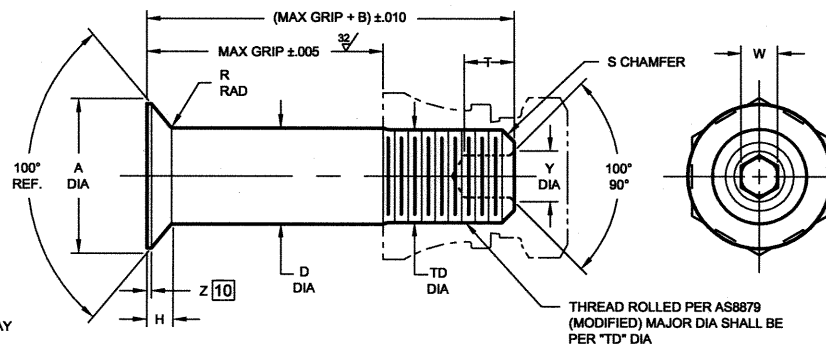
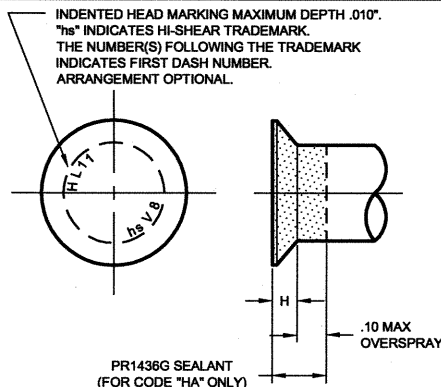


STANDARDS COMMITTEE FOR HI-LOK® PRODUCTS

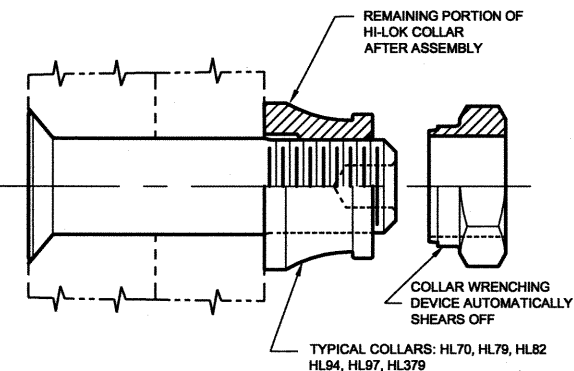
2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA 90509 U.S.A.

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. 07928
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. 0LB68
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)



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 .2171	.294	.1375 .1370	.1375 .1365	.1335 .1310	.003	.0354 .0334	.025 .015	.010	1/32" x 37°	6-32UNJC-3A Modified	.0645 .0635	.100 .080	12	2,840	950
	5	5/32	.2612 .2564	.312	.1635 .1630	.1635 .1625	.1595 .1570	.004	.0410 .0390	.025 .015	.010	1/32" x 37°	8-32UNJC-3A Modified	.0645 .0635	.135 .115	.090 .075	4,010	1,650
	6	3/16	.3016 .2966	.325	.1895 .1890	.1895 .1885	.1840 .1810	.005	.0470 .0450	.030 .020	.015	1/32" x 37°	10-32UNJF-3A Modified	.0806 .0791	.135 .115	.119 .104	5,380	2,000
	8	1/4	.3948 .3898	.395	.2495 .2490	.2495 .2485	.2440 .2410	.006	.0610 .0590	.030 .020	.015	1/32" x 37°	1/4-28UNJF-3A Modified	.0967 .0947	.150 .130	.142 .122	9,300	3,700
	10	5/16	.4739 .4689	.500	.3120 .3115	.3120 .3110	.3060 .3020	.007	.0680 .0660	.040 .030	.015	3/64" x 37°	5/16-24UNJF-3A Modified	.1295 .1270	.170 .150	.180 .160	14,600	5,500
	12	3/8	.5604 .5554	.545	.3745 .3740	.3745 .3735	.3680 .3640	.008	.0780 .0760	.040 .030	.015	3/64" x 37°	3/8-24UNJF-3A Modified	.1617 .1582	.200 .180	.217 .197	21,000	7,200
	14	7/16	.6680 .6620	.635	.4370 .4365	.4370 .4360	.4310 .4260	.009	.0969 .0944	.050 .040	.022	3/64" x 37°	7/16-20UNJF-3A Modified	.1930 .1895	.230 .210	.253 .233	28,600	10,000
	16	1/2	.7540 .7480	.685	.4995 .4990	.4995 .4985	.4930 .4880	.010	.1068 .1043	.050 .040	.022	3/64" x 37°	1/2-20UNJF-3A Modified	.2242 .2207	.260 .240	.289 .269	37,300	13,500
	18	9/16	.8380 .8310	.770	.5615 .5610	.5615 .5605	.5550 .5500	.010	.1160 .1131	.050 .040	.022	1/16" x 37°	9/16-18UNJF-3A Modified	.2555 .2520	.290 .270	.326 .306	47,200	17,000
	20	5/8	.9250 .9180	.825	.6240 .6235	.6240 .6230	.6180 .6120	.010	.1260 .1230	.050 .040	.022	1/16" x 37°	5/8-18UNJF-3A Modified	.2555 .2520	.330 .305	.326 .306	58,300	21,000
	24	3/4	1.0970 1.0850	1.050	.7490 .7485	.7490 .7480	.7430 .7370	.012	.1460 .1410	.050 .040	.022	1/16" x 37°	3/4-16UNJF-3A Modified	.3185 .3150	.395 .365	.398 .378	83,900	30,700
	28	7/8	1.3197 1.3030	1.210	.8740 .8735	.8740 .8730	.8680 .8610	.014	.1870 .1800	.050 .040	.022	5/64" x 37°	7/8-14UNJF-3A Modified	.3820 .3780	.455 .425	.471 .451	114,000	42,000
32	1	1.5186 1.4995	1.390	.9990 .9985	.9990 .9980	.9930 .9860	.014	.2180 .2100	.050 .040	.022	5/64" x 37°	1-12UNJF-3A Modified	.5100 .5040	.580 .550	.618 .598	149,000	55,000	

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

HL11

JFO-STD/HLPIN

"Hi-Lok" and "HL" are internationally registered trademark of Hi-Shear Corporation.		
DRAWN Briej	DATE 11-26-62	TITLE HI-LOK® PIN 100° FLUSH SHEAR HEAD TITANIUM 1/16" GRIP VARIATION
APPROVED Cessna	DATE 11-26-62	DRAWING NUMBER HL11 SHEET 1 OF 2
REVISION (45)	DATE JO 3-23-06	

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STANDARDS COMMITTEE FOR HI-LOK® PRODUCTS

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

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BLANC AERO S.A. France (Licensee - ECC Countries)
a LISI AEROSPACE Company
TOKYO SCREW COMPANY, Japan (Licensee - Japan)

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.
 - HL11VBJ(-)(-) = 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.
 - 11 HL11VBU(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type I, Class 3, with color code yellow on thread end.
 - 11 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.
 - 12 HL11VDK(-)(-) = Solid film lube per Kalgard FA.
 - HL11VF(-)(-) = 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).
 - HL11VVR(-)(-) = 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.
 - 9 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:

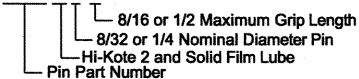
First dash number indicates nominal diameter in 1/32nds.
Second dash number indicates maximum grip in 1/16ths.
See Finish note for explanation of code letters.

HOW TO ORDER

EXAMPLES:

Pin Part Number Only

HL11VTB8-8



Pin and Collar Assembly Part Number Combination

HL11VTB70-8-8



DRAWING NUMBER

HL11

Sheet 2 of 2

HL11