



# AEROSPACE INFORMATION REPORT

**AIR5358™****REV. B**

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Superseding AIR5358A

(R) Landing Gear Shock Strut Hydraulic Fluid With  
Extreme Pressure and Anti-Wear Additives

## RATIONALE

This document has been updated to provide additional information about the use of landing gear shock strut hydraulic fluids in-service, and to clarify the use of MIL-PRF-6083. In addition, some editorial changes have been made.

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## 1. SCOPE

This document describes hydraulic fluids used in landing gear shock struts with extreme high contact pressure and anti-wear additives that have been added for improved lubrication.

### 1.1 Purpose

The purpose of this document is to describe several hydraulic fluids with an additive package that can be used for the reduction of friction and subsequent reduction of "ladder cracking" in aircraft shock struts (refer to AIR5913).

### 1.2 Field of Application

The information included herein is for hydraulic fluid in landing gear shock struts. The fluid contains a uniquely colored dye to differentiate it from other fluids used for hydraulic systems.

## 2. APPLICABLE DOCUMENTS

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

### 2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

AIR1362 Aerospace Hydraulic Fluids Physical Properties

AIR5913 Landing Gear Component Heat Damage

### 2.2 U.S. Government Publications

Copies of these documents are available online at <https://quicksearch.dla.mil>.

MIL-PRF-5606 Hydraulic Fluid, Petroleum Base, Aircraft, Missile, and Ordinance

MIL-PRF-6083 Hydraulic Fluid, Petroleum Base, For Preservation and Operation

MIL-PRF-83282 Hydraulic Fluid, Fire Resistant, Synthetic Hydrocarbon Base, Metric, Nato Code Number H-537

MIL-PRF-87257 Hydraulic Fluid, Fire Resistant, Low Temperature, Synthetic Hydrocarbon Base, Aircraft and Missile

### 2.3 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, [www.astm.org](http://www.astm.org).

ASTM D92 Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester

ASTM D445 Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity)

ASTM D974 Standard Test Method for Acid and Base Number by Color-Indicator Titration

ASTM D1500 Standard Test Method for ASTM Color of Petroleum Products (ASTM Color Scale)