

INSTALLING THE *RICHMOND* 6-SPEED

1984 TO 1988 CORVETTE WITH 4+3 TRANSMISSION

Rod Corvette 4+3 Replacement #29521, 37130, 37131, 29627, 29628, 29629, 29626, 29630, 29631

Items required to complete installation:

Electronic Speedo Sensor, Connector and Driven Gear

Eckler Part # 29941 Sensor

Eckler Part # 29943 Driven Gear (Ref. For 19 tooth)

Eckler Part # 29942 Connector

Note: Different driven gears are available depending on rear axle ratio.

Transmission Output Yoke

Eckler Part # 29944

Shifter Boot

Any aftermarket floor shifter boot, approximately 3.5" x 4.5"
(Eckler Part # 29940).

Caution: GM has built into these vehicles a security device that will lock out the steering wheel to prevent theft when car is not in use. This locking pin mechanism is attached to the 4+3 shifter. Since it is not possible to attach this cable to the ROD shifter, we strongly recommend that you remove the pin or override this device for your own safety. If this procedure is not done, the steering wheel will lock out.

Step 1 Removing the 4+3 Transmission

The purchase of an applicable year Corvette Shop Manual to assist in disassembly of the transmission is recommended. Manuals are available through Eckler's @ 1-800-327-4868.

General Outline for Removal:

Disconnect battery positive cable.

Disconnect oxygen sensor wire connection.

Remove complete exhaust system from exhaust manifold back.

Remove drive shaft after first marking differential companion flange for reassembly.

Remove plenum extension (distributor cover) and loosen or remove distributor cap to prevent interference with firewall.

Support engine with floor jack under rear of oil pan.

Support transmission with transmission jack.

Remove driveline beam (torque arm).

Lower engine/transmission for access and disconnect T.V. cable (throttle valve), if applicable. T.V. cables were used in 1984 through part of the 1986 models.

Disconnect T.V. cable at TPI throttle and remove from vehicle.

Disconnect overdrive cooler lines from overdrive and at radiator. Remove lines from vehicle.

Drain overdrive fluid from radiator and plug radiator fitting.

Disconnect shifter linkage at transmission and remove weather seals from floor pan.

Disconnect first gear switch, if applicable, and overdrive electrical connectors. Tape connectors to prevent shorts and fasten out of the way with wire ties.

Disconnect speedometer sensor and replace connector plug with Eckler # 29942. Plug may be wired either way.

Disconnect backup/reverse light switch and replace connector with supplied plug. Plug may also be wired either way.

Remove transmission assembly, 4 bolts, at bell-housing being careful to properly support transmission weight to prevent damage to clutch.

Remove driver's seat, 4 bolts, from seat tracks to floor. Seat bottom can be loosened to get at electrical plugs.

Remove shifter console trim plate with shifter boot after first removing shifter knob.

Disconnect the reverse lock cable from shifter.

Remove console storage compartment lock assembly.

Remove the driver's side panel from console (screws along storage compartment edge and through carpet into transmission tunnel).

Remove shifter assembly and mounting bracket.

Cut out recessed shifter mounting pocket from floor pan using body saw or similar tool.

Step 2 Install Speedometer Sensor Eckler # 29941

It may be necessary to re-align sensor retainer on sensor housing for sensor electrical connector to be positioned toward bottom of transmission.

Step 3 Shifter

Prior to installing the transmission, it is recommended that the shifter be assembled to the transmission and all rod adjustments made. Once all rods are set, disassemble shifter and rods from the transmission and set aside.

Step 4 Install Rod Transmission

Tighten bolts at bell-housing, approximately 40 ft/lbs.

Install driveline beam (torque arm).

Install drive shaft.

If necessary, trim floor pan for additional clearance with shifter in place.

Connect Speedo sensor and backup light switch wire connectors.

Step 5 Mounting the Shifter

Bolt shifter into place. Fasten shifter rods to the transmission. Place shifter alignment pin in place and reset the rod length, if required.

Note: The shifter rods must work freely without binding. Binding rods will cause hard shifting. With rods set, set the shifter stops to prevent over-shift.

Step 6 Weather Seal

Fabricate and install a weather seal at shifter opening. This can be made from light gauge aluminum sheet and fastened to the floor pan using self-tapping screws and silicone sealer.

Place shifter boot over shifter handle and fasten using self-tapping screws.

Step 7 Lockout Pin

Disconnect steering wheel lockout pin or override system. For disconnecting pin, see applicable year of Shop Manual.

To override system, push cable up into case. Fasten end of cable to body using a self-tapping screw. Be sure cable will not work out of case.

Caution: If cable works free, the steering wheel will lock if pin is not removed.

Step 8 Replace Console Panel & Seat

Before installing, make sure transmission shifts with no interference to the console. Shift through all gears.

Step 9 Gear Lube

Fill transmission with gear lube to fill plug, approximately two quarts.

Step 10 Run Check Procedure

With car on jack stand, run transmission a few minutes in each gear. This will allow the lube to be circulated to all bearing and gears.