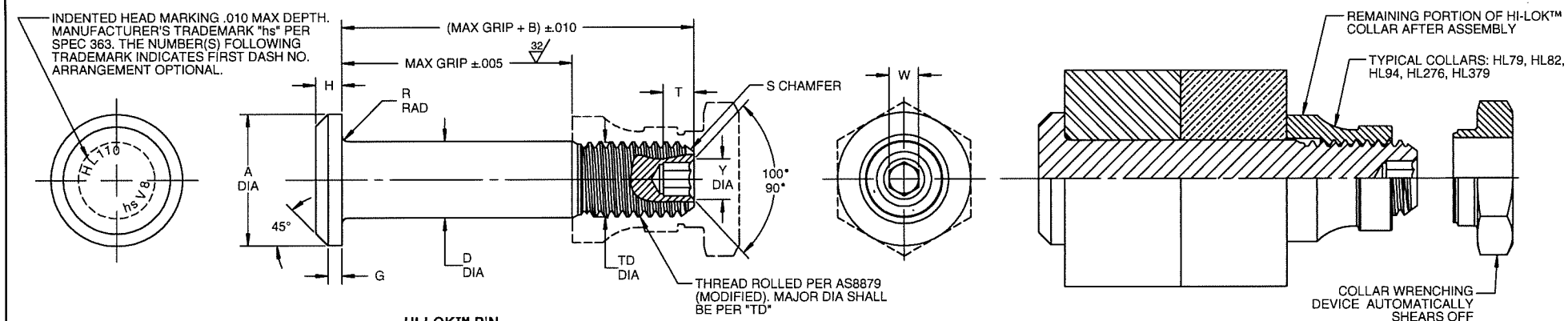


Hi-Shear Corporation, USA a LI-SI AEROSPACE Company	Design Holder	CAGE No. 73197	SPS TECHNOLOGIES, USA SPS TECHNOLOGIES, UK MINEBEA, Japan WEST COAST AEROSPACE, USA	Licensee	CAGE No. 56878 CAGE No. K5673 CAGE No. SB962 CAGE No. 60516
BLANC AERO INDUSTRIES UK Ltd a LI-SI AEROSPACE Company	Licensee	CAGE No. U6300	AFS Hildesheim, Germany AFS City of Industry, USA	Licensee (Japan) Licensee (WW except Japan for oversize, USA & Canada for nominal)	CAGE No. C4293 CAGE No. 1RC86 CAGE No. 06950 CAGE No. 17446
BLANC AERO INDUSTRIES SA, France a LI-SI AEROSPACE Company	Licensee	CAGE No. F0188-C	AFS Carson, USA	Licensee	
LI-SI AEROSPACE CANADA, Canada a LI-SI AEROSPACE Company	Licensee	CAGE No. L4528			
ANKIT FASTENERS Ltd, India Air Industries CO., USA	Licensee (India) Licensee (USA, Canada)	CAGE No. SEM10 CAGE No. 06725			



HI-LOK™ PIN

HI-LOK™ PIN AND COLLAR AFTER ASSEMBLY

[5]																
FIRST DASH NO.	PIN NOM DIA	A DIA	B REF	D DIA		TD DIA	G REF	H	R RAD	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 HL10V()6(-)									
6	13/64	.315 .295	.325	.2026 .2021	.2026 .2016	.1840 .1810	.025	.055 .045	.025 .015	1/32 x 37°	.1900-32 UNJF-3A	.0806 .0791	.135 .115	.119 .104	6,130	2,500
8	17/64	.412 .387	.395	.2651 .2646	.2651 .2641	.2440 .2410	.030	.069 .059	.025 .015	1/32 x 37°	.2500-28 UNJF-3A	.0967 .0947	.150 .130	.142 .122	10,490	4,300
10	21/64	.505 .475	.500	.3276 .3271	.3276 .3266	.3060 .3020	.035	.078 .068	.030 .020	3/64 x 37°	.3125-24 UNJF-3A	.1295 .1270	.170 .150	.180 .160	16,000	6,300
12	25/64	.600 .565	.545	.3901 .3896	.3901 .3891	.3680 .3640	.040	.088 .078	.030 .020	3/64 x 37°	.3750-24 UNJF-3A	.1617 .1582	.200 .180	.217 .197	22,700	8,700
14	29/64	.676 .641	.635	.4526 .4521	.4526 .4516	.4310 .4260	.045	.105 .093	.030 .020	3/64 x 37°	.4375-20 UNJF-3A	.1930 .1895	.230 .210	.253 .233	30,600	12,100
16	33/64	.770 .735	.685	.5151 .5146	.5151 .5141	.4930 .4880	.050	.116 .103	.030 .020	3/64 x 37°	.5000-20 UNJF-3A	.2242 .2207	.260 .240	.289 .269	39,600	15,300
18	37/64	.864 .829	.770	.5771 .5766	.5771 .5761	.5550 .5500	.055	.127 .112	.040 .025	1/16 x 37°	.5625-18 UNJF-3A	.2555 .2520	.290 .270	.326 .306	49,700	19,000
20	41/64	.953 .918	.825	.6396 .6391	.6396 .6386	.6180 .6120	.060	.137 .122	.040 .025	1/16 x 37°	.6250-18 UNJF-3A	.2555 .2520	.330 .305	.326 .306	61,000	23,000
24	49/64	1.108 1.066	1.050	.7646 .7641	.7646 .7636	.7430 .7370	.070	.151 .136	.045 .030	1/16 x 37°	.7500-16 UNJF-3A	.3185 .3150	.395 .365	.398 .378	87,200	30,700
28	57/64	1.285 1.241	1.210	.8896 .8891	.8896 .8886	.8680 .8610	.090	.187 .172	.050 .035	5/64 x 37°	.8750-14 UNJF-3A	.3820 .3780	.455 .425	.471 .451	118,000	45,000
32	1-1/64	1.468 1.424	1.390	1.0146 1.0141	1.0146 1.0136	.9930 .9860	.110	.218 .203	.060 .045	5/64 x 37°	1.0000-12 UNJF-3A	.5100 .5040	.580 .550	.618 .598	154,000	60,900

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 D.P.S.	DATE 11-4-83	TITLE HI-LOK™ PIN PROTRUDING SHEAR HEAD TITANIUM, 1/64 OVERSIZE 1/16 GRIP VARIATION
J.F.Obispo	7-29-14	
APPROVED Cessna	DATE 11-5-83	
REVISION (28)	DATE JFO 12-15-14	DRAWING NUMBER HL110

- GENERAL NOTES:**
1. Concentricity: "A" to "D" diameter within .010 FIM.
 2. Dimensions to be met after finish.
 3. Surface texture per ANSI B46.1.
 4. Hole preparation per NAS618.
 - 5 Maximum "D" diameter may be increased by .0002 to allow for solid film or aluminum coating application.
 - 6 Broach petals removed.
 - 7 Dimensions to be met before finish for "VY" code only.
 8. Use HL410 for oversize replacement.
 - 9 Non-lubed pins must be used with lubed collars or wet sealant.
 - 10 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 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:**
- HL110V(-)(-) = Cetyl alcohol lube per Hi-Shear Spec. 305.
 - 10 HL110VAP(-)(-) = HI-KOTE™ 1 aluminum pigmented coating per Hi-Shear Spec. 294, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - 10 HL110VAZ(-)(-) = HI-KOTE™ 1 aluminum pigmented coating per Hi-Shear Spec. 294, with color black on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL110VBJ(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL110VBR(-)(-) = Color code white on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - 9 HL110VBU(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type I, Class 3, with color yellow on thread end.
 - 9 HL110VBV(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, with color blue on thread end.
 - HL110VCB(-)(-) = 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.
 - 6 HL110VDK(-)(-) = Solid film lube per "KalGard™" FA. "KALGARD" is a trademark of Metal Improvement Company.
 - HL110VF(-)(-) = Surface coating per Hi-Shear Spec. 306, Type I, color blue, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL110VHD(-)(-) = I.V.D. aluminum coating per BAC5315, with color red on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - 6 HL110VK(-)(-) = Solid film lube per Lubeco 905.
 - HL110VLJ(-)(-) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per AS5272.
 - HL110VLV(-)(-) = Phosphate fluoride treat and Esna-Lube No. 382 (Everlube Corp).
 - HL110VR(-)(-) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per "Electrofilm" 4396.
 - HL110VRA(-)(-) = Phosphate fluoride treat with color red on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL110VSY(-)(-) = Phosphate fluoride treat, solid film lube per AS5272, Type I, and color red on thread end.
 - HL110VT(-)(-) = Surface coating per Hi-Shear Spec. 306, Type I, color pink, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL110VTA(-)(-) = 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.
 - HL110VTB(-)(-) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL110VTF(-)(-) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292.
 - HL110VTL(-)(-) = 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.
 - HL110VTT(-)(-) = Translube.
 - HL110VUE(-)(-) = Surface coating per Hi-Shear Spec. 306, Type II, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL110VUU(-)(-) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per "Lubeco" 2123, Type II.
 - HL110VV(-)(-) = Solid film lube per "Lubeco" 2123, Type II.
 - 7 HL110VY(-)(-) = Surface coating per Hi-Shear Spec. 306, Type I, color blue, and solid film lubricant per M88. (British Aircraft Corporation Spec. MP-1071).
 - HL110VNKJ(-)(-) = 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.
 - HL110VNKK(-)(-) = 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.
 - HL110VNKL(-)(-) = 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.

CODE: First dash number indicates nominal diameter in 1/32nds of the pin which HL110 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
 HL110VAP8-8

8/16 or 1/2 Maximum Grip Length
 Replaces 8/32 or 1/4 Nominal Diameter Pin
 HI-KOTE™ 1 Aluminum Coating
 Pin Basic Part Number

SPECIFICATION: HI-LOK™ Product Specification 342.

DRAWING NUMBER

HL110

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