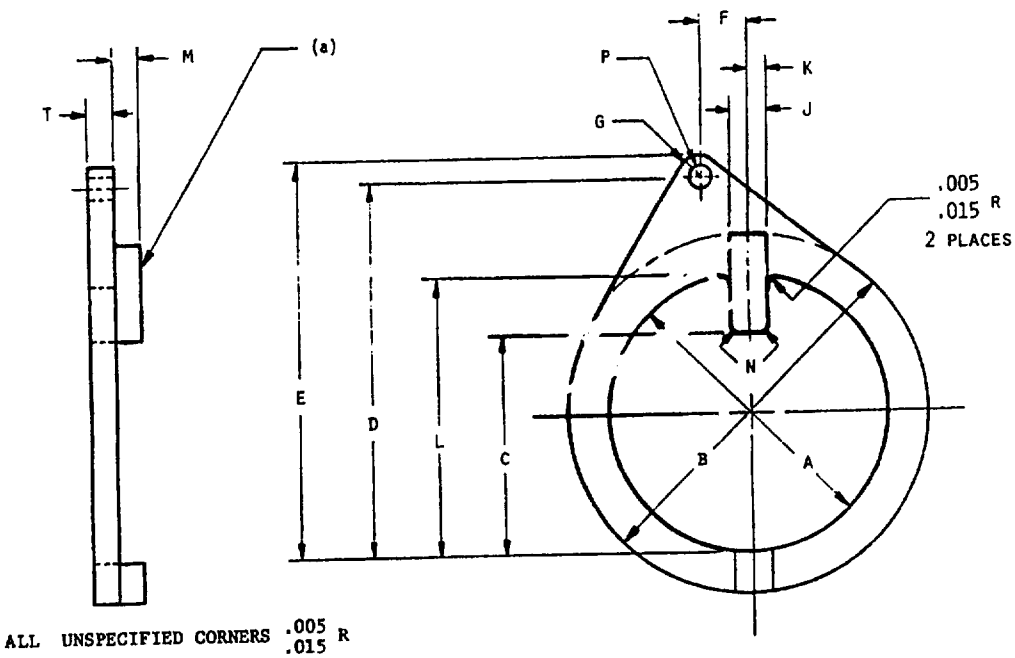
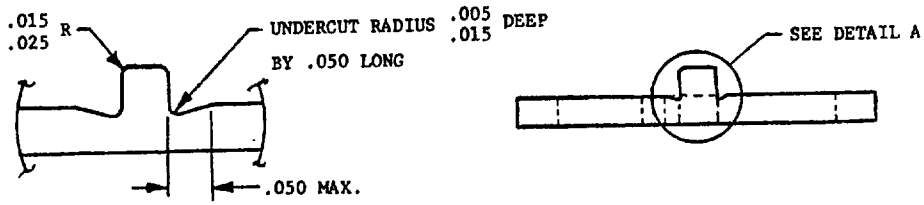
FED. SUP CLASS
5340

USER SYMBOLS:

REVIEWER SYMBOLS:
ARMY - MI
USAF -
DLA - IS



ALL UNSPECIFIED CORNERS .005 / .015 R



(A) DETAIL A

FIG. 1. ROD END LOCKING DEVICE

(a) THE FLAT SURFACE OF THE LOCKING ELEMENT SHALL EXTEND TO DIAMETER B.

REQUIREMENTS:

1. MATERIAL AND HEAT TREATMENT:

STEEL CASTING: 17-4PH, IN ACCORDANCE WITH AMS 5343, ROCKWELL C38-45.

ALLOY CASTING: INCONEL 718, IN ACCORDANCE WITH AMS 5838, ROCKWELL C35-42.

STEEL BAR, FORGING AND RING: 15-5PH, IN ACCORDANCE WITH AMS 5659, ROCKWELL C38-45.

ALLOY BAR, FORGING AND RING: INCONEL 718, IN ACCORDANCE WITH AMS 5662, ROCKWELL C35-42.

2. FINISH: STEEL 17-4PH AND 15-5PH; CADMIUM PLATE IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 2. OR PASSIVATE IN ACCORDANCE WITH QQ-P-35.
INCONEL; NO ADDITIONAL FINISH TREATMENT REQUIRED.

3. SURFACE TEXTURE: ALL SURFACES SHALL BE 125 MICROINCHES IN ACCORDANCE WITH ANSI B46.1.

4. FLATNESS: WASHER FACES SHALL BE FLAT WITHIN 0.005 INCH.

5. INSPECTION: PENETRANT INSPECT IN ACCORDANCE WITH MIL -1-6866, AQL SHALL BE 0.65 IN ACCORDANCE WITH MIL-STD-105. INSPECTION LEVEL II.

(A) DENOTES CHANGES

APPROVED 14 JULY 1982 REVISED (A) 17 JAN 83

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P.A. NAVY — AS Other Cust ARMY-AV USAF-11	TITLE: LOCK, ROD END, EXTRA STRENGTH, HIGH PROFILE LUG	MILITARY STANDARD MS 14198
PROCUREMENT SPECIFICATION: NONE	SUPERSEDES: NAS 513 AND NAS 559 IN PART	SHEET 1 OF 5

DD FORM 1 MAR 72 672-1 (Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE. PROJECT NO. 5340-1533 PLATE NO. 23088

PA.
NAVY — AS
Other Cust
ARMY-AV
USAF-11

PROCUREMENT SPECIFICATION
NONE

SUPERSEDES:
NAS 513 AND NAS 559 IN PART

TITLE
LOCK, ROD END, EXTRA STRENGTH, HIGH PROFILE LUG

MILITARY STANDARD
MS14198

SHEET 2 OF 5

FED. SUP CLASS
5340

TABLE 1. LOCK DIMENSIONS

Dash No.	Terminal Thread Size (REF)	A DIA ±.005	B DIA ±.01	C ±.005	D ±.015	E ±.015	F ±.015	G RAD NOM.		J ±.005	K	L +.000 -.015	M ±.005	N RAD +.010 -.000	P DIA ± .005	T ±.005
4	1/4-28 UNJF-3A	.260	.44	.206	.445	.506	.108	.061	-	.052	.026 ± .005	.268	.105	.005	.062	.063
5	5/16-24 UNJF-3A	.323	.50	.266	.514	.575	.108	.061	-	.052	.026 ± .005	.331	.105	.005	.062	.063
6	3/8-24 UNJF-3A	.385	.56	.316	.580	.641	.123	.061	-	.082	.041 ± .005	.393	.105	.015	.062	.063
7	7/16-20 UNJF-3A	.448	.63	.376	.648	.709	.123	.061	-	.082	.041 ± .005	.456	.105	.015	.062	.063
8	1/2-20 UNJF-3A	.510	.75	.441	.753	.814	.123	.061	-	.082	.041 ± .005	.518	.105	.015	.062	.063
9	9/16-18 UNJF-3A	.573	.88	.484	.857	.923	.148	.066	-	.114	.057 ± .005	.581	.105	.015	.071	.071
10	5/8-18 UNJF-3A	.635	1.00	.546	.960	1.026	.148	.066	-	.114	.057 ± .005	.643	.105	.015	.071	.071
12	3/4-16 UNJF-3A	.760	1.13	.668	1.095	1.161	.148	.066	-	.114	.057 ± .005	.768	.105	.015	.071	.071
14	7/8-14 UNJF-3A	.885	1.31	.782	1.268	1.343	.173	.075	-	.142	.071 ± .007	.893	.105	.015	.080	.080
16	1-12 UNJF-3A	1.010	1.50	.905	1.443	1.526	.183	.083	-	.142	.071 ± .007	1.018	.105	.015	.090	.090
18	1-1/8-12 UNJF-3A	1.135	1.63	1.015	1.576	1.659	.199	.083	-	.174	.087 ± .007	1.143	.105	.015	.090	.090
20	1-1/4-12 UNJF-3A	1.260	1.75	1.141	1.719	1.821	.221	.102	-	.174	.087 ± .007	1.268	.110	.015	.112	.112
22	1-3/8-12 UNJF-3A	1.385	1.88	1.241	1.849	1.951	.252	.102	-	.236	.118 ± .007	1.393	.110	.015	.112	.112
24	1-1/2-12 UNJF-3A	1.510	2.00	1.366	1.984	2.086	.252	.102	-	.236	.118 ± .007	1.518	.110	.015	.112	.112
26	1-5/8-12 UNJF-3A	1.635	2.13	1.482	2.122	2.235	.265	.113	-	.236	.118 ± .007	1.643	.120	.015	.125	.125
28	1-3/4-12 UNJF-3A	1.760	2.25	1.594	2.254	2.367	.296	.113	-	.298	.149 ± .007	1.768	.120	.015	.125	.125
30	1-7/8-12 UNJF-3A	1.885	2.38	1.719	2.390	2.503	.296	.113	-	.298	.149 ± .007	1.893	.120	.015	.125	.125
32	2-12 UNJF-3A	2.010	2.63	1.844	2.598	2.711	.296	.113	-	.298	.149 ± .007	2.018	.120	.015	.125	.125
34	2-1/8-12 UNJF-3A	2.135	2.75	1.960	2.733	2.846	.296	.113	-	.298	.149 ± .007	2.143	.120	.015	.125	.125
36	2-1/4-12 UNJF-3A	2.260	2.88	2.085	2.866	2.979	.296	.113	-	.298	.149 ± .007	2.268	.120	.015	.125	.125

APPROVED 14 JULY 1982 REVISED (A) FOR CHANGES SEE SHEETS 1 AND 3

FED. SUP CLASS
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NOTES:

1. MS14198 LOCK IS INTENDED FOR USE IN NEW DESIGN. IT PROVIDES GREATER KEYTAB STRENGTH THAN EXISTING NAS ROD END LOCKS. THE HIGHER LUG PROFILE PERMITS IDENTIFICATION OF IMPROPERLY MATED PARTS.
2. FOR TERMINAL THREAD SIZES -20 (1-1/4 INCH) THROUGH -36 (2-1/4 INCH) MS14198 LOCKS MAY BE RETROFITTED INTO ROD END TERMINALS DESIGNED FOR NAS 513 WASHERS.
3. USE NAS 513 LOCKS OR MS14227 LOCKS, FOR TERMINAL THREAD SIZES -4(1/4 INCH) THROUGH -18(1-1/8 INCH) WHICH WERE DESIGNED PRIOR TO THE APPROVAL DATE OF THIS DOCUMENT.
4. MS14198 LOCKS SHALL BE USED WITH NAS 509 OR NAS 1423 JAM NUTS FOR POSITIVE LOCKING OF ROD END BEARINGS TO HYDRAULIC CYLINDER PISTON RODS.
5. WHERE ASSEMBLY LENGTHS MUST BE ADJUSTED WITHIN 0.001 INCH, USE NAS 1193 LOCKS.
6. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES.
7. PARTS SHALL BE FREE FROM BURRS AND SHARP EDGES. CAST PARTS SHALL HAVE GATES TRIMMED FLUSH.
8. PACKAGING SHALL BE IN ACCORDANCE WITH PPP-H-1581.
9. EXAMPLE OF PART NUMBER

MS14198 K 4 C = 1/4 DIA., 17-4 PH MATERIAL, CADMIUM PLATED

- "C" DENOTES CADMIUM PLATING (STEEL ONLY)
- "P" DENOTES PASSIVATION (STEEL ONLY) (A)
- ABSENCE OF LETTER DENOTES NO ADDITIONAL FINISH TREATMENT (INCONEL ONLY) (A)
- DASH NO. (SEE TABLE 1)
- "K" DESIGNATES 17-4 PH OR 15-5PH MATERIAL. (A)
- "N" DESIGNATES INCONEL 718 MATERIAL.
- MILITARY STANDARD NUMBER

(A) 10. INTERCHANGEABILITY: PART NUMBER IN PREVIOUS REVISION INCORPORATING A "-" TO DESIGNATE 15-5PH MATERIAL ARE UNIVERSALLY INTERCHANGEABLE WITH "K" PART NUMBER IN REV. A. PART NUMBER IN PREVIOUS REVISION INCORPORATING A BLANK (ABSENCE OF LETTER) TO DESIGNATE PASSIVATION IS UNIVERSALLY INTERCHANGEABLE WITH "P" PART NUMBER IN REVISION A.

11. THIS DOCUMENT TAKES PRECEDENCE OVER NAS 559 AND NAS 513 FOR NEW APPLICATIONS.
12. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BIDS, OR REQUEST FOR PROPOSAL EXCEPT THAT REFERENCED ADOPTED DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.
13. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.

APPROVED 14 JULY 1982 REVISED (A) FOR CHANGES SEE SHEETS 1 AND 3

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REVIEWER SYMBOLS:
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DLA -

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PROCUREMENT SPECIFICATION NONE	SUPERSEDES: NAS 513 AND 559 IN PART	SHEET 3 OF 5

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DESIGN INFORMATION

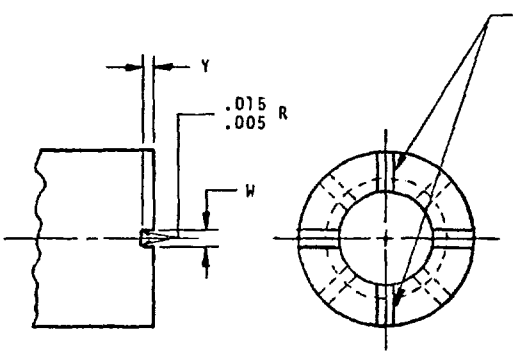

FIG. 2 PISTON ROD

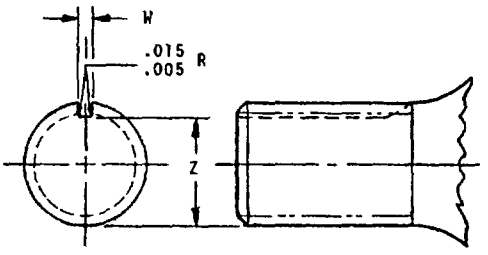

FIG. 3 ROD END TERMINAL

TABLE II SLOT DIMENSIONS

WASHER DASH NO. (REF)	TERMINAL THREAD	W +.005 -.000	Y +.005 -.000	Z +.000 -.005
4	1/4 - 28UNJF-3A	.062	.110	.201
5	5/16 -24UNJF-3A	.062	.110	.260
6	3/8 -24UNJF-3A	.093	.110	.311
7	7/16 -20UNJF-3A	.093	.110	.370
8	1/2 -20UNJF-3A	.093	.110	.436
9	9/16 -18UNJF-3A	.125	.110	.478
10	5/8 -18UNJF-3A	.125	.110	.541
12	3/4 -16UNJF-3A	.125	.110	.663
14	7/8 -14UNJF-3A	.156	.110	.777
16	1 -12UNJF-3A	.156	.110	.900
18	1 1/8 -12UNJF-3A	.187	.110	1.010
20	1 1/4 -12UNJF-3A	.187	.116	1.136
22	1 3/8 -12UNJF-3A	.250	.116	1.236
24	1 1/2 -12UNJF-3A	.250	.116	1.361
26	1 5/8 -12UNJF-3A	.250	.129	1.477
28	1 3/4 -12UNJF-3A	.312	.129	1.589
30	1 7/8 -12UNJF-3A	.312	.129	1.714
32	2 -12UNJF-3A	.312	.129	1.839
34	2 1/8 -12UNJF-3A	.312	.129	1.955
36	2 1/4 -12UNJF-3A	.312	.129	2.080

NOTE: THE INFORMATION INCLUDED ON THIS PAGE DEFINES THE SLOT DIMENSIONS OF THE PISTON ROD AND ROD END TERMINAL USED IN CONJUNCTION WITH THE MS 14198 LOCK. THESE DIMENSIONS ARE ALSO COMPATIBLE WITH THE NAS 1193 POSITIVE INDEX LOCKING DEVICE AND THE NAS 513 LOCKING DEVICE.

MS14198 SLOT DIMENSIONS IDENTICAL TO NAS 513 AND NAS 1193 SLOT DIMENSIONS FOR DASH 20 THROUGH 36.

APPROVED 14 JULY 1982 REVISED (A) FOR CHANGES SEE SHEETS 1 AND 3

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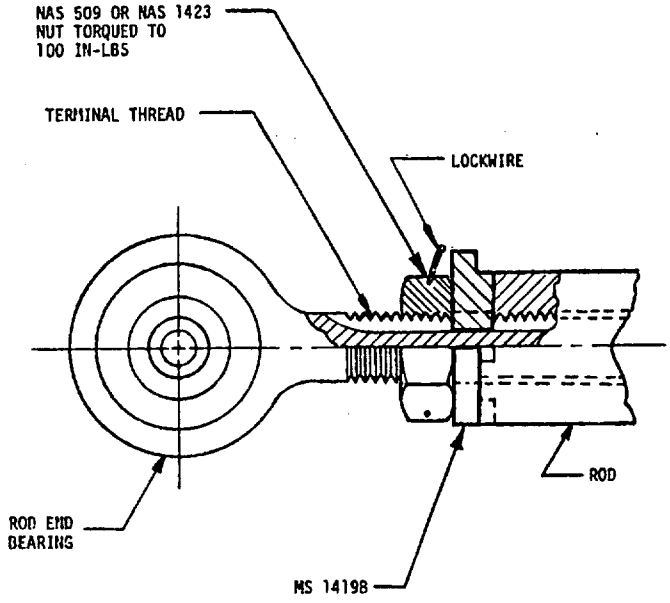

FIG. 4 TYPICAL INSTALLATION

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DD FORM 1 MAR 72 672-1 (Coordinated)

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