TYPE-CERTIFICATE

DATA SHEET

NO. EASA.IM.A.274

for
AIR TRACTOR

Type Certificate Holder
Air Tractor, Inc

Olney
76374, Texas
USA

For models: AT-802
AT-802A

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SECTION A: MODEL A DESIGNATION

A.I. General

1. Type/ Model/ Variant	
1.1 Type:	AT-802A
1.2 Model:	AT-802A 1PCLM
2. Airworthiness Category:	Restricted
3. Manufacturer:	Air Tractor Olney 76374, Texas USA
4. EASA Type Certification Application Date: *Note: State of Design Authority certification application date for grandfathered products*	
5. State of Design Authority:	FAA
6. State of Design Authority Type Certificate Date	22.6.2015

A.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements: 17.12.1992

2. Airworthiness Requirements: FAR 23, dated February 1, 1965, through Amendment 23-42, effective February 4, 1991 with the following sections below being defined as appropriate or inappropriate for the special purpose use of agricultural spraying, dusting, and seeding and for the special purpose use of forest and wildlife conservation (fire fighting) per FAR 21.25 (b)(1) and 21.25(b)(2); including the special purpose of Drug Eradication in accordance with FAR 21.25(b)(7) for the application of herbicides.

Additionally, the airplane may be operated under the special purposes of aerial surveying per FAR 21.25(b)(3) and patrolling per FAR 21.25(b)(4) with the following restrictions to meet the requirements of FAR 36 Appendix G, Amendment 36-28:

1) Maximum takeoff weight of 14,800 lbs

2) No installed engine with less than 1,295 SHP at takeoff. Acceptable engines are:

a) PT6A-65AG

b) PT6A-65AR

c) PT6A-65R
d) PT6A-67AG
e) PT6A-67AF
f) PT6A-67R
g) PT6A-67F

3) No agricultural spray or granular dispersal equipment installed, consisting of:

a) Spray booms (Dwg 80647)
b) Spray plumbing (Dwg 80643 or 81321)
c) Fan-operated spray pump (Dwg 80635, 81199, or 80745)
d) Spreader (Dwg 80776, 80634, or 80697)

At Maximum Weight: Defined as the maximum restricted category gross weight the airplane is to be operated and includes at least full fuel, full operating liquids, crew, baggage, and full hopper.
Appropriate FAR 23 Requirements:
23.21, 23.23, 23.25(a), 23.29, 23.49(a)(c), 23.65(c), 23.143, 23.171, 23.173(c), 23.201, 23.231(a), 23.233, 23.235, 23.251, All of Subpart C - Structures, 23.629, 23. 721, 23.723, 23.725, 23.726, 23.727, 23.731, 23.733, 23.1041, 23.1043, 23.1045, 23.1323, 23.1505, 23.1545, 23.1585(a).

Serial numbers 802A 0003 thru 802A 0083 do comply with 23.629(f).

At Baseline Weight: Defined as a reference weight not to be less than 75 percent of the Maximum Weight (above). FAR 23 through Amendment 23-42 with the exception of the following requirements deemed inappropriate per FAR 21.25(a)(1).

Inappropriate FAR 23 Requirements:
23.1, 23.3, 23.45(b)(c)(d)&(e), 23.51, 23.75, 23.221, 23.629(f)(1), 23.777(f)(1),(h)(1)(ii), 23.781(a),(b), 23.867, 23.901(d), 23.954, 23.1303(e), 23.1321(d), 23.1325(b)(3),(e), 23.1351(d)(1), 23.1505(c), 23.1587(a)(5), (a)(6), (a)(7), (a)(8).

3. Special Conditions: none

4. Exemptions: Exemption No. 5574 [23.49 (b) (1)] 61 knot stall speed

5. (Reserved) Deviations: none

6. Equivalent Safety Findings:

Equivalent Safety Finding to FAR 23.562, dated Septembe 14, 1992

Equivalent Safety Finding to FAR 23.677 (a), dated March 23, 1999

Equivalent Level of Safety to FAR 23.1093(b), dated December 7, 1992

7. Environmental Protection: FAR 36 as applicable in section A.11.2

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: The AT-802A is structurally certified to meet the requirements of FAR 23. The engine installation along with the systems and equipment meet FAR 23 requirements except in cases deemed inappropriate for intended operations. In these cases placards are installed on the instrument panel which prohibit flying under those special conditions. The AT-802A are certified by the FAA for a gross weight of 16,000 pounds. Certification basis is FAR 21.25. Airworthiness requirements of FAR 23 were met with certain sections excepted as inappropriate for the special-purpose use of agricultural and forest and wildlife conservation.

2. Description: The Air Tractor AT-802A is an all-metal cantilever low-wing monoplane designed especially for agricultural or fire fighting operations. It is powered by a Pratt & Whitney PT6A turboprop engine which is highly suited for this type of flying. The standard engine for the fire-fighting versions is the PT6A-67AG which is rated at 1350 SHP at sea level and 99ºF. The PT6A-65AG is a popular optional engine, which is rated at 1295 SHP. Other PT6A engines are optional, including the PT6A-67F which is rated at 1424 SHP. The propeller is a Hartzell five-blade constant speed prop with reversing capabilities. The -65 series engines have a 115-inch diameter prop and the -67 series have a 118-inch prop. The hopper is made of fiberglass. It has a capacity of 800 U.S. gallons for Ag versions and 820 gallons for fire-fighting versions. The horizontal stabilizer is all metal and strut-braced for added rigidity. The vertical fin is cantilevered. The elevators and rudder are of all-metal construction and sealed to prevent chemical entry. The fuselage features removable skin panels for ease of maintenance and cleaning. High-lift flaps are incorporated to provide short take-off and landing distances.

3. Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations must be
installed in the aircraft for certification. In addition, the following equipment is required:

a. Operative pre-stall warning system (Dwg. 50130)
b. 24 volt electrical system

c. Slip indicator
d. Fire Extinguisher (Dwg 10564 or 11421)

Agricultural Dispersal Equipment
The following agricultural dispersal equipment may be installed:
None, or any of the following:

a. Dust spreader (Dwg. 80634 or 80697 or 80776)
b. Standard spray system (Dwg. 80472 or 80745)
c. Micronair spray system (Dwg. 80678)
d. Fire Gate spray system (Dwg. 80745)
e. Automatic flagger (Dwg. 80612)
f. Drift finder smoker (Dwg. 80610)
g. Crop Hawk, Micronair, Accuflo flowmeter (Dwg. 80472)
h. 48 extra nozzles (Dwg. 80037)
i. Night working lights (Dwg. 60382)
j. Hopper rinse system (dwg. 80900)
k. Foam tank (dwg. 80576)

Optional Equipment
Conventional fire bomber gate and vent (Dwg. 81196)
Computerized fire bomber gate and vent (Dwg. 80540)
Air conditioning system (Dwg. 60414 or Dwg 60719)
Cockpit heater (Dwg. 51477)
Fuel flowmeter (Dwg. 60286 or 60585)
Attitude gyro (Dwg. 51625)
Turn coordinator (Dwg. 51625)
King COM or NAV/COM radio (Dwg. 60616)
Windshield washer (Dwg. 60439)
Windshield wiper (Dwg. 60177)
King transponder (Dwg. 60434)
King LMH 3142 radio (Dwg. 60436)
King DME (Dwg.60451)
King HSI/Slaved compass (Dwg. 60451)
King audio console (Dwg. 60451)
Loran-C (Dwg. 60451)
King Automatic direction finder (Dwg. 60724)
King Marker Beacon (Dwg. 60473)
Narco ELT (Dwg. 60554)
Dorne and Margolin ELT (Dwg. 60684)
Garmin GPS 150 (Dwg. 60619)
Trimble GPS (Dwg. 60978)
N.A.T. Audio Control Panel (Dwg. 60493)
King KN53 NAV (Dwg. 60453)
ACK ELT (dwg. 60617)
Public Address/Siren (dwg. 60922)
Directional Gyro (dwg. 51625)
S-Tec Autopilot (Dwg. 70656)
King KLX-135 GPS/COM (Dwg. 60939)

Vertical speed indicator (dwg. 51625)
King high frequency radio (Dwg. 61001)
King Radar altimeter (Dwg. 61004)
King GPS (Dwg. 60992)
Crew Seat (Dwg. 11742)
Garmin GMA 340 Audio Control (Dwg. 61155)
Garmin GNS 530 GPS NAV COM (Dwg. 61163)
Garmin GNS 430 GPS NAV COM (Dwg. 61161)
Garmin GNC 250XL GPS COM (Dwg. 61159)
Garmin GTX 327 Transponder (Dwg. 61157)
King KRA 405B Radar Altimeter (Dwg. 61196)
Engine Fire Detection System (Dwg. 52260)
Fuel Control Override System (Dwg. 70640)
Garmin/Apollo SL40 Com radio (Dwg. 61339)
Ram Air Engine Inlet (Dwg 51208)
Light Package (Dwg 60038).
Auxiliary Fuselage Fuel System (Dwg 52940) (for Aerial Surveying/Patrolling configuration)
Electronics International MVP-50T Engine Monitor Installation (drawing 53160 – alternate to 51625 standard instrument installation)
Amsafe Inflatable Restraints (Dwg 11068)
Dispersal Monitoring System (Dwg 81926)
Reabe Hopper Gauge System (Dwg 82060)
Retractable Firewall Mount (Dwg 13874)

4. Dimensions

Length:	36 ft.	
Wing span:	Serial number 802A-0003 thru 0058:	58.0 ft.
	Serial number 802A-0060 and subsequent:	59 ft. 3 in.
Height:	13 ft.	
Wing area:	Serial number 802A-0003 thru 0058:	390.7 ft^2
	Serial number 802A-0060 and subsequent:	401 ft^2

5. Engine

5.1. Model: Pratt & Whitney PT6A-45R, PT6A-65AR, PT6A-65B, PT6A-65R, PT6A-65AG, PT6A-67R, PT6A-67AG, PT6A-67AF, or PT6A-67F.

5.2 Type Certificate:
PT6A-65AG – E4EA
PT6A-65AR – E4EA
PT6A-65R – E4EA
PT6A-67AG – E26NE
PT6A-67AF – E26NE
PT6A-67R – E26NE
PT6A-67F – E26NE
PT6A-45R – E4EA
PT6A-65B – E4EA

5.3 Limitations

Engine Limits PT6A-45R

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1173	3625		800 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1020	3150		800	104.0	1700	90 to 135	0 to 99
MIN Idle (Run)				700	58.0		60 Min.	-40 to 99
Starting			800	1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		850 (20 sec)	104.0	1870	60 Min.	0 to 110
MAX Reverse	900	1000		800		1650	90 to 135	0 to 99

Engine Limits PT6A-65B

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1100	3625		820 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1100	3625		810	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				700	58.0		60 Min.	-40 to 99
Starting			700	1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		870 (20 sec)	104.0	1870	40 to 200	0 to 110
MAX Reverse	900			760		1650	90 to 135	0 to 99

Engine Limits PT6A-65AR, PT6A-65R

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1295	4000		820 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1173	3625		810	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				715	58.0		60 Min.	-40 to 99
Starting			700	1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		870 (20 sec)	104.0	1870	40 to 200	0 to 110
MAX Reverse	900			760		1650	90 to 135	0 to 99

Engine Limits PT6A-65AG

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1295	4000		820 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1220	3770		810	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				715	58.0		60 Min.	-40 to 99
Starting				1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		870 (20 sec)	104.0	1870	40 to 200	-40 to 110
MAX Reverse	900			760		1650	90 to 135	0 to 99

Engine Limits PT6A-67AG

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1350	4170		800 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1220	3770		800	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				750	58.0		60 Min.	-40 to 99
Starting				1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		870 (20 sec)	104.0	1870	40 to 200	0 to 110
MAX Reverse	900			760		1650	90 to 135	10 to 99

Engine Limits PT6A-67AF

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1424	4400	835	855 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1220	3825	820	840	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				750	58.0		60 Min.	-40 to 99
Starting			700	1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		870 (20 sec)	104.0	1870	40 to 200	0 to 110
AX Reverse	900			765		1650	90 to 135	10 to 99

Engine Limits PT6A-67R

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1424	4400	835	855 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1220	3770	820	840	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				755	58.0		60 Min.	-40 to 99
Starting			700	1000 (5 sec)			0 to 200	-40 to 99
transient		5100 (20 sec)		870 (20 sec)	104.0	1870	40 to 200	0 to 110
MAX Reverse	900			765		1650	90 to 135	10 to 99

Engine Limits PT6A-67F

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1424	4400		870 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1220	3770		870	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				760	58.0		60 Min.	-40 to 99
Starting				1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		910 (20 sec)	104.0	1870	40 to 200	0 to 110
MAX Reverse	900			760		1650	90 to 135	10 to 99

6. Load factors

		Flaps Retracted	Flaps Extended
Maximum positive	(12,500lbs.)(5670kg)	+3.25	+2.0
	(16,000lbs.)(7257kg)	+2.54	+2.0
Maximum negative	(12,500lbs.)(5670kg)	-1.3	0.0
	(16,000lbs.)(7257kg)	-1.2	0.0

7. Propeller & Propeller Limits

Hartzell HC-B5MP-3C/M10876AS or HC-B5MP-3C/M10876ANS

Maximum dia. 111.0 inch, minimum dia. 110.7 inch

Pitch settings, high 79.0□, low 16.5□, reverse -11.0□ at 42 inch station.

OR:

Hartzell HC-B5MP-3F/M11276NS

Maximum dia. 115.2 inch, minimum dia. 114.7 inch

Pitch settings, high 83.1□, low 13.9□, reverse -10.0□ at 42 inch station.

(PT6A-45R, PT6A-65B, PT6A-65AR, PT6A-65R, or PT6A-65AG)

Hartzell HC-B5MA-3D/M11276 or HC-B5MA-3D/M11276N (Thru s/n 802A-0073) HC-B5MA-3D/M11276NS (s/n 802A-0074 & Subs.) See Note 5

Maximum dia. 115.2 inch, minimum dia. 114.7 inch

Pitch settings, high 83.1□, low 13.9□, reverse -10.0□ at 42-inch station.

Or

(One) Hartzell HC-B5MA-3D/M11691NS (s/n 802A-0003 & Subs.)

Minimum diameter – 118.2 in.

Maximum diameter – 118.7 in.

Pitch Settings, high 84.0º, low 13.9º,

Reverse –10.0º at 42 inch station

(PT6A-67R, PT6A-67AF, PT6A-67AG, PT6A-67F)

8. Fluids

8.1 Fuel

ASTM D1655-70, JET A, JET A1, JET B, MIL-T-5624, JP-4, JP-8.8.2

8.2 Oil

MIL-L-7808, MIL-L-23699.

8.3 Coolant — Not applicable

9. Fluid capacities

9.1 Fuel — 256 gal. (+33.0)
(250 gal. usable capacity, one 127 gal. tank in each wing)
308 gallons optional (302 gallons usable)
380 gallons optional (374 gallons usable)

9.2 Oil — 2.5 gals. (1.5 gals. usable)

9.3 Coolant system — Not applicable

10. Air Speeds (CAS)

VNE (Never Exceed)
227 mph (197 knots) below 12,500lbs.

*VNE (Never Exceed)
169 mph (147 knots) above 12,500 lbs.

*VA (Maneuvering)
169 mph (147 knots)

*VNO (Max. structural cruise)
169 mph (147 knots)

**VNE (Never Exceed)
167 mph (145 knots) above 12,500 lbs.

**VA (Maneuvering)
167 mph (145 knots)

**VNO (Max. structural cruise)
167 mph (145 knots)

VFE (Flap extended)
142 mph (123 knots)

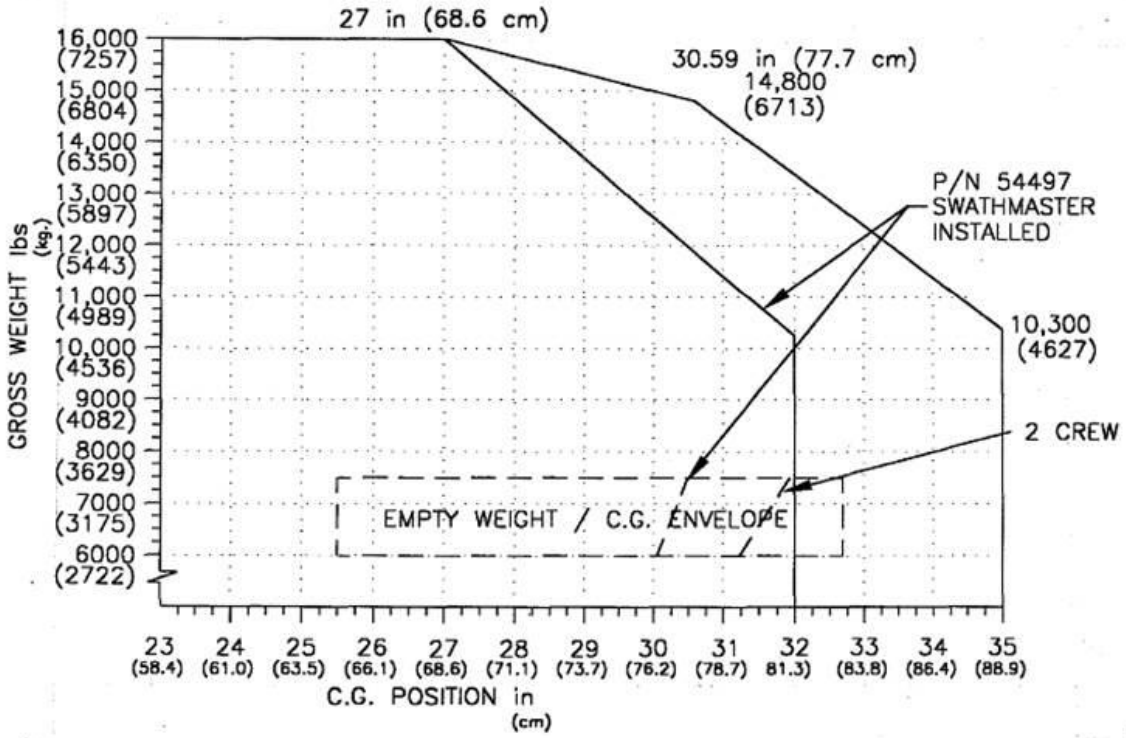
*For s/n 802A-0003 thru 802A-0058

**For s/n 802A-0060 & subs.

11. Flight Envelope

1.7 CENTER OF GRAVITY LIMITS:

(+23.0) (58.4 cm.) to (+27.0 in.) (68.6 cm.) at 16,000 lbs.(7257 kg.)
(+23.0) (58.4 cm.) to (+30.59 in. (77.7 cm.) at 14,800 lbs. (6713 kg.)
(+23.0) (58.4 cm.) to (+32.0 in.) (81.3 cm.) at 10,200 lbs. (4636 kg.) (With Swathmaster)
(+23.0) (58.4 cm.) to (+35.0 in.) (88.9 cm.) at 10,300 lbs. (4672 kg.)
The pilot is responsible for determining maximum weight.
Straight line variation between points.
Ballast may be required to maintain weight and C.G. within limits.
Datum is wing leading edge.



12. Approved Operations

Day VFR

Night VFR (when properly equipped)

13. Maximum Masses

Max Weight	15,000 lbs. (with PT6A-45R) in sprayer configuration
	14,850 lbs. (with PT6A-45R) in duster configuration
	15,000 lbs. (with PT6A-45R) in fire bomber configuration
	15,200 lbs. (with PT6A-65 series) in duster configuration
	16,000 lbs. (with PT6A-67 series) in duster configuration
	16,000 lbs. (with PT6A-65 series or PT6A-67 series) in sprayer configuration

	16,000 lbs. (with PT6A-65 series or PT6A-67 series) in fire bomber configuration 14,800 lbs. (with PT6A-65 series or PT6A-67 series) in aerial surveying/patrolling configuration
Max. Hopper Load	8,000 lbs. (+20.5) with PT6A-45R 8,800 lbs. (+20.5) with PT6A-65 series or PT6A-67 series

14. Centre of Gravity Range

C.G. Range	(+23.0) to (+27.0) at 15,000 lbs. (with PT6A-45R) (+23.0) to (+27.0) at 16,000 lbs. (with PT6A-65 or -67 series) (+23.0) to (+30.59) at 14,800 lbs. (with PT6A-65 or -67 series) (+23.0) to (+32.0) at 10,200 lbs. (with Swathmaster Spreader) (+23.0) to (+35.0) at 10,300 lbs. Straight-line variation between points.
15. Reference datum	Wing Leading edge

16. Control surface deflections

Elevator	Up	$29° \pm 1°$	Down	$15° \pm 1°$
Elevator tab	Up	$8° \pm 1.5°$	Down	$11° \pm 1.5°$
Rudder	Left	$24° \pm 1°$	Right	$24° \pm 1°$
Aileron	Up	$17° \pm 1°$	Down	$13° \pm 1°$
Flaps	---		Down	$30° \pm 1.5°$

17. Levelling Means	Top of left hand main landing gear leg 5° tail down.
18. Minimum Flight Crew	One (1) pilot
19. Maximum Passenger No. of seats	1 (+84.0) 1 crew (+123.0) when optional crew seat is installed in accordance with Dwg. 11742
20. Baggage/ Cargo Compartments	One baggage compartment at (+105). Max capacity 60 lbs.
21. Wheels and Tyres	The main gear wheels are Cleveland p/n 40-279A with a 11.00-12 10-ply rating tire installed. The tail wheel is a Cleveland 40-140C. The tail wheel tire is 17.5X6.25-6 10-ply rating.

22. (Reserved)

A.IV. Operating and Service Instructions

1. Flight Manual	FAA Approved AFM 01-0066, original issued date: December 17, 1992, revised 01/10/2017.
2. Maintenance Manual	The maintenance manual (owner's manual) is dated 03/12/2012.
3. Structural Repair Manual	There is no structural repair manual.
4. Weight and Balance Manual	There is no weight and balance manual.
5. Wiring Manual	There is no wiring manual.
6. Illustrated Parts Catalogue	The illustrated parts catalog is dated 08/01/2017.

A.V. Notes

Note 1	FAA approved Airplane Flight Manual dated December 17, 1992, or later FAA approved revision is required. Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions, when necessary, must be provided for each aircraft at the time of original certification. The empty weight and corresponding center of gravity location must include the following unusable fuel: 40 lbs. at (+33.0).
Note 2	All placards required by either FAA Approved Airplane Flight Manual, the applicable operating rules, or the Certification Basis must be installed in the aircraft.
NOTE 3	Life Limited airframe parts are listed in the applicable AT-802/802A series Maintenance Manual
NOTE 4	The placard "FLIGHT IN VICINITY OF THUNDERSTORMS PROHIBITED" may be deleted when Lightning-Safe modifications have been incorporated in accordance with drawing 11615.
NOTE 5	AT-802A aircraft prior to s/n 802A-0074 with PT6A-67R, PT6A-67AF, or PT6A-67AG engines installed that have been retrofitted with the p/n 50821-32 side-thrust engine mount must use the Hartzell p/n HC-B5MA-3D/M11276NS propeller.

SECTION B: MODEL AT-802 2 PCLM

B.I. General

1. Type/ Model/ Variant	
1.1 Type:	AT-802
1.2 Model:	AT-802 2PCLM
2. Airworthiness Category:	Restricted
3. Manufacturer:	Air Tractor Olney 76374, Texas USA

4. EASA Type Certification Application Date:
Note: State of Design Authority certification application date for grandfathered products

5. State of Design Authority:	FAA
6. State of Design Authority Type Certificate Date	22.6.2015

B.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements: 27.04.1993

2. Airworthiness Requirements: FAR 23, dated February 1, 1965, through Amendment 23-42, effective February 4, 1991 with the following sections below being defined as appropriate or inappropriate for the special purpose use of agricultural spraying, dusting, and seeding and for the special purpose use of forest and wildlife conservation (fire fighting) per FAR 21.25 (b)(1) and 21.25(b)(2); including the special purpose of Drug Eradication in accordance with FAR 21.25(b)(7) for the application of herbicides.

Additionally, the airplane may be operated under the special purposes of aerial surveying per FAR 21.25(b)(3) and patrolling per FAR 21.25(b)(4) with the following restrictions to meet the requirements of FAR 36 Appendix G, Amendment 36-28:

1) Maximum takeoff weight of 14,800 lbs
2) No installed engine with less than 1,295 SHP at takeoff. Acceptable engines are:
   a) PT6A-65AG
   b) PT6A-65AR

c) PT6A-65R
d) PT6A-67AG
e) PT6A-67AF
f) PT6A-67R
g) PT6A-67F

3) No agricultural spray or granular dispersal equipment installed, consisting of:

a) Spray booms (Dwg 80647)
b) Spray plumbing (Dwg 80643 or 81321)
c) Fan-operated spray pump (Dwg 80635, 81199, or 80745)
d) Spreader (Dwg 80776, 80634, or 80697)

At Maximum Weight: Defined as the maximum restricted category gross weight the airplane is to be operated and includes at least full fuel, full operating liquids, crew, baggage, and full hopper.
Appropriate FAR 23 Requirements:
23.21, 23.23, 23.25(a), 23.29, 23.49(a)(c), 23.65(c), 23.143, 23.171, 23.173(c), 23.201, 23.231(a), 23.233, 23.235, 23.251, All of Subpart C - Structures, 23.629, 23.721, 23.723, 23.725, 23.726, 23.727, 23.731, 23.733, 23.1041, 23.1043, 23.1045, 23.1323, 23.1505, 23.1545, 23.1585(a).

Serial numbers 802 0001 thru 802 0082 do comply with 23.629(f).

At Baseline Weight: Defined as a reference weight not to be less than 75 percent of the Maximum Weight(above). FAR 23 through Amendment 23-42 with the exception of the following requirements deemed inappropriate per FAR 21.25(a)(1).

Inappropriate FAR 23 Requirements:
23.1, 23.3, 23.45(b)(c)(d)&(e), 23.51, 23.75, 23.221, 23.777(f)(1),(h)(1)(ii), 23.781(a),(b), 23.629(f)(1), 23.867, 23.901(d), 23.954, 23.1303(e), 23.1321(d), 23.1325(b)(3),(e), 23.1351(d)(1), 23.1505(c), 23.1587(a)(5), (a)(6), (a)(7), (a)(8).

3. Special Conditions: none

4. Exemptions: Exemption No. 5574 [23.49 (b) (1)] 61 knot stall speed

5. (Reserved) Deviations: none

6. Equivalent Safety Findings:	Equivalent Safety Finding to FAR 23.562, dated Septembe 14, 1992 Equivalent Safety Finding to FAR 23.677 (a), dated March 23, 1999 Equivalent Level of Safety to FAR 23.1093(b), dated December 7, 1992
7. Environmental Protection:	FAR 36 as applicable in section A.11.2

B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition:	The AT-802 is structurally certified to meet the requirements of FAR 23. The engine installation along with the systems and equipment meet FAR 23 requirements except in cases deemed inappropriate for intended operations. In these cases placards are installed on the instrument panel which prohibit flying under those special conditions. The AT-802 are certified by the FAA for a gross weight of 16,000 pounds. Certification basis is FAR 21.25. Airworthiness requirements of FAR 23 were met with certain sections excepted as inappropriate for the special-purpose use of agricultural and forest and wildlife conservation.
2. Description:	The Air Tractor AT-802 is an all-metal cantilever low-wing monoplane designed especially for agricultural or fire fighting operations. It is powered by a Pratt & Whitney PT6A turboprop engine which is highly suited for this type of flying. The standard engine for the fire-fighting versions is the PT6A-67AG which is rated at 1350 SHP at sea level and 99ºF. The PT6A-65AG is a popular optional engine, which is rated at 1295 SHP. Other PT6A engines are optional, including the PT6A-67F which is rated at 1424 SHP. The propeller is a Hartzell five-blade constant speed prop with reversing capabilities. The -65 series engines have a 115-inch diameter prop and the -67 series have a 118-inch prop. The hopper is made of fiberglass. It has a capacity of 800 U.S. gallons for Ag versions and 820 gallons for fire-fighting versions. The horizontal stabilizer is all metal and strut-braced for added rigidity. The vertical fin is cantilevered. The elevators and rudder are of all-metal construction and sealed to prevent chemical entry. The fuselage features removable skin panels for ease of maintenance and cleaning. High-lift flaps are incorporated to provide short take-off and landing distances.
3. Equipment:	The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification. In addition, the following equipment is required: a. Operative pre-stall warning system (Dwg. 50130) b. 24 volt electrical system

c. Slip indicator
d. Fire Extinguisher (Dwg. 10564 or 11421)

Agricultural Dispersal Equipment
The following agricultural dispersal equipment may be installed:
None, or any of the following:

l. Dust spreader (Dwg. 80634 or 80697 or 80776)
m. Standard spray system (Dwg. 80472 or 80745)
n. Micronair spray system (Dwg. 80678)
o. Fire Gate spray system (Dwg. 80745)
p. Automatic flagger (Dwg. 80612)
q. Drift finder smoker (Dwg. 80610)
r. Crop Hawk, Micronair, Accuflo flowmeter (Dwg. 80472)
s. 48 extra nozzles (Dwg. 80037)
t. Night working lights (Dwg. 60382)
u. Hopper rinse system (dwg. 80900)
v. Foam tank (dwg. 80576)

Optional Equipment
Conventional fire bomber gate and vent (Dwg. 81196)
Computerized fire bomber gate and vent (Dwg. 80540)
Air conditioning system (Dwg. 60414 or Dwg. 60719)
Cockpit heater (Dwg. 51477)
Fuel flowmeter (Dwg. 60286 or 60499)
Attitude gyro (Dwg. 51625)
Turn coordinator (Dwg. 51625)
King COM or NAV/COM radio (Dwg. 60616)
Windshield washer (Dwg. 60439)
Windshield wiper (Dwg. 60296)
King transponder (Dwg. 60434)
King LMH 3142 radio (Dwg. 60436)
King DME (Dwg.60451)
King HSI/Slaved compass (Dwg. 60451)
King audio console (Dwg. 60451)
Loran-C (Dwg. 60451)
King - Automatic direction finder (Dwg. 60724)
Garmin GPS 150 (Dwg. 60619)
Trimble GPS (Dwg. 60978)
N.A.T. Audio Control Panel (Dwg. 60493)
King KN53 NAV (Dwg. 60453)
S-Tec Autopilot (dwg. 70656)
King KLX-135 GPS/COM (dwg. 60939)
ACK ELT (dwg. 60617)
Narco ELT (Dwg. 60554)
Dorne & Margolin ELT (Dwg. 60684)
Public Address/Siren (dwg. 60922)
Directional Gyro (dwg. 51625)
Vertical Speed indicator (dwg. 51625)

King high frequency radio (Dwg. 61001)
King radar Altimeter (Dwg. 61004)
King GPS (Dwg. 60992)
King Marker beacon (Dwg. 60473)
Garmin GMA 340 Audio Control (Dwg. 61155)
Garmin GNS 530 GPS NAV COM (Dwg. 61163)
Garmin GNS 430 GPS NAV COM (Dwg. 61161)
Garmin GNC 250XL GPS COM (Dwg. 61159)
Garmin GTX 327 Transponder (Dwg. 61157)
King KRA 405B Radar Altimeter (Dwg. 61196)
Engine Fire Detection System (Dwg. 52260)
Garmin/Apollo SL40 Com Radio (Dwg. 61339)
FCU Override System (70640)
Light Package (Dwg. 60038)
Ram Air Engine Inlet (Dwg. 51208)
Auxiliary Fuselage Fuel System (Dwg 52940) (for Aerial Surveying/Patrolling configuration)
Electronics International MVP-50T Engine Monitor Installation (drawing 53160 – alternate to 51625
standard instrument installation)
Amsafe Inflatable Restraints (Dwg 11068)
Dispersal Monitoring System (Dwg 81926)
Reabe Hopper Gauge System (Dwg 82060)
Retractable Firewall Mount (Dwg 13874)
Armor Installation (Dwg. 12032)
Forward Avionics Console (Dwg. 62104)
Aft Avionics Console (Dwg. 62105)
Ballistic Glass Split Doors (Dwg. 11984)
Dual Engine Starter and Ignitor Switches (Dwg. 60408)
Dual Fuel Shutoff Valve Controls (Dwg. 53328)
Dual Fuselage Fuel Valve Controls (Dwg. 71440)
Dual Parking Brake Controls (Dwg. 40108)
Dual Trim Controls (Dwg. 70556)
Externally Mounted Tow Bar (Dwg. 40162)

4. Dimensions

Length:	36 ft.
Wing span:	Serial number 802-0001 thru 0059: 58.0 ft. Serial number 802-0060 and subsequent: 59 ft. 3 in.
Height:	13 ft.
Wing area:	Serial number 802-0001 thru 0059: 390.7 ft^2 Serial number 802-0060 and subsequent: 401 ft^2

5. Engine

5.1. Model: Pratt & Whitney PT6A-45R, PT6A-65AR, PT6A-65B, PT6A-65R, PT6A-65AG, PT6A-67R, PT6A-67AG, PT6A-67AF, or PT6A-67F

5.2 Type Certificate:
PT6A-65AG – E4EA
PT6A-65AR – E4EA
PT6A-65R – E4EA
PT6A-67AG – E26NE
PT6A-67AF – E26NE
PT6A-67R – E26NE
PT6A-67F – E26NE
PT6A-45R – E4EA
PT6A-65B – E4EA

5.3 Limitations

Engine Limits PT6A-45R

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1173	3625		800 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1020	3150		800	104.0	1700	90 to 135	0 to 99
MIN Idle (Run)				700	58.0		60 Min.	-40 to 99
Starting			800	1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		850 (20 sec)	104.0	1870		
MAX Reverse	900	1000		800		1650	90 to 135	0 to 99

Engine Limits PT6A-65AR, PT6A-65R

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1295	4000		820 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1173	3625		810	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				715	58.0		60 Min.	-40 to 99
Starting			700	1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		870 (20 sec)	104.0	1870	40 to 200	0 to 110
MAX Reverse	900			760		1650	90 to 135	0 to 99

Engine Limits PT6A-65AG

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1295	4000		820 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1220	3770		810	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				715	58.0		60 Min.	-40 to 99
Starting				1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		870 (20 sec)	104.0	1870	40 to 200	-40 to 110
MAX Reverse	900			760		1650	90 to 135	0 to 99

Engine Limits PT6A-65B

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1100	3625		820 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1100	3625		810	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				700	58.0		60 Min.	-40 to 99
Starting			700	1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		870 (20 sec)	104.0	1870	40 to 200	0 to 110
MAX Reverse	900			760		1650	90 to 135	0 to 99

Engine Limits PT6A-67R

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1424	4400	835	855 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1220	3770	820	840	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				755	58		60 Min.	-40 to 99
Starting			700	1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		870 (20 sec)	104.0	1870	40 to 200	0 to 110
MAX Reverse	900			765		1650	90 to 135	10 to 99

Engine Limits PT6A-67AG

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1350	4170		800 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1220	3770		800	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				750	58.0		60 Min.	-40 to 99
Starting				1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		870 (20 sec)	104.0	1870	40 to 200	0 to 110
MAX Reverse	900			760		1650	90 to 135	10 to 99

Engine Limits PT6A-67AF

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT °C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1424	4400		855 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1220	3825		840	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				750	58.0		60 Min	-40 to 99
Starting				1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		870 (20 sec)	104.0	1870	40 to 200	0 to 110
MAX Reverse	900			765		1650	90 to 135	10 to 99

Engine Limits PT6A-67F

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°C	Maximum Observed ITT°C	Ng RPM %	Np RPM	Oil Pressure PSIG	Oil Temp °C
Takeoff	1424	4400		870 (5 min)	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1220	3770		870	104.0	1700	90 to 135	10 to 99
MIN Idle (Run)				760	58.0		60 Min.	-40 to 99
Starting				1000 (5 sec)			0 to 200	-40 to 99
Transient		5100 (20 sec)		910 (20 sec)	104.0	1870	40 to 200	0 to 110
MAX Reverse	900			760		1650	90 to 135	10 to 99

6. Load factors

		Flaps Retracted	Flaps Extended
Maximum positive	(12,500lbs.)(5670kg)	+3.25	+2.0
	(16,000lbs.)(7257kg)	+2.54	+2.0
Maximum negative	(12,500lbs.)(5670kg)	-1.3	0.0
	(16,000lbs.)(7257kg)	-1.2	0.0

7. Propeller & Propeller Limits

Hartzell HC-B5MP-3C/M10876AS or HC-B5MP 3C/M10876ANS

Maximum dia. 111.0 inch, minimum dia. 110.7 inch

Pitch settings, high 79.0□, low 16.5□, reverse -11.0□ at 42 inch station.

OR:

Hartzell HC-B5MP-3F/M11276NS

Maximum dia. 115.2 inch, minimum dia. 114.7 inch

Pitch settings, high 83.1□, low 13.9□ , reverse -10.0□ at 42 inch station.

(PT6A-45R, PT6A-65B, PT6A-65AR, PT6A-65R, PT6A-65AG)

Hartzell HC-B5MA-3D/M11276 or HC-B5MA-3D/M11276N (Thru s/n 802 0076)

Hartzell HC-B5MA-3D/M11276NS (s/n 802-0078 & Subs.) See Note 5

Maximum dia. 115.2 inch, minimum dia. 114.7 inch

Pitch settings, high 83.1□, low 13.9□ , reverse -10.0□ at 42 inch station.

OR

Hartzell HC-B5MA-3D/M11691NS (s/n 802-0001 & subs.)

Minimum diameter – 118.2 in.

Maximum diameter – 118.7 in.

Pitch settings, high 84.0º, low 13.9º, reverse –10.0º at 42 inch station

(PT6A-67R, PT6A-67AF, PT6A-67AG, PT6A-67F)

8. Fluids

8.1 Fuel
ASTM D1655-70, JET A, JET A1, JET B, MIL-T-5624, JP-4, JP-8

8.2 Oil
MIL-L-7808, MIL-L-23699.

8.3 Coolant — Not applicable

9. Fluid capacities

9.1 Fuel — 256 gal. (+33.0)
(250 gal. usable capacity, one 127 gal. tank in each wing)
308 gallons optional (302 gallons usable)
380 gallons optional (374 gallons usable)

9.2 Oil — 2.5 gals. (1.5 gals. usable)

9.3 Coolant system — Not applicable

10. Air Speeds (CAS)

VNE (Never Exceed)
227 mph (197 knots) below 12,500lbs.

*VNE (Never Exceed)
169 mph (147 knots) above 12,500 lbs.

*VA (Maneuvering)
169 mph (147 knots)

*VNO (Max. structural cruise)
169 mph (147 knots)

**VNE (Never Exceed)
167 mph (145 knots) above 12,500 lbs.

**VA (Maneuvering)
167 mph (145 knots)

**VNO (Max. structural cruise)
167 mph (145 knots)

VFE (Flap extended)
142 mph (123 knots)

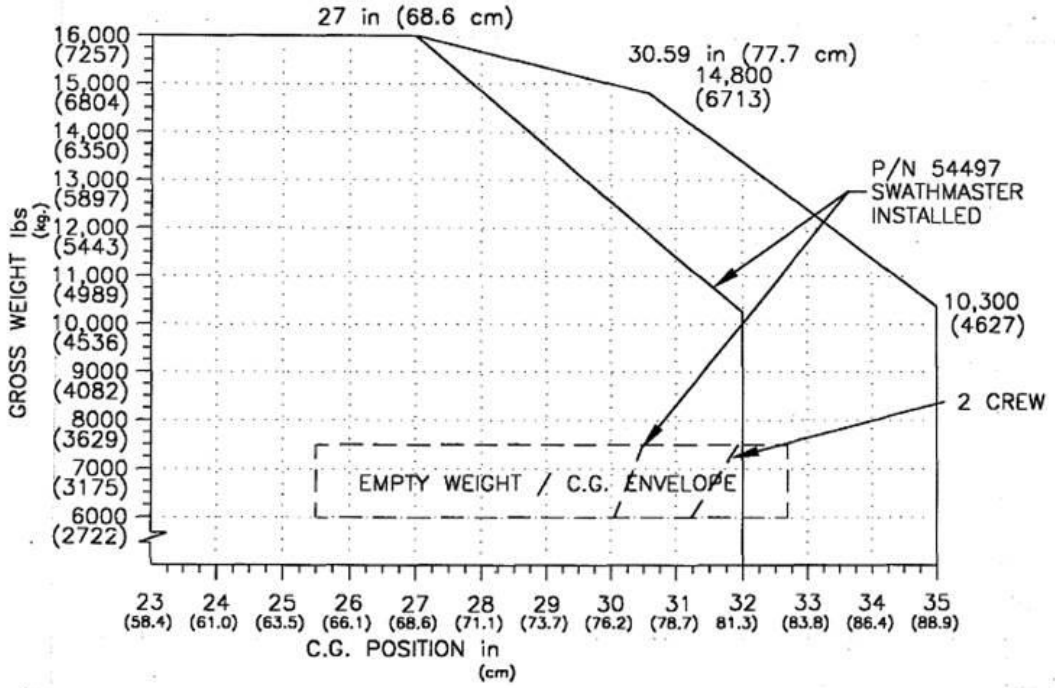
*For s/n 802-0001 thru 802-0059

**For s/n 802-0064 & subs.

11. Flight Envelope

1.7 CENTER OF GRAVITY LIMITS:

(+23.0) (58.4 cm.) to (+27.0 in.) (68.6 cm.) at 16,000 lbs.(7257 kg.)
(+23.0) (58.4 cm.) to (+30.59 in. (77.7 cm.) at 14,800 lbs. (6713 kg.)
(+23.0) (58.4 cm.) to (+32.0 in.) (81.3 cm.) at 10,200 lbs. (4636 kg.) (With Swathmaster)
(+23.0) (58.4 cm.) to (+35.0 in.) (88.9 cm.) at 10,300 lbs. (4672 kg.)
The pilot is responsible for determining maximum weight.
Straight line variation between points.
Ballast may be required to maintain weight and C.G. within limits.
Datum is wing leading edge.



12. Approved Operations Capability

Day VFR

Night VFR (when properly equipped)

13. Maximum Masses

Max Weight	15,000 lbs. (with PT6A-45R) in sprayer configuration
	14,850 lbs. (with PT6A-45R) in duster configuration
	16,000 lbs. (with PT6A-65 series or PT6A-67 series) in sprayer configuration
	15,200 lbs. (with PT6A-65 series or PT6A-67 series) in duster configuration
	16,000 lbs. (with PT6A-65 series or PT6A-67 series) in fire bomber configuration
	15,000 lbs. (with PT6A-45R) in fire bomber configuration
	14,800 lbs. (with PT6A-65 series or PT6A-67 series) in aerial surveying/patrolling configuration

Max. Hopper Load	8,000 lbs. (+20.5) with PT6A-45R 8,800 lbs. (+20.5) with PT6A-65 series or PT6A-67 series

14. Centre of Gravity Range

C.G. Range	(+23.0) to (+27.0) at 15,000 lbs. (with PT6A-45R) (+23.0) to (+27.0) at 16,000 lbs. (with PT6A-65 or -67 series) (+23.0) to (+30.59) at 14,800 lbs. (with PT6A-65 or -67 series) (+23.0) to (+32.0) at 10,200 lbs. (with Swathmaster Spreader) (+23.0) to (+35.0) at 10,300 lbs. Straight line variation between points.

15. Reference datum	Wing Leading edge

16. Control surface deflections

Elevator	Up	$29° \pm 1°$	Down	$15° \pm 1°$
Elevator tab	Up	$8° \pm 1.5°$	Down	$11° \pm 1.5°$
Rudder	Left	$24° \pm 1°$	Right	$24° \pm 1°$
Aileron	Up	$17° \pm 1°$	Down	$13° \pm 1°$
Flaps		---	Down	$30° \pm 1.5°$

17. Levelling Means	Top of left hand main landing gear leg 5° tail down.
18. Minimum Flight Crew	One (1) pilot

19. Maximum Passenger

No. of seats	1 (+84.0) 1 crew (+123.0)
20. Baggage/ Cargo Compartments	One baggage compartment at (+105). Max capacity 60 lbs.
21. Wheels and Tyres	The main gear wheels are Cleveland p/n 40-279A with a 11.00-12 10-ply rating tire installed. The tail wheel is a Cleveland 40-140C. The tail wheel tire is 17.5X6.25-6 10-ply rating.

22. (Reserved)

N.IV. Operating and Service Instructions

1. Flight Manual	FAA Approved AFM 01-0059, original issued date: July 27, 1993, revised 01/10/2017.
2. Maintenance Manual	The maintenance manual (owner's manual) is dated 03/12/2012.

3. Structural Repair Manual	There is no structural repair manual.
4. Weight and Balance Manual	There is no weight and balance manual.
5. Wiring Manual	There is no wiring manual.
6. Illustrated Parts Catalogue	The illustrated parts catalog is dated 08/01/2017.

B.V. Notes

Note 1	FAA approved Airplane Flight Manual dated April 27, 1993, or later FAA approved revision is required. Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions, when necessary, must be provided for each aircraft at the time of original certification. The empty weight and corresponding center of gravity location must include the following unusable fuel: 40 lbs. at (+33.0).
Note 2	All placards required by either FAA Approved Airplane Flight Manual, the applicable operating rules, or the Certification Basis must be installed in the aircraft.
NOTE 3	Life Limited airframe parts are listed in the applicable AT-802/802A series Maintenance Manual
NOTE 4	The placard “FLIGHT IN VICINITY OF THUNDERSTORMS PROHIBITED” may be deleted when Lightning-Safe modifications have been incorporated in accordance with drawing 11615.
NOTE 5	AT-802 aircraft prior to s/n 802-0078 with PT6A-67R, PT6A-67AF, or PT6A-67AG engines installed that have been retrofitted with the p/n 50821-32 side-thrust engine mount must use the Hartzell p/n HC-B5MA-3D/M11276NS propeller.
NOTE 6	Aircraft s/n 802-4001 and subsequent have wings and fuselage frames that are configured for planned future modifications.

SECTION ADMINISTRATIVE

I. Acronyms & Abbreviations

AMM	Aircraft maintenance manual
EASA	European aviation safety agency
IPC	Illustrated parts catalogue
KIAS	Indicated airspeed in knots
KTAS	True airspeed in knots
MAC	Mean aerodynamic chord
MSL	Mean sea level
MDL	Master document list
POH	Pilot's operating handbook
RPM	Revolutions per minute
VFR	Visual flight rules

II. Type Certificate Holder Record

Air Tractor
Olney
76374, Texas
USA

III. Change Record

Issue	Date	Changes	TC Issue No. & Date
Issue 01	08/08/2018	Initial Issue	08/08/2018

-END-