



FIELD SERVICE CAMPAIGN – 22116

21 September 2022

SUBJECT:

Alternator Replacement

MODELS INVOLVED:

International® HV™ and LT® Series trucks

DEFECT DESCRIPTION:

Certain International® HV™ and LT® Series trucks may have an alternator built with an incorrect voltage regulator that could result in excessive voltage fluctuation and possibly trigger the voltage warning lamp.

ELIGIBILITY:

This procedure applies ONLY to vehicles marked in the International® Service PortalSM with FSC 22116. Also complete any other open campaigns listed on the Service Portal at this time.

TOOLS REQUIRED:

No special tools required.

PARTS REQUIRED:

NOTE: See table at the end of this document for specific alternator to VIN part number information.

Part Number	Description	Quantity
476074C1	Nut, Battery Terminal 3/8" UNC	1
VINT21501	Dielectric Coatings Reapplicant Kit	Source Locally

Table 1 Parts Information

WORK INSTRUCTIONS

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.

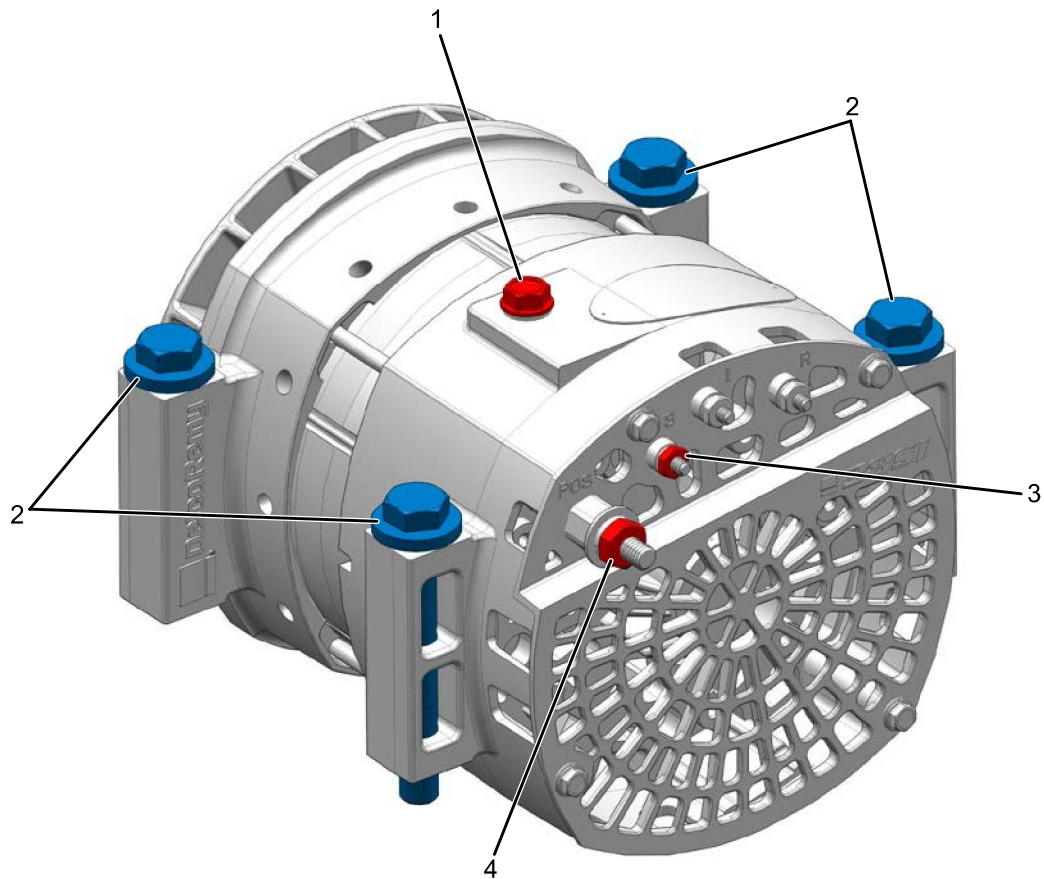
WARNING! To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.

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.

WARNING! To prevent personal injury and / or death, or damage to property, remove the ground cable from the negative terminal of the battery before disconnecting any electrical components. Always connect the ground cable last.

1. Park vehicle on a level surface.
2. Shift transmission into Park or Neutral and set parking brake.
3. Turn ignition to Key OFF position.
4. Install wheel chocks.
5. Disconnect and isolate negative battery cable on main vehicle battery. Discard battery terminal nut.
6. Unlatch and open hood.
7. Obtain access to the alternator.
8. Remove serpentine belt.

NOTE: Do not apply gel softener onto rubber and wire insulation. Only apply to metallic surfaces.



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Figure 1. Alternator

1. Ground terminal
2. Mounting bolt (4)
3. Remote sense terminal (if equipped)
4. Positive terminal

9. Using paint brush, apply gel softener onto RED coated alternator nuts and studs (only metal surfaces).

NOTE: A longer gel softener set time will yield better results.

10. Allow gel softener to sit for 10 to 15 minutes to soften the RED coating.

NOTE: Ensure removal of RED gel coat on mating surface of eyelet connectors, nut, washers, threads, or any contact surface that may disrupt continuity.

11. Using a wire brush and rag remove RED coating.

12. Remove alternator terminal nuts (Figure 1, Item 4) and bolts (Figure 1, Item 1) and discard.
13. If equipped, remove load sense terminal nut (Figure 1, Item 3). Save nut for reuse.
14. Remove alternator mounting bolts (Figure 1, Item 2).

NOTE: Confirm correct VIN specific alternator is installed.

15. Install new alternator.
16. Install alternator mounting bolts (Figure 1, Item 2). Using torque wrench, tighten hex head bolt to 79 lb-feet (107 N·m).
17. Connect ground cable (Figure 1, Item 1). Using torque wrench, tighten nut to 60-90 lb-inch (6.8-10.2 N·m).
18. Connect positive cable (Figure 1, Item 4). Using torque wrench, tighten nut to 80-125 lb-inch (9-14 N·m).
19. If alternator is equipped with remote sense terminal, remove retaining nut (Figure 1, Item 3) and install terminal harness. Using torque wrench, tighten nut to 20-35 lb-inch (2.2-3.9 N·m).
20. Apply RED paint to alternator terminal studs, ground terminal, battery terminal, and remote sense terminal cable ring terminal and threads if equipped.
21. Install serpentine belt.
22. Reinstall any components previously removed prior to obtain access to alternator.
23. Close and latch hood.
24. Using wire brush, electronic contact cleaner, and compressed shop air, clean negative battery terminal components.
25. Apply BLUE dielectric grease to battery terminal stud, negative battery cable ring terminal, and threads of new battery stud nut.

26. Reconnect negative battery cable to negative terminal on main vehicle battery and install new batter terminal nut.
27. Using torque wrench, tighten battery stud nut to 12-15 lb-feet (16-20 N·m).
28. Remove wheel chocks.

LABOR INFORMATION

Operation number must appear on all claims.

Operation Number	Description	Time
A40-22116-1	Alternator, R & R or Replace (LT® Cummins® X15)	0.7 hrs
A40-22116-2	Alternator, R & R or Replace (LT® International® A26)	0.8 hrs
A40-22116-3	Alternator, R & R or Replace (HV™ Cummins® L9)	0.5 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 22116.

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 22116 activity must be submitted by 21 September 2023 or within the normal warranty period for the component repaired, if after 21 September 2023.

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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NOTE: Order components either as a Critical Order through PDC (CRT order type, marked as Unit Down with a VIN and campaign number) or a Critical Direct Ship (CDS order type, marked as Unit Down with VIN and campaign number).

PARTS REQUIRED:

VIN	Part Number	Description	Quantity
3HSDZAPR4PN020536	4078653C91	Alternator, 12V	1
3HSDZAPR6PN020537			
3HSDZAPR3PN030538			
3HSDZTZR2PN012881	3721717C92	Alternator	1
3HSDZTZR2PN020432			
3HSDZAPRXP074892			
3HSDZAPR5PN269363			
3HSDZAPR0PN269366			
3HSDZAPR2PN269367			
3HSDZAPR3PN269376			
3HSDZAPR3PN466905			
3HSDZAPR1PN529936			
3HSDZAPR3PN537214			
3HSDZAPR1PN538524			
3HSDZAPR0PN558389			
3HAEKTATXPL364364			
3HSDZAPR0PN220118	3718541C92	Alternator 12 Volt Pad Mounting 300A Delco 40-SI High Temperature	1
3HSDZAPR6PN220138			
3HSDZAPR6PN220172			
3HSDZAPR4PN220185			
3HSDZAPR3PN220193			
3HSDZAPR2PN220203			
3HSDZAPRXP0220207			
3HSDZAPR2PN220587			
3HSDZAPR6PN220589			
3HSDZAPR6PN251020			
3HSDZAPR8PN275349			
3HSDZAPR4PN275350			
3HSDZAPR6PN275351			
3HSDZAPRXP0275353			
3HSDZAPR1PN275354			
3HSDZAPR4PN779980			
3HSDZAPR8PN779982			
3HSDZAPR7PN817251			

Table 3 Parts Information