

INCH-POUND

A-A-52485B

July 11, 2013

SUPERSEDING

A-A-52485A

April 6, 1995

COMMERCIAL ITEM DESCRIPTION

VALVE, RELAY EMERGENCY: BREAKAWAY AIR BRAKE

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

1. SCOPE.

This CID covers air operated relay emergency valve used in vehicle air brake systems referred to herein as relay valve.

2. SALIENT CHARACTERISTICS.

2.1 Materials. All metals used in the construction of the relay valve shall be made of corrosion resistant material or protected to resist corrosion. The use of recovered material made in compliance with regulatory requirements is acceptable providing that all requirements of this CID are met (see 3.1).

2.1.1 Dissimilar metals. Dissimilar metals shall not be used in intimate contact with each other unless protected against galvanic corrosion.

2.2 Design and construction. Unless otherwise specified in figure 1, the relay valve shall be designed and constructed in accordance with the manufacturer's specifications and drawings.

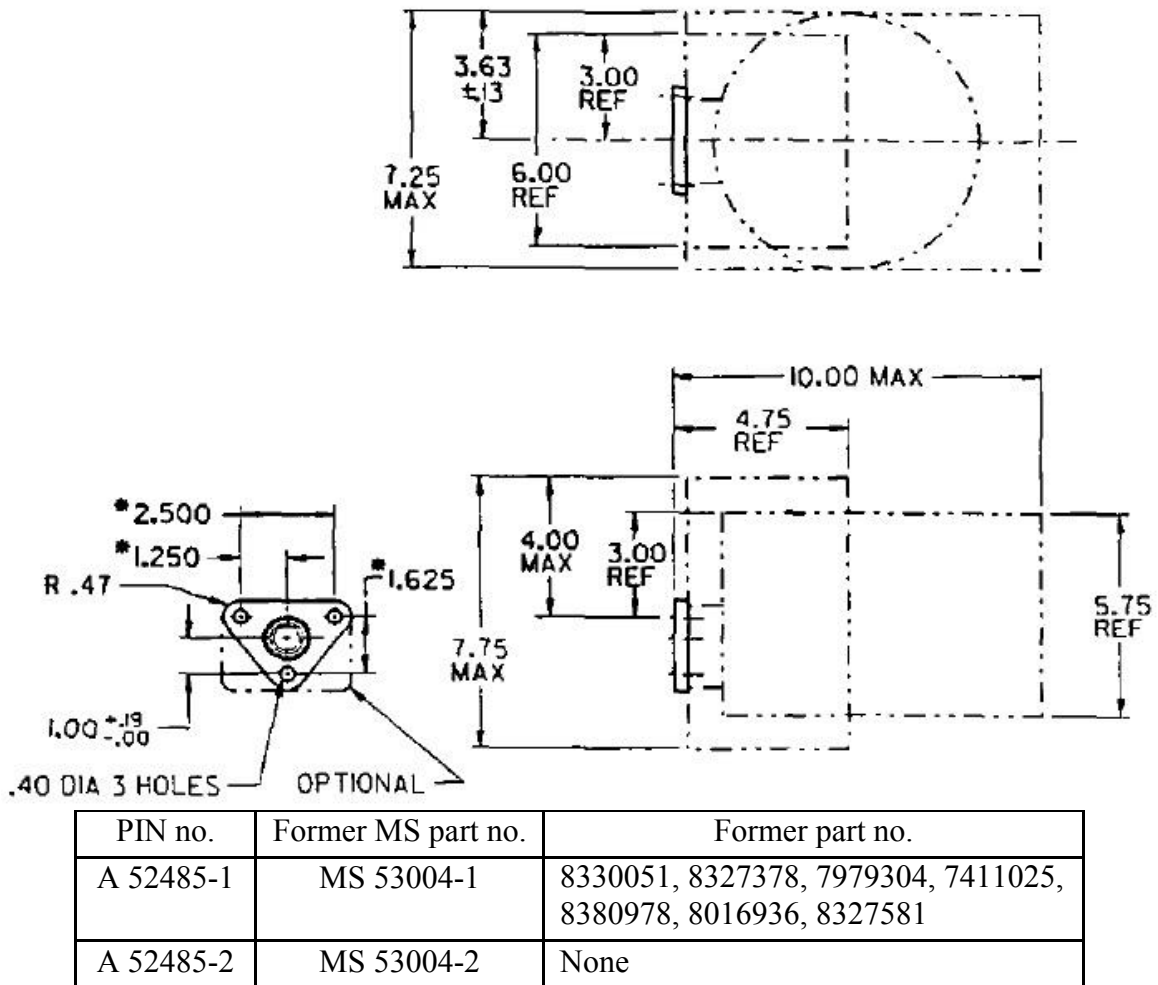
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AMSC N/A

FSC 2530

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NOTE:

1. Location of service, emergency, delivery (cylinder), reservoir, and exhaust ports optional. However, ports shall provide optimum access for connection in any of the referenced mounting positions.
2. Port thread dimensions: Service port - 1/4-18 NPTF, one (1) minimum required: Emergency port (charging) - 1/4-18 NPTF, one (1) minimum required: Delivery ports (brake) - 1/4-18 NPTF, four (4) minimum required: Reservoir ports - two (2) minimum required - valve mounting pad port 3/4-14 NPTF. The other reservoir port 3/8-18 NPTF.
3. All ports, except one (1) service, one (1) emergency, and one (1) delivery port, shall be fitted with metallic dryseal (NPTF) pipe plugs. Unplugged ports shall be fitted with closures to prevent intrusion of dust and moisture, and protect the threads.
4. All designated valve ports and elbows shall be so positioned to allow assembly of ninety degrees (90°).
5. Dimensions are in inches (in). Tolerances are $\pm .031$ unless otherwise specified. Use of an asterisk (*) indicates tolerance $\pm .005$, casting dimensions shall be $\pm .062$.
6. PIN number A 52485-2 is a replacement kit.

FIGURE 1. Relay valve.

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2.3 Port marking. All ports shall be clearly and permanently marked and identified to indicate the proper air line application and connection to be made.

2.4 Performance. Unless otherwise specified, performance and test requirements of the relay valve shall conform to SAE J1409 and SAE J1410.

2.5 Cracking pressure. Service line pressure required to actuate the valve allowing pressure to enter delivery line shall not be more than 5 pounds per square inch (psi).

2.6 Charging rate. The time required to build up trailer reservoir (1,000 cubic inches) pressure from 0 to 65 psi shall be 7 ± 1 second, and from 0 to 100 psi shall not be more than 30 seconds.

2.7 Pressure differential. The pressure differential between the service line pressure and the brake chamber pressure shall not be more than 5 psi at an air pressure of 50 ± 5 psi. The air pressure in the brake chamber at all times.

2.8 Service time. The time between application of 100 psi air pressure to the service port and build up of 60 psi in the brake chamber shall be a maximum of 0.22 seconds.

2.9 Emergency application. The pressure in the 75 cubic inch reservoir shall increase approximately three times the rate that the emergency line pressure decreases. The time between the start of emergency line pressure decrease and build up of 60 psi in the reservoir shall not exceed .19 seconds.

2.10 Bleed-down rate. The relay valve shall have an automatic means to gradually reduce trailer air reservoir and brake system pressure to the atmosphere when the trailer is detached from the towing vehicle. The rate of this pressure reduction shall be between .065 standard cubic feet per minute (scfm) and .025 scfm when measured in the range of 88 to 82 psig. Pressure shall be maintained for no less than 3 minutes and shall not bleed back through the supply line.

2.11 Finish. External surfaces of the valve shall be cleaned, treated and painted to provide protection against rust, corrosion, and deterioration. Color and type of paint final top coat shall be as specified in the contract or order (see 6.2).

2.12 Identification and marking. Identification markings shall be permanent and legible and shall include as a minimum, the manufacturer's identification code (CAGE) and part number, and the military part identification number (PIN) (see figure 1, 6.2 and 6.3).

2.13 Mounting. The relay valve shall be capable of mounting in the following positions:

- a. Direct mounted to reservoir with 3/4"-14 NPTF for pipe nipple.
- b. Mounted to reservoir bracket.
- c. Remote mounted.

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2.14 Replacement kit. Replacement kit shall include relay valve, instructions for mounting, provisions for tank 3/4"-14 NPTF for pipe nipple, tank flange, or remote mounting plus the following fittings which shall conform to SAE J246:

Quantity:

- (1) Adapter - 1/4 NPTF with nut and sleeve for 3/8 air line.
- (2) 90° elbow - 1/4 NPTF with nut and sleeve for 3/8 air line.
- (1) 90° elbow - 3/8 NPTF with nut and sleeve for 3/8 air line.
- (1) 90° elbow - 3/8 NPTF with nut and sleeve for 1/2 air line.
- (4) 90° street elbow - 1/4 NPTF.

3. REGULATORY REQUIREMENTS.

3.1 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).

4. PRODUCT CONFORMANCE PROVISIONS.

4.1 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 marketplace. The government reserves the right to require proof of such conformance.

5. PACKAGING.

5.1 Packaging. Preservation, packaging, packing, labeling, and marking for the desired level shall be as specified in the contract (see 6.2).

6. NOTES.

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

6.1 Addresses for obtaining copies of referenced documents.

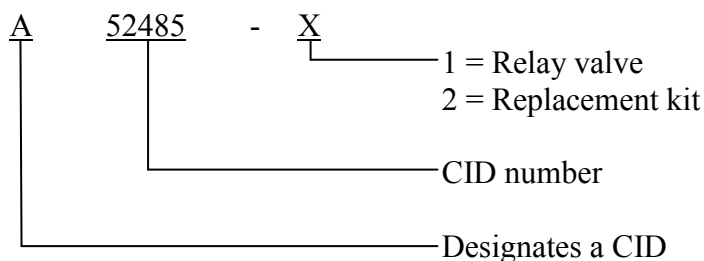
6.1.1 Non-Government publication. Copies of SAE J246 "Spherical and Flanged Sleeve (Compression) Tube Fittings"; SAE J1409, "Air Brake Valves Test Procedure"; and SAE J1410, "Air Brake Valve-Performance Requirements" are available from <http://www.sae.org> or from the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096.

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6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this CID.
- b. If required, the specific issue of individual reference documents.
- c. Nomenclature, PIN, and quantity of each item required.
- d. Color of paint final top coat and if Chemical Agent Resistant Paint (CARC) is required.
- e. Applicable level and packaging requirements.

6.3 Part identification number (PIN). The PIN to be used for the relay valve and replacement kit acquired to this CID are as follows:



6.4 Cross-reference. Relay valves conforming to this CID are interchangeable/substitutable with relay valves conforming to MIL-V-46704A(AT) and MS53004C.

6.5 Environmentally preferable material. Environmentally preferable materials should be used to the maximum extent possible to meet the requirements of this specification. As of the dating of this document, the U.S. Environmentally Protection Agency (EPA) is focusing efforts on reducing 31 priority chemicals. The list of chemicals and additional information is available on their website <http://www.epa.gov/osw/hazard/wastemin/priority.htm>. Included in the EPA list of 31 priority chemicals are cadmium, lead, and mercury. Use of these materials on the list should be minimized or eliminated unless needed to meet the requirements specified herein (see Section 3).

6.6 Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue 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 issue.

6.7 Key words.

Axle
Component
Tactical
Trailer
Vehicular
Wheel

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MILITARY INTERESTS:

Custodians

Army - AT
Navy - MC
Air Force - 99

Review activities

Army - MI
Air Force - 84
DLA - CC

CIVIL AGENCY
COORDINATING ACTIVITY:
GSA - FSS

PREPARING ACTIVITY:
Army - AT

(Project 2530-2013-004)

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