DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A17SW
Revision 15
Air Tractor
AT-401 AT-401A
AT-401B AT-402
AT-402A AT-402B
AT-501 AT-502
AT-502A AT-502B
AT-503 AT-503A
AT-504
May 19, 2020

TYPE CERTIFICATE DATA SHEET NO. A17SW

This data sheet, which is part of Type Certificate No. A17SW, prescribes conditions and limitations under which the productions 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-503 2 PCLM (Restricted Category), Approved October 2, 1986

Engine: Pratt & Whitney PT6A-45R.

Fuel: Per Specifications CPW 46, PWA 522, GB 6537-94 (Peoples' Republic of China RP-3 kerosene).
For recommended use of anti-icing additives and emergency use of aviation gasoline per MIL-G-5572, refer to the FAA Approved Airplane Flight Manual.

Oil: Per Specifications CPW 202 or PWA 521.

Engine Limits

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pressure PSIG	Oil Temp °C
Takeoff	1100 ISA+ 0°C	3398		800	39000 104.0	1700 100.0	90 to 135	10 to 99
MAX. Continuous	1020 ISA+ 18.3°C	3398		880	39000 104.0	1700 100.0	90 to 135	0 to 99
MAX Climb MAX Cruise	992 ISA +0°C	3398	740	765	39000 104.0	1425 83.8	90 to 135	0 to 99
MIN Idle				700 (6)	21000 56.0 (MIN)		60 (MIN)	-40 to 99
Starting			800	1000 (4)			0 to 200	-40 (MIN)
Transient		5100 20 SEC (MAX)		850	39000 104.0	1870 110.0	60 (MIN)	0 to 110
MAX Reverse	900 @ ISA			800		1650 97.0	90 to 135	0 to 99

Propeller & Limits: Hartzell HC-B5MP-3C/M10876AS
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.

Airspeed Limits (CAS):

VNE (Never Exceed)	180 mph	(156 knots)
VA (Maneuvering)	148 mph	(128 knots)
VNO (Max. structural cruise)	148 mph	(128 knots)
VFE (Flap extended)	130 mph	(113 knots)

C.G. Range	(+14.5) to (+20.0) at 8,000 lbs. (+14.5) to (+25.0) at 7,180 lbs. and below Straight-line variation between points.		
Max Weight	8,000 lbs.		
No. of Seats	2 (+74.0), (+113.0)		
Max. Hopper Load	4,100 lbs. (+12.0)		
Fuel Capacity	260 gallons (+33.0) (254 gal. usable capacity, one 106-gal. tank and one 24 gal. tank in each wing)		
Oil Capacity	10.0 quarts, 6.0 quarts usable		
Control Surface Movements	Elevator	Up 30° ± 1°	Down 18° ± 1°
	Elevator tab	Up 8° ± 1.5°	Down 8° ± 1.5°
	Rudder	Left 21° ± 1°	Right 21° ± 1°
	Aileron	Up 23° ± 1	Down 15° ± 1°
	Flaps	---	Down 26° ± 1.5°
	Aileron droop with full flap 10° ± 1°		
Serial Nos. Eligible	503-0001 and subsequent.		
Equipment	The basic required equipment as prescribed in 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. Light package of Strobe, Instrument, Dome, Flap Lights, Landing Lights.		
Agricultural Dispersal Equipment	The following agricultural dispersal equipment may be installed: None, or any of the following: a. Dust spreader (Dwg. 80020) b. Standard spray system (Dwg. 80299) c. Micronair spray system (Dwg. 80039)		
Optional Equipment	Fire bomber gate and vent installation (Dwg. 80343)		
Datum	Wing leading edge.		
Leveling Means	Screw heads on engine inlet airscoop.		
Baggage	One baggage compartment at (+98). Max capacity 60 lb.		
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 September 8, 1986, 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 the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.		

NOTE 3 Safe-life of Air Tractor Model AT-503, wing carry-through structure, and attaching structure is limited to 1,650 hours' time in service.

For all serial numbers through 503-0701, owners may continue to operate their AT-502 aircraft beyond the safe-life listed above by following the requirements in Appendix 2—Alternative Method of Compliance (AMOC) to AD 2006-24-10.

II - Model AT-401 1 PCLM (Restricted Category) Approved April 24, 1987

Engine: Pratt & Whitney Wasp R1340 AN1 (S3H1 Commercial designation) with carburetor parts list setting 395118-3, A-18639-7 or A-18639-8.

or Pratt & Whitney Wasp R1340 S1H1 with carburetor parts list setting 395118-3, A-18639-7, or A-18639-8.

Fuel: 80/87 minimum grade aviation gasoline.

Engine Limits

	HP	RPM	M.P.	ALT.
Takeoff (5 minutes)	600	2250	36.0	S.L.
Max. Continuous	550	2200	34.0	S.L.
Max. Continuous	550	2200	32.5	5000

Propeller & Propeller Limits: Hamilton Standard 22D40 hub, 6533A-12 blades, constant speed, hydromatic.
Diameter 109 inch maximum 107-inch minimum.
Pitch settings 12.0 degrees low and 35 degrees high at 42-inch sta.

or Hamilton Standard 22D40 hub, EAC AG200-2 blades, constant speed, hydromatic.
Diameter 106 inch maximum 104-inch minimum.
Pitch settings 12.0 degrees low and 35 degrees high at 42 inch station.

or Hamilton Standard 12D40 hub, 6101A-12 blades, constant speed.
Diameter 109 inch maximum 107-inch minimum.
Pitch settings 12.0 degrees low and 26 degrees high at 42 inch station.

or Hamilton Standard 23D40 hub, 6533A-18 blades, constant speed, hydromatic, 3-blade.
Diameter 103 inch maximum 101-inch minimum.
Pitch settings 10.0 degrees low and 35 degrees high at 42 inch station.

or Hamilton Standard 12D40 hub, EAC AG100-2 blades, constant speed.
Diameter 106 inch maximum 104-inch minimum.
Pitch settings 11.0 degrees low and 26 degrees high at 42 inch station.

Airspeed Limits (CAS)

VNE (Never Exceed)	176 mph	(153 knots)
VA (Maneuvering)	140 mph	(122 knots)
VNO (Max. structural cruise)	140 mph	(122 knots)
VFE (Flap extended)	115 mph	(100 knots)

C.G. Range: (+16.0) to (+24.0) at 6,000 pounds
(+16.0) to (+24.5) at 5,937 pounds and below
Straight-line variation between points.

Max Weight: 6,000 pounds

No. of Seats: 1 (+74.0)

Max Hopper Load: 3,250 lbs. (+12.0)

Fuel Capacity:

126 gallons (+33.0)	(120 gal. usable, one 63 gal. tank in each wing)
170 gallons optional (+33.0)	(164 gal. usable, one 85 gal. tank in each wing)
216 gallons optional (+33.0)	(210 gal. usable, one 108 gal. tank in each wing)

Oil Capacity: 9.5 gal. total 71 lb. at (-23.0) (8 gal. usable)

Control Surface Movements	Elevator	Up 28° ± 1°	Down 18° ± 1°
	Elevator tab	Up 11° ± 1.5°	Down 10° ± 1.5°
	Rudder	Left 21° ± 1°	Right 21° ± 1°
	Aileron	Up 20° ± 1°	Down 14° ± 1°
	Flaps	---	Down 26° ± 1.5°
	Aileron droop with full flap 10° ± 1°		

Serial Nos. Eligible: 401-0662 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.

Agricultural: The following agricultural dispersal equipment may be installed:

Dispersal Equipment: None, or any of the following:

a. Dust spreader (Dwg. 80020)
b. Standard spray system (Dwg. 80038)
c. Micronair spray system (Dwg. 80039)
d. Hopper rinse tank (Dwg. 80939)

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

Fire bomber gate and vent installation (Dwg 80343).
3-Piece Windshield (Dwg. 11464)
Windshield washer (Dwg. 80216)
Windshield wiper (Dwg. 60177)
Avionics (Dwg. 60616)
Night working lights (Dwg. 60038)
Automatic Flagman (Dwg. 80038)
Smoker (Dwg. 80610)
Loader Seat (Dwg. 11524)
Attitude Gyro (Dwg. 50899)
Turn Coordinator (Dwg. 50899)

Datum: Wing leading edge.

Leveling Means: Top of left-hand main landing gear leg at intersection of fuselage side skin.

Baggage: One baggage compartment at (+94). 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 6, 1987, 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: 36 lbs. at (33.0).

NOTE 2: All placards required by either the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.

NOTE 3: Safe-life of Air Tractor Model AT-401, serial numbers 401-0662 through 401-0951, wing carry-through structure, and attaching structure is limited to 10,757 hours time in service.

III - Model AT-501 1 PCLM (Restricted Category) Approved June 23, 1987

Engine — Pratt & Whitney Wasp R1340 S3H1-G (Military designation R1340-59)

or Pratt & Whitney Wasp R1340 S1H1-G (Military designation R1340-61)

Fuel — 80/87 minimum grade aviation gasoline.

Engine Limits

	HP	RPM	M.P.	ALT.
Takeoff (5 minutes)	600	2250	36.0	S.L.
Max. Continuous	550	2200	34.0	S.L.
Max. Continuous	550	2200	32.5	5000

Propeller & Propeller Limits — Hamilton Standard 23D40 hub, 7035A-9 blades, constant speed, hydromatic. Diameter 129 inch maximum 127-inch minimum. Pitch settings 19.0° low and 34.0° high at 42 inch station.

or Hamilton Standard 23D40 hub, 6529A-9 blades, constant speed, hydromatic. Diameter 129 inch maximum 127-inch minimum. Pitch settings 19.0° low and 34° high at 42 inch station.

Airspeed Limits (CAS)

VNE (Never Exceed)	176 mph (153 knots)
VA (Maneuvering)	140 mph (122 knots)
VNO (Max. structural cruise)	140 mph (122 knots)
VFE (Flap extended)	115 mph (100 knots)

C.G. Range — (+15.0) to (+24.0) at 6,500 pounds.

Max Weight — 6,500 pounds.

No. of Seats — 1 (+74.0)

Max Hopper Load — 4,100 lbs. (+12.0)

Fuel Capacity — 126 gal. (+33.0)
(120 gal. usable capacity, one 63.0 gal. tank in each wing)

Oil Capacity — 9.5 gal. total 71 lbs. at (-23.0) (8 gal. usable).

Control Surface Movements

Elevator	Up 28° ± 1°	Down 16° ± 1°
Elevator tab	Up 9° ± 1.5°	Down 9° ± 1.5°
Rudder	Left 21° ± 1°	Right 21° ± 1°
Aileron	Up 20° ± 1°	Down 14° ± 1°
Flaps	---	Down 26° ± 1.5°

Aileron droop with full flap 10° ± 1°

Serial Nos. Eligible — 501-0002 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.

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

a. Dust spreader (Dwg. 80020)
b. Standard spray system (Dwg. 80038)
c. Micronair spray system (Dwg. 80039)
d. Hopper rinse tank (Dwg. 80707, Sh. 1)

Optional Equipment	The following items of optional equipment may be installed. Other items of optional equipment may be approved but not listed here. Fire bomber gate and vent system (Dwg. 80343). Windshield washer (Dwg. 80216) Windshield wiper (Dwg. 60177) Avionics (Dwg. 60616) Night working lights (Dwg. 60038) Automatic Flagman (Dwg. 80038) Smoker (Dwg. 80610)
Datum	Wing leading edge.
Leveling Means	Underside of propeller dome.
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 23, 1987, 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: 36 lbs. at (+33.0).
NOTE 2	All placards required by either the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.
NOTE 3	Safe-life of Air Tractor Model AT-501 serial numbers 501-0002 thru 501-0061 wing lower spar caps and attaching structure is limited to 4,531 hours time in service. Safe-life of Air Tractor Model AT-501, all serial numbers beginning with 501-0062, wing lower spar caps and attaching structure is limited to 7,693 hours time in service.
NOTE 4	Air Tractor Model AT-501 airplane is eligible for conversion to Model AT-502 configuration in accordance with Air Tractor Service Letter No. 80A dated April 14, 1989.

IV - Model AT-502 1 PCLM (Restricted Category), Approved June 23, 1987

Engine	Pratt & Whitney PT6A-15AG, PT6A-27, PT6A-34, PT6-34AG, PT6A-36, or PT6A-34B.
Fuel	Per specifications CPW 46, PWA 522, GB 6537-94 (Peoples' Republic of China RP-3 kerosene), or automotive diesel fuels. For recommended use of anti-icing additives, limitations of using automotive diesel fuels, and emergency use of aviation gasoline per MIL-G-5572, refer to the FAA Approved Airplane Flight Manual.
Oil	Per specifications CPW 202 or PWA 521.

Engine Limits PT6A-15AG or PT6A-27

Power Setting	SHP	Torque Ft-Lb	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pres PSIG	Oil Temp °C
All Operations	680 ISA +6.7°C	1628	725	38,100 101.5	2200 100.0	80 to 100	10 to 99
Lo Idle			660			40 (MIN)	-40 to 99
Starting			1090 2 seconds				-40(MIN)
Transient		2100	825 2 seconds	38,500 102.6	2420 110.0		0 to 99
Max Reverse	620	1554	725	35,812 95.5	2100 95.5	80 to 100	0 to 99

Engine Limits PT6A-34, PT6A-34AG, PT6A-36, or PT6A-34B

Power Setting	SHP	Torque Ft-Lb	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pres PSIG	Oil Temp °C
All Operations	750 ISA +15.6°C	1795	790	38,100 101.5	2200 100.0	85 to 105	10 to 99
Lo Idle			685			40 (MIN)	-40 to 99
Starting			1090 2 seconds				-40(MIN)
Transient		2100	850 2 seconds	38,500 102.6	2420 110.0		0 to 99
Max Reverse	750	1795	790	35,812 95.5	2100 95.5	85 - 105	0 to 99

Propeller & Propeller Limits: Hartzell HC-B3TN-3D/T10282 +4 or HC-B3TN-3D/T10282N + 4 or HC-B3TN-3D/T10282NS + 4
Maximum dia. 106 inch, minimum. dia. 102 inch.
Pitch settings, high 86° - 88°, low 18°, reverse -8.0° at 30-inch station.

Airspeed Limits (CAS):

VNE (Never Exceed)	155 mph (135 knots)
VA (Maneuvering)	140 mph (122 knots)
VNO (Max. structural cruise)	140 mph (122 knots)
VFE (Flap extended)	115 mph (100 knots)

See NOTE 6 regarding VNE speed

C.G. Range:
(+16.0) to (+26.0) at 6,500 lbs (S/N 502-0003 thru 502-0038)
(+16.0) to (+28.0) at 6,500 lbs (S/N 502-0039 thru 502-0061)
(+16.0) to (+24.0) at 8,000 lbs (S/N 502-0062 and subs.)
(+16.0) to (+28.0) at 6,980 lbs and below
Straight-line variation between points
See NOTE 4 regarding C.G. range.

Max Weight:
6,500 lbs. (S/N 502-0003 thru 502-0061)
8,000 lbs. (S/N 502-0062 and subs.)
See NOTE 5 regarding gross weight

No. of Seats: 1 (+74.0), 2(+74.0) with optional buddy seat installed per Dwg. 11360

Max Hopper Load: 4,100 lbs. (+12.0)

Fuel Capacity:

126 gallons (+33.0)	(120 gal. usable, one 63 gal. tank in each wing)
170 gallons optional (+33.0)	(164 gal. usable, one 85 gal. tank in each wing)
216 gallons optional (+33.0)	(210 gal. usable, one 108 gal. tank in each wing)
234 gallons optional (+33.0)	(228 gal. usable, one 117 gal. tank in each wing)

Oil Capacity: 9.2 quarts, 6.0 quarts usable

Control Surface Movements	Elevator	Up 28° ± 1°	Down 16° ± 1°
	Elevator tab	Up 9° ± 1.5°	Down 7° ± 1.5°
	Rudder	Left 21° ± 1°	Right 21° ± 1°
	Aileron	Up 20° ± 1°	Down 14° ± 1°
	Flaps	---	Down 26° ± 1.5°
	Aileron droop with full flap 10° ± 1°		

Serial Nos. Eligible: 502-0003 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.

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

a. Dust spreader (Dwg. 80020)
b. Standard spray system (Dwg. 80038)
c. Micronair spray system (Dwg. 80039)
d. Hopper rinse tank (Dwg. 80707, Sh. 1)
e. Hopper rinse tank (Dwg. 80707, Sh. 3)

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

Fire bomber gate and vent installation (Dwg. 80343)
Air conditioning system (Dwg. 60586)
COM radio or NAV/COM radio (Dwg. 60616)
Attitude Gyro (Dwg. 51619)
Fuel flowmeter (Dwg. 60585)
Cockpit heater (Dwg. 51026)
Air conditioning system (Dwg. 60740)
ADF (Dwg. 51619)
Turn coordinator (Dwg 51619)
Transponder (Dwg. 60434)
Directional Gyro (Dwg. 51619)
Vertical Speed Indicator (Dwg. 51619)
Light package (Dwg. 60038)

Datum: Wing leading edge.

Leveling Means: Top of left-hand 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 23, 1987, 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 the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.

NOTE 3: Safe-life of Air Tractor Model AT-502 wing lower spar caps and attaching structure, all serial numbers beginning with 502-0003, is limited to 1,650 hours time in service.

Owners may continue to operate their AT-502 aircraft beyond the safe-life listed above by following the requirements in Appendix 2—Alternative Method of Compliance (AMOC) to AD 2006-24-10.

Safe-life of Air Tractor Model AT-502 wings, any serial number beginning with 502-0003, that have been retrofitted with p/n 21058-1 and 21058-2 wing lower spar caps and p/n 21059-1/-2 spar blocks is 9,800 hours time in service from time of retrofit.

NOTE 4 C.G. range on serials 502-0003 through 502-0038 may be changed to (+16.0) to (+28.0) at 6,500 lbs. by removing existing elevator down spring attach strap and installing p/n 70466-3 strap per Dwg. 70465.

NOTE 5 Gross weight on serial 502-0002 through 502-0061 may be increased to 8,000 lbs. by incorporating main spar modifications in accordance with Air Tractor Service Letter No. 80J dated March 6, 1993 (or later FAA Approved version).

NOTE 6 VNE (Never Exceed) may be increased to 176 mph (153 knots) when Hartzell HC-B3TN-3D/T10282NS + 4 propeller is installed.

V - Model AT-402 1 PCLM (Restricted Category), Approved December 2, 1988

Engine Pratt & Whitney PT6A-15AG, PT6A-27, PT6A-34, or PT6-34AG

Fuel Per Specification CPW 46, PWA 522, GB 6537-94 (Peoples' Republic of China RP-3 kerosene), or automotive diesel fuels.
For recommended use of anti-icing additives, limitations of using automotive diesel fuels, and emergency use of aviation gasoline per MIL-G-5572, refer to the FAA Approved Airplane Flight Manual.

Oil Per Specification CPW 202 or PWA 521.

Engine Limits PT6A-15AG or PT6A-27

Power Setting	SHP	Torque Ft-Lb	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pres PSIG	Oil Temp °C
All Operations	680 ISA +6.7°C	1628	725	38,100 101.5	2200 100.0	80 to 100	10 to 99
Lo Idle			660			40 (MIN)	-40 to 99
Starting			1090 2 seconds				-40(MIN)
Transient		2100	825 2 seconds	38,500 102.6	2420 110.0		0 to 99
Max Reverse	620	1554	725	35,812 95.5	2100 95.5	80 to 100	0 to 99

Engine Limits PT6A-34 or PT6A-34AG

Power Setting	SHP	Torque Ft-Lb	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pres PSIG	Oil Temp °C
All Operations	680 ISA +15.6°	1628	790	38,100 101.5	2200 100.0	85 to 105	10 to 99
Lo Idle			685			40 (MIN)	-40 to 99
Starting			1090 2 seconds				-40(MIN)
Transient		2100	850 2 seconds	38,500 102.6	2420 110.0		0 to 99
Max Reverse	620	1554	750	35,812 95.5	2100 95.5	85 to 100	0 to 99

Propeller & Propeller Limits Hartzell HC-B3TN-3D/T10282 +4 or HC-B3TN-3D/T10282N + 4 or HC-B3TN-3D/T10282NS + 4
Max dia. 106 inch Min dia. 102 inch
Pitch settings feather 86° - 88°, low 18°, reverse -8.0° at 30-inch station.

Airspeed Limits (CAS)	VNE (Never Exceed)		140 mph (122 knots)
	VA (Maneuvering)		140 mph (122 knots)
	VNO (Max. structural cruise)		140 mph (122 knots)
	VFE (Flap extended)		115 mph (100 knots)
	See NOTE 4 regarding VNE speed.		
C.G. Range	(+16.0) to (+24.0) at 6,000 pounds.		
	(+16.0) to (+27.5) at 5,562 pounds and below.		
	Straight-line variation between points.		
Max Weight	6000 pounds.		
No. of Seats	1 (+74.0)		
	1 Crew (+110.0) when optional loader seat is installed in accordance with Dwg 11524		
Max Hopper Load	3,250 lbs. (+12.0)		
Fuel Capacity	126 gallons (+33.0)		(120 gal. usable, one 63 gal. tank in each wing)
	170 gallons optional (+33.0)		(164 gal. usable, one 85 gal. tank in each wing)
	216 gallons optional (+33.0)		(210 gal. usable, one 108 gal. tank in each wing)
	234 gallons optional (+33.0)		(228 gal. usable, one 117 gal. tank in each wing)
Oil Capacity	9.2 quarts, 6.0 quarts usable		
Control Surface Movements	Elevator	Up 28° ± 1°	Down 18° ± 1°
	Elevator tab	Up 11° ± 1.5°	Down 10° ± 1.5°
	Rudder	Left 21° ± 1°	Right 21° ± 1°
	Aileron	Up 20° ± 1°	Down 14° ± 1°
	Flaps	---	Down 20° ± 1.5°
	Aileron droop with full flap 8° ± 1°		
Serial Nos. Eligible	402-0694 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.		
Agricultural Dispersal Equipment	The following agricultural dispersal equipment may be installed: None, or any of the following:		
	a. Dust spreader (Dwg. 80020)		
	b. Standard spray system (Dwg. 80038)		
	c. Micronair spray system (Dwg. 80039)		
	d. Hopper rinse tank (Dwg. 80939)		
Optional Equipment	The following items of optional equipment may be installed. Other items of optional equipment may be approved but not listed here.		
	Fire bomber gate and vent installation (Dwg. 80343)		
	Cockpit heater (Dwg. 51026)		
	Engine driven air conditioner (Dwg. 60906)		
	3-Piece Windshield (Dwg. 11464)		
	Windshield washer (Dwg. 80216)		
	Windshield wiper (Dwg. 60177)		
	Avionics (Dwg. 60616)		
	Night working lights (Dwg. 60038)		
	Automatic Flagman (Dwg. 80038)		
	Smoker (Dwg. 80610)		
	Attitude Gyro (Dwg. 50950)		
	Turn Coordinator (Dwg. 50950)		
	Fuel Flowmeter (Dwg. 60585)		
	Transponder (Dwg. 60434)		
	Crophawk Flowmeter (Dwg. 80038)		
	Loader Seat (Dwg. 11524)		
	ADF (Dwg. 60616)		

NAV/COM Radio (Or COM only) (Dwg. 60616)

Datum — Wing leading edge.

Leveling Means — Top of left-hand main landing gear leg at intersection fuselage side skin.

Baggage — One baggage compartment at (+94.0). 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 November 23, 1988, 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 the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.

NOTE 3 — Safe-life of Air Tractor Model AT-402, all serial numbers, wing carry-through structure, and attaching structure is limited to 7,440 hours' time in service.

NOTE 4 — VNE (Never Exceed) may be increased to 176 mph (153 knots) when Hartzell HC-B3TN-3D/T10282NS + 4 Propeller is installed.

VI - Model AT-402A 1 PCLM (Restricted Category), Approved November 15, 1989

Engine — Pratt & Whitney PT6A-11AG, PT6A-11, PT6A-20, PT6A-20A, PT6A-20B, PT6A-21, or PT6A-11AG BS 943.

Fuel — Per Specifications CPW 46, PWA 522, GB 6537-94 (Peoples' Republic of China RP-3 kerosene), or automotive diesel fuels.
For recommended use of anti-icing additives, limitations of using automotive diesel fuels, and emergency use of aviation gasoline per MIL-G-5572, refer to the FAA Approved Airplane Flight Manual.

Oil — Per Specifications CPW 202 or PWA 521.

Engine Limits PT6A-11AG or PT6A-11

Power Setting	SHP	Torque Ft-Lb	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pres PSIG	Oil Temp °C
All Operations	500 ISA +6.7°C	1194	700	38,100 101.5	2200 100.0	80 to 100	10 to 99
Lo Idle			660			40 (MIN)	-40 to 99
Starting			1090(3) 2 seconds				-40(MIN)
Transient		1500	825(3) 2 seconds	38,500 102.6	2420 110.0		0 to 99
Max Reverse	475	1194	700	38,100 101.5	2112 96.0	80 to 100	0 to 99

Engine Limits PT6A-20 or PT6A-20A or PT6A-20B

Power Setting	SHP	Torque Ft-Lb	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pres PSIG	Oil Temp °C
All Operations	500 ISA +6.7°C	1194	700	38,100 101.5	2200 100.0	65 to 105	10 to 99
Lo Idle			660			40 (MIN)	-40 to 99
Starting			1090(3) 2 seconds				-40(MIN)
Transient		1500	850(3) 2 seconds	38,500 102.6	2420 110.0		0 to 99
Max Reverse	500	1315	750	38,100 101.5	2090 95.0	65 to 85	0 to 99

Engine Limits PT6A-21

Operating Condition	SHP	Torque Ft-Lb	Maximum ITT°C	37500=100% Gas Gen (Ng) RPM %	Prop RPM (Np)	Note (7) Oil Press PSI	Note(8) Oil Temp (°C)
Take-off	550	1315	695	38,100 101.5	2,200	80 to 100	10 to 99
Max Cont. (1)	550	1315	695	38,100 101.5	2,200	80 to 100	10 to 99
Hi Idle				25,875 68-70		80 to 100	0 to 99
Lo Idle (RUN)(2)			660(3)	19,500 51-53		40 min.	-40 to 99
Starting			1090(4)				-40 min.
Acceleration (5)		1500	825	38,500 102.6	2,420		0 to 99
Max. Reverse (6)	500	1315	695	38,100 101.5	2,112	80 to 110	0 to 99

Engine Limits PT6A-11AG BS943

			Maximum	37500=100% Gas Gen (Ng)		Prop	Note (7) Oil	Note (8)
Operating Condition	SHP	Torque Ft-Lb	ITT°C	RPM	%	RPM (Np)	Press PSI	Oil Temp (°C)
Take-off	550	1315	700	38,100	101.5	2,200	80 - 100	10 - 99
Max Cont. (1)	550	1315	700	38,100	101.5	2,200	80 - 100	10 - 99
Hi Idle				25,875	68-70		80 - 100	0 - 99
Lo Idle (RUN)(2)			660(3)	19,500	51-53		40 min.	-40 - 99
Starting			1090(4)					-40 min.
Acceleration (5)		1500	825	38,500	102.6	2,420	80 - 100	0 - 99
Max. Reverse (6)	500	1315	700	38,100	101.5	2,112	80 - 110	0 - 99

Propeller & Propeller Limits: Hartzell HC-B3TN-3D/T10282 + 4 or HC-B3TN-3D/T10282N + 4 or HC-B3TN-3D/T10282NS + 4
Max dia. 106 inch Min dia. 102 inch
Pitch settings feather 86° - 88°, low 18°, reverse -8.0° at 30-inch station.

Airspeed Limits (CAS):

VNE (Never Exceed)	140 mph	(122 knots)
VA (Maneuvering)	140 mph	(122 knots)
VNO (Max. structural cruise)	140 mph	(122 knots)
VFE (Flap extended)	115 mph	(100 knots)

See NOTE 4 regarding VNE speed.

C.G. Range:

FOR AIRCRAFT WITH 6000 POUND MAX. WEIGHT:
(+16.0) to (+24.0) at 6,000 pounds.
(+16.0) to (+27.5) at 5,562 pounds and below.
Straight-line variation between points.

FOR AIRCRAFT WITH 7000 POUND MAX. WEIGHT:
(+17.5) to (+24.0) at 7,000 pounds
(+17.5) to (+28.0) at 6,400 pounds and below
Straight-line variation between points.

Max Weight:
6000 pounds.
7000 pounds (For S/N 402A-1015, 402A-1021 and subsequent and with:
P/N 40059-21 or 40059-34 Main Landing Gear Installation,
and PT6A-11AG BS 943 or PT6A-21 engine installed)

No. of Seats	1 (+74.0) 1 crew (+110.0) when optional loader seat is installed in accordance with Dwg. 11524.
Max Hopper Load	3,250 lbs.
Fuel Capacity	126 gallons (+33.0) (120 gal. usable, one 63 gal. tank in each wing) 170 gallons optional (+33.0) (164 gal. usable, one 85 gal. tank in each wing) 216 gallons optional (+33.0) (210 gal. usable, one 108 gal. tank in each wing) 234 gallons optional (+33.0) (228 gal. usable, one 117 gal. tank in each wing)
Oil Capacity	9.2 quarts, 6.0 quarts usable

Control Surface Movements	Elevator	Up 28° ± 1°	Down 18° ± 1°
	Elevator tab	Up 11° ± 1.5°	Down 10° ± 1.5°
	Rudder	Left 21° ± 1°	Right 21° ± 1°
	Aileron	Up 20° ± 1°	Down 14° ± 1°
	Flaps	---	Down 20° ± 1.5°
	Aileron droop with full flap 10° ± 1°		

Serial Nos. Eligible	402A-0738 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.
Agricultural Dispersal Equipment	The following agricultural dispersal equipment may be installed: None, or any of the following: a. Dust spreader (Dwg. 80020) b. Standard spray system (Dwg. 80038) c. Micronair spray system (Dwg. 80039) d. Hopper rinse tank (Dwg. 80939)
Optional Equipment	The following items of optional equipment may be installed. Other items of optional equipment may be approved but not listed here. Fire bomber gate and vent installation (Dwg. 80343) Cockpit heater (Dwg. 51026) Engine driven air conditioner(Dwg. 60906) 3-Piece Windshield (Dwg. 11464) Windshield washer (Dwg. 80216) Windshield wiper (Dwg. 60177) Avionics (Dwg. 60616) Night working lights (Dwg. 60038) Automatic Flagman (Dwg. 80038) Smoker (Dwg. 80610) Attitude Gyro (Dwg. 50950) Turn Coordinator (Dwg. 50950) COM radio or NAV/COM radio (Dwg. 60616) Fuel Flowmeter (Dwg. 60585) Loader Seat (Dwg. 11524) Transponder (Dwg. 60434 or 61157) Crophawk Flowmeter (Dwg. 80038) ADF (Dwg. 60616 FCU Override System (Dwg. 70640) Garmin/Apollo SL40 COM radio (Dwg. 61339) Optional Hopper Gauge System (Dwg. 82060) Amsafe Inflatable Restraints (Dwg. 10094) Electronics International MVP-50T Engine Monitor Installation (Dwg. 53157) Ram Air Engine Inlet (Dwg. 50463) Optional Engine Power Quadrant (Dwg. 70585)
Datum	Wing leading edge.

Leveling Means	Top of left-hand main landing gear leg at intersection fuselage side skin.
Baggage	One baggage compartment at (+94.0). 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 November 15, 1989, 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 the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.
NOTE 3	Safe-life of Air Tractor Model AT-402A, serial numbers 402A-0738 thru 402A-0951, wing lower spar caps and attaching structure is limited to 7,440 hours time in service. Safe-life of Air Tractor Model AT-402A, serial numbers 402A-0952 thru 402A-1020 except 1015, wing lower spar caps and attaching structure is limited to 2,000 hours time in service. Safe-life of Air Tractor Model AT-402A, serial numbers 402A-1015 and 402A-1021 thru 402A-1182, wing lower spar caps and attaching structure is limited to 2,300 hours time in service. Owners may continue to operate their AT-402A aircraft beyond the safe-life listed above by following the requirements in Appendix 2 – Alternative Method of Compliance (AMOC) to AD 2006-08-08. Safe-life of Air Tractor model AT-402A, any serial number, wings that have been retrofitted with p/n 21058-1 and 21058-2 wing lower spar caps and p/n 21059-1/-2 splice blocks is 9,800 hours time in service from time of retrofit. Safe-life of Air Tractor Model AT-402A, all serial numbers beginning with 402A-1183, wing lower spar caps and attaching structure is limited to 9,800 hours time in service.
NOTE 4	VNE (Never Exceed) may be increased to 176 mph (153 Knots) when Hartzell HC-B3TN-3D/T10282NS+4 Propeller is installed.

VII - Model AT-503A 2 PCLM (Restricted Category), Approved November 26, 1990

Engine	Pratt & Whitney PT6A-34 or PT6A-34AG
Fuel	Per Specifications CPW 46, PWA 522, GB 6537-94 (Peoples' Republic of China RP-3 kerosene), or automotive diesel fuels. For recommended use of anti-icing additives, limitations of using automotive diesel fuels, and emergency use of aviation gasoline per MIL-G-5572, refer to the FAA Approved Airplane Flight Manual.
Oil	Per Specifications CPW 202 or PWA 521.

Engine Limits PT6A-34 or PT6A-34AG

Power Setting	SHP	Torque Ft-Lb	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pres PSIG	Oil Temp °C
All Operations	750 ISA +15.6°C	1795	790	38,100 101.5	2200 100.0	85 to 105	20 to 99
Lo Idle			685	19,500		40 (MIN)	-40 to 99
Starting			1090 2 seconds				-40(MIN)
Transient		2100	850 2 seconds	38,500 102.6	2420 110.0	85 to 105	0 to 99
Max Reverse	750	1795	790	33,100 95.5	2100 95.5	85 to 105	0 to 99

Propeller & Propeller Limits: Hartzell HC-B3TN-3D/T10282 +4 or HC-B3TN-3D/T10282N+4 or HC-B3TN-3D/T10282NS+4.
Max dia. 106 inch Min dia. 102 inch
Pitch settings feather 86° - 88°, low 18°, reverse -8.0° at 30-inch station.

Airspeed Limits (CAS):

VNE (Never Exceed)	155 mph	(135 knots)
VA (Maneuvering)	140 mph	(122 knots)
VNO (Max. structural cruise)	140 mph	(122 knots)
VFE (Flap extended)	115 mph	(100 knots)

See NOTE 4 regarding VNE Speed.

C.G. Range: (+18.0) to (+24.0) at 8,000 pounds.
(+18.0) to (+28.0) at 6,980 pounds and below.
Straight-line variation between points.

Max Weight: 8000 pounds.

No. of Seats: 1 (+74.0), 2(+74.0) with optional buddy seat installed per Dwg. 11360
1 crew (+110) when optional loader seat is installed in accordance with Dwg. 11524.

Max Hopper Load: 4,100 lbs.

Fuel Capacity:

126 gallons (+33.0)		(120 gal. usable, one 63 gal. tank in each wing)
170 gallons optional (+33.0)		(164 gal. usable, one 85 gal. tank in each wing)
216 gallons optional (+33.0)		(210 gal. usable, one 108 gal. tank in each wing)

Oil Capacity: 9.2 quarts, 6.0 quarts usable

Control Surface Movements:

Elevator	Up 28° ± 1°	Down 18° ± 1°
Elevator tab	Up 9° ± 1.5°	Down 7° ± 1.5°
Rudder	Left 21° ± 1°	Right 21° ± 1°
Aileron	Up 20° ± 1°	Down 14° ± 1°
Flaps	---	Down 26° ± 1.5°

Aileron droop with full flap 10° ± 1°

Serial Nos. Eligible: 503A-0067 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.

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

a. Dust spreader (Dwg. 80020)
b. Standard spray system (Dwg. 80038)
c. Micronair spray system (Dwg. 80039)
d. Hopper rinse tank (Dwg. 80707, Sh. 3)

Optional Equipment	The following items of optional equipment may be installed. Other items of optional equipment may be approved but not listed here. Fire bomber gate and vent installation (Dwg. 80343) Air Conditioning system (Dwg. 60586) COM radio or NAV/COM radio (Dwg. 60516) Attitude Gyro (Dwg. 50913) Fuel Flowmeter (Dwg. 60585) Cockpit Heater (Dwg. 51026) ADF (Dwg. 51619) Turn Coordinator (Dwg. 51619) Transponder (Dwg. 60434 or 61157) Directional Gyro (Dwg. 51619) Vertical Speed Indicator (Dwg. 51619) Light Package (Dwg. 60038)
Datum	Wing leading edge.
Leveling Means	Screw heads on engine inlet air scoop
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 November 26, 1990, 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 the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.
NOTE 3	Safe-life of Air Tractor Model AT-503A, all serial numbers beginning with 503A-0067, wing lower spar caps and attaching structure is limited to 1,650 hours time in service. Owners may continue to operate their AT-503A aircraft beyond the safe-life listed above by following the requirements in Appendix 2—Alternative Method of Compliance (AMOC) to AD 2006-24-10. Safe-life of Air Tractor Model AT-503A, any serial number, wings that have been retrofitted with p/n 21058-1 and 21058-2 wing lower spar caps and p/n 21059-1/02 splice blocks is 9,800 hours time in service from time of retrofit.
NOTE 4	VNE may be increased to 176 mph (153 knots) when Hartzell HC-B3TN-3D/T10282NS+4 propeller is installed.

VIII - Model AT-401A 1 PCLM (Restricted Category) Approved December 1, 1991

Engine	Wsk - "Pezetel" PZL-3S 2nd Series (Note 4)				
Fuel	91 Minimum grade aviation gasoline				
Engine Limits	Condition	HP	RPM	M.P	ALT.
	Takeoff (1 min.)	592	2200	37.0	S.L.
	Max. Continuous	542	2100	35.8	S.L.
	Max. Continuous	473	2100	32.0	5000

Propeller & Propeller Limits	Wsk Model US-132000/A constant speed, hydromatic, 4- blade. Diameter 103.7 inch maximum, 102-inch minimum. Pitch settings 12.0° low and 32.0° ± 1.0° high.	
Airspeed Limits (CAS)	VNE (Never Exceed)	176 mph (153 knots)
	VA (Maneuvering)	140 mph (122 knots)
	VNO (Max. structural cruise)	140 mph (122 knots)
	VFE (Flap extended)	115 mph (100 knots)

C.G. Range	(+16.0) to (+24.0) at 6,000 pounds (+16.0) to (+24.5) at 5,937 pounds Straight-line variation between points.		
Max Weight	6,000 pounds		
No. of Seats	1 (+74.0)		
Max. Hopper Load	3,250 lbs. (+12.0)		
Fuel Capacity	126 gal. (+33.0) (120 gal. usable capacity, one 63.0 gal. tank in each wing)		
Oil Capacity	9.5 gal. total 71 lbs. at (-23.0) (8 gal. usable)		
Control Surface Movements	Elevator	Up 28° ± 1°	Down 18° ± 1°
	Elevator tab	Up 11° ± 1.5°	Down 10° ± 1.5°
	Rudder	Left 21° ± 1°	Right 21° ± 1°
	Aileron	Up 20° ± 1°	Down 14° ± 1°
	Flaps	---	Down 26° ± 1.5°
	Aileron droop with full flap 10° ± 1°		
Serial Nos. Eligible	401-0662 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.		
Agricultural Dispersal Equipment	The following agricultural dispersal equipment may be installed: None, or any of the following: a. Dust spreader (Dwg. 80020) b. Standard spray system (Dwg. 80038) c. Micronair spray system (Dwg. 80039)		
Optional Equipment	The following items of optional equipment may be installed. Other items of optional equipment may be approved but not listed here. Fire bomber gate and vent installation (Dwg 80343).		
Datum	Wing leading edge.		
Leveling Means	Top of left-hand main landing gear leg at intersection of fuselage side skin.		
Baggage	One baggage compartment at (+94.0). 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 November 1, 1991, 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: 36 lbs. at (+33.0).		
NOTE 2	All placards required by either the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.		
NOTE 3	Safe-life of Air Tractor Model AT-401A, any serial number, wing carry-through structure, and attaching structure is limited to 10,757 hours time in service.		

NOTE 4 Cylinders having larger cooling fins PZL P/N 20.33.0280 are to be installed per PZL S/B Number 86/PZL-3S/90. Engine placard (data plate) is to be modified per Drawing 51135.

IX - Model AT-502A 1 PCLM (Restricted Category), Approved April 10, 1992

Engine Pratt & Whitney PT6A-45R, PT6A-45A, PT6A-45B, PT6A-60AG, PT6A-65B, PT6A-65AG, or PT6A-140AG

Fuel Per Specifications CPW 46, PWA 522, GB 6537-94 (Peoples' Republic of China RP-3 kerosene).
For recommended use of anti-icing additives and emergency use of aviation gasoline per MIL-G-5572, refer to the FAA Approved Airplane Flight Manual.

Oil Per Specifications CPW 202 or PWA 521.

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

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pressure PSIG	Oil Temp °C
Takeoff	1100 ISA+ 0°C	3398		800	39,000 104.0	1700 100.0	90 to 135 NOTE 5	10 to 99
MAX. Continuous	1020 ISA+ 18.3°C	3398		800	39,000 104.0	1700 100.0	90 to 135	0 to 99
MAX Climb MAX Cruise	922 ISA +0°C	3398	740	765	39,000 104.0	1425 83.8	90 to 135	0 to 99
MIN Idle				700 (6)	2100 56.0 (MIN)		60 (MIN)	-40 to 99
Starting			800	1000 (4)			0 to 200	-40 (MIN)
Transient		5100 20 SEC (MAX)		850	39,000 104.0	1870 110.0	60 (MIN)	0 to 110
Max Reverse	900 @ ISA			800		1650 97.0	90 to 135	0 to 99

Engine Limits PT6A-60AG

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pressure PSIG	Oil Temp °C
Takeoff	1050	3245		820	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				750	58.0		60 Min.	-40 to 99
Starting			800	1000 (5)			0 to 200	-40 to 99
Transient		5100		850 (20)	104.0	1870	40 to 200	0 to 110
Max Reverse	900			760		1650	90 to 135	10 to 99

Engine Limits PT6A-65B or PT6A-65AG

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pressure PSIG	Oil Temp °C
Takeoff	1100	3398		820	104.0	1700	90 to 135	10 to 99
MAX. Continuous	1020	3398		810	104.0	1700	90 to 135	10 to 99
MIN Idle				700	58.0		60 Min.	-40 to 99
Starting			700	1000 (5)			0 to 200	-40 to 99
Transient		5100		870 (20)	104.0	1870	40 to 200	0 to 110
Max Reverse	900			760		1650	90 to 135	0 to 99

Engine Limits PT6A-140AG

Power Setting	SHP	Torque Ft-Lb	Nominal ITT°	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pressure PSIG	Oil Temp °C
Takeoff	867	2397		870	103.7	1900	85 to 120	10 to 99
MAX. Continuous (NOTE 4)	810	2239 2363		825	103.7	1900 1800	85 to 120	10 to 99
MAX Climb	867	2397	785	825	103.7	1900	85 to 120	0 to 99
MAX Cruise (NOTE 4)	810	2239 2363	785	805	103.7	1900 1800	85 to 120	0 to 99
MIN Idle				700	55.0 MIN		40 MIN	-40 to 99
Starting				1090 (2)			0 to 200	-40 to 99
Transient		2800 (20)		905 (20)	106.8	2090		0 to 104 (10 min)
Max Reverse	867			850		1825	85 to 120	0 to 99

Propeller & Propeller Limits

For PT6A-45R, -45A, -45B, -60AG, -65B, or -65AG 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.
Stabilized ground operation is prohibited between 400 and 900 RPM and between 1170 and 1400 RPM.

or Hartzell HC-B5MP-3A/M10282A+6
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.
Stabilized ground operation is prohibited between 400 and 900 RPM and between 1170 and 1400 RPM.

For PT6A-140AG Engine:
Hartzell HC-B4TN-3C/T10702NS
Maximum dia. 108.0 inch, minimum dia. 107.0 inch
Pitch settings, high 80.7°, low 8.2°, reverse -15.0° at 42 inch station.
Stabilized ground operation is prohibited between 400 and 1100 RPM.

Airspeed Limits (CAS)

VNE (Never Exceed)	176 mph (153 knots)
VA (Maneuvering)	140 mph (122 knots)
VNO (Max. structural cruise)	140 mph (122 knots)
VFE (Flap extended)	115 mph (100 knots)

C.G. Range

For PT6A-45R, -45A, -45B, -60AG, -65B, or -65AG Engines:
(+16.0) to (+23.0) at 8,000 pounds
(+16.0) to (+28.0) at 6,980 pounds and below
Straight-line variation between points

For PT6A-140AG Engine:
(+18.0) to (+23.0) at 8,000 pounds
(+18.0) to (+28.0) at 6,980 pounds and below
Straight-line variation between points

Max Weight

8,000 pounds

No. of Seats

1 (+74.0), 2(+74.0) with optional buddy seat installed per Dwg. 11360
1 crew (+110) when optional loader seat is installed in accordance with Dwg. 11524.

Max Hopper Load

4,100 pounds (+12.0)

Fuel capacity

170 gallons (+33.0)
(164 gal. usable capacity, one 85 gal. tank in each wing)

216 gallons optional (+33.0)
(210 gal. usable capacity, one 108 gal. tank in each wing)

234 gallons optional (+33.0)
(228 gal. usable capacity, one 117 gal. tank in each wing)

Oil capacity	For PT6A-45R, -45A, -45B, -60AG, -65B, or -65AG Engines: 10.0 quarts, 6.0 quarts usable For PT6A-140AG Engine: 12.0 quarts, 6.0 quarts usable		
Control Surface Movements	Elevator	Up 28° ± 1°	Down 16° ± 1°
	Elevator tab	Up 9° ± 1.5°	Down 7° ± 1.5°
	Rudder	Left 21° ± 1°	Right 21° ± 1°
	Aileron	Up 20° ± 1°	Down 14° ± 1°
	Flaps	---	Down 26° ± 1.5°
	Aileron droop with full flap 10° ± 1°		
Serial Nos. Eligible	502A-0158 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.		
Agricultural Dispersal Equipment	The following agricultural dispersal equipment may be installed: None, or any of the following: a. Dust spreader (Dwg. 80020) b. Standard spray system (Dwg. 80038) c. Micronair spray system (Dwg. 80039) d. Hopper rinse tank (Dwg. 80707, Sh. 1) e. Hopper rinse tank (Dwg. 80707, Sh. 3)		
Optional Equipment	The following items of optional equipment may be installed. Other items of optional equipment may be approved but not listed here. Fire bomber gate and vent installation (Dwg. 80343) Air Conditioning system (Dwg. 60586) COM radio or NAV/COM radio (Dwg. 60616) Attitude Gyro (Dwg. 51619) Cockpit Heater (Dwg. 51377) Air conditioning system (Dwg. 60740) Turn Coordinator (Dwg. 51619) ADF (Dwg. 51619) Transponder (Dwg. 60434 or 61157) Directional Gyro (Dwg. 51619) Vertical Speed Indicator (Dwg. 51619) Light Package (Dwg. 60038) Buddy Seat (Dwg. 11360) Loader Seat (Dwg. 11524) FCU Override System (Dwg. 70640) Garmin Apollo SL40 COM Radio (Dwg. 61339) Optional Hopper Gauge System (Dwg. 82060) Amsafe Inflatable Restraints (Dwg. 10094) Electronics International MVP-50T Engine Monitor Installation (Dwg. 53159 for PT6A-45R/-45A/-45B/-60AG/-65B/-65AG Engines OR Dwg. 53158 for PT6A-140AG Engine) Ram Air Engine Inlet (Dwg. 50825 for PT6A-45R/-45A/-45B/-60AG/-65B/-65AG Engines OR Dwg. 50463 for PT6A-140AG Engine) Optional Engine Power Quadrant (Dwg. 70622)		
Datum	Wing leading edge.		
Leveling Means	Top of left-hand 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 For PT6A-45R, -45A, -45B, -60AG, -65B, or -65AG Engines:
FAA approved Airplane Flight Manual (p/n 01-0037) dated April 9, 1992, or later FAA approved revision is required.

For PT6A-140AG Engine:
FAA approved Airplane Flight Manual (p/n 01-0153) dated February 4, 2016 or later FAA approved revision is required.

For all engines:
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 the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.

NOTE 3 Safe-life of Air Tractor Model AT-502A, serial 502A-0158 thru 502A-0654 except 502A-0643, wing lower spar caps and attaching structure is limited to 1,650 hours time in service.

Owners may continue to operate their AT-502A aircraft beyond the safe-life listed above by following the requirements in Appendix 2—Alternative Method of Compliance (AMOC) to AD 2006-24-10.

Safe-life of Air Tractor Model AT-502A wings that have been retrofitted with p/n 21058-1 and 21058-2 wing lower spar caps and p/n 21059-1/-2 splice blocks is 9.800 hours time in service from time of retrofit.

Safe-life of Air Tractor Model AT-502A, serial 502A-0643 and 502A-0655 thru 502A-0692, wing lower spar caps and attaching structure are limited to 9,000 hours time in service. In accordance with AD 2006-24-10, cold work the left-hand and the right-hand two outboard wing center splice block bolt holes (4 total) in the lower spar caps before accumulating 2,000 hours TIS following Snow Engineering Co. Service Letter #244, dated April 25, 2005.

Safe-life of Air Tractor Model AT-502A, serial 502A-0693 thru 502A-0701, wing lower spar caps and attaching structure is limited to 9,500 hours time in service.

Safe-life of Air Tractor Model AT-502A, all serial numbers beginning with 502A-0702, wing lower spar caps and attaching structure is limited to 9,800 hours time in service.

NOTE 4 For PT6A-140AG engine: If the external dispersal equipment is removed (for ferry flight or other operations), Max Continuous and Max Cruise Power must be reduced to 660 SHP by reducing torque as follows:
At 1900 RPM, use maximum of 1824 Ft-Lb of torque.
At 1800 RPM, use maximum of 1926 Ft-Lb of torque.
At 1700 RPM, use maximum of 2039 Ft-Lb of torque.

NOTE 5 Oil Pressure Range for PT6A-45A and PT6A-45B is 100 to 135 psig.

X - Model AT-502B 1 PCLM (Restricted Category), Approved December 8, 1992

Engine Pratt & Whitney PT6A-15AG, PT6A-27, PT6A-34, PT6A-34AG, PT6A-36, or PT6A-34B.

Fuel Per Specifications CPW 46, PWA 522, GB 6537-94 (Peoples' Republic of China RP-3 kerosene), or automotive diesel fuels.
For recommended use of anti-icing additives, limitations of using automotive diesel fuels, and emergency use of aviation gasoline per MIL-G-5572, refer to the FAA Approved Airplane Flight Manual.

Oil Per Specifications CPW 202 or PWA 521.

Engine Limits PT6A-15AG or PT6A-27

Power Setting	SHP	Torque Ft-Lb	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pressure PSIG	Oil Temp °C
All Operations	680 ISA +6.7°C	1628	725	38,100 101.5	2200 100.0	80 to 100	10 to 99
Lo Idle			660			40 (MIN)	-40 to 99
Starting			1090 2 seconds				-40(MIN)
Transient		2100	825 2 seconds	38,500 102.6	2420 110.0		0 to 99
Max Reverse	620	1554	725	35,812 95.5	2100 95.5	80 to 100	0 to 99

Engine Limits PT6A-34, PT6A-34AG, PT6A-36, or PT6A-34B.

Power Setting	SHP	Torque Ft-Lb	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pressure PSIG	Oil Temp °C
All Operations	750 ISA +15.6°C	1795	790	38,100 101.5	2200 100.0	85 to 105	10 to 99
Lo Idle			685			40 (MIN)	-40 to 99
Starting			1090 2 seconds				-40(MIN)
Transient		2100	850 2 seconds	38,500 102.6	2420 110.0		0 to 99
Max Reverse	750	1795	790	35,812 95.5	2100 95.5	85 to 105	0 to 99

Propeller & Propeller Limits: Hartzell HC-B3TN-3D/T10282 +4 or HC-B3TN-3D/T10282N+4 or HC-B3TN-3D/T10282NS +4.
Max dia. 106 inch Min dia. 102 inch
Pitch settings, high 86° - 88°, low 18°, reverse -8.0° at 30-inch station.

Airspeed Limits (CAS):

VNE (Never Exceed)	155 mph	(135 knots)
VA (Maneuvering)	140 mph	(122 knots)
VNO (Max. structural cruise)	140 mph	(122 knots)
VFE (Flap extended)	115 mph	(100 knots)

See NOTE 4 regarding VNE speed.

C.G. Range: (+18.0 in.) to (+24.0 in.) at 8,000 pounds.
(+18.0 in.) to (+28.0 in.) at 6,980 pounds and below.
Straight-line variation between points.

Max Weight: 8,000 pounds.

No. of Seats: 1 (+74.0), 2 (+74.0) with optional buddy seat installed per Dwg. 11360
1 crew (+110.0) when optional loader seat is installed in accordance with Dwg. 11524.

Max Hopper Load: 4,100 lbs. (+12.0)

Fuel Capacity:

126 gallons (+33.0)	(120 gal. usable, one 63 gal. tank in each wing)
170 gallons optional (+33.0)	(164 gal. usable, one 85 gal. tank in each wing)
216 gallons optional (+33.0)	(210 gal. usable, one 108 gal. tank in each wing)
234 gallons optional (+33.0)	(228 gal. usable, one 117 gal. tank in each wing)

Oil Capacity: 9.2 quarts, 6.0 quarts usable

Control Surface Movements:

Elevator	Up 29° ± 1°	Down 16° ± 1°
Elevator tab	Up 9° ± 1.5°	Down 7° ± 1.5°
Rudder	Left 21° ± 1°	Right 21° ± 1°
Aileron	Up 20° ± 1°	Down 14° ± 1°
Flaps	---	Down 26° ± 1.5°

Aileron droop with full flap 10° ± 1°

Serial Nos. Eligible: 502B-0187 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.
Agricultural Dispersal Equipment	The following agricultural dispersal equipment may be installed: None, or any of the following: a. Dust spreader (Dwg. 80020) b. Standard spray system (Dwg. 80038) c. Micronair spray system (Dwg. 80039) d. Hopper rinse system (Dwg. 80707, Sh. 1) e. Hopper rinse system (Dwg. 80707, Sh. 3)
Optional Equipment	The following items of optional equipment may be installed. Other items of optional equipment may be approved but not listed here. Fire bomber gate and vent installation (Dwg. 80343) Air conditioning system (Dwg. 60586) COM radio or NAV/COM radio (Dwg. 60616) Attitude Gyro (Dwg. 51619) Fuel Flowmeter (Dwg. 60585) Cockpit Heater (Dwg. 51026) Air conditioning system (Dwg. 60740) Turn coordinator (Dwg. 51619) ADF (Dwg. 51619) Transponder (Dwg. 60434 or 61157) Directional Gyro (Dwg. 51619) Vertical Speed Indicator (Dwg. 51619) Light Package (Dwg. 60038) Buddy Seat (Dwg. 11360) Loader Seat (Dwg. 11524) FCU Override System (Dwg. 70640) Garmin/Apollo SL40 Com Radio (Dwg. 61339) Optional Hopper Gauge System (Dwg. 82060) Amsafe Inflatable Restraints (Dwg. 10094) Electronics International MVP-50T Engine Monitor Installation (Dwg. 53158) Ram Air Engine Inlet (Dwg. 50463) Optional Engine Power Quadrant (Dwg. 70622) Fuel Control Override System (Dwg. 70640)
Datum	Wing leading edge.
Leveling Means	Top of left-hand 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 December 8, 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 the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.
NOTE 3	Safe-life of Air Tractor Model AT-502B, serial 502B-0187 thru 502B-0654 except 502B-0643, wing lower spar caps and attaching structure is limited to 1,650 hours time in service.

Owners may continue to operate their AT-502B aircraft beyond the safe-life listed above by following the requirements in Appendix 2—Alternative Method of Compliance (AMOC) to AD 2006-24-10.

Safe-life of Air Tractor Model AT-502B, any serial number, wings that have been retrofitted with p/n 21058-1 and 21058-2 wing lower spar caps and p/n 21059-1/-2 splice blocks is 9,800 hours time in service from time of retrofit.

Safe-life of Air Tractor Model AT-502B, serial 502B-0643 and 502B-0655 thru 502B-0692, wing lower spar caps and attaching structure is limited to 9,000 hours time in service. In accordance with AD 2006-24-10, Cold work the left-hand and the right-hand two outboard wing center splice block bolt holes (4 total) in the lower spar caps before accumulating 2,000 hours TIS following Snow Engineering Co. Service Letter #244, dated April 25, 2005.

Safe-life of Air Tractor Model AT-502B, serial 502B-0693 thru 502B-0701, wing lower spar caps and attaching structure is limited to 9,500 hours time in service.

Safe-life of Air Tractor Model AT-502B, all serial numbers beginning with 502B-0702, wing lower spar caps and attaching structure is limited to 9,800 hours time in service.

NOTE 4 VNE (Never Exceed) may be increased to 176 mph (153 knots) when Hartzell HC-B3TN-3D/T10282NS+4 propeller is installed.

XI - Model AT-401B 1 PCLM (Restricted Category) Approved July 22, 1994

Engine: Pratt & Whitney Wasp R1340 AN1 (S3H1 Commercial designation) with carburetor parts list setting 395118-3, A-18639-7 or A-18639-8.

or Pratt & Whitney Wasp R1340 S1H1 with carburetor parts list setting 395118-3, A-18639-7, or A-18639-8.

Fuel: 80/87 minimum grade aviation gasoline.

Engine Limits

	HP	RPM	M.P.	ALT.
Takeoff (5 minutes)	600	2250	36.0	S.L.
Max. Continuous	550	2200	34.0	S.L.
Max. Continuous	550	2200	32.5	5000

Propeller & Propeller Limits: Hamilton Standard 22D40 hub, 6533A-12 blades, constant speed, hydromatic.
Diameter 109 inch maximum 107-inch minimum.
Pitch settings 12.0 degrees low and 35 degrees high at 42-inch sta.

or Hamilton Standard 22D40 hub, EAC AG200-2 blades, constant speed, hydromatic.
Diameter 106 inch maximum 104-inch minimum.
Pitch settings 12.0 degrees low and 35 degrees high at 42 inch station.

or Hamilton Standard 12D40 hub, 6101A-12 blades, constant speed.
Diameter 109 inch maximum 107-inch minimum.
Pitch settings 12.0 degrees low and 26 degrees high at 42 inch station.

or Hamilton Standard 23D40 hub, 6533A-18 blades, constant speed, hydromatic, 3-blade.
Diameter 103 inch maximum 101-inch minimum.
Pitch settings 10.0 degrees low and 35 degrees high at 42 inch station.

or Hamilton Standard 12D40 hub, EAC AG100-2 blades, constant speed.
Diameter 106 inch maximum 104-inch minimum.
Pitch settings 11.0 degrees low and 26 degrees high at 42 inch station.

Airspeed Limits (CAS)

VNE (Never Exceed)	176 mph (153 knots)
VA (Maneuvering)	140 mph (122 knots)
VNO (Max. structural cruise)	140 mph (122 knots)
VFE (Flap extended)	115 mph (100 knots)

C.G. Range

FOR AIRCRAFT WITH 6000 POUND MAX. WEIGHT:
(+16.0) to (+24.0) at 6,000 pounds
(+16.0) to (+24.5) at 5,937 pounds and below
Straight-line variation between points.

FOR AIRCRAFT WITH 7000 POUND MAX. WEIGHT:
(+18.0) to (+24.0) at 7,000 pounds
(+18.0) to (+27.5) at 6,475 pounds

Max Weight

6,000 pounds
7,000 pounds (For S/N 402B-1015, 402B-1021 and subsequent with P/N 40059-21 or 40059-34 Main Landing Gear installed)

No. of Seats

1 (+74.0)
1 crew (+110.0) when optional loader seat is installed in accordance with Dwg. 11524

Max Hopper Load

3,250 lbs. (+12.0)

Fuel Capacity

126 gallons (+33.0) (120 gal. usable, one 63 gal. tank in each wing)
170 gallons optional (+33.0) (164 gal. usable, one 85 gal. tank in each wing)
216 gallons optional (+33.0) (210 gal. usable, one 108 gal. tank in each wing)

Oil Capacity

9.5 gal. total 71 lb. at (-23.0) (8 gal. usable)

Control Surface Movements

Elevator	Up 28° ± 1°	Down 18° ± 1°
Elevator tab	Up 11° ± 1.5°	Down 10° ± 1.5°
Rudder	Left 21° ± 1°	Right 21° ± 1°
Aileron	Up 20° ± 1°	Down 14° ± 1°
Flaps	---	Down 26° ± 1.5°

Aileron droop with full flap 10° ± 1°

Serial Nos. Eligible

401B-0952 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.

Agricultural Dispersal Equipment

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

a. Dust spreader (Dwg. 80020)
b. Standard spray system (Dwg. 80038)
c. Micronair spray system (Dwg. 80039)
d. Hopper rinse tank (Dwg. 80939)

Optional Equipment

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

Fire bomber gate and vent installation (Dwg 80343).
3-Piece Windshield (Dwg. 11464)
Windshield washer (Dwg. 80216)
Windshield wiper (Dwg. 60177)
Avionics (Dwg. 60195)
Night working lights (Dwg. 60038)
Automatic Flagman (Dwg. 80038)
Smoker (Dwg. 80610)
Loader Seat (Dwg. 11524)
Attitude Gyro (Dwg. 50899)
Turn Coordinator (Dwg. 50899)
Garmin/Apollo SL40 Com Radio (Dwg. 61339)

Datum

Wing leading edge.

Leveling Means

Top of left-hand main landing gear leg at intersection of fuselage side skin.

Baggage

One baggage compartment at (+94). 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 13, 1994, 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: 36 lbs. at (33.0).

NOTE 2 All placards required by either the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.

NOTE 3 Safe-life of Air Tractor Model AT-401B, serial numbers 401B-0952 thru 401B-1020, except 1015, wing lower spar caps and attaching structure is limited to 6,948 hours time in service.

Safe-life of Air Tractor Model AT-401B, serial numbers 401B-1015 and 401B-1021 thru 401B-1182, wing lower spar caps and attaching structure is limited to 7,777 hours time in service.

Safe-life of Air Tractor Model AT-401B, all serial numbers beginning with 401B-1183 wing lower spar caps and attaching structure is limited to 9,800 hours time in service.

Safe-life of Air Tractor Model AT-401B, any serial number, wings that have been retrofitted with p/n 21058-1 and 21058-2 wing lower spar caps and p/n 21059-1/-2 splice blocks is 9,800 hours time in service from time of retrofit.

XII - Model AT-402B 1 PCLM (Restricted Category), Approved October 25, 1994

Engine Pratt & Whitney PT6A-15AG, PT6A-27, PT6A-34, or PT6-34AG

Fuel Per Specification CPW 46, PWA 522, GB 6537-94 (Peoples' Republic of China RP-3 kerosene), or automotive diesel fuels.
For recommended use of anti-icing additives, limitations of using automotive diesel fuels, and emergency use of aviation gasoline per MIL-G-5572, refer to the FAA Approved Airplane Flight Manual.

Oil Per Specification CPW 202 or PWA 521.

Engine Limits PT6A-15AG or PT6A-27

Power Setting	SHP	Torque Ft-Lb	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pres PSIG	Oil Temp °C
All Operations	680 ISA +6.7°C	1628	725	38,100 101.5	2200 100.0	80 to 100	10 to 99
Lo Idle			660			40 (MIN)	-40 to 99
Starting			1090 2 seconds				-40(MIN)
Transient		2100	825 2 seconds	38,500 102.6	2420 110.0		0 to 99
Max Reverse	620	1554	725	35,812 95.5	2100 95.5	80 to 100	0 to 99

Engine Limits PT6A-34 or PT6A-34AG

Power Setting	SHP	Torque Ft-Lb	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pres PSIG	Oil Temp °C
All Operations	680 ISA +15.6°	1628	790	38,100 101.5	2200 100.0	85 to 105	10 to 99
Lo Idle			685			40 (MIN)	-40 to 99
Starting			1090 2 seconds				-40(MIN)
Transient		2100	850 2 seconds	38,500 102.6	2420 110.0		0 to 99
Max Reverse	620	1554	750	35,812 95.5	2100 95.5	85 to 105	0 to 99

Propeller & Propeller Limits: Hartzell HC-B3TN-3D/T10282 +4 or HC-B3TN-3D/T10282N+4 or HC-B3TN-3D/T10282NS +4
Max dia. 106 inch Min dia. 102 inch
Pitch settings feather 86° - 88°, low 18°, reverse -8.0° at 30-inch station.

Airspeed Limits (CAS):

VNE (Never Exceed)	140 mph	(122 knots)
VA (Maneuvering)	140 mph	(122 knots)
VNO (Max. structural cruise)	140 mph	(122 knots)
VFE (Flap extended)	115 mph	(100 knots)

See NOTE 4 regarding VNE speed.

C.G. Range:

FOR AIRCRAFT WITH 6000 POUND MAX. WEIGHT:
(+16.0) to (+24.0) at 6,000 pounds.
(+16.0) to (+27.5) at 5,562 pounds and below.
Straight-line variation between points.

FOR AIRCRAFT WITH 7000 POUND MAX. WEIGHT:
(+17.5) to (+24.0) at 7,000 pounds.
(+17.5) to (+28.0) at 6,400 pounds
and below. Straight-line variation between points.

Max Weight: 6000 pounds.
7000 pounds (For S/N 402B-1015, 402B 1021 and subsequent and with P/N 40059-21 or 40059-34 Main Landing Gear installed)

No. of Seats: 1 (+74.0)
1 crew (+110.0) when optional loader seat is installed in accordance with Dwg. 11524.

Max Hopper Load: 3,250 lbs. (+12.0)

Fuel Capacity:

126 gallons (+33.0)	(120 gal. usable, one 63 gal. tank in each wing)
170 gallons optional (+33.0)	(164 gal. usable, one 85 gal. tank in each wing)
216 gallons optional (+33.0)	(210 gal. usable, one 108 gal. tank in each wing)
234 gallons optional (+33.0)	(228 gal. usable, one 117 gal. tank in each wing)

Oil Capacity: 9.2 quarts, 6.0 quarts usable

Control Surface Movements:

Elevator	Up 28° ± 1°	Down 18° ± 1°
Elevator tab	Up 11° ± 1.5°	Down 10° ± 1.5°
Rudder	Left 21° ± 1°	Right 21° ± 1°
Aileron	Up 20° ± 1°	Down 14° ± 1°
Flaps	---	Down 20° ± 1.5°

Aileron droop with full flap 8° ± 1°

Serial Nos. Eligible: 402B-0966 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.

Agricultural Dispersal Equipment	The following agricultural dispersal equipment may be installed: None, or any of the following: a. Dust spreader (Dwg. 80020) b. Standard spray system (Dwg. 80038) c. Micronair spray system (Dwg. 80039) d. Hopper rinse tank (Dwg. 80939)
Optional Equipment	The following items of optional equipment may be installed. Other items of optional equipment may be approved but not listed here. Fire bomber gate and vent installation (Dwg. 80343) Cockpit heater (Dwg. 51026) Engine driven air conditioner (Dwg. 60906) 3-Piece Windshield (Dwg. 11464) Windshield washer (Dwg. 80216) Windshield wiper (Dwg. 60177) Avionics (Dwg. 60616) Night working lights (Dwg. 60038) Automatic Flagman (Dwg. 80038) Smoker (Dwg. 80610) Attitude Gyro (Dwg. 50950) Turn Coordinator (Dwg. 50950) Fuel Flowmeter (Dwg. 60585) Transponder (Dwg. 60434 or 61157) Loader Seat (Dwg. 11524) Crophawk Flowmeter (Dwg. 80038) ADF (Dwg. 11524) NAV/COM Radio (Or Com Only) (Dwg. 60616) FCU Override System (Dwg. 70640) Garmin/Apollo SL40 Com Radio (Dwg. 61339) Optional Hopper Gauge System (Dwg. 82060) Amsafe Inflatable Restraints (Dwg. 10094) Electronics International MVP-50T Engine Monitor Installation (Dwg. 53157) Ram Air Engine Inlet (Dwg. 50463) Optional Engine Power Quadrant (Dwg. 70585) Fuel Control Override System (Dwg. 70640)
Datum	Wing leading edge.
Leveling Means	Top of left-hand main landing gear leg at intersection fuselage side skin.
Baggage	One baggage compartment at (+94.0). 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 November 23, 1988, 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 the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.
NOTE 3	Safe-life of Air Tractor Model AT-402B, serial numbers 402B-0966 thru 402B-1020 except 1015, wing lower spar caps and attaching structure is limited to 2,000 hours time in service. Safe-life of Air Tractor Model AT-402B, serial numbers 402B-1015 and 402B-1021 thru 402B-1182, wing lower spar caps and attaching structure is limited to 2,300 hours time in service.

Owners may continue to operate their AT-402B aircraft beyond the safe-life listed above by following the requirements in Appendix 2- Alternative Method of Compliance (AMOC) to AD 2006-08-08.

Safe-life of Air Tractor Model AT-402B, any serial number, wings that have been retrofitted with p/n 21058-1 and 21058-2 wing lower spar caps and p/n 21059-1/-2 splice blocks is 9,800 hours time in service from time of retrofit.

Safe-life of Air Tractor Model AT-402B, all serial numbers beginning with 402B-1183, wing lower spar caps and attaching structure is limited to 9,800 hours time in service.

NOTE 4 VNE (Never Exceed) may be increased to 176 mph (151 knots) when Hartzell HC-B3TN-3D/T10282NS+4 propeller is installed.

XIII - Model AT-504 2 PCLM (Restricted Category), Approved February 11, 2009

Engine Pratt & Whitney PT6A-34AG.

Fuel Per Specifications CPW 46, PWA 522, GB 6537-94 (Peoples' Republic of China RP-3 kerosene), or automotive diesel fuels.
For recommended use of anti-icing additives, limitations of using automotive diesel fuels, and emergency use of aviation gasoline per MIL-G-5572, refer to the FAA Approved Airplane Flight Manual.

Oil Per Specifications CPW 202 or PWA 521.

Engine Limits PT6A-34AG.

Power Setting	SHP	Torque Ft-Lb	Maximum Observed ITT°C	Ng RPM %	Np RPM %	Oil Pressure PSIG	Oil Temp °C
All Operations	750 ISA +15.6°C	1795	790	38,100 101.5	2200 100.0	85 to 105	10 to 99
Lo Idle			685			40 (MIN)	-40 to 99
Starting			1090 2 seconds				-40(MIN)
Transient		2100	850 2 seconds	38,500 102.6	2420 110.0		0 to 99
Max Reverse	750	1795	790	35,812 95.5	2100 95.5	85 to 105	0 to 99

Propeller & Propeller Limits: Hartzell HC-B3TN-3D/T10282 +4 or HC-B3TN-3D/T10282N+4 or HC-B3TN-3D/T10282NS+4.
Max dia. 106 inch Min dia. 102 inch
Pitch settings, high 86° - 88°, low 18°, reverse -8.0° at 30-inch station.

Airspeed Limits (CAS):

VNE (Never Exceed)	155 mph	(135 knots)
VA (Maneuvering)	140 mph	(122 knots)
VNO (Max. structural cruise)	140 mph	(122 knots)
VFE (Flap extended)	115 mph	(100 knots)

See NOTE 4 regarding VNE speed.

C.G. Range: (+18.0 in.) to (+26.5 in.) at 8,000 pounds.
(+18.0 in.) to (+29.0 in.) at 7,619 pounds and below.
Straight-line variation between points.

Max Weight: 8,000 pounds.

No. of Seats: 1 (+74.0)
1 crew (+74.0)

Max Hopper Load: 4,100 lbs. (+5.5)

Fuel Capacity:

126 gallons (+33.0)	(120 gal. usable, one 63 gal. tank in each wing)
170 gallons optional (+33.0)	(164 gal. usable, one 85 gal. tank in each wing)
216 gallons optional (+33.0)	(210 gal. usable, one 108 gal. tank in each wing)
234 gallons optional (+33.0)	(228 gal. usable, one 117 gal. tank in each wing)

Oil Capacity	9.2 quarts, 6.0 quarts usable		
Control Surface Movements	Elevator	Up 29° ± 1°	Down 16° ± 1°
	Elevator tab	Up 9° ± 1.5°	Down 7° ± 1.5°
	Rudder	Left 21° ± 1°	Right 21° ± 1°
	Aileron	Up 20° ± 1°	Down 14° ± 1°
	Flaps	---	Down 26° ± 1.5°
	Aileron droop with full flap 10° ± 1°		
Serial Nos. Eligible	504-4001 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.		
Agricultural Dispersal Equipment	The following agricultural dispersal equipment may be installed: None, or any of the following: a. Dust spreader (Dwg. 80020) b. Standard spray system (Dwg. 80038) c. Micronair spray system (Dwg. 80039) d. Hopper rinse system (Dwg. 80707, Sh. 7) e. Automatic flagger (Dwg. 80612) f. Drift finder smoker (Dwg. 80610) g. Crop Hawk, Micronair, Accuflo flowmeter (Dwg. 80990) h. 48 extra nozzles (Dwg. 80037) i. Night working lights (Dwg. 60956)		
Optional Equipment	The following items of optional equipment may be installed. Other items of optional equipment may be approved but not listed here. Fire bomber gate and vent installation (Dwg. 80343) Air conditioning system (Dwg. 60740-11) COM radio or NAV/COM radio (Dwg. 60616) Attitude Gyro (Dwg. 51619 Sh. 8) Fuel Flowmeter (Dwg. 60585) Cockpit Heater (Dwg. 51026) Turn coordinator (Dwg. 51619 Sh. 8) ADF (Dwg. 51619 Sh. 8) Transponder (Dwg. 60434 or 61157) Directional Gyro (Dwg. 51619 Sh. 8) Vertical Speed Indicator (Dwg. 51619 Sh. 8) Light Package (Dwg. 60038) Garmin/Apollo SL40 Com Radio (Dwg. 61339) Optional Hopper Gauge System (Dwg. 82060) Amsafe Inflatable Restraints (Dwg. 13721) Electronics International MVP-50T Engine Monitor Installation (Dwg. 53158) Ram Air Engine Inlet (Dwg. 50463) Optional Engine Power Quadrant (Dwg. 70585)		
Datum	Wing leading edge.		
Leveling Means	Top of left-hand 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 February 2, 2009, 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 the FAA Approved Airplane Flight Manual, the applicable operating rules, or the certification basis must be installed as specified.

NOTE 3 Safe-life of Air Tractor Model AT-504, all serial numbers beginning with 504-4001 wing lower spar caps and attaching structure is limited to 9,800 hours time in service.

NOTE 4 VNE (Never Exceed) may be increased to 176 mph (153 knots) when Hartzell HC-B3TN-3D/T10282NS+4 propeller is installed.

DATA PERTINENT TO ALL MODELS

When operating in the restricted category, operators may approve higher maximum weights as permitted by FAA Advisory Circular No. 20-33B and Civil Aeronautic Manual No. 8. With respect to this action, the following aircraft have demonstrated satisfactory operation in the restricted category under the following conditions:

(a) Model AT-401 at 7860 lbs., 1,300-ft. altitude, outside air temperature 90°F, stall speed 84 mph CAS, maximum speed 140 mph CAS.

(b) Model AT-401A at 7860 lbs., 1,300-ft. altitude, outside air temperature 90°F, stall speed 84 mph CAS, maximum speed 140 mph CAS.

(c) Model AT-401B at 7,860 lbs., 1,300-ft. altitude, outside air temperature 90°, stall speed 84 mph CAS, maximum speed 140 mph CAS.

(d) Model AT-402 at 7860 lbs., 1,300-ft. altitude, outside air temperature 90°F, stall speed 84 mph CAS, maximum speed 140 mph CAS.

(e) Model AT-402A at 7860 lbs., 1,300-ft. altitude, outside air temperature 90°F, stall speed 84 mph CAS, maximum speed 140 mph CAS.

(f) Model AT-402B at 7860 lbs., 1,300-ft. altitude, outside air temperature 90°F, stall speed 84 mph CAS, maximum speed 140 mph CAS. (s/n 402B-0966 thru 1020 except 1015) Model AT-402B at 9170 lbs., 1300-ft. altitude, outside air temperature 90°F, stall speed 88 mph CAS, maximum speed 140 mph CAS. (s/n 402B-1015, 402-1021 and subsequent)

(g) Model AT-501 at 8500 lbs., 1,300-ft. altitude, outside air temperature 90°F, stall speed 86 mph CAS, maximum speed 140 mph CAS.

(h) Model AT-502 S/N 502-0001 through 502-0061, at 8500 lbs., 1,300 ft. altitude, outside air temperature 90°F, stall speed 86 mph CAS, maximum speed 140 mph CAS.

(i) Model AT-502, S/N 502-0062 and subs., at 9,200 lbs., 1,300-ft. altitude, outside air temperature 90°F, stall speed 89 mph CAS, maximum speed 140 mph CAS.

(j) Model AT-502A at 10,480 lbs., 1,300-ft. altitude, outside air temperature 90°F, stall speed 95 mph CAS, maximum speed 140 mph CAS.

(k) Model AT-502B, at 9,400 lbs., 1,300-ft. altitude, outside air temperature 90°F, stall speed 90 mph CAS, maximum speed 140 mph CAS.

(l) Model AT-503 at 10,480 lbs., 1,300-ft. altitude, outside air temperature 90°F, stall speed 97 mph CAS, maximum speed 148 mph CAS.

(m) Model AT-503A at 9,200 lbs., 1,300-ft. altitude, outside air temperature 90°F, stall speed 89 mph CAS, maximum speed 140 mph CAS.

(m) Model AT-504 at 9,600 lbs., 1,300-ft altitude, outside air temperature 85°F, stall speed 91 mph CAS, maximum speed 140 mph CAS.

Certification Basis for Models AT-401, AT-401A, AT-401B and AT-501: FAR 21.25(a)(1). Aircraft met structural requirements of FAR 23, Basis February 1, 1965, through Amendment 23-9. Flight criteria, propulsion and systems and equipment items met the requirements of Appendix B, CAM 8, November 15, 1951, as amended through January 20, 1956.

Certification Basis for Models AT-502, AT-502A, AT-502B, AT-402, AT-402A, AT-402B, AT-503, and AT-503A: FAR 21.25(a)(1), (b)(1), (b)(2). Aircraft met structural requirements of FAR 23, Basis February 1, 1965, through Amendment 23-9. Flight criteria, propulsion and systems and equipment items met the requirements of Appendix B, CAM 8, November 15, 1951, as amended through January 20, 1956. Turbine engine effective December 28, 1984; FAR 23.33, 23.361, 23.371, 23.903(b), 23.905, 23.907, 23.929, 23.933(a), 23.939, 23.951(c), 23.954, 23.955, 23.961, 23.991(a)(2), 23.993, 23.997(d), 23.1045, 23.1091(c), 23.1093, 23.1111, 23.1121(g), 23.1141(e), and 23.1155.

Certification Basis for Model AT-504: FAR 21.25(a)(1), (b)(1), (b)(2). Aircraft met structural requirements of FAR 23, Basis February 1, 1965, through Amendment 23-9. Flight criteria, propulsion and systems and equipment items met the requirements of Appendix B, CAM 8, November 15, 1951, as amended through January 20, 1956. Turbine engine effective December 28, 1984; FAR 23.33, 23.361, 23.371, 23.903(b), 23.905, 23.907, 23.929, 23.933(a), 23.939, 23.951(c), 23.954, 23.955, 23.961, 23.991(a)(2), 23.993, 23.997(d), 23.1045, 23.1091(c), 23.1093, 23.1111, 23.1121(g), 23.1141(e), and 23.1155. Control system requirements FAR 23.395, 23.397, 23.399 through Amendment 23-53. Emergency landing Dynamic Conditions requirements FAR 23-562 through Amendment 23-36. Equivalent Level of Safety Findings: ELOS #ACE-09-02 Dated February 11, 2009 -14 CFR Part 23 §23.562, Amendment 23-36, Emergency landing Dynamic Conditions.

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