# HI-LOK™ PIN AND COLLAR AFTER ASSEMBLY

## THREAD ROLLED PER AS8879 (MODIFIED). MAJOR DIA SHALL BE PER “TD”

### INANTED HEAD MARKING .01 O MAX DEPTH.

- TRADEMARK INDICATES FIRST DASH NO. ARRANGEMENT OPTIONAL.

### THREADING NOTES

- THREAD MODIFIED
  - W: THREAD HOLE
  - T: THREAD BODY
  - Y: THREAD VARIATION

### SOCKET

- DOUBLE SHEAR POUNDS MINIMUM
- TENSION POUNDS MINIMUM

### PIN AND COLLAR STANDARDS

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

### TRADEMARKS

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

**HI-SHEAR Corporation, USA**

**a LISI AEROSPACE Company**

For the current list of licensed manufacturers, please visit the LISI AEROSPACE website at:

HTTP://WWW.LISI-AEROSPACE.COM/LICENSES

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**Table: HI-LOK™ PIN**

<table>
<thead>
<tr>
<th>FIRST DASH NO.</th>
<th>PIN NOM DIA</th>
<th>A</th>
<th>B REF</th>
<th>DIA</th>
<th>A</th>
<th>B REF</th>
<th>WITHOUT COATING</th>
<th>AFTER COATING</th>
<th>THREAD MODIFIED</th>
<th>DOUBLE SHEAR POUNDS MINIMUM</th>
<th>TENSION POUNDS MINIMUM</th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>1/8</td>
<td>.240</td>
<td>.294</td>
<td>.1375</td>
<td>.135</td>
<td>.1335</td>
<td>.020</td>
<td>.042</td>
<td>.020</td>
<td>1/32 x 37°</td>
<td>.0645</td>
</tr>
<tr>
<td>5</td>
<td>5/32</td>
<td>.262</td>
<td>.312</td>
<td>.1635</td>
<td>.162</td>
<td>.1605</td>
<td>.020</td>
<td>.047</td>
<td>.025</td>
<td>1/32 x 37°</td>
<td>.0645</td>
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<tr>
<td>6</td>
<td>3/16</td>
<td>.315</td>
<td>.375</td>
<td>.1895</td>
<td>.188</td>
<td>.1865</td>
<td>.025</td>
<td>.055</td>
<td>.025</td>
<td>1/32 x 37°</td>
<td>.1900</td>
</tr>
<tr>
<td>8</td>
<td>1/4</td>
<td>.412</td>
<td>.475</td>
<td>.2445</td>
<td>.244</td>
<td>.2425</td>
<td>.030</td>
<td>.069</td>
<td>.025</td>
<td>3/32 x 37°</td>
<td>.2500</td>
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<tr>
<td>10</td>
<td>5/16</td>
<td>.505</td>
<td>.575</td>
<td>.3120</td>
<td>.312</td>
<td>.3110</td>
<td>.035</td>
<td>.078</td>
<td>.030</td>
<td>3/32 x 37°</td>
<td>.3125</td>
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<td>3/8</td>
<td>.600</td>
<td>.675</td>
<td>.3745</td>
<td>.374</td>
<td>.3735</td>
<td>.040</td>
<td>.088</td>
<td>.030</td>
<td>1/8 x 37°</td>
<td>.3750</td>
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<td>7/16</td>
<td>.676</td>
<td>.750</td>
<td>.4375</td>
<td>.437</td>
<td>.4365</td>
<td>.045</td>
<td>.103</td>
<td>.030</td>
<td>1/8 x 37°</td>
<td>.4375</td>
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<td>1/2</td>
<td>.773</td>
<td>.850</td>
<td>.5000</td>
<td>.500</td>
<td>.4995</td>
<td>.050</td>
<td>.115</td>
<td>.030</td>
<td>5/32 x 37°</td>
<td>.5000</td>
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<td>9/16</td>
<td>.870</td>
<td>.940</td>
<td>.5655</td>
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<td>5/32 x 37°</td>
<td>.5625</td>
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<td>.151</td>
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<td>.7000</td>
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<td>7/8</td>
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<td>.090</td>
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<td>.999</td>
<td>.9990</td>
<td>.110</td>
<td>.218</td>
<td>.060</td>
<td>5/16 x 37°</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

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**Notes:**

- INDENTED HEAD MARKING .01 O MAX DEPTH.
- MANUFACTURER’S TRADEMARK PER SPEC 365. THE NUMBER(S) FOLLOWING TRADEMARK INDICATES FIRST DASH NO. ARRANGEMENT OPTIONAL.
- THREAD MODIFIED.
- MAX GRIP + B ± .01 O

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**Figure:** HI-LOK™ PIN

- THREAD ROLLED PER AS8879 (MODIFIED).
- MAJOR DIA SHALL BE PER “TD”

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**Revisions:**

- DRAWN BY: J.P. OBISPO
- APPROVED DATE: 1962-11-26
- REVISION: 08
- TITLE: HI-LOK™ PIN
- PROTRUDING SHEAR HEAD
- TITANIUM
- 1/16 GRIP VARIATION

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**Table:** HI-LOK™ PIN AND COLLAR AFTER ASSEMBLY

- DOUBLE SHEAR POUNDS MINIMUM
- TENSION POUNDS MINIMUM

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**Diagram:**

- HI-LOK™ PIN AND COLLAR AFTER ASSEMBLY
- COLLAR WRENCHING DEVICE AUTOMATICALLY SHEARS OFF
- Remaining portion of HI-LOK™ COLLAR after assembly

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**References:**

- LISI AEROSPACE – Please refer to Central Documentation Website to check validity

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**GENERAL NOTES:**
1. Concentricity: "A" to "D" diameter within .010 F.I.M.
2. Dimensions are in inches and to be met after finish.
3. Surface texture per ASME B446.1.
4. Hole preparation per NAS618.
5. Maximum "D" diameter may be increased by .002 to allow for solid film or aluminum coating application.
7. Dimensions to be met before finish for "VY" code only.
8. Evidence of broken edge across points.
9. Non-lubed pins must be used with lubed collars or wet sealant.
10. Use HL110 for oversize replacement.
11. After February, 21st of 2015, HI-KOTE™ 1 aluminum pigmented coating will be replaced by REACH compliant HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 on fasteners coated in UK and European Union.

**MATERIAL:**
6Al-4V titanium alloy per AMS4928 or AMS4997.

**HEAT TREAT:**
160,000 psi tensile minimum (95,000 psi shear minimum for sizes up to 3/4; 90,000 psi shear minimum for 7/8 and larger).

**FINISH:**
- HL10V(): = Cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VAP(): = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VAZ(): = HI-KOTE™ 1 or HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294, with color black on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VB(): = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VB(R): = Color code white on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VBU(): = I.V.D. aluminum coating per MIL-DTL-83488, Type I, Class 3, with color yellow on thread end.
- HL10VC(): = I.V.D. aluminum coating per MIL-DTL-83488, Type I, Class 3, with color black on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VDK(): = Solid film lube per "KalGard™" F.A. "KALGARD" is a trademark of Metal Improvement Company.
- HL10VF(): = Anodize per Hi-Shear Spec. 306, Type I, color blue, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VHD(): = I.V.D. aluminum coating per BAC5315, with color red on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VK(): = Solid film lube per Lubeco 905.
- HL10VL(): = Anodize per Hi-Shear Spec. 306, Type II, and solid film lube per AS5272.
- HL10VLI(): = Phosphate fluoride treat and Esne-Lube No. 352 (Everlube Corp).
- HL10VR(): = Anodize per Hi-Shear Spec. 306, Type II, and solid film lube per "Electrofilm" 4396.
- HL10VRA(): = Phosphate fluoride treat with color red on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VSY(): = Phosphate fluoride treat, solid film lube per AS5272, Type I, and color red on thread end.
- HL10VT(): = Anodize per Hi-Shear Spec. 306, Type I, color pink, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VSA(): = Anodize Ti-Shield III and HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VSB(): = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VSL(): = Anodize Ti-Shield III, solid film lube per DAG-258, and cetyl alcohol lube per Hi-Shear Spec. 305; or anodize per Tiodize Type II, solid film lube per Ti-2-LUBE TAL-88, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VTL(): = Translube.
- HL10VUE(): = Anodize per Hi-Shear Spec. 306, Type II, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VU(): = Anodize per Hi-Shear Spec. 306, Type II, and solid film lube per "Lubeco" 2123, Type II.
- HL10VY(): = Solid film lube per "Lubeco" 2123, Type II.
- HL10VN(): = Anodize per Hi-Shear Spec. 306, Type I, color blue, and solid film lubricant per M88. (British Aircraft Corporation Spec. MP-1071).
- HL10VNC(): = HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294, with color silver on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VNY(): = HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 on threads only, with color silver on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
- HL10VH(): = HI-KOTE™ 4 NC aluminum coating per Hi-Shear Spec. 307.

**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:**
- Pin Part Number
- HL10VAP-8
- Finish Code
- Pin Basic Part Number
- 8/16 or 1/2 Maximum Grip Length
- 8/32 or 1/4 Nominal Diameter Pin

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