

FEDERAL AVIATION AGENCY

3E2 Revision 3 C. A. & E. CJ69-1025 August 8, 1966
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TYPE CERTIFICATE DATA SHEET NO. 3E2

Engines of models described herein conforming with this data sheet (which is part of type certificate No. 3E2) and other approved data on file with the Federal Aviation Agency meet the minimum standards 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 Holder	Continental Aviation & Engineering Corporation 12700 Kercheval Detroit, Michigan 48215
Model	CJ69-1025
Type - Turbojet	Single stage, centrifugal flow compressor Single annular combustion chamber Single stage, axial flow turbine
Ratings (static, sea level) (see NOTE 3)	
Max. continuous thrust, lb., r.p.m.	880, 20,700
Takeoff thrust (5 min.), lb., r.p.m.	1025, 21,730
Fuel control	Bendix HJ-A2, HJ-A1
Fuel, normal	MIL-J-5624D, JF-4
Oil	MIL-L-7808 (Esso Turbo 15, Penola Turbo 15)
Principal dimensions	
Length, overall, in. (excludes inner tail cone but includes typical starter generator housing)	50-3/8
Diameter, in.	22-3/8
Weight (dry), lb. (excludes tailpipe, jet nozzle and starter-generator)	364
C.G. location (in. aft of main mounts)	10.6 w/start-gen., 12.2 w/o start-gen.
Ignition system	Bendix type TGLN-2113 with dual ignition coil and two Champion FHE-158B or AC P/N 5611193 igniters (GLA igniter coil CA&E P/N 576580 opt.)
Certification basis	Part 13 of the Civil Air Regulations Application for Type Certificate dated October 27, 1955. Type Certificate No. 3E2 issued October 28, 1958, for Model CJ69-920; Model CJ69-1025 added November 20, 1959. Model CJ69-920 cancelled June 24, 1965.
Production basis	None

NOTE 1. Maximum permissible temperatures

Turbine exhaust gas temperatures	
Takeoff (5 min.)	1250°F. (677°C.)
Maximum continuous	1200°F. (649°C.)
Transient	Shall not exceed 1425°F. (774°C) below 50% engine speed, nor 1375°F. (746°C.) above 50% engine speed, and in no case shall exceed 1450°F (788°C)
Oil inlet temperatures	200°F. (93°C.)
External engine component temperatures	
Ahead of firewall, ambient air	200°F. (93°C.)
Rear bearing air cooling supply	200°F. (93°C.)

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NOTE 2. Fuel and oil pressure limits

Fuel pump inlet, from 10 p.s.i. above the vapor pressure of the fuel to 50 p.s.i.g.

Oil pump outlet, 20 p.s.i.g. to 40 p.s.i.g. at 20,700 r.p.m. or above.

NOTE 3. The sea level static ratings are based on the following conditions and test equipment:

Compressor inlet, air 59°F. and 29.92 in. Hg abs., dry

Turbine outlet gas temperature 1225°F

Engine speed, maximum 21,730 r.p.m.

No compressor air bleed

No inlet air distortion

No accessory loading (generator or hydraulic pump)

Jet nozzle area 68 sq. in. (nominal)

Bellmouth inlet CA&E dwg. 564480

Tailpipe assembly CA&E dwg. 569643

Tailcone assembly CA&E dwg. 569646

NOTE 4. The following accessory drive or mounting provisions are available:

Original Accessory	Direction of Rotation	Gear Ratio	Max. Torque (in.-lb.)			Maximum Overhang Moment (in. -lb.)
			Continuous	Static	15 Sec. Overload	
Starter-Generator	C	0.360:1	100	1000	580	500
Hydraulic pump	C	0.169:1	175	1650	250	125
Tachometer	CC	0.194:1	7	50	15	50

NOTE 5. The following accessories not included in the basic engine weight are available at weight increases indicated:

Starter-Generator (200 a.)

35 lb.

Starter-Generator (100 a.)

32 lb.

Tachometer-Generator

2 lb.

Firewall

5 lb. (approx.)

NOTE 6. These engines have no provisions for anti-icing the inlets and have not been tested to determine the extent to which flights in icing conditions will adversely affect engine output.

NOTE 7. Compressor air bleed limitations:

The maximum permissible air bleed shall be 3 percent of the total compressor airflow.

NOTE 8. The HJ-A2 Bendix fuel control has no manual (emergency) fuel control circuit. An optional fuel control (Bendix HJ-A1) is available with an integral manual (emergency) control feature. When this control is used, an additional electrical connection is required from the air frame for transferring from automatic to manual circuit.

NOTE 9. These engines meet FAA requirements for adequate turbine disc integrity and rotor blade containment and do not require external armoring.

NOTE 10. Overspeed limitations:

No operation at speeds in excess of maximum allowable, 21,730 r.p.m. (100 per cent) should be attempted. The engine should be removed from the aircraft for disassembly inspection of the rotating shaft components any time the shaft speeds exceed 22,600 r.p.m. (104 per cent).

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