

FLA COE
FLB COE
FLD Conventional
Business Class
FLC 112 Conventional

Century Class Conventional
Argosy
Cargo
Columbia
122SD and Coronado

Business Class M2
Cascadia
108SD/114SD
> New Cascadia

**Freightliner
Service Bulletin**

General Information

Some New Cascadia vehicles equipped with a 12.5K or 13.3K rated front suspension may experience a clunking or popping noise coming from the front suspension. If the front suspension is diagnosed with front spring eye bushings (part number 16-20508-000) that have damaged inner pins or have cracked rubber isolators, replacement bushings are available, beginning in January, 2022, when the new, improved replacement bushings entered production.

NOTE: Bushing Replacement Criteria

- 1) If the bushing outer can has slid within the spring eye or shackle bracket, or there is visible damage to the spring eye or shackle bracket bore, then the spring assembly or shackle bracket must be replaced.
- 2) If the bushing has cracked rubber isolator material or a damaged inner pin, as shown in **Fig. 1**, then the bushing must be replaced.

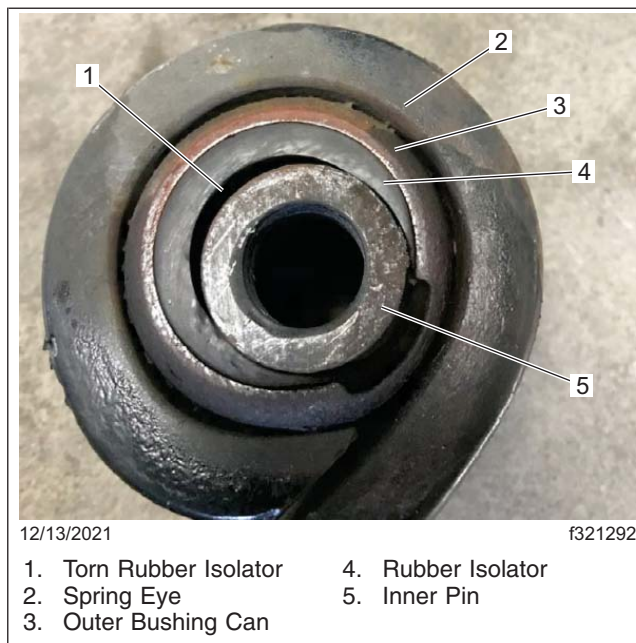


Fig. 1, Damaged Spring Eye Bushing

Use the procedures below to replace the shackle bracket bushing and spring eye bushing as needed. See **Fig. 2** for an exploded view of the front suspension system.

32-056

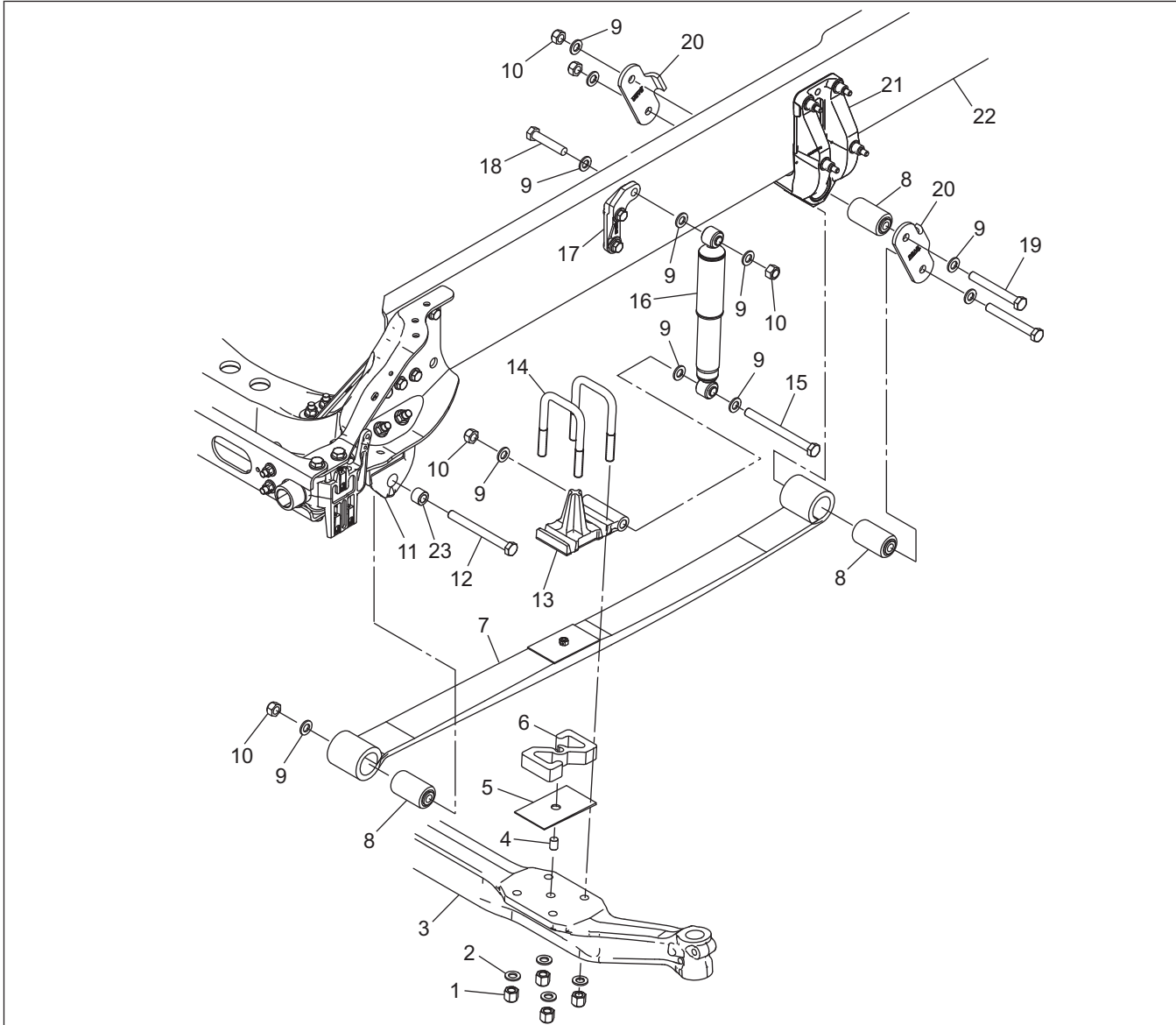
Front Spring Eye Bushing Replacement

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10/04/2018

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- | | | |
|----------------------------|---|---|
| 1. U-Bolt High Nut | 10. Nut, M20 | 17. Shock Absorber Upper Mounting Bracket |
| 2. Bearing Washer | 11. Forward Spring Bracket | 18. Upper Shock Bolt, M20 |
| 3. Axle | 12. Bolt, M20 | 19. Shackle Bolt, M20 |
| 4. Dowel | 13. Axle Stop and Shock Absorber Lower Mounting Bracket | 20. Shackle Stop |
| 5. Caster Adjustment Shim | 14. U-Bolt | 21. Shackle Frame Bracket |
| 6. Spacer | 15. Lower Shock Bolt, M20 | 22. Frame Rail |
| 7. Spring | 16. Shock Absorber | 23. Bushing |
| 8. Rubber Bushing Assembly | | |
| 9. Hardened Washer | | |

Fig. 2, Front Suspension (12,500 lb. - 13,300 lb.)

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Shackle Bracket Bushing Replacement

1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.

WARNING

Never work around or under a vehicle that is supported only by a jack. Always support the vehicle with safety stands. Jacks can slip, allowing the vehicle to fall, which could result in serious injury or death.

2. Raise the vehicle until both front tires are off the ground. Support the vehicle with safety stands. For instructions to raise and lower the vehicle, refer to **Section 00.06** of the *New Cascadia Workshop Manual*. If necessary, drain the air tanks, and remove the primary air tank to make room for the safety stand. The axle and leaf springs can now be manipulated with the floor jack. Make sure the frame rails are level side-to-side and an equal distance off the ground.

NOTE: If necessary, remove the mud guards to access the shackles.

3. Using the floor jack, raise the axle just enough so the jack is supporting the weight of the axle, then support the axle with safety stands.
4. Remove the rear shackle bolt that goes through the shackle stop and frame shackle bracket.
5. Use a tiger tool or equivalent to remove the bushing. Thoroughly clean the bore of the shackle bracket with a nylon brush and solvent solution to remove any adhesive residue or debris.
6. Apply a coating of Perma-Bond® HM-160 or Loctite® RC-609 adhesive to the inside of the shackle bracket(s), and to the outside of the rubber bushing(s). Press the new bushing(s) into the shackle bracket(s) until they are centered between the edges of the spring eye(s).
7. Use a tiger tool or equivalent to install the bushing.
8. Install the rear shackle bolt that goes through the shackle stop and frame shackle bracket.
9. Use a torque wrench to tighten the nut to 219 to 267 lbf-ft. (297 to 363 N·m).
10. Lower the vehicle.

Spring Eye Bushing Replacement

1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.

WARNING

Never work around or under a vehicle that is supported only by a jack. Always support the vehicle with safety stands. Jacks can slip, allowing the vehicle to fall, which could result in serious injury or death.

2. Raise the vehicle until both front tires are off the ground. Support the vehicle with safety stands. For instructions to raise and lower the vehicle, refer to **Section 00.06** of the *New Cascadia Workshop Manual*. If necessary, drain the air tanks, and remove the primary air tank to make room for the safety stand. The axle and leaf springs can now be manipulated with the floor jack. Make sure the frame rails are level side-to-side and an equal distance off the ground.

NOTE: If necessary, remove the mud guards to access the shackles.

3. Using the floor jack, raise the axle just enough so the jack is supporting the weight of the axle, then support the axle with safety stands.

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4. Remove the M20 spring bolt that goes through the spring bushing.
5. Use a tiger tool or equivalent to remove the bushing. Thoroughly clean the bore of the spring eye with a nylon brush and solvent solution to remove any adhesive residue or debris.
6. Apply a coating of Perma-Bond® HM-160 or Loctite® RC-609 adhesive to the inside of the spring eye(s), and to the outside of the rubber bushing(s). Press the new bushing(s) into the spring eye(s) until they are centered between the edges of the spring eye(s).
7. Use a tiger tool or equivalent to install the bushing.
8. Install the M20 spring bolt that goes through the spring bushing.
9. Use a torque wrench to tighten the nut to 219 to 267 lbf-ft. (297 to 363 N·m).
10. Lower the vehicle.

Parts

Parts		
Part Number	Part Description	Quantity
16-22182-000	FR SUSP-RUBBER BUSH,M20/60	As needed

Table 1, Parts

Warranty

This is an informational bulletin only. Warranty does not apply.