



DTC (Code) SPN 175 FMI 0 // P0298 - 00 Codigo:	Bulletin: RD18-002 Date Fecha: May 11, 2018
Description: See below for fault code description(s)	
Application: US10 – US20 Emissions	

General Information

These repair instructions are intended to address the following faults:

DTC	Description	Possible Cause	Possible (Observable) Symptoms
SPN 175 FMI 0 // P0298 - 00	Engine Oil Over Temperature	<ul style="list-style-type: none"> • Extreme driving conditions • Engine cooling fan • Oil thermostat • Cooling System • Clogged oil cooler • Engine oil level (EOL) and temperature sensor 	<ul style="list-style-type: none"> • Info lamp lights up if the temperature is moderately above range • Red lamp lights up if the temperature is critically above range • A buzzer sounds if the temperature is critically above range • Engine de-rated

Required Parts

Part Number	Description	Quantity
22807993	Oil Level Sensor	1
20579690	Oil Drain Plug Gasket	1
20555696	Oil Fill Tube O-Ring	1

Repair Instructions

Oil Level Sensor Replacement

1. Secure the vehicle for service by parking in on a flat level surface, applying the parking brake, chocking the rear wheel, and placing the transmission in neutral or park.
2. Turn the main electrical switch off.
3. Disconnect all cables from the negative (ground) battery terminals to prevent personal injury from electrical shock and prevent damage to electrical components.
4. Open the service hatches at the rear of the bus.
5. Raise the bus and support with jack stands.

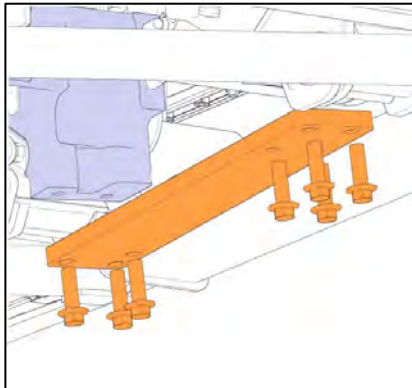
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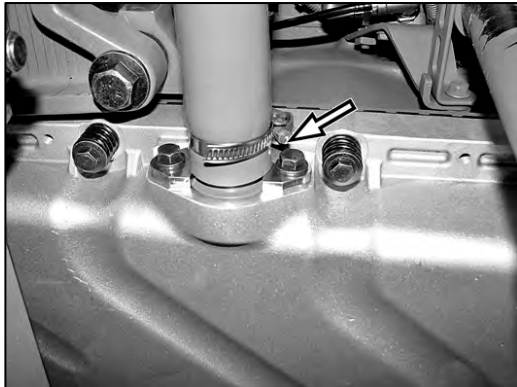
6. Using a suitable container drain the oil. Discard of the oil drain plug gasket.. Dispose of the use oil in accordance with all state, local and/or federal regulations.



7. Remove the cross member under the oil pan.



8. Remove the hose clamp to the filler pipe. Move the hose aside.



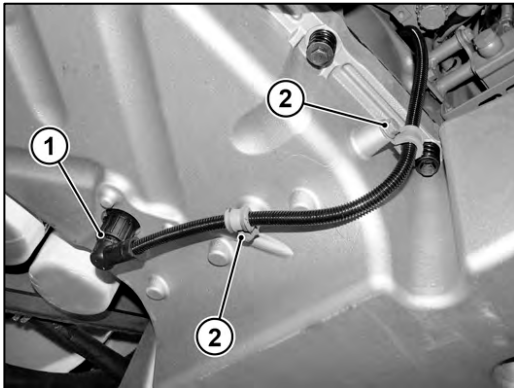
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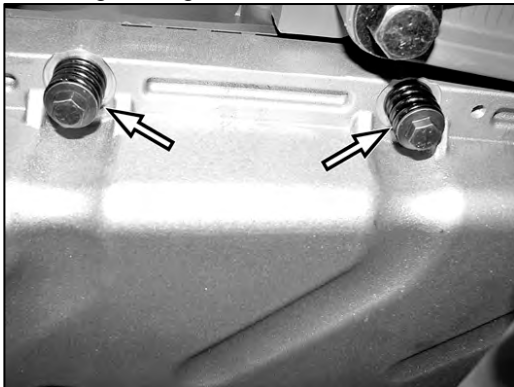
9. Pull out the dipstick about 0.5 m (1.6 ft.). Remove the dipstick and the dipstick outer casing. Plug the holes.



10. Unplug the connector (1) for the oil temperature/level sensor, and remove the cable clamps (2) for the cable. Move the cable aside.



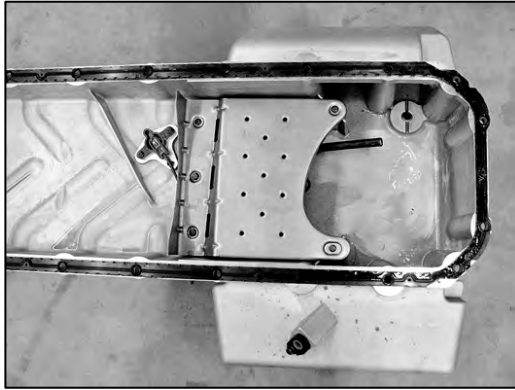
11. Loosen the bolts for the oil pan. Leave two bolts in place. Note: With the aid of an assistant, or using a jack, lower the oil pan. Angle the oil pan down at the rear edge and push it forward somewhat. Then lower the oil pan. Exercise care when removing or installing the oil pan. Move the pan slowly, ensuring the oil strainer doesn't get caught on the oil level sensor as this may result in sensor damage.



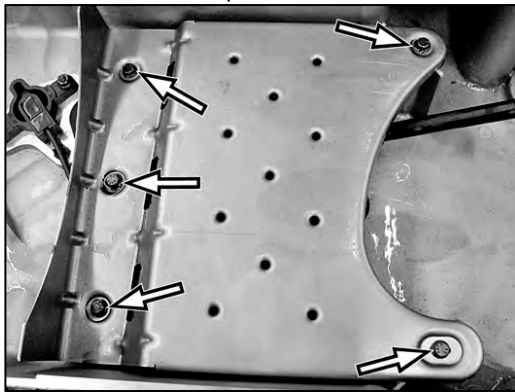
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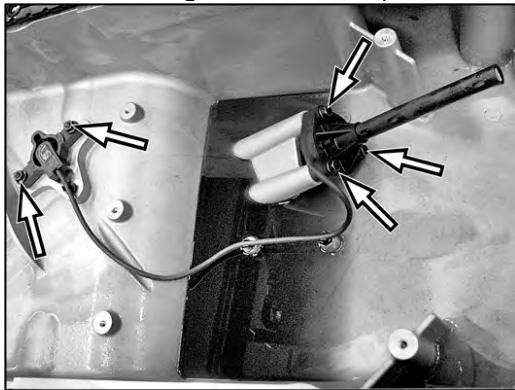
12. Clean the oil pan and remove the gasket.



13. Remove the baffle plate.



14. Remove the engine oil level/temperature sensor and electrical connector.

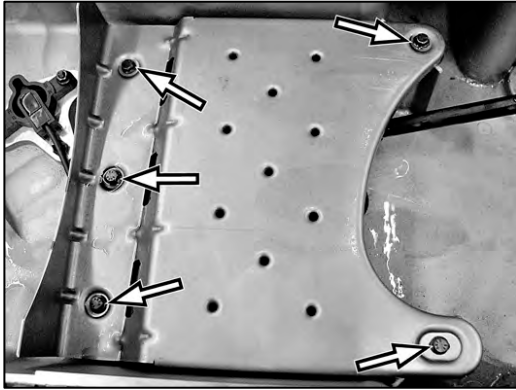


15. Install the new engine oil level/temperature sensor. Install a new, greased O-ring on the electrical connector. Torque to the proper specification, refer to Group 20, Specification

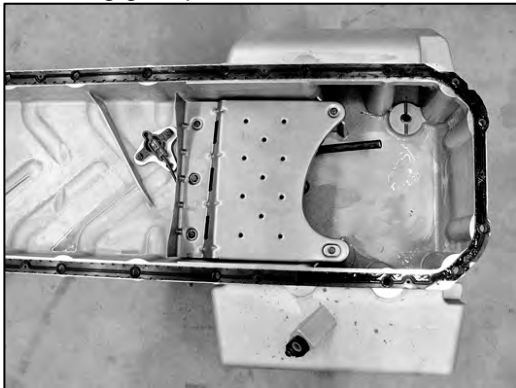
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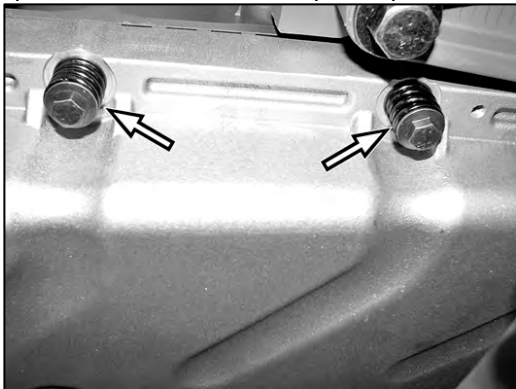
16. Install the baffle plate. Torque to the proper specification, refer to Group 20 Specification.



17. Install a new oil pan gasket. Apply a 3 mm bead of silicone to the cylinder block at the timing gear casing and at the timing gear plate on both sides.



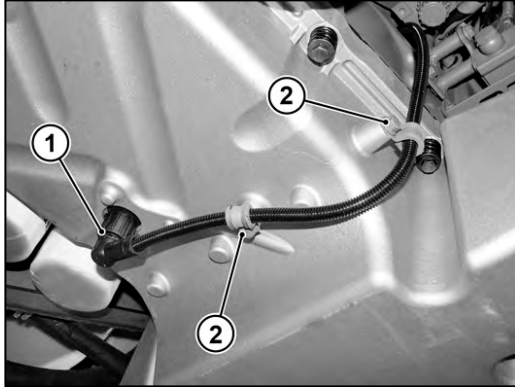
18. Install the oil pan. *Note: With the aid of an assistant, or using a jack, lift up the oil pan. Angle the oil pan up at the front edge and push it forward somewhat. Then lift up the oil pan. Torque the bolts to the proper specification, refer to Group 20 Specification.*



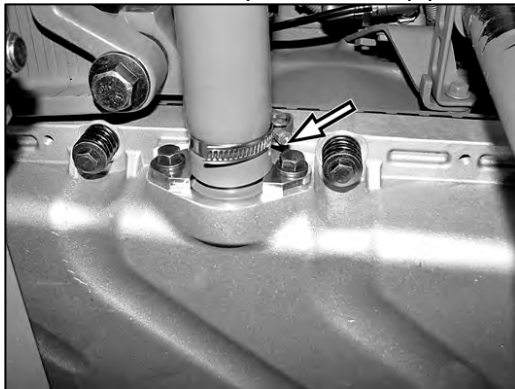
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19. Position the cable back and plug in the connector (1) for the engine oil temperature/level sensor, and install the cable clamps (2) for the cable.



20. Install the dipstick tube. Insert the dipstick.
21. Install the hose clamp for the filler pipe.



22. Install the drain plug. Torque to the proper specification, refer to Group 20, Specification.
23. Install the cross member beneath the oil pan. Torque to the proper specification, refer to Group 20 Specification.
24. Lower the coach.
25. Fill the engine with oil.
26. Close the service hatches.
27. Install all previous removed cables to the ground (negative) battery terminals.
28. Turn the main electrical switch on.
29. Using Tech Tool, check for codes.
30. Start the engine and carry out function and leakage checks.



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Additional Resources

These repairs are the most likely fix for the identified fault(s), if this does not fix the issue, Tech Tool will need to be used for more detailed diagnostics. If filing a warranty claim, please include the ASIST case number.

Labor Code	
3861-03-02-06	2.9
Causal Part	22807993