4L60E/4L65E

2-3 Shift Clunk

Condition
Some customers may comment on a 2-3 shift clunk noise. Typically, this clunk noise is most noticeable when
the 2-3 shift occurs under approximately 48 km/h (30 mph).

Correction
Important:
• The PCM calibrations may **REDUCE** but not **ELIMINATE** the 2-3 shift clunk.
• This bulletin only applies to the 2005 model year vehicles listed above.
• As always, make sure your TECH 2® is updated with the latest software version.

1. To determine if this calibration will help to reduce 2-3 shift clunk, use the Tech 2 to navigate to the
   transmission diagnostic section and view the 2-3 shift adapt cells.
   • If the 2-3 adapt cell values are negative, this calibration change will have minimal benefit in
     reducing the 2-3 shift clunk.
   • If the 2-3 adapt cell values are above approximately +5 psi, this calibration may provide a
     reduction in the 2-3 shift clunk.

Important: These calibrations also contain the second gear start correction as detailed in Bulletin 05-07-30-013.

2. Technicians are to reprogram the PCM with an updated software calibration. This new service calibration was
   released with TIS satellite data update version 5 or later available May 1, 2005. Refer to Service
4L60E

P0741 Set, Hard Shifts, Cruise Control Inoperative

T-Truck Applications
Bravada, Envoy, Trailblazer and Rainier applications with the 4.2L engine and a 4L60E transmission may set an intermittent P0741 DTC.

CAUSE/REPAIR:
P0741 will set if:
• TP value between 20-90%
• Gear ratio is between .89 and 1.02 (3rd gear)
• TCC duty cycle is greater than 75%
• No TP, VSS, Shift solenoid DTC’s are set
• No TCC P0742 DTC set
• TCC slip exceeds 130 RPM for more than 20 seconds

If a P0741 is set the PCM will:
• Illuminate the MIL
• Command maximum line pressure
• Command TCC off
• Inhibit 4th gear if in hot mode
• Inhibit cruise control operation
• Freeze adapts

Several items can cause this DTC to set including:
• A sticking/damaged TCC converter clutch valve
• A faulty/damaged TCC apply solenoid
• A faulty/damaged TCC PWM solenoid
• Worn/sticking/damaged regulator apply isolator valve train
• Leakage within the TCC circuit
• A faulty Torque converter
• Calibration Level

If you are working on a T-truck application, check the calibration level of your vehicle with your scan tool before inspecting for valve, solenoid or leakage issues. An updated calibration is available for some model years that corrects false P0741, P0335 and P0606 in one calibration download. The calibration numbers for this update are Trans; 12597046 Operating; 12597031. Refer to the GM calibration web site to see if and updated calibration is available for your application. http://calid.gm.com

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**4L60E**

PO741 Set, Hard Shifts, Cruise Control Inoperative (continued)

**T-Truck  4.2L**

2004/05 Trailblazer, Bravada, Envoy and Rainier applications may exhibit any or all of the following symptoms:

- P0741 set
- SES light on
- Hard shifts
- Cruise inoperative

An updated transmission calibration is available to address the above concerns. Use the GM web site to determine if your vehicle applies to the calibration change. Install the updated calibration. The updated calibration was installed at the plant, in all 4.2L T-truck applications starting September 23rd 2004.
4L60E

2002 Trailblazer/Envoy 4.2L applications shift concerns

Condition: Some T-truck applications may exhibit any or all of the following shift related concerns

- Delayed downshifts
- 1-2 shift quality
- Cold start shift quality
- Cooling fan noise

Cause/Correction: An updated calibration has been released to address the above concerns. Several different calibrations have been released so be sure you have the latest transmission calibration installed prior to attempting to repair any of the concerns. The latest calibration addresses all of the issues in one calibration load. Use your scan tool to identify the vehicles current software level. Access the GM calibration web site (http://calid.gm.com) or (http://calid.gm.com/vci/) to find if your vehicle has an updated calibration available.
4L60E

Shift Complaints

2002 Trailblazer/Envoy/Bravada

Several shift quality concerns have arisen with this application including:

- Hard/soft garage shifts
- Delayed downshifts
- Harsh 1-2 shifts

Several calibrations have been released to address these concerns. The latest update is calibration number 12579253. Make sure to visit the GM calibration web site at: http://calid.gm.com/vci/
Some 1999 vehicles equipped with the 4L60E or 4L80E transmissions may experience harsh 1–2 upshifts. This problem may be accompanied by one or both of these other problems:

- Hard 1–2 upshifts at heavy throttle.
- Shift may seem long with, a bump at the end.

One possibility for this problem may be a line pressure variation during the shift.

The correction is to reflash the VCM with an updated calibration. These calibrations include changes in the line pressure tables.

### Calibration Update: Hard 1–2 Upshifts

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Code P0756 Set, Erratic Shifting

C/K/N Truck and Y car

P0756 is one of the DTC’s that is used to determine if a mechanical/hydraulic problem is present in the transmission. To set a P0756 the following must occur:
P0756 Will set if:

• The PCM commands the transmission into 1st gear
• The gear ratio indicates the transmission is not in 1st gear with a measured ratio indicating the unit is in 3rd or 4th gear
• The above conditions are met for more than 1 second (Creating a 4-3-3-4 shift pattern)
  OR
• The PCM commands the transmission into 2nd gear
• The gear ratio indicates the transmission is not in 2nd gear with a measured ratio indicating the unit is in 3rd or 4th gear
• The above conditions are met for more than 2 seconds (Creating a 4-3-3-4 shift pattern)
  OR
• The PCM commands the transmission into 3rd gear
• The gear ratio indicates the transmission is not in 3rd gear with a measured ratio indicating the unit is in 1st or 2nd gear
• The above conditions are met for more than 2 seconds (Creating a 1-2-2-1 shift pattern)
  OR
• The PCM commands the transmission into 4th gear
• The gear ratio indicates the transmission is not in 4th gear with a measured ratio indicating the unit is in 1st or 2nd gear
• The above conditions are met for more than 1 second (Creating a 1-2-2-1 shift pattern)

If a P0756 is set the PCM will:
• Command 3rd gear
• Command Maximum line pressure
• Inhibit TCC
• Freeze adapts
• Illuminate the MIL
Several items can cause a P0756 including:

- A faulty/damaged/stuck/cracked 2-3 shift solenoid
- A damaged 2-3 shift solenoid O-ring
- Debris plugging or restricting AFL feed oil at orifice # 29 in the spacer plate
- Damaged/stuck 2-3 shift valve
- Damaged/stuck 2-3 shuttle valve
- Damaged/stuck 4-3 sequence 3-4 relay valves
- Damaged 3-4 clutch
- Calibration update needed for a false P0756 DTC

Check for a calibration update for this concern (new calibration available for T Truck GMC Canyon and Chevrolet Colorado) Check the GM calibration web site to see if an updated is available for your application. [http://calid.gm.com](http://calid.gm.com) If none are found inspect and repair the valves, spacer plate and solenoids as listed above.