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

HI-SHEAR Corporation, USA
a LISI AEROSPACE Company

Design Holder

CAGE No. 73197

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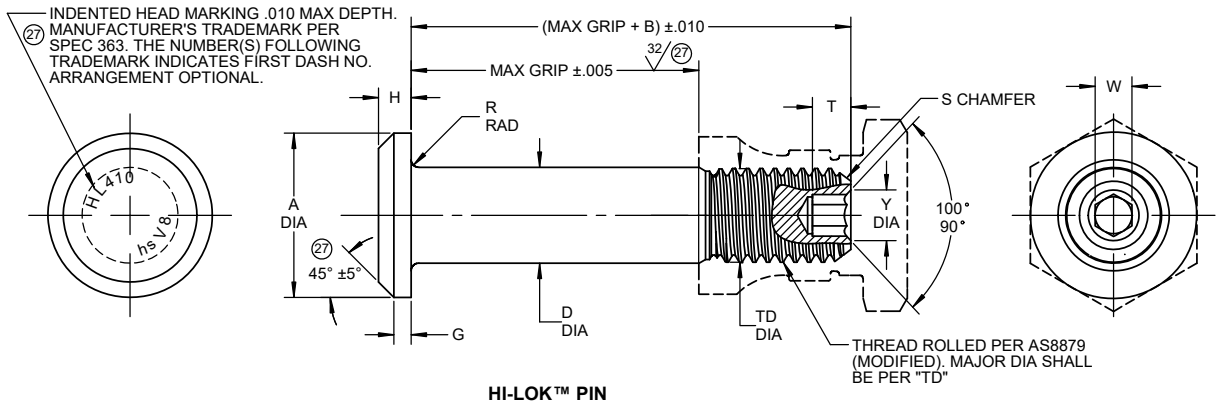
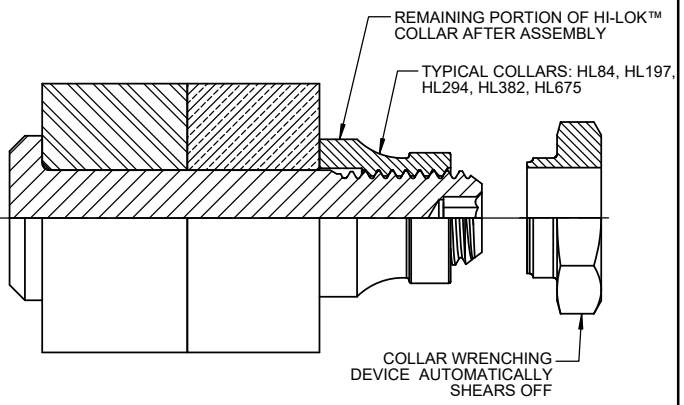


HI-LOK™ PIN



HI-LOK™ PIN AND COLLAR AFTER ASSEMBLY

[5]

FIRST DASH NO.	PIN NOM DIA	A DIA	B REF	D DIA WITHOUT COATING OR SOLID FILM	D DIA AFTER COATING OR SOLID FILM	TD DIA	G REF	H	R RAD	S CHAMFER REF	THREAD MODIFIED	SOCKET W HEX	SOCKET T DEPTH	SOCKET Y DIA	DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM
5							NOTE: USE HL110V( )6-( )									
6	7/32	.315 .295	.325	.2182 .2177	.2182 .2172	.1840 .1810	.025	.055 .045	.025 .015	1/32 x 37°	.1900-32 UNJF-3A	.0806 .0791	.135 .115	.119 .104	7,100	2,500
8	9/32	.412 .387	.395	.2807 .2802	.2807 .2797	.2440 .2410	.030	.069 .059	.025 .015	1/32 x 37°	.2500-28 UNJF-3A	.0967 .0947	.150 .130	.142 .122	11,800	4,300
10	11/32	.505 .475	.500	.3432 .3427	.3432 .3422	.3060 .3020	.035	.078 .068	.030 .020	3/64 x 37°	.3125-24 UNJF-3A	.1295 .1270	.170 .150	.180 .160	17,600	6,300
12	13/32	.600 .565	.545	.4057 .4052	.4057 .4047	.3680 .3640	.040	.088 .078	.030 .020	3/64 x 37°	.3750-24 UNJF-3A	.1617 .1582	.200 .180	.217 .197	24,600	8,700
14	15/32	.676 .641	.635	.4682 .4677	.4682 .4672	.4310 .4260	.045	.105 .093	.030 .020	3/64 x 37°	.4375-20 UNJF-3A	.1930 .1895	.230 .210	.253 .233	32,700	12,100
16	17/32	.770 .735	.685	.5307 .5302	.5307 .5297	.4930 .4880	.050	.116 .103	.030 .020	3/64 x 37°	.5000-20 UNJF-3A	.2242 .2207	.260 .240	.289 .269	42,000	15,300
18	19/32	.864 .829	.770	.5927 .5922	.5927 .5917	.5550 .5500	.055	.127 .112	.040 .025	1/16 x 37°	.5625-18 UNJF-3A	.2555 .2520	.290 .270	.326 .306	52,400	19,000
20	21/32	.953 .918	.825	.6552 .6547	.6552 .6542	.6180 .6120	.060	.137 .122	.040 .025	1/16 x 37°	.6250-18 UNJF-3A	.2555 .2520	.330 .305	.326 .306	64,100	23,000
24	25/32	1.108 1.066	1.050	.7802 .7797	.7802 .7792	.7430 .7370	.070	.151 .136	.045 .030	1/16 x 37°	.7500-16 UNJF-3A	.3185 .3150	.395 .365	.398 .378	90,900	30,700
28	29/32	1.285 1.241	1.210	.9052 .9047	.9052 .9042	.8680 .8610	.090	.187 .172	.050 .035	5/64 x 37°	.8750-14 UNJF-3A	.3820 .3780	.455 .425	.471 .451	122,000	45,000
32	1-1/32	1.468 1.424	1.390	1.0302 1.0297	1.0302 1.0292	.9930 .9860	.110	.218 .203	.060 .045	5/64 x 37°	1.0000-12 UNJF-3A	.5100 .5040	.580 .550	.618 .598	158,000	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 BRIEJ J.F.OBISPO	DATE 1966-04-07 2014-07-29	TITLE HI-LOK™ PIN PROTRUDING SHEAR HEAD TITANIUM 1/16 GRIP VARIATION, 1/32 OVERSIZE
APPROVED MILLER	DATE 1968-04-07	
REVISION (27)	DATE K. PHAM 2022-02-07	DRAWING NUMBER **HL410** 1 OF 2

HL410

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GENERAL NOTES:
1. Concentricity: "A" to "D" diameter within .010 FIM.
2. Dimensions are in inches and to be met after finish.
3. Surface texture per ASME 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. Oversize replacement for HL10 and HL110.
[9] Non-lubed pins must be used with lubed collars or wet sealant.
(27) [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 inUK 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:
HL410V( )-( ) = Cetyl alcohol lube per Hi-Shear Spec. 305.
(27) [10] HL410VAP( )-( ) = 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.
(27) [10] HL410VAZ( )-( ) = 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.
HL410VBJ( )-( ) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, and cetyl alcohol lube per Hi-Shear Spec. 305.
HL410VBR( )-( ) = Color code white on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
[9] HL410VBU( )-( ) = I.V.D. aluminum coating per MIL-DTL-83488, Type I, Class 3, with color yellow on thread end.
[9] HL410VBV( )-( ) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, with color blue on thread end.
HL410VCB( )-( ) = 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] HL410VDK( )-( ) = Solid film lube per "KalGard™" FA. "KALGARD" is a trademark of Metal Improvement Company.
HL410VF( )-( ) = Surface coating per Hi-Shear Spec. 306, Type I, color blue, and cetyl alcohol lube per Hi-Shear Spec. 305.
HL410VHD( )-( ) = I.V.D. aluminum coating per BAC5315, with color red on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
[6] HL410VK( )-( ) = Solid film lube per Lubeco 905.
HL410VLJ( )-( ) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per AS5272.
HL410VLV( )-( ) = Phosphate fluoride treat and Esna-Lube No. 382 (Everlube Corp).
HL410VR( )-( ) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per "Electrofilm" 4396.
HL410VRA( )-( ) = Phosphate fluoride treat with color red on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
HL410VSY( )-( ) = Phosphate fluoride treat, solid film lube per AS5272, Type I, and color red on thread end.
HL410VT( )-( ) = Surface coating per Hi-Shear Spec. 306, Type I, color pink, and cetyl alcohol lube per Hi-Shear Spec. 305.
HL410VTA( )-( ) = 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.
HL410VTB( )-( ) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305.
HL410VTF( )-( ) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292.
HL410VTL( )-( ) = 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.
HL410VTT( )-( ) = Translube.
HL410VUE( )-( ) = Surface coating per Hi-Shear Spec. 306, Type II, and cetyl alcohol lube per Hi-Shear Spec. 305.
HL410VUU( )-( ) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per "Lubeco" 2123, Type II.
HL410VV( )-( ) = Solid film lube per "Lubeco" 2123, Type II.
[7] HL410VY( )-( ) = Surface coating per Hi-Shear Spec. 306, Type I, color blue, and solid film lubricant per M88. (British Aircraft Corporation Spec. MP-1071).
HL410VNKJ( )-( ) = HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294, with color siilver on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
HL410VNKK( )-( ) = 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.
HL410VNKL( )-( ) = 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.
HL410VHK( )-( ) = 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 HL410 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
HL410VAP8-8
- HL410 — Pin Basic Part Number
- VA — Finish Code
- P — Replaces 8/32 or 1/4 Nominal Diameter Pin
- 8 — 8/16 or 1/2 Maximum Grip Length

HL410

DRAWING NUMBER
HL410