

## SB 4-269-001

JANUARY 2007

**ATTENTION: SERVICE MANAGERS / PARTS MANAGERS**

**SUBJECT: SECONDARY TRANSMISSION SHIFT CONTROLLER**

**MODELS: WX DUAL DRIVE AND WXLL DUAL DRIVE VEHICLES EQUIPPED WITH ALLISON 4th GENERATION TRANSMISSION CONTROLS**

### Service Bulletin Information

Service Bulletins are product modifications and/or product improvements that Autocar has determined will enhance the operation of the truck.

This bulletin provides information on a solution for the following problems experienced on WX and WXLL dual drive models equipped with Allison 4th generation transmission controls:

- Transmission Malfunction Indicator Lamp (MIL) displayed on instrument panel
- Transmission Diagnostic Trouble Code (DTC) displayed on transmission shift controller
- No transmission shift controller function from the secondary driver station on dual-drive vehicles

### Repair

The root cause has been determined to be incorrect wiring within the transmission control wire harness. The ground wire for the secondary transmission shift controller is not grounded properly. Without being properly grounded, the secondary transmission shift controller will not function as intended.

This Service Bulletin outlines the diagnostic and repair procedures necessary to restore function to the secondary transmission shift controller.

Refer to the DIAGNOSTIC PROCEDURE on *page 2*, and the REPAIR PROCEDURE on *page 3*.

### Parts

No parts are needed to perform this Service Bulletin.

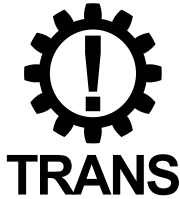
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### DIAGNOSTIC PROCEDURE

Perform the following steps to verify that the transmission MIL or DTC is caused by the lack of a signal in the transmission control wiring harness when the driver station control is switched to the right hand side (secondary) driver station.

**NOTE:** The transmission MIL (on the instrument panel) or DTC (on the transmission shift controller) will be displayed a few seconds after start-up (*Figures 1 and 2*). An audible alarm will simultaneously be sounded.



AC-384-0506-G784

Figure 1

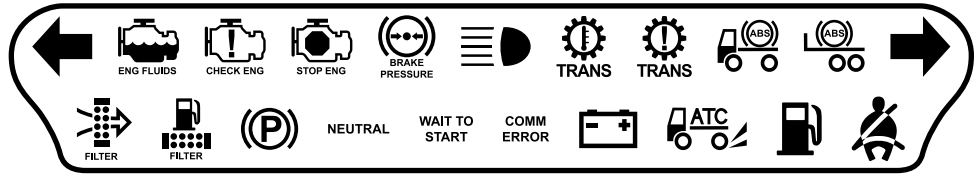
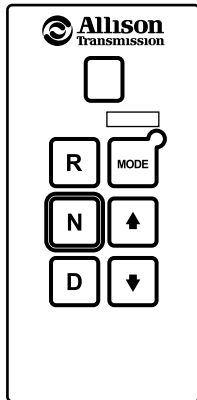


Figure 2

AC-381-0506-G777

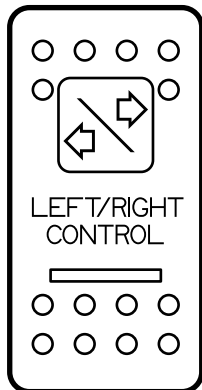
**STEP 1:** With the vehicle's engine running (or with the vehicle's ignition key in the ON position) simultaneously press both arrow keys on the shift pad *twice* (*Figure 3*). This will allow the transmission shift control pad to be used as a diagnostic tool.

**NOTE:** The driver station control switch (*Figure 4*) must be set to the driver station from which the diagnosis is being performed.



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Figure 3



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Figure 4

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**STEP 2:** The LED display of the transmission shift pad will display D1, indicating the first stored DTC.

**STEP 3:** The character combinations below indicate a DTC relating to faulty wiring between the transmission shift control panels of dual-drive vehicles. If the following combinations result, faulty wiring exists between the transmission shift control panels:

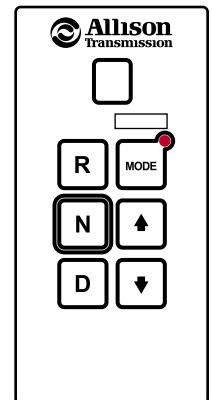
1st character: P  
2nd character: 27  
3rd character: 93

**NOTE:** The red light in the MODE button on the transmission shift control pad (*Figure 5*) will illuminate if the transmission ECU has stored a DTC.

**NOTE:** If the vehicle displays a transmission MIL or DTC (may be intermittent or constant, while the vehicle is running), the vehicle may have faulty wiring between the transmission shift control panels.

If the cause of the MIL or DTC is not active while the vehicle is being diagnosed, the red light in the MODE button will not be illuminated. In this case, it is still recommended that the source of the transmission MIL or DTC be corrected to prevent future problems relating to the faulty ground wire for the secondary transmission shifter control.

**NOTE:** If the transmission has logged multiple error codes, the P2793 code may not be the first code displayed. It is recommended that once an error code is indicated, the MODE button be pressed to cycle through any additional errors. When the MODE button is pressed, the next error code (D2, D3, D4, or D5) will be displayed, followed by the three characters of the error code. When an error code is followed by double dashes (- -), there are no additional errors in the system.



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**Figure 5**

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### WARNING

To prevent eye injury, always wear eye protection when performing vehicle maintenance, service or inspection.



### DANGER

Before working on a vehicle, set the parking brake, place the transmission in neutral and block the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.

## REPAIR PROCEDURE

**STEP 1:** Remove right side (RS) front body builder panel to access the transmission shift controller harness (*Figure 6*).

**NOTE:** IN *FIGURE 6*, THE CLIMATE CONTROL PANEL IS INSTALLED IN THE RIGHT SIDE (RS) BODY BUILDER PANEL. THE TRANSMISSION WIRE HARNESS THAT MUST BE ACCESSED IS LOCATED BEHIND THIS PANEL, BUT IT MUST BE NOTED THAT THE CLIMATE CONTROL PANEL MAY BE LOCATED ELSEWHERE, DEPENDING ON THE OPTIONS AND CONFIGURATION OF THE VEHICLE.



Figure 6

**STEP 2:** Locate wire 0Y-H or 0Y-F, in the front bundle that routes to the Transmission ECU (*Figure 7*). Cut either wire at the most accessible location and strip both ends.

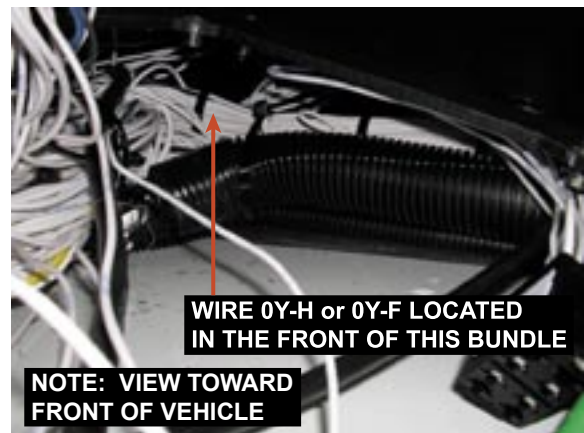
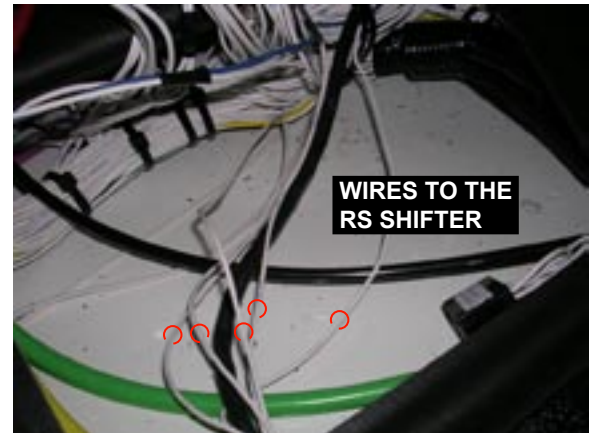


Figure 7

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**STEP 3:** Locate splice 11 (SPL-11). It will be located in the branch leading to the right side shifter (*Figure 8*). Locate wire 0C on the left side of this splice. Follow wire 0C as far to the front of the vehicle as possible. Cut wire 0C at this location and tape off the end that leads to the main cab harness. On the remaining leg of wire 0C (leading back to SPL-11), strip the end of the wire.



*Figure 8*

**STEP 4:** Create a new splice with solder and heat shrink tubing or electrical tape, connecting both ends of the 0Y-H or 0Y-F wire to the stripped end of wire 0C leading to SPL-11. A 16-14 or 12-10 gauge butt splice will be required.

**STEP 5:** Before re-assembly of the body builder panel, repeat the **DIAGNOSTIC PROCEDURE** from *page 2* in order to verify the repair has been completed successfully.

**STEP 6:** Reinstall the RS front body builder panel which was removed in *step 1* of the **REPAIR PROCEDURE**.