

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

E-2
Revision 3

WARNER ENGINE COMPANY

WARNER SCARAB
SERIES 28, 29, 30,40, & 50

September 27, 2000

TYPE CERTIFICATE DATA SHEET NO. E-2

Engine of models described herein conforming with this data sheet (which is a part of type certificate No. E-2) 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 Warner Engine Company, LLC.
P.O. Box 9
Palmer Lake, Colorado 80133

This TC was transferred from Duncan and Company, PO Box 21, Palmer Lake, Colorado 80133 to Warner Engine Company September 27, 2000.

This TC was transferred from George Olson Company, 969 Stonewall Road, Lexington, Kentucky 40504-3127 to Duncan and Company, PO Box 21, Palmer Lake, Colorado 80133 October 20, 1998.

This TC was transferred to George Olson Company on May 4, 1995.

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| Models - Scarab | 28, 29, 30, 40, & 50 |
| Type | 7 RA |
| Rating, standard atmosphere | |
| Max. continuous hp., r.p.m., at sea level pressure altitude | 125-2050 |
| Takeoff hp., 5 min., r.p.m., full throttle, at sea level pressure altitude | 125-2050 |
| Fuel (min. grade aviation gasoline) | 67 |
| Bore and stroke, in. | 4.25 x 4.25 |
| Displacement, cu. in. | 422 |
| Compression ratio | 5.15:1 |
| Weight (dry), lb w/magneto ignition | 292 |
| Weight (dry), lb w/battery ignition | 295 |
| Propeller shaft, SAE No. | 1 Taper |
| Carburetor | Stromberg NA-R5A with 1-5/8 in. venturi; Holley Model 419 with 1-1/2 in. venturi |
| Ignition, dual | Scintilla MN7D or VMN7D magnetos or Bosch battery ignition Auto-Lite battery ignition |
| Spark Plugs | Champion No. 13, C-26, -S, C-27, C-27S, M-4, -S; BG-5B2, 317-S; AC-N; Bendix 18CB; Simmonds-Benton 3B5, -S |

Certification Basis Type Certificate No. 2

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NOTES:

- NOTE 1. Engine numbers 10, 15, 17, 18, 32, 34, 46, and 58 are approved only for 110 hp at 1850 rpm until their crankshaft No. 7223 is replaced with heavier crankshaft No. 7223 or 7333.
- NOTE 2. Maximum permissible cylinder head, barrel, and oil inlet temperatures, 525 degrees F., 300 degrees F., and 200 degrees F., respectively.
- NOTE 3. Scarab Series 50 model eligible with Apollo impulse coupling on one magneto. These engines are identified by the suffix "B" after the engine serial number.
- NOTE 4. Engine serial number suffix letters as indicated below should be added to the engine nameplate to denote when the following modifications have been incorporated:
Suffix "A" to denote 3/8 in. cylinder base studs and 0 type cylinder base oil seals.
Suffix "E" to denote austenitic type exhaust valves.
Suffix "F" to denote cylinder bores chrome plated by Spartan Engineering Company.
- NOTE 5. The approval for Series 28, 29, and 30 expired 7/20/41 and for 40 and 50 9/7/50. No engines of these models manufactured after these dates are eligible for use in certificated aircraft.

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