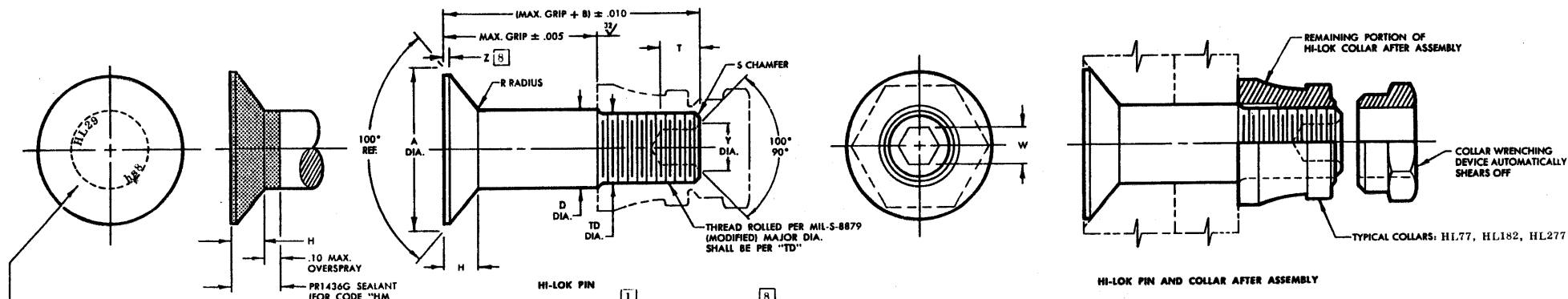


STANDARDS COMMITTEE FOR HI-LOK® PRODUCTS

2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA 90509

HI-SHEAR CORPORATION, U.S.A. Division of HI-Shear Industries Inc., U.S.A. AIR INDUSTRIES CO., INC. DEUTSCH FASTENER CO., INC. SPS TECHNOLOGIES, U.S.A. VOF-SHAN, Division of VSI Corp., U.S.A. WEST COAST AEROSPACE INC., U.S.A.	(Patent Holder) (Licensee) (Licensee) (Licensee) (Licensee) (Licensee) (Licensee) (Pin & Steel Collars)	U.S. Federal Code I.S. No. 73187 U.S. Federal Code I.S. No. 84725 U.S. Federal Code I.S. No. 87929 U.S. Federal Code I.S. No. 88678 U.S. Federal Code I.S. No. 88215 U.S. Federal Code I.S. No. 88618	HI-SHEAR FASTENERS EUROPE Division of HI-Shear Industries Inc. KAMAS-WEINE, Germany Rudolph Kallmann GmbH & Co. ST. CHARLES DRAHT, S.A. France SHIMADZU, S.A. France TOKYO SCREW COMPANY, Japan	(Licensee) (Licensee) (Licensee) (Licensee) (Licensee) (Licensee) (Licensee) (Licensee)
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INDENTED HEAD MARKING MAXIMUM DEPTH .010"
"hi" indicates HI-SHEAR trademark.
"vs" indicates VOF-SHAN 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
												W HEX.	T DEPTH	Y DIA.		
-5	5/32	.3304 .3256	.312	.1635 .1625	.1595 .1570	.004	.0700 .0680	.025 .015	.015	1/32" x 45°	8-32UNJC-3A Modified	.0645 .0635	.135 .115	.090 .075	1,760	1,030
-6	3/16	.3813 .3765	.325	.1895 .1885	.1840 .1810	.005	.0805 .0785	.030 .020	.015	1/32" x 45°	10-32UNJF-3A Modified	.0806 .0791	.135 .115	.119 .104	2,540	1,640
-8	1/4	.5066 .5018	.395	.2495 .2485	.2440 .2410	.006	.1079 .1059	.030 .020	.015	1/32" x 45°	1/4-28UNJF-3A Modified	.0967 .0947	.150 .130	.142 .122	4,500	2,950
-10	5/16	.6335 .6287	.500	.3120 .3110	.3060 .3020	.007	.1349 .1329	.040 .030	.015	3/64" x 45°	5/16-24UNJF-3A Modified	.1295 .1270	.170 .150	.180 .160	7,050	4,660
-12	3/8	.7604 .7556	.545	.3745 .3735	.3680 .3640	.008	.1619 .1599	.040 .030	.015	3/64" x 45°	3/8-24UNJF-3A Modified	.1617 .1592	.200 .180	.217 .197	10,100	7,200
-14	7/16	.8884 .8812	.635	.4370 .4360	.4310 .4260	.009	.1895 .1865	.050 .040	.022	3/64" x 45°	7/16-20UNJF-3A Modified	.1930 .1895	.230 .210	.253 .233	13,800	9,350
-16	1/2	1.0139 1.0068	.645	.4995 .4985	.4930 .4880	.010	.2160 .2130	.050 .040	.022	3/64" x 45°	1/2-20UNJF-3A Modified	.2242 .2207	.260 .240	.289 .269	18,000	13,000

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 FIR.
 - "H" dimensioned from maximum "D" diameter.
 - Dimensions to be met after finish.
 - Surface texture per ANSI B46.1.
 - Hole preparation per NAS618.
 - Use HL129 for oversize replacement.
 - Curved or flat edge manufacturer's option.

MATERIAL: 7075 aluminum alloy per Spec. QQ-A-225/9 or QQ-A-430.

HEAT TREAT: Age to T6 condition per Spec. MIL-H-6088.

- ① FINISH: HL29-()-() = Anodize per Spec. MIL-A-8625, dye color green.
Cetyl alcohol lube per Hi-Shear Spec. 305.
HL29HM-()-() = Anodize per Spec. MIL-A-8625, dye color green,
and apply precoat No. PR1436G sealant (.002-.005 thick), plus cetyl alcohol lube per Hi-Shear Spec. 305.
HL29NA-()-() = Anodize per Spec. MIL-A-8625, dye color natural,
and cetyl alcohol lube per Hi-Shear Spec. 305.

SPECIFICATION: Hi-Lok Product Specification 342.

HOW TO ORDER EXAMPLES:

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.

Pin Part Number Only

HL29-8-8
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

HL2977-8-8
Size and Grip Length, See Above Example
Collar Part Number
Pin Part Number

DRAWN DATE SCHAD 10-15-58		Patented internationally. "Hi-Lok" and "HL" are internationally registered trademarks of Hi-Shear Corporation.	
APPROVED DATE CESSNA 10-15-58		100° FLUSH MS24694 TENSION HEAD ALUMINUM ALLOY 1/16" GRIP VARIATION	
REVISION DATE 6 D.P.S. 9-13-88		DRAWING NUMBER HL29	