

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

A19SW  
Revision 12  
Air Tractor  
AT-602  
AT-802  
AT-802A  
May 19, 2020

TYPE CERTIFICATE DATA SHEET NO. A19SW

This data sheet, which is part of Type Certificate No. A19SW, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder:     Air Tractor, Inc.  
   Olney, Texas 76374

I - Model AT-802A 1 PCLM (Restricted Category). Approved December 17, 1992

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

Fuel                        ASTM D1655-70, JET A, JET A1, JET B, MIL-T-5624, JP-4, JP-8.  
For required use of anti-icing additives and emergency use of aviation gasoline per MIL-G-5572, refer to the FAA Approved Airplane Flight Manual.

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

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     | 315  | 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    |
| MAX 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    |

|                                    |   |  |
|------------------------------------|---|--|
| Propeller &<br>Propeller<br>Limits | <u>FOR PT6A-45R, PT6A-65B, PT6A-65AR, PT6A-65R, or PT6A-65AG ENGINES:</u><br>Hartzell HC-B5MP-3C/M10876AS or HC-B5MP-3C/M10876ANS<br>Maximum dia. 111.0 inch, minimum dia. 110.7 inch<br>Pitch settings, high 79.0°, low 16.5°, reverse -11.0° at 42 inch station.<br>OR:<br>Hartzell HC-B5MP-3F/M11276NS<br>Maximum dia. 115.2 inch, minimum dia. 114.7 inch<br>Pitch settings, high 83.1°, low 13.9°, reverse -10.0° at 42 inch station.  |  |
| Propeller &<br>Propeller<br>Limits | <u>FOR PT6A-67R, PT6A-67AF, PT6A-67AG, or PT6A-67F ENGINES:</u><br>Hartzell HC-B5MA-3D/M11276 or HC-B5MA-3D/M11276N (Thru s/n 802A-0073)<br>HC-B5MA-3D/M11276NS (s/n 802A-0074 & Subs.) SEE NOTE 5<br>Maximum dia. 115.2 inch, minimum dia. 114.7 inch<br>Pitch settings, high 83.1°, low 13.9°, reverse -10.0° at 42-inch station.<br>OR:<br>Hartzell HC-B5MA-3D/M11691NS (s/n 802A-0003 & Subs.)<br>Minimum diameter – 118.2 inch, Maximum diameter – 118.7 in.<br>Pitch Settings, high 84.0°, low 13.9°, Reverse –10.0° at 42 inch station                             |  |
| Airspeed<br>Limits<br>(CAS)        | VNE (Never Exceed) 227 mph (197 knots) below 12,500 lbs.<br>*VNE (Never Exceed) 169 mph (147 knots) above 12,500 lbs.<br>*VA (Maneuvering) 169 mph (147 knots)<br>*VNO (Max. structural cruise) 169 mph (147 knots)<br>**VNE (Never Exceed) 167 mph (145 knots) above 12,500 lbs.<br>**VA (Maneuvering) 167 mph (145 knots)<br>**VNO (Max. structural cruise) 167 mph (145 knots)<br>VFE (Flap extended) 142 mph (123 knots)  |  |
|                                    | *For s/n 802A-0003 thru 802A-0058<br>**For s/n 802A-0060 & subs.  |  |
| C.G. Range                         | (+23.0) to (+27.0) at 15,000 lbs. (with PT6A-45R)<br>(+23.0) to (+27.0) at 16,000 lbs. (with PT6A-65 or -67 series)<br>(+23.0) to (+30.59) at 14,800 lbs. (with PT6A-65 or -67 series)<br>(+23.0) to (+32.0) at 10,200 lbs. (with Swathmaster Spreader)<br>(+23.0) to (+35.0) at 10,300 lbs.<br>Straight-line variation between points.   |  |
| Max Weight                         | 15,000 lbs. (with PT6A-45R) in sprayer configuration<br>14,850 lbs. (with PT6A-45R) in duster configuration<br>15,000 lbs. (with PT6A-45R) in fire bomber configuration<br>15,200 lbs. (with PT6A-65 series) in duster configuration<br>16,000 lbs. (with PT6A-67 series) in duster configuration<br>16,000 lbs. (with PT6A-65 series or PT6A-67 series) in sprayer configuration<br>16,000 lbs. (with PT6A-65 series or PT6A-67 series) in fire bomber configuration<br>14,800 lbs. (with PT6A-65 series or PT6A-67 series) in aerial surveying/patrolling configuration |  |
| No. of Seats                       | 1 (+84.0)<br>1 crew (+123.0) when optional crew seat is installed in accordance with Dwg. 11742   |  |
| Max. Hopper<br>Load                | 8,000 lbs. (+20.5) with PT6A-45R<br>8,800 lbs. (+20.5) with PT6A-65 series or PT6A-67 series  |  |
| Fuel Capacity                      | 256 gallons (+33.0)<br>308 gallons optional (+33.0)<br>380 gallons optional (+33.0)   | (250 gal. usable capacity, one 127 gal. tank in each wing)<br>(302 gal. usable capacity, one 153 gal. tank in each wing)<br>(374 gal. usable capacity, one 189 gal. tank in each wing) |
| Oil Capacity                       | 10.0 quarts, 6.0 quarts usable  |  |

|           |              |      |                             |       |                              |
|-----------|--------------|------|-----------------------------|-------|------------------------------|
| Control   | Elevator     | Up   | $29^{\circ} \pm 1^{\circ}$  | Down  | $15^{\circ} \pm 1^{\circ}$   |
| Surface   | Elevator tab | Up   | $8^{\circ} \pm 1.5^{\circ}$ | Down  | $11^{\circ} \pm 1.5^{\circ}$ |
| Movements | Rudder       | Left | $24^{\circ} \pm 1^{\circ}$  | Right | $24^{\circ} \pm 1^{\circ}$   |
|           | Aileron      | Up   | $17^{\circ} \pm 1^{\circ}$  | Down  | $13^{\circ} \pm 1^{\circ}$   |
|           | Flaps        | ---  |                             | Down  | $30^{\circ} \pm 1.5^{\circ}$ |

Serial Nos.  
Eligible 802A-0003 and subsequent.

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 The following items of optional equipment may be installed.  
Other items of optional equipment may be approved but not listed here.

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)  
 Optional Engine Power Quadrant (Dwg. 70567)

Certification  
Basis

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).

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

Equivalent Safety Finding to FAR 23.562, dated September 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

|                    |   |
|--------------------|---|
| Datum              | Wing Leading edge   |
| Leveling           | Top of left hand main landing gear leg 5° tail down   |
| Baggage            | One baggage compartment at (+105). Max capacity 60 lbs.   |
| Production Basis   | PC2SW   |
| Export Eligibility | Aircraft will be eligible for issuance of an Export Certificate of Airworthiness subject to compliance with FAR Part 21.  |
| 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.   |

## II - Model AT-802 2 PCLM (Restricted Category) Approved April 27, 1993

|        |  |
|--------|--|
| Engine | Pratt & Whitney PT6A-45R, PT6A-65AR, PT6A-65B, PT6A-65R, PT6A-65AG, PT6A-67R, PT6A-67AG, PT6A-67AF, or PT6A-67F  |
| Fuel   | ASTM D1655-70, JET A, JET A1, JET B, MIL-T-5624, JP-4, JP-8<br>For required use of anti-icing additives and emergency use of aviation gasoline per MIL-G-5572, refer to the FAA Approved Airplane Flight Manual. |
| Oil    | MIL-L-7808, MIL-L-23699  |

## 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     | 315  | 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    |

- Propeller & Propeller Limits
- FOR PT6A-45R, PT6A-65B, PT6A-65AR, PT6A-65R, or PT6A-65AG ENGINES:  
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.
- Propeller & Propeller Limits
- FOR PT6A-67R, PT6A-67AF, PT6A-67AG, or PT6A-67F ENGINES:  
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 84.0°, low 13.9°, reverse –10.0° at 42 inch station

|                                  |  |  |
|----------------------------------|--|--|
| Airspeed Limits (CAS)            | VNE (Never Exceed)<br>*VNE (Never Exceed)<br>*VA (Maneuvering)<br>*VNO (Max. structural cruise)<br>**VNE (Never Exceed)<br>**VA (Maneuvering)<br>**VNO (Max. structural cruise)<br>VFE (Flap extended)   | 227 mph (197 knots) below 12,500 lbs.<br>169 mph (147 knots) above 12,500 lbs.<br>169 mph (147 knots)<br>169 mph (147 knots)<br>167 mph (145 knots) above 12,500 lbs.<br>167 mph (145 knots)<br>167 mph (145 knots)<br>142 mph (123 knots) |
|                                  | *For s/n 802-0001 thru 802-0059<br>**For s/n 802-0064 & subs.  |  |
| C.G. Range                       | (+23.0) to (+27.0) at 15,000 lbs. (with PT6A-45R)<br>(+23.0) to (+27.0) at 16,000 lbs. (with PT6A-65 or -67 series)<br>(+23.0) to (+30.59) at 14,800 lbs. (with PT6A-65 or -67 series)<br>(+23.0) to (+32.0) at 10,200 lbs. (with Swathmaster Spreader)<br>(+23.0) to (+35.0) at 10,300 lbs.<br>Straight line variation between points.  |  |
| Max Weight                       | 15,000 lbs. (with PT6A-45R) in sprayer configuration<br>14,850 lbs. (with PT6A-45R) in duster configuration<br>16,000 lbs. (with PT6A-65 series or PT6A-67 series) in sprayer configuration<br>15,200 lbs. (with PT6A-65 series or PT6A-67 series) in duster configuration<br>16,000 lbs. (with PT6A-65 series or PT6A-67 series) in fire bomber configuration<br>15,000 lbs. (with PT6A-45R) in fire bomber configuration<br>14,800 lbs. (with PT6A-65 series or PT6A-67 series) in aerial surveying/patrolling configuration |  |
| No. of Seats                     | 1 at (+84), 1 at (+123)  |  |
| Max. Hopper Load                 | 8,000 lbs. (+20.5) with PT6A-45R<br>8,800 lbs. (+20.5) with PT6A-65 series or PT6A-67 series   |  |
| Fuel Capacity                    | 256 gallons (+33.0)<br>308 gallons optional (+33.0)<br>380 gallons optional (+33.0)  | (250 gal. usable capacity, one 127 gal. tank in each wing)<br>(302 gal. usable capacity, one 153 gal. tank in each wing)<br>(374 gal. usable capacity, one 189 gal. tank in each wing)   |
| Oil Capacity                     | 10.0 quarts, 6.0 quarts usable   |  |
| Control Surface Movements        | Elevator<br>Elevator tab<br>Rudder<br>Aileron<br>Flaps   | Up 29° ± 1°<br>Up 8° ± 1.5°<br>Left 24° ± 1°<br>Up 17° ± 1°<br>---<br>Down 15° ± 1°<br>Down 11° ± 1.5°<br>Right 24° ± 1°<br>Down 13° ± 1°<br>Down 30° ± 1.5°   |
| Serial Nos. Eligible             | 802-0001 and subsequent.   |  |
| 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:<br>a. Operative pre-stall warning system (Dwg. 50130)<br>b. 24 volt electrical system<br>c. Slip indicator<br>d. Fire Extinguisher (Dwg. 10564 or 11421)   |  |
| Agricultural Dispersal Equipment | The following agricultural dispersal equipment may be installed:<br>None, or any of the following:<br>a. Dust spreader (Dwg. 80634 or 80697 or 80776)<br>b. Standard spray system (Dwg. 80472 or 80745)<br>c. Micronair spray system (Dwg. 80678)<br>d. Fire gate spray system (Dwg. 80745)<br>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

The following items of optional equipment may be installed.  
Other items of optional equipment may be approved but not listed here.

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)  
 Optional Engine Power Quadrant (Dwg. 70567)

Certification  
 Basis

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).

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

Equivalent Safety Finding to FAR 23.562, dated September 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

Datum

Wing Leading edge

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|                    |  |
|--------------------|--|
| Leveling Means     | Top of lefthand main landing gear leg 5° tail down   |
| Baggage            | One baggage compartment at (+105). Max capacity 60 lbs.  |
| Production Basis   | PC2SW  |
| Export Eligibility | Aircraft will be eligible for issuance of an Export Certificate of Airworthiness subject to compliance with FAR Part 21.   |
| 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.  |

III - Model AT-602 1 PCLM (Restricted Category), Approved June 6, 1996

Engine Pratt & Whitney PT6A-45R, PT6A-45A, PT6A-45B, PT6A-60AG, PT6A-65AR, PT6A-65B, PT6A-65R, or PT6A-65AG.

Fuel ASTM D1655-70, JET A, JET A1, JET B, MIL-T-5624, JP-4, JP-8.  
For required use of anti-icing additives and emergency use of aviation gasoline per MIL-G-5572, refer to the FAA Approved Airplane Flight Manual.

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

Engine Limits PT6A-45R, PT6A-45A, PT6A-45B

| Power Setting   | SHp  | Torque Ft-Lb  | Nominal ITT°C | Maximum Observed ITT°C | Ng RPM % | Np RPM | Oil Pressure PSIG | Oil Temp °C |
|-----------------|------|---------------|---------------|------------------------|----------|--------|-------------------|-------------|
| Takeoff         | 1050 | 3245          |               | 800 (5 min)            | 104.0    | 1700   | 100* to 135       | 10 to 99    |
| MAX. Continuous | 1020 | 3150          |               | 800                    | 104.0    | 1700   | 100* 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   | 100* to 135       | 0 to 99     |

\* - PT6A-45R minimum oil pressure is 90 PSIG.

Engine Limits PT6A-60AG

| Power Setting   | SHp  | Torque Ft-Lb  | Nominal ITT°C | Maximum Observed ITT°C | Ng RPM % | Np RPM | Oil Pressure PSIG | Oil Temp °C |
|-----------------|------|---------------|---------------|------------------------|----------|--------|-------------------|-------------|
| Takeoff         | 1050 | 3245          |               | 820 (5 min)            | 104.0    | 1700   | 90 to 135         | 10 to 99    |
| MAX. Continuous | 1020 | 3150          |               | 775                    | 104.0    | 1700   | 90 to 135         | 10 to 99    |
| MIN Idle (Run)  |      |               |               | 750                    | 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   | 40 to 200         | 0 to 110    |
| MAX Reverse     | 900  |               |               | 760                    |          | 1650   | 90 to 135         | 10 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         | 1050 | 3245          |               | 820 (5 min)            | 104.0    | 1700   | 90 to 135         | 10 to 99    |
| MAX. Continuous | 1050 | 3245          |               | 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-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         | 1050 | 3245          |               | 820 (5 min)            | 104.0    | 1700   | 90 to 135         | 10 to 99    |
| MAX. Continuous | 1050 | 3245          |               | 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-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         | 1050 | 3245          |               | 820 (5 min)            | 104.0    | 1700   | 90 to 135         | 10 to 99    |
| MAX. Continuous | 1050 | 3245          |               | 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     |

Propeller &  
Propeller  
Limits

## FOR PT6A-45R, PT6A-45A, PT6A-45B, or PT6A-60AG ENGINES:

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

Maximum dia. 111.2 inch, minimum dia. 110.7 inch

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



|                                  |  |  |  |
|----------------------------------|--|--|--|
| Propeller & Propeller Limits     | <u>FOR PT6A-65AR, PT6A-65B, PT6A-65R, or PT6A-65AG ENGINES:</u><br>Hartzell HC-B5MP-3C/M10876AS or HC-B5MP-3C/M10876ANS<br>Maximum dia. 111.2 inch, minimum dia. 110.7 inch<br>Pitch settings, high 79.0°, low 16.5°, reverse -11.0° at 42 inch station.<br>OR:<br>Hartzell HC-B5MP-3F/M11276NS<br>Maximum dia. 115.2 inch, minimum dia. 114.7 inch<br>Pitch settings, high 83.1°, low 13.9°, reverse -10.0° at 42 inch station. |  |  |
| Airspeed Limits (CAS)            | VNE (Never Exceed)<br>VNE (Never Exceed)<br>VA (Maneuvering)<br>VNO (Max. structural cruise)<br>VFE (Flap extended)  | 218 mph (189 knots) below 9,200 lbs.<br>162 mph (141 knots) above 9,200 lbs.<br>162 mph (141 knots)<br>162 mph (141 knots)<br>130 mph (113 knots)                                      |  |
| C.G. Range                       | (+17.5) to (+24.0) at 12,500 lbs.<br>(+17.5) to (+24.0) at 12,000 lbs.<br>(+17.5) to (+24.9) at 11,750 lbs.<br>(+17.5) to (+29.5) at 7,700 lbs.  |  |  |
| Max Weight (Takeoff)             | 12,500 lbs.  |  |  |
| Max Weight (Landing)             | 12,000 lbs.  |  |  |
| No. of Seats                     | 1 at (+74.0), 1 at (+107.0) when optional crew seat installed per dwg. 11524-40  |  |  |
| Max. Hopper Load                 | 6,500 lbs. (+16.0)   |  |  |
| Fuel Capacity                    | 218 gallons (+33.0)<br>236 gallons optional (+33.0)<br>292 gallons optional (+33.0)  | (212 gal. usable capacity, one 108 gal. tank in each wing)<br>(230 gal. usable capacity, one 117 gal. tank in each wing)<br>(286 gal. usable capacity, one 189 gal. tank in each wing) |  |
| Oil Capacity                     | 10.0 quarts, 6.0 quarts usable   |  |  |
| Control Surface Movements        | Elevator<br>Elevator tab<br>Rudder<br>Aileron<br>Flaps<br>Aileron droop with full flaps  | Up<br>Up<br>Left<br>Up<br>---<br>9° ± 1°   | 29° ± 1°<br>11° ± 1.5°<br>20° ± 0/-1°<br>19° ± 1°<br>---<br>9° ± 1°          |
|                                  |  | Down<br>Down<br>Right<br>Down<br>Down<br>Down  | 16° ± 1°<br>9° ± 1.5°<br>19° ± 0/-1°<br>14° ± 1°<br>28° ± 1.5°<br>28° ± 1.5° |
| Serial Nos. Eligible             | 602-0337 and subsequent  |  |  |
| 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:<br>a. Operative pre-stall warning system (Dwg. 50130)<br>b. 24 volt electrical system<br>c. Slip indicator<br>d. Fire Extinguisher (Dwg. 10564 or 11421)   |  |  |
| Agricultural Dispersal Equipment | The following agricultural dispersal equipment may be installed:<br>None, or any of the following:<br>a. Dust spreader (Dwg. 80634 or 80697)<br>b. Standard spray system (Dwg. 80990)<br>c. Micronair spray system (Dwg. 80990)<br>d. Automatic flagger (Dwg. 80612)<br>e. Drift finder smoker (Dwg. 80610)  |  |  |

- f. Crop Hawk, Micronair, Accuflo flowmeter (Dwg. 80990)
- g. 48 extra nozzles (Dwg. 80037)
- h. Night working lights (Dwg. 60956)
- i. Hopper rinse system (dwg. 80707)

Optional  
Equipment

The following items of optional equipment may be installed.  
Other items of optional equipment may be approved but not listed here.

Conventional fire bomber gate and vent (Dwg. 80343)  
Air conditioning system (Dwg. 60740)  
Cockpit heater (Dwg. 51477)  
Fuel flowmeter (Dwg. 60286)  
Commercial Band Radio (Dwg. 60436)  
Vertical speed indicator (Dwg. 51625)  
Loader Seat (Dwg. 11524)  
Attitude gyro (Dwg. 51625)  
Turn coordinator (Dwg. 51625)  
King COM or NAV/COM radio (Dwg. 60616)  
Windshield washer (Dwg. 80216)  
Windshield wiper (Dwg. 60177)  
King transponder (Dwg. 60434)  
King audio console (Dwg. 60451)  
Automatic direction finder (Dwg. 60724)  
Garmin GPS 150 (Dwg. 60619)  
King KLX-135 GPS/COM (Dwg. 60939)  
Directional Gyro (Dwg. 51625)  
ACK ELT (dwg. 60617)  
Strobe, Panel, flap lights (Dwg. 60004)  
FCU Override System ( Dwg. 70640)  
Light Package (Dwg. 60038)  
Garmin/Apollo SL40 Com Radio (Dwg. 70640)  
Ram Air Engine Inlet (Dwg. 50825)  
Electronics International MVP-50T Engine Monitor Installation (Drawing 53159 – alternate to 51625 standard instrument installation)  
Amsafe Inflatable Restraints (Dwg 11068)  
Dispersal Monitoring System (Dwg 81926)  
Reabe Hopper Gauge System (Dwg 82060)  
Optional Engine Power Quadrant (Dwg. 70622)

Certification  
Basis

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.

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).

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).

Exemption No. 6136 [23.562(d)] 61 knot stall speed

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

Equivalent Safety Finding to FAR 23.677 (a), dated February 4, 2000.

Datum Wing Leading edge

Leveling Means Top of lefthand main landing gear leg 5° tail down

Baggage One baggage compartment at (+98.0). Max capacity 60 lbs.

Production Basis PC2SW

Export Eligibility Aircraft will be eligible for issuance of an Export Certificate of Airworthiness subject to compliance with FAR Part 21.

NOTE 1 FAA approved Airplane Flight Manual dated June 6, 1996, 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 AT-602 Maintenance Manual

.....END.....