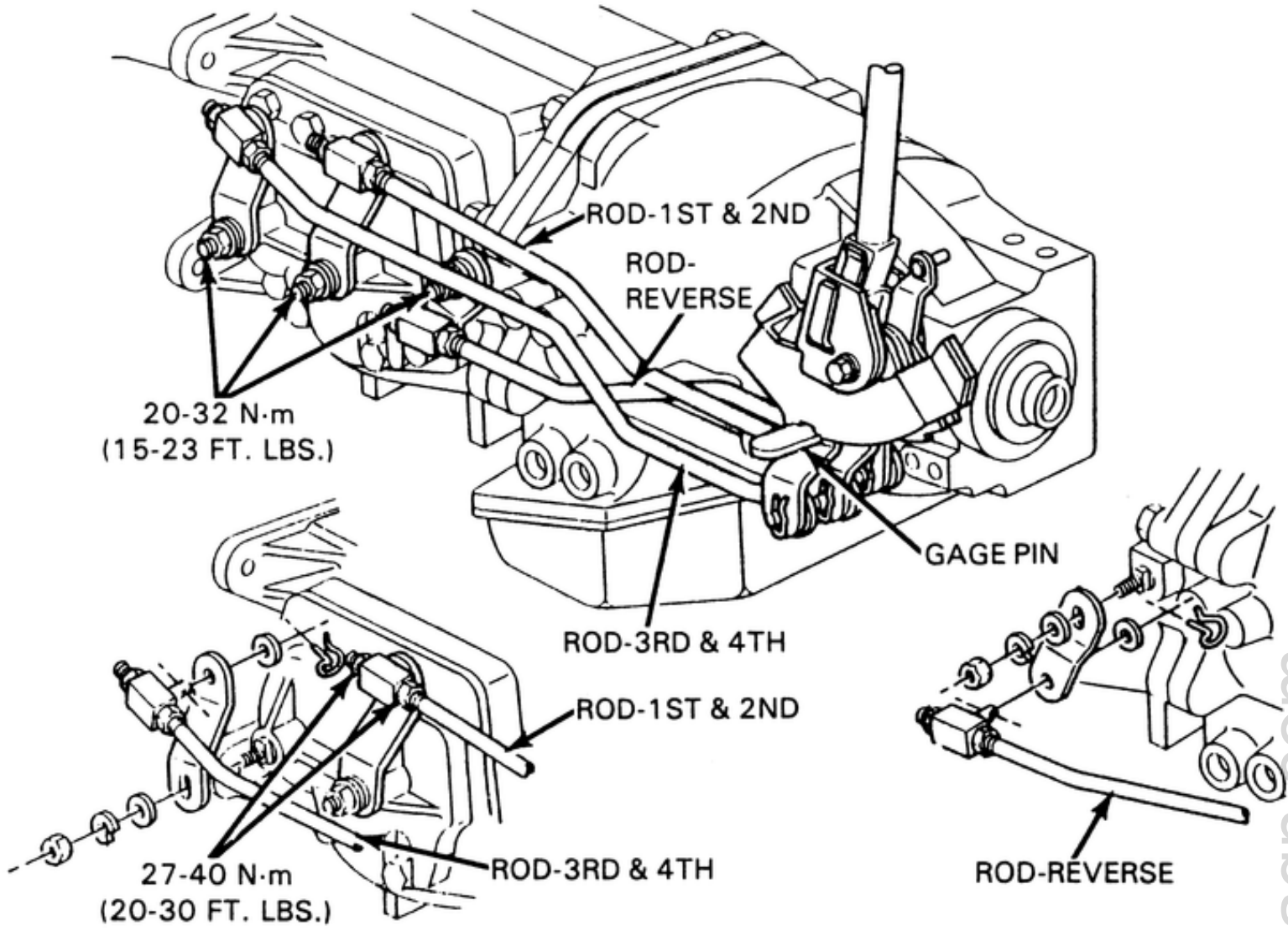
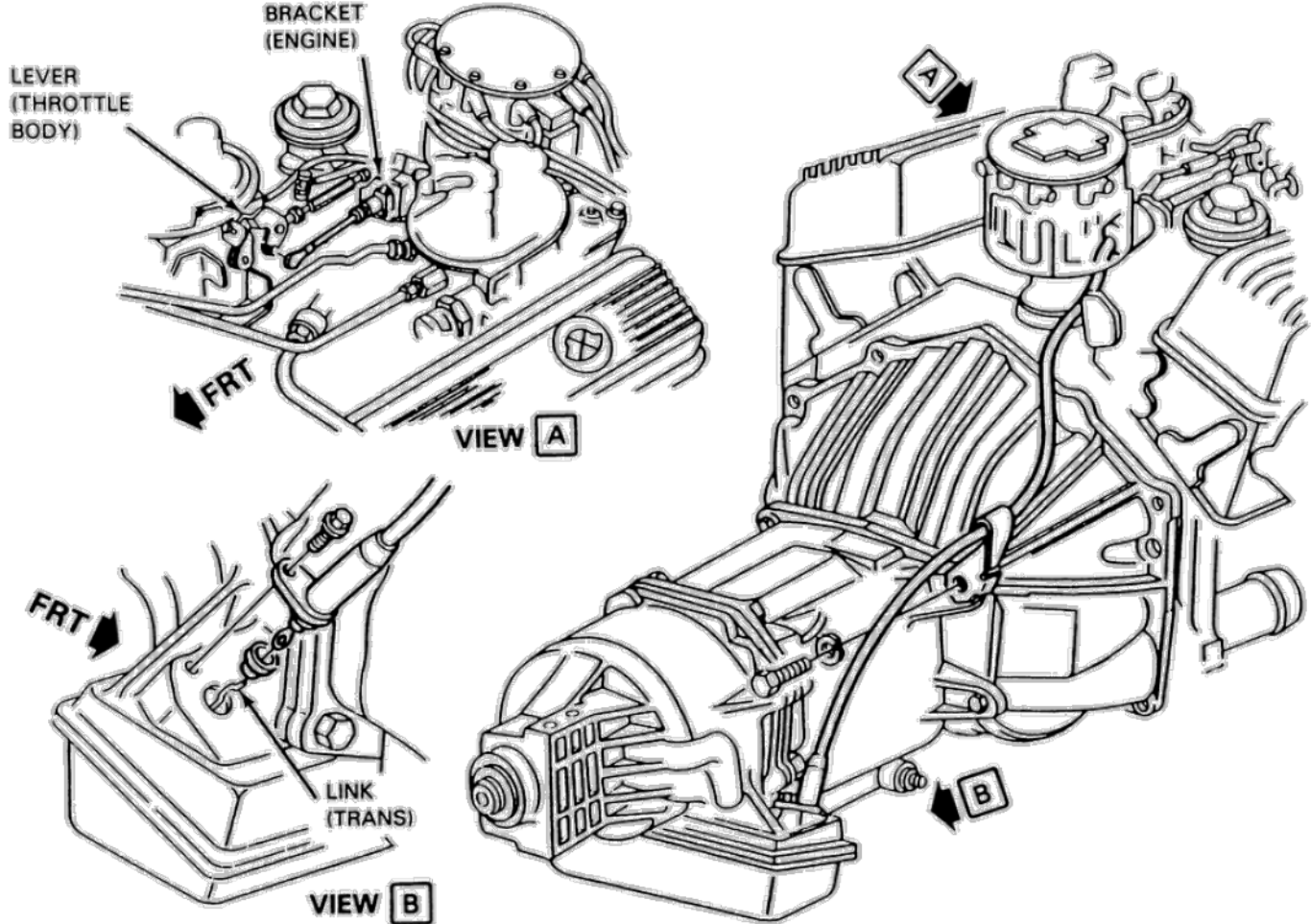






THROTTLE VALVE CABLE ADJUSTMENT & READJUSTMENT PROCEDURE

THROTTLE VALVE CABLE ADJUSTMENT PROCEDURE

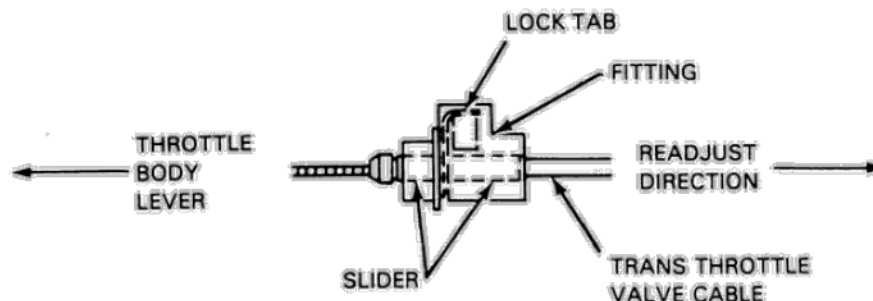
1. AFTER INSTALLATION OF CABLE TO THE TRANSMISSION, ENGINE BRACKET, AND THROTTLE LEVER, CHECK TO ASSURE THAT THE CABLE SLIDER IS IN THE ZERO OR FULLY READJUSTED POSITION. (IF NOT, REFER TO READJUSTMENT PROCEDURE.)
2. ROTATE THE THROTTLE LEVER TO THE "FULL TRAVEL STOP" POSITION TO OBTAIN A MINIMUM OF ONE CLICK ADJUSTMENT.

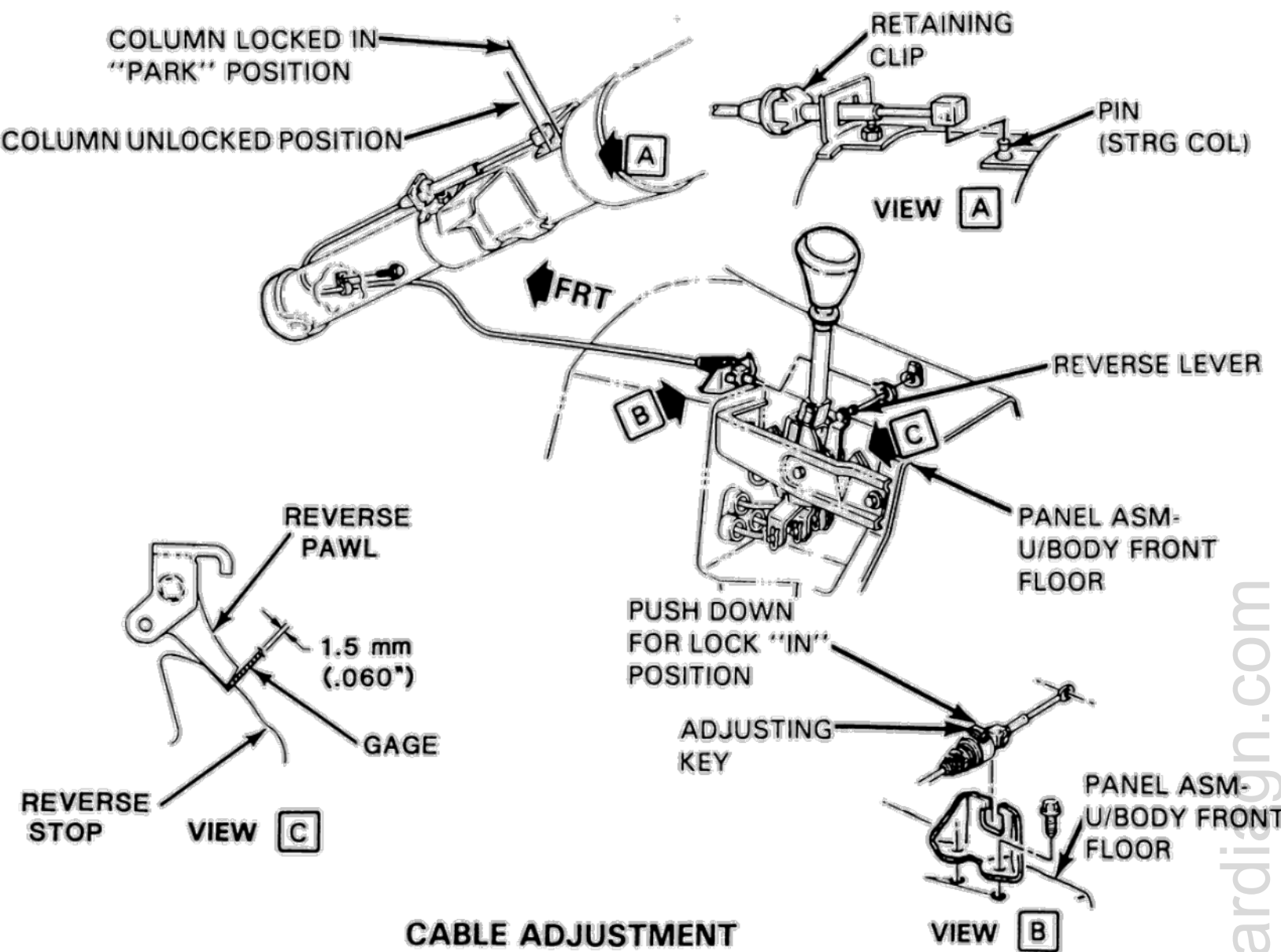
CAUTION LOCK TAB MUST NOT BE DEPRESSED DURING THIS OPERATION.

THROTTLE VALVE CABLE READJUSTMENT PROCEDURE

IN CASE READJUSTMENT IS NECESSARY BECAUSE OF INADVERTENT ADJUSTMENT BEFORE OR DURING ASSEMBLY, OR FOR REPAIR, PERFORM THE FOLLOWING:

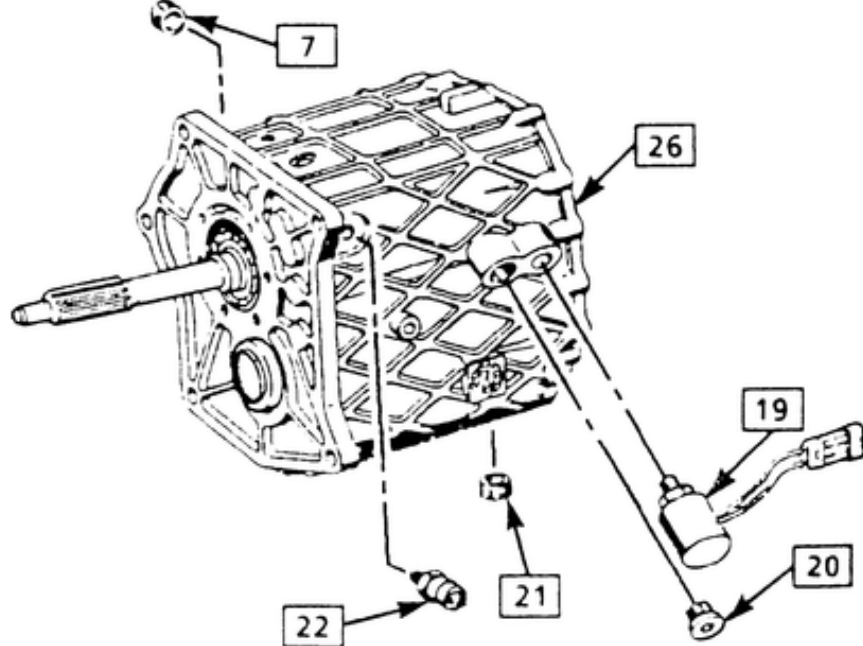
1. DEPRESS AND HOLD METAL LOCK TAB.
2. MOVE SLIDER BACK THROUGH FITTING IN DIRECTION AWAY FROM THROTTLE BODY LEVER UNTIL SLIDER STOPS AGAINST FITTING.
3. RELEASE METAL LOCK TAB.
4. REPEAT STEP 2 OF ADJUSTMENT PROCEDURE.



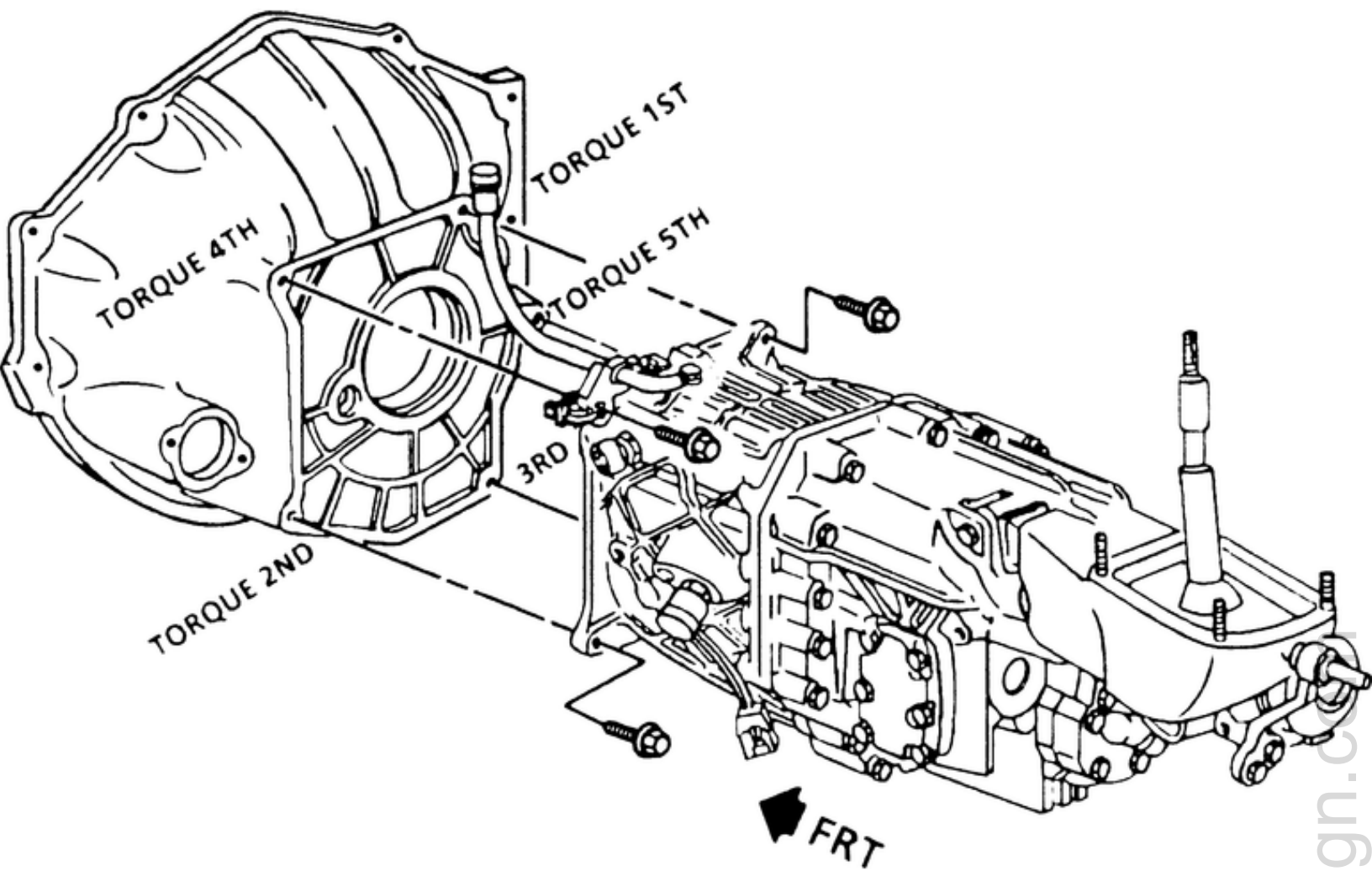


CABLE ADJUSTMENT

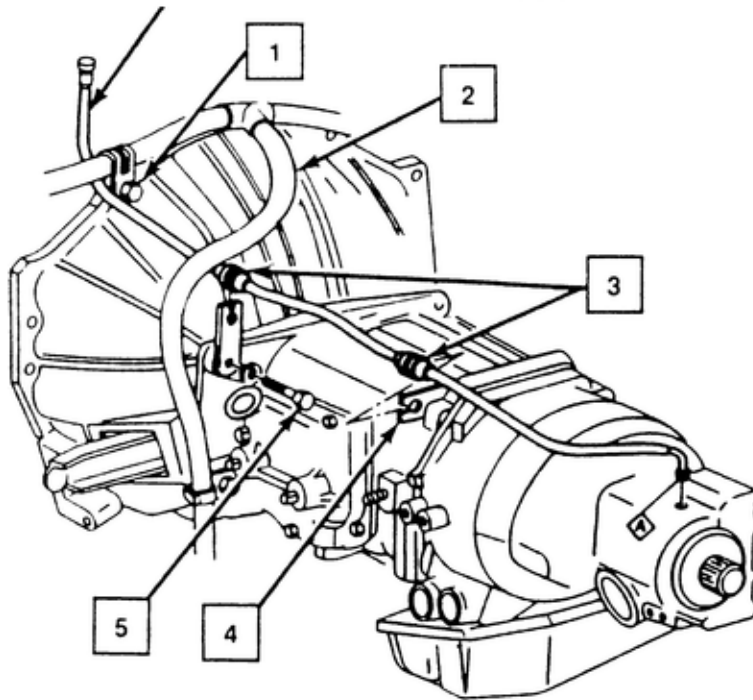
1. LIFT UP ON ADJUSTING KEY TO RELEASE CABLE.
2. PLACE STEERING COLUMN LOCK LEVER IN THE LOCK PARK POSITION.
3. SHIFT TRANSMISSION INTO REVERSE GEAR.
4. INSERT GAGE AGAINST REVERSE STOP AND PULL REVERSE LEVER UNTIL REVERSE PAWL CONTACTS GAGE.
5. PUSH DOWN ON THE ADJUSTING KEY TO SET THE CABLE.
6. REMOVE GAGE AND PULL BACK ON SHIFT LEVER AND INSURE PAWL HITS THE STOP AND LOCKS SHIFTER IN REVERSE.



- 7** FILL PLUG
- 19** COMPUTER AIDED GEAR SELECT SOLENOID
- 20** GEARSHIFT SHAFT DETENT PLUG
- 21** DRAIN PLUG
- 22** BACKUP LAMP SWITCH
- 26** TRANSMISSION FRONT CASE



NOTE ROUTE VENT TUBE FORWARD OF ECM HARNESS AND LEFT OF HARNESS BRACKET.



1. HARNESS BRACKET
 2. E.C.M. HARNESS
 3. TUBE GROMMET
 4. TRANSMISSION BRACKET
 5. BOLT
- 60-80 N·m (45-60 FT. LBS.)

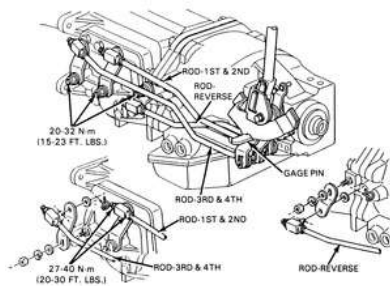
1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

Linkage

1. Disconnect the negative battery cable.
2. Remove the left seat from the vehicle. If your vehicle is equipped with power seats, make sure to detach the electrical wiring.
3. Remove the shift knob.
4. Remove the console cover and the glove compartment lock.
5. Remove the left side panel from the console.
6. Remove the shifter cover.
7. Loosen the shifter rod adjusting nuts.

Fig. 1: Shift linkage adjustment — 1984–88 vehicles

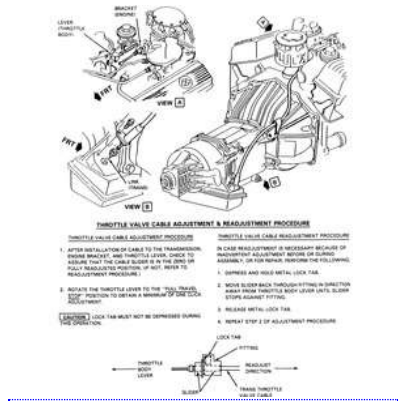


8. With the transmission and shifter in Neutral, install the alignment in the shifter, as shown in the accompanying figure.
9. Equalize the swivels on all three shift levers. Hand tighten the forward and rear adjusting nuts at the same time with equal force. Do this for all three shifter rods, and then tighten the forward and rear adjusting nuts at the same time to specifications.
10. After the adjustment is complete, install the components previously removed.

TV Cable

To adjust the Throttle Valve (TV) cable, refer to the accompanying figure.

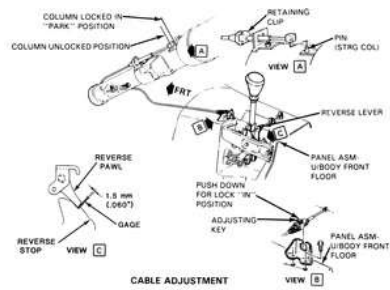
Fig. 2: TV cable adjustment procedure — 1984–88 vehicles



Park Lock Cable

To adjust the Park Lock cable, refer to the accompanying figure.

Fig. 3: Park lock cable adjustment — 1984–88 vehicles



CABLE ADJUSTMENT

1. LIFT UP ON ADJUSTING KEY TO RELEASE CABLE.
2. PLACE STEERING COLUMN LOCK LEVER IN THE LOCK PARK POSITION.
3. SHIFT TRANSMISSION INTO REVERSE GEAR.
4. INSERT GAGE AGAINST REVERSE STOP AND PULL REVERSE LEVER UNTIL REVERSE PAWL CONTACTS GAGE.
5. PUSH DOWN ON THE ADJUSTING KEY TO SET THE CABLE.
6. REMOVE GAGE AND PULL BACK ON SHIFT LEVER AND INSURE PAWL HITS THE STOP AND LOCKS SHIFTER IN REVERSE.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

On these vehicles, no adjustments are necessary or possible.

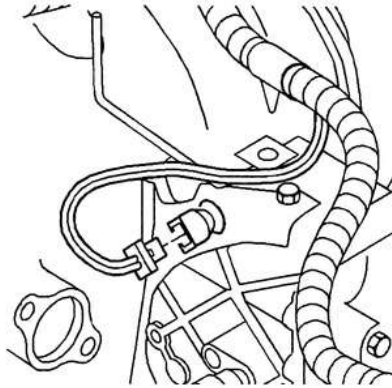
1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

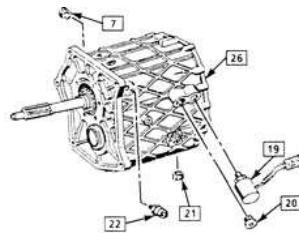
1. Disconnect the negative battery cable.
2. Raise and safely support the vehicle.
3. Detach the electrical connector from the switch.

Fig. 1: Unplug the electrical connector from the back-up light switch — 1996 vehicle shown



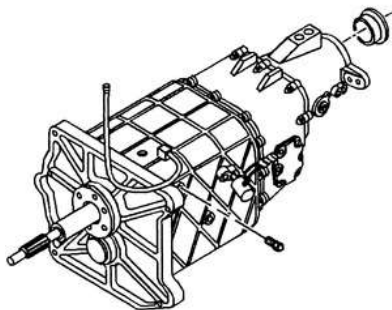
4. Remove the back-up lamp switch from the transmission case.

Fig. 2: Exploded view of the back-up lamp switch location — 1992 vehicle shown



7	FILL PLUG
19	COMPUTER AIDED GEAR SELECT SOLENOID
20	GEARSHIFT SHAFT DETENT PLUG
21	DRAIN PLUG
22	BACKUP LAMP SWITCH
26	TRANSMISSION FRONT CASE

Fig. 3: The back-up light switch is mounted in the transmission case — 1996 vehicle shown



To install:

5. Apply a suitable pipe sealant with Teflon® to the threads of the switch.
6. Install the switch and tighten to 35 ft. lbs. (47 Nm).
7. Attach the switch electrical connector.
8. Carefully lower the vehicle, then connect the negative battery cable.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

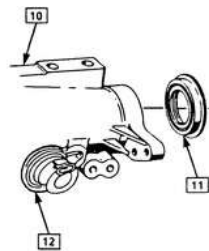
Fuel Delivery: FI | Fuel: GAS

1. Disconnect the negative battery cable.
2. Remove the air cleaner assembly.
3. If equipped, disconnect the TV cable from the left TBI unit.
4. Remove the distributor cap, and position it aside.
5. Raise and safely support the vehicle.
6. If equipped with a convertible, remove the upper and lower underbody braces.

NOTE: You will probably need an assistant to help you remove the exhaust system.

7. Remove the complete exhaust system as an assembly, as follows:
 - A. Disconnect the AIR pipe from the converter.
 - B. Unfasten the AIR pipe clamps from the exhaust manifold.
 - C. Detach the Oxygen sensor electrical connector.
 - D. Unfasten the bolts securing the mufflers to the hangers.
 - E. Remove the hanger bracket from the converter.
 - F. Detach the exhaust pipes from the exhaust manifolds, then carefully remove the exhaust system and place it in a safe place.
8. Support the transmission assembly with a suitable jack.
9. Remove the bolts securing the driveline support beam at the axle and transmission. Remove the driveline support beam from the vehicle, as outlined in later in this section.
10. Matchmark the position of the shaft to the companion flange and disconnect the rear universal joint by removing the trunnion bearing straps. Make sure to tape the bearing cups to avoid dropping and/or losing the bearing rollers.
11. There may be some fluid leakage from the transmission output shaft housing, so place a suitable catch pan underneath, then slide the slip yolk from the transmission and remove the shaft.
12. Carefully pry the old seal out using a suitable seal removal tool, working around the perimeter of the seal, removing it a little at a time, until the seal can be removed.

Fig. 1: Exploded view of the extension housing oil seal, removed from the vehicle — 1992 vehicle shown



- 10 EXTENSION HOUSING
- 11 EXTENSION HOUSING REAR OIL SEAL
- 12 SPEED SENSOR

To install:

13. Coat the lip of a new seal with automatic transmission fluid.

Fig. 2: Use the proper tool to install the output shaft seal — 1984–88 vehicles

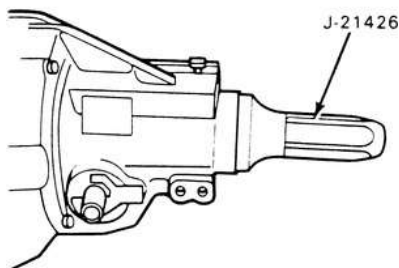
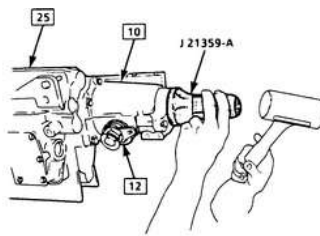


Fig. 3: You will need the seal drive and a mallet to install the extension housing seal



10 EXTENSION HOUSING

12 SPEED SENSOR

25 TRANSMISSION REAR CASE

14. Using a suitable seal installation tool, as shown in the accompanying figure, place a new seal on the tool and install the seal.
15. Install the propeller shaft. Make sure to align the shaft with the matchmarks made during removal, remove the tape over the trunnion bearing caps and connect the exposed caps to the companion flange. Tighten the strap retaining bolts to 12.5 ft. lbs. (17 Nm).
16. The remainder of installation is the reverse of the removal procedure.
17. Refer to the procedure located later in this section for driveline support beam installation and tightening specifications.
18. Check the transmission fluid level add if necessary. Keep in mind that the transmission should be level when checking the fluid level. Tighten the fill plug to 26 ft. lbs. (35 Nm).

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

1984-88 Vehicles

1. Disconnect the negative battery cable.
2. Remove the air cleaner assembly.
3. If equipped, disconnect the TV cable from the left TBI unit.
4. Remove the distributor cap, and position it aside.
5. Raise and safely support the vehicle.
6. If equipped with a convertible, remove the upper and lower underbody braces.

NOTE: You will probably need an assistant to help you remove the exhaust system.

7. Remove the complete exhaust system as an assembly, as follows:
 - A. Disconnect the AIR pipe from the converter.
 - B. Unfasten the AIR pipe clamps from the exhaust manifold.
 - C. Detach the Oxygen sensor electrical connector.
 - D. Unfasten the bolts securing the mufflers to the hangers.
 - E. Remove the hanger bracket from the converter.
 - F. Detach the exhaust pipes from the exhaust manifolds, then carefully remove the exhaust system and place it in a safe place.
8. Support the transmission assembly with a suitable jack.
9. Unfasten the bolts securing the driveline support beam to the axle and transmission. Remove the driveline beam from the vehicle.
10. Matchmark the position of the propeller shaft to the axle companion flange. Remove the trunnion bearing straps and disengage the rear universal joint from the axle. Slide the propeller shaft slip yoke out from the overdrive unit and remove the shaft from the vehicle.
11. Disconnect the cooler lines and the TV cable, if equipped, from the overdrive unit.
12. Detach the shift linkage from the side cover.
13. Detach the electrical connectors from the side cover switches, backup light switch, overdrive unit and speedometer sensor.
14. While supporting the engine with a suitable fixture, carefully lower the transmission.
15. Unfasten the bolts attaching the transmission to the bellhousing. Slide the transmission rearward to disengage the input shaft from the clutch. Remove the transmission from the vehicle.
16. Inspect the clutch components and replace components as necessary, as outlined later in this section.

To install:

Fig. 1: View of the transmission components — 1984 vehicle shown

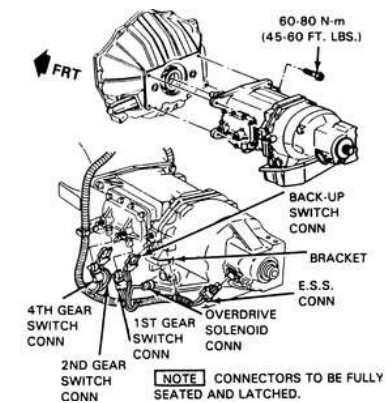
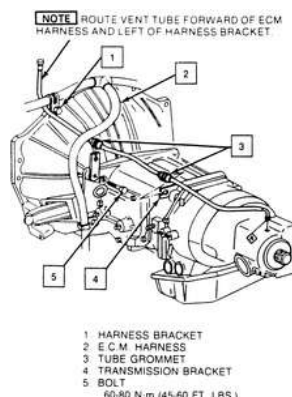


Fig. 2: Exploded view of the transmission attachment — 1987 vehicle shown



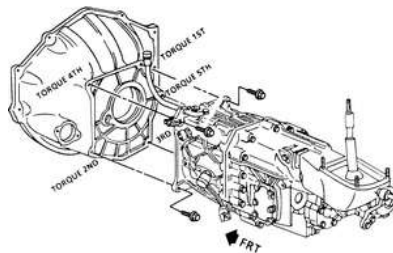
17. Installation is the reverse of the removal procedure. Make sure to tighten all components securely and attach all connectors properly. Please note the following important steps:
 - A. Clean and repack the clutch release bearing.
 - B. Tighten the transmission attaching bolts to 45-60 ft. lbs. (60-80 Nm) and the oil cooler line fittings to 8-12 ft. lbs. (11-16 Nm).

- C. If equipped, adjust the TV cable, as outlined earlier in this section.
 - D. Install and align the driveline support beam installation as follows:
 - To insure proper alignment of the driveline, you must maintain a clearance of 1.52–2.02 in. (39–51mm) between the top of the beam to the under body and a clearance of 0.85–1.35 in. (22–34mm) from the right (passenger) side of the beam to the side wall.
 - Take the previous measurements directly above and to the right of the propeller shaft yoke.
 - Refer to the driveshaft procedure, located later in this section, for additional installation information and tightening specifications.
18. Refill the transmission with the proper type and amount of fluid as outlined in Section 1 of this manual.

1989–92 Vehicles

1. Disconnect the negative battery cable.
2. Remove the center air outlet.
3. Remove the console and accessory trim plates.
4. Remove the control lever button.
5. Remove the shift lever knob assembly.
6. Remove the center console trim plate.
7. Remove the shift lever snapping.
8. Remove the shifter retainer nuts.
9. Raise and safely support the vehicle.
10. Remove the complete exhaust assembly.
11. Remove the driveshaft.
12. Support the transmission with a suitable jack.
13. Remove the driveline support beam.
14. Disengage the electrical connectors from the speed sensor, backup lamp switch and shift solenoid.
15. Remove the transmission to clutch housing attaching bolts.
16. Remove the transmission assembly from the vehicle.

Fig. 3: Exploded view of the manual transmission — 1992 vehicle shown



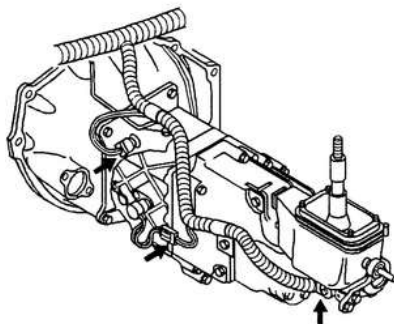
17. Installation is the reverse of the removal procedure. Please note the following tightening specifications:
 - Transmission-to-clutch housing bolts: 37 ft. lbs. (50 Nm), making sure to torque the bolts using the proper crisscross sequence, starting at the top right bolt.
 - Driveline support beam-to-differential bolts: to 60 ft. lbs. (80 Nm).
 - Driveline support beam-to-transmission bolts: to 37 ft. lbs. (50 Nm).
18. Check transmission oil level and add if necessary.

NOTE: In a horizontal position, the transmission should be filled to the point of overflow.
19. Connect the negative battery cable.

1993–96 Vehicles

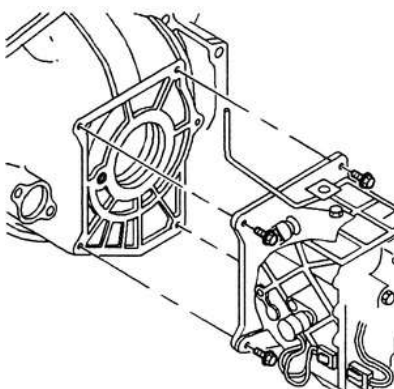
1. Disconnect the negative battery cable.
2. Remove the shifter button, retainer, shift knob, set screw and reverse inhibitor.
3. Remove the rear trim plate screws and the screw located underneath the cup holder mat.
4. Disengage the instrument panel harness connectors from the lighter and rear compartment lid release switch, then unclip the accessory plug harness.
5. Pry the locking tabs on the underside of the boot from the shaft groove, then remove the console trim plate and boot from the shaft.
6. Raise and support the vehicle safely.
7. Remove the complete exhaust assembly.
8. Remove the bolts retaining the driveline torque beam, then slide the beam outboard to gain access to the driveshaft.
9. Remove the parking brake cable clip, then remove the bolts retaining the support bracket.
10. To maintain drive train balance, matchmark the relationship between the driveshaft and the differential carrier yoke, then remove the bolts attaching the driveshaft to the yoke.
11. Slide the driveline torque beam rearward until it make contact with the rear exhaust hanger.
12. Support the transmission using an adjustable transmission jack.
13. Disengage the electrical connectors from the speed sensor, back-up lamp switch and the computer aided shift solenoid.

Fig. 4: Location of the electrical connectors you need to unplug for transmission removal — 1996 vehicle shown



14. Remove the transmission to clutch housing attaching bolts.
15. Carefully lower the transmission and remove the transmission assembly from the vehicle.

Fig. 5: Exploded view of the transmission attachment — 1996 vehicle shown



To install:

16. Install transmission assembly into the vehicle.
17. Install and tighten the transmission to clutch housing bolts to 37 ft. lbs. (50 Nm). Be sure to tighten the bolts using the proper crisscross sequence, starting at the top right bolt.
18. Engage the wiring harness connectors to the speed sensor, back-up lamp switch and shift solenoid.
19. Slide the driveline torque beam forward and onto the transmission extension housing.
20. Install the driveshaft, aligning the matchmarks made on the shaft and yoke during removal. Tighten the shaft-to-yoke retaining bolts to 18 ft. lbs. (24 Nm).
21. Install the bolts retaining the support bracket and tighten to 18 ft. lbs. (25 Nm).
22. Check transmission oil level and add if necessary.

NOTE: In a horizontal position, the transmission should be filled to the point of overflow.

23. Install the parking brake cable clip.
24. Align the torque beam and install the retaining bolts. Tighten the beam-to-differential carrier bolt to 60 ft. lbs. (80 Nm) and the beam-to-transmission bolt to 37 ft. lbs. (50 Nm).
25. Install the complete exhaust system assembly.
26. Lower the vehicle.
27. Install the console trim plate and boot assembly.
28. Connect the negative battery cable.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

Because of the way an internal combustion engine breathes, it can produce torque (or twisting force) only within a narrow speed range. Most overhead valve pushrod engines must turn at about 2500 rpm to produce their peak torque. Often by 4500 rpm, they are producing so little torque that continued increases in engine speed produce no power increases.

The torque peak on overhead camshaft engines is, generally, much higher, but much narrower.

The manual transmission and clutch are employed to vary the relationship between engine RPM and the speed of the wheels so that adequate power can be produced under all circumstances. The clutch allows engine torque to be applied to the transmission input shaft gradually, due to mechanical slippage. The vehicle can, consequently, be started smoothly from a full stop.

The transmission changes the ratio between the rotating speeds of the engine and the wheels by the use of gears. 4-speed or 5-speed transmissions are most common. The lower gears allow full engine power to be applied to the rear wheels during acceleration at low speeds.

The clutch driveplate is a thin disc, the center of which is splined to the transmission input shaft. Both sides of the disc are covered with a layer of material which is similar to brake lining and which is capable of allowing slippage without roughness or excessive noise.

The clutch cover is bolted to the engine flywheel and incorporates a diaphragm spring which provides the pressure to engage the clutch. The cover also houses the pressure plate. When the clutch pedal is released, the driven disc is sandwiched between the pressure plate and the smooth surface of the flywheel, thus forcing the disc to turn at the same speed as the engine crankshaft.

The transmission contains a mainshaft which passes all the way through the transmission, from the clutch to the driveshaft. This shaft is separated at one point, so that front and rear portions can turn at different speeds.

Power is transmitted by a countershaft in the lower gears and reverse. The gears of the countershaft mesh with gears on the mainshaft, allowing power to be carried from one to the other. Countershaft gears are often integral with that shaft, while several of the mainshaft gears can either rotate independently of the shaft or be locked to it. Shifting from one gear to the next causes one of the gears to be freed from rotating with the shaft and locks another to it. Gears are locked and unlocked by internal dog clutches which slide between the center of the gear and the shaft. The forward gears usually employ synchronizers; friction members which smoothly bring gear and shaft to the same speed before the toothed dog clutches are engaged.