Product Data

Aero™ 35 Yellow

Landing Gear Shock Strut Fluid

Description

Castrol Aero™ 35 Yellow is a high quality, MIL-PRF-6083F based ISO Grade 15 mineral hydraulic fluid, containing antiwear agents and corrosion inhibitors. It also contains a shear stable viscosity index improver, anti-oxidant and an approved EP additive system which reduces martensitic streaking of landing gear outer cylinders and galling of shock strut upper bearings. This formulation is specially designed to reduce the "stick-slip" properties of MIL-PRF-6083F fluids. Aero 35 Yellow is available in dyed red (Douglas Aircraft DPM 6177) or straw/yellow (undyed) (Boeing Spec BMS 3-32B, Type I).

Application

Aero 35 Yellow is specially designed for use in landing gear shock struts. Additionally, Aero 35 Yellow is compatible with approved MILPRF- 5606H and MIL-PRF-6083F hydraulic fluids. It is not completely compatible with synthetic gas turbine lubricants nor with phosphate-ester hydraulic fluids. It is compatible with other petroleum-based and synthesized hydrocarbon lubricants, but contamination should be avoided in order to maintain the unique properties of Aero 35 Yellow. This product is compatible with most seals, hoses, and paints, normally used in shock struts and dispensing equipment connected with this application.
While certain grades of the above materials are fully compatible with Aero 35 Yellow, it is advisable to confirm acceptability of use with either the material manufacturer or Castrol.

Specification
Aero 35 Yellow (undyed) is formulated in accordance with Boeing Specification BMS 3-32B, Type I as an alternative to Boeing Service Letters 707-SL-12-2; 727-SL-12-2; 737-SL-12-2; 757-SL-27-15-B. These letters instruct the addition of an EP additive to either the standard or corrosion inhibited mineral based hydraulic fluid for use in their landing gear shock struts.

Typical Characteristics

Name	Method	Units	Aero 35 Yellow
API Gravity @ 16°C / 60°F	ASTM D287	°API	28.7
Density of finished oil @ 16°C / 60°F	In-house test	lb/ gallon	7.335
Kinematic Viscosity @ 100°C / 212°F	ASTM D445 / ISO 3104	mm²/s	4.8
Kinematic Viscosity @ 40°C / 104°F	ASTM D445 / ISO 3104	mm²/s	13.8
Kinematic Viscosity @ -40°C / -40°F	ASTM D445 / ISO 3104	mm²/s	650
Kinematic Viscosity @ -54°C / -65°F	ASTM D445 / ISO 3104	mm²/s	3388
Viscosity Index	ASTM D2270 / ISO 2909	-	326
Pour Point	ASTM D97 / ISO 3016	°C/°F	110 / 230
Flash Point - open cup method	ASTM D92 / ISO 2592	°C/°F	118 / 245
Fire Point	ASTM D92 / ISO 2592	°C/°F	-65 / -85
Copper corrosion (72 hrs@121°C/250°F)	ASTM D130 / ISO 2160	Rating	1a
Four Ball Wear test - Wear Scar Diameter (40 kgf / 75°C / 1200 rpm / 1 hr)	ASTM D4172	mm	0.45
Falex Pin & Vee Block test - Extreme Pressure properties	ASTM D 3233-03 (method A)	Pass	Pass

Subject to usual manufacturing tolerances.

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