Esso Imperial Oil

Product Data Sheet

AVIATION OIL EE

ASHLESS-DISPERSANT PISTON ENGINE OIL

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AVIATION OIL EE is the name of Exxon ashless dispersant mineral oil for piston engines of commercial, military and private aircraft. AVIATION OIL EE offers the following features and benefits:

- **US Military approved against SAE J1899 which replaced MIL-L-22851D**
- **Meets SAE J1899**
- **Appropriate viscosity grades approved by the U.K. Ministry of Defense, Defense Evaluation and Research Agency (DERA)**
- **Appropriate viscosity grades approved for Pratt & Whitney (Spec No. 1183), Teledyne Continental Motors (MHS-24), Textron Lycoming (Spec No. 301F) engines**
- **Appropriate viscosity grades recommended for Curtis-Wright, Franklin, and Rolls-Royce engines**
- **Lower ring zone deposits, varnish, and sludge than straight mineral oils**
- **Compatible with other aircraft piston engine oil - both straight mineral or ashless-dispersant**

Primary Applications

AVIATION OIL EE is designed to satisfy the requirements of all major engine manufacturers under all climatic conditions. To meet a wide range of these requirements, AVIATION OIL EE is available in two single-viscosity grades (80 and 100).

Performance Features

Cleaner engines and reduced wear are just two of the performance benefits gained through use of AVIATION OIL EE. Through the action of the ashless-dispersant additive, solid contaminants remain suspended in the oil and are not allowed to accumulate as sludge or deposits on engine surfaces. The suspended contaminants are non-abrasive and circulate harmlessly in the oil until they are removed when the oil is drained. As a result, AVIATION OIL EE produces significantly lower ring zone deposits, varnish, and sludge than a straight mineral oil.

Most major engine manufacturers advise the use of straight mineral oil when breaking-in new or newly overhauled engines for the first 25 to 50 hours of operation. The engine manufacturer's recommendations should be followed since the modification standard can vary from engine to engine

Extensive flight tests have demonstrated the high performance level of AVIATION OIL EE. Engine protection and excellent lubricating properties have been proven in thousands of

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flying hours. AVIATION OIL EE meets the obsolete U.S. Military Specification MIL-L-22851D, as well as the new SAE J1899 specification. AVIATION OIL EE, in the appropriate viscosity grade, is recommended for Pratt & Whitney, Curtiss-Wright, Continental, Franklin, and Lycoming piston engines.

Compatibility

AVIATION OIL EE is compatible with straight mineral oil as well as with other ashless-dispersant oils that meet the requirements of SAE J1899. It can also be used in high-time engines that have previously used a straight mineral oil. If this is done, however, it is advisable to carry out the oil-screen inspection recommended by the engine manufacturer.

Run-in procedure

New or newly overhauled aircraft engines should be broken in according to the engine builder's recommended procedure.

Precautions

AVIATION OIL EE is manufactured from high quality petroleum base stock, blended with selected additives. As with all petroleum products, good personal hygiene and careful handling should always be practiced. Avoid prolonged contact with the skin, splashing into the eyes, ingestion, or vapour inhalation. Please refer to the Esso Material Safety Data Sheet for further information.

Note: This product is NOT controlled under the Canadian WHMIS legislation.

Typical Properties

GRADE	**80**	**100**
SAE Viscosity	40	50
Military Type	Type III	—
Gravity, °API	28.2	27.8
Gravity, specific @ 15.6°C (60°F)	0.886	0.888
Viscosity, cSt @ 40°C cSt @ 100°C	130 15.2	197 20.0
Viscosity index	121	118
Flash Point, COC °C °F	250 482	253 487
Pour point, °C °F	-30 -22	-27 -17
Ash, mass %	NIL	NIL
Acid No., mg KOH/g	0.02	0.02
Sulfur, mass %	0.40	0.50

The values shown above are representative of current production. Some are controlled by manufacturing and performance specifications while others are not. All may vary within modest ranges.

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