



HI-LOK™ PIN AND COLLAR AFTER ASSEMBLY

FIRST DASH NO.	PIN NOM DIA	A DIA	B REF	D DIA		TD DIA	F REF	H	R RAD	Z MAX	S CHAMFER REF	THREAD MODIFIED	SOCKET				DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM
				WITHOUT COATING OR SOLID FILM	AFTER COATING OR SOLID FILM								W HEX	T DEPTH	T1 DEPTH MAX	Y DIA		
5	5/32	.3304 .3256	.312	.1635 .1630	.1635 .1625	.1595 .1570	.004	.0700 .0680	.025 .015	.010	1/32 x 37°	.1640-32 UNJC-3A	.0801 .0791	.100 .080	.140	[8]	4,010	2,180
6	3/16	.3813 .3765	.325	.1895 .1890	.1895 .1885	.1840 .1810	.005	.0805 .0785	.030 .020	.015	1/32 x 37°	.1900-32 UNJF-3A	.0806 .0791	.100 .080	.140	.119 .104	5,380	3,180
7	7/32	.4452 .4378	.355	.2182 .2177	.2182 .2172	.2100 .2070	.006	.0950 .0930	.030 .020	.015	1/32 x 37°	.2160-28 UNJF-3A	.0806 .0791	.100 .080	.140	.119 .104	7,110	4,280
8	1/4	.5066 .5018	.395	.2495 .2490	.2495 .2485	.2440 .2410	.006	.1080 .1060	.030 .020	.015	1/32 x 37°	.2500-28 UNJF-3A	.0967 .0947	.110 .090	.160	.142 .122	9,300	5,820
10	5/16	.6335 .6287	.500	.3120 .3115	.3120 .3110	.3060 .3020	.007	.1350 .1330	.040 .030	.015	3/64 x 37°	.3125-24 UNJF-3A	.1295 .1270	.130 .110	.200	.180 .160	14,600	9,200
12	3/8	.7604 .7556	.545	.3745 .3740	.3745 .3735	.3680 .3640	.008	.1620 .1600	.040 .030	.015	3/64 x 37°	.3750-24 UNJF-3A	.1617 .1582	.160 .140	.235	.217 .197	21,000	14,000
14	7/16	.8884 .8812	.635	.4370 .4365	.4370 .4360	.4310 .4260	.009	.1895 .1865	.050 .040	.022	3/64 x 37°	.4375-20 UNJF-3A	.1930 .1895	.190 .170	.280	.253 .233	28,600	18,900
16	1/2	1.0139 1.0068	.685	.4995 .4990	.4995 .4985	.4930 .4880	.010	.2160 .2130	.050 .040	.022	3/64 x 37°	.5000-20 UNJF-3A	.2242 .2207	.220 .200	.320	.289 .269	37,300	25,600
18	9/16	1.1408 1.1337	.770	.5615 .5610	.5615 .5605	.5550 .5500	.010	.2430 .2400	.050 .040	.025	1/16 x 37°	.5625-18 UNJF-3A	.2555 .2520	.260 .240	.360	.326 .306	47,200	32,400
20	5/8	1.2723 1.2651	.825	.6240 .6235	.6240 .6230	.6180 .6120	.010	.2720 .2690	.050 .040	.025	1/16 x 37°	.6250-18 UNJF-3A	.2555 .2520	.260 .240	.400	.326 .306	58,300	41,000
24	3/4	1.5308 1.5236	1.050	.7490 .7485	.7490 .7480	.7430 .7370	.012	.3280 .3250	.050 .040	.025	1/16 x 37°	.7500-16 UNJF-3A	.3185 .3150	.330 .300	.425	.398 .378	83,900	59,500

SEE COLLAR STANDARDS FOR COLLAR STRENGTHS. LOWER STRENGTH (PIN OR COLLAR) DETERMINES SYSTEM STRENGTH

"HI-LOK", "HL", AND "HI-KOTE" ARE TRADEMARKS OF HI-SHEAR CORPORATION

DRAWN BY J.F. OBISPO	DATE 2015-01-06	TITLE HI-LOK™ PIN 100° FLUSH MS24694 TENSION HEAD TITANIUM 1/16 GRIP VARIATION (SPECIAL APPLICATION)
VAN	1973-11-02	
APPROVED JG WILCOX	DATE 1973-11-02	DRAWING NUMBER HL1013
REVISION (20)	DATE 2024-4-16	

- GENERAL NOTES:**
- Head edge out of roundness shall not exceed "F".
 - Concentricity: Conical surface of head to "D" diameter within .003 FIM.
 - Dimensions are in inches and to be met after finish.
 - Surface texture per ASME B46.1.
 - Hole preparation per NAS618.
 - "H" is dimensioned from maximum "D" diameter.
 - Maximum "D" diameter may be exceeded by .0002 for solid film lubricated bolts.
 - Evidence of broken edge across points
 - Curved or flat edge manufacturer's option.
 - Use HL1023 for oversize replacement.

CODE: First dash number indicates nominal diameter in 1/32nds.
Second dash number indicates maximum grip in 1/16ths.
See Finish note for explanation of code letters.

**HOW TO ORDER
EXAMPLE:**

Pin Part Number
HL1013AZ8-8
└─ 8/16 or 1/2 Maximum Grip Length
└─ 8/32 or 1/4 Nominal Diameter Pin
└─ Finish Code
└─ Pin Basic Part Number

MATERIAL: 6AL-4V titanium alloy per AMS4928 or AMS4967.

HEAT TREAT: 160,000 psi tensile minimum (95,000 psi shear minimum).

- FINISH:**
- HL1013(-)(-) = Cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013AZ(-)(-) = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294, with color black on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013BB(-)(-) = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 on top of head only (.005 max overspray on the head bearing surface permissible) with color blue on the thread end. Top of head painted in accordance with BAC5684, Type 5 and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013BN(-)(-) = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 on threads (no overspray on the shank allowed) and top of head only (.005 max overspray on the head bearing surface permissible) with color white on thread end. Top of head painted in accordance with BAC5684, Type 5 and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013EF(-)(-) = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 on top of head only (.005 max overspray on the head bearing surface permissible) with color blue on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013EZ(-)(-) = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294, with color black on thread end. Top of head is painted in accordance with BAC5684, Type 5 and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013GM(-)(-) = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 on threads (no overspray on the shank allowed) and top of head only (.005 max overspray on the head bearing surface permissible) with color white on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013HA(-)(-) = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294, with color black on thread end, and apply Precoat No. PR1436G sealant (.002-.005 thick), and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013HD(-)(-) = I.V.D. aluminum coating per BAC5315, with color red on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013RA(-)(-) = Phosphate fluoride treat with color red on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013SY(-)(-) = Phosphate fluoride treat, solid film lube per AS5272, Type I with color red on thread end.
 - HL1013VF(-)(-) = Anodize per Hi-Shear Spec 306, Type I, color blue, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013NKJ(-)(-) = HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294, with color silver on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013NKK(-)(-) = Sulfuric acid anodizing per ISO8080 and HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 on threads only, with color silver on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL1013NKL(-)(-) = HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 on threads only, with color silver on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.

SPECIFICATION: HI-LOK™ Product Specification 342.

DRAWING NUMBER

HL1013

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HL1013