

TECHNICAL SERVICE BULLETIN

Group:	O-GENERAL
Bulletin No:	SB-16-022
Issue Date:	8-16-2016
Vendor Ref.:	HMM-160805-B1

BURNER ATOMIZER REPAIR PROCEDURE

SUBJECT VEHICLES: 11MY-14MY Conventional Trucks (238, 258, 268, or 338)

Note: This service bulletin is provided as technical information and is not authorization for a warrantable repair.

OVERVIEW:

A subject vehicle may experience an external fuel leak from the burner atomization module assembly, specifically the fuel pressure regulator. This repair procedure outlines replacement of the fuel pressure regulator seals while the atomizer is installed in the vehicle.

BEFORE YOU BEGIN

- Read and understand all instructions and procedures before you begin the work.
- Read and follow all **WARNINGS** and **NOTICES** set forth in this publication. These alerts help to avoid damage to components, serious personal injury, or both.
- Park the vehicle on a flat, level and solid surface.
- Place the gear shift lever in "Neutral" or "Park".
- Apply the parking brake firmly and confirm parking brake activation.
- Turn off the engine and remove the key from the ignition switch.
- Always wear safety glasses or goggles to protect your eyes.
- Place wheel chocks in front of and behind all the wheels to prevent the vehicle from moving.

PARTS:

PART NUMBER	DESCRIPTION	QUANTITY
17214-E0040	U-CUP SEAL	1
17214-E0020	HOUSING O-RING	1



TRUCKS

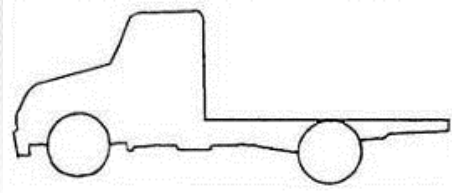
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VEHICLE PREPARATION

1. Park the vehicle on a flat, level and solid surface.



2. Confirm the engine is stopped, the ignition switch is in the off (LOCK) position, and the key is removed.



3. Apply the parking brake.



4. Chock all of the wheels.



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5. Disconnect the negative battery cable. Do not reconnect the negative battery cable until instructed to do so.



REPAIR PROCEDURE

WARNING: Make certain that the exhaust has completely cooled before beginning this repair. This procedure requires working near the exhaust system. Failure to allow the exhaust to cool can result in serious burn injuries.

1. Working from underneath the passenger side of the vehicle, disconnect the ignition wires from the ignition coil and reposition them away from the ignition coil.



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2. Remove the two mounting bolts securing the ignition coil. Once the coil is lowered slightly, the connector on the backside can be released and the coil removed from the vehicle. Retain the ignition coil and the two mounting bolts for reassembly.



3. Remove the combustion chamber inlet temperature sensor and reposition it to allow for sufficient clearance to remove the atomizer cover. The harness can be left connected.



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4. Using a T27 security Torx bit, remove the four screws retaining the atomizer cover. Retain the four screws for reassembly.



5. The atomizer cover can be removed by first rotating the cover over into the space previously occupied by the ignition coil. Make certain the wire harness grommet releases from the front side of the cover. The cover can then be moved downwards toward the combustion chamber and again rotated to remove. This is a very tight fit, but the cover can be removed without force once it is positioned correctly.



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6. It will be necessary to mark the location of the fuel pressure regulator housing with a paint pen to ensure the regulator is returned to this position when reinstalled. Refer to the photograph below for reference.



7. To allow a socket to be placed over the fuel pressure regulator housing for removal, it will be necessary to loosen the air solenoid retaining nut located above the fuel pressure regulator and rotate slightly. Refer to the photographs below, which show a view of the atomizer from above, for reference. The atomizer pictured has been removed from the vehicle for clarity.



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8. Remove the fuel pressure regulator. Set the regulator on a clean shop rag. The photograph below illustrates the fuel pressure regulator components.

NOTICE: Use caution to prevent the regulator piston from falling out of the pressure regulator housing during removal.



9. The fuel pressure regulator housing O-ring may remain in place in the atomizer. Remove and discard this O-ring.

NOTICE: Do not allow any debris to enter the fuel pressure regulator opening on the atomizer, as damage to the atomizer may result.



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10. Using a pick, carefully remove the old U-cup seal from the fuel pressure regulator piston. Discard the old U-cup seal.

NOTICE: Use caution to avoid scratching or damaging the regulator piston. Scratching or damaging the regulator piston will cause sealing issues.



11. Lubricate the piston and the new U-cup seal lightly with silicone grease to ease installation. Slide the new U-cup seal over the piston, ensuring the cup faces away from the piston as shown.



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12. Clean any debris from inside the fuel pressure regulator housing. Lightly lubricate the outside diameter of the piston using silicone grease and insert into the fuel pressure regulator housing. Ensure all fuel pressure regulator components are in proper order. The photograph below shows the proper order of the regulator components.



13. Place the new housing O-ring on the fuel pressure regulator housing. Rethread the fuel pressure regulator into the atomizer. Carefully tighten the fuel pressure regulator to the paint mark made in step 6. Be careful not to overtighten.



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14. Reconnect the negative battery cable.



15. Connect the DX2 scan tool to the vehicle. Turn the ignition on and enter the diagnostic menu for the BCU (Burner Control Unit). Do not start the engine.



16. Monitor the Atomizer Fuel Pressure while commanding the fuel pump to "on". Determine if the fuel pressure is within the standard value. If the fuel pressure is correct, proceed to step 18. If the fuel pressure is incorrect, continue to step 17.

Standard Value: 592-662 Kpa (86-96 PSI)

<input checked="" type="checkbox"/>	Parameter	Expand	Current value	Unit
<input checked="" type="checkbox"/>	Atomizer fuel pressure		611.250	kPa



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17. To adjust the fuel pressure, loosen the lock nut on the fuel pressure regulator. Rotate the adjuster clockwise to increase fuel pressure, and counterclockwise to decrease fuel pressure. Torque the locknut to the specified torque.

Specified Torque: 16 lb-ft (22Nm)



18. Verify that with the fuel pump running, no fuel leaks are noted from the atomizer. Exit the diagnostic session in the DX2 and turn the ignition off. Do not disconnect the DX2 at this time.

WARNING: Failure to turn the ignition to the off position can result in component damage or serious personal injury.

19. Rotate the air solenoid back to its original position and torque the retaining nut to the specified torque.

Specified Torque: 16 lb-ft (22Nm)



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20. Replace the cover on the atomizer. Make certain that the wiring harness grommet on the forward side of the atomizer properly engages the groove on the atomizer cover.



21. Replace the four screws retaining the atomizer cover and tighten to the specified torque.

Specified Torque: 3.3 lb-ft (4.5 Nm)



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22. Reconnect the ignition coil electrical connector. Install the ignition coil and torque the two bolts to the specified torque.

Specified Torque: 6.6 lb-ft (9 Nm)



23. Reconnect the ignition wires to the ignition coil.



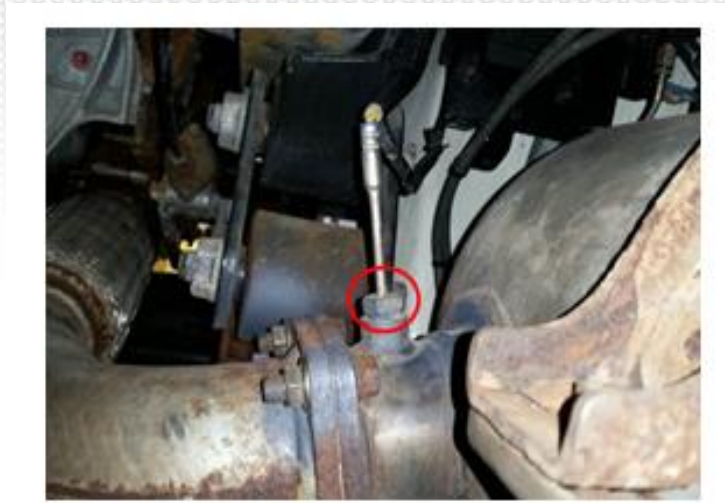
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24. Reinstall the combustion chamber inlet temperature sensor and torque to the specified torque.

Specified Torque: 33.5 lb-ft (45 Nm)



25. Use the Hino DX2 software to clear any DTCs that may have set in the vehicle during the repair.

Proceed to “Final Inspection Procedure”



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FINAL INSPECTION PROCEDURE

1. To complete this Technical Service Bulletin, review the bulletin and confirm the following:
 - The atomizer fuel pressure regulator has been carefully checked for leaks.
 - Atomizer fuel pressure is within specification
 - All fasteners have been properly torqued.
 - DTC's (Diagnostic Trouble Codes) may have inadvertently been set in the engine ECU and BCU(Burner Control Module). Using the Hino DX2, ensure all codes have been cleared from these modules prior to releasing the truck back to the customer.

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CLAIM APPLICATION

Labor Charge: 1.1 Hours

Warranty Code: 11565

Trouble Code: 11

Operation Code: 11550AOT

Part Number: 17214-E0040



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