



## Product Data

## Castrol Aero 35

Landing Gear Shock Strut Fluid

### Description

Castrol Aero™ 35 is a high quality, MIL-PRF-6083F based ISO Grade 15 mineral hydraulic fluid, containing anti-wear 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 is available in dyed red (Douglas Aircraft DPM 6177) or straw/yellow (undyed) (Boeing Spec BMS 3-32B, Type I).

### Application

Aero 35 is specially designed for use in landing gear shock struts. Additionally, Aero 35 is compatible with approved MIL-PRF-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. 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, it is advisable to confirm acceptability of use with either the material manufacturer or Castrol.

### Specification

Aero 35 Red is formulated in accordance with Douglas Aircraft Specification DPS 3.334, referenced as Douglas stock number DPM 6177.

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

TEST (ASTM)	DESCRIPTION	RESULT
D 287	API Gravity, @ 15.6/15.6°C (60/60°F)	28.7
	Pounds per Gallon @ 16°C (60°F)	7.355
D 445	Kinematic Viscosity, cSt	
	@ 100°C (212°F)	4.8
	@ 40°C (104°F)	13.8
	@ -40°C (-40°F)	650
	@ -54°C (-65°F)	3388
D 2270	Viscosity Index	326
D 92	Flash Point, COC, °C (°F)	110 (230)
	Fire Point, COC, °C (°F)	118 (245)
D 97	Pour Point, °C (°F)	-65 (-85)
D 130	Copper Strip Corrosion, 72 hrs @ 121°C (250°F)	1a
D 4172	Four-Ball Wear-Test, AWSD, mm 1 hr @ 1200 rpm, 40 kgf @ 75°C (167°F)	0.45
D 3233	Falex Wear Characteristics, 500 lbf, Reference Load	Pass

Subject to usual manufacturing tolerances.

Castrol Aero 35  
8/14/2008, version 8.0  
Castrol, Aero and the Castrol logo are trademarks of Castrol Limited, used under licence.

All reasonable care has been taken to ensure that the information contained in this publication is accurate as of the date of printing. However, such information may, nevertheless, be affected by changes in the blend formulation occurring subsequent to the date of printing. Material Safety Data Sheets are available for all Castrol Ltd products. The MSDS must be consulted for appropriate information regarding storage, safe handling and disposal of a product.

Castrol Industrial North America Inc. 150 West Warrenville Road, 605 3E Naperville, IL 60563  
Tel: (877) 641 1600 Fax: (877) 648 9801  
[www.castrol.com/industrial](http://www.castrol.com/industrial)