

INCH-POUND

A-A-52432A

October 12, 1995

SUPERSEDES

A-A-52432

October 20, 1993

MIL-M-46728C

23 March 1987

MS53015H

22 August 1989

COMMERCIAL ITEM DESCRIPTION

MIRROR ASSEMBLY, REARVIEW: AUTOMOTIVE EXTERIOR MOUNTING

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

1. SCOPE. This CID covers exterior-mounted, automotive rearview mirror assemblies.

1.1 Classification. Rearview mirror assemblies shall be of the following types:

- | | |
|----------|--|
| Type I | - Stud, ball and socket mount. |
| Type II | - Top and bottom stud mount. |
| Type III | - Top and bottom stud mount, combination (plane & convex). |

2. SALIENT CHARACTERISTICS.

2.1 Materials. Materials shall be as specified herein and in the applicable standards and specifications. 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 Mirror glass. Mirror glass shall conform to type I, float glass, quality ql- double strength, thickness (.115 minimum - .134 inch maximum) per ASTM C1036.

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/BLUE, Warren, MI 48397-5000.
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FSC 2540

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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2.1.2 Mirror coating. The reflecting surface of the mirror coating shall be a silvered coating, uniform in color, and free from stains, scratches, blisters, and misses.

2.1.3 Chromium. Vacuum metalized or sputtered chromium may be used in place of base silvering operation.

2.1.4 Mirror case. Mirror case shall be made of low-carbon steel, 0.024 inch temper 2 to 5.

2.1.5 Mirror mounts. Mirror mounts shall be made from carbon steel (G10200 to G10350) and zinc plated per ASTM B633.

2.2 Design and construction. This CID is not intended to limit construction to features other than as shown in figures 1, 2, and 3, by dimension, notation, or reference documents.

2.3 Specular reflectivity. With an angle of incidence of 45 degrees, total reflective light in the visible range shall exceed 50 percent when tested in accordance with SAE J964.

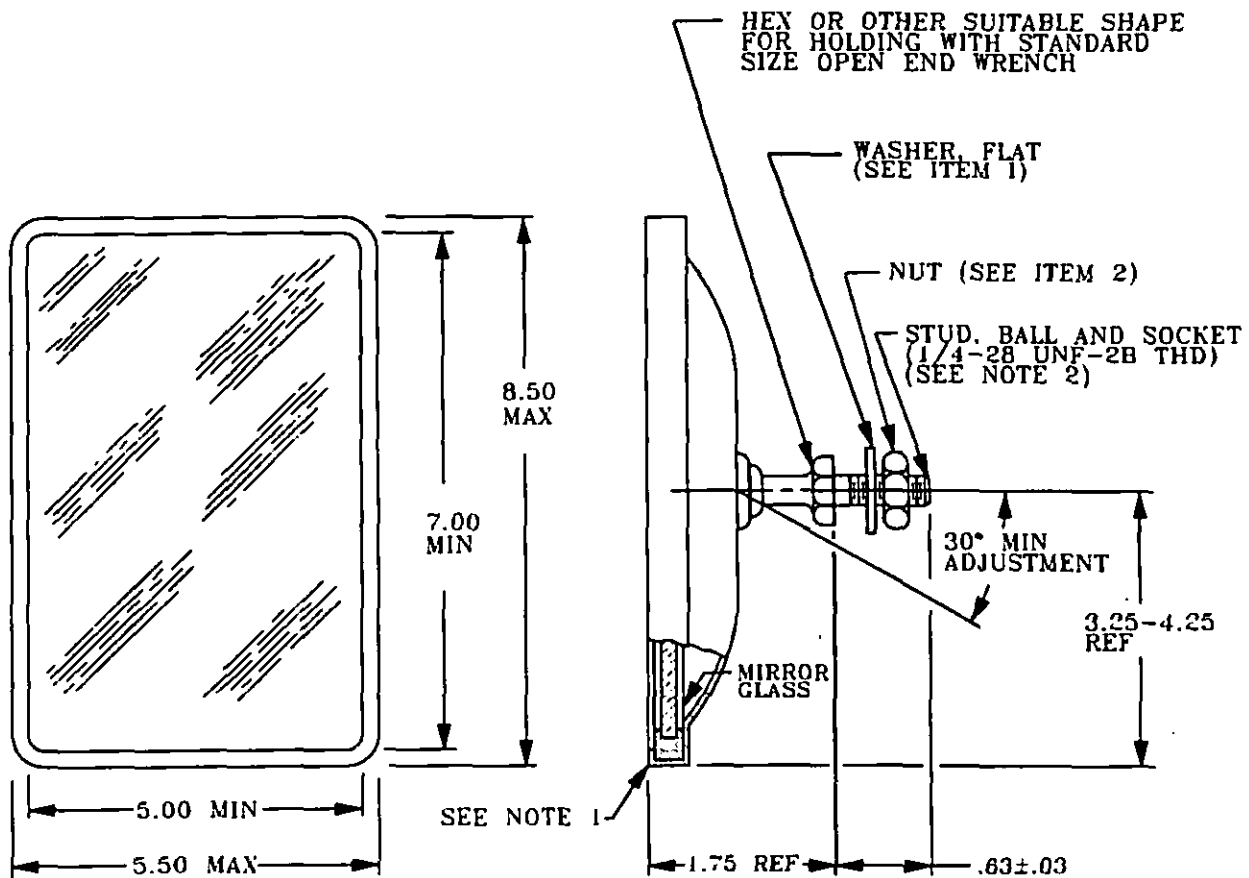
2.4 Range of convexities. Convex mirror shall have an average radius of curvature not less than 20 inches and not more than 60 inches when measured with a spherometer.

2.5 Vibration. The mirror assembly shall show no evidence of damage when subjected to being vibrated for 1 hour in each of its three axes. Vibration shall be in a periodic cycle from 10 to 55 and back to 10 cycles per second through an amplitude of .03 inch (total excursion .06 inch).

2.6 Temperature stability. When subjected to specified temperatures, mirrors shall not show any evidence of discoloration, silvering deterioration, or reduction in reflectivity. A disassembled mirror shall be placed in a cold chamber and the temperature reduced to -65 degrees Fahrenheit ($^{\circ}\text{F}$) $\pm 5^{\circ}\text{F}$ for 2 hours. The mirror shall then be removed from the cold chamber and returned to room temperature. It shall then be placed in an oven with ambient temperature of 200 $^{\circ}\text{F}$ for 2 hours. Possible reduction in reflectivity shall be measured visually comparing the reflected shade of a sheet of white paper with actual shade of the paper.

2.7 Abrasion resistance. When subjected to abrasion and cleaning as specified, the reflectivity of the mirror shall not be reduced by more than 2 percent. The reflecting surface shall be cleaned with a soft, unbleached cloth and dusted on the nap side with dry soil passed through a 200-mesh sieve. The reflecting surface shall be rubbed with the cloth for 30 seconds using a rotary motion. The foregoing cleaning cycle shall be repeated 30 times. Mirror shall be examined for any visible damage due to the above abrading and shall then be tested as specified in 2.8.

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ITEM	DESCRIPTION	REPLACEMENT PART NO.
1	WASHER, FLAT ROUND, STEEL, ZINC PLATED INSIDE DIAMETER .281 OUTSIDE DIAMETER .625 THICKNESS .065	MS27183-10
2	LOCKNUT 1/4-28 UNJF-3B STEEL, ZINC PLATED	MS21044-N4

PART IDENTIFICATION NUMBER (PIN)	FORMER MS DASH NUMBER
A52432-1	MS53015-1

NOTES:

1. Synthetic rubber cushion, all around mirror edges. Retention optional.
2. Ball, stud and socket assembly shall be provided with means of adjusting tension sufficiently to hold mirror in fixed position.

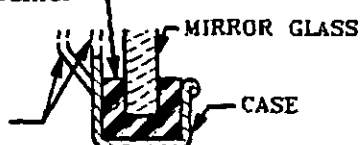
FIGURE 1. Mirror assembly, rearview (type I).

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PART IDENTIFICATION NUMBER (PIN)	FORMER MS DASH NUMBER
A52432-2	MS53015-2

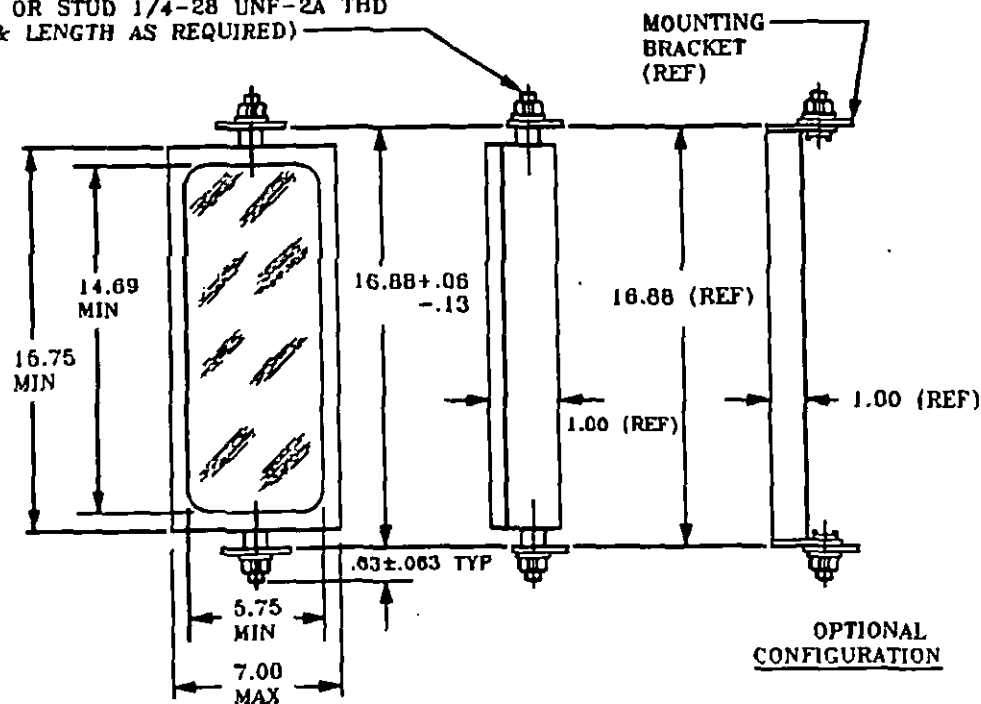
SYNTHETIC RUBBER CUSHION
(SEE NOTE 1)

OPTIONAL CASE BACK
CONFIGURATION



CROSS-SECTION VIEW
OF MIRROR INSTALLATION

2-LOCKNUT (SEE ITEM 1)
2-WASHER, FLAT (SEE ITEM 2)
2-BOLT OR STUD 1/4-28 UNF-2A THD
(TYPE & LENGTH AS REQUIRED)



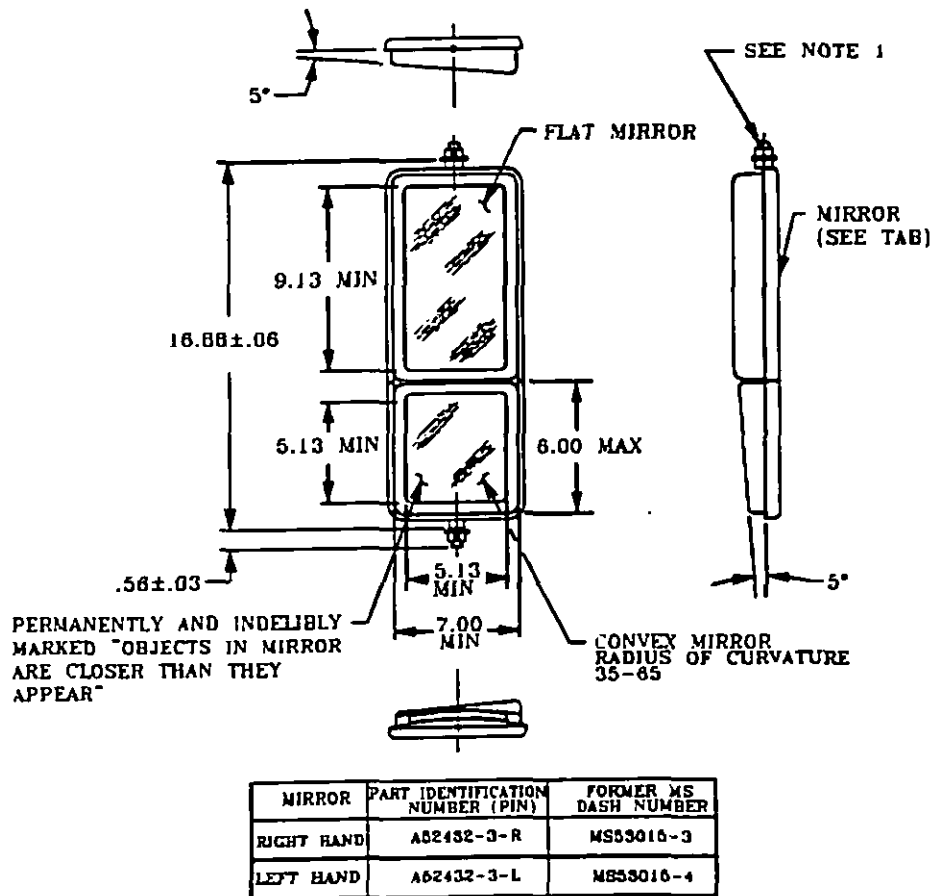
ITEM	DESCRIPTION	REPLACEMENT PART NO.
1	1/4-28 UNF-2B, ZINC PLATED NON-METALLIC INSERT OF NYLON OR EQUIVALENT SHALL BE PROVIDED	MS51922-5
2	ROUND, STEEL, ZINC PLATED INSIDE DIAMETER .281, OUTSIDE DIAMETER .625, THICKNESS .065	MS27183-10

NOTES:

1. Synthetic rubber cushion, all around mirror edges. Retention optional.

FIGURE 2. Mirror assembly, rearview (type II).

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NOTES:

1. Stud, washer and nut shall be as specified in figure 2.
2. Angle between plane of flat mirror and chord plane of convex mirror as shown above: 5° in plain view, 4.1° in vertical elevation view.
3. Right hand mirror is shown. Left hand mirror is identical except of opposite hand with respect to vertical axis.
4. The combination (plain and convex) mirror assembly shall be capable of being independently adjusted.

FIGURE 3. Combination mirror assembly (type III).

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2.8 Corrosion resistance. When subjected to corrosive solution as specified, mirror shall evidence no discoloration, silvering deterioration, or any visually apparent reduction in reflectivity. A disassembled mirror shall be subjected to the corrosion test specified in ASTM B117 standard. Salt solution shall be 20 percent by weight. Length of exposure shall be 50 hours ± 1 hour. At completion of test and prior to mirror being inspected, residue shall be removed by cleaning with a soft, unbleached cloth.

2.9 Coating adhesion. When subjected to loading adhesion testing as specified, there shall be no separation of reflective coating from the mirror. A strip of pressure-sensitive tape, 1 inch wide shall be securely applied to the coated side and over the edges of mirror glass in an ambient air temperature of $68^{\circ}\text{F} \pm 2^{\circ}\text{F}$. The tape shall be stripped off in one slow, steady motion.

2.10 Finish treatment. Cleaning, pretreating, priming and painting of the mirror case shall conform to an appropriate CARC paint system selected from Army drawing no. 12369000 for external application. Unless otherwise specified (see 6.2), color of paint final top coat shall be green 383.

2.11 Identification and marking. Identification and marking shall be permanent and legible and shall include the manufacturer's identification code (CAGE), and the part identification number (PIN) (see 6.4). Marking shall be at the lower edge of mirror's reflective surface in letters not less than .19 inch nor more than .25 inch high.

3. REGULATORY REQUIREMENTS.

3.1 Recovered material. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of Federal Acquisition Regulation (FAR).

4. QUALITY ASSURANCE PROVISIONS.

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

4.2 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.

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5. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order (see 6.2).

6. NOTES.

6.1 Addresses for obtaining copies of referenced documents

6.1.1 Army drawing. Copies of Army drawing no. 12369000 "Chemical Agent Resistant Coating (CARC) Paint System Index" are available from the Contracting Officer, U.S. Army Tank Automotive Command, Warren, MI 48393-5000.

6.1.2 Non-Government publications. Copies of ASTM B117 "Standard Test Method of Salt Spray (Fog) Testing" and ASTM B633 "Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel" are available from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103. Copies of SAE J964 "Test Procedure for Determining Reflectivity of Rear View Mirrors" are available from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001.

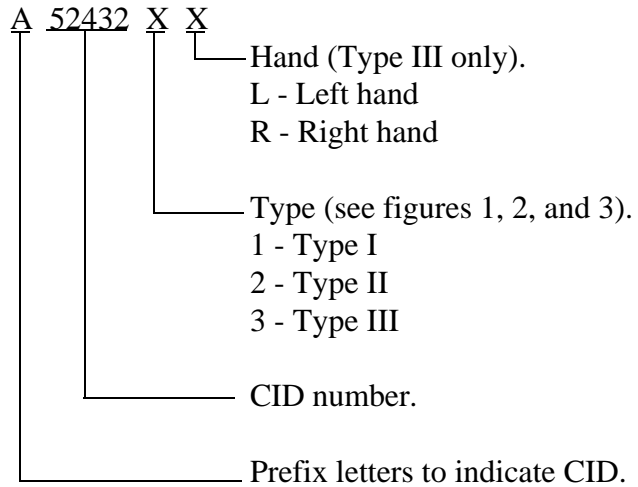
6.2 Ordering data. Acquisition documents must specify the following:

- a. Title, number, and date of this commercial item description.
- b. Issue of the DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced.
- c. Type and PIN number of mirror assembly to be furnished (see figures 1, 2, and 3).
- d. Color of mirror case paint final top coat if other than specified.
- e. Selection of applicable level and packaging requirements.

6.3 Cross-reference data. Mirrors conforming to this CID are interchangeable/substitutable with mirrors conforming to MIL-M-46728C and MS53015H.

6.4 Part or identification number (PIN). The PINs to be used for mirrors acquired to this CID are as follows:

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MILITARY INTERESTS:

Custodians:

Army - AT
Navy - YD
Air Force - 99

Review activities:

Army - ME, MI
Navy - MC
DLA - CS

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

Preparing activity:

Army - AT

(Project 2540-0431)