

1 3 26-15



Service Information Bulletin

SUBJECT	DATE
Main Shaft Speed Sensor	March 2015

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0140	Transmission	Removal of the Main Shaft Speed Sensor	Add a figure to point out the cap referred to in step 11.



13400 Outer Drive, West, Detroit, Michigan 48239-4001
 Telephone: 313-592-5000
www.demanddetroit.com

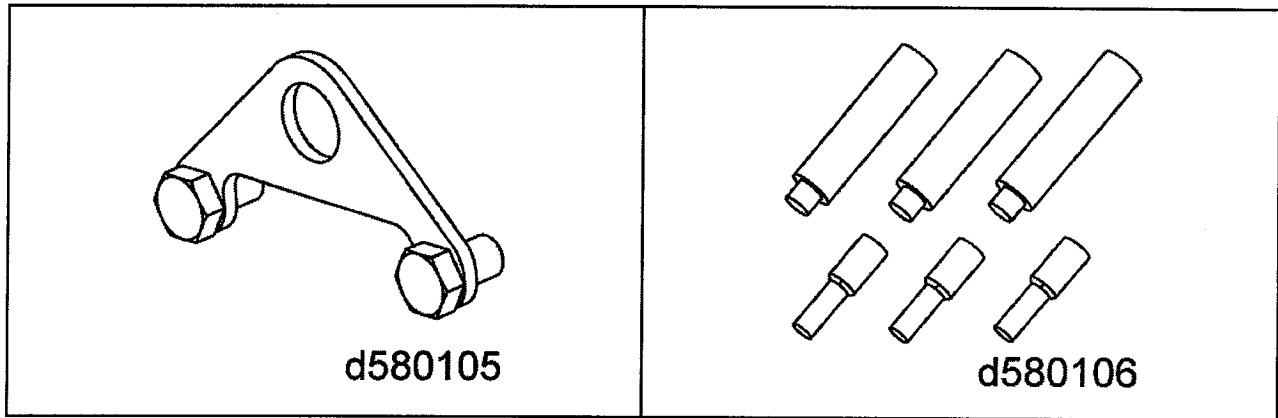
2 Removal of the Main Shaft Speed Sensor

Remove as follows:

Special Tools

Special tools are required for this procedure.

Table 1.



1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.



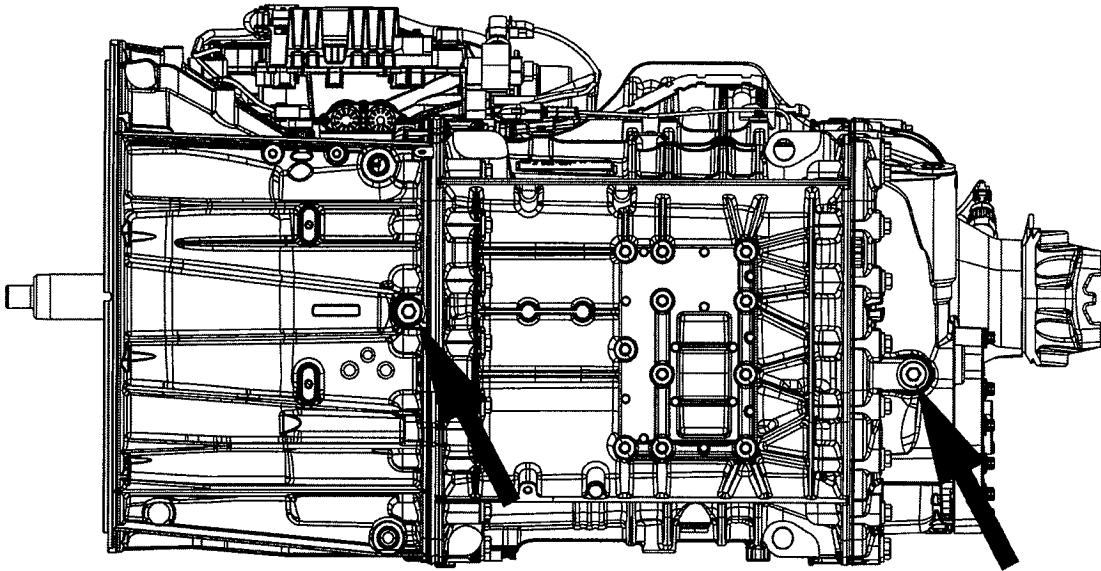
WARNING: PERSONAL INJURY

To avoid injury from hot surfaces, wear protective gloves, or allow engine to cool before removing any component.

2. Disconnect the batteries at the negative post, including the batteries for the auxiliary HVAC, if equipped.

NOTE: View from beneath the transmission.

3. Drain the transmission oil. See graphic below for the location of the oil drain plugs.



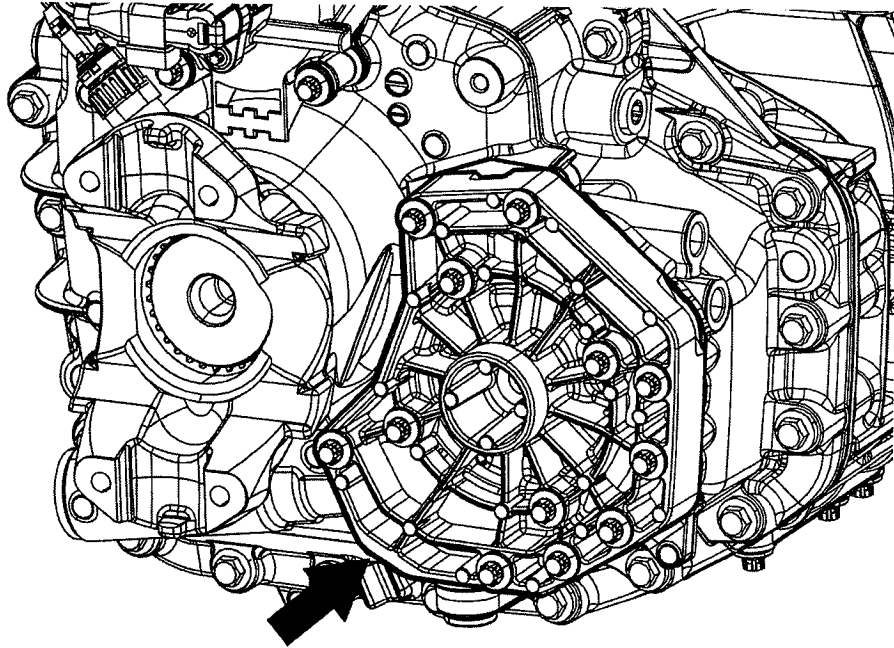
d260020

Figure 1. Transmission Oil Drain Plugs.

4. Remove the transmission. Refer to section "Removal of the Transmission"

NOTE: Be ready to catch the oil pump relief valve as the oil pump cover is removed.

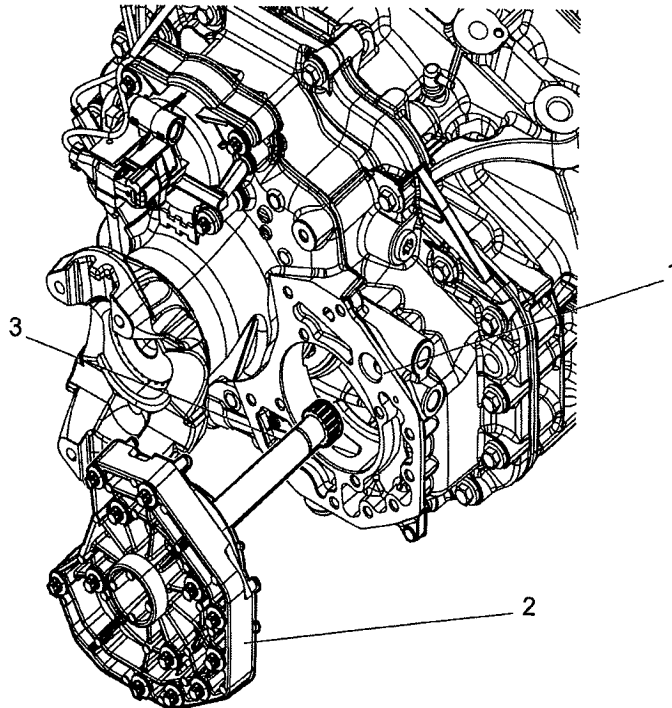
5. Remove capscrews that attach oil pump cover to the transmission housing.



d260021

Figure 2. Oil Pump Cover.

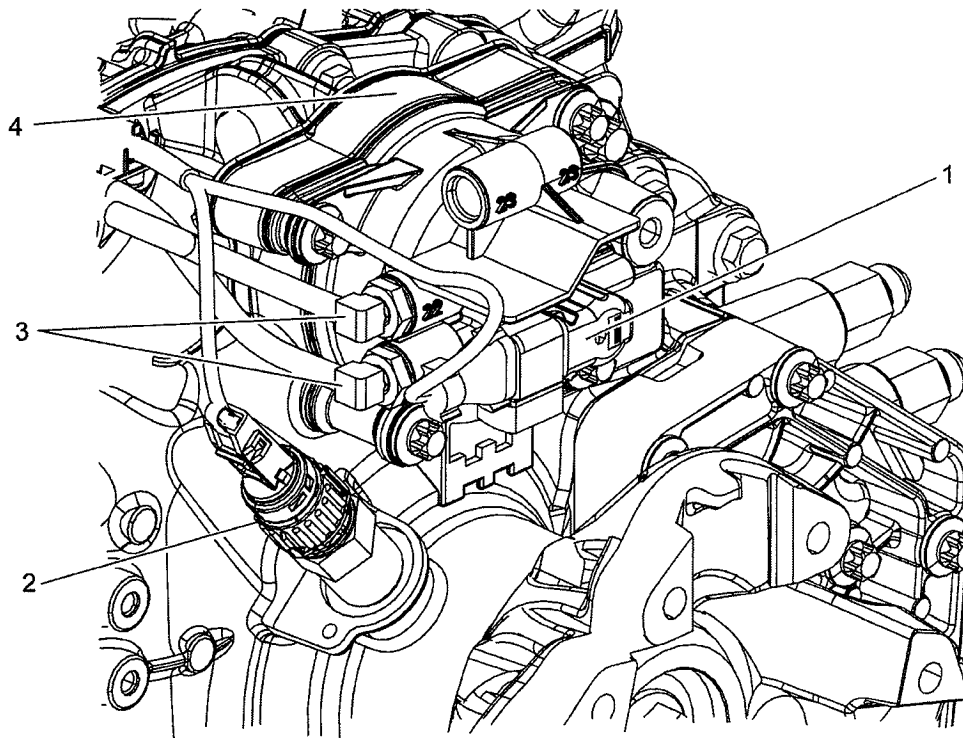
6. Remove the oil pump relief valve (1).



d260022

Figure 3. Removing the Oil Pump.

7. Remove the oil pump drive shaft (3) and the pump rotors.
8. Remove the air fittings connected to the range cylinder (4).



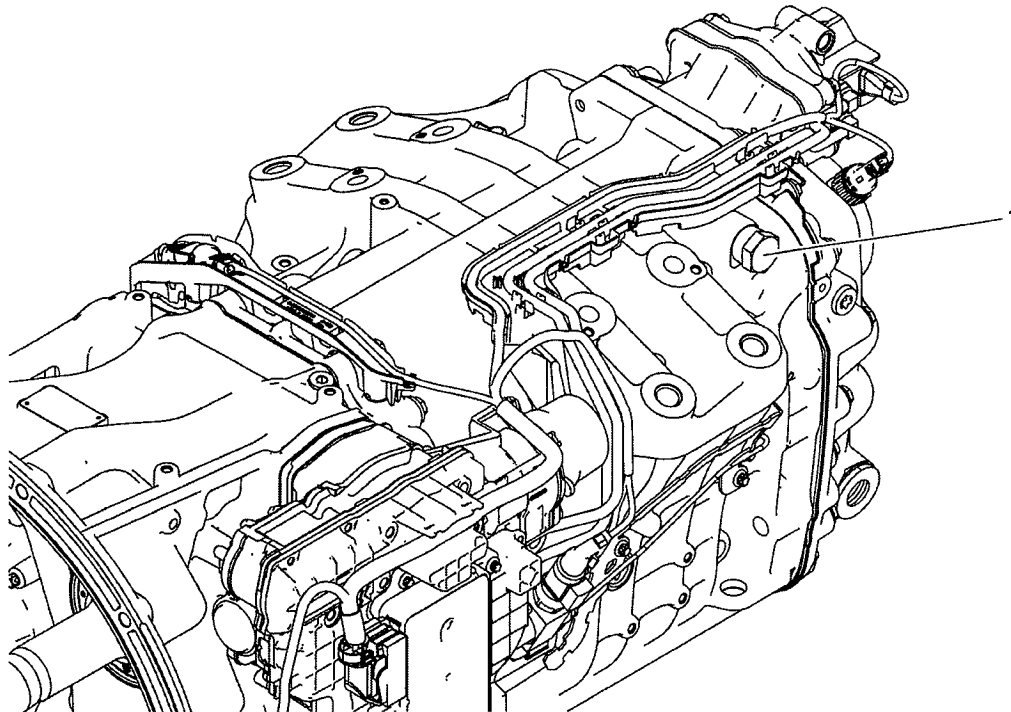
d260023

Figure 4. Range Cylinder Air Lines.

9. Disconnect the range position sensor (1) and output speed sensor (2) from the transmission wiring harness.
10. Remove the air line (3) and wire harness raceway.

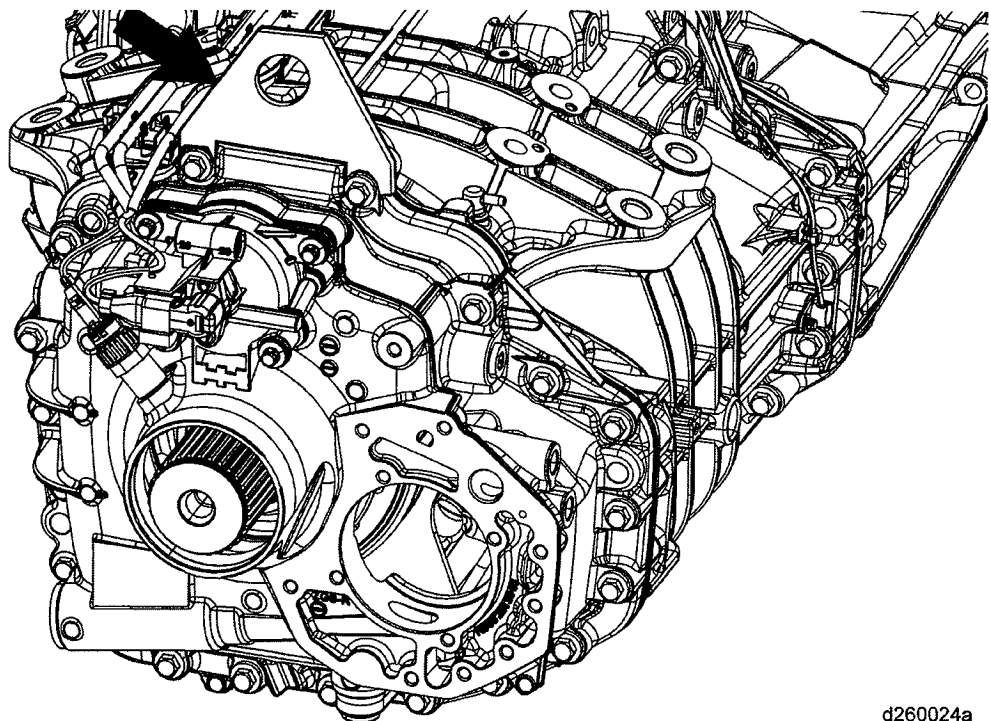
NOTICE: The range detent spring is under pressure, and must be held back to prevent the spring from catapulting the shift fork detent spring nut, possibly causing thread damage to the case and potential injury from flying parts.

11. Remove the range shift fork detent spring nut cap(1). As the nut is removed, push in with enough force to prevent the spring from catapulting the nut.



d260070

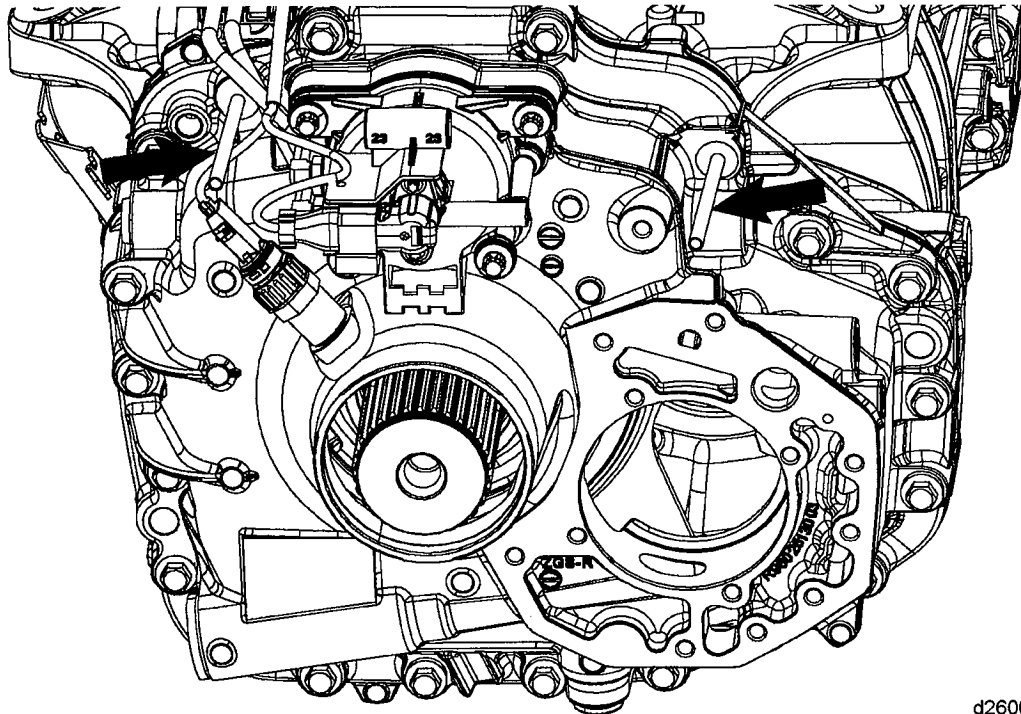
12. Remove the top two bolts on the range housing bolting flange, and install the lifting eye (special tool DDE W 715 589 00 40 00).



d260024a

Figure 5. Lifting Eye (special tool DDE W 715 589 00 40 00) Installed.

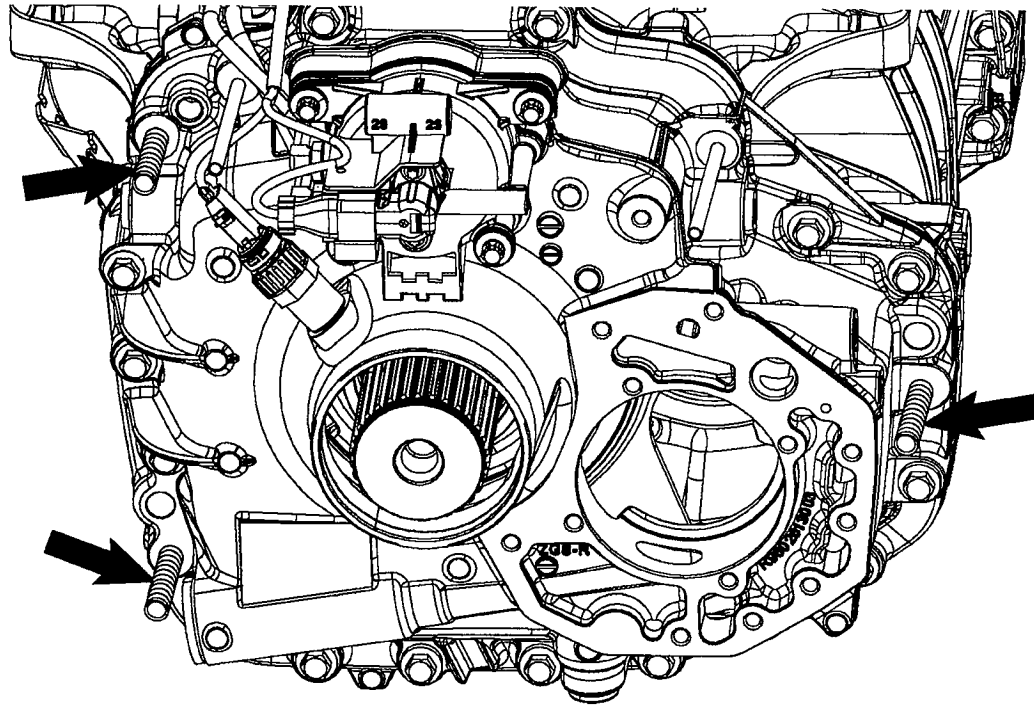
13. Attach the lifting device, then remove the remaining fasteners.
14. Install guide pins.



d260025a

Figure 6. Guide Pins.

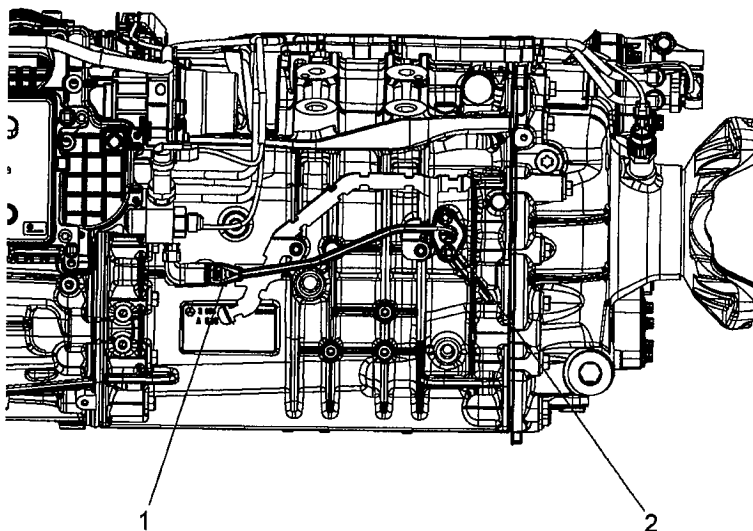
15. Install the kit of three set screws and pushing screws (special tool DDE W 715 589 14 33 00). Turn all three screws in even, incremental steps, to push the housing off the dowel pins. While the housing is being pushed back, the planetary housing flange may tend to bind on the alignment dowels. Take steps to keep the flange parallel to the housing face to ease the removal of the housing. See figure below for pushing screw locations.



d260026a

Figure 7. Pushing Screw Locations.

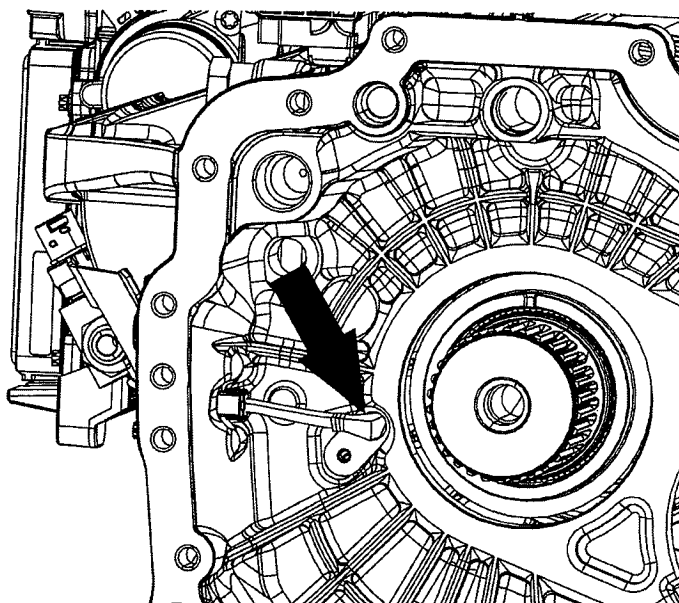
16. Remove the pushing screws and set screws.
17. Remove the ties from the mainshaft sensor wiring.
18. Disconnect the mainshaft speed sensor harness connector.



d260027

Figure 8. Mainshaft Speed Sensor Connector and Pass-Through.

19. Remove the sensor pass-through capscrews.
20. Remove the sensor.



d260028

Figure 9. Mainshaft Speed Sensor.