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## SECTION 10 ABBREVIATIONS

|       |  |
|-------|--|
| ABS   | Antilock Brake System                              |
| A/C   | Air Conditioning                                   |
| ACM   | Aftertreatment Control Module                      |
| AFSS  | Automatic Fire Suppression System                  |
| DEF   | Diesel Exhaust Fluid                               |
| DID   | Driver Information Display                         |
| DPF   | Diesel Particulate Filter                          |
| DTC   | Diagnostic Troubleshooting Code                    |
| ECM   | Engine Control Module                              |
| ECU   | Electronic Control Unit                            |
| EECU  | Engine Electronic Control Unit                     |
| EGR   | Exhaust Gas Recirculation                          |
| ESC   | Escape   |
| GECU  | Gear selector Electronic Control Unit              |
| HVAC  | Heating, Ventilation and Air Conditioning          |
| LED   | Light Emitting Diode                               |
| MCM   | Master Chassis Module                              |
| MPH   | Miles Per Hour                                     |
| PTT   | Premium Tech Tool                                  |
| PRIME | Power Recovery by Intelligent Management of Energy |
| SCR   | Selective Catalytic Reduction                      |
| TCM   | Transmission Control Module                        |
| TCS   | Traction Control System                            |
| TECU  | Transmission Electronic Control Unit               |
| TWS   | Threshold Warning System                           |
| ULSD  | Ultra Low Sulfur Diesel                            |
| VCADS | Diagnostic Tool                                    |
| VECF  | Vehicle Electrical Center Front                    |
| VECR  | Vehicle Electrical Center Rear                     |
| VECU  | Vehicle Electronic Control Unit                    |
| WCL   | Wheelchair Lift                                    |



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### SERVICE LITERATURE

Visit our web site at [www.prevostcar.com](http://www.prevostcar.com) for part and service information including online parts ordering and technical publications.

Paper copies of the following service literature are available on request and at low cost.

- \* **Maintenance Manual**
- \* **Operator's Manual**
- \* **Parts Manual**
- \* **Service Center Directory**

Vehicle serial number is required to order literature.

Phone:

**United States:** 1 800 621-5519

**Canada:** 1 800 463-8876

Email:

**United States:** *function.prevostparts.orders@volvo.com*

**Canada:** *prevostparts.commandes@volvo.com*

Mail :

**United States:**

PREVOST PARTS  
2250 Point Blvd, Suite 410  
Elgin, Illinois  
60123

**Canada:**

PREVOST PARTS  
2955-A Watt Street  
Sainte-Foy, (Quebec)  
Canada G1X 3W1

## **NOTICE**

### **DECLARATION OF THE MANUFACTURING DEFECTS TO THE GOVERNMENT OF THE UNITED STATES**

If you believe that your vehicle has defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Prevost.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign.

However, NHTSA cannot become involved in individual problems between you, your dealer, or Prevost Car Inc.

To contact NHTSA you may either call the Auto Safety Hotline toll-free at **1-800-424-9393** (or **366-0123** in Washington, D.C. area) or write to:

**NHTSA  
U.S. Department of transportation  
Washington, D.C. 20590.**

You can also obtain other information about motor vehicle safety from the Hotline.

### **DECLARATION OF THE MANUFACTURING DEFECTS TO THE CANADIAN GOVERNMENT**

If you live in Canada, and if you believe that your vehicle has a safety defect, you should immediately inform Transport Canada and Prevost. You may write to:

**Transport Canada  
Box 8880  
Ottawa, Ontario, K1G 3J2**

### **DECLARATION OF THE MANUFACTURING DEFECTS TO PREVOST.**

In addition to notify the NHTSA (or Transport Canada), please contact Prevost at **1-418-831-2046**. Or you may write to:

**Prevost  
After-sales service department  
850 Olivier Road,  
Saint-Nicolas (Quebec)  
Canada, G7A 2N1**



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## ALLISON TRANSMISSION 5<sup>th</sup> GENERATION OIL LEVEL CHECK USING THE PUSHBUTTON SHIFT SELECTOR

The oil level sensor (OLS) is standard in your transmission. With the OLS and Allison 5<sup>th</sup> generation shift selector, you can get a more accurate electronic fluid level check than with a dipstick.

Oil level codes are obtained as follows:

1. Park vehicle on a level surface, select «N» (neutral) on the pushbutton shift selector and apply parking brake.
2. Wait for at least 2 minutes to allow the oil to settle;
3. Press simultaneously the ▲ (Upshift) and ▼ (Downshift) arrow buttons once.
4. Oil level codes are displayed once the following parameters are met :
  - **The vehicle has been stationary for approximately 2 minutes to allow the oil to settle;**
  - **Engine at idle;**
  - **Oil at normal operating temperature, between 104°F (40°C) and 220°F (104°C);**
  - **Transmission in «N» (Neutral);**
  - **Transmission output shaft stopped;**
  - **Oil level sensor present and working.**

5. Correct fluid level is displayed as shown.



6. Low fluid level is displayed as shown. The number indicates the number of quarts of fluid



the transmission requires.

7. High fluid level condition with the number of quarts in excess is displayed as shown.



### NOTE

*Confirm a low fluid level condition by making a manual fluid level check.*

8. To exit the Oil Level Display Mode, press any range button «R», «N» or «D» at any time.

### NOTE

*Note that the quantities LO 4 and HI 3 are the largest values displayed and that the actual variation in oil level may exceed these numbers.*

If the fluid level check cannot be completed, an Invalid for Display fault is reported. Refer to table below to review the codes and conditions.

| CODE              | CAUSE OF FAULT CODE             |
|-------------------|---------------------------------|
| SETTLING OX       | Settling time too short         |
| ENG RPM TOO LOW   | Engine speed (rpm) too low      |
| ENG RPM TOO HIGH  | Engine speed (rpm) too high     |
| MUST BE IN NEU    | N (Neutral) must be selected    |
| OIL TEMP TOO LOW  | Sump fluid temperature too low  |
| OIL TEMP TOO HIGH | Sump fluid temperature too high |
| VEH SPD TOO HI    | Output shaft speed              |
| SENSOR FAILED     | Sensor failure                  |



## **DIAGNOSTIC TROUBLESHOOTING CODES (DTC) — ALLISON 5TH GENERATION**

### **DIAGNOSTIC TROUBLESHOOTING CODES (DTC) OVERVIEW**

Diagnostic features are provided with the transmission control system to assist in troubleshooting of malfunctions and/or the monitoring of specific operating parameters. When a control system malfunction is detected, a series of Diagnostic Trouble Codes (DTCs) are used to identify and clarify the nature of the malfunction. These DTCs are each named by a 5 character alphanumeric string that refers to a diagnostic algorithm running pass/fail tests to help identify a malfunction in the transmission or vehicle operation. Most DTCs have some kind of diagnostic response that the operator notices, such as an illuminated CHECK light, selector display change, lock in range, or inhibit shifts condition.

DTCs are logged in the Transmission Control Module (TCM) memory by severity and by their active/inactive status with the most severe and active codes listed first. A maximum of five DTCs (numbered d1- d5) from most recent to oldest may be read from the shift selector. As DTCs are added, the oldest inactive DTC (historic) is dropped from the list. If all DTCs are active, the DTC with the lowest priority is dropped from the list.

An active code is any code that is current in the TCM decision-making process and has failed the DTC test(s) associated with that specific diagnostic algorithm. Historical codes, which are by definition inactive, are codes that are no longer failing their algorithm but are retained in the TCM in order to help the technician analyze possible causes and provide them direction if the vehicle is brought in before they are cleared from the queue.

DTCs can be cleared manually by the operator or they clear automatically from last (d5) to first (d1) in the queue after a number of engine starts, without becoming active again.

### **USING SHIFT SELECTOR FOR ACCESSING DIAGNOSICS INFORMATION**

DTCs can be displayed on the display portion of the shift selector. A DTC is either active or historic. An active DTC is a DTC that is current in the TCM decision-making process. Historic DTCs are retained in the TCM memory and do not necessarily affect the TCM decision-making process.

#### **Display Sequence**

Up to five DTCs may be displayed one at a time from the selector once the diagnostic display mode has been initiated by the operator. Each DTC is 5 characters in length. The DTC status active or inactive is shown below the DTC.



Shows active DTC P0730

The operator presses the MODE button to read the next DTC in the queue (if any) or requests to exit diagnostics mode. The diagnostics mode times out and returns the selector to normal operating mode after approximately 10 minutes of operator inactivity.

#### **Diagnostic Code Display and Clearing Procedure**

Diagnostic codes can be read and cleared by two methods:

- Using an Allison DOC™ diagnostic tool. For specific instructions on how to use an Allison DOC™ diagnostic tool, refer to the User Guide.
- Using the pushbutton shift selector.

To begin the diagnostic process:

1. Bring the vehicle to a stop at a safe location.
2. Apply the parking brake.

## 12-4 APPENDIX B – Allison Transmission’s Other Features

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To display stored codes:

1. Simultaneously press the ▲ (Upshift) and ▼ (Downshift) arrow buttons five times (Prognostics enabled) to access the Diagnostic Display Mode. With Prognostics disabled, press the ▲ (Upshift) and ▼ (Downshift) arrow buttons twice.
2. Press the MODE button to read the next code in the queue, if any.

To clear all active stored codes:

While in Diagnostic Mode, clear all active codes by pressing and holding the MODE button for approximately three seconds until the MODE message flashes. Release the MODE button. The MODE message should not remain illuminated if the active DTC shown in the display has cleared.

While in Diagnostic Mode, press and hold the MODE button for 10 seconds to clear both active codes and inactive codes. The MODE message flashes a second time indicating all codes are cleared from the queue.

### Exiting Diagnostic Mode

Exit the diagnostic mode by one of the following methods:

1. Press simultaneously the ▲ (Upshift) and ▼ (Downshift) arrow buttons at the same time on the pushbutton shift selector.
2. Press any range button «D», «N» or «R» on the pushbutton shift selector.
3. After approximately 10 minutes of inactivity at the pushbutton shift selector, the diagnostic mode automatically exits and returns to normal operating mode.
4. Turn off power to the TCM (shut off the engine using the ignition key).

|             |
|-------------|
| <b>NOTE</b> |
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| <i>Be sure to record all codes displayed before they are cleared. This is essential for troubleshooting.</i> |
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|-------------|
| <b>NOTE</b> |
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|--|
| <i>If clearing a code while locked in a «D» (Drive) or «R» (Reverse) position (fail-to-range), the transmission will still be in «D» (Drive) or «R» (Reverse) when the clearing procedure is completed. «N» (Neutral) must be manually selected.</i> |
|--|

### DIAGNOSTIC TROUBLE CODE RESPONSE

The electronic control system is programmed to inform the operator of a problem with the transmission system via the CHECK light and shift selector display while it automatically takes action to protect the operator, vehicle, and transmission. When the Transmission Control Module (TCM) flags a Diagnostic Trouble Code (DTC) as active, the TCM may take a combination of diagnostic responses as listed in the table below.

| CATEGORY OF RESPONSE           | ACTIONS TAKEN  |
|--------------------------------|--|
| DNS - <u>Do Not Shift</u>      | Release lock up (LU) clutch and inhibit lock up operation.<br>Inhibit shifts from the current attained range.<br>Turn on the CHECK light.<br>Display the current attained range in the MONITOR window of the shift selector.<br>Blank the SELECT window of the shift selector.<br>Ignore any range selection inputs from the shift selector. |
| SOL OFF - <u>SOLenoid OFF</u>  | All solenoids are commanded off, resulting in hydraulic default operation of the transmission – PCS1 & PCS2 are on hydraulically when off electrically.  |
| RPR - Return to Previous Range | When the speed sensor ratio or PS1 tests do not pass, the TCM commands the same range as commanded before the shift.   |
| NNC - Neutral No Clutches      | When certain speed sensor ratio or PS1 tests do not pass, the TCM commands a neutral condition with no clutches applied.   |
| DNA - <u>Do Not Adapt</u>      | The TCM stops adaptive shift control while the code is active.   |

**DIAGNOSTIC TROUBLESHOOTING CODES (DTC) LIST - ALLISON 5<sup>TH</sup> GENERATION CONTROLS**

| DTC   | Description  | CHECK Light | Inhibited Operation Description   |
|-------|--|-------------|---|
| C1312 | Retarder Request Sensor Failed Low                   | No          | May inhibit retarder operation if not using J1939 datalink  |
| C1313 | Retarder Request Sensor Failed High                  | No          | May inhibit retarder operation if not using J1939 datalink  |
| P0122 | Pedal Position Sensor Circuit Low Voltage            | No          | Use default throttle values. Freezes shift adapts.  |
| P0123 | Pedal Position Sensor Circuit High Voltage           | No          | Use default throttle values. Freezes shift adapts.  |
| P0218 | Transmission Fluid Over Temperature                  | Yes         | Use default sump temp   |
| P0562 | System Voltage Low                                   | No          | Inhibit TCC Operation, DNA  |
| P0602 | TCM Not Programed                                    | Yes         | Lock in Neutral   |
| P0604 | Control module random access memory (RAM)            | Yes         | Lock in Neutral   |
| P0614 | Torque Control Data Mismatch - ECM/TCM               | Yes         | Allows operation only in reverse and second range.  |
| P0634 | TCM Internal Temperature Too High                    | Yes         | SOL OFF (hydraulic default)   |
| P0642 | Sensor Reference Voltage "A" Circuit Low             | Yes         | Default sensor data used  |
| P0643 | Sensor Reference Voltage "A" Circuit High            | Yes         | Default sensor data used  |
| P0657 | Actuator Supply Circuit Voltage 1 Open (HSD 1)       | Yes         | SOL OFF, DNA, Inhibit TCC operation, Inhibit main modulation  |
| P0658 | Actuator Supply Voltage 1 (HSD1) Low                 | Yes         | DNS, SOL OFF (hydraulic default)  |
| P0659 | Actuator Supply Voltage 1 (HSD1) High                | Yes         | DNS, SOL OFF (hydraulic default)  |
| P0703 | Brake Switch Circuit Malfunction                     | No          | No Neutral to Drive shifts for refuse packer. TCM inhibits retarder operation if a TPS code is also active. |
| P0708 | Transmission Range Sensor Circuit High Input         | Yes         | Ignore defective strip selector inputs  |
| P070C | Transmission Fluid Level Sensor Circuit – Low Input  | No          | None  |
| P070D | Transmission Fluid Level Sensor Circuit – High Input | No          | None  |

## 12-6 APPENDIX B – Allison Transmission’s Other Features

| DTC   | Description  | CHECK Light | Inhibited Operation Description  |
|-------|--|-------------|--|
| P0712 | Transmission Fluid Temperature Sensor Circuit Low Input  | Yes         | Use default sump temp  |
| P0713 | Transmission Fluid Temperature Sensor Circuit High Input | Yes         | Use default sump temp  |
| P0715 | Turbine Shaft Speed Sensor Circuit                       | Yes         | DNS, Lock in current range   |
| P0716 | Turbine Shaft Speed Sensor Circuit Performance           | Yes         | DNS, Lock in current range   |
| P0717 | Turbine Shaft Speed Sensor Circuit No Signal             | Yes         | DNS, Lock in current range   |
| P071A | RELS Input Failed On                                     | Yes         | Inhibit RELS operation   |
| P071D | General Purpose Input Fault                              | Yes         | None   |
| P0720 | Output Shaft Speed Sensor Circuit                        | Yes         | DNS, Lock in current range   |
| P0721 | Output Shaft Speed Sensor Circuit Performance            | Yes         | DNS, Lock in current range   |
| P0722 | Output Speed Sensor Circuit No Signal                    | Yes         | DNS, Lock in current range   |
| P0725 | Engine Speed Sensor Circuit                              | No          | Default to turbine speed   |
| P0726 | Engine Speed Sensor Circuit Performance                  | No          | Default to turbine speed   |
| P0727 | Engine Speed Sensor Circuit No Signal                    | No          | Default to turbine speed   |
| P0729 | Incorrect 6 <sup>th</sup> Gear Ratio                     | Yes         | DNS, Attempt 5 <sup>th</sup> , then 3 <sup>rd</sup>                        |
| P0731 | Incorrect 1 <sup>st</sup> Gear ratio                     | Yes         | DNS, Attempt 2 <sup>nd</sup> , then 5 <sup>th</sup>                        |
| P0732 | Incorrect 2 <sup>nd</sup> Gear ratio                     | Yes         | DNS, Attempt 3 <sup>rd</sup> , then 5 <sup>th</sup>                        |
| P0733 | Incorrect 3 <sup>rd</sup> Gear ratio                     | Yes         | DNS, Attempt 4 <sup>th</sup> , then 6 <sup>th</sup>                        |
| P0734 | Incorrect 4 <sup>th</sup> Gear ratio                     | Yes         | DNS, Attempt 5 <sup>th</sup> , then 3 <sup>rd</sup>                        |
| P0735 | Incorrect 5 <sup>th</sup> Gear ratio                     | Yes         | DNS, Attempt 6 <sup>th</sup> , then 3 <sup>rd</sup> , then 2 <sup>nd</sup> |
| P0736 | Incorrect Reverse Gear ratio                             | Yes         | DNS, Lock in Neutral   |
| P0741 | Torque Converter Clutch System Stuck Off                 | Yes         | None   |
| P0752 | Shift Solenoid 1 Valve Performance-Stuck On              | Yes         | DNS  |
| P0776 | Pressure Control Solenoid (PCS) 2 Stuck Off              | Yes         | DNS, RPR   |
| P0777 | Pressure Control Solenoid 2 Stuck On                     | Yes         | DNS, RPR   |
| P0796 | Pressure Control Solenoid 3 Stuck Off                    | Yes         | DNS, RPR   |
| P0797 | Pressure Control Solenoid 3 Stuck On                     | Yes         | DNS, RPR   |
| P0842 | Transmission Fluid Pressure Switch 1 Circuit Low         | Yes         | DNS, Lock in current range   |
| P0843 | Transmission Fluid Pressure Switch 1 Circuit High        | Yes         | DNS, Lock in current range   |
| P0847 | Transmission Fluid Pressure Switch 2 Circuit Low         | Yes         | None   |
| P0848 | Transmission Fluid Pressure Switch 2 Circuit High        | Yes         | None   |
| P088A | Transmission Fluid Filter Maintenance Alert              | No          | None   |
| P088B | Transmission Fluid Filter Maintenance Required           | No          | None   |
| P0880 | TCM Power Input Signal                                   | No          | None   |
| P0881 | TCM Power Input Signal Performance                       | No          | None   |
| P0882 | TCM Power Input Signal Low                               | Yes         | DNS, SOL OFF (hydraulic default)   |
| P0883 | TCM Power Input Signal High                              | No          | None   |
| P0894 | Unexpected Mechanical Gear Disengagement                 | Yes         | DNS, Lock in first   |
| P0897 | Transmission Fluid Deteriorated                          | No          | None   |
| P0960 | Main Pressure Modulator Solenoid Control Circuit Open    | Yes         | None   |
| P0962 | Main Pressure Modulator Solenoid Control Circuit Low     | Yes         | DNS, SOL OFF (hydraulic default)   |
| P0963 | Main Pressure Modulator Solenoid Control Circuit High    | Yes         | None   |
| P0964 | Pressure Control Solenoid 2 (PCS2) Control Circuit Open  | Yes         | DNS, SOL OFF (hydraulic default)   |
| P0966 | Pressure Control Solenoid 2 (PCS2) Control Circuit Low   | Yes         | DNS, SOL OFF (hydraulic default)   |
| P0967 | Pressure Control Solenoid 2 (PCS2) Control Circuit High  | Yes         | DNS, SOL OFF (hydraulic default)   |

| <b>DTC</b> | <b>Description</b>                                      | <b>CHECK Light</b> | <b>Inhibited Operation Description</b>                          |
|------------|---|--------------------|---|
| P0968      | Pressure Control Solenoid 3 (PCS3) Control Circuit Open | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P0970      | Pressure Control Solenoid 3 (PCS3) Control Circuit Low  | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P0971      | Pressure Control Solenoid 3 (PCS3) Control Circuit High | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P0973      | Shift Solenoid 1 (SS1) Control Circuit Low              | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P0974      | Shift Solenoid 1 (SS1) Control Circuit High             | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P0976      | Shift Solenoid 2 (SS2) Control Circuit Low              | Yes                | 7-speed: Allow 2 through 6, N, R<br>Inhibit TCC operation       |
| P0977      | Shift Solenoid 2 (SS2) Control Circuit High             | Yes                | 7-speed: Allow 2 through 6, N, R                                |
| P097A      | Shift Solenoid 1 (SS1) Control Circuit Open             | Yes                | Lock in range   |
| P097B      | Shift Solenoid 2 (SS2) Control Circuit Open             | Yes                | 7-speed: Allow 2 through 6, N, R                                |
| P0989      | Retarder Pressure Sensor Circuit Low                    | No                 | None  |
| P0990      | Retarder Pressure Sensor Circuit High                   | No                 | None  |
| P1739      | Incorrect Low Gear Ratio                                | Yes                | Command 2 <sup>nd</sup> and allow shifts 2 through 6, N, R      |
| P1790      | Gear Shift Module 1 Calibrated Invalid                  | Yes                | Shift selector language or units incorrect                      |
| P1791      | Gear Shift Module 2 Calibrated Invalid                  | Yes                | Shift selector language or units incorrect                      |
| P1891      | Throttle Position Sensor PWM Signal Low                 | No                 | Use default throttle values                                     |
| P1892      | Throttle Position Sensor PWM Signal High                | No                 | Use default throttle values                                     |
| P2184      | Engine Coolant Temperature Sensor 2 Circuit Low Input   | No                 | Use default engine coolant values                               |
| P2185      | Engine Coolant Temperature Sensor 2 Circuit High Input  | No                 | Use default engine coolant values                               |
| P2637      | Torque Management Feedback Signal (A)                   | Yes                | Inhibit SEM   |
| P2641      | Torque Management Feedback Signal (B)                   | Yes                | Inhibit L RTP   |
| P2669      | Actuator Supply Circuit Voltage 2 Open (HSD2)           | Yes                | SOL OFF, Inhibit TCC operation,<br>Inhibit Main modulation, ONA |
| P2670      | Actuator Supply Voltage 2 (HSD2) Low                    | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P2671      | Actuator Supply Voltage 2 (HSD2) High                   | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P2684      | Actuator Supply Circuit Voltage 3 Open (HSD3)           | Yes                | SOL OFF, Inhibit TCC operation,<br>Inhibit Main modulation, ONA |
| P2685      | Actuator Supply Voltage 3 (HSD3) Low                    | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P2686      | Actuator Supply Voltage 3 (HSD3) High                   | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P2714      | Pressure Control Solenoid 4 (PCS4) Stuck Off            | Yes                | DNS, RPR  |
| P2715      | Pressure Control Solenoid 4 (PCS4) Stuck On             | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P2718      | Pressure Control Solenoid 4 (PCS4) Control Circuit Open | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P2720      | Pressure Control Solenoid 4 (PCS4) Control Circuit Low  | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P2721      | Pressure Control Solenoid 4 (PCS4) Control Circuit High | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P2723      | Pressure Control Solenoid 1 (PCS1) Stuck Off            | Yes                | DNS, RPR  |
| P2724      | Pressure Control Solenoid 1 (PCS1) Stuck On             | Yes                | DNS, RPR  |
| P2727      | Pressure Control Solenoid 1 (PCS1) Control Circuit Open | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P2729      | Pressure Control Solenoid 1 (PCS1) Control Circuit Low  | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P2730      | Pressure Control Solenoid 1 (PCS1) Control Circuit High | Yes                | DNS, SOL OFF (hydraulic default)                                |
| P2736      | Pressure Control Solenoid 5 (PCS5) Control Circuit Open | Yes                | Inhibit retarder operation                                      |
| P2738      | Pressure Control Solenoid 5 (PCS5) Control Circuit Low  | Yes                | Allow 2 through 6, N, R. Inhibit<br>retarder and TCC operation  |
| P2739      | Pressure Control Solenoid 5 (PCS5) Control Circuit High | Yes                | Inhibit retarder operation                                      |

## 12-8 APPENDIX B – Allison Transmission’s Other Features

| DTC   | Description  | CHECK Light | Inhibited Operation Description                                    |
|-------|--|-------------|--|
| P273F | Retarder Oil Temperature Sensor Over Temperature Condition           | No          | None   |
| P2742 | Retarder Oil Temperature Sensor Circuit – Low                        | No          | Use default retarder temp values                                   |
| P2743 | Retarder Oil Temperature Sensor Circuit – High                       | No          | Use default retarder temp values                                   |
| P2761 | TCC PCS Control Circuit Open   | Yes         | Inhibit TCC operation  |
| P2763 | TCC PCS Control Circuit High   | Yes         | Inhibit TCC operation  |
| P2764 | TCC PCS Control Circuit Low  | Yes         | 7-speed: Allow 2 through 6, N, R. Inhibit TCC operation            |
| P2789 | Transmission Clutch Life Expired (Clutch Adaptive Learning at Limit) | No          | None   |
| P2793 | Gear Shift Direction Circuit   | Yes         | Ignores PWM input from shift selector                              |
| P2808 | Pressure Control Solenoid 6 (PCS6) Stuck Off                         | Yes         | DNS, RPR   |
| P2809 | Pressure Control Solenoid 6 (PCS6) Stuck On                          | Yes         | DNS, RPR   |
| P2812 | Pressure Control Solenoid 6 (PCS6) Control Circuit Open              | Yes         | DNS, SOL OFF (hydraulic default)                                   |
| P2814 | Pressure Control Solenoid 6 (PCS6) Control Circuit Low               | Yes         | DNS, SOL OFF (hydraulic default)                                   |
| P2815 | Pressure Control Solenoid 6 (PCS6) Control Circuit High              | Yes         | DNS, SOL OFF (hydraulic default)                                   |
| U0073 | CAN Communication Bus 1 Off  | No          | Use default values   |
| U0074 | CAN Communication Bus 2 Off  | No          | Use default values   |
| U0100 | Lost Communications with ECM A                                       | Yes         | Use default values   |
| U0103 | Lost Communication with Gear Shift Module (Shift Selector) 1         | Yes         | Maintain range selected, observe gear shift direction circuit      |
| U0291 | Lost Communication with Gear Shift Module (Shift Selector) 2         | Yes         | Maintain range selected, observe gear shift direction circuit      |
| U0304 | Incompatible Gear Shift Module 1 (Shift Selector)                    | Yes         | Ignore shift selector inputs                                       |
| U0333 | Incompatible Gear Shift Module 2 (Shift Selector)                    | Yes         | Ignore shift selector inputs                                       |
| U0404 | Invalid Data Received From Gear Shift Module (Shift Selector) 1      | Yes         | Maintain range selected, observe gear shift direction circuit      |
| U0592 | Invalid Data Received From Gear Shift Module (Shift Selector) 2      | Yes         | Maintain range selected, observe the gear shift direction circuit. |