

HI-LOK™ PIN AND COLLAR AFTER ASSEMBLY

FIRST DASH NO.	PIN NOM DIA	A DIA	B REF	D DIA	TD DIA	F REF	H	R RAD	Z MAX	S CHAMFER REF	THREAD MODIFIED	SOCKET				DOUBLE SHEAR POUNDS MINIMUM	TENSION POUNDS MINIMUM
												W HEX	T DEPTH	T1 DEPTH MAX	Y DIA		
5	5/32	.3304 .3256	.312	.1635 .1625	.1595 .1570	.004	.0700 .0680	.025 .015	.010	1/32 x 45°	.1640-32 UNJC-3A	.0801 .0791	.135 .115	.165	[7]	4,010	2,180
6	3/16	.3813 .3765	.325	.1895 .1885	.1840 .1810	.005	.0805 .0785	.030 .020	.015	1/32 x 45°	.1900-32 UNJF-3A	.0806 .0791	.135 .115	.175	.119 .104	5,380	3,180
8	1/4	.5066 .5018	.395	.2495 .2485	.2440 .2410	.006	.1080 .1060	.030 .020	.015	1/32 x 45°	.2500-28 UNJF-3A	.0967 .0947	.150 .130	.200	.142 .122	9,300	5,820
10	5/16	.6335 .6287	.500	.3120 .3110	.3060 .3020	.007	.1350 .1330	.040 .030	.015	3/64 x 45°	.3125-24 UNJF-3A	.1295 .1270	.170 .150	.240	.180 .160	14,600	9,200
12	3/8	.7604 .7556	.545	.3745 .3735	.3680 .3640	.008	.1620 .1600	.040 .030	.015	3/64 x 45°	.3750-24 UNJF-3A	.1617 .1582	.200 .180	.275	.217 .197	21,000	14,000
14	7/16	.8884 .8812	.635	.4370 .4360	.4310 .4260	.009	.1895 .1865	.050 .040	.022	3/64 x 45°	.4375-20 UNJF-3A	.1930 .1895	.230 .210	.315	.253 .233	28,600	18,900
16	1/2	1.0139 1.0068	.685	.4995 .4985	.4930 .4880	.010	.2160 .2130	.050 .040	.022	3/64 x 45°	.5000-20 UNJF-3A	.2242 .2207	.260 .240	.360	.289 .269	37,300	25,600
18	9/16	1.1408 1.1337	.770	.5615 .5605	.5550 .5500	.010	.2430 .2400	.050 .040	.025	1/16 x 45°	.5625-18 UNJF-3A	.2555 .2520	.290 .270	.400	.326 .306	47,200	32,400
20	5/8	1.2723 1.2651	.825	.6240 .6230	.6180 .6120	.010	.2720 .2690	.050 .040	.025	1/16 x 45°	.6250-18 UNJF-3A	.2555 .2520	.330 .305	.440	.326 .306	58,300	41,000
24	3/4	1.5308 1.5236	1.050	.7490 .7480	.7430 .7370	.012	.3280 .3250	.050 .040	.025	1/16 x 45°	.7500-16 UNJF-3A	.3185 .3150	.395 .365	.520	.398 .378	83,900	59,500
28	7/8	1.7845 1.7773	1.210	.8740 .8730	.8680 .8610	.014	.3820 .3790	.050 .040	.025	5/64 x 45°	.8750-14 UNJF-3A	.3820 .3780	.400 .370	.560	.471 .451	114,000	81,500
32	1	2.0405 2.0310	1.390	.9990 .9980	.9930 .9860	.014	.4370 .4330	.050 .040	.025	5/64 x 45°	1.0000-12 UNJF-3A	.5100 .5040	.520 .490	.715	.618 .598	149,000	106,000

SEE COLLAR STANDARDS  
 FOR COLLAR STRENGTHS.  
 LOWER STRENGTH (PIN OR  
 COLLAR) DETERMINES  
 SYSTEM STRENGTH

"HI-LOK", "HL", AND "HI-KOTE",  
 ARE TRADEMARKS OF HI-SHEAR CORPORATION

DRAWN BY RIC	DATE 1963-03-11	TITLE HI-LOK™ PIN 100° FLUSH MS24694 TENSION HEAD ALLOY STEEL 1/16 GRIP VARIATION	
APPROVED CESSNA	DATE 1963-03-13	DRAWING NUMBER HL21	
REVISION (24)	DATE 2023-12-21	1 OF 2	

**GENERAL NOTES:**

- 1 Head edge out of roundness shall not exceed "F".
- 2. Concentricity: Conical surface of head to "D" diameter within .005 FIM.
- 3. "H" is dimensioned from maximum "D" diameter.
- 4. Dimensions are in inches and to be met after finish.
- 5. Surface texture per ASME B46.1.
- 6. Hole preparation per NAS618.
- 7 Evidence of broken edge across points.
- 8 Non-lubed pins must be used with lubed collars or wet sealant.
- 9 Curved or flat edge manufacturer's option.
- 10. Use HL65 for oversize replacement.

24 **MATERIAL:** Alloy steel per AMS6415, AMS6349, AMS6322 or AMS6382.

24 **HEAT TREAT:** 160,000 - 180,000 psi tensile per AMS2759.

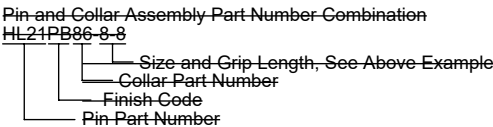
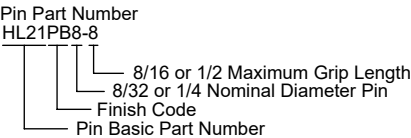
**FINISH:**

- HL21-( )-( ) = Cadmium plate per AMS-QQ-P-416, Type I, Class 2, and Cetyl alcohol lube per Hi-Shear Spec. 305.
- HL21HC( )-( ) = Cadmium plate per AMS-QQ-P-416, Type I, Class 2, and Precoat No. PR1436G sealant (.002-.005 thick) plus cetyl alcohol lube per Hi-Shear Spec. 305.
- HL21N( )-( ) = Diffused nickel-cadmium plate per AMS2416pe I, Class 2, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL21PB( )-( ) = Cadmium plate per AMS-QQ-P-416, Type II, Class 2, and cetyl alcohol lube per Hi-Shear Spec. 305.
- 8 HL21PN( )-( ) = Cadmium plate per AMS-QQ-P-416, Type II, Class 2.
- HL21RB( )-( ) = Cadmium plate per AMS-QQ-P-416, Type II, Class 2, color violet purple, and cetyl alcohol lube per Hi-Shear Spec. 305.

**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  
EXAMPLE:**



DRAWING NUMBER

HL21