is raised to require compliance with that Alert Telex for ex Ministry of Defence Gazelle helicopters on the UK register with a Permit to Fly.

#### Compliance:

- 1. Not later than 10 flight hours from the effective date of this MPD comply with paragraph 2.B.2 of Eurocopter SA 341/342 Alert Telex No 65.63.
- 2. If the helicopter is flown with tail rotor drive shafts that have one or more special washers incorrectly fitted then do the following:
  - a) Remove and replace any non-compliant assemblies with compliant assemblies before 1 May 2004.
  - b) Pending removal of the non-compliant assemblies, comply with paragraph 2.B.3 of Eurocopter SA 341/342 Alert Telex No 65.63 at intervals not exceeding 10 flight hours.
- 3. Before installation of any inclined or horizontal tail drive shafts held as spares comply with paragraph 2.B.2 of Eurocopter SA 341/342 Alert Telex No 65.63.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 24 October 2003.



Issue Date: 6 November 2003

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-016 RANS

Subject: Revised seat suspension.

**Applicability:** Rans S.4 and S.5 Series microlights.

**Reason:** There is a possibility of the aileron torque tube being obstructed by the base of the pilots seat. This situation can result in loss of control of the aircraft.

**Compliance:** Not later than 90 days from the effective date of this MPD modify by replacing the webbing which suspends the pilots seat with fixed length cables in accordance with PFA Airworthiness Information MOD/193/005.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 10 November 2003.

MPD No: 2003-017 R1

Issue Date: 2 January 2004

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-017 R1 RANS

**Subject:** Pilot and passenger restraint harnesses.

Applicability: Rans S.6 Series aircraft.

**Reason:** Rans have issued a simplified shoulder and lap strap style harness that is unsatisfactory. The diagonal shoulder strap exits the buckle in the same direction as the lap strap. When it passes over the occupants shoulder, it becomes distorted at the buckle end. Undue stress concentrations are placed on the shoulder strap near the buckle. There is a potential for premature failure of the strap, particularly in the event of an accident, which may lead to fatal injury of the wearer. This MPD is raised to Revision 1 to amend the applicability to read 'aircraft' to encompass Rans S.6 aircraft that are designated as aeroplanes as well as the sub-set definition of microlight aeroplanes.

**Compliance:** Not later than 90 days from the original effective date of this MPD modify the pilot and passenger restraint harnesses by installing harnesses with a swivel fitting on the shoulder strap in accordance with PFA Airworthiness Information MOD/204/010.

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 10 November 2003. Revision 1 becomes effective on 6 January 2004.



MPD No: 2003-018 R1

Issue Date: 2 January 2004

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-018 R1 RANS

Subject: Condition of pilot and passenger restraint harnesses.

Applicability: Rans S.6 Series aircraft.

**Reason:** A pilot was fatally injured when a Rans S.6 microlight crashed. He was ejected from the cockpit and suffered fatal head injuries after his seat harness broke. The subsequent accident investigation revealed evidence to pre-existing damage, which was considered a contributory cause to the failure of the seat harness. This MPD is raised to Revision 1 to amend the applicability to read 'aircraft' to encompass Rans S.6 aircraft that are designated as aeroplanes as well as the sub-set definition of microlight aeroplanes.

**Compliance:** Not later than 90 days from the original effective date of this MPD and thereafter at each scheduled maintenance period inspect the pilot and passenger restraint harnesses for signs of wear and damage in accordance with PFA Airworthiness Information MOD/204/011. If any signs of deterioration or damage are found, the harness must be replaced with a new one in accordance with PFA Airworthiness Information MOD/204/011 before further flight.

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 10 November 2003. Revision 1 becomes effective on 6 January 2004.



MPD No: 2003-019 R2

Issue Date: 3 August 2004

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2003-019 R2 CFM

Subject: Under-fuselage 'slipper' fuel tank.

**Applicability:** CFM Streak Shadow, Star Streak and amateur built Shadow D Series microlights fitted with a slipper tank.

Compliance: Cancelled at Revision 2 and superseded by MPD 2004-007.

The original MPD and Revision 1 became effective on 31 December 2003, Revision 2 became effective 1 May 2004.



Issue Date: 7 January 2004

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-001 X'AIR

Subject: Inspection of ailerons.

**Applicability:** X'Air Mk 1 microlights. Note: X'Air Mk1 microlights have a designation in the format 'X'Air [engine] ([designation])', e.g. X'Air 584(4) or X'Air Jabiru (1).

**Reason:** The CAA have been advised that the instructions requiring reflexing of the ailerons during build of some X'Air Mk 1 microlights have been mis-interpreted. As a result, there may be aircraft with mis-set ailerons, which would lead to unsafe handling qualities during flight. In addition, the CAA has been advised that unauthorised alterations may have been made to the turnbuckles in the aileron circuit in some aircraft.

**Compliance:** Before further flight from the effective date of this MPD, inspect and correct if necessary, the setting of each aileron in accordance with British Microlight Aircraft Association (BMAA) Service Bulletin 1741.2, which is Appendix B to Microlight Airworthiness Approval Note (MAAN) 1741.

Before further flight from the effective date of this MPD, inspect each aileron adjustment turnbuckle for any modifications, in accordance with BMAA Service Bulletin 1741.2. If the turnbuckle has been modified in any way, the turnbuckle must be replaced with a new turnbuckle.

A copy of BMAA MAAN 1741 and further information can be obtained from:

**British Microlight Aircraft Association** 

 Bullring
 Tel:
 01869 338888

 Deddington
 Fax:
 01869 337116

 Banbury, Oxon, OX15 0TT
 Email:
 cto@bmaa.org

Replacement turnbuckles can be sourced from:

The Wessex Light Aeroplane Company Ltd 7 Fullands Avenue

Taunton, Somerset, TA1 3DE Tel/fax: 01823 256258

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 12 January 2004.

Enquiries regarding this MPD should be referred to Mrs J Barratt, Aircraft Certification Section, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573945 Fax: 01293 573976 E-mail: jane.barratt@srg.caa.co.uk



MPD No: 2004-002 R1

Issue Date: 3 August 2004

# **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-002 R1 CFM

**Subject:** Under-fuselage 'slipper' fuel tank.

**Applicability:** CFM Shadow B, BD, C, CD Series microlights, Shadow Series D microlight Serial No 339 and Type Approved Shadow DD microlights fitted with a slipper tank.

Compliance: Cancelled at Revision 1 and superseded by MPD 2004-007.

The original MPD became effective on 15 January 2004 and Revision 1 became effective 1 May 2004.

Enquiries regarding this MPD should be referred to Mrs J Barratt, Aircraft Certification Section, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573945 Fax: 01293 573976 E-mail: jane.barratt@srg.caa.co.uk



Issue Date: 12 January 2004

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-003 SKYRANGER UK

**Subject:** Diagonal bracing to seat-bases.

**Applicability:** Skyranger UK Skyranger Series microlights.

**Reason:** The seat base webbing on some Skyranger microlights is sufficiently slack to allow the square seat base to deform and slip off the rear supports during periods of negative g loading. This presents a risk of fouling of the port rudder cable, which runs under the pilot's seat. To prevent this occurring, diagonal braces must be fitted to the seat bases.

**Compliance:** Not later than 3 months from the effective date of this MPD or at the next permit renewal, whichever is the sooner, install diagonal seat braces in accordance with Skyranger UK Service Bulletin 001, which is appended to British Microlight Aircraft Association (BMAA) Microlight Airworthiness Approval Note (MAAN) 1744.

A copy of BMAA MAAN 1744 and further information can be obtained from:

British Microlight Aircraft Association Bullring Deddington Banbury Oxon OX15 0TT

Tel: 01869 338888 Fax: 01869 337116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 15 January 2004.

MPD No: 2004-004 R1

Issue Date: 7 November 2008

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-004 R1 YAKOVLEV / AEROSTAR SA / INTREPRINDEREA DE AV BACAU/ STROJIRNY PRVNI PETILESKY / LET NARODNI PODNIK KUNOVICE / SUKHOI / NANCHANG AIRCRAFT

Subject:	Pneumatic system reservoirs			
Applicability:	Strojirny Prvni Petilesky / Let Narodni Podnik Kunovice Yak C.11 aeroplanes. Strojirny Prvni Petilesky Yak C.18A aeroplanes. Yakovlev Yak 50 aeroplanes. Yakovlev / Aerostar SA / Intreprinderea De Av Bacau Yak 52 aeroplanes. Yakovlev Yak 55 and Yak 55M aeroplanes. Sukhoi SU-26M, SU-26M2 and SU-26MX aeroplanes. Nanchang Aircraft NAMC CJ-6A aeroplanes.			
Reason:	A serious ground incident occurred to a Yak 50 where the pneumatic system reservoir, while at normal working pressure, explosively ruptured causing serious damage, jamming the throttle in the open position and tipping the aeroplane onto its nose.  Findings reported by the Air Accident Investigation Branch indicate that the reservoir failure was caused by internal corrosion, which had weakened the wall, particularly in the lower area where water had accumulated.  There is a potential for a number of aeroplanes types, which have similar pneumatic system reservoirs, to have hidden defects, which could develop into potentially catastrophic failures.  Following the discovery of a reservoir with serious internal corrosion that should have perhaps have been identified sooner, the MPD has been revised to require internal inspection by borescope only and not alternative methods.			
Compliance:	Not later than 5 flying hours or one month from the effective date of this MPD, whichever is the sooner, carry out a maintenance schedule amendment as detailed overleaf.  Not later than 20 flying hours or three months from the effective date of this MPD, whichever is the sooner, carry out the initial inspection as detailed overleaf.			

MPD: 2004-004 R1 Page 2 of 3

#### Action:

#### Maintenance schedule amendment

Carry out a review of the Approved Maintenance Schedule (AMS), (AMS prescribed in the Airworthiness Approval Note (AAN)) for the particular aeroplane. Ensure the schedule contains the following tasks to protect against and detect corrosion of the pneumatic system reservoir:

After every flight – Open the water trap.

After 50 flying hours or annually (whichever is the sooner) – Remove the reservoir from the aeroplane and drain the water.

Annually - Carry out internal inspection of the pneumatic system reservoir, as per Initial Inspection detailed below.

Five yearly or at the interval recommended by the aeroplane manufacturer - Carry out hydrostatic test of the pneumatic system reservoir, as per Initial Inspection detailed below.

Carry out a review of the aeroplane maintenance records to identify when the pneumatic system reservoir was last inspected internally and hydrostatic tested.

#### **Initial Inspection**

If the reservoir has been subject to a detailed internal inspection with acceptable results within the last 12 months and a satisfactory hydrostatic test within the last five years, or in accordance with the manufacturers recommended period, this can be accepted as meeting the requirement for the initial inspection and test.

Remove the reservoir from the aeroplane and carry out a detailed visual inspection of the internal surfaces of the reservoir using a borescope. Light surface corrosion is acceptable, all other corrosion, typically heavy, pitting, exfoliation or any sign of distress; require the bottle to be rejected.

Carry out a hydrostatic test on the reservoir in accordance with the manufacturer's maintenance instructions or in accordance with industry best practice (typically 1.5 times working pressure) for the testing of pressure vessels used in pneumatic systems. Bottles that fail to hold the pressure or show any signs of distortion are required to be rejected.

In order that the situation regarding reservoirs with corrosion can be monitored, the CAA requests any reservoirs that are rejected are made the subject of a Mandatory Occurrence Report (MOR). CAP 382 - The Mandatory Occurrence Reporting Scheme refers.

The CAA is not aware of any corrosion-inhibiting compound that the aeroplane manufacturer has recommended for use in the pneumatic reservoir or system. Operators are reminded that should they choose to use proprietary corrosion inhibiting compounds, it is their responsibility to ascertain, and technically justify, the fitness for purpose of the compound they use. CAP 562 - Civil Aircraft Airworthiness Information and Procedures, Leaflet 11-22 Appendix 51-3 also refers.

MPD: 2004-004 R1 Page 3 of 3

#### Ensure compliance with this MPD is recorded in the aircraft logbook.

Effective Date: 10 November 2008.

The original MPD became effective on 4 February 2004.

Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573309 Fax: +44 (0)1293 573976

Email: department.certification@caa.co.uk



MPD No: 2004-005 R1

Issue Date: 5 May 2004

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-005 R1 FLY BUY ULTRALIGHTS

Subject: Elevator horn cracking.

**Applicability:** Fly Buy Ultralights Ikarus C42 variants FB UK, FB 80, FB 100 and FB 100 VLA microlights.

**Reason:** A crack has been found on one of the elevator horn plates on an Ikarus C42 microlight that had flown 59 hours. The crack appeared at the welded junction of the right hand horn plate with the collar tube, at the plate's rear edge, and appears to be associated with a small weld undercut at that point. Drawing 42UKD02.06.00, Issue 26/10/2002, Elevator Horn Assembly refers. This MPD has been raised to Revision 1 to extend the compliance period for the kit built microlights.

**Compliance:** Replace the elevator horn assembly with a modified component in accordance with Fly Buy Ultralights Owner's Service Bulletins OSB 16 Issue 1 dated 17 December 2003 for factory built microlights and OSB 17 Issue 3 dated 30 April 2004 for the kit built microlights. The modified component part number 42UKD02.06.00, Issue 10/12/03 has an improved weld pattern. Factory built microlights must have had the Elevator Horn Assembly replaced by 17 March 2004 in accordance with OSB 16 Issue 1 and kit built microlights must have the Elevator Horn Assembly replaced by 5 June 2004 in accordance with OSB 17 Issue 3.

Prior to the replacement of the elevator horn assembly, factory built microlights must be operated in accordance with the terms of Owner's Service Bulletin OSB 16 and kit built microlights in accordance with OSB 17.

Copies of the Owner's Service Bulletins may be obtained from:

Fly Buy Ultralights Ltd Shaw Lane, Shifnal Telford, Shropshire, TF11 9PN

Tel: 01952 461181 Fax: 01952 462654

Record compliance with this MPD in the aircraft log book.

The original MPD became effective 8 March 2004, this MPD becomes effective on 7 May 2004.

Enquiries regarding this MPD should be referred to Mr Nigel Davis, Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573309 Fax: 01293 573976 E-mail: nigel.davis@srg.caa.co.uk



Issue Date: 22 April 2004

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 2004-006 YAKOVLEV / AEROSTAR SA / INTREPRINDEREA DE AV BACAU

**Subject:** Installation of barriers across the rear fuselage.

**Applicability:** Yakovlev Yak-52 aeroplanes (manufactured by Aerostar SA or Intreprinderea De Av Bacau).

**Reason:** The investigation into the fatal crash of a Yak-52 ascertained that the primary cause of the accident was a loose article, in the form of a screwdriver, jamming the aft elevator quadrant and preventing the elevator from being moved beyond neutral in the up direction. Another causal factor was the design of the aeroplane's fuselage, which is fully open from front to rear. The fuselage design, in conjunction with the design of the elevator control on this particular aeroplane type and the undertaking of aerobatics, increases the risk of loose articles in the cockpit migrating to the rear of the aeroplane and jamming the elevator control.

Compliance: Not later than two months from the effective date of this MPD, install two barriers in the rear fuselage to close off the aft elevator quadrant from the cockpit area, in order to prevent loose articles finding their way to the rear of the aeroplane and jamming the elevator control. The first barrier must be installed across the aft most fuselage frame opening. The frame is to the aft of the flux detector and is accessible through the flux detector panel on the rear left hand fuselage beneath the tailplane. This barrier must cover the frame opening with as small a hole as is possible to allow for the elevator control cable. A second barrier must be installed across the upper two lightening holes in the rear fuselage forward tailplane attachment bulkhead with as small a hole as is possible to allow for the elevator trim cables.

continued overleaf

MPD: 2004-006 page 2 of 2

#### Notes:

1. The barriers must be installed under a Minor Modification. Suitable aerospace fabric or CAA agreed alternative must be used.

- 2. In addition to the installation of the barriers, the Maintenance Schedule must be amended to include a requirement for the enclosed area behind the aft barrier to be inspected whenever the tailplane to fin fairing is removed and in any case as part of the annual maintenance inspection. This inspection may require the removal of the barrier and its subsequent replacement if the inspection cannot be carried out by other means.
- 3. A CAA Approved Modification, reference Yak/61, which would satisfy this MPD is available from Yak UK Ltd.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 26 April 2004.



MPD No: 2004-007 R1

Issue Date: 19 May 2004

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-007 R1 CFM

Subject: Main undercarriage

**Applicability:** All CFM Shadow B, BD, C, CD, D, DD, Streak Shadow and Starstreak Shadow series microlights.

**Reason:** The standard undercarriage assembly of CFM Shadow, Streak Shadow and Starstreak Shadow microlights consists of a steel framework attached to the composite fuselage. The outer section of the main undercarriage consists of two GRP pultrusion rods. An under-fuselage fuel tank, known as a 'slipper tank', is available as an optional modification or as part of the basic build standard.

There have been a number of cases of main undercarriage failure on these aircraft. There have also been cases of rupture of the under-fuselage fuel tank following failure of the undercarriage. Operation of microlights using the slipper tank has been prohibited by Mandatory Permit Directives (MPDs) 2003-019 R1 and 2004-002. This action was an interim measure pending resolution of the undercarriage problem.

This MPD has been raised to revision 1 to include all CFM Shadow aeroplanes and to reference the BMAA modification.

**Compliance:** Before further flight, replace the standard main undercarriage assembly with an approved alternative main undercarriage. Compliance with this MPD cancels MPD 2003-019R1 and 2004-002.

The following replacement undercarriage designs are available at this time:

For all Shadow B, BD, C, CD, DD aeroplanes and for Type Approved Shadow D series microlights, see British Microlight Aircraft Association (BMAA) Microlight Airworthiness Approval Note (MAAN) 1762. Copies of BMAA MAAN 1762 and further information can be obtained from:

British Microlight Aircraft Association Tel: 01869 338888 Bullring Fax: 01869 337116

Deddington

Banbury Email: cto@bmaa.org

Oxon OX15 0TT

continued overleaf

MPD 2004-007 R1 page 2 of 2

For Homebuilt Shadow D series aeroplanes, Streak Shadow and Starstreak microlights, see Popular Flying Association (PFA) Airworthiness Modification 11121 "Crosbie Main Undercarriage".

For Streak Shadow aeroplanes only, PFA Airworthiness Modification 11132 "Alternative Moulded Composite Undercarriage" can be embodied as an alternative.

Copies of PFA Modifications 11121 and 11132 and further information can be obtained from:

Popular Flying Association Turweston Aerodrome Nr Brackley Northants NN13 5YD

Tel: 01280 846786 Fax: 01280 846780

Email: engineering@pfa.org.uk

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 1 May 2004, this MPD becomes effective 22 May 2004.



MPD No: 2004-008 R1

Issue Date: 19 May 2004

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-008 R1 CFM

Subject: Nosewheel undercarriage

**Applicability**: All CFM Shadow B, BD, C, CD, D, DD, Streak Shadow and Starstreak Shadow series microlights.

**Reason:** The nosewheel undercarriage of CFM Shadow, Streak Shadow and Star Streak series microlights consists of a short vertical tubular aluminium leg which is pivoted within the composite fuselage moncoque. There have been a number of cases of noseleg failure as a result of incorrectly tensioned or degraded noseleg bungees.

This MPD has been raised to revision 1 to include all CFM Shadow microlights.

**Compliance:** For all Shadow B, BD, C, CD, DD aeroplanes and for Type Approved Shadow D series microlights, before further flight and subsequently at each 50 hour and annual check, inspect the noseleg bungee in accordance with British Microlight Aircraft Association (BMAA) Microlight Airworthiness Approval Note (MAAN) 1762 Appendix A.

For all CFM Streak Shadow, Star Streak and Homebuilt Shadow D series microlights, before further flight and subsequently at each 50 hour and annual check, inspect the noseleg bungee in accordance with Popular Flying Association (PFA) Service Bulletin MOD/206/002 and replace components as required.

Copies of BMAA MAAN 1762 and further information can be obtained from:

British Microlight Aircraft Association Tel: 01869 338888
Bullring Fax: 01869 337116
Deddington Email: cto@bmaa.org

Banbury Oxon OX15 0TT

continued overleaf

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Copies of PFA SB MOD/206/002 and further information can be obtained from:

Popular Flying Association Turweston Aerodrome Nr Brackley Northants NN13 5YD

Tel: 01280 846786 Fax: 01280 846780

Email: engineering@pfa.org.uk

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 1 May 2004, this MPD becomes effective 22 May 2004.



MPD No: 2004-009 R2

Issue Date: 29 September 2004

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-009 R2 MAINAIR SPORTS

Subject: Control frame top rivets

**Applicability:** Mainair Sports Pegasus Quik microlight aeroplanes up to serial number 8070.

**Reason:** Service experience has shown that it is necessary to modify and/or inspect the control frame top knuckle fitting before further flight. This MPD has been raised to Revision 2 to extend the applicability of the microlight aeroplanes affected.

#### Compliance:

- Before further flight, if not already accomplished, the control frame top knuckle fitting must be modified in accordance with Modification 124 of Mainair Service Bulletin 116 Issue 2.
- ii) Before further flight, inspect the control frame top knuckle fitting in accordance with Mainair Service Bulletin 116 Issue 2 paragraphs 3) A) to F).
- iii) In order to facilitate subsequent continued airworthiness inspections, the PVC rubber boots over the knuckle joint assembly, removed in accordance with Mainair Service Bulletin 116 Issue 2, must not be re-fitted.
- iv) A general visual inspection of the joint area and security of fittings must be carried out as part of the daily inspection of every aeroplane.
- v) The inspections defined in Mainair Service Bulletin 116 Issue 2 paragraphs 3) A) to F) must be repeated every 50 hours and after any heavy landing.

A copy of Mainair Service Bulletin 116 Issue 2 can be obtained from:

Mainair Sports Ltd Tel: 01706 655134 Unit B, Crawford Street Fax: 01706 631561

Rochdale Lancashire OL16 5NU Email: flying@mainairsports.co.uk

Record compliance with this MPD in the aircraft log book.

The original MPD became effective 13 May 2004 and Revision 1 became effective 25 September 2004. Revision 2 becomes effective 30 September 2004.

Enquiries regarding this MPD should be referred to Mrs J Barratt, Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573945 Fax: 01293 573976 E-mail: jane.barratt@srg.caa.co.uk



MPD No: 2004-010 R1

Issue Date: 12 August 2004

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-010 R1 MAINAIR SPORTS

**Subject:** Internal aileron and flap bracket inspection and replacement.

**Applicability:** All Flight Design CT2K microlight aeroplanes manufactured and UK registered prior to 1 May 2004.

**Reason:** A CT2K aircraft was performing a left hand steep bank turn, when after application of full right aileron control in order to roll out, the starboard outer aileron bracket rear bolt tore out of the wing, leaving the external bracket still attached to the wing at the front hole. Close examination of the failed internal bracket revealed that a fatigue crack had started adjacent to the welded nut on the rear attachment bracket and had propagated to the edge of the plate. Another aircraft was found during pre-flight inspection to have suffered the same problem.

This MPD has been raised to Revision 1 to introduce procedures for the internal inspection and replacement of the aileron and flap brackets.

**Compliance:** Within five flying hours from the effective date of this MPD, carry out the following actions in accordance with Mainair Service Bulletin CT115:

- a) Create inspection holes in accordance with the Service Bulletin.
- b) Inspect aileron and flap brackets using the criteria in the Service Bulletin.
- c) Defective brackets must be replaced with bracket part number KA2010401ASSY Rev 2 before further flight.
- d) Repeat the inspection at every Permit Renewal or 100 flying hours whichever occurs first, until the brackets are replaced with the improved bracket part number KA201041ASSY Rev 2.

A copy of Mainair Service Bulletin CT115 can be obtained from:

Mainair Sports Ltd Tel: 01706 655134 Unit B Fax: 01706 631561

Crawford Street Email: flying@mainairsports.co.uk

Rochdale Lancashire OL16 5NU

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 28 May 2004, this Revision becomes effective 14 August 2004.

Enquiries regarding this MPD should be referred to Mrs Barratt, Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573945 Fax: 01293 573976 E-mail: jane.barratt@srg.caa.co.uk



Issue Date: 10 August 2004

### MANDATORY PERMIT DIRECTIVE

The following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-0011 ROTARY AIR FORCE MARKETING

Subject: Door placard.

Applicability: Rotary Air Force Marketing RAF 2000 and RAF 2000 GTX-SE gyroplanes.

**Reason:** As a result of a recent accident, the AAIB has identified the need to review placards associated with emergency egress of the RAF 2000 gyroplane. External placarding caused rescuers to attempt a break-in by prising against the door structure at a point where a latch was in a fastened position. The purpose of this MPD is to revise and relocate placarding of the door latches to avoid delaying rescue attempts.

**Compliance:** Within one month of the effective date of this MPD, revise the external placards surrounding the doors of all RAF 2000 and RAF 2000 GTX-SE gyroplanes to read as follows:-

Adjacent to the door handle on either side of the cabin include an external placard to read:-

"In emergency pull the door handle to break internal latches"

2. Adjacent to each internal latch include an external placard that reads "Latch location".

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 13 August 2004.



Issue Date: 8 September 2004

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-012 MAINAIR SPORTS

**Subject:** Oil cooler to tank suction hose joint – hose clamp wire locking.

**Applicability:** Mainair Sports Pegaus Quik and Quantum 15-912 microlight aeroplanes up to serial number 8074.

**Reason:** The oil suction hose connection to the 90 degree fitting on the port side of the oil cooler has been known to loosen. If the hose detaches, the engine will be starved of oil and may seize, possibly requiring a forced landing and engine rebuild.

**Compliance:** Before further flight from the effective date of this MPD, inspect the oil suction hose to 90 degree fitting joint for correct fitting in accordance with Mainair Service Bulletin 118.

A copy of Mainair Service Bulletin 118 can be obtained from:

Mainair Sports Ltd Unit B Crawford Street Rochdale Lancashire OL16 5NU

Tel: 01706 655134 Fax: 01706 631561

Email: flying@mainairsports.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 11 September 2004.

Enquiries regarding this MPD should be referred to Mrs J Barratt, Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573945 Fax: 01293 573976 E-mail: jane.barratt@-srg.caa.co.uk



Issue Date: 12 October 2004

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-013 FLY BUY ULTRALIGHTS

Subject: Stub axle shock absorber attachment cracking

**Applicability:** Fly Buy Ultralights Ikarus C42 Variants FB UK, FB 80, FB 100 and FB 100 VLA microlight aeroplanes.

**Reason:** Two cracked stub axles have been found on Ikarus C42 microlight aeroplanes in Germany. The cracks were found on the 5mm thick plates near the junction with the shock absorber lower attachment bush. The microlight aeroplanes had completed approximately 200 hours. The equivalent component on UK Ikarus C42 microlight aeroplanes, drawing 42UKA09.02.00 Issue 26/10/2003 Stub Axle Assembly, has plates of increased, 6mm thickness.

**Compliance:** Before further flight from the effective date of this MPD, inspect the stub axles for cracks on microlight aeroplanes with more than 50 hours in accordance with Fly Buy Ultralights Owner's Service Bulletin, OSB 18, Issue 1, dated 29 September 2004. If cracks are found no further flight is permitted until the cracked component has been replaced with a new item of the same part number or specified approved alternative.

Note: The inspection will be required at each 50 hour check on the aircraft and the relevant details have been included in the C42 Owners Manual at Issue 5.

Copies of the Owner's Service Bulletin may be obtained from:

Fly Buy Ultralights Ltd Shaw Lane, Shifnal Telford, Shropshire, TF11 9PN

Tel: 01952 461181 Fax: 01952 462654

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 15 October 2004.

Enquiries regarding this MPD should be referred to Mr Nigel Davis, Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573309 Fax: 01293 573976 E-mail: nigel.davis@srg.caa.co.uk



Issue Date: 22 December 2004

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

# MPD: 2004-014 AERIAL ARTS / CYCLONE AIRSPORTS / PEGASUS AVIATION / COSMIK AVIATION

**Subject:** Understrength control frame uprights.

**Applicability:** Chaser S, Chaser S447, Chaser S508 and Chaser S1000 microlight aeroplanes.

**Reason:** It has been established that the control frame uprights on some microlight aeroplanes have been made from material of inadequate strength.

**Compliance:** Before further flight, inspect the uprights in accordance with Cosmik Aviation Service Bulletin SB/CHA/003 Issue 1.

If fitted with Type 1 or Type 2 uprights, which are undamaged, the microlight aeroplanes may be returned to service.

Damaged Type 1 or Type 2 uprights must be assessed and replaced in accordance with SB/CHA/003 Issue 1.

Type 2 uprights with incorrect aluminium alloy tubes or Type 3 uprights must be replaced before further flight.

Copies of the Service Bulletin may be obtained from:

Cosmik Aviation Ltd Burnside Deppers Bridge Southam Warwickshire CV47 2SU

Tel: 01926 614422 Fax: 01926 613781

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 29 December 2004.

Enquiries regarding this MPD should be referred to Mr Nigel Davis, Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573309 Fax: 01293 573976 E-mail: nigel.davis@srg.caa.co.uk



Issue Date: 22 December 2004

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

# MPD: 2004-015 AERIAL ARTS / CYCLONE AIRSPORTS / PEGASUS AVIATION / COSMIK AVIATION

Subject: Understrength kingpost.

**Applicability:** Chaser S, Chaser S447, Chaser S508 and Chaser S1000 microlight aeroplanes.

**Reason:** It has been established that the kingpost on some microlight aeroplanes has been made from material of inadequate strength.

**Compliance:** Before further flight, inspect the kingpost in accordance with Cosmik Aviation Service Bulletin SB/CHA/004 Issue 1.

If fitted with a Type 1 or Type 2 kingpost, which is undamaged, the microlight aeroplane may be returned to service.

A damaged Type 1 or Type 2 kingpost must be assessed and replaced in accordance with SB/CHA/004 Issue 1.

A Type 3 kingpost must be replaced before further flight.

Copies of the Service Bulletin may be obtained from:

Cosmik Aviation Ltd Burnside Deppers Bridge Southam Warwickshire CV47 2SU

Tel: 01926 614422 Fax: 01926 613781

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 29 December 2004.

Enquiries regarding this MPD should be referred to Mr Nigel Davis, Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573309 Fax: 01293 573976 E-mail: nigel.davis@srg.caa.co.uk



Issue Date: 6 January 2005

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2005-001 MAINAIR SPORTS

**Subject:** Inspection of the nosewheel assembly.

**Applicability:** All Flight Design CT2K microlight aeroplanes manufactured and UK registered before 17 June 2003.

**Reason:** The original CT2K nosewheel consists of an aluminium hub with  $5 \times 6.1$ mm locating holes and  $5 \times 10$ mm lightening holes. The spun aluminium rims are bought-in components, which have been supplied with pre-drilled 7mm holes and additional 6.1mm holes. The rims are held to the hub with  $5 \times 6$ mm nuts and bolts, with 14mm diameter washers. If the rims are assembled through the wrong holes, or the washers are omitted, or the bolts are not tightened sufficiently, relative movement between the rim and hub occurs. Fretting, cracking and failure of the wheel can quickly ensue.

**Compliance:** Before further flight from receipt of this MPD, inspect the nosewheel assembly in accordance with Mainair Service Bulletin CT119 Part A and replace parts as necessary.

A copy of Mainair Service Bulletin CT119 can be obtained from:

Mainair Sports Ltd Unit B Crawford Street Rochdale Lancashire OL16 5NU

Tel: 01706 655134 Fax: 01706 631561

Email: flying@mainairsports.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 10 January 2005.

Enquiries regarding this MPD should be referred to Mrs Barratt, Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573945 Fax: 01293 573976 E-mail: jane.barratt@srg.caa.co.uk



Issue Date: 22 March 2005

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2005-002 CFM

Subject: CFM Shadow Elevator Flutter

**Applicability:** All CFM Shadow D, DD and D-SS series aircraft with Permit to fly issued by the British Microlight Aircraft Association (BMAA).

**Reason:** Elevator flutter has been reported on some Shadow variants. Elevator flutter could result in the loss of the elevator or the complete tailplane and in consequence, loss of control of the aircraft.

**Compliance:** From the effective date of this MPD, the aircraft is not to be flown until it has been test flown in accordance with BMAA Service Bulletin No. BMAA SB MAAN1877/1 (Issue 1 or later BMAA approved revision). Aircraft which do not exhibit the problem may continue to fly (subject to continued validity of a permit to fly) for up to 3 months from the effective date of this MPD, after which the aircraft must be modified in accordance with instructions issued by the BMAA under modification approval number MAAN 1877 (to be issued). Aircraft which are found to suffer from elevator flutter when test flown are not to be flown until modified in accordance with this BMAA modification.

In each case, compliance with this MPD and embodiment of the respective modification is to be recorded in the aircraft log book.

Further information can be obtained from:

British Microlight Aircraft Association Tel: 01869 336006 Bullring Fax: 01869 337116

Deddington

Banbury Email: cto@bmaa.org

Oxon OX15 0TT

This MPD becomes effective on 25 March 2005.

Enquiries regarding this MPD should be referred to Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573315 Fax: 01293 573976 E-mail: department.certification@srg.caa.co.uk



Issue Date: 22 March 2005

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2005-003 CFM

Subject: CFM Shadow Elevator Flutter

**Applicability:** Homebuilt CFM Shadow D, DD series, Streak Shadow and Starstreak Shadow series with Permit to Fly issued by the Popular Flying Association (PFA).

**Reason:** Elevator flutter has been reported on some Shadow variants. Elevator flutter could result in the loss of the elevator or the complete tailplane and in consequence, loss of control of the aircraft.

**Compliance:** From the effective date of this MPD, the aircraft is not to be flown until modification MOD/206/003 is embodied.

In each case, compliance with this MPD and embodiment of the respective modification is to be recorded in the aircraft log book.

Further information can be obtained from:

Popular Flying Association Turweston Aerodrome Nr Brackley Northants NN13 5YD

Tel: 01280 846786 Fax: 01280 846780

Email: engineering@pfa.org.uk

This MPD becomes effective on 4 April 2005.



Issue Date: 13 June 2005

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2005-004 EUROPA

**Subject:** Europa Modification 70 – Tailplane Mass Balance Arm Replacement.

Applicability: All Europa aircraft delivered before February 2005.

**Reason:** A failure of the Part Number TP18 mass balance arm assembly has occurred on a British registered aircraft. Detachment of the mass balance may result in flutter and subsequent loss of control of the aircraft with attendant loss of life.

**Compliance:** For aircraft identified in the Appendix to Europa Aircraft (2004) Modification Bulletin 70 issue 1 or any which have suffered a heavy landing or ground loop, within the next five flying hours or before renewal of its Certificate of Validity, whichever occurs sooner, carry out the modification identified in Modification Bulletin 70 issue 1.

For all other applicable aircraft within the next twenty five hours or before renewal of its Certificate of Validity, whichever occurs sooner, carry out the modification identified in Modification Bulletin 70 issue 1.

During embodiment of the modification and after completion, the work should be inspected at appropriate stages by an approved PFA inspector.

In each case, compliance with this MPD and embodiment of the respective modification is to be recorded in the aircraft log book.

Further information can be obtained from:

Europa Aircraft (2004) Ltd Kirkby Mills Industrial Estate Kirkbymoorside York YO62 6QR

Tel: 01751 431773 Fax: 01751 431706

Email: andy@europa-aircraft.com

This MPD becomes effective on 17 June 2005.

Enquiries regarding this MPD should be referred to Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573315 Fax: 01293 573976 E-mail: department.certification@srg.caa.co.uk



Issue Date: 29 June 2005

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2005-005 WESTLAND HELICOPTERS

Subject: Inspection of Gazelle helicopter engine cowlings.

Applicability: All Westland Gazelle AH.Mk1, HT.Mk2 and HT.Mk3 helicopters.

Reason:

An incident has occurred where one engine cowl became detached during flight, failure of the cowl latch(es) and hinge pin was suspected as the cause. The main rotor was struck by the cowl; this or damage to other areas of the tail could have resulted in loss of the aircraft.

Compliance: At next scheduled maintenance input after the effective date of this MPD or before renewal of the Certificate of Validity, whichever occurs sooner, carry out a one time inspection of the engine cowls/latches to verify their condition and security as detailed below. If any significant damage, wear or mal-adjustment is found, replace or adjust the affected parts before further flight.

Inspect as follows:

- (i) Carry out a detailed visual inspection of the front and rear cowl hinges and hinge supports for distortion, wear and cracks.
- (ii) Carry out a detailed visual inspection of each of the cowl latches/locks for condition including signs of wear and damage.
- (iii) Check the cowl latches/locks for adjustment and correct closing for each cowl in turn.
- (iv) Check the cowl latches/locks for adjustment and correct closing of both cowls together.
- (v) Check operation/condition of the cowl retaining rods.
- (vi) Check condition of the cowl restraint lanyards.

continued overleaf

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#### Note:

For this MPD a detailed visual inspection is defined as "An intensive visual examination of a specific area to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning may also be required."

Record compliance with this MPD in the aircraft log book.

Report the results of the inspection and aircraft details to the address below.

This MPD becomes effective on 8 July 2005.



Issue Date: 7 September 2005

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2005-006 IVCHENKO

**Subject:** Introduction of Engine Calendar Life Limit.

**Applicability:** Ivchenko Al-25TL engines fitted to Aero L-39 Albatros aeroplanes.

**Reason:** Following an investigation into an accident involving an L-39 Albatros aeroplanes in August 2003, the Aircraft Accidents Investigation Branch have recommended to the CAA that consideration be given to imposing calendar life limits on Ivchenko AI-25TL engines fitted to these aircraft, since engine integrity and reliability may be impaired by ageing effects.

The engine manufacturer has stated that the calendar life and storage life limits are specified as eight years between overhauls. Since the acceptance of engines onto the civil register from ex-military service is in part based upon continued operation in accordance with limits specified by the manufacturers for military operation, it is considered that this limit should also be applicable to operation on the civil register.

Compliance: Comply with the following actions before 1 November 2005:

- 1. Establish from engine records the date of the last engine recondition/overhaul (i.e. the last shop visit at which the engine was zero timed). If the engine has not been reconditioned or overhauled since manufacture, establish the date of manufacture.
- Remove from service any engine which has accumulated more than eight years since last recondition/overhaul. If the engine has never been reconditioned or overhauled, remove any engine from service which has accumulated more than eight years since manufacture. The above limits include any storage period of the engine.
- 3. If no information is available on the past history of the engine to establish compliance with paragraph 1 and 2, remove the engine from service.
- 4. Engines removed as a result of the above actions may not be refitted until they are reconditioned/overhauled in accordance with the manufacturer's instructions.

Thereafter, recondition/overhaul the engine at calendar periods not to exceed eight years.

continued overleaf

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Compliance with this MPD must be recorded in the aircraft log book as calendar and storage lives will be a condition for all renewals of the Permit to Fly.

#### **Alternative Means of Compliance:**

The intent of this MPD is to prevent potential calendar time related engine deterioration developing to a point where engine integrity is compromised. Alternative Means of Compliance, based on inspection/test and sampling programmes, which can be shown to prevent unacceptable engine deterioration in service, will be considered by the CAA and operators may wish to propose such programmes in lieu of engine withdrawal from service. Such proposals will only be acceptable if supported by the engine manufacturer or a suitably approved BCAR A8-20 organisation.

This MPD becomes effective on 12 September 2005.



Issue Date: 27 July 2005

# **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2005-007 MAINAIR SPORTS

Subject: Wing Uprights

**Applicability:** Mainair Sports Pegasus Quik microlight aeroplanes up to and including serial number 8037 with wing uprights modified in accordance with SB 116 Issue 1 by the owner / BMAA inspector.

**Reason:** AAIB investigation of a Pegasus Quik accident has established that Modification 124 introduced under Service Bulletin SB116 Issue 1 had been installed incorrectly. Correct implementation of Modification 124, which affects primary aircraft structure, is critical to the continued airworthiness of this aircraft. Mainair Sports has already taken action to ensure correct embodiment of the modification by the issue of SB116 issue 2. However, in response to the AAIB recommendation, CAA requires manufacturer verification of correct embodiment of this modification for all aircraft.

#### Compliance:

Within 5 flying hours from receipt of this MPD, remove both wing uprights in accordance with P&M Service Bulletin 120 and return both uprights to P&M Aviation Ltd. for inspection / replacement as necessary.

A copy of P&M Aviation Service Bulletin 120 can be obtained from:

P&M Aviation Ltd.

Unit B

Crawford Street

Rochdale Tel: 01706 655134 Lancashire Fax: 01706 631561

OL16 5NU Email: flying@pmaviation.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 27 July 2005.

Enquiries regarding this MPD should be referred to Mrs Barratt, Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573945 Fax: 01293 573976 E-mail: jane.barratt@srg.caa.co.uk





Issue Date: 24 August 2005

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

**MPD: 2005-008 - GYROPLANES** 

Subject: CG/Thrust Line offset

Applicability: All single seat gyroplanes.

**Reason:** CAA flight testing of some Bensen derivative gyroplanes has found that poor handling characteristics exist if such machines have a thrustline /CG offset that exceeds <u>+</u> 2 inches. The CAA considers that inexperienced gyroplane pilots are at risk due to these handling characteristics and that this combination constitutes an unsafe condition.

In order to reduce this risk, this MPD introduces a  $V_{NE}$ , wind speed and gust limitations and a requirement for a horizon reference on all single seat machines. In addition, a minimum pilot experience limitation is introduced for machines with a cockpit/nacelle and a minimum power-on airspeed is introduced for open-frame machines.

Pilot experience,  $V_{NE}$  and wind/gust restrictions may be removed if acceptable evidence is presented to the CAA to show that the thrust line/CG offset is within  $\pm 2$  inches.

Compliance with those aspects highlighted as "must be approved by the CAA/PFA" will normally be achieved by a submission to the PFA. Any alternative arrangements are to be agreed with the CAA on a case by case basis.

**Compliance:** This MPD applies the following limitations on all single seat gyroplanes and must be retained with the Permit to Fly:

#### 1. Single seat gyroplanes incorporating cockpit/nacelle;

- 1.1 Minimum experience of pilots flying such machines must be 50 hours logged solo gyroplane flight time following the issue of his/her PPL (G).
- 1.2 Flight when surface winds, including gusts, exceed 15 knots (17 miles per hour) is prohibited.
- 1.3 Flight when surface wind gust spreads exceed 10 knots (12 miles per hour) is prohibited.
- 1.4 Continued flight in moderate, severe or extreme turbulence is prohibited. Adjust forward airspeed to 55 knots (63 miles per hour) IAS or below upon inadvertently encountering moderate, severe or extreme turbulence.

continued overleaf

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 $V_{\text{NE}}$  is reduced to 70 MPH (61 Knots) IAS or equivalent units appropriate to the instruments installed.

- 1.6 Before next Flight, install a placard, clearly visible to the pilot, identifying the  $V_{NE}$  restriction of 70 MPH (61 Knots) IAS or equivalent units appropriate to the instruments installed.
- 1.7 Prior to any flight more than three months after the effective date of this MPD a horizon reference acceptable to the CAA/PFA must be fitted.
- 1.8 The requirement for the limitations introduced under items 1.1, 1.2, 1.3, 1.4 and 1.5 and the requirement for the placard to be installed under 1.6 may be removed if evidence is provided (using a method acceptable to the CAA), that the thrust line/CG offset is within + 2 inches.
- 1.9 Any modification required to bring the thrust line/CG offset within ± 2 inches must be approved by CAA/PFA and may involve flight testing.
- 1.10 Weight balance and Thrustline/CG offset must be confirmed by a method acceptable to the CAA after any modification referred to in 1.9 has been incorporated and the results reported to the CAA and recorded in the Gyroplane Maintenance record.
- 1.11 Thrust line/CG determination must include fuel tank conditions from full to empty and a range of pilot weights. The pilot weights used should be declared as placarded limitations clearly visible to the pilot.

#### 2. Single seat open frame gyroplanes

- 2.1 The  $V_{NE}$  for all open frame machines is reduced to 70 MPH (61 Knots) IAS with immediate effect.
- 2.2 Before next flight install a placard, clearly visible to the pilot identifying the  $V_{\text{NE}}$  restriction of 70 MPH (61 Knots) IAS or equivalent units appropriate to the instruments installed.
- 2.3 Flight when surface winds, including gusts, exceed 15 knots (17 MPH) is prohibited.
- 2.4 Flight when surface wind gust spreads exceed 10 knots (12 miles per hour) is prohibited.
- 2.5 Continued flight in moderate, severe or extreme turbulence is prohibited. Adjust forward airspeed to 55 knots (63 MPH) or below upon inadvertently encountering moderate, severe or extreme turbulence.
- 2.6 The gyroplane minimum airspeed, other than in the landing flare, is 30mph (26 knots). This limitation must be stated on a placard clearly visible to the pilot.
- 2.7 Prior to any flight more than three months after the effective date of this MPD, a horizon reference acceptable to the CAA/PFA must be fitted.
- 2.8 The airspeed restrictions referred to in paragraph 2.1, 2.2, 2.3, 2.4 and 2.5 may be removed if acceptable evidence is presented to the CAA to show that the thrust line/CG offset is within ± 2 inches. Any modifications necessary to bring this about must be approved by the CAA/PFA and may involve flight testing.
- 2.9 Thrust line/CG determination must include fuel tank conditions from full to empty and a range of pilot weights. The pilot weights used must be declared as placarded limitations clearly visible to the pilot.

Note: Moderate turbulence is turbulence that causes (a) changes in altitude or attitude, (b) variations of indicated airspeed, and (c) aircraft occupants to feel definite strains against the seatbelts or any tendency to a reduction in positive G-forces.

A PFA gyroplane inspector or other person acceptable to the CAA for the purpose must inspect the machine and record compliance with this MPD in the aircraft log book before further flight.

This MPD becomes effective on 24 August 2005.



MPD No: 2005-009 R1

Issue Date: 5 October 2005

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2005-009 R1 SKY ARROW

Subject: Cockpit Throttle Lever Stop Replacement

**Applicability:** Sky Arrow 650 aircraft up to and including serial number PFA-298-14008.

**Reason:** The manufacturer, Initiative Industriali Italiane Spa, has advised that wear has been detected on the throttle lever stops of aircraft with high operating times. If excessive force is applied to the throttle lever at idle, the worn lever stop could move and cause an unintentional engine switch off. For Type Certificated aircraft, this issue is the subject of an ENAC Emergency Airworthiness Directive.

#### Compliance:

- 1) Before 30 September 2005:
  - a) Carry out the inspection specified in Sections 4.1 4.3 of Sky Arrow Service Bulletin reference SB-C 01/03 Rev 1 dated 18 November 2003. If the cockpit throttle lever stops are found to be worn, compliance with item 2 of this MPD is required before further flight.
  - b) Install the following placard next to the throttle on the left control assembly:
    - 'Before each flight, verify that the front and rear throttle lever stop positioning marks remain aligned'
- 2) Before the next renewal of the certificate of validity, or by 31 May 2006, whichever occurs first, if not previously accomplished:
  - Replace the front and rear cockpit throttle lever stops with a metal stop in accordance with Iniziative Industriali Italiane, S.p.A Service Bulletin SB-C 01/03 Rev 1 dated 18 November 2003.

continued overleaf

Enquiries regarding this MPD should be referred to the Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573315 Fax: 01293 573976 E-mail: Department.Certification@srg.caa.co.uk

MPD: 2005-009 R1 page 2 of 2

b) Revise Chapter 05-02, Section 3 'Inspection Checklist Sky Arrow 650TC / TCN', Item VI 'Cabin' of Sky Arrow 650TC and TCN Maintenance Manual, reference mm05.doc, to include the following additional 100 hour inspections:

- '19. Verify the condition of the front and rear throttle lever stops on the left control assembly, and the tightening of the securing bolts.
- 20. Carry out the inspection in Section 4.1 and 4.3 of Sky Arrow Service Bulletin reference SB-C 01/03 Rev 1 dated 18 November 2003.

A copy of Iniziative Industriali Italiane, S.p.A Service Bulletin SB-C 01/03 Rev 1 dated 18 November 2003 can be obtained from:

Product Support Iniziative Industriali Italiane, S.p.A 19/23 Viale Leonardo da Vinci 00016 Monterotondo Scalo Rome Italy

Tel:00 39 06 90085545 Fax: 0039 06 90085530

Email: productsupport@skyarrow.com

Web site: www.skyarrow.it/documentazione.htm

#### Or from the UK kit importers:

Sky Arrow (Kits) UK Ltd Hangar 3 Old Sarum Airfield Salisbury Wiltshire SP4 6DZ

Tel: 01722 336686 Fax: 01722 410678

Email: info@skyarrow.co.uk

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 23 August 2005. This MPD becomes effective on 5 October 2005.



Issue Date: 21 November 2005

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 2005-011 MEDWAY MICROLIGHTS/SOUTHDOWN INTERNATIONAL

Subject: Snoot Assembly – Inspection for cracks

**Applicability:** All Puma Sprint, Raven and Raven X microlights and any modified microlight using a Raven trike unit

doing a reavent time unit

**Reason:** Medway Microlights have advised that there has been a recent failure of the snoot assembly on a Puma Sprint aircraft. Failure of the snoot assembly may result in turn-over of the aircraft on landing and serious injury to the occupants.

**Compliance:** Within 15 flying hours from receipt of this Mandatory Permit Directive or at next Permit renewal, whichever occurs first, carry out inspection of the snoot assembly in accordance with Medway Microlights Service Bulletin 16 dated November 2005.

A copy of Medway Microlights Service Bulletin can be obtained from

Medway Microlights Burrows Lane Middle Stoke Rochester Kent ME3 9RN

Tel: 01634 270780 Fax: 01634 270648

Email: medway@ravenmad.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 21 November 2005.





Issue Date: 5 December 2005

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2005-012 AIRBORNE EDGE

Subject: Airborne Edge - Streak 3 Wing Knuckles

**Applicability:** Airborne Edge Microlight aircraft with Streak 3 & Cruze Wings.

**Reason:** The knuckles on Streak 3 and Cruze wing control frames have exhibited stress corrosion cracking. Failure of the part in flight would be catastrophic. The Australian CASA has mandated SB-003 to address this issue – this MPD is to promulgate the same action on UK registered aircraft.

#### Compliance:

From the effective date of this MPD, the aircraft is not to be flown until Airborne Service Bulletin SB-003 is complied with.

For each detailed inspection by disassembly carried out in accordance with the referenced service bulletin (2-monthly following the initial inspection) compliance with this MPD and duplicate inspection are to be recorded in the aircraft logbook.

Further information can be obtained from:

- 1. Airborne Australia's web site at <a href="https://www.airborne.com.au">www.airborne.com.au</a>, or by writing to Airborne Australia PO Box 7042, Redhead, NSW 2290 Australia (Tel: +61 2 4944 9199.
- 2. The UK importer, Graham Webster, Airborne Aviation in UK, Tel: 01952 254949

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 5 December 2005.





MPD No: 2005-013
Correction

Issue Date: 22 December 2005

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2005-013 DYN AERO

Correction to MPD 2005-013 dated 31 July 2008

**Subject:** Replacement of Baumeister Flap Drive Motor.

**Applicability:** Dyn Aero MCR-01 Club and ULC aeroplanes fitted with John Scott flap drive system incorporating a Baumeister flap drive electric motor.

**Reason:** With the Baumeister flap drive electric motor installed to the John Scott flap drive system there is a possibility that the flap drive shaft can fail, resulting in inadvertent movement of the flaps. The consequence of which could be loss of control of the aeroplane during critical phases of flight with possible consequent loss of the aeroplane and loss of life or serious injury to its occupants.

**Compliance:** Prior to next flight from the effective date of this MPD, remove the Baumeister flap drive electric motor in accordance with PFA Modification 301-019 and replace it with an alternative electric motor specifically approved by the PFA for the application. The replacement electric motor is to be installed in accordance with a PFA approved modification directly applicable to the Dyn-Aero MCR-01 Club and ULC aeroplanes.

Record compliance with this MPD in the aircraft log book.

Further information can be obtained from

Popular Flying Association Turweston Aerodrome Nr Brackley Northants NN13 5YD

Tel: 01280 846786 Fax: 01280 846780

Email: engineering@pfa.org.uk

This MPD becomes effective on 31 December 2005.

This correction to the MPD has been made due to a typographical error on the applicability.

Enquiries regarding this MPD should be referred to Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573317 Fax: 01293 573976 E-mail: Department.Certification@srg.caa.co.uk





Correction

Issue Date: 22 December 2005

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2005-014 DYN AERO

Correction to MPD 2005-014 dated 31 July 2008

**Subject:** Installation of Audible Stall Warning Device.

Applicability: Dyn Aero MCR-01 VLA, Club and ULC aeroplanes.

**Reason:** Stall warning provisions are enhanced. Failure by a pilot to recognise and correct a stall condition in a timely manner can result in loss of control of the aeroplane with possible consequent loss of the aeroplane and loss of life or serious injury to its occupants.

**Compliance:** Prior to next flight from the effective date of this MPD, install the stall warning devices detailed in PFA Modification Leaflet 301-018 or, any other PFA approved modification directly applicable to the Dyn-Aero MCR-01, which includes the words in the 'continued airworthiness instructions' "Meets the requirements of MOD 301-018".

Record compliance with this MPD in the aircraft log book.

Further information can be obtained from

Popular Flying Association Turweston Aerodrome Nr Brackley Northants NN13 5YD

Tel: 01280 846786 Fax: 01280 846780

Email: engineering@pfa.org.uk

This MPD becomes effective on 31 December 2005.

This correction to the MPD has been made due to a typographical error on the applicability.

Enquiries regarding this MPD should be referred to Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573317 Fax: 01293 573976 E-mail: department.certification@srg.caa.co.uk





Issue Date: 4 January 2006

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2006-001 JABIRU

**Subject:** Jabiru aircraft which do not have a fuel system header tank fitted.

**Applicability:** Jabiru J200, J400, J230, J430, J250, J450, J160 (short wing), J160 (long wing), SP Tricycle, SP Tail dragger, UL Tricycle, UL-C, UL-D aircraft with wet wings (i.e. fuel tanks integral to the wings) and which do not have a fuel system header tank fitted.

**Reason:** There have been reported incidents of loss of engine power. There is a possibility of air entering the engine fuel lines which could result in loss of power or engine stoppage which, if it occurred during take off, could cause loss of the aircraft.

**Compliance:** Before further flight after receipt of the MPD determine whether the aircraft has had a header tank fitted. No further action is required if a header tank has already been installed at build or by modification.

For aircraft which do not have a header tank installed, within 28 days of the effective date of this MPD or before renewal of the aircraft's Certificate of Validity, whichever occurs sooner, carry out the Header Tank Upgrade modification identified in Jabiru Aircraft Pty Ltd Service Letter JSL001-1 issue 1 dated 22 November 2004.

During embodiment of the modification and after completion, the work must be inspected at appropriate stages by a person approved either by the CAA or the PFA.

For affected aircraft which continue to fly before the modification is embodied the procedural advice on Wet Wing - Minimum Fuel Requirements contained in ST Aviation Limited Jabiru J400 Modification Service Bulletin STSB-002 dated 19 October 2005 must be observed.

Compliance with this MPD and embodiment of the modification is to be recorded in the aircraft log book.

continued overleaf

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Further information can be obtained from:

ST Aviation Ltd Oaklands Farm Coltstaple Lane Horsham West Sussex RH13 9BB

Tel: 0870 300 0501 Fax: 0103 731123 email: info@jabiru.co.uk

This MPD becomes effective on 9 January 2006.



Issue Date: 4 January 2006

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2006-002 JABIRU

Subject: Inboard lower seat belt attachments.

**Applicability:** Jabiru LSA, SP, UL and J160 models and associated variants where the inboard lower seat belt attachment is shared by the landing gear inboard attachment bolt.

**Reason:** An accident which involved damage to the landing gear attachment could cause the seat belt to become detached or apply undesirable loads to the belt. This may result in serious injury to the occupant(s).

**Compliance:** Within 20 flight hours after the effective date of this MPD or before renewal of the aircraft's Certificate of Validity, whichever occurs sooner, carry out the modification identified in ST Aviation limited Jabiru Service Bulletin STSB-001 issue 1 dated 12<sup>th</sup> October 2005.

During embodiment of the modification and after completion, the work must be inspected at appropriate stages by a suitable person approved either by the CAA or the PFA.

This MPD becomes effective on 9 January 2006.

Compliance with this MPD and embodiment of the modification is to be recorded in the aircraft log book.

Further information can be obtained from: ST Aviation Ltd Oaklands Farm, Coltstaple Lane, Horsham, West Sussex RH13 9BB Tel: 0870 300 0501

Fax: 0103 731123 email: info@jabiru.co.uk

Enquiries regarding this MPD should be referred to Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573315 Fax: 01293

573976 E-mail: department.certification@srg.caa.co.uk





Issue Date: 22 March 2006

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2006-003 ROTARY AIR FORCE MARKETING

Subject: Control System Strength.

Applicability: Rotary Air Force (RAF) Marketing RAF 2000 and RAF 2000 GTX-SE

gyroplanes.

**Reason:** As a result of a recent non fatal accident due to the failure of a control rod end, it has been established that some specific components in the control system of the RAF 2000 gyroplane do not meet latest standards for control system strength. Failure of such components in the flight control system can cause total loss of control of the gyroplane.

The CAA/PFA, in conjunction with RAF have identified a set of modifications that address this problem by increasing the strength of the control system.

**Compliance:** Within three months of the effective date of this MPD, install the following components, as detailed in RAF Letter to Owners dated 12 December 2005, in accordance with RAF Product Notice 40 installation instructions.

1.	070-022-S22	201/2" x .125 wall knurled 4130 Steel Joystick Control Tube
2.	070-023-S23	7½" x .125 wall knurled 4130 Steel Rear Control Yoke Tube
3.	070-024-S24	½" x 28 ½" Stainless Steel Control Tube Push Rod.
4.	320-017-S07	Gimble Activation Arm MK 3.
5.	1/4 ROD AM4	1/4" Male Rod End High Strength.
6.	AN4-26A	AN4-26A Aircraft Bolts
7.	MS20365-428	MS20365-428 Aircraft Niloc Nuts
8.	AN960-416	AN960-416 Aircraft Washers

During embodiment of the modification and after completion, the work must be inspected at appropriate stages by a person approved either by the CAA or the PFA. Compliance with this MPD and appropriate inspections should be in accordance with normal PFA procedures and recorded in the aircraft log book.

This MPD becomes effective on 24 March 2006.



MPD No: 2006-004 R1

Issue Date: 31 July 2006

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2006-004 R1 BRITISH AEROSPACE

**Subject:** Harley Buckle – Disengagement of Locking Bar Pivot Pins

Applicability: British Aerospace BAC 167 Strikemaster all Mks.

**Reason:** The Ejection Seat manufacturer has advised that during routine maintenance of an AML Harley Buckle Assembly, the solid Locking Bar Pivot Pin was not engaged in the Release Lever, both of which form part of the same assembly. This instruction details an examination of all Harley Buckles with Pt No. AML 33175 SHT 1 and AML AL2872 SHT 1 installed on the Parachute Harness and if found, to carry out a further visual examination of the Locking Bar Pivot Pin.

#### Compliance:

- 1) Not later than 28 days from the original effective date of this MPD carry out Part A of the instructions of BAe CSTI/SURVIVAL EQUIPMENT (Strikemaster)/71.
- 2) After the original effective date of this MPD no Parachute Harness assemblies with Harley Buckles with Pt No. AML 33175 SHT 1 and AML AL2872 SHT 1 may be installed on an aircraft unless inspected in accordance with Part B of BAe CSTI/SURVIVAL EQUIPMENT (Strikemaster)/71.

A copy of the CSTI can be obtained from Mr A C Love, Aircraft Certification Section, 2E, Certification Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR Telephone +44 (0)1293 573726.

Record compliance with this MPD in the aircraft log book.

The original MPD became effective 18 April 2006. Revision 1 (editorial amendment) becomes effective 31 July 2006.



MPD No: 2006-005 R1

Issue Date: 31 July 2006

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2006-005 R1 BRITISH AEROSPACE

**Subject:** Harley Buckle – Disengagement of Locking Bar Pivot Pins

Applicability: British Aerospace BAC Canberra, Jet Provost all Mks

**Reason:** The Ejection Seat manufacturer has advised that during routine maintenance of an AML Harley Buckle Assembly, the solid Locking Bar Pivot Pin was not engaged in the Release Lever, both of which form part of the same assembly. This instruction details an examination of all Harley Buckles with Pt No. AML 33175 SHT 1 and AML AL2872 SHT 1 installed on the Parachute Harness and if found, to carry out a further visual examination of the Locking Bar Pivot Pin.

#### Compliance:

- 1) Not later than 28 days from the original effective date of this MPD carry out Part A of the instructions of BAe CSTI/SURVIVAL EQUIPMENT (Strikemaster)/72.
- 2) After the original effective date of this MPD no Parachute Harness assemblies with Harley Buckles with Pt No. AML 33175 SHT 1 and AML AL2872 SHT 1 may be installed on an aircraft unless inspected in accordance with PartBofBAeCSTI/SURVIVAL EQUIPMENT (Strikemaster)/72.

A copy of the CSTI can be obtained from Mr A C Love, Aircraft Certification Section 2E, Certification Department, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR Telephone +44 (0)1293 573726.

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 18 April 2006. Revision 1 (editorial amendment) becomes effective 31 July 2006.

Enquiries regarding this MPD should be referred to Mr Tony Love, Aircraft Certification Section / Airworthiness Division, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573726 Fax: 01293 573976 E-mail: Department.Certification@srg.caa.co.uk



Issue Date: 22 June 2006

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2006-006 SAVANNAH

Subject: Inspection of Rear Cross Member.

Applicability: All Savannah microlight aircraft.

**Reason:** An aircraft was found to have significant cracking of the rear cross member that provides support for the flying controls. If uncorrected this could lead to ineffectiveness of flying controls and consequent loss of the aircraft.

**Compliance:** SB BMAA MAAN 2013/1 is to be complied with initially before further flight and at least every 5 hours subsequently.

Service Bulletin 2013 is available from the BMAA, Bullring, Deddington, OX15 0TT, cto@bmaa.org.

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 23 June 2006.



Issue Date: 17 July 2006

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2006-007 SKYRANGER UK

Subject: Inspection and modification of CKT exhaust

**Applicability:** Skyranger UK Skyranger microlights with CKT exhaust (Rotax 912 and 912S variants).

**Reason:** Instances of cracking of the tailpipe on CKT exhausts have occurred on Rotax 912S Skyranger variants. This problem has been reported on some examples after less than 100 flying hours. Loss of the exhaust would increase the risk of fire within the engine bay and the possibility of exhaust fumes contaminating the cockpit.

The cracking occurs around two welded seams on the tailpipe downstream of the exhaust box. The exhaust manufacturer, CKT, has developed a corrective modification in the form of a 'steady bracket'.

**Compliance:** For all Skyranger microlights, before further flight from the effective date of this MPD, carry out the instructions contained within Skyranger Service Bulletin 2000/1, which is appended to British Microlight Aircraft Association (BMAA) Microlight Airworthiness Approval Note (MAAN) 2000.

For 912S engined variants the exhaust must be modified with steady bracket installed in accordance with Skyranger Service Bulletin 2000/1 within 10 flying hours of the effective date of this MPD, or before the next permit renewal if sooner.

A copy of Skyranger Service Bulletin 2000/1 and further information can be obtained from:

British Microlight Aircraft Association Bullring, Deddington Banbury OX15 0TT

Tel: 01869 336 006 Fax: 01869 337 116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 18 July 2006.

Enquiries regarding this MPD should be referred to Mr A Love, Aircraft Certification Section, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573726 Fax: 01293 573976 E-mail: Tony.Love@srg.caa.co.uk



Issue Date: 17 July 2006

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2006-008 SKYRANGER UK

**Subject:** Application of fire-resistant paint to engine cowlings.

**Applicability:** Skyranger UK Skyranger series microlights.

**Reason:** An indeterminate number of engine cowlings have been supplied that have been incorrectly manufactured using non-fire-resistant resin. As there is no easy way to determine those cowlings that are affected, Service Bulletin 2002/2 mandates painting the inside of all engine cowlings with fire-resistant paint.

**Compliance:** Within two months of the effective date of this MPD, or before the next permit renewal if sooner, paint the inside of the engine cowlings with fire-resistant paint in accordance with Skyranger Service Bulletin 2000/2, which is appended to British Microlight Aircraft Association (BMAA) Microlight Airworthiness Approval Note (MAAN) 2000.

A copy of Skyranger Service Bulletin 2000/2 and further information can be obtained from:

British Microlight Aircraft Association Bullring, Deddington Banbury OX15 0TT

Tel: 01869 336 006 Fax: 01869 337 116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 18 July 2006.

Enquiries regarding this MPD should be referred to Mr A C Love, Aircraft Certification Section, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573726 Fax: 01293 573976 E-mail: Tony.Love@srg.caa.co.uk



Issue Date: 17 July 2006

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2006-009 SKYRANGER UK

**Subject:** Check of correct installation of Kiev propeller spacer.

**Applicability:** Skyranger UK Skyranger microlights with Kiev propellers.

**Reason:** Some Kiev propeller spacers contain large diameter lightening holes in addition to the clearance holes for the propeller bolts. It is possible to incorrectly install the propeller spacer with the propeller bolts through the lightening holes instead of the clearance holes. This puts bending loads through the propeller bolts (rather than pure shear loads), which cause premature failure of the bolts and may lead to the loss of the propeller in flight.

**Compliance:** Before further flight from the effective date of this MPD, inspect the propeller installation in accordance with Skyranger Service Bulletin 2000/3, which is appended to British Microlight Aircraft Association (BMAA) Microlight Airworthiness Approval Note (MAAN) 2000.

A copy of Skyranger Service Bulletin 2000/3 and further information can be obtained from:

British Microlight Aircraft Association
Bullring, Deddington
Banbury
OX15 0TT

Tel: 01869 336 006 Fax: 01869 337 116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 18 July 2006.

Enquiries regarding this MPD should be referred to Mr A C Love, Aircraft Certification Section, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573726 Fax: 01293 573976 E-mail: Tony.Love@srg.caa.co.uk



Issue Date: 19 July 2006

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2006-010 MAINAIR SPORTS/P&M AVIATION

Subject: Wing keel cracks

Applicability: Pegasus Quik microlight aeroplanes

**Reason:** A number of Pegasus Quik microlight aircraft have been found to suffer from local fatigue cracks in the wing keel at the roll bracket bearing hole where the M6 bolt attaches the bearing to the keel.

#### Compliance:

- a) For aircraft that have been involved in a heavy landing, before further flight from the effective date of this MPD, inspect the wing keel roll bracket bearing hole for elongation, fretting and cracks in accordance with P&M Aviation Service Bulletin 122.
  - If elongation, fretting or cracks are found during the inspection, the wing keel must be returned to P&M Aviation for installation of Modification 139 or replacement with a new keel as necessary.
- b) For aircraft that have 150 hours flight time, within 5 flying hours from the effective date of this MPD, inspect the wing keel roll bracket bearing hole for elongation, fretting and cracks in accordance with P&M Aviation Service Bulletin 122.

If elongation, fretting or cracks are found during the inspection, the wing keel must be returned to P&M Aviation for installation of Modification 139 or replacement with a new keel as necessary.

If no cracks are found, repeat the inspection at 50 flight hour intervals up to a total of 500 flight hours or four years whichever occurs first.

continued overleaf

Enquiries regarding this MPD should be referred to Mrs J Barratt, Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573945 Fax: 01293 573976 Email: jane.barratt@srg.caa.co.uk

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c) For aircraft that have 500 hours flight time or 4 years service whichever occurs first, before further flight return the wing keel to P&M Aviation for installation of Modification 139.

A copy of P&M Aviation Service Bulletin 122 can be obtained from:

P&M Aviation Ltd. Unit B Crawford Street Rochdale Lancashire OL16 5NU

Tel: 01706 655134 Fax: 01706 631561

Email: flying@pmaviation.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 21 July 2006.



MPD No: 2006-012 R1

Issue Date: 9 November 2006

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

### MPD: 2006-012 R1 MAINAIR SPORTS/P&M AVIATION

Subject: Kingpost Base.

**Applicability:** Pegasus Quik microlight aeroplanes up to and including serial number 7966 with a Rotax 912ULS engine installed.

**Reason:** The Pegasus Quik wing kingpost is located by a turned fitting that plugs into a steel eyebolt, which acts as a spigot. Between the eyebolt and the kingpost base is a cable, which is intended to align the kingpost with its spigot, and to keep the parts connected. If the cable is a little too long, when the kingpost is erected, it is probable that the forward force from the fin tube will cause the kingpost to sit in front of the spigot instead of over it, supported only by the cable. If the aircraft is flown in this condition, the cable will get rapidly damaged allowing the kingpost to separate from the keel entirely.

Note: P&M Aviation Service Bulletin SB114 was issued in June 2003 and some aircraft may already have been modified as required by this MPD.

**Compliance:** Before further flight, from receipt of this MPD, inspect the kingpost for correct alignment on the base in accordance with P& M Aviation Ltd. Service Bulletin 114.

- i) If the kingpost is not correctly aligned on the base, before further flight, replace the eyebolt and cable with an eyebolt and shackle sub assembly part number YQC-211 in accordance with P&M Aviation Service Bulletin 114.
- ii) If the kingpost is correctly aligned on the base, within 5 flight hours from receipt of this MPD, replace the eyebolt and cable with an eyebolt and shackle sub assembly part number YQC-211 in accordance with P&M Aviation Service Bulletin 114.
- iii) If the eyebolt and cable has already been replaced with an eyebolt and shackle sub assembly part number YQC-211, no further modification action is required under this MPD.

continued overleaf

MPD: 2006-012 R1 page 2 of 2

A copy of P&M Aviation Service Bulletin 114 can be obtained from:

P&M Aviation Ltd. Unit B Crawford Street Rochdale Lancashire OL16 5NU

Tel: 01706 655134 Fax: 01706 631561

Email: flying@pmaviation.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 10 November 2006.



Issue Date: 8 December 2006

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2006-014 P&M AVIATION

Subject: Flap Up Limit Cable

Applicability: All Flight Design CT2K microlight aeroplanes up to and including serial

number 03-07-03-34 / P&M Serial number 8124

**Reason:** The electric flap system on the CT2K is provided with a flexible cable that limits the 'UP' travel in the event of failure of the limit switch. Some CT2K aircraft were manufactured with a 1.5 mm diameter cable which can break in some circumstances if the limit switch fails.

**Compliance:** Before further flight, from receipt of this MPD, inspect the flap 'UP' limit cables and measure the diameter in accordance with P&M Aviation Ltd. Service Bulletin CT124.

- i) If cables less than 3.5mm in diameter are fitted, within 5 flying hours from receipt of this MPD, replace each cable with new cable part number KA6030310 in accordance with P&M Modification 109.
- ii) If cables part number KA6030310 have been installed in accordance with P&M Modification 109, no further modification action is required under this MPD.

A copy of P&M Aviation Service Bulletin CT124 can be obtained from:

P&M Aviation Ltd. Unit B Crawford Street Rochdale Lancashire OL16 5NU

Tel: 01706 655134 Fax: 01706 631561

Email: flying@pmaviation.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 11 December 2006

Enquiries regarding this MPD should be referred to Mrs J Barratt, Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573945 Fax: 01293 573976 E-mail: jane.barratt@srg.caa.co.uk



Issue Date: 2 March 2007

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2007-001 MAINAIR SPORTS/P&M AVIATION

Subject: Main undercarriage.

**Applicability:** All Flight Design CT2K and CTSW microlight aeroplanes first registered before 22 February 2007.

**Reason:** The port main undercarriage leg of a CT2K aircraft has failed during taxiing. Inspection of the undercarriage of this aircraft showed fatigue cracking in the neck of the leg near the attachment with the fuselage. During installation of a replacement undercarriage leg, it was found that the replacement leg did not align well with the main bulkhead pivot attachment hole and alignment of the leg introduced a preload in the neck of the undercarriage leg. This preload is considered to have contributed to the fatigue failure of the leg.

#### Compliance:

- a) For any aircraft that has been involved in a heavy landing (irrespective of the number of flying hours accumulated), before further flight inspect the main undercarriage in accordance with P& M Aviation Ltd. Service Bulletin CT123.
  - i) If any cracks are found, the undercarriage leg must be replaced before further flight by P&M Aviation Ltd or by a P&M Aviation Ltd. approved agent.
  - ii) If no cracks are found, refit the leg in accordance with SB CT123.
- b) For aircraft with a main undercarriage with 300 hours flight time, within 5 flying hours from receipt of this MPD, inspect the main undercarriage in accordance with P& M Aviation Ltd. Service Bulletin CT123.
  - i) If any cracks are found, the undercarriage leg must be replaced before further flight by P&M Aviation Ltd or by a P&M Aviation Ltd. approved agent.
  - ii) If no cracks are found, refit the leg in accordance with SB CT123.

continued overleaf

MPD No: 2007-001 page 2 of 2

c) For aircraft with a main undercarriage with less than 300 hours flight time at the date of this MPD, when the undercarriage of the aircraft reaches 300 flying hours, inspect the main undercarriage in accordance with P& M Aviation Ltd. Service Bulletin CT123.

- i) If any cracks are found, the undercarriage leg must be replaced before further flight by P&M Aviation Ltd or by a P&M Aviation Ltd. approved agent.
- ii) If no cracks are found, refit the leg in accordance with SB CT123.

A copy of P&M Aviation Service Bulletin CT123 can be obtained from:

P&M Aviation Ltd. Unit B Crawford Street Rochdale Lancashire OL16 5NU

Tel: 01706 655134 Fax: 01706 631561

Email: flying@pmaviation.co.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective upon receipt from 3 March 2007.



MPD No: 2007-002 R2

Issue Date: 23 June 2010

# **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 22(1) of the Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Flv.

MPD: 2007-002	R2 BRITISH AEROSPACE
Subject:	Port and Starboard mainplane spar upper attachment lugs cracking.
Applicability:	All British Aerospace Jet Provost and Strikemaster aeroplanes.
Reason:	This MPD was originally issued partly as a precautionary measure pending the Final Report on the accident to Strikemaster VH-AKY in Australia in October 2006. Revision 1 of this MPD was then raised due to new information received by the CAA regarding the nature of the lug bore cracking and the way the aircraft can be operated even when subject to 'non-aerobatic' operations. Revision 2 is to clarify the intent of compliance instructions, and to record that the issuance of the report referred above did not alter the need for compliance with this MPD as stated on Page 2.
	The wing upper lug cracking has occurred before in military service, prior to aircraft achieving their limiting Fatigue Index (FI). There are some distinguishing features that may indicate whether an aircraft has been subject to the loading necessary to cause this cracking. These features are not foolproof but if present will indicate a high probability of cracking in the bore of the lug, requiring lug bore inspection before further flight. Where these features are not present, historical evidence indicates that lug bore cracking may still be present. As such, operational restrictions will still need to be maintained until the bore of the affected lug can be clearly shown to be free from cracking.
	The CAA also understands that high 'G' manoeuvres can still be flown in normal 'non-aerobatic' operations, so negating the purpose of the original MPD, leaving open the possibility of lug bore crack propagation. The CAA has therefore determined that a limit on 'G' would be a better means of controlling the situation. The limits have been chosen to slow down the growth of any incipient crack.

MPD: 2007-002 R2 Page 1/2

#### Compliance:

(1) Before further flight, from 6 August 2007 (the effective date of Revision 1 of this MPD), insert a placard within plain view of the pilots stating:

#### "Manoeuvres are restricted to between +3.0G to -0.25G".

Insert a similar page in the Aircraft Manual, referring also to this MPD

(2) Within the next 5 flying hours, from 6 August 2007 (the effective date of Revision 1 of this MPD), carry out the following:

Visually inspect the upper neck of the wing attachment lug fitting to see if a repair has been carried out resulting from crack detection following CSI 50 Appendix 3 inspection.

If a repair has been carried out (ie as a result of a crack being detected by application of the CSI), the lug bush should be removed and the lug bore inspected in accordance with the eddy current inspection of CSI 50 Appendix 2, before further flight.

Any cracking in the lug must be rectified before further flight, in accordance with CSI 50.

If no repair has been carried out, operation may continue under the g limitations in paragraph 1.

(3) Confirmation that the lug is free from cracking by inspection in accordance with the eddy current inspection of CSI 50 Appendix 2 with the bush removed (or another method agreed with the Authority), removes the operational limitation applied by paragraph 1 of this MPD.

#### Ensure compliance with this MPD is recorded in the aircraft logbook.

**Effective Date:** 

Revision 2: 24 June 2010

Revision 1: 6 August 2007 Original Issue: 10 March 2007

- 1. This MPD was not published as a PMPD for consultation as Revision 2 does not alter the intent of Revision 1.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573726 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk

MPD: 2007-002 R2 Page 2/2



MPD No: 2007-003 R2

Issue Date: 2 May 2007

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2007-003 R2 ROTAX

Subject: Fuel Pump Replacement

Applicability: Rotax 912UL / 912ULS / 912 ULSFR engines

These engines are known to be fitted to, but not limited to, the following permit aircraft types: Airborne Edge XT912, Medway Eclipser, Flight Design CT2K, Flight Design CTSW, Ikarus FB80, Ikarus FB100, Mainair Blade 912, Mainair Blade 912S, Pegasus Quantum 15-912, Pegasus Quik, Quik GT450, Medway SL 80, Medway SLA100, EV97 Team Eurostar UK, Sky Arrow 650T, Sky Ranger, X'Air, X'Air Falcon, Escapade, iXess, Tanarg and Rotorsport UK MT-03 gyroplane

**Reason:** Rotax have advised that for a number of fuel pump part numbers fitted to Rotax 912 UL, 912ULS and 912ULSFR engines, there is a possibility of significant fuel leakage and/or engine malfunction due to excessive fuel pressure being supplied to the mechanical fuel pump.

**Compliance:** Within 25 flying hours from the date of Revision 1 of this MPD or by 1 July 2007 whichever occurs first, inspect the engine fuel pump in accordance with Rotax Service Bulletin SB-912-053UL.

- i) If fuel pump part number 892230, 892232 or 892540 is fitted, replace the fuel pump with part number 892542 in accordance with Rotax Service Bulletin SB-912-053UL.
- ii) If fuel pump part number 892235, 892236 or 892545 is fitted, replace the fuel pump with part number 892546 in accordance with Rotax Service Bulletin SB-912-053UL.
- iii) If fuel pump part number 892542 or 892546 is fitted, no further action is required.
- iv) Engines fitted with Pierburg fuel pumps ("Pierburg" marked on outer end) are <u>not</u> affected by this MPD. All affected pumps are marked "AC" on the outer end. Note: Engines manufactured before the end of 2005 will be fitted with Pierburg pumps unless they have subsequently been fitted with AC pumps as replacements.
- v) If Rotax Alert Service Bulletin ASB-912-053UL has already been complied with, no further action is required by this MPD revision.

continued overleaf

MPD: 2007-003 R2 page 2 of 2

A copy of Rotax Service Bulletin SB-912-053UL and further information on how to establish whether the fuel pump on your aircraft must be replaced may be obtained from the Technical Support section of www.conairsports.co.uk. Replacement fuel pumps may be obtained from:

 Skydrive Ltd
 Tel: 01926 612188

 Burnside
 Fax: 01926 613781

Deppers Bridge e-mail: sales@skydrive.co.uk

Southam CV47 2SU

Record compliance with this MPD in the aircraft log book.

The original MPD became effective 30 March 2007. Revision 1 became effective on 10 April 2007. Revision 2 becomes effective on 3 May 2007.

MPD No: 2007-004 R1

Issue Date: 4 April 2007

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2007-004 R1 EUROPA

Subject: Landing gear mounting frame LG01 / NG01

**Applicability:** All Europa and Europa XS aeroplanes fitted with landing gear frames supplied before January 2007

**Reason:** There has been an incident of cracking of the landing gear mounting frame on a UK registered Europa aircraft. Further detailed analysis of the landing gear mounting frame has shown that reinforcement of the upper horizontal tubes of the landing gear mounting frame is required.

#### Compliance:

i) For all applicable aircraft, before further flight from receipt of this MPD, inspect the landing gear mounting frame in accordance with Europa Aircraft Modification 72. If any cracks are found, the landing gear mounting frame must be replaced with a new landing gear mounting frame supplied by Europa aircraft.

and

ii) For all Rotax engined Europa aircraft, within 25 hours flight time from receipt of this MPD or by the next Permit renewal whichever occurs first, install Europa Aircraft Modification 72.

Note: Installation of Modification 72 is not required for aircraft with:

- a) No cracks found in the landing gear frame and Classic engine installation with Rotax 912 engine and Warp Drive ground adjustable propeller or any other propeller weighing less than 28lb.
- b) No cracks found in the landing gear frame and Classic engine installation with Rotax 912S engine and Warp Drive ground adjustable propeller or any other propeller weighing less than 25lb.
- c) Landing gear frames supplied by Europa after January 2007.

or

iii) Aircraft with engines other than Rotax must contact Europa to establish whether Modification 72 is required to be installed.

A copy of Europa Aircraft Modification 72 can be obtained from:

Europa Aircraft (2004) Ltd Tel: 01751 431773 7 Dove Way Fax: 01751 431706

Kirby Mills Industrial Estate Email: roger@europa-aircraft.com

Kirkbymoorside

York YO62 6QR

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 11 April 2007.

Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573293 Fax: 01293 573976 Email: Department.Certification@srg.caa.co.uk



MPD No: 2007-005 R2

Issue Date: 5 November 2007

### MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2007-005 R2 EUROPA

Subject: PFA Flight Safety Bulletin (PFA 247/FSB-006 Issue 4) – Tailplane Control

Components

Applicability: All Europa and Europa XS aircraft

Reason: A fatal accident has occurred with a Europa aircraft. The initial results of the

investigation suggest that tailplane flutter may have occurred leading to detachment of the tailplane. Additional inspections are required to be made.

Compliance: Before further flight, carry out the inspection identified in PFA Flight Safety

Bulletin, PFA 247/FSB-006 Issue 4. If the inspection criteria specified are not satisfied the aircraft is grounded until modification or rectification is carried out.

Repeat inspections must be carried out at the intervals specified in PFA Flight Safety Bulletin, PFA 247/FSB-006 Issue 4. If the inspection criteria specified are not satisfied the aircraft is grounded until modification or rectification is carried out.

If PFA Flight Safety Bulletin, PFA 247/FSB-006 Issue 3 has been carried out within the last 10 hours flight, then it is not necessary to carry out PFA 247/FSB-006 Issue 4 until the remainder of the 10 hours has been completed.

A copy of the Flight Safety Bulletin may be obtained from: Popular Flying Association Turweston Aerodrome Northants NN13 5YD

Tel: 01280 846786 Fax: 01280 846780

Email: engineering@pfa.org.uk

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 17 June 2007, Revision 1 became effective on 2 November 2007 and Revision 3 becomes effective 8 November 2007.

Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573315 Fax: 01293 573976 E-mail: department.certification@srg.caa.co.uk



Issue Date: 15 June 2007

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2007-006 EUROPA

Subject: PFA Flight Safety Bulletin (PFA 247/FSB-007) - Inspection of wing rear

attachment point.

**Applicability:** All Europa aircraft excluding Europa XS model.

Reason: A fatal accident has occurred with a Europa aircraft. The initial results of the

investigation suggest that detachment of a wing may have occurred as result tailplane flutter. A one off inspection of the rear wing attachment point is

required.

Compliance: Before further flight, carry out the inspection identified in PFA Flight Safety

Bulletin, PFA 247/FSB-007. If the results of the inspection identify any manufacturing error the aircraft is grounded until modification or rectification is

carried out.

A copy of the Flight Safety Bulletin may be obtained from:

Popular Flying Association Turweston Aerodrome Northants NN13 5YD

Tel: 01280 846786 Fax: 01280 846780

Email: francis.donaldson@pfa.org.uk

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 17 June 2007.



Issue Date: 27 June 2007

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2007-007 FLY BUY ULTRALIGHTS/AEROSPORT

Subject: Fouling of Rear Fuselage Composite Fairing by Bolts on Rudder Horn.

**Applicability:** Ikarus C42 FB80 and C42 FB100 microlights and C42 FB UK and C42 FB 100 VLA homebuilt microlights.

**Reason:** An occurrence has been reported where during a sideslip manoeuvre some temporary restriction of rudder movement was evident. When an investigation was carried out on the ground it was found that there was a small static clearance between the bolts on the rudder horn and the rear fuselage composite fairing but it was suspected that under the airloads of the sideslip manoeuvre the composite fairing had flexed sufficiently to cause the foul and impede the rudder.

**Compliance:** Before further flight from the effective date of this MPD, carry out the inspection detailed in Aerosport Owner's Service Bulletin OSB 24 Issue 1 dated 20 March 2007. As required in the OSB, ensure that there is a minimum clearance of 10 mm between all parts of the rudder horn and the rear fuselage composite fairing throughout the full range of rudder movement.

Copies of the Owner's Service Bulletin may be obtained from:

Aerosport Ltd Tel: 01384 221550
Aerosport House Fax: 01384 221560
Wolverhampton Airport
Bobbington
Stourbridge
DY7 5DY

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 30 June 2007.

Enquiries regarding this MPD should be referred to Mr Nigel Davis, Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573309 Fax: 01293 573976 E-mail: nigel.davis@srg.caa.co.uk



Issue Date: 23 July 2007

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2007-008 FLY BUY ULTRALIGHTS/AEROSPORT

Subject: Cracking in Weld on Wing Root Rib

**Applicability:** Ikarus C42 FB 80 and C42 FB 100 microlights and C42 FB UK and C42 FB 100 VLA homebuilt aircraft.

**Reason:** An occurrence has been reported where during a routine inspection a 20mm long crack was discovered in the weld that joins the wing root rib to the wing leading edge. It is not clear whether this was as a result of a manufacturing fault or fatigue failure or a combination of both possible causes.

**Compliance:** Before further flight, from the effective date of this MPD, carry out the inspection detailed in Aerosport Owner's Service Bulletin OSB 25 Issue 2 dated 19 July 2007. As required in the OSB, inspect the wing root rib welds for cracks, using dye penetrant techniques as required. Welds on both wing root ribs around the leading and trailing edges must be inspected.

If a crack is found it must be reported to Aerosport and repaired in accordance with an approved procedure and by suitably qualified personnel.

The inspection must be repeated on an annual basis.

Copies of the Owner's Service Bulletin may be obtained from:

Aerosport Ltd Aerosport House Wolverhampton Airport Bobbington Stourbridge DY7 5DY Tel: 01384 221550 Fax: 01384 221560

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 25 July 2007.

Enquiries regarding this MPD should be referred to Mr Nigel Davis, Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573309 Fax: 01293 573976 E-mail: nigel.davis@srg.caa.co.uk



Issue Date: 30 August 2007

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2007-009 ESCAPADE

Subject: Change in pitch trim tab setting angle limits

Applicability: UK Escapade microlights fitted with the original, smaller pitch trim tab

**Reason:** Flight testing has demonstrated that the original, smaller pitch trim tab gives a better trim speed range when set to range of 20° up and 40° down, reducing the likelihood of overspeeding the flaps during the landing phase.

**Compliance:** Before the next permit revalidation from the effective date of this MPD, re-set the pitch trim tab angle in accordance with Escapade Service Bulletin BMAA MAAN 1937.

A copy of Escapade Service Bulletin BMAA MAAN 1937 and further information can be obtained from:

British Microlight Aircraft Association Bullring, Deddington Banbury OX15 0TT Tel: 01869 336 006

Fax: 01869 337 116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 3 September 2007.

Enquiries regarding this MPD should be referred to Mr A C Love, Aircraft Certification Section, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573726 Fax: 01293 573976 E-mail: Tony.Love@srg.caa.co.uk@srg.caa.co.uk



Issue Date: 11 April 2008

# **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2008-001 HAWKER

Subject: Inspection of the engine mounting brackets for cracks

Applicability: All Hawker Hurricane aircraft.

**Reason:** Cracks have been found in the engine mounting brackets of three Hurricane aircraft. A pair of brackets is installed on each side of the engine mount. The photographs below show the location of the cracks.



Location of cracks

A 72086 bracket showing the location of cracking



View of port rear engine mount in a partly assembled MK 2B



A port rear engine mount in a partly assembled aircraft showing the area of inspection on the outboard side of the brackets.

continued overleaf

Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573315 Fax: 01293 573976 E-mail: department.certification@srg.caa.co.uk

MPD: 2008-001 page 2 of 2

Cracks have been found in brackets of both the original design (part numbers A72086 and A72087) and the modified design (drawing AP1564B-M14-W/44). One aircraft was found to have cracks in three of the four brackets fitted. Brackets have been observed with plates attached to the outer surfaces of the triangular webs. If plates have been attached to the brackets, the inspection detailed in this MPD will not be effective and the CAA must be consulted for details of an appropriate inspection.

#### Compliance:

- a) Before further flight, visually inspect the rear engine mount brackets for cracks on both inboard and outboard webs; see above photographs for location of the cracking. Adequate access to the rear engine mount brackets should be rendered with removal of the skin/cowls around the engine so that the inspection can be conducted directly or by the use of a torch and mirror. If any cracks are found, the aircraft is grounded until the brackets are replaced. Note that if one bracket in a pair is found to be cracked, both brackets must be replaced.
- b) If no cracks are found under a) or when the brackets are replaced with new brackets of either the original design (part numbers A72086 and A72087) or the modified design (drawing AP1564B-M14-W/44), inspect the brackets for cracks at intervals of 50 hours or every 24 months whichever is the shorter. If cracks are found during any of these inspections, the brackets are to be replaced with new parts. Note that if one bracket in a pair is found to be cracked, both brackets must be replaced.
- c) Acro Aeronautical Services (AAS) Ltd. Modification 5012 introduces a new design bracket. Installation of AAS Ltd. Modification 5012 is a terminating action for this MPD and the repetitive inspections under part b) are not required. Alternative modifications may be agreed as terminating actions with the CAA. Please note that the modification documents may include repetitive visual inspections of the replacement brackets.
- d) If under a), it is found that plates are attached to the outer surfaces of the brackets, the CAA must be contacted for details of a suitable inspection.
- e) Report any cracked brackets found to Aircraft Certification Department 2E, United Kingdom Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR.

A copy of AAS Ltd. Modification 5012 may be obtained from:

Acro Aeronautical Services Ltd. Unit 3E Haddenham Business Park Haddenham Bucks HP17 8LJ

Tel: 01844 390747 Fax: 01844 290777

Email: mail@acro-aero.co.uk

Compliance with this MPD is to be recorded in the aircraft log book.

This MPD becomes effective on 14 April 2008.



Issue Date: 6 February 2008

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2008-002 DYN AERO

Subject: MCR-01 ULC Tailplane Attachment Failure

Applicability: All MCR-01, MCR-01 ULC and MCR-01 CLUB aircraft

**Reason:** An MCR-01 ULC recently experienced a failure of the tailplane attachment lugs resulting in the loss of its tailplane and in consequence, loss of the aircraft. These aircraft (including related MCR-01 and MCR-01 CLUB variants) are not to be flown until this condition has been addressed as below.

**Compliance:** From the effective date of this MPD, the aircraft is not to be flown until appropriate action has been agreed in order to return the aircraft to airworthiness (to the satisfaction of the LAA and CAA).

Further information can be obtained from:

Light Aircraft Association Turweston Aerodrome Northants NN13 5YD

Tel: 01280 846786 Fax: 01280 846780

Email: engineering@laa.uk.com

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 8 February 2008

Enquiries regarding this MPD should be referred to Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573315 Fax: 01293 573976 E-mail: department.certification@caa.co.uk





Issue Date: 27 June 2008

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to

MPD: 2008-003 **SAVANNAH** 

Subject: Elevator bias spring attachment bracket SUP8.

Applicability: UK built Savannah aircraft with manual bungee pitch trim fitted.

Reason:

UK built Savannah aircraft with the manual (bungee) pitch trim fitted have an elevator bias spring mechanism fitted in the tail. This mechanism includes a plate (Part number SUP8) that is attached to the elevator control horn (SE028). It may be possible for the elevator control cable to come into contact with bracket SUP8 at one extreme of elevator movement. If this is allowed to happen the elevator control cable will wear over time and could eventually fail resulting in the loss of the aircraft.

Compliance: Within the next 10 flight hours from the effective date of this MPD, or before the next inspection for revalidation of the Permit to Fly, whichever is the sooner, inspect the elevator bias spring mechanism and if necessary carry out remedial action in accordance with UK Savannah Service Bulletin 2159. copy of the bulletin may be obtained from:

British Microlight Aircraft Association

Bullring Deddington Banbury Oxon **OX15 0TT** 

Tel: 01869 336006 Fax: 01869 337116 Email: cto@bmaa.org

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective on 30 June 2008.

Enquiries regarding this MPD should be referred to Certification and Approvals Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR. Phone: 01293 573315 Fax: 01293 573976 E-mail: department.certification@caa.co.uk





Issue Date: 31 July 2008

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2008-004 PUROLATOR IN-LINE FILTERS

**Subject:** Purolator In-line Fuel Filters.

**Applicability:** All aircraft with a Purolator, or similar, fuel filter installed.

Reason:

At least one forced landing has occurred due to debris bypassing the mesh of a Purolator fuel filter and interrupting the fuel supply to the engine.

This kind of filter consists of a nylon mesh on a central core; the mesh is held against the end of the unit by a knurled nut. If the nut migrates, the filter may slide along the core and allow unfiltered fuel to pass. Thus, correct functioning of Purolator (and similar) fuel filters depends upon the security of the retaining nut. Therefore, modification is required to ensure the security of the nut, and daily inspection of the filter until such a modification is in place.

#### Compliance: -

- (1) Within 30 days of the effective date of this MPD, or when maintenance is performed, whichever is the sooner, inspect the aircraft to determine whether a Purolator or similar filter is fitted. If such a filter is fitted, complete (2) below. (PFA/LAA Service Bulletin, MOD/EQUIP/001, BMAA Service Bulletin 2143 and UK AAIB Bulletin 11/ 2005 EW/G2005/07/01 provide further information to assist identification of such filters).
- (2) Determine whether there is a spring fitted to retain the nut.

If a spring is fitted, and is intact, complete the actions specified under (3) once.

If no such spring is fitted, or it is no longer intact, the actions specified under (3) shall be performed before the first flight of each day, until the aircraft is modified in accordance with (4); the modification must be completed before the next annual validation/re-validation of the permit.

(3) Examine the filter to establish that the filter screen and retaining nut are correctly located. If the mesh is not correctly seated, or the nut is loose, complete all necessary maintenance actions to restore the filter to correct functioning and to ensure that the engine and fuel system downstream of the filter is not contaminated by debris.

continued overleaf

MPD: 2008-004 page 2 of 2

(4) Modify the filter to seat the mesh correctly and to prevent migration of the retaining nut.

Acceptable modifications are those defined in PFA/LAA Service Bulletin, MOD/EQUIP/001 (for LAA-administered aircraft) and BMAA Service Bulletin 2143 (for BMAA-administered aircraft).

Record compliance with this MPD in the aircraft log book.

This MPD becomes effective 4 August 2008.



MPD No: 2008-005 R1

Issue Date: 4 December 2008

# **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Flv.

### MPD: 2008-005 R1 YAKOVLEV / AEROSTAR SA / INTREPRINDEREA DE AVIOANE BACAU

Subject:	Installation of barrier on rear cockpit floor	
Applicability:	Yakovlev Yak-52 aeroplanes (manufactured by Aerostar SA or Intreprinderea De Avioane Bacau)	
Reason:	The investigation into the fatal crash of a Yak-52 ascertained that it was probably caused by a restriction in the flight controls and that the most likely cause of that restriction was that the buckle on the unsecured crotch strap of the rear cockpit occupant became jammed in the flight controls.	
	Revision 1 has been raised to allow alleviation in the compliance period provided that an item is added to the pre-flight checklist.	
Compliance:	Not later than 6 December 2008, install a barrier on the rear cockpit floor to prevent loose articles jamming the elevator and aileron controls. This barrier must be positioned to cover the bay on the centreline immediately aft of the attachment point for the crotch strap. Longitudinally this bay extends aft to the next fuselage frame and laterally it extends between the two angles running fore and aft either side of the flight control rod.	
	Alternatively the compliance period can be extended to the next 50 hour or annual inspection, whichever comes first, provided that an item is added to the aircraft pre-flight checklist as follows:	
	"Check all safety harness straps are fastened in both cockpits. If rear cockpit is unoccupied ensure all straps are fastened or otherwise made safe."	
	Notes:	
	The barrier must be installed under a Minor Modification. It is expected that the barrier would be metallic although alternative material proposals would be considered.	
	2. In addition to the installation of the barrier, the Maintenance Schedule must be amended to include a requirement for the area under the barrier to be inspected at least annually. The barrier should therefore be readily removable.	

MPD: 2008-005 R1 Page 2 of 2

Ensure compliance with this MPD is recorded in the aircraft logbook.		
Effective Date:	5 December 2008 The original MPD became effective 6 October 2008.	

Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573309 Fax: +44 (0)1293 573976

Email: department.certification@caa.co.uk



MPD No: 2008-006 R1

Issue Date: 27 August 2009

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Flv.

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MPD: 2008-006 R1 7FN	7 IK

Subject:	Structural Failure of Wing.
Applicability:	All Zenair CH 601XL Aircraft operating on a UK Permit to Fly, administered by the Light Aircraft Association (LAA).
	Note.Other Zenair aircraft models, not designated CH 601XL, are not affected by this MPD.
Reason:	A recent serious accident occurring to a Dutch registered Zenair CH 601XL in Holland involved a structural failure and loss of a wing in flight.
	Other recent incidents have given rise to concern with respect to the structural adequacy of the wing. This is being investigated by the LAA in conjunction with the kit manufacturer. The aim is to positively identify any design shortfall and to define an appropriate modification to restore the structural integrity of the wing. These aircraft are not to be flown until this condition is addressed as below.
	Revision 1 of this MPD is to record that LAA modification MOD/162B/004 is a suitable means of returning the aircraft to an airworthy condition provided that it is carried out to the satisfaction of either the LAA or the CAA.
Compliance:	From the effective date of this MPD, the aircraft is not to be flown until appropriate action has been agreed in order to return the aircraft to an airworthy condition. LAA modification MOD/162B/004 is a suitable means of compliance provided that it is carried out to the satisfaction of the LAA or the CAA.
	Further information may be obtained from: Owners Group Representative Mr Lawrence Lewis Turweston Aerodrome 30 Avon Road Redcar Northants Cleveland TS10 1NW Tel: 01642 472785 E-mail: lol@lewisaviation.com Light Aircraft Association Nr Brackley Northants NN13 5XT TS10 1NW Tel: 01280 846786 E-mail: engineering@laa.uk.com

#### Ensure compliance with this MPD is recorded in the aircraft logbook.

Effective Date: 25 November 2009

- 1. This MPD was not published for consultation.
- Enquiries regarding this MPD should be referred to Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom. Tel: +44 (0)1293 573315 Fax: +44 (0)1293 573976 Email: <a href="mailto:department.certification@caa.co.uk">department.certification@caa.co.uk</a>



Issue Date: 6 February 2009

# **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2009-001	ROTARY AIR FORCE MARKETING
Subject:	Handling Qualities
Applicability:	Rotary Air Force (RAF) Marketing RAF 2000 and RAF 2000 GTX-SE gyroplanes.
Reason:	As a result of a fatal accident to an RAF 2000, the AAIB recommended that UK CAA investigate the RAF 2000 for compliance with BCAR Section T and consider the need for any safety actions. CAA accepted the recommendation and has conducted a flight evaluation of the RAF 2000. This has revealed non-compliant flight characteristics: with paragraph T181 in some phases of flight, and with paragraph T177 throughout the currently approved flight envelope. This MPD introduces measures to restore the safety standard from the identified unsafe conditions.
	This MPD supersedes MPD 2006-013 and has been raised to change the limitations for aircraft that have been modified under normal LAA processes by approved tailplane/rudder centring spring/Door Mod Number 12311.
Compliance:	Before further flight from the effective date of this MPD, revise the RAF 2000 Pilot Operating Handbook (POH) by incorporating the following limitations. This may be accomplished by inserting a copy of this MPD in the POH.
	Basic Aircraft, not modified as defined in 2 below:-
	<ol> <li>Doors must be removed for flight.</li> <li>V<sub>NE</sub> is reduced to 70mph.</li> <li>ASI display must be revised to show a red radial line at 70mph.</li> <li>A placard must be included adjacent to the ASI with the following text:- "Maximum Permitted Airspeed 70mph"</li> <li>Maximum crosswind component for take off and landing is 7kt</li> <li>Flight when surface winds exceed 15kt is prohibited.</li> <li>Flight when surface wind gust spread exceeds 10kt is prohibited.</li> <li>Continued flight in moderate, severe or extreme turbulence is prohibited. Maximum airspeed, should such turbulent conditions be encountered, is 60mph.</li> </ol>
	2. Aircraft modified under normal LAA processes by approved tailplane/rudder centring spring/Door Mod Number 12311:-
	<ol> <li>V<sub>NE</sub> is reduced to 70mph.</li> <li>ASI display must be revised to show a red radial line at 70mph.</li> <li>A placard must be included adjacent to the ASI with the following text:- "Maximum Permitted Airspeed 70mph"</li> <li>Maximum crosswind component for take off and landing is 12kt</li> <li>Continued flight in severe or extreme turbulence is prohibited. Maximum airspeed, should such turbulent conditions be encountered, is 60mph.</li> </ol>

# Compliance Cont:

Note: Moderate turbulence is turbulence that causes a) changes in altitude or attitude, b) variations of indicated airspeed, and c) aircraft occupants to feel definite strains against the seat harnesses or any tendency to a reduction in positive G-Forces.

Design revisions, as yet to be determined and approved, to establish compliance with BCAR Section T would be an acceptable alternative means to alleviate the foregoing restrictions.

During embodiment of the modification and after completion, the work must be inspected at appropriate stages by a person approved either by the CAA or the LAA. Compliance with this MPD and appropriate inspections should be in accordance with normal LAA procedures and recorded in the aircraft logbook.

MPD 2006-013 is to be removed from the POH.

### Ensure compliance with this MPD is recorded in the aircraft logbook.

**Effective Date:** 

9 February 2009

- 1. This MPD was published on 27 January 2009 as Proposed MPD 09-02 for consultation until 3 February 2009.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom. Tel: +44 (0)1293 573306 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk



Issue Date: 6 March 2009

# MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2009-002	YEUMAN LIGHT AIRCRAFT COMPANY

Subject:	Throttle Lever Modification	
Applicability:	The following Dynamic WT9-UK aeroplanes:  DY135/2006, DY147/2006, DY155/2006, DY159/2006, DY161/2007, DY165/2007, DY188/2007, DY189/2007, DY192/2007, DY194/2007, DY197/2007, DY200/2007, DY239/2008, DY257/2008.	
Reason:	Due to service experience on foreign registered aircraft, it has been determined that the existing design may result in inadvertent release of the throttle lever nut that would result in full throttle setting for the engine.	
Compliance:	Within 5 flying hours of the effective date of this MPD, replace throttle linkage "slotted pan head screw" with modified screw M4x10 DIN 912 8.8VZ to locate into new recess hole drilled into the threaded bar and secure the assembly with LOCTITE 243, in accordance with YLAC SB WT09-002-004.	
	During embodiment of the modification and after completion, the work must be inspected at appropriate defined and agreed stages and by a person approved either by the CAA or by an authorised BMAA Inspector. Compliance with this MPD and inspections should be in accordance with BMAA or agreed YLAC procedures	
	Inspection should include pre-assembly inspection of the dimple before start of re-assembly, alignment of the dimple in the nut and the loctite being applied and throttle barrel re-assembly, re-fitting of the aluminium barrel and final inspection prior to the panel top being re-fitted.	
	A copy of the Service Bulletin may be obtained from:	
	Yeoman Light Aircraft Company Limited  Manor Farm, Water Lane Drayton St Leonard Wallingford Oxon OX10 7BE  Tel 020 8866 6896 Fax 020 7504 3650 e-mail info@ylac.com	

#### Ensure compliance with this MPD is recorded in the aircraft logbook.

Effective Date: 10 March 2009

- 1. This MPD was published on 27 January 2009 as PMPD 09-01 for consultation until 30 January 2009.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom. Tel: +44 (0)1293 573306 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk





# **United Kingdom Civil Aviation Authority**

MPD No: 2009-003

Issue Date: 20 May 2009

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

### **EMERGENCY MANDATORY PERMIT DIRECTIVE**

MPD: 2009-003 – ROTARY AIR FORCE MARKETING			
Subject:	Rudder Cable Inspection/Replacemen	t	
Applicability:	Rotary Air Force (RAF) Marketing RAF	2000 and RAF 2000 GTX-SE gyroplanes.	
Reason:	During a routine inspection of the rudder cables on an RAF 2000 gyroplane it was noted that the cable was damaged; as extra load was applied to the rudder cable, the cable broke. Inspection of this cable has identified the mechanism of failure as corrosion due to the ingress of water over a period of time. The rudder cable sits inside an outer (Bowden like) sheath and is not inspectable without destroying the cable. The rudder is an essential control during a normal landing of these gyroplanes.		
Compliance:	Before further flight, after the effective date of this MPD, the aircraft must be inspected by an approved LAA Inspector to determine whether the rudder cables fitted are made from galvanised steel or stainless steel. If the cable is made from stainless steel then no further action is required; if the cable is made from steel it must be replaced with an approved stainless steel cable before further flight.  All changes to the design are subject to normal LAA/CAA modification approval procedures.  Further product information can be obtained from:		
	Mr. Mike Goldring, Newton Air Gyroplanes Ltd., Rohan, 6 Combes Head Road, Newton Abbot, TQ12 1PY	Tony Melody, LAA Inspector (Gyroplanes), 103 Pole Hill Road, Hillingdon, Uxbridge, Middx. UB10 0QD	
	Tel: 01626 353717 EM: mikeraf2000@hotmail.com	Tel: 07956 447085 EM: tmgyros@yahoo.co.uk	
E	Ensure compliance with this MPD is recorded in the aircraft logbook.		

Effective Date: 23 May 2009

- 1. This MPD was not published for consultation because of the urgency of the requirement.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573315 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk





# **United Kingdom Civil Aviation Authority**

MPD No: 2009-004

Issue Date: 3 June 2009

## **EMERGENCY MANDATORY PERMIT DIRECTIVE**

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2009-004	VPM GYROPLANES
Subject:	Airframe Structure Inspection
Applicability:	VPM M14 and VPM M16 Tandem Trainer Gyroplanes.
Reason:	During a routine inspection of a VPM M16 Tandem Trainer Gyroplane cracks were discovered in the tubular steel airframe. Cracks, thus far encountered, have been found in and around the welds connecting the mast and the engine mount and the mast to seat assembly.
Compliance:	Before further flight, and each 50 flying hours after the effective date of this MPD, an approved LAA inspector must inspect the airframe. The purpose of this inspection is to detect any cracks in the tubular steel structure of the airframe. To facilitate this inspection both the seat/fuel tank must be removed and the airframe thoroughly cleaned. The airframe must be inspected carefully and systematically using a bright light, paying particular attention to welds and the area around the welds connecting the mast and the engine mount and the mast to seat assembly, see drawings and photograph overleaf.  The airframe of this aircraft is painted and therefore any cracking, flaking or staining of the paint must be thoroughly investigated, if there is any doubt about the integrity of the underlying structure then the paint must be removed. Should there be any evidence of cracking in the area of the engine mount the engine must be removed and the area thoroughly inspected. In cases of doubt a more thorough process of inspection may be required such as dye-penetrant.  If cracks are found then the aircraft must not be flown and a full report submitted to the Light Aircraft Association. The manufacturers have indicated that a factory repair may be available on an airframe-by-airframe basis; advice should be sought from the UK agent (details overleaf).  If no cracks are found then the gyroplane may be returned to service.

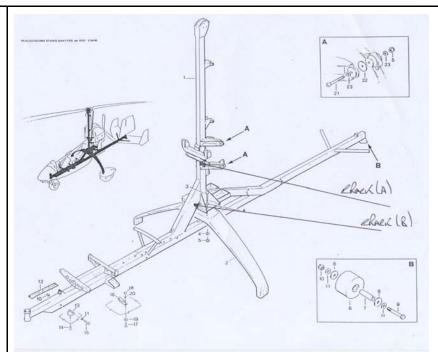


Figure 1. General Arrangement of VPM M16 Fuselage Structure showing areas where cracks have been seen.



Figure 2. An example of a crack emanating from a welded connection. (Photo. R. Savage) Further Information can be obtained from:

Jeff Hoyle The Healings West Bradford Road Waddington Clitheroe, Lancs BB7 3JE

Tel: 01200 422813

Email: magnigyro.uk@talktalk.net

The Light Aircraft Association Turweston Aerodrome, Nr. Brackley, Northants. NN13 5YD

Tel: 01280 846786

Email: engineering@laa.uk.com

### Ensure compliance with this MPD is recorded in the aircraft logbook.

### Effective Date: 5 June 2009

- 1. This MPD was not published for consultation because of the urgency of the requirement.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573315 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk



# **United Kingdom Civil Aviation Authority**

MPD No: 2009-005

Issue Date: 3 September 2009

### **EMERGENCY MANDATORY PERMIT DIRECTIVE**

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Flv.

MPD: 2009-005 P&M AVIATION		
Subject:	Pegasus Quantum and Quasar front strut top channel	
Applicability:	All Pegasus Quantum and Quasar aircraft.	
Reason:	An unsafe condition has been identified where the front strut assembly can be incorrectly assembled with the top channel installed upside down. This would cause an abnormal loading condition, which might result in structural damage and failure.	
Compliance:	<ol> <li>Before further flight, from the effective date of this MPD, inspect the front strut assembly in accordance with P&amp;M Aviation Service Bulletin number 126 issue 1 to determine whether the top channel has been incorrectly assembled or is distorted.  If the assembly is incorrectly installed or the inspection reveals any distortion or cracking of the top channel it must be replaced with a new part (No. ZCH-011) in accordance with SB 126.</li> <li>Apply placard ZPL-155 in accordance with SB126.</li> <li>Restore the aircraft to an airworthy condition using new parts as necessary.</li> <li>Record the results of the inspection and actions taken in the aircrafts' technical log book.</li> </ol>	
Ensure compliance with this MPD is recorded in the aircraft logbook.		
Effective Date:	4 September 2009	

- 1. This MPD was not published for consultation because of the urgency of the requirement.
- 2. Enquiries regarding this MPD should be referred to the Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573207 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk





# **United Kingdom Civil Aviation Authority**

MPD No: 2009-006

Issue Date: 2 October 2009

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Flv.

### **EMERGENCY MANDATORY PERMIT DIRECTIVE**

MPD: 2009-006 P&M AVIATION		
Subject:	Pegasus CKT exhaust	
Applicability:	All Pegasus Quik Series Aircraft - Quik, Quik GT450 and Quik R aircraft fitted with CKT stainless steel twin exhausts which have serial numbers 8230 to 8430.	
Reason:	An unsafe condition has been identified where fatigue failure of an silencer end cap could result in the baffle tube being ejected from the silencer. If this occurred during flight the tube could enter the propeller disc causing propeller failure, this could be hazardous.	
Compliance:	Before further flight, from the effective date of this MPD, carry out the inspection identified in ACTION/Inspection given in P&M Aviation Service Bulletin number 127 issue 2 or later approved revision.	
	If no cracks are found the aircraft may be returned to service but P&M modification 228 must be done before the aircraft's next permit renewal.	
	Certify the work carried out as specified in the Documentation section of P&M Aviation Service Bulletin number 127 issue 2 or later approved revision.	
	<ol> <li>If cracks are found, remove and internally inspect the silencers in accordance with ACTION/ Removal given in P&amp;M Aviation Service Bulletin number 127 issue 2 or later approved revision.</li> </ol>	
	4. If a replacement or repaired silencer is to be re-installed it must either:	
	(a) Have modification 228 already installed, or	
	(b) Be of a later modification standard identified by the silencer end caps, which are smooth with no baffle tube connection, exhaust serial number 10940809 onwards.	
	Certify the work carried out as specified in the Documentation section of P&M Aviation Service Bulletin number 127 issue 2 or later approved revision.	
	Note Issue 2 of the Service Bulletin supersedes the previously issued version.	
	Ensure compliance with this MPD is recorded in the aircraft logbook.	
Effective Date:	6 October 2009	
1 This MPD was	not published for consultation because of the urgency of the requirement.	

- 1. This MPD was not published for consultation because of the urgency of the requirement.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom. Tel: +44 (0)1293 573207 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk





## **United Kingdom Civil Aviation Authority**

MPD No: 2009-007 R1

Issue Date: 15 October 2009

## **EMERGENCY MANDATORY PERMIT DIRECTIVE**

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Flv.

MPD: 2009-007 R1 P&M AVIATION		
Subject:	P&M QuikR keel pocket webbing and flight limitations	
Applicability:	Webbing - All P&M QuikR aircraft up to serial number 8474 except for serial numbers 8370 and 8452. Flight Limitations – All P&M QuikR aircraft.	
Reason:	During practice for a competition the keel pocket rear webbing grommet pulled out. Although, on this occasion, the aircraft landed safely, under repeated loading especially when being flown at the certificated limits, the failure could become significant. This is considered to be an unsafe condition.	
	Revision 1 has been raised because of editorial changes and to correct an error with type designation on the original MPD.	
Compliance:	Before further flight, from the effective date of this MPD, inspect the keel pocket rear webbing in accordance with P&M Aviation Service Bulletin number 128 issue 1 (or later approved revision).	
	If the grommet has pulled out P&M Aviation modification M229 must be carried out before further flight.	
	3. If the grommet is secure, the aircraft may be returned to service but P&M Aviation modification M229 must be carried out within 2 years or 300 flight hours from the effective date of this MPD.	
	4. Before further flight, from the effective date of this MPD, ensure that the ASI has the coloured arcs specified in Action 3 of P&M Aviation Service Bulletin number 128 issue 1 (or later approved revision).	
	5. Restore the aircraft to an airworthy condition.	
En	sure compliance with this MPD is recorded in the aircraft logbook.	
Effective Date:	16 October 2009 Revision 1 has the same Effective Date as the original MPD.	

- 1. This MPD was not published for consultation because of the urgency of the requirement.
- Enquiries regarding this MPD should be referred to the Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom. Tel: +44 (0)1293 573207 Fax: +44 (0)1293 573976 Email: <a href="mailto:department.certification@caa.co.uk">department.certification@caa.co.uk</a>





## **United Kingdom Civil Aviation Authority**

MPD No: 2009-008

Issue Date: 26 November 2009

## **EMERGENCY MANDATORY PERMIT DIRECTIVE**

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Flv.

MPD: 2009-008	PORTABLE FIRE EXTINGUISHERS
Subject:	Portable Halon 1211 Fire Extinguishers manufactured by Fire Fighting Enterprises Ltd
Applicability:	Any aircraft fitted with portable Halon 1211 fire extinguisher(s) listed in Appendix 1 of this MPD.
Reason:	It has been discovered that significant quantities of Halon 1211 gas, determined to be outside the required specification, have been supplied to the aviation industry for use in fire extinguishing equipment. Halon 1211 (BCF) is used in handheld fire extinguishers, usually fitted or stowed in aircraft cabins.
	The CAA published AIRCOM 2009/13 on 12 October 2009 to make the aviation community aware of this safety concern.
	The results of the ongoing investigation now show that LyonTech Engineering Ltd, a UK-based company, has supplied a quantity of heavily contaminated Halon 1211 (BCF) to Fire Fighting Enterprises (FFE). This Halon 1211 has subsequently been used to fill certain FFE portable fire extinguishers that are now likely to be installed in or carried on board aircraft.
	The contaminated nature of this gas, when used against a fire, may lead to release of toxic fumes, possibly causing injury to aircraft occupants.
	For the reason described above, this MPD requires the identification and removal from service of all affected fire extinguishers and replacement with serviceable units.
	Required as indicated, unless accomplished previously:
Compliance:	(1) Within two (2) days after the effective date of this MPD, identify the FG number and s/n of the portable fire extinguisher(s) installed or carried on board the aircraft.
	(2) If any portable fire extinguisher identified as required by paragraph (1) of this MPD is listed in Appendix 1 of this MPD, before next flight, remove it from the aircraft and replace it with a serviceable unit.
	(3) From the effective date of this MPD, do not install any portable fire extinguisher as identified in Appendix 1 of this MPD on any aircraft, unless it has been serviced with Halon 1211 that has been verified to conform to the correct specification.
Er	sure compliance with this MPD is recorded in the aircraft logbook.
Effective Date:	26 November 2009

- 1. This MPD was not published for consultation due to the urgency of the requirement.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, SafetyRegulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom. Tel: +44 (0)1293 573126 Fax: +44 (0)1293 573975 Email: department.certification@caa.co.uk
- 3. For any questions concerning the technical content of this MPD, please contact:

MPD: 2009-008 Page 2

### **APPENDIX 1**

FG Number	serial number(s)
BA20703GR-3	044293, 044339 and 044340.
BA20703GSR-3	044650, 044651, and 044682 through 044685 inclusive.
BA20703R-3	044398 through 044417 inclusive, 044692, 045066, 045206, 045207 and 045208.
BA21741GR-2	044336, 044337, 044338, 044562, 044563, 044564, 044585, and 044728 through 044733 inclusive.
BA21741GSR-2	044241, 044242, 044294, 044295, 044882, 044950, 045188, 045189, and 046753 through 046756 inclusive,.
BA21741SR-2	044325 through 044329 inclusive, 044490 through 044499 inclusive, 044542 through 044546 inclusive, and 044744 through 044763 inclusive,
BA21783GSR-3	044586 and 044587.
BA22594GR-3	044369, 044370, 044371, and 044466 through 044471 inclusive
BA23044SR-1	044429 through 044432 inclusive, 044889 through 044895 inclusive, 045099, 045100 and 045101.
BA23792-1	04645 through 04744 inclusive.
BA23792R-1	044877 through 044881 inclusive.
BA24180R-1	044227 through 044232 inclusive, 046010 and 046011
BA51012GS-3	045137 and 045138.
BA51012R-3	044485 through 044489 inclusive.
BA51012SR-1	045190.
BA51015-3	044243 through 044282 inclusive, 044355 through 044368 inclusive, 044433 through 044452 inclusive, 044512 through 044531 inclusive, 044693 through 044723 inclusive, and 044774 through 044781 inclusive,
BA51015G-3	044724, 044725, 044824 through 044830 inclusive, and 044869 through 044876 inclusive.
BA51015GR-3	044532 through 044541 inclusive, 044734 through 044737 inclusive, 044913 through 044924 inclusive, and 045058 through 045063 inclusive.
BA51015GS-3	044883 through 044888 inclusive, and 044945 through 044949 inclusive.
BA51015GSR-3	044738 through 044743 inclusive, 044911 and 044912.
BA51015R-3	044568 through 044584 inclusive.
BA51015S-3	044459 through 044465 inclusive.
BA51015SR-3	044565, 044566 and 044567.



## **United Kingdom Civil Aviation Authority**

MPD No: 2009-009

Issue Date: 18 December 2009

## **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2009-009	PORTABLE FIRE EXTINGUISHERS		
Subject:	Portable Halon 1211 Fire Extinguishers Manufactured By Fire Fighting Enterprises		
Applicability:	Any aircraft fitted with portable Halon 1211 fire extinguisher(s) listed in Appendix 1 of FFE ASB 26-115.		
Reason:	It has been discovered that significant quantities of Halon 1211 gas, determined to be outside the required specification, have been supplied to the aviation industry for use in fire extinguishing equipment. Halon 1211 (BCF) is used in lavatory waste bin fire extinguishers and portable fire extinguishers, usually fitted or stowed in aircraft cabins and toilet compartments.		
	The CAA published AIRCOM 2009/13 on 12 October 2009 to make the aviation community aware of this safety concern.		
	On the 26 November 2009, CAA Emergency MPD 2009-008 was published to address an earlier batch of extinguishers with contaminated Halon 1211.		
	The results of the ongoing investigation have now established that Lyontech Engineering L a UK-based company, has supplied further consignments of Halon 1211 (BCF) to F Fighting Enterprises (FFE) that do not meet the required specification. This Halon 1211 h subsequently been used to fill certain FFE portable cabin and toilet compartment f extinguishers that are now likely to be installed in or carried on board aircraft.		
	The contaminated nature of this gas, when used against a fire, may provide reduced fire suppression, endangering the safety of the aircraft and its occupants. In addition, extinguisher activation may lead to release of toxic fumes, possibly causing injury to aircraft occupants.		
	For the reason described above, this MPD requires the identification and removal from service of certain batches of fire extinguishers and replacement with serviceable units.		
Compliance:	Required as indicated, unless accomplished previously:		
	1) Within the next 30 days after the effective date of this MPD, accomplish the following:		
	(1.1) Identify the P/N and s/n of the fire extinguisher(s) installed or carried on board the aircraft, as listed in Appendix 1 of FFE ASB 26-115, and		
	(1.2) If any fire extinguisher identified as required by paragraph (1.1) of this MPD is listed in Appendix 1 of FFE ASB 26-115, remove it from the aircraft and replace it with a serviceable unit in accordance with the instructions of FFE ASB 26-115.		
	2) From the effective date of this MPD, do not install any fire extinguisher as identified in Appendix 1 of the FFE ASB 26-115 on any aircraft.		

MPD: 2009-009 Page 2

<b>Ensure compliance</b>	with this N	/IPD is recorded	l in the aircr	att logbook.

**Effective Date:** 

29 December 2009

1. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573126 Fax: +44 (0)1293 573975 Email: department.certification@caa.co.uk

2. For any questions concerning the technical content of this MPD, please contact: Fire Fighting Enterprises Ltd, 9 Hunting Gate, Hitchin, Hertfordshire, SG4 0TJ, United Kingdom. Tel +44 (0) 845 402 4242 Email: <a href="mailto:sales@ffeuk.com">sales@ffeuk.com</a>, Website: <a href="www.ffeuk.com">www.ffeuk.com</a>

3. FFE ASB 26-115 can be accessed via the FFE website at www.firecmm.com



Issue Date: 23 December 2009

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 11(6)(a) of the Air Navigation Order 2005 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Flv.

MPD: 2009-011 PORTABLE FIRE EXTINGUISHERS			
Subject:	Portable Halon 1211 Fire Extinguishers Manufactured by SICLI (formerly General Incendie MAIP)		
Applicability:	Type H1-10 AIR Portable Fire Extinguishers, Part Number (P/N) 1708337B4, serial numbers as listed in Appendix 1 of this MPD as per EASA AD 2009-0278.		
Reason:	It has been discovered that significant quantities of Halon 1211 gas, determined to be outside the required specification, have been supplied to the aviation industry for use in fire extinguishing equipment. Halon 1211 (BCF) is used in portable fire extinguishers, usually fitted or stowed onboard the aircraft.		
	The CAA published AIRCOM 2009/13 on 12 October 2009 to make the aviation community aware of this safety concern.		
	On the 26 November 2009 CAA Emergency MPD 2009-008 and 18 December 2009 MPD 2009-009 were published to address an earlier batch of extinguishers with contaminated Halon 1211.		
	The results of the ongoing investigation have now established that LyonTech Engineering Ltd, a UK-based company, has supplied further consignments of Halon 1211 (BCF) to SICLI that do not meet the required specification. This Halon 1211 has subsequently been used to fill P/N 1708337B4 portable fire extinguishers that are now likely to be installed in or carried on board aircraft.		
	The contaminated nature of this gas, when used against a fire, may provide reduced fire suppression, endangering the safety of the aircraft and its occupants. In addition, extinguisher activation may lead to the release of toxic fumes, possibly causing injury to aircraft occupants. For the reasons described above, this MPD requires the identification and removal from service of certain batches of fire extinguishers and replacement with serviceable units.		
Compliance:	Required as indicated, unless accomplished previously:  (1) Within the next 30 days after the effective date of this MPD, accomplish the following:		
	(1.1) Identify the s/n of the SICLI P/N 1708337B4 fire extinguisher(s) installed or carried on board the aircraft, and		
	(1.2) If any fire extinguisher identified as required by paragraph (1.1) of this MPD is listed in Appendix 1 of this MPD, remove it from the aircraft and replace it with a serviceable unit.		
	(2) Within 30 days after removing a fire extinguisher from an aircraft as required by paragraph (1.2) of this MPD, return the fire extinguisher to SICLI for disposal, address details in the Remarks section of this MPD.		

MPD 2009-011 Page 2

	(3) From the effective date of this MPD, do not install any fire extinguisher as identified in Appendix 1 of this MPD on any aircraft.	
Ensure compliance with this MPD is recorded in the aircraft logbook.		
Effective Date:	05 January 2010	
1 Enquiries regarding this MPD should be referred to Aircraft Certification Department. Civil Aviation Authority		

 Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573126 Fax: +44 (0)1293 573975 Email: department.certification@caa.co.uk

2. For any questions concerning the technical content of this MPD, please contact:

SICLI, ZI la Saun. Saunière, 89600 Saint Florentin

Telephone: +33 (0)3 8643 7930, Fax: +33 (0)3 8635 3632. E-mail jerome.villette@sicli.com,

Website: http://www.sicli.com/

Appendix I
Serial Numbers of Affected SICLI Portable Fire Extinguishers, P/N 1708337B4

0843113 and 0843114	0843971	0844424 through 0844428 incl.
0843329, 0843330 and 0843331	0843973 through 0843977 incl.	0844430 through 0844436 incl.
0843333 through 0843339 incl.	0843979 through 0843982 incl.	0844439 through 0844450 incl.
0843341 through 0843350 incl.	0843984, 0843985 and 0843986	0844452 through 0844454 incl.
0843352 through 0843358 incl.	0843988 through 0844016 incl.	0844456 through 0844470 incl.
0843360 through 0843369 incl.	0844018 through 0844043 incl.	0844472 through 0844475 incl.
0843372	0844045 and 0844046	0844477 through 0844494 incl.
0843374 through 0843386 incl.	0844048 and 0844049	0844496 through 0844512 incl.
0843388	0844051 through 0844069 incl.	0844514 through 0844518 incl.
0843390 through 0843407 incl.	0844071 through 0844077 incl.	0844520 through 0844524 incl.
0843409 through 0843464 incl.	0844079 through 0844109 incl.	0844526
0843466 through 0843468 incl.	0844111 and 0844112	0844528
0843470 and 0843471	0844115 trough 0844119 incl.	0844530
0843473	0844121 through 0844125 incl.	0844534
0843475	0844127 through 0844161 incl.	0844536 through 0844568 incl.
0843477	0844163 through 0844190 incl.	0844570 through 0844592 incl.
0843479 through 0843487 incl.	0844192 and 0844193	0844594 through 0844619 incl.
0843489 through 0843522 incl.	0844195	0844621 through 0844626 incl.
0843524 through 0843552 incl.	0844197	0844628 through 0844635 incl.
0843554 through 0843561 incl.	0844199 through 0844218 incl.	0844637 through 0844660 incl.
0843563	0844220 through 0844225 incl.	0844663 through 0844666 incl.
0843565 through 0843574 incl.	0844228 through 0844240 incl.	0844668
0843579 through 0843587 incl.	0844242 through 0844249 incl.	0844670 through 0844673 incl.
0843589 through 0843629 incl.	0844253 through 0844257 incl.	0844676 through 0844685 incl.
0843631 through 0843676 incl.	0844259 through 0844263 incl.	0844687 through 0844692 incl.
0843679 through 0843700 incl.	0844265 through 0844267 incl.	0844694 through 0844702 incl.
0843702 through 0843737 incl.	0844269 through 0844280 incl.	0844704 through 0844708 incl.
0843739 through 0843780 incl.	0844282 through 0844286 incl.	0844710 through 0844723 incl.
0843782 through 0843845 incl.	0844288 and 0844289	0844725 through 0844730 incl.
0843847 and 0843848	0844291 through 0844303 incl.	0844732 through 0844741 incl.
0843850 through 0843856 incl.	0844305 through 0844317 incl.	0844743 through 0844747 incl.
0843858 through 0843861 incl.	0844319 through 0844332 incl.	0844749 through 0844771 incl.
0843863 through 0843878 incl.	0844334 through 0844337 incl.	0844773 through 0844778 incl.
0843879 through 0843902 incl.	0844339 through 0844376 incl.	0844781 through 0844792 incl.
0843904 through 0843934 incl.	0844379 through 0844398 incl.	0844794 through 0844801 incl.
0843936 through 0843951 incl.	0844400 and 0844401	0844803 through 0844837 incl.
0843953 through 0843957 incl.	0844403 through 0844415 incl.	
0843959 through 0843969 incl.	0844417 through 0844422 incl.	



Issue Date: 9 February 2010

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 22(1) of the Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

#### MPD: 2010-001 TRELLEBORG HYDRO K HOSES

Subject:	Inspection / Replacement of cracked hoses.
Applicability:	All UK registered aircraft operating on a CAA Permit to Fly fitted with Trelleborg Hydro K hoses.

#### Reason:

Trelleborg Hydro K hose is used on a number of microlight, gyroplane and amateur built aircraft operating on a UK Permit to Fly. This hose type is used for both fuel and oil delivery on Rotax engine installations. This hose type may have also been used by aircraft manufacturers for other engine installations and or aircraft systems.

The CAA has been made aware of a number of occurrences of cracking of this hose type, which has occurred within 6 months from new. In some instances, the hose has cracked through to the inner core resulting in significant fluid leakage, which could result in fuel or oil exhaustion, or an aircraft fire.



MPD: 2010-001 Page 2 of 2

#### Compliance:

a) Within 28 days of the effective date of this MPD, visually inspect all Trelleborg Hydro K flexible hoses for signs of cracking. If any cracks are found, before further flight, replace the affected hose(s) with new parts or an alternative approved hose.

b) If no cracks are found under a) inspect the hoses for cracks at intervals of 30 flight hours or every month, whichever is the shorter. If cracks are found during any of these inspections, the hoses are to be replaced with new parts or an alternative approved hose.

#### Note:

1. For Rotorsport UK Ltd. MT03 and MTO Sport gyroplanes, Service Bulletin number 012, Modification MC112 introduces an alternative hose type. Further details of this modification can be obtained from:

Rotorsport UK Ltd.
Poplar Farm
Prolley Moor
Wentnor
Bishops Castle
SY9 5EJ

Telephone and fax number: 01588 650769

Email: rotorsport\_uk@yahoo.co.uk

2. For other aircraft types, please contact the type approval holder, the BMAA or LAA as appropriate for details of approved modifications.

### Ensure compliance with this MPD is recorded in the aircraft logbook.

### **Effective Date:**

14 February 2010

- 1. This MPD was published on 11 December 2009 as PMPD 09-07 for consultation until 10 January 2010.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573126 Fax: +44 (0)1293 573975 Email: department.certification@caa.co.uk



Issue Date: 27 April 2010

## **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 22(1) of the Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2010-002 PORTABLE FIRE EXTINGUISHERS		
Subject:	Fire Protection – Halon 1211 Fire Extinguishers – Identification / Replacement	
Applicability:	Halon 1211 (BCF) fire extinguishers identified by serial number (s/n) and Part Number (P/N) in Fire Fighting Enterprises Ltd (FFE) Alert Service Bulletin (ASB) 26-116M Issue A, dated March 2010. The use of later approved revisions of this document is acceptable for compliance with the requirements of this MPD.	
Reason:	Significant quantities of Halon 1211 gas, determined to be outside the required specification, have been supplied to the aviation industry for use in fire extinguishing equipment. Halon 1211 (BCF) is used in lavatory waste bin fire extinguishers and portable fire extinguishers, usually fitted or stowed in aircraft cabins and toilet compartments.	
	The results of the investigation established that LyonTech Engineering Ltd, a UK based company, had supplied consignments of Halon 1211 (BCF) to Fire Fighting Enterprises (FFE) that do not meet the required specification. This Halon 1211 has subsequently been used to fill certain FFE portable cabin and toilet compartment fire extinguishers that are now likely to be installed in or carried on board aircraft.	
	The contaminated nature of this gas, when used against a fire, may provide reduced fire suppression, endangering the safety of the aircraft and its occupants. In addition, extinguisher activation may lead to release of toxic fumes, possibly causing injury to aircraft occupants.	
	The CAA has decided that certain batches of fire extinguishers, identified by FFE to contain contaminated Halon, should be removed from service.	
	For the reason described above, this MPD requires the identification and removal from service of certain fire extinguishers, identified by s/n and P/N in FFE ASB 26-116 and replacement with serviceable units.	

MPD: 2010-002 Page 2 of 2

### Compliance:

Required as indicated, unless accomplished previously:

(1) Within the next 4 months after the effective date of this MPD, accomplish the following:

- (1.1) Identify the s/n of the fire extinguisher(s) installed or carried on board the aircraft, as listed in Appendix 1 of FFE ASB 26-116, and
- (1.2) If any fire extinguisher identified as required by paragraph (1.1) of this MPD is listed in Appendix 1 of FFE ASB 26-116, remove it from the aircraft and replace it with a serviceable unit in accordance with the instructions of FFE ASB 26-116.

**Note:** The serial numbers in the ASB are separated into two lists: one with five (5) significant digits, sometimes having a zero (0) in front, sometimes not; the other list affects P/N BA23792-1 extinguishers only, having serial numbers with only four (4) significant digits.

(2) From the effective date of this MPD, do not install any fire extinguisher as identified in Appendix 1 of FFE ASB26-116 on any aircraft, unless it has been determined to contain Halon of an acceptable purity.

### Ensure compliance with this MPD is recorded in the aircraft logbook.

#### **Effective Date:**

3 May 2010

- 1. This MPD was not published for consultation.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.
  - Tel: +44 (0)1293 573126 Fax: +44 (0)1293 573975 Email: department.certification@caa.co.uk
- 3. For any question concerning the technical content of the requirements in this MPD, please contact: Fire Fighting Enterprises Ltd, 9 Hunting Gate, Hitchin, Hertfordshire SG4 0TJ, United Kingdom.
  - Tel: +44 (0)845 402 4242 E-mail: info@ffeuk.com Website: www.ffeuk.com
- 4. The FFE ASB 26-116 can also be accessed via the FFE website at www.firecmm.com



Issue Date: 29 April 2010

## **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 22(1) of the Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

### MPD: 2010-003 AEROTECHNIK / COSMIK AVIATION

Subject:	Temporary Reduction in Maximum Manoeuvring Airspeed, $V_A$ and Never Exceed Airspeed, $V_{NE}$ together with Mandatory Inspection of Wing Lower Spar Caps.
Applicability:	Aerotechnik EV-97 Eurostar Aerotechnik EV-97A Eurostar Aerotechnik EV-97 Eurostar SL EV-97 teamEurostar UK  All aeroplanes except those with documentation for the wings showing Wing Lower
	Spar Cap material passed the inspection detailed in Evektor-Aerotechnik document M-EV97-02/2009 "Methodology of Check of Wing Spar Caps – Conductivity".
Reason:	As a result of the investigation into the crash of a Danish registered Eurostar in Switzerland it was ascertained that some of the material used in the wing lower spar caps did not meet the alloy's strength specification.
	An inspection procedure to enable the strength of the wing lower spar caps to be measured has now been developed so that it can be determined whether they are acceptable and meet the design requirements.
	While the inspection procedure was being finalised MPD 2009-010 required that the $V_A$ and $V_{NE}$ airspeed limits on all aircraft were reduced to ensure that there was an adequate strength margin even if an aircraft had lower strength wing lower spar caps.
	This MPD supersedes MPD 2009-010 and retains the Temporary Reduction of certain airspeed limitations from that MPD. The inspection procedure is mandated by this MPD and forms a closing action for the MPD.

MPD 2010-003 Page 2 of 2

#### Compliance:

1. Before further flight after the effective date of this MPD, temporarily amend  $V_A$  and  $V_{NE}$  by approved modification action as follows:

- a) Replace existing placarded value of  $V_A$  by new value of 88 mph (76 knots).
- b) Replace existing placarded value of  $V_{NE}$  by a new value of 106 mph (92 knots).
- c) Re-mark airspeed indicator to show a red radial line at the new  $V_{\text{NE}}$  of 106 mph (92 knots).
- d) Amend Pilot's Handbook to show the new values of  $V_A$  and  $V_{NE}$ .
- 2. It is understood that Cosmik Aviation can supply a kit, which will meet these requirements.
- 3. Compliance with the requirements of MPD 2009-010 is acceptable to show compliance with paragraphs 1 and 2 above.
- 4. Before 31 March 2011, inspect both aeroplane wings in accordance with Cosmik Aviation SB/EUR/005 or SB-EV97-UK-011 as applicable.
- 5. If the inspection shows that both the wings meet the strength criteria the aircraft may be re-assembled.
- 6. If the inspection shows that one or both of the wings do not meet the strength criteria, the understrength wing or wings must be repaired or replaced with components that do meet the strength criteria before re-assembly to the aeroplane.

**Note:** Provided the conductivity of any spar cap that failed the strength criteria does not exceed 43%, it is permissible to re-assemble the aeroplane and conduct a one-off ferry flight to a location where the understrength wing or wings must be removed and then repaired or replaced.

- 7. Following aeroplane re-assembly the temporary actions in paragraph 1 above may be reversed and the aeroplane placarding, airspeed indicator marking and Pilot's Handbook returned to standard.
- 8. Further flight after 31 March 2011 is prohibited unless an inspection in accordance with paragraph 4 of this MPD has been carried out.

#### Ensure compliance with this MPD is recorded in the aircraft logbook.

### **Effective Date:**

5 May 2010

- 1. This MPD was published on 26 March 2010 as PMPD 10-01 for consultation until 26 April 2010.
- Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573309 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk



Issue Date: 6 May 2010

## **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 22(1) of the Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2010-004 ROLLS-ROYCE		
Subject:	Rocker Arm Inspection	
Applicability:	Rolls-Royce Merlin Series Engines incorporating Modification 9/223/M2623. These engines are fitted on but not limited to Supermarine Spitfire, Hawker Hurricane and North American P51 Mustang series aircraft.	
Reason:	The CAA has received reports of the separation of a small number of carbide pads fitted under the authority of the above modification. Once released, the pads drop onto the block and may migrate, potentially causing engine damage and possible engine failure.	
	The reason for the loss of bond is still under investigation. This Directive is therefore raised as an interim measure to instruct a regular inspection of the rocker arms for detachment or indication of loss of bonding between the pad and rocker arm, and removal of failing pads from service.	
	Within five flying hours, one month or at the next Permit renewal, whichever is the sooner from the effective date of this MPD:	
	a) Inspect each modified rocker arm fitted for detachment of the carbide pad. Remove from service any rocker arm, which exhibits a released pad along with the associated pad. Replace with a serviceable arm. If any pad cannot be located on the cylinder block carry out further in-depth inspection to locate the pad, if necessary by removing the engine. Rectify any damage caused by the released pad prior to engine release back to service.	
	b) For the remaining modified rocker arms, inspect the region of the brazed joint between the carbide pad and the rocker arm as shown in figure 1 using a x10 glass or if preferred a stylus of maximum radius 0.005". Inspect for evidence of movement of the pad on the arm, which is revealed by a line indication or step on the arm.	
	In cases where movement is observed, carry out a comparison with a feeler gauge to measure the size of step. Any arm, which exhibits a step estimated at 0.005" or less may continue in service in accordance with paragraph (d). Any arm, which exhibits a step in excess of 0.005" but less than 0.015" is to be re-inspected at intervals in accordance with paragraph (c). Any arm, which	

exhibits a step of 0.015" or more, is to be removed from service.

MPD: 2010-004 Page 2 of 2

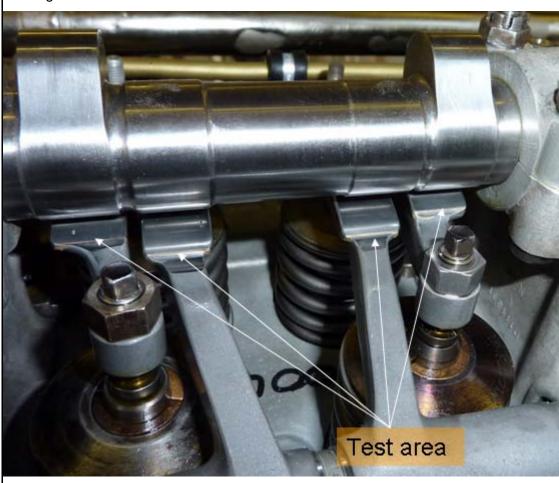
## Compliance Cont:

c) Re-inspect those rocker arms, which exhibit a step in excess of 0.005" but less than 0.015" at intervals not to exceed 15 flight hours or annually, whichever limit is reached first. At each re-inspection, reject any arm, which exhibits a step of 0.015" or more.

d) Re-inspect rocker arms declared fully serviceable at 25-flight hour intervals or annually, whichever limit is reached first, in accordance with the previously defined maintenance regime for these arms.

Any instances of arms rejected from service and details of operating time should be reported to the CAA Aircraft Certification Department.

Figure 1.



Ensure compliance with this MPD is recorded in the aircraft logbook.

**Effective Date:** 

12 May 2010

- 1. This MPD was published on 8 April 2010 as PMPD 10-02 for consultation until 30 April 2010.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573074 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk



MPD No: 2010-005 R1

Issue Date: 19 July 2010

## **EMERGENCY MANDATORY PERMIT DIRECTIVE**

In accordance with Article 22(1) of the Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2010-005 R1 ROTORSPORT UK		
Subject:	Honeywell low fuel warning sensor, part number RSD4335	
Applicability:	Rotorsport UK Ltd. MTOSport gyroplanes serial numbers RSUK/MTOS/024 – RSUK/MTOS/036 inclusive	
Reason:	CAA has been advised of 2 failures of the Honeywell low fuel warning sensor, part number RSD4335, which is fitted to Rotorsport MT03 and MTOSport gyroplanes. The failures have occurred on MTOSport gyroplanes with sensors obtained from one batch. The failure of the sensor has resulted in an unsafe condition with the sensor falling out of the fuel tank resulting in a loss of fuel from the tank.	
Compliance:	Before further flight, replace Honeywell low fuel warning sensor, part number RSD4335, with an Optomax LLT500D3 fuel sensor in accordance with the instructions of Rotorsport UK Ltd. Service Bulletin 028.  Notes:  a) This MPD must be carried out by a CAA BCAR A3-7 Authorised Engineer for the type. b) A copy of Service Bulletin 028 and Optomax LLT500D3 fuel sensor may be obtained from:  Rotorsport UK Ltd. Poplar Farm Prolley Moor Wentnor Bishops Castle SY9 5EJ Telephone and fax number: 01588 650769 Email: rotorsport_uk@yahoo.co.uk	

### Ensure compliance with this MPD is recorded in the aircraft logbook.

Effective Date: 19 July 2010

- 1. This MPD was not published for consultation because of the urgency of the requirement.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom. Tel: +44 (0)1293 573945 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk



MPD No: 2010-006 R1

Issue Date: 28 October 2010

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 22(1) of the Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

Subject:	Exfoliation Corrosion Splits Aluminium Flying Strut Ends.
Applicability:	Thruster T600, T300 and TST series microlight aircraft with aluminium alloy flying strutends.
Reason:	Corrosion splitting in this primary structure may weaken the part sufficiently that it may result in the loss of a wing and consequent loss of the aircraft.
	This MPD has been revised in the light of the type design organisation's investigations, to apply corrosion protection and increase period between inspections.
Compliance:	Before further flight (as required by the original MPD), carry out the inspection called up in Thruster Air Services Service Bulletin TAS/SB 13 Issue 2 (or later approved revision). If any crack is found replace the parts with sound fittings.
	If compliance has been achieved within the last 10 flying hours in accordance with issue 1 of this MPD/SB, the results remain valid for the remainder of that 10 hours. Inspection may be carried out by the pilot/owner.
	Carry out further inspections every 100 hours /6 months whichever is sooner.
	Replacement of the strut ends with steel end fittings terminates the need for repeat inspection.

## Ensure compliance with this MPD is recorded in the aircraft logbook.

Effective Date: 4 November 2010

- 1. This MPD was not published for consultation.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573726 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk





Issue Date: 6 September 2010

## MANDATORY PERMIT DIRECTIVE

In accordance with Article 22(1) of the Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2010-007 SAVANNAH			
Subject:	UK Savannah anti-balance tab operating mechanism (bungee pitch trim)		
Applicability:	UK Savannah aircraft fitted with bungee pitch trim (Mandatory Modification 12).		
Reason:	A UK Savannah aircraft fitted with the bungee pitch trimmer (Mandatory Modification 12) suffered a double, in-flight, anti-balance tab failure leaving both anti-balance tabs free to flap in the slipstream. The aircraft remained controllable and a safe landing was made. The root cause of the problem is believed to be the anti-balance tab operating mechanism. The design of the mechanism is such that at full up elevator the anti-balance tab gearing becomes infinite and therefore prone to being strained.		
	BMAA Service Bulletin 2283 issue 1 is introduced to manage the problem until a BMAA approved modification to eliminate the problem is installed. BMAA Service Bulletin 2283 issue 1 introduces a pre-flight inspection schedule; a preliminary modification to replace the plastic rod-ends in the anti-balance tab operating mechanism with metal rod-ends, and a deadline of 31 December 2011 to eliminate the problem by installing a BMAA approved modification.		
Compliance:	Before each flight carefully inspect the anti-balance tab operating mechanism (in accordance with BMAA Service Bulletin 2283 issue 1). This inspection regime must be commenced within one month of the effective date of this MPD.  Within 3 months of the effective date of this MPD replace the place and a in the action.		
	<ol> <li>Within 3 months of the effective date of this MPD replace the plastic rod-ends in the anti- balance tab operating mechanism with metal rod-ends (in accordance with BMAA Service Bulletin 2283 issue 1).</li> </ol>		
	3. Before 31 December 2011 install a BMAA approved modification to eliminate the problem (in accordance with BMAA Service Bulletin 2283 issue 1).		
En	Ensure compliance with this MPD is recorded in the aircraft logbook.		
Effective Date:	13 September 2010		

- 1. This MPD was published on 13 August 2010 as PMPD 10-07 for consultation until 3 September 2010.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573726 Fax: +44 (0)1293 573996 Email: department.certification@caa.co.uk



Issue Date: 22 December 2010

## **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 22(1) of the Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2010-009 SAVANNAH				
Subject:	Savannah Wing Lift Strut Attachment Plates			
Applicability:	All MXP-740 Savannah Classic and Savannah VG aircraft.			
Reason:	A BMAA Service Bulletin was originally issued in response to a fatal air crash of an ICP Savannah that occurred in Norway on 29 June 2005. The crash was caused by the detachment of one wing from the fuselage. An investigation by the Norwegian authorities found that it is likely that there were cracks in the lift strut attachment plates (of which the owner was aware) prior to the flight.  Subsequent to Issue 2 of the SB, two UK examples have been discovered with fretting or severe inter-granular corrosion of the attachment plates.  BMAA Service Bulletin 1918 Issue 3 now mandates those inspections noted at Issue 2 of the Service Bulletin. The Service Bulletin must be implemented within one month of the effective date.			
Compliance:	Within one month from the effective date of this MPD, carry out a close visual examination of the wing lift strut attachment plates and bolts that connect the wing main spar to the front strut for evidence of possible cracks, fissures, fretting, deformations, corrosion or oxidation, in accordance with BMAA Service Bulletin 1918 Issue 3.  Carry out further inspections every 50 flying hours / 6 months whichever is sooner.  If defective parts are found, including corrosion other than mild surface oxidation, do not fly the aircraft and contact the BMAA immediately for further advice.			
Ensure compliance with this MPD is recorded in the aircraft logbook.				

Effective Date: 29 December 2010

- 1. This MPD was not published for consultation.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573726 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk





## **United Kingdom Civil Aviation Authority**

MPD No: 2010-010

Issue Date: 23 December 2010

## **EMERGENCY MANDATORY PERMIT DIRECTIVE**

In accordance with Article 22(1) of the Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Flv.

MPD: 2010-010 JABIRU		
Subject:	Primary Flight Control Surfaces	
Applicability:	All Jabiru UL-C, UL-D, J160-C, LSA 55/2K, LSA 55/2J, Jabiru ST, LSA 55/3J, and Jabiru ST3 aircraft, all serial numbers.	
Reason:	In 2008, Avtech released JSB 019-1 to address several cases where the control surfaces of Jabiru Aircraft have rubbed against fixed parts of the airframe during flight. In some cases this caused control jamming. Since this bulletin was first released, these incidents have continued to occur, though at a lower rate. In some cases these incidents have caused loss of control of the aircraft, resulting in significant damage. On 24 November 2010, JSB 019-2 was issued to include new clearer requirements intended to prevent further occurrence of this type of problem.  CASA Australia, as the Airworthiness Authority of the State of Design, have mandated this before further flight, in their AD 24/2010, for factory built machines, and this mandate is promulgated by this MPD.	
	Amateur built aircraft are also affected, although to date this has been satisfied under LAA supervision by application of LAA MOD/274/015. The LAA are satisfied that this covers the amateur built machines under their supervision sufficiently that compliance with JSB 019-2 is not necessary before further flight, and this is accepted by the CAA.	
Compliance:	Factory built machines:  Before further flight from the effective date of this MPD, comply with CASA Australia AD/JABIRU/1 "Primary Flight Control Surfaces" 24/2010 which mandates Avtech Jabiru JSB 019-2 dated 24 November 2010.  Anyone who has carried out the inspection since the service bulletin was released (and recorded such in the aircraft log book) already complies and does not need to repeat the inspection before further flight.	

MPD 2010-010 Page 1 of 2

#### Amateur built machines:

Comply with LAA MOD/274/015, which promulgates the actions of JSB 019.

## Compliance Continued:

Anyone who has carried out the inspection since the service bulletin was released (and recorded such in the aircraft log book) already complies and does not need to repeat the inspection before further flight.

#### All machines:

Carry out further inspections in accordance with Avtech Jabiru JSB 019-2 every 50 flying hours / annually whichever is sooner.

### Ensure compliance with this MPD is recorded in the aircraft logbook.

Effective Date: 24 December 2010

- 1. This MPD was not published for consultation because of the urgency of the requirement.
- 2. Enquiries regarding this MPD should be referred to Aircraft Certification Department, Civil Aviation, Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.

Tel: +44 (0)1293 573726 Fax: +44 (0)1293 573976 Email: department.certification@caa.co.uk

MPD 2010-010 Page 2 of 2



## **Civil Aviation Authority**

## EMERGENCY MANDATORY PERMIT DIRECTIVE Civil Aviation



Number: 2011-001-E Issue date: 4 March 2011

In accordance with 22(1) of Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

Type Approval Holder's Name:		Type/Model Designation(s):	
Magni Gyro UK Ltd		Magni M24C	
Title:	Flight Controls – Rudder Pedal Mounting Block - Replacement		
Manufacturer:	Magni Gyro UK Ltd.		
Applicability:	Magni M24C gyroplanes, serial numbers:		
	24-10-5964 24-10-6044 24-10-6134 24-10-6004 24-10-6094 24-11-6204 24-11-6194 24-10-6034 24-11-6214		
Reason:	The CAA has been advised of an in-flight failure of the pilot's rudder pedal mounting block fitted to a M24C gyroplane. Investigation by Magni Gyro UK Ltd. has found that the failure was due to an incorrectly machined fillet radius on the mounting block. Magni has redesigned the rudder pedal mounting block to strengthen the attachment and to minimise the effect of any production or maintenance errors.  Failure of the rudder pedal mounting block may result in loss of control of the gyroplane and loss of the gyroplane.		
Effective Date:	4 March 2011		
Compliance/Action:	<ol> <li>Before further flight, from the effective date of this MPD, remove rudder pedal mounting block part number 514-05-24C from both the pilot's side and passenger side of the cockpit, in accordance with the instructions of Magni Gyro UK Ltd. Service bulletin SB009.</li> <li>Install new rudder pedal mounting block part number 514-05-24C issue B on both the pilot's side and passenger side of the cockpit, in accordance with the instructions of Service Bulletin SB009.</li> </ol>		

## Compliance/Action Cont:

#### Notes:

- a) The compliance actions required by this MPD must be carried out by a BCAR A3-7 type authorised person and entered into the airframe logbook accordingly.
- b) A duplicate/vital point inspection is required to ensure correct installation of the pedal mounting blocks and rudder control system and also must be recorded in the aircraft logbook. The second inspection may be carried out by a pilot or by another BCAR A3-7 type authorised person.
- c) A copy of Service Bulletin 009 may be obtained from:

Magni Gyro UK Ltd. Healings Farm West Bradford Waddington Clitheroe BB7 3JE

Tel: 01200 422813

Email: magnigyro.uk@talktalk.net

#### ENSURE COMPLIANCE WITH THIS MPD IS RECORDED IN THE AIRCRAFT LOGBOOK

Reference Publications:	Magni Gyro UK Ltd. Service Bulletin SB009	
Remarks:	[1] This MPD was not posted for consultation because of the urgency of the requirement.	
	[2] Enquiries regarding this Mandatory Permit Directive should be referred to: Airworthiness Evaluation and Surveillance Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR.	
	Tel: +44 (0)1293 573315 Fax: +44 (0)1293 573976	
	E-mail: department.certification@caa.co.uk	



# Civil Aviation Authority EMERGENCY MANDATORY PERMIT DIRECTIVE



Number: 2011-002-E

Issue date: 19 April 2011

In accordance with 22(1) of Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

Kingdom operating on a OK OAA Femili to Fry.				
Type Approval Holder's N	ame:	Type/Model De	signation(s):	
Not applicable – administere	ed via the LAA	Dyn'Aero MCR-	01	
Title:	Alu	ıminium Fittings	- Inspection	
Manufacturer:	Amateur build – kit ma	anufacturer: Dyn'	Aero	
Applicability:	Dyn'Aero MCR-01, M	CR-01 Club and N	ICR-01 ULC aircraft	
Reason:	Corrosion of primary s	structure.		
Effective Date:	20 April 2011			
Compliance/Action:	Before further flight, from the effective date of this MPD, comply with LAA Airworthiness Information Leaflet MOD/301/022. Please note that a single flight to position the aircraft to the site where the action is to be carried out is allowed.  Repeat annually at each revalidation inspection.			
Ensure compliance with this MPD is recorded in the aircraft logbook				
Reference Publications:	LAA Airworthiness Information Leaflet MOD/301/022			
Remarks:	<ol> <li>This MPD was not posted for consultation because of the urgency of the requirement.</li> <li>Enquiries regarding this Mandatory Permit Directive should be referred to: Airworthiness Evaluation and Surveillance Department Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR.</li> <li>Tel: +44 (0)1293 573726 Fax: +44 (0)1293 573976</li> <li>E-mail: department.certification@caa.co.uk</li> </ol>			





## **Civil Aviation Authority EMERGENCY** MANDATORY PERMIT DIRECTIVE Civil Aviation



Number: 2011-003-E

Issue date: 10 May 2011

In accordance with 22(1) of Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

Type Approval Holder's Name:		Type/Model Designation(s):
BRP - Powertrain GmbH & Co. KG Rotax 912 and 914 Series engines		Rotax 912 and 914 Series engines
Title:	Replacement of Flywheel Hub Washer Part No. 944072	
Manufacturer:	BRP - Powertrain GmbH & Co. KG	
Applicability:	Rotax 912UL, 912ULS, 912 ULSFR, 914UL engines of the following serial numbers (S/N) (ranges are inclusive)	
	912UL – from S/N 6,770.178 to S/N 6,770.241 from S/N 6,770.245 to S/N 6,770.251	
	912ULS – from S/N 6,777.699 to S/N 6,777.716 from S/N 6,777.718 to S/N 6,777.832 from S/N 6,777.861 to S/N 6,777.885 from S/N 6,777.896 to S/N 6,777.967 from S/N 6,777.973 to S/N 6,778.025 from S/N 6,778.031 to S/N 6,778.107 from S/N 6,778.115 to S/N 6,778.139 from S/N 6,778.179 to S/N 6,778.196	
	from S from S from S from S	/N 6,774.240 to S/N 6,774.261 /N 6,774.263 to S/N 6,774.269 /N 6,774.271 to S/N 6,774.308 /N 6,774.313 to S/N 6,774.321 /N 6,774.327 to S/N 6,774.386 /N 6,774.396 to S/N 6,774.425

	<u></u>		
Reason:	During a production process review, a deviation in hardening of certain Part Number (P/N) 944072 washers has been detected, which exceeds the hardness of the design specification.		
	The affected washers are part of the magneto ring flywheel hub installation and have been installed on a limited number of engines. No defective washers have been shipped as spare parts, so washers P/N 944072 delivered as spares are not affected.		
	This condition, if not corrected, could lead to cracks in the washer, loosening of the magneto flywheel hub and consequent ignition failur in-flight engine shutdown and forced landing.		
	This MPD therefore requires, for the aft of the P/N 944072 washer and associa serviceable parts, having the same P/N 912-058UL or SB-914-041UL.	ted gasket ring P/N 950141 with	
	This MPD also prohibits installation of a washer on that engine has been replace		
Effective Date:	12 May 2011		
Compliance/Action:	Compliance is required as follows, unless previously accomplished:		
	(1) Within 10 flight hours or 31 August 2011, whichever occurs first, after the effective date of this MPD, replace the P/N 944072 washer and associated gasket ring P/N 950141 on the magneto ring flywheel hub with serviceable parts, having the same P/N, in accordance with BRP-Powertrain Mandatory SB-912-058UL or SB-914-041UL as applicable. (Note that these bulletins refer to SB-912-058 or SB-914-041 for actual instructions for performing the task.)		
	(2) From the effective date of this MPD, do not install an affected engine, identified by S/N in the Applicability section of this MPD, unless the washer on that engine has been replaced as required by paragraph (1).		
Ensure comp	pliance with this MPD is recorded in th	e aircraft logbook	
Reference Publications:	Rotax SB-912-058UL and Rotax SB-914-041UL, dated 15 April 2011 The use of later revisions of this document is acceptable for compliance with this MPD.		
Remarks:	1.This MPD was not posted for consultation because of the urgency of the requirement.		
	2. Enquiries regarding this Mandatory Permit Directive should be referred to: Airworthiness Evaluation and Surveillance, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR.		
	Tel: +44 (0)1293 573074 Fax: +44 (0)1293 573976		
	E-mail: department.certification@caa.co.uk		



## **Civil Aviation Authority**

## EMERGENCY MANDATORY PERMIT DIRECTIVE Civil Aviation



Number: 2011-004-E Issue date: 20 May 2011

In accordance with 22(1) of Air Navigation Order 2009 as amended the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

T A		Toma (Mandal Danisma tian (a))	
Type Approval Holder's Name:		Type/Model Designation(s):	
Thruster Air Services		Thruster T600	
Title:	Propeller flange t	Propeller flange to crankshaft attachment screw replacement	
Manufacturer:	Thruster Air Services		
Applicability:	All Thruster T600 series aircraft fitted with Jabiru 2200A series engines driving 2 blade ground adjustable Warp Drive propellers of 64 inch nominal diameter.		
Reason:	To prevent propeller of	detachment in flight.	
Effective Date:	22 May 2011		
Compliance/Action:	<ol> <li>Compliance is required as follows:</li> <li>Engines which have accumulated less than 500 hours since new on the effective date of this MPD - upon reaching 500 hours:</li> <li>Engines which have accumulated more than 500 hours but less than 1000 hours since new on the effective date of this MPD – within 5 flight hours:</li> <li>Engines which have accumulated 1000 hours or more since new on the effective date of this MPD – before further flight:</li> <li>Carry out propeller flange to crankshaft screw replacement, in accordance with Thruster Air Services Ltd Service Bulletin TAS/SB 014.</li> <li>Visually inspect the removed screws for evidence of failure, elongation or cracking. Report any instances of screw damage or failure to Thruster Air Services Ltd. in accordance with bulletin TAS/SB014.</li> <li>Rectify any damage to mating parts in accordance with manufacturer's instructions before further flight.</li> </ol>		

ENSURE COMPLIANCE WITH THIS MPD IS RECORDED IN THE AIRCRAFT LOGBOOK			
Reference Publications:	Thruster Air Services TAS/SB014 Jabiru Service Bulletin JSB 022-1		
Remarks:	<ul> <li>[1]. This MPD was not posted for consultation because of the urgency of the requirement.</li> <li>[2]. Enquiries regarding this Mandatory Permit Directive should be referred to: Airworthiness Evaluation and Surveillance, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR.</li> </ul>		
	Tel: +44 (0)1293 573726 Fax: +44 (0)1293 573976		
	E-mail: department.certification@caa.co.uk		



## **MANDATORY PERMIT DIRECTIVE**

Number: 2011-005 R1

Issue date: 10 June 2011



Type Approval Holder's	Name:	Type/Model Designation(s):	
P&M Aviation		Pegasus Quik, Quik GT450, QuikR	
		r ogađa gam, gam o r roo, gama	
Title:	Sail reinforcement of	degradation – additional test	
Manufacturer:	P&M Aviation Ltd.		
Applicability:	Pegasus Quik, Quik inforcement bands.	GT450, QuikR with X-05 or Technora re-	
Reason:	body has shown that	An incident with a 4 year/1500 hours flight time white Dacron sail main body has shown that the standard Bettsometer test used to predict degradation cannot be used.	
	This MPD is updated flown if the bands fail	to Revision 1 to clarify that the aircraft must not be the test.	
<b>Effective Date:</b>	12 June 2011	12 June 2011	
	This is the same effe	This is the same effective date as the original MPD.	
Compliance/Action:	For aircraft more than 2 years old or more than 500 hours flight time, whichever comes first, perform the test as described in P&M Aviation Ltd Service Bulletin Number 132 within the next 25 hours from the effective date of this MPD, during which period high G manoeuvres must be avoided.		
	For all aircraft perform the test as described in P&M Aviation Ltd Service Bulletin Number 132 at each annual inspection		
	In the event of the reinforcement bands failing the test described in SB 132 contact P&M Aviation Limited and the aircraft must not be flown until satisfactory resolution is received from P&M Aviation Limited.		
Note: a) A copy of Service Bulletin Number 132 may be obtained P & M Aviation Unit B Crawford Street Rochdale Lancashire OL16 5NU		ion	
	Tel: 01706 655134 Email: flying@pmaviation.co.uk		

ENSURE COMPLIANCE WITH THIS MPD IS RECORDED IN THE AIRCRAFT LOGBOOK				
Reference Publications:	P & M Aviation Ltd Service Bulletin	P & M Aviation Ltd Service Bulletin Number 132		
Remarks:	[2]. Enquiries regarding this MPD Evaluation and Surveillance	<ul> <li>[1]. The original issue of this MPD was dated 9 June 2011.</li> <li>[2]. Enquiries regarding this MPD should be referred to: Airworthiness Evaluation and Surveillance Department, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR.</li> </ul>		
	Tel: +44 (0)1293 573303	Tel: +44 (0)1293 573303 Fax: +44 (0)1293 573976		
	E-mail: department.certification@c	E-mail: department.certification@caa.co.uk		



# EMERGENCY MANDATORY PERMIT DIRECTIVE Civil Aviation



**Number:** 2011-006-E Issue date: 12 July 2011

Type Approval Holder	s Name: Type/Model Designation(s):	
Rotorsport UK Ltd.	Rotorsport UK MT-03, MTOSport and Calidus gyroplanes	
Title:	Rotor Blade – Life Limit	
Manufacturer:	Rotorsport UK Ltd.	
Applicability:	All UK registered Rotorsport UK Ltd. MT-03, MTOSport and Calidus gyroplanes with rotor blade part numbers:	
	Aircopter 8.4m blade (MT Series) – part number RSD7033 Autogyro 8.4m blade (MT series) - part number RSD7040 Autogyro 8m blade (MT Series) – part number RSD7139 Autogyro 8.4m (Calidus) blade – part number C.RK20 (BG1448)	
Reason:	The CAA has been advised that cracks, bends and evidence of fretting have been found in the rotor blades (Aircopter type) of a Rotorsport UK Ltd MT-03 gyroplane. Further investigation by Rotorsport UK Ltd. has found cracks, bends and evidence of fretting on non-UK registered MT-03 and MTOSport gyroplanes fitted with both Aircopter and Autogyro type rotor blades.	
	Cracks and bends in the rotor blades may result in loss of a rotor blade and consequent loss of a gyroplane.	
	This MPD supersedes MPD 2010-008 R1 and has been raised following further investigation and fatigue assessment of the rotor blade design and introduces a life of 700 hours for the following rotor blade part numbers	
	Aircopter 8.4m blade (MT series) – part number RSD7033 Autogyro 8.4m blade (MT series) - part number RSD7040 Autogyro 8m blade (MT series) – part number RSD7139 Autogyro 8.4m (Calidus) blade – part number C.RK20 (BG1448)	
	Operation with the above rotor blade types above 700 hours is not permitted.	

Reason Cont:	This MPD also removes the requirement for 100 hour inspections of the rotor blades for cracking and fretting. The blade straightness check from SB034 issue 3 has been transferred to the applicable maintenance schedules.		
Effective Date:	12 July 2011		
Compliance/Action:	<ol> <li>Within 10 flight hours from the effective date of this MPD, establish the operating hours for each rotor blade.</li> <li>If the operating hours for a rotor blade exceed 700 hours, before further flight, replace the rotor blade with an airworthy approved blade.</li> <li>Note:         <ul> <li>The compliance actions required by paragraph 2 above must be carried out by a BCAR A3-7 type authorised person and entered into the airframe logbook accordingly.</li> </ul> </li> <li>CE WITH THIS MPD IS RECORDED IN THE AIRCRAFT LOGBOOK</li> </ol>		
Reference Publications:	N/A		
Remarks:	<ol> <li>This MPD was not published for consultation due the urgency of the situation.</li> <li>Enquiries regarding this MPD should be referred to Airworthiness Evaluation and Surveillance, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.</li> </ol>		
	Tel: +44 (0)1293 573074 Fax: +44 (0)1293 573976		
	E-mail: department.certification@caa.co.uk		



## **MANDATORY PERMIT DIRECTIVE**

Number: 2011-007

Issue date: 25 November 2011



Type Approval Holder's	Name:	Type/Model Designation(s):		
Rotorsport UK Ltd.		Rotorsport UK MT-03, MTOSport and Calidus gyroplanes		
Title:	Rotor Head A	ssembly Main Bearing Bolt – Replacement		
Manufacturer:	Rotorsport UK Ltd.			
Applicability:		Zinc plated (silver coloured) rotor assembly main bearing bolt part number BT696 (M.RK32.12, C.RK08.12) fitted to:		
	a) Rotorsport M 6 April 2010.	T03 gyroplanes with replacement parts fitted since		
		<ul> <li>b) Rotorsport MTOSport gyroplanes serial number 024 onwards or gyroplanes with replacement parts fitted since 6 April 2010.</li> </ul>		
	c) All Calidus gy	c) All Calidus gyroplanes.		
Reason:	The CAA has been advised of an error in the manufacturing process for the rotor assembly main bearing bolt, Rotorsport part number BT696, which may affect the structural strength of this component.			
		Failure of the main bearing bolt may result in separation of the rotor blade assembly and consequent loss of a gyroplane.		
Effective Date:	25 November 2011	25 November 2011		
Compliance/Action:	Within 30 flight hours or 3 months from the effective date of this MPD, whichever occurs first, replace the zinc plated (silver coloured) rotor assembly main bearing bolt part number BT696 in accordance with the instructions in Rotorsport Service Bulletin SB053.			
	Note: The compliance actions required by this MPD must be carried out by a BCAR A3-7 type authorised person and entered into the airframe logbook accordingly.			

ENSURE COMPLIANCE WITH THIS MPD IS RECORDED IN THE AIRCRAFT LOGBOOK			
Reference Publications:	Rotorsport Service Bulletin SB053		
Remarks:	<ol> <li>This MPD was not published for consultation.</li> <li>Enquiries regarding this MPD should be referred to Airworthiness Evaluation and Surveillance, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom.</li> </ol>		
	Tel: +44 (0)1293 573074 Fax: +44 (0)1293 573976		
	E-mail: department.certification@caa.co.uk		



# EMERGENCY MANDATORY PERMIT DIRECTIVE Civil Aviation



Number: 2011-008-E

(Correction: 31 January 2012)Issue date: 17 November 2011

registered in the United Kingdom operating on a UK CAA Permit to Fly.		
Type Approval Holder's Na	me:	Type/Model Designation(s):
Not applicable		Martin-Baker Ejection Seats
Title:	Inspection of Ejection Seat Drogue Shackle Connection to Scissor Shackle	
Manufacturer:	Martin-Baker Aircraft	Company Limited
Applicability:	Martin-Baker Ejection	Seats fitted with a Scissor Shackle
Reason:	It has been determined that the freedom of movement of drogue shackles on ejection seats fitted with scissor shackles may have become restricted.	
	Failure to ensure that there is freedom of movement between the drogue shackle and scissor shackle may prevent the withdrawal of the main parachute during the ejection sequence.	
	This MPD has been corrected to clarify the type/model designation.	
Effective Date:	17 November 2011	
Compliance/Action:	Compliance is required as follows, unless previously accomplished:	
	(1) Before further flight, inspect the drogue shackle connection to the scissor shackle in accordance with paragraph 2.1 of Martin-Baker Special Information Leaflet No. 704.	
	(2) If the drogue shackle does not move freely in the scissor shackle replace the locknut securing the drogue shackle to the scissor shackle in accordance with paragraph 2.2 of Martin-Bake Special Information Leaflet No. 704.	
	(3) After the effective date of this MPD, do not install an affected ejection seat in an aircraft unless the inspection has been carried out in accordance with paragraph (1) and if necessary the locknut replaced in accordance with paragraph (2).	

ENSURE COMPLIANCE WITH THIS MPD IS RECORDED IN THE AIRCRAFT LOGBOOK		
Reference Publications:	Martin-Baker Special Information Leaflet No. 704, "Drogue Shackle Connection to Scissor Shackle Maintenance Check", PSD/704 dated November 2011.	
	The use of later revisions of this document is acceptable for compliance with this MPD.	
Remarks:	This MPD was not posted for consultation because of the urgency of the requirement.	
	2. Enquiries regarding this Mandatory Permit Directive should be referred to: Airworthiness Evaluation and Surveillance, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR.	
	Tel: +44 (0)1293 573309 Fax: +44 (0)1293 573976	
	E-mail: department.certification@caa.co.uk	



# Civil Aviation Authority EMERGENCY MANDATORY PERMIT DIRECTIVE



**Number: 2011-009-E R1** Issue date: 18 January 2012

Kingdom operating on a UK CAA Permit to Fly.		
Type Approval Holder's Name:		Type/Model Designation(s):
BRP - Powertrain GmbH & Co. KG		Rotax 912 and 914 Series engines
Title:		Crankshaft Inspection
Manufacturer:	BRP - Powertrain Gm	bH & Co. KG
Applicability:	Rotax 912UL, 912ULS	S, 912 ULSFR and 914UL series engines
Reason:	During a production process review, a deviation in the manufacturing process of certain Part Number (P/N) 888164 crankshafts has been detected, which may lead to engine failure.	
	The affected crankshafts, identified by serial number (s/n) in Table 1 of this MPD, have been installed on a limited number of engines or shipped as spare parts for use on the above engine types.	
	This condition, if not corrected, could lead to crack formation on the power take off side of the crankshaft journal, possibly resulting in failure of the crankshaft support bearing, in-flight engine shutdown and forced landing, damage to the aeroplane and injury to occupants.	
	For the reasons described above, this MPD requires an inspection for cracks of all affected crankshafts and, depending on findings, corrective action.	
	This MPD also prohibits installation of an affected crankshaft on an engine, or installation of an engine with an affected crankshaft on an aircraft, unless the crankshaft has passed the inspection as required by this MPD.	
	This MPD has been revised because of the cancellation of the original referenced Alert Service Bulletins, and replacement by later bulletins.	
Effective Date:	18 January 2012	
	The original MPD became effective 30 November 2011.	

### Compliance/Action:

1. For the following engine serial numbers:

912 UL :- S/N 6,770.159 to 6,770.176 inclusive 6,770.184

912 ULS :- S/N 6,777.492 to 6,777.505 inclusive

6,777.526

6,777.528 to 6,777.542 inclusive 6,777.544 to 6,777.547 inclusive 6,777.563 to 6,777.569 inclusive 6,777.576 to 6,777.594 inclusive

6,777.596

6,777.609 to 6,777.610 inclusive 6,777.624 to 6,777.628 inclusive 6,777.630 to 6,777.631 inclusive 6,777.634 to 6,777.642 inclusive 6,777.667 to 6,777.668 inclusive

6,777.686

6,777.688 to 6,777.690 inclusive

912 ULSFR :- S/N 6,777.514 and 6,777.527

914 UL :- S/N 6,774.151 to 6,774.160 inclusive 6,774.165 to 6,774.166 inclusive 6,774.168 to 6,774.171 inclusive 6,774.176 to 6,774.193 inclusive 6,774.199 to 6,774.213 inclusive

6,774.220

These engines are known to have had an affected crankshaft P/N 888164 installed, as delivered by BRP-Powertrain. Within 4 flight hours or 30 days of the effective date of the original issue of this MPD (30 November 2011), whichever occurs first, accomplish the following actions if not previously accomplished:

- 1.1 If no crankshaft change has been carried out since entry into service, inspect the crankshaft for cracks, in accordance with the instructions of Section 3 of BRP-Powertrain SB-912-059UL/SB-914-042UL, as applicable to engine type.
- 1.2 If a crankshaft change has been carried out since entry into service, determine the part number and serial number of the replacement crankshaft fitted. If crankshaft P/N 888164 is fitted and the crankshaft serial number is included in the list contained in Table 1, inspect the crankshaft for cracks in accordance with the instructions of Section 3 of BRP-Powertrain SB-912-059UL/SB-914-042UL, as applicable to engine type.

### Compliance/Action:

2. For all other Rotax 912UL, 912ULS, 912ULSFR and 914UL series engines:

These engines are only potentially affected if a crankshaft change has been carried out since 1 October 2010. Within 4 flight hours or 30 days of the effective date of the original issue of this MPD (30 November 2011), whichever occurs first, accomplish the following actions if not previously accomplished:

- 2.1 Determine from maintenance records whether a crankshaft change has been carried out since 1 October 2010.
  - a) If no crankshaft change has been carried out since this date, no further action is required.
  - b) If a crankshaft change has been carried out since this date, determine the part number and serial number of the crankshaft fitted. If crankshaft P/N 888164 is fitted and the crankshaft serial number is included in the list contained in table 1, inspect the crankshaft for cracks in accordance with the instructions of Section 3 of BRP-Powertrain SB-912-059UL/SB-914-042UL, as applicable to engine type.
- If, during the applicable inspection as required by the above paragraphs, cracks are detected then before next flight contact BRP-Powertrain for approved instructions and accomplish those instructions accordingly.
- 4. From the effective date of this MPD, do not install an engine having an affected P/N 888164 crankshaft fitted, identified by s/n in Table 1 of this MPD, on an aircraft unless the crankshaft has passed the inspection specified in Section 3 of BRP-Powertrain SB-912-059UL/ SB-914-042UL.
- From the effective date of this MPD, do not install an affected P/N 888164 crankshaft, identified by s/n in Table 1 of this MPD, on an engine, unless the crankshaft has passed the inspection specified in Section 3 of BRP-Powertrain SB-912-059UL/SB-914-042UL.

Report any crack findings to CAA, using the contact details at the end of the MPD.

## Table 1 – Crankshaft Part No. 888164 – Serial Nos. Covered by this MPD

-	
I	40232 to 40267 inclusive
Ī	40293 to 40374 inclusive
Ī	40408 to 40433 inclusive
ſ	40435 to 40507 inclusive

Ensure compliance with this MPD is recorded in the aircraft logbook			
Reference Publications:	BRP-Powertrain SB-912-059UL and SB-914-042UL (single document), dated 1 January 2012.		
	The use of later revisions of this document is acceptable for compliance with this MPD.		
Remarks:	This MPD was not posted for consultation because of the urgency of the requirement.		
	2. Enquiries regarding this Mandatory Permit Directive should be referred to: Airworthiness Evaluation and Surveillance, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR.		
	Tel: +44 (0)1293 573074 Fax: +44 (0)1293 573976		
	E-mail: department.certification@caa.co.uk		



### **MANDATORY PERMIT DIRECTIVE**

Number: 2011-010

Issue date: 16 December 2011



Type Approval Holder's Name:		Type/Model Designation(s):
Nanchang Aircraft Manufacturing Company (NAMC)		NAMC CJ-6A
Title:	Tailplane Forward Spar - Inspection	
Manufacturer:	Nanchang Aircraft Ma	anufacturing Company (NAMC)
Applicability:	NAMC CJ-6A	
Reason:	While carrying out a recent fleet review of the type, the CAA has identified reported instances of cracking in the central section of the forward spar of the tailplane on the worldwide Nanchang CJ-6A fleet. We have also seen examples of strengthening of the tailplane on aircraft imported into the UK, indicating an earlier problem in military service.  Extended cracking of the forward spar could lead to an unsafe condition in flight. This MPD is therefore raised to ensure that a precautionary routine check of the tailplane forward spar is incorporated into the maintenance schedule for all aircraft of this type, irrespective of the modification standard of the tailplane.	
Effective Date:	23 December 2011	
Compliance/Action:	Compliance with this MPD is required within 25 flying hours or 6 months of the effective date of this MPD, whichever limit is reached first, unless the intent of this inspection has already been accomplished, and the repeat inspection specified is already built into the maintenance schedule for the aircraft.  Gain access to the region of the central section of the tailplane forward spar between the fuselage attachment points.	

### Compliance/Action Cont:

For aircraft with no reinforcement of the tailplane forward spar:

- Carry out a visual inspection of the full depth of the spar along the length of the exposed central section. Examine the edge of the elevator cable cut-out using a minimum of a x10 magnification. A tailplane which exhibits any crack indication along the exposed length may not continue in service until an approved reinforcing modification is carried out on the forward spar.
- 2) If no cracking is identified, refit fairing(s) and return aircraft to service.

Thereafter, at intervals not exceeding 50 hours, carry out a repeat inspection of the tailplane forward spar in accordance with the above.

For aircraft with a reinforced tailplane forward spar:

- 1) Carry out a visual inspection of the reinforcing plate for any cracking.
- 2) Carry out an inspection of the visible section of the original spar to ensure no crack propagation has occurred beyond any terminated indication originally present. Use a minimum of a x10 magnification. Reject from service any tailplane which exhibits cracking beyond crack stopping prior to reinforcement in the original spar, or which exhibits any evidence of cracking subsequent to reinforcement.
- 3) If no further cracking is identified, refit fairing(s) and return aircraft to service.

Thereafter, at intervals not exceeding 50 hours, carry out a repeat inspection of the tailplane forward spar in accordance with the above.

Report any instances of cracking to the CAA, at the contact details below.

#### ENSURE COMPLIANCE WITH THIS MPD IS RECORDED IN THE AIRCRAFT LOGBOOK

Reference Publications:	None	
Remarks:	This MPD was posted on 13 October 2011 as PMPD 11-02 for consultation until 12 November 2011.	
	2. Enquiries regarding this Mandatory Permit Directive should be referred to: Airworthiness Evaluation and Surveillance, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex RH6 0YR.	
	Tel: +44 (0)1293 573074	Fax: +44 (0)1293 573976
	E-mail: department.certification@caa.co.uk	