

Contact: Bud Countryman @ W.W. Williams

Cell 520591-5882 Office 520-624-8377

WCOUNTRYMAN@WWWILLIAMS.COM

How to use the shift selector to read  
oil level and diagnostic codes on  
3000/4000 Series Allison transmissions

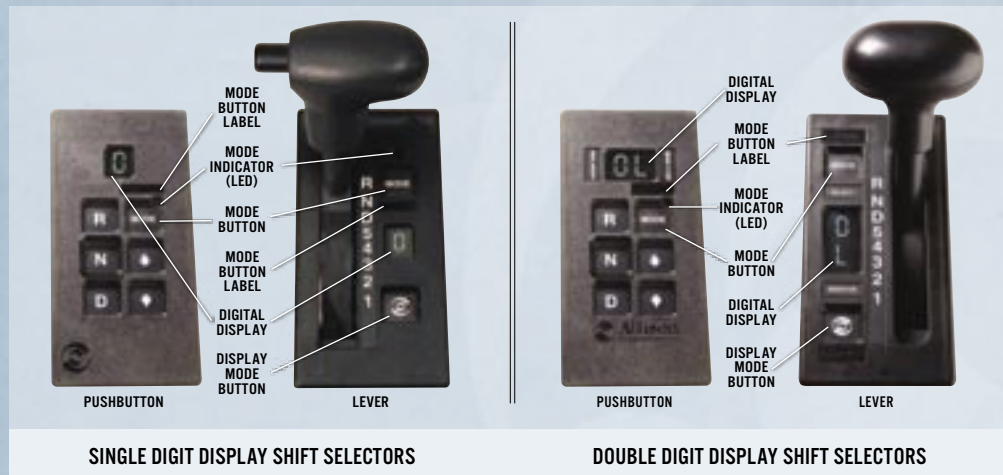
If it's not Allison, it's not Automatic.™



## The Allison Advantage

Your Allison Automatic is fully electronically controlled. The Allison electronic controls package oversees the operation of the transmission, controlling transmission upshifts and downshifts, and providing important information on the operation of your drive system.

Through readouts on your shift selector, you will be able to monitor transmission oil levels and read diagnostic codes. This brochure will help you understand the readouts, and thereby help you enjoy long, trouble-free operation of your Allison Automatic.



Vehicle manufacturers may choose different types of shift selectors for their vehicles. The shift selector in your Allison-equipped vehicle will be similar to one of the pushbutton or lever styles as shown above.

## Checking Fluid Levels

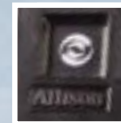
The transmission fluid cools, lubricates and transmits hydraulic power, so it is important the proper fluid level be maintained at all times. If the fluid level is too low, the converter and clutches do not receive an adequate supply of fluids. If the fluid level is too high, the fluid can aerate, causing the transmission to shift erratically or overheat.

If the transmission is equipped with an oil level sensor, oil level information can be displayed on the shift selector.

Use the following procedure to display oil level information if the transmission is equipped with the option.

### To enter the oil level display mode:

1. Park the vehicle on a level surface, shift to **N** (Neutral) and apply the parking brake.
2. Using a *pushbutton shift selector*, simultaneously press the **UP** and **DOWN** arrow buttons.



Using a *lever shift selector*, press the **DISPLAY MODE** button one time.



3. A two-minute countdown begins when the following conditions are met:
  - Engine is at idle.
  - The fluid temperature is above 60°C (140°F) and below 104°C (220°F).
  - Transmission output shaft is stopped.
  - Transmission is in **N** (Neutral).
  - The vehicle has been stationary for approximately two minutes to allow the fluid to settle.

Oil level will be displayed at the end of the two-minute countdown. During the countdown, the display flashes and a countdown occurs reducing by one digit every 15 seconds (for example 8, 7, 6, 5, 4, 3, 2, 1).

### SINGLE DIGIT DISPLAY

A delayed fluid level check for *pushbutton and lever selectors* with single digit display is indicated by a “-” in the display window followed by a numerical countdown. The countdown, starting at 8, indicates the time remaining in the two-minute setting period.



### DOUBLE DIGIT DISPLAY

The indication of a delayed fluid level check for *pushbutton and lever selectors* with double digit windows is a flashing display and a digit countdown from 8 to 1 in the **SELECT/MONITOR** window display.



4. After the two-minute countdown, the shift selector displays the oil level data as follows:

- **CORRECT FLUID LEVEL** – “oL” is displayed (“oL” represents “Fluid (Oil) Level Check Mode”), followed by “oK.” The “oK” display indicates the fluid is within the correct fluid level zone. The sensor display and the transmission dipstick may not agree exactly because the oil level sensor compensates for fluid temperature.



- **LOW FLUID LEVEL** – “oL” is displayed (“oL” represents “Fluid (Oil) Level Check Mode”) followed by “Lo” (“Lo” represents “Low Oil Level”) and the number of quarts the transmission fluid is low.

*Example: oL Lo 02* “2” indicates that 2 additional quarts of fluid will bring the fluid level within the middle of the “oK” zone.



- **HIGH FLUID LEVEL** – “oL” is displayed (“oL” represents “Fluid (Oil) Level Check Mode”) followed by “HI” (“HI” represents “High Oil Level”) and the number of quarts the transmission fluid is overfilled.

*Example: oL HI 1* “1” indicates 1 quart of fluid above the full transmission level.



- **INVALID FOR DISPLAY** – Failure to meet any of the above conditions will stop the two-minute countdown. The shift selector will display “oL” (“oL” represents “Fluid (Oil) Level Check Mode”) followed by “-” (for single digit display) or “- -” (for double digit display) and a numerical display. The numerical display is a fault code and indicates conditions are not proper to receive the fluid level information, or that there is a system malfunction.

The fault codes that may be encountered are shown in the Fluid Level Fault Codes tables:

SINGLE DIGIT DISPLAY FAULT CODE	FLUID LEVEL FAULT CODE DESCRIPTION	DOUBLE DIGIT DISPLAY FAULT CODE
o, L, -, 0, X	Setting time too short	oL, --, 0X
o, L, -, 5, 0	Engine speed too low	oL, --, 50
o, L, -, 5, 9	Engine speed too high	oL, --, 59
o, L, -, 6, 5	Neutral must be selected	oL, --, 65
o, L, -, 7, 0	Sump fluid temperature too low	oL, --, 70
o, L, -, 7, 9	Sump fluid temperature too high	oL, --, 79
o, L, -, 8, 9	Output shaft rotation	oL, --, 89
o, L, -, 9, 5	Oil level sensor failed*	oL, --, 95

\*Report sensor failure display to a distributor or dealer in your area.

**CAUTION:** A low or high fluid level can cause overheating and irregular shift patterns. Incorrect fluid level can damage the transmission.

To exit the oil level display mode:

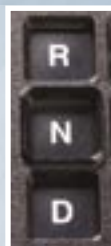
#### SINGLE DIGIT DISPLAY

- *Pushbutton selector:* Press the **NEUTRAL** button or simultaneously press the **UP** and **DOWN** arrows twice.
- *Lever selector:* Press the **DISPLAY** button twice or momentarily move the shift selector to any range and back to neutral.



#### DOUBLE DIGIT DISPLAY

- *Pushbutton selector:* Press any range button.
- *Lever selector:* Press the **DISPLAY MODE** (diagnostic) button once.



## Diagnostics

The electronic control system of your Allison Automatic is programmed to inform the operator of a problem with the transmission system and automatically alert the operator. When the Electronic Control Unit (ECU) detects a problem condition, the ECU:

- Restricts shifting
- Illuminates the **CHECK TRANS\*** light on the instrument panel
- Registers a diagnostic code

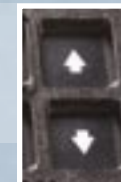
Continued illumination of the **CHECK TRANS** light during vehicle operation (other than start-up) indicates that the ECU has signaled a diagnostic code.

\* For some problems, diagnostic codes may be registered without the ECU activating the **CHECK TRANS** light. Your Allison Transmission authorized service outlet should be consulted whenever there is a transmission-related concern. They have the equipment to check for diagnostic codes and to correct problems which arise.

## Displaying Active Diagnostic Codes

To enter the diagnostic mode:

1. Bring the vehicle to a complete stop. Apply the parking brake.
2. Using a *pushbutton shift selector*, simultaneously press the **UP** and **DOWN** arrows once if the transmission does not have an oil level sensor and twice if the transmission is equipped with an oil level sensor.



Using a *lever shift selector*, press the **DISPLAY MODE/DIAGNOSTIC** button once if the transmission does not have an oil level sensor and twice if the transmission is equipped with an oil level sensor.



## To read the digital display codes:

Diagnostic codes will appear one digit at a time on a single digit display lever or pushbutton selector. They will appear two characters at a time on a double digit display pushbutton or lever selector.

### SINGLE DIGIT DISPLAY CODES

When the diagnostic mode is entered, the first code (position **d1**) is displayed as follows:

*Example Code: 13 12*

*Code Position: d1 - indicates that this is the first diagnostic code listed in the ECU memory.*

*Main Codes: 13 - (two digits displayed one at a time) are listed first and provide the general condition or area of a fault detected by the ECU.*

*Sub Code: 12 - (two digits displayed one at a time) is listed second and provides specific areas or conditions within the main code that caused the fault. This subcode indicates the problem is caused by low voltage.*



### DOUBLE DIGIT DISPLAY CODES

When the diagnostic mode is entered, the first code (position **d1**) is displayed as follows:

*Example Code: P 07 22*

*Displayed as: d1, P, 07, 22*

*The Code Position (d1) is the first item displayed, followed by the Diagnostic Trouble Code (DTC);\*\* P, 07, 22. Each item is displayed for about one second.*

*The display cycles continuously until the next code list position is accessed by pressing the **MODE** button.*



## To clear diagnostic codes:

### 1. SINGLE DIGIT DISPLAYS

Press and hold the **MODE** button for approximately three seconds until the **MODE INDICATOR** (LED) flashes. Release the **MODE** button and active indicators will not be illuminated. To clear inactive codes, press and hold the **MODE** button for 10 seconds. Some codes are self-clearing and others require ignition cycles to clear.

### DOUBLE DIGIT DISPLAYS

Press and hold the **MODE** button for 10 seconds to clear both active and inactive codes.



2. Be sure to record all codes displayed before they are cleared. This is essential for troubleshooting. Begin operating as normal.
3. Drive the vehicle and check for code recurrence. If codes continue to recur, bring the vehicle to an authorized Allison Transmission service outlet to diagnose and repair the problem causing the codes.

**NOTE:** This information is designed to give you an overview of the Oil Level Sensor and Diagnostics operation of your Allison Automatic, and is not intended to replace your Operator's Manual. Please refer to your Allison Automatic Operator's Manual for complete information on Diagnostic Codes and Oil Level Sensor operation.

To order an Operator's Manual, go to [www.allisontransmission.com](http://www.allisontransmission.com).

Or contact SGI, Inc.

Attn: Allison Literature Fulfillment Desk  
8350 Allison Avenue  
Indianapolis, IN 46268

Toll free: 888-666-5799  
International: 317-471-4995

\*\* Diagnostic Trouble Code (DTC) - The diagnostic trouble code number referring to the general condition or area of fault detected by the ECU.

## Diagnostic Transmission Codes

MAIN CODE	SUB CODE	CODE DESCRIPTION
13	12	ECU INPUT VOLTAGE LOW
	13	ECU INPUT VOLTAGE MEDIUM LOW
	23	ECU INPUT VOLTAGE HIGH
14	12	OIL LEVEL SENSOR, FAILED LOW
	23	OIL LEVEL SENSOR, FAILED HIGH
21	12	THROTTLE POSITION SENSOR, FAILED LOW
	23	THROTTLE POSITION SENSOR, FAILED HIGH
22	14	ENGINE SPEED SENSOR
	15	TURBINE SPEED SENSOR
	16	OUTPUT SPEED SENSOR
23	12	PRIMARY SHIFT SELECTOR FAULT
	13	PRIMARY SHIFT SELECTOR MODE FAULT
	14	SECONDARY SHIFT SELECTOR FAULT
	15	SECONDARY SHIFT SELECTOR MODE FAULT
	16	SHIFT SELECTOR DISPLAY LINE FAULT
24	12	SUMP FLUID TEMPERATURE, COLD
	23	SUMP FLUID TEMPERATURE, HOT
25	00	OUTPUT SPEED SENSOR @ 0 RPM, LOW
	11	OUTPUT SPEED SENSOR @ 0 RPM, 1ST
	22	OUTPUT SPEED SENSOR @ 0 RPM, 2ND
	33	OUTPUT SPEED SENSOR @ 0 RPM, 3RD
	44	OUTPUT SPEED SENSOR @ 0 RPM, 4TH
	55	OUTPUT SPEED SENSOR @ 0 RPM, 5TH
	66	OUTPUT SPEED SENSOR @ 0 RPM, 6TH
	77	OUTPUT SPEED SENSOR @ 0 RPM, REVERSE
26	00	THROTTLE SOURCE NOT DETECTED
	11	ENGINE COOLANT SOURCE NOT DETECTED
32	00	C3 PRESSURE SWITCH OPEN IN LOW
	33	C3 PRESSURE SWITCH OPEN IN 3RD
	55	C3 PRESSURE SWITCH OPEN IN 5TH
	77	C3 PRESSURE SWITCH OPEN IN REVERSE
33	12	SUMP OIL TEMPERATURE SENSOR, FAILED LOW
	23	SUMP OIL TEMPERATURE SENSOR, FAILED HIGH
34	12	CALIBRATION COMPATIBILITY WRONG
	13	CALIBRATION BLOCK CHECKSUM
	14	POWER OFF BLOCK CHECKSUM
	15	DIAGNOSE QUEUE BLOCK CHECKSUM

## Diagnostic Transmission Codes

MAIN CODE	SUB CODE	CODE DESCRIPTION
34	16	REAL TIME BLOCK CHECKSUM
	17	CUSTOMER MODIFIABLE CONSTANTS CHECKSUM
35	00	POWER INTERRUPTION
	16	REAL TIME WRITE INTERRUPTION
36	00	HARDWARE/SOFTWARE NOT COMPATIBLE
	01	TID NOT COMPATIBLE W/HARDWARE/SOFTWARE
	02	TID DID NOT COMPLETE
42	12	A SOLENOID SHORTED TO BATTERY
	13	B SOLENOID SHORTED TO BATTERY
	14	C SOLENOID SHORTED TO BATTERY
	15	D SOLENOID SHORTED TO BATTERY
	16	E SOLENOID SHORTED TO BATTERY
	21	F SOLENOID SHORTED TO BATTERY
	22	G SOLENOID SHORTED TO BATTERY
	23	H SOLENOID SHORTED TO BATTERY
	24	J SOLENOID SHORTED TO BATTERY
	26	N SOLENOID SHORTED TO BATTERY
44	12	A SOLENOID SHORTED TO GROUND
	13	B SOLENOID SHORTED TO GROUND
	14	C SOLENOID SHORTED TO GROUND
	15	D SOLENOID SHORTED TO GROUND
	16	E SOLENOID SHORTED TO GROUND
	21	F SOLENOID SHORTED TO GROUND
	22	G SOLENOID SHORTED TO GROUND
	23	H SOLENOID SHORTED TO GROUND
	24	J SOLENOID SHORTED TO GROUND
	26	N SOLENOID SHORTED TO GROUND
45	12	A SOLENOID CIRCUIT OPEN
	13	B SOLENOID CIRCUIT OPEN
	14	C SOLENOID CIRCUIT OPEN
	15	D SOLENOID CIRCUIT OPEN
	16	E SOLENOID CIRCUIT OPEN
	21	F SOLENOID CIRCUIT OPEN
	22	G SOLENOID CIRCUIT OPEN
	23	H SOLENOID CIRCUIT OPEN
24	J SOLENOID CIRCUIT OPEN	
26	N SOLENOID CIRCUIT OPEN	

## Diagnostic Transmission Codes

MAIN CODE	SUB CODE	CODE DESCRIPTION
46	21	F SOLENOID CIRCUIT OVERCURRENT
	26	N & H SOLENOID CIRCUIT OVERCURRENT
	27	A-HI SOLENOID CIRCUIT OVERCURRENT
51	01	OFFGOING RATIO TEST, LOW TO 1
	10	OFFGOING RATIO TEST, 1 TO LOW
	12	OFFGOING RATIO TEST, 1 TO 2
	21	OFFGOING RATIO TEST, 2 TO 1
	23	OFFGOING RATIO TEST, 2 TO 3
	24	OFFGOING RATIO TEST, 2 TO 4
	35	OFFGOING RATIO TEST, 3 TO 5
	42	OFFGOING RATIO TEST, 4 TO 2
	43	OFFGOING RATIO TEST, 4 TO 3
	45	OFFGOING RATIO TEST, 4 TO 5
	46	OFFGOING RATIO TEST, 4 TO 6
	53	OFFGOING RATIO TEST, 5 TO 3
	64	OFFGOING RATIO TEST, 6 TO 4
	65	OFFGOING RATIO TEST, 6 TO 5
XY	OFFGOING RATIO TEST, X TO Y	
52	01	OFFGOING C3PS TEST, LOW TO 1
	08	OFFGOING C3PS TEST, LOW TO N1
	32	OFFGOING C3PS TEST, 3 TO 2
	34	OFFGOING C3PS TEST, 3 TO 4
	54	OFFGOING C3PS TEST, 5 TO 4
	56	OFFGOING C3PS TEST, 5 TO 6
	71	OFFGOING C3PS TEST, REVERSE TO 1
	72	OFFGOING C3PS TEST, REVERSE TO 2
	78	OFFGOING C3PS TEST, REVERSE TO N1
	99	OFFGOING C3PS TEST, N3 TO N2
XY	OFFGOING C3PS TEST, X TO Y	
53	08	OFFGOING SPEED TEST, LOW TO N1
	09	OFFGOING SPEED TEST, L TO NNC
	18	OFFGOING SPEED TEST, 1 TO N1
	19	OFFGOING SPEED TEST, 1 TO RELS
	28	OFFGOING SPEED TEST, 2 TO N1
	29	OFFGOING SPEED TEST, 2 TO N2
	38	OFFGOING SPEED TEST, 3 TO N1
	39	OFFGOING SPEED TEST, 3 TO N3

## Diagnostic Transmission Codes

MAIN CODE	SUB CODE	CODE DESCRIPTION
53	48	OFFGOING SPEED TEST, 4 TO N1
	49	OFFGOING SPEED TEST, 4 TO N3
	58	OFFGOING SPEED TEST, 5 TO N1
	59	OFFGOING SPEED TEST, 5 TO N3
	68	OFFGOING SPEED TEST, 6 TO N1
	69	OFFGOING SPEED TEST, 6 TO N4
	78	OFFGOING SPEED TEST, REVERSE TO N1
	99	OFFGOING SPEED TEST, N2 TO N3 OR N3 TO N2
	XY	OFFGOING SPEED TEST, X TO Y
	54	01
07		ONCOMING RATIO TEST, LOW TO REVERSE
10		ONCOMING RATIO TEST, 1 TO LOW
12		ONCOMING RATIO TEST, 1 TO 2
17		ONCOMING RATIO TEST, 1 TO REVERSE
21		ONCOMING RATIO TEST, 2 TO 1
23		ONCOMING RATIO TEST, 2 TO 3
24		ONCOMING RATIO TEST, 2 TO 4
27		ONCOMING RATIO TEST, 2 TO REVERSE
32		ONCOMING RATIO TEST, 3 TO 2
34		ONCOMING RATIO TEST, 3 TO 4
35		ONCOMING RATIO TEST, 3 TO 5
42		ONCOMING RATIO TEST, 4 TO 2
43		ONCOMING RATIO TEST, 4 TO 3
45		ONCOMING RATIO TEST, 4 TO 5
46		ONCOMING RATIO TEST, 4 TO 6
53		ONCOMING RATIO TEST, 5 TO 3
54		ONCOMING RATIO TEST, 5 TO 4
56		ONCOMING RATIO TEST, 5 TO 6
64		ONCOMING RATIO TEST, 6 TO 4
65		ONCOMING RATIO TEST, 6 TO 5
70		ONCOMING RATIO TEST, REV. TO LOW
71		ONCOMING RATIO TEST, REVERSE TO 1
72	ONCOMING RATIO TEST, REVERSE TO 2	
80	ONCOMING RATIO TEST, N1 TO LOW	
81	ONCOMING RATIO TEST, N1 TO 1	
82	ONCOMING RATIO TEST, N1 TO 2	
83	ONCOMING RATIO TEST, N1 TO 3	

## Diagnostic Transmission Codes

MAIN CODE	SUB CODE	CODE DESCRIPTION	
54	85	ONCOMING RATIO TEST, N1 TO 5	
	86	ONCOMING RATIO TEST, N1 TO 6	
	87	ONCOMING RATIO TEST, N1 TO REVERSE	
	92	ONCOMING RATIO TEST, N2 TO 2	
	93	ONCOMING RATIO TEST, N3 TO 3	
	95	ONCOMING RATIO TEST, N3 TO 5	
	96	ONCOMING RATIO TEST, N4 TO 6	
	XY	ONCOMING RATIO TEST, X TO Y	
55	07	ONCOMING C3PS TEST, LOW TO REVERSE	
	17	ONCOMING C3PS TEST, 1 TO REVERSE	
	27	ONCOMING C3PS TEST, 2 TO REVERSE	
	87	ONCOMING C3PS TEST, N1 TO REVERSE	
	97	ONCOMING C3PS TEST, NVL TO REVERSE	
	XY	ONCOMING C3PS TEST, X TO Y	
	56	00	LOW RANGE VERIFICATION TEST
11		1ST RANGE VERIFICATION TEST	
22		2ND RANGE VERIFICATION TEST	
33		3RD RANGE VERIFICATION TEST	
44		4TH RANGE VERIFICATION TEST	
55		5TH RANGE VERIFICATION TEST	
66		6TH RANGE VERIFICATION TEST	
77		REVERSE RANGE VERIFICATION TEST	
57		11	1ST RANGE VERIFICATION C3PS TEST
		22	2ND RANGE VERIFICATION C3PS TEST
	44	4TH RANGE VERIFICATION C3PS TEST	
	66	6TH RANGE VERIFICATION C3PS TEST	
	88	N1 RANGE VERIFICATION C3PS TEST	
	99	N2 OR N4 RANGE VERIFICATION C3PS TEST	
61	00	RETARDER OIL TEMPERATURE, HOT	
62	12	RETARDER TEMP. SENSOR, FAILED LOW	
	23	RETARDER TEMP. SENSOR, FAILED HIGH	
	32	ENGINE COOLANT TEMP. SENSOR, FAILED LOW	
	33	ENGINE COOLANT TEMP. SENSOR, FAILED HIGH	
63	00	INPUT FUNCTION FAULT	
	26	KICKDOWN INPUT, FAILED ON	
	40	SERVICE BRAKE STATUS INPUT, FAILED ON	

## Diagnostic Transmission Codes

MAIN CODE	SUB CODE	CODE DESCRIPTION
63	41	PUMP/PACK AND NEUTRAL GENERAL PURPOSE INPUT
	47	RELS INPUT, FAILED ON
64	12	RETARDER MODULATION SENSOR, FAILED LOW
	23	RETARDER MODULATION SENSOR, FAILED HIGH
65	00	ENGINE RATING TOO HIGH
	11	ENGINE NOT RESPONDING TO LRTP TORQUE REDUCTION
	12	ENGINE NOT RESPONDING TO DEFAULT TRANSMISSION TORQUE LIMIT
66	00	SERIAL COMMUNICATION INTERFACE FAULT
	11	S. C. I. ENGINE COOLANT SOURCE FAULT
	22	J1939 RETARDER REQUEST FAULT
	33	J1939 DRIVER DEMAND TORQUE FAULT
	34	ENGINE NOT RESPONDING TO J1939 SEM CONTROL
69	27	A-HIGH SWITCH INOPERATIVE IN ECU
	28	F-HIGH SWITCH INOPERATIVE IN ECU
	29	N & H-HIGH SWITCH INOPERATIVE IN ECU
	33	COMPUTER OPERATING PROPERLY TIMEOUT IN ECU
	34	ECU WRITE TIMEOUT
	35	ECU CHECKSUM TEST
	36	RAM SELF TEST IN ECU
70	39	COMMUNICATION CHIP ADDRESSING ERROR
	41	I/O ASIC ADDRESSING TEST IN ECU
	42	SPI OUTPUT FAILURE
	43	SPI INPUT FAILURE
	12	MINOR LOOP OVERRUN IN SOFTWARE
	13	ILLEGAL WRITE TO ADDRESS \$0000
	14	MAJOR LOOP OVERRUN IN SOFTWARE



## Diagnostic Transmission Codes

DIAGNOSTIC CODE	CODE DESCRIPTION
C1312	RETARDER REQUEST SENSOR, FAILED LOW
C1313	RETARDER REQUEST SENSOR, FAILED HIGH
P0122	PEDAL POSITION SENSOR, LOW VOLTAGE
P0123	PEDAL POSITION SENSOR, HIGH VOLTAGE
P0218	TRANSMISSION FLUID OVER TEMPERATURE
P0602	TCM NOT PROGRAMMED
P0610	TCM VEHICLE OPTIONS (TRANSID) ERROR
P0613	TCM PROCESSOR
P0614	TORQUE CONTROL DATA MISMATCH-ECM/TCM
P0634	TCM INTERNAL TEMPERATURE TOO HIGH
P063E	AUTO CONFIGURATION THROTTLE INPUT NOT PRESENT
P063F	AUTO CONFIGURATION ENGINE COOLANT TEMP INPUT NOT PRESENT
P0658	ACTUATOR SUPPLY VOLTAGE 1 (HSD1), LOW
P0659	ACTUATOR SUPPLY VOLTAGE 1 (HSD1), HIGH
P0701	TRANSMISSION CONTROL SYSTEM PERFORMANCE
P0702	TRANSMISSION CONTROL SYSTEM ELECTRICAL (TRANSID)
P0703	BRAKE SWITCH CIRCUIT MALFUNCTION
P0708	TRANSMISSION RANGE SENSOR, HIGH
P070C	TRANSMISSION FLUID LEVEL SENSOR, LOW
P070D	TRANSMISSION FLUID LEVEL SENSOR, HIGH
P0711	TRANSMISSION FLUID TEMPERATURE SENSOR PERFORMANCE
P0712	TRANSMISSION FLUID TEMPERATURE SENSOR, LOW
P0713	TRANSMISSION FLUID TEMPERATURE SENSOR, HIGH
P0716	TURBINE SPEED SENSOR PERFORMANCE
P0717	TURBINE SPEED SENSOR, NO SIGNAL
P0719	BRAKE SWITCH ABS, INPUT LOW
P071A	RELS INPUT, FAILED ON
P071D	GENERAL PURPOSE FAULT
P0721	OUTPUT SPEED SENSOR PERFORMANCE
P0722	OUTPUT SPEED SENSOR, NO SIGNAL
P0726	ENGINE SPEED SENSOR PERFORMANCE
P0727	ENGINE SPEED SENSOR, NO SIGNAL

## Diagnostic Transmission Codes

DIAGNOSTIC CODE	CODE DESCRIPTION
P0729	INCORRECT 6TH GEAR RATIO
P0731	INCORRECT 1ST GEAR RATIO
P0732	INCORRECT 2ND GEAR RATIO
P0733	INCORRECT 3RD GEAR RATIO
P0734	INCORRECT 4TH GEAR RATIO
P0735	INCORRECT 5TH GEAR RATIO
P0736	INCORRECT REVERSE GEAR RATIO
P0741	TORQUE CONVERTER CLUTCH SYSTEM, STUCK OFF
P0776	PRESSURE CONTROL SOLENOID 2, STUCK OFF
P0777	PRESSURE CONTROL SOLENOID 2, STUCK ON
P0796	PRESSURE CONTROL SOLENOID 3, STUCK OFF
P0797	PRESSURE CONTROL SOLENOID 3, STUCK ON
P0842	TRANSMISSION PRESSURE SWITCH 1, LOW
P0843	TRANSMISSION PRESSURE SWITCH 1, HIGH
P0880	TCM POWER INPUT SIGNAL
P0881	TCM POWER INPUT SIGNAL PERFORMANCE
P0882	TCM POWER INPUT SIGNAL, LOW
P0883	TCM POWER INPUT SIGNAL, HIGH
P0894	TRANSMISSION COMPONENT SLIPPING
P0960	PRESSURE CONTROL SOLENOID MAIN MOD CONTROL, OPEN
P0962	PRESSURE CONTROL SOLENOID MAIN MOD CONTROL, LOW
P0963	PRESSURE CONTROL SOLENOID MAIN MOD CONTROL, HIGH
P0964	PRESSURE CONTROL SOLENOID 2 CONTROL, OPEN
P0966	PRESSURE CONTROL SOLENOID 2 CONTROL, LOW
P0967	PRESSURE CONTROL SOLENOID 2 CONTROL, HIGH
P0968	PRESSURE CONTROL SOLENOID 3 CONTROL, OPEN
P0970	PRESSURE CONTROL SOLENOID 3 CONTROL, LOW
P0971	PRESSURE CONTROL SOLENOID 3 CONTROL, HIGH
P0973	SHIFT SOLENOID 1 CONTROL, LOW
P0974	SHIFT SOLENOID 1 CONTROL, HIGH
P0975	SHIFT SOLENOID 2 CONTROL, OPEN
P0976	SHIFT SOLENOID 2 CONTROL, LOW

If it's not Allison, it's not Automatic.™

## Diagnostic Transmission Codes

DIAGNOSTIC CODE	CODE DESCRIPTION
P0977	SHIFT SOLENOID 2 CONTROL, HIGH
P0989	RETARDER PRESSURE SENSOR, FAILED LOW
P0990	RETARDER PRESSURE SENSOR, FAILED HIGH
P1739	INCORRECT LOW GEAR RATIO
P1891	THROTTLE POSITION SENSOR PWM SIGNAL, LOW
P1892	THROTTLE POSITION SENSOR PWM SIGNAL, HIGH
P2184	ENGINE COOLANT TEMPERATURE SENSOR, LOW
P2185	ENGINE COOLANT TEMPERATURE SENSOR, HIGH
P2637	TORQUE MANAGEMENT FEEDBACK SIGNAL (SEM)
P2641	TORQUE MANAGEMENT FEEDBACK SIGNAL (LRTP)
P2670	ACTUATOR SUPPLY VOLTAGE 2 (HSD2), LOW
P2671	ACTUATOR SUPPLY VOLTAGE 2 (HSD2), HIGH
P2685	ACTUATOR SUPPLY VOLTAGE 3 (HSD3), LOW
P2686	ACTUATOR SUPPLY VOLTAGE 3 (HSD3), HIGH
P2714	PRESSURE CONTROL SOLENOID 4, STUCK OFF
P2715	PRESSURE CONTROL SOLENOID 4, STUCK ON
P2718	PRESSURE CONTROL SOLENOID 4 CONTROL, OPEN
P2720	PRESSURE CONTROL SOLENOID 4 CONTROL, LOW
P2721	PRESSURE CONTROL SOLENOID 4 CONTROL, HIGH
P2723	PRESSURE CONTROL SOLENOID 1, STUCK OFF
P2724	PRESSURE CONTROL SOLENOID 1, STUCK ON
P2727	PRESSURE CONTROL SOLENOID 1 CONTROL, OPEN
P2729	PRESSURE CONTROL SOLENOID 1 CONTROL, LOW
P2730	PRESSURE CONTROL SOLENOID 1 CONTROL, HIGH
P2736	PRESSURE CONTROL SOLENOID 5 CONTROL, OPEN
P2738	PRESSURE CONTROL SOLENOID 5 CONTROL, LOW
P2739	PRESSURE CONTROL SOLENOID 5 CONTROL, HIGH
P2740	RETARDER OIL TEMPERATURE, HOT
P2742	RETARDER OIL TEMPERATURE SENSOR, LOW
P2743	RETARDER OIL TEMPERATURE SENSOR, HIGH
P2761	TCC PCS CONTROL, OPEN
P2763	TCC PCS CONTROL, HIGH
P2764	TCC PCS CONTROL, LOW
P278A	KICKDOWN INPUT, FAILED ON
P2793	GEAR SHIFT DIRECTION

## Diagnostic Transmission Codes

DIAGNOSTIC CODE	CODE DESCRIPTION
P2808	PRESSURE CONTROL SOLENOID 6, STUCK OFF
P2809	PRESSURE CONTROL SOLENOID 6, STUCK ON
P2812	PRESSURE CONTROL SOLENOID 6 CONTROL, OPEN
P2814	PRESSURE CONTROL SOLENOID 6 CONTROL, LOW
P2815	PRESSURE CONTROL SOLENOID 6 CONTROL, HIGH
U0001	HIGH SPEED CAN BUS RESET COUNTER OVERRUN (IESCAN)
U0010	CAN BUS RESET COUNTER OVERRUN
U0100	LOST COMMUNICATION WITH ECM/PCM (J1587)
U0103	LOST COMMUNICATION WITH GEAR SHIFT MODULE (SHIFT SELECTOR) 1
U0115	LOST COMMUNICATION WITH ECM
U0291	LOST COMMUNICATION WITH GEAR SHIFT MODULE (SHIFT SELECTOR) 2
U0304	INCOMPATIBLE GEAR SHIFT MODULE 1 (SHIFT SELECTOR ID)
U0333	INCOMPATIBLE GEAR SHIFT MODULE 2 (SHIFT SELECTOR ID)
U0404	INVALID DATA RECEIVED FROM GEAR SHIFT MODULE (SHIFT SELECTOR) 1
U0592	INVALID DATA RECEIVED FROM GEAR SHIFT MODULE (SHIFT SELECTOR) 2