

[NOT MEASUREMENT  
SENSITIVE]  
A-A-52039B  
September 15, 1995  
SUPERSEDING  
A-A-52039A  
April 20, 1992

## COMMERCIAL ITEM DESCRIPTION

### LUBRICATING OIL, AUTOMOTIVE ENGINE, API SERVICE SH

The General Services Administration has authorized the use of this commercial item description (CID) for all federal agencies.

#### 1. SCOPE.

This CID describes lubricating oils meeting the American Petroleum Institute (API) SH performance category, SAE J300, and the International Lubricant Standardization and Approval Committee (ILSAC) GF-1 Standard, and bearing the API Certification Mark (starburst symbol) in accordance with API 1509. These oils are suitable for the lubrication of spark-ignition, gasoline consuming engines used in administrative type, commercial vehicles.

#### 2. CLASSIFICATION.

2.1 Viscosity grades. Lubricating oils shall be of the following viscosity grades:

SAE 5W-30  
SAE 10W-30

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any other data which may improve this document should be sent by letter to: U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-TR-E, Warren, MI 48397-5000

FSC 9150

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A-A-52039B

### 3. SALIENT CHARACTERISTICS.

**3.1 Materials.** Lubricating oils shall be derived from petroleum fractions, synthetically prepared compounds or a combination of the two types of products. They may be virgin, re-refined stocks or a combination thereof. The stocks shall be compounded with such functional additives (detergents, dispersants, oxidation inhibitors, corrosion inhibitors, etc.) as are necessary to meet the specified requirements. The use of recovered materials made in compliance with regulatory requirements is acceptable provided that all requirements of this CID are met (see 4.3).

**3.2 Performance.** Lubricating oils shall have an "SH" API performance level as identified in SAE J183 and ASTM D 4485, shall carry the API donut symbol and Certification Mark (starburst symbol), and shall have an "Energy Conserving II" performance requirement as defined by SAE J1423.

**3.3 Physical and chemical requirements.** Lubricating oils shall meet all the physical and chemical properties required for the API Certification Mark and in SAE J300. In addition, lubricating oils shall have those properties indicated in table I when tested in accordance with the respective test methods (ASTM test procedures are listed where applicable).

Table I. Physical and chemical properties of lubricating oils.

Property <sup>1/</sup>	SAE 5W-30	SAE 10W-30	ASTM Test Procedure or Federal Test Standard
Viscosity, Kinematic, cSt @ 40°C		1/	D 445
Viscosity Index	1/	1/	D 2270
Pour Point, °C max.	-36	-30	D 97
Stable Pour Point <sup>2/</sup> , °C max.	-36	-30	FED-STD-791, method 203
Gravity, °API	1/	1/	D 287
Carbon Residue, mass%	1/	1/	D 524
Sulfur, mass%	1/	1/	D 2622, D 4927, D 4951, D 5185
Sulfated Ash, mass%	1/	1/	D 874
Total Acid Number	1/	1/	D 664
Base Number	1/	1/	D 2896, D 4739
Nitrogen	1/	1/	D 3228, D 4629
Metallic components, mass%	1/	1/	D 4628, D 4927, D 4951, D 5185

A-A-52039B

- 1/ Typical values for all physical and chemical properties required in table I, API 1509, and SAE J300 shall be provided at the time of solicitation or contract as specified by the contracting officer (see 7.2).
- 2/ After being cooled below the pour point, lubricating oils shall regain their homogeneity on standing at a temperature not more than 6°C above the pour point, but not to exceed the above stated values.

3.3.1 Formulation data. The contractor shall provide the name, type, percent and manufacturer of all base stocks and additive packages for each formulation to be supplied under contract or order, or used in performance testing. Each formulation must be identified by a formula number or oil code, and if more than one code is used for a formulation, then all codes associated with that formulation must be indicated. In addition, the contractor must identify which formulation was used to run each performance test. This information shall be provided to the contracting officer at the time of solicitation.

3.3.1.1 Base stocks. The contractor shall identify all base stocks used in each formulation offered or used in performance testing by base stock name, manufacturer, and type of base stock according to Appendix E of API 1509. The data listed in Table E-1 (Appendix E - API 1509) shall be included for all base stocks.

3.3.1.2 Additives. The contractor shall identify all additive systems used in each formulation offered or used in performance testing by additive package name, manufacturer and type of additive system (i.e. Detergent Inhibitor (DI), Viscosity Improver Type (OCP, SIP, PMA, etc.), Pour Point Depressant, etc.). If there are read-across between different formulations, then an explanation on how the additive systems relate to one another must be provided.

#### 4. REGULATORY REQUIREMENTS.

4.1 Hazard Communication Standard. The contractor shall certify that no carcinogenic or potentially carcinogenic constituents are present as defined under the Hazard Communication Standard (29 CFR 1910.1200). The contractor shall provide certification to this effect to the contracting officer or the contracting officer's designated representative.

4.2 Toxicity. Lubricating oils shall have no adverse effect on the health of personnel when used for their intended purpose. Questions pertinent to this effect shall be referred by the contracting activity to the appropriate departmental medical service who will act as an advisor to the contracting agency. The contractor shall have the toxicological formulations and associated information available for review by the contracting activity to evaluate the safety of the material for proposed use.

4.3 Recovered materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR). When re-refined base stocks are sought, the minimum content to be used in the formulation shall be indicated in the contract or solicitation (see 7.2).

A-A-52039B

## 5. QUALITY ASSURANCE PROVISIONS.

5.1 Responsibility for inspection. The contractor is responsible for the performance of all inspections (examinations and tests).

5.2 Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this CID, and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices. The contractor shall provide the required information in a tabulated format and with enough clarity so that the formulation of the tested product can be traced and compared to the offered product(s). The contractor shall provide a summary of performance data, consisting of test reports, substantiating that the product to be supplied under this CID meets the SAE, ASTM, and API documents cited under 3.2 and 3.3 above. The contractor shall provide test results of the physical and chemical properties indicated under 3.3 above. The Government reserves the right to require proof of such performance prior to delivery and thereafter as may be otherwise provided for under the provisions of the contract.

5.3 Market acceptability (MA). The contractor shall provide products which have a proven market record based on the number of items sold, length of time the product has been on the market, and reliability and performance of the products as required under the contract or solicitation (see 7.2).

5.4 Inspection and testing. The inspection and testing of products to be supplied under this CID shall be as specified in the contract or order (see 7.2).

## 6. PACKAGING.

Preservation, packing, and marking shall be as specified in the contract or order. The container will be as specified in the contract or order (see 7.2).

## 7. NOTES.

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

### 7.1 Addresses for obtaining copies of referenced documents.

7.1.1 Copies of FED-STD-791 are available from the Defense Printing Service Detachment Office, Bldg. 4D (Customer Service), 700 Robbins Avenue, Philadelphia, PA 19111-5094.

7.1.2 Copies of 29 CFR 1910.1200 are available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402.

7.1.3 Copies of API 1509 "Engine Oil Licensing and Certification System" are available from American Petroleum Institute, Marketing Department, Program Manager, ESCS Program, 1220 L Street N.W., Washington, D.C. 20005.

7.1.4 Copies of ASTM D 97, D 287, D 445, D 524, D 664, D 874, D 2270, D 2622, D 2896, D 3228, D 4485, D 4628, D 4629, D 4739, D 4927, D 4951, and D 5185 are available from the American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103.

7.1.5 Copies of SAE J183, SAE J300, and SAE J1423 are available from Society of Automotive Engineers (SAE), 400 Commonwealth Drive, Warrendale, PA 15096.

7.2 Ordering data. Acquisition documents must specify the following:

- a. Title, number and date of this CID.
- b. Quantity and SAE grade of oil required.
- c. Type and unit of issue required.
- d. Typical values for all physical and chemical properties listed in table I.
- e. If re-refined base stocks are sought, the minimum content to be used in the formulation.
- f. When this CID is used for procurement, the certification clause must appear in the solicitation.
- g. Applicable market acceptability requirements.
- h. Inspection and testing levels required.
- i. Selection of applicable packaging requirements and container.

7.3 National Stock Numbers (NSN). The following NSN's are for use by the Government and do not constitute a requirement on the contractor, unless required by the contract or order. The lubricating oils provided under this CID can be ordered using the following NSN's:

National Stock Numbers	SAE Viscosity Grade	Unit of Issue
9150-01-320-3706 9150-01-348-1596	5W-30	Box of 12 1-qt. plastic bottles 55 gal drum
9150-01-227-8210 9150-01-230-9749 9150-01-230-9748	10W-30	Box of 12 1-qt. plastic bottles 5 gal plastic container 55 gal drum
The following NSNs are for Re-refined Oil Only		
9150-01-413-6897 9150-01-413-6892 9150-01-413-6990	10W-30	Box of 12 1-qt. plastic bottles 5 gal plastic container 55 gal drum

A-A-52039B

**MILITARY INTERESTS:**

**Custodians:**

Army - AT

Navy - SH

Air Force - 68

**Review activities:**

Army - CD, MD-1, SM

Navy - AS, MC, OS, SA, YD-1

Air Force - 11

DLA - GS, PS

**Industry associations:**

ASTM

SAE

**CIVILIAN AGENCY COORDINATING ACTIVITY  
GSA-FSS**

**PREPARING ACTIVITY:**

Army - AT

(Project 9150-1129)