INCH-POUND
A-A-52472A
March 2, 2011
SUPERSEDING
A-A-52472
August 31, 1993

COMMERCIAL ITEM DESCRIPTION

FILTER, FLUID, PRESSURE, AUTOMOTIVE FUEL (10 GPH FILTRATION)

The General Services Administration has authorized the use of this commercial item description (CID) as a replacement for MS51085C, which is cancelled. This CID also replaces the portions of cancelled MIL-F-45356B, which apply to MS51085C.

1. SCOPE. This CID covers requirements for a filter assembly with a fine filtration element for use in the fuel systems of internal combustion gasoline engines and personnel heaters.

2. CLASSIFICATION. Filter assemblies shall be furnished in the following types (see 7.2).

Type I - Filter assembly with 15 pounds per square inch (psi) pressure requirements, without lockwire.
Type II - Filter assembly with 300 psi air pressure requirements, with lockwire.

3. SALIENT CHARACTERISTICS

3.1 Materials. Unless otherwise specified herein, the materials used shall be in accordance with the manufacturer's materials specifications for pressure fluid filter as required to meet the performance requirements of this CID. The use of recovered materials made to conform to regulatory requirements is acceptable provided all requirements of this CID are met (see 4).

3.1.1 Cover (head). Type II filter covers shall be made of metal. If made of steel, cover material shall be zinc coated, and the finished cover shall be treated with a corrosion resistant inhibitor as per ASTM D6386.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to DAMI_STANDARDIZATION@conus.army.mil or U.S. Army RDECOM, Tank Automotive Research, Development and Engineering Center, ATTN: RDTA-EN/STND/TRANS MS #268, 6501 E. 11 Mile Road, Warren, MI 48397-5000. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at https://assist.daps.dla.mil.

AMSC N/A FSC 2910

3.1.2 Bowl. Type II filter bowl material shall be brass, annealed, Unified Numbering System (UNS) C24000, C26000, C26800 per ASTM B36/B36M, or zinc coated steel strip, carbon, cold rolled per ASTM A109/A109M. Steel bowls shall be treated with a corrosion resistant inhibitor per ASTM D6386.

3.2 Design and construction. Unless otherwise specified in figure 1, the design and construction of the filter assembly shall be in accordance with the manufacturer's specifications/drawings. The cover and bowl for the type II filter shall have a provision for and secured together with lockwire.

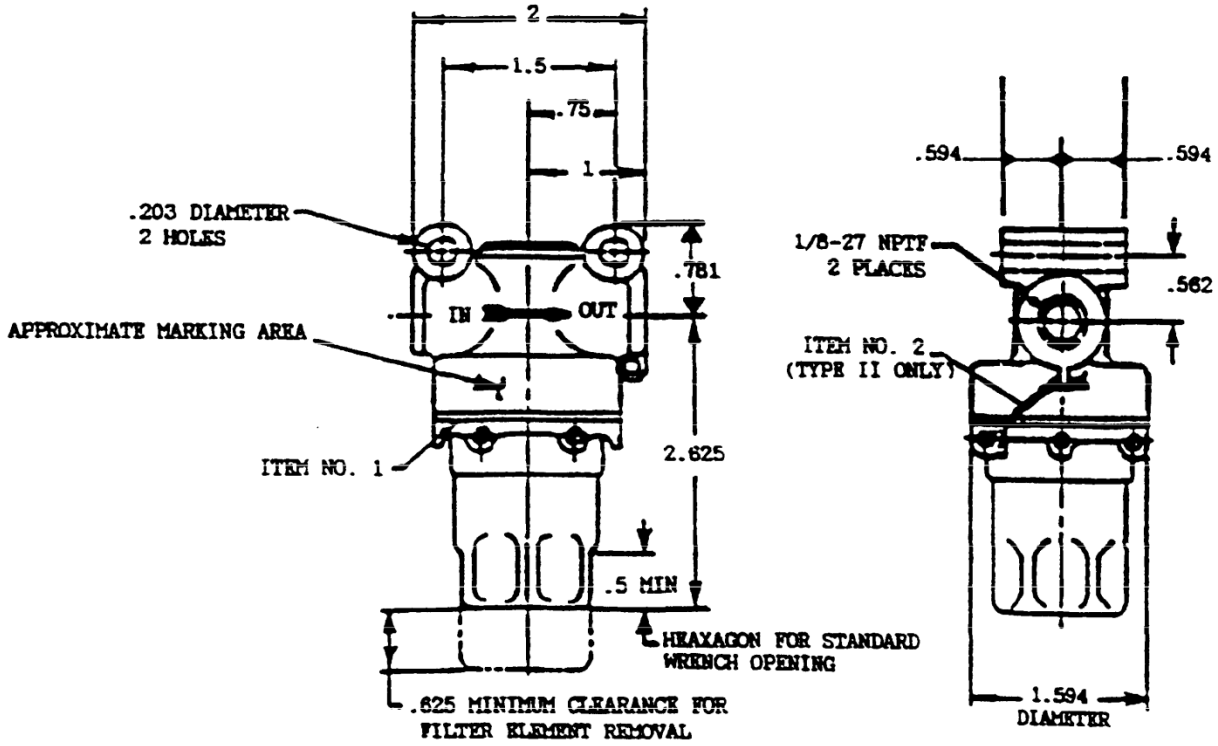
3.2.1 Filter element. The filter element shall be of the fine filtration type.

3.2.2 Servicing. Servicing, including cleaning and reassembly, shall be easily accomplished without disturbing the filter assembly connection to the engine and shall be designed to prevent improper assembly.

3.3 Performance.

3.3.1 Pressure-temperature resistance. The filter assembly shall be pressure tested at -65±3 degrees Fahrenheit (°F), 80±3 °F, and 160±3 °F. Test fluid used for the -65 °F and 80 °F tests shall be a mineral/petroleum spirit solvent having 100 °F minimum flash point (see 3.3.3). Air shall be used for the 160 °F test. For all tests, the pressure shall be applied for 5 minutes and reduced to zero. At a pressure of 15 psi, the type I filter assembly shall show no signs of leakage or permanent deformation during and after the pressure test. The type II filter assembly shall show no signs of leakage while submerged in water under an air pressure of 300 psi and, afterwards, shall show no signs of permanent deformation.

3.3.2 Flow rate. The flow rate of the filter assembly shall be 10 gallons per hour (gph). The maximum pressure differential across the filter assembly shall not exceed 4 inches of water.



Cross Reference			
Type	CID Part number	MS Part number	Former Army part number
I	A52472-1	MS51085-1	7761059
II	A52472-2	MS51085-2	7416350

Item No	Item Description	Replacement Item
1	Packing, Bowl, O-ring: Hydrocarbon fuel resistant material. I.D: 1.299±.006 Ring O.D: .103±.003	MS29513-125
2	Lockwire (for type II filter): CRES material. .032 wire Dia by 4 in LG.	MS20995-C32-4

FIGURE 1. Filter, fluid, pressure, automotive fuel (10 gph filtration).

3.3.3 Filtering efficiency. The filtering efficiency shall conform to the requirements specified in table I. Filters shall be tested with fine contaminants in accordance with table II. Test fluids shall have a solid contaminant content of no more than 5 milligrams per liter (mg/l) and temperature of 90±10 °F.

TABLE I. Filtering efficiency.

Test duration (hours)	Flow rate (gph)	Maximum contaminant add rate (grams/hour)	Minimum Filtering Efficiency percent (%) at 0.1 hour	Minimum Filtering Efficiency (%) at 1.0 hour	Minimum Filtering efficiency (%) at end of test
3	10	0.6	65	85	95

TABLE II. Contaminant size.

Fine contaminant	
Particle size in micrometer	Percent by weight
0-5	39±2
5-10	18±3
10-20	16±3
20-40	18±3
40-80	9±3
80-200	----

3.3.4 Vibration resistance. The fuel filter assembly shall show no evidence of cracking, deformation, loosening or leakage in the body, at gaskets, or at the fittings after exposure to a sinusoidal motion for 3 hours along each axis. A frequency range of 5 to 500 cycles per second shall be used. The sweep time for the frequency range of 5 Hertz (Hz) to 500 Hz and return to 5 Hz shall be 15 minutes.

3.4 Identification and markings. Identification and markings shall be permanent and legible and shall include, as a minimum, the part identification number (PIN) and the manufacturer's identification code (CAGE) and part number (see 7.2).

4. REGULATORY REQUIREMENTS. 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).

5. PRODUCT CONFORMANCE PROVISIONS

5.1 Responsibility for inspection. The contractor is responsible for all inspections, including 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, workmanship standards, and quality assurance practices. Items with known defects shall not be submitted for Government acceptance. The Government reserves the right to require proof of such conformance prior to the

first delivery and thereafter as may be otherwise provided for under the provisions of the contract or order.

5.3 Product Conformance. The products provided shall meet the salient characteristics of this Commercial Item Description, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial market. The government reserves the right to require proof of such conformance.

6. PACKAGING. Preservation, packing, and marking shall 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 non-Government publications.

7.1.1 AIAA documents. Copies of Aerospace Industries Association of America documents are available from www.aia-aerospace.org or Aerospace Industries Association, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3928.

AIA/NAS NASM20995	-	Wire, Safety or Lock

7.1.2 ASTM documents. Copies of ASTM documents are available from www.astm.org or ASTM International, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM A109/A109M	-	Standard Specifications for Steel Strip, Carbon, Cold Rolled
ASTM B36/B36M	-	Standard Specifications for Brass Plate, Sheet, Strip and Rolled Bar
ASTM D6386	-	Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting

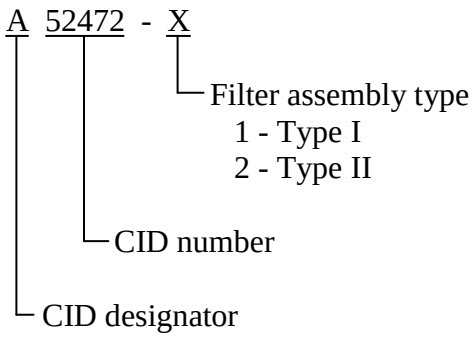
7.1.3 SAE documents. Copies of these documents are available from www.sae.org or SAE Customer Service, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE AS29513	-	Packing, Preformed, Hydrocarbon Fuel Resistant, O Ring

7.2 Ordering data. Acquisition documents should specify the following:

a. Title, number, and date of this CID.
b. Type of filter assembly, PIN number and quantity required.
c. Issue of Industry Standard to be cited in the solicitation and, if required, the specific issue of individual documents referenced.
d. Selection of applicable level and packaging requirements.

7.3 Part identification number (PIN). The PINs to be used for the pressure fluid filters, acquired to this CID, are created as follows:



7.4 Supersession and cross-reference data. Filter assemblies conforming to this CID supersede and are interchangeable/substitutable with filter assemblies conforming to MS51085C dated 26 August 1970 and applicable portions of MIL-F-45356B, dated 25 July 1984.

MILITARY INTERESTS:

Custodians:
Army - AT
Navy - YD
Air Force - 99

CIVIL AGENCY COORDINATING ACTIVITY:
GSA - FAS

Preparing Activity:
Army - AT

(Project 2910-2011-001)

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