

INCH-POUND

MS51514B  
 14 December 2015  
 SUPERSEDING  
 MS51514A  
 17 January 1979

## DETAIL SPECIFICATION SHEET

TEE, PIPE TO TUBE,  
 FEMALE PIPE ON RUN 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.

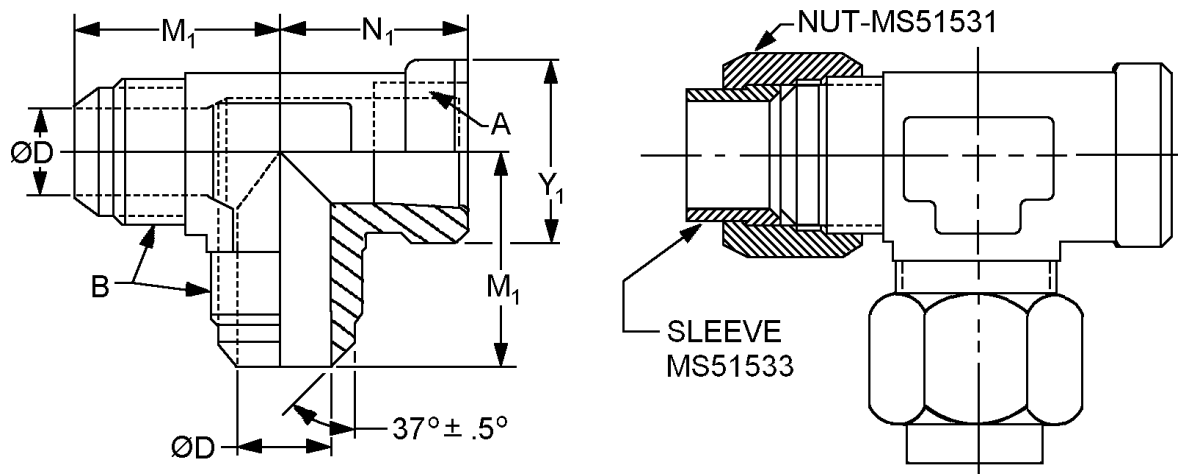


FIGURE 1. Tee, female pipe on run.



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Suffix designator		Tube OD nom.	A Pipe thread NPTF	B Straight thread	D diameter	
Assembly (see note 4)	Body				Basic inches (mm)	Tolerance inches (mm)
A2	B2	.1250 (3.175)	1/8 - 27	.3125-24 UNF-2A	.062 (1.57)	±.003 (0.08)
A3	B3	.1875 (4.763)	1/8 - 27	.3750-24 UNF-2A	.125 (3.18)	
A4	B4	.2500 (6.350)	1/8 - 27	.4375-20 UNF-2A	.172 (4.37)	
A5	B5	.3125 (7.936)	1/8 - 27	.5000-20 UNF-2A	.234 (5.94)	
A6	B6	.3750 (9.525)	1/4 - 18	.5625-18 UNF-2A	.297 (7.54)	±.004 (0.10)
A8	B8	.5000 (12.700)	3/8 - 18	.7500-16 UNF-2A	.391 (9.93)	
A10	B10	.6250 (15.875)	1/2 - 14	.8750-14 UNF-2A	.484 (12.29)	±.005 (0.13)
A12	B12	.7500 (19.050)	3/4 - 14	1.0625-12 UN-2A	.609 (15.47)	
A14	B14	.8750 (22.225)	3/4 - 14	1.1875-12 UN-2A	.718 (18.24)	
A16	B16	1.0000 (25.400)	1 - 11½	1.3125-12 UN-2A	.844 (21.44)	±.007 (0.18)
A20	B20	1.2500 (31.750)	1 1/4 - 11½	1.6250-12 UN-2A	1.078 (27.38)	+.008 -.005 (+0.20 -0.13)
A24	B24	1.5000 (38.100)	1 1/2 - 11½	1.8750-12 UN-2A	1.312 (33.32)	
A32	B32	2.0000 (50.800)	2 - 11½	2.500-12 UN-2A	1.781 (45.24)	+.010 -.005 (+0.25 -.013)

Suffix designator		M <sub>1</sub> inches (mm) ±.030 (0.76)	N <sub>1</sub> inches (mm) ±.030 (0.76)	Y <sub>1</sub> inches (mm) ±.020 (0.51)
Assembly	Body			
A2	B2	1.000 (25.40)	.660 (16.76)	.562 (14.27)
A3	B3	1.030 (26.16)	.660 (16.76)	.562 (14.27)
A4	B4	1.080 (27.43)	.660 (16.76)	.562 (14.27)
A5	B5	1.080 (27.43)	.660 (16.76)	.562 (14.27)
A6	B6	1.230 (31.24)	.880 (22.35)	.750 (19.05)
A8	B8	1.420 (36.07)	1.020 (25.91)	.875 (22.23)
A10	B10	1.640 (41.66)	1.230 (31.24)	1.062 (26.97)
A12	B12	1.890 (48.01)	1.360 (34.54)	1.312 (33.32)
A14	B14	1.860 (47.24)	1.420 (36.07)	1.312 (33.32)
A16	B16	2.170 (55.12)	1.620 (41.15)	1.625 (41.28)
A20	B20	2.330 (59.18)	1.700 (43.18)	1.875 (47.63)
A24	B24	2.890 (73.41)	2.080 (52.83)	2.562 (65.07)
A32	B32	3.300 (83.82)	2.390 (60.71)	2.812 (71.42)

## 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. Assemblies are only furnished to this specification (body, nuts, and sleeves). Bodies are not to be stocked stored or issued.
5. Dimensions and tolerances not shown shall be in accordance with SAE-J514 for 37° flared fittings.
6. The drawing is for identification purposes only and is not intended to restrict designs and shapes not dimensioned.

FIGURE 1. Tee, female pipe on run. - Continued.

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## REQUIREMENTS:

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

Components of the assemblies shall be of the same material and finish.

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

TABLE I. Materials.

Material	Form	Specification	Alloy
Carbon steel	Bar	SAE-J403	1110, 1120, 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 603 (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 <u>1/</u>	Bars	SAE-AMS4928	6Al-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.

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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 3 or SAE-AMS-QQ-P-416, type II, class 2. <u>1/</u>
CN		Cadmium plating in accordance with SAE-AMS-C-81562, type II, class 3 or SAE-AMS-QQ-P-416, type II, class 2 with NAVAIR trivalent chromium pretreatment (TCP) in accordance with MIL-DTL-81706, type II, class 1A. <u>1/</u>
E		NAVAIR TCP in accordance with MIL-DTL-81706, type II, class 1A.
F	Steel	Zinc plate (finish J, P, or R) with NAVAIR TCP in accordance with MIL-DTL-81706, type II, class 1A.
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.
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, class1.
R	Steel	Zinc plating in accordance with ASTM B633; type VI, Fe/Zn 5. <u>2/</u>
S	Corrosion resistant steel	No additional finish. Passivation in accordance with SAE-AMS2700, type 6 or 7.
T	Titanium	Anodize in accordance with SAE-AMS2488 type 2. <u>3/</u>
TF	Titanium	Fluoride phosphate in accordance with SAE-AMS2486. <u>3/</u>
Z	Steel	Zinc plating in accordance with ASTM B633; type II or III, Fe/Zn 5, or ASTM B695, type II, class 5. <u>4</u>
ZN	Steel	Zinc plating in accordance with ASTM B633; type II or III, Fe/Zn 5, or ASTM B695, type II, class 5 with NAVAIR TCP in accordance with MIL-DTL-81706, type II, class 1A. <u>4/</u>

1/ Embrittlement test need not be run. Cadmium shall not be used in oxygen or potable water systems.

2/ Hexavalent chromium free.

3/ 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.

4/ Not for use in aircraft.

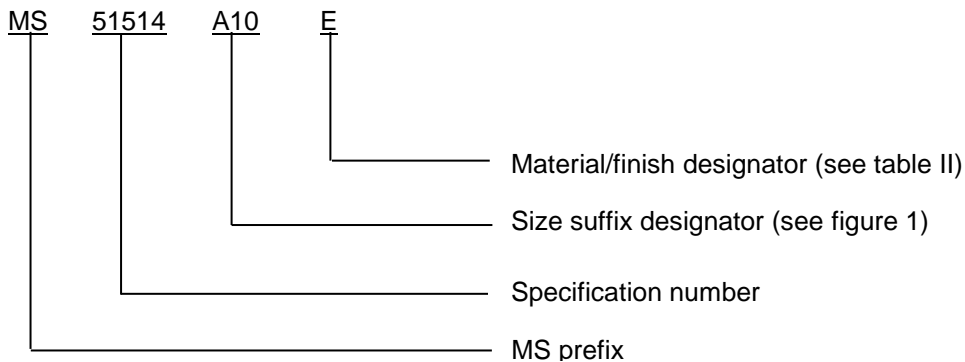
Trivalent wrenchability. When the finish has been damaged due to poor wrenchability, the surface of the connector shall be touched up using the brush plating process below. The term "trivalent wrenchability" is used to evaluate the ability of the finish to withstand abrasion from an excessive amount 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.
- c. Brush plating of NAVAIR TCP shall be in accordance with MIL-DTL-81706, type II, class 1A, material form 1 through 6, application method B. Example of a PIN: M817062A6B.

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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 tee size, and a letter for material finish designator.



PIN example: MS51514A10E indicates a tee, pipe to tube, .6250 inch (15.875 mm), steel with NAVAIR TCP.

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 MS51514 PIN's and for new design SAE-J514 PIN's.

MS51514 parts have straight threads in accordance with ASME B1.1 the SAE parts have straight threads in accordance with SAE-J425.

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.

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TABLE III. MS51514 to SAE-J514 cross reference.

Inactive for new design MS51514 PIN		Tube O.D.	Pipe thread NPTF	For new design SAE-J514 PIN	
Assembly	Body			Assembly	Body
MS51514A2	MS51514B2	1/8	1/8	Not available	Not available
MS51514A2CN	MS51514B2CN	1/8	1/8	Not available	Not available
MS51514A2E	MS51514B2E	1/8	1/8	Not available	Not available
MS51514A2F	MS51514B2F	1/8	1/8	Not available	Not available
MS51514A2H	MS51514B2H	1/8	1/8	Not available	Not available
MS51514A2J	MS51514B2J	1/8	1/8	Not available	Not available
MS51514A2M	MS51514B2M	1/8	1/8	J514-2-2-2-070426MA	J514-2-2-2-070426MB
MS51514A2N	MS51514B2N	1/8	1/8	J514-2-2-2-070426NA	J514-2-2-2-070426NB
MS51514A2P	MS51514B2P	1/8	1/8	J514-2-2-2-070426PA	J514-2-2-2-070426PB
MS51514A2R	MS51514B2R	1/8	1/8	Not available	Not available
MS51514A2S	MS51514B2S	1/8	1/8	J514-2-2-2-070426SA	J514-2-2-2-070426SB
MS51514A2T	MS51514B2T	1/8	1/8	J514-2-2-2-070426TA	J514-2-2-2-070426TB
MS51514A2TF	MS51514B2TF	1/8	1/8	Not available	Not available
MS51514A2Z	MS51514B2Z	1/8	1/8	J514-2-2-2-070426ZA	J514-2-2-2-070426ZB
MS51514A2ZN	MS51514B2ZN	1/8	1/8	Not available	Not available
MS51514A3	MS51514B3	3/16	1/8	Not available	Not available
MS51514A3CN	MS51514B3CN	3/16	1/8	Not available	Not available
MS51514A3E	MS51514B3E	3/16	1/8	Not available	Not available
MS51514A3F	MS51514B3F	3/16	1/8	Not available	Not available
MS51514A3H	MS51514B3H	3/16	1/8	Not available	Not available
MS51514A3J	MS51514B3J	3/16	1/8	Not available	Not available
MS51514A3M	MS51514B3M	3/16	1/8	J514-3-2-2-070426MA	J514-3-2-2-070426MB
MS51514A3N	MS51514B3N	3/16	1/8	J514-3-2-2-070426NA	J514-3-2-2-070426NB
MS51514A3P	MS51514B3P	3/16	1/8	J514-3-2-2-070426PA	J514-3-2-2-070426PB
MS51514A3R	MS51514B3R	3/16	1/8	Not available	Not available
MS51514A3S	MS51514B3S	3/16	1/8	J514-3-2-2-070426SA	J514-3-2-2-070426SB
MS51514A3T	MS51514B3T	3/16	1/8	J514-3-2-2-070426TA	J514-3-2-2-070426TB
MS51514A3TF	MS51514B3TF	3/16	1/8	Not available	Not available
MS51514A3Z	MS51514B3Z	3/16	1/8	J514-3-2-2-070426ZA	J514-3-2-2-070426ZB
MS51514A4	MS51514B4	1/4	1/8	Not available	Not available
MS51514A4CN	MS51514B4CN	1/4	1/8	Not available	Not available
MS51514A4E	MS51514B4E	1/4	1/8	Not available	Not available
MS51514A4F	MS51514B4F	1/4	1/8	Not available	Not available
MS51514A4H	MS51514B4H	1/4	1/8	Not available	Not available
MS51514A4J	MS51514B4J	1/4	1/8	Not available	Not available
MS51514A4M	MS51514B4M	1/4	1/8	J514-4-2-2-070426MA	J514-4-2-2-070426MB
MS51514A4N	MS51514B4N	1/4	1/8	J514-4-2-2-070426NA	J514-4-2-2-070426NB
MS51514A4P	MS51514B4P	1/4	1/8	J514-4-2-2-070426PA	J514-4-2-2-070426PB
MS51514A4R	MS51514B4R	1/4	1/8	Not available	Not available
MS51514A4S	MS51514B4S	1/4	1/8	J514-4-2-2-070426SA	J514-4-2-2-070426SB
MS51514A4T	MS51514B4T	1/4	1/8	J514-4-2-2-070426TA	J514-4-2-2-070426TB
MS51514A4TF	MS51514B4TF	1/4	1/8	Not available	Not available
MS51514A4Z	MS51514B4Z	1/4	1/8	J514-4-2-2-070426ZA	J514-4-2-2-070426ZB
MS51514A4ZN	MS51514B4ZN	1/4	1/8	Not available	Not available

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TABLE III. MS51514 to SAE-J514 cross reference - Continued.

Inactive for new design MS51514- PIN		Tube O.D.	Pipe thread NPTF	For new design SAE-J514 PIN	
Body	Assembly			Body	Assembly
MS51514A5	MS51514B5	5/16	1/8	Not available	Not available
MS51514A5CN	MS51514B5CN	5/16	1/8	Not available	Not available
MS51514A5E	MS51514B5E	5/16	1/8	Not available	Not available
MS51514A5F	MS51514B5F	5/16	1/8	Not available	Not available
MS51514A5H	MS51514B5H	5/16	1/8	Not available	Not available
MS51514A5J	MS51514B5J	5/16	1/8	Not available	Not available
MS51514A5M	MS51514B5M	5/16	1/8	J514-5-2-2-070426MA	J514-5-2-2-070426MB
MS51514A5N	MS51514B5N	5/16	1/8	J514-5-2-2-070426NA	J514-5-2-2-070426NB
MS51514A5P	MS51514B5P	5/16	1/8	J514-5-2-2-070426PA	J514-5-2-2-070426PB
MS51514A5R	MS51514B5R	5/16	1/8	Not available	Not available
MS51514A5S	MS51514B5S	5/16	1/8	J514-5-2-2-070426SA	J514-5-2-2-070426SB
MS51514A5T	MS51514B5T	5/16	1/8	J514-5-2-2-070426TA	J514-5-2-2-070426TB
MS51514A5TF	MS51514B5TF	5/16	1/8	Not available	Not available
MS51514A5Z	MS51514B5Z	5/16	1/8	J514-5-2-2-070426ZA	J514-5-2-2-070426ZB
MS51514A5ZN	MS51514B5ZN	5/16	1/8	Not available	Not available
MS51514A6	MS51514B6	3/8	1/4	Not available	Not available
MS51514A6CN	MS51514B6CN	3/8	1/4	Not available	Not available
MS51514A6E	MS51514B6E	3/8	1/4	Not available	Not available
MS51514A6F	MS51514B6F	3/8	1/4	Not available	Not available
MS51514A6H	MS51514B6H	3/8	1/4	Not available	Not available
MS51514A6J	MS51514B6J	3/8	1/4	Not available	Not available
MS51514A6M	MS51514B6M	3/8	1/4	J514-6-4-4-070426MA	J514-6-4-4-070426MB
MS51514A6N	MS51514B6N	3/8	1/4	J514-6-4-4-070426NA	J514-6-4-4-070426NB
MS51514A6P	MS51514B6P	3/8	1/4	J514-6-4-4-070426PA	J514-6-4-4-070426PB
MS51514A6R	MS51514B6R	3/8	1/4	Not available	Not available
MS51514A6S	MS51514B6S	3/8	1/4	J514-6-4-4-070426SA	J514-6-4-4-070426SB
MS51514A6T	MS51514B6T	3/8	1/4	J514-6-4-4-070426TA	J514-6-4-4-070426TB
MS51514A6TF	MS51514B6TF	3/8	1/4	Not available	Not available
MS51514A6Z	MS51514B6Z	3/8	1/4	J514-6-4-4-070426ZA	J514-6-4-4-070426ZB
MS51514A6N	MS51514B6ZN	3/8	1/4	Not available	Not available
MS51514A8	MS51514B8	1/2	3/8	Not available	Not available
MS51514A8CN	MS51514B8CN	1/2	3/8	Not available	Not available
MS51514A8E	MS51514B8E	1/2	3/8	Not available	Not available
MS51514A8F	MS51514B8F	1/2	3/8	Not available	Not available
MS51514A8H	MS51514B8H	1/2	3/8	Not available	Not available
MS51514A8J	MS51514B8J	1/2	3/8	Not available	Not available
MS51514A8M	MS51514B8M	1/2	3/8	J514-8-6-6-070426MA	J514-8-6-6-070426MB
MS51514A8N	MS51514B8N	1/2	3/8	J514-8-6-6-070426NA	J514-8-6-6-070426NB
MS51514A8P	MS51514B8P	1/2	3/8	J514-8-6-6-070426PA	J514-8-6-6-070426PB
MS51514A8R	MS51514B8R	1/2	3/8	Not available	Not available
MS51514A8S	MS51514B8S	1/2	3/8	J514-8-6-6-070426SA	J514-8-6-6-070426SB
MS51514A8T	MS51514B8T	1/2	3/8	J514-8-6-6-070426TA	J514-8-6-6-070426TB
MS51514A8TF	MS51514B8TF	1/2	3/8	Not available	Not available
MS51514A8Z	MS51514B8Z	1/2	3/8	J514-8-6-6-070426ZA	J514-8-6-6-070426ZB
MS51514A8ZN	MS51514B8ZN	1/2	3/8	Not available	Not available

## MS51514B

TABLE III. MS51514 to SAE-J514 cross reference - Continued.

Inactive for new design MS51514- PIN		Tube O.D.	Pipe thread NPTF	For new design SAE-J514 PIN	
Body	Assembly			Body	Assembly
MS51514A10	MS51514B10	5/8	1/2	Not available	Not available
MS51514A10CN	MS51514B10CN	5/8	1/2	Not available	Not available
MS51514A10E	MS51514B10E	5/8	1/2	Not available	Not available
MS51514A10F	MS51514B10F	5/8	1/2	Not available	Not available
MS51514A10H	MS51514B10H	5/8	1/2	Not available	Not available
MS51514A10J	MS51514B10J	5/8	1/2	Not available	Not available
MS51514A10M	MS51514B10M	5/8	1/2	J514-10-8-8-070426MA	J514-10-8-8-070426MB
MS51514A10N	MS51514B10N	5/8	1/2	J514-10-8-8-070426NA	J514-10-8-8-070426NB
MS51514A10P	MS51514B10P	5/8	1/2	J514-10-8-8-070426PA	J514-10-8-8-070426PB
MS51514A10R	MS51514B10R	5/8	1/2	Not available	Not available
MS51514A10S	MS51514B10S	5/8	1/2	J514-10-8-8-070426SA	J514-10-8-8-070426SB
MS51514A10T	MS51514B10T	5/8	1/2	J514-10-8-8-070426TA	J514-10-8-8-070426TB
MS51514A10TF	MS51514B10TF	5/8	1/2	Not available	Not available
MS51514A10Z	MS51514B10Z	5/8	1/2	J514-10-8-8-070426ZA	J514-10-8-8-070426ZB
MS51514A10ZN	MS51514B10ZN	5/8	1/2	Not available	Not available
MS51514A12	MS51514B12	3/4	3/4	Not available	Not available
MS51514A12CN	MS51514B12CN	3/4	3/4	Not available	Not available
MS51514A12E	MS51514B12E	3/4	3/4	Not available	Not available
MS51514A12F	MS51514B12F	3/4	3/4	Not available	Not available
MS51514A12H	MS51514B12H	3/4	3/4	Not available	Not available
MS51514A12J	MS51514B12J	3/4	3/4	Not available	Not available
MS51514A12M	MS51514B12M	3/4	3/4	J514-12-12-12-070426MA	J514-12-12-12-070426MB
MS51514A12N	MS51514B12N	3/4	3/4	J514-12-12-12-070426NA	J514-12-12-12-070426NB
MS51514A12P	MS51514B12P	3/4	3/4	J514-12-12-12-070426PA	J514-12-12-12-070426PB
MS51514A12R	MS51514B12R	3/4	3/4	Not available	Not available
MS51514A12S	MS51514B12S	3/4	3/4	J514-12-12-12-070426SA	J514-12-12-12-070426SB
MS51514A12T	MS51514B12T	3/4	3/4	J514-12-12-12-070426TA	J514-12-12-12-070426TB
MS51514A12TF	MS51514B12TF	3/4	3/4	Not available	Not available
MS51514A12Z	MS51514B12Z	3/4	3/4	J514-12-12-12-070426ZA	J514-12-12-12-070426ZB
MS51514A12ZN	MS51514B12ZN	3/4	3/4	Not available	Not available
MS51514A14	MS51514B14	7/8	3/4	Not available	Not available
MS51514A14CN	MS51514B14CN	7/8	3/4	Not available	Not available
MS51514A14E	MS51514B14E	7/8	3/4	Not available	Not available
MS51514A14F	MS51514B14F	7/8	3/4	Not available	Not available
MS51514A14H	MS51514B14H	7/8	3/4	Not available	Not available
MS51514A14J	MS51514B14J	7/8	3/4	Not available	Not available
MS51514A14M	MS51514B14M	7/8	3/4	J514-14-12-12-070426MA	J514-14-12-12-070426MB
MS51514A14N	MS51514B14N	7/8	3/4	J514-14-12-12-070426NA	J514-14-12-12-070426NB
MS51514A14P	MS51514B14P	7/8	3/4	J514-14-12-12-070426PA	J514-14-12-12-070426PB
MS51514A14R	MS51514B14R	7/8	3/4	Not available	Not available
MS51514A14S	MS51514B14S	7/8	3/4	J514-14-12-12-070426SA	J514-14-12-12-070426SB
MS51514A12T	MS51514B12T	3/4	3/4	J514-12-12-12-070426TA	J514-12-12-12-070426TB
MS51514A12TF	MS51514B12TF	3/4	3/4	Not available	Not available
MS51514A12Z	MS51514B12Z	3/4	3/4	J514-12-12-12-070426ZA	J514-12-12-12-070426ZB
MS51514A12ZN	MS51514B12ZN	3/4	3/4	Not available	Not available



## MS51514B

TABLE III. MS51514 to SAE-J514 cross reference - Continued.

Inactive for new design MS51514- PIN		Tube O.D.	Pipe thread NPTF	For new design SAE-J514 PIN	
Body	Assembly			Body	Assembly
MS51514A16	MS51514B16	1	1	Not available	Not available
MS51514A16CN	MS51514B16CN	1	1	Not available	Not available
MS51514A16E	MS51514B16E	1	1	Not available	Not available
MS51514A16F	MS51514B16F	1	1	Not available	Not available
MS51514A16H	MS51514B16H	1	1	Not available	Not available
MS51514A16J	MS51514B16J	1	1	Not available	Not available
MS51514A16M	MS51514B16M	1	1	J514-16-16-16-070426MA	J514-16-16-16-070426MB
MS51514A16N	MS51514B16N	1	1	J514-16-16-16-070426NA	J514-16-16-16-070426NB
MS51514A16P	MS51514B16P	1	1	J514-16-16-16-070426PA	J514-16-16-16-070426PB
MS51514A16R	MS51514B16R	1	1	Not available	Not available
MS51514A16S	MS51514B16S	1	1	J514-16-16-16-070426SA	J514-16-16-16-070426SB
MS51514A16T	MS51514B16T	1	1	J514-16-16-16-070426TA	J514-16-16-16-070426TB
MS51514A16TF	MS51514B16TF	1	1	Not available	Not available
MS51514A16Z	MS51514B16Z	1	1	J514-16-16-16-070426ZA	J514-16-16-16-070426ZB
MS51514A16ZN	MS51514B16ZN	1	1	Not available	Not available
MS51514A20	MS51514B20	1 1/4	1 1/4	Not available	Not available
MS51514A20CN	MS51514B20CN	1 1/4	1 1/4	Not available	Not available
MS51514A20E	MS51514B20E	1 1/4	1 1/4	Not available	Not available
MS51514A20F	MS51514B20F	1 1/4	1 1/4	Not available	Not available
MS51514A20H	MS51514B20H	1 1/4	1 1/4	Not available	Not available
MS51514A20J	MS51514B20J	1 1/4	1 1/4	Not available	Not available
MS51514A20M	MS51514B20M	1 1/4	1 1/4	J514-20-20-20-070426MA	J514-20-20-20-070426MB
MS51514A20N	MS51514B20N	1 1/4	1 1/4	J514-20-20-20-070426NA	J514-20-20-20-070426NB
MS51514A20P	MS51514B20P	1 1/4	1 1/4	J514-20-20-20-070426PA	J514-20-20-20-070426PB
MS51514A20R	MS51514B20R	1 1/4	1 1/4	Not available	Not available
MS51514A20S	MS51514B20S	1 1/4	1 1/4	J514-20-20-20-070426SA	J514-20-20-20-070426SB
MS51514A20T	MS51514B20T	1 1/4	1 1/4	J514-20-20-20-070426TA	J514-20-20-20-070426TB
MS51514A20TF	MS51514B20TF	1 1/4	1 1/4	Not available	Not available
MS51514A20Z	MS51514B20Z	1 1/4	1 1/4	J514-20-20-20-070426ZA	J514-20-20-20-070426ZB
MS51514A20ZN	MS51514B20ZN	1 1/4	1 1/4	Not available	Not available
MS51514B24	MS51514A24	1 1/2	1 1/2	Not available	Not available
MS51514B24CN	MS51514A24CN	1 1/2	1 1/2	Not available	Not available
MS51514B24E	MS51514A24E	1 1/2	1 1/2	Not available	Not available
MS51514B24F	MS51514A24F	1 1/2	1 1/2	Not available	Not available
MS51514B24H	MS51514A24H	1 1/2	1 1/2	Not available	Not available
MS51514B24J	MS51514A24J	1 1/2	1 1/2	Not available	Not available
MS51514B24M	MS51514A24M	1 1/2	1 1/2	J514-24-24-24-070426MB	J514-24-24-24-070426MA
MS51514B24N	MS51514A24N	1 1/2	1 1/2	J514-24-24-24-070426NB	J514-24-24-24-070426NA
MS51514B24P	MS51514A24P	1 1/2	1 1/2	J514-24-24-24-070426PB	J514-24-24-24-070426PA
MS51514B24R	MS51514A24R	1 1/2	1 1/2	Not available	Not available
MS51514B24S	MS51514A24S	1 1/2	1 1/2	J514-24-24-24-070426SB	J514-24-24-24-070426SA
MS51514B24T	MS51514A24T	1 1/2	1 1/2	J514-24-24-24-070426TB	J514-24-24-24-070426TA
MS51514B24TF	MS51514A24TF	1 1/2	1 1/2	Not available	Not available
MS51514B24Z	MS51514A24Z	1 1/2	1 1/2	J514-24-24-24-070426ZB	J514-24-24-24-070426ZA
MS51514B24ZN	MS51514A24ZN	1 1/2	1 1/2	Not available	Not available

## MS51514B

Inactive for new design MS51514- PIN		Tube O.D.	Pipe thread NPTF	For new design SAE-J514 PIN	
Body	Assembly			Body	Assembly
MS51514B32	MS51514A32	2	2	Not available	Not available
MS51514B32CN	MS51514A32CN	2	2	Not available	Not available
MS51514B32E	MS51514A32E	2	2	Not available	Not available
MS51514B32F	MS51514A32F	2	2	Not available	Not available
MS51514B32H	MS51514A32H	2	2	Not available	Not available
MS51514B32J	MS51514A32J	2	2	Not available	Not available
MS51514B32M	MS51514A32M	2	2	J514-32-32-32-070426MB	J514-32-32-32-070426MA
MS51514B32N	MS51514A32N	2	2	J514-32-32-32-070426NB	J514-32-32-32-070426NA
MS51514B32P	MS51514A32P	2	2	J514-32-32-32-070426PB	J514-32-32-32-070426PA
MS51514B32R	MS51514A32R	2	2	Not available	Not available
MS51514B32S	MS51514A32S	2	2	J514-32-32-32-070426SB	J514-32-32-32-070426SA
MS51514B32T	MS51514A32T	2	2	J514-32-32-32-070426TB	J514-32-32-32-070426TA
MS51514B32TF	MS51514A32TF	2	2	Not available	Not available
MS51514B32Z	MS51514A32Z	2	2	J514-32-32-32-070426ZB	J514-32-32-32-070426ZA
MS51514B32ZN	MS51514A32ZN	2	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-595/36280	ASTM B164	SAE-AMS2700
FED-STD-595/36081	FED-STD-595/36293	ASTM B166	SAE-AMS4928
FED-STD-595/36099	MIL-DTL-16232	ASTM B564	SAE-AMS5639
FED-STD-595/36118	MIL-DTL-81706	ASTM B633	SAE-AMS5643
FED-STD-595/36134	MS51531	ASTM B695	SAE-AMS5645
FED-STD-595/36152	MS51533	ASTM F1136/F1136M	SAE-AMS5647
FED-STD-595/36170	QQ-N-281	SAE-AMS-C-81562	SAE-AMS5743
FED-STD-595/36173	ASME B1.1	SAE-AMS-QQ-P-416	SAE-AMS6370
FED-STD-595/36176	ASTM A276/A276M	SAE-AMS2417	SAE-AMS6382
FED-STD-595/36231	ASTM A564/A564M	SAE-AMS2451/5	SAE-J403
FED-STD-595/36251	ASTM A582/A582M	SAE-AMS2451/9	SAE-J425
FED-STD-595/36270	ASTM B117	SAE-AMS2486	SAE-J514
		SAE-AMS2488	

MS51514B

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA - CC

(Project 4730-2016-010)

Review activities:

Army - AT  
Navy - MC  
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>.