RECOMMENDED SERVICE BULLETIN

NUMBER: SB14-06
REVISION: 00
DATE: June 19, 2014

SUBJECT: NOSE LANDING GEAR UPGRADES

EFFECTIVITY:
As required for KODIAK® 100 Series Aircraft Serial Numbers: 100-0001 thru 100-0124.

SUMMARY:
The accompanying Field Service Instruction provides instruction for replacing the ¼" diameter nose landing gear centering pins with 3/8" diameter pins. Compliance with this bulletin removes the 1000 hour pin replacement, as defined in Chapter 4 of the AMM (AM902.0), and the repetitive requirements of SB12-05. This FSI also installs a revised lower gland with upgraded seals to prevent leaks when operating at low ambient temperatures as well as adding a stone guard plate at the bottom of the nose gear strut.

COMPLIANCE:
Quest recommends this SB be complied with at or before 1000 hours TTAF, or at the next nose gear overhaul (as found on condition).

ATTACHED DOCUMENTS:

Document #:	Document Title:
FSI-075	NOSE LANDING GEAR 3/8 INCH PIN INSTALLATION

FAA APPROVAL STATUS:
The instructions attached to this Service Bulletin have demonstrated compliance with all applicable Federal Aviation Regulations and are approved by the Federal Aviation Administration.

CREDIT AND WARRANTY INFORMATION:
Not applicable. Service Kit FSI-075 is available for purchase through Quest Customer Service for $2,982.56 (price subject to change).

Quest Customer Service
Service Bulletin SB14-06
Phone: (208)263-1111 Toll Free: 1(866)263-1112
Email: Customerservice@questaircraft.com

SPECIAL INSTRUCTIONS:
None applicable.

RECOMMENDED SERVICE BULLETIN
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SUBJECT

This Field Service Instruction provides instruction for removing the ¼ inch nose landing gear centering pins, enlarging the holes, and installing 3/8 inch pins on the nose landing gear. This FSI also installs a revised lower gland with a larger polypack seal and a stone guard plate at the bottom of the nose gear strut.

AFFECTED MANUALS AND PUBLICATIONS

None

INDUSTRY REFERENCES

None

WEIGHT AND BALANCE

Negligible

MANPOWER

The estimated man-hours and minimum number of persons required to perform this Field Service Instruction are listed below. The "Minimum Persons" refers only to maintenance personnel or installers, and unless otherwise specified within this instruction does not include additional personnel that may be needed solely to comply with safety requirements (for example, safety observers that are not performing tasks within this instruction). It is the responsibility of maintenance personnel to comply with safety requirements, including having a safety observer available as needed.

Estimated Man-hours: 5 hours

Minimum Persons: 1 person

If more than the minimum personnel perform this instruction, the actual man-hours required may be reduced due to increased efficiencies. As appropriate, Quest encourages the use of additional personnel; man-hour estimates are based on the minimum personnel required.

RECORD OF COMPLETION

- Update the appropriate maintenance logs.
- Ensure the KODIAK® 100 Aircraft Maintenance Manual is up-to-date with the current revision (Rev 13 or later).

Quest Aircraft Company, LLC
1200 Turbine Drive
Sandpoint, ID 83864

REVISION RECORD

REV	PAGE	CHANGE DESCRIPTION
00	All	Initial Release
01	5	Was: “Item # 2-1-18 100-412-0120-000” IS: “Item #2-1-18 S100-412-0000”

TABLE OF CONTENTS

1. Special Safety Instructions

1.1 Warnings

Failure to comply with "Warnings" contained in this instruction may result in financial loss, significant delay in the completion time, and/or serious injury to personnel.

1.2 Cautions

Failure to comply with "Cautions" contained in this instruction may result in the destruction of components, unnecessary complications, the need to reverse completed work, and/or delays in the completion time.

1.3 Notes

"Notes" are provided when additional information may lead to an increase in efficiency.

2. Parts, Tools, and Equipment

The following tables describe the parts, tools, and equipment necessary to successfully complete this instruction. Where applicable, reference to drawings provided with this instruction is provided.

Table 2-1: Parts and Tools Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
2-1-1	M83461/1-150	1	O RING, SEAL	N/A	N/A
2-1-2	425712501500	1	POLY PACK	N/A	N/A
2-1-3	100-410-0107	2	PIN, SCREW	N/A	N/A
2-1-4	M83461/1-026	1	O RING, SEAL	N/A	N/A
2-1-5	100-410-0202	1	STONE GUARD, NOSE GEAR	N/A	N/A
2-1-6	M83461/1-234	1	O RING, SEAL	N/A	N/A
2-1-7	461518702500Y375B	1	POLYPACK	N/A	N/A
2-1-8	4615SH959-25	1	DUST SEAL	N/A	N/A
2-1-9	M83461/1-328	1	O RING, SEAL	N/A	N/A
2-1-10	100-412-0126	1	UPPER GLAND	N/A	N/A
2-1-11	100-412-0113	1	LOWER GLAND NOSE GEAR	N/A	N/A
2-1-12	AN122743	2	PIN, STRAIGHT, HEADLESS, STEEL	N/A	N/A
2-1-13	AN122716	2	PIN, STRAIGHT, HEADLESS, STEEL	N/A	N/A
2-1-14	NAS6606-19	2	BOLT	N/A	N/A
2-1-15	NAS6606-23	2	BOLT	N/A	N/A
2-1-16	NAS1149F0632P	4	WASHER	N/A	N/A
2-1-17	MS21045-6	4	NUT	N/A	N/A
2-1-18	S100-412-0000	1	DRILL GUIDE KIT	N/A	N/A

Table 2-2: Consumables Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
2-2-1	N/A	-	N/A	N/A	N/A

Table 2-3: Serial-Number-Specific Parts Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
2-3-1	N/A	-	N/A	N/A	N/A

Table 2-4: Parts and Tools NOT Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
2-4-1	Commercially Available	-	Emery Cloth	N/A	N/A
2-4-2	CST410-0100	1	Nose Strut Resealing Tool Kit	N/A	N/A
2-4-3	Commercially Available	1	Large Snap Ring Pliers Set-Astro Pneumatic	N/A	N/A
2-4-4	Commercially Available	A/R	MIL-H-5606 Hydraulic Fluid	N/A	N/A
2-4-5	Commercially Available	A/R	Parker “O” Lube or equivalent	N/A	N/A
2-4-8	Commercially Available	A/R	Machine Cutting Fluid	N/A	N/A
2-4-9	Commercially Available	A/R	Pro-Seal 890 Class B Type 2 or equivalent	N/A	N/A
2-4-10	Commercially Available	1	21" Wooden or Plastic Dowel	N/A	N/A
2-4-11	Commercially Available	1	Flat Punch	N/A	N/A

3. General

This Field Service Instruction provides guidance for upgrading the nose landing gear 1/4 inch centering pins to 3/8 inch diameter pins. The upgraded pins will extend the service life and require replacement less frequently. This FSI also installs a revised lower gland with a larger polypack seal and a stone guard plate at the bottom of the nose gear strut.

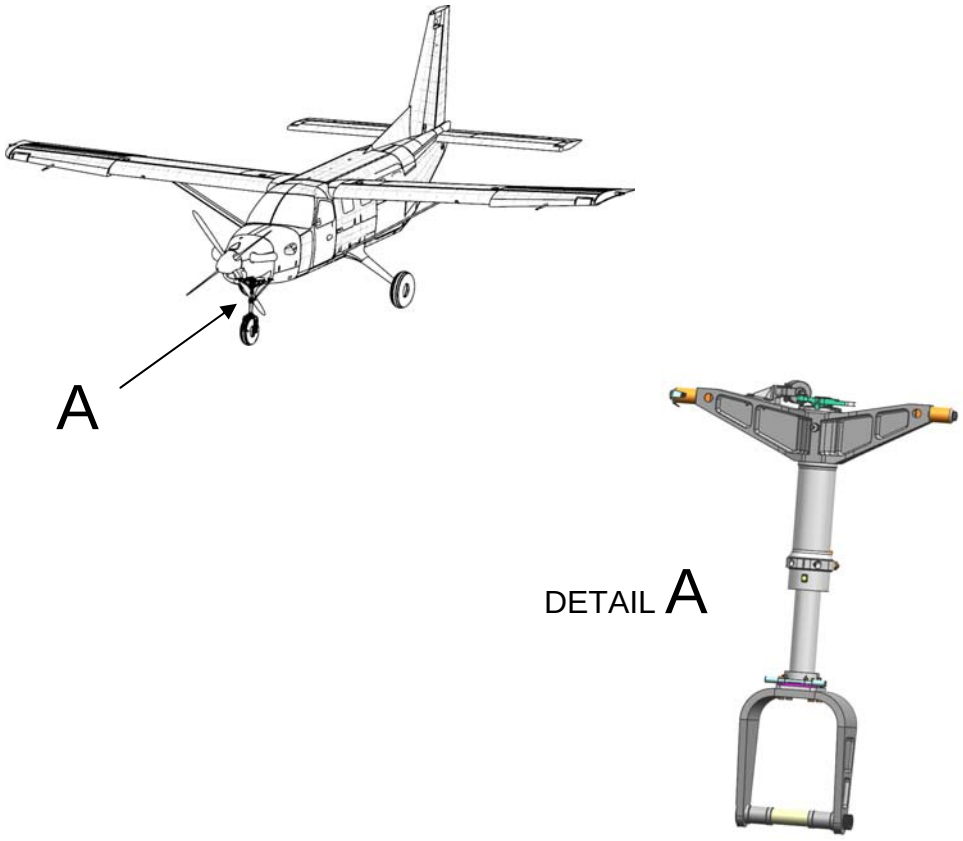

Figure 3-1: Nose Landing Gear Overview

3.1 Limitations

Applicable for aircraft with nose landing gear, upper gland bearing (P/N 100-412-0106) installed. These aircraft have 1/4 inch centering pins and are subject to the 1,000 hour pin replacement requirement.

4. Preparation

4.1 Nose Landing Gear Shock Strut Removal

Remove the nose landing gear shock strut in accordance with the *KODIAK® 100 Airplane Maintenance Manual*, Chapter 32.

4.2 Remove Nose Landing Gear Fork

1. Remove the four (4) bolts, four (4) washers, and four (4) nuts securing the nose landing gear fork to the fitting at the lower end of the chrome tube. Refer to **Figure 4-1.**

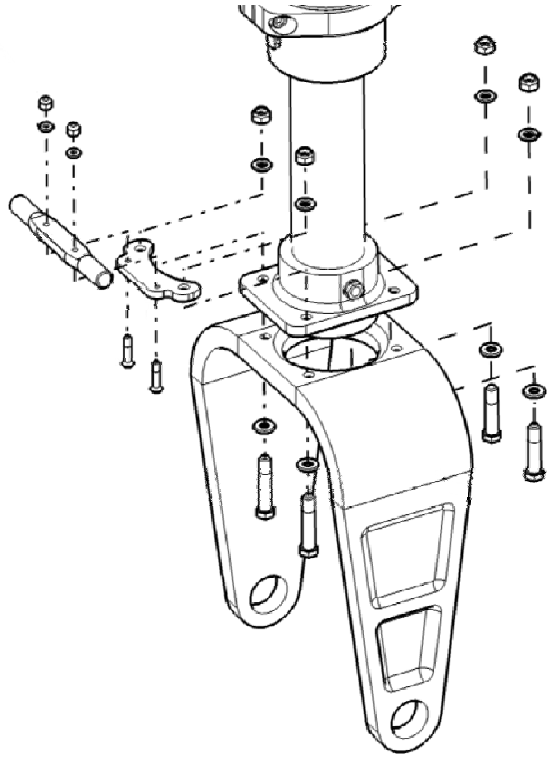

Figure 4-1: Nose Landing Gear Fork Removal

4.3 Nose Landing Gear Shock Strut Disassembly

1. Disassemble the Upper Nose Gear shock strut assembly in accordance with the *KODIAK® 100 Airplane Maintenance Manual*, Chapter 32.

2. Disassemble the Lower Nose Gear shock strut assembly in accordance with the *KODIAK® 100 Airplane Maintenance Manual*, Chapter 32.

3. Remove the paint (if present) and thoroughly clean the area below the piston plug in the lower piston tube. Refer to **Figure 4-2**.

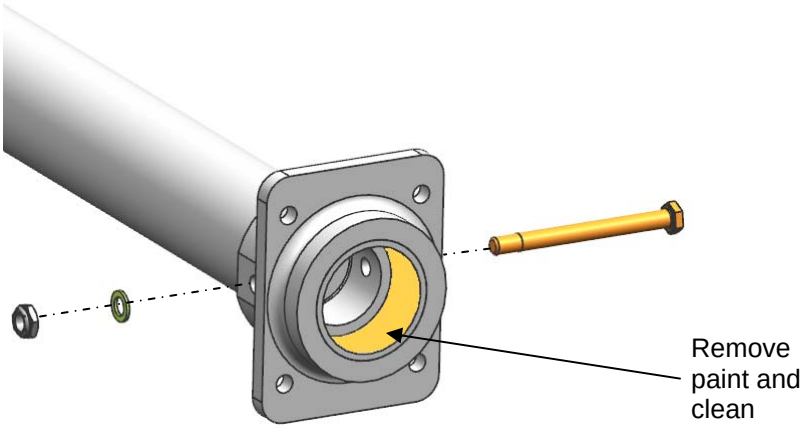

Figure 4-2: Piston Tube Paint Removal

4. Remove the lower fork bolt, nut, and two (2) washers to allow for the removal of the piston plug. Refer to **Figure 4-2**.

5. Insert a 21inch length of plastic or wooden dowel into the upper end of the piston assembly and through the metering piston.

6. Using a plastic mallet, remove the piston plug through the bottom of the piston tube by tapping on the dowel. Refer to **Figure 4-3.**

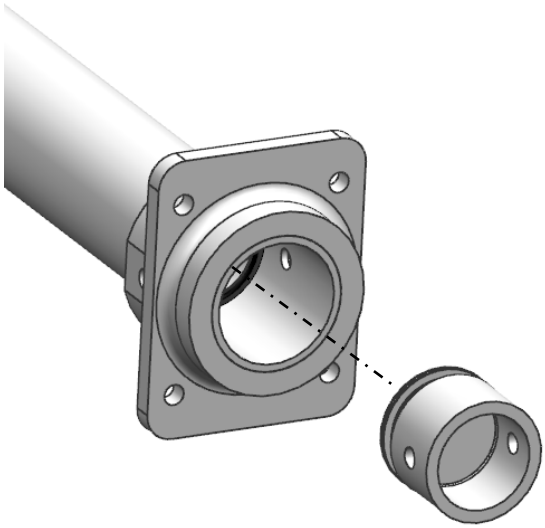

Figure 4-3: Removed Piston

4.4 Part Inspection and Cleaning

1. Thoroughly clean all strut parts to remove all lubricants.
2. Inspect all strut parts for wear or damage, paying specific attention to the following areas:
   a) The inner bore of the lower strut housing where the pin screws pass through the cylinder. Dress out any sharp edges using an emery cloth.
   b) If removed, the inner edges of the lower piston, where the lower fork bolt passes through. Refer to **Figure 4-4**. Dress out any sharp edges using an emery cloth.

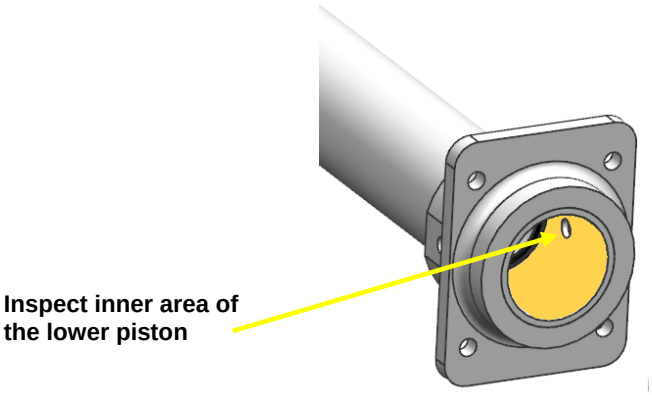

Figure 4-4: Lower Piston Inspection

   c) The chromed area of the piston tube for evidence of abnormal wear spots or damage to the chrome finish. Any significant damage found, such as gouges or scraping along the length of the piston tube, requires replacement of the piston tube.
   d) The upper beveled edge of the piston tube for any roughness or sharp edges. Dress out any sharp edges using an emery cloth.
   e) Inspect the inside walls of the lower strut housing for damage from bent pins. If damage is found, contact Quest Aircraft Company and order FSI-065 *NLG Trunnion Outer Tube Pin Wear*.

NOTE

If any damage is located within the nose landing gear strut assembly that is not covered or exceeds the tolerances listed above, contact Quest Aircraft Company for further instructions or replacement parts.

5. Instructions

The chrome tube and drill guide assembly must be secured to a bench top for safety and stability.

⚠ WARNING ⚠

Do not attempt any drilling or reaming operations if the assembly is not securely clamped to a table, drill press, or workbench.

⚠ WARNING ⚠

The drilling and reaming operations in the following procedures will create tiny, nearly microscopic slivers of chrome tube. Use extreme care and Personal Protective Equipment (PPE) to protect your eyes and exposed skin when handling the drill shavings and chips.

⚠ CAUTION ⚠

The drill bits and reamers used in these instructions are carbide and extremely brittle. Any side loads, bending loads, or shock loads will break the carbide bits or damage the drill guide sleeves.

5.1 Drill Guide Installation and Alignment

1. Verify that the metering orifice is completely down inside the chrome tube and clear of the torque collar to avoid damage during the drilling operation.
2. Apply a light coat of machine cutting fluid to the inside of the drill guide and outside of chrome tube.
3. Install the drill guide on the upper end of the chrome tube aligning the drill guide holes with the 1/4 inch holes in the chrome tube.
4. Use a dead-blow hammer or a rubber mallet to set the drill guide securely against the top of the chrome tube. Refer to **Figure 5-1.**

Figure 5-1: Drill Guide Installed

5. Insert the 1/4 inch alignment pin into the side of the drill guide that has the threaded hole.
6. Adjust the alignment of the chrome tube and drill guide to allow the 1/4 inch alignment pin to slip into place in the existing 1/4 inch hole in the chrome tube. Refer to **Figure 5-2.**
7. Using a flat punch, tap the alignment pin to seat it against the chrome tube.
8. Install the 5/8 inch screw in the threaded hole behind the alignment pin. Refer to **Figure 5-2**.
9. Again, verify that the drill guide is seated by tapping with a rubber mallet or dead blow hammer.
10. Snug the screw with a 15/16 inch wrench or socket only enough to fully seat the 1/4 inch alignment pin.

⚠ CAUTION ⚠

Do NOT use a pneumatic or electric ratchet or impact driver to tighten the 5/8 inch screw.

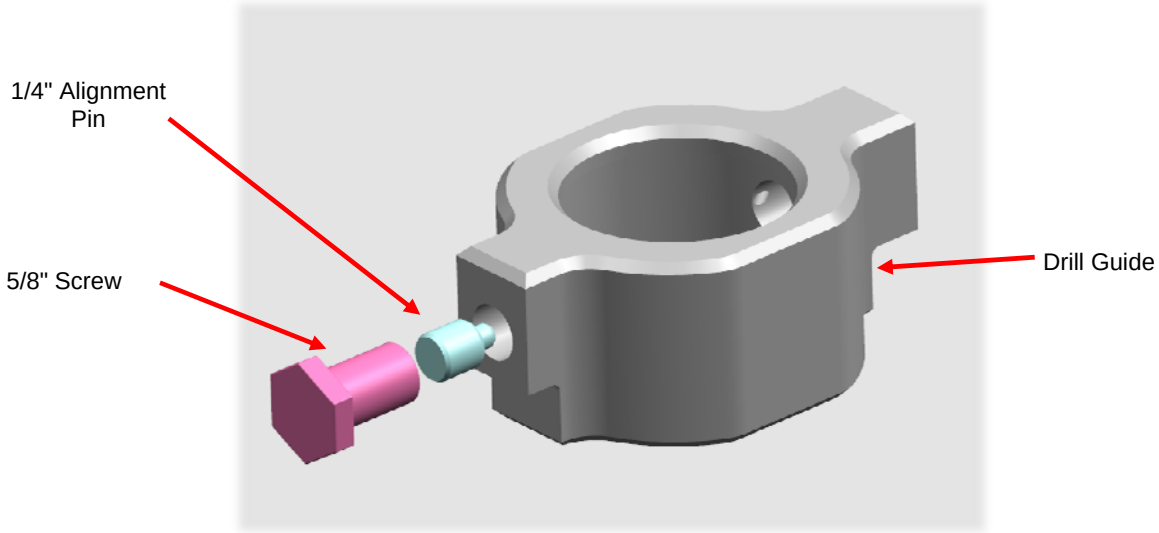

Figure 5-2: Drill Guide Alignment

11. Secure the chrome tube and drill guide sleeve assembly to a work bench with the 5/8 inch screw facing down. Refer to **Figure 5-3.**

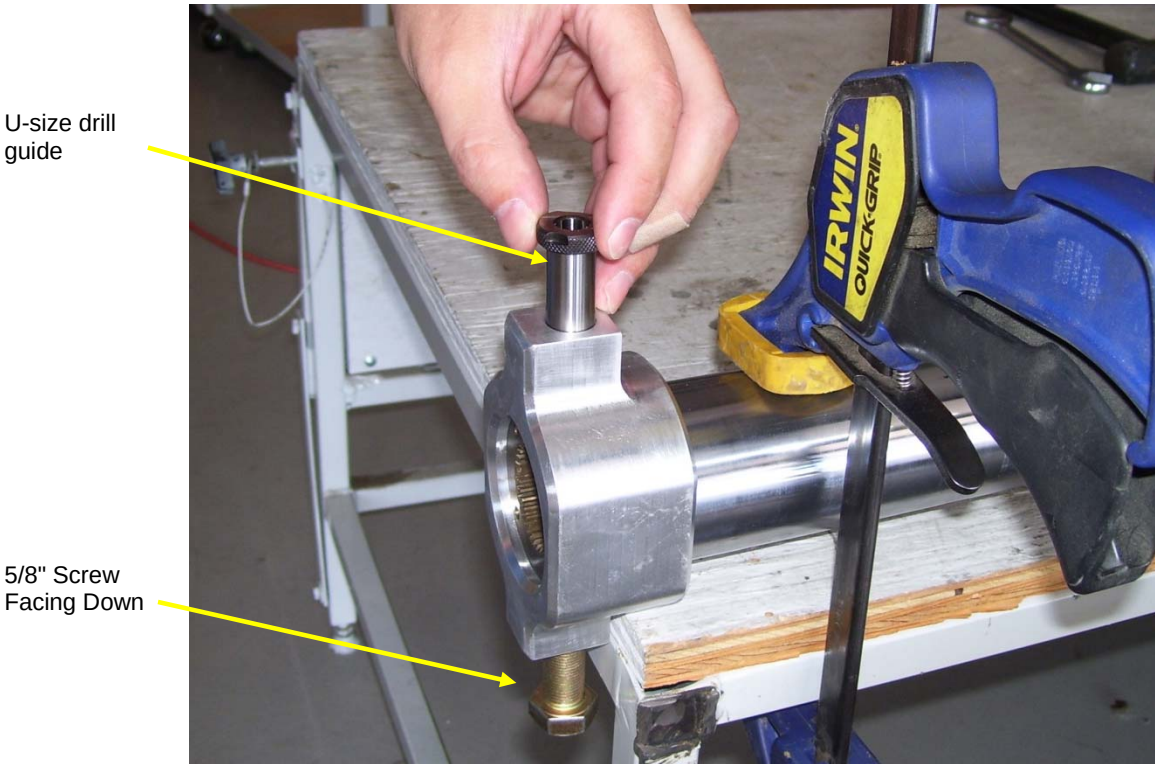

Figure 5-3: Assembly Secured

5.2 Rough Drill U-size Hole

1. Apply machine cutting fluid to the inside of the drill guide and outside surfaces of the bushing.
2. Insert the U-size drill guide bushing into the drill guide and secure the drill bushing with the lock screw.
3. Apply machine cutting fluid to the inside surface of the drill guide to lubricate the drill bushing.

> ⚠ CAUTION ⚠
> The solid carbide bit works best at high cutting speeds with minimal heat buildup. Overheating the bits will cause them to weaken, dull quickly, and break. Apply machine cutting fluid liberally to the bit, the inside of the bushing, and through the lube hole provided in the drill guide.

4. Select a high-speed handheld electric drill and attach the solid carbide U-size bit.

> ⚠ NOTE ⚠
> The ideal electric drill for this operation is capable of safely operating at approximately 1500 rpm.

5. Insert the carbide bit into the drill guide bushing.
6. Liberally apply machine cutting fluid to the lubricant hole during the drilling operation. Refer to **Figure 5-4**.
7. Using the highest speed setting, apply smooth continuous pressure of the drill bit on the chrome tube until the bit fully penetrates the tube wall and torque collar. Refer to **Figure 5-4**.

NOTE

Maintain a smooth application of pressure to avoid introducing shock loads into the drill bit.

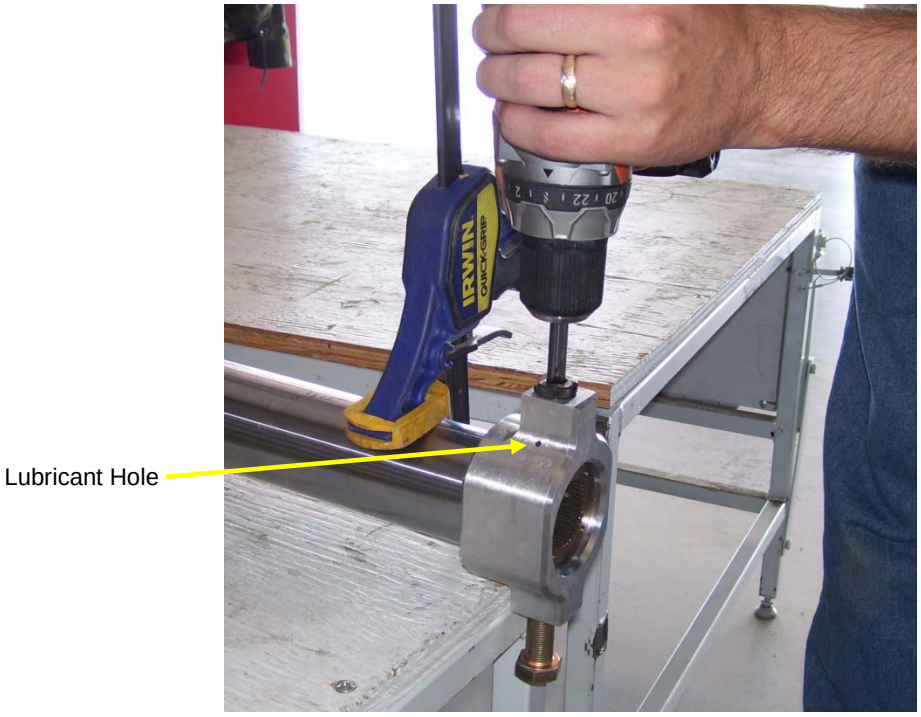

Figure 5-4: Rough Drill the U-sized Hole

5.3 Ream 3/8 Inch Hole

1. Remove the U-size drill bushing from the drill guide.

> ⚠ CAUTION ⚠
> Do NOT remove the drill guide from the chrome tube at this time.

> ⚠ WARNING ⚠
> Use extreme care and Personal Protective Equipment (PPE) to protect your eyes and exposed skin when handling the drill shavings and chips.

2. Clear away any metal shavings.
3. Place a rag over the hole and use compressed air to blow out any chips or shavings.
4. Apply machine cutting fluid to the inside and outside surfaces of the reamer bushing.
5. Apply machine cutting fluid to the inside surface of the drill guide to lubricate the drill bushing.
6. Insert the 0.3735 inch reamer guide bushing into the drill guide and lock it in place with the lock screw.

> ⚠ NOTE ⚠
> This carbide reamer works best at low cutting speeds with minimal heat buildup. Overheating the reamer will cause it to weaken, dull quickly and break.

> ⚠ NOTE ⚠
> The ideal electric drill for this operation is capable of safely operating at a slow speed of between 400 and 500 rpm.

7. Select the appropriate handheld electric drill and attach the carbide reamer.
8. Position the drill and reamer in the reamer guide bushing without penetrating the rough hole.
9. Using extreme care to maintain the proper alignment between the reamer and the drill guide bushing, operate the drill at its lowest setting (preferably 400 to 500 rpm).
10. Liberally apply machine cutting fluid to the lubricant hole during the reaming operation.
11. After the drill has reached operating speed, apply smooth continuous pressure and make a single pass through the hole.
12. While the reamer is still turning, pull the drill and reamer back out of the hole using the same steady pressure and motion.

> ⚠ CAUTION ⚠
> Do NOT reinsert the reamer, reverse the drill, or allow the reamer to stop while in the new hole.

5.4 Reposition for Second Hole

1. Remove the reamer guide bushing.

> **⚠ WARNING ⚠**
> Use extreme care and Personal Protective Equipment (PPE) to protect your eyes and exposed skin when handling the drill shavings and chips.

2. Clear away any metal shavings using a rag or compressed air.
3. Remove the 5/8 inch – 18 screw and the 1/4 inch alignment pin. Refer to **Figure 5-5.**

> **⚠ NOTE ⚠**
> The 1/4inch pin can be easily removed by gently tapping it out using a flat punch and light hammer blows.

4. Disassemble the drill guide from the chrome tube.
5. Use compressed air to remove debris and wipe clean all of the mating surfaces (including the inner diameter of the drill guide) to remove any shavings that can damage the chrome tube during reassembly.
6. Use the no-go gauge pin to verify the correct final hole size. The no-go gauge pin should not fit into the final hole. If the no-go gauge pin fits in the hole, the hole is oversize and will not properly retain the 3/8 inch pins; contact Quest Customer Service for further instructions.

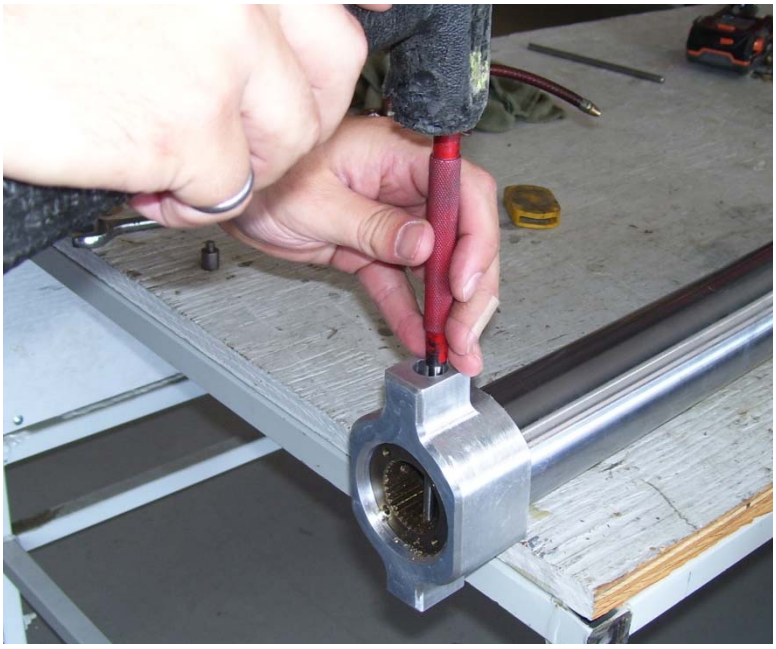

Figure 5-5: Removing the 1/4 Inch Alignment Pin

7. Reorient the drill guide 180° from the first new hole and reassemble the drill guide on the chrome tube.
8. Tap the top of the drill guide with a rubber mallet or a dead blow hammer to ensure it is seated completely on the chrome tube.
9. Carefully align the alignment pin side of the drill guide with the enlarged hole and the drill guide sleeve with the smaller 1/4 inch hole.
10. Insert the 3/8 inch alignment pin into the first new hole and tap it into place until the shoulder of the pin is seated against the chrome tube.
11. Insert the 5/8 inch screw.
12. Again, verify that the drill guide is seated by tapping with a rubber mallet or dead blow hammer.
13. Snug the screw with a 15/16 inch wrench or socket only enough to fully seat the 3/8 inch alignment pin.

⚠ CAUTION ⚠
Do NOT use a pneumatic or electric ratchet or impact driver to tighten the 5/8 inch screw.

14. Secure the chrome tube and drill guide sleeve assembly to a work bench with the 5/8 inch screw facing down. Refer to **Figure 5-3.**

5.5 Rough Drill Second 3/8 Inch Hole

Repeat Section 5.2 above.

5.6 Ream Second 3/8 Inch Hole

Repeat Section 5.3 above.

⚠ NOTE ⚠
After both new holes are drilled, the assembly can be removed from the workbench as needed.

5.7 Clean Up

1. Remove the reamer guide bushing.

⚠ WARNING ⚠
Use extreme care and Personal Protective Equipment (PPE) to protect your eyes and exposed skin when handling the drill shavings and chips.

2. Clear away any metal shavings.
3. Loosen the 5/8 inch screw and remove the alignment pin.
4. Disassemble the drill guide from the chrome tube.
5. Verify all metal shavings are removed from the chrome tube and inner diameter of the drill guide.
6. Use compressed air and wipe clean all of the mating surfaces to remove metal shavings that can damage the chrome tube during reassembly.

7. Use the no-go gauge pin to verify the correct final hole size. The no-go gauge pin should not fit into the final hole. If the no-go gauge pin fits in the hole, the hole is oversize and will not properly retain the 3/8 inch pins; contact Quest Customer Service for further instructions.
8. If the upper surface of the bronze torque collar is not scribed, use a scribe or marker to draw a line across the interface between the top of the chrome tube and the bronze torque collar to restore identical alignment during reassembly.
9. Use a flat punch to drive out the two (2) 1/4 inch pins securing the bronze torque collar inside the top of the chrome tube.
10. Inspect for and remove any small shavings and burrs that formed during the drilling and reaming process.
11. Remove the torque collar.

> ⚠ CAUTION ⚠
> Do NOT simply force the torque collar out. Take the time to work the torque collar loose and dislodge any burrs that may come loose. This will reduce scratches on the outside of the torque collar and the inside of the chrome tube and will ease re-assembly.

12. Use emery cloth or a very light file to clean the edges of all of the newly drilled holes in the chrome tube and the bronze torque collar.

> ⚠ CAUTION ⚠
> Do NOT make a chamfer or radius on the edges of the holes. Simply remove any burrs that would complicate fit and reassembly.

13. Thoroughly clean torque collar and chrome tube to remove any metal dust, shaving or chips.

5.8 1/4 Inch Pin Installation

1. Use the alignment marks to carefully restore the original alignment of the torque collar inside the chrome tube.
2. Insert a new 1/4 inch pin (PN AN122716-00) into one side of the chrome tube.
3. If a press is available, use a press to insert the pins flush with the outside surface of the chrome tube. If no press is available use a hammer and punch or rivet set, to set the pin in place and flush with the outside surface of the chrome tube.

> ⚠ CAUTION ⚠
> Do NOT over drive the pins or they will interfere with the motion of the steer tube splines.

4. Rotate the assembly 180° and install the second new 1/4 inch pin (PN AN122716-00) into the chrome tube.
5. Slide the splined steer tube down through the torque collar to verify smooth motion and no interference.

5.9 Replace Lower Piston Seal

6. Lubricate o-ring (P/N MS83461/1-328) with Parker "O" Lube or MIL-PRF-5606 hydraulic fluid and install onto piston plug (P/N 100-412-0103).
7. Generously apply lubricant to the inside of the lower chrome tube, especially around the two holes where the bolt passes through the chrome tube and attachment collar.
8. Install piston plug from the bottom of the chrome tube taking care to align the holes in the plug with the bolt holes in the chrome tube and attachment collar.
9. Wet install the through-bolt (P/N NAS6606-54) using ProSeal 890 class B type 2 sealant or equivalent.

5.10 Lower Nose Gear Shock Strut Assembly

1. Lubricate with Parker "O" Lube or MIL-PRF-5606 hydraulic fluid and install a new poly pack seal (P/N 461518702500Y375B) onto the lower gland. Be sure to install the poly pack with the o-ring open side towards the pressure chamber. Refer to **Figure 5-6**.
2. Lubricate with Parker "O" Lube or MIL-PRF-5606 hydraulic fluid and install a new o-ring (P/N M83461/1-234) and dust seal (P/N 4615SH959-25) on the lower gland. Refer to **Figure 5-6**.

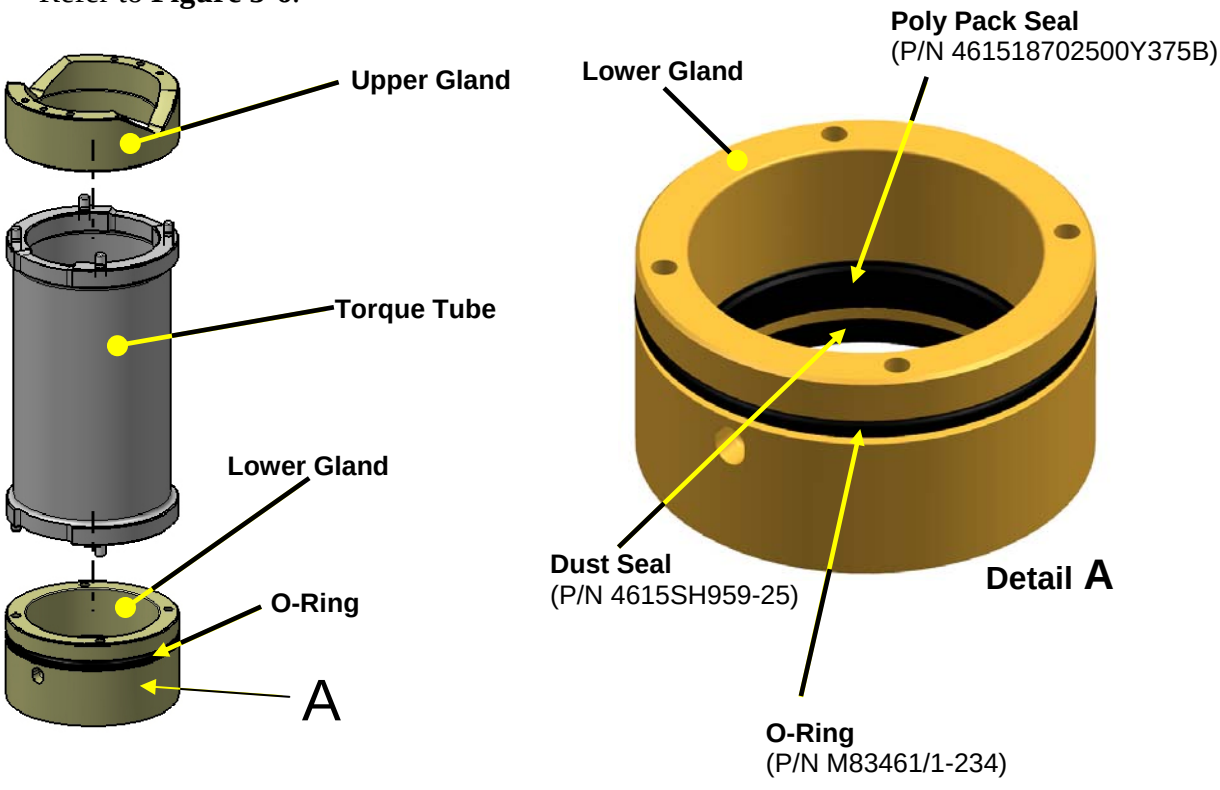

Figure 5-6: Torque Tube Assembly

3. Ensure that the lower gland retainer snap ring (P/N MS16625-1325) is located on the chrome tube as shown in **Figure 5-7**.

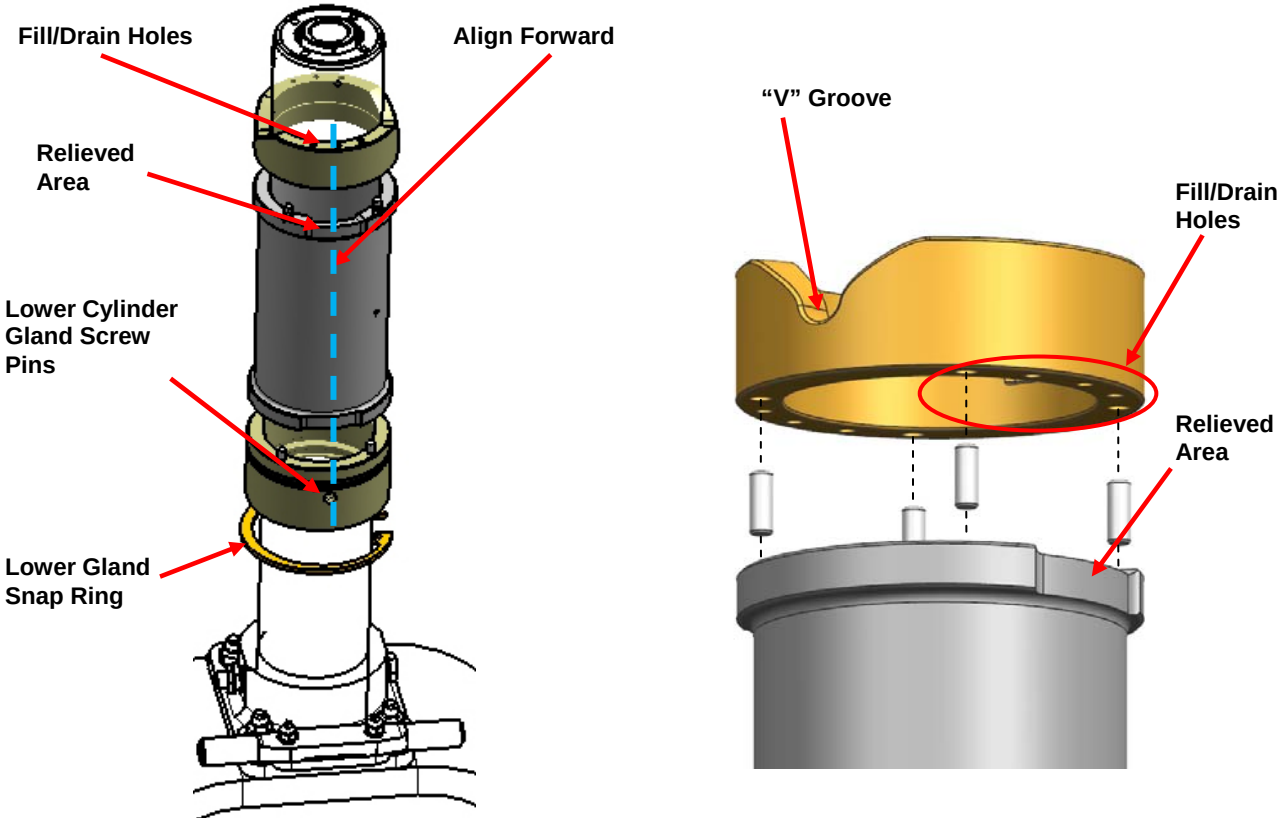

Figure 5-7: Gland Alignment and Installation

4. Install the lower gland (P/N 100-412-0113), torque tube (P/N 100-412-0108), and the upper gland (P/N 100-412-0126) onto the piston.

5.11 Centering Pin Installation

1. Position a new 3/8 inch centering pin over the newly drilled hole.
2. Place the pin guide over the pin.
3. If a press is available, use a press to insert the pins with the pin guide to set the correct depth. Otherwise, use a hammer to set the new 3/8 inch centering pin with the pin guide into the newly drilled holes in the chrome tube.

> **⚠ NOTE ⚠**
> The pin guide is designed to set the pin to the appropriate depth. When the pin guide bottoms out against the chrome tube, do not force it any further. If the pin guide deforms the centering pin will be set too deeply into the shock tube assembly.

4. Remove the pin guide after the pin is in place.

5. Verify the correct pin depth with the pin depth gauge. The pin should extend 0.250 inch to 0.255 inch beyond the outside surface of the chrome tube. Place the pin depth gauge over the pin aligned with the chrome tube centered on the pin. Refer to **Figure 5-8**. The pin should be shorter than the "+" gauge but not shorter than the "-" gauge. If a gap is visible between the "-" gauge and the pin, the pin has been inserted too far. If a gap is visible between the feet of the gauge and the chrome tube with the pin in the "+" gauge, the pin has not been inserted far enough.

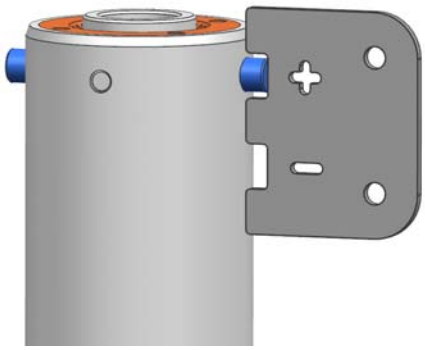

Figure 5-8: Pin Depth Gauge

> **NOTE**
> The pin should not interfere with the motion of the steer tube.

6. Slide the splined steer tube down through the torque collar to verify smooth motion and no interference.
7. Repeat steps 1 through 6 above to install a new 3/8 inch centering pin in the second newly drilled hole.

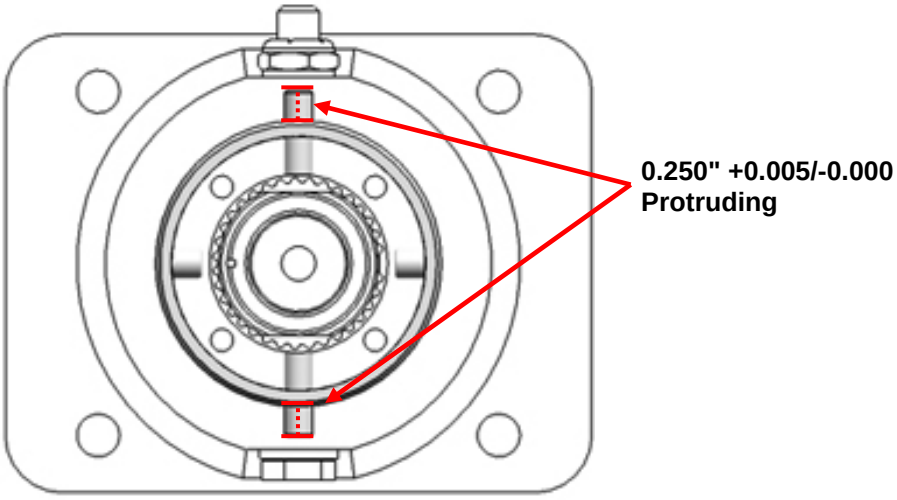

Figure 5-9: Correct Centering Pin Installation

8. Orient the glands and torque tube forward and slide the glands and torque tube up to engage the centering pins into the upper gland "v" groove. Refer to **Figure 5-7**.

> **NOTE**
> Ensure that the fill/drain holes in the upper gland are in line with the relieved area of the torque tube and the two (2) lower cylinder gland screw pins as shown in **Figure 5-7**.

9. Use masking tape as shown in **Figure 5-10** to attach the spacer tool pieces, supplied with the nose strut resealing tool kit, between the fork attach collar and lower gland.

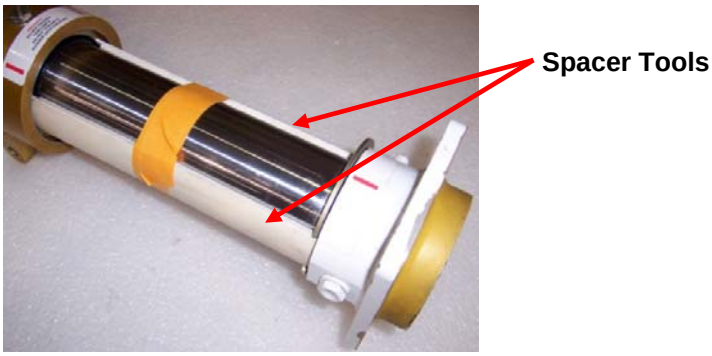

Figure 5-10: Upper Gland Alignment and Installation

10. Securely hold the trunnion upside down, ensure the keyed spline on the torque collar is at the front of the strut assembly (it will line up with the high pressure valve in the trunnion) and insert the piston assembly into the cylinder.
11. Ensure the cylinder gland screw-pin holes are aligned with the outer tube.
12. Install the screw-pins (P/N 100-410-0107) and washers (P/N NAS1149F0532P).

13. Torque the screw-pins to 60 – 85 in-lb.
14. Safety wire the two screw-pins together in accordance with the *KODIAK® 100 Airplane Maintenance Manual*, Chapter 20.

> **NOTE**
> Quest Aircraft Company recommends the installation of wire heat shrink/wire protectant over the safety wire between the two bolts.

15. Install the lower gland retainer snap ring (P/N MS16625-1325).
16. Remove the spacer tools, collapse the strut and place the strut in the upright position.

6. Completion

6.1 Install Nose Landing Gear Fork

1. Apply corrosion prevention (Par-Al-Ketone or equivalent) to the inside of the bottom of the chrome tube and piston plug.
2. Clean the center portion of the bottom inside surface of the fork with acetone. Refer to **Figure 6-1**.

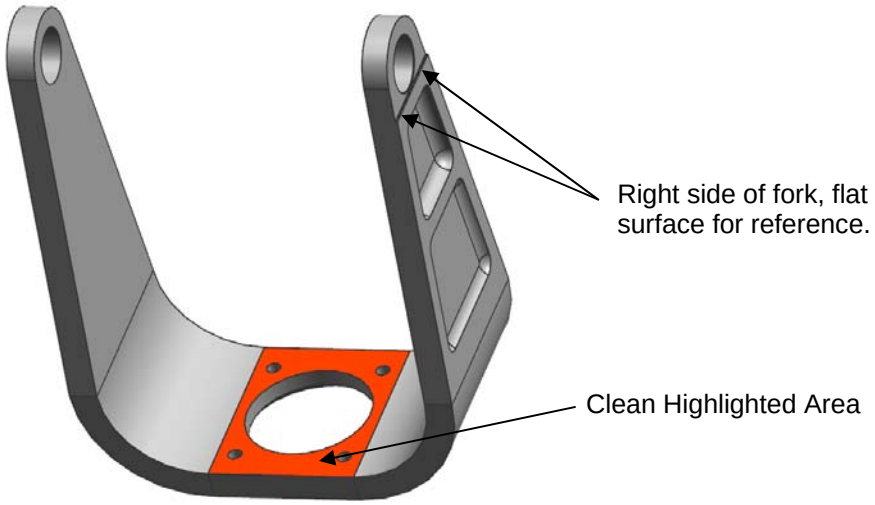

Figure 6-1: Fork Surface Cleaning

3. Note the correct alignment of the fork with regard to the nose gear trunnion. On the right side of the fork, there is a small flat spot where the detent on the axle will rest. Refer to **Figure 6-1**.
4. Apply ProSeal 890 class B type 2 or equivalent to the surface of the fork to fay seal the stone guard (P/N 100-410-0202) in place.
5. Install two (2) bolts (P/N NAS6606-23) up through the stone guard, fork, nose landing gear attachment collar and tow peg mounting base. Place one (1) washer on each bolt and torque nut (P/N MS21045-6) to 160-190 in-lb. Refer to **Figure 6-2**.
6. Install two (2) bolts (P/N NAS6606-19) up through the stone guard, fork, and nose landing gear attachment collar. Place one (1) washer on each bolt and torque nut (P/N MS21045-6) to 160-190 in-lb. Refer to **Figure 6-2**.

⚠ NOTE ⚠

The two (2) longer nose landing gear fork bolts (P/N NAS6606-23) are installed on the forward side of the chrome tube and the two (2) shorter bolts (P/N NAS6606-19) are installed on the aft side of the chrome tube.

⚠ NOTE ⚠

Ensure the tow pins are installed on the forward side of the nose landing gear fork.

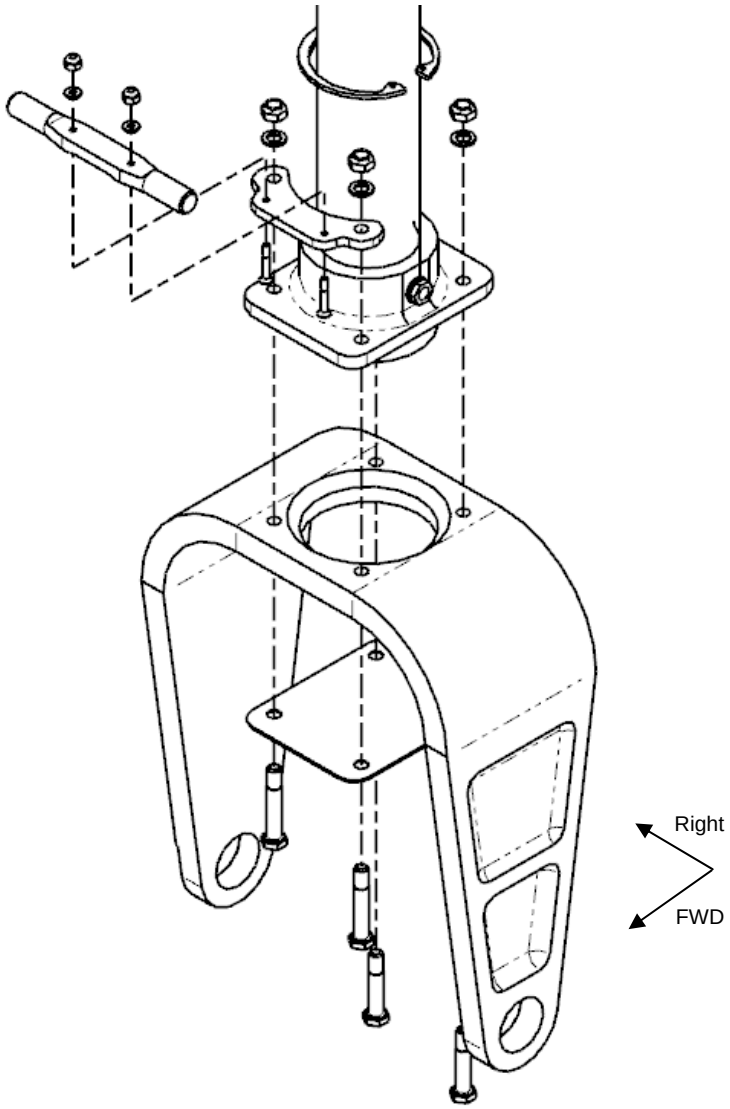

Figure 6-2: Nose Landing Gear Fork Assembly

7. Remove and fillet smooth any sealant squeeze-out.

6.2 Upper Nose Gear Shock Strut Assembly

Assemble the upper nose gear shock strut as described in the *KODIAK® 100 Airplane Maintenance Manual*, Chapter 32.

6.3 Hydraulic Fluid Replenishment

Replenish the nose gear hydraulic fluid as described in the *KODIAK® 100 Airplane Maintenance Manual*, Chapter 32 "Hydraulic Fluid Replenishment."

6.4 Update Records

Record all work performed in the appropriate maintenance records.

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