

Removal and installation of the Corvair or Corvair 95 Power Train is basically the same and is relatively simple when the proper procedures are followed and the correct tools and equipment are used.

However, major differences in procedures between Corvair and Corvair 95 models will also be shown in this presentation.



FOREWORD

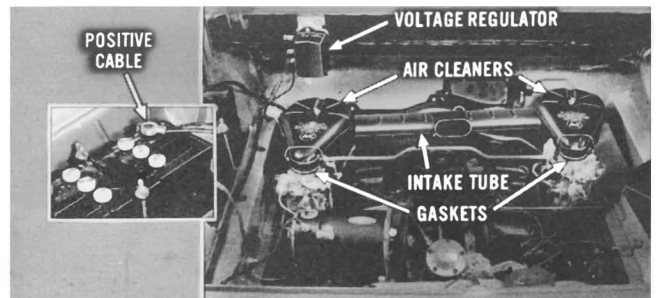
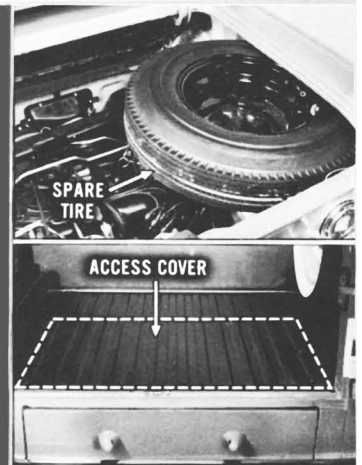
This booklet contains a complete review of the slidefilm, **CORVAIR AND CORVAIR 95 POWER TRAIN—REMOVAL AND INSTALLATION**. Keep at least one copy of this booklet in the Service Department file of Technical Information.

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POWER TRAIN REMOVAL

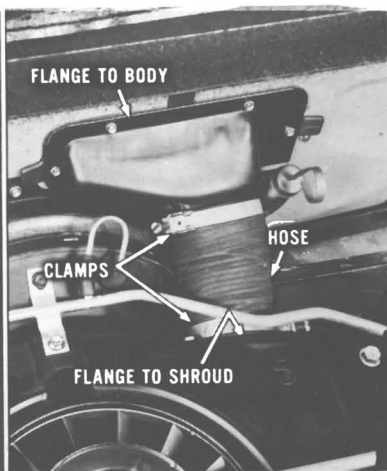
ENGINE COMPARTMENT — Mechanical: On 1961 and 1962 Corvair models, begin by removing the spare tire from the engine compartment. On Corvair 95 models, remove engine access cover.



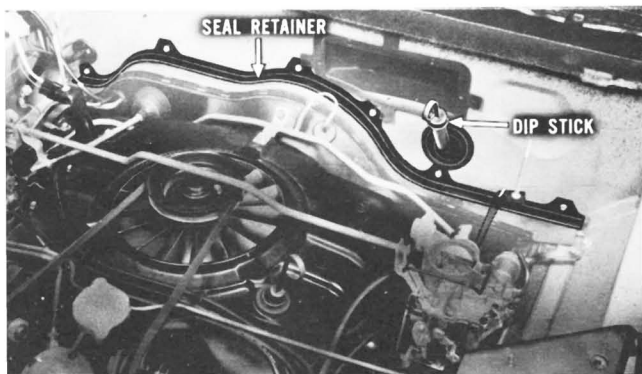
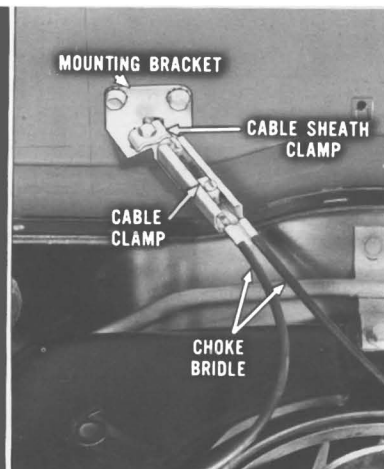
On all models, disconnect ground cable then positive cable at battery. Remove carburetor air cleaners, gaskets, and air-intake tube. To remove left air cleaner on 1962 models, remove the top 2 mounting screws from the voltage regulator. Move the regulator and bracket to provide clearance.

Remove retaining screws holding heater air-inlet hose flange to body, and hose flange to engine shroud. Remove flanges with the hose attached as an assembly.

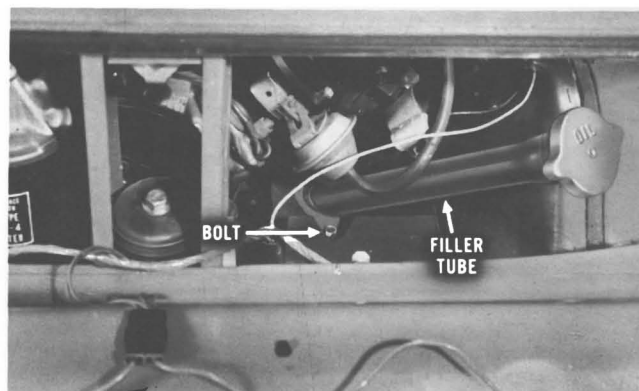
NOTE: DO NOT loosen or remove hose clamps. This is the easier method and actually saves time.



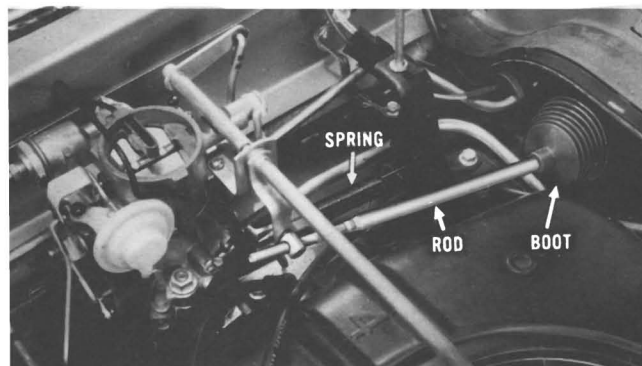
On 1961 models, separate front choke cable from choke bridle by loosening both the cable clamp and cable sheath clamp. Remove capscrews holding mounting bracket to body and pull assembly away from body.



Remove retaining screws and remove engine front shield-to-body seal retainer. Also, if equipped with automatic transmission, remove dip stick.



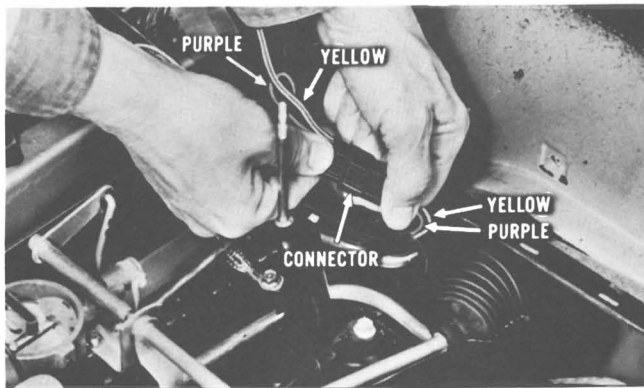
On Corvair 95 models, drain crankcase then remove retaining bolt and crankcase oil-filler tube.



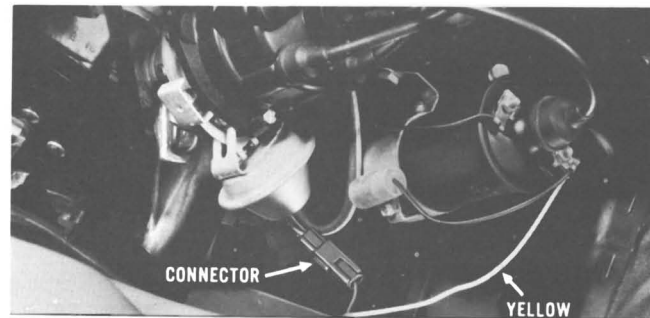
Remove return spring and disconnect throttle linkage from left carburetor at the carburetor cross shaft. Also, release boot from front shield.



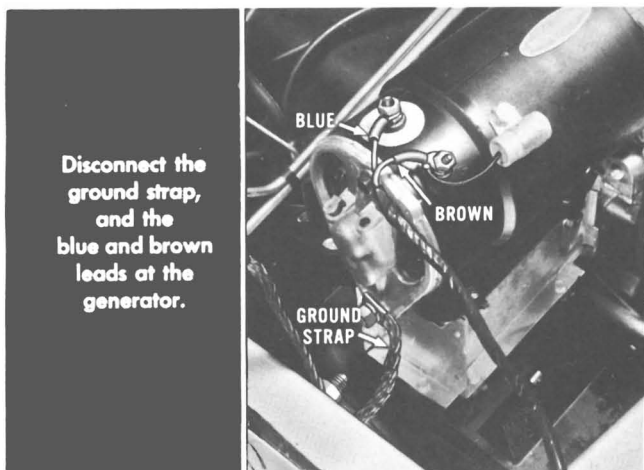
ENGINE COMPARTMENT — Electrical: Disconnect both wires from the regulator BAT terminal at the regulator.



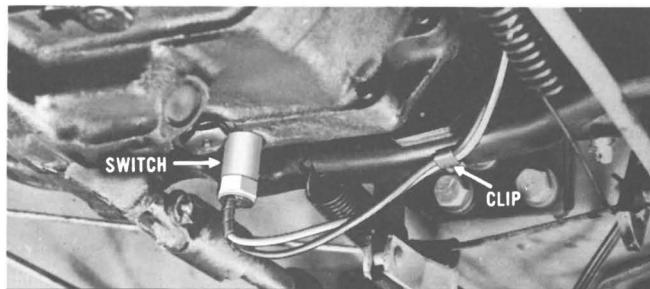
Disconnect yellow and purple starter solenoid leads at the starter motor harness connector.



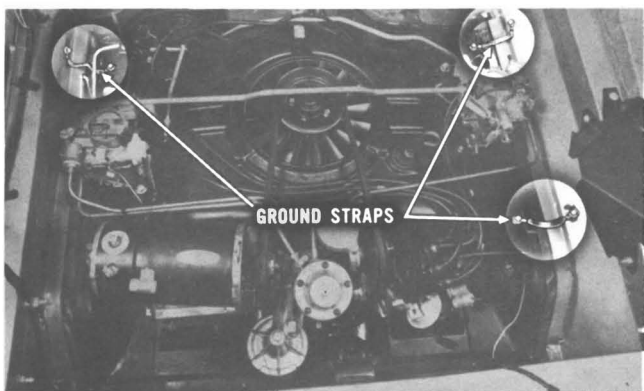
Disconnect yellow lead at coil and temperature and oil pressure sending units at harness connector. Remainder of power train removal operations require vehicle be raised. It can be supported on suitable hoist, tall jack stands or floor jack stands.



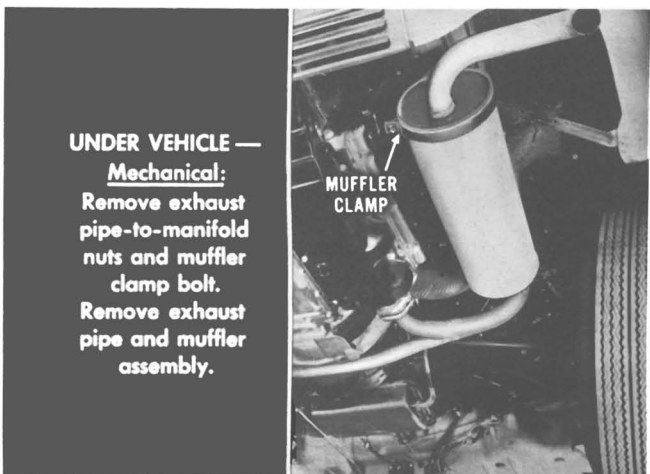
Disconnect the ground strap, and the blue and brown leads at the generator.



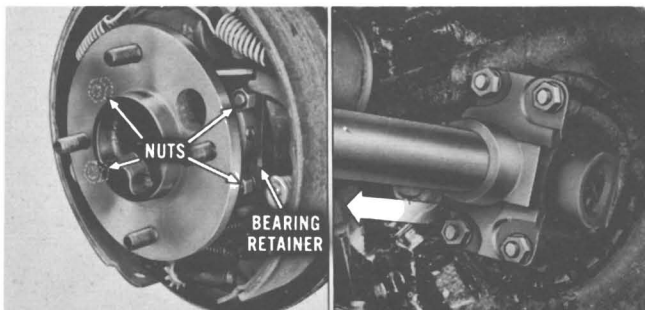
UNDER VEHICLE—Electrical: If equipped with 4-speed transmission and backup lights, drain transmission. Remove clip from front mount, then remove backup light switch by unscrewing from transmission case with wires attached. Make sure wires and switch are both free from any interference with power train assembly.



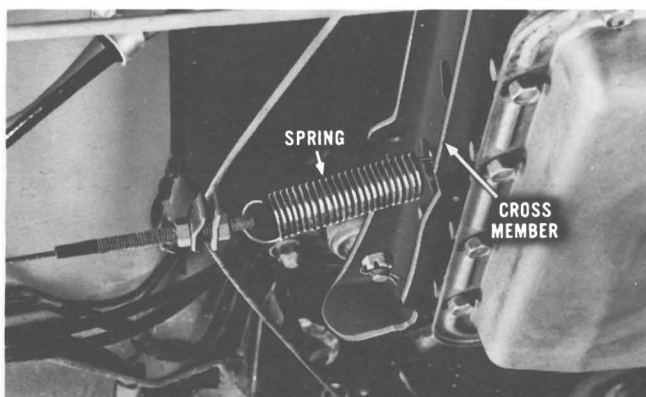
Disconnect the radio ground straps between engine shroud and body at the body.



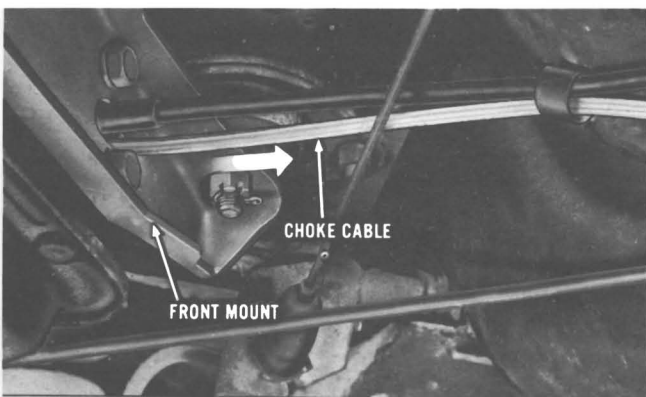
UNDER VEHICLE — Mechanical: Remove exhaust pipe-to-manifold nuts and muffler clamp bolt. Remove exhaust pipe and muffler assembly.



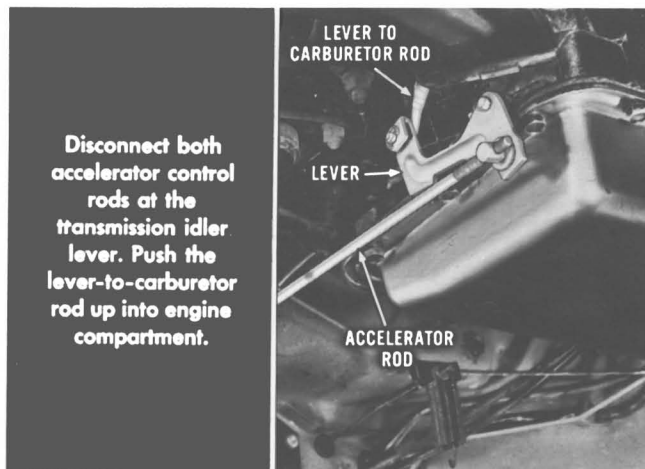
Remove rear wheels and brake drums. Then remove the nuts securing the axle bearing retainers and axles to the brake backing plates. Do not disconnect universal joints. Pull axles and universal joints as an assembly, sufficiently away from differential carrier to clear power train.



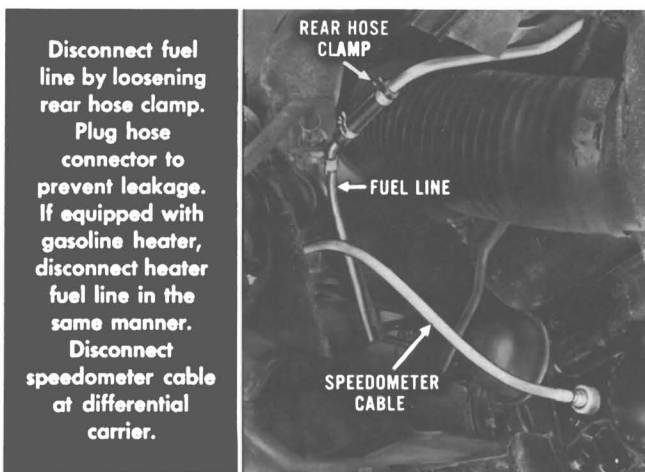
Disconnect parking brake return spring from engine front mount cross member.



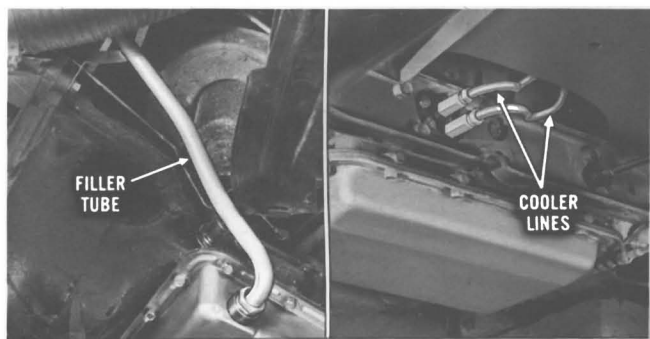
On 1961 models, pull front choke cable and sheath forward until it clears the engine front mount.



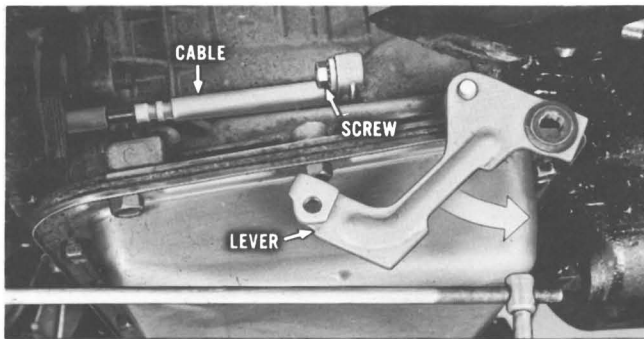
Disconnect both accelerator control rods at the transmission idler lever. Push the lever-to-carburetor rod up into engine compartment.



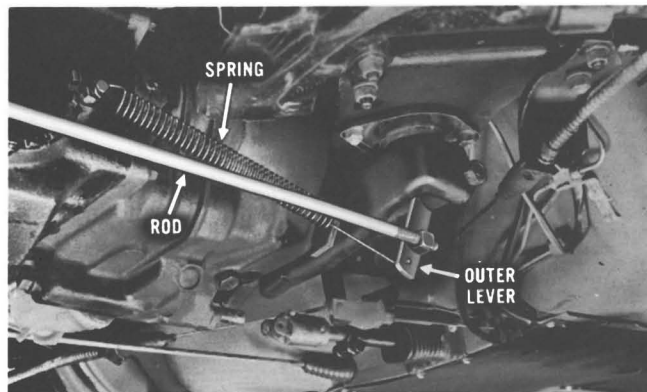
Disconnect fuel line by loosening rear hose clamp. Plug hose connector to prevent leakage. If equipped with gasoline heater, disconnect heater fuel line in the same manner. Disconnect speedometer cable at differential carrier.



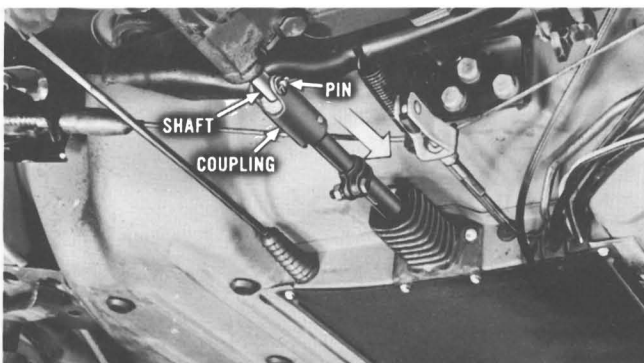
If vehicle is equipped with **AUTOMATIC TRANSMISSION**: On all models, place a receptacle under transmission to catch oil, and remove filler tube. On Corvair 95 models, also disconnect oil cooler lines at transmission.



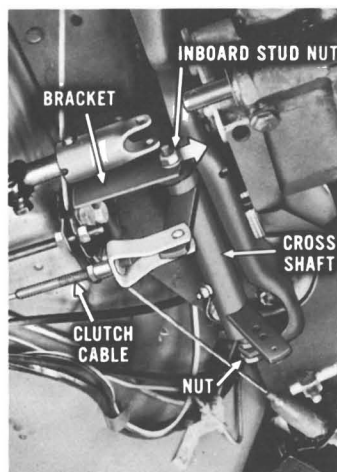
Remove shift cable retaining screw (or nut, early 1960), and cable clip in kick-up area. Carefully pull cable until ball on end of cable disengages from TV lever. Continue to pull cable forward until clear of front engine mount.



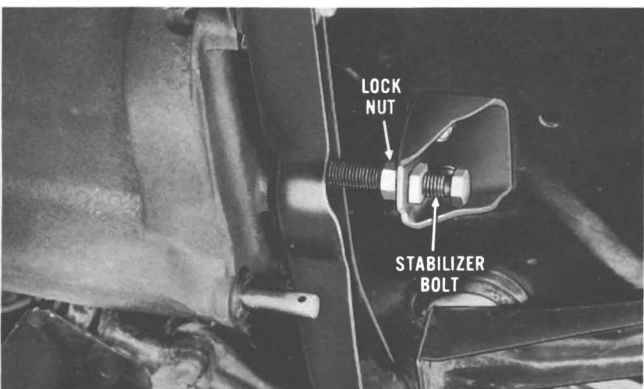
Disconnect and remove clutch return spring, then disconnect clutch pull rod from outer lever.



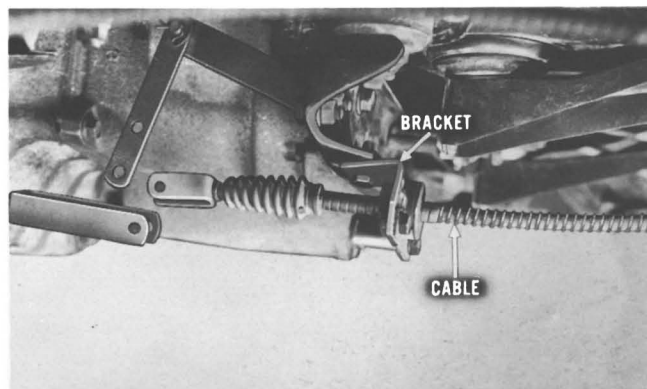
If equipped with **MANUAL TRANSMISSION**: Disconnect shift tube coupling at transmission shifter shaft. Then push shaft tube and coupling forward until clear of front mount.



On late 1960 through 1962 Corvairs, remove nut securing clutch cross shaft to engine front mount. Loosen inboard stud nut at bracket. Then, push inboard end from slot in bracket, and remove cross shaft from mount. Disengage clutch cable from cross shaft. On early 1960 models, remove bracket and cross shaft as an assembly by removing capscrews holding bracket to body.

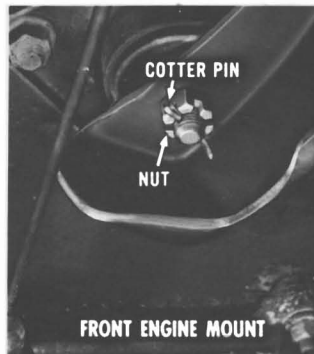
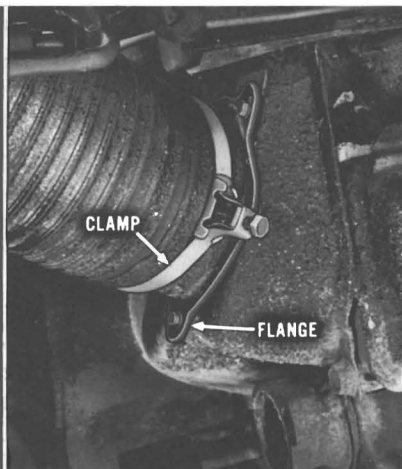


On 1962 Corvair 95 models, loosen lock nut and back off stabilizer bolt until clear of front mount.

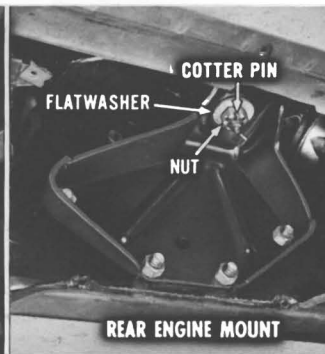


On Corvair 95 models, remove nut and bolt securing clutch cable and bracket to front mount.

If equipped with air heater, remove retaining screws, and disconnect left and right heater hose flanges at the engine shroud. Do not loosen clamps. Time will be saved by following this procedure.

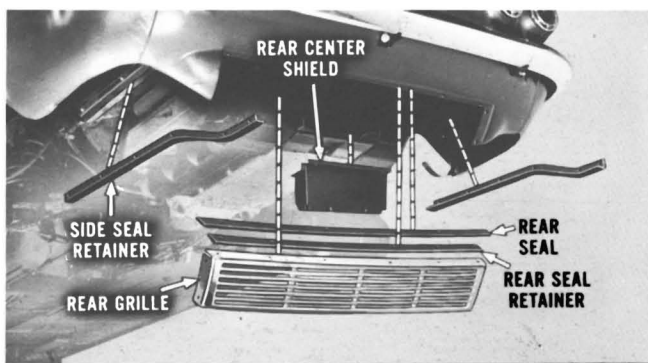


FRONT ENGINE MOUNT

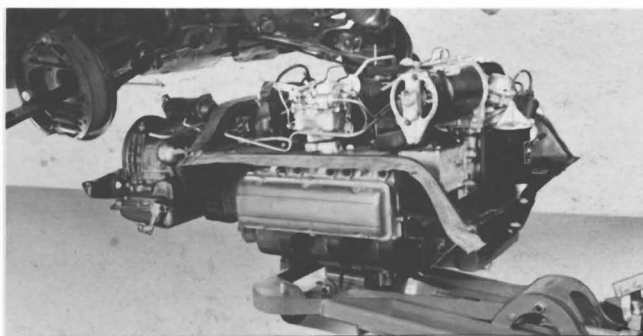


REAR ENGINE MOUNT

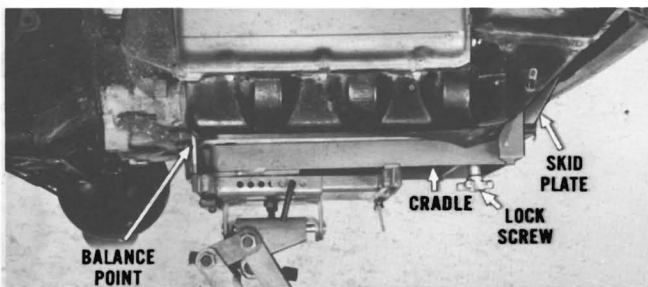
Remove cotter pins and castelated nuts from front engine mounts, as well as cotter pin, castelated nut and flatwasher from rear engine mount.



Remove retaining screws and remove rear grille, rear seal retainer and seal, rear center shield, and left and right engine side seal retainers.



Lower the power train gradually. CAUTION: Watch for interference at carburetors, rear mount, and left and right lower control arms. Power train is now ready for any operation requiring prior removal.



Remove bolt and lockwasher from skid plate and install a suitable power train cradle such as J-7894 mounted on heavy-duty hydraulic jack. CAUTION: FOR SAFETY, MAKE SURE LOCK SCREW IS TIGHTENED SECURELY. Balance point of power train is approximately $\frac{3}{16}$ " behind front face of cylinder block.

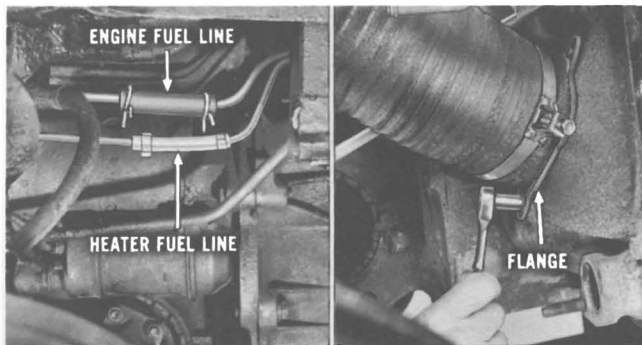
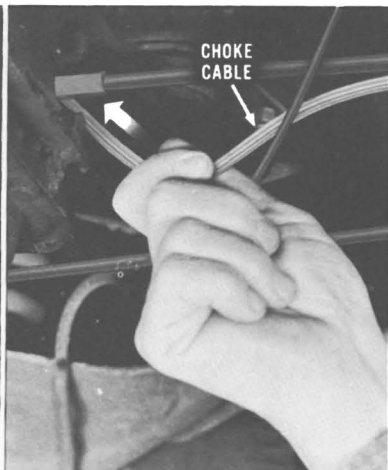
POWER TRAIN INSTALLATION

Before installing power train, make certain all electrical wires, fuel lines, and levers are out of the way to prevent damage or interference as the power train is hoisted into position.

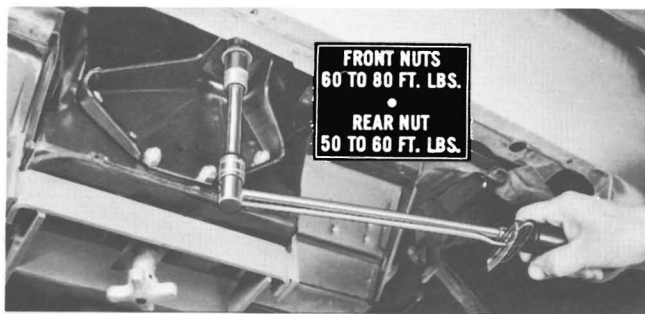
UNDER VEHICLE —

Mechanical:

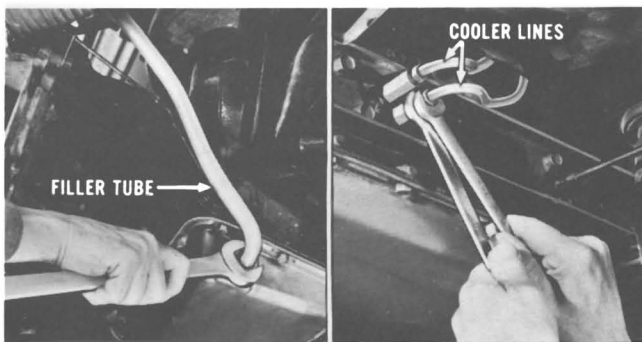
On 1961 models, as power train is being raised into position, push choke cable through engine front mount and grommet into the engine compartment.



Connect engine fuel line. If equipped with gasoline heater, also connect heater fuel line. On vehicles equipped with air heater, connect left-and-right heater hose flanges to engine shroud.



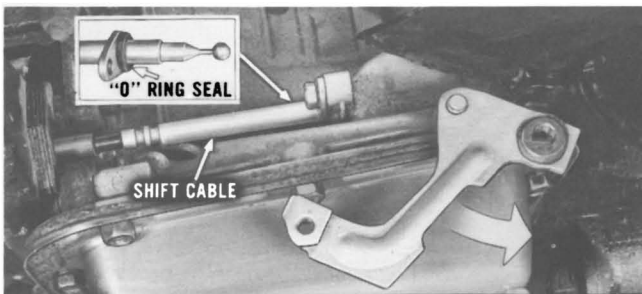
Raise power train, carefully, until engine mounting brackets align with mounts. Install nuts at front, and flatwasher and nut at rear. Torque front nuts 60 to 80 ft. lbs., and rear nut, 50 to 60 ft. lbs. Install cotter pins. Remove jack and install skidplate lockwasher and bolt.



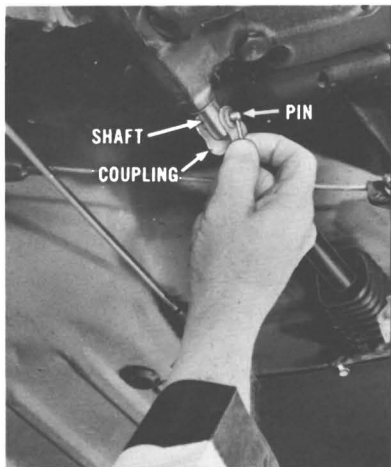
If vehicle is equipped with **AUTOMATIC TRANSMISSION**: On all models, install filler tube in transmission oil pan. On Corvair 95 models, also connect oil cooler lines to front of transmission.



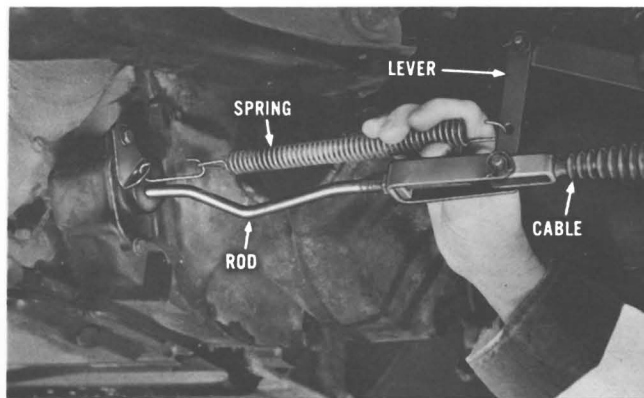
Install the left-and-right side seal retainers, rear center shield, rear seal and retainer, and rear grille.



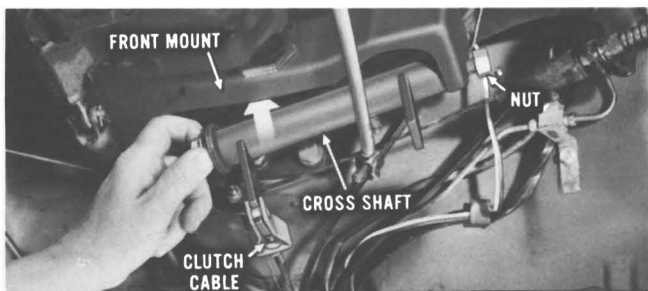
Lubricate new "O" ring seal, and install on shift cable. Rotate TV lever its full limit counterclockwise, and insert ball end of shift cable into transmission until shoulder seats against case. Secure cable to case with capscrew or on early models, with retaining nut. Install cable clip in kick-up area.



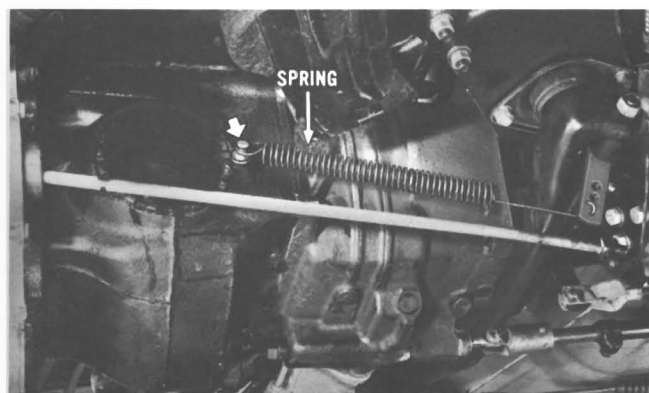
If equipped with **MANUAL TRANSMISSION**: Connect shift tube clevis pin and securing with flatwasher and cotter pin.



Connect clutch pull rod and clutch cable to lever, then install return spring.

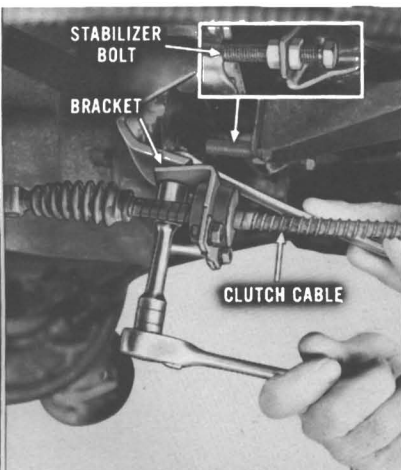


On late 1960 through 1962 Corvair models, connect clutch cable to cross shaft. Insert outboard ball stud end of clutch cross shaft through engine front mount, then slip inboard stud end into cross shaft bracket. Tighten stud nuts at each end. On early 1960 Corvairs, reinstall clutch cross shaft and bracket, as an assembly.

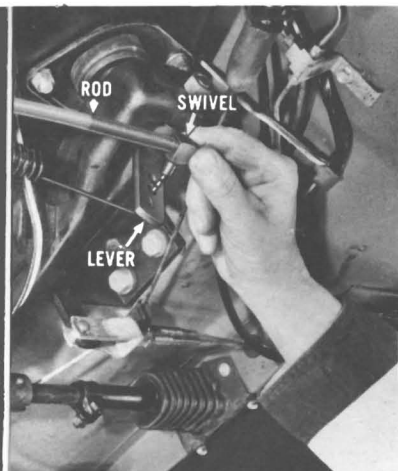


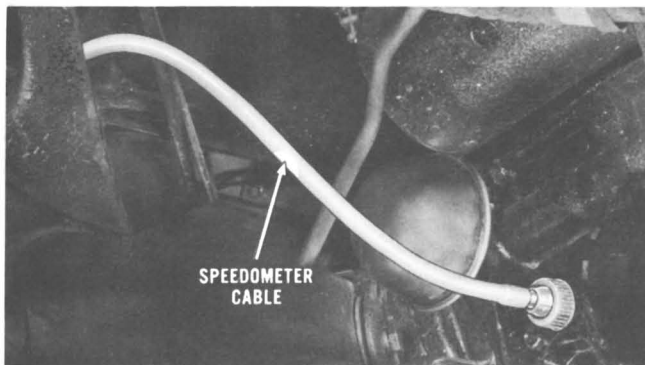
On Corvair models, attach clutch return spring to lower hole in outer lever and to stud on differential carrier.

On Corvair 95 models, secure clutch cable and bracket to front mount. On 1962 models, turn stabilizer bolt until snug against front mount, and lock with jam nut.

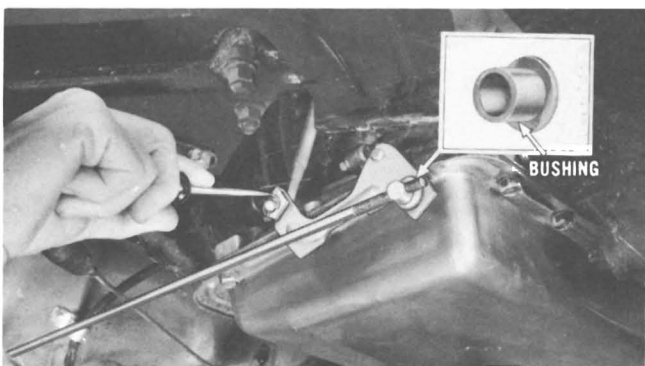


Pull clutch rod forward and adjust swivel to align with upper hole in outer lever. Then, without changing this adjustment, insert swivel into lower hole in lever and install clip. Check for $\frac{3}{4}$ " free travel of clutch pedal. Readjust if necessary.

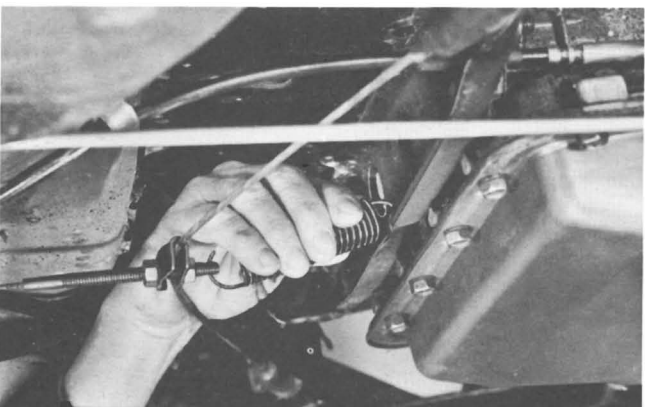




Install speedometer cable at differential carrier. Make sure cable is properly engaged in speedometer drive gear. Tighten lock nut on speedometer cable housing.



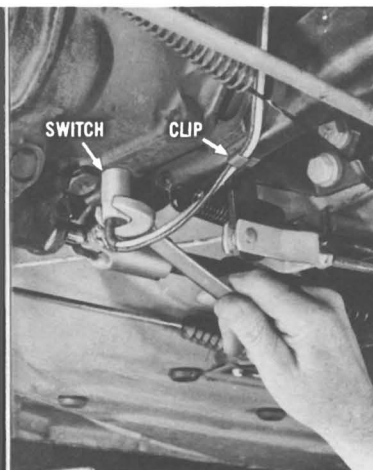
Install bushing in grommet in lever, and connect both accelerator control rods to transmission idler lever. Secure with "E" clips.



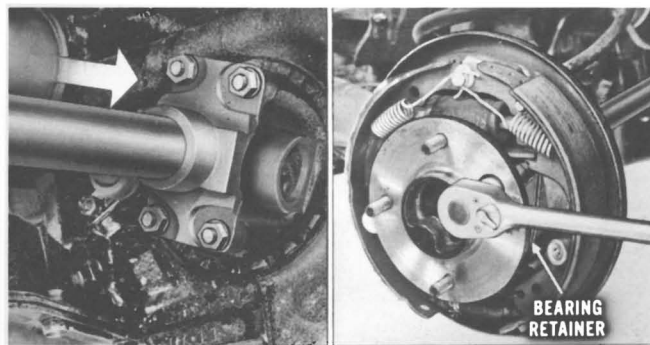
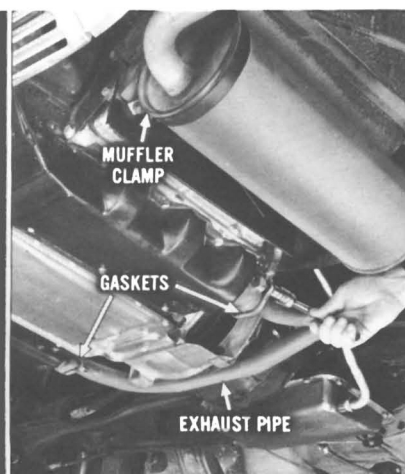
Install parking brake return spring.

UNDER VEHICLE—

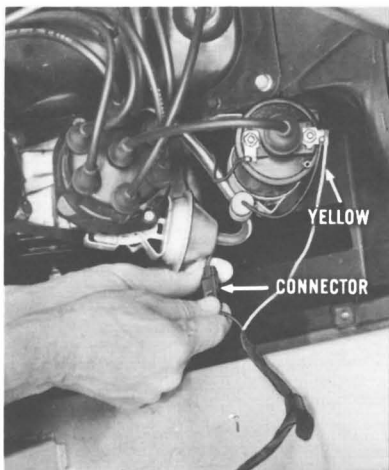
Electrical: If equipped with 4-speed transmission and backup lights, install backup light switch and wire retaining clip. At this time for all 3- and 4-speed manual transmissions replace transmission and differential carrier lubricants.



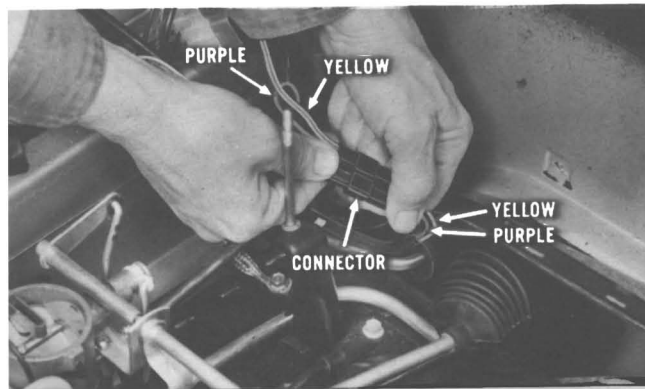
Install exhaust pipe gaskets, exhaust pipe and muffler assembly. Tighten nuts at left and right manifolds alternately and evenly until snug. Then, install and tighten muffler clamp bolt.



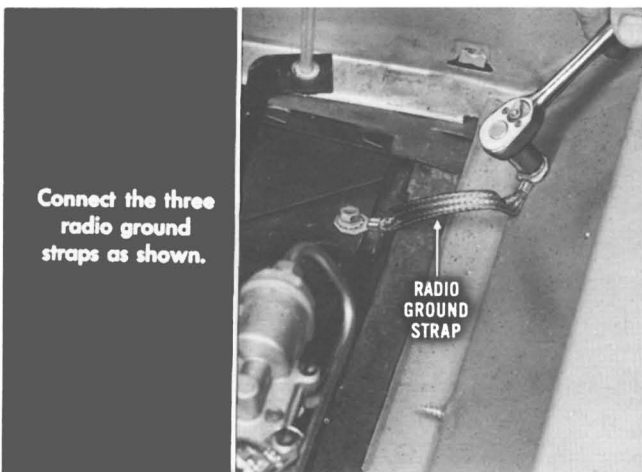
Insert axles and universal joints into differential carrier. Then install lockwashers and nuts holding the axle bearing retainers and axles to the brake backing plates. Then, install brake drums and wheels.



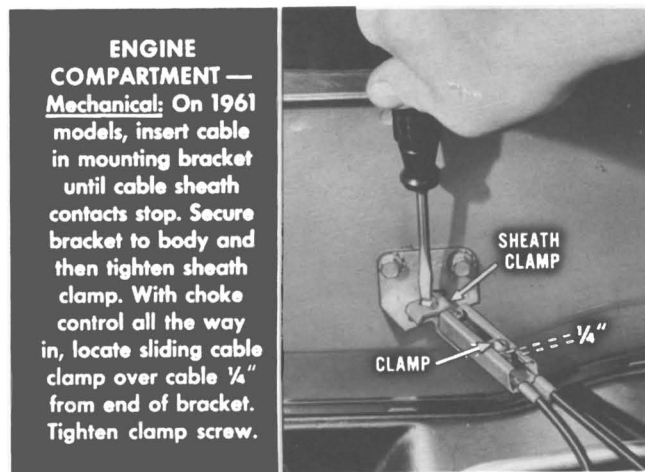
ENGINE COMPARTMENT—
Electrical: Lower vehicle to floor, and make the following electrical connections: Connect yellow lead to ignition coil, and harness connector to temperature and oil pressure sending units.



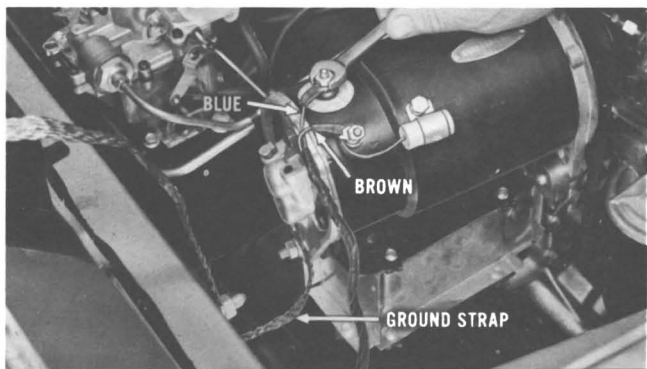
Connect yellow and purple ignition leads by inserting them into the starting motor harness connector.



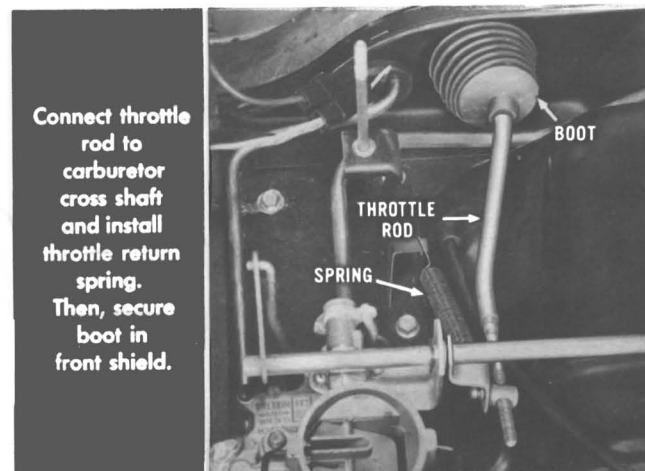
Connect the three radio ground straps as shown.



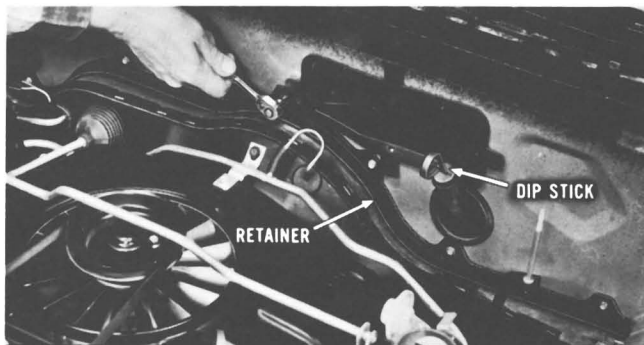
ENGINE COMPARTMENT —
Mechanical: On 1961 models, insert cable in mounting bracket until cable sheath contacts stop. Secure bracket to body and then tighten sheath clamp. With choke control all the way in, locate sliding cable clamp over cable $\frac{1}{4}$ " from end of bracket. Tighten clamp screw.



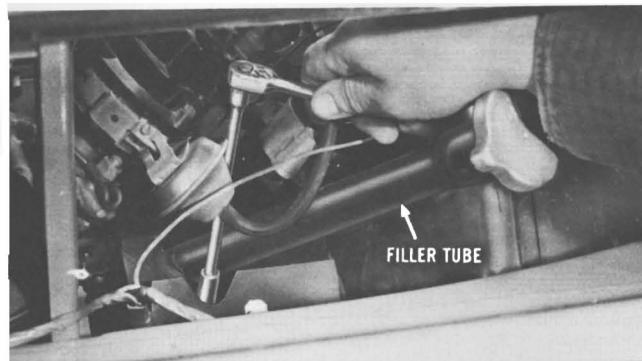
Connect ground strap to generator, then connect brown lead to rear terminal and blue lead to front terminal of generator.



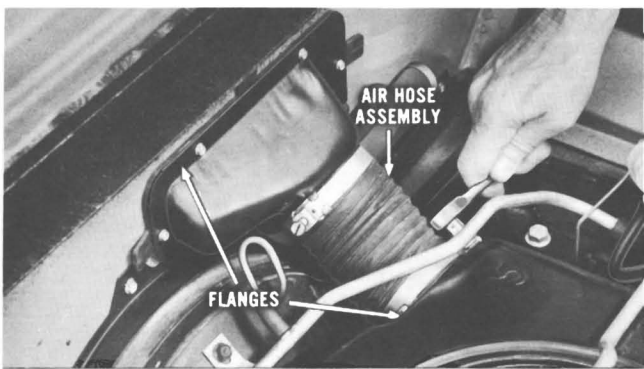
Connect throttle rod to carburetor cross shaft and install throttle return spring. Then, secure boot in front shield.



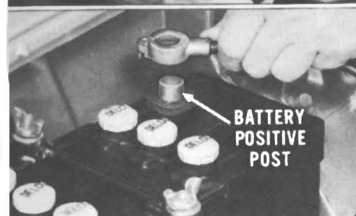
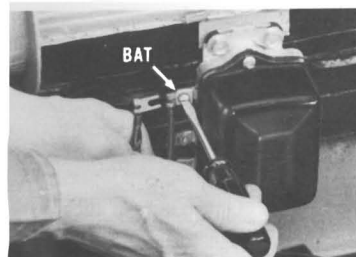
Pull front seal up into engine compartment. Install front seal retainer and secure with screws. Also, if equipped with automatic transmission, install automatic transmission fluid and replace dip stick.



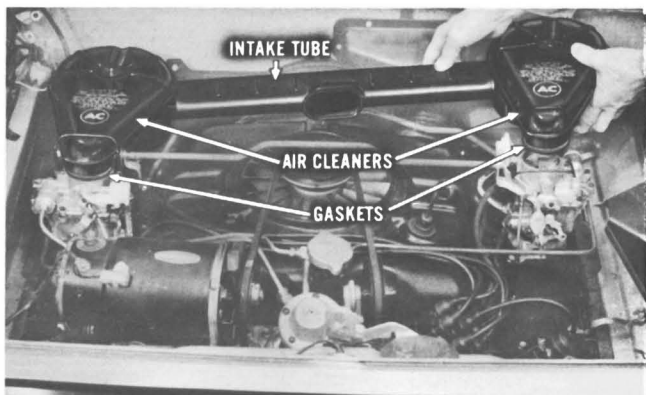
On Corvair 95 models, install new "O" ring on crankcase oil-filler tube. Install filler tube, and secure with bolt. At this time refill engine crankcase if needed.



If equipped with an air heater, install air hose, flanges, and clamps as an assembly. Secure with screws at body and engine shroud.



Connect both leads to the BAT terminal of regulator. On all other models, connect cable to battery positive post, then ground strap to battery negative post.



On 1961 and 1962 models, install air cleaners, gaskets, and intake tube.

On Corvair models, install spare tire. On Corvair 95 models, install engine access cover. Check engine oil level and Powerglide fluid level. Then start engine, and check for oil leaks. With engine running, check for proper operation of throttle and carburetor linkage, shift linkage, and clutch linkage. Make final adjustments if required. This completes power train installation.