



**DEFENSE LOGISTICS AGENCY**  
DEFENSE SUPPLY CENTER, COLUMBUS  
POST OFFICE BOX 3990  
COLUMBUS, OH 43218-3990

IN REPLY  
REFER TO

DSCC-VAI

June 22, 2004

MEMORANDUM FOR DLA/MILITARY DISTRIBUTION

SUBJECT: Initial Draft of A-A-59440 and nine slash sheets; See table for Project Numbers

A-A-59440	4820-0880-000
A-A-59440/001	4820-0881-000
A-A-59440/002	4820-0882-000
A-A-59440/003	4820-0853-000
A-A-59440/004	4820-0883-000
A-A-59440/005	4820-0868-000
A-A-59440/006	4820-0884-000
A-A-59440/007	4820-0885-000
A-A-59440/008	4820-0886-000
A-A-59440/009	4820-0887-000

The Initial drafts for these subject documents, dated 24 May, 2004, are now available for viewing and downloading from the DSCC-VA Web site:

<http://www.dsccl.dla.mil/Programs/MilSpec/DocSearch.asp>

Major changes to these documents involves a complete rewrite and use of manufacturer's part numbers from Certificates of Compliances (CoC). CoC's have been mailed to manufacturers. When they return, only the part numbers that are listed on the CoC's will be used in the CID.

Concurrence or comments are required at this Center within 45 days from the date of the letter. Late comments will be held for the next coordination of the document. Comments from military departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians of this office, As applicable, in sufficient time to allow for consolidating the department reply.

The point of contact for this document is Mr. Earnest Brown. Defense Supply Center Columbus, DSCC-VAI, Post Office Box 3990, Columbus, OH. 43218-3990. Mr. Earnest Brown can be reached at 614-692-1568/850-1568, or by e-mail: to <mailto:Earnest.Brown@dla.mil>.

Sincerely,

/signed/

Howard E. H. Jenkins  
Acting Chief,  
Interconnection Devices Team

cc:

DSCC-VSS (Ms. Beverly Wilson)  
DSCC-LDA (Mr. Brett Rippl)  
DSCC-LEA (Mr. Art Levenstein)  
DSCC-MEA (Mr. Dan Krist)  
DSCC-AAB (Mr. Dan Patel)  
DSCC-MED (Mr. Jay Nutt)  
DSCC-MEC (Mr. Walt Myers)  
DSCC-MEA (Mr. Bob Trivett)  
DSCC-CSAB (Mr. Don Groesbeck)  
Army- MI, AV,AT  
Air Force-99, 71  
Navy- SH,MC,SA

NOTE: This draft, dated 24 May 2004, prepared by Defense Supply Center, Columbus, DSCC-VAI, 3990 East Broad Street, Columbus, OH 43218-3990, Has not been approved and is subjected to modification.  
DO NOT USE PRIOR TO APPROVAL. (Project 4820-0880-000)

[INCH-POUND]  
A-A-59440A  
DRAFT  
SUPERSEDING  
A-A-59440  
13 August 1999

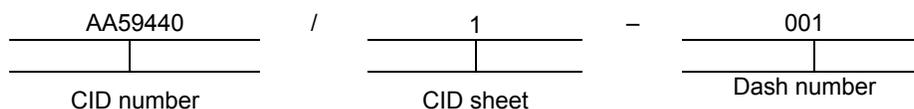
## COMMERCIAL ITEM DESCRIPTION

### COCKS, DRAIN, COCKS, PLUG, AND COCKS, SHUTOFF, SCREW STEM; BRASS VALVES

The General Services Administration has authorized the use of this Commercial Item Description (CID) for all federal agencies.

1. **SCOPE.** This CID covers the general requirements for brass drains, plugs, and shutoff valves in nominal sizes of 1/8-inch through 2-inch, with NPTF threads (see 3.6). These items are for use where pressure does not exceed 150 psig for Water, Oil and Gas, (WOG) at 150° F and steam at 351°F. Only the A-A-59440ss1 and A-A-59440ss2, are for nonflammable application.

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



### 3. SALIENT CHARACTERISTICS.

3.1 **General.** All valves shall meet the requirements of this CID with respect to their individual illustrations, tables, and notes found in their respective slash sheet. Illustrations for the individual valves in the slash sheets are for identification purposes only and not intended to restrict other designs or shapes.

3.2 **Pressure and Temperature Rating.** All valves shall meet the pressure rating in pounds per square inch Gauge (PSIG) and temperature rating in Fahrenheit, per table II.

3.3 **Design and Construction.** Valves supplied under this CID shall be made of the materials specified under the salient characteristics section of this CID and as specified in their respective slash sheet. The valve's bodies shall be provided with hexagonal wrenching surfaces. Handles for the cocks shall be of the materials specified in their respective slash sheet. The threads of the valves shall be in accordance with ASME B1.20.3 and ASME B1.20.5. When specified, one or both end connections shall be of the compression type. All parts of the end item shall be interchangeable with mating parts.

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be sent to: Defense Supply Center, Columbus, ATTN: DSCC-VAI, Post Office Box 3990, Columbus OH 43216-5000, or telephone (614) 692-0566, or facsimile (FAX) (614) 692-6939 or emailed to: [construction@dsc.dla.mil](mailto:construction@dsc.dla.mil). Since contact information can change you may want to verify the currency of this information using ASSIST Online database at <http://www.dodssp.daps.mil>.

3.4 Plugs and Stems. Plugs and stems shall be made of the materials defined in their respective slash sheet. The ports in the plugs shall be either round, oval or flat-way except that in no case shall the flow area through the port be less than the area of the adjacent flow passages. Spring-adjusted plugs shall be held tight against the seat by a spring made of phosphor bronze or tempered spring brass or in accordance with the respective slash sheet. Screw-adjusted plugs shall be secured by means of a slotted-head brass screw, a brass nut, or in accordance with the respective slash sheet, in such a manner as to eliminate the tendency of the screw or nut to be loosened by the operation of the plug. The fit of the screw or nut shall be sufficiently tight to prevent loosening by vibration.

3.5 Performance. The valves shall close tightly to the extent that, when tested in accordance with the seat test pressure as specified in Table I and in their respective slash sheet, any internal leakage past the seat; and for spring key valves, any external leakage at the plug stem shall not exceed two (2) cubic centimeters per hour. For valves with screw stems and screw keys, there shall be no external leakage past the stem or plug at the specified seat test pressure (see table I). The leakage limitations shall be attained with the plug or stem adjusted so that the maximum tangential force required to operate the cock will not exceed an amount produced by normal manual application without the use of extension levers or special tools or wrenches. The valves shall also be capable of being operated against the full working pressure applied to one side of the closed valves without the use of auxiliary levers or wrenches.

3.5.1 Shell Test. Each sample valve shall be subjected to a hydrostatic or pneumatic shell test using the pressure for shell test as specified in table I. Drain valves shall be tested at the inlet with the stem closed. Other valves shall be tested with the plug or stem open and both ends closed. The duration of the test on each sample shall be 30 seconds. Any external leakage attributable to defects in castings or workmanship shall constitute failure of the test.

3.5.2 Seat Test. Each sample valve passing the shell test, shall be subjected to a seat test using the pressure for the seat test as specified in table I. The test shall be either hydrostatic or pneumatic at the option of the supplier. The test pressure shall be applied to one side of the plug or stem. If no leakage is visible after the test pressure has been applied, the test may be discontinued. If measurable leakage is visible during the initial observation period, the test shall be continued for a length of time sufficient to permit an accurate determination of the leakage rate. For hydrostatic tests any leakage exceeding the maximum permissible rate specified in 3.5 shall constitute failure of the test. For pneumatic tests, leakage exceeding a rate of 25 cubic centimeters per minute of free air at standard atmospheric conditions shall constitute failure of the test. During the seat tests, the cocks shall also be observed for leakage past the plug or stem, and any leakage exceeding the specified limits shall also constitute failure of the test.

TABLE I . A-A-59440 Test Pressures .

TEST PRESSURES (PSIG)			
DOCUMENTS	WAS	SHELL	SEAT
A-A-59940/1	MS35782	150	50
A-A-59940/2	MS35783	150	50
A-A-59940/3	MS35784	80	10
A-A-59940/4	MS35785	300	150
A-A-59940/5	MS35787	300	150
A-A-59940/8	MS35930	80	10
A-A-59940/9	MS35931	250	125
A-A-59940/6	MS35932	125	125
A-A-59940/7	MS35934	150	50

3.5.3 Operating force. After the shell test, the full working pressure shall be applied to the inlet side of plug valves. The valve shall then be manually opened. For the seat test, the plug or the stem of the valve shall be manually closed before the seat test begins, In either case, the need for applying levers, wrenches, or impact force to operating levers and handles to effect satisfactory operation shall constitute failure of the test.

3.6 Threads : Threads are dryseal NPTF per ASME B1.20.3. Each of the letters in the symbols has a definite significance as follows: N = National (American) Standards; P = Pipe; T = Taper; F= Fuel and Oil. NPTF dryseal threads seal pressure tight joints without sealant compound. ASME B1.20.3 explains the engineering principle and engineering design.

3.7 Size. The tables for the individual types of valves found in their respective slash sheet, list the permissible variation in dimensions for each individual illustration. The external dimensions of the cocks should not limit procurement unless the end applications restrict these dimensions. Aside from the external dimensions of the valves.

3.8 Applications: The following table II, gives information on applications for each A-A-59440 slash sheet:

TABLE II . A-A-59440 APPLICATIONS.

DOCUMENTS	WAS	STEAM		WATER, OIL, GAS (WOG)	
		PRESSURE PSIG	TEMPERATURE DEGREES F	PRESSURE PSI	TEMPERATUR E DEGREES F
A-A-59940/1	MS35782			150	150
A-A-59940/2	MS35783			150	150
A-A-59940/3	MS35784			50	150
A-A-59940/4	MS35785	150	351		
A-A-59940/5	MS35787	150	351		
A-A-59940/6	MS35932			125	150
A-A-59940/7	MS35934			150	150
A-A-59940/8	MS35930			50	150
A-A-59940/9	MS35931	125	351		

3.9 Handles. Handles shall be as specified in the slash sheets and in accordance with the manufacturer's standard practice.

3.10 End connection. Cocks shall be as specified in the slash sheets and in accordance with the manufacturer's standard practice.

3.11 Finish. All surfaces of the cocks shall have the natural or machined finish normally produced by commercial manufacturing processes and techniques established as standard practice by the valve and fitting industry. Seating surfaces shall finished as required to insure compliance with the tightness and closure force limitations of 3.7.

3.12 Interface and physical dimensions. Cocks supplied to this CID shall be as specified on the applicable CID sheet.

3.13 Marking. Cocks supplied to this CID shall be marked with the manufacturer's standard commercial PIN.

3.14 Workmanship. The quality of workmanship shall be consistent with the level of quality established by the valve and fittings industry for drain and shutoff cocks produced for commercial distribution. Castings shall be free from cracks, hot tears, blowholes, porosity, or other defects affecting structural soundness. Castings which must be plugged, impregnated, brazed, or burned-in to correct defects will not be acceptable. Inside and outside surfaces of castings shall be clean. All flow channels must be clean. Machined parts shall be free of cracks or other defects which will interfere with proper functioning of the cock.

4. REGULATORY REQUIREMENTS.

4.1 Recycled/Recovered Materials. 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. QUALITY ASSURANCE PROVISIONS.

5.1 Product Conformance. The products provided shall meet the salient characteristics of this CID, the applicable Specification Sheet and shall conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial/industrial market. The Government reserves the right to require proof of such conformance.

5.2 Market Acceptance. The following market acceptance criteria are necessary to document the quality of the product to be provided under this CID:

- a. The company producing the item must have been producing a product meeting the requirements of this CID for at least 5 years.
- b. The company must have an annual corporate sales volume over \$400,000.
- c. Average annual sales over the last 5 years of 2000 units that either entirely, or in part, meet the requirements of this CID.

6. PACKAGING.

6.1 Preservation, Packing, and Marking. Preservation, packing, and marking shall be as specified by the contract or order (see 7.2).

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 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these shutoff valves to DSCC under the Military Parts Control Advisory Group (MPCAG) evaluation program.

7.3 Source of reference documents.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

- |              |   |   |
|--------------|---|---|
| ASME B1.20.3 | - | Dryseal Pipe Threads (Inch)-Revision and Redesignation of B2.2-1968 |
| ASME B1.20.5 | - | Gaging for Dryseal Pipe Threads (Inch)                              |

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

7.4 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.

7.5 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.)

86520	Conbraco Industries, Inc. P.O. Box 247 Matthews, NC 28106-0247 Phone: (704) 841-6135 Conbraco Industries, Inc.
79470	Eaton Corp 14615 Loneoak Rd. Edenperry, MN 55344 952-294-2032/888-258-0222 jeffeno@eaton.com
93061	Parker-Hannifin Corp Brass Products Division 300 Parker Drive Otsego, MI 49708-1472 260-636-2104 dwsanders@Parker.com
20969	Essex Brass Corp 23500 Pinewood Warren, MI 48091-3122 586-757-8200 bpushman@essexbrass.com

7.6 Part number (P/N) supersession data . These CID P/Ns supersede the following MFR's P/N's as shown. This information is being provided to assist in reducing proliferation in the Government inventory system.

TABLE III. P/N suppression data.

Dash number (see table I)	MFR's CAGE	MFG's P/N <sup>1/</sup>
AA59440ss1-001	See slash sheet	See slash sheet
AA59440ss2-001	See slash sheet	See slash sheet
AA59440ss3-001	See slash sheet	See slash sheet
AA59440ss4-001	See slash sheet	See slash sheet
AA59440ss5-001	See slash sheet	See slash sheet
AA59440ss6-001	See slash sheet	See slash sheet
AA59440ss7-001	See slash sheet	See slash sheet
AA59440ss8-001	See slash sheet	See slash sheet
AA59440ss9-001	See slash sheet	See slash sheet

<sup>1/</sup> The manufacturer's P/N shall not be used for procurement to the requirements of this CID. At the time of preparation of this CID, the aforementioned commercial products reviewed and could be replaced by the CID PIN shown. For actual part marking requirements (see 3.10 ).

7.7 Government Users. To acquire information on obtaining these cocks from the Government inventory system, contact Defense Supply Center, Columbus, ATTN: DSCC-NAB, PO BOX 3990, Columbus, OH 43216-5000, or telephone (614) 692-2271 or (614) 692-3191.

7.8 Original documents. This CID and slash sheets came from the associated documents listed in table IV.

TABLE IV. Original documents.

DOCUMENTS	WAS
A-A-59940/1	MS35782
A-A-59940/2	MS35783
A-A-59940/3	MS35784
A-A-59940/4	MS35785
A-A-59940/5	MS35787
A-A-59940/6	MS35932
A-A-59940/7	MS35934
A-A-59940/8	MS35930
A-A-59940/9	MS35931

7.9 Non standard information.. The following information was carried over from MIL-C-1203 for Type II style C and style D. This information will have to be ordered as non standard parts since the manufacturers do not have these parts as off the shelf parts.

7.9.1 Non standard parts. Shutoff Cocks, ground ported plug (key), for in-line service, lever handle and two-way, two-port plug, 90 deg turn, square head with removable - lever handle (no MS- standard). Two-way, two-port plug, 90 deg turn, fixed lever handle, stop and waste - (no MS- standard). The performance parameters for both are: 150 psig WOG at 150 deg F. The test Pressures for both, are: for shell is 150 Psig and for seat is 50 psig. Type II style C and style D cocks shall be furnished either with Dryseal (NPTF) or standard (NPT) taper pipe threads conforming to ANSI std. B2.1..For type II, style c and style D cocks the nominal sizes of the end connections shall be from 1/2-inch through 2-inch.

7.10 Intended application. The drain cocks specified herein are intended for use in the automotive field for drainage of radiators, tanks, and similar components. Shutoff cocks are used for gauging stations, fuel lines, air vents, oil lines, and similar applications.

7.11 key words.

- Cock
- Radiator
- Valve
- Drainage
- Steam
- Water
- Oil
- Gas
- NPTF
- Brass
- Automotive

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

MILITARY INTERESTS:

Custodians:

Army - AR  
Air Force - 99  
Navy - SH  
DLA - CC

Review activities:

Army – AT,AV,MI  
NAVY – MC,SA  
Air Force - 71

Civil Agency and Coordinating Activities:

GSA - FSS

Preparing activity:

DLA - CC

(Project 4820-0880-000)

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