lisi AEROSPACE
hi-shear corporation
2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA 90509 U.S.A.

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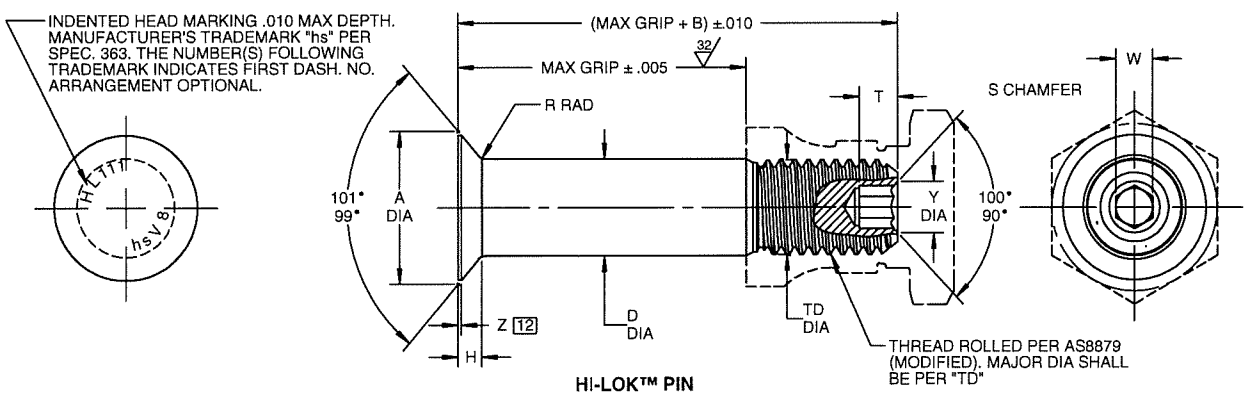
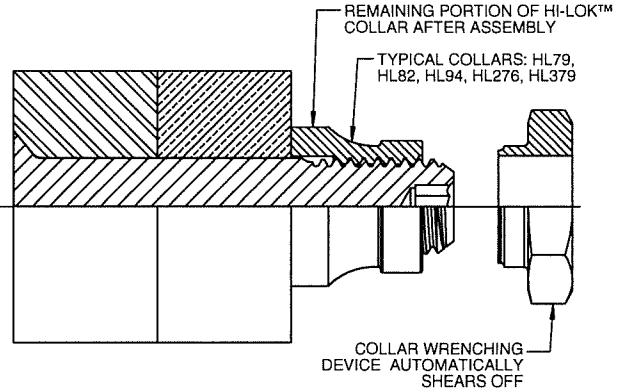


HI-LOK™ PIN



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 [7] WITHOUT COATING OR SOLID FILM	D DIA [7] AFTER COATING OR SOLID FILM	TD DIA	F REF [1]	H	R RAD	Z MAX	S CHAMFER REF	THREAD MODIFIED	SOCKET W HEX	SOCKET T DEPTH	SOCKET Y DIA	DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM
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
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	.040 .030	.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
(30) 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

"HI-LOK", "HL", and "HI-KOTE", are Trademarks of Hi-Shear Corporation

DRAWN BY	DATE
J.F.Obispo	7-22-14
D.P.S.	11-4-63
APPROVED	DATE
Cessna	11-5-63
REVISION	DATE
(30)	J.F.O. 9-23-2015

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

DRAWING NUMBER
HL111

HL111

lisi AEROSPACE
hi-shear corporation
2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA 90509 U.S.A.

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 to be met after finish.
4. Surface texture per ANSI 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 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.
- 13 HL111VAP( )-( ) = HI-KOTE™ 1 aluminum pigmented coating per Hi-Shear Spec. 294, and cetyl alcohol lube per Hi-Shear Spec. 305.
- 13 HL111VAZ( )-( ) = 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.
- 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.
- HL111VF( )-( ) = Surface coating 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.
- HL111VLJ( )-( ) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per AS5272.
- HL111VLV( )-( ) = Phosphate fluoride treat and Esna-Lube No. 382 (Everlube Corp).
- HL111VR( )-( ) = Surface coating 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.
- HL111VT( )-( ) = Surface coating 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.
- HL111VUE( )-( ) = Surface coating per Hi-Shear Spec. 306, Type II, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL111VUU( )-( ) = Surface coating 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.
- 9 HL111VY( )-( ) = Surface coating 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.

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
- HI-KOTE™ 1 Aluminum Coating
- Pin Basic Part Number

HL111

DRAWING NUMBER
HL111 2 of 2