Concrete and Refuse Mid-Ship Five Piece Crossmember 31-047

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 Description

Cracked mid-ship crossmembers have been found on some 114SD vehicles with mixer bodies. The crossmembers are located in the rear of the frame rail mixer plates. This usually occurs after three years in service as shown in **Fig. 1**. A five-bolted crossmember with 100 ksi gussets and an 80 ksi channel are used to improve the component life.



Fig. 1, Cracked Midship Crossmember

Parts List

- Old assembly number: A 680 310 34 37 and A15-22497-008.
- New assembly number: A15-31343-000.

Part Number	Part Description	Quantity
15-31345-000	Lower-Gusset, Mixer, Heavy Duty, 854	2
15-31344-000	Upper-Gusset, Mixer, Heavy Duty, 854	2
15-30244-000	Heavy Duty Channel Crossmember, Five-Piece Bolted	1
23-14823-050	Hex Bolt	16
23-14451-116	Hex Nut	16
23-09114-000	Washer	32

Table 1, Parts List

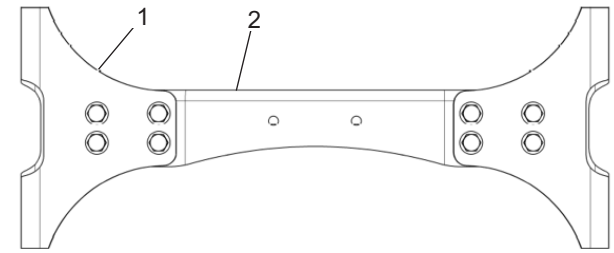
Removal of Mid-Ship Crossmember

1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
2. If an air brake valve is attached to the crossmember, drain the air reservoirs, then remove the valve from the crossmember.
3. Remove any clamps that attach the air lines or wiring to the crossmember, and secure the lines or wiring away from the crossmember.
4. If replacing a forward-rear-suspension crossmember with the suspension brackets that share the frame fasteners with the crossmember, use safety stands to support the rear of the frame at a height that the tires are just touching the floor, so that there is no weight on the suspension.
5. If replacing a midship-bearing crossmember, support the driveline on a safety stand, then remove the midship-bearing bracket from the crossmember.

6. Use a metal-cutting reciprocating saw or cutting torch to cut the crossmember channel into two pieces. A slightly diagonal cut will make the removal of the crossmember pieces easier.
7. Remove the fasteners that attach the crossmember halves to the frame rails, and remove the crossmember.

Installation of Five-Piece Bolted Crossmember

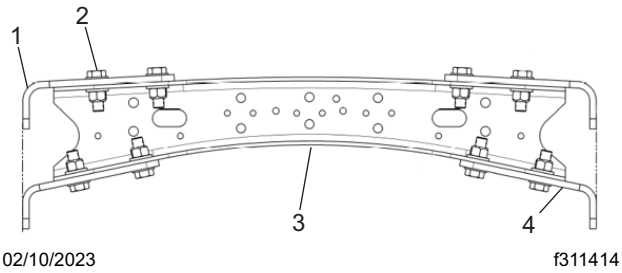
1. Attach one new upper gusset to the crossmember channel. Tighten the fasteners snugly, but not to final torque value. See **Fig. 2**.



1. Upper Gusset
2. Crossmember Channel

Fig. 2, Five-Piece Bolted Crossmember, Top View

2. Place the crossmember channel and gusset in the frame rails, with the channel opening facing the same direction as the original crossmember. Position the crossmember so the channel is resting on the lower flanges of both frame rails.
3. Slide the other upper gusset into position, and attach it to the crossmember channel. Tighten the fasteners snugly, but not to the final torque value.
4. Use a dead-blow hammer to tap the crossmember into place. Align the mounting holes of the upper gussets with the holes in the frame rails. Install the fasteners, but do not tighten. Attach the suspension bracket with the same capscrews, if they were removed.
5. Place the lower gussets in position against the crossmember channel, and insert the fasteners that secure the gussets to the channel. See **Fig. 3**.



1. Upper Gusset
2. Hex-Head Fastener
3. Crossmember Channel
4. Lower Gusset

Fig. 3, Five-Piece Bolted Crossmember, Rear View

6. Reposition any frame mounted components such as fuel tank brackets, then install the fasteners that attach the gussets to the frame rails. Attach the suspension bracket with the same capscrews, if they were removed.
7. Tighten the fasteners that secure the gussets to the frame rails as follows:
   - 174 lbf·ft (236 N·m) for the green VLH-coated nut.
   - 129 lbf·ft (175 N·m) for the silver XL-coated nut.
8. Tighten the fasteners that secure the gussets to the crossmember 170 lbf·ft (230 N·m).
9. If the driveline was disconnected, attach the midship bearing bracket to the crossmember.
10. Remove the supports.

Warranty

This procedure is warrantable only if the described condition exists and the repair is performed within the applicable base or extended coverage warranty period. If a failure is not found, this procedure is considered preventive and warranty does not apply.

Normal warranty applies. See **Table 2** for OWL VMRS codes and labor allowance information. Enter this service bulletin number in the *Service Bulletin #* field.

OWL VMRS Codes and Labor Allowance						
Primary Failed Part	**Component Code**	**Cause Code**	**Correction Code**	**SRT Code**	**Description**	**Time: Hours**
Five Piece Crossmember	014-001-007	14	03	562-6005A	Bolted crossmember, Gusset, Fasteners, R/R (SB 31-047)	5.6

Table 2, OWL VMRS Codes and Labor Allowance