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[HTTP://WWW.LISI-AEROSPACE.COM/LICENSES](http://WWW.LISI-AEROSPACE.COM/LICENSES)

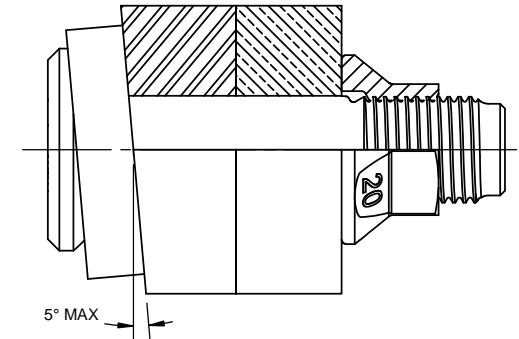
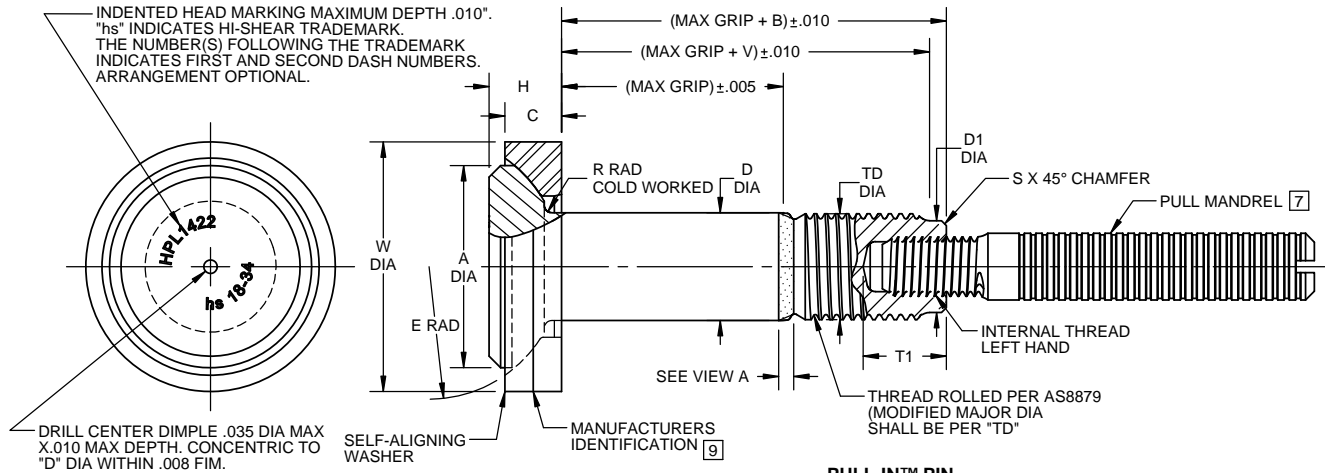


TABLE 1

PULL-IN™ PIN

EXAMPLE OF PULL-IN™ PIN AND NUT/COLLAR AFTER ASSEMBLY

FIRST DASH NO.	PIN NOM DIA	A DIA REF	B REF	D DIA	TD DIA	D1 DIA	W DIA	H MAX	S CHAMFER REF	V REF	E RAD	R RAD ROLLED	C REF	THREAD MODIFIED	INTERNAL THREAD LEFT HAND ⑩			DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM	TENSION-TENSION FATIGUE POUNDS MAX
															T1 MAX	THREAD SIZE UNJF-2B	LOAD POUNDS MAX			
18	37/64	1.051	.845	.5771 .5761	.5550 .5500	.4783 .4764	1.307 1.300	.382	.020	.701	.688	.040 .025	.303	.5625-18 UNJF-3A	.465	5/16-SP	11,500	49,900	32,400	11,300
20	41/64	1.130	.935	.6396 .6386	.6180 .6120	.5413 .5394	1.437 1.430	.405	.020	.733	.750	.040 .025	.319	.6250-18 UNJF-3A	.520	3/8-SP	14,200	61,200	41,000	14,400
24	49/64	1.291	1.125	.7646 .7636	.7430 .7370	.6575 .6555	1.689 1.681	.547	.020	.927	.875	.045 .030	.358	.7500-16 UNJF-3A	.625	7/16-SP	19,109	87,400	59,500	21,000
28	57/64	1.449	1.315	.8896 .8886	.8680 .8610	.7717 .7697	1.921 1.913	.634	.020	1.021	1.000	.050 .035	.390	.8750-14 UNJF-3A	.725	1/2-SP	31,500	115,000	77,500	28,800
32	1-1/64	1.602	1.500	1.0146 1.0136	.9930 .9860	.8819 .8799	2.134 2.126	.712	.020	1.151	1.125	.060 .045	.437	1.0000-12 UNJF-3A	.830	9/16-SP	38,218	145,200	100,900	37,600

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

- GENERAL NOTES:**
- Concentricity: "A" to "D" diameter within .010 FIM.
  - Dimensions in inches and to be met after finish.
  - Surface texture per ASME B46.1.
  - Hole preparation per HSL/HPL-IS01: PULL-STEM™ / PULL-IN™ fastener installation specification for HSL/HPL pins.
  - HPL1422 is the oversize replacement for HPL1412.
  - Use HPL1432 for oversize replacement.
  - Mandrel is sold separately.
  - Product in accordance with LISI AEROSPACE Product Specification N°415.
  - One line indicates Blanc Aero Industries, France as manufacturer.
  - The maximum allowable installation load must not exceed the maximum load values in table or thread/mandrel failure may occur.
  - After February 21st of 2015, HI-KOTE™ 1 aluminum pigmented coating per Hi-Shear Spec. 294 will be replaced by REACH compliant HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 on fasteners coated in the European Union.

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



VIEW A

HI-LITE™ THREAD TRANSITION AREA  
SEE SPECIFICATION FOR INSPECTION

"HI-KOTE", "HI-LITE", "PULL-IN" AND "HPL", ARE TRADEMARKS OF HI-SHEAR CORPORATION

DRAWN BY ASSYSTEM	DATE 2005-03-12	TITLE PULL-IN™ PIN SELF-ALIGNING TENSION HEAD INTERFERENCE FIT TITANIUM 1/16 GRIP VARIATION, 1/64 OVERSIZE
APPROVED J.GOYER	DATE 2005-03-12	
REVISION ②	DATE M.BEARD 2017-10-26	DRAWING NUMBER <b>HPL1422</b>

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FINISH TABLE

Part	Finish, Lube, ID Code	Finish	Lube	Identification
Titanium Pin	11 KM	HI-KOTE™ 1 Aluminum Pigmented Coating per Hi-Shear Spec. 294	Cetyl alcohol lube per Hi-Shear Spec. 305	White color on pin end
	NKM	HI-KOTE™ 1 NC Aluminum Pigmented Coating per Hi-Shear Spec. 294		
Titanium Washer	11 APW	HI-KOTE™ 1 Aluminum Pigmented Coating per Hi-Shear Spec. 294	Cetyl alcohol lube per Hi-Shear Spec. 305	White spot on outside diameter
	NAPW	HI-KOTE™ 1 NC Aluminum Pigmented Coating per Hi-Shear Spec. 294		

**MATERIAL:** Pin = 6Al-4V Titanium alloy per AMS4928 or AMS4967.  
 ② Washer = 6Al-4V Titanium alloy per AMS4928 or AMS4967.

**HEAT TREAT:** Pin = 160,000 psi tensile minimum and 95,000 psi shear minimum for sizes up to 3/4.  
 ② 150,000 psi tensile minimum and 90,000 psi shear minimum for 7/8 and larger.  
 Washer = 160,000 psi tensile minimum and 95,000 psi shear minimum.

**CODE:** First dash number indicates nominal diameter in 1/32nds of the pin which HPL1422 oversize pin replaces.  
 Second dash number indicates maximum grip in 1/16ths.  
 See "Finish" note for explanation of code letters.

**HOW TO ORDER** Pin-Washer Assembly Part Number  
 ② **EXAMPLE:** HPL1422 NKM 18 NAPW 34

└─ 34/16 Maximum Grip Length  
 └─ Washer finish code  
 └─ 18/32 or 9/16 Nominal Diameter Pin  
 └─ Finish Code  
 └─ Pin Basic Part Number

HPL1422

DRAWING NUMBER

**HPL1422**

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