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INCH-POUND

A-A-52460
August 11, 1993
SUPERSEDING
MS51087B
16 February 1988

COMMERCIAL ITEM DESCRIPTION

FILTER, FLUID, PRESSURE-AUTOMOTIVE FUEL (21 GPH FILTRATION)

The General Services Administration has authorized the use of this commercial item description (CID) as a replacement for MS51087B, which is canceled. This CID also replaces the portions of canceled MIL-F-45356B which apply to MS51087B.

ABSTRACT

This CID covers requirements for one type of filter assembly with a coarse filtration element for use in the fuel systems of internal combustion gasoline engines and accessories.

SALIENT CHARACTERISTICS

a. Materials. Unless otherwise specified herein, the materials used shall be in accordance with the manufacturer's material specifications for pressure fluid filters. The use of recovered materials made to conform with regulatory requirements is acceptable providing that all requirements of this CID are met (see note d).

1. Cover (head). The cover shall be made of a material which shall allow the filter assembly to perform to the requirements of this CID. If made of steel, cover material shall be zinc coated and the finished cover shall be treated with a corrosion resistant inhibitor in accordance with ASTM D2092, method B.

2. Bowl. The filter bowl material shall be brass, annealed, Unified Numbering System (UNS) C24000, C26000, or C26800 per ASTM B36; or zinc coated steel strip, carbon, cold rolled in accordance with ASTM A109. Steel bowls shall be treated with a corrosion resistant inhibitor in accordance with ASTM D2092, method B.

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 Command, ATTN: AMSTA-GDS, Warren, MI 48397-5000.

AMSC N/A FSC 2910

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3. Filter element. The filter element shall be made of a material which shall allow the filter assembly to perform to the requirements of this CID.

4. Bowl gasket. The filter bowl gasket shall be made of rubber conforming to ASTM D2000, classification number M2BG610A14B14EF21F17 or M2BG710A14B14EF21F17.

b. Design and construction.

1. Filter assembly. Unless otherwise specified in figure 1, the filter assembly and the replacing element shall be constructed in accordance with the manufacturer's specifications/drawings. The filter bowl shall be compatible with the bowl gasket.

2. Bowl gasket. The filter bowl gasket shall be in accordance with CID A-A-52468, part number A52468-5.

3. 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.

c. Performance characteristics.

1. Pressure-temperature resistance. The filter assembly shall show no signs of leakage or permanent deformation after being pressure tested at -65 + 3 degrees Fahrenheit (°F), 80 + 3°F, and 160 + 3°F. The pressure used in this test shall be 15 + 1 pounds per square inch (psi). Test fluids shall be used for the -65°F and 80°F tests. Air shall be used for the 160°F test. For all tests the pressure shall be applied for 5 minutes and reduced to zero.

2. Flow rate. The flow rate of the fuel filter assembly shall be 21 gallons per hour (gph). The maximum differential pressure across the filter assembly shall not exceed 6 psi. Test fluid shall be a "Mineral Spirits" or "Petroleum Spirits" solvent (Stoddard solvent) and shall have a solid contaminant content of no more than 5 milligrams per liter (mg/l) and temperature of 90° + 10°F.

3. Filtering efficiency. The filtering efficiency shall conform to the requirements specified in table I. Filters shall be tested with coarse contaminants in accordance with table II. The A.C. Spark Plug Division, Coarse Air Cleaner Dust, package no. 1543637 or equivalent, often referred to as "Arizona road dust" or "AC coarse dust" has been satisfactory for filter testing.

4. Vibration resistance. The fuel filter assembly shall show no evidence of cracking, deformation, loosening, or leakage in the body, at the gasket, 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 seconds 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.

d. Identification and marking. Identification and marking shall be permanent and legible and shall include, as a minimum,. the manufacturer's CAGE code and the part identification number (PIN), A52460-1 (see figure 1 and note b).

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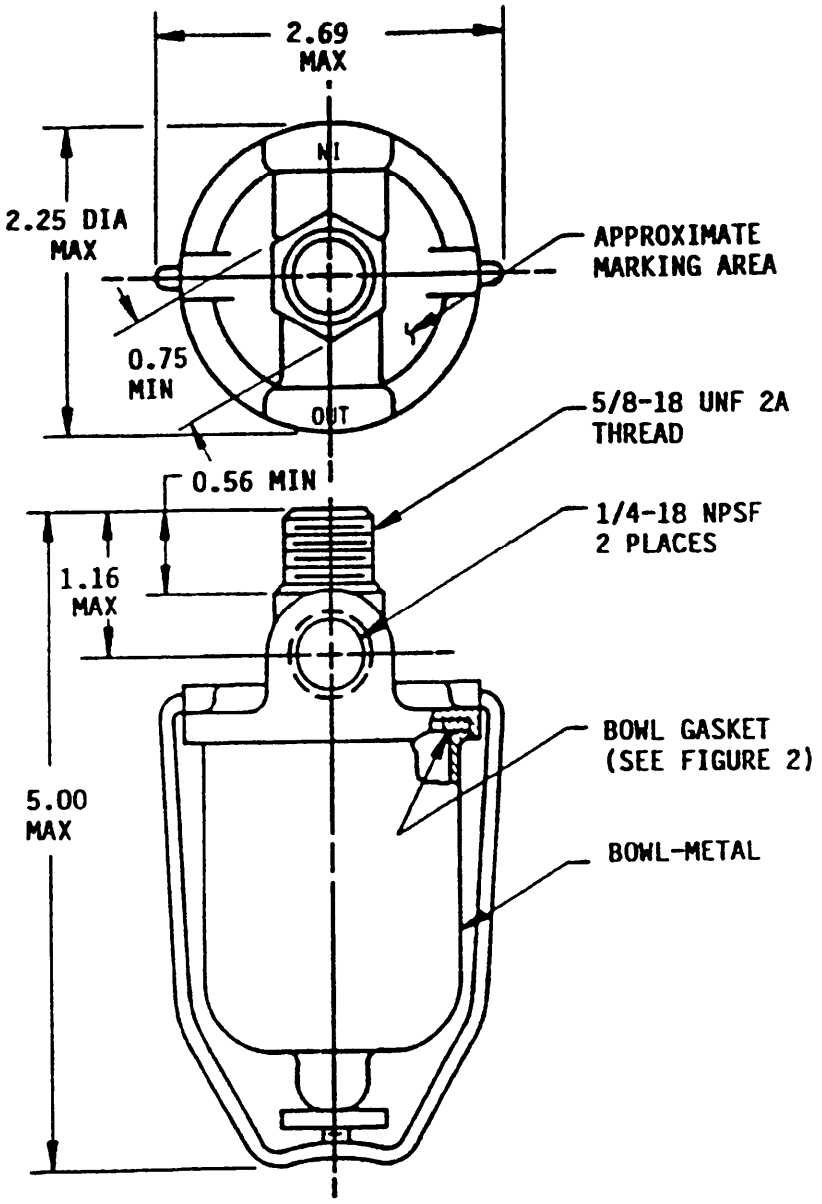

PIN	Former MS Part number
A52460-1	MS51087-1

NOTES:

1. Dimensions are in inches.
2. MAX = maximum.
3. MIN = minimum.

FIGURE 1. Filter, fluid, pressure-automotive fuel (21 gph).

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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	21	0.6	65	85	95

TABLE II. Contaminant size.

Coarse contaminant	
Particle size in micrometer	Percent by weight
0-5	12 ± 2
5-10	12 ± 3
10-20	14 ± 3
20-40	23 ± 3
40-80	30 ± 3
80-200	9 ± 3

QUALITY ASSURANCE PROVISION

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

b. Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this commercial item description 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.

PRESERVATION, PACKAGING, PACKING, LABELING, AND MARKING

Preservation, packaging, packing, labeling, and marking for the desired level shall be as specified in the contract (see note b).

NOTES

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

a. Addresses for obtaining copies of referenced documents.

1. Government specifications and standards. Copies of A-A-52468 "Gasket: Filter, Fluid, Pressure, Automotive Fuel" are available from the Navy Publications and Printing Service Office, Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

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2. Non-Government publications. ASTM A109 "Standard Specification for Steel Strip Carbon, Cold Rolled"; ASTM B36 "Standard Specifications for Brass Plate, Sheet, Strip and Rolled Bar"; ASTM D2000 "Standard Classification System for Rubber Products in Automotive Applications"; ASTM D2092 "Standard Practice for Preparation of Zinc-Coated Steel Surfaces for Paint" are available from the American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103.

b. Ordering data. Acquisition documents must specify the following:

1. Title, number, and date of this CID.
2. Issue of Department of Defense Index of Specifications and Standards (DODISS) to be cited in the solicitation, and if required, the specific issue of individual documents referenced.
3. Filter assembly PIN.
4. Selection of applicable level and packaging requirements.

c. Cross-reference data. Fuel filters conforming to this CID are interchangeable/substitutable with fuel filters conforming to MS51087B, dated 16 February 1988 and applicable sections of MIL-F-45356B, dated 25 July 1984.

d. Regulatory requirements. The offeror/contractor is encouraged to use recovered materials in accordance with Public Law 94-580 to the maximum extent practicable.

MILITARY INTERESTS:

Custodians
Army - AT
Air Force - 99

Review activity
Air Force - 82
DLA - CS

CIVIL AGENCY COORDINATING ACTIVITY:
GSA - FSS

PREPARING ACTIVITY:
Army - AT

(Project 2910-0228)