

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

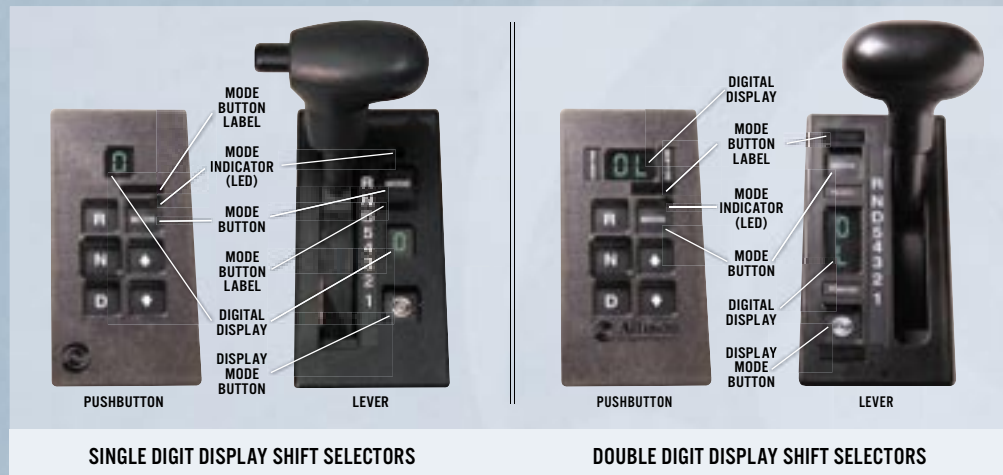
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The Allison Advantage

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

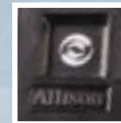
The transmission fluid cools, lubricates and transmits hydraulic power, so it is important the proper fluid level be maintained at all times. If the fluid level is too low, the converter and clutches do not receive an adequate supply of fluids. If the fluid level is too high, the fluid can aerate, causing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

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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 countdowns, starting at 8, indicate 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 01 “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

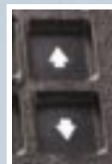
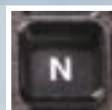
*Report sensor failure display to a distributor or dealer in your area.

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.



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 TRANSMISSION*** light on the instrument panel
- Registers a diagnostic code

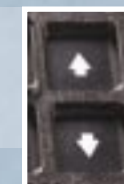
Continued illumination of the **CHECK TRANS** light during vehicle operation (other than start-up) indicates that the ECU has signaled a diagnostic code.

** 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.



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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 cause 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.



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

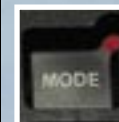
To clear diagnostic codes:

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 reoccurrence. If codes continue to reoccur, 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 Operators Manual. Please refer to your Allison Automatic Operators Manual for complete information on Diagnostic Codes and Oil Level Sensor operation.

To order an Operators Manual, go to 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 Transmission Codes

MAIN CODE	SUB CODE	CODE DESCRIPTION
12	12	OIL LEVEL - LOW
	23	OIL LEVEL - HIGH
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
	13	PRIMARY SHIFT SELECTOR MODE FAULT
	14	SECONDARY SHIFT SELECTOR
	15	SECONDARY SHIFT SELECTOR MODE FAULT
24	12	SUMP FLUID TEMPERATURE COLD
	23	SUMP FLUID TEMPERATURE HOT
25	00	OUTPUT SPEED SENSOR @ 0 IN LOW
	11	OUTPUT SPEED SENSOR @ 0 IN 1ST
	22	OUTPUT SPEED SENSOR @ 0 IN 2ND
	33	OUTPUT SPEED SENSOR @ 0 IN 3RD
	44	OUTPUT SPEED SENSOR @ 0 IN 4TH
	55	OUTPUT SPEED SENSOR @ 0 IN 5TH
	66	OUTPUT SPEED SENSOR @ 0 IN 6TH
	77	OUTPUT SPEED SENSOR @ 0 IN REVERSE
26	00	THROTTLE SOURCE NOT DETECTED
	11	ENG. 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 TEMPERATURE SENSOR FAILED LOW
	23	SUMP TEMPERATURE SENSOR FAILED HIGH
34	12	EEPROM COMPATIBILITY NUMBER WONG
	13	EEPROM CALIBRATION BLOCK CHECKSUM
	14	EEPROM POWER OFF BLOCK CHECKSUM

Diagnostic Transmission Codes

MAIN CODE	SUB CODE	CODE DESCRIPTION
34	15	EEPROM DIAGNOSE QUEUE BLOCK CHECKSUM
	16	EEPROM REAL TIME BLOCK CHECKSUM
	17	EEPROM MODIFIABLE CONSTANTS CHECKSUM
35	00	POWER INTERRUPTION
	16	REAL TIME WRITE INTERRUPTION
36	00	HARDWARE / SOFTWARE NOT COMPATIBLE
41	12	A SOLENOID OPEN OR SHORTED TO GROUND
	13	B SOLENOID OPEN OR SHORTED TO GROUND
	14	C SOLENOID OPEN OR SHORTED TO GROUND
	15	D SOLENOID OPEN OR SHORTED TO GROUND
	16	E SOLENOID OPEN OR SHORTED TO GROUND
	21	F SOLENOID OPEN OR SHORTED TO GROUND
	22	G SOLENOID OPEN OR SHORTED TO GROUND
	23	H SOLENOID OPEN OR SHORTED TO GROUND
	24	J SOLENOID OPEN OR SHORTED TO GROUND
	25	K SOLENOID OPEN OR SHORTED TO GROUND
	26	N SOLENOID OPEN OR SHORTED TO GROUND
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
	25	K 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
	25	K SOLENOID SHORTED TO GROUND

Diagnostic Transmission Codes

MAIN CODE	SUB CODE	CODE DESCRIPTION
44	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
	25	K SOLENOID CIRCUIT OPEN
	26	N SOLENOID CIRCUIT OPEN
46	21	F SOLENOID CIRCUIT OVER CURRENT
	26	N & H SOLENOID CIRCUITS OVER CURRENT
	27	A-HI SOLENOID CIRCUIT OVER CURRENT
51	01	OFF GOING RATIO TEST LOW TO 1
	10	OFF GOING RATIO TEST 1 TO LOW
	12	OFF GOING RATIO TEST 1 TO 2
	21	OFF GOING RATIO TEST 2 TO 1
	23	OFF GOING RATIO TEST 2 TO 3
	24	OFF GOING RATIO TEST 2 TO 4
	35	OFF GOING RATIO TEST 3 TO 5
	42	OFF GOING RATIO TEST 4 TO 2
	43	OFF GOING RATIO TEST 4 TO 3
	45	OFF GOING RATIO TEST 4 TO 5
	46	OFF GOING RATIO TEST 4 TO 6
	53	OFF GOING RATIO TEST 5 TO 3
	64	OFF GOING RATIO TEST 6 TO 4
	65	OFF GOING RATIO TEST 6 TO 5
	XY	OFF GOING RATIO TEST X TO Y
52	01	OFF GOING C3PS TEST LOW TO 1
	08	OFF GOING C3PS TEST LOW TO N1
	32	OFF GOING C3PS TEST 3 TO 2
	34	OFF GOING C3PS TEST 3 TO 4
	54	OFF GOING C3PS TEST 5 TO 4
	56	OFF GOING C3PS TEST 5 TO 6
	71	OFF GOING C3PS TEST REVERSE TO 1
	72	OFF GOING C3PS TEST REVERSE TO 2

Diagnostic Transmission Codes

MAIN CODE	SUB CODE	CODE DESCRIPTION
52	78	OFF GOING C3PS TEST REVERSE TO N2
	79	OFF GOING C3PS TEST REVERSE TO NNC TO 2
	99	OFF GOING C3PS TEST N3 TO N2
	XY	OFF GOING C3PS TEST X TO Y
53	08	OFF GOING SPEED TEST LOW TO N1
	18	OFF GOING SPEED TEST 1 TO N1
	28	OFF GOING SPEED TEST 2 TO N1
	29	OFF GOING SPEED TEST 2 TO N2
	38	OFF GOING SPEED TEST 3 TO N1
	39	OFF GOING SPEED TEST 3 TO N3
	48	OFF GOING SPEED TEST 4 TO N1
	49	OFF GOING SPEED TEST 4 TO N3
	58	OFF GOING SPEED TEST 5 TO N1
	59	OFF GOING SPEED TEST 5 TO N3
	68	OFF GOING SPEED TEST 6 TO N1
	69	OFF GOING SPEED TEST 6 TO N4
	78	OFF GOING SPEED TEST REVERSE TO N1
	99	OFF GOING SPEED TEST N2 TO N3 / N3 TO N2
	XY	OFF GOING SPEED TEST X TO Y
54	01	ON COMING RATIO TEST LOW TO 1
	07	ON COMING RATIO TEST LOW TO REVERSE
	10	ON COMING RATIO TEST 1 TO LOW
	12	ON COMING RATIO TEST 1 TO 2
	17	ON COMING RATIO TEST 1 TO REVERSE
	21	ON COMING RATIO TEST 2 TO 1
	23	ON COMING RATIO TEST 2 TO 3
	24	ON COMING RATIO TEST 2 TO 4
	27	ON COMING RATIO TEST 2 TO REVERSE
	32	ON COMING RATIO TEST 3 TO 2
	34	ON COMING RATIO TEST 3 TO 4
	35	ON COMING RATIO TEST 3 TO 5
	42	ON COMING RATIO TEST 4 TO 2
	43	ON COMING RATIO TEST 4 TO 3
	45	ON COMING RATIO TEST 4 TO 5
	46	ON COMING RATIO TEST 4 TO 6
	53	ON COMING RATIO TEST 5 TO 3
	54	ON COMING RATIO TEST 5 TO 4
	56	ON COMING RATIO TEST 5 TO 6

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Diagnostic Transmission Codes

MAIN CODE	SUB CODE	CODE DESCRIPTION
54	64	ON COMING RATIO TEST 6 TO 4
	65	ON COMING RATIO TEST 6 TO 5
	70	ON COMING RATIO TEST REV. TO LOW
	71	ON COMING RATIO TEST REVERSE TO 1
	72	ON COMING RATIO TEST REVERSE TO 2
	80	ON COMING RATIO TEST N1 TO LOW
	81	ON COMING RATIO TEST N1 TO 1
	82	ON COMING RATIO TEST N1 TO 2
	83	ON COMING RATIO TEST N1 TO 3
	85	ON COMING RATIO TEST N1 TO 5
	86	ON COMING RATIO TEST N1 TO 6
	92	ON COMING RATIO TEST N2 TO 2
	93	ON COMING RATIO TEST N3 TO 3
	95	ON COMING RATIO TEST N3 TO 5
	96	ON COMING RATIO TEST N4 TO 6
	97	ON COMING RATIO TEST 2 TO REVERSE
	XY	ON COMING RATIO TEST X TO Y
55	07	ON COMING C3PS TEST LOW TO REVERSE
	17	ON COMING C3PS TEST 1 TO REVERSE
	27	ON COMING C3PS TEST 2 TO REVERSE
	80	ON COMING C3PS TEST N1 TO LOW
	87	ON COMING C3PS TEST N1 TO REVERSE
	97	ON COMING C3PS TEST NVL TO REVERSE
	XY	ON COMING 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 TO N4 RANGE VERIFICATION C3PS TEST

Diagnostic Transmission Codes

MAIN CODE	SUB CODE	CODE DESCRIPTION
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
64	12	RETARDER MODULATION SENSOR FAILED LOW
	23	RETARDER MODULATION SENSOR FAILED HIGH
65	00	ENGINE RATING TOO HIGH
66	00	SERIAL COMMUNICATION INTERFACE FAULT
	11	S. C. I. ENGINE COOLANT SOURCE FAULT
69	12	A SOLENOID DRIVER OPEN IN ECU
	13	B SOLENOID DRIVER OPEN IN ECU
	14	C SOLENOID DRIVER OPEN IN ECU
	15	D SOLENOID DRIVER OPEN IN ECU
	16	E SOLENOID DRIVER OPEN IN ECU
	21	F SOLENOID DRIVER OPEN IN ECU
	22	G SOLENOID DRIVER OPEN IN ECU
	23	H SOLENOID DRIVER OPEN IN ECU
	24	J SOLENOID DRIVER OPEN IN ECU
	25	K SOLENOID DRIVER OPEN IN ECU
	26	N SOLENOID DRIVER OPEN IN ECU
	27	A-HIGH SWITCH INOPERATIVE IN ECU
	28	F-HIGH SWITCH INOPERATIVE IN ECU
	29	N & H-HIGH SWITCH INOPERATIVE IN ECU
	32	SPI COMMUNICATIONS LINK FAULT IN ECU
	33	CENTRAL OPERATING PROCESSOR TIMEOUT
	34	EPROM WRITE TIMEOUT IN ECU
	35	EPROM CHECKSUM TEST IN ECU
	36	RAM SELF TEST IN ECU
	39	COMMUNICATIONS CHIP ADDRESSING ERROR
	41	I/O ASIC ADDRESSING TEST IN ECU
	42	SPI OUTPUT FAILURE
	43	SPI INPUT FAILURE

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 CIRCUIT HIGH INPUT
P070C	TRANSMISSION FLUID LEVEL SENSOR CIRCUIT-LOW INPUT
P070D	TRANSMISSION FLUID LEVEL SENSOR CIRCUIT-HIGH INPUT
P0711	TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT PERFORMANCE
P0712	TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT LOW INPUT
P0713	TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT HIGH INPUT
P0716	TURBINE SPEED SENSOR CIRCUIT PERFORMANCE
P0717	TURBINE SPEED SENSOR CIRCUIT NO SIGNAL
P0719	BRAKE SWITCH ABS INPUT LOW
P071A	RELS INPUT FAILED ON
P071D	GENERAL PURPOSE INPUT FAULT
P0721	OUTPUT SPEED SENSOR CIRCUIT PERFORMANCE
P0722	OUTPUT SPEED SENSOR CIRCUIT NO SIGNAL
P0726	ENGINE SPEED SENSOR CIRCUIT PERFORMANCE
P0727	ENGINE SPEED SENSOR CIRCUIT 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 CIRCUIT LOW
P0843	TRANSMISSION PRESSURE SWITCH 1 CIRCUIT 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 CIRCUIT OPEN
P0962	PRESSURE CONTROL SOLENOID MAIN MOD CONTROL CIRCUIT LOW
P0963	PRESSURE CONTROL SOLENOID MAIN MOD CONTROL CIRCUIT HIGH
P0964	PRESSURE CONTROL SOLENOID 2 (PCS2) CONTROL CIRCUIT OPEN
P0966	PRESSURE CONTROL SOLENOID 2 (PCS2) CONTROL CIRCUIT LOW
P0967	PRESSURE CONTROL SOLENOID 2 (PCS2) CONTROL CIRCUIT HIGH
P0968	PRESSURE CONTROL SOLENOID 3 (PCS3) CONTROL CIRCUIT OPEN
P0970	PRESSURE CONTROL SOLENOID 3 (PCS3) CONTROL CIRCUIT LOW
P0971	PRESSURE CONTROL SOLENOID 3 (PCS3) CONTROL CIRCUIT HIGH
P0973	SHIFT SOLENOID 1 (SS1) CONTROL CIRCUIT LOW
P0974	SHIFT SOLENOID 1 (SS1) CONTROL CIRCUIT HIGH
P0975	SHIFT SOLENOID 2 (SS2) CONTROL CIRCUIT OPEN

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Diagnostic Transmission Codes

DIAGNOSTIC CODE	CODE DESCRIPTION
P0976	SHIFT SOLENOID 2 (SS2) CONTROL CIRCUIT LOW
P0977	SHIFT SOLENOID 2 CONTROL CIRCUIT 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 INPUT
P1892	THROTTLE POSITION SENSOR PWM SIGNAL HIGH INPUT
P2184	ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT LOW INPUT
P2185	ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT HIGH INPUT
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 (PCS4) STUCK OFF
P2715	PRESSURE CONTROL SOLENOID 4 (PCS4) STUCK ON
P2718	PRESSURE CONTROL SOLENOID 4 (PCS4) CONTROL CIRCUIT OPEN
P2720	PRESSURE CONTROL SOLENOID 4 (PCS4) CONTROL CIRCUIT LOW
P2721	PRESSURE CONTROL SOLENOID 4 (PCS4) CONTROL CIRCUIT HIGH
P2723	PRESSURE CONTROL SOLENOID 1 (PCS1) STUCK OFF
P2724	PRESSURE CONTROL SOLENOID 1 (PCS1) STUCK ON
P2727	PRESSURE CONTROL SOLENOID 1 (PCS1) CONTROL CIRCUIT OPEN
P2729	PRESSURE CONTROL SOLENOID 1 (PCS1) CONTROL CIRCUIT LOW
P2730	PRESSURE CONTROL SOLENOID 1 (PCS1) CONTROL CIRCUIT HIGH
P2736	PRESSURE CONTROL SOLENOID 5 (PCS5) CONTROL CIRCUIT OPEN
P2738	PRESSURE CONTROL SOLENOID 5 (PCS5) CONTROL CIRCUIT LOW
P2739	PRESSURE CONTROL SOLENOID 5 (PCS5) CONTROL CIRCUIT HIGH

Diagnostic Transmission Codes

DIAGNOSTIC CODE	CODE DESCRIPTION
P2740	RETARDER OIL TEMPERATURE HOT
P2742	RETARDER OIL TEMPERATURE SENSOR CIRCUIT—LOW INPUT
P2743	RETARDER OIL TEMPERATURE SENSOR CIRCUIT—HIGH INPUT
P2761	TCC PCS CONTROL CIRCUIT OPEN
P2763	TCC PCS CONTROL CIRCUIT HIGH
P2764	TCC PCS CONTROL CIRCUIT LOW
P278A	KICKDOWN INPUT FAILED ON
P2793	GEAR SHIFT DIRECTION CIRCUIT
P2808	PRESSURE CONTROL SOLENOID 6 (PCS6) STUCK OFF
P2809	PRESSURE CONTROL SOLENOID 6 (PCS6) STUCK ON
P2812	PRESSURE CONTROL SOLENOID 6 (PCS6) CONTROL CIRCUIT OPEN
P2814	PRESSURE CONTROL SOLENOID 6 (PCS6) CONTROL CIRCUIT LOW
P2815	PRESSURE CONTROL SOLENOID 6 (PCS6) CONTROL CIRCUIT HIGH
U0001	HI SPEED CAN BUS RESET COUNTER OVERRUN (IESCAN)
U0010	CAN BUS RESET COUNTER OVERRUN
U0100	LOST COMMUNICATIONS 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

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