

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

E13CE
Revision 2
AMES
TRS 18-046
December 15, 1983

TYPE CERTIFICATE DATA SHEET NO. E13CE

Engines of models described herein conforming with this data sheet (which is a part of Type Certificate No. E13CE) and other approved data on file with the Federal Aviation Administration 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	Ames Industrial Corporation 55 Orville Drive Bohemia, New York 11716
Model	TRS 18-046
Type	Turbojet, single stage radial flow compressor, annular reverse flow combustion, single stage axial flow turbine.
Rating (See Note 1)	
Takeoff and maximum continuous at sea level static thrust, lb.	198.4
AT turbine exhaust temperature °F.	1202
Rotor speed RPM	44,000
Fuel control	Microturbo electric fuel pump 04600500 Microturbo control box 04603200 Throttle potentiometer impedance 1,000 ohms Moog servo valve model 33-164-C
Fuel	Fuels meeting the specification ATM-D-1655 (Jet A-1). Phillips PFA55MB anti-icing additive must be blended into the fuel in concentrations of not less than 0.060 or more than 0.15 percent by volume.
Oil (.74 qt. integral tank)	Oils should meet the following specifications: AIR 3514 MIL-L 7808 MIL-L 23699 DERD 2497
Principal dimensions	Diameter 12 inches, length (less tailpipe) 23 inches
Dry weight	80 lb. including starter-generator, distribution block assembly, and oil pump
C.G. location	13 inches from nose of starter generator
Ignition system	Bendix Model TGLN-28
Notes	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

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Certification basis	FAR 33 effective February 1, 1964, including Amendments 33-1 through 33-6. Type Certificate No. E13CE, issued May 25, 1976; Date of application for Type Certificate, January 16, 1975.
Production basis	Production Certificate No. 115 Ames Industrial Corporation Bohemia, New York 11716
Serial number applicability	No. 208, 209, 211, 219 and up

- NOTE 1. The engine ratings are based on static sea level conditions of 59°F., and 29.92 in.Hg.
- NOTE 2. Maximum permissible turbine exhaust gas temperature for takeoff and maximum continuous operation is 1328°F.
- NOTE 3. Maximum air bleed 1.16 lb./min.
- NOTE 4. This engine meets FAA requirements for adequate turbine disc integrity and rotor blade containment and does not require external armoring.
- NOTE 5. Maximum time engine may be operated under negative or zero "g" conditions is 30 sec.
- NOTE 6. Fuel system uses a return fuel line with an approximate 68°F. higher temperature than the inlet fuel. The maximum allowable return line pressure is 5.7 psi.
- NOTE 7. Minimum and maximum permissible ambient temperature limits for engine component accessories are -40°F. to 122°F. respectively.
- NOTE 8. Fuel inlet pressure limits Min.: 8.6 PSIA
 Max.: 28.6 PSIG
- NOTE 9. Fuel inlet temperature limits: Min. Temperature corresponding to a fuel viscosity of 12 CST
 Max.: 140°F.
- NOTE 10. This engine meets icing operation criteria contained in Advisory Circular 20.73 dated April 21, 1971, when installed in airplanes having a plenum type inlet incorporating design features which turn the inlet air at least 90° before entry into the engine inlet.
- NOTE 11. A standby microturbo electric fuel pump P/N 04600500 is required.
- NOTE 12. The engine requires a 7 amp hour battery for emergency operation of the engine fuel control in the event of engine electrical system failure.

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