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**Western Star
Service Bulletin**

General Information

Western Star 47X and 49X vehicles built from September 9, 2019 through October 1, 2021, with the tire pressure monitoring system (TPMS) modules communicating on the J1939 500K baud rate (part numbers BW K138367 or BW K165667) and stamped with the TPMS housing date codes from February 2019 to June 2020, may experience water intrusion into the TPMS module.

Water entering the TPMS module can affect the internal components resulting in the following symptoms:

- TPMS does not communicate.
- TPMS disrupting the J1939 500K communication.

If the vehicle has either of the listed symptoms and the TPMS module is stamped with a date code of February 2019 to June 2020, it is recommended that the module be replaced. Ensure the connection at the module is not damaged; replace any damaged parts.

Replacement of the TPMS Module

1. Park the vehicle on a level surface, shut down the engine, and set the parking brakes. Chock the tires.
2. Locate the TPMS module mounted below the left frame rail as shown in [Fig. 1](#).



Fig. 1, Location of the TPMS Module

IMPORTANT: **Figure 2** is intended for visual orientation purposes only. The wire routing should NOT be such that the wire connections are stressed, as is seen here. Proper procedure for wiring with this module is outlined below in Step 7.

3. Disconnect the wiring harness connector from the TPMS module. See **Fig. 2**.

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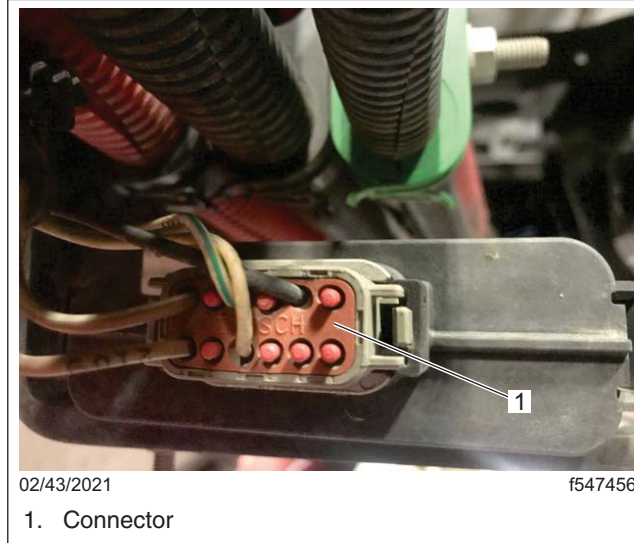


Fig. 2, TPMS Module Connector

4. Remove the two M6 x 1 capscrews and flange-head nuts from the mounting bracket, then remove the TPMS module. See [Fig. 3](#).

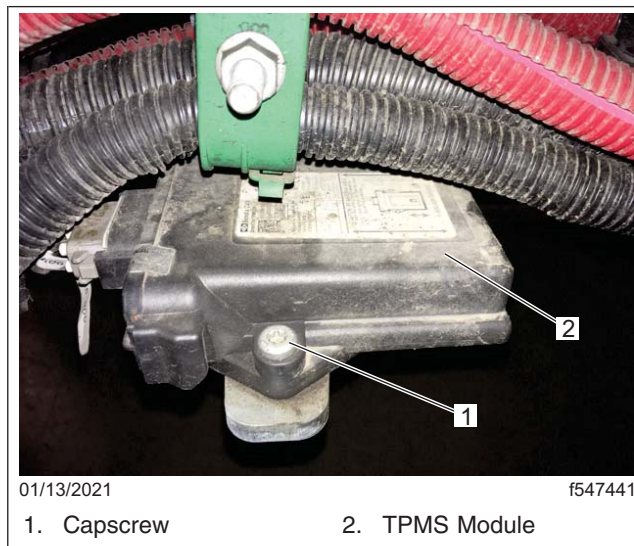


Fig. 3, Fastener Removal

5. Inspect the TPMS housing date code. If the date is between February 2019 and June 2020, replace the TPMS module. See [Fig. 4](#) for the location of the date code.

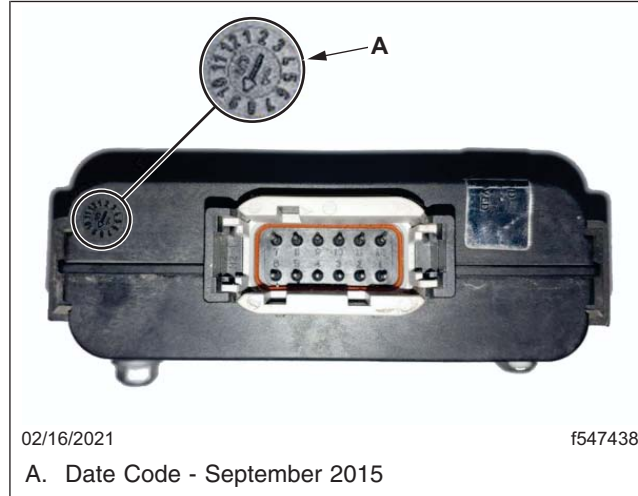


Fig. 4, TPMS Housing Date Code

6. Install the new TPMS module on the vehicle mounting bracket and tighten the capscrews 90 lbf-in (113 N-cm).
7. Connect the wiring harness to the main connector on the receiver. If a protective connector boot (gray boot shown in the top-right of [Fig. 5](#)) is not installed, wrap the connector and the first two inches of the harness with Arlon self-fusing silicone tape, shown in the bottom-right of [Fig. 5](#). Wrapping the wiring protects it from direct water spray and provides strain relief, eliminating the chance of side loading the wires on the wire seal.

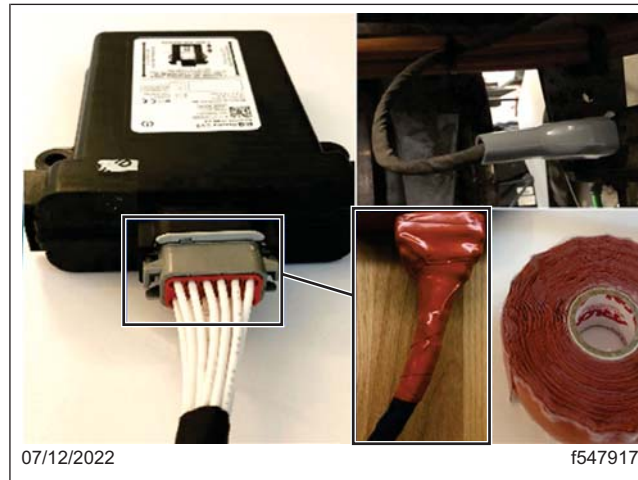
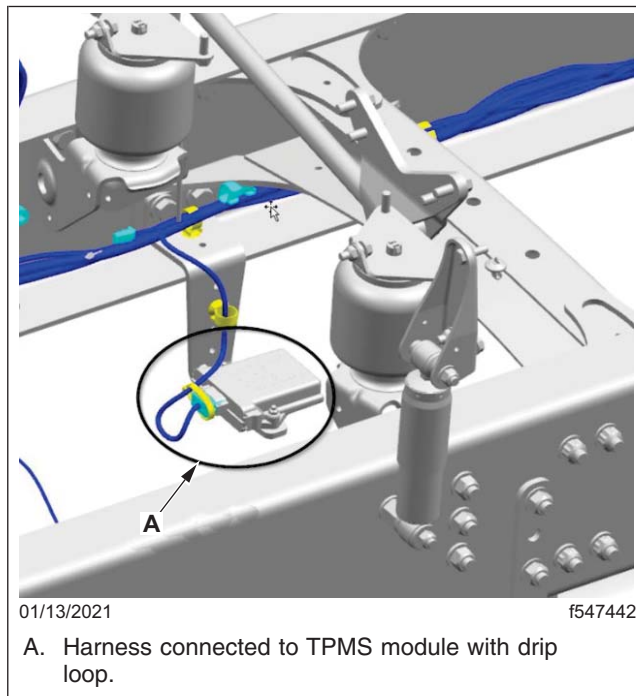


Fig. 5, Wire Harness Protection

8. Ensure that the harness (wire) connected to the TPMS has a drip loop and is securely fastened to the connector with the tie strap as shown in [Fig. 6](#).

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A. Harness connected to TPMS module with drip loop.

Fig. 6, Securing the Harness

Warranty

This procedure is warrantable only if the described condition exists and the repair is performed within the applicable base or extended coverage warranty period. If a failure is not found, this procedure is considered preventive and warranty does not apply.

Normal warranty applies. See [Table 1](#) for OWL VMRS codes and labor allowance information. Enter this service bulletin number in the *Service Bulletin #* field.

OWL VMRS Codes and Labor Allowance						
Primary Failed Part	Component Code	Cause Code	Correction Code	SRT Code	Description	Time: Hours
TPMS Module	017-009-030	59	03	489-5001A	TPMS Module, Tire Pressure Monitoring System ECU, R/R, (SBW 54-089)	0.3

Table 1, OWL VMRS Codes and Labor Allowance