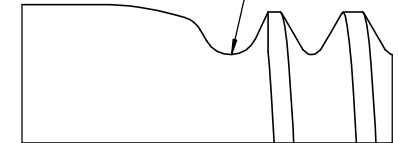


HI-LITE™ PIN AND COLLAR AFTER ASSEMBLY

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

THIS AREA OF SPECIAL CONFIGURATION  
AND COLD WORKING TO MEET PHYSICAL  
REQUIREMENTS



VIEW A

HI-LITE™ THREAD TRANSITION AREA  
SEE SPECIFICATION FOR INSPECTION

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 MIN	T1 DEPTH MAX	Y DIA		
5							NOTE:USE HST112( )6-( )										
6	7/32	.390 .370	.300	.2182 .2177	.2182 .2172	.1840 .1810	.035	.074 .064	.025 .015	1/32 x 37°	.1900-32 UNJF-3A	.0806 .0791	.080	.135	.119 .104	7,100	3,180
8	9/32	.460 .435	.330	.2807 .2802	.2807 .2797	.2440 .2410	.045	.090 .080	.025 .015	1/32 x 37°	.2500-28 UNJF-3A	.0967 .0947	.090	.160	.142 .122	11,800	5,820
10	11/32	.520 .490	.390	.3432 .3427	.3432 .3422	.3060 .3020	.055	.112 .102	.030 .020	3/64 x 37°	.3125-24 UNJF-3A	.1295 .1270	.110	.200	.180 .160	17,600	9,200
12	13/32	.620 .590	.430	.4057 .4052	.4057 .4047	.3680 .3640	.075	.140 .130	.030 .020	3/64 x 37°	.3750-24 UNJF-3A	.1617 .1582	.140	.235	.217 .197	24,600	14,000
14	15/32	.695 .660	.510	.4682 .4677	.4682 .4672	.4310 .4260	.095	.160 .150	.030 .020	3/64 x 37°	.4375-20 UNJF-3A	.1930 .1895	.150	.246	.253 .233	32,700	18,900
16	17/32	.790 .755	.610	.5307 .5302	.5307 .5297	.4930 .4880	.095	.188 .178	.030 .020	3/64 x 37°	.5000-20 UNJF-3A	.2242 .2207	.170	.275	.289 .269	42,000	25,600
18	19/32	.900 .865	.710	.5927 .5922	.5927 .5917	.5550 .5500	.125	.210 .200	.040 .025	1/16 x 37°	.5625-18 UNJF-3A	.2555 .2520	.200	.329	.326 .306	52,400	32,400
20	21/32	.970 .935	.790	.6552 .6547	.6552 .6542	.6180 .6120	.140	.238 .228	.040 .025	1/16 x 37°	.6250-18 UNJF-3A	.2555 .2520	.210	.339	.326 .306	64,100	41,000
24	25/32	1.185 1.145	1.030	.7802 .7797	.7802 .7792	.7430 .7370	.200	.335 .320	.045 .030	1/16 x 37°	.7500-16 UNJF-3A	.3185 .3150	.290	.452	.398 .378	90,900	59,500
28	29/32	1.375 1.335	1.170	.9052 .9047	.9052 .9042	.8680 .8610	.250	.385 .370	.050 .035	5/64 x 37°	.8750-14 UNJF-3A	.3820 .3780	.340	.525	.471 .451	122,000	81,500
32	1-1/32	1.550 1.510	1.315	1.0302 1.0297	1.0302 1.0292	.9930 .9860	.300	.435 .420	.060 .045	5/64 x 37°	1.0000-12 UNJF-3A	.5100 .5040	.460	.682	.618 .598	158,000	106,000

"HI-LITE", "HST", AND "HI-KOTE",  
ARE TRADEMARKS OF HI-SHEAR CORPORATION

DRAWN BY J.OBISPO	DATE 1992-01-16	TITLE HI-LITE™ PIN PROTRUDING TENSION HEAD TITANIUM 1/16 GRIP VARIATION, 1/32 OVERSIZE
APPROVED A.BROWN	DATE 1992-01-16	
REVISION (16)	DATE K. PHAM 2022-05-10	DRAWING NUMBER <b>HST412</b>

- GENERAL NOTES:**
1. Concentricity: "A" diameter 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. Oversize replacement pin for HST12 and HST112.
  - 16 8. 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 UK and European Union.
  9. After September 30th of 2015, HI-KOTE™ 4 coating per HS397 will be replaced by HI-KOTE™ 4 NC coating per HS397.

**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:**
- HST412(-)(-) = Cetyl alcohol lube per Hi-Shear Spec. 305.  
HST412AB(-)(-) = I.V.D. aluminum coating per BAC5315 with conversion coating (.0003-.0005 thick) per MIL-DTL-5541, Class 1A and cetyl alcohol lube per Hi-Shear Spec. 305.
- 16 8 HST412AG(-)(-) = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294, with color orange on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
- 16 8 HST412AP(-)(-) = 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.
- 16 8 HST412AZ(-)(-) = 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.  
HST412BJ(-)(-) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, and cetyl alcohol lube per Hi-Shear Spec. 305.
- 6 HST412CT(-)(-) = Color orange on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.  
HST412CZ(-)(-) = Color black on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
- 16 8 HST412GD(-)(-) = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 on threads only, and cetyl alcohol lube per Hi-Shear Spec. 305.
- 9 HST412HK(-)(-) = HI-KOTE™ 4 NC aluminum coating per Hi-Shear Spec. 397.
- 6 HST412K(-)(-) = Solid film lube per "Lubeco" 905.
- 6 HST412MA(-)(-) = Solid film lube per KalGard RA.
- HST412RP(-)(-) = Phosphate fluoride treat with color orange on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HST412RS(-)(-) = Phosphate fluoride treat, solid film lube per AS5272, Type I, and color orange on thread end.
- HST412RV(-)(-) = Phosphate fluoride treat, HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305.
- 16 8 HST412SU(-)(-) = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294, with color light blue on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HST412TB(-)(-) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305.
- 16 HST412UV(-)(-) = Anodize per Hi-Shear Spec. 306, Type II, HI-KOTE™ 2 solid film lube and cetyl alcohol lube per Hi-Shear Spec. 305.
- 16 HST412WF(-)(-) = Anodize per Hi-Shear Spec. 306, Type I, color blue, with color black on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HST412YW(-)(-) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292 on threads only, with color white on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
- HST412NKJ(-)(-) = 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.
- HST412NKK(-)(-) = 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.
- HST412NKL(-)(-) = 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.
- 16 HST412NAP(-)(-) = HI-KOTE™ 1 NC aluminum coating per Hi-Shear Spec. 294, cetyl alcohol lube per Hi-Shear Spec. 305.

**SPECIFICATION:** HI-LITE™ Product Specification 380.

**CODE:** First dash number indicates nominal diameter in 1/32nds of the pin which HST412 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  
HST412AP8-8

8/16 or 1/2 Maximum Grip Length  
Replaces 8/32 or 1/4 Nominal Diameter Pin  
Finish Code  
Pin Basic Part Number

HST412

DRAWING NUMBER

**HST412**

2 OF 2