



Certification basis CAR 13 effective June 15, 1936, as amended by 13-1, 13-2 and 13-3. Type Certificate No. 306 issued September 9, 1958; CJ805-3B added November 9, 1960, CJ805-3A added June 30, 1961. Date of Application for Type Certificate November 2, 1956.

Production basis Production Certificate No. 108.

NOTE 1. Maximum permissible temperatures:

	<u>CJ805-3, -3A</u>	<u>CJ805-3B</u>
Turbine exhaust gas temperature		
Takeoff (5 min.)	1170°F	1170°F
Max. continuous	1040°F	1080°F
Max. transient for acceleration (3 min.)	1182°F	--
Max. transient for acceleration (1.5 min.)	—	1202°F
Max. transient for starting (4 sec.)	1400°F	--
Max. transient for starting (2 sec.)	1508°F	--
Oil inlet temperature	250°F	--
Accessory drive zone, max. ambient air temp.	300°F	--

NOTE 2. Fuel and oil pressure limits:

Fuel, minimum at engine pump inlet, 4 p.s.i. above absolute fuel vapor pressure with maximum of 50 p.s.i. above absolute ambient atmospheric pressure.

Oil pressure:

Normal operation (p.s.i.g.)	40 min., 80 max.
Idle (p.s.i.g.)	12 min., 40 max.

NOTE 3. Aircraft accessory drive provisions are as follows:

Drive	Rotation*	Speed Ratio	Maximum Torque (in. -lb.)		Maximum Overhang (in. -lb.)
			Continuous**	Static	
Starter	C	1.000	4800	7200	625
CSD and Generator	CC	1.000	79 hp.	6000	2000
Hyd. pump (2 pads)	C	0.482	1000	4400	400
Tachometer	C	0.562	17	45	4

\* "C" Clockwise, "CC" Counter clockwise, facing drive.

\*\* Combined customer accessory load not to exceed 113 hp. at engine idle speed (4474 r.p.m.) and 138 hp. at engine takeoff speed (7684 r.p.m.) with a straight line relationship between these points.

NOTE 4. The following accessory equipment is available, as indicated:

<u>Equipment</u>	<u>Remarks</u>
United Aircraft Products fuel heater and oil cooler are provided.	Fuel heater automatically controls fuel temperature within limits of 33°F to 45°F.
Tachometer generator is provided.	
Monument Engineering Company engine mounted oil tank is provided.	Contains two separate oil compartments. One contains 4.1 gal. for engine lubrication and other contains 1.8 gal. for CED unit.
CM thrust reverser model 7E-TR-22.	This equipment has been substantiated in accordance with CAR 13.260(a) and is eligible for use on these engines.)
CM noise suppresser exhaust nozzles models 7E-SEF-3, 7E-SEF-3A, 7E-SEF-3B	Eligible for use on engine models -3, -3A, and -3B, respectively.

NOTE 5. The CJ805-3 engine ratings are based on an engine speed and exhaust gas temperature (EGT) trim procedure and calibrated stand performance under the following conditions:

7684 r.p.m. and 1170°F EGT for T.O. (Limit r.p.m. is 7684 for T.O.)  
 7236 r.p.m. and 1040°F EGT for M.C. (Limit r.p.m. is 7684 for M.C.)  
 Compressor inlet air temperature 59°F.  
 Compressor inlet air pressure 29.92 in. Hg.  
 Turbine exhaust nozzle configuration per GB Dwg. Nos. 619E575 for outer cone, 514D325 for conical nozzle,  
 106R592 for inner cone.  
 GE Bellmouth air inlet per Dwg. 4012071-50.  
 GE inlet bullet nose per Dwg. 4012071-48.  
 No external air bleed or accessory drive power for aircraft accessories.  
 No anti-icing airflow.

(Complete performance parameters for model CJ805-3 are contained in GE Manual GE 59FPD725 Addendum No. 1.)

- NOTE 6. The CJ805-3A and -3B engine ratings are based on an engine pressure ratio (EPR) trim procedure and calibrated stand performance under the following conditions:
- Compressor inlet air pressure 59°F.
  - Compressor inlet air pressure 29.92 in. Hg.
  - GE Bellmouth air inlet.
  - No anti-icing air flow.
  - Turbine exhaust gas temperatures not exceeded.
  - (Limit r.p.m. is 7684 for both T.O. and M.C.)

Below 59°F, the sea level static thrust limitations for these models will increase as follows:

- the -3A; to 11,700 lb. max. at 31°F for T.O.  
to 11,700 lb. max. at -26°F for M.C.
- the -3B; to 12,200 lb. max. at 29°F for T.O.  
to 11,700 lb. max. at -40°F for M.C.

(Complete performance parameters for models CJ805-3A and -3B are contained in G.E. Performance Bulletins Nos. GEI 67888 and R60FPD4797, respectively.)

- NOTE 7. Maximum allowable compressor air bleed for aircraft purposes in 10% for engine speeds from idle to 6340 r.p.m. dropping to 5% at 6714 r.p.m. and above, with linear variation between 6340 r.p.m. and 6714 r.p.m.
- NOTE 8. Kerosene, JP-4 or JP-5 may be used separately or mixed in any proportions without affecting engine operation or performance. In emergencies, aviation grade gasoline may also be used either mixed with jet fuel or separately; however, all operations with any proportion of gasoline must be recorded and limited to a maximum accumulation of 10 hours during any engine overhaul period. No fuel control adjustment is required when switching fuel types.
- NOTE 9. The only optional additives which may be used in approved fuels are as follows:
- (1) Phillips PFA-55MB or anti-icing additives to specification MIL-I-27686d at a concentration not in excess of 0.15% by volume.
  - (2) SOHIO Biobor JF biocide additive at a concentration not in excess of 20 PPM elemental boron (270 PPM total additive).
  - (3) Shell ASA-3 anti-static additive at a concentration that will provide not in excess of 300 conductivity units which is approximately equivalent to 1 PPM.

The above additives may be used in combination.

- NOTE 10. These engines meet FAA requirements for operation in icing conditions and for adequate turbine disc integrity. They do require an external turbine blade shield conforming to GE Dwg. No. 514D678.

NOTE 11. These engines incorporate the following detailed characteristics:

CJ805-3	Basic Model.
CJ805-3A	Similar to -3 except incorporates control features to permit use of EPR trim system.
CJ805-3B	Similar to -3 except incorporates changes to permit increased air flow and thrust for takeoff. EPR trim system utilized normally. Engine model CJ805-3B may be reworked to conform to the -3 trim procedure and ratings by incorporating GE Kit No. 133A3175. This modification is described in GE CJ805-3B Service Bulletin No. 72-12. CJ805-3B engines so modified should have the suffix letter "K" added to the engine serial number.

NOTE 12. See G.E. Service Bulletin No. 74-4 (-3, -3A) or 74-5 (-3B) prior to use of igniter plug AA-308-9 or JC-805.

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