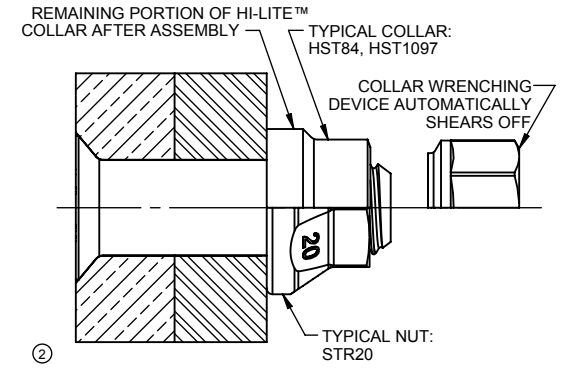
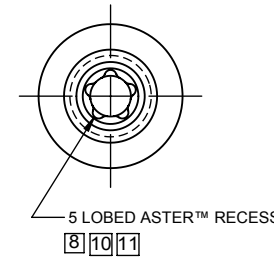


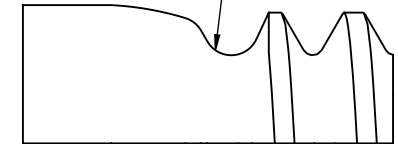
HI-LITE™ PIN WITH ASTER™ RECESS



RECOMMENDED COLLAR OR NUT FOR ASSEMBLY

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

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



VIEW A

HI-LITE™ THREAD TRANSITION AREA.  
 SEE SPECIFICATION FOR INSPECTION

| FIRST<br>DASH<br>NO. | PIN<br>NOM<br>DIA | A<br>DIA       | A'<br>DIA<br>MIN | B<br>REF | D DIA                          |                             | TD<br>DIA      | F    | H              | R<br>RAD     | Z<br>MAX | S<br>CHAMFER<br>REF | THREAD<br>MODIFIED  | ASTER™ RECESS          |                    |                   | DOUBLE<br>SHEAR<br>POUNDS<br>MINIMUM | TENSION<br>POUNDS<br>MINIMUM |
|----------------------|-------------------|----------------|------------------|----------|--------------------------------|-----------------------------|----------------|------|----------------|--------------|----------|---------------------|---------------------|------------------------|--------------------|-------------------|--------------------------------------|------------------------------|
|                      |                   |                |                  |          | WITHOUT<br>ALUMINUM<br>COATING | WITH<br>ALUMINUM<br>COATING |                |      |                |              |          |                     |                     | RECESS<br>SIZE<br>CODE | T1<br>DEPTH<br>MAX | T<br>DEPTH<br>MIN |                                      |                              |
| 5                    | 3/16              |                |                  |          |                                |                             |                |      |                |              |          |                     |                     |                        |                    |                   |                                      |                              |
|                      |                   |                |                  |          |                                |                             |                |      |                |              |          |                     |                     |                        |                    |                   |                                      |                              |
| 6                    | 13/64             | .3016<br>.2966 | .270             | .300     | .2026<br>.2021                 | .2026<br>.2016              | .1840<br>.1810 | .005 | .0415<br>.0394 | .030<br>.020 | .015     | 1/32 X 37°          | .1900-32<br>UNJF-3A | A5L-06                 | .116               | .069              | 6,130                                | 2,000                        |
| 7                    | 15/64             | .3403<br>.3355 | .309             | .315     | .2338<br>.2333                 | .2338<br>.2328              | .2100<br>.2070 | .005 | .0512<br>.0492 | .030<br>.020 | .015     | 1/32 X 37°          | .2160-28<br>UNJF-3A | A5L-07                 | .117               | .069              | 8,100                                | 3,100                        |
| 8                    | 17/64             | .3948<br>.3898 | .363             | .330     | .2651<br>.2646                 | .2651<br>.2641              | .2440<br>.2410 | .006 | .0544<br>.0523 | .030<br>.020 | .015     | 1/32 X 37°          | .2500-28<br>UNJF-3A | A5L-08                 | .118               | .069              | 10,490                               | 3,700                        |
| 10                   | 21/64             | .4739<br>.4689 | .442             | .390     | .3276<br>.3271                 | .3276<br>.3266              | .3060<br>.3020 | .007 | .0614<br>.0593 | .040<br>.030 | .015     | 3/64 X 37°          | .3125-24<br>UNJF-3A | A5L-10                 | .127               | .070              | 16,000                               | 5,000                        |
| 12                   | 25/64             | .5604<br>.5554 | .529             | .430     | .3901<br>.3896                 | .3901<br>.3891              | .3680<br>.3640 | .008 | .0714<br>.0693 | .040<br>.030 | .015     | 3/64 X 37°          | .3750-24<br>UNJF-3A | A5L-12                 | .147               | .087              | 22,700                               | 7,200                        |
| 14                   | 29/64             | .6680<br>.6620 | .620             | .495     | .4526<br>.4521                 | .4526<br>.4516              | .4310<br>.4260 | .009 | .0904<br>.0879 | .050<br>.040 | .022     | 3/64 X 37°          | .4375-20<br>UNJF-3A | A5L-14                 | .196               | .116              | 30,600                               | 10,000                       |
| 16                   | 33/64             | .7540<br>.7480 | .706             | .535     | .5151<br>.5146                 | .5151<br>.5141              | .4930<br>.4880 | .010 | .1002<br>.0977 | .050<br>.040 | .022     | 3/64 X 37°          | .5000-20<br>UNJF-3A | A5L-16                 | .236               | .139              | 39,600                               | 13,500                       |

NOTE: USE HSTR11( )6-( )

HSTR111

|   |                                    |   |  |
|---|------------------------------------|---|--|
| "HI-LITE", "HSTR", AND "HI-KOTE"<br>ARE TRADEMARKS OF HI-SHEAR CORPORATION.<br>ASTER™ IS A TRADEMARK OF LISI AEROSPACE. |                                    |   |  |
| DRAWN BY<br>F.CARINGELLA  | DATE<br>2016-07-07                 | TITLE<br>HI-LITE™ PIN, ASTER™ RECESS<br>100° FLUSH SHEAR HEAD<br>TITANIUM<br>1/16 GRIP VARIATION, 1/64 OVERSIZE |  |
| APPROVED<br>C.REITZ   | DATE<br>2016-07-07                 |   |  |
| REVISION<br>2   | DATE<br>F.CARINGELLA<br>2017-11-27 | DRAWING NUMBER<br><b>HSTR111</b>  |  |

- 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 "H" is dimensioned from maximum "D" diameter.
  4. Dimensions are in inches and to be met after finish.
  5. Surface texture per ASME B46.1.
  6. Hole preparation per NAS618.
  - 7 Curved or flat edge manufacturer's option.
  - 8 US patent 6632057; other US & foreign patents granted and pending property of LISI AEROSPACE.
  9. Oversize replacement for HSTR111. Use HSTR411 for oversize replacement.
  - 10 Broach petals removed.
  - 11 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 for sizes up to 3/4).

**FINISH:** HSTR111NKK( )-( ) = 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.

HSTR111NKK( )-( ) = 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.

HSTR111NKL( )-( ) = 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-LITE™ Product Specification 410.  
 ASTER™ Recess per A5L-QA02.

**CODE:** First dash number indicates nominal diameter in 1/32nds of the pin which HSTR111 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:** HSTR111 NKJ 8-8

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

HSTR111

DRAWING NUMBER

**HSTR111**

2 OF 2