

HI-LOK™ PIN

HI-LOK™ PIN AND COLLAR AFTER ASSEMBLY

45 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	T1 DEPTH MAX	Y DIA		
5	5/32	.322 .306	.312	.1635 .1630	.1635 .1625	.1595 .1570	.030	.065 .055	.025 .015	1/32 x 37°	.1640-32 UNJC-3A	.0645 .0635	.135 .115	.160	.090 .075	4,010	2,180
6	3/16	.377 .357	.325	.1895 .1890	.1895 .1885	.1840 .1810	.035	.074 .064	.025 .015	1/32 x 37°	.1900-32 UNJF-3A	.0806 .0791	.135 .115	.175	.119 .104	5,380	3,180
8	1/4	.440 .415	.395	.2495 .2490	.2495 .2485	.2440 .2410	.045	.090 .080	.025 .015	1/32 x 37°	.2500-28 UNJF-3A	.0967 .0947	.150 .130	.200	.142 .122	9,300	5,820
10	5/16	.505 .475	.500	.3120 .3115	.3120 .3110	.3060 .3020	.055	.112 .102	.030 .020	3/64 x 37°	.3125-24 UNJF-3A	.1295 .1270	.170 .150	.240	.180 .160	14,600	9,200
12	3/8	.600 .565	.545	.3745 .3740	.3745 .3735	.3680 .3640	.075	.140 .130	.030 .020	3/64 x 37°	.3750-24 UNJF-3A	.1617 .1582	.200 .180	.275	.217 .197	21,000	14,000
14	7/16	.676 .641	.635	.4370 .4365	.4370 .4360	.4310 .4260	.095	.160 .150	.030 .020	3/64 x 37°	.4375-20 UNJF-3A	.1930 .1895	.230 .210	.315	.253 .233	28,600	18,900
16	1/2	.770 .735	.685	.4995 .4990	.4995 .4985	.4930 .4880	.095	.188 .178	.030 .020	3/64 x 37°	.5000-20 UNJF-3A	.2242 .2207	.260 .240	.360	.289 .269	37,300	25,600
18	9/16	.877 .842	.770	.5615 .5610	.5615 .5605	.5550 .5500	.125	.210 .200	.040 .025	1/16 x 37°	.5625-18 UNJF-3A	.2555 .2520	.290 .270	.400	.326 .306	47,200	32,400
20	5/8	.953 .918	.825	.6240 .6235	.6240 .6230	.6180 .6120	.140	.238 .228	.040 .025	1/16 x 37°	.6250-18 UNJF-3A	.2555 .2520	.330 .305	.440	.326 .306	58,300	41,000
24	3/4	1.150 1.110	1.050	.7490 .7485	.7490 .7480	.7430 .7370	.200	.335 .320	.045 .030	1/16 x 37°	.7500-16 UNJF-3A	.3185 .3150	.330 .300	.465	.398 .378	83,900	59,500
28	7/8	1.330 1.290	1.210	.8740 .8735	.8740 .8730	.8680 .8610	.250	.385 .370	.050 .035	5/64 x 37°	.8750-14 UNJF-3A	.3820 .3780	.400 .370	.560	.471 .451	114,000	81,500
32	1	1.510 1.470	1.390	.9990 .9985	.9990 .9980	.9930 .9860	.300	.435 .420	.060 .045	5/64 x 37°	1.0000-12 UNJF-3A	.5100 .5040	.520 .490	.715	.618 .598	149,000	106,000

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 MARTIN	DATE 1963-11-19	TITLE HI-LOK™ PIN PROTRUDING TENSION HEAD TITANIUM 1/16 GRIP VARIATION
APPROVED J.F.OBISPO	DATE 2014-07-30	
REVISION 45	DATE 2017-05-18	DRAWING NUMBER HL12

1 OF 2

HL12

- GENERAL NOTES:**
1. Concentricity: "A" to "D" diameter within .010 FIM.
 - ④5 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 Deleted.
 - ⑨ Non-lubed pins must be used with lubed collars or wet sealant.
 10. Use HL112 for oversize replacement.
 - ①1 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:**
- HL12V(-)(-) = Cetyl alcohol lube per Hi-Shear Spec. 305.
 - ①1 HL12VAP(-)(-) = HI-KOTE™ 1 aluminum pigmented coating per Hi-Shear Spec. 294, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - ①1 HL12VAT(-)(-) = HI-KOTE™ 1 aluminum pigmented coating per Hi-Shear Spec. 294.
 - ①1 HL12VAZ(-)(-) = 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.
 - HL12VBJ(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - ⑨ HL12VBV(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, with color blue on thread end.
 - ⑥ HL12VDK(-)(-) = Solid film lube per "KalGard™" FA. "KALGARD" is a trademark of Metal Improvement Company.
 - HL12VF(-)(-) = Surface coating per Hi-Shear Spec. 306, Type I, color blue, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL12VLJ(-)(-) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per AS5272.
 - HL12VLV(-)(-) = Phosphate fluoride treat and Esna-Lube No. 382 (Everlube Corp).
 - ⑥ HL12VMA(-)(-) = Solid film lube per "KalGard™" RA. "KALGARD" is a trademark of Metal Improvement Company
 - HL12VR(-)(-) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per "Electrofilm" 4396.
 - HL12VRA(-)(-) = Phosphate fluoride treat with color red on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL12VSS(-)(-) = Grit blast top of head with color light blue on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL12VSY(-)(-) = Phosphate fluoride treat, solid film lube per AS5272, Type I, and color red on thread end.
 - HL12VT(-)(-) = Surface coating per Hi-Shear Spec. 306, Type I, color pink, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL12VTA(-)(-) = 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.
 - HL12VTB(-)(-) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL12VTF(-)(-) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292.
 - HL12VTL(-)(-) = 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.
 - HL12VTT(-)(-) = Translube.
 - ⑨ HL12VU(-)(-) = Bare, no lubricant.
 - HL12VUE(-)(-) = Surface coating per Hi-Shear Spec. 306, Type II, and cetyl alcohol lube per Hi-Shear Spec. 305.
 - HL12VUU(-)(-) = Surface coating per Hi-Shear Spec. 306, Type II, and solid film lube per "Lubeco" 2123, Type II.
 - HL12VV(-)(-) = Solid film lube per "Lubeco" 2123, Type II.
 - ⑦ HL12VY(-)(-) = Surface coating per Hi-Shear Spec. 306, Type I, color blue, and solid film lubricant per M88. (British Aircraft Corporation Spec. MP-1071).
 - HL12VNKJ(-)(-) = 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.
 - HL12VNKK(-)(-) = 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.
 - HL12VNKL(-)(-) = 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.
 - HL12VHK(-)(-) = HI-KOTE™ 4 NC aluminum coating per Hi-Shear Spec. 397.

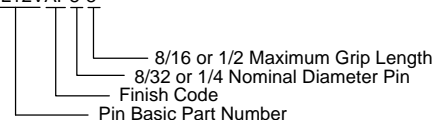
SPECIFICATION: HI-LOK™ Product Specification 342.

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

HOW TO ORDER

EXAMPLE:

Pin Part Number
 HL12VAP8-8



HL12

DRAWING NUMBER
HL12