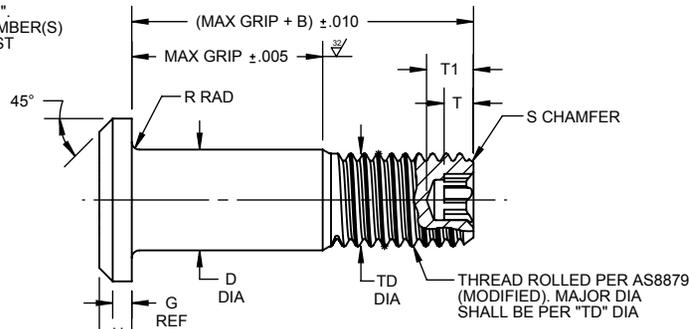
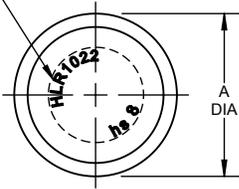
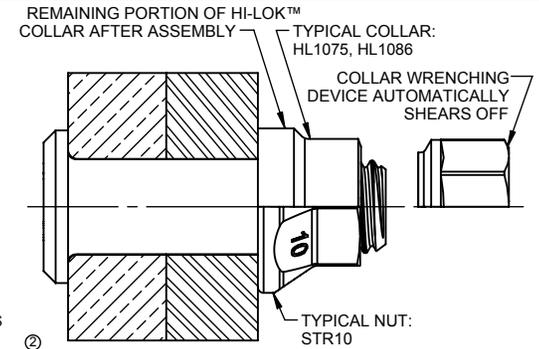
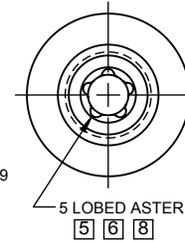


For the current list of licensed manufacturers, please visit the  
 LISI AEROSPACE website at:  
[HTTP://WWW.LISI-AEROSPACE.COM/LICENSES](http://www.lisi-aerospace.com/licenses)

INDENTED HEAD MARKING MAXIMUM DEPTH .010".  
 MANUFACTURER'S IDENTIFICATION "hs". THE NUMBER(S)  
 FOLLOWING THE BASIC NUMBER INDICATES FIRST  
 DASH NUMBER. ARRANGEMENT OPTIONAL.



**HI-LOK™ PIN WITH ASTER™ RECESS**



**RECOMMENDED COLLAR OR NUT FOR ASSEMBLY**

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

FIRST DASH NO.	PIN NOM DIA	A DIA	B REF	D DIA		TD DIA	G REF	H	R RAD	S CHAMFER REF	THREAD MODIFIED	ASTER™ RECESS			DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM
				WITHOUT ALUMINUM COATING	WITH ALUMINUM COATING							RECESS SIZE CODE	T1 DEPTH MAX	T DEPTH MIN		
5	NOTE: USE HLR1012( )6-( )															
6	13/64	.377 .357	.325	.2026 .2021	.2026 .2016	.1840 .1810	.035	.074 .064	.025 .015	1/32 X 37°	.1900-32 UNJF-3A	A5L-06	.116	.069	6,130	3,180
7	15/64	.410 .390	.355	.2338 .2333	.2338 .2328	.2100 .2070	.040	.081 .071	.025 .015	1/32 X 37°	.2160-28 UNJF-3A	A5L-07	.117	.069	8,100	4,000
8	17/64	.440 .415	.395	.2651 .2646	.2651 .2641	.2440 .2410	.045	.090 .080	.025 .015	1/32 X 37°	.2500-28 UNJF-3A	A5L-08	.118	.069	10,490	5,820
10	21/64	.505 .475	.500	.3276 .3271	.3276 .3266	.3060 .3020	.055	.112 .102	.030 .020	3/64 X 37°	.3125-24 UNJF-3A	A5L-10	.127	.070	16,000	9,200
12	25/64	.600 .565	.545	.3901 .3896	.3901 .3891	.3680 .3640	.075	.140 .130	.030 .020	3/64 X 37°	.3750-24 UNJF-3A	A5L-12	.147	.087	22,700	14,000
14	29/64	.676 .641	.635	.4526 .4521	.4526 .4516	.4310 .4260	.095	.160 .150	.030 .020	3/64 X 37°	.4375-20 UNJF-3A	A5L-14	.196	.116	30,600	18,900
16	33/64	.770 .735	.685	.5151 .5146	.5151 .5141	.4930 .4880	.095	.188 .178	.030 .020	3/64 X 37°	.5000-20 UNJF-3A	A5L-16	.236	.139	39,600	25,600

HLR1022

"HI-LOK", "HLR", AND "HI-KOTE",  
 ARE TRADEMARKS OF HI-SHEAR CORPORATION.  
 ASTER™ IS A TRADEMARK OF LISI AEROSPACE.

DRAWN BY F. CARINGELLA	DATE 2016-07-07	TITLE HI-LOK™ PIN, ASTER™ RECESS PROTRUDING TENSION HEAD TITANIUM 1/16 GRIP VARIATION, 1/64 OVERSIZE
APPROVED C. REITZ	DATE 2016-07-07	DRAWING NUMBER <b>HLR1022</b>
REVISION 2	DATE F. CARINGELLA 2017-12-05	1 OF 2

- GENERAL NOTES:**
1. Concentricity: "A" diameter to "D" diameter within .010 FIM.
  2. Dimensions are in inches and to be met after finish.
  - ② 3. Surface texture per ASME B46.1.
  4. Hole preparation per NAS618.
  - ⑤ US patent 6632057; other US & foreign patents granted and pending property of LISI AEROSPACE.
  - ⑥ Broach petals removed.
  7. Oversize replacement for HLR1012. Use HLR1032 for oversize replacement.
  - ② ⑧ Identification colorant is not allowed in the ASTER™ Recess.

**MATERIAL:** 6AL-4V titanium alloy per AMS4928 or AMS4967.

**HEAT TREAT:** 160,000 psi tensile minimum (95,000 psi shear minimum). ②

- FINISH:**
- HLR1022NKJ( )-( ) = 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.
  - HLR1022NKK( )-( ) = 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.
  - HLR1022NKL( )-( ) = 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 409.  
ASTER™ Recess per A5L-QA02.

**CODE:** First dash number indicates nominal diameter in 1/32nds of the pin which HLR1022 oversize pin replaces.  
Second dash number indicates maximum grip in 1/16ths. See Finish note for explanation of code letters.

**HOW TO ORDER** Pin Part Number

② **EXAMPLES:** HLR1022 NKJ 8-8

