

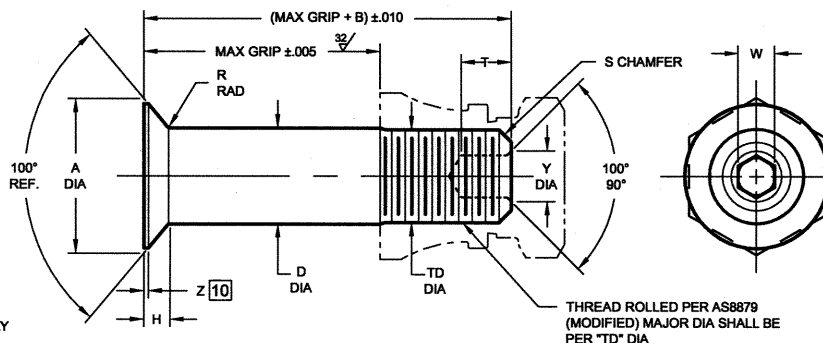
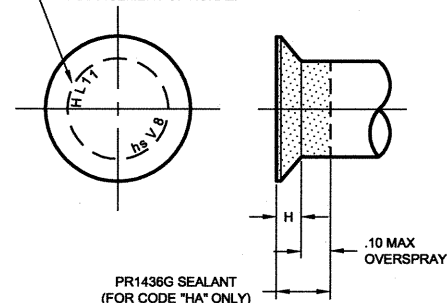
STANDARDS COMMITTEE FOR HI-LOK® PRODUCTS

2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA 90509 U.S.A.

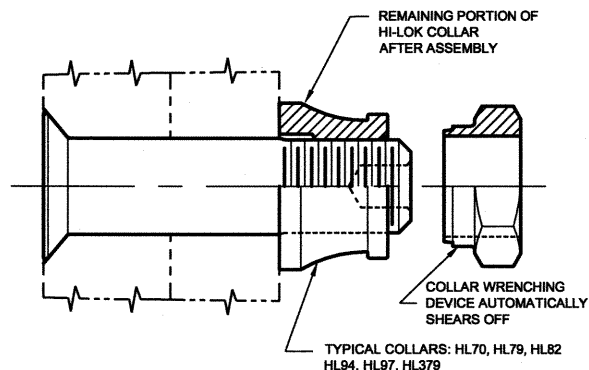
HI-SHEAR CORPORATION, U.S.A. (Patent Holder) CAGE No. 73197
 a LISI AEROSPACE Company
 AIR INDUSTRIES CO., INC., U.S.A. (Licensee - U.S.A. & Canada) CAGE No. 06725
 HUCK INTERNATIONAL, INC., U.S.A. (Licensee) CAGE No. 97928
 SPS TECHNOLOGIES, U.S.A. (Licensee) CAGE No. 56878
 FAIRCHILD Aerospace Fastener Division (Licensee) CAGE No. 92215
 WEST COAST AEROSPACE INC., U.S.A. (Licensee) CAGE No. 60516
 (Pins & Steel Collars)

HI-SHEAR FASTENERS EUROPE, LTD., U.K. (Licensee) CAGE No. 0LB88
 a LISI AEROSPACE Company
 HUCK S.A. France (Licensee - ECC Countries)
 BLANC AERO S.A. France (Licensee - ECC Countries)
 a LISI AEROSPACE Company
 TOKYO SCREW COMPANY, Japan (Licensee - Japan)

INDENTED HEAD MARKING MAXIMUM DEPTH .010".
 "hs" INDICATES HI-SHEAR TRADEMARK.
 THE NUMBER(S) FOLLOWING THE TRADEMARK
 INDICATES FIRST DASH NUMBER.
 ARRANGEMENT OPTIONAL.



HI-LOK PIN



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	SOCKET			DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM
				WITHOUT COATING OR SOLID FILM	WITH COATING OR SOLID FILM								W HEX	T DEPTH	Y DIA		
45 4	1/8	.2219	.294	.1375	.1375	.1335	.003	.0354	.025	.015	.010	1/32" x 37°	.0645	.100	[12]	2,840	950
		.2171		.1370	.1365								.1310	.0635			
5	5/32	.2612	.312	.1635	.1635	.1595	.004	.0410	.025	.015	.010	1/32" x 37°	.0645	.135	.090	4,010	1,650
		.2564		.1630	.1625								.1570	.0635			
6	3/16	.3016	.325	.1895	.1895	.1840	.005	.0470	.030	.020	.015	1/32" x 37°	.0806	.135	.119	5,380	2,000
		.2966		.1890	.1885								.1810	.0791			
8	1/4	.3948	.395	.2495	.2495	.2440	.006	.0610	.030	.020	.015	1/32" x 37°	.0967	.150	.142	9,300	3,700
		.3898		.2490	.2485								.2410	.0947			
10	5/16	.4739	.500	.3120	.3120	.3060	.007	.0680	.040	.030	.015	3/64" x 37°	.1295	.170	.180	14,600	5,500
		.4689		.3115	.3110								.3020	.1270			
12	3/8	.5604	.545	.3745	.3745	.3680	.008	.0780	.040	.030	.015	3/64" x 37°	.1617	.200	.217	21,000	7,200
		.5554		.3740	.3735								.3640	.1582			
14	7/16	.6680	.635	.4370	.4370	.4310	.009	.0969	.050	.040	.022	3/64" x 37°	.1930	.230	.253	28,600	10,000
		.6620		.4365	.4360								.4260	.1895			
16	1/2	.7540	.685	.4995	.4995	.4930	.010	.1068	.050	.040	.022	3/64" x 37°	.2242	.260	.289	37,300	13,500
		.7480		.4990	.4985								.4880	.2207			
18	9/16	.8380	.770	.5615	.5615	.5550	.010	.1160	.050	.040	.022	1/16" x 37°	.2555	.290	.326	47,200	17,000
		.8310		.5610	.5605								.5500	.2520			
20	5/8	.9250	.825	.6240	.6240	.6180	.010	.1260	.050	.040	.022	1/16" x 37°	.2555	.330	.326	58,300	21,000
		.9180		.6235	.6230								.6120	.2520			
24	3/4	1.0970	1.050	.7490	.7490	.7430	.012	.1460	.050	.040	.022	1/16" x 37°	.3185	.395	.398	83,900	30,700
		1.0850		.7485	.7480								.7370	.3150			
28	7/8	1.3197	1.210	.8740	.8740	.8680	.014	.1870	.050	.040	.022	5/64" x 37°	.3820	.455	.471	114,000	42,000
		1.3030		.8735	.8730								.8610	.3780			
32	1	1.5186	1.390	.9990	.9990	.9930	.014	.2180	.050	.040	.022	5/64" x 37°	.5100	.580	.618	149,000	55,000
		1.4995		.9985	.9980								.9860	.5040			

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

"Hi-Lok" and "HL" are internationally
 registered trademark of Hi-Shear Corporation.

DRAWN Briej	DATE 11-26-62	TITLE HI-LOK® PIN
APPROVED Cessna	DATE 11-26-62	100° FLUSH SHEAR HEAD TITANIUM 1/16" GRIP VARIATION
REVISION 45	DATE JO 3-23-06	DRAWING NUMBER HL11

SHEET 1 OF 2

HL11

STANDARDS COMMITTEE FOR HI-LOK® PRODUCTS

2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA 90509 U.S.A.

HI-SHEAR CORPORATION, U.S.A. (Patent Holder) CAGE No. 73197	HI-SHEAR FASTENERS EUROPE, LTD., U.K. (Licensee) CAGE No. OLB68
a LISI AEROSPACE Company	a LISI AEROSPACE Company
AIR INDUSTRIES CO., INC., U.S.A. (Licensee - U.S.A. & Canada) CAGE No. 06725	HUOX S.A. France (Licensee - ECC Countries)
HUCK INTERNATIONAL, INC., U.S.A. (Licensee) CAGE No. 97928	BLANC AERO S.A. France (Licensee - ECC Countries)
SPS TECHNOLOGIES, U.S.A. (Licensee) CAGE No. 56878	a LISI AEROSPACE Company
FAIRCHILD Aerospace Fastener Division (Licensee) CAGE No. 92215	TOKYO SCREW COMPANY, Japan (Licensee - Japan)
WEST COAST AEROSPACE INC., U.S.A. (Licensee) CAGE No. 60516	
(Pins & Steel Collars)	

GENERAL NOTES:

1. Head edge out of roundness shall not exceed "F".
2. Concentricity: Conical surface of head to "D" diameter within .005 FIM.
3. "H" is dimensioned from maximum "D" diameter.
4. Dimensions to be met after finish.
5. Surface texture per ANSI B46.1.
6. Hole preparation per NAS618.
7. Use HL111 for oversize replacement.
8. Maximum "D" diameter may be increased by .0002 to allow for solid film or aluminum coating application.
9. Dimensions to be met before finish for "VY" code only.
10. Curved or flat edge manufacturer's option.
11. Non-lubed pins must be used with lubed collars or wet sealant.
12. Broach petals removed.
13. Evidence of broken edge across points.

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

HEAT TREAT: 95,000 psi shear minimum.

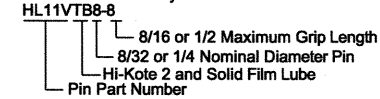
- FINISH:**
- HL11K(-)(-) = Solid film lube per Lubeco 905.
 - HL11V(-)(-) = Cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL11VAP(-)(-) = Hi-Kote 1 aluminum coating per Hi-Shear Spec. 294, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL11VAZ(-)(-) = Hi-Kote 1 aluminum coating per Hi-Shear Spec. 294, with color black on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL11VB(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL11VBR(-)(-) = Color code white on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL11VBU(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type I, Class 3, with color code yellow on thread end.
 - HL11VBV(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, with color code blue on thread end.
 - HL11VCB(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type I, Class 3, with color code black on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL11VDK(-)(-) = Solid film lube per Kalgard FA.
 - HL11VDF(-)(-) = Surface coating per Hi-Shear Spec. 306, Type I, color blue, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL11VHA(-)(-) = Hi-Kote 1 aluminum coating per Hi-Shear Spec. 294, with color code black on thread end, and apply Precoat No. PR1436G sealant (.002-.005 thick), and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL11VLJ(-)(-) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per AS5272.
 - HL11VLV(-)(-) = Phosphate fluoride treat and Esna-Lube No. 382 (Everlube Corp).
 - HL11VLR(-)(-) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per "Electrofilm" 4396.
 - HL11VRA(-)(-) = Phosphate fluoride treat with color code red on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL11VSY(-)(-) = Phosphate fluoride treat, solid film lube per AS5272, Type I, and color red on thread end.
 - HL11VT(-)(-) = Surface coating per Hi-Shear Spec. 306, Type I, color pink, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL11VTA(-)(-) = 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.
 - HL11VTB(-)(-) = Hi-Kote 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL11VTF(-)(-) = Hi-Kote 2 solid film lube per Hi-Shear Spec. 292.
 - HL11VTL(-)(-) = Anodize per Hi-Shear 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.
 - HL11VTT(-)(-) = Translube.
 - HL11VUE(-)(-) = Surface coating per Hi-Shear Spec. 306, Type II, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL11VUU(-)(-) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per "Lubeco" 2123, Type II.
 - HL11VV(-)(-) = Solid film lube per "Lubeco" 2123, Type II.
 - HL11VY(-)(-) = Surface coating per Hi-Shear Spec. 306, Type I, color blue, and solid film lubricant per M88. (British Aircraft Corporation Spec. MP-1071).

SPECIFICATION: Hi-Lok Product Specification 342.

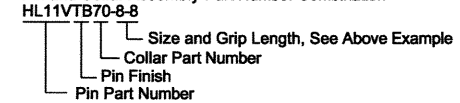
CODE: First dash number indicates nominal diameter in 1/32nds.
Second dash number indicates maximum grip in 1/16ths.
See Finish note for explanation of code letters.

HOW TO ORDER EXAMPLES:

Pin Part Number Only



Pin and Collar Assembly Part Number Combination



HL11

JFO-STD/HLPIN

DRAWING NUMBER

HL11

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