



MANDATORY PERMIT DIRECTIVE

Number: 2018-007

Issue date: 3 August 2018



In accordance with 41(1) of Air Navigation Order 2016 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: Rolls-Royce PLC (formerly Bristol Aeroplane Company)	Type/Model Designation(s): Engines: Bristol Mercury and Bristol Pegasus
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Title: Engine Exhaust Valves: Removal from Service

Manufacturer: Bristol Aeroplane Company

Applicability: Bristol Mercury (All variants)
Bristol Pegasus (All variants)

Reason:

Rolls-Royce has recently identified production non-conformances in certain batches of sodium-filled exhaust valves manufactured within specific dates.

These non-conformances have been shown to lead to the valve cracking. The observed cracking could lead to valve failure and engine loss of power.

This could result in a forced landing with consequent damage to the aeroplane and injury to occupants.

This MPD has been raised to address this potential unsafe condition.

Effective Date: 6 August 2018

Compliance/Action: For the purposes of this MPD the non-conforming batches of exhaust valves are identified in Table 1:

Table 1:		
Part No.	Manufacturer	Date of Manufacture
FB.74307/93	Valve Technics Ltd.	1990-1999
FB.74307	G & S Valves Ltd.	2009

Compliance/Action contd.	<p>FOR INSTALLED/SPARE ENGINES</p> <p>Within three calendar months of the effective date of this MPD:</p> <ol style="list-style-type: none"> 1. From engine records or by detailed inspection, determine the source and manufacture date of the exhaust valves fitted to the engine. 2. Remove from service all exhaust valves from the non-conforming batches detailed in Table 1 and replace with a new or serviceable part. 3. Remove from service all exhaust valves where the source and date of manufacture cannot be determined and replace with a new or serviceable part. <p>FOR SPARE PARTS STOCK</p> <p>From the effective date of this MPD:</p> <ol style="list-style-type: none"> 1. From stores inventory and by detailed inspection, determine the source and manufacture date of all spare parts stock. Remove from service and quarantine any exhaust valve detailed in Table 1 or any, where the source and date of manufacture cannot be determined. 2. Do not install, on any engine, any exhaust valves from the non-conforming batches detailed in Table 1.
<p>ENSURE COMPLIANCE WITH THIS MPD IS RECORDED IN THE AIRCRAFT/ENGINE LOGBOOK</p>	
Reference Publications:	<i>None</i>
Remarks:	<ol style="list-style-type: none"> 1. The exhaust valves are installed in engines fitted to Historic aircraft types including (but not limited to): Bristol Bolingbroke Mk. IV, Fairey Swordfish, Gloster Gamecock, Gloster Gladiator, Gloster Gladiator II, Hawker Audax, Supermarine Walrus, Westland Lysander 2. This MPD was circulated for comment as PMPD18-02 and closed for consultation on 21 June 2018. 3. If requested and appropriately substantiated, the CAA can approve Alternative Methods of Compliance for this MPD. 4. Enquiries regarding this Mandatory Permit Directive should be referred to: GA Unit, Safety Airspace Regulation Group, Civil Aviation Authority, Aviation House, Gatwick Airport South, West Sussex RH6 0YR. <p>Tel: +44 (0)1293 573988 E-mail: GA@caa.co.uk</p>