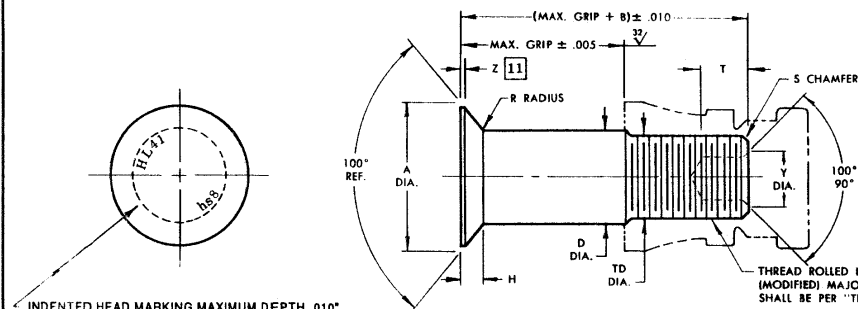


# STANDARDS COMMITTEE FOR HI-LOK® PRODUCTS

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

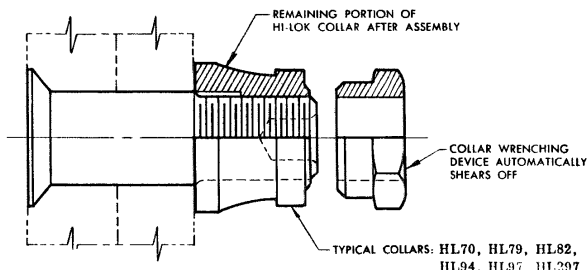
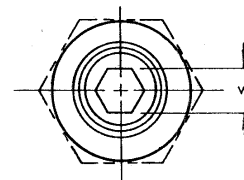
HI-SHEAR CORPORATION, U.S.A. (Patent Holder) CAGE No. 73197  
Division of Hi-Shear Industries Inc., U.S.A.  
AIR INDUSTRIES CO., INC., U.S.A. (Licensee - U.S. & Canada) CAGE No. 06725  
HUCK INTERNATIONAL, INC., Deutsch Operation, U.S.A. (Licensee) CAGE No. 97928  
SPS TECHNOLOGIES, U.S.A. (Licensee) CAGE No. 56676  
FAIRCHILD Aerospace Fastener Division, U.S.A. (Licensee) CAGE No. 92216  
WEST COAST AEROSPACE INC., U.S.A. (Licensee) CAGE No. 60516  
(Pins & Steel Collars)

HI-SHEAR FASTENERS EUROPE, LTD., U.K. (Licensee) CAGE No. 01B68  
Division of Hi-Shear Industries Inc., U.S.A.  
HUCK INTERNATIONAL GMBH & CO., Germany (Licensee - EEC Countries)  
SAINT CHAMOND GRANAT, S.A. France (Licensee - EEC Countries)  
SIMMONDS S.A. France (Licensee - EEC Countries-Collars)  
TOKYO SCREW COMPANY, Japan (Licensee - Japan)



INDENTED HEAD MARKING MAXIMUM DEPTH .010".  
MANUFACTURER'S TRADEMARK PER HI-SHEAR SPEC.  
363. THE NUMBER(S) FOLLOWING THE TRADEMARK  
INDICATE FIRST DASH NUMBER.  
ARRANGEMENT OPTIONAL.

HI-LOK® PIN



HI-LOK® PIN AND COLLAR AFTER ASSEMBLY

| FIRST<br>DASH<br>NO. | NOM.<br>DIA. | A<br>DIA.        | B<br>REF. | D DIA. [5]                       |                               | TD<br>DIA.     | F    | H<br>REF.      | R<br>RAD.    | Z<br>MAX | S<br>CHAMFER<br>REF. | THREAD                     | SOCKET         |              |              | DOUBLE<br>SHEAR<br>POUNDS<br>MINIMUM | TENSION<br>POUNDS<br>MINIMUM |
|----------------------|--------------|------------------|-----------|----------------------------------|-------------------------------|----------------|------|----------------|--------------|----------|----------------------|----------------------------|----------------|--------------|--------------|--------------------------------------|------------------------------|
|                      |              |                  |           | WITHOUT<br>SOLID<br>FILM<br>LUBE | WITH<br>SOLID<br>FILM<br>LUBE |                |      |                |              |          |                      |                            | W<br>HEX       | T<br>DEPT H  | Y<br>DIA.    |                                      |                              |
| 4                    | 1/8          | .2219<br>.2171   | .294      | .1375<br>.1370                   | .1375<br>.1365                | .1335<br>.1310 | .003 | .0354<br>.0334 | .020<br>.010 | .010     | 1/32" x 45°          | 6-32UNJC-3A<br>Modified    | .0645<br>.0635 | .100<br>.085 | [10]         | 2,840                                | 950                          |
| 5                    | 5/32         | .2612<br>.2564   | .312      | .1635<br>.1630                   | .1635<br>.1625                | .1595<br>.1570 | .004 | .0410<br>.0390 | .025<br>.015 | .010     | 1/32" x 45°          | 8-32UNJC-3A<br>Modified    | .0801<br>.0791 | .135<br>.115 | [10]         | 4,010                                | 1,750                        |
| 6                    | 3/16         | .3016<br>.2966   | .325      | .1895<br>.1890                   | .1895<br>.1885                | .1840<br>.1810 | .005 | .0470<br>.0449 | .030<br>.020 | .015     | 1/32" x 45°          | 10-32UNJF-3A<br>Modified   | .0806<br>.0791 | .135<br>.115 | .119<br>.104 | 5,380                                | 2,000                        |
| 8                    | 1/4          | .3948<br>.3898   | .395      | .2495<br>.2490                   | .2495<br>.2485                | .2440<br>.2410 | .006 | .0610<br>.0589 | .030<br>.020 | .015     | 1/32" x 45°          | 1/4-28UNJF-3A<br>Modified  | .0967<br>.0947 | .150<br>.130 | .142<br>.122 | 9,300                                | 3,700                        |
| 10                   | 5/16         | .4739<br>.4689   | .500      | .3120<br>.3115                   | .3120<br>.3110                | .3060<br>.3020 | .007 | .0679<br>.0758 | .040<br>.030 | .015     | 3/64" x 45°          | 5/16-24UNJF-3A<br>Modified | .1295<br>.1270 | .170<br>.150 | .180<br>.160 | 14,600                               | 5,500                        |
| 12                   | 3/8          | .5604<br>.5554   | .545      | .3745<br>.3740                   | .3745<br>.3735                | .3680<br>.3640 | .008 | .0780<br>.0759 | .040<br>.030 | .015     | 3/64" x 45°          | 3/8-24UNJF-3A<br>Modified  | .1617<br>.1582 | .200<br>.180 | .217<br>.197 | 21,000                               | 7,200                        |
| 14                   | 7/16         | .6680<br>.6620   | .635      | .4370<br>.4365                   | .4370<br>.4360                | .4310<br>.4260 | .009 | .0969<br>.0944 | .050<br>.040 | .022     | 3/64" x 45°          | 7/16-20UNJF-3A<br>Modified | .1930<br>.1895 | .230<br>.210 | .253<br>.233 | 28,600                               | 10,000                       |
| 16                   | 1/2          | .7540<br>.7480   | .685      | .4995<br>.4990                   | .4995<br>.4985                | .4930<br>.4880 | .010 | .1068<br>.1043 | .050<br>.040 | .022     | 3/64" x 45°          | 1/2-20UNJF-3A<br>Modified  | .2242<br>.2207 | .260<br>.240 | .289<br>.269 | 37,300                               | 13,500                       |
| 18                   | 9/16         | .8380<br>.8310   | .770      | .5615<br>.5610                   | .5615<br>.5605                | .5550<br>.5500 | .010 | .1160<br>.1131 | .050<br>.040 | .025     | 1/16" x 45°          | 9/16-18UNJF-3A<br>Modified | .2555<br>.2520 | .290<br>.270 | .326<br>.306 | 47,200                               | 17,000                       |
| 20                   | 5/8          | .9250<br>.9180   | .825      | .6240<br>.6235                   | .6240<br>.6230                | .6180<br>.6120 | .010 | .1260<br>.1230 | .050<br>.040 | .025     | 1/16" x 45°          | 5/8-18UNJF-3A<br>Modified  | .2555<br>.2520 | .330<br>.305 | .326<br>.306 | 58,300                               | 21,000                       |
| 24                   | 3/4          | 1.0970<br>1.0850 | 1.050     | .7490<br>.7485                   | .7490<br>.7480                | .7430<br>.7370 | .012 | .1460<br>.1410 | .050<br>.040 | .025     | 1/16" x 45°          | 3/4-UNJF-3A<br>Modified    | .3185<br>.3150 | .395<br>.365 | .398<br>.378 | 83,900                               | 30,700                       |

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-tubed 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.
- Use HL141 for oversize replacement.
- Evidence of broken edge across points.
- Curved or flat edge manufacturer's option.
- Broach petals removed.
- A-286 high temperature alloy per Spec. AMS5737 or AMS5731.
- 95,000 psi shear minimum at 70°F.
- HL41(-)(-) = Passivate per Hi-Shear Spec. 258 and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL41DL(-)(-) = Kalgard FA or EM620C solid film lube per MIL-L-46010, Type I, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL41DU(-)(-) = Solid film lube per MIL-L-46010, Type I.
- HL41GU(-)(-) = Silver plate per AMS2410.
- HL41K(-)(-) = Solid film lubricant per Lubeco 905.
- HL41PY(-)(-) = Passivate per Hi-Shear Spec. 258.
- HL41TF(-)(-) = Hi-Kote 2 solid film per Hi-Shear Spec. 292.
- HL41V(-)(-) = Solid film lubricant per Lubeco 2123, Type II.

MATERIAL:  
HEAT TREAT:  
FINISH:

## SPECIFICATION:

## 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:

### Pin Part Number Only

HL41-8-8

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

HL41V79-8-8

Size and Grip Length, See Above Example  
Collar Part Number  
Pin Finish  
Pin Part Number

"Hi-Lok" and "HL" are internationally  
registered trademarks of Hi-Shear Corporation.

| DRAWN    | DATE                   | TITLE   |
|----------|------------------------|---|
| C.E.K.   | 10-17-62               | HI-LOK® PIN   |
| APPROVED | DATE                   |   |
| M.E.C.   | 10-17-62               | 100° FLUSH SHEAR HEAD<br>A-286 HIGH TEMPERATURE ALLOY<br>1/16" GRIP VARIATION |
| REVISION | DATE                   | DRAWING NUMBER  |
| (25)     | J.F. Obispo<br>7-03-96 | HL41  |