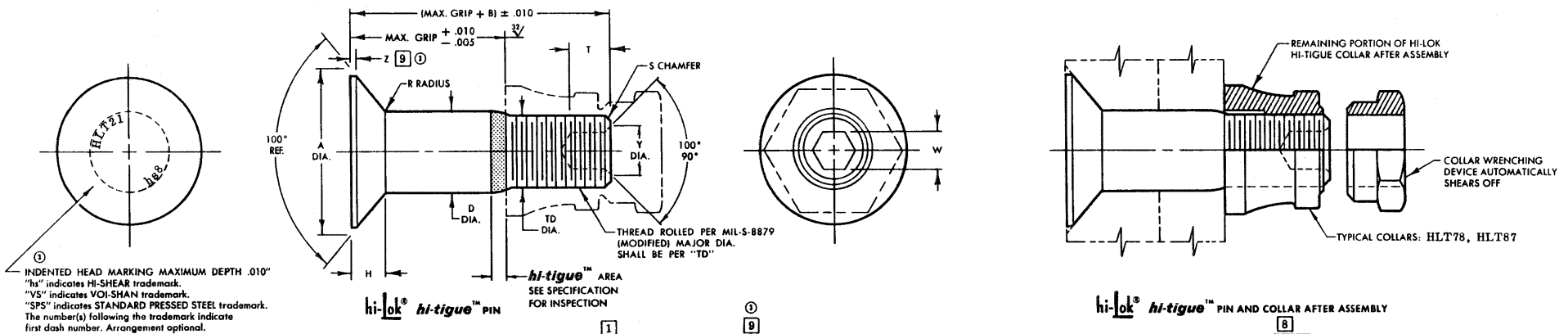


STANDARDS COMMITTEE FOR HI-LOK® HI-TIGUE™ PRODUCTS
2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA 90509

① HI-SHEAR CORPORATION, U.S.A. (Patent Holder) U.S. Federal Code I.D. No. 73197
Division of Hi-Shear Industries Inc.
VOI-SHAM, Division of VSI Corp., U.S.A. (Licensee) U.S. Federal Code I.D. No. 92215
SPS TECHNOLOGIES, U.S.A. (Licensee) U.S. Federal Code I.D. No. 56878
LITTON FASTENING SYSTEMS, U.S.A. (Licensee) U.S. Federal Code I.D. No. 97928
KAMAX-WERKE, Germany (Licensee)
Rudolph Kellerman GmbH & Co.
ST. CHAMOND-GRANAT, S.A. France (Licensee)
TOKYO SCREW COMPANY, Japan (Licensee)



① INDENTED HEAD MARKING MAXIMUM DEPTH .010"
"hs" indicates HI-SHEAR trademark.
"vs" indicates VOI-SHAM trademark.
"SPS" indicates STANDARD PRESSED STEEL trademark.
The number(s) following the trademark indicate first dash number. Arrangement optional.

FIRST DASH NO.	NOM. DIA.	A DIA.	B REF.	D DIA.	TD DIA.	F	H	R RAD.	Z MAX.	S CHAMFER REF.	THREAD	SOCKET			DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM	MIN. GRIP LENGTH
												W HEX.	T DEPTH	Y DIA.			
-5	5/32	.3304 .3256	.312	.1695 .1685	.1595 .1570	.004	.0675 .0655	.025 .015	.010	1/32" x 45°	8-32UNJC-3A Modified	.0801 .0791	.100 .080	.104 .094	4,210	2,180	-2
-6	3/16	.3813 .3765	.325	.1955 .1945	.1840 .1810	.005	.0780 .0760	.030 .020	.015	1/32" x 45°	10-32UNJF-3A Modified	.0806 .0791	.100 .080	.119 .104	5,550	3,180	-3
-8	1/4	.5066 .5018	.395	.2555 .2545	.2440 .2410	.006	.1054 .1034	.030 .020	.015	1/32" x 45°	1/4-28UNJF-3A Modified	.0967 .0947	.110 .090	.142 .122	9,620	5,820	-3
-10	5/16	.6335 .6287	.500	.3180 .3170	.3060 .3020	.007	.1324 .1304	.040 .030	.015	3/64" x 45°	5/16-24UNJF-3A Modified	.1285 .1270	.130 .110	.180 .160	14,890	9,200	-3
-12	3/8	.7604 .7556	.545	.3805 .3795	.3680 .3640	.008	.1594 .1574	.040 .030	.015	3/64" x 45°	3/8-24UNJF-3A Modified	.1617 .1582	.180 .140	.217 .197	21,430	14,000	-4
-14	7/16	.8884 .8812	.635	.4430 .4420	.4310 .4260	.009	.1869 .1839	.050 .040	.022	3/64" x 45°	7/16-20UNJF-3A Modified	.1930 .1895	.190 .170	.253 .233	29,000	18,900	-5
-16	1/2	1.0139 1.0068	.685	.5055 .5045	.4930 .4880	.010	.2133 .2103	.050 .040	.022	3/64" x 45°	1/2-20UNJF-3A Modified	.2242 .2207	.220 .200	.289 .269	37,900	25,600	-5

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 FIR.
 - "H" is dimensioned from maximum "D" diameter.
 - Dimensions to be met after finish.
 - Surface texture per ANSI B46.1.
 - Use HLT121 for oversize replacement.
 - Install per Hi-Shear Spec. 299.
 - Minimum required for head and Hi-Tigue feature.
 - Curved or flat edge manufacturer's option.

MATERIAL: Alloy steel per MIL-S-5000, MIL-S-5626 or MIL-S-6049.

HEAT TREAT: 160,000-180,000 psi tensile per MIL-H-6875.

① FINISH: HLT21-()-() = Cadmium plate per QQ-P-416, Type II, Class 2, and cetyl alcohol lube per Hi-Shear Spec. 305.

SPECIFICATION: HI-Lok Hi-Tigue Product Specification 342.

CODE: First dash number indicates nominal diameter in 1/32nds. Second dash number indicates maximum grip in 1/16ths.

HOW TO ORDER EXAMPLES:

Pin Part Number Only
HLT21-8-8
 ↳ 8/16 or 1/2 Maximum Grip Length
 ↳ 8/32 or 1/4 Nominal Diameter Pin
 ↳ Pin Part Number

Pin and Collar Assembly Part Number Combination
HLT2178-8-8
 ↳ Size and Grip Length, See Above Example
 ↳ Collar Part Number
 ↳ Pin Part Number

① U.S. patents 3,138,987; 3,390,906; 3,578,367; and foreign patents. "Hi-Lok," "HL," "Hi-Tigue," and "HLT" are Registered Trademarks of Hi-Shear Corporation.	
DRAWN VAN	DATE 2-10-77
APPROVED J.B. Wilkey	DATE 2-10-77
REVISION ③	DATE D. P. S. 3-3-81
hi-lok hi-tigue™ PIN 100° FLUSH MS24694 TENSION HEAD ALLOY STEEL 1/16" GRIP VARIATION DRAWING NUMBER HLT21	

HLT21