

Automatic Transaxle System



Lubricants

Item	Specified lubricant	Quantity
Transaxle fluid	GS CALTEX ATF SP-IV-RR Hyundai Genuine ATF SP-IV-RR	9.6L (2.535 U.S gal., 10.14 U.S.qt., 8.45 Imp.qt.)

Automatic Transaxle System



EOL Input

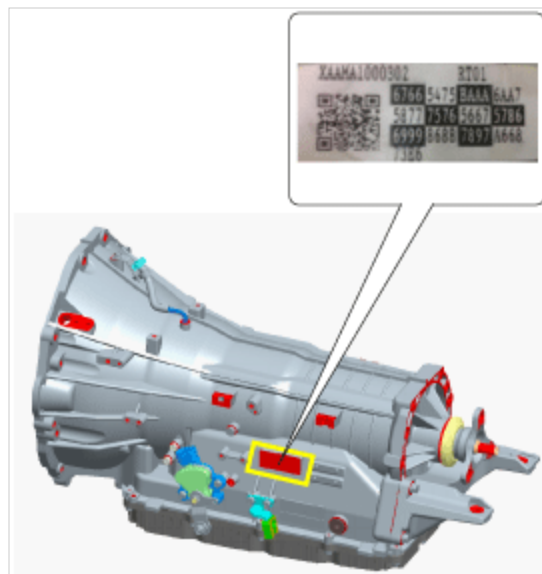
Description

When shift shock is occurred or parts related with the transaxle are replaced, EOL should be performed.

In the following case, EOL is required.

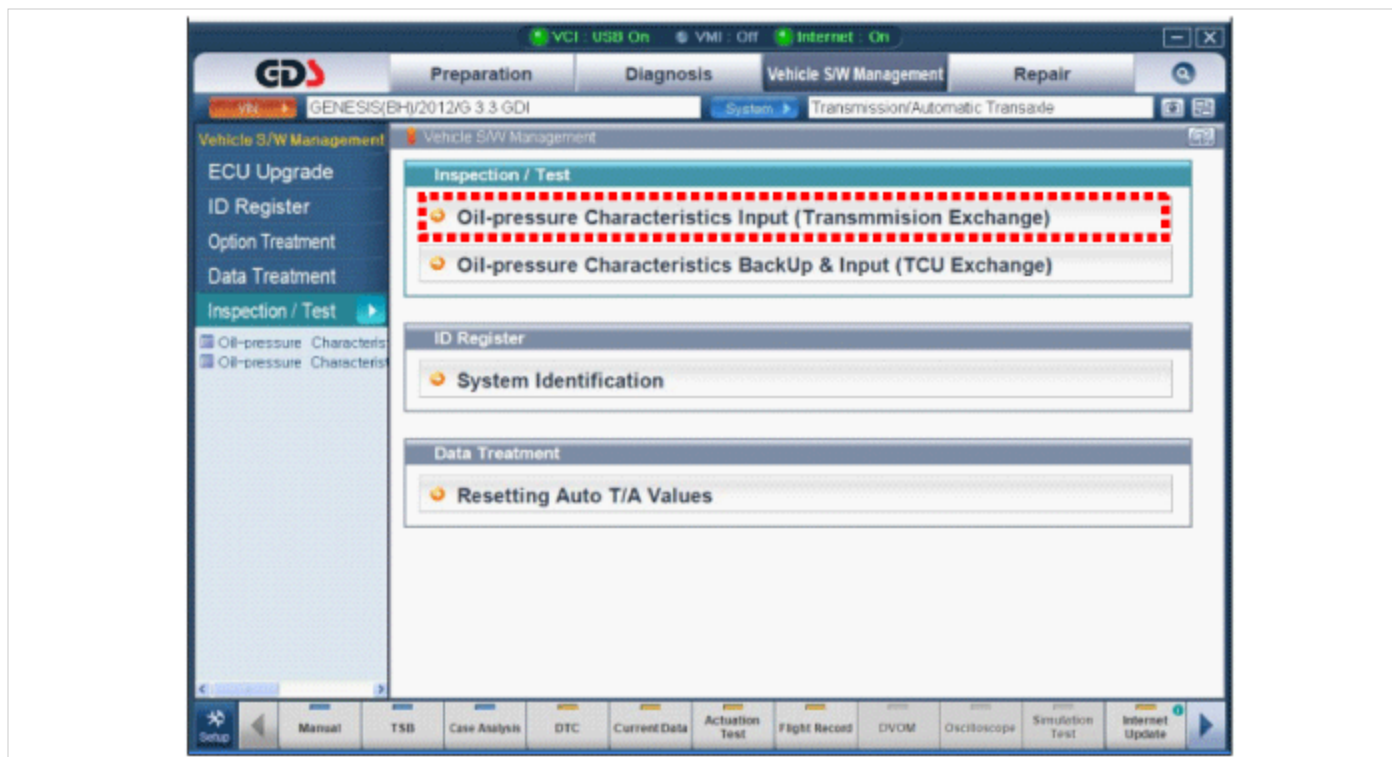
- Transaxle assembly replacement
- TCM replacement

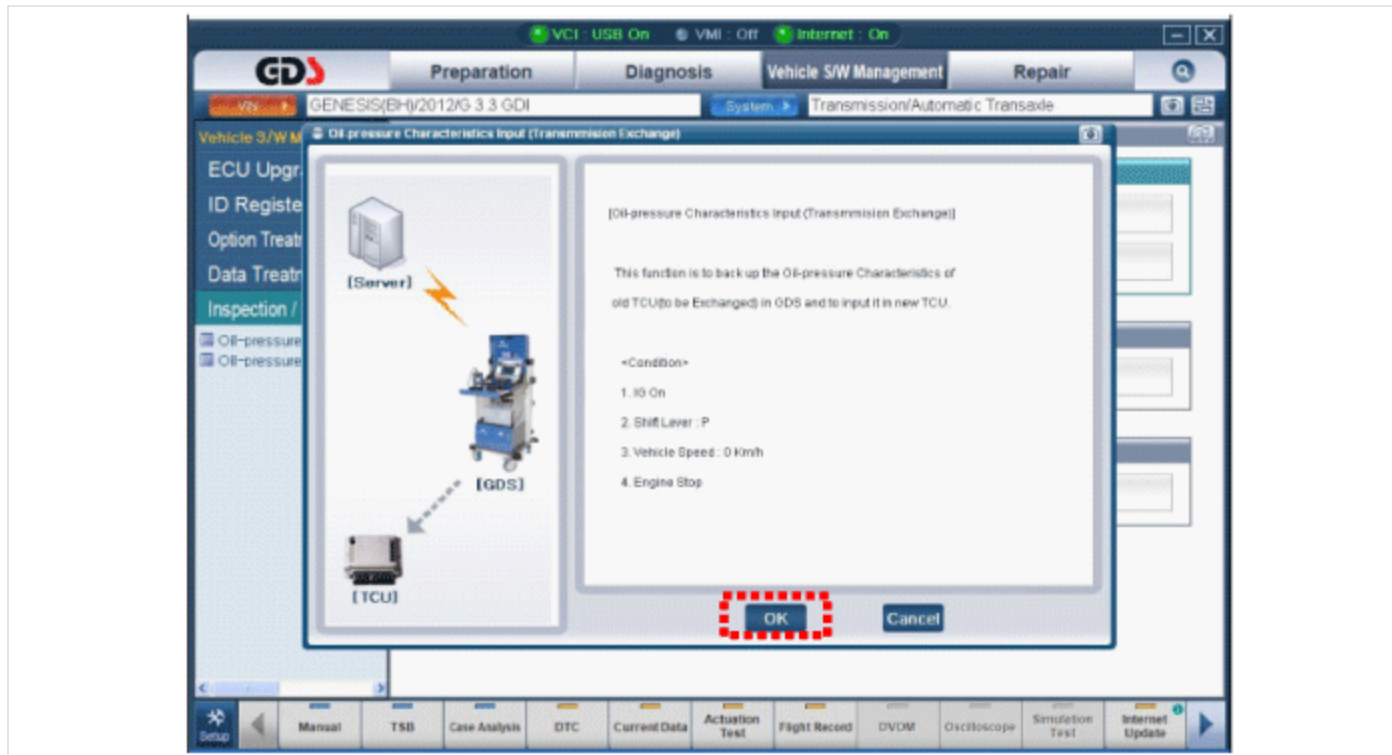
Bar code location



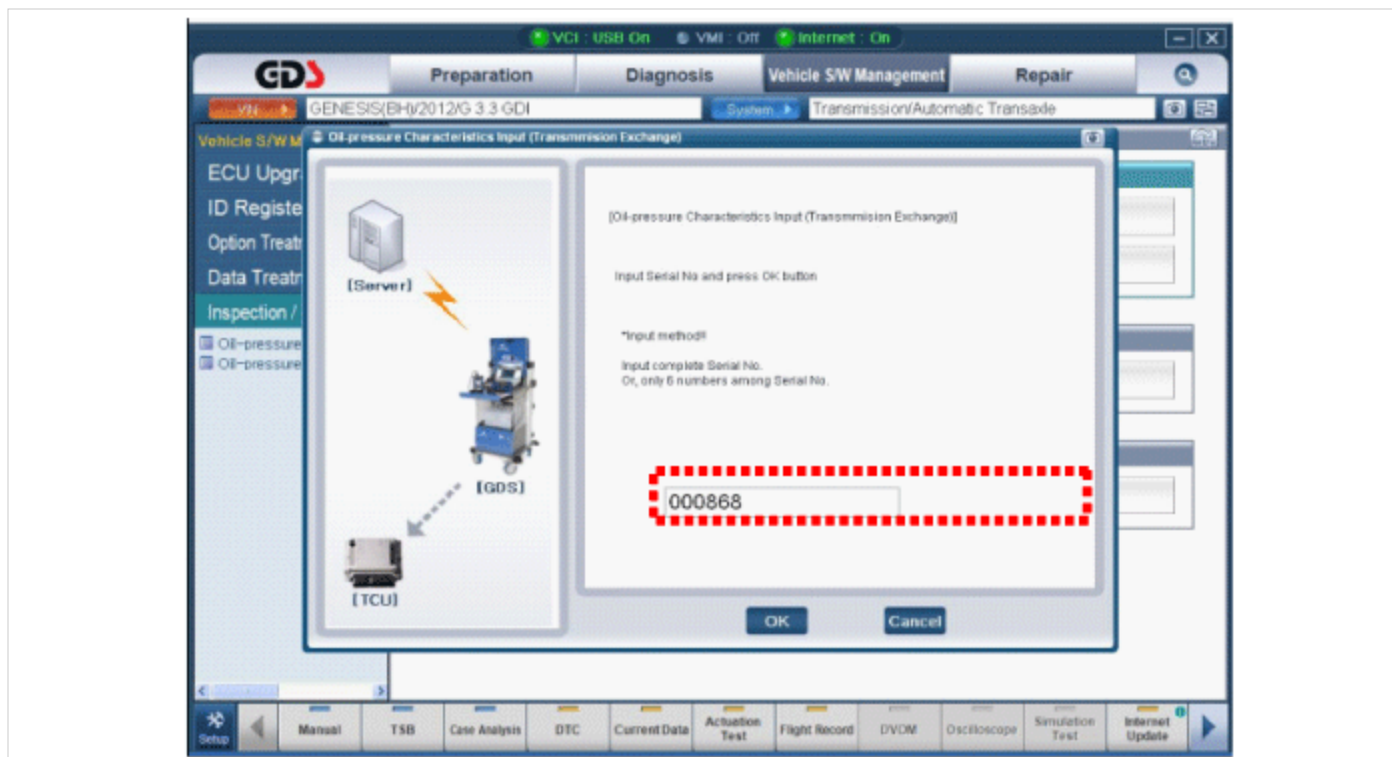
EOL Input procedure

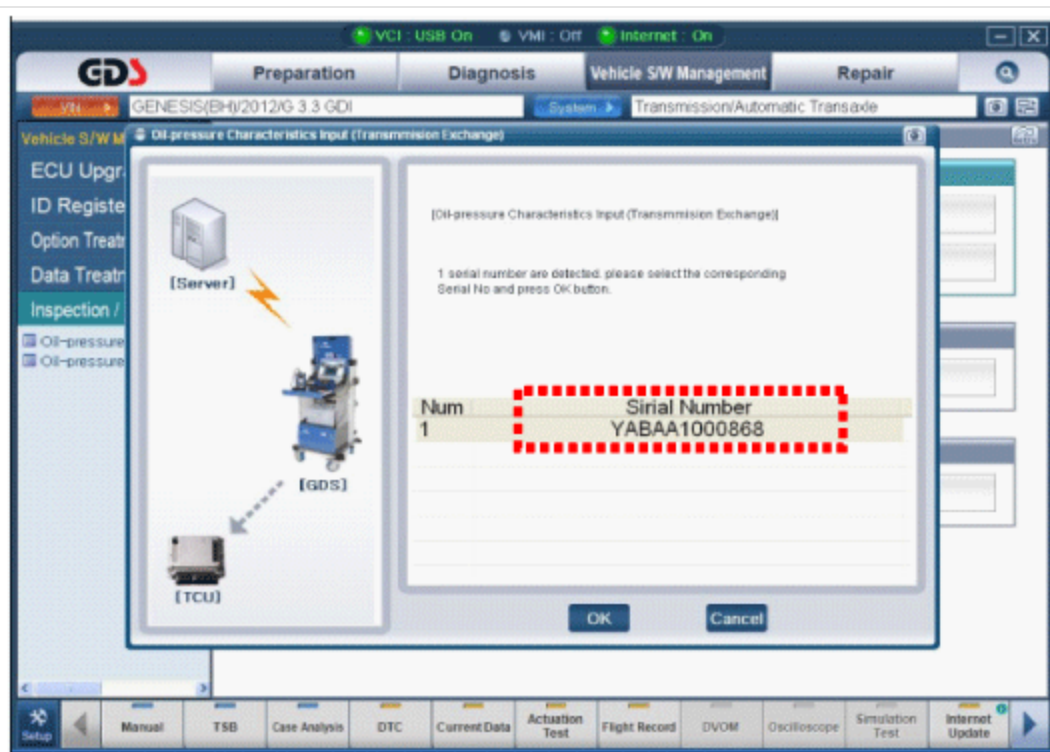
- Transaxle assembly replacement



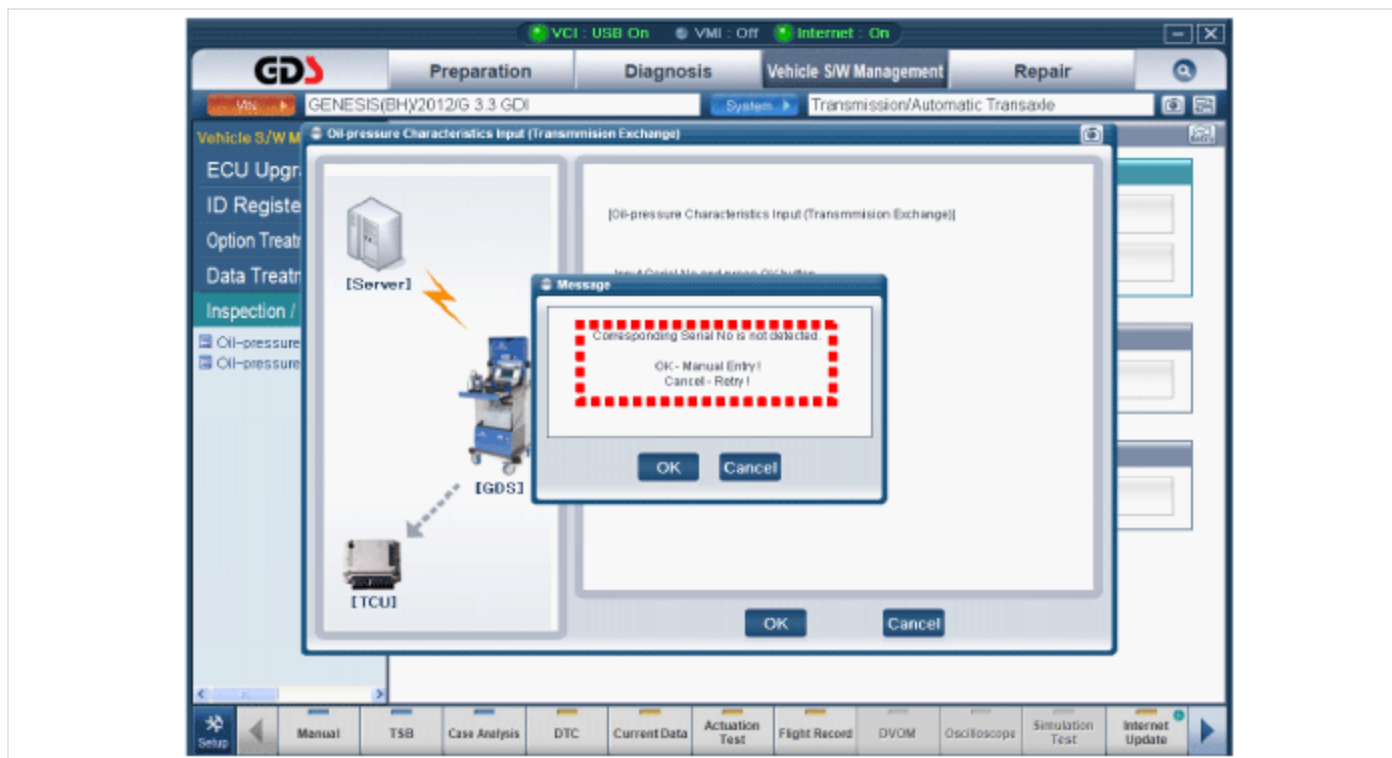


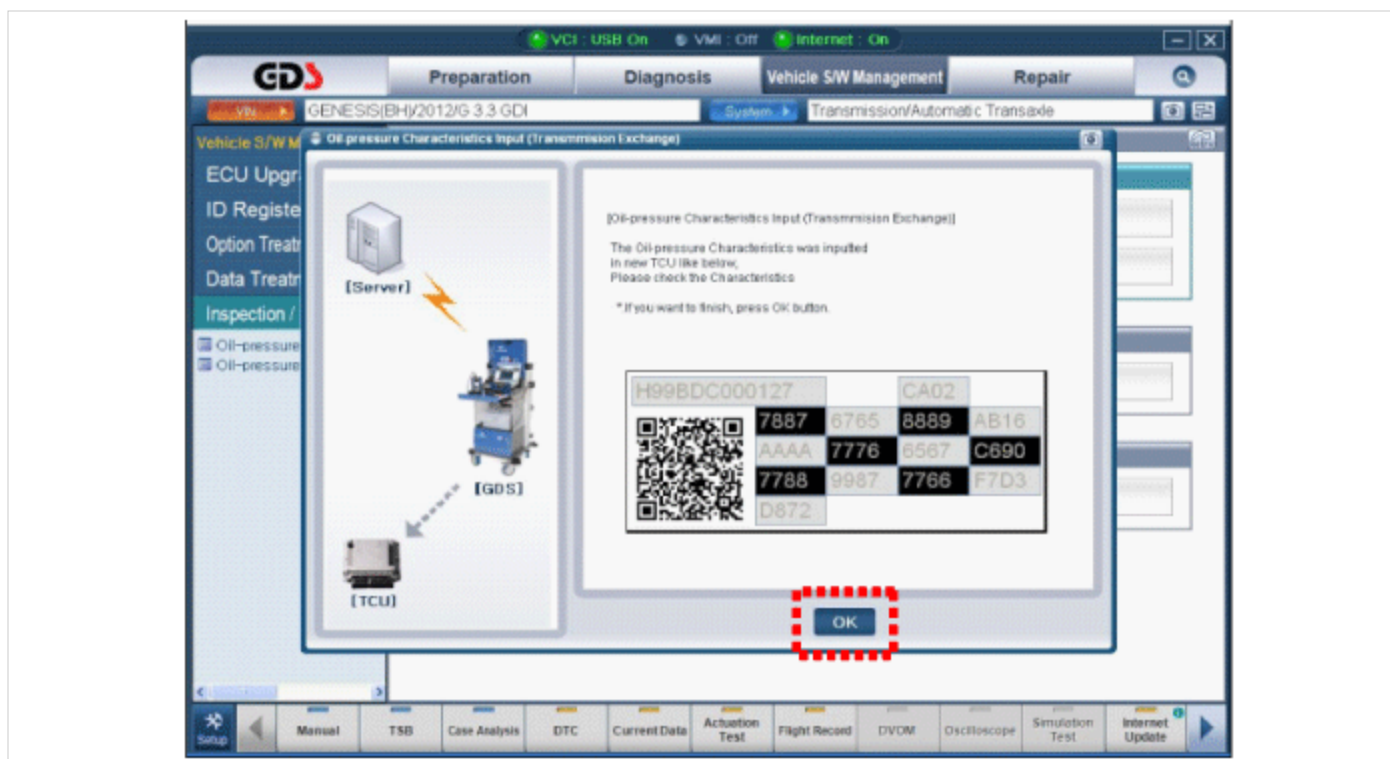
Internet :On



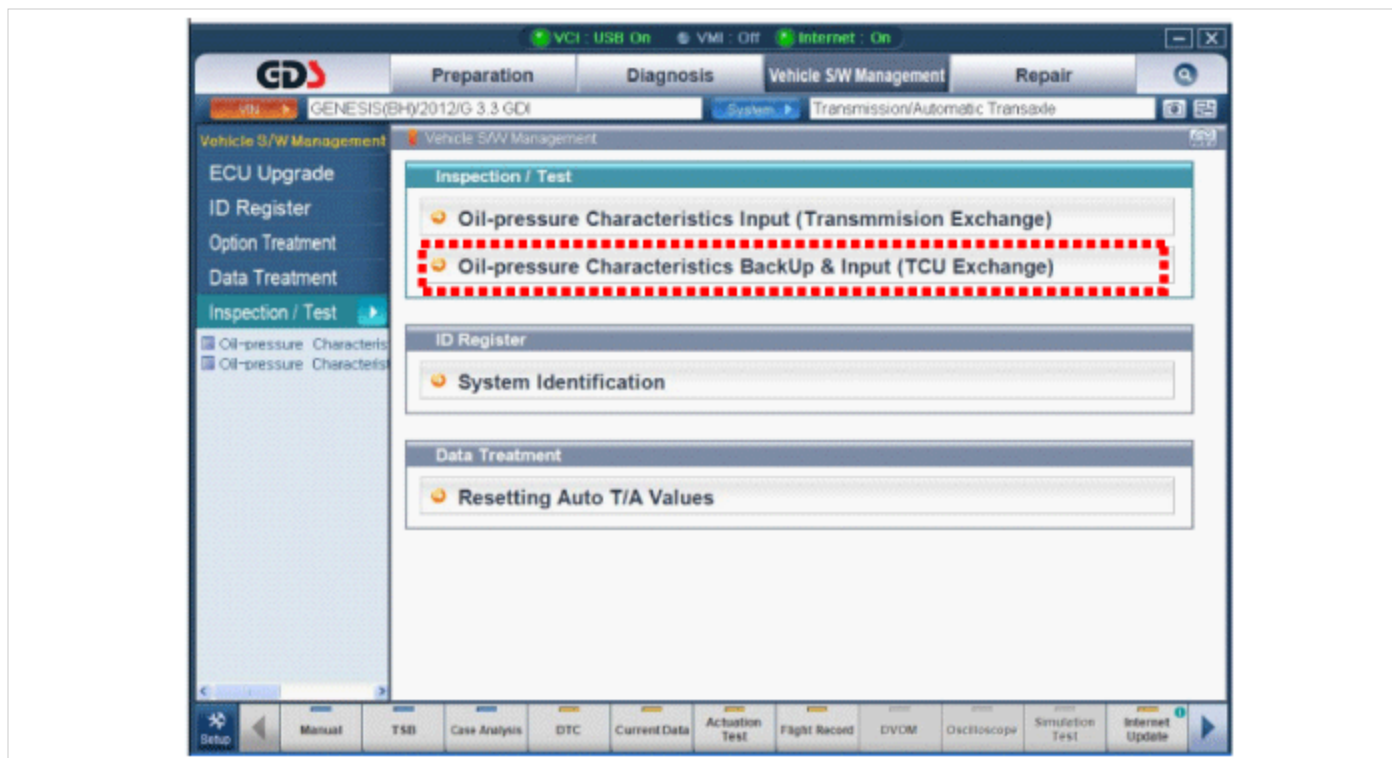


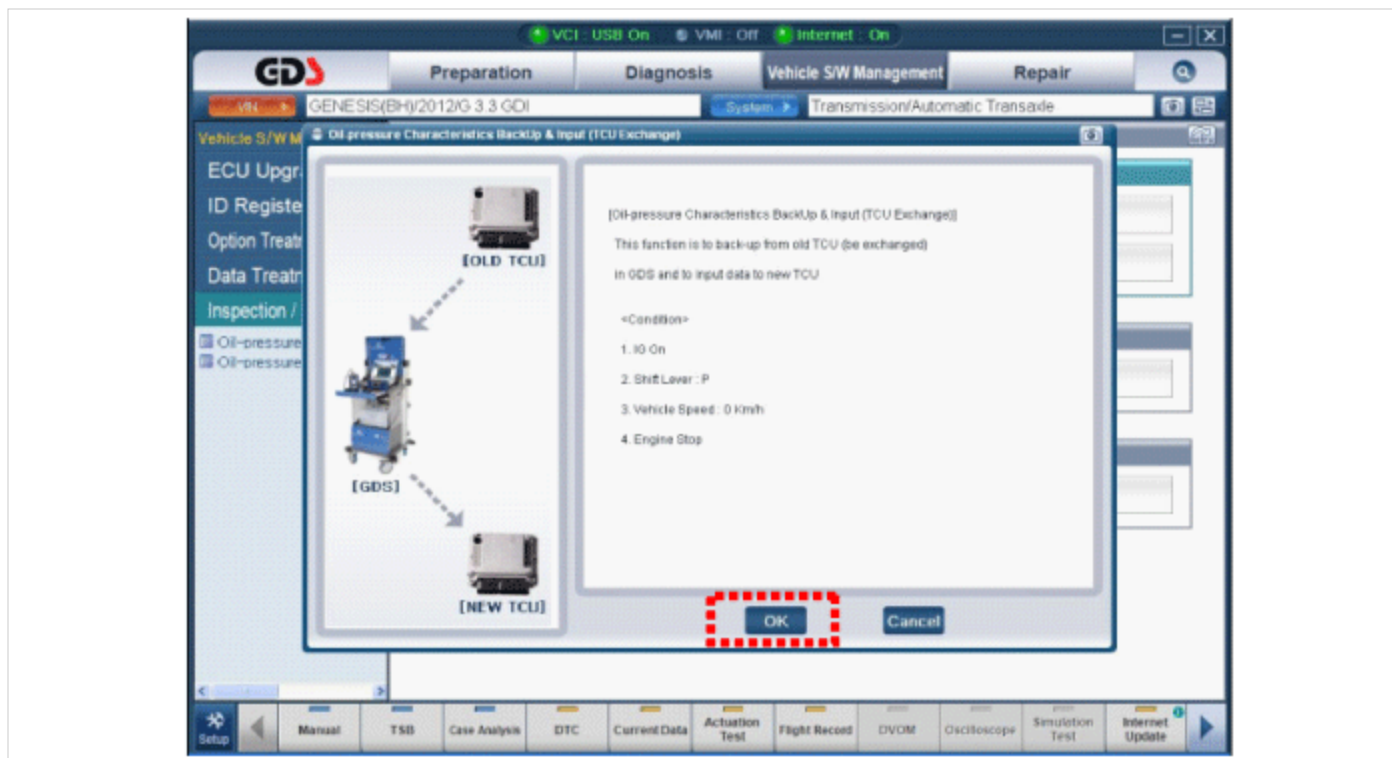
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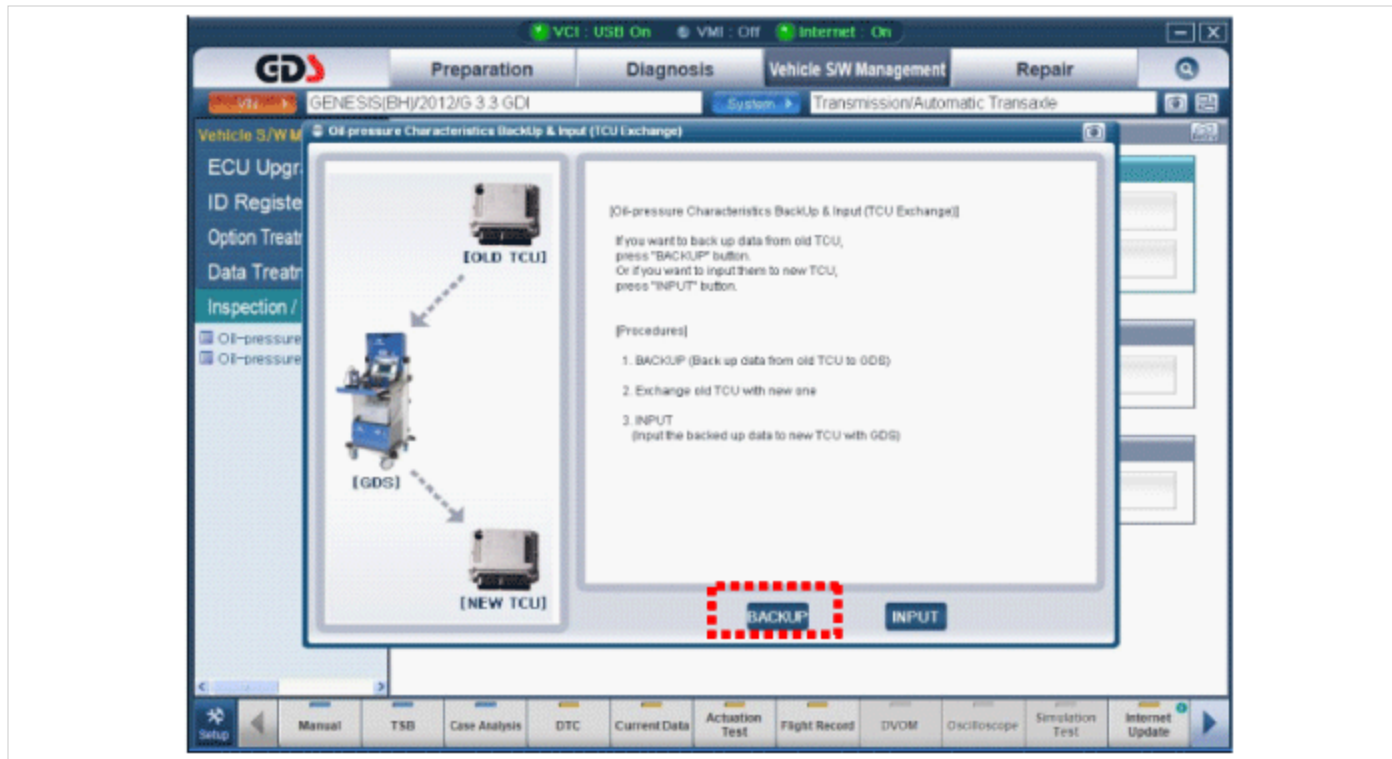


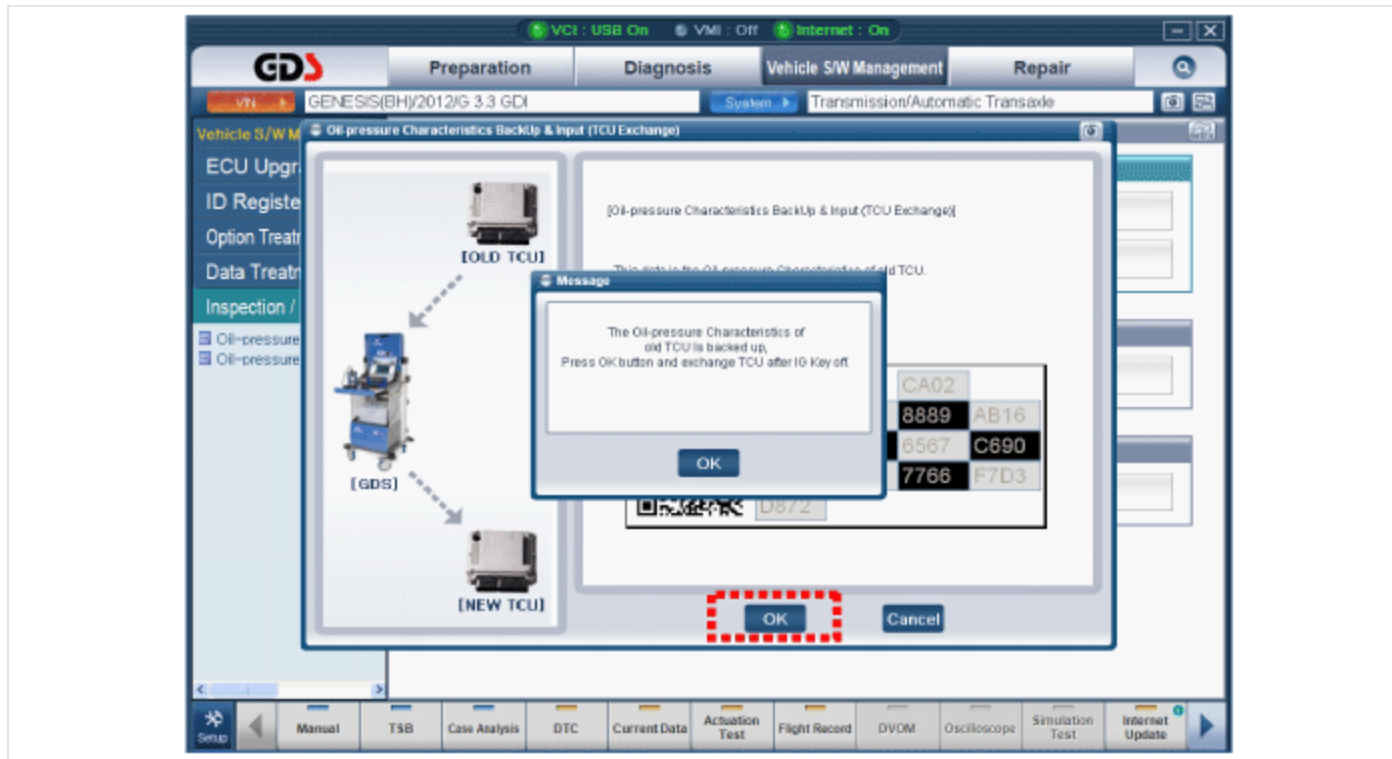


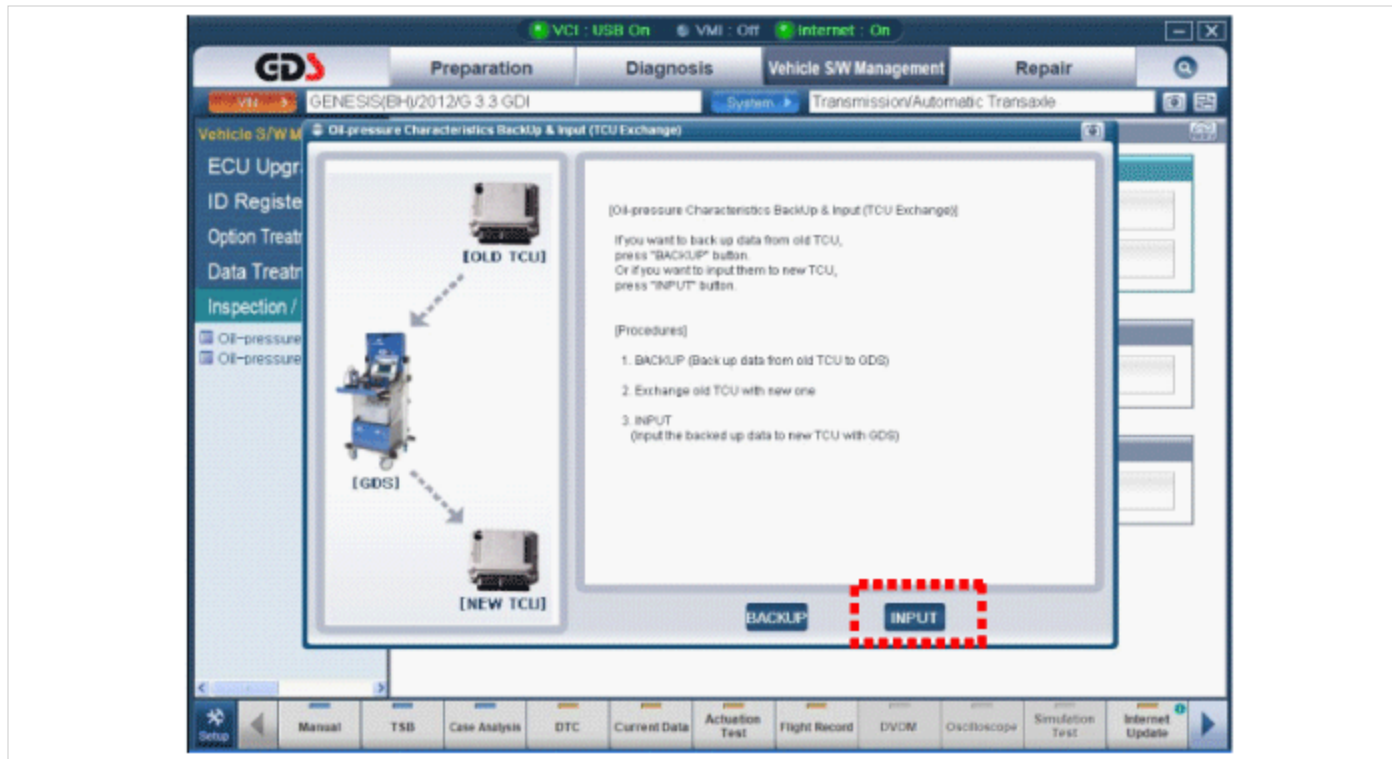
- TCM replacement

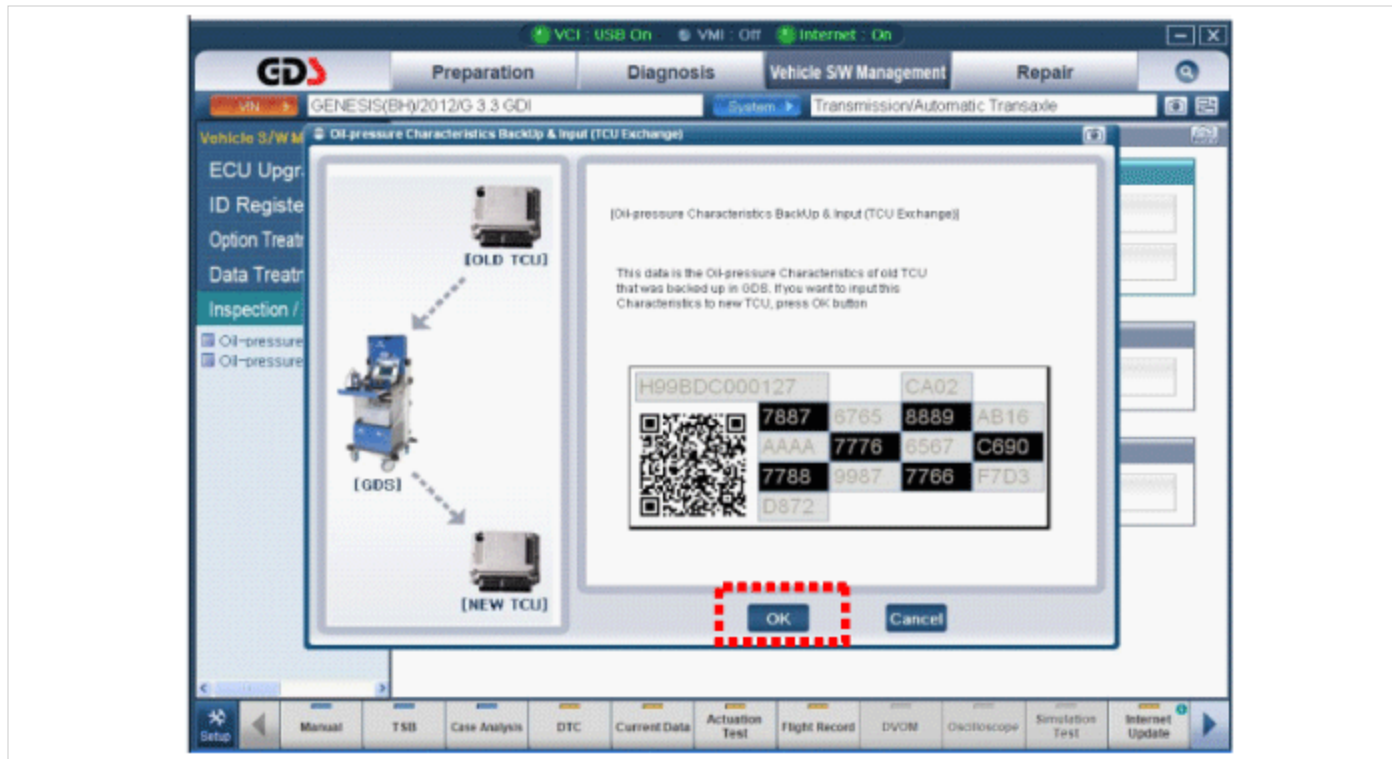


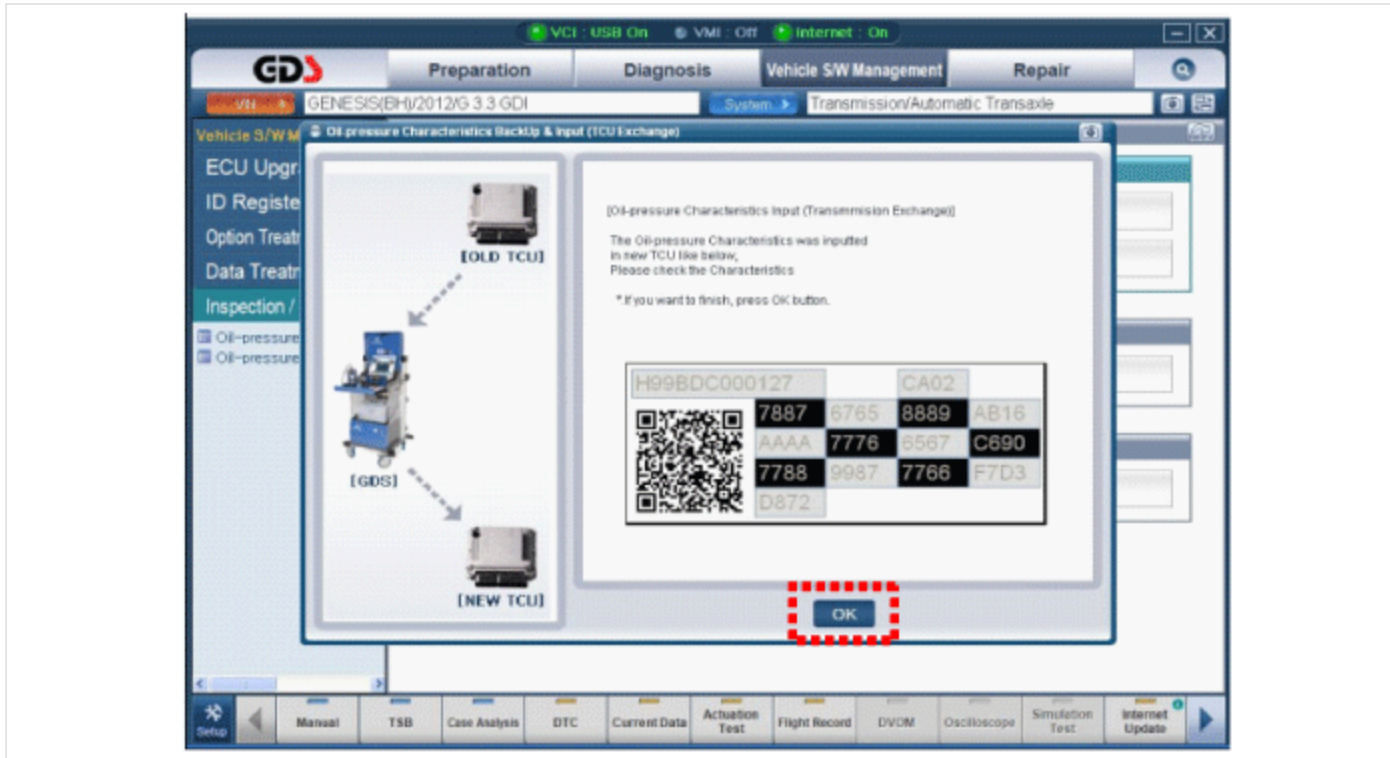








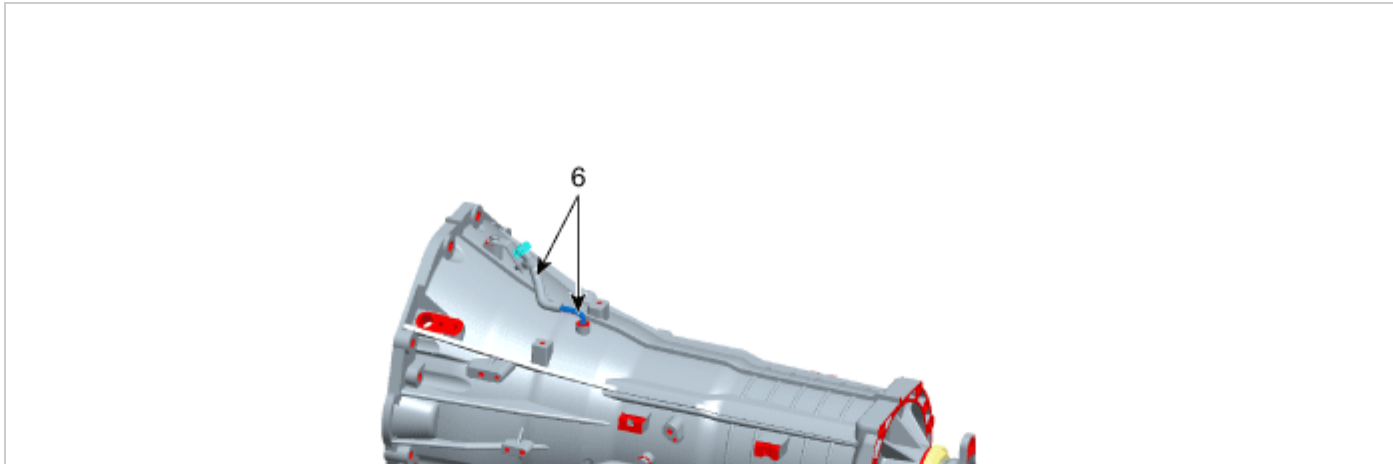


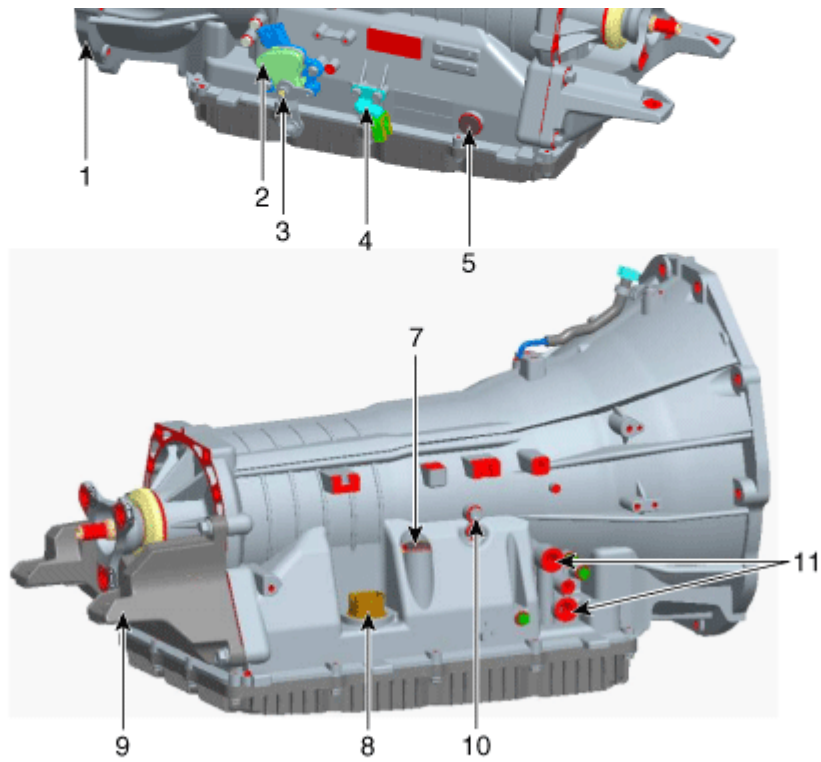


Automatic Transaxle System



Components Location





1. Automatic transmission case
2. Inhibitor switch
3. Manual control lever
4. Shift cable bracket
5. Oil injection hall
6. Air breather hose & pipe

7. Oil injection hall (in factory)
8. E Module connector
9. Support bracket
10. Check plug
11. Oil cooler port

Automatic Transaxle System



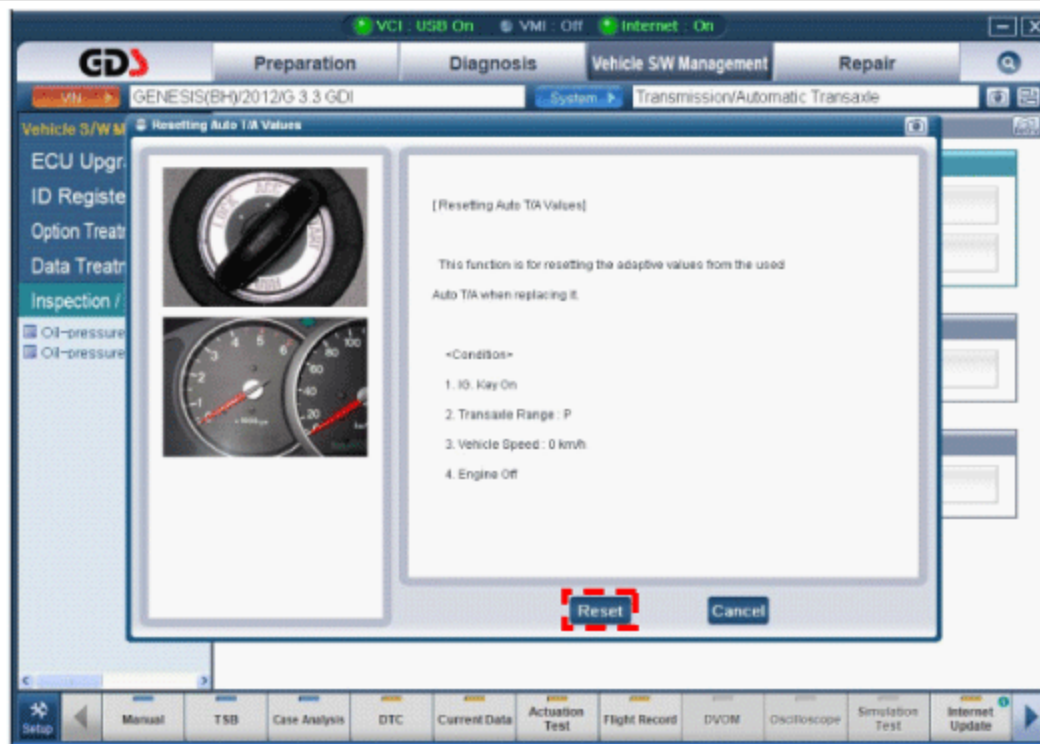
Installation

1. Installation is the reverse of removal.

NOTICE

After replacement or reinstallation procedure of the automatic transmission assembly, perform the procedures below.

- Adding automatic transmission fluid. (Refer to "automatic transmission system" in this group.)
- After servicing the automatic transmission or TCM, clear the diagnostic trouble codes (DTC) using the GDS tool. Diagnostic trouble codes (DTC) cannot be cleared by disconnecting the battery. When deleting diagnostic trouble code, use the GDS.
- When replacing the automatic transmission, reset the automatic transmissions values by using the GDS.
- After exchanging automatic transmission, input the EOL(End of line). (Refer to "Repair procedures" in this group)
- Perform TCM learning after replacing the transmission to prevent slow transmission response, jerky acceleration and jerky startup. (Refer to "Automatic transmission control system (Repair procedures)" in this group)



Automatic Transaxle System



Description

The hydraulic system consists of oil, an oil filter, an oil pump, and a valve body (valves and solenoid valves).

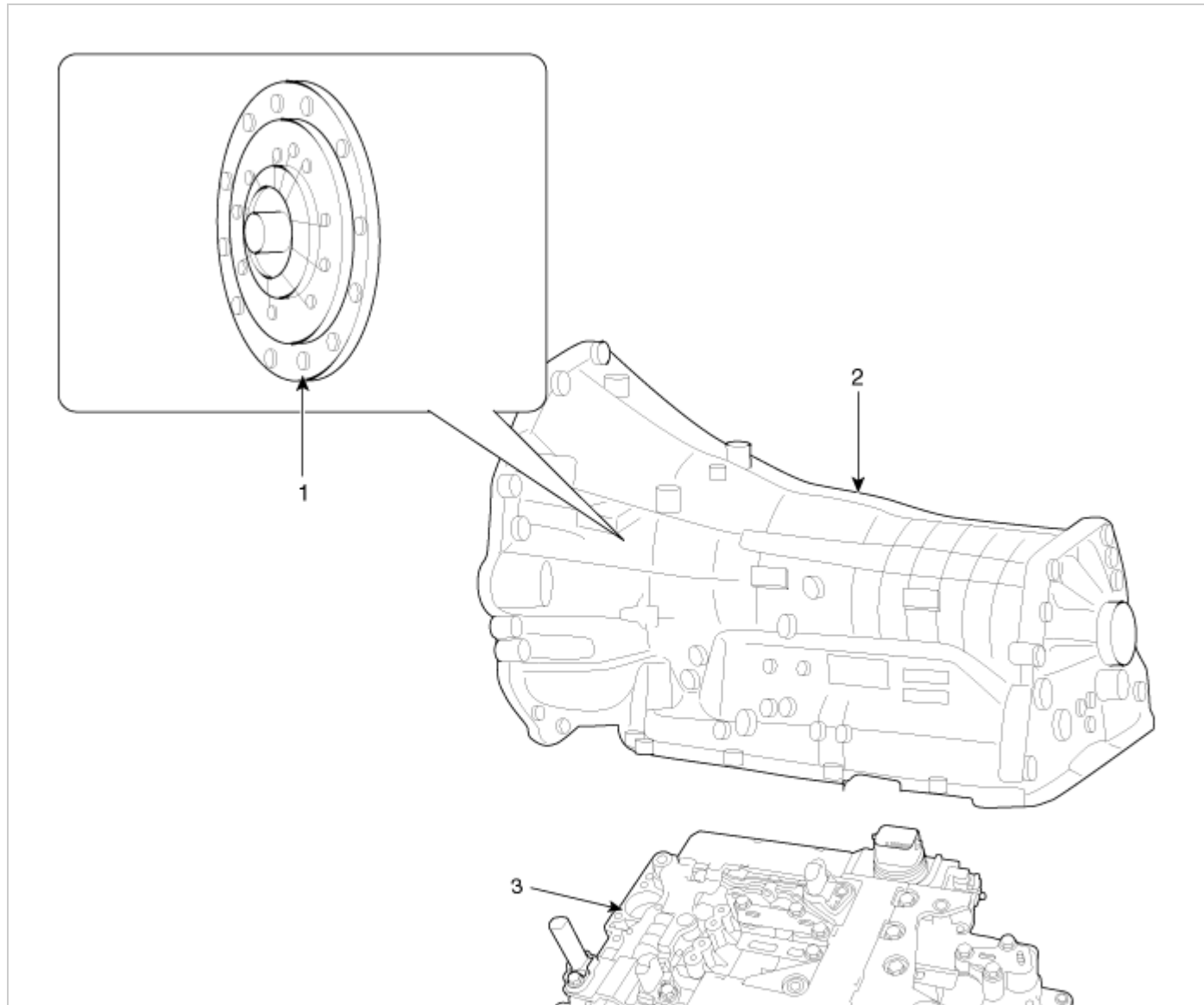
The oil pump is powered by the engine. ATF passes through the oil filter and gets distributed along the oil channels.

The oil becomes highly pressurized as it exits the oil pump and passes through the line pressure valve before being fed to the clutch & brake control valve, clutch, and brakes. TCM controls the hydraulic pressure using solenoid valves and controls clutch and brake operations.

Automatic Transaxle System



Components Location





1. Oil pump assembly
2. Automatic transmission

3. Valve body assembly
4. Oil pan

Automatic Transaxle System



Description

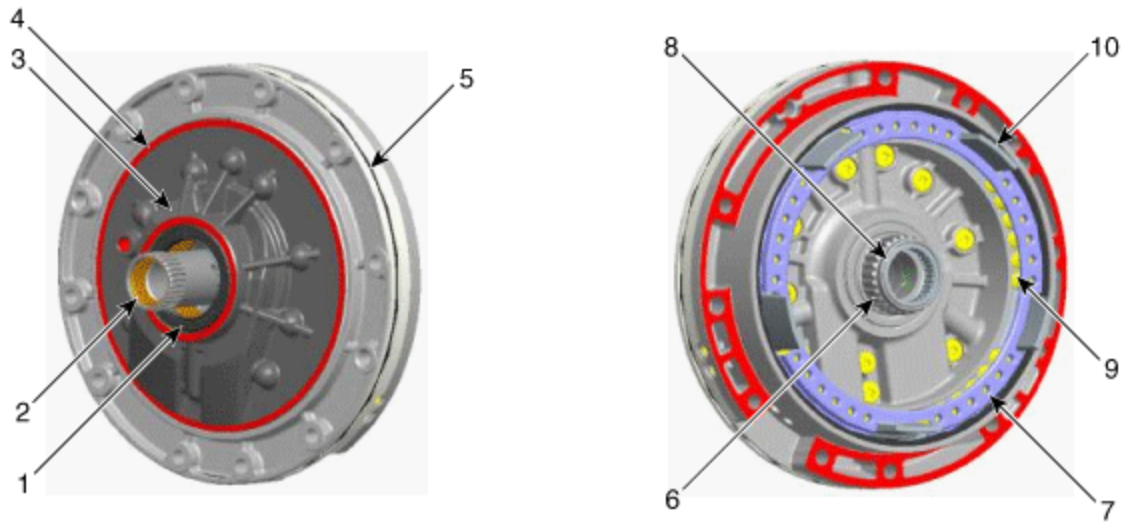
The oil pump rotation builds the hydraulic pressure needed for the lubrication of the various parts of the automatic transmission and operation of the clutch and brakes. The oil also circulates through the torque converter and the cooler.



Automatic Transaxle System



Components Location



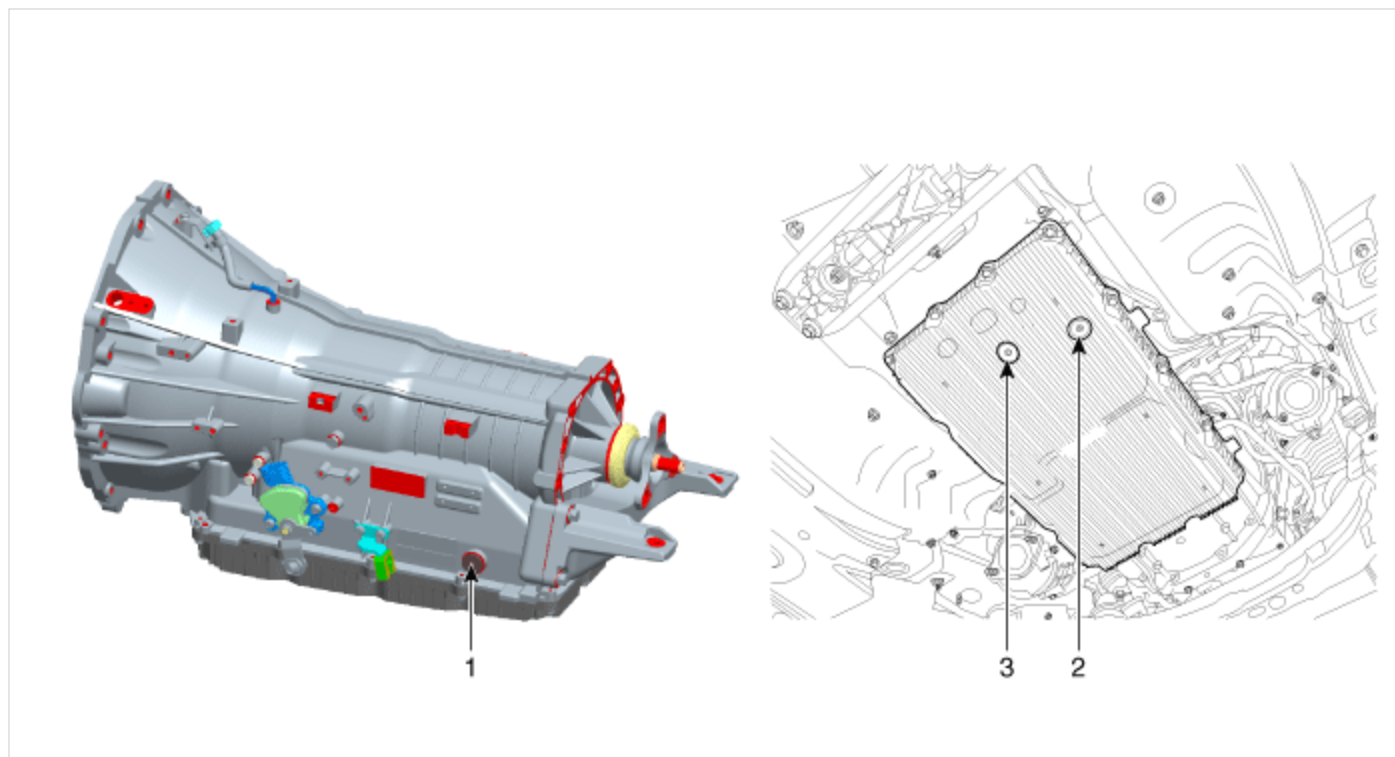
1. Oil seal
2. Reaction shaft
3. Housing
4. Cover
5. O-Ring

6. Reaction shaft
7. Snap ring
8. Niddle bearing
9. 8LR/B return spring
10. 8LR/B piston

Automatic Transaxle System



Components Location



1. Oil injection hole
2. Oil level plug

3. Oil drain plug

Automatic Transaxle System



Replacement

NOTICE

ATF of 8 speed automatic transaxle doesn't need to be replaced in normal usage. If the vehicle is used severely in business or personal use, replace ATF every 100,000 miles.

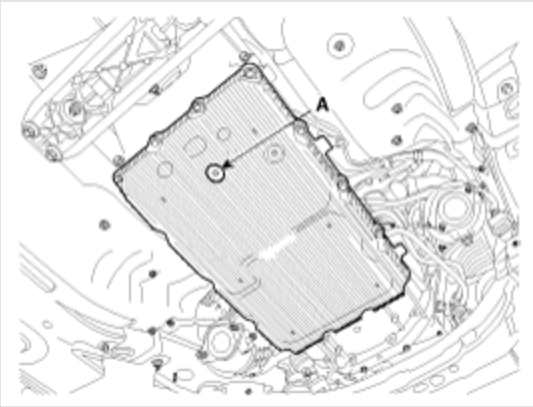
Severe usage is defined as

- Driving in rough road (Bumpy, Gravel, Snowy, Unpaved road, etc)
- Driving in mountain road, ascent/descent
- Repetition of short distance driving
- More than 50% operation in heavy city traffic during hot weather above 30°C(89.6°F) .
- Police, Taxi, Commercial type operation or trailer towing, etc

1. Remove the drain plug (A) and reinstall the drain plug after draining ATF totally.

Drain plug tightening torque:

22.6 ~ 24.5 N.m (2.3 ~ 2.5 kgf.m, 16.6 ~ 18.1 lb-ft)

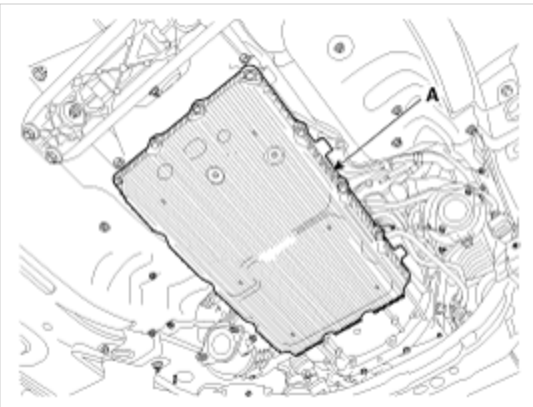
**⚠ CAUTION**

The gasket of the drain plug use new one.

2. Fill the oil about 7.0 liters through oil injection hole.
3. Check the oil level.
(Refer to "Hydraulic system (Fluid)" in this group)

Automatic Transaxle System**Replacement**

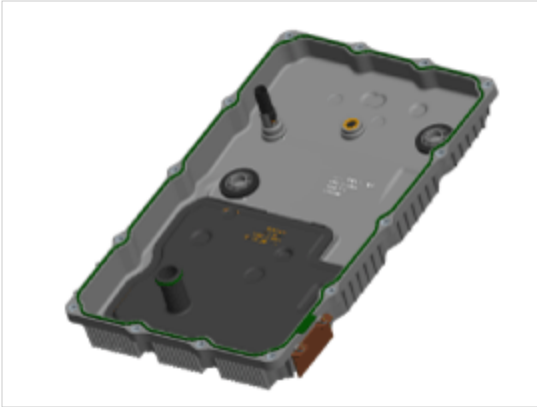
1. Draining ATF totally.
2. Remove the oil pan (A).



- Must be replaced by new oil pan.

NOTICE

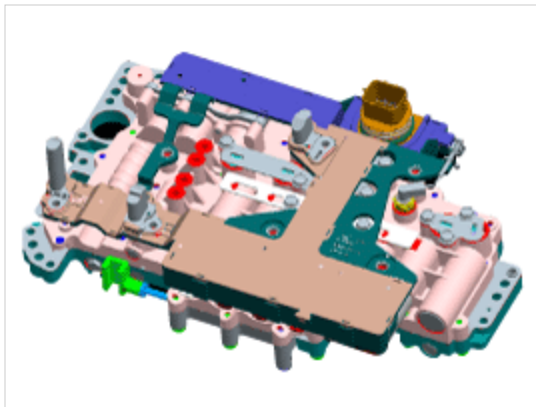
Not replaceable filters integrated oil pan.

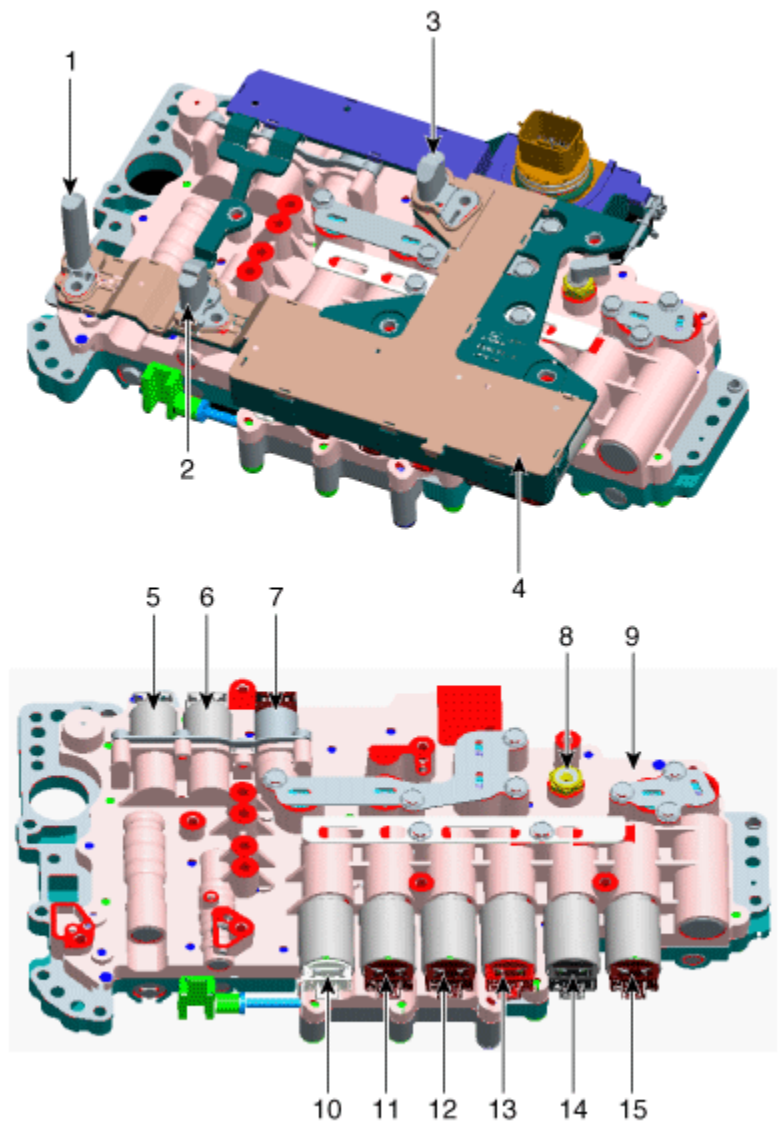


- Adding automatic transmission fluid.
(Refer to "automatic transaxle system" in this group.)

Automatic Transaxle System**Description**

The valve body is essential to automatic transaxle control and consists of various valves used to control the oil feed from the oil pump. Specifically, these valves consist of pressure regulator valves, oil redirection valves, shift valves, and manual valves. The body also features electronic solenoid valves that ensure smooth gear changes.

**Automatic Transaxle System****Components Location**



- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Input speed sensor 2. Middle speed sensor 3. Output speed sensor 4. E Module 5. Line pressure control solenoid valve 6. Demper clutch control solenoid valve 7. ON/OFF solenoid valve 8. Pressure switch | <ol style="list-style-type: none"> 9. Valve body assembly 10. 8LR/B control solenoid valve 11. 6/C control solenoid valve 12. 27/B control solenoid valve 13. 35R/C control solenoid valve 14. 4&OD/C control solenoid valve 15. UD/C control solenoid valve |
|--|---|

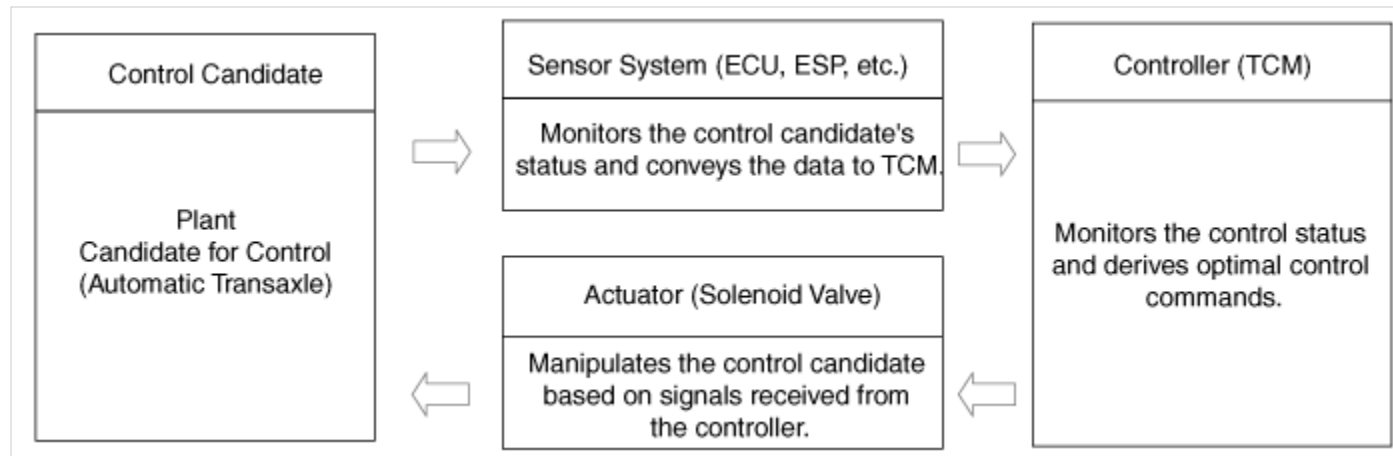
Automatic Transaxle System



Description

Automatic transaxle system relies on various measurement data to determine the current control status and extrapolate the necessary compensation values. These values are used to control the actuators and achieve the desired control output. If a problem with the drivetrain, including the transaxle, has been identified, perform self-diagnosis and basic transaxle inspection (oil and fluid inspection) and then check the control system's components using the diagnosis tool.

Control System Composition



Fault Diagnosis

Features a fail-safe mechanism that prevents dangerous situations from developing in the event of a transaxle failure.

The limp home mode engages if the transaxle malfunctions. In this mode, the transaxle operates at a minimal functionality level, making it possible for the vehicle to reach a service center.

Fail-Safe: Allows the vehicle to be driven safely in the event of a malfunction.

Limp Home: Maintains minimal functionality (*) in the event of a malfunction, making it possible for the vehicle to reach a service center.

(*) Minimal Functionality: Drive (fixed gear setting), Reverse, and Neutral

Self-diagnosis

TCM is in constant communication with the control system's components (sensors and solenoids). If an abnormal signal is received for longer than the predefined duration, TCM recognizes a fault, stores the fault code in memory, and then sends out a fault signal through the self-diagnosis terminal. Such fault codes are independently backed up and will not be cleared even if the ignition switch is turned off, the battery is disconnected, or the TCM connector is disconnected.

⚠ CAUTION

- Disconnecting a sensor or an actuator connector while the ignition switch is in the "On" position generates a diagnostic trouble code (DTC) and commits the code to memory. In such event, disconnecting the battery will not clear the fault diagnosis memory. The diagnosis tool must be used to clear the fault diagnosis memory.
- Before removing or installing any part, read the diagnostic trouble codes and then disconnect the battery negative (-) terminal.
- Before disconnecting the cable from battery terminal, turn the ignition switch to OFF. Removal or connection of the battery cable during engine operation or while the ignition switch is ON could cause damage to the TCM.
- When checking the generator for the charging state, do not disconnect the battery '+' terminal to prevent the ECM from damage due to the voltage.
- When charging the battery with the external charger, disconnect the vehicle side battery terminals to prevent damage to the TCM.

Checking Procedure (Self-diagnosis)

⚠ CAUTION

- When battery voltage is excessively low, diagnostic trouble codes can not be read. Be sure to check the battery for voltage and the charging system before starting the test.
- Diagnosis memory is erased if the battery or the TCM connector is disconnected. Do not disconnect the battery before the diagnostic trouble codes (DTC) are completely read and recorded.

Inspection Procedure (Using the GDS)

1. Turn OFF the ignition switch.
2. Connect the GDS to the data link connector on the lower crash pad.
3. Turn ON the ignition switch.
4. Use the GDS to check the diagnostic trouble code.
5. Repair the faulty part from the diagnosis chart.
6. Erase the diagnostic trouble code.
7. Disconnect the GDS.

⚠ CAUTION

- Perform TCM learning after replacing the automatic transaxle to prevent slow automatic transaxle response, jerky acceleration and jerky startup. (Refer to "Automatic transaxle control system (Repair procedures)" in this group)
- Adding automatic transaxle fluid. (Refer to "automatic transaxle system" in this group.)
- After servicing the automatic transaxle or TCM, clear the diagnostic trouble code (DTC) using the GDS tool. Diagnostic trouble codes (DTC) cannot be cleared by disconnecting the battery.

Automatic Transaxle System



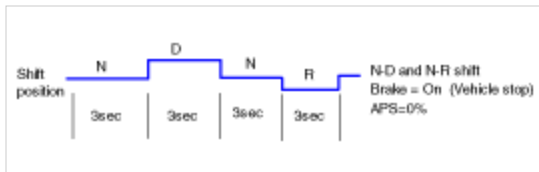
Adjustment

TCM Learning

When shift shock is occurred or parts related with the transaxle are replaced, TCM learning should be performed.

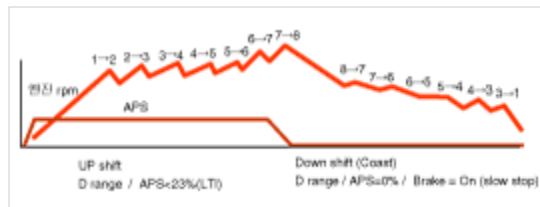
In the following case, TCM learning is required.

- Transaxle assembly replacement
 - TCM replacement
 - TCM upgrading
1. TCM learning condition
 - A. ATF temperature: 30 ~ 95°C (86 ~ 203°F)
 2. TCM learning procedure
 - A. Stop learning
 - Repeat the below shift pattern four times or more with stepping on the brake.



B. Driving learning

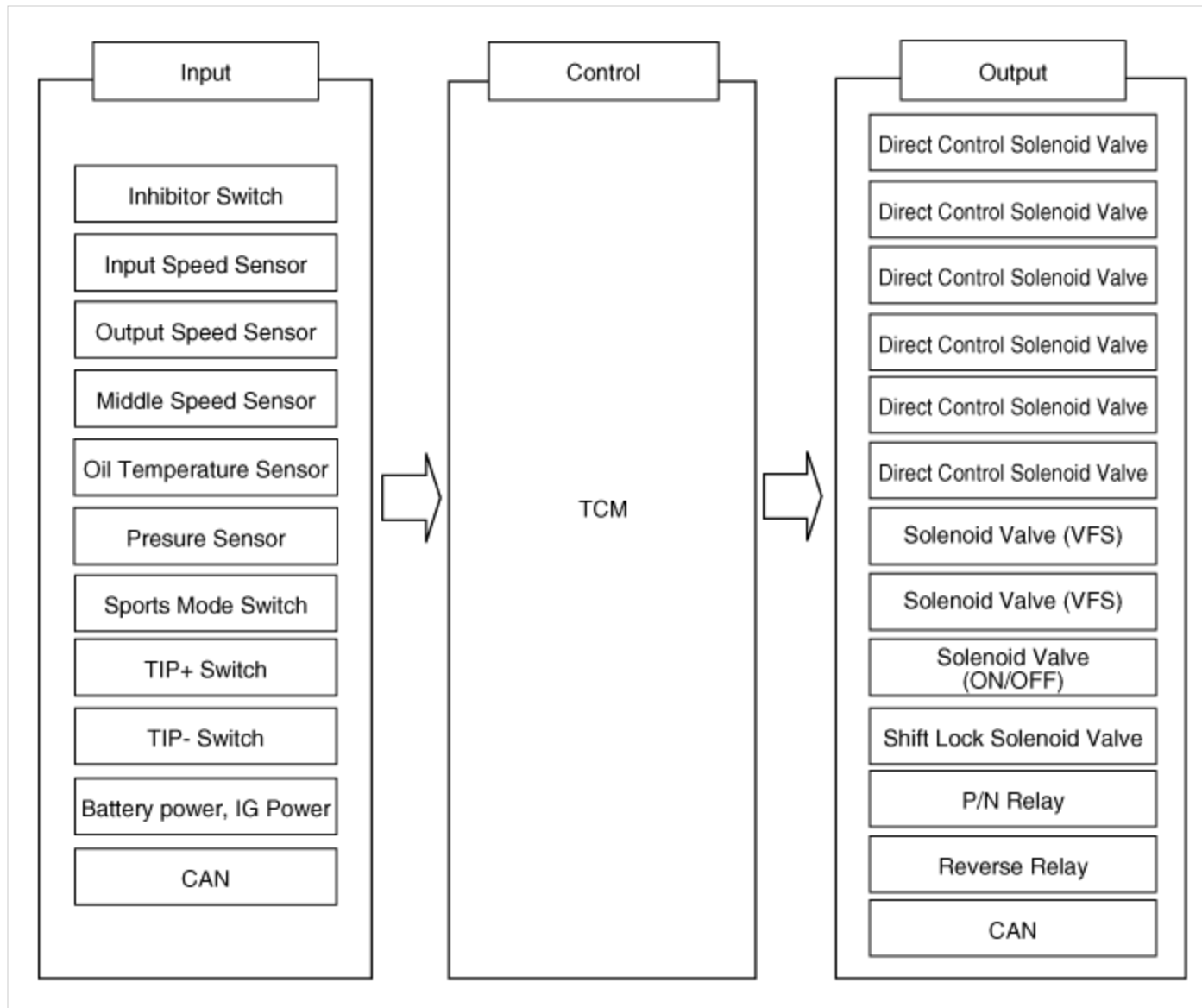
1. Drive the vehicle through all gears at D range. Drive from stop to 1st to 2nd to 3rd to 4th to 5th to 6th to 7th to 8th with keeping fixed throttle open.
 2. Down shift from 8th to 7th, 7th to 6th, 6th to 5th, 5th to 4th, 4th to 3rd, 3rd to 2nd, 2nd to 1st.
 3. Repeat the above driving pattern four times or more.
- Up-shift throttle open : 15 ~ 30%



Automatic Transaxle System



Circuit Diagram

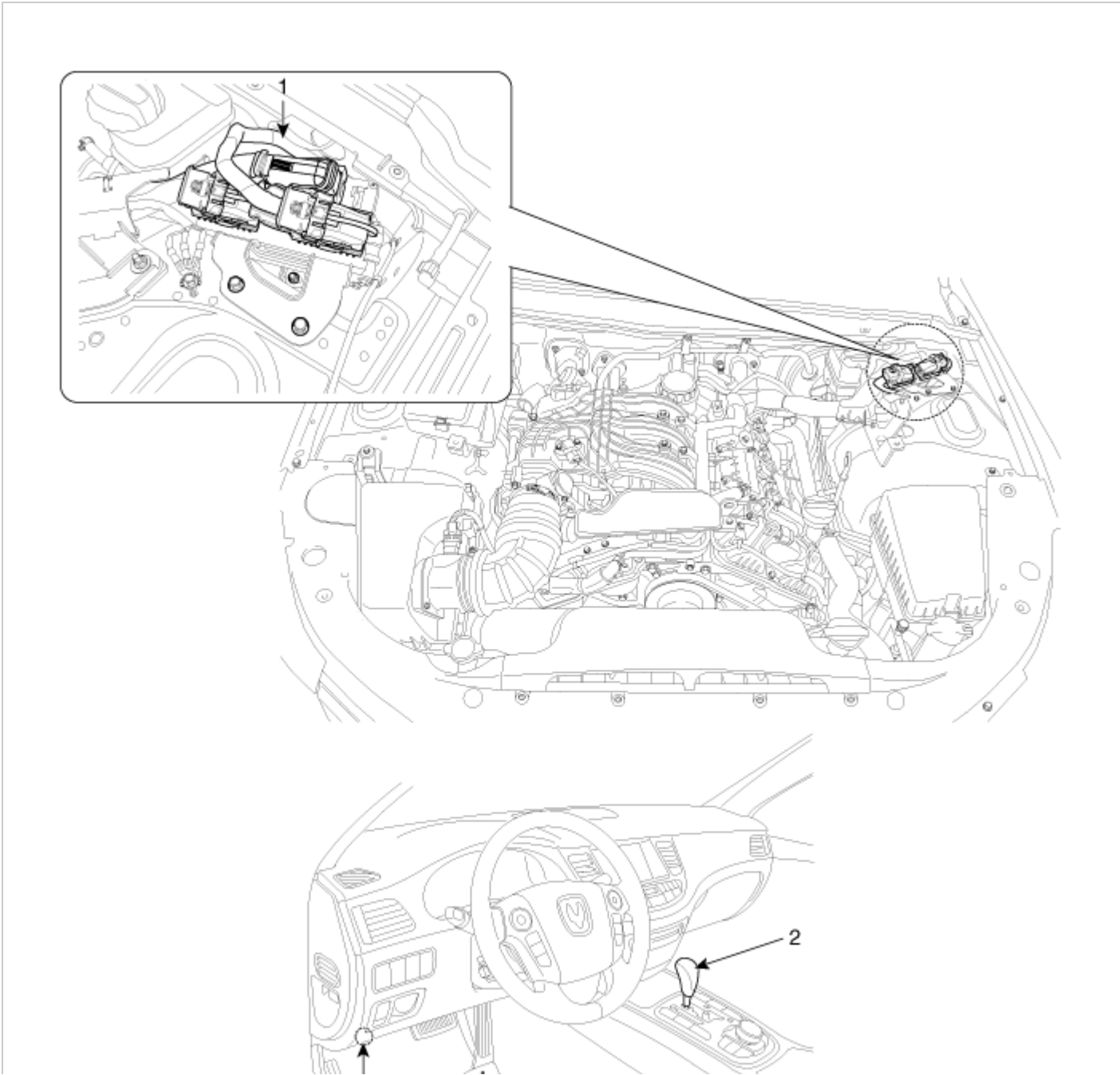


Automatic Transaxle System



Components Location

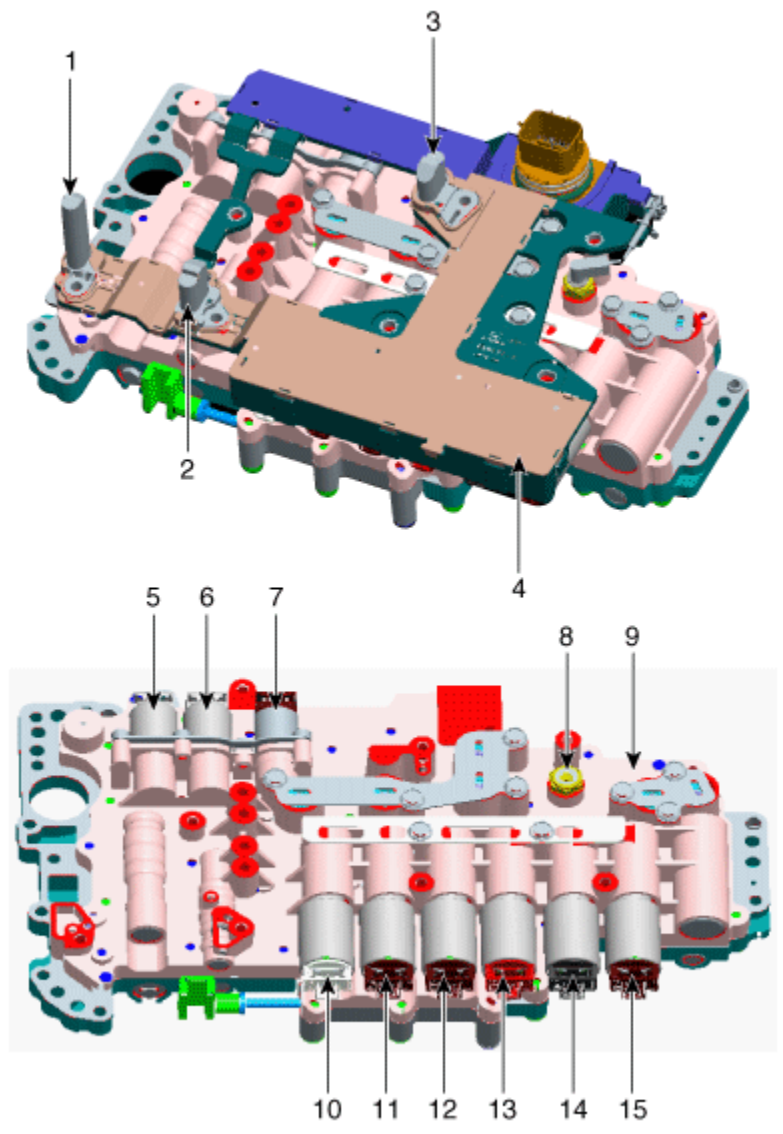
[Vehicle Components]





1. Transmission Control Module(TCM) 2. Shift lever	3. Data Link Connector (DLC)
---	------------------------------

[Transmission Components]



- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Input speed sensor 2. Middle speed sensor 3. Output speed sensor 4. E Module assembly 5. Line pressure control solenoid valve 6. Demper clutch control solenoid valve 7. ON/OFF solenoid valve 8. Pressure switch | <ol style="list-style-type: none"> 9. Valve body assembly 10. 8LR/B control solenoid valve 11. 6/C control solenoid valve 12. 27/B control solenoid valve 13. 35R/C control solenoid valve 14. 4&OD/C control solenoid valve 15. UD/C control solenoid valve |
|---|---|

Automatic Transaxle System



Description

Transaxle Control Module (TCM) is the automatic transaxle's brain. The module receives and processes signals from various sensors and implements a wide range of transaxle controls to ensure optimal driving conditions for the driver.

TCM is programmed for optimal response to any on-road situation. In the event of a transaxle failure or malfunction, TCM stores the fault information in memory so that the technician may reference the code and quickly repair the transaxle.

Functions

- Monitors the vehicle's operating conditions to determine the optimal gear setting.
- Performs a gear change if the current gear setting differs from the identified optimal gear setting.
- Determines the need for damper clutch (D/C) activation and engages the clutch accordingly.
- Calculates the optimal line pressure level by constantly monitoring the torque level and adjusts the pressure accordingly.
- Diagnoses the automatic transaxle for faults and failures.



Automatic Transaxle System



2. TCM Terminal Function

Connector [CLG-TG]

Pin	Description	Pin	Description
1	Battery power	48	-
2	Battery power	49	-
3	Power(IG 1)	50	27 Brake control solenoid valve
4	Ground	51	-
5	Ground	52	ON/OFF solenoid valve
6	Ground	53	-
7	-	54	Input speed sensor signal
8	-	55	Middle speed sensor signal
9	-	56	Output speed sensor signal
10	-	57	-
11	-	58	-
12	-	59	-
13	Inhibitor switch signal "S1"	60	-
14	Oil temperature sensor (+)	61	Sports mode select switch
15	-	62	-
16	Sports mode up switch	63	-
17	Sports mode down switch	64	-
18	Pressure switch	65	CAN communication line (LOW)
19	-	66	-
20	-	67	-
21	Inhibitor switch signal "S2"	68	-
22	Inhibitor switch signal "S4"	69	-
23	Inhibitor switch signal "S3"	70	Solenoid supply power 2
24	-	71	-
25	-	72	-
26	-	73	Solenoid supply power(4&OD/C,35R/C,6/C,L/P)
27	-	74	-
28	-	75	-
29	Solenoid supply power(UD/C,27/B,8LR/B,D/C)	76	-
30	Input speed sensor power	77	-
31	Middle speed sensor power	78	-
32	-	79	-
33	-	80	-
34	-	81	-
35	-	82	-
36	-	83	-

37	-	84	-
38	Oil temperature sensor (-)	85	CCP CAN Low
39	-	86	CCP CAN High
40	-	87	CAN communication line (High)
41	35R Clutch control solenoid valve	88	-
42	8LR Brake control solenoid valve	89	-
43	Underdrive clutch control solenoid valve	90	-
44	6Speed clutch control solenoid valve	91	-
45	Line pressure control solenoid valve	92	-
46	Damper clutch control solenoid valve	93	Output speed sensor power
47	4&OD Clutch control solenoid valve	94	-

3. TCM Terminal input/output signal

Pin	Description	Condition	Input/Output Value	
			Type	Level
1	Battery power	ON	Power	0V/Battery voltage level
2		OFF		9V < Battery voltage level < 16V
3	Power (IG 1)	ON	Input	Battery voltage level
		OFF		0V voltage level
4	Ground	-	Ground	0V(GND level)
5	Ground	-	Ground	0V(GND level)
6	Ground	-	Ground	0V(GND level)
7	-	ON	Output	About 1V
		OFF		Battery voltage level
8	-	-	Output	0V/Battery voltage level
				9V < Battery voltage level < 16V
9	-	-	-	-
10	-	ON	Pulse input	About 9V~11V voltage level
		OFF		0V voltage level
11	-	-	-	-
12	-	-	-	-
13	Inhibitor switch signal "S1"	ON	Input	Battery voltage level
		OFF		0V(GND)
14	Oil temperature sensor (+)	-	Input	Maximum 5V voltage level
15	-	-	-	-
16	Sports mode up switch	ON	Input	0V(GND)

		OFF		Battery voltage level
17	Sports mode down switch	ON	Input	0V(GND)
		OFF		Battery voltage level
18	Pressure switch	-	Input	0V/Battery voltage level
19	-	-	-	-
20	-	-	-	-
21	Inhibitor switch signal "S2"	ON	Input	Battery voltage level
		OFF		0V(GND)
22	Inhibitor switch signal "S4"	ON	Input	Battery voltage level
		OFF		0V(GND)
23	Inhibitor switch signal "S3"	ON	Input	Battery voltage level
		OFF		0V(GND)
24	-	-	-	-
25	-	-	-	-
26	-	-	Output	0V/Battery voltage level
				9V < Battery voltage level <16V
27	-	-	-	-
28	-	-	Output	0V/Battery voltage level
				9V < Battery voltage level <16V
29	Solenoid supply power (UD/C,27/B,8LR/B,D/C)	-	Power	Battery voltage level
				9V < Battery voltage level <16V
30	Input speed sensor power	ON	Output	About 9V voltage level
		OFF		0V
31	Middle speed sensor power	ON	Output	About 9V voltage level
		OFF		0V
32	-	-	-	-
33	-	-	-	-
34	-	-	-	-
35	-	-	-	-
36	-	-	-	-
37	-	-	-	-
38	Oil temperature sensor (-)	-	Input	Minimum 0V voltage level
39	-	-	-	-
40	-	-	-	-
41	35R Clutch control solenoid valve	-	Output	0V/Battery voltage level
				9V < Battery voltage level <16V
42	8LR Brake control solenoid valve	-	Output	0V/Battery voltage level

				9V < Battery voltage level <16V
43	Underdrive clutch control solenoid valve	-	Output	0V/Battery voltage level 9V < Battery voltage level <16V
44	6Speed clutch control solenoid valve	-	Output	0V/Battery voltage level 9V < Battery voltage level <16V
45	Line pressure control solenoid valve	-	Output	0V/Battery voltage level 9V < Battery voltage level <16V
46	Damper clutch control solenoid valve	-	Output	0V/Battery voltage level 9V < Battery voltage level <16V
47	4&OD Clutch control solenoid valve	-	Output	0V/Battery voltage level 9V < Battery voltage level <16V
48	-	-	-	-
49	-	-	-	-
50	27 Brake control solenoid valve	-	Output	0V/Battery voltage level 9V < Battery voltage level <16V
51	-	-	-	-
52	ON/OFF solenoid valve	-	Output	0V/Battery voltage level 9V < Battery voltage level <16V
53	-	ON OFF	Output	0V Battery voltage level
54	Input speed sensor signal NTU1		Pulse input	Low : About 0.7V, High : 1.4V Maximum/Minimum Frequency : 9kHz/0Hz
55	Middle speed sensor signal NTU2		PulseInput	Low : About 0.7V, High : 1.4V Maximum/Minimum Frequency : 9kHz/0Hz
56	Output speed sensor signal NAB		PulseInput	Low : About 0.7V, High : 1.4V Maximum/Minimum Frequency : 9kHz/0Hz
57	-	-	-	-
58	-	-	-	-
59	-	-	-	-
60	-	-	-	-
61	Sports mode select switch	Sports mode Other	Input	0V/Battery voltage level 9V < Battery voltage level <16V
62	-	-	-	-
63	-	-	-	-

64		-	-	-	-
65	CAN communication line (LOW)	-	-	-	-
66		-	-	-	-
67		-	-	-	-
68		-	-	-	-
69		-	-	-	-
70	Solenoid supply power 2	-	Power	Battery voltage level 9V < Battery voltage level <16V	
71		-	-	-	
72		-	-	-	
73	Solenoid supply power (4&OD/C,35R/C,6/C,L/P)	-	Power	Battery voltage level 9V < Battery voltage level <16V	
74		-	-	-	
75		-	-	-	
76		-	-	-	
77		-	-	-	
78		-	-	-	
79		-	-	-	
80		-	-	-	
81		-	-	-	
82		-	-	-	
83		-	-	-	
84		-	-	-	
85		-	-	-	
86		-	-	-	
87	CAN communication line (High)	-	-	-	
88					
89					
90					
91					
92		-	-	-	
93	Output speed sensor power	ON OFF	Output	About 9V voltage level 0V	
94					

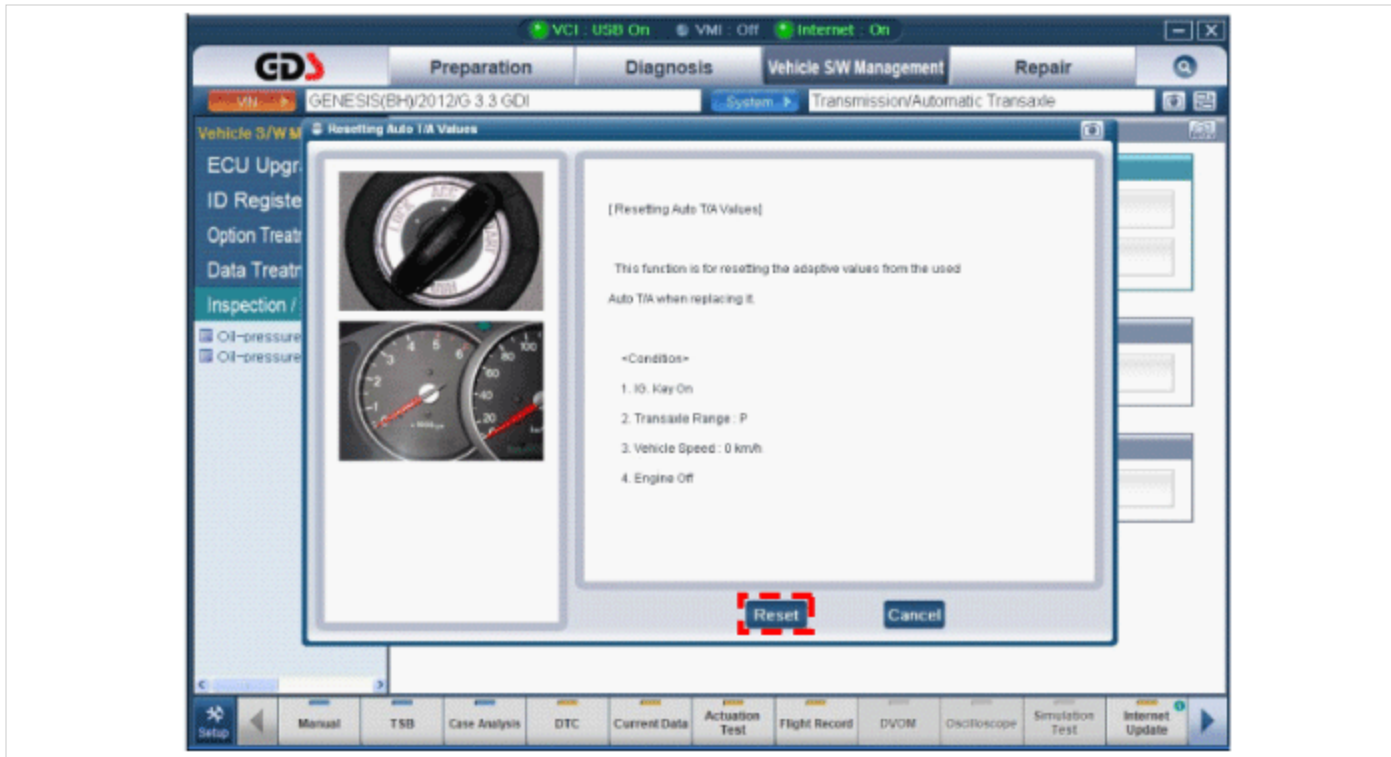


Installation

1. Installation is reverse of removal.

⚠ CAUTION

- A. In the case of the vehicle equipped with immobilizer or button engine start system, perform "Key Teaching" procedure together. (Refer to "Immobilizer" or "Button Engine Start System" in BE group).
- B. After exchanging TCM, input the EOL (End of line).
(Refer to "Repair procedures" in this group)
- C. When replacing the TCM, reset the automatic transmissions values by using the GDS.
- D. Perform TCM learning after replacing the TCM.



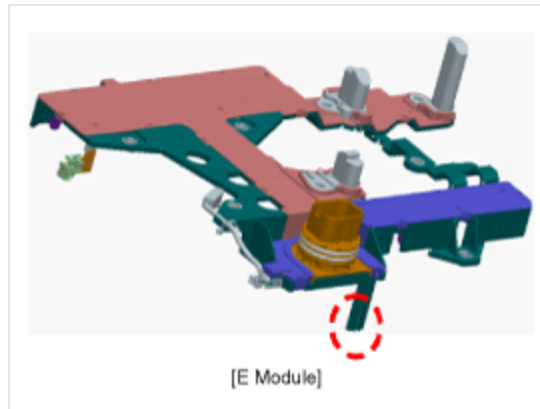
Automatic Transaxle System



Description

Transaxle oil temperature sensor monitors the automatic transaxle fluid's temperature and conveys the readings to TCM.

It is an NTC (Negative Thermal Coefficient) sensor whose resistance has an inversely proportional relationship with the temperature level. Data produced by this sensor is used to identify damper clutch activation and deactivation zones within the low temperature and high temperature range and to compensate hydraulic pressure levels during gear changes.



Automatic Transaxle System



Specifications

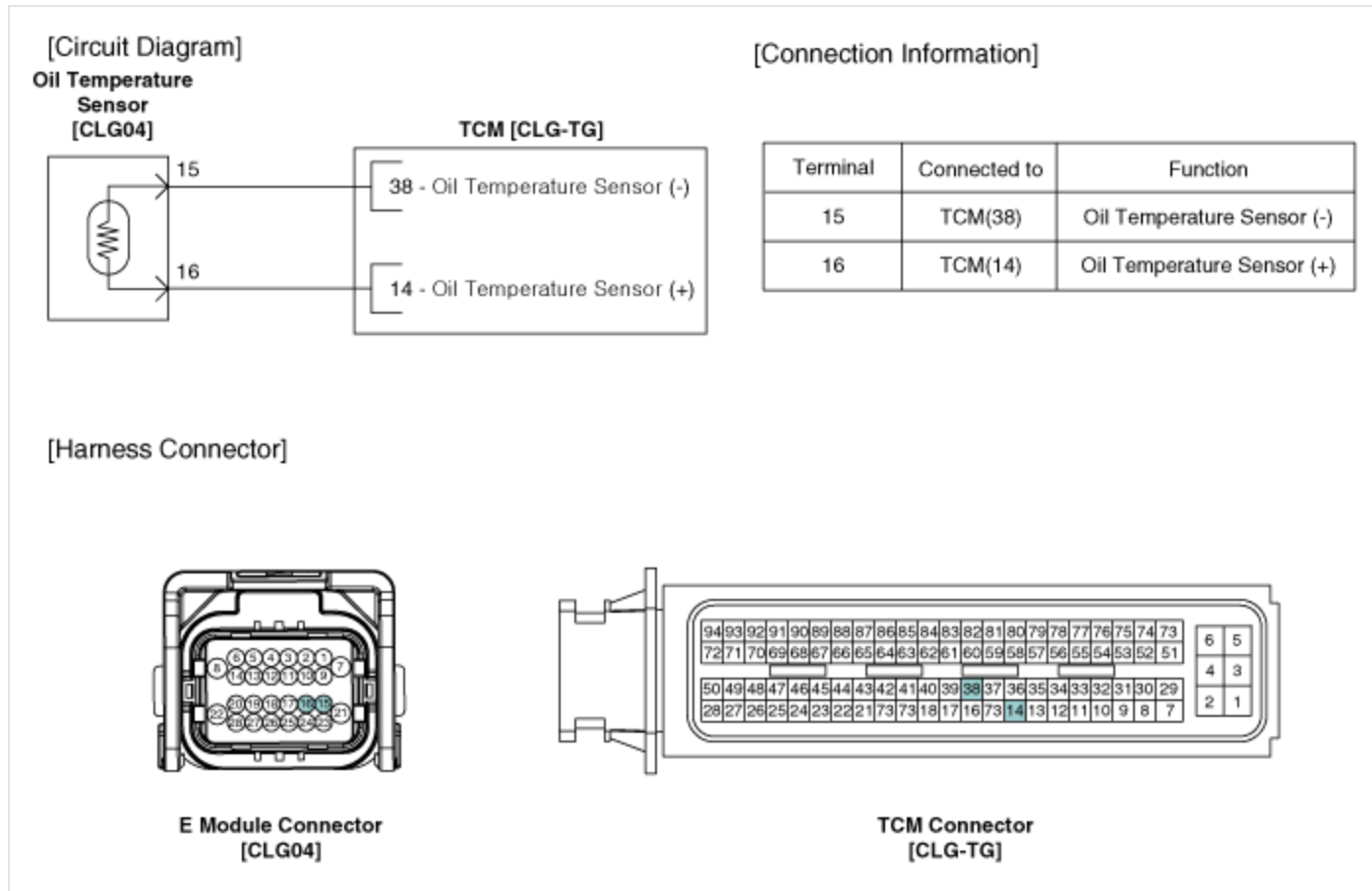
▷ Type: Negative Thermal Coefficient Type

Temp. [(°C)°F]	Resistance (kΩ)
(-40)-40	139.5
(-20)-4.0	47.4
(0)32.0	18.6
(20)68.0	8.1
(40)104.0	3.8
(60)140.0	1.98
(80)176.0	1.08
(100)212.0	0.63
(120)248.0	0.38
(140)284.0	0.25
(150)302.0	0.16

Automatic Transaxle System



Circuit Diagram



Automatic Transaxle System



Inspection

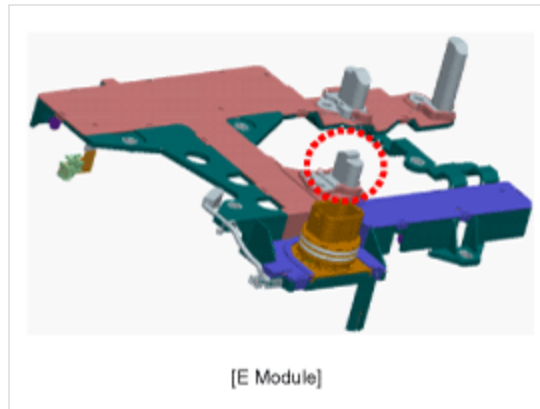
1. Turn ignition switch OFF.
2. Disconnect the E Module connector.
3. Measure resistance between sensor signal terminal and sensor ground terminal.
4. Check that the resistance is within the specification.

Automatic Transaxle System



Description

The output speed sensor is a vital unit that measures the rate of rotation of the transaxle's turbine shaft and output shaft, and delivers the readings to the TCM. The sensor provides critical input data that's used in feedback control, damper clutch control, gear setting control, line pressure control, clutch activation pressure control, and sensor fault analysis.



Automatic Transaxle System



Specifications

- ▷ Type: Hall effect sensor
- ▷ Specifications

Operation condition (°C)°F		((-)40~150) -40~302
Air gap(mm)in.		1.3(0.0512)
Output voltage	High	1.4
	Low	0.7

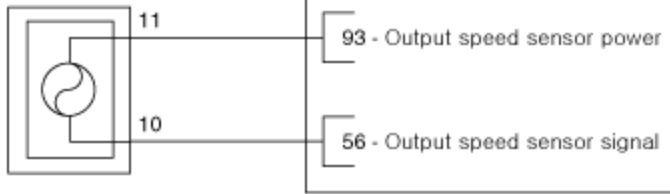
Automatic Transaxle System



Circuit Diagram

[Circuit Diagram]

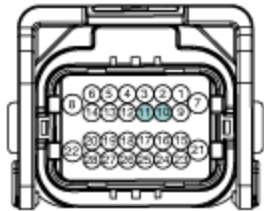
Output Speed Sensor [CLG04]



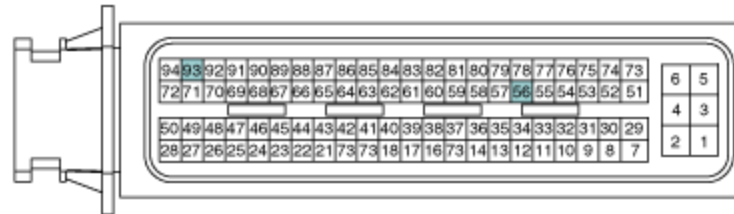
[Connection Information]

Terminal	Connected to	Function
11	TCM(93)	Output speed sensor power
10	TCM(56)	Output speed sensor signal

[Harness Connector]



E Module Connector [CLG04]



TCM Connector [CLG-TG]

Automatic Transaxle System



Inspection

1. Check signal waveform of output speed sensor using the GDS.

Specification: Refer to "Signal Wave Form" section.

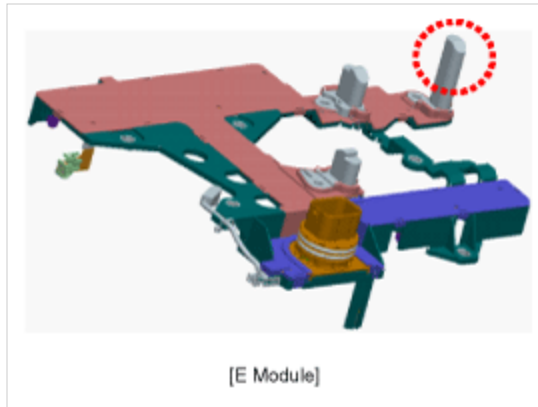


Automatic Transaxle System



Description

Input speed sensor is a vital unit that measures the rate of rotation of the input shaft inside the transaxle and delivers the readings to the TCM. The sensor provides critical input data that's used in feedback control, damper clutch control, gear setting control, line pressure control, clutch activation pressure control, and sensor fault analysis.



Automatic Transaxle System



Specifications

- ▷ Type: Hall effect sensor
- ▷ Specifications

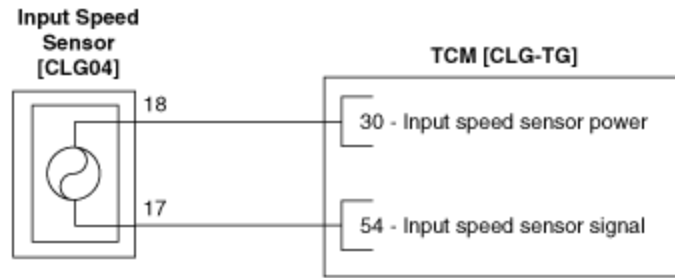
Operation condition (°C)°F		((-)40~150) -40~302
Air gap(mm)in.		1.3(0.0512)
Output voltage	High	1.4
	Low	0.7

Automatic Transaxle System



Circuit Diagram

[Circuit Diagram]



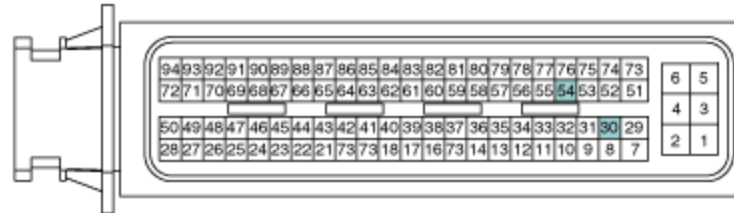
[Connection Information]

Terminal	Connected to	Function
18	TCM(30)	Input speed sensor power
17	TCM(54)	Input speed sensor signal

[Harness Connector]



E Module Connector [CLG04]



TCM Connector [CLG-TG]

Automatic Transaxle System



Inspection

1. Check signal waveform of Input speed sensor using the GDS.

Specification: Refer to "Signal Wave Form" section.

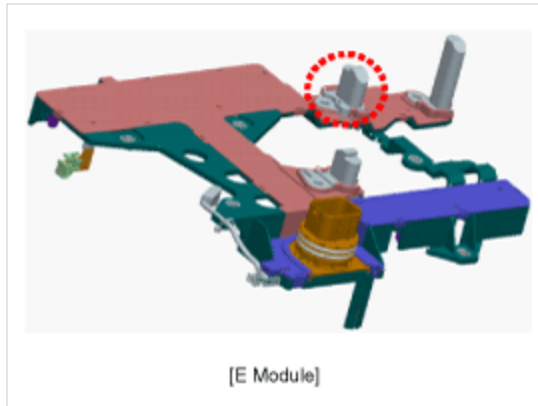


Automatic Transaxle System



Description

Middle speed sensor is a vital unit that measures the rate of rotation of the input shaft inside the transaxle and delivers the readings to the TCM.



Automatic Transaxle System



Specifications

- ▷ Type: Hall effect sensor
- ▷ Specifications

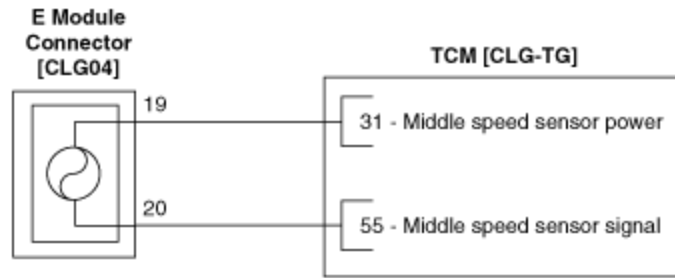
Operation condition (°C)°F		((-40~150)) -40~302
Air gap(mm)in.		1.3(0.0512)
Output voltage(V)	High	1.4
	Low	0.7

Automatic Transaxle System



Circuit Diagram

[Circuit Diagram]



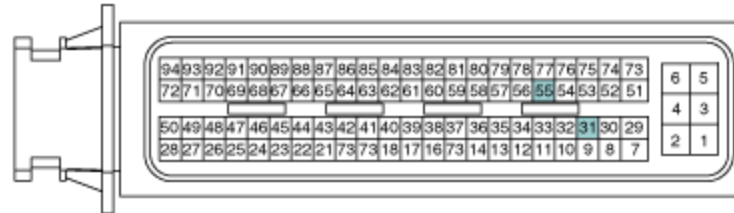
[Connection Information]

Terminal	Connected to	Function
19	TCM(31)	Middle speed sensor power
20	TCM(55)	Middle speed sensor signal

[Harness Connector]



E Module Connector [CLG04]



TCM Connector [CLG-TG]

Automatic Transaxle System



Inspection

1. Check signal waveform of middle speed sensor using the GDS.

Specification: Refer to "Signal Wave Form" section.

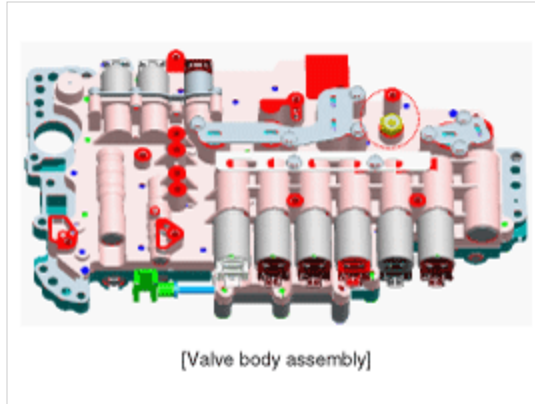


Automatic Transaxle System



Description

Pressure switch is attached to the valve body. This check the production of hydraulic.



Automatic Transaxle System



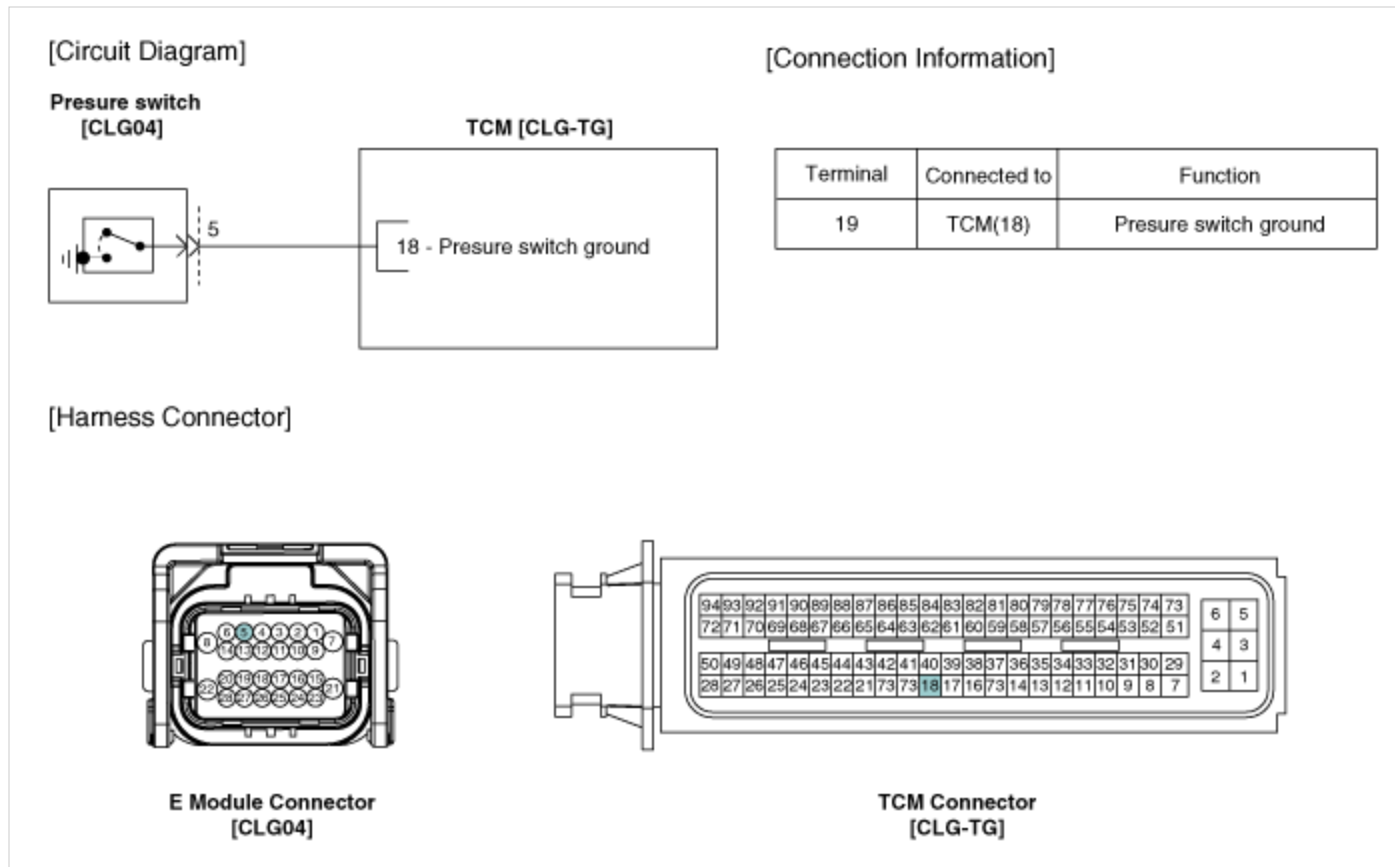
Specifications

	Specifications (20°C(68°F))
OFF => ON	146 ± 40 kPa
ON => OFF	50 kPa

Automatic Transaxle System



Circuit Diagram



Automatic Transaxle System



Installation

1. Install in the reverse order of removal.

NOTICE

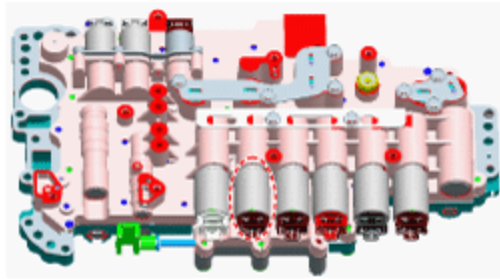
- Adding Automatic Transaxle Fluid(ATF).
(Refer to Hydraulic System - " Fluid ")

Automatic Transaxle System



Description

6 Clutch control solenoid valve is attached to the valve body. This variable force solenoid valve directly controls the hydraulic pressure inside the 6 Clutch.



[Valve body assembly]

Automatic Transaxle System



Specifications

Direct control VFS[6/C]

▷ Control type : Normal low type

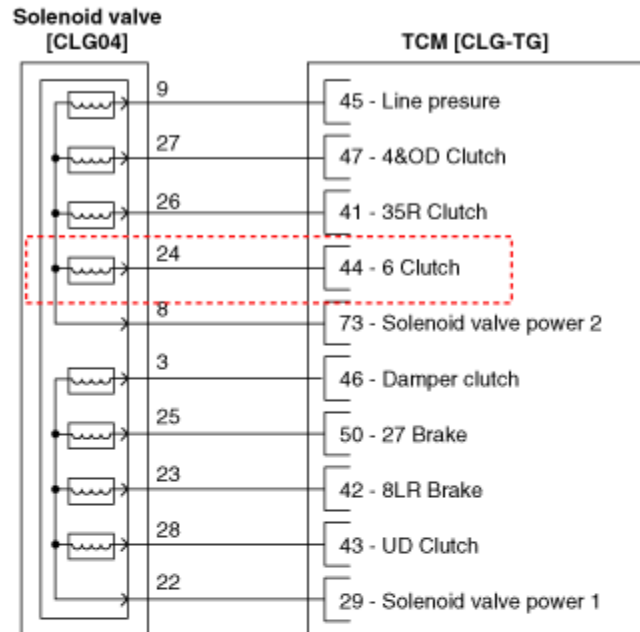
Control Pressure kpa (kgf/cm ² , psi)	0~1569.06 (0~16,0~227.57)
Current value(mA)	0~1100
Internal resistance(Ω)	5.0~5.6

Automatic Transaxle System



Circuit Diagram

[Circuit Diagram]



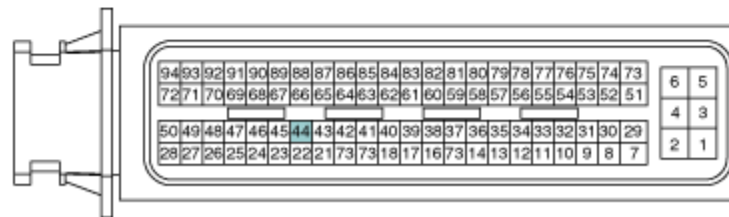
[Connection Information]

Terminal	Connected to	Function
9	TCM(45)	Line pressure control
27	TCM(47)	4&OD Clutch control
26	TCM(41)	35R Clutch control
24	TCM(44)	6 Clutch control
8	TCM(73)	Solenoid valve power 2
3	TCM(46)	Damper clutch control
25	TCM(50)	27 Brake control
23	TCM(42)	8LR Brake control
28	TCM(43)	UD Clutch control
22	TCM(29)	Solenoid valve power 1

[Harness Connector]



E Module Connector
[CLG04]



TCM Connector
[CLG-TG]



Inspection

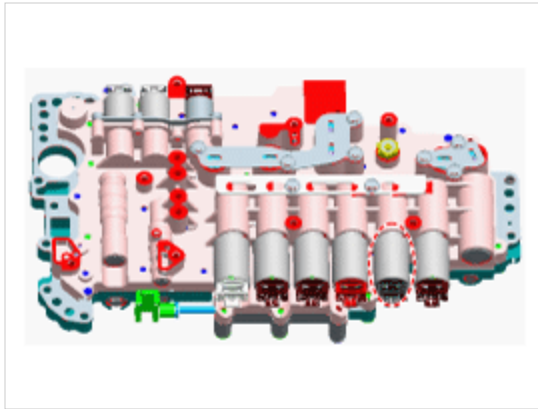
1. Turn ignition switch OFF.
2. Disconnect the E Module connector.
3. Measure resistance between valve signal terminal and valve ground terminal.
4. Check that the resistance is within the specification.

Automatic Transaxle System



Description

4&OD Clutch control solenoid valve is attached to the valve body. This variable force solenoid valve directly controls the hydraulic pressure inside the 4&OD Clutch.



Automatic Transaxle System



Specifications

Direct control VFS[4&OD/C]

▷ Control type : Normal low type

Control Pressure kpa (kgf/cm ² , psi)	0~1569.06 (0~16,0~227.57)
Current value(mA)	0~1100
Internal resistance(Ω)	5.0~5.6

Automatic Transaxle System



Circuit Diagram