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SERVICE BULLETIN

SB016-0003

Subject: Evolution Main Landing Gear Trunnion Rev B

Date: 12-2-09

Pages:7

Status: Mandatory Inspections, Life limited parts, and Reinforcement Installation

Background:

A crack was discovered in the "434-0002B Trunnion, Main Gear, Left" on the #001 prototype Evolution. This service bulletin explains how to inspect and reinforce both of the trunnions (434-0002B Trunnion, Main Gear, Left and 434-0003B Trunnion, Main Gear, Right) to detect and prevent cracks. These modifications will be temporary and time limited to 50 hours. After that, Lancair Engineering will advise and/or replace the revision B trunnions.

Note: Read and thoroughly understand all instruction before proceeding. If you have questions call Lancair engineering for instructions.

Action:

Phase I: Inspection & Limitations

Inspections: Inspect the entire landing gear, including trunnions and trailing links for cracks, paying special attention to the areas outlined on the attachments #4, #5, and #6. If available, use dye penetrant process to inspect the same areas. If any cracks are found remove aircraft from service and contact Lancair Engineering.

Limitations:

- Limit one wheel pivots (locking one wheel) during taxiing: 29 foot wing tip minimum turn radius.
- Limit cross wind landings.
- Every preflight thoroughly visually inspect (flashlight suggested) the entire landing gear with specific attention to the areas shown on attachment sheets #4, #5, and #6.



Figure 1 Intact Main Landing Gear

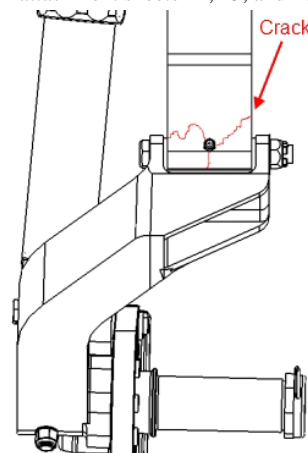


Figure 2 Illustration of Cracks in Trunnion

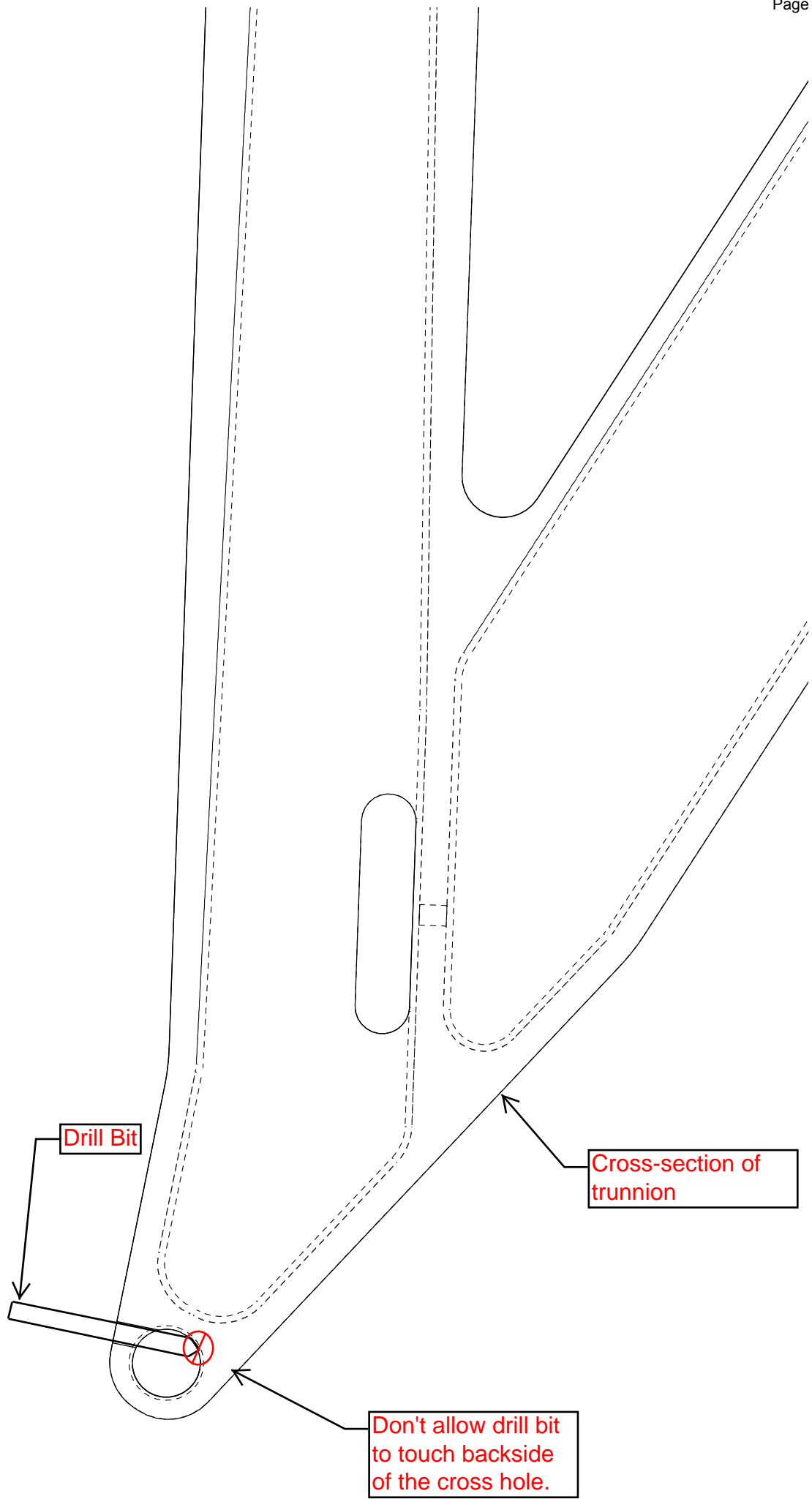
Phase II: Installation of Modification Kit PN 434-0014A

- Install the eight trunnion boxes PN 230-0008A through 230-0015A following the procedure on attachment #2.
- The assembly is shown on attachment #3. The left trunnion assembly is a mirror of the right assembly.
- Remove both zerks and progressively drill the threaded zerk holes with .250", .257", .261", .266", and .277" drill bits.
- Ensure all threads are removed without scoring the wall of the cross bolt hole, see attachment #1.
- Bond the two 216-0020A Plugs into the drilled zerk holes using the Hysol process stated for closeouts, attachment #2.

After installation of trunnion boxes and plugs continue to follow the limitations stated in phase I.

Phase III: Replacement

Contact Lancair Engineering at 50 hours for further instructions.



Drill Bit

Cross-section of trunnion

Don't allow drill bit to touch backside of the cross hole.

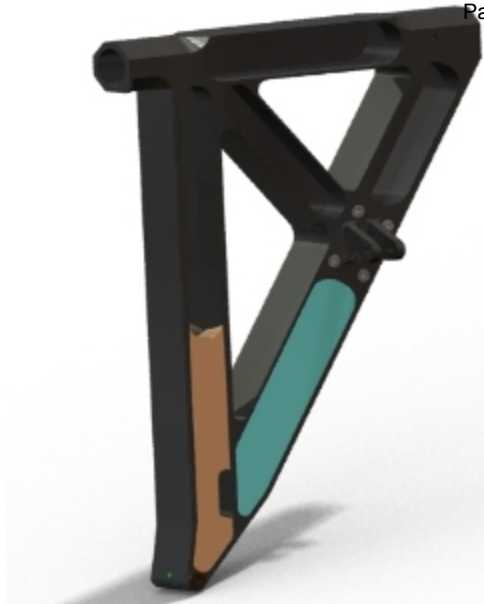
Attachment #2 Lancair Landing Gear Closeout Installation

1. Take weight off wheels.
2. Remove trailing links and other attachments on the trunnion that would interfere with closeout installation.
3. Check fit of closeouts and mark bonding surfaces.
4. Clean bonding area with acetone to remove grease and contaminants.
5. Scuff all bonded surfaces with fine emery cloth removing all anodizing.
6. Blow off sanded areas with clean compressed air and do not clean or touch surface.
Do not touch the surface with anything.
7. Within minutes of prepping, using properly mixed 9394 QT Hysol Kit, (see can for ratios, mix in one cup then transfer to another cup and mix again) wet out all bonded surfaces with a squeegee.
8. Liberally batter mixed Hysol on bonded surfaces.
9. Insert boxes into trunnions and clamp using soft-face clamps.
10. Scrape up squeeze-out and clean trunnion with acetone.
11. Utilizing heat lamps allow to cure above 75 degrees for over 48 hours.

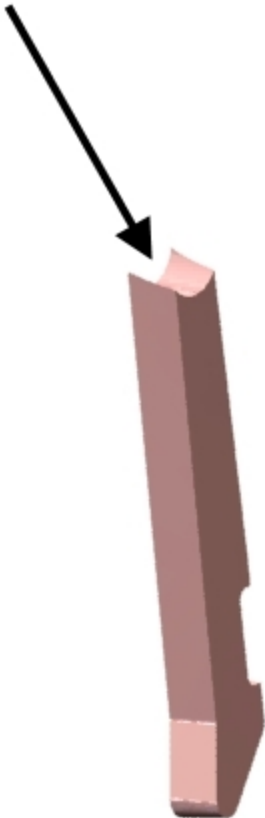
434-0014A Modification Kit

- 1ea 230-0008A Closeout, Inboard, Right, Fwd, Landing Gear
- 1ea 230-0009A Closeout, Inboard, Right, Aft, Landing Gear
- 1ea 230-0010A Closeout, Outboard, Right, Fwd, Landing Gear
- 1ea 230-0011A Closeout, Outboard, Right, Aft, Landing Gear
- 1ea 230-0012A Closeout, Inboard, Left, Fwd, Landing Gear
- 1ea 230-0013A Closeout, Inboard, Left, Aft, Landing Gear
- 1ea 230-0014A Closeout, Outboard, Left, Fwd, Landing Gear
- 1ea 230-0015A Closeout, Outboard, Left, Aft, Landing Gear
- 2ea 216-0020A Plug, Trunnion, Main Landing Gear
- 1ea 9394 QT Hysol Kit

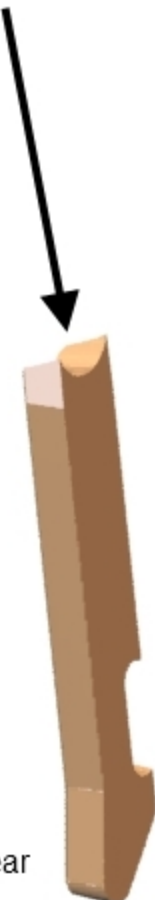
Attachment #3 Right Trunnion Boxes



230-0010A Closeout, Outboard, Right, Fwd, Landing Gear



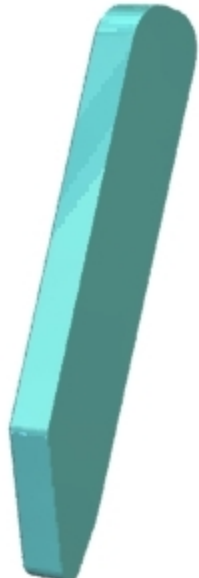
230-0008A Closeout, Inboard, Right, Fwd, Landing Gear



230-0011A Closeout, Outboard, Right, Aft, Landing Gear

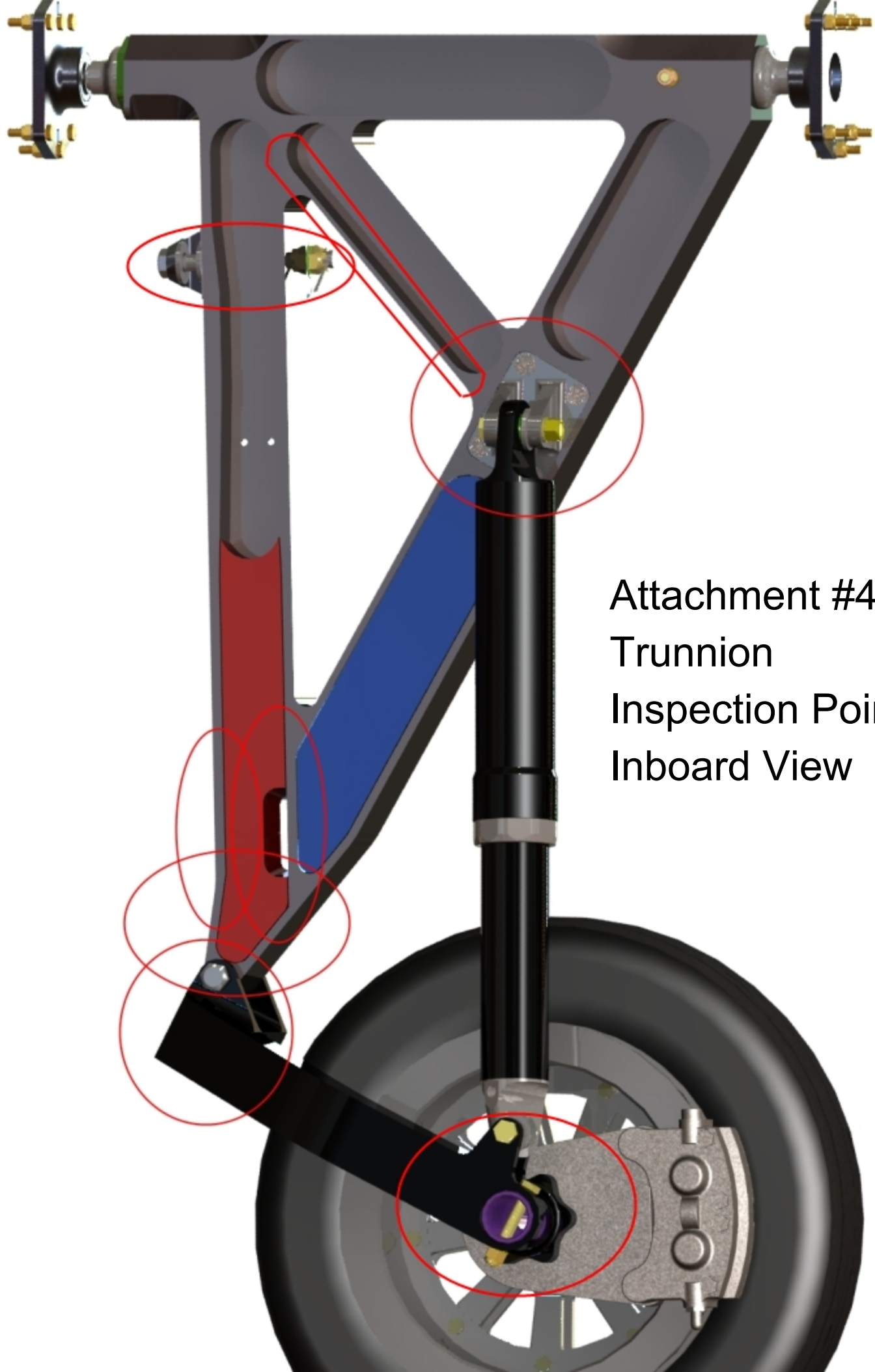


230-0009A Closeout, Inboard, Right, Aft, Landing Gear



216-0020A Plug, Trunnion, Main Landing Gear



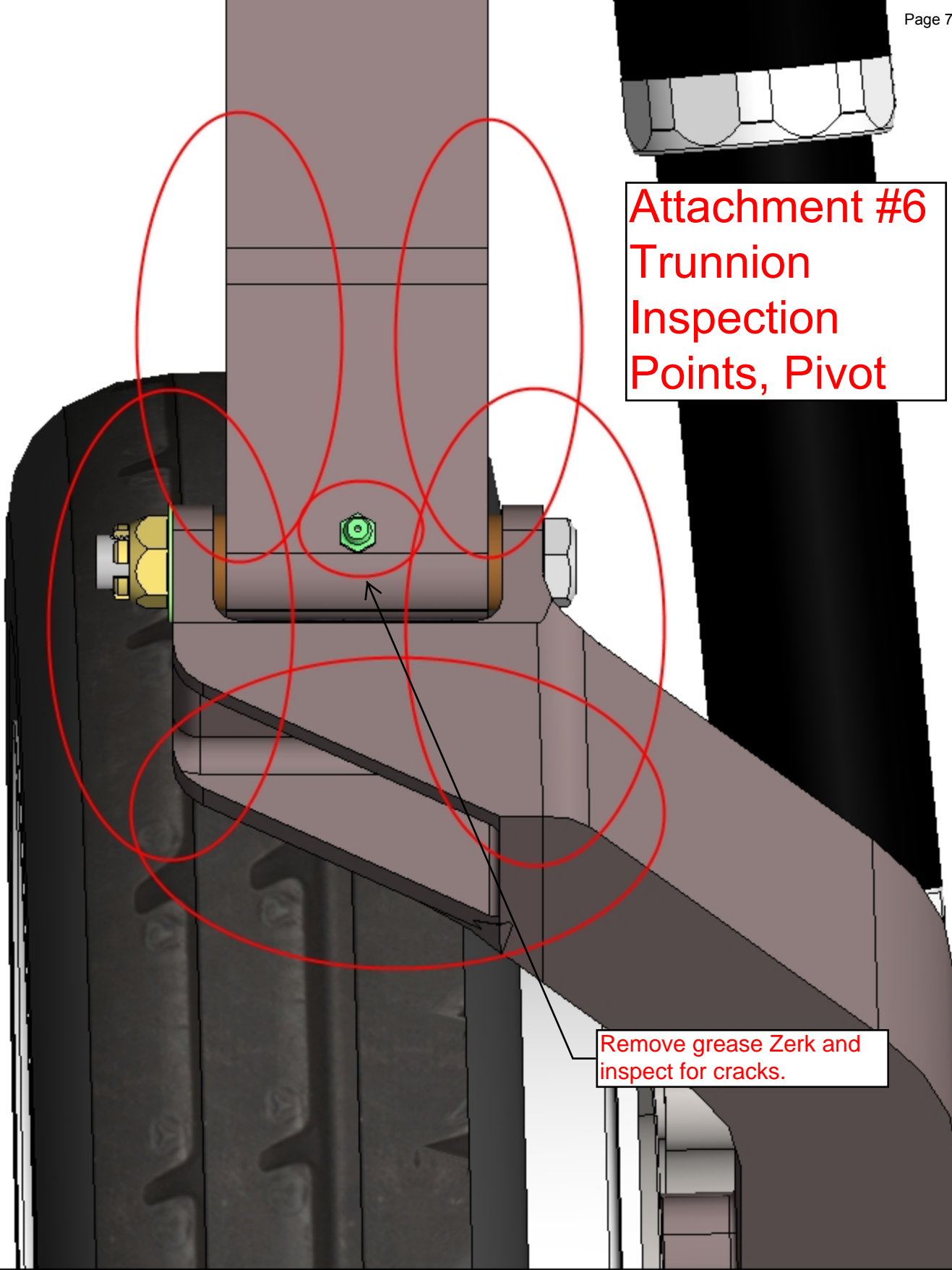


Attachment #4
Trunnion
Inspection Points,
Inboard View



Attachment #5 Trunnion
Inspection Points, ISO
View

**Attachment #6
Trunnion
Inspection
Points, Pivot**



Remove grease Zerck and inspect for cracks.