

Accessories for the Wright "Whirlwind" Engine

THE proper functioning of the engine is materially influenced by the type of accessories used with it. Accessories designed especially for the Wright "Whirlwind" engine, such as air heaters, fuel pumps and propeller hubs, have been developed after exhaustive experiments under a wide range of operating conditions. The use of these accessories is recommended.

Such accessories as tachometers, oil temperature gauges and oil pressure gauges are to be found on the open market and any instrument of this type, whose use has been approved by the U. S. Army and the U. S. Navy, will be found satisfactory on the Wright "Whirlwind" engine.

AIR HEATERS Experience has shown that a carburetor air heater is a desirable accessory for the Model J-5 engine, since it not only prevents the formation of frost and ice in the carburetor during cold and damp weather operations, but it improves fuel distribution, carburetion and fuel economy during operation in average temperate conditions. Since the average aviation gasoline obtainable by most commercial operators is not on a par with that generally used by the U. S. Army and Navy, the carburetor air heater is included as standard equipment on all Model J-5C and J-5CA engines. This air heater is provided with a simple valve operated from the pilot's cockpit which permits adjustment of the air temperature entering the carburetor. The heater is of cast aluminum alloy and is attached to the carburetor by means of six machine screws. Its use is recommended for all operations in extremely damp or cold weather.

FUEL PUMPS For engine installations where gravity feed to the carburetor is impossible or where a fuel head of at least 20" cannot be provided, provision is made for the attachment of an engine driven fuel pump. The Wright fuel pump has an integral pressure relief valve which can be adjusted to deliver fuel to the carburetor at any pressure within the allowable range. This pump is simple in construction and effective in operation.

TACHOMETERS Two tachometer drive connections are fitted to the engine. These take the U. S. Army Air Corps standard tachometer connections from which the tachometer cable can be carried to the instrument board or other location in the airplane.

OIL TEMPERATURE There are two points in the engine where connections are made for the oil temperature gauge bulb. Both connections are fitted for the $\frac{5}{8}$ "—18 Pitch U. S. Std. thread connection. One is located in the oil cooling sump surrounding the carburetor manifold

and gives the temperature of the oil as it leaves the engine. The other is located in the oil strainer cover and gives the temperature of the oil as it enters the engine. The former should be used and the oil temperature under normal conditions of flight should not be allowed to exceed 180°F.

ACCESSORY INSTALLATION The above accessories (excluding the air heater which is standard equipment) are available at extra cost, but installed on the engine without extra installation expense. When starter or fuel pump are not required their attaching flanges are protected by suitable cover plates supplied with the engine.

PROPELLER HUB The propeller hub shipped with a Wright "Whirlwind" engine should always be used with that engine and should not be applied to another engine of the same model without previously lapping the propeller hub on the crankshaft. This lapping assures proper fitting and eliminates scoring the propeller hub bore and the crankshaft.

INSTRUCTION BOOK The Wright "Whirlwind" engine instruction manual is shipped as an accessory to the engine. This manual gives full instructions on engine operation and maintenance and includes detailed parts lists for use in making up replacement orders. Additional copies of this instruction manual can be obtained at extra cost.

