

**MODELS:** Wright Cyclone SR and SGR-1820F-3B, -53 and Military R-1820-75

**T.C. NUMBER:** T.C. 149

| Models - Cyclone<br>Type - 9RA<br>Rating:                             | SR-1820-F-53 and F-3B<br>Direct drive  | SGR-1820-F-53 and F-3B<br>16:11 reduction gearing |
|---|--|---|
| Maximum continuous,<br>hp, rpm, in.Hg., at:                           |  |   |
| Rated pressure<br>altitude (ft.)                                      | 745-2100-34.0-9600   | 730-2100-34.0-9600                                |
| Sea level pressure<br>altitude  | 685-2100-34.0-S.L.   | 670-2100-34.0-S.L.                                |
| Take-off (one minute)<br>hp, rpm, in.Hg.                              | 785-2200-37.5  | 770-2200-37.5                                     |
| Fuel (minimum octane<br>aviation gasoline - CFR<br>Motor Method fuel) | 87   | --  |
| Bore and stroke, in.  | 6.125 x 6.875  | --  |
| Displacement, cu. in.   | 1823   | --  |
| Compression ratio   | 6.4:1  | --  |
| Weight (dry), lbs.  | 1000   | 1095  |
| Propeller shaft,<br>SAE No.   | 40   | 50  |
| Supercharging<br>(impeller gear ratio)                                | 8.31:1   | --  |
| Carburetion   | Stromberg NA-F7C or NA-F7E with<br>2-1/4 in. venturi, NA-F7F with<br>2-3/8 in. venturi, or Holley C.G.<br>1375 C, E, F, H or Chandler-Evans<br>1375DA-1 carburetor |   |
| Ignition, dual  | Scintilla VAG-9DF, SF9L, SF9LN1,<br>SF9LN2, SF9L3 or SF9L4 magnetos  |   |

|                     |  |      |
|---------------------|--|------|
| NOTES               | 1, 2, 3  | 1, 2 |
| Certification basis | Approved Type Certificate No. 149  |      |
| Production basis    | None. The manufacturer does not hold a production certificate for the production of engines under this type certificate and, therefore, each engine so produced is subject to a detailed inspection for workmanship and conformity with the approved data by a Civil Aeronautics Administration Agent. In addition, the engine must have a satisfactory run-in including 5 hours at rated power and speed. Upon satisfactory completion of the above, the agent will tag the engine with Tag Form ACA 186. |      |

NOTE 1. Maximum permissible cylinder head, barrel, and oil inlet temperatures, 500 degrees F., 325 degrees F., and 200 degrees F., respectively.

NOTE 2. The approval of SR and SGR-1820F-3B engine models expired as of 7/25/41. No engines modified to these models from the F-3 models after that date eligible for use in certificated aircraft.

NOTE 3. Military model R-1820-75 is identical to model SR-1820F-53. When used in certificated aircraft, the engine designation plate should be revised to include the corresponding certificated model designation and Type Certificate No. 149.