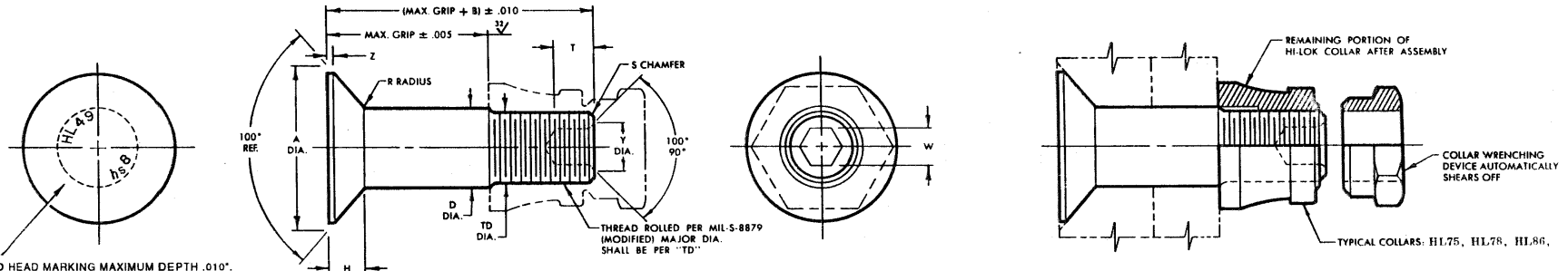


STANDARDS COMMITTEE FOR HI-LOK® PRODUCTS

2600 Skypark Drive, Torrance, California U.S.A. 90509

HI-SHEAR CORPORATION, U.S.A. (Patent Holder) CAGE No. 73197	HI-SHEAR FASTENERS EUROPE, LTD., U.K. (Licensee) CAGE No. 0LB68
Division of Hi-Shear Industries Inc., U.S.A.	Division of Hi-Shear Industries Inc., U.S.A.
AIR INDUSTRIES CO., INC. U.S.A. (Licensee - U.S. & Canada) CAGE No. 06725	HUCK INTERNATIONAL GMBH & CO, Germany (Licensee - EEC Countries)
HUCK INTERNATIONAL INC., Deutsch Operation, U.S.A. (Licensee) CAGE No. 07929	SAINT CHAMOND GRANAT, S.A. France (Licensee - EEC Countries)
SPS TECHNOLOGIES, U.S.A. (Licensee) CAGE No. 50878	SIMMONDS S.A., France (Licensee - EEC Countries-Collars)
FAIRCCHILD Aerospace Fastener Division, U.S.A. (Licensee) CAGE No. 92215	TOKYO SCREW COMPANY, Japan (Licensee - Japan)
WEST COAST AEROSPACE INC., U.S.A. (Licensee) CAGE No. 60516	

(Pins & Steel Collars)



INDENTED HEAD MARKING MAXIMUM DEPTH .010".
"hs" INDICATES HI-SHEAR TRADEMARK.
THE NUMBER(S) FOLLOWING THE TRADEMARK
INDICATE FIRST DASH NUMBER.
ARRANGEMENT OPTIONAL.

FIRST DASH NO.	NOM. DIA.	A DIA.	B REF.	D DIA. [8]			TD DIA.	F	H	R RAD.	Z MAX.	S CHAMFER REF.	THREAD	SOCKET			DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM
				WITHOUT PLATING/SOLID FILM LUBE	AFTER PLATING/SOLID FILM LUBE	[8]								W HEX.	T DEPTH	Y DIA.		
5	5/32	.3304 .3256	.312	.1635 .1630	.1635 .1625	.1595 .1570	.004	.0700 .0680	.025 .015	.015	1/32" x 45°	8-32UNJF-3A Modified	.0801 .0791	.135 .115	[9]	4,010	2,180	
6	3/16	.3813 .3765	.325	.1895 .1890	.1895 .1885	.1840 .1810	.005	.0805 .0785	.030 .020	.015	1/32" x 45°	10-32UNJF-3A Modified	.0805 .0791	.135 .115	.119 .104	5,380	3,180	
8	1/4	.5066 .5018	.395	.2495 .2490	.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	9,300	5,820	
10	5/16	.6335 .6287	.500	.3120 .3115	.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	14,600	9,200	
12	3/8	.7604 .7556	.545	.3745 .3740	.3745 .3735	.3680 .3640	.008	.1619 .1599	.040 .030	.015	3/64" x 45°	3/8-24UNJF-3A Modified	.1617 .1582	.200 .180	.217 .197	21,000	14,000	
14	7/16	.8884 .8812	.635	.4370 .4365	.4370 .4360	.4310 .4260	.009	.1894 .1864	.050 .040	.022	3/64" x 45°	7/16-20UNJF-3A Modified	.1930 .1895	.230 .210	.253 .233	28,600	18,900	
16	1/2	1.0139 1.0068	.685	.4995 .4990	.4995 .4985	.4930 .4880	.010	.2158 .2128	.050 .040	.022	3/64" x 45°	1/2-20UNJF-3A Modified	.2242 .2207	.260 .240	.289 .269	37,300	25,600	
18	9/16	1.1408 1.1337	.770	.5615 .5610	.5615 .5605	.5550 .5500	.010	.2430 .2400	.050 .040	.025	1/16" x 45°	9/16-18UNJF-3A Modified	.2555 .2520	.290 .270	.326 .306	47,200	32,400	
20	5/8	1.2723 1.2651	.825	.6240 .6235	.6240 .6230	.6180 .6120	.010	.2720 .2690	.050 .040	.025	1/16" x 45°	5/8-18UNJF-3A Modified	.2555 .2520	.330 .305	.326 .306	58,300	41,000	
24	3/4	1.5308 1.5236	1.050	.7490 .7485	.7490 .7480	.7430 .7370	.012	.3280 .3250	.050 .040	.025	1/16" x 45°	3/4-16UNJF-3A Modified	.3165 .3150	.395 .365	.398 .378	83,900	59,500	
28	7/8	1.7845 1.7773	1.210	.8740 .8735	.8740 .8730	.8680 .8610	.014	.3820 .3790	.050 .040	.025	5/64" x 45°	7/8-14UNJF-3A Modified	.3820 .3780	.400 .370	.471 .451	114,000	81,500	
32	1	2.0405 2.0310	1.390	.9990 .9985	.9990 .9980	.9930 .9860	.014	.4370 .4330	.050 .040	.025	5/64" x 45°	1-12UNJF-3A Modified	.5100 .5040	.520 .490	.618 .598	149,000	106,000	

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.
- Non-lubed pins must be used with lubed collars.
- Surface texture per ANSI B46.1.
- Hole preparation per NAS618.
- Maximum "D" diameter may be increased by .0002 to allow for solid film application.
- Evidence of broken edge across points.
- Use HL249 for oversize replacement.
- Curved or flat edge manufacturer's option.
- Broach petals removed.

MATERIAL:
HEAT TREAT:
FINISH:

- A-286 high temperature alloy per AMS5737 or AMS5731.
160,000 psi tensile minimum (95,000 psi shear minimum) at 70°F.
HL49-(-)-() = Passivate per Hi-Shear Spec. 258 and cetyl alcohol lube per Hi-Shear Spec. 305.
HL49BC-(-)-() = Passivate per Hi-Shear Spec. 258 with blue paint on top of head only and cetyl alcohol lube per Hi-Shear Spec. 305.
HL49DL-(-)-() = Solid film tube per MIL-L-46010, Type I, and cetyl alcohol lube per Hi-Shear Spec. 305.
HL49DS-(-)-() = Solid film lubricant per "Lubeco" M390.
HL49DU-(-)-() = Solid film tube per MIL-L-46010, Type I.
HL49DU-(-)-() = Solid film tube per MIL-L-46010, Type I.
HL49GU-(-)-() = Silver plate per AMS2410.
HL49K-(-)-() = Solid film lubricant per "Lubeco" 905.
HL49MA-(-)-() = Solid film lube per Galgard RA.
HL49PY-(-)-() = Passivate per Hi-Shear Spec. 258.
HL49TF-(-)-() = Hi-Kote 2 solid film lube per Hi-Shear Spec. 292.
HL49V-(-)-() = Solid film lubricant per "Lubeco" 2123, Type II.

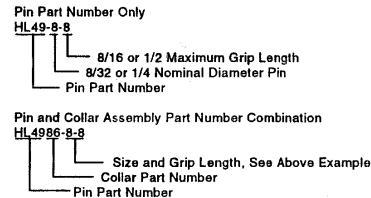
SPECIFICATION:

Hi-Lok Product Specification 342.

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:



DRAWN		DATE	TITLE	
Brlej		4-3-63	100° FLUSH MS24694 TENSION HEAD A-286 HIGH TEMPERATURE ALLOY 1/16" GRIP VARIATION	
APPROVED		DATE	DRAWING NUMBER	
M.C.		4-3-63	HL 49	
REVISION	DATE			
(25)	J.F. Obispo 02-13-96			

HL49