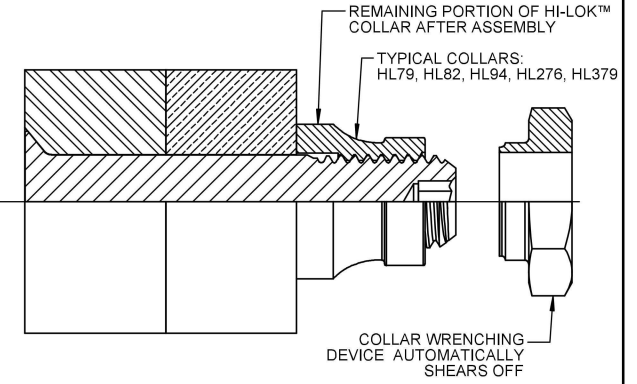
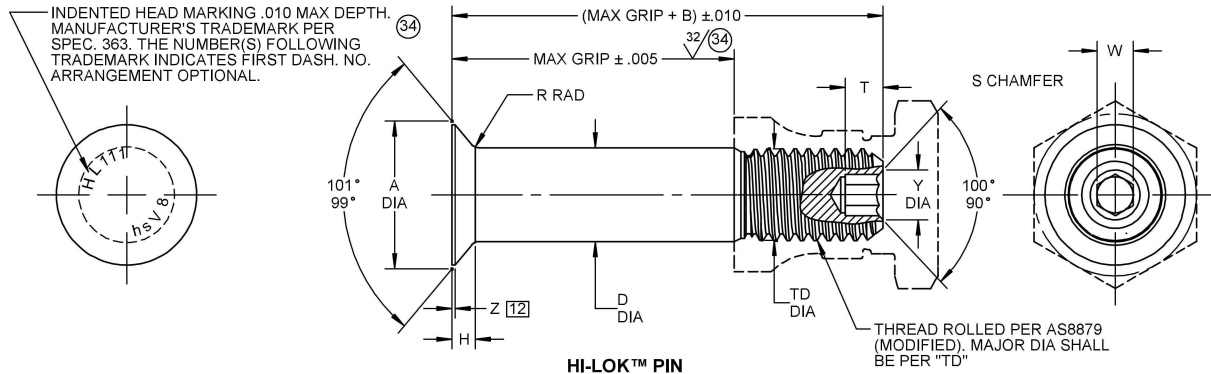




HI-LOK™ PIN AND COLLAR AFTER ASSEMBLY

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	TENSIO N POUND MINIMUM
				WITHOUT COATING OR SOLID FILM	AFTER COATING OR SOLID FILM								W HEX	T DEPTH	Y DIA		
5							NOTE: USE HL11V()6-()										
6	13/64	.3016 .2966	.325	.2026 .2021	.2026 .2016	.1840 .1810	.005	.0415 .0394	.030 .020	.015	1/32 x 37°	.1900-32 UNJF-3A	.0806 .0791	.135 .115	.119 .104	6,130	2,000
7	15/64	.3653 .3581	.355	.2338 .2333	.2338 .2328	.2100 .2070	.006	.0553 .0523	.030 .020	.015	1/32 x 37°	.2160-28 UNJF-3A	.0806 .0791	.100 .080	.119 .104	8160	2750
8	17/64	.3948 .3898	.395	.2651 .2646	.2651 .2641	.2440 .2410	.006	.0544 .0523	.030 .020	.015	1/32 x 37°	.2500-28 UNJF-3A	.0967 .0947	.150 .130	.142 .122	10,490	3,700
10	21/64	.4739 .4689	.500	.3276 .3271	.3276 .3266	.3060 .3020	.007	.0614 .0593	.040 .030	.015	3/64 x 37°	.3125-24 UNJF-3A	.1295 .1270	.170 .150	.180 .160	16,000	5,500
12	25/64	.5604 .5554	.545	.3901 .3896	.3901 .3891	.3680 .3640	.008	.0714 .0693	.040 .030	.015	3/64 x 37°	.3750-24 UNJF-3A	.1617 .1582	.200 .180	.217 .197	22,700	7,200
14	29/64	.6680 .6620	.635	.4526 .4521	.4526 .4516	.4310 .4260	.009	.0904 .0879	.050 .040	.022	3/64 x 37°	.4375-20 UNJF-3A	.1930 .1895	.230 .210	.253 .233	30,600	10,000
16	33/64	.7540 .7480	.685	.5151 .5146	.5151 .5141	.4930 .4880	.010	.1002 .0977	.050 .040	.022	3/64 x 37°	.5000-20 UNJF-3A	.2242 .2207	.260 .240	.289 .269	39,600	13,500
18	37/64	.8380 .8310	.770	.5771 .5766	.5771 .5761	.5550 .5500	.010	.1094 .1065	.050 .040	.022	1/16 x 37°	.5625-18 UNJF-3A	.2555 .2520	.290 .270	.326 .306	49,700	17,000
20	41/64	.9250 .9180	.825	.6396 .6391	.6396 .6386	.6180 .6120	.010	.1197 .1168	.050 .040	.022	1/16 x 37°	.6250-18 UNJF-3A	.2555 .2520	.330 .305	.326 .306	61,000	21,000
24	49/64	1.0970 1.0850	1.050	.7646 .7641	.7646 .7636	.7430 .7370	.012	.1394 .1344	.050 .040	.022	1/16 x 37°	.7500-16 UNJF-3A	.3185 .3150	.395 .365	.398 .378	87,200	30,700
28	57/64	1.3197 1.3030	1.210	.8896 .8891	.8896 .8886	.8680 .8610	.014	.1804 .1734	.050 .040	.022	5/64 x 37°	.8750-14 UNJF-3A	.3820 .3780	.455 .425	.471 .451	118,000	42,000
32	1-1/64	1.5186 1.4995	1.390	1.0146 1.0141	1.0146 1.0136	.9930 .9860	.014	.2114 .2034	.050 .040	.022	5/64 x 37°	1.0000-12 UNJF-3A	.5100 .5040	.580 .550	.618 .598	154,000	55,000

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
 D.P.S.

DATE
 2014-07-22
 1963-11-01

APPROVED
 CESSNA

DATE
 1963-11-05

REVISION
 (34)

DATE
 K. PHAM
 2022-04-04

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

DRAWING NUMBER
HL111

- 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 Dimensions to be met before finish for "VY" code only.
 - 10 Use HL411 for oversize replacement.
 - 11 Non-lubed pins must be used with lubed collars or wet sealant.
 - 12 Curved or flat edge manufacturer's option.
 - 13 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.

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

HEAT TREAT: 160,000 psi tensile minimum (95,000 psi shear minimum for sizes up to 3/4; 90,000 psi shear minimum for 7/8 and larger).

- FINISH:**
- HL111V(-)(-) = Cetyl alcohol lube per Hi-Shear Spec. 305.
 - 34 13 HL111VAP(-)(-) = 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.
 - 34 13 HL111VAZ(-)(-) = 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.
 - HL111VBJ(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL111VBR(-)(-) = Color code white on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - 11 HL111VBU(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type I, Class 3, with color yellow on thread end.
 - 11 HL111VBV(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, with color blue on thread end.
 - HL111VCB(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type I, Class 3, with color black on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - 8 HL111VDK(-)(-) = Solid film lube per "KalGard™" FA. "KALGARD" is a trademark of Metal Improvement Company.
 - 34 HL111VF(-)(-) = Anodize per Hi-Shear Spec. 306, Type I, color blue, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - 8 HL111VK(-)(-) = Solid film lube per Lubeco 905.
 - 34 HL111VLJ(-)(-) = Anodize per Hi-Shear Spec. 306, Type II, and solid film lube per AS5272.
 - 34 HL111VLV(-)(-) = Phosphate fluoride treat and Esna-Lube No. 382 (Everlube Corp).
 - 34 HL111VR(-)(-) = Anodize per Hi-Shear Spec. 306, Type II, and solid film lube per "Electrofilm" 4396.
 - HL111VRA(-)(-) = Phosphate fluoride treat with color red on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL111VSY(-)(-) = Phosphate fluoride treat, solid film lube per AS5272, Type I, and color red on thread end.
 - 34 HL111VT(-)(-) = Anodize per Hi-Shear Spec. 306, Type I, color pink, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL111VTA(-)(-) = 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.
 - HL111VTB(-)(-) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292.
 - HL111VTL(-)(-) = Anodize Ti-Shield III, solid film lube per DAG-258, and cetyl alcohol lube per Hi-Shear Spec. 305; or anodize per Tiodize Type II, solid film lube per TI-O-LUBE TAL-58, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL111VTT(-)(-) = Translube.
 - 34 HL111VUE(-)(-) = Anodize per Hi-Shear Spec. 306, Type II, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - 34 HL111VUU(-)(-) = Anodize per Hi-Shear Spec. 306, Type II, and solid film lube per "Lubeco" 2123, Type II.
 - HL111VV(-)(-) = Solid film lube per "Lubeco" 2123, Type II.
 - 34 9 HL111VY(-)(-) = Anodize per Hi-Shear Spec. 306, Type I, color blue, and solid film lubricant per M88. (British Aircraft Corporation Spec. MP-1071).
 - HL111VNKJ(-)(-) = 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.
 - HL111VNKK(-)(-) = 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.
 - HL111VNKL(-)(-) = 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.
 - HL111VHK(-)(-) = HI-KOTE™ 4 NC aluminum coating per Hi-Shear Spec. 397.

SPECIFICATION: HI-LOK™ Product Specification 342.

CODE: First dash number indicates nominal diameter in 1/32nds of the pin which HL111 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
 HL111VAP8-8
 8/16 or 1/2 Maximum Grip Length
 8/32 or 1/4 Nominal Diameter Pin
 Finish Code
 Pin Basic Part Number