CHEVROLET

SERVICE NEWS

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CONTENTS

ADDITIONAL SERVICE TOOLS

VALVE GUIDE REAMER

An additional size Valve Guide Reamer for Corvair engines, J-5830-4, is now available for valves with .010" oversize stems. The tool can be obtained by ordering J-5830-4 or in valve guide reamer Tool set J-5830-01.

BEARING INSTALLER

With reference to the Corvair Shop Manual, the differential side bearings cannot be installed on the differential case with tool J-5768 after the differential side gears have been assembled in the case. When the side gears are assembled in the case, the side gear hub extends into the differential case hub. Tool J-5768 has a pilot which will not enter the side gear bore.

Bearing Installer, J-8359, has a machined groove and no pilot, which makes it possible to install differential side bearings with the differential gears assembled in the case. When using installer J-8359, use handle J-7079-2. This tool can also be used for 1955-60 Passenger Car rear axles.

DOOR HINGE SOCKET AND RATCHET

When adjusting the Corvair front doors in or out, it is necessary to loosen the screws attaching the hinges to the hinge pillar (fig. 1). Access to these screws is quite difficult but can be made easy by using tool J-8749, Door Hinge Socket and Ratchet. The tool is shaped at a right angle for ease in reaching screws that are not directly accessible. The tool is designed with a long lever arm to minimize the force necessary to loosen the screws.

CARBURETOR CHAIN GAUGE

Recent changes in the design of some Passenger Car Rochester four barrel carburetors makes tool J-8879, Carburetor Chain Gauge, necessary to prop-

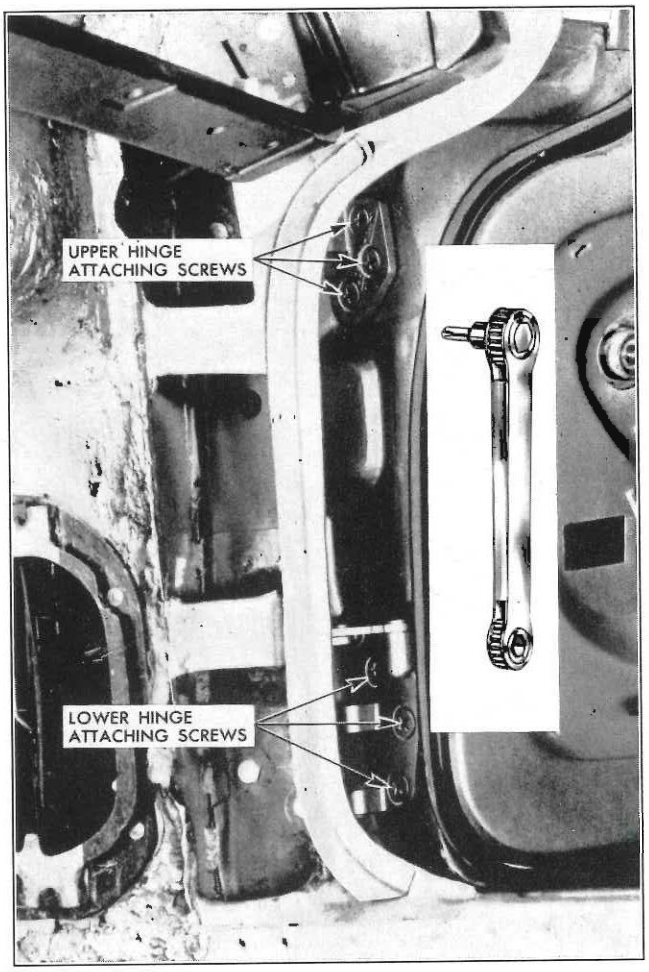

Fig. 1—Door Hinge Socket and Ratchet

erly adjust the float level. The Passenger Cars affected by this change are 283 and 348 cu. in. engines equipped with automatic transmissions and air conditioning. The carburetor changes are a redesigned float hanger and the addition of a torsion spring. Both the primary and secondary float settings are changed and are as follows:

	Primary	*Secondary*
Old	1-43/64"	1-47/64"
New	1-33/64"	1-37/64"

INSTRUMENT CLUSTER RETAINING CLIP DEPRESSOR

A new tool J-7900 is necessary to remove the instrument cluster from Tilt Cab models. Holes are provided in the instrument panel to permit this hooked tool to depress cluster retaining clips and release the cluster from the panel as shown in Figure 2.

BELT TENSION GAUGE

Strand Tension Method! What is it? It's a new, faster and more accurate way to determine if a fan or blower belt is properly adjusted. Actually,

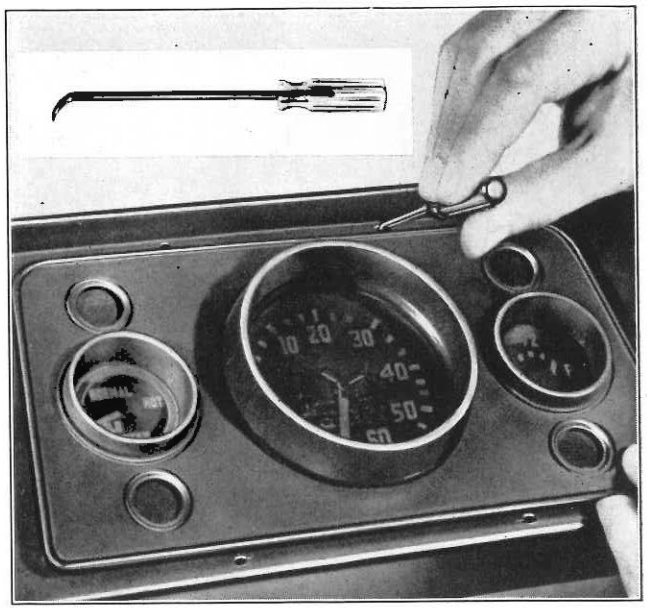

Fig. 2—Instrument Cluster Retaining Clip Depressor

strand tension is the force on a belt created by adjusting, which results in pounds of pull on the belt.

Belt Tension Gauge, J-7316, is a new device to accurately measure the pounds of pull on a belt, or strand tension, to see if the belt is properly adjusted. The gauge is easy to install, just depress the button, position the gauge on the belt, then gradually release the tension (fig. 3).

With the use of a belt tension gauge a fast, accurate check of belt tension can be made. After initially tensioning the belt it is advisable to run the engine for a few minutes, then check and retension the belt, if necessary.

The gauge should be installed between the idler

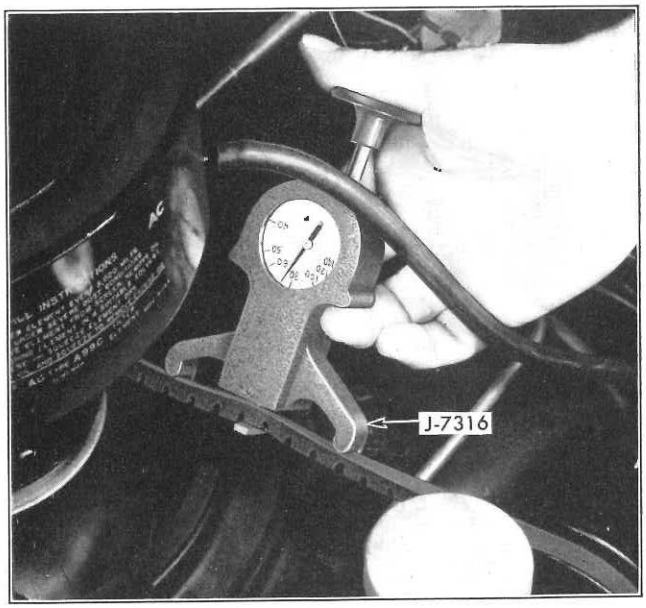

Fig. 3—Belt Tension Gauge

pulley and blower belt pulley on the Corvair and between the water pump pulley and generator pulley on the Passenger Car, Corvette and Truck. Exercise care to install the gauge at the mid-point between the two pulleys and gradually release the gauge spring tension.

The strand tension specification for the Passenger Car, Corvair, Truck and Corvette for new and used belts is 75 lbs. with one exception, used Passenger Car belts should be tensioned to 50 lbs.

CYLINDER BALANCER TESTER OVERLAY CARD

A more complete Overlay Card, J-7412-3, is now available for use with the Cylinder Balance Tester. The new card covers all six and eight cylinder engines plus the Corvair. The Corvair information is printed on the reverse side.

A Cylinder Balance Tester is one of the most efficient tools for locating certain engine troubles; such as, mechanical conditions affecting compression, missing under a heavy load and breakdown of electrical units. With this Overlay Card (fig. 4), the serviceman has a ready reference as to how to operate the tester and interpret the results.

ZIPCUT TOOL

Body Men! How do you remove spot welds? This can be a very costly and time consuming process. How would you like a tool that will cut spot welds faster and easier than ever before? The Zip-

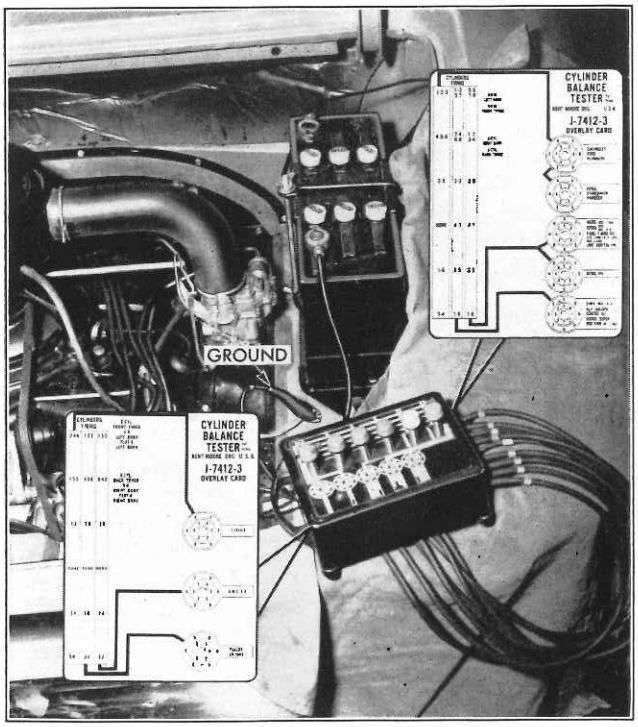

Fig. 4—Cylinder Balance Tester Overlay Card

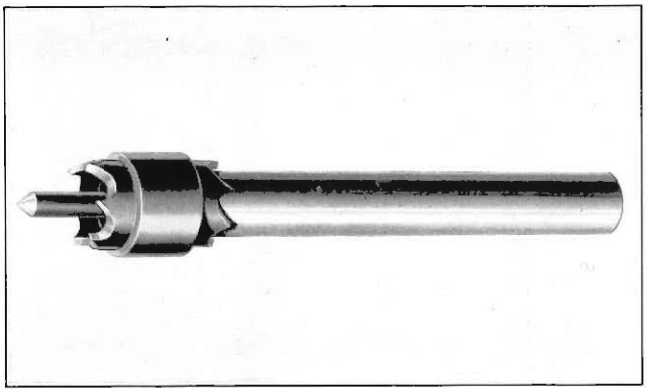

Fig. 5—Zip Cut Tool

cut tool, J-8943 (fig. 5), is designed to cut out the welded area to the desired depth without panel distortion. The cut may be made through one or both panels.

The tool makes a clean, fast cut leaving a weld button on the inner panel. The button makes panel replacement and re-alignment easy and assures positive and tight re-welding of the panel.

All these tools can be ordered from the Kent-Moore Organization, Inc., 28635 Mound Road, Warren, Michigan.

PASSENGER CAR SERVICE

CORRECTION—1959-60 PASSENGER CAR SHOP MANUAL

The 1959-60 Passenger Car Shop Manual states, in error, that the size of the main metering jets for the 1960 2-barrel Powerglide carburetor is .060". Refer to page 16-22, Carburetor Chart. The correct specification is .055".

In some cases of reported poor gasoline mileage, servicemen have disassembled these carburetors and found that the main metering jets have been changed from .055" to .060". If additional performance is desired, the main metering jet can be changed from .055" to .056", but in no cases should a .060" jet be installed in a 1960 2-barrel Powerglide carburetor.

IDENTIFICATION AIR HORN GASKETS FOUR BARREL CARBURETORS

Some servicemen have expressed concern with regard to the construction of the air horn gasket supplied with Kit 7015827. The service gasket, (fig. 6) is made slightly different than the production gasket to eliminate the possibility of the engine cutting out on turns during hot weather operating conditions.

The standard prodnction gasket is used with four barrel carburetors, Part Nos. 7013004, 7013006, 7013010 and 7013012. When the serviceman is

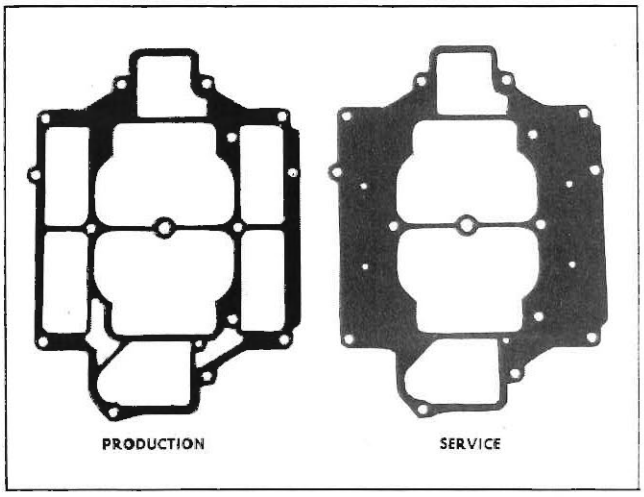

Fig. 6—Air Horn Gaskets—Production and Service

confronted with this problem of the difference in construction of the original equipment gasket compared to the service replacement gasket, by referring to Figure 6 he can be assured that the service replacement gasket being installed is correct.

CARBURETOR POWER PISTON SPRING

There are many dangers involved in altering carburetor power piston actuating spring. The power piston actuating spring is calibrated just as carefully as are idle tubes and port drillings for each engine and transmission combination; therefore, it is only logical that the spring should not be altered *in any way*.

The following is a list of the dangers involved if some of the coils are removed:

1. When accelerating, the action of the power piston is delayed. This causes an insufficient amount of fuel to be injected into the throat of the carburetor which results in poor performance for passing or load-pulling.
2. Fuel economy is reduced because the throttle valve is open more than normal for a given operating condition.
3. At constant high speed operation, a lean air fuel mixture may develop resulting in the engine overheating which can cause burned valves, warped heads or burned pistons.
4. Constant throttle surging may develop because of the lean condition as a result of the delayed action of the power piston.

Some of the dangers involved as a result of stretching the power piston spring are as follows:

1. The power piston will cut-in sooner causing immediate loss of fuel economy because extra fuel is supplied to the engine before it is needed.
2. The power piston cutting in too soon may cause a rich air-fuel mixture, resulting in excessive carbon deposits in the combustion chamber. These carbon deposits can cause spark plug fouling. This is specially true for city driving conditions.

REVISED FOUR SPEED TRANSMISSION SERVICE PROCEDURE

This revised four speed transmission service procedure covers (1) the selective fit snap rings used at the front of the front bearing and at the rear of the rear bearing (2) the snap ring used at the front of the third and fourth speed clutch assembly and (3) the rear bearing retaining ring. Reference is also made to firmly seat the bearings.

Briefly, the selective fit snap ring used at the front of the front bearing and to the rear of the rear bearing is available in three sizes maintaining a clearance of .000″ to .005″. The snap ring used at the front of the third and fourth speed clutch assembly and the rear bearing retaining ring are not selective.

The following information should be included in the 2nd Edition of the 1960 Passenger Car Shop Manual pages 12-10, 12-11 and 12-12:

1. Immediately after step 4, page 12-10, add the following statement: Firmly seat the bearing against the shoulder on the mainshaft.
2. Following step 5, page 12-10, add the following paragraph:
   This snap ring is available in three thicknesses, .087″, .093″ and .099″. Use the ring that will produce .000″ to .005″ clearance between the rear face of the bearing and the front face of the snap ring. Refer to Figure 7.
3. Delete the note following step 10, page 12-11.
4. Step 11, page 12-11, should read as follows: Install the rear bearing retainer plate, (fig. 21). Spread the snap ring in the plate to allow the snap ring to drop around the rear bearing

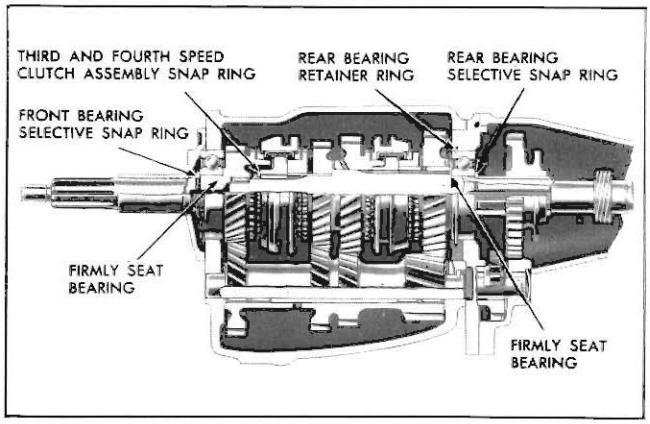

Fig. 7—Four Speed Transmission

and press on the end of the mainshaft until the snap ring engages the groove in the rear bearing.

5. Immediately after step 3, page 12-12, add the following statement: Firmly seat bearing against shoulder on clutch gear.
6. Following step 4, page 12-12, add the following paragraph: The snap ring is available in three thicknesses, .087", .093" and .099". Use the ring that will produce .000" to .005" clearance between the rear face of the snap ring and the front face of the spacer washer.

TURBOGLIDE CHANGES

Mainline Pressure

The 1959-60 Turboglide transmission was modified to provide a minimum mainline pressure of 80-90 psi instead of the 45-60 psi used in the 1957-58 models. This change eliminated the need for the vacuum modulator accumulator valve, located in the hydraulic modulator valve body.

A new hydraulic modulator valve body, Part No. 3779625, without the vacuum modulator accumulator valve (fig. 8) is now being installed in the Turboglide transmissions. The previously used valve body, Part No. 3759834 (fig. 8), is available as a service replacement part for 1959-60 transmissions with either the early production valve body, Part No. 3759834, or present production valve body, Part No. 3779625. When valve body Part No. 3779625 becomes available for service replacement it cannot be used for 1957-58 transmissions. The 1957-58 transmissions require an accumulator and also have different diameter hydraulic modulator valves. Use original equipment valve body, Part No. 3745605, for 1957 transmissions and valve body Part No. 3750652 for 1958 transmissions as service replacement valve bodies for these transmision.

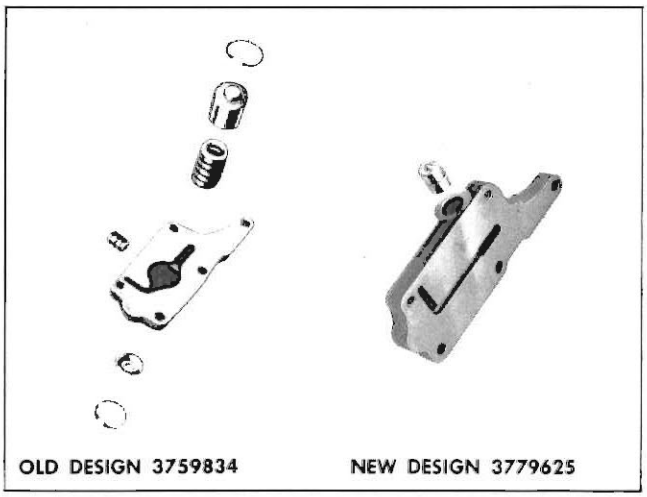

Fig. 8—Old and New Design Hydraulic Modulators—Turboglide

2nd Turbine Thrust Washer

The 2nd turbine thrust washer used in the torque converter of the Turboglide transmission has been changed in production from a needle-type thrust washer to a plain, steel-backed thrust washer. Until the present time, three needle-type thrust washers have been used in the torque converter, one for each turbine, 1st, 2nd and 3rd (fig. 9).

The steel-backed thrust washer is used with service replacement, second turbine assembly Part No. 3760597 as well as being used in the complete transmission assembly Part No. 3759863. However, the new thrust washer will not be serviced separately. Use needle-type thrust washer, Part No. 3732258, as a service replacement part.

IMPROVED BODY ELECTRICAL CONNECTORS

The construction of the body electrical connectors has been redesigned to improve their retention. This will minimize the possibility of electrical failure due to disconnected wires, switches, etc.

Figure 10 illustrates the constructional changes. Knowledge of this information will assist the serviceman when removing these connectors.

The window control switch retaining clips, View A, have been redesigned to provide a positive attachment to the switch terminal. This is the case for all one and four button assemblies. Each switch incorporates two finger type clips which must be spread apart before the switch can be removed from the terminal block.

A wire clip, View B, is used to secure the switch terminal block to the four and six way seat adjuster

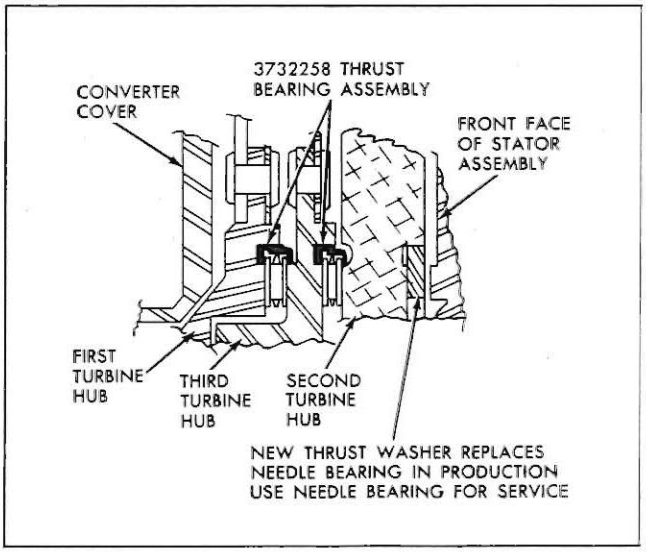

Fig. 9—New Design 2nd Turbine Thrust Washer—Turboglide

control switch. The clip must be removed before the terminal block can be disengaged from the switch.

The electric window and seat motor connector to harness connector, View C, has been revised to permit a button-type locking arrangement to position itself into the motor connector. To remove the harness connector, depress the button, with thumb pressure, then pull the harness connector out of the motor connector. The only precaution to observe when installing the harness connector is to depress and align the release button with the hole in the motor connector.

Locking mechanisms have also been included in the single and double wire harness connectors, View D. The molded in locking ramp, when positioned in the window of the female connector, provides positive retention of the mating parts. To remove the male connector pry up the locking tab of the female connector, then pull out the male connector.

STATION WAGON SECOND SEAT ADJUSTMENT

Cases have been reported of the folding second seat back on station wagon models being difficult to lock in the lowered position or to unlock from the lowered position. This condition may be corrected by adjusting the seat according to the following procedure:

1. Fold the seat back down to its lowered position, then slightly compress both the seat cushion and back cushion.

   NOTE: *With the seat back in this position, the linkage pedestal supports should rest flat on the rubber bumpers attached to the floor pan. Also, the floor filler panel should lay flat*

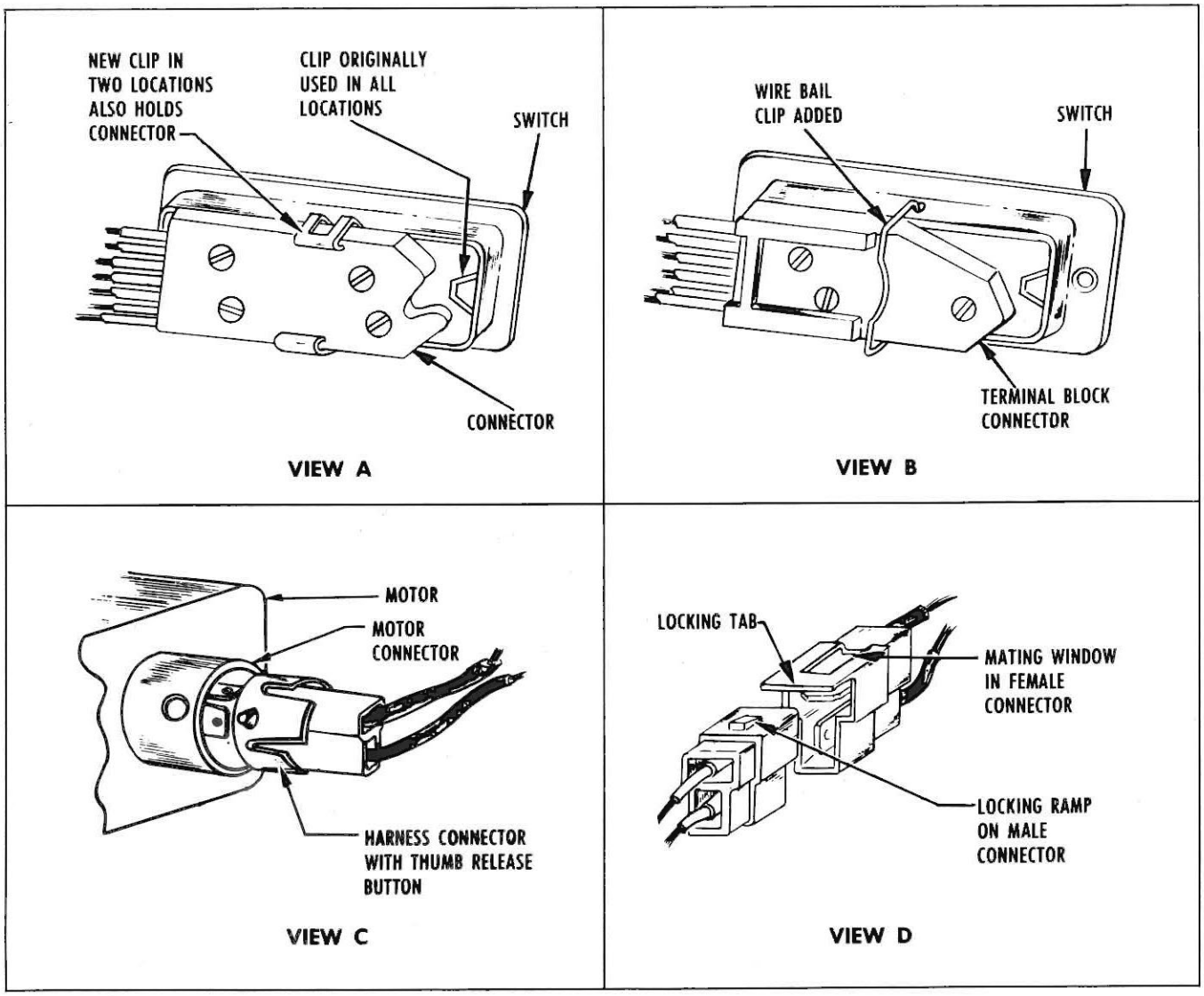

Fig. 10—Redesigned Body Electrical Connectors

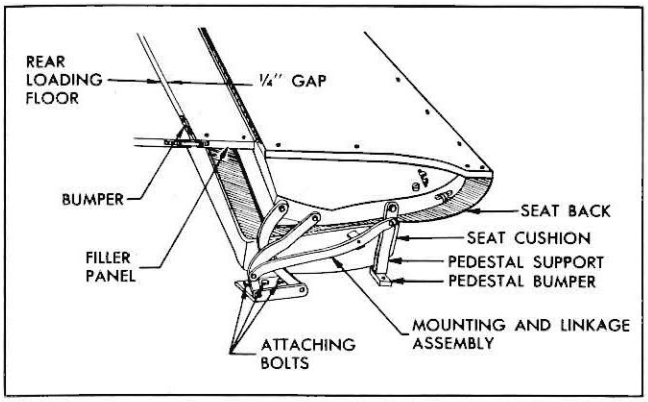

Fig. 11—Station Wagon Folding Seat Alignment

against the rubber bumpers attached to the metal step portion of the rear loading floor (fig. 11).

2. If adjustment is necessary, loosen the three bolts at each side of the seat assembly attaching the folding seat back mounting and linkage assembly to the floor pan.
3. Position seat assembly as required so the gap between the metal edge of the filler panel and the metal step on the rear loading floor is ¼" wide along the full length of the filler panel.
4. Tighten the three attaching bolts at each end of the seat assembly.
5. Check the locking and unlocking action of the folding seat assembly.

AIRFLOW HEATER GURGLE 1959-60 PASSENGER CARS WITH 348 CU. IN. ENGINES

If a gurgling noise, considered objectionable by an owner, is noted in the 1959-60 Passenger Car equipped with 348 cu. in. engine and Air Flow Heater or All Weather Air Conditioning, the noise may be minimized with the installation of a Reducer-Bypass Part No. 3781066, in the heater hoses (fig. 12).

This reducer is installed between the inlet and outlet hoses approximately 11 inches from the hose attachment to the heater core.

The reducer may also be used on units with 283 cu. in. engines although it is not recommended, since it will lower the heater output at idling speed.

To install the reducer the following procedure is suggested:

1. Drain radiator.
2. Cut inlet and outlet heater hoses approximately 11" from ends attached to heater core.
3. Remove and discard restrictor used in the lower or inlet hose at core pipe.

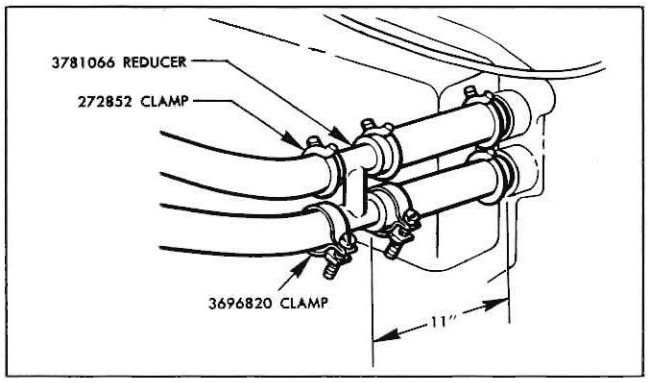

Fig. 12—Installing Reducer in Heater Hoses

4. Install reducer, using the two ¾" spring type clamps on the upper hose, and the two ⅝" screw type clamps on the lower hose (fig. 12).
5. Remove lower hose nipple at intake manifold water outlet; remove and discard restrictor.

CORVAIR SERVICE

OIL FILTER TORQUE

The oil filter center bolt torque specification presented on page 2-6 of the 2nd Edition Corvair Shop Manual is incorrect. The torque specification should be 9-15 ft. lbs. as stated on pages 6A-51 and 12-6.

The correct amount of torque applied to the oil filter center bolt is very important because if the bolt is tightened to 20-25 ft. lbs. torque as

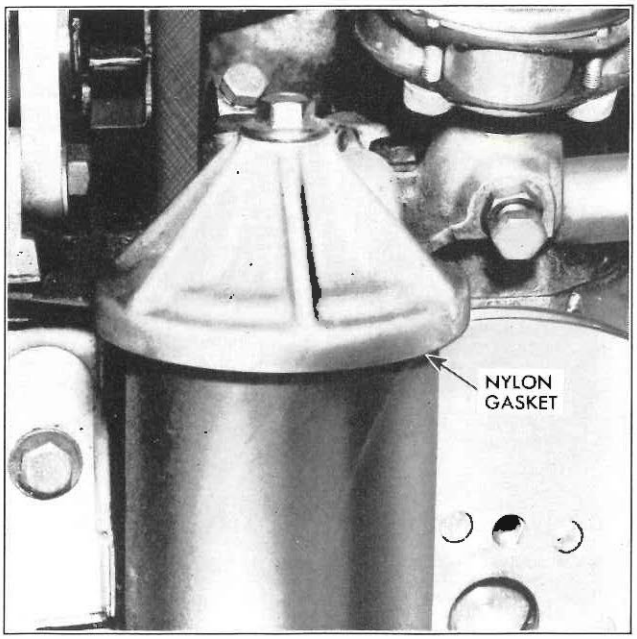

Fig. 13—Corvair Oil Filter Gasket

stated on page 2-6 of the Corvair Shop Manual, the nylon gasket may split, causing an oil leak. An oil leak in this area (fig. 13) can result in the rapid exhausting of the engine oil.

CORVAIR CARBURETOR CHANGES AND IDENTIFICATION

Recent changes in Corvair carburetors make proper carburetor identification necessary to insure correct float setting.

Corvair carburetors Part No. 7015310 (automatic transmission) and Part No. 7015311 (3 speed) use a solid needle valve and a float without a dimple. Recently these carburetors were changed to include a spring loaded needle valve, seat assembly and a new float with a dimple, carburetor Part No. 7015312 (automatic) and Part No. 7015313 (3 speed). Production difficulties were encountered with this modified carburetor which necessitated replacement of the spring loaded needle valve with the original solid needle valve and seat. These carburetors with the solid needle valve and dimpled float have the same part numbers as the original solid needle valve carburetors, but are identified by the letter "A" stamped on the metal tag. The letter "A" indicates that this carburetor has a dimpled float. In the near future all carburetors will have the solid needle valve and seat assembly and float without the dimple.

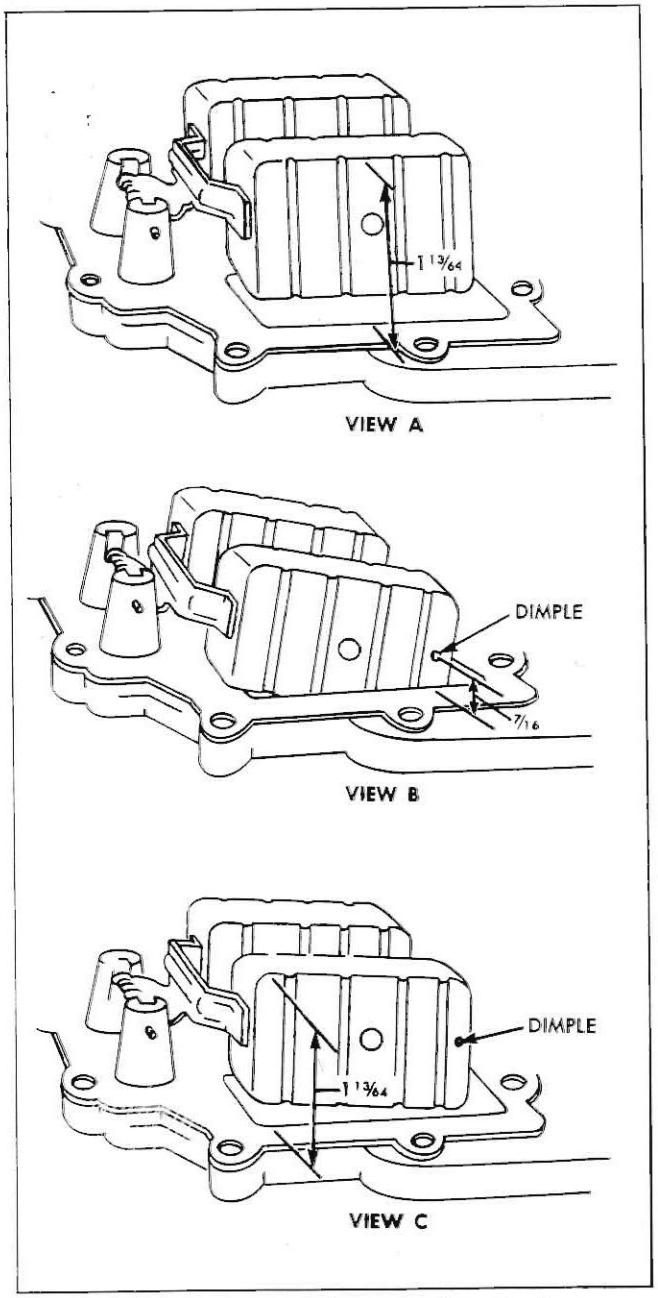

Fig. 14—Corvair Carburetor Float Settings

Figure 14 illustrates the float setting according to the type of needle valve used and the float identification marks.

The float setting for Carburetor Part No. 7015310 or 7015311 with solid needle valve and float Part No. 7015241 should be $1\frac{13}{64}$" from the gasket surface to the top of the float, View A.

The float setting for carburetor Part No. 7015312 or Part No. 7015313 with spring loaded needle valve and float with a dimple should be $\frac{7}{16}$" from the gasket to the dimple, View B.

The float setting for carburetor Part No. 7015310 or Part No. 7015311 with the solid needle valve and the dimpled float should be $1\frac{13}{64}$", View C.

It is suggested that the solid needle valve and seat Part No. 7015789 be used as service replacement for spring loaded needle valve and seat assembly. It is also suggested that float and lever assembly Part No. 7015241 (without dimple) be used with solid needle valve and seat Part No. 7015789 as service replacement for all dimpled floats. When making this replacement a float setting of $1\frac{13}{64}$" should be used.

TRUCK SERVICE

SURGE CONDITION—235 ENGINE

Cases have been reported of a part throttle surge condition, when accelerating in the 30-60 MPH speed range for 1960 light duty L-6 Truck engines. The surging is caused by a lean air-fuel mixture which can be corrected by installing a richer main metering jet.

Main metering jet, Part No. 7001860, stamped "55" installed in place of jet, Part No. 7002954, stamped "54" will give a richer air-fuel mixture. This jet has a larger and tapered approach orifice, compared to a square approach orifice, which reduces the turbulence of the incoming fuel and contributes to a richer mixture. It is currently used as a secondary jet in the Rochester 4-barrel carburetor and is available as a service replacement part.