2005 Dodge or Ram Truck RAM 2500 Truck 4WD L6-5.9L DSL Turbo VIN C
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QUICK LEARN PROCEDURE

TCM QUICK LEARN
The quick learn procedure requires the use of the scan tool.

This program allows the electronic transmission system to recalibrate itself. This will provide the proper transmission operation. The quick learn procedure should be performed if any of the following procedures are performed:
- Transmission Assembly Replacement
- Transmission Control Module Replacement
- Solenoid Pack Replacement
- Clutch Plate and/or Seal Replacement
- Valve Body Replacement or Recondition

To perform the Quick Learn Procedure, the following conditions must be met:
- The brakes must be applied
- The engine speed must be **above 500 rpm**
- The throttle angle (TPS) must be **less than 3 degrees**
- The shift lever position must stay in PARK until prompted to shift to overdrive
- The shift lever position must stay in overdrive after the Shift to Overdrive prompt until the scan tool indicates the procedure is complete.
- The calculated oil temperature must be **above 60° and below 200°**

DRIVE LEARN
When a transmission is repaired and a Quick Learn procedure has been performed on the Transmission Control Module (TCM), the following Drive Learn procedure can be performed to fine tune any shifts which are particularly objectionable.

NOTE: It is not necessary to perform the complete Drive Learn procedure every time the TCM is Quick Learned. Perform only the portions which target the objectionable shift.

LEARN A SMOOTH 1ST NEUTRAL TO DRIVE SHIFT
Perform this procedure only if the complaint is for a delayed or harsh shift the first time the transmission is put into gear after the vehicle is allowed to set with the engine not running for at least **10 minutes**. Use the following steps to have the TCM learn the 1st N-D UD CVI.

NOTE: The transmission oil temperature must be **between 80 - 110° F (27 - 43° C)**.

1. Start the engine only when the engine and ignition have been off for at least **ten (10) minutes**.
2. With the vehicle at a stop and the service brake applied, record the 1st N-D UD CVI while performing a Neutral to Drive shift. The 1st N-D UD CVI accounts for air entrapment in the UD clutch that may occur after the engine has been off for a period of time.
3. Repeat Step 1 and Step 2 until the recorded 1st N-D UD CVI value stabilizes.

NOTE: It is important that this procedure be performed when the transmission temperature is **between 80 -110° F (27 - 43° C)**. If this procedure takes too long to complete fully for the allowed transmission oil temperature, the vehicle may be returned to the customer with an explanation that the shift will improve daily during normal vehicle usage. The TCM also learns at higher oil temperatures, but these values (line pressure correction values) are not available for viewing on the scan tool.

LEARN A SMOOTH NEUTRAL TO DRIVE GARAGE SHIFT
Perform this procedure if the complaint is for a delayed or harsh shift when the transmission is put into gear after the vehicle has had its first shift. Use the following steps to have the TCM learn the Norm N-D UD CVI.

NOTE: The transmission oil temperature must be **between 80 - 110° F (27 - 43° C)** to learn the UD CVI. Additional learning occurs at temperatures **as low as 0° F** and as high as **200° F**. This procedure may be performed at any temperature that experiences poor shift quality. Although the UD CVI may not change, shift quality should improve.

1. Start the vehicle engine and shift to drive.
2. Move the vehicle forward to a speed of at least **16 km/h (10 MPH)** and come to a stop. This ensures no air is present in the UD hydraulic circuit.
3. Perform repeated N-D shifts at a stop while pausing in Neutral for at least **2-3 seconds** and monitor Norm N-D UD CVI volume until the value stabilizes. The value will change during the N-D shift. This is normal since the UD value is different for the N-D shift then the normal value shown which is used for 4-3 coastdown and kickdowns. Perform repeated shifts in this temperature range until the Norm N-D UD CVI value stabilizes and the N-D shifts become smooth.

LEARN THE 1ST 2-3 SHIFT AFTER A RESTART OR SHIFT TO REVERSE
Use the following steps to have the TCM learn the 1st 2-3 shift OD CVI.

NOTE: The transmission oil temperature must be **above 80° F (27° C)**.

1. With the vehicle engine running, select reverse gear for over **2 seconds**.
2. Shift the transmission to Drive and accelerate the vehicle from a stop at a steady **15 degree** throttle opening and perform a 2-3 shift while noting the 1st 2-3 OD CVI.
3. Repeat Step 1 and Step 2 until the 1st 2-3 upshift becomes smooth and the 1st 2-3 OD CVI stabilizes.

LEARN A SMOOTH 2-3 AND 3-4 UPSHIFT

NOTE: The transmission oil temperature must be **above 110° F (43° C)**.

Use the following steps to have the TCM learn the OD and 4C CVI's.

1. Accelerate the vehicle from a stop at a steady 15 degree throttle opening and perform multiple 1-2, 2-3, and 3-4 upshifts. The 2nd 2-3 shift following a restart or shift to reverse will be shown during the shift as a value between the 1st 2-3 OD CVI and the normal OD CVI. Updates to the normal OD CVI will occur after the 2nd shift into 3rd gear, following a restart or shift to reverse.
2. Repeat Step 1 until the 2-3 and 3-4 shifts become smooth and the OD and 4C CVI become stable.

LEARN A SMOOTH 4-3 COASTDOWN AND PART THROTTLE 4-3 KICKDOWN

NOTE: The transmission oil temperature must be **above 110° F (43° C)**.

Use the following steps to have the TCM learn the UD shift volume.

1. At a vehicle speed **between 64-97 km/h (40-60 MPH)**, perform repeated 4-3 kickdown shifts.
2. Repeat Step 1 until the UD volume becomes somewhat stable and the shift becomes smooth.

LEARN A SMOOTH 1-2 UPSHIFT AND 3-2 KICKDOWN

Use the following steps to have the TCM learn the 2C shift volume.

NOTE: The transmission oil temperature must be **above 110° F (43° C)**.

1. With a vehicle speed **below 48 km/h (30 MPH)** and the transmission in 3rd gear, perform multiple 3-2 kickdowns.
2. Repeat Step 1 until the 3-2 kickdowns become smooth and the 2C CVI becomes stable.

LEARN A SMOOTH MANUAL 2-1 PULLDOWN SHIFT AS WELL AS A NEUTRAL TO REVERSE SHIFT

NOTE: The transmission oil temperature must be **above 110° F (43° C)**.

Use the following steps to have the TCM learn the LR volume.

1. With the vehicle speed around **40-48 km/h (25-30 MPH)** in Manual 2nd, perform manual pulldowns to Low or 1st gear at closed throttle.
2. Repeat Step 1 until the LR CVI becomes stable and the manual 2-1 becomes smooth.

LEARN A SMOOTH NEUTRAL TO REVERSE SHIFT

NOTE: The transmission oil temperature must be **above 110° F (43° C)**.

1. With the vehicle at a stop, perform Neutral to Reverse shifts until the shift is smooth. An unlearned Neutral to Reverse shift may be harsh or exhibit a double bump.
2. If any of the shifts are still not smooth after the clutch volume stabilizes, an internal transmission problem may be present.

LEARN A SMOOTH 4-5 UPSHIFT

NOTE: The transmission oil temperature must be **above 110° F (43° C)**.

Use the following steps to have the TCM learn the Alt 2C CVI.

1. Accelerate the vehicle through **88 km/h (55mph)** at a steady **10-15 degree** throttle opening and perform multiple 4-5 upshifts.
2. Repeat Step 1 until the 4-5 shift become smooth and the Alt 2C CVI become stable. There is a separate 2C volume used and learned for 4-5 shifts, 2CA. It is independent of the 2C CVI learned on 3-2 kickdowns.