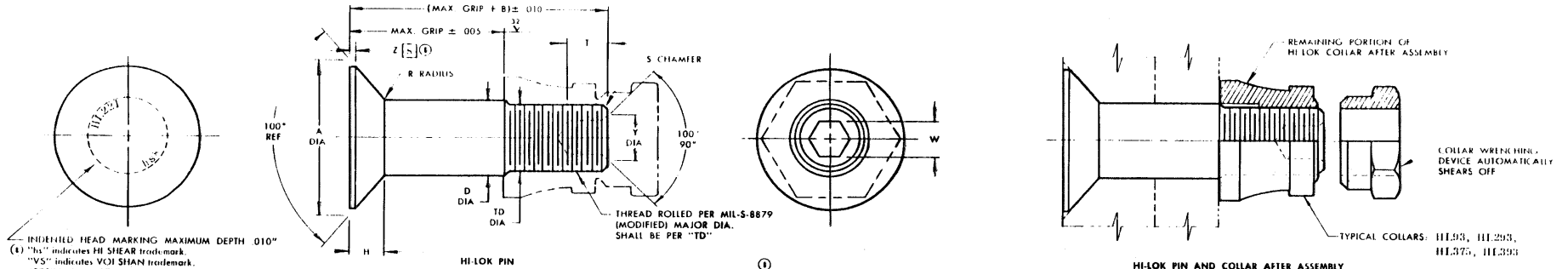


**STANDARDS COMMITTEE
FOR HI-LOK[®] PRODUCTS**
2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA 90509

HI-SHEAR CORPORATION (Patent Holder) — Federal Code Ident. No. 73197
VOI-SHAN DIV., VSI CORP. (Licensee) — Federal Code Ident. No. 92215
STANDARD PRESSED STEEL CO. (Licensee) — Federal Code Ident. No. 56878



INDENTED HEAD MARKING MAXIMUM DEPTH .010"
(1) "hs" indicates HI-SHEAR trademark.
"VS" indicates VOI-SHAN trademark.
"SPS" indicates STANDARD PRESSED STEEL trademark.
The number or numbers 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			**		
												W HEX.	T DEPTH	Y DIA.	DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM	
-5	13/64																
NOTE: Use HL65-6																	
-6	7/32	.3813 .3765	.325	.2182 .2172	.1840 .1810	.005	.0684 .0664	.030 .020	.015	1/32" x 45°	10-32UNJF-3A Modified	.0806 .0791	.135 .115	.119 .104	7,100	3,180	
-8	9/32	.5066 .5018	.395	.2807 .2797	.2440 .2410	.006	.0948 .0928	.030 .020	.015	1/32" x 45°	1/4-28UNJF-3A Modified	.0967 .0947	.150 .130	.142 .122	11,800	5,820	
-10	11/32	.6335 .6287	.500	.3432 .3422	.3060 .3020	.007	.1218 .1198	.040 .030	.015	3/64" x 45°	5/16-24UNJF-3A Modified	.1295 .1270	.170 .150	.180 .160	17,600	9,200	
-12	13/32	.7604 .7556	.545	.4057 .4047	.3680 .3640	.008	.1488 .1468	.040 .030	.015	3/64" x 45°	3/8-24UNJF-3A Modified	.1617 .1582	.200 .180	.217 .197	24,600	14,000	
-14	15/32	.8884 .8812	.635	.4682 .4672	.4310 .4260	.009	.1763 .1733	.050 .040	.022	3/64" x 45°	7/16-20UNJF-3A Modified	.1930 .1895	.230 .210	.253 .233	32,700	18,900	
-16	17/32	1.0139 1.0068	.685	.5307 .5297	.4930 .4880	.010	.2027 .1997	.050 .040	.022	3/64" x 45°	1/2-20UNJF-3A Modified	.2242 .2207	.260 .240	.289 .269	42,000	25,600	
-18	19/32	1.1408 1.1337	.770	.5927 .5917	.5550 .5500	.010	.2300 .2270	.050 .040	.025	1/16" x 45°	9/16-18UNJF-3A Modified	.2555 .2520	.290 .270	.326 .306	52,400	32,400	
-20	21/32	1.2723 1.2651	.825	.6552 .6542	.6180 .6120	.010	.2589 .2559	.050 .040	.025	1/16" x 45°	5/8-18UNJF-3A Modified	.2555 .2520	.330 .305	.326 .306	64,100	41,000	
-24	25/32	1.5308 1.5236	1.050	.7802 .7792	.7130 .7070	.012	.3149 .3119	.050 .040	.025	1/16" x 45°	3/4-16UNJF-3A Modified	.3185 .3150	.395 .365	.398 .378	90,900	59,500	

SEE COLLAR STANDARDS FOR COLLAR STRENGTHS. LOWER STRENGTH IPIN OR COLLAR DETERMINES SYSTEM STRENGTH.

- (1) GENERAL NOTES:
- Head edge out of roundness shall not exceed ".1"
 - Concentricity: Conical surface of head to "D" diameter within .005 FIR.
 - "H" dimensioned from maximum "D" diameter.
 - Dimensions to be met after plating.
 - Non-lubed pins must be used with wet sealant or with lubed collars.
 - Surface texture per ANSI B46.1.
 - Hole preparation per NAS618.
 - Curved or flat edge manufacturer's option.
 - Use HL205 for oversize replacement.

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-6375.

(2) FINISH: HL221-()-() Cadmium plate per Spec. QQ-P-416, Type II, Class 2, and cetyl alcohol lube per HI-Shear Spec. 305.
HL221A-()-() = Cadmium plate per AMS2400-3 and cetyl alcohol lube per HI-Shear Spec. 305.
HL221PN-()-() Cadmium plate per Spec. QQ-P-416, Type II, Class 2. (See Note 5.)

SPECIFICATION: HI-Lok Product Specification 342.

CODE: First dash number indicates nominal diameter in 1/32nds which HL221 oversize pin replaces.
Second dash number indicates maximum grip in 1/16ths. See "Finish" note for explanation of code letters.

HOW TO ORDER EXAMPLES:
Pin Part Number Only
HL221-3-8
8/16 or 1/2 Maximum Grip Length
Replaces 8/32 or 1/4 Nominal Diameter Pin
Pin Part Number with Type II Cadmium Plate

Pin and Collar Assembly Part Number Combination
HL22193-8-8
Size and Grip Length, See Above Example
Collar Part Number
Pin Part Number

** The Double Shear Values shown are based on cross sectional area for nominal diameter pin.

U.S. patents 2,882,773, 2,927,491, 2,940,495, 3,027,899, 3,138,987, design patent 191,883, other U.S. and Foreign patents granted and pending, property of HI-Shear Corporation. "HI-Lok" and "HL" are Registered Trademarks of HI-Shear Corporation.

DRAWN	DATE	hi-lok[®] PIN
Brl/jc	3-11-64	
APPROVED	DATE	100" FLUSH MS24694 TENSION HEAD ALLOY STEEL 1/16" GRIP VARIATION - 1/32" OVERSIZE
M.C.	3-11-64	
REVISION	DATE	DRAWING NUMBER
8 VAN	4-24-76	HL221

HL221