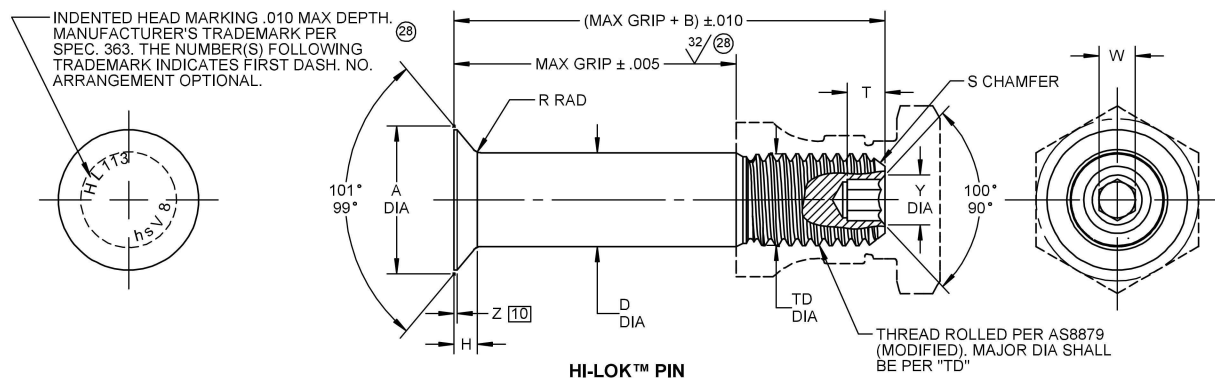
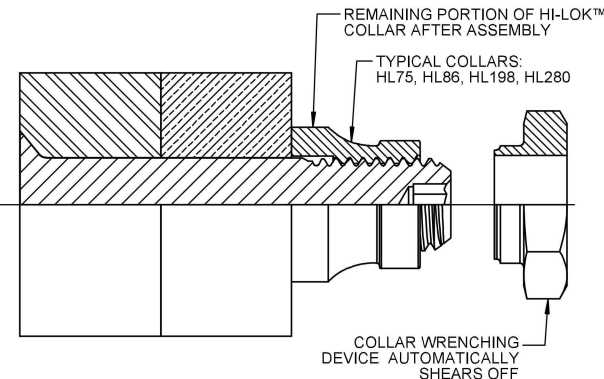




HI-LOK™ PIN



HI-LOK™ PIN AND COLLAR AFTER ASSEMBLY

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

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	Y DIA		
5							NOTE: USE HL13V()6-()										
6	13/64	.3813 .3765	.325	.2026 .2021	.2026 .2016	.1840 .1810	.005	.0750 .0730	.030 .020	.015	1/32 x 37°	.1900-32 UNJF-3A	.0806 .0791	.135 .115	.119 .104	6,130	3,180
8	17/64	.5066 .5018	.395	.2651 .2646	.2651 .2641	.2440 .2410	.006	.1013 .0993	.030 .020	.015	1/32 x 37°	.2500-28 UNJF-3A	.0967 .0947	.150 .130	.142 .122	10,490	5,820
10	21/64	.6335 .6287	.500	.3276 .3271	.3276 .3266	.3060 .3020	.007	.1283 .1263	.040 .030	.015	3/64 x 37°	.3125-24 UNJF-3A	.1295 .1270	.170 .150	.180 .160	16,000	9,200
12	25/64	.7604 .7556	.545	.3901 .3896	.3901 .3891	.3680 .3640	.008	.1553 .1533	.040 .030	.015	3/64 x 37°	.3750-24 UNJF-3A	.1617 .1582	.200 .180	.217 .197	22,700	14,000
14	29/64	.8884 .8812	.635	.4526 .4521	.4526 .4516	.4310 .4260	.009	.1828 .1798	.040 .030	.022	3/64 x 37°	.4375-20 UNJF-3A	.1930 .1895	.230 .210	.253 .233	30,600	18,900
16	33/64	1.0139 1.0068	.685	.5151 .5146	.5151 .5141	.4930 .4880	.010	.2093 .2063	.050 .040	.022	3/64 x 37°	.5000-20 UNJF-3A	.2242 .2207	.260 .240	.289 .269	39,600	25,600
18	37/64	1.1408 1.1337	.770	.5771 .5766	.5771 .5761	.5550 .5500	.010	.2365 .2335	.050 .040	.025	1/16 x 37°	.5625-18 UNJF-3A	.2555 .2520	.290 .270	.326 .306	49,700	32,400
20	41/64	1.2723 1.2651	.825	.6396 .6391	.6396 .6386	.6180 .6120	.010	.2654 .2624	.050 .040	.025	1/16 x 37°	.6250-18 UNJF-3A	.2555 .2520	.330 .305	.326 .306	61,000	41,000
24	49/64	1.5308 1.5236	1.050	.7646 .7641	.7646 .7636	.7430 .7370	.012	.3214 .3184	.050 .040	.025	1/16 x 37°	.7500-16 UNJF-3A	.3185 .3150	.330 .300	.398 .378	87,200	59,500

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

DRAWN BY
J.F.OBISPO
D.P.S.

DATE
2014-07-31
1963-11-04

APPROVED
M.C.

DATE
1963-11-05

REVISION
(28)

DATE
K. PHAM
2022-04-04

TITLE
HI-LOK™ PIN
100° FLUSH MS24694 TENSION HEAD
TITANIUM, 1/64 OVERSIZE
1/16 GRIP VARIATION

DRAWING NUMBER
HL113

1 OF 2

- GENERAL NOTES:**
- 1 Head edge out of roundness shall not exceed "F".
 2. Concentricity: Conical surface of head to "D" diameter within .003 FIM.
 3. Dimensions are in inches and to be met after finish.
 4. Surface texture per ASME B46.1.
 5. Hole preparation per NAS618.
 6. "H" is dimensioned from maximum "D" diameter.
 - 7 Maximum "D" diameter may be increased by .0002 to allow for solid film or aluminum coating application.
 - 8 Broach petals removed.
 - 9 Non-lubed pins must be used with lubed collars or wet sealant.
 - 10 Curved or flat edge manufacturer's option.
 11. Use HL413 for oversize replacement.
 - 12 After February, 21st of 2015, HI-KOTE™ 1 aluminum pigmented coating will be replaced by REACH compliant HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 on fasteners coated in UK and European Union.

CODE: First dash number indicates nominal diameter in 1/32nds of the pin which HL113 oversize pin replaces.
 Second dash number indicates maximum grip in 1/16ths.
 See Finish note for explanation of code letters.

**HOW TO ORDER
 EXAMPLE:**

Pin Part Number
 HL113VAP8-8
 8/16 or 1/2 Maximum Grip Length
 Replaces 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:**
- HL113V(-)(-) = Cetyl alcohol lube per Hi-Shear Spec. 305.
 - 28 12 HL113VAP(-)(-) = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - 28 12 HL113VAT(-)(-) = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294.
 - 28 12 HL113VAZ(-)(-) = 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.
 - HL113VBJ(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - 9 HL113VBV(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, with color blue on thread end.
 - 8 HL113VDB(-)(-) = Solid film lube per "KalGard™" FA. "KALGARD" is a trademark of Metal Improvement Company.
 - 28 HL113VF(-)(-) = Anodize per Hi-Shear Spec. 306, Type I, color blue, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - 28 12 HL113VHA(-)(-) = 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.
 - 28 HL113VLJ(-)(-) = Anodize per Hi-Shear Spec. 306, Type II, and solid film lube per AS5272.
 - HL113VLV(-)(-) = Phosphate fluoride treat and Esna-Lube No. 382 (Everlube Corp).
 - 28 HL113VR(-)(-) = Anodize per Hi-Shear Spec. 306, Type II, and solid film lube per "Electrofilm" 4396.
 - HL113VRA(-)(-) = Phosphate fluoride treat with color red on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL113VSY(-)(-) = Phosphate fluoride treat, solid film lube per AS5272, Type I, and color red on thread end.
 - 28 HL113VT(-)(-) = Anodize per Hi-Shear Spec. 306, Type I, color pink, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL113VTA(-)(-) = Anodize Ti-Shield III and HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL113VTB(-)(-) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL113VTF(-)(-) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292.
 - 9 HL113VU(-)(-) = Bare, no lubricant.
 - 28 HL113VUE(-)(-) = Anodize per Hi-Shear Spec. 306, Type II, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL113VV(-)(-) = Solid film lube per "Lubeco" 2123, Type II.
 - HL113VYS(-)(-) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292 on threads only.
 - HL113VNKJ(-)(-) = 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.
 - HL113VNKK(-)(-) = 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.
 - HL113VNKL(-)(-) = 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.
 - HL113VHK(-)(-) = HI-KOTE™ 4 NC aluminum coating per Hi-Shear Spec. 397.

SPECIFICATION: HI-LOK™ Product Specification 342.

DRAWING NUMBER

HL113

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