CHEVROLET

SERVICE NEWS

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Corvair Powerglide Front Oil Pump

To provide more positive priming of the front oil pump on the Corvair Powerglide, on late 1964 vehicles a plunger type priming valve installed in the pump body is used in place of the ball type valve previously installed in the bottom of the transmission case.

This improvement was incorporated in a new front oil pump assembly used in the Powerglide of all Corvair passenger cars built after November 12, 1963, and in most Corvair "95" trucks built after that date.

The later design Front Oil Pump Assembly #3850843 is now being serviced for all 1960-64 Corvair Powerglide. The body casting of the #3850843 pump assembly is bored for installation of the new priming valve parts, at the location shown in Figure 1.

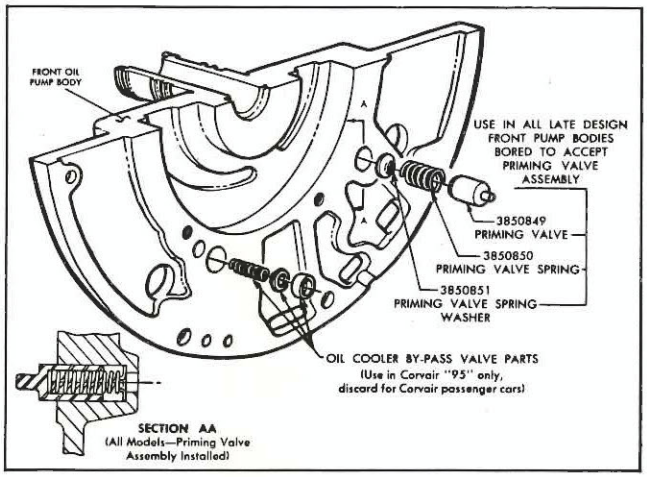

Fig. 1—Corvair Powerglide Front Pump

When using this later design front pump assembly as replacement on any 1960-64 Corvair Powerglide, the priming valve parts specified in Figure 1 must be ordered separately, and installed in the new front pump. If these priming valve parts were in error omitted when installing the #3850843 front pump assembly in any 1960-64 Corvair Powerglide, the vehicle would not move at engine speeds of less than 2500 rpm.

To avoid possible pump cavitation noise, the oil cooler by-pass valve parts, shown in Figure 1, should be removed from the #3850843 front pump assembly before installing the pump in any model Corvair passenger car.

Chevelle Rear Upper Control Arm Replacement

Chevelle rear suspension upper control arms incorporate a cam adjustment on early production vehicles; however, 1964 late production vehicles are equipped with non-adjustable type upper control arms. It was determined that provision for adjustment of rear axle pinion nose angle was not necessary on the Chevelle line.

The non-adjustable design control arm will eventually also be serviced as replacement for the adjustable type arm used earlier.

On a vehicle equipped with adjustable type control arms; if a non-adjustable type arm is being used as replacement on one side only, it will be necessary to reset the cam bolt to zero degrees, on the remaining adjustable arm. On the side where the non-adjustable arm is being installed; the cam arrangement and attaching parts that were used at the rear with the original adjustable arm should be discarded, and the bolt and nut designed for use with the new arm should be installed and torqued to 50-60 ft. lbs.

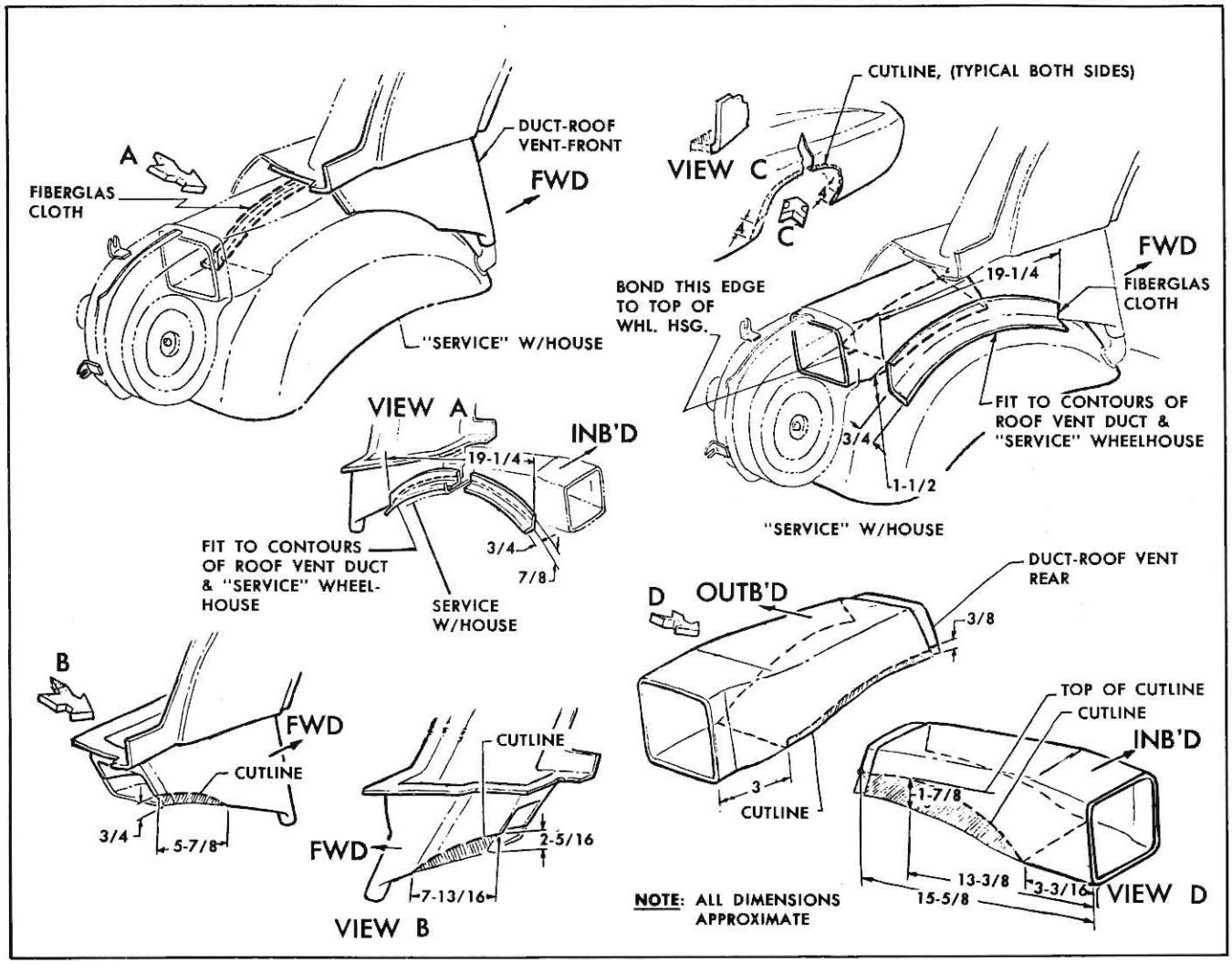

Fig. 2—Rework of 1963-64 Corvette Model 837 for Installation of Larger Tires

Corvette Body Rework For Larger Tires

Some owners of 1963-64 Corvettes (model 837) may wish to equip their cars with the wide racing type tires without destroying the appearance of the rear quarter panels. Due to body clearances, this is possible on closed models only after rework, and not at all on convertibles, because of interferences which occur with the folding top mechanism.

On closed models, adequate wheel travel clearances may be obtained for 7.10-7.60 x 15 tires mounted on RPO P48 Aluminum Knock-off Wheels (6" rim width) by installing the inner wheel housings which are used in Production with the RPO N03 fuel tank of 35 gallon capacity, and by cutting material away in the wheel openings. These wheel housings are serviced under P/N's 3794441 and 3794442 for the right and left sides respectively. On the left side, considerable rework is required to make the larger wheel housing fit under the body rear compartment air exhaust duct. Individual owners may elect to have the exhaust duct system removed instead of going to the expense of the rework. If the rework is undertaken, the efficiency of the rear compartment air exhaust system will be decreased because of the reduced duct area just over the wheel housing.

Refer to Figure 2 for details of the installation of the larger wheel housings, the provision of extra clearance between the tire and the wheel openings, and the modification of the body rear compartment air exhaust duct. In those areas where cutting and rebonding of fiberglas is involved, regular shop practices and materials should be used. The use of the materials shown in Group 12.800 of the Chevrolet Parts Catalog is suggested.

Truck Brake Master Cylinder Cover Leakage

This article provides instructions for a modification that is recommended to avert brake fluid leakage from the rectangular cover used on the brake master cylinder of many 1960-64 trucks. Repeated checking of the brake fluid level has been found to pull the center of the cover gasket upward due to attachment of the gasket retainer to the cover bolt, at the underside of the gasket. Upward movement of the retainer reduces the gasket sealing at the edge and also forms a fluid trap above the gasket, which can result in considerable leakage of fluid out the air vent.

To insure proper gasket positioning is maintained so that brake fluid will not be trapped above the gasket, an additional retainer should be installed on the cover bolt; as described below and illustrated in Figure 3.

The original retainer and gasket can be removed by sliding the cover down and off the bolt. Procure an additional Retainer #9414220 and install on the bolt, positioned 5/8 inch from the under side of the cover. Install Cover Gasket #5465109 (rubber) against the added retainer and use the original retainer underneath to hold the gasket in place. This will position the center of the gasket about 1/8 inch below the clamping edge of the cover. Assemble the cover to the master cylinder and torque the cover bolt to approximately 45 in. lb. Do not over-torque as it could cause deflection of the cover and result in fluid leakage.

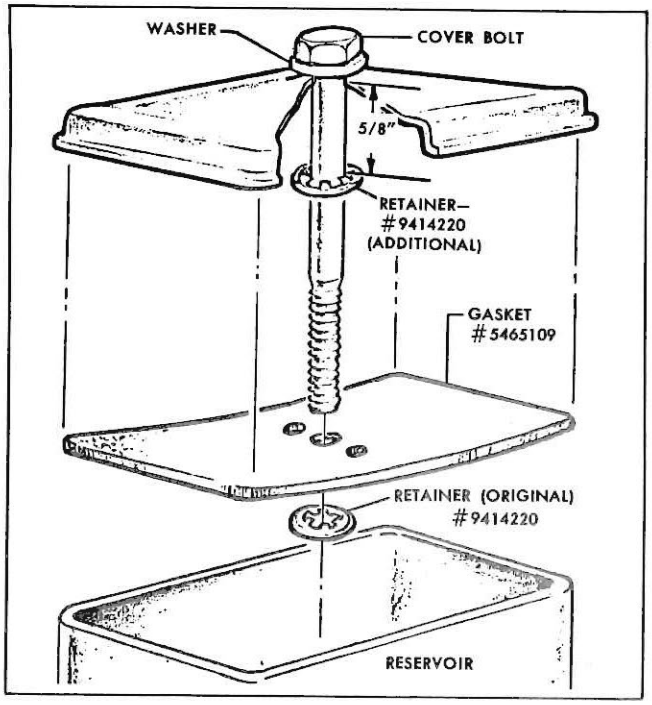

Fig. 3—Rework of Brake Master Cylinder Cover Assembly

Truck V-8 Engine Exhaust Valve Sticking

On 348 and 409 cu. in. V-8 truck engines, occurrences of bent or broken push rods can be due to sticking exhaust valves. In those cases where a push rod failure can not be attributed to engine overspeed or other ohvious causes, exhaust valve sticking should be suspected.

In many instances when the exhaust valve is removed from the cylinder head in the cold condition, no indication of sticking will be evident. However, valve sticking can be suspected if inspection indicates a carbon build-up in the lower end of the valve guide and the corresponding surface of the valve stem shows carbon streaks or evidence of galling.

If the above exhaust valve problem is experienced on these engines it can be eliminated by counterboring the lower end of the exhaust valve guides .010" oversize, 3/16" deep; as shown in Figure 4. The cylinder heads should be cleaned thoroughly after machining.

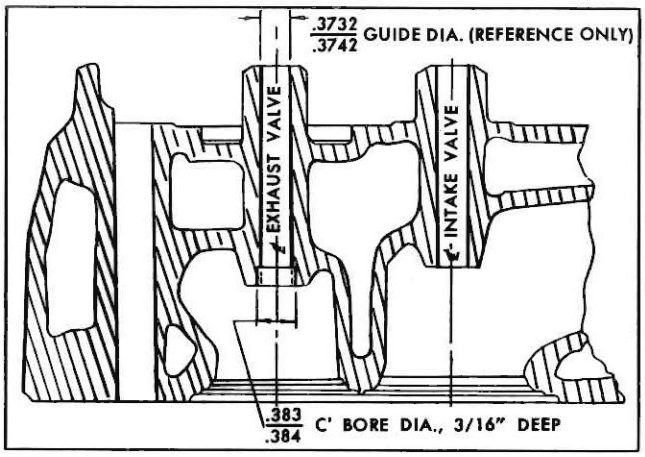

Fig. 4—Exhaust Valve Guide Rework

Stamping Of Delivery Date On Vehicle Serial Plates

Many Vehicle Serial Number Plates are being broken loose from the body during the "date of vehicle delivery" stamping operation performed in dealerships. In most cases where the plates have broken loose, it has been caused by striking the die excessively hard in an attempt to make a legible impression with one hammer blow. By employing the stamping technique described below, a very satisfactory plate impression can be obtained with the recommended 1/8" size dies, and without knocking the serial number plate off the body.

Hold the die firmly against the serial plate and strike the die a series of light taps with a small hammer. Rocking the die slightly while tapping, will assure a full imprint on the plate.

Gasket Storage Recommendations

Technicians sometimes report encountering service replacement cork or paper composition gaskets which they feel were fabricated too small for the intended service application. Investigation of these reports, in all except isolated cases, reveals that the gaskets were properly designed and manufactured. The poor fit experienced was due to extended storage of the gaskets in the dealership.

When gaskets are stored for a prolonged period under low humidity conditions, moisture is absorbed from the gaskets and consequently they shrink. Although all practical means are employed in gasket formulation to retard the aging process by fortifying polymeric materials such as plastic, rubber, cork and other fibers; it is nevertheless recognized that in gaskets containing these materials, a certain degree of shrinkage and hardening with resultant loss of compressibility will occur as the gaskets shelf age.

Dealership Parts stock of gaskets should, therefore, be rotated so that the oldest stock on the shelves is used first.

If a shrunken gasket is encountered it can be restored to original size by submerging it in a pan of warm water for one or two minutes. Prolonged submersion in water would expand the gasket beyond its normal size and require some drying back.

Fortunately, certain measures can be employed to permit long period storage of gaskets, while maintaining acceptable stability in gasket size and retention of the desired properties in the gasket materials. The following guidelines should be observed in the storage of gaskets:

An ideal storage condition for gaskets is provided within the temperature range of 60° to 85°F., with relative humidity between 30% and 50%. Exposure of the gasket storage area to direct sunlight should be avoided. Gaskets should be stored in bin areas having the least air circulation, and where practical closed bins should be utilized. Keep gaskets in the original service package and reseal gasket packages that are opened for any reason and then returned to storage. If the original packaging has been discarded re-wrap the gasket in a suitable paper or plastic material, or place the gasket in a closed container.

If the gasket storage environment departs considerably from that recommended in the previous paragraph, gasket deterioration will be greatly accelerated. High temperature (100°F. and up) will hasten gasket shrinkage and embrittlement. High temperatures combined with excessive humidity (70% and up) promote fungus attack. Low temperatures (0°F. and below) may be tolerated for moderate periods, provided the gaskets are brought back to at least 70°F. before use. Seasonal, wide range variations in humidity of the storage area are particularly harmful to gaskets containing cork.

When the ideal storage conditions described earlier in this article can not be provided in the dealership, storage life of gaskets can be greatly extended by the use of vapor barrier packaging, such as commercially available 1 or 2 mil polyethylene film. If the plastic over-package is utilized, humidity and temperature extremes will have much less effect on the gaskets.

Chevy Van Heater Water Shut-Off

Reports indicate that in many early production Chevy Vans the heater water shut-off valve assembly is incorrectly installed. It is important that this shut-off valve be connected into the heater water inlet hoses with the "ON" marking on the valve body located toward the downstream or heater side of the installation; as shown in Figure 5. If in error,

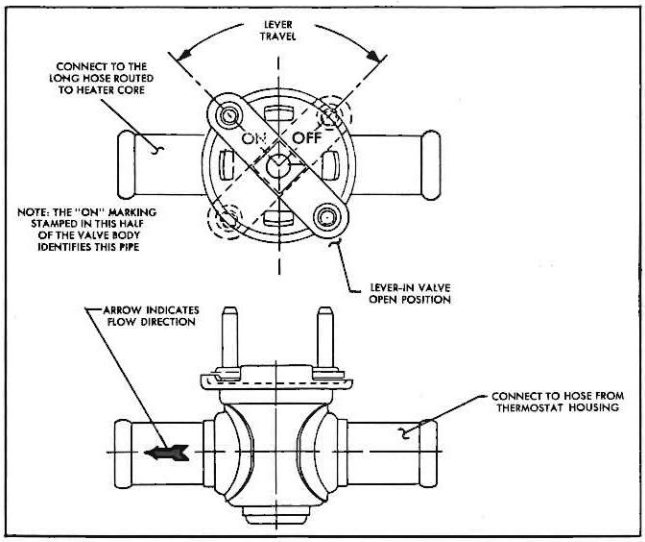

Figure 5—Heater Water Shut-Off Valve

the valve is connected into the hoses in the reverse direction, it cannot be shut off completely, which would permit hot water flow thru the heater core during warm weather. Check for proper installation of this valve if an owner reports receiving heated air when the valve has been turned off.

NOTE: *An arrow stamped into the valve pipe to indicate proper direction of water flow thru the valve, unfortunately is so light on the valves of early manufacture that it will not be detectable on many of these parts.*