

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

E8EA Revision: 5 HONEYWELL (AlliedSignal, Textron Lycoming) T5307A FEBRUARY 1, 2000

TYPE CERTIFICATE DATA SHEET NO. E8EA

Engines of models described herein conforming with this data sheet (which is a part of Type Certificate No. E8EA) and other approved data on file with the Federal Aviation Administration meet the minimum standard for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Federal Aviation Regulations provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other approved instructions.

TYPE CERTIFICATE (TC) HOLDER: Honeywell International Inc.
111 South 34th Street
Phoenix, AZ 85034

Model	T5307A
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TYPE AXIAL - centrifugal flow, free turbine turboprop. Five stage axial and single stage centrifugal compressor. External annular vaporizing combustion chamber. Single stage gas producer turbine. Single stage power turbine.

RATING

At nominal output shaft speed of 1710 rpm	
Maximum continuous at sea level, hp.	1000
Takeoff (5 min.) at sea level, hp.	1100

FUEL CONTROL

Chandler Evans Model TA-2F with integral dual element pump

FUEL (see Note 10)

OIL

Synthetic type conforming to MIL-L-7808

PRINCIPAL DIMENSIONS

Length, in.	58.62
Nominal diameter, in.	23.70
Maximum radius, in.	13.31

WEIGHT (dry), lb.

560

(includes essential engine accessories but excludes starter, two tachometer generators, oil tank and oil cooler)

C.G. LOCATION (dry weight)

Aft of front mount pad centerline in.	11.50
Below engine horizontal centerline in.	.71

IGNITION SYSTEM (28 volts D.C.)

Scintilla type TGLN 1112 with spark splitter coil and two shunted surface gap igniter plugs
AC 5610719

IGNITER PLUGS

NOTES

1,2,3,4,5,6,7,8,9,10

CERTIFICATION BASIS

CAR 13, effective June 15, 1956, as amended by 13-1, 13-2, and 13-3. Type Certificate		
<u>Model</u>	<u>Date of Application</u>	<u>Type Certificate Issued</u>
T5307A	September 26, 1963	July 17, 1964

PRODUCTION BASIS
2000.

Production Certificate No. 413NM issued to Honeywell International Inc. January 25,

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- NOTE 1. Maximum permissible gas producer speeds are: 25,200 rpm - takeoff
24,700 rpm - maximum continuous
- NOTE 2. Maximum permissible temperatures:
Maximum permissible exhaust gas temperature varies with ambient temperature as shown in the Honeywell International Inc. manual of FAA approved data. The exhaust gas temperature is measured by three thermocouples located in the exhaust diffuser of the engine.
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|---|--------|
| Oil outlet temperature | 300°F. |
| Ignition unit surface temperature | 238°F. |
| Fuel control ambient temperature | 240°F. |
| Igniter solenoid valve surface temperatures | 250°F. |
| Air bleed control ambient temperature | 260°F. |
- NOTE 3. Fuel and oil pressure limits:
Fuel: 0-50 p.s.i.g.
Oil: Minimum - 10 p.s.i. ground idle
60 p.s.i. takeoff and maximum continuous
Maximum - 80 p.s.i.
- NOTE 4. Accessory drive provisions:
- | Drive | AND Type | No. Required | Gear Ratio | Maximum Torque (in.-lb.) | | Rotation* |
|--------------------------|----------------------|--------------|------------|--------------------------|--------|-----------|
| | | | | Cont. | Static | |
| Gas producer tachometer | 20005 XV-B modified | 1 | .1670 | 7 | 50 | C |
| Starter-generator | 20002 XII-D modified | 1 | .2833 | 220 | 1296 | C |
| Power takeoff | 20002 XII-D modified | 1 | .5397 | 150 | 680 | C |
| Power turbine tachometer | 20005 XV-B | 1 | .1997 | 7 | 50 | C |
- *C - Clockwise; CC - Counterclockwise
- The customer accessory horsepower extraction limits are presented in graphical form in the Honeywell International Inc. manual of FAA approved data.
- NOTE 5. Engine ratings are based on calibrated stand performance under the following conditions:
Static sea level standard conditions of 59°F and 29.92 in.Hg.
No inlet duct losses, no loading of the accessory drives and minimum permissible bleed air flow.
Exhaust configuration as defined by Honeywell International Inc. drawing 1-000-029-03.
- NOTE 6. Maximum permissible air bleed extraction is 3.0% at standard sea level static conditions at 92% maximum continuous power and below.
- NOTE 7. The nominal power turbine operating speed is 21,190 rpm. Maximum power turbine speed is 21,300 rpm at all conditions including takeoff.
- NOTE 8. Power turbine output shaft torque limits:
Takeoff 3580 ft. lb.
Maximum continuous 3280 ft. lb.
- NOTE 9. These engines meet FAA requirements for operation in icing conditions, for adequate turbine disc integrity and rotor blade containment and do not require airframe mounted armoring. They have not, however, been tested to evaluate the effects of ingestion of birds. The bird ingestion characteristics of the airframe air inlet and engine combination are to be evaluated prior to the approval of the engine installation in an airplane.
- NOTE 10. MIL-DTO-5624, Grades JP-4 and JP-5. MIL-DTO-83133, Grade JP-8. ASTM D1655 Jet A, Jet A-1, and Jet B. Refer to Honeywell Maintenance Manual 330.2 for equivalent fuels and additives.

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