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#### THIS SERVICE BULLETIN IS ALSO BEING RELEASED AS RAPID RESPONSE TRANSMITTAL (RRT) 16-040. ALL APPLICABLE SOLD AND UN-SOLD RRT VIN'S HAVE BEEN LOADED. TO VERIFY THAT THIS RRT SERVICE ACTION IS APPLICABLE TO THE VEHICLE, USE VIP OR PERFORM A VIN SEARCH IN TECHCONNECT. ALL REPAIRS ARE REIMBURSABLE WITHIN THE PROVISIONS OF WARRANTY.

## SUBJECT:

Wire Termination Seal On 2.4L Engine Wiring Harness

## **OVERVIEW**:

This bulletin involves wire repairs to the engine harness.

## MODELS:

2015	(BU)	Jeep Renegade
2016	(FB)	Fiat 500X

# NOTE: This bulletin applies to vehicles within the following markets/countries: NAFTA.

NOTE: This bulletin applies to vehicles built on or after March 07, 2015 (MDH 0307XX) and on or before May 09, 2015 (MDH 0509XX) equipped with a 2.4L engine (Sales Code ED6).

## SYMPTOM/CONDITION:

Customers may experience a Malfunction Indicator Lamp (MIL) illumination. Upon further investigation the technician may find the following Diagnostic Trouble Codes (DTCs) listed below:

- P0652 Sensor Reference Voltage 2 Circuit Low.
- P0340 Camshaft Position Sensor Circuit Bank 1 Sensor 1.
- P1185 General Pressure Sensor Correlation.

In addition, customers may experience one or more of the following conditions:

- Excessive engine crank times.
- Engine stall at startup.
- Vehicle in limp in mode (engine won't go over 2,000 RPM).

## DIAGNOSIS:

All vehicles on the RRT VIN list are to be inspected and repaired as necessary. If the customer describes the symptom/condition listed, perform the Repair Procedure.

## PARTS REQUIRED:

Qty.	Part No.	Description
1	04778570	Heat Shrink Tube
1	68328970AA	Reflective Tape
1	68065586AA	Tesa Tape

## REPAIR PROCEDURE:

- 1. Open and support the hood.
- 2. Remove the engine cover. Refer to the detailed service procedures available in DealerCONNECT> TechCONNECT under: Service Info> Engine/Cover, Engine/Removal and Installation.
- 3. Inspect for a white witness mark on the plastic wire harness retainer (Fig. 1).
- 4. Is there a white witness mark on the harness retainer (Fig. 1)?
  - a. YES >>> This bulletin has been completed, use LOP (08-94-TF-90) to close the active RRT. Reinstall the engine cover.
    - b. NO >>> Proceed to Step #5.



Fig. 1 White Witness Mark Placement

5. Disconnect and isolate the negative battery cable.

6. Locate the engine wiring harness (Fig. 2).



Fig. 2 Engine Harness

#### 08-061-16

7. Using a suitable tool, remove plastic wire harness retainer from threaded stud (Fig. 3).

# CAUTION: Failure to carefully cut reflective tape may lead to damage to the engine harness.

8. Using a suitable cutting tool, carefully cut reflective tape open and remove from engine harness in the area shown to expose three terminated wire ends (Fig. 3).

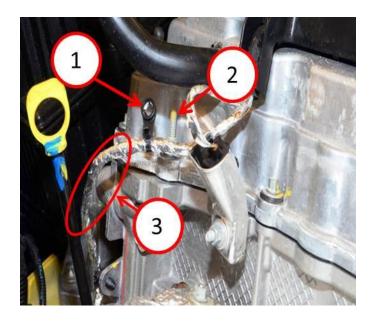


Fig. 3 Reflective Tape And Retainer

- 1 Retainer
- 2 Threaded Stud
- 3 Reflective Tape Area To Cut

## NOTE: Stagger cut all wire ends before proceeding to Step #10.

9. Remove and discard electrical tape from three wire ends (Fig. 4).

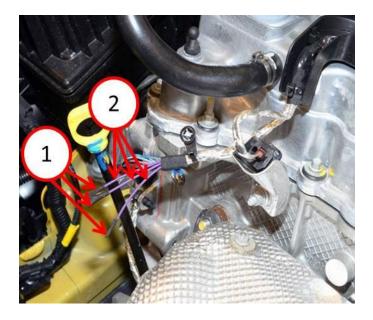


Fig. 4 Electrical Tape And Wire Ends

1 - Electrical Tape

2 - Wire Ends

- 10. Cut three equal lengths of heat shrink tubing and place tubing over three wire ends (Fig. 5).
- 11. Using a suitable heat gun, heat all tubing until it is tightly sealed and sealant begins to seep out of both ends of the tubing (Fig. 5).

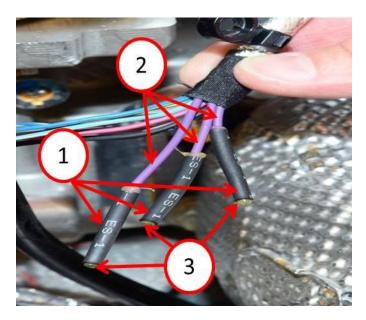


Fig. 5 Heat Shrink Tubing

- 1 Heat Shrink Tubing
- 2 Wire Ends
- 3 Sealant

12. Using Tesa tape, wrap three wires to engine harness (Fig. 6).

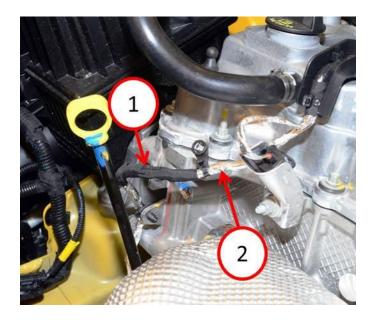


Fig. 6 Tesa Tape And Engine Harness

1 - Tesa Tape

2 - Engine Harness

- 13. Using reflective tape, completely cover Tesa tape (Fig. 7).
- 14. Install plastic harness retainer to threaded stud (Fig. 7).
- 15. Using a white paint pen, place witness mark on wire harness retainer (Fig. 7).

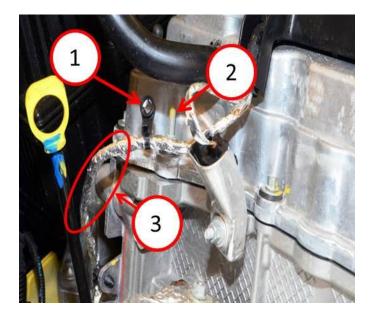


Fig. 7 Reflective Tape And Retainer

- 1 Harness Retainer
- 2 Threaded Stud
- 3 Reflective Tape
- Install the engine cover. Refer to the detailed service procedures available in DealerCONNECT> TechCONNECT under: Service Info> Engine/Cover, Engine/Removal and Installation.
- 17. Connect the negative battery cable.
- 18. Close hood.
- 19. Clear any DTCs that may have been set.

## POLICY:

Reimbursable within the provisions of the warranty.

## TIME ALLOWANCE:

Labor Operation No:	Description	Skill Category	Amount
08-94-TF-90	Wiring Harness, Engine - Inspect (2 - Skilled)	6 - Electrical And Body Systems	0.2 Hrs.
08-94-TF-91	Wiring Harness, Engine - Repair (2 - Skilled)	6 - Electrical And Body Systems	0.3 Hrs.

## FAILURE CODE:

ZZ	Service Action
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