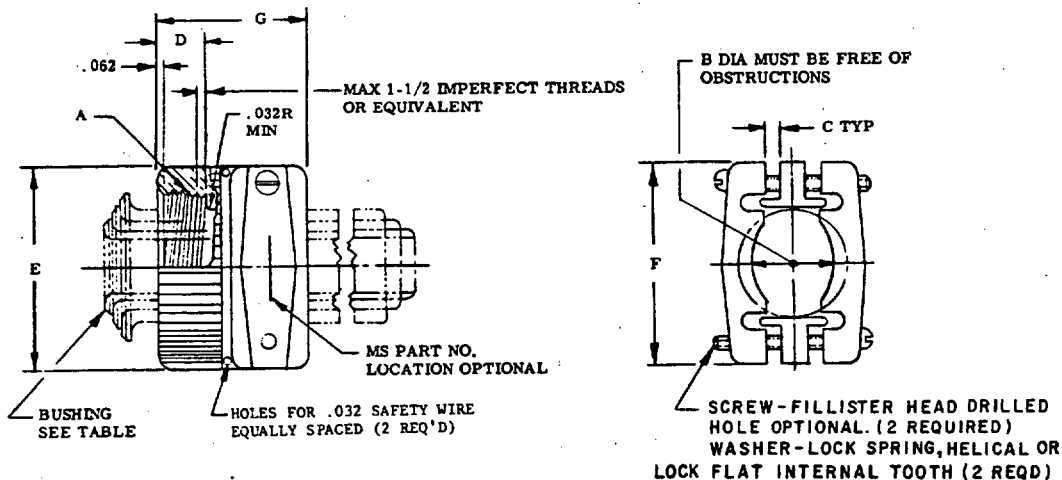


User activities: Army - AT, AV, ME
Navy - MC, SH, OS
Air Force -Review activities: Army - MU, MI
Navy - EC, OS
Air Force -

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



TYPE A - CABLE CLAMP, STRAIN RELIEF

DASH NO. (a)	CONNECTOR SHELL SIZE (REF) (b)	A THREAD	B MAX	C	D	E ±.031 DIA	F ±.031	G ±.031	BUSHING (REF) (c)
-3A	8S AND 10S	.500-28 UNEF-2B	.250	.047	.406	.688	.812	.812	MS3420-3
-4A	10SL, 12S AND 12	.625-24 UNEF-2B	.312	.062		.812	.875		MS3420-4
-6A	14S AND 14	.750-20 UNEF-2B	.438	.078		.969	1.062	.875	MS3420-6
-8A	16S AND 16	.875-20 UNEF-2B	.562	.109		1.094	1.156		MS3420-8
-10A	18	1.000-20 UNEF-2B	.625	.125		1.188	1.250	.938	MS3420-10
-12A	20 AND 22	1.188-18 UNEF-2B	.750	.156		1.375	1.469		MS3420-12
-16A	24 AND 28	1.438-18 UNEF-2B	.938	.188		1.656	1.688	1.031	MS3420-16
-20A	32	1.750-18 UNS-2B	1.250	.250		2.031	2.031	1.094	MS3420-20
-24A	36	2.000-18 UNS-2B	1.375	.297	.531	2.219	2.281	1.156	MS3420-24
-28A	40	2.250-16 UN-2B	1.625	.328		2.500	2.688	1.688	MS3420-28
-32A	44	2.500-16 UN-2B	1.875	.375	.594	2.781	2.938	1.750	MS3420-32
-40A	48	3.000-16 UN-2B	2.375	.453	.656	3.281	3.500		MS3420-40

- (a) PART NUMBERS MS3057-3A THROUGH -40A ARE INTERCHANGEABLE WITH PART NUMBERS AN3057-3A THROUGH 40A.
(b) CLAMP MATES WITH CONNECTOR SHELL SIZE LISTED IN THIS COLUMN.
(c) BUSHINGS FOR REFERENCE ONLY AND NOT SUPPLIED AS PART OF CLAMP.

FOR ADDITIONAL CLOSE DOWN OF THE B DIMENSION, BUSHINGS MS3420-3 THROUGH MS3420-40 MAY BE USED. ONE BUSHING AS REQUIRED FOR MS3057-3A THROUGH MS3057-12A, CORRESPONDING TO MS3420-3 THROUGH MS3420-12.

TWO BUSHINGS AS REQUIRED FOR MS3057-16A THROUGH MS3057-24A, ONE EACH CORRESPONDING TO MS3420-16 THROUGH MS3420-24, AND MS3420-12 THROUGH MS3420-20. (EXAMPLES: MS3057-16A REQUIRES ONE MS3420-16 AND ONE MS3420-12.)

THREE BUSHINGS AS REQUIRED FOR MS3057-28A THROUGH MS3057-40A, ONE EACH CORRESPONDING TO MS3420-28 THROUGH MS3420-40, AND MS3420-24 THROUGH MS3420-32, AND MS3420-20 THROUGH MS3420-28. (EXAMPLES: MS3057-40A REQUIRES ONE MS3420-40, ONE MS3420-32, AND ONE MS3420-28.)

NOTES:

- DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS $\pm .016$. ANGLES $\pm 2^\circ$. DIMENSIONS AND TOLERANCING IN ACCORDANCE WITH ANSI Y14.5-1973.
- MATERIAL: ALUMINUM ALLOY, QQ-A-591, ALLOY NO. 13.
- FINISH: IN ACCORDANCE WITH MIL-C-5015.
- THREADS IN ACCORDANCE WITH MIL-S-7742.
- REMOVE ALL BURRS AND SHARP EDGES.

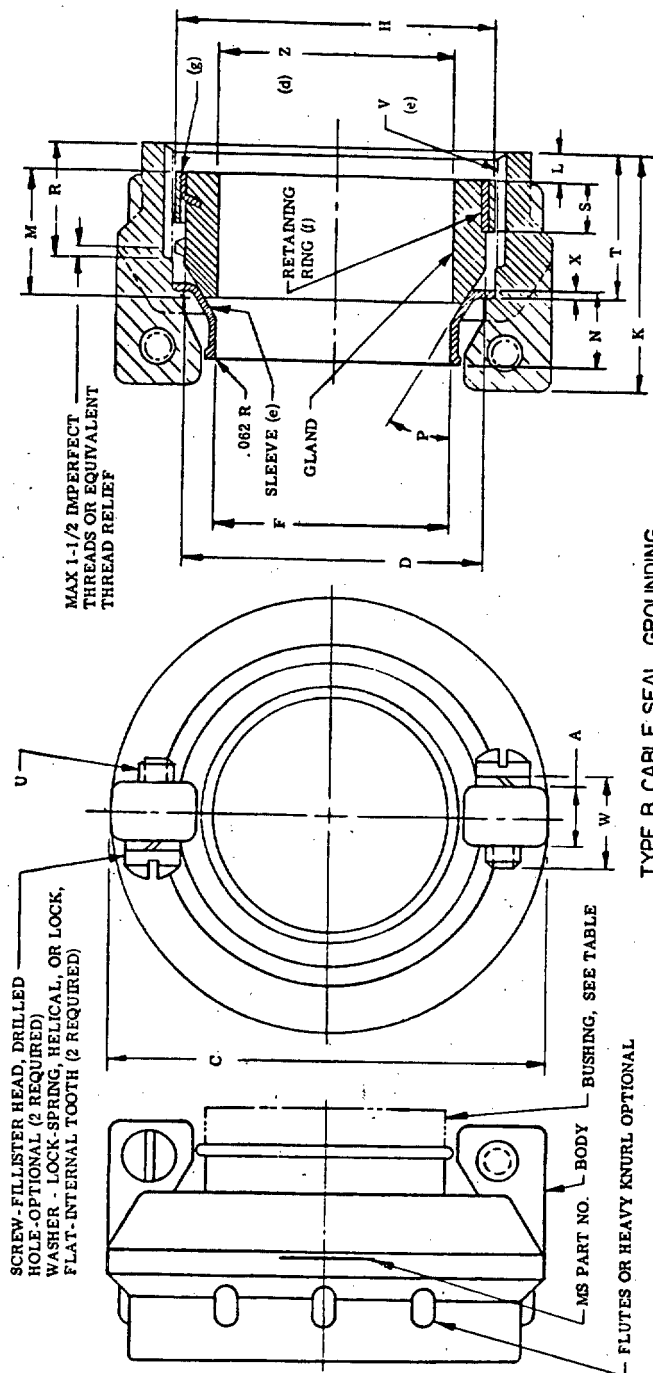
FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

INACTIVE FOR DESIGN AFTER 1 JULY 1982. DOCUMENT WILL BE CANCELLED AFTER 1 JULY 1984, USE MIL-C-85049/1, /2, /41, /42

Ⓔ DENOTES CHANGES

P.A Navy - AS	International Interest	TITLE	MILITARY STANDARD
Other Cust Army - EL USAF - 85		CLAMPS, CABLE, ELECTRICAL CONNECTOR	MS 3057
Procurement Specification MIL-C-5015		SUPERSEDES: AN3057	PAGE 1 OF 8

P.A. NAVY - AS	International interest	TITLE	MILITARY STANDARD
Other Cust Army - EL USAF - 85		CLAMPS, CABLE, ELECTRICAL CONNECTOR	MS 3057
Procurement Specification MIL-C-5015	SUPERSEDES:	AN3057	PAGE 2 OF 3



TYPE B CABLE SEAL, GROUNDING

(d) FOR ADDITIONAL CLOSEDOWN OF THE Z DIMENSION, BUSHINGS MS3420-3A THROUGH MS3420-40A MAY BE USED. DIAMETER Z SHALL BE FREE OF OBSTRUCTIONS.

(e) APPLY LUBRICANT, VV-P-236 TO THREADS AND SURFACES OF SLEEVE.

(f) RETAINING RING TO BE BONDED IN RUBBER GLAND.

(g) SERRATIONS AT BASE OF RETAINING RING MAY BE COVERED WITH A MAXIMUM OF .013 RUBBER FOR SIZES 3B THROUGH 10B, IF COVERED, THE RUBBER SHALL BE MOLDED TO THE CONTOUR OF THE SERRATIONS.

NOTES:

6. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS $\pm .016$, ANGLES $\pm 2^\circ$.

7. MATERIAL: BODY, ALUMINUM ALLOY, QQ-A-225/5, TEMPER T4; QQ-A-601 OR QQ-A-591, ALLOY NO. 13, 218, 380, OR SC1114A.

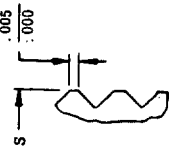
8. FINISH: BODY, SCREWS AND WASHERS - CADMIUM PLATE, SPECIFICATION QQ-P-416, TYPE II, CLASS 3, COLOR, DULL OLIVE DRAB, ELECTRICALLY CONDUCTIVE.

9. SLEEVE - SPECIFICATION MIL-C-5541. THE PORTION OF THE SLEEVE IN CONTACT WITH THE BODY SHALL BE COATED WITH POLYTETRAFLUOROETHYLENE RESIN FOR SIZES 3B THRU 10B.

10. THREADS IN ACCORDANCE WITH MIL-S-7742.

11. REMOVE ALL BURRS AND SHARP EDGES.

FED. SUP CLASS
5935



SIDE VIEW OF SERRATIONS
ON RETAINING RING
(20 SERRATIONS PER INCH)

APPROVED 17 Dec 58 REVISED (E) FOR CHANGES SEE SHEET 1

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Review activities: Army - MU, MI
Navy - EC, OS
Air Force

User activities: Army - AT, AV, ME
Navy - MC, SH, OS
Air Force

P.A Navy - AS	International interest	TITLE CLAMPS, CABLE, ELECTRICAL CONNECTOR	MILITARY STANDARD
Other Cust Army - EL USAF - 85			MS3057
Procurement Specification MIL-C-5015	SUPERSEDES: AN3057		PAGE 3 OF 8

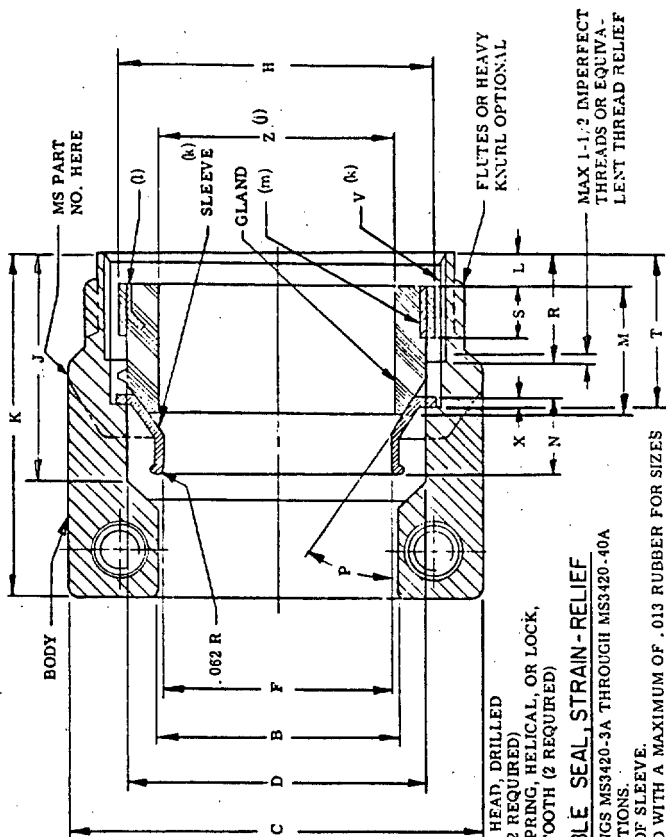
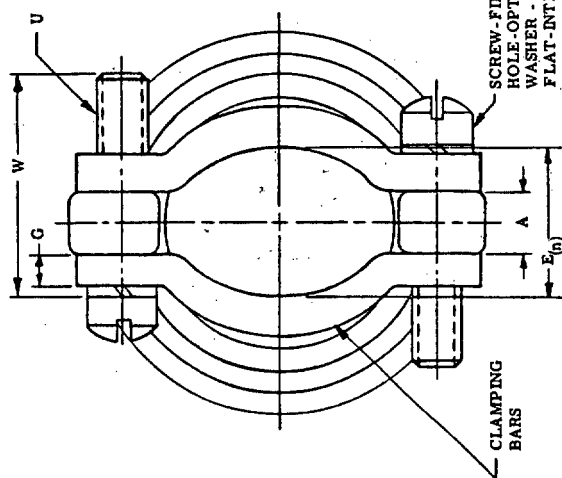
TYPE B CABLE SEAL, GROUNDING

DASH NO.	CONNECTOR SHELL SIZE (REF)	A +.031 -.016	C MAX	D +.000 -.020 DIA	F +.020 -.000 DIA	H +.000 -.020 DIA	K MAX	L MIN	M +.031	N	P #2	R MIN
(h)	(i)			GLAND								
-3B	8S AND 10S		.812	.389	.231	.441					20°	
-4B	10SL, 12S AND 12		.937	.510	.315	.560	1.031		.473	.254		
-6B	14S AND 14	.188	1.062	.627	.440	.676						.531
-8B	16S AND 16		1.188	.744	.515	.800			.537	.281	30°	
-10B	18		1.312	.870	.614	.926	1.094	.156	.625	.320		
-12B	20 AND 22	.250	1.562	1.037	.738	1.107	1.219		.662	.344		
-16B	24 AND 28		1.750	1.286	.926	1.357			.940	.406		.562
-20B	32		2.250	1.590	1.200	1.870	1.344					
-24B	36	.312	2.375	1.844	1.363	1.920	1.547				35°	.781
-28B	40		2.625	2.083	1.611	2.162						
-32B	44		2.812	2.332	1.865	2.412	1.734	.188	1.047	.500		
-40B	48	.375	3.312	2.832	2.365	2.912	1.781					

DASH NO.	S	T	U THREAD	V THREAD	W MIN	X	Z DIA APPROX (GLAND)	BUSHING (REF)	MAX CABLE DIA
(h)							FREE CLOSED		
-3B				.500-28 UNEF-2B			.219	MS3420-3A	.219
-4B	.200	.641	6-32UNC-2A	.625-24 UNEF-2B	.281	.025 +.010	.312	MS3420-4A	.312
-6B				.750-20 UNEF-2B		.003	.438	MS3420-6A	.438
-8B				.875-20 UNEF-2B			.531	MS3420-8A	.515
-10B	.218	.672		1.000-20 UNEF-2B			.625	MS3420-10A	.614
-12B		.719	8-32UNC-2A	1.188-18 UNEF-2B	.344	.032 +.012	.750	MS3420-12A	.738
-16B	.273			1.438-18 UNEF-2B		.003	.938	MS3420-16A	.926
-20B		.797		1.750-18 UNS-2B			1.250	MS3420-20A	1.200
-24B	.431	1.016		2.000-18 UNS-2B		.051 ±.005	1.375	MS3420-24A	1.363
-28B			10-32UNF-2A	2.250-16 UN-2B	.406		1.625	MS3420-28A	1.611
-32B	.500	1.172		2.500-16 UN-2B			1.875	MS3420-32A	1.865
-40B		1.234		3.000-16 UN-2B		.064 ±.005	2.375	MS3420-40A	2.365

(h) PART NUMBERS MS3057-3B THROUGH -40B ARE INTERCHANGEABLE WITH PART NUMBERS AN3057-3B THROUGH -40B.

(i) CLAMP MATES WITH CONNECTOR SHELL SIZE LISTED IN THIS COLUMN.

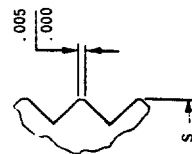


TYPE C CABLE SEAL, STRAIN-RELIEF

- (1) FOR ADDITIONAL CLOSE DOWN OF THE Z DIMENSION, BUSHINGS MS3420-3A THROUGH MS3420-40A MAY BE USED. DIAMETER Z SHALL BE FREE OF OBSTRUCTIONS.
- (k) APPLY LUBRICANT, VV-P-236 TO THREADS AND SURFACES OF SLEEVE.
- (1) SERRATIONS AT BASE OF RETAINING RING MAY BE COVERED WITH A MAXIMUM OF .013 RUBBER FOR SIZES 3C THRU 10C, IF COVERED, THE RUBBER SHALL BE MOLDED TO THE CONTOUR OF THE SERRATIONS.
- (m) RETAINING RING TO BE BONDED IN RUBBER GLAND.
- (n) "E" MIN WITH CLAMPING BARS FULLY OPENED SHALL BE NO LESS THAN "B" DIMENSION.

NOTES:

11. DIMENSIONS IN INCHES, UNLESS OTHERWISE SPECIFIED. TOLERANCES: DECIMALS $\pm .016$, ANGLES $\pm 2^\circ$. DIMENSIONS AND TOLERANCING IN ACCORDANCE WITH ANSI Y14.5-1973. SEE SHEET 5 FOR TABULATED DIMENSIONS.
12. MATERIAL: BODY, ALUMINUM ALLOY, QQ-A-225/5, TEMPT4; QQ-A-601 OR QQ-A-591, ALLOY NO. 13, 218, 380, OR SG1144.
SLEEVE, ALUMINUM, AMS4025, OR QQ-A-225.
GLAND, RUBBER, AMS3209, DUROMETER "A" 70 ± 5 .
RETAINING RING, BRASS, SAET0, HARD TEMPER ONLY.
CLAMPING BARS, ALUMINUM QQ-A-250/8 TEMPER H32.
13. FINISH: BODY, SCREWS AND WASHERS - CADMIUM PLATE, SPECIFICATION QQ-P-416, TYPE II, CLASS 3; COLOR, DULL OLIVE DRAB, ELECTRICALLY CONDUCTIVE.
SLEEVE - SPECIFICATION MIL-C-5541. THE PORTION OF THE SLEEVE IN CONTACT WITH THE BODY SHALL BE COATED WITH POLYTETRAFLUOROETHYLENE RESIN FOR SIZES 3C THRU 10C.
14. THREADS IN ACCORDANCE WITH MIL-S-7742.
15. REMOVE ALL BURRS AND SHARP EDGES.



(1) SIDE VIEW OF SERRATIONS
ON RETAINING RING
(20 SERRATIONS PER INCH)

P.A. Navy - AS Other Cust Army - EL USAF - 85	International Interest	TITLE CLAMPS, CABLE, ELECTRICAL CONNECTOR	MILITARY STANDARD MS3057
Procurement Specification MIL-C-5015	SUPERSEDES: AN3057	PAGE 4 OF 8	

Review activities: Army - MU, MI
Navy - EC, OS
Air Force -

User activities: Army - AT, AV, ME
Navy - MC, SH, OS
Air Force -

FED. SUP CLASS
5935

TYPE C CABLE SEAL, STRAIN RELIEF

DASH NO.	CONNECTOR SHELL SIZE (REF) (a)	A + .031 - .016	B MIN CABLE CLEAR- ANCE	C MAX	D + .000 - .020 GLAND	E MAX CLOSED	F + .020 - .000 DIA	G + .016 - .020 DIA	H + .020 - .020 DIA	J + .020	K MAX	L MIN	M + .031	N	P	R MIN
-3C	8S AND 10S		.239	.812	.389	.217	.231	.441								
-4C	10SL, 12S AND 12		.317	.937	.510	.296	.315	.560							20°	
-6C	14S AND 14	.188	.443	1.062	.627	.390	.440	.125	.676	.875	1.375		.473	.254		
-8C	16S AND 16		.551	1.188	.744		.515	.800								.531
-10C	18		.630	1.312	.870	.434	.614	.926	.927				.537	.281		
-12C	20 AND 22		.771	1.562	1.037		.738	1.107	1.016	1.437	.156		.625	.320	30°	
-16C	24 AND 28	.250	.959	1.750	1.286	.596	.926	.156	1.357	1.037	1.562		.662	.344		
-20C	32		1.271	2.250	1.590		1.200		1.670	1.167	1.812					.562
-24C	36	.312	1.396	2.375	1.844	.858	1.363	.188	1.920	1.386	2.062		.940	.406	35°	
-28C	40		1.646	2.625	2.083	1.107	1.611		2.162							.781
-32C	44	.375	1.896	2.812	2.332	1.421	1.865		2.412	1.480	2.188	.188	1.047	.500		

DASH NO.	S	T	U THREAD	V THREAD	W MIN	X	Z DIA APPROX (GLAND)		BUSHING (REF)	MAX CABLE DIA
							FREE	CLOSED		
-3C				.500-28 UNEF-2B	.469		.219	.031	MS3420-3A	.219
-4C	.200	.641	6-32UNC-2A	.625-24 UNEF-2B	.594	.025 + .010 -.003	.312	.094	MS3420-4A	.312
-6C				.750-20 UNEF-2B			.438	.250	MS3420-6A	.438
-8C				.875-20 UNEF-2B	.719		.531	.312	MS3420-8A	.515
-10C	.218	.672		1.000-20 UNEF-2B			.625	.375	MS3420-10A	.614
-12C		.719	8-32UNC-2A	1.188-18 UNEF-2B	.844	.032 + .012 -.003	.750	.500	MS3420-12A	.738
-16C	.273			1.438-18 UNEF-2B	1.062		.938	.594	MS3420-16A	.926
-20C		.797		1.750-18 UNS-2B	1.187		1.250	.938	MS3420-20A	1.200
-24C	.431	1.016	1/4-20UNC-2A	2.000-18 UNS-2B		.051 ± .005	1.375	.969	MS3420-24A	1.363
-28C		1.172		2.250-16 UN-2B	1.312		1.625	1.188	MS3420-28A	1.611
-32C	.500			2.500-16 UN-2B		.064 ± .005	1.875	1.375	MS3420-32A	1.865

(a) CLAMP MATES WITH CONNECTOR SHELL SIZE LISTED IN THIS COLUMN.

APPROVED 17 Dec 58 REVISED (E) FOR CHANGES SEE SHEET 1

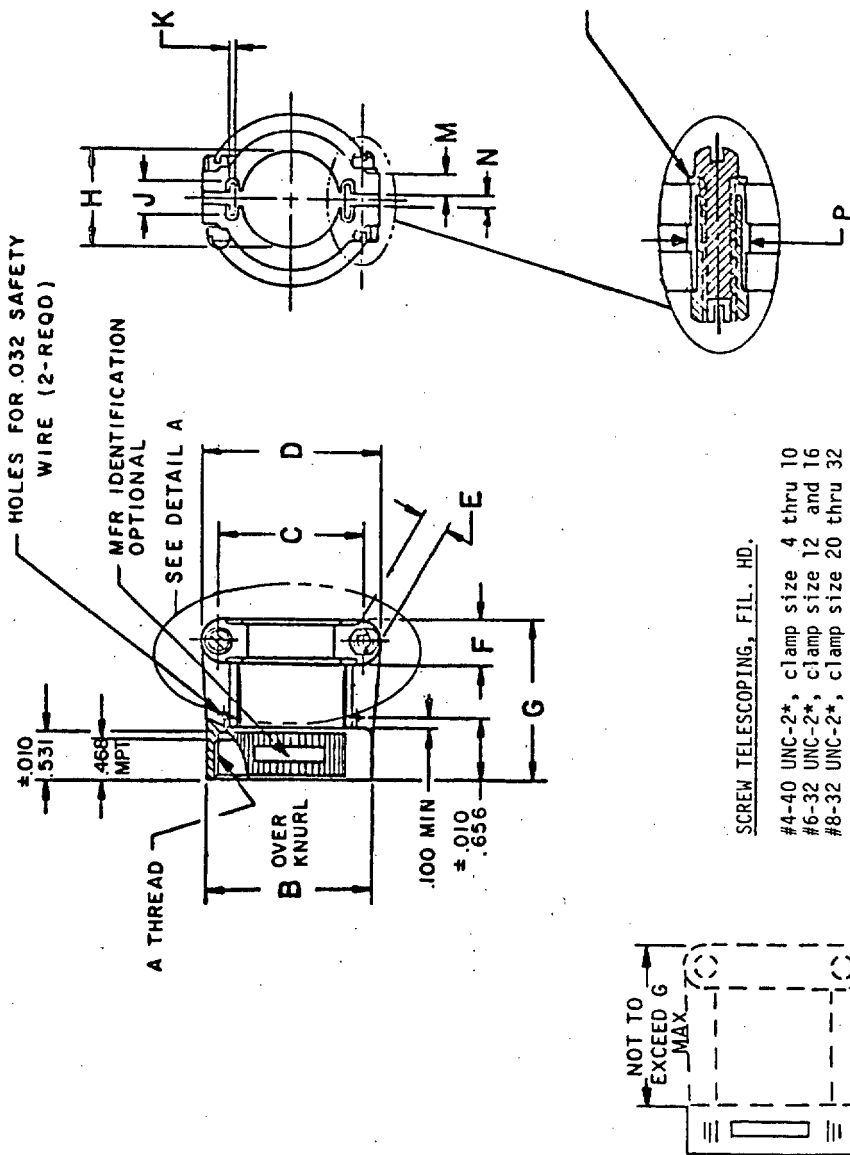
P.A Navy - AS	International interest	TITLE CLAMPS, CABLE, ELECTRICAL CONNECTOR	MILITARY STANDARD MS3057
Other Cust Army - EL USAF - 85			
Procurement Specification MIL-C-5015	SUPERSEDES: AN3057	PAGE 5 OF 8	

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

Review activities: Army - MU, MI
Navy - EC, OS
Air Force -
User activities: Army - AT, AV, ME
Navy - MC, SH, OS
Air Force -

P.A Navy - AS Other Cust Army - EL USAF - 85		International interest	TITLE CLAMPS, CABLE, ELECTRICAL CONNECTOR	MILITARY STANDARD
Procurement Specification MIL-C-5015		SUPERSEDES:	AN3057	MS3057
DD FORM 1 MAY 73 672		PAGE 6 OF 8		

(Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.



Type D - Cable clamp, heavy duty, high shock

FED. SUP CLASS
5935

APPROVED 17 Dec 58 REVISED (E) FOR CHANGES SEE SHEET 1

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Review activities: Army - MU, MI
Navy - EC, OS
Air Force -

User activities: Army - AT, AV, ME
Navy - MC, SH, OS
Air Force -

P.A. Navy - AS	International interest	TITLE	MILITARY STANDARD
Other Cust Army - EL USAF - 85		CLAMPS, CABLE, ELECTRICAL CONNECTOR	MS3057
Procurement Specification MIL-C-5015	SUPERSEDES:	AN3057	PAGE 7 OF 8

DD FORM 672 (Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.
1 MAY 73

Type D - Cable clamp, heavy duty, high shock.

Dash No.	A Thread Class 2A	B Dia Max	C	D	E	F	G	H		J Dia	K	M	N	P	Test plug diameter (inches)		Pull-out load (pounds)	Clamp size range
								Min	Max						Min	Max		
-40	.625-24 UNEF	.937	.637	.937	.250	.312	1.281	.125	.312	.218	.062	.156	.109	.166	.109	.125	25	1
-60	.750-20 UNEF	1.031	.763	1.125	.250	.375	1.281	.250	.437	.281	.062	.175	.125	.166	.234	.250		
-80	.875-20 UNEF	1.250	.942	1.312	.250	.422	1.281	.312	.562	.312	.062	.211	.125	.166	.296	.312		
-100	1.000-20 UNEF	1.250	.964	1.312	.250	.437	1.281	.350	.625	.312	.062	.218	.125	.166	.334	.350	50	2
-120	1.188-18 UNEF	1.437	1.130	1.531	.250	.437	1.312	.500	.750	.375	.062	.250	.156	.192	.484	.500		
-160	1.438-18 UNEF	1.688	1.375	1.750	.250	.531	1.406	.625	.937	.375	.062	.250	.188	.192	.609	.625		
-200	1.750-18 UNS	2.000	1.703	2.093	.312	.531	1.593	.875	1.250	.475	.078	.312	.188	.217	.859	.875	75	3
-240	2.000-18 UNS	2.250	1.906	2.343	.312	.531	1.625	1.000	1.375	.500	.093	.312	.250	.217	.984	1.000		
-280	2.250-16 UN	2.500	2.218	2.750	.312	.812	1.900	1.250	1.625	.625	.093	.312	.375	.217	1.234	1.250		
-320	2.500-16 UN	2.750	2.500	3.000	.312	.812	1.900	1.437	1.875	.675	.125	.312	.375	.217	1.421	1.437	100	

NOTE: Unless otherwise specified, tolerances shall be: .xx = ±.01; .xxx = ±.005; angular: x° = ±1°00'; x°xx' = ±0°30'.

Requirements:

A. Material: Clamp body and saddle - Aluminum alloy, per QQ-A-591, comp. 13,380 or A 380. clamp screws - AISI 300 series stainless steel.

B. Finish:

Designator	Finish	
A	Cadmium plate, per QQ-P-416, type II, class 3, over nickel: Color - Olive drab.	
C	Cadmium plate, per QQ-P-416, type II, class 3; Color - Olive drab.	
N	Electroless nickel, per MIL-C-26074, class 3 or 4, grade B.	
D	Nonmagnetic corrosion resisting steel, per QQ-S-763, 300 series classes	Cadmium plate, per QQ-P-416, type II, class 3, color - black.
S		Passivate

Performance: MS3188, MS3189, MS3437 or other suitable back shells shall be used as the test fixture when necessary.

C. Magnetic permeability -

The relative magnetic permeability shall be less than 2.0 when checked with an indicator conforming to MIL-I-17214.

D. Vibration -

The assembly shall be subjected to the vibration requirements of MIL-STD-167-1(Ships) paragraph 5.1.3.3.3 and Method 204, condition B of MIL-STD-202. There shall be no loosening of parts or evidence of damage due to vibration. No safety wires shall be used.

E. Shock -

The assembly shall be subjected to the requirements of MIL-S-901, grade A. The clamp is a subassembly, class I, lightweight test classification (250 lbs. or less) type C. There shall be no loosening of parts or evidence of damage due to shock. No safety wires shall be used.

F. Salt spray (corrosion) -

Salt spray test in accordance with Method 1001 of MIL-STD-1344 test condition B. There shall be no exposure of basis metal due to corrosion.

G. Cable Pull-Out -

Cables shall not pull out when specified loads in table are applied, nor shall the slippage exceed .125 inch.

H. Quality assurance:

A. Examination of product.

I. Military part number: See example.

MS3057 - 16D A
Basic No. _____
Dash No. _____
Finish designator _____
See requirement B

P.A. Navy - AS	International interest	TITLE CLAMPS, CABLE, ELECTRICAL CONNECTOR	MILITARY STANDARD MS3057
Other Cust Army - EL USAF - 85			
Procurement Specification MIL-C-5015	SUPERSEDES: AN3057	PAGE 8 OF 8	

User activities: Army - AT, AV, ME
Navy - MC, SH, OS
Air Force -Review activities: Army - MU, MI
Navy - EC, OS
Air Force -

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APPROVED 17 Dec 58 REVISED (E) FOR CHANGES SEE SHEET 1