

ADDITIONAL SERVICE WHEN REPLACING CONTROL VALVE OR TRANSAXLE ASSEMBLY

< BASIC INSPECTION >

[CVT: RE0F11A]

ADDITIONAL SERVICE WHEN REPLACING CONTROL VALVE OR TRANSAXLE ASSEMBLY

Description

INFOID:0000000015083201

When replacing the control valve or transaxle assembly, perform the following work. For work procedure, refer to [TM-143. "Work Procedure"](#).

ERASING, LOADING AND STORING OF CALIBRATION DATA

- The TCM acquires calibration data (individual characteristic value) of each solenoid that is stored in the ROM assembly (in the control valve). This enables the TCM to perform accurate control. For this reason, after the control valve or transaxle assembly is replaced, it is necessary to erase the calibration data previously stored in TCM, to load new calibration data, and to store them.

ERASING THE LEARNED VALUE DATA

- TCM learns indicated pressure for appropriate control of the transaxle assembly and records the learned values. For this reason, the learned values stored in TCM must be erased after replacing a transaxle assembly.

ERASING CVT FLUID DEGRADATION LEVEL DATA

- TCM records the degradation level of the CVT fluid calculated from the vehicle driving status. Therefore, if the transaxle assembly is replaced, it is necessary to erase the CVT fluid degradation level data recorded by TCM.

CLUTCH LEARNING

- Clutch learning must be performed to prevent shock or slip from occurring while shifting gears.

Work Procedure

INFOID:0000000015083202

1. INITIALIZE TCM

With CONSULT

1. Set parking brake.
2. Turn ignition switch ON.
3. Select "Work Support" in "TRANSMISSION".
4. Select "ERASE MEMORY DATA".
5. While maintaining the conditions below, touch "Start".
 - Vehicle stop status
 - With engine stopped
 - Selector lever: "R" position
 - Accelerator pedal: Depressed

NOTE:

Select "Start" and complete within approximately 20 seconds.

Is "COMPLETED" displayed?

YES >> GO TO 2.

NO >> Turn the ignition switch OFF and wait for a minimum of 10 seconds then perform the work again.

2. CHECK AFTER TCM IS INITIALIZED

With CONSULT

1. Turn ignition switch OFF with the selector lever in "R" position and wait for 10 seconds or more.
2. Turn ignition switch ON with the selector lever in "R" position.

CAUTION:

Never start the engine.

3. Select "Special function" in "TRANSMISSION".
4. Select "CALIB DATA".
5. Check that indicated value of "CALIB DATA" is equal to the value shown in the following table.

Item name	Display value	Item name	Display value
UNIT CLB ID1	00	MAP NO HC/RB	00
UNIT CLB ID2	00	MAP NO L/B	00

ADDITIONAL SERVICE WHEN REPLACING CONTROL VALVE OR TRANSAXLE ASSEMBLY

< BASIC INSPECTION >

[CVT: RE0F11A]

Item name	Display value	Item name	Display value
UNIT CLB ID3	00	OFFSET2 LU	0
UNIT CLB ID4	00	OFFSET2 PL	0
UNIT CLB ID5	00	OFFSET2 PRI	0
UNIT CLB ID6	00	OFFSET2 H/R	0
UNIT CLB ID7	00	OFFSET2 L/B	0
UNIT CLB ID8	00	INIT OFFSET H/R A	0
UNIT CLB ID9	00	INIT OFFSET H/R B	0
UNIT CLB ID10	00	INIT OFFSET H/R C	0
UNIT CLB ID11	00	INIT OFFSET H/R D	0
GAIN LU	256	INIT OFFSET H/R E	0
GAIN PL	256	INIT OFFSET H/R F	0
GAIN PRI	256	INIT OFSET LB A	0
GAIN HC/RB	256	INIT OFSET LB B	0
GAIN L/B	256	INIT OFSET LB C	0
OFFSET LU	0	INIT OFSET LB D	0
OFFSET PL	0	INIT OFSET LB E	0
OFFSET PRI	0	INIT OFSET LB F	0
OFFSET HC/RB	0	LB INITIALIZE LEARN	-1
OFFSET L/B	0	HC INITIALIZE LEARN	-1
MAP NO LU	00	LB INITIALIZE TEMP	FF
MAP NO PL	00	LB INITIALIZE TEMP	FF
MAP NO PRI	00		

Is the indicated value of "CALIB DATA" equal to the value shown in the table?

YES >> GO TO 3.

NO >> GO TO 1.

3. LOAD CALIBRATION DATA

- Shift the selector lever to the "P" position.
- Check that "P" is displayed on shift position indicator on combination meter.

NOTE:

Displayed approximately 4 – 5 seconds after the selector lever is moved to the "P" position.

Does shift position indicator display "P"?

YES >> GO TO 4.

NO >> GO TO 6.

4. STORE CALIBRATION DATA

- Turn ignition switch OFF and wait for 5 seconds.
- Turn ignition switch ON.

Does the shift position indicator display "P" at the same time when turning ON the ignition switch?

YES >> GO TO 5.

NO >> Check harness between battery and TCM harness connector terminal.

5. ERASE THE CVT FLUID DEGRADATION LEVEL DATA

With CONSULT

- Select "WORK SUPPORT" in "TRANSMISSION".
- Select "CONFORM CVTF DETERIORATION".
- Touch "Clear".

>> GO TO 7.

ADDITIONAL SERVICE WHEN REPLACING CONTROL VALVE OR TRANSAXLE ASSEMBLY

< BASIC INSPECTION >

[CVT: RE0F11A]

6. DETECT MALFUNCTIONING ITEMS

Check the following items:

- Harness between the TCM and the ROM assembly inside the transaxle assembly is open or shorted.
- Disconnected, loose, bent, collapsed, or otherwise abnormal connector housing terminals

Is the inspection result normal?

YES >> GO TO 1.

NO >> Repair or replace the malfunctioning parts.

7. CONFIRMATION OF WORK SUPPORT ITEM

With CONSULT

Check if “Auxiliary gearbox clutch point learning” is displayed in “WORK SUPPORT” mode.

Is “Auxiliary gearbox clutch point learning” displayed?

YES >> GO TO 8.

NO >> GO TO 9.

8. CLUTCH POINT LEARNING-1

With CONSULT

Perform “Auxiliary gearbox clutch point learning”.

>> WORK END

9. CLUTCH LEARNING-2

WITH IDLE NEUTRAL CONTROL

1. Start the engine and warm up CVT fluid to 50°C (122°F).

NOTE:

Confirm CVT fluid temperature by “FLUID TEMP” in “Data Monitor”.

2. Turn air conditioner OFF.
3. Shift the selector lever to P position and then stop the engine and wait for 5 seconds.
4. Start the engine and wait for 5 seconds.
5. Stop the engine and wait for 30 seconds.
6. Perform Step 4 to Step 5 two times. (Total: Three times)
7. Start the engine.
8. Wait for 30 seconds at idling condition.
9. Shift the selector lever to D position.
10. Drive the vehicle at 10 km/h (7 MPH) or more.
11. Stop the vehicle in idle neutral control operating condition and wait for 30 seconds.
For idling neutral control operating condition, refer to Service Manual.
12. Perform Step 10 to Step 11 again. (Total: Two times)
13. Accelerate the vehicle from 0 km/h (0 MPH) to 45 km/h (28 MPH) at low throttle (0.5/8 – 1/8).
14. Stop the vehicle and shift the selector lever to P position.
15. Stop the vehicle at 5 seconds or more and then restart the engine.
16. Shift the selector lever to D position.
17. Perform Step 13 to Step 16 four times. (Total: Five times)
18. Drive the vehicle and check that no shock occurs while shifting gears.

WITHOUT IDLE NEUTRAL CONTROL

1. Start the engine and warm up CVT fluid to 50°C (122°F).

NOTE:

Confirm CVT fluid temperature by “FLUID TEMP” in “Data Monitor”.

2. Turn air conditioner OFF.
3. Shift the selector lever to P position and then stop the engine and wait for 5 seconds.
4. Start the engine and wait for 5 seconds.
5. Stop the engine and wait for 30 seconds.
6. Perform Step 4 to Step 5 two times. (Total: Three times)
7. Start the engine.
8. Shift the selector lever to D position.
9. Accelerate the vehicle from 0 km/h (0 MPH) to 65 km/h (40 MPH) at low throttle (0.5/8 – 1/8).
10. Decelerate the vehicle to 30 km/h (18 MPH) or less without using brakes.

ADDITIONAL SERVICE WHEN REPLACING CONTROL VALVE OR TRANSAXLE ASSEMBLY

< BASIC INSPECTION >

[CVT: RE0F11A]

-
11. Stop the vehicle and shift the selector lever to P position.
 12. Stop the engine and wait for 5 seconds or more.
 13. Restart the engine.
 14. Perform Step 8 to Step 13 four times. (Total: Five times)
 15. Shift the selector lever to D position.
 16. Accelerate the vehicle from 0 km/h (0 MPH) to 45 km/h (28 MPH) at low throttle (0.5/8 – 1/8).
 17. Stop the vehicle and shift the selector lever to P position.
 18. Stop the vehicle at 5 seconds or more and then restart the engine.
 19. Perform Step 15 to Step 18 four times. (Total: Five times)
 20. Drive the vehicle and check that no shock occurs while shifting gears.

>> WORK END