

03/31/2021
CAL FTL 42-003

Subject: Inspection and Correction of the Clearance between the Drive Axle Disc Brake Chamber and the Airliner Leaf Spring

Models Affected: Model year 2021 and 2022 Freightliner New Cascadia vehicles built from January 13, 2020 through February 16, 2021

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

Please see the attached communication in this email. We hope you find this information helpful.

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Disc Brake Chamber and the Airliner Leaf Spring**

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Work Instructions

1. Park the vehicle on a level surface, shut down the engine, and apply the parking brakes. Chock the tires.
2. Measure the clearance between the bottom of the disc brake air chamber and the top of the Airliner leaf spring as shown in Fig. 1. The minimum clearance is .19 inches (5 mm).
If the clearance is equal to or more than 5 mm, no further work is needed.
If the clearance is less than 5 mm, continue to step 3.

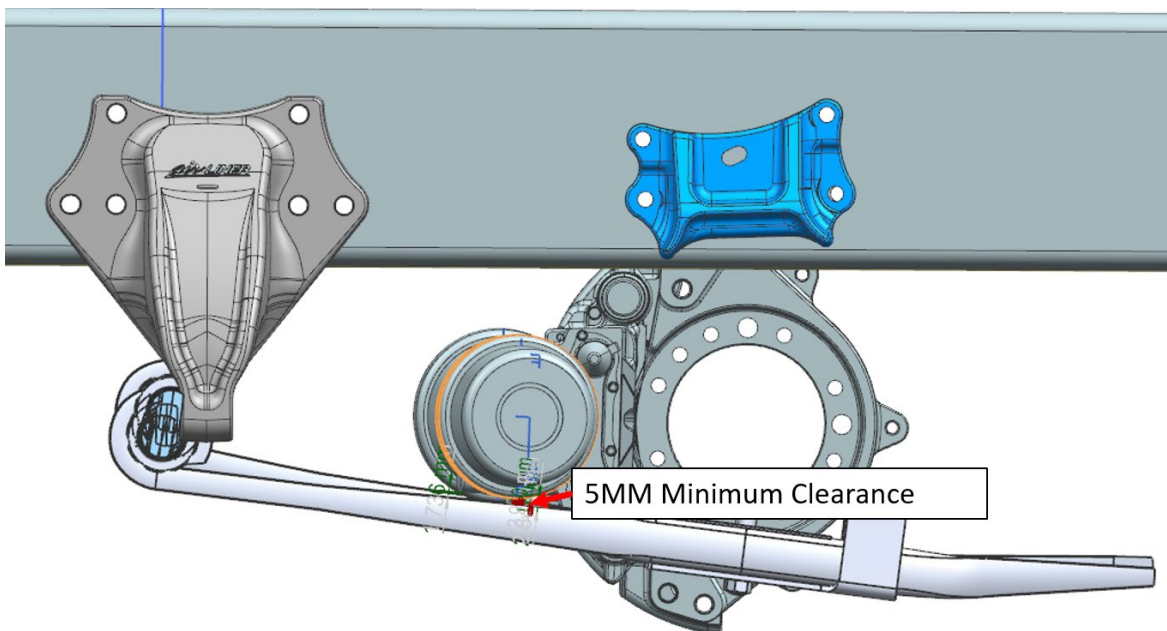


Fig. 1, Clearance between the Bottom of the Disc Brake Air Chamber and the Top of the Airliner Leaf Spring



DANGER: Before working under the vehicle, place jack stands under the frame rails to ensure the vehicle cannot drop. Failure to follow these steps could result in serious personal injury or death.

3. If the clearance is less than 5 mm, remove the caliper/carrier assembly and hub and rotor assembly to replace the disc brake anchor plate.

Use the 423 bill of materials in Parts Pro to get the correct anchor plate part number for the vehicle.

- 3.1. Place jack stands under the frame rails.
- 3.2. Following all shop procedures, remove the wheel and tire assemblies.
- 3.3. Following all shop procedures, remove the air pressure from the air brake system and cage the drive axle brakes.
- 3.4. Remove the air lines at the chambers for each brake assembly.

NOTE: See subject 35.01.100 of the New Cascadia Workshop Manual for specific instructions on preparing the hub for removal.

- 3.5. Remove the bolts holding the carrier/caliper assembly onto the drive spindle.
- 3.6. Remove the caliper/carrier assembly and set it aside to allow for the removal of the hub and rotor assembly.

If needed, instructions on how to remove the WABCO caliper slack adjuster assembly can be found in [MAXXUS 22 Mechanical Sliding Disc Brake Caliper](#) service literature on the WABCO website.

- 3.7. Remove the hub and rotor assembly.

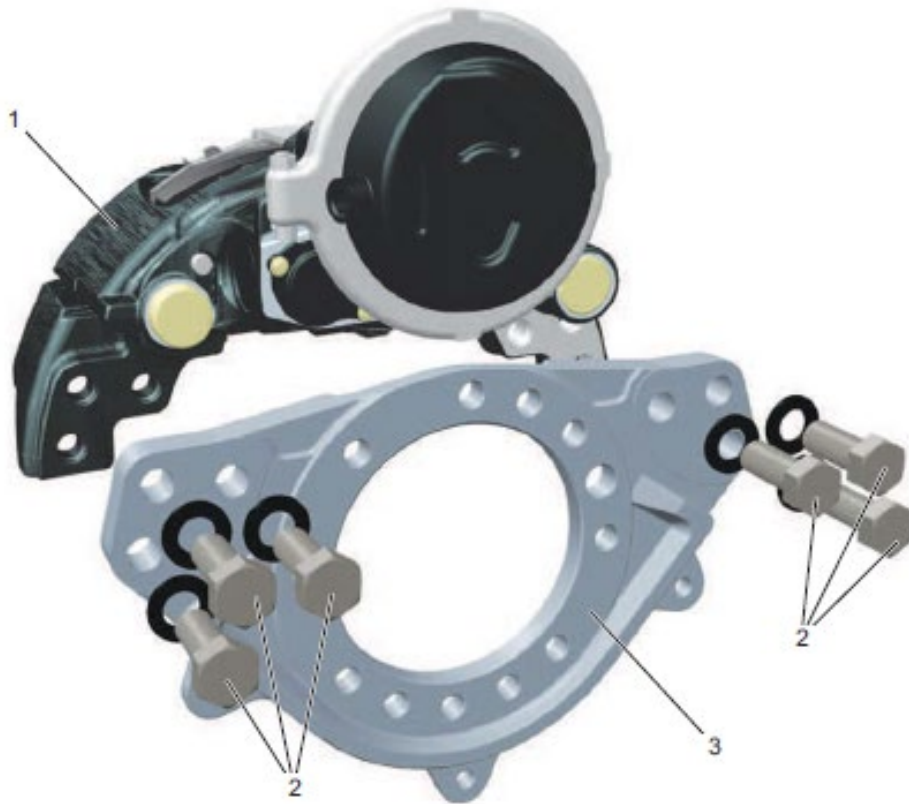
NOTE: Always use new fasteners when installing an anchor plate.

- 3.8. Remove the existing anchor plate assembly and install the new anchor plate assembly.
If needed, instructions on how to replace the anchor plate assembly can be found in Subject 42.20.120 of the **New Cascadia Workshop Manual**.

4. Install the hub and rotor assembly. If needed, instructions can be found in Subject 35.01.100 of the **New Cascadia Workshop Manual**.

NOTE: Always use new fasteners when installing the carrier/caliper assembly.

5. Install the caliper/carrier assembly. See Fig. 2.



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1. Caliper/Carrier Assembly (showing service actuator)
 2. Mounting Bolts and Washers (6)

3. Anchor Plate/Torque Plate

Fig. 2, Axial Mount Disc Brake Caliper/Carrier and Chamber

6. Align each caliper/carrier assembly with the rotor by pushing the caliper against the shelf on the torque plate.

NOTE: Where instructions call for a torque wrench, use a Snap-On torque wrench ATECH4RS600, or equivalent, with a center-to-handle length of 47 inches (119 cm). Due to limited caliper bolt access on the drive axles when combined with Airliner suspensions, use tool DDE DSNCHA018005 shown in Fig. 3.



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Fig. 3, Special Tool, DDE DSNCHA018005

When using tool DDE DSNCHA018005, use the torque conversion values shown in Table 1.



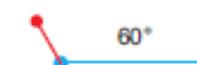
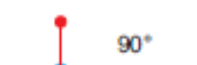

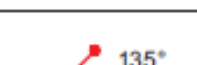
Bendix/Wabco Installation with a 47 Inch (119 cm) Torque Wrench and Tool DDC DSNCHA018005			
Angle View	Extension Angle (degrees)	Target Torque [lbf-ft (N-m)]	Tool Setting [lbf-ft (N-m)]
 11/28/2016 #422613	0	375 (508)	317 (430)
 11/28/2016 #422614	45		332 (450)
 11/08/2018 #422668	60		343 (465)
 11/28/2016 #422615	90		375 (508)
 11/08/2018 #422669	120		413 (560)
 11/28/2016 #422616	135		431 (584)

Table 1, Torque Check with Special Tool DDE DSNCHA018005

7. Install the caliper/carrier assembly using new caliper mounting bolts. Tighten the caliper/carrier mounting bolts in two steps as follows:
 - 7.1. Start on one side of the caliper and tighten all three bolts 40 ± 20 lbf-ft (54 ± 27 N-m), beginning with the inner-most bolt and moving to the outer-most bolt. Then tighten the three bolts on the other side of the caliper 40 ± 20 lbf-ft (54 ± 27 N-m), beginning with the inner-most bolt and moving to the outermost bolt.

See Fig. 4 for the left-side caliper sequence and Fig. 5 for the right-side caliper sequence.



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Fig. 4, Left-Side Caliper Tightening Sequence



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Fig. 5, Right-Side Caliper Tightening Sequence



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7.2. Repeat the tightening sequence, increasing the torque value to 375 ± 25 lbf·ft (508 ± 34 N·m).

8. Charge the air system and check for leaks.

⚠ WARNING

WARNING: Do not operate the vehicle until the brakes have been checked for proper operation. To do so could result in inadequate or no braking ability, which could cause personal injury or death, and property damage.

9. Check the brakes for proper operation.
10. Document any vehicles found with inadequate clearance caused by incorrect anchor plates. Send this documentation to your DTNA service representative.