

INCH-POUND

A-A-59553A
 14 May 2012
 SUPERSEDING
 A-A-59553
 28 June 2001

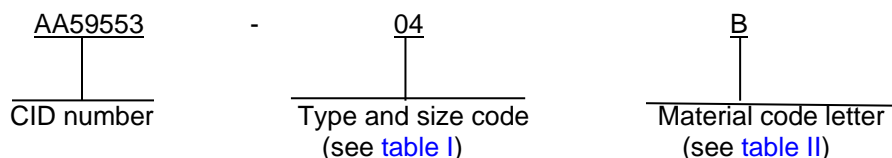
COMMERCIAL ITEM DESCRIPTION

COUPLING HALVES, CAP AND WYE; QUICK DISCONNECT
 PNEUMATIC HOSE, TWO-LUG UNIVERSAL TYPE

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

1. **SCOPE.** This commercial item description (CID) covers the general requirements for coupling halves, cap and wye; quick disconnect pneumatic hose, two-lug universal type. Coupling halves, cap and wye; quick disconnect pneumatic hose, two-lug universal type covered by this CID are intended for commercial/industrial applications (see 7.10).

2. **CLASSIFICATION/PART OR IDENTIFICATION NUMBER (PIN).** This CID uses a classification system which is included in the PIN as shown in the following example (see 7.1)



2.1 **Example of PIN:** The PIN AA59553-04B specifies a 3/4 inch, type I, bronze barbed fitting with male hose fitting end.

2.1.1 **Types.** The following are types of coupling halves, cap and wye; quick disconnect pneumatic hose, two-lug universal type (see 2.3 and table I):

- | | | |
|----------|---|---|
| Type I | - | Coupling half, quick disconnect with male hose fitting end (figure 1). |
| Type II | - | Coupling half, quick disconnect with female NPT fitting end (figure 2). |
| Type III | - | Coupling half, quick disconnect with male NPT fitting end (figure 3). |
| Type IV | - | Coupling half, quick disconnect, wye (figure 4). |
| Type V | - | Coupling half, quick disconnect, dead-end (cap) (figure 5). |

2.2 **Sizes.** Couplings covered by this CID will be used with hose having the following inside diameters (see 2.3 and table I):

- | | | |
|----------|---|----------|
| 1/4 inch | - | 5/8 inch |
| 3/8 inch | - | 3/4 inch |
| 1/2 inch | - | 1 inch |

Comments, suggestions, or questions on this document should be addressed to DLA, Land and Maritime, ATTN: VAI, P.O. Box 3990, Columbus, OH 43218-3990, or email to FluidFlow@dla.mil. 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>.

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2.3 Type and size of fitting. The size and type of hose fittings are identified by two digits (see table I).

TABLE I. Type and size code number.

| Size (inch) | Type (see figures 1 through 5) | | | | |
|-------------|--------------------------------|----|-----|----|----|
| | I | II | III | IV | V |
| None | | | | 16 | 17 |
| 1/4 | | 06 | 11 | | |
| 3/8 | 01 | 07 | 12 | | |
| 1/2 | 02 | 08 | 13 | | |
| 5/8 | 03 | | | | |
| 3/4 | 04 | 09 | 14 | | |
| 1 | 05 | 10 | 15 | | |

2.4 Material. The pneumatic hose fitting is made from a material (see 3.2) identified by a single letter (see table II).

TABLE II. Material code letter.

| Code letter | Material |
|-------------|--------------------------------------|
| B | Bronze |
| M | Malleable iron |
| S | 316 Corrosion resistant steel (CRES) |

3. SALIENT CHARACTERISTICS.

3.1 Interface and physical dimensions. These quick disconnect coupling halves supplied to this CID shall be as specified herein and are suitable for use with pneumatic hose and hose accessories. The pneumatic hose fittings, hereinafter called fittings, shall have the same size quick disconnect ends for interconnection of hoses regardless of hose sizes. Requirements shall be as defined herein.

3.2 Materials. Materials shall be as specified herein. Basic fitting material shall be malleable iron or bronze (see 3.2.2 and 3.2.3). Materials not specified shall be selected by the contractor and shall be subject to all provisions of this CID.

3.2.1 Dissimilar metals. Fitting parts shall be fabricated from compatible materials, inherently corrosion resistant or treated to provide protection against the various forms of corrosion and deterioration to which they are susceptible. Dissimilar metals shall not be used in intimate contact with each other unless protected against galvanic corrosion.

3.2.2 Malleable iron. Malleable iron castings shall conform to ASTM-A197/A197M or ASTM-A47/A47M, grade 32510. (see 3.2.4)

3.2.2.1 Coating. Malleable iron fittings shall be zinc-coated 25µm in accordance with ASTM-B633. Minimum film thickness shall be in accordance with ASTM-B633 Fe/Zn 24 service condition 4 (very severe service).

3.2.3 Bronze. Bronze castings shall conform to ASTM-B61 or ASTM-B584, UNS C85700.

3.2.4 Corrosion resistant steel. 316 CRES shall be in accordance with ASTM A666 or SAE-AMS5524.

3.2.4.1 Corrosion resistant steel passivation. Corrosion resistant steel shall be passivated in accordance with SAE-AMS2700, type 6 or 7.

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3.3 Configuration.

3.3.1 Physical requirements. The fittings shall be commercial design and shall provide for interconnection between all types of fittings covered by this CID. The fittings shall have external lugs to provide a locking arrangement that will permit connection (or disconnection) of any two of the fittings by turning one into (or out of) the other a quarter of a turn. The fittings shall be furnished with lockwire holes. When the fittings are snapped together, at least one of the lockwire holes on each fitting shall line up to receive a lockwire or safety pin. A preformed packing shall be furnished with each fitting.

3.3.2 Type I coupling. The type I coupling halves shall conform to the configuration shown in [figure 1](#) (see [7.6](#)), and shall be the size specified (see [2.2](#)).

3.3.3 Types II and III coupling halves. Type II and III coupling halves shall conform to the configurations shown in figures 2 and 3, respectively (see [7.6](#)), and shall be the size specified with ASME-B1.20.1 NPT threads. (see [2.2](#))

3.3.4 Types IV and V coupling halves. Type IV wye and type V cap couplings shall conform to the configurations shown in figures 4 and 5, respectively (see [7.6](#)).

3.4 Performance.

3.4.1 Proof pressure. Fittings and preformed packings shall withstand, without leakage or distortion, a hydrostatic proof pressure of 165 psi (1106 kpa).

3.4.2 Working pressure. Fittings conforming to this CID shall be rated for 110 psi (758 kpa) working pressure.

3.5 Marking. The fittings supplied to this CID shall be marked with the manufacturer's (MFR's) standard commercial PIN. (NOTE: The part number marked on the unit pack shall be the CID PIN.)

3.6 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

3.7 Workmanship. Coupling halves, cap and wye; quick disconnect pneumatic hose, two-lug universal type shall be processed in such a manner as to be uniform in quality and shall be free from other defects that will affect life, serviceability, or appearance.

4. REGULATORY REQUIREMENTS. The offerer/contractor is encouraged to use recovered material to the maximum extent practicable, in accordance with 23.403 of the Federal Acquisition Regulation (FAR).

5. PRODUCT CONFORMANCE PROVISIONS.

5.1 Product conformance. The products provided shall meet the salient characteristics of this CID; 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.

6. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order.

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7. NOTES.

7.1 PIN. The PIN should be used for Government purposes to buy commercial products to this CID. See section 2 for PIN format example.

7.2 Environmentally preferable material. Environmentally preferable materials should be used to the maximum extent possible to meet the requirements of this specification. As of the date of this document, the U.S. Environmental 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 should be minimized or eliminated unless needed to meet the requirements specified herein (see section 3).

7.3 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these coupling halves, cap and wye; quick disconnect pneumatic hose, two-lug universal type to DLA Land and Maritime under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

7.4 Source of documents.

FEDERAL REGULATIONS

FAR - Federal Acquisition Requirements (FAR)

(The online document is available at <https://www.acquisition.gov/far/> or copies of the document are available at the U.S. Government Bookstore, 710 North Capital Street N.W., Washington D.C 20401-0001 or online at <http://bookstore.gpo.gov/>).

ASTM INTERNATIONAL

| | | |
|-----------------|---|---|
| ASTM-A47/A47M | - | Standard Specification for Ferritic Malleable Iron Castings |
| ASTM-A197/A197M | - | Standard Specification for Cupola Malleable Iron |
| ASTM A666 | - | Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar |
| ASTM-B61 | - | Standard Specification for Steam or Valve Bronze Castings |
| ASTM-B584 | - | Standard Specification for Copper Alloy Sand Castings for General Applications |
| ASTM-B633 | - | Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel |

(Copies of these documents are available online at <http://www.astm.org> or from the ASTM International, P.O. Box C700, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

ASME INTERNATIONAL

ASME-B1.20.1 - Pipe Threads, General Purpose (Inch)

(Copies of these documents are available online at <http://www.asme.org> or from the ASME International, Three Park Avenue, New York, NY 10016-5990.)

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SAE INTERNATIONAL

SAE-AMS2700 - Passivation of Corrosion Resistant Steels
 SAE-AMS5524 - Steel, Corrosion and Heat-Resistant, Sheet, Strip and Plate
 18Cr - 13Ni - 2.5Mo (SAE 30316) Solution Heat Treated -
 UNS S31600

(Copies of these documents are available on line at www.sae.org from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, and Tel: 877-606-7323 [inside USA and Canada] or 724-776-4970 [outside USA], email at CustomerService@sae.org.)

7.5 Ordering data. The contract or order should specify the following:

- a. CID document number, revision, and CID PIN.
- b. Product conformance provisions.
- c. Packaging requirements.

7.6 Commercial products. As part of the market analysis and research effort, this CID was coordinated with the following manufacturers of commercial products. At the time of CID preparation and coordination, these manufacturers were known to have commercial products that would meet the requirements of this CID. (NOTE: This information should not be considered as a list of approved manufacturers or be used to restrict procurement to only the manufacturers shown.)

| <u>MFR's CAGE</u> | <u>MFR's name and address</u> |
|-------------------|---|
| 72661 | Dixon Valve & Coupling Company 800 High St. Chestertown, MD 21620 Phone: 410-778-2000 Fax: 410-778-4702 E-mail: sales@dixonvalve.com WEB: http://www.dixonvalve.com |
| 39428 | McMaster-Carr Supply Company 600 County Line Rd. Elmhurst, IL 60126-2034 Phone: 732-329-3200 WEB: http://mcmaster.com |

7.7 Cross reference data. Fittings conforming to this CID are interchangeable with fittings conforming to the following cancelled federal specification WW-C-633D which is superseded by A-A-59553.

7.8 Part number (P/N) supersession data. These CID PIN's supersede the following MFR's P/N's as shown in [table III](#). This information is being provided to assist in reducing proliferation in the Government inventory system.

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TABLE III. P/N supersession data.

| A-A-59553 PIN | CAGE 72661 | CAGE 39428 | Size | Coupling type |
|------------------|---------------|---------------|------|---------------------------------------|
| AA59553-01B | ABH | 5344K34 | 3/8 | Couplings, Barbed |
| AA59553-01M | AMH | 5344K39 | | |
| AA59553-01S | RAMH | 5344K69 | | |
| AA59553-02B | AB1 | 5344K35 | 1/2 | |
| AA59553-02M | AM1 | 5344K41 | | |
| AA59553-02S | RAM1 | 5344K71 | | |
| AA59553-03B | AB5 | --- | 5/8 | |
| AA59553-03M | AM5 | --- | | |
| AA59553-03S | --- | --- | | |
| AA59553-04B | AB6 | 5344K36 | 3/4 | |
| AA59553-04M | AM6 | 5344K42 | | |
| AA59553-04S | RAM6 | 5344K72 | | |
| AA59553-05B | AB11 | 5344K37 | 1 | |
| AA59553-05M | AM11 | 5344K43 | | |
| AA59553-05S | RAM11 | 5344K73 | | |
| AA59553-06B | ABC1 | 5344K16 | 1/4 | Couplings, threaded female pipe |
| AA59553-06M | AMC1 | 5344K27 | | |
| AA59553-06S | --- | 5344K65 | | |
| AA59553-07B | ABC | 5344K17 | 3/8 | |
| AA59553-07M | AMC | 5344K28 | | |
| AA59553-07S | RAMC | 5344K66 | | |
| AA59553-08B | AB3 | 5344K18 | 1/2 | |
| AA59553-08M | AM3 | 5344K29 | | |
| AA59553-08S | RAM3 | 5344K67 | | |
| AA59553-09B | AB8 | 5344K19 | 3/4 | |
| AA59553-09M | AM8 | 5344K31 | | |
| AA59553-09S | RAM8 | 5344K68 | | |
| AA59553-10B | AB13 | 5344K21 | 1 | |
| AA59553-10M | AM13 | 5344K32 | | |
| AA59553-10S | RAM13 | --- | | |
| AA59553-11B | ABB1 | 5344K11 | 1/4 | Couplings, threaded male pipe |
| AA59553-11M | AMB1 | 5344K22 | | |
| AA59553-11S | --- | 5344K61 | | |
| AA59553-12B | ABB | 5344K12 | 3/8 | |
| AA59553-12M | AMB | 5344K23 | | |
| AA59553-12S | RAMB | 5344K62 | | |
| AA59553-13B | AB2 | 5344K13 | 1/2 | |
| AA59553-13M | AM2 | 5344K24 | | |
| AA59553-13S | RAM2 | 5344K63 | | |
| AA59553-14B | AB7 | 5344K14 | 3/4 | |
| AA59553-14M | AM7 | 5344K25 | | |
| AA59553-14S | RAM7 | 5344K64 | | |
| AA59553-15B | AB12 | 5344K15 | 1 | |
| AA59553-15M | AM12 | 5344K26 | | |
| AA59553-15S | RAM12 | --- | | |
| AA59553-16B | AN10 | ---- | N/A | Triple connector |
| AA59553-16M | AM10 | 5344K53 | | |
| AA59553-16S | --- | --- | | |
| AA59553-17B | AB0 | --- | N/A | Blank end |
| AA59553-17M | AM0 | 5344K51 | | |
| AA59553-17S | RAM0 | --- | | |

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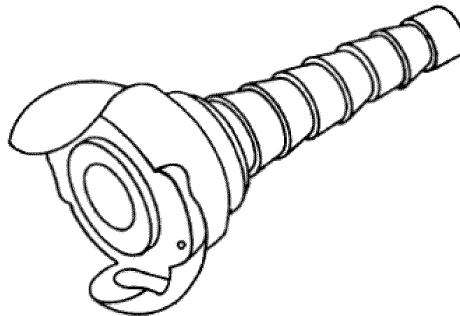
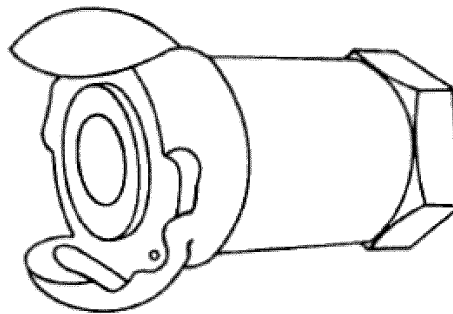
7.9 Government users. To acquire information on obtaining these Coupling Halves, Cap and Wye; Quick Disconnect, Pneumatic Hose, Two-Lug Universal Type from the Government inventory system, contact DLA, Land and Maritime, ATTN: FMD, P.O. Box 3990, Columbus, OH 43218-3990, or telephone (614) 692-1004.

7.9.1 National stock number (NSN). The following is a list of NSN's assigned which correspond to this CID. The list is for information only and may not be indicative of all possible NSN's associated with the CID. For up to date information on assigned NSN's, please contact the aforementioned DLA Land and Maritime office (see 7.9 and [table IV](#)).

TABLE IV. NSN's.

| CID A-A-59553 PIN | NSN |
|-------------------|------------------|
| AA59553-09-M | 4730-00-293-7905 |
| AA59553-13-M | 4730-00-369-4591 |
| AA59553-14-M | 4730-00-369-4593 |
| AA59553-12M | 4730-00-369-4595 |
| AA59553-05-M | 4730-00-496-5953 |
| AA59553-10B | 4730-00-844-9014 |
| AA59553-15B | 4730-01-340-2282 |

7.10 Information figures. Figures 1 through 5 show fittings that have been found acceptable; however, the figures are included as examples of the five fitting types only, and are not intended to preclude the furnishing of other fittings that conform to this CID.

FIGURE 1. Hose end coupling, type I.FIGURE 2. Female-thread coupling, type II.

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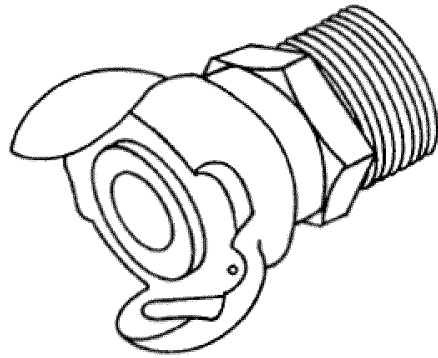


FIGURE 3. Male-thread coupling, type III.

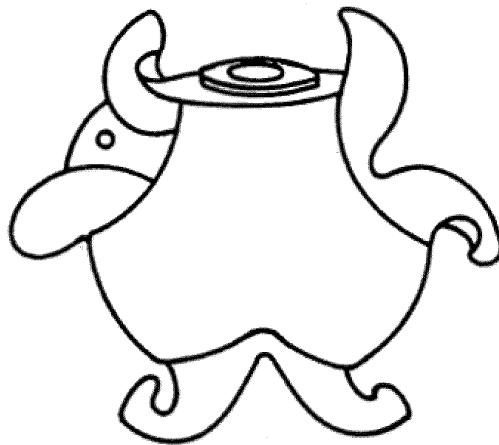


FIGURE 4. Three-way (wye) coupling, type IV.

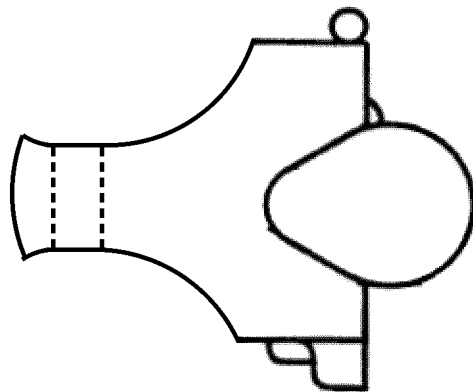


FIGURE 5. Dead-end (cap) coupling, type V.

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7.11 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

MILITARY INTERESTS:

Custodians:

Army - AT
Navy - SH
DLA - CC

Review activities:

Army - AR
Navy - MC, OS, SA

CIVIL AGENCY COORDINATING ACTIVITIES:

GSA - FAS
DOT - FAA – ACO
HSS - FEC
USDA - AFS

Preparing activity:

DLA - CC

(Project 4730-2011-038)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.daps.dla.mil>.