

02/23/2021
CAL FTL 32-010

**Subject: Cascadia Front Steer Arm – Drag
Link Ball Joint Connection Inspection**

Models Affected: Specific Cascadia vehicles manufactured between January 1, 2019 and July 14, 2020

Our records indicate that you are the owner of certain vehicles, and therefore DTNA has decided to share the following documentation with you.

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Work Instructions

Subject: Cascadia Front Steer Arm – Drag Link Ball Joint Connection Inspection

Models Affected: Specific Cascadia vehicles manufactured between January 1, 2019 and July 14, 2020

Inspection and Tightening of Castle Nut

NOTE: This procedure will require two people, one turning the steering wheel and one observing the drag link steering arm joint as the steering wheel is turned.

1. Park the vehicle on a level surface, apply the parking brakes, and chock the rear tires.
2. Raise the hood and rotate it to the fully raised rest position.
3. Log in to DTNAConnect and then click on the link to watch the [reference video](#).¹ The video shows a drag link steering arm joint with movement present. Notice there is an audible knocking sound.
4. Observe the behavior of the drag link steering arm joint. See [Fig. 1](#).
 - 4.1 With the engine running at idle and the parking brakes still engaged, have one person turn the steering wheel in small increments from left-to-right and back several times.



Maintain a safe distance from the front tire and moving steering linkage while observing.

- 4.2 While the steering wheel is being turned, have the second person monitor the behavior of the drag link - steering arm joint.

¹ URL: https://dtnacontent-dtna.prd.freightliner.com/content/dam/techlit/video/chassis/46_steering/Loose_Draglink_Unit32K_2.mp4

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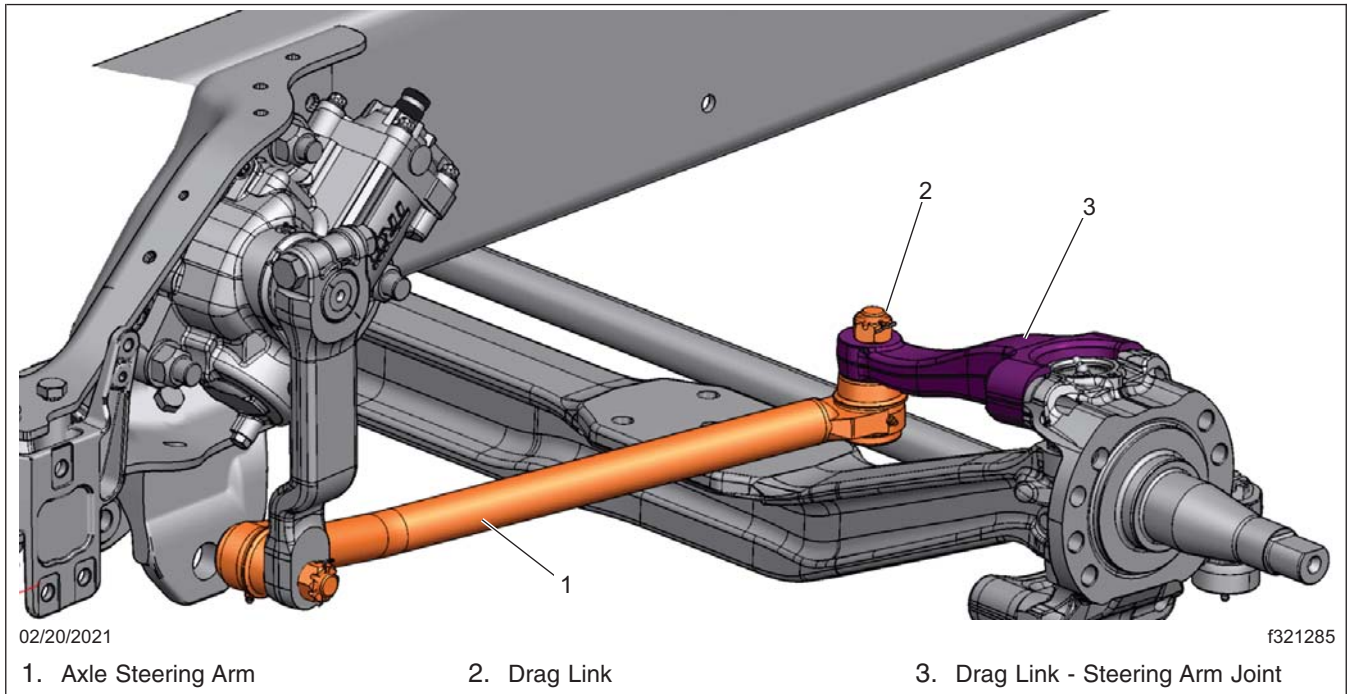


Fig. 1, Drag Link - Steering Arm Joint

5. If the castle nut does not appear to be loose, the cotter pin is in place, and there is no movement in the drag link - steering arm joint when the steering wheel is moved back and forth, follow the following sub-steps.

If there is movement in the drag link - steering arm joint, continue to step 6.

5.1 Remove the cotter pin and torque the castle nut to 229 lbf-ft (310 N·m). See [Fig. 2](#).

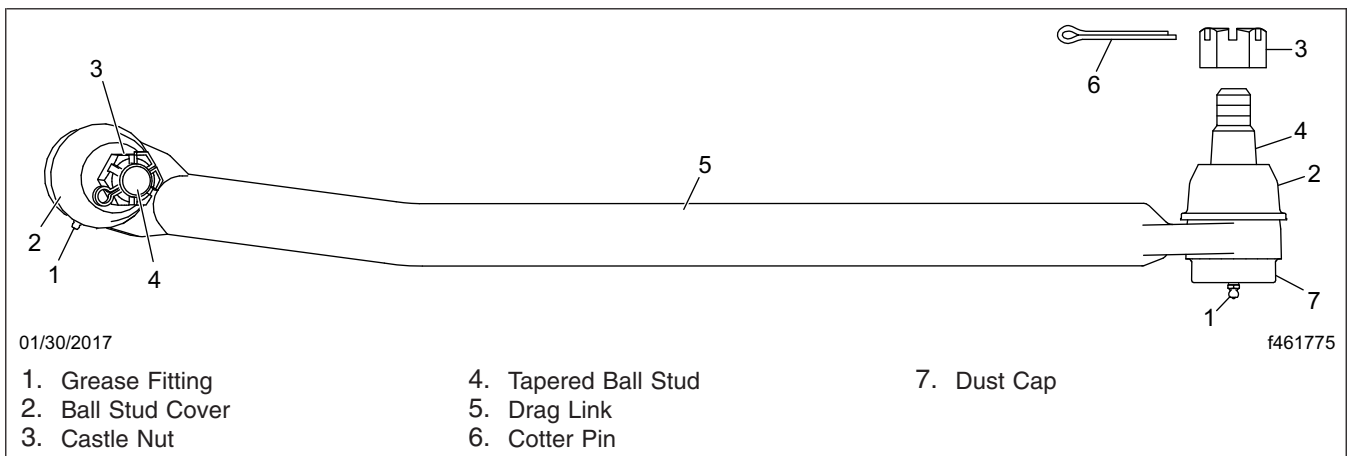


Fig. 2, Fixed-Length Drag Link Assembly

5.2 Once the castle nut is torqued, install a new cotter pin. If the new cotter pin does not align, continue to tighten the castle nut to achieve cotter pin alignment. **Do not** loosen the castle nut to allow for alignment of the cotter pin.

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6. If relative movement is observed between the drag link ball stud and steering arm connection point, the drag link and steering arm will need to be replaced.
 - 6.1 For steering arm replacement refer to the following manual sections:
 - **Cascadia Workshop Manual**, section 33.03.100 Detroit Front Axles, Axle Removal and Installation.
 - **Meritor Maintenance Manual 2** for Meritor Front Non-Drive Steer Axles, section 10.
 - 6.2 For drag link replacement refer to the **Cascadia Workshop Manual**, section 46.06.100 Drag Link Removal and Installation.

If replacing the drag link, torque the castle nut to 229 lbf-ft (310 N·m) and align the cotter pin according to the above instructions in step 5.