



FIELD SERVICE CAMPAIGN – 23110

02 May 2023

SUBJECT:

Driveline Vibration

MODELS INVOLVED:

International® HV™ Series trucks

DEFECT DESCRIPTION:

Certain International® HV™ Series trucks built with two-piece driveline may experience vibration when driving at highway speed.

ELIGIBILITY:

This procedure applies ONLY to vehicles marked in the International® Service PortalSM with FSC 23110. Also complete any other open campaigns listed on the Service Portal at this time.

TOOLS REQUIRED:

No special tools required

PARTS REQUIRED:

NOTE: Only order one driveshaft for repair. See table at the end of this document for VIN-specific driveshaft part number information.

Part Number	Description	Quantity
144425H	Locknut, 7/8-NF CAD P/T	8
25549R1	Lock Washer 0.938 X 1.75 X 0.219 P	8
2500674C91	U-Joint Kit, Driveshaft	4
2504102C1	U-bolt, Spring, Suspension, 7/8 X 25 in	4
417LTH1720	Prop Shaft SPL170 Series	1 If Needed – Check VIN
417LTH1680	Prop Shaft SPL170 Series	1 If Needed – Check VIN

Table 1 Parts Information

WORK INSTRUCTIONS

GOVERNMENT REGULATION: Engine fluid (oil, fuel, and coolant) may be a hazard to human health and the environment. Handle all fluid and other contaminated materials (such as filters and rags) in accordance with applicable regulations. Recycle or dispose of engine fluids, filters, and other contaminated materials according to applicable regulations.

WARNING! To prevent personal injury and / or death, or damage to property, park vehicle on hard flat surface, turn the engine off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in both directions.

WARNING! To prevent personal injury and / or death, or damage to property, if the vehicle must be raised, do not work under the vehicle supported only by jacks. Jacks can slip or fall over.

WARNING! To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.

WARNING! To prevent personal injury and / or death, or damage to property, keep flames or sparks away from vehicle and do not smoke while servicing the vehicle's batteries. Batteries expel explosive gases.

1. Park vehicle on flat surface.
2. Shift transmission to Park or Neutral.
3. Turn vehicle ignition to Key OFF position.
4. Install wheel chocks.

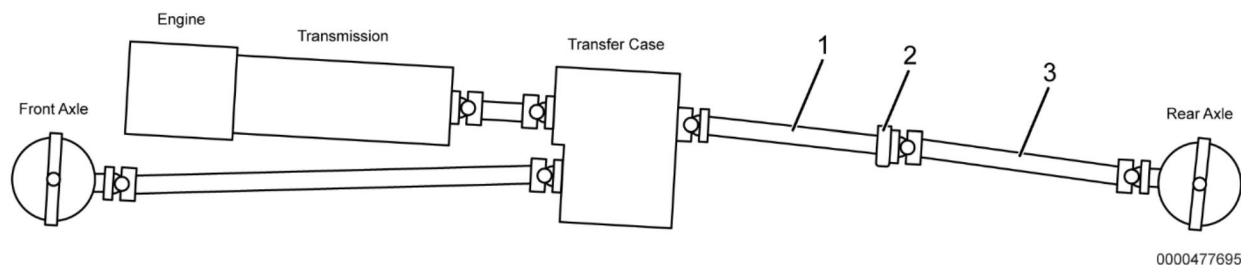


Figure 1. Driveline

1. Driveshaft 1
2. Center support bearing
3. Driveshaft 2

5. Remove driveshaft 1 (Figure 1, Item 1) and driveshaft 2 (Figure 1, Item 3). Refer to appropriate service manual for proper removal. Discard driveshafts.
6. Remove center support bearing (Figure 1, Item 2) and mounting bracket. Refer to appropriate service manual for proper removal. Discard center support bearing and mounting bracket.

NOTE: For proper installation, attach bellows end of driveshaft to transfer case.

NOTE: See appropriate service manual for driveshaft lubrication instructions.

7. Install one-piece driveshaft. Refer to appropriate service manual for proper installation.

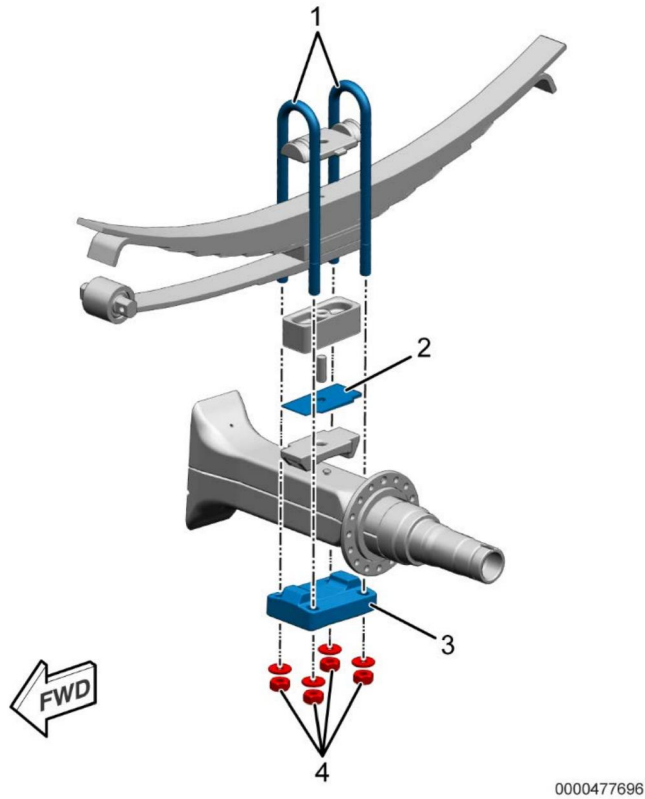


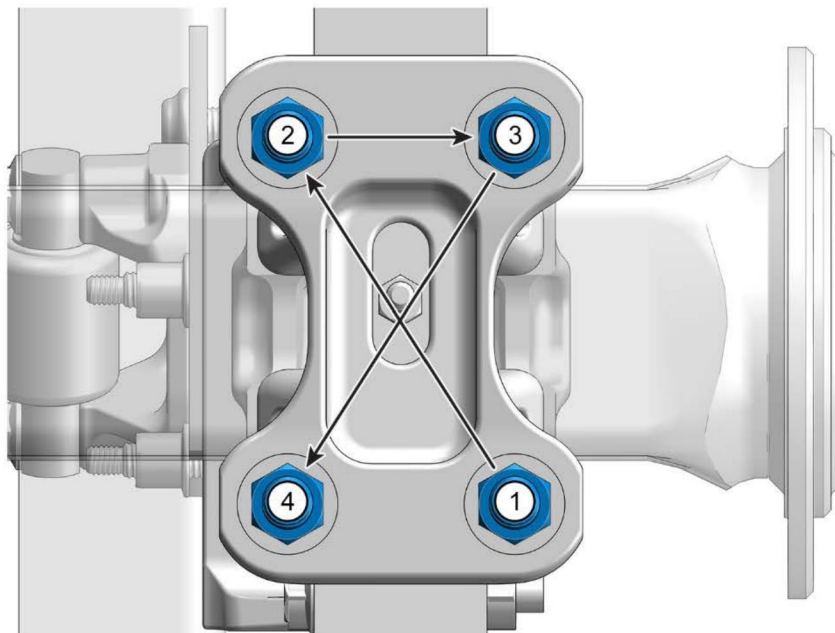
Figure 2. Rear Axle Driver-Side

- 1. U-bolt (2)
- 2. Axle wedge
- 3. Lower axle seat
- 4. U-bolt nut and washer (4)

- 8. Using a jack, raise the rear of the vehicle and support the frame on jackstands, high enough for the drive axle tires to clear the pavement.
- 9. Position jack under drive axle and raise the axle high enough to relieve leaf spring tension.
- 10. Starting on driver-side of vehicle, remove four U-bolt nuts and washers (Figure 2, Item 4), and remove lower axle seat (Figure 2, Item 3). Discard nuts and washers and save lower axle seat.
- 11. Lower jack to create a gap between leaf spring and axle to allow for removal of axle wedge (Figure 2, Item 2).
- 12. Remove axle wedge (Figure 2, Item 2). Discard axle wedge.

13. Remove both U-bolts (Figure 2, Item 1). Discard U-bolts.
14. Install new U-bolts, nuts, washers, and saved axle seat.
15. Repeat Steps 10 through 14 for passenger-side of vehicle to remove axle wedge and install new U-bolts, nuts, and washers.

NOTE: U-bolt nuts require multiple stages of tightening to ensure proper installation.



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Figure 3. U-Bolt Torque Sequence

16. Using a torque wrench, tighten U-bolt nuts incrementally using torque sequence depicted in Figure 3.
 - a. Torque nuts to 25 lb-ft (20.3 N·m) using diagonal pattern.
 - b. Retorque nuts to 75 lb-ft (102 N·m) using diagonal pattern.
 - c. Retorque nuts to 150 lb-ft (203 N·m) using diagonal pattern.
 - d. Retorque nuts to 225 lb-ft (305 N·m) using diagonal pattern.
 - e. Final torque nuts to 290 lb-ft (407 N·m) using diagonal pattern.

17. Repeat Step 16 for opposite side.
18. Using a jack, raise rear of vehicle, remove jack stands, and lower vehicle.
19. Remove wheel chocks.

LABOR INFORMATION

Operation number must appear on all claims.

Operation Number	Description	Time
A40-23110-1	Driveshaft, R & R (HV™ Series trucks), Remove Axle Wedge	2.9 hrs

Table 2 Labor Information

WARRANTY CLAIMS

Warranty claim expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Field Service Campaign 23110.

Section 7 of the Warranty Policy and Procedures Manual contains further information related to the submission and processing of AFC / Recall claims.

As with all claim submissions, items acquired locally must be submitted in the “Other Charges” tab. The cost of any bulk items (such as a bag of cable tie straps, roll of wire, barrel of oil, or tube of silicone) should be prorated for the cost of the individual pieces / amount used during each repair.

To make sure this important improvement is made in a timely manner, all claims for 23110 activity must be submitted by 02 May 2024 or within the normal warranty period for the component repaired, if after 02 May 2024.

GROUP	NOUN	C	WARR.	TP	PAD

GROUP — Enter number

NOUN — Leave blank

C (CAUSE) — Enter either 1, 2, 3. (See below)

1. Inspected (No repair required).
2. Inspected and repaired.
3. Defective part from parts stock.

WARRANTY — (Warranty Code) Enter 40.

TYPE PART — Enter P for type part causing failure.

PAD — Enter 100

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VIN	Part Number	Description	Quantity
3HAEETAR4ML562137	417LTH1720	PROP SHAFT SPL170 SERIES	1
3HAEETAR6ML562138			
3HAEETAR5LL858718			
3HAEETAR7LL858719			
3HAEETAR0LL291964			
3HAEETAN8NL539099			
3HAEETARXML626598	417LTH1680	PROP SHAFT SPL170 SERIES	1
3HAEETARXPL737978			
3HAEETAR8LL153153			
3HAEETAR4LL153229			
3HAEETAR9LL153243			
3HAEETAR6LL152602			
3HAEETAR1LL152779			
3HAEETAR3LL152959			
3HAEETARXML661982			
3HAEETAR5ML661985			
3HAEETAR3ML662939			
3HAEETARXML662940			
3HAEETAR5ML662943			

VIN	Part Number	Description	Quantity
3HAEETAR1ML661983	417LTH1680 (cont.)	PROP SHAFT SPL170 SERIES (cont.)	1 (cont.)
3HAEETAR3ML662942			
3HAEETAR1ML662941			
3HAEETAR7ML662944			
3HAEETAR7NL231991			
3HAEETAR9NL231992			
3HAEETAR5ML494981			
1HTEETAR2KH548417			
3HAEETAR8LL528328			
3HAEETAR6PL146756			
3HAEETAR1KL373720			
3HAEETAR4KL374649			
3HAEETAR3KL370317			
3HAEETAR7KL373351			
3HAEETAR3KL369958			
3HAEETAR7LL154004			

Table 3 Parts Information