INCH-POUND

MS51520B
17 March 2016
SUPERSEDING
MS51520A
17 January 1979

DETAIL SPECIFICATION SHEET

NIPPLE, TUBE, BULKHEAD
37 DEGREE FLARED

This specification is approved for use by all Departments and Agencies of the Department of Defense.

Inactive for new design after 17 August 1999. For new design, use SAE-J514.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-18866.

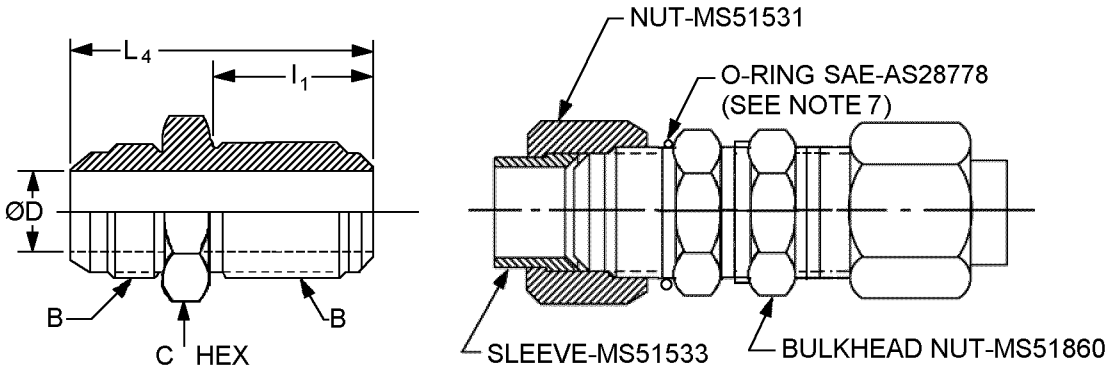


FIGURE 1. Nipple tube.

Suffix designator		Tube OD nom.	B Straight thread	C Hex flat Nom.	D diameter	
Assembly (see note 8)	Body (see note 9)				Basic inches (mm)	Tolerance inches (mm)
A2	B2	1/8	.3125-24 UNF-2A	9/16	.062 (1.57)	±.003 (0.08)
A3	B3	3/16	.3750-24 UNF-2A	5/8	.125 (3.18)	
A4	B4	1/4	.4375-20 UNF-2A	11/16	.172 (4.37)	
A5	B5	5/16	.5000-20 UNF-2A	3/4	.234 (5.94)	
A6	B6	3/8	.5625-18 UNF-2A	13/16	.297 (7.54)	±.004 (0.10)
A8	B8	1/2	.7500-16 UNF-2A	1	.391 (9.93)	
A10	B10	5/8	.8750-14 UNF-2A	1 1/8	.484 (12.29)	
A12	B12	3/4	1.0625-12 UN-2A	1 3/8	.609 (15.47)	±.005 (0.13)
A14	B14	7/8	1.1875-12 UN-2A	1 1/2	.718 (18.24)	
A16	B16	1	1.3125-12 UN-2A	1 5/8	.844 (21.44)	±.007 (0.18)
A20	B20	1 1/4	1.6250-12 UN-2A	1 7/8	1.078 (27.38)	+.008 -.005 (+0.20 -0.13)
A24	B24	1 1/2	1.8750-12 UN-2A	2 1/8	1.312 (33.32)	
A32	B32	2	2.500-12 UN-2A	2 3/4	1.781 (45.24)	+.010 -.005 (+0.25 -.013)

Suffix designator		l_1 inches (mm) ±.020 (0.51)	L_4 inches (mm) ±.020 (0.51)
Assembly	Body		
A2	B2	1.110 (28.19)	1.870 (47.50)
A3	B3	1.110 (28.19)	1.900 (48.26)
A4	B4	1.200 (30.48)	2.070 (52.58)
A5	B5	1.200 (30.48)	2.070 (52.58)
A6	B6	1.280 (32.51)	2.180 (55.37)
A8	B8	1.440 (36.58)	2.440 (61.98)
A10	B10	1.580 (40.13)	2.740 (69.60)
A12	B12	1.750 (44.45)	3.090 (78.49)
A14	B14	1.750 (44.45)	3.120 (79.25)
A16	B16	1.750 (44.45)	3.140 (79.76)
A20	B20	1.800 (45.72)	3.310 (84.07)
A24	B24	1.810 (45.97)	3.520 (89.41)
A32	B32	2.090 (53.09)	4.200 (106.68)

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Break all sharp edges and remove all burrs and slivers.
4. Dimensions and tolerances not shown shall be in accordance with SAE-J514 for 37° flared fittings.
5. The drawing is for identification purposes only and is not intended to restrict designs and shapes not dimensioned.
6. Threads shall be in accordance with ASME B1.1.
7. Procure the O-rings separately and install before installation of the fittings.
8. MS51520A parts shall not be supplied with the undercut, as defined by dimensions G_1 and H_1, on the bulkhead end of the fitting.
9. Bodies will be used for production only and shall not be stocked for maintenance.

FIGURE 1. Plug - Continued.

REQUIREMENTS:

Fittings shall be as specified on figure 1 and in tables I and II.

Materials shall be in accordance with MIL-DTL-18866 and table I.

TABLE I. Materials.

Material	Form	Specification	Alloy
Carbon steel	Bar	SAE-J403	1117, 1126, 1140, 1213, 1215, or 12L14
	Forgings		
Chrome-molybdenum steel	Bars	SAE-AMS6370	4130
	Forgings	SAE-AMS6382	
		SAE-AMS6370	
Corrosion resistant steel	Bars and forgings	ASTM A276/A276M	304, 304L, 316, or 321
		ASTM A564/A564M	XM-12 (15-5 PH) UNS S15500 or 630 (17-4 PH) UNS S17400
		SAE-AMS5639	UNS S30400
		SAE-AMS5645	UNS S32100
		SAE-AMS5647	UNS S30403
		SAE-AMS5743	UNS S35500
	Bar	ASTM A582/A582M	UNS S30300
Nickel-copper alloy	Bar	ASTM B164 QQ-N-281	UNS N04400
High-chromium nickel alloy	Bar	ASTM B166	UNS N06690
	Forgings	ASTM B564	
Titanium 1/	Bars	SAE-AMS4928	6AI-4V annealed
	Forgings		

1/ Titanium shall not be used in oxygen or potable water systems.

Finish. Finishes shall be as specified in table II. All platings shall be capable of meeting a minimum of 96 hours salt spray test in accordance with ASTM B117. The fittings shall show no evidence of corrosion after 96 hours of salt spray. Fluid passages, other openings and internal threads shall not be subject to the plating thickness requirement and may have bare areas provided they are protected with a light film of oil.

TABLE II. Material and finish identification codes.

PIN code material/plating finish	Material	Plating finish
Blank	Steel	Cadmium plating in accordance with SAE-AMS-C-81562, type II, class 2 or SAE-AMS-QQ-P-416, type II, class 2. 1/
H	Steel	Zinc-Aluminum in accordance with ASTM F1136/F1136M, grade 3, NC.
J	Steel	Zinc-nickel in accordance with SAE-AMS2417, type 2, grade B. 3/
M	Nickel-copper alloy UNS N04400	No additional finish.
N	High-chromium nickel alloy UNS N06690	No additional finish.
P	Steel	Zinc phosphate finish in accordance MIL-DTL-16232 type Z, class 4. 2/
R	Steel	Zinc plating in accordance with ASTM B633; type VI, Fe/Zn 12. 5/
S	Corrosion resistant steel	No additional finish. Passivation in accordance with SAE-AMS2700, method 1, type 6 or 7.
T	Titanium	Anodize in accordance with SAE-AMS2488 type 2. 4/
TF	Titanium	Fluoride phosphate in accordance with SAE-AMS2486. 4/
Z	Steel	Zinc plating in accordance with ASTM B633; type II or III, Fe/Zn 12, or ASTM B695, type II, class 12. 5/
ZC	Steel	Zinc may be any zinc plating from PIN codes H, J, and R with a colored chromate coating 5/

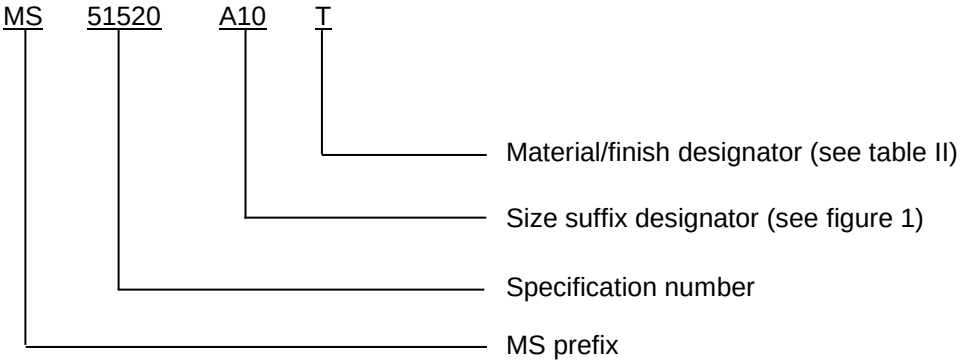
1/ Embrittlement test need not be run. Cadmium shall not be used in oxygen or potable water systems.
2/ Hexavalent chromium free. Finish shall be ROHS compliant.
3/ The zinc-nickel alloy plate shall contain 12% to 16% nickel. The coating thickness shall be 315µ inches (8µm) minimum coating thickness.
4/ A pretreatment, a modification of the fluoride treatment, or a post treatment shall be applied so the final color of the fittings shall be similar to FED-STD-595 colors 36076 through 36293.
5/ Not for use in aircraft. Requires approval from the Program Officer for all applications.

Trivalent wrenchability. When the finish has been damaged due to poor wrenchability, the surface of the connector shall be touched up using one of the brush plating processes below as appropriate to primary finish. The term “trivalent wrenchability” is used to evaluate the ability of the finish to withstand abrasion from an excessive amount of wrenching.

a. Brush plating of hard chromium by electrodeposition shall be in accordance with SAE-AMS-2451/5.
b. Brush plating of medium-hardness, low stress nickel by electrodeposition shall be in accordance with SAE-AMS-2451/9.

Maximum operating pressure. Maximum operating pressure shall be in accordance with SAE-J514.

PIN: The PIN consists of the letters “MS”, the specification number, a letter and number for nipple size, and a letter for material finish designator.



PIN example: MS51520A10T indicates a nipple, tube, .6250 inch (15.875 mm), titanium anodized.

Cadmium is not recommended. To the users of this document, it is recommended that the use of carbon steel material with cadmium plating be used only when other materials and finishes specified in this document cannot meet performance requirements.

Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

Referenced documents shall be of the issue in effect on date of invitations for bid.

Table III provides a detailed cross-reference of inactive MS51520 PIN’s and for new design SAE-J514 PIN’s.

MS51520 parts have straight threads in accordance with ASME B1.1 the SAE parts have straight threads in accordance with SAE-J425.

Plating “P” SAE allows a range of nickel from 6% to 20%. Below 12%, ZnNi is not much better than zinc plating, which is less expensive and easier to apply. Above 16%, ZnNi becomes more cathodic and no longer acts as a sacrificial coating - if a high nickel coating is damaged the steel beneath the coating will corrode at an accelerated rate.

Users are cautioned to evaluate replacement parts for their particular application.

CAUTION: The superseding information is valid as of the date of this specification and may be superseded by subsequent revisions of the superseding document.

TABLE III. MS51520 to SAE-J514 cross reference.

Inactive for new design MS51520- PIN		TUBE O.D.	For new design SAE-J514 PIN	
Assembly	Body		Assembly	Body
MS51520A2	MS51520B2	1/8	Not available	Not available
MS51520A2H	MS51520B2H	1/8	Not available	Not available
MS51520A2J	MS51520B2J	1/8	Not available	Not available
MS51520A2M	MS51520B2M	1/8	J514-2-2-070601MA	J514-2-2-070601MB
MS51520A2N	MS51520B2N	1/8	J514-2-2-070601NA	J514-2-2-070601NB
MS51520A2P	MS51520B2P	1/8	J514-2-2-070601PA	J514-2-2-070601PB
MS51520A2R	MS51520B2R	1/8	Not available	Not available
MS51520A2S	MS51520B2S	1/8	J514-2-2-070601SA	J514-2-2-070601SB
MS51520A2T	MS51520B2T	1/8	J514-2-2-070601TA	J514-2-2-070601TB
MS51520A2TF	MS51520B2TF	1/8	Not available	Not available
MS51520A2Z	MS51520B2Z	1/8	J514-2-2-070601ZA	J514-2-2-070601ZB
MS51520A2ZC	MS51520B2ZC	1/8	Not available	Not available
MS51520A3	MS51520B3	3/16	Not available	Not available
MS51520A3H	MS51520B3H	3/16	Not available	Not available
MS51520A3J	MS51520B3J	3/16	Not available	Not available
MS51520A3M	MS51520B3M	3/16	J514-3-3-070601MA	J514-3-3-070601MB
MS51520A3N	MS51520B3N	3/16	J514-3-3-070601NA	J514-3-3-070601NB
MS51520A3P	MS51520B3P	3/16	J514-3-3-070601PA	J514-3-3-070601PB
MS51520A3R	MS51520B3R	3/16	Not available	Not available
MS51520A3S	MS51520B3S	3/16	J514-3-3-070601SA	J514-3-3-070601SB
MS51520A3T	MS51520B3T	3/16	J514-3-3-070601TA	J514-3-3-070601TB
MS51520A3TF	MS51520B3TF	3/16	Not available	Not available
MS51520A3Z	MS51520B3Z	3/16	J514-3-3-070601ZA	J514-3-3-070601ZB
MS51520A3ZC	MS51520B3ZC	3/16	Not available	Not available
MS51520A4	MS51520B4	1/4	Not available	Not available
MS51520A4H	MS51520B4H	1/4	Not available	Not available
MS51520A4J	MS51520B4J	1/4	Not available	Not available
MS51520A4M	MS51520B4M	1/4	J514-4-4-070601MA	J514-4-4-070601MB
MS51520A4N	MS51520B4N	1/4	J514-4-4-070601NA	J514-4-4-070601NB
MS51520A4P	MS51520B4P	1/4	J514-4-4-070601PA	J514-4-4-070601PB
MS51520A4	MS51520B4	1/4	Not available	Not available
MS51520A4S	MS51520B4S	1/4	J514-4-4-070601SA	J514-4-4-070601SB
MS51520A4T	MS51520B4T	1/4	J514-4-4-070601TA	J514-4-4-070601TB
MS51520A4TF	MS51520B4TF	1/4	Not available	Not available
MS51520A4Z	MS51520B4Z	1/4	J514-4-4-070601ZA	J514-4-4-070601ZB
MS51520A4ZC	MS51520B4ZC	1/4	Not available	Not available

TABLE III. MS51520 to SAE-J514 cross reference - Continued.

Inactive for new design MS51520- PIN		Tube O.D.	For new design SAE-J514 PIN	
Assembly	Body		Assembly	Body
MS51520A5	MS51520B5	5/16	Not available	Not available
MS51520A5H	MS51520B5H	5/16	Not available	Not available
MS51520A5J	MS51520B5J	5/16	Not available	Not available
MS51520A5M	MS51520B5M	5/16	J514-5-5-070601MA	J514-5-5-070601MB
MS51520A5N	MS51520B5N	5/16	J514-5-5-070601NA	J514-5-5-070601NB
MS51520A5P	MS51520B5P	5/16	J514-5-5-070601PA	J514-5-5-070601PB
MS51520A5R	MS51520B5R	5/16	Not available	Not available
MS51520A5S	MS51520B5S	5/16	J514-5-5-070601SA	J514-5-5-070601SB
MS51520A5T	MS51520B5T	5/16	J514-5-5-070601TA	J514-5-5-070601TB
MS51520A5TF	MS51520B5TF	5/16	Not available	Not available
MS51520A5Z	MS51520B5Z	5/16	J514-5-5-070601ZA	J514-5-5-070601ZB
MS51520A5ZC	MS51520B5ZC	5/16	Not available	Not available
MS51520A6	MS51520B6	3/8	Not available	Not available
MS51520A6H	MS51520B6H	3/8	Not available	Not available
MS51520A6J	MS51520B6J	3/8	Not available	Not available
MS51520A6M	MS51520B6M	3/8	J514-6-6-070601MA	J514-6-6-070601MB
MS51520A6N	MS51520B6N	3/8	J514-6-6-070601NA	J514-6-6-070601NB
MS51520A6P	MS51520B6P	3/8	J514-6-6-070601PA	J514-6-6-070601PB
MS51520A6R	MS51520B6R	3/8	Not available	Not available
MS51520A6S	MS51520B6S	3/8	J514-6-6-070601SA	J514-6-6-070601SB
MS51520A6T	MS51520B6T	3/8	J514-6-6-070601TA	J514-6-6-070601TB
MS51520A6TF	MS51520B6TF	3/8	Not available	Not available
MS51520A6Z	MS51520B6Z	3/8	J514-6-6-070601ZA	J514-6-6-070601ZB
MS51520A6ZC	MS51520B6ZC	3/8	Not available	Not available
MS51520A8	MS51520B8	1/2	Not available	Not available
MS51520A8G	MS51520B8G	1/2	Not available	Not available
MS51520A8H	MS51520B8H	1/2	Not available	Not available
MS51520A8M	MS51520B8M	1/2	J514-8-8-070601MA	J514-8-8-070601MB
MS51520A8N	MS51520B8N	1/2	J514-8-8-070601NA	J514-8-8-070601NB
MS51520A8P	MS51520B8P	1/2	J514-8-8-070601PA	J514-8-8-070601PB
MS51520A8R	MS51520B8R	1/2	Not available	Not available
MS51520A8S	MS51520B8S	1/2	J514-8-8-070601SA	J514-8-8-070601SB
MS51520A8T	MS51520B8T	1/2	J514-8-8-070601TA	J514-8-8-070601TB
MS51520A8TF	MS51520B8TF	1/2	Not available	Not available
MS51520A8Z	MS51520B8Z	1/2	J514-8-8-070601ZA	J514-8-8-070601ZB
MS51520A8ZC	MS51520B8ZC	1/2	Not available	Not available

TABLE III. MS51520 to SAE-J514 cross reference - Continued.

Inactive for new design MS51520- PIN		Tube O.D.	For new design SAE-J514 PIN	
Assembly	Body		Assembly	Body
MS51520A10	MS51520B10	5/8	Not available	Not available
MS51520A10H	MS51520B10H	5/8	Not available	Not available
MS51520A10J	MS51520B10J	5/8	Not available	Not available
MS51520A10M	MS51520B10M	5/8	J514-10-10-070601MA	J514-10-10-070601MB
MS51520A10N	MS51520B10N	5/8	J514-10-10-070601NA	J514-10-10-070601NB
MS51520A10P	MS51520B10P	5/8	J514-10-10-070601PA	J514-10-10-070601PB
MS51520A10R	MS51520B10R	5/8	Not available	Not available
MS51520A10S	MS51520B10S	5/8	J514-10-10-070601SA	J514-10-10-070601SB
MS51520A10T	MS51520B10T	5/8	J514-10-10-070601TA	J514-10-10-070601TB
MS51520A10TF	MS51520B10TF	5/8	Not available	Not available
MS51520A10Z	MS51520B10Z	5/8	J514-10-10-070601ZA	J514-10-10-070601ZB
MS51520A10ZC	MS51520B10ZC	5/8	Not available	Not available
MS51520A12	MS51520B12	3/4	Not available	Not available
MS51520A12H	MS51520B12H	3/4	Not available	Not available
MS51520A12J	MS51520B12J	3/4	Not available	Not available
MS51520A12M	MS51520B12M	3/4	J514-12-12-070601MA	J514-12-12-070601MB
MS51520A12N	MS51520B12N	3/4	J514-12-12-070601NA	J514-12-12-070601NB
MS51520A12P	MS51520B12P	3/4	J514-12-12-070601PA	J514-12-12-070601PB
MS51520A12R	MS51520B12R	3/4	Not available	Not available
MS51520A12S	MS51520B12S	3/4	J514-12-12-070601SA	J514-12-12-070601SB
MS51520A12T	MS51520B12T	3/4	J514-12-12-070601TA	J514-12-12-070601TB
MS51520A12TF	MS51520B12TF	3/4	Not available	Not available
MS51520A12Z	MS51520B12Z	3/4	J514-12-12-070601ZA	J514-12-12-070601ZB
MS51520A12ZC	MS51520B12N	3/4	Not available	Not available
MS51520A14	MS51520B14	7/8	Not available	Not available
MS51520A14H	MS51520B14H	7/8	Not available	Not available
MS51520A14J	MS51520B14J	7/8	Not available	Not available
MS51520A14M	MS51520B14M	7/8	J514-14-14-070601MA	J514-14-14-070601MB
MS51520A14N	MS51520B14N	7/8	J514-14-14-070601NA	J514-14-14-070601NB
MS51520A14P	MS51520B14P	7/8	J514-14-14-070601PA	J514-14-14-070601PB
MS51520A14	MS51520B14	7/8	Not available	Not available
MS51520A14S	MS51520B14S	7/8	J514-14-14-070601SA	J514-14-14-070601SB
MS51520A14T	MS51520B14T	7/8	J514-14-14-070601TA	J514-14-14-070601TB
MS51520A14TF	MS51520B14TF	7/8	Not available	Not available
MS51520A14Z	MS51520B14Z	7/8	J514-14-14-070601ZA	J514-14-14-070601ZB
MS51520A14ZC	MS51520B14ZC	7/8	Not available	Not available

TABLE III. MS51520 to SAE-J514 cross reference - Continued.

Inactive for new design MS51520- PIN		Tube O.D.	For new design SAE-J514 PIN	
Assembly	Body		Assembly	Body
MS51520A16	MS51520B16	1	Not available	Not available
MS51520A16H	MS51520B16H	1	Not available	Not available
MS51520A16J	MS51520B16J	1	Not available	Not available
MS51520A16M	MS51520B16M	1	J514-16-16-070601MA	J514-16-16-070601MB
MS51520A16N	MS51520B16N	1	J514-16-16-070601NA	J514-16-16-070601NB
MS51520A16P	MS51520B16P	1	J514-16-16-070601PA	J514-16-16-070601PB
MS51520A16R	MS51520B16R	1	Not available	Not available
MS51520A16S	MS51520B16S	1	J514-16-16-070601SA	J514-16-16-070601SB
MS51520A16T	MS51520B16T	1	J514-16-16-070601TA	J514-16-16-070601TB
MS51520A16TF	MS51520B16TF	1	Not available	Not available
MS51520A16Z	MS51520B16Z	1	J514-16-16-070601ZA	J514-16-16-070601ZB
MS51520A16ZC	MS51520B16ZC	1	Not available	Not available
MS51520A20	MS51520B20	1 1/4	Not available	Not available
MS51520A20H	MS51520B20H	1 1/4	Not available	Not available
MS51520A20J	MS51520B20J	1 1/4	Not available	Not available
MS51520A20M	MS51520B20M	1 1/4	J514-20-20-070601MA	J514-20-20-070601MB
MS51520A20N	MS51520B20N	1 1/4	J514-20-20-070601NA	J514-20-20-070601NB
MS51520A20P	MS51520B20P	1 1/4	J514-20-20-070601PA	J514-20-20-070601PB
MS51520A20R	MS51520B20R	1 1/4	Not available	Not available
MS51520A20S	MS51520B20S	1 1/4	J514-20-20-070601SA	J514-20-20-070601SB
MS51520A20T	MS51520B20T	1 1/4	J514-20-20-070601TA	J514-20-20-070601TB
MS51520A20TF	MS51520B20TF	1 1/4	Not available	Not available
MS51520A20Z	MS51520B20Z	1 1/4	J514-20-20-070601ZA	J514-20-20-070601ZB
MS51520A20ZC	MS51520B20ZC	1 1/4	Not available	Not available
MS51520A24	MS51520B24	1 1/2	Not available	Not available
MS51520A24H	MS51520B24H	1 1/2	Not available	Not available
MS51520A24J	MS51520B24J	1 1/2	Not available	Not available
MS51520A24M	MS51520B24M	1 1/2	J514-24-24-070601MA	J514-24-24-070601MB
MS51520A24N	MS51520B24N	1 1/2	J514-24-24-070601NA	J514-24-24-070601MB
MS51520A24P	MS51520B24P	1 1/2	J514-24-24-070601PA	J514-24-24-070601PB
MS51520A24R	MS51520B24R	1 1/2	Not available	Not available
MS51520A24S	MS51520B24S	1 1/2	J514-24-24-070601SA	J514-24-24-070601SB
MS51520A24T	MS51520B24T	1 1/2	J514-24-24-070601TA	J514-24-24-070601TB
MS51520A24TF	MS51520B24TF	1 1/2	Not available	Not available
MS51520A24Z	MS51520B24Z	1 1/2	J514-24-24-070601ZA	J514-24-24-070601ZB
MS51520A24ZC	MS51520B24ZC	1 1/2	Not available	Not available

TABLE III. MS51520 to SAE-J514 cross reference - Continued.

Inactive for new design MS51520- PIN		Tube O.D.	For new design SAE-J514 PIN	
Assembly	Body		Assembly	Body
MS51520A32	MS51520B32	2	Not available	Not available
MS51520A32H	MS51520B32H	2	Not available	Not available
MS51520A32J	MS51520B32J	2	Not available	Not available
MS51520A32M	MS51520B32M	2	J514-32-32-070601MA	J514-32-32-070601MB
MS51520A32N	MS51520B32N	2	J514-32-32-070601NA	J514-32-32-070601NB
MS51520A32P	MS51520B32P	2	J514-32-32-070601PA	J514-32-32-070601PB
MS51520A32	MS51520B32	2	Not available	Not available
MS51520A32S	MS51520B32S	2	J514-32-32-070601SA	J514-32-32-070601SB
MS51520A32T	MS51520B32T	2	J514-32-32-070601TA	J514-32-32-070601TB
MS51520A32TF	MS51520B32TF	2	Not available	Not available
MS51520A32Z	MS51520B32Z	2	J514-32-32-070601ZA	J514-32-32-070601ZB
MS51520A32ZC	MS51520B32ZC	2	Not available	Not available

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.

Referenced documents. In addition to MIL-DTL-18866, this document references the following:

FED-STD-595/36076
FED-STD-595/36081
FED-STD-595/36099
FED-STD-595/36118
FED-STD-595/36134
FED-STD-595/36152
FED-STD-595/36170
FED-STD-595/36173
FED-STD-595/36176
FED-STD-595/36231
FED-STD-595/36251
FED-STD-595/36270
FED-STD-595/36280
FED-STD-595/36293
MIL-DTL-16232
MS51531
MS51533
MS51860
QQ-N-281
ASME B1.1
ASTM A276/A276M
ASTM A564/A564M
ASTM A582/A582M
ASTM B117
ASTM B164
ASTM B564
ASTM B166
ASTM B633
ASTM B695
ASTM F1136/F1136M
SAE-AMS-C-81562
SAE-AMS-QQ-P-416
SAE-AMS2417
SAE-AMS2451/5
SAE-AMS2451/9
SAE-AMS2486
SAE-AMS2488
SAE-AMS2700
SAE-AMS4928
SAE-AMS5639
SAE-AMS5645
SAE-AMS5647
SAE-AMS5743
SAE-AMS6370
SAE-AMS6382
SAE-AS28778
SAE-J403
SAE-J425
SAE-J514

CONCLUDING MATERIAL

Custodians:
Army - AR
Navy - OS
Air Force - 99
DLA - CC

Review activities:
Army - AT, MI
Navy - CG, MC, SA, SH
Air Force - 71

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.dla.mil.

Preparing activity:
DLA - CC

(Project 4730-2016-020)