

	<u>T5309A</u>	<u>T5309B</u>	<u>T5309C</u>	<u>T5311A</u> <u>T5311B</u>
C.G. location (dry weight)				
Aft of front mount pad centerline, in.	14.10	--	--	--
Below engine horizontal centerline, in.	.65	--	--	--
Ignition system (28 volts D.C.)	Bendix type TGLN 1112 with spark splitter coil and two shunted surface gap igniter plugs	--	--	--
Igniter plugs	Bendix 10-165660-1	--	AC 5610719	--
NOTES	1,2,3,4,5,6,7,8,9,10,11	--	--	--

"- -" indicates "same as preceding model"

"__" indicates "does not apply"

Certification Basis

<u>Regulations and Amendments</u>	<u>Model</u>	<u>Date of Application</u>	<u>Date Type Certificate E1EA Issued/Amended</u>
CAR 13, effective June 15, 1956	T5309A	December 28, 1960	September 20, 1962
As amended by 13-1, 13-2, & 13-3	T5309B	September 27, 1962	November 6, 1962
	T5309C	April 4, 1963	April 18, 1963
	T5311A	June 15, 1962	September 3, 1963
	T5311B	October 16, 1968	October 23, 1968

Production Basis Production Certificate No. 413NM reissued to Honeywell International Inc. on January 25, 2000.

NOTE 1. Maximum permissible gas producer speeds are: 25,200 r.p.m. - takeoff
24,700 r.p.m. - 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.

Oil outlet temperature	300° F
Ignition unit surface temperature	238° F
Fuel control ambient temperature	240° F
Igniter solenoid valve surface temperature	250° F
Air bleed control ambient temperature	260° F

NOTE 3. Fuel and oil pressure limits:

Fuel: 0 - 50 p.s.i.g.

Oil: Ground idle	10 p.s.i. minimum
Operating range	20 to 80 p.s.i.
Takeoff and maximum continuous	60 p.s.i. minimum

NOTE 4. Accessory drive provisions:

Drive	AND Type	No. Required	Gear Ratio	Maximum Torque (in.-lb.)			Rotation
				Continuous	Short Time ⁽¹⁾	Static	
Gas producer tachometer	20005 XV-B Modified	1	.1670	7	----	50	c
Starter-generator	20002 XII-D Modified	1	.2833	220	320 ⁽³⁾	1296 ⁽²⁾	c
Power takeoff	20002 XII-D Modified	1	.5397	150	22	680	c
Power turbine tachometer	20005 XV-B Modified	1	.1992	7	---	50	c

c - Clockwise

(1) Maximum permissible torque for 5-minute periods, recurring at not less than 4-hour intervals.

(2) Maximum permissible torque during starts is 1296 in.-lb.

(3) Generator torque in excess of 320 in.-lb. is permissible up to a maximum of 625 in.-lb. for a period of not more than 15 seconds.

The customer accessory horsepower extraction limits are presented 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 shall be in accordance with Figure 4 in the Honeywell International Inc. Manual of FAA Approved Data.

NOTE 7. The nominal power turbine operating speed is 21,190 r.p.m. Maximum power turbine speed is 21,300 r.p.m. at all conditions including takeoff.

NOTE 8. Power turbine output shaft torque limits:

Takeoff	926 ft.-lb.
Maximum continuous	850 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.

NOTE 10. MIL-DTO-5624, Grades JP-4 and JP-5. MIL-DTO-83133, Grade JP-8. ASTM D1655 Jet A, Jet A-2, and Jet B. Refer to Honeywell International Inc. Maintenance Manual 330.2 for equivalent fuels and additives.

NOTE 11. The above models incorporate the following general characteristics:

T53 Model

Characteristics

09A	Basic model. Bleed air bled from peripheral gap in centrifugal compressor housing.
09B	Same as 09A except bleed air bled from series of holes in rear vanes of diffuser.
09C	Same as 09B except revised combustion chamber parts to permit operation on JP-5 fuel.
11A	Same as 09C except fuel regulator provides control of the transient air bleed for decreased acceleration time.
11B	Same as 11A except for output shaft spline.

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