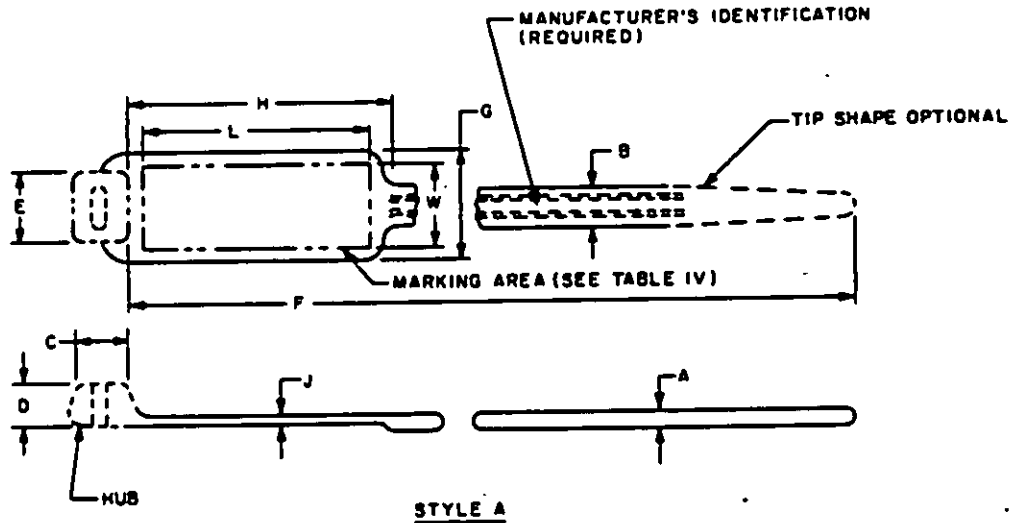


USED SYMBOLS:  
ARMY -  
NAVY - SH, NS  
USAF - 1)

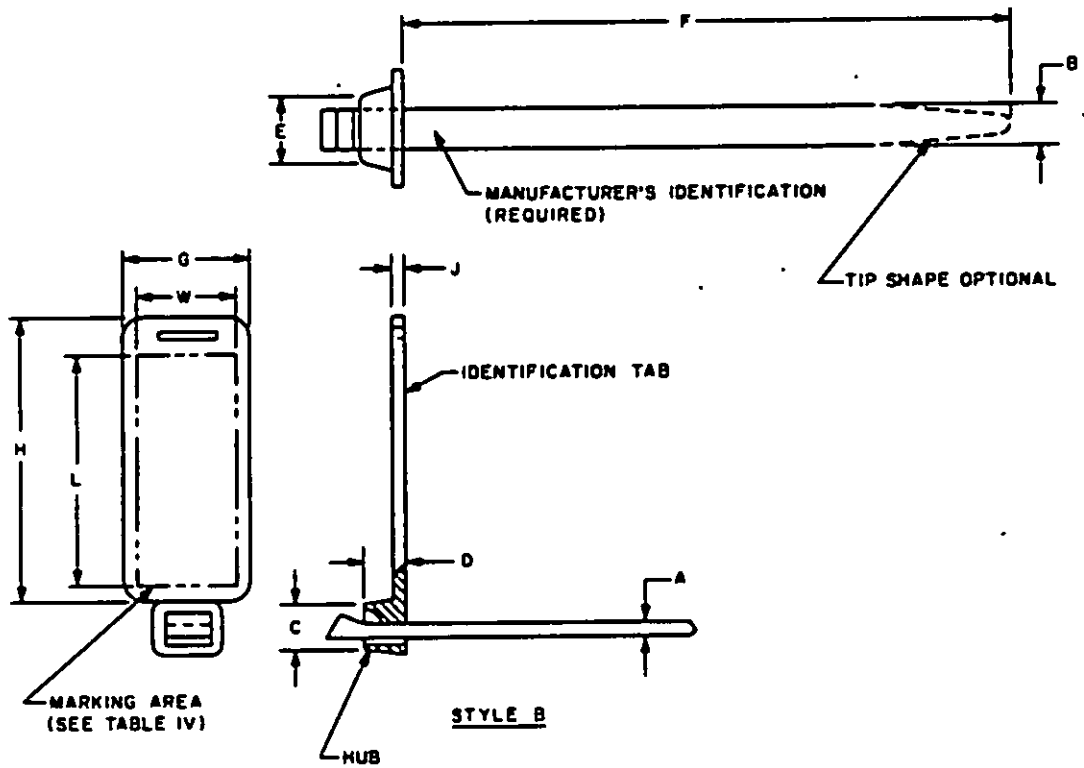
REVIEWED SYMBOLS:  
ARMY - AV, MI, EL  
NAVY - EC  
USAF - 99

\*When/where information is correct as of the date of this document, for future substitution of changes to this document, such substitution should be based on the information in the current 90000.

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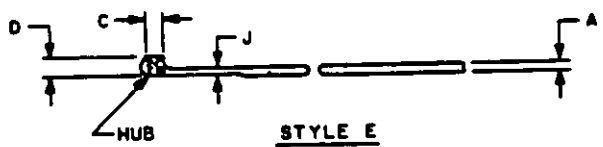
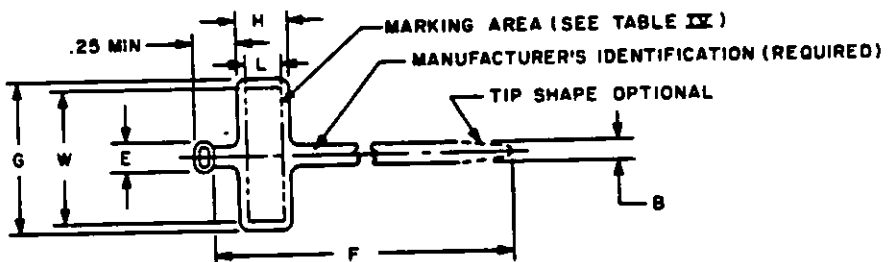
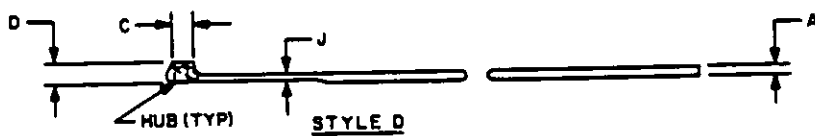
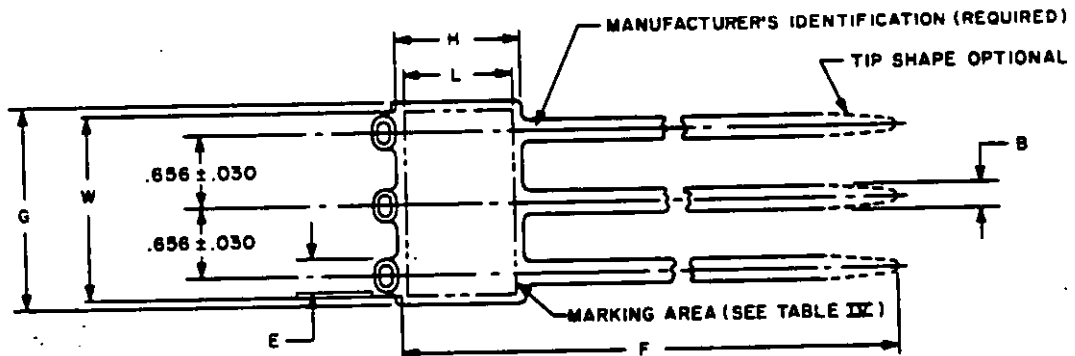
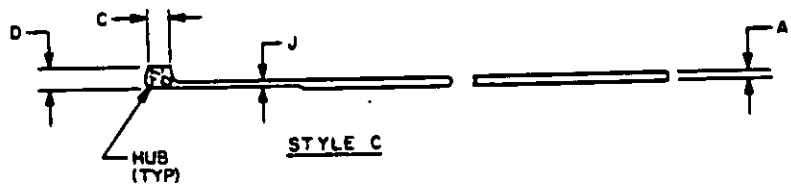
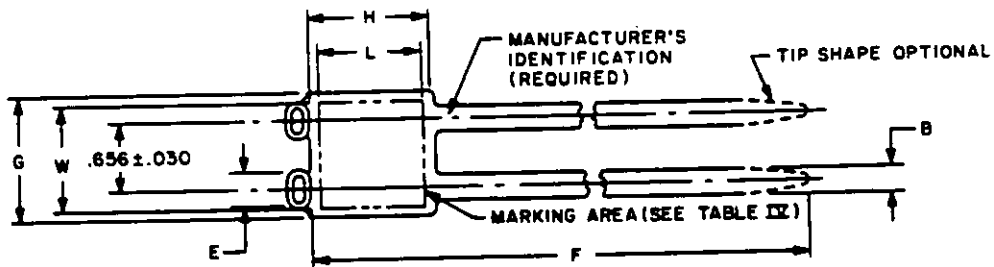
STYLE A



STYLE B

Ⓢ ENTIRE STANDARD REVISED

P.A. NAVY - AS Other Code  USAF - 85 ARMY - EL	TITLE	MILITARY STANDARD
	STRAP, TIEDOWN, ELECTRICAL COMPONENTS, IDENTIFICATION, ADJUSTABLE, SELF-CLINCHING, PLASTIC, TYPE II, CLASS I	MS3368
PROCUREMENT SPECIFICATION MIL-S-23190	SUPERSEDES MS17822 AND MS18035	SHEET 1 OF 5



APPROVED 10 JULY 1989 REVISED (F) FOR CHANGES SEE SHEETS 1 THRU 5

REVISION SYMBOL:  
ARMY - AV, MI, EL  
NAVY - EC  
USAF - 99

"Review/alter information is correct as of the date of this document. For future coordination of changes to this document, draft characteristics should be based on the information in the current 00BISG."

This military standard is approved for use by all Departments & Agencies of the Department of Defense. Selection for all new engineering and design applications and for replacement use shall be made from this document.

P.A. NAVY - AS Other Code  USAF - 85 ARMY - EL	TITLE STRAP, TIEDOWN, ELECTRICAL COMPONENTS, IDENTIFICATION, ADJUSTABLE, SELF-CLINCHING, PLASTIC, TYPE II, CLASS I	MILITARY STANDARD <b>MS3368</b>
PROCUREMENT SPECIFICATION MIL-S-23190	SUPERSEDES MS17822 AND MS18035	SHEET 2 OF 5 PLATE NO 2284

TABLE I  
STYLE A, B, C, D & E

DASH NUMBER	STYLE	BUNDLE DIA. INCH		A	B	C	D	E	F	G	H	J	MIN. TENSILE STRENGTH LB.	STRAP IDENTIFICATION CODE SEE NOTE 11	MS INSTALLATION TOOL	TOOL TENSION SETTING RANGE SEE NOTES 7 & 12
		MIN.	MAX.	MAX	MAX	MAX	MAX	MIN	MIN	MAX	MAX					
-1	A & B	3/8 (See Note 4)	1-3/4	.035	.190	.275	.240	.425	6.30	.50	1.125 1/	.035	50	STD (Standard)	MS90387-1	6 to 8
-2	A & B	3/4 (See Note 4)	4	.035	.190	.275	.240	.425	13.35	.50	2.312	.048	50	STD (Standard)	MS90387-1	6 to 8
-3	C	3/8	1-3/4	.035	.190	.275	.240	.425	6.30	1.12	1.125	.035	50 (See Note 4)	STD (Standard)	MS90387-1	6 to 8
-4	D	3/8	1-3/4	.035	.190	.275	.240	.425	6.30	1.78	1.125	.035	50 (See Note 6)	STD (Standard)	MS90387-1	6 to 8
-5	E	3/16	5/8	.046	.100	.175	.170	.200	2.72	.96	.34	.035	18	MIN (Miniature)	MS90387-1	1 to 3

1/ FOR DASH 1, STYLE B, THE "H" DIMENSION SHALL BE 1.187 MAX IN LIEU OF 1.125.

TABLE II

COLOR DASH NO.	COLOR	COLOR DASH NO.	COLOR
-0	BLACK 2/	-5	GREEN
-1	BROWN	-6	BLUE
-2	RED	-7	PURPLE
-3	ORANGE	-8	GRAY
-4	YELLOW	-9	NATURAL

TABLE III

SUPERSESION BY PART NUMBER		
PART NO.	PART NO.	PART NO.
MS3368-1	MS17822-1	MS18035-1
MS3368-2	MS17822-2	MS18035-2
MS3368-3	-----	MS18035-3
MS3368-4	-----	MS18035-4
MS3368-5	-----	MS18035-5

2/ SEE REQUIREMENTS: 1. (c) (1)

TABLE IV

DASH NO.	STYLE	MARKING AREA	
		L MIN.	W MIN.
1	A	.85	.41
1	B	.96	.42
2	A	1.93	.41
2	B	.96	.42
3	C	.87	1.07
4	D	.87	1.75
5	E	.24	.91

REVIEWER SYMBOLS:  
ARMY - AV, MI, EL  
NAVY - EC  
USAF - 99

\*Revision/Change information is carried on all the data of this document. For future coordination of changes to this document, create amendments should be based on the information in the current 000133.

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P.A. NAVY - AS Other Code  USAF - 85 ARMY - EL	TITLE <b>STRAP, TIEDOWN, ELECTRICAL COMPONENTS, IDENTIFICATION, ADJUSTABLE, SELF-CLINCHING, PLASTIC, TYPE II, CLASS I</b>	MILITARY STANDARD <b>MS3368</b>
	PROCUREMENT SPECIFICATION MIL-S-23190	SUPERSEDES MS17822 AND MS18035

SEEK SYMBOLS:  
ARMY - AV, MI, EL  
NAVY - EC  
USAF - 99

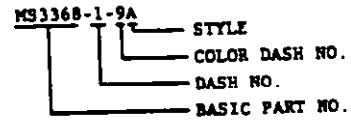
INCH	MM	INCH	MM	INCH	MM	INCH	MM
.030	0.76	.190	4.83	.500	12.70	1.125	28.58
.035	0.89	.200	5.08	.625	15.88	1.187	30.15
.046	1.17	.24	6.10	.656	16.66	1.750	44.45
.048	1.22	.25	6.35	.750	19.05	1.780	45.21
.055	1.40	.275	6.99	.850	21.59	1.930	49.02
.0625	1.59	.34	8.64	.870	22.10	2.312	58.72
.100	2.54	.375	9.53	.910	23.11	2.720	69.09
.170	4.32	.41	10.41	.960	24.38	4.000	101.60
.175	4.45	.42	10.67	1.070	27.18	6.300	160.02
.1875	4.76	.425	10.80	1.120	28.45	13.350	339.09

**REQUIREMENTS:**

1. MATERIAL: (a) STRAP: NYLON, PER MIL-M-20693, TYPE I, OR TYPE III, EXCEPT FOR BLACK WHICH SHALL BE TYPE II (WEATHER RESISTANT).
  - (b) STRAP LOCK: (1) METAL TYPE PER QQ-S-766, CLASS 301 AND 302 (SEE NOTE 5).
    - (2) PLASTIC TYPE PER MIL-M-20693, TYPE I EXCEPT FOR BLACK WHICH SHALL BE TYPE II (WEATHER RESISTANT) (SEE NOTE 5).
  - (c) COLOR: (1) COLORS IN ACCORDANCE WITH MIL-STD-104, EXCEPT NATURAL AND BLACK.
    - (2) A CONTRASTING COLOR SHALL BE USED WHEN MARKING IDENTIFICATION CABLE STRAP IN "MARKING" AREA.

**NOTES:**

1. DIMENSIONS ARE IN INCHES.
2. STRAPS SHALL HAVE NO BURRS, SHARP EDGES OR SHARP CORNERS.
3. METRIC EQUIVALENTS (TO THE NEAREST .01 MM) ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED UPON 1 INCH = 25.4 MM.
4. WHEN IDENTIFICATION TAB FOR THE STYLE B DESIGN IS IN THE "FLAG" POSITION, MINIMUM BUNDLE DIAMETER MAY BE 1/16.
5. LOCKING DEVICES OF ANY DESIGN ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS OF THE PROCUREMENT SPECIFICATION. WHEN METAL LOCKING DEVICES ARE USED, THEY MUST BE SECURELY ANCHORED AND SHALL NOT BE EXPOSED OUTSIDE OF THE HUB OR HUBS.
6. THE GOVERNMENT HAS A ROYALTY FREE LICENSE UNDER THE FOLLOWING U.S. PATENT AND U.S. PATENT APPLICATION NUMBERS 3,022,557; 173,866; 3,186,047; FOR THE BENEFIT OF MANUFACTURERS OF THE ITEMS CALLED FOR IN THIS STANDARD EITHER FOR THE GOVERNMENT OR FOR USE IN EQUIPMENT TO BE DELIVERED TO THE GOVERNMENT.
7. TYPE II TIEDOWN STRAPS MAY BE USED ON WIRE BUNDLES CONTAINING SOLID DIELECTRIC COAXIAL CABLES PROVIDED THAT THE TENSION SETTING ON THE MS90387 INSTALLING TOOL IS NOT GREATER THAN THAT REQUIRED TO PREVENT AXIAL SLIPPAGE.
8. MINIMUM TENSILE STRENGTH APPLIES TO EACH LEG OF STRAP.
9. CONTOUR INDICATED BY PHANTOM LINES MAY VARY FROM THAT SHOWN TO SUIT INDIVIDUAL MANUFACTURER'S DESIGN. SLIGHT MOLDING TAPER IS PERMITTED.
10. EXAMPLE OF PART NUMBER:



APPROVED 10 JULY 1969 REVISED FOR CHANGES SEE SHEETS 1 THRU 5

P.A. NAVY - AS Other Code  USAF - 85 ARMY - EL	TITLE STRAP, TIEDOWN, ELECTRICAL COMPONENTS, IDENTIFICATION, ADJUSTABLE, SELF-CLINCHING, PLASTIC, TYPE II, CLASS I	MILITARY STANDARD <b>MS3368</b>
		SHEET 4 OF 5
PROCUREMENT SPECIFICATION MIL-S-23190	SUPERSEDES MS17822 AND MS18035	

11. UNIT PACKAGE MARKING - IN ADDITION TO THE PART NUMBER SHOWN IN NOTE 10, THE UNIT PACKAGE SHALL HAVE THE FOLLOWING TYPICAL INFORMATION MARKED ON THE PACKAGE OR CONTAINED WITHIN THE PACKAGE

EXAMPLE

STRAP IDENTIFICATION CODE - STANDARD  
 MS INSTALLATION TOOL - 90387-1  
 TOOL TENSION SETTING RANGE - 6 TO 8

12. TOOL TENSION SETTING - THE TOOL TENSION SETTING RANGES SPECIFIED IN TABLE I ARE FOR TYPICAL WIRE BUNDLE APPLICATIONS. SETTINGS LESS OR GREATER THAN THE RANGES SPECIFIED MAY BE NECESSARY FOR SPECIAL APPLICATIONS.
13. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.
14. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BIDS, OR REQUEST FOR PROPOSAL EXCEPT THAT REFERENCED ADOPTED INDUSTRY DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.

USED SYMBOLS:  
 ARMY - SH, OS  
 NAVY - SH, OS  
 USAF - 17

REVISED SYMBOLS:  
 ARMY - AV, MI, EL  
 NAVY - EC  
 USAF - 99

"Notice/new information is current as of the date of this document. For future coordination of changes to this document, draft amendments should be based on the information in the current document."

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APPROVED 10 JULY 1969 REVISED (C) FOR CHANGES SEE SHEETS 1 THRU 3

P.A. NAVY - AS Other Code USAF - 85 ARMY - EL	TITLE	MILITARY STANDARD
	STRAP, TIEDOWN, ELECTRICAL COMPONENTS, IDENTIFICATION, ADJUSTABLE, SELF-CLINCHING, PLASTIC, TYPE II, CLASS I	MS3368
PROCUREMENT SPECIFICATION MIL-S-23190	SUPERSEDES MS17822 AND MS18055	SHEET 5 OF 5