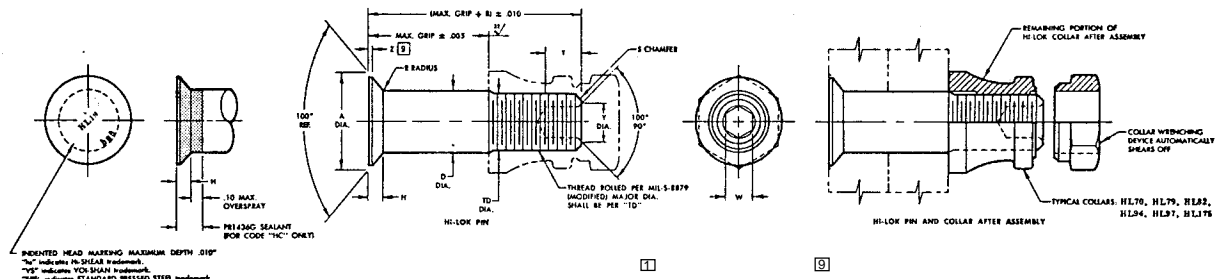
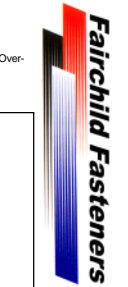


STANDARDS COMMITTEE FOR HI-LOK[®] PRODUCTS

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., U.S.A.
 AIRCRAFT FASTENERS (Forged Parts) LTD., UK (Licensee)
 Division of Hi-Shear Industries Inc., U.S.A.
 VOI-SHAN, 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
 size Pins & Steel Collars
 LITTON FASTENING SYSTEMS, U.S.A. (Licensee) — U.S. Federal Code I.D. No. 97928
 Division of Litton Systems Inc., U.S.A.
 ST. CHAMOND-GRAMAT, S.A. France (Licensee — EEC Countries)
 KAMAX-WERKE, Germany (Licensee — EEC Countries)
 Rudolph Kellerman GmbH & Co. (Licensee — EEC Countries— Collars)
 SIMMONDS, S.A. France (Licensee — EEC Countries— Collars)
 TOKYO SCREW COMPANY, Japan (Licensee — Japan)
 WEST COAST AEROSPACE INC., U.S.A. (Licensee)
 U.S. Federal Code I.D. No. 60516



INDENTED HEAD MARKING MAXIMUM DEPTH .010"
 "H" indicates HI-SHEAR trademark.
 "V" indicates VOI-SHAN trademark.
 "SP" indicates STANDARD PRESTRESS STEEL trademark.
 The number or numbers following the trademark indicate the dash number. Arrangement optional.

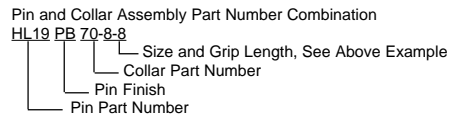
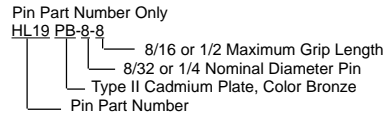
FIRST DASH NO.	NOM. DIA.	A DIA.	B REF.	D DIA.	TD DIA.	F	H	R RAD.	Z MAX.	S CHAMFER REF.	THREAD	SOCKET			DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM
												w HEX.	T DEPTH	Y DIA.		
-5	5/32	.2612 .2564	.312	.1635 .1625	.1595 .1570	.004	.0410 .0390	.025 .015	.010	1/32" x 45°	8-32UNJC-3A Modified	.0801 .0791	.135 .115	B	4,010	1,290
-6	3/16	.3016 .2966	.325	.1895 .1885	.1840 .1810	.005	.0470 .0450	.030 .020	.015	1/32" x 45°	10-32UNJF-3A Modified	.0806 .0791	.135 .115	.119 .104	5,380	2,000
-8	1/4	.3948 .3898	.395	.2495 .2485	.2440 .2410	.006	.0610 .0590	.030 .020	.015	1/32" x 45°	1/4-28UNJF-3A Modified	.0967 .0947	.150 .130	.142 .122	9,300	3,700
-10	5/16	.4739 .4689	.500	.3120 .3110	.3060 .3020	.007	.0680 .0660	.040 .030	.015	3/64" x 45°	5/16-24UNJF-3A Modified	.1295 .1270	.170 .150	.180 .160	14,600	5,000
-12	3/8	.5604 .5554	.545	.3745 .3735	.3680 .3640	.008	.0780 .0760	.040 .030	.015	3/64" x 45°	3/8-24UNJF-3A Modified	.1617 .1582	.200 .180	.217 .197	21,000	7,200
-14	7/16	.6680 .6620	.635	.4370 .4360	.4310 .4260	.009	.0969 .0944	.050 .040	.022	3/64" x 45°	7/16-20UNJF-3A Modified	.1930 .1895	.230 .210	.253 .233	28,600	10,000
-16	1/2	.7540 .7480	.685	.4995 .4985	.4930 .4880	.010	.1068 .1043	.050 .040	.022	3/64" x 45°	1/2-20UNJF-3A Modified	.2242 .2207	.260 .240	.289 .269	37,300	13,500
-18	9/16	.8380 .8310	.770	.5615 .5605	.5550 .5500	.010	.1160 .1130	.050 .040	.022	1/16" x 45°	9/16-18UNJF-3A Modified	.2555 .2520	.290 .270	.326 .306	47,200	17,000
-20	5/8	.9250 .9180	.825	.6240 .6230	.6180 .6120	.010	.1260 .1230	.050 .040	.025	1/16" x 45°	5/8-18UNJF-3A Modified	.2555 .2520	.330 .305	.326 .306	58,300	21,000
-24	3/4	1.0970 1.0850	1.050	.7490 .7480	.7430 .7370	.012	.1460 .1410	.050 .040	.030	1/16" x 45°	3/4-16UNJF-3A Modified	.3185 .3150	.395 .365	.398 .378	83,900	30,700
-28	7/8	1.3197 1.3030	1.210	.8740 .8730	.8680 .8610	.014	.1870 .1800	.050 .040	.035	5/64" x 45°	7/8-14UNJF-3A Modified	.3820 .3780	.455 .425	.471 .451	114,000	42,000
-32	1	1.5186 1.4995	1.390	.9990 .9980	.9930 .9860	.014	.2180 .2100	.050 .040	.035	5/64" x 45°	1-12UNJF-3A Modified	.5100 .5040	.580 .550	.618 .598	149,000	55,000

GENERAL NOTES:

- Head edge out of roundness shall not exceed "F".
- Concentricity: Conical surface of head to "D" diameter within .005 FIR.
- "H" dimensioned from maximum "D" diameter.
- Dimensions to be met after finish.
- Surface texture per ANSI B46.1.
- Hole preparation per NAS618.
- Use HL63 for oversize replacement.
- Evidence of broken edge across points.
- Curved or flat edge manufacturer's option.

CODE: 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.

HOW TO ORDER EXAMPLES:



MATERIAL: Alloy steel per Spec. MIL-S-5000. MIL-S-5626 or MIL-S-6049.
 HEAT TREAT: 95,000 psi shear minimum (160,000-180,000 psi tensile per Spec. MIL-H-6875).
 FINISH: HL19(-)(-) = Cadmium plate per Spec. QQ-P-416 Type I, Class 2, and cetyl alcohol lube per Hi-Shear Spec. 305.
 HL19HC(-)(-) = Cadmium plate per Spec. QQ-P-416, Type II, Class 2, and apply precoat No. PR1436G sealant (.002-.005 thick) plus cetyl alcohol lube per Hi-Shear Spec. 305.
 HL19KD(-)(-) = Aluminum coating per Boeing BMS 10-85, Type I, Class B, with color code black on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
 HL19FB(-)(-) = Cadmium plate per Spec. QQ-P-416, Type II, Class 2, color bronze and cetyl alcohol lube per Hi-Shear Spec. 305.
 HL19PH(-)(-) = Cadmium plate per Spec. QQ-P-416, Type II, Class 2, black finish per unichrome dip Bulletin 65-B-Cd, and cetyl alcohol lube per Hi-Shear Spec. 305.
 HL19TF(-)(-) = Cadmium plate per QQ-P-416, Type III, Class 2, and Hi-Kote 2 solid film lube per Hi-Shear Spec. 292.
 SPECIFICATION: Hi-Lok Product Specification 342.

U.S. patents 2,882,773; 2,927,491; 2,940,495; 3,027,789; 3,138,987; design patent 191,883 other U.S. and Foreign patents granted and pending properties of "Hi-Lok" and "HL" are Registered Trademarks of Hi-Shear Corporation.

DRAWN J.C.S	DATE 7-19-62	hi-lok[®] PIN 100° FLUSH SHEAR HEAD ALLOY STEEL 1/16" GRIP VARIATION
APPROVED Cessna	DATE 7-29-62	
REVISION ②	DATE D. P. S. 10-9-79	DRAWING NUMBER HL19

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HL19