

**1962**  
**CHEVROLET**

**NEW PRODUCT  
INFORMATION**



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TECHNICAL SERVICE DEPARTMENT  
**CHEVROLET MOTOR DIVISION**

GENERAL MOTORS CORPORATION

# PART III

# CORVAIR AND GREENBRIER

## SECTION 1

### GENERAL INFORMATION

#### MODEL LINE-UP

The 1962 Corvair line contains 6 models grouped in three series. In addition, two Greenbrier Sports Wagons will again be offered.

The 500 series is limited to a single model for 1962. The 4-Door Sedan and Station Wagons are discontinued, leaving only the 2-Door Coupe (527) in this series.

The 4-Door Station Wagon (735) will no longer carry the Lakewood emblem. The separate model name for this body style has been discontinued.

CORVAIR MODEL LINE UP

Series Designation	Model Number	Description
Corvair 500	527	2-Door Coupe, 5-Passenger
Corvair 700	727	2-Door Coupe, 5-Passenger
	769	4-Door Sedan, 6-Passenger
	735	4-Door Station Wagon, 2-Seat
Corvair 900 (Monza)	927	2-Door Coupe, 4-Passenger
	969	4-Door Sedan, 6-Passenger
R-12	R-1206 Deluxe*	4-Door Station Wagon, 6-Passenger (Greenbrier)

\* - Custom equipment package available as single option (RPO 431).

All body, engine, and chassis designs are basically the same as the 1961 line; however, all areas have been refined and improved over the current design.

New ornamentation and trim add to the crisp new appearance of the 1962 line. All models feature twin ornamental grilles on the front body panel. The bright metal grilles are located between the headlamp and center crest on each side of the front panel. Decorating the center of the panel, and located between the grille members is a new 4 x 3 inch name plate.

A special emblem, located below the new rear name plate, identifies models equipped with the optional Super Turbo-Air engine (RPO 649). The emblem depicts a simplified engine cross-section with black crossed-flags. The engine outline, pistons, and connecting rods are bright metal.

New name plates are featured for all 700 series and 900 Monzas. A rear license cavity frame of bright aluminum is standard on all Monza models and will be available for the 500 - 700 coupes and sedans. A wide aluminum rocker sill moulding extends full length between the wheel openings on all 700 series and Monza models.

A new rear appearance is achieved by

restyled tail light lenses and bezels, and a new engine exhaust grille. Tail light lenses and the matching back-up light lenses will feature a bright aluminum trim

ring with 8 radial spokes extending out to the slim new bezel. The engine exhaust grille is redesigned; however, over-all dimensions at the grille remain unchanged.

### CORVAIR POWER TRAINS

Engine Description Bore & Stroke	Gross Horsepower		Equipment	Comp. Ratio	Transmissions	Std. Axle Ratio **	Optional Ratios **
		Torque					
145 Cu. In. Opposed-6 Turbo-Air 145  3.438 x 2.6	80 @ 4400	128 @ 2300	Two Single Barrel Carbs.  Hydraulic Lifters	8.0:1*	3-Speed Sedans & Coupes	3.27:1	3.55:1 3.89:1
					Station Wagon	3.55:1	3.89:1
	4-Speed Sedans & Coupes	3.27:1			3.55:1 3.89:1		
	Station Wagon	3.55:1			3.89:1		
	Powerglide Sedans & Coupes	3.27:1			3.55:1 3.89:1		
	Station Wagon	3.55:1			3.89:1		
145 Cu. In. Opposed-6 Turbo-Air 145 RPO 649 3.438 x 2.6	102 @ 4400	134 @ 2800 3000	Two Single Barrel Carbs.  Hydraulic Lifters Special Camshaft	9.0:1	3-Speed Sedans & Coupes	3.27:1	3.55:1 3.89:1
					Station Wagon	3.55:1	3.89:1
	4-Speed Sedans & Coupes	3.27:1			3.55:1 3.89:1		
	Station Wagon	3.55:1			3.89:1		
	Powerglide	3.55:1			3.89:1		

\* - On Monza models with Powerglide transmission compression ratio is 9.0:1, and power ratings are 84 horsepower @ 4400 rpm and 130 lb. ft. @ 2300 rpm.

\*\* - Positraction axle ratios of 3.27, 3.55, and 3.89:1 available in the combinations shown.

# SECTION 5

## CORVAIR BRAKES

### GENERAL

The 1962 Corvair and Corvair 95 brake systems are carried forward from 1961 with the exception of a new main cylinder and pedal linkage on the 500, 700, and 900 models. The main cylinder, a slightly smaller version of the new round reservoir type used on the regular Passenger Car models is discussed in the Chevy II Section of this booklet.

The new main cylinder is installed in the forward cargo area rather than under the dash panel as in the past. This relocation is accompanied by a new design brake pedal and pedal support.

### MINOR SERVICE

#### Brake Fluid Level

The 1962 Delco-Moraine main cylinder (round reservoir) has a new fluid level specification. The brake fluid reservoir should be filled to a level  $1/4$  inch below the top of the casting (gasket surface). The fluid used for this filling must be "G.M. Hydraulic Brake Fluid Super No. 11" or its equivalent.

#### Bleeding Procedure

Due to the design of the main cylinder, a new special tool (J9477) has been released to adapt the existing pressure bleeder to 1962 service.

#### Push Rod Adjustment

The new brake pedal and linkage design requires a new "Free Play" or push rod

clearance adjustment. The 1962 unit does not use a brake pedal return spring and thus the push rod remains in contact with the main cylinder piston. The free movement is now measured as the amount of pedal motion in the upward or release direction from the point when the piston seats and the pedal arm contacts the rubber bumper. The total free motion, as measured at the bottom of the brake pedal pad, should be  $1/16$  to  $1/4$  inch.

### Brake Adjustment

The brake adjustment procedure for the 500, 700 and 900 series remains unchanged. The Greenbrier and Corvair 95 are unchanged with one exception, the brake adjusting screw is backed off 12 notches on all wheels after tightening to a uniform drag.

The new Special Tool J9485 released for the Chevy II may be used for brake adjustments on all Corvairs.

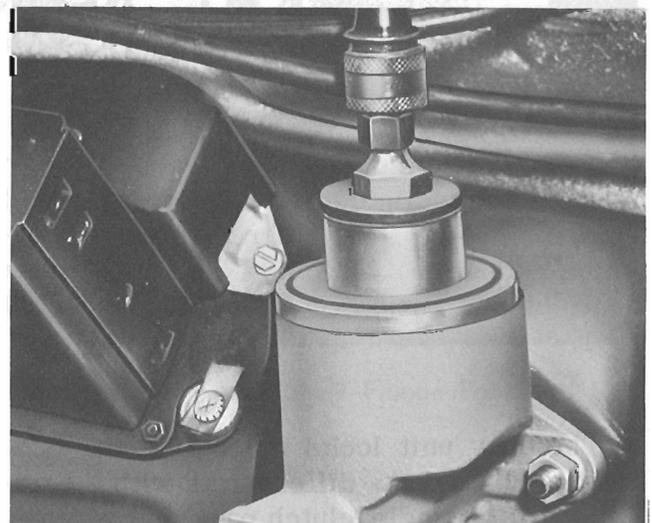


Fig. 3-1--New Main Cylinder Bleeding

## SECTION 6A

### ENGINE

#### GENERAL

The Corvair 145 cubic inch engine will be offered for 1962 with the same compression ratios as those available in 1961. Refinements consist of new carburetors incorporating automatic chokes, a new distributor, and a redesigned lower shroud. A new radial fin cooling blower provides quieter operation. This new blower is a high strength plastic construction rather than steel.

A new engine lower shroud will be incorporated for 1962. The lower shroud was previously welded to the exhaust duct, but now will be assembled with sheet metal screws. This will permit easy access to the exhaust manifolds, valve lifters, thermostatic springs, and sending units.

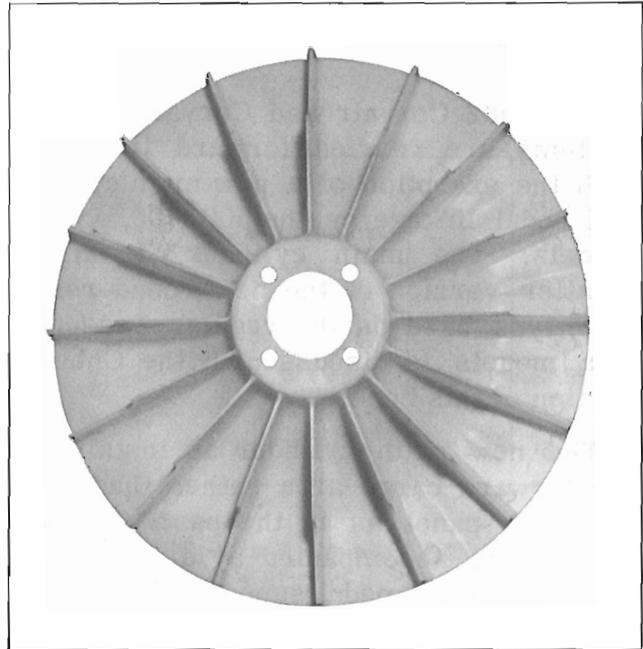


Fig. 3-2—High Strength Plastic Cooling Fan

## SECTION 6C

### REAR AXLE

#### POSITRACTION

New multiple plate Positraction Rear Axles are available for all Corvairs and Greenbriers in three gear ratios as Regular Production Options. The units are available in ratios of 3.27, 3.55 and 3.89 to 1.

The new unit looks much like the conventional Corvair differential with the addition of a single clutch pack and retainer ring between the right hand side gear and the differential case. A Belleville spring

in the pack loads the clutch discs with a predetermined pressure. This preload keeps the clutch pack in a partially engaged condition. Further clutch apply results from the slight lateral movement of the right hand side gear. This spreading action is caused by the forces in the meshing action with the pinion gears.

#### AXLE SHAFT BEARINGS

The axle shaft bearings on both the Corvair and the Greenbrier rear axle shafts have been revised for 1962. Figure 3-5 illustrates the new bearing design.

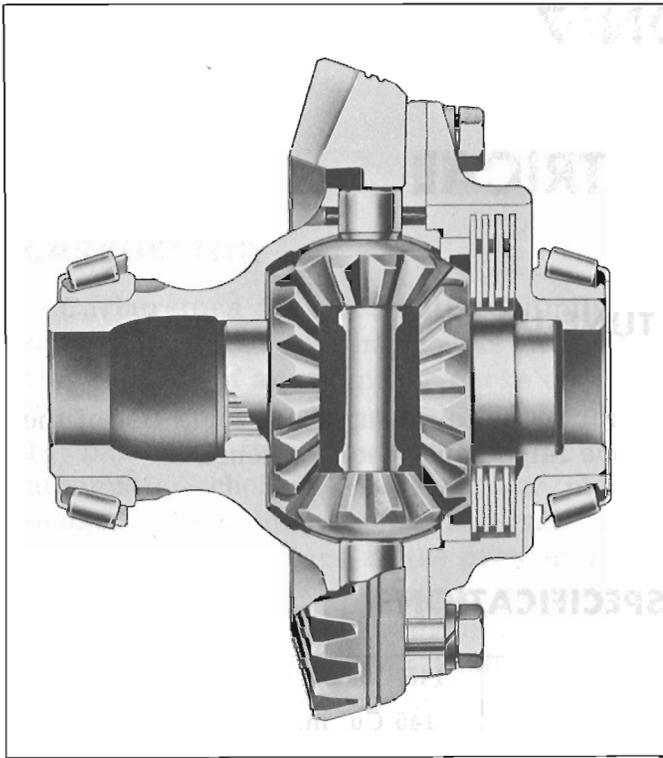


Fig. 3-3—Positraction Cut Away

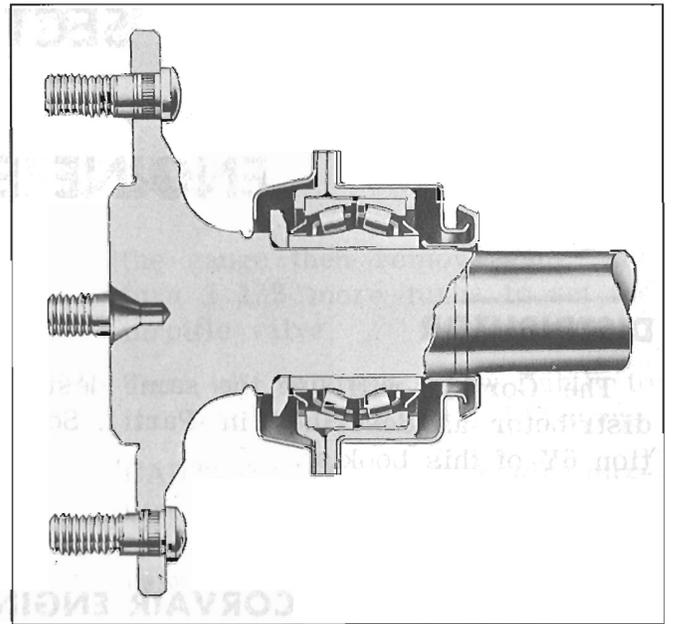


Fig. 3-5—New Axle Bearing Design

The special press fixture inserts released for the Chevy II axle shaft bearings may be used for servicing the Corvair. When reassembling the shaft and bearing, it is recommended that the bearing flange be packed with grease (fig. 3-6).

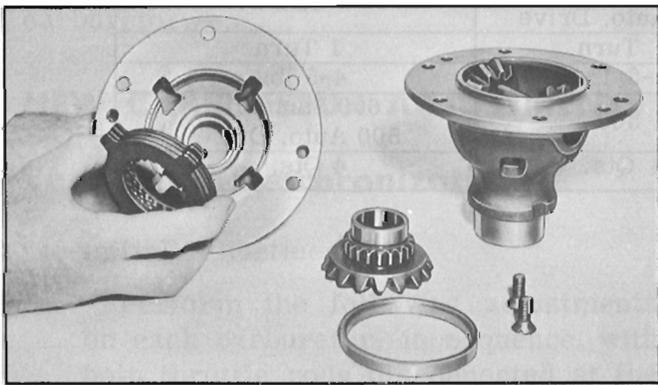


Fig. 3-4—Positraction Disassembled

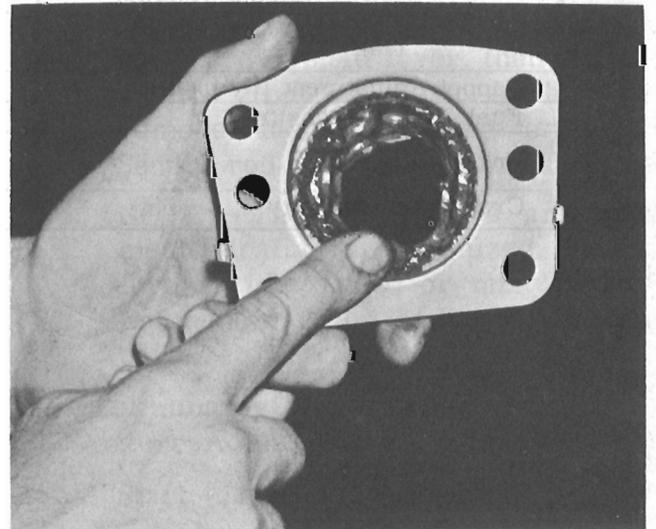


Fig. 3-6—Axle Shaft Flange Packing

# SECTION 7

## ENGINE ELECTRICAL

### DISTRIBUTOR

The Corvair will use the same design distributor as described in Part I, Section 6Y of this booklet.

### TUNE-UP

Refer to the following chart for a list of the more important specifications.

### CORVAIR ENGINE SPECIFICATIONS

	145 Cu. In. 80 h.p.	145 Cu. In. - 102 h.p. 145 Cu. In. - 84 h.p. Monza with Powerglide
Compression Pressure (Cranking)	130 psi.	130 psi.
Spark Plugs	Make and Number AC 46 FF	AC 44 FF
Gap	.035	.035
Ignition Distributor	Dwell (Cam angle)	31° - 36°
	Point Gap	.019" New .016" Used
Spring Tension	19-23 oz	19-23 oz
Ignition Timing	4° Standard 13° Auto. Drive	13°
Tappet Adjustment (Hydraulic)	1 Turn	1 Turn
Fuel Pump Pressure	4-5 lbs	4-5 lbs
Engine Idle R.P.M.	500	600 Standard 500 Auto. Drive
Crankcase Capacity	4 Qts.	4 Qts.

# SECTION 9

## FUEL AND EXHAUST

### CARBURETOR

Carburetors for 1962 will be similar in operation to the present models except for the addition of an automatic choke on each. The fundamental operation of this choke is basically the same as all Chevrolet automatic chokes, however, a plastic housed vacuum diaphragm has been incorporated in place of the present vacuum piston. This diaphragm housing is attached to the float bowl cover and is linked to the choke pivot shaft through a slot. Mechanical linkage then connects the choke valve (plate) to the bi-metallic coil thermostat which is attached to a flat milled surface on the bottom of the cylinder head. Vacuum for the operation of the diaphragm is received from the base of the carburetor, through an external rubber hose. There is one choke assembly, connecting linkage and thermostat for each carburetor.

### NEW CARBURETOR ADJUSTMENTS

#### Carburetor Synchronization

##### 1. Initial Adjustments

Perform the following adjustments on each carburetor, in sequence, with both throttle rods disconnected at the cross-shaft, choke control lever disconnected at choke lever and with engine off.

- a. Back idle speed screw away from throttle lever. Open the choke valve so throttle lever does not contact fast idle cam. Place a .003 inch feeler gauge between idle speed adjusting screw and throttle lever. Turn the screw until it just contacts

the gauge then remove gauge and turn 1 1/2 more turns to set the throttle valve.

- b. Turn idle mixture screw lightly to its seat and back out 1 1/2 turns.

**CAUTION:** Do not turn idle mixture screws tightly against seats or damage to needle and seat will result.

##### 2. Connect Throttle Rods

- a. Right Carburetor - Connect throttle rod to carburetor cross-shaft lever using retainer clip.
- b. Left Carburetor - Rotate cross-shaft (with accelerator rod) to assure positive closing of right carburetor throttle valve. Adjust throttle rod length in swivel until rod freely enters hole on carburetor cross-shaft lever, then shorten the rod one turn further to remove lash in linkage system. Secure rod with retainer clip.

**NOTE:** The carburetors are now mechanically synchronized. Any further idle speed or mixture adjustment must be duplicated on both carburetors.

##### 3. Preliminary Curb Idle Speed and Mixture Adjustment

- a. Start engine and normalize.
- b. Check timing.
- c. Connect vacuum gauge to adapter on vacuum balance tube. (Remove transmission vacuum line on automatic transmission, or cap on synchromesh, from the balance tube adapter.)

- d. Connect tachometer to engine.
- e. Adjust curb idle speed (duplicate adjustment on both carburetors) to attain the approximate proper idle speed.

Adjust idle mixture screws on both carburetors to obtain peak steady vacuum at given idle speed.

- f. Remove vacuum gauge and close adapter as required for given transmission model.

#### 4. Carburetor Balance - Vacuum Check

NOTE: Ordinarily carburetors are satisfactorily synchronized at this point, and Step 4 is merely a vacuum test comparing the two banks.

- a. Remove choke diaphragm hose from each carburetor hose adapter and connect vacuum gauge to the adapter. Do not turn or twist tube in carburetor body. (Best results can be obtained using 2 equally calibrated gauges.)

NOTE: One gauge can be used by constructing a "T" line to both carburetors from the gauge. Pinch hose closed between gauge and one carburetor and read vacuum of opposite carburetor.

- b. Operate engine at idle speed. Check vacuum at each carburetor and note difference. If difference is one inch or less, the carburetors are satisfactorily synchronized. If difference is more than one inch, adjust left carburetor throttle rod one turn (up to increase, left carburetor vacuum and down to decrease) and recheck vacuum readings. Make the adjustment by disconnecting rod at cross-shaft and rotating it in the swivel.

NOTE: It is preferable to have a higher reading on the right carburetor (spark advance side).

CAUTION: When making linkage adjustments, move the cross-shaft by grasping accelerator rod only. Do not open throttle by grasping other parts of the linkage as this might upset geometry and synchronization.

- c. Remove gauge/or gauges and replace choke diaphragm hoses.
- #### 5. Final Curb Idle Speed and Mixture Adjustment Check

NOTE: Always make final idle speed mixture adjustment with air cleaners installed.

- a. Replace air cleaners.
- b. Reconnect vacuum gauge to vacuum balance tube adapter.
- c. Read vacuum at idle speed. If necessary adjust curb idle speed and mixture screws to highest steady vacuum reading.

CAUTION: Any necessary adjustment must be duplicated at each carburetor.

### Adjust Fast Idle Cam Clearance

NOTE: This adjustment must be made after curb idle speed has been set.

- a. Stop engine.
- b. With throttle lever on second highest step of fast idle cam, bend tang to obtain .078 inch clearance between idle speed screw and throttle lever. Use wire gauge from chain gauge set J 9577.
- c. Start engine and recheck speed as above.

### Vacuum Diaphragm Adjustment

- a. Hold vacuum diaphragm arm squarely against diaphragm.

- b. Measure clearance between lower edge of choke valve and wall of air horn. Clearance should be .145 inch to .170 inch. Use carburetor chain gauge J9577.
- c. If necessary to adjust clearance, disconnect and bend diaphragm link.
- d. At this setting, throttle lever fast idle tang should rest on second highest step of fast idle cam. If not, adjust by bending outer choke-shaft lever tang.

### Choke Adjustment

Perform adjustment with engine not running.

1. Disconnect choke control rod at choke shaft lever.
2. Hold choke valve closed and, while holding the control rod up against the top of slot in choke thermostat bracket, adjust upper choke control rod until it freely enters hole in choke shaft lever.

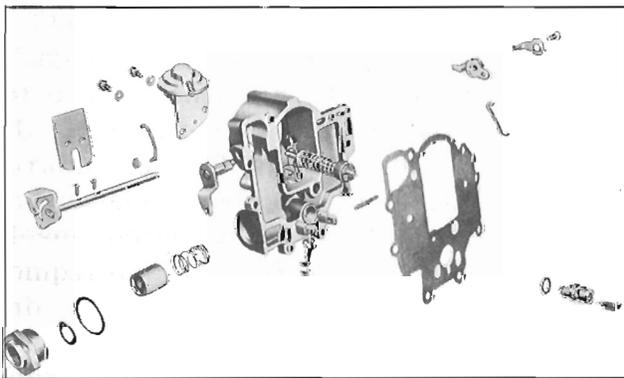


Fig. 3-7--Carburetor and Choke Details

**CAUTION:** To minimize the possibility of deforming the control rod while adjusting, always turn the vertical portion. Do not "crank" the rod using offset portion.

3. Start engine and warm up - check choke position after warm up. Choke valve should be open and fast idle cam should clear the throttle lever.

### Unloader Adjustment

Check unloader adjustment by holding throttle valve in wide open position and insert a .250 inch wire gauge (supplied with chain gauge J9577) between choke valve lower edge and wall of air horn. To adjust, if necessary, bend tang on throttle lever.

**NOTE:** Unloader adjustment should be checked especially if it has been necessary to adjust the choke shaft outer lever tang during choke diaphragm link check.

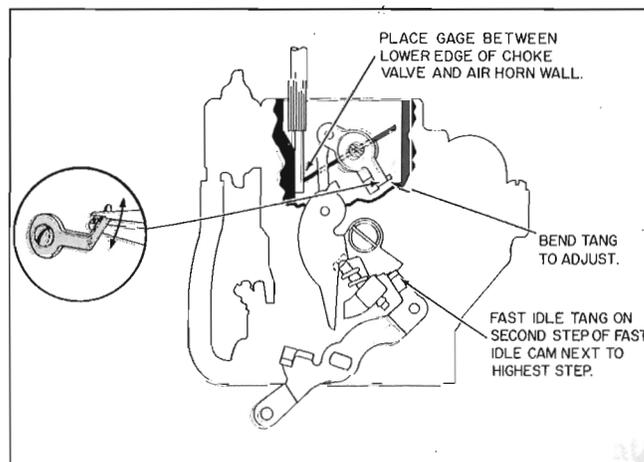


Fig. 3-8--Choke Rod Adjustment

# SECTION 11

## ACCESSORIES

### GENERAL

The accessories available for the new Corvair will be comparable to those offered for previous models. Two heaters (hot air and gasoline), two radios, and an air conditioning unit will be available.

### AIR CONDITIONING

The 1962 air conditioning will be based on the design released in midseason 1961. The new version will use the new 6-cylinder axial compressor described in the Chevy II and Passenger Car Parts of this booklet. The Corvair compressor will be the reverse rotation model. In this unit, the oil pump gears and gear cavity in the rear head are offset to the opposite side of the shaft. The remainder of the compressor will be the same as indicated in the previous description.

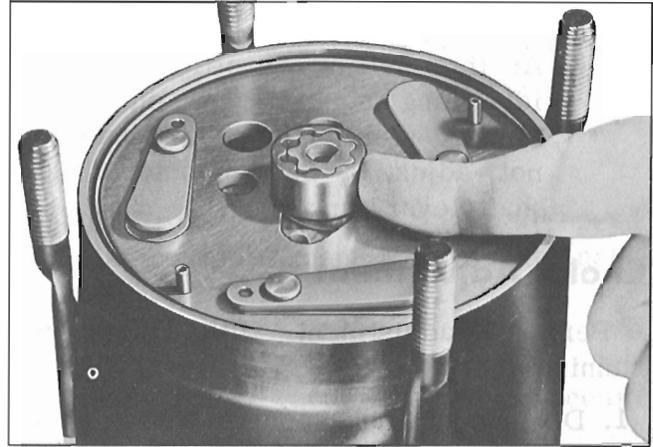


Fig. 3-12—Reverse Rotation Oil Pump

### SEAT BELTS

As in the remainder of the passenger car lines, Corvair will feature provisions for front seat belt bracket installation without the use of special tools.