

<p>NOT MEASUREMENT SENSITIVE</p>
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MIL-H-6083E  
AMENDMENT 2  
8 February 1990  
SUPERSEDING  
AMENDMENT 1  
28 March 1988

MILITARY SPECIFICATION

HYDRAULIC FLUID, PETROLEUM BASE, FOR PRESERVATION AND OPERATION

This amendment forms a part of MIL-H-6083E, dated 14 August 1986, and is approved for use by all Departments and Agencies of the Department of Defense.

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- \* Table I, after "9150-00-159-4472 16 ounces", add "aerosol can".  
At end of table, add "06 9150-01-290-2943 16 ounce can".
- \* 2.1.1, under SPECIFICATIONS, add:

"MILITARY

MIL-B-3137 - Benzene, Nitration Grade."

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- \* 2.1.2, delete "BULLETIN AF 539 - Standard Elastomer Stock."
- \* 2.2, under AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) add:  
"D 4175 - Standard Terminology Relating to Petroleum, Petroleum Products, and Lubricants."

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- \* 2.2, add:  
"SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)  
AMS 3217 - Standard Elastomer Stocks, Test Slabs.

(Applications for copies should be addressed to the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096.)"

AMSC N/A

FSC 9150

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\* 3.2, lines 1 thru 3, delete the first sentence and substitute "The hydraulic fluid shall be derived from petroleum fractions. These may be virgin or re-refined (recycled or reclaimed) stocks or a combination thereof. Re-refined stocks shall be as defined in ASTM D 4175. The stocks shall be compounded with such functional additives (anti-wear, oxidation inhibitors, corrosion inhibitors, etc.) as are necessary to meet the specified requirements."

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- \* 3.4.3, line 6, delete: "0.10 and mgKOH/g." and substitute: "0.10 mg KOH/g."
- \* 3.4.6, line 1, delete "5.5.1" and substitute "5.5".

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- \* 3.5.2.1, line 7, delete: "Slight discoloration of the surface of the copper will be permitted, but dark brown, black, or gray stain shall be cause for rejection." and substitute "Any corrosion produced on the surface of the copper shall not be greater than No. 2 of the ASTM copper corrosion standards (ASTM D 130)."

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- \* 3.5.12, after "(ASTM D 4172)," add "using a 40 kg load,".

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- \* 4.3.2, add: "Should the particle count on any individual determination be considered excessive, two additional determinations on another sample from the same container may be used. The container shall be thoroughly shaken for approximately one minute immediately prior to withdrawing each 100-mL portion for all determinations. The arithmetic average of the two closer particle counts shall be considered the particle count for the sample."

- \* Table IV, add, "1 pt. (0473 liter)            100            1".

- \* 4.3.3, line 7, after "FED-STD-313," add "a copy of the warning label,"

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- \* 4.5.2, line 5, delete "Evaporation loss (see 3.5.8)."

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- \* 4.6.5, line 4, delete "AF 539" and substitute "AMS 3217".

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- \* 4.6.6.1.2, line 13, after "nitrobenzene", add "conforming to MIL-B-3137".

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- \* 4.7.1.2, line 2, add "Sample size shall be determined by using MIL-STD-105, table I and table IIa. A lot shall be accepted when zero defects are found and rejected when one or more defects are found."
- \* 5.2, line 2, delete ", or commercial".
- \* 5.2.1, delete in its entirety and substitute:

"5.2 Size. The hydraulic fluid shall be supplied in 16-ounce, 1-quart, 1-gallon, 5-gallon, 55-gallon metal containers or 16-ounce gas pressurized containers as specified (see 6.2)."

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- \* 5.2.3, 5.2.4 and 5.2.5, delete in their entirety and substitute:

"5.2.3 Level B. Unit containers shall conform to the requirements of MIL-STD-290, level B, and the following: 16-ounce, 1-quart, and 1 gallon containers shall conform to PPP-C-96, type I, class 3; 5-gallon containers shall conform to PPP-P-704, type I, class 3; 55-gallon containers shall conform to PPP-D-729, type II; and 16-ounce gas pressurized containers shall conform to PPP-C-96, type IX, class 2."

"5.2.4 Level C. Unit containers shall conform to the requirements of MIL-STD-290, level C, for the sizes specified in 5.2.1."

- \* 5.3, line 2, delete ", or commercial" and add "Packing and handling of the 16-ounce gas pressurized containers shall follow the guideline of PPP-C-96, type IX, class 2."
- \* After 5.5.1, add:

"5.5.2 Hazard warning label. Unit and exterior containers shall be marked with a hazard warning label prepared in accordance with the Hazard Communication Standard, 29 CFR 1910.1200. The appropriate warning shall convey the specific physical and health hazards including target organ effects of the material."

5.5.1, lines 10 through 14, delete the warning label in its entirety.

- \* 6.1, delete in its entirety and substitute:

"6.1 Intended use. The hydraulic fluid is intended for use as an operational fluid from  $-54^{\circ}\text{C}$  to  $135^{\circ}\text{C}$  where corrosion protection is required and a determination has been made that MIL-H-46170 (FRH) hydraulic fluid cannot be used. This includes use in recoil mechanisms and hydraulic systems for rotating weapons or aiming devices of tactical and support ordnance equipment, except combat armored vehicles/equipment which require FRH. The hydraulic fluid is also used as a preservative fluid for aircraft hydraulic systems and components where MIL-H-5606 (OHA) is used as an operational fluid."

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"6.1.1 Cleaning agents.

"6.1.1.1 Isopropyl alcohol. Isopropyl alcohol should not be used as a cleaning agent on components containing any parts which may have come in contact with hydraulic fluid. A sticky acrylic resin is formed which may be detrimental to the proper operation of hydraulic components. If isopropyl alcohol must be used as part of a cleaning sequence, it is essential that the components be thoroughly dried to remove all traces of the alcohol.

"6.1.1.2 Chlorinated solvents. Chlorinated solvents should not be used for cleaning hydraulic components. Residual solvent contaminates the hydraulic fluid and may cause corrosion damage.

"6.1.1.3 Recommended solvents. The recommended solvents are P-D-680, type II, or other petroleum distillate type solvents.

"6.1.2 Storage condition. Prior to use in the intended equipment, the product may be stored under conditions of covered or uncovered storage in geographic areas ranging in temperatures from -57 to +49 °C (-70 to +120 °F)."

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- \* 6.5, line 3, after "purchased in" add "16-ounce,".
- \* 6.6, line 3, after "STANAG 3149" add "STANAG 3713".
- \* 6.8.1, line 1, delete "product contains" and substitute "may contain".

The margins of this amendment are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletion) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

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Preparing activity:

Army - ME

Project 9150-1041

Review activities:

Army - AL, AR, AT, AV, MD, MI, SM  
Navy - SA, SH  
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User activities:

Navy - MC, OS