

A. Purpose:

This work instruction provides steps on how to inspect and replace hubs, hub studs and lug nuts to prevent damage to components caused by not torquing lug nuts to specifications.

B. Scope:

This document is to be referenced in the case that loose lug nuts have been discovered on a chassis to determine whether any repairs need to be done and the procedures to follow if repairs are needed.

C. Contact Information:

If you have any questions about this Repair Document, please contact the Stoughton Trailers Customer Service Department by toll free at (866)-725-0044 or by email (warranty@stoughtontrailers.com).

D. Approximate Inspection Time: 10 - 60 minutes

E. Inspection Instruction

1. Issue

1.1. Loose lug nuts can lead to major failures of chassis components. If lugs are not torqued to specifications, this can lead to significant wear on hubs, wheels and studs that will eventually lead to stud/hub failure and therefore a wheel off event.

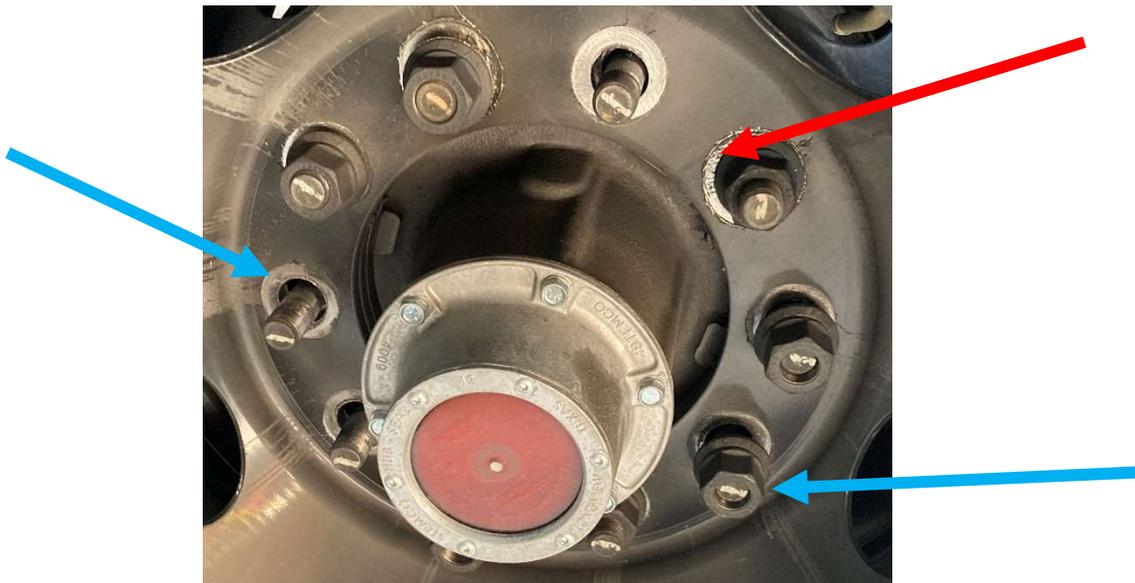
2. Signs of Loose Lug Nuts

2.1. Wear on wheel/paint defects, **Red Arrow**

2.1.1. The lug nut can appear tight upon inspection, but any defects in paint or inconsistent paint alignment marks are a sure sign that lugs are not fully torqued. If any defects are noticed, the wheel must be removed for hub/perform hub/stud inspection. If no damage is found, torque all lug nuts to specifications and continue to check consistently.

2.2. Lugs have backed off or are missing, **Blue Arrow**

2.2.1. If Lugs appear loose upon inspection or are missing, the wheel must be removed to check hub/hub studs for damage.



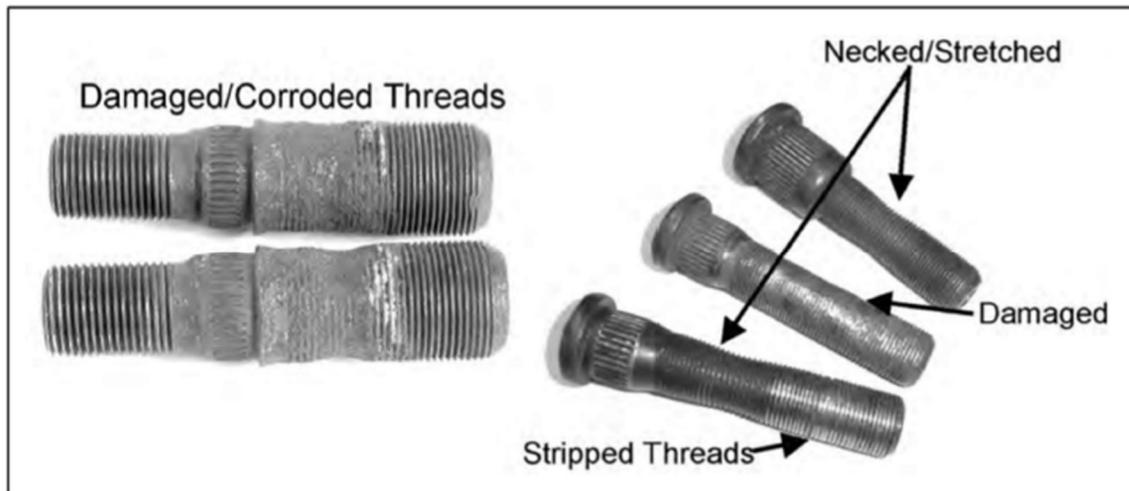
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3. Stud inspection

- 3.1. Visual Inspection. Remove wheel. Once the wheel is off, visually inspect studs for any signs of wear, discussed below.
- 3.2. Physical Inspection. Test for thread damage by installing a lug nut by hand on each stud until it bottoms out on the hub. If any noticeable resistance is found, replace the stud. Signs of thread damage can be seen below.



Upon inspection, if any stud appears to have been bent, unseated, necked, stripped, broken or is missing from the hub, it must be removed, and further inspection of the hub must follow. An example of damaged, corroded, stripped and necked studs is shown below.



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Physically feel each stud by attempting to move it to check that they are tight in the hub. If any studs are loose in the hub, see section 4. A missing and broken hub stud can be seen below.



If the stud appears bent or deformed on either side of the hub, this can lead to damage of the stud seats, as seen below, which will lead to loosening of lug nuts and eventually hub failure. Therefore, the stud must be removed.

3.3. Stud Replacement. If any wear is present, the damaged stud and one stud on either side of it at the minimum must be replaced (3 studs). NOTE: Two or more damaged studs requires all studs to be replaced and hub inspected.

4. Hub Inspection

4.1. Remove any studs in question.

4.2. Visual Inspection. Look over the outside of the hub for any sign of damage such as fractures, a damaged mounting face, excessive corrosion etc. If damage is done to so much as one stud seat, pictured below, there is a risk of compromising the whole hub assembly which could lead to a wheel off event and significant damage and/or safety concerns. After removing each stud, inspect the spline pattern on each of the stud seats for the corresponding stud. If these internal splines are chipped, broken, worn, or missing, the replacement stud will not seat properly.

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4.3. If as little as one stud seat is found to be damaged after visual inspection, **replace the hub.**



Hub Stud
 Internal Spline
 Pattern

4.4. If visual inspection shows there were any studs loose before disassembly, or the inspector sees the hub unsafe to use, **replace the hub.**

4.5. Identify Hub Manufacturer & refer to reference documents below.

5. Lug Nut Torque Certification

5.1. When lug nuts are torqued to the required value found in the manufacturer's specifications in section 7, mark with a red mark as shown below.



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5.2. Paint a small green dot on the body of the chassis on the roadside suspension as shown below.



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6. Inspection Certification Ribbon

6.1. Once the unit has been inspected and repaired, secure a blue ribbon to the curbside front as shown in the photo below.



7. Reference Documents

7.1.1. Wheel Stud Replacement

7.1.1.1. [How to Replace Wheel Bolts on CONMET Hub Assemblies](#)

7.1.2. Hub Assembly Replacement

7.1.2.1. [CONMET Hub Service Manual; Conventional, PreSet, PreSet Plus, Hub & Rotor](#)

8. Part Numbers

8.1. Conmet:

8.1.1. Lug nut: 10083845

8.1.2. Wheel Stud: 10001399

8.1.3. Hub Assembly: 10085616

8.2. AXN

8.2.1. Lug Nut:

8.2.2. Wheel Stud: H33-0341

8.2.3. Hub Assembly:

9. Tool List

9.1. Stud Replacement:

9.1.1. Commercial Wheel Stud Replacement Kit **OR**

9.1.2. Hammer

9.1.3. Lug Wrench & Socket

9.1.4. Impact Driver

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- 9.1.5. 0.002" Feeler gauge
- 9.2. Hub Replacement:
 - 9.2.1. See Reference Documents

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