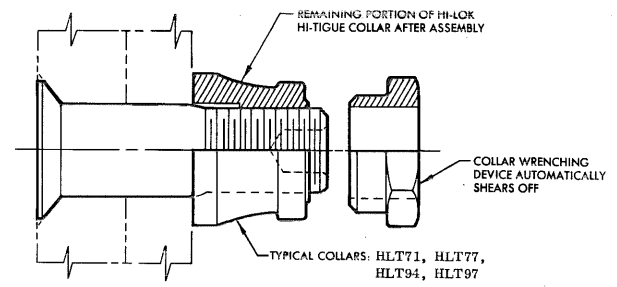
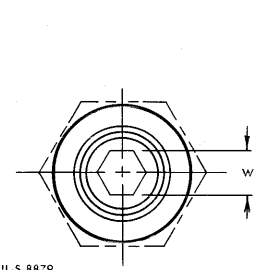
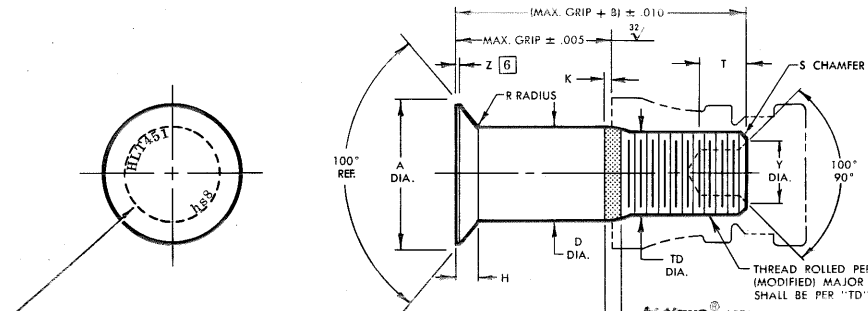


# STANDARDS COMMITTEE FOR HI-LOK® HI-TIGUE® PRODUCTS

2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA 90509 U.S.A.

HI-SHEAR CORPORATION, U.S.A. (Patent Holder) CAGE No. 73197  
 A Subsidiary of GFI Industries, France  
 AIR INDUSTRIES CO., INC. (Licensee - U.S. & Canada) CAGE No. 06725  
 HUCK INTERNATIONAL, INC., Deutsch Operation, U.S.A. (Licensee) CAGE No. 97928  
 SPS TECHNOLOGIES, U.S.A. (Licensee) CAGE No. 56878  
 FAIRCHILD Aerospace Fastener Division, U.S.A. (Licensee) CAGE No. 92215  
 WEST COAST AEROSPACE INC., U.S.A. (Licensee) CAGE No. 60516  
 (Pins & Steel Collars)

HI-SHEAR FASTENERS EUROPE, LTD., U.K. (Licensee) CAGE No. 0LB68  
 A Subsidiary of GFI Industries, France  
 HUCK INTERNATIONAL GmbH & Co. Germany (Licensee - EEC Countries)  
 ST. CHAMOND GRANAT, S.A. France (Licensee - EEC Countries)  
 SIMMONDS, S.A. France (Licensee - EEC Countries - Collars)  
 TOKYO SCREW COMPANY, Japan (Licensee - Japan)



INDENTED HEAD MARKING MAXIMUM DEPTH .010".  
 MANUFACTURER'S TRADEMARK PER HI-SHEAR SPEC. 363. THE NUMBER(S) FOLLOWING THE TRADEMARK INDICATE FIRST DASH NUMBER. ARRANGEMENT OPTIONAL.

HI-LOK HI-TIGUE PIN

HI-LOK HI-TIGUE PIN AND COLLAR AFTER ASSEMBLY

FIRST DASH NO.	NOM. DIA.	A DIA.	B REF.	D DIA. [7]		TD DIA.	F	H	K REF.	R RAD.	Z MAX.	S CHAMFER REF.	THREAD	SOCKET			DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM
				WITHOUT HI-KOTE 1 OR HI-KOTE 2	WITH HI-KOTE 1 OR HI-KOTE 2									W HEX.	T DEPTH	Y DIA.		
4	1/8	.2219 .2171	.294	.1375 .1370	.1375 .1365	.1335 .1310	.003	.0354 .0334	.010	.020 .010	.010	1/32" x 37°	6-32UNJC-3A Modified	.0645 .0635	.100 .080	[8]	2,840	950
5	5/32	.2612 .2564	.312	.1635 .1630	.1635 .1625	.1595 .1570	.004	.0408 .0388	.013	.025 .015	.012	1/32" x 37°	8-32UNJC-3A Modified	.0801 .0791	.100 .080	[8]	4,010	1,290
6	3/16	.3016 .2966	.325	.1895 .1890	.1895 .1885	.1840 .1810	.005	.0470 .0449	.016	.030 .020	.015	1/32" x 37°	10-32UNJF-3A Modified	.0806 .0791	.100 .080	.119 .104	5,380	2,000
8	1/4	.3948 .3898	.395	.2495 .2490	.2495 .2485	.2440 .2410	.006	.0610 .0589	.021	.030 .020	.015	1/32" x 37°	1/4-28UNJF-3A Modified	.0967 .0947	.110 .090	.142 .122	9,300	3,700
10	5/16	.4739 .4689	.500	.3120 .3115	.3120 .3110	.3060 .3020	.007	.0679 .0658	.026	.040 .030	.015	3/64" x 37°	5/16-24UNJF-3A Modified	.1295 .1270	.130 .110	.180 .160	14,600	5,000
12	3/8	.5604 .5554	.545	.3745 .3740	.3745 .3735	.3680 .3640	.008	.0780 .0759	.030	.040 .030	.015	3/64" x 37°	3/8-24UNJF-3A Modified	.1617 .1582	.160 .140	.217 .197	21,000	7,200
14	7/16	.6680 .6620	.635	.4370 .4365	.4370 .4360	.4310 .4260	.009	.0969 .0944	.035	.050 .040	.022	3/64" x 37°	7/16-20UNJF-3A Modified	.1930 .1895	.190 .170	.253 .233	28,600	10,000
16	1/2	.7540 .7480	.685	.4995 .4990	.4995 .4985	.4930 .4880	.010	.1068 .1043	.039	.050 .040	.022	3/64" x 37°	1/2-20UNJF-3A Modified	.2242 .2207	.220 .200	.289 .269	37,300	13,500
18	9/16	.8380 .8310	.770	.5615 .5610	.5615 .5605	.5550 .5500	.010	.1160 .1130	.039	.050 .040	.025	1/16" x 37°	9/16-18UNJF-3A Modified	.2555 .2520	.260 .240	.326 .306	47,200	17,000
20	5/8	.9250 .9180	.825	.6240 .6235	.6240 .6230	.6180 .6120	.010	.1260 .1230	.044	.050 .040	.025	1/16" x 37°	5/8-18UNJF-3A Modified	.2555 .2520	.260 .240	.326 .306	58,300	21,000
24	3/4	1.0970 1.0850	1.050	.7490 .7485	.7490 .7480	.7430 .7370	.012	.1460 .1410	.044	.050 .040	.025	1/16" x 37°	3/4-16UNJF-3A Modified	.3185 .3150	.330 .300	.398 .378	83,900	30,700
28	7/8	1.3197 1.3030	1.210	.8740 .8735	.8740 .8730	.8680 .8610	.014	.1870 .1800	.045	.050 .040	.025	5/64" x 37°	7/8-14UNJF-3A Modified	.3820 .3780	.400 .370	.471 .451	114,000	42,000
32	1	1.5186 1.4995	1.390	.9990 .9985	.9990 .9980	.9930 .9860	.014	.2180 .2100	.045	.050 .040	.025	5/64" x 37°	1-12UNJF-3A Modified	.5100 .5040	.520 .490	.618 .598	149,000	55,000

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

**GENERAL NOTES:**

- Head edge out of roundness shall not exceed "F".
- Concentricity: Conical surface of head to "D" diameter within .005 FIM.
- "H" is dimensioned from maximum "D" diameter.
- Surface texture per ANSI B46.1.
- Hole preparation per NAS618.
- Curved or flat edge manufacturer's option.
- Maximum "D" diameter may be increased by .0002 to allow for solid film lube application.
- Evidence of broken edge across points.
- Use HLT435 for oversize replacement.

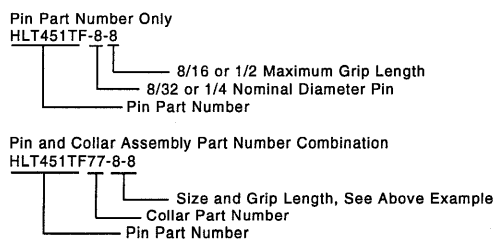
**SPECIFICATION:**  
**CODE:**  
**HOW TO ORDER EXAMPLE:**

**MATERIAL:**  
**HEAT TREAT:**  
**FINISH:**

- 6Al-4V titanium alloy per Spec. AMS4928 or AMS4967.  
 95,000 psi shear minimum.  
 HLT451(-)(-) = Grit blast top of head, and cetyl alcohol lube per Hi-Shear Spec. 305.  
 HLT451AP(-)(-) = Hi-Kote 1 aluminum coating per Hi-Shear Spec. 294, and cetyl alcohol lube per Hi-Shear Spec. 305.  
 HLT451FZ(-)(-) = Grit blast top of head, Hi-Kote 2 solid film lube on threads only per Hi-Shear Spec. 292.  
 HLT451TB(-)(-) = Hi-Kote 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305.

HLT451TF(-)(-) = Hi-Kote 2 solid film lube per Hi-Shear Spec. 292.  
 HLT451MA(-)(-) = Solid film lube per Kal-Gard RA.  
 Hi-Lok Hi-Tigue Product Specification 342.

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.



DRAWN DATE		TITLE	
D.P.S.	4-5-83	HI-LOK® HI-TIGUE® PIN	
APPROVED DATE		100° FLUSH SHEAR HEAD	
R.Ting	4-6-83	TITANIUM	
REVISION DATE		1/16" GRIP VARIATION	
10	J. Henderson 7-21-97	DRAWING NUMBER	
		<b>HLT451</b>	

HLT451