

Trouble: Insufficient heat from heater caused by incorrect setting of Bowden Cable and conduit resulting in the temperature control valve not opening to the full open position.

Remedy: Loosen the Bowden Cable and conduit and place the temperature control knob in the full down or open position, re-adjust Bowden Cable and conduit and tighten securely.

Trouble: Insufficient heat from defrosters (with cables and valve properly adjusted) caused by sponge rubber seal between defroster manifold and heater core assembly not being in proper position, resulting in closing off part or all of the defroster opening.

Remedy: Remove heater, disassemble defroster manifold from heater core, align sponge rubber seal and reassemble heater. This should be done only after other possible causes have been checked and eliminated.

Trouble: Heat not being distributed correctly from heater distributor.

Remedy: Be sure the two wide rubber bands used to connect the blower and distributor together are attached to each end of the blower and distributor to prevent the heated air from escaping.

Trouble: Insufficient heat to rear seat of car caused by obstructions to the flow of heated air such as packages or wrinkled up floor mat under the front seat or a blocking of the lower end of the distributor by the floor mat, preventing heat flow to the driver's side of the car.

Remedy: Remove obstruction. In some instances the heavy carpet on Bel Air series cars tends to block air flow out of the heater. Removal of the jute backing from the carpet in the area below and to each side of the outlet will eliminate this condition and promote free air flow.

To aid in air flow to driver's side of car, the opening in the left hand side of the heat distributor may be lengthened. Using a hack saw blade, cut down 1" starting at slot lower corners and bend resulting tab into distributor at a 45° angle (or as necessary), thus acting as a deflector.

Powerglide Linkage Adjustment

A change has been made in the angle of the transmission throttle valve control outer lever and in the length of the control rod to lower the part throttle upshift range to 12-18 MPH on 1955

Powerglide six cylinder passenger car models. This will necessitate revising the present linkage adjustment procedure at the low and drive valve body where the new outer lever and control rod are used.

The new Throttle Valve Control Outer Lever, Part No. 3720323, and the shorter Throttle Valve Control Rod, Part No. 3715711, will replace the first type lever and rod, Part Nos. 3710634 and 3710632 respectively.

The procedure for adjusting the throttle valve linkage with the new outer lever and control rod will remain the same as described in the 1955 Passenger Car Shop Manual for first type lever and rod with the exception of the outer lever adjustment at the low and drive valve body. The new adjustment should be performed as follows:

1. With the control rod disconnected from the lever, remove the top bolt and lockwasher on rear edge of low and drive valve body cover.
2. Loosen the outer lever adjusting bolt.
3. Remove the outer lever assembly clamp bolt and install a suitable tool through the clamp bolt slot to assist in rotating the lever.
4. With the throttle valve outer lever positioning gauge J-5906 set at 6", rotate the outer lever counterclockwise to permit the gauge to be installed in top bolt hole and lever. Install gauge as shown in Figure 8.
5. With the clamp and outer lever rotated counterclockwise to the open throttle position (to a definite stop), tighten adjusting screw (fig. 8).

In cases where the six cylinder Powerglide units upshift in the 26-28 MPH range on part throttle, and it is desirable to have the upshift at 12-18 MPH for the best fuel economy, particularly in metropolitan areas, the new outer lever and control rod should be installed.

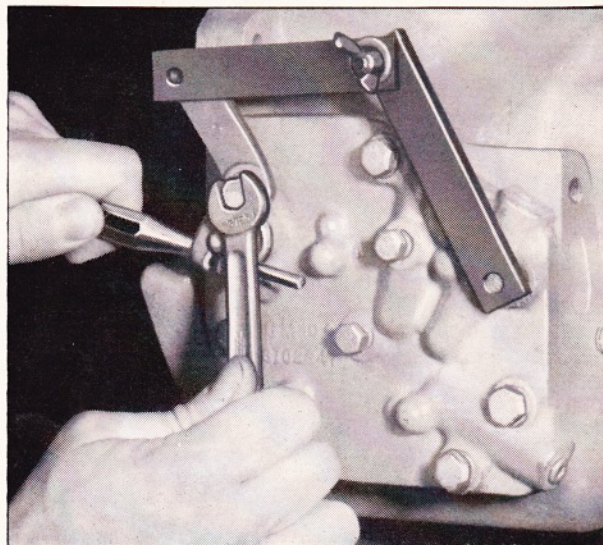


Fig. 8

ation against the valve assembly with a force sufficient to displace the valve from the rim and cause air leakage from the tire.

Whenever this condition is encountered, the hub cap should be removed from the wheel and the tabs in the hub cap retaining flange pried outward by inserting a screwdriver or similar tool in the tab slots. With all tabs sufficiently raised to present adequate retaining area, the hub cap should then be installed so that a lug on the wheel rim is located between the two projecting tabs in each pair of tabs.

Overdrive Governor Water Leakage

The condition has been reported where water leakage into the overdrive governor switch has resulted in a shorting out of the switch. Where encountered, the condition may be corrected by either applying Permatex or undercoating compound to the switch base over all three switch base attaching screws.

Air Cleaner Gasket Installation

A number of instances have been found where the four barrel carburetor air cleaner gasket has been improperly installed, blocking off the carburetor bowl vent tubes. This results from the gasket being rotated on the carburetor air horn prior to assembly of the air cleaner.

Before installing the air cleaner, the cutouts in the gasket should be matched with the vent pipes to prevent this occurrence. A change is being made in the gasket to eliminate the possibility of installing the gasket incorrectly.

Powerglide Thrust Washer

To prevent possible galling of the thrust surfaces between the planet carrier and reverse ring gear and drum, a new steel thrust washer has been incorporated in production beginning with Transmission No. C-128D. To accommodate the new .020" thick washer, the height of the thrust shoulder on the reverse ring gear and drum has been reduced .020".

A service package, Part No. 3721564, which consists of one Transmission Planet Reverse Ring

Gear and Drum Assembly, Part No. 3720472 and one Transmission Output Shaft Thrust Washer, Part No. 3720474, will replace 1953 and 1954 Drum Assembly, Part No. 3703240 and 1955 Drum Assembly, Part No. 3710246 when present parts stock is exhausted.

Rocker Arm Stud Height

V-8 engine rocker arm studs have been installed to the following heights since the start of production:

$1\frac{3}{4}$ " on early production low boss heads with short rocker arm studs.

$1\frac{1}{2}$ " on high boss heads with short rocker arm studs

$1\frac{41}{64}$ " on high boss heads with long rocker arm studs

For field service the following stud installation heights are to be used regardless of stud length:

Low boss head (early production) $1\frac{3}{4}$ "

High boss head (later production) $1\frac{41}{64}$ "

The low or high boss heads may be identified by placing a straight edge across the rocker cover gasket surface. The low rocker arm stud boss (early head) will be approximately flush with the lower edge of the scale while the high boss will be approximately $\frac{1}{4}$ " above lower edge of scale.

Rocker Arm Stud Installer Tool J-5801 was originally designed to locate the top end of the stud $1\frac{27}{32}$ " above the boss. Grinding $\frac{3}{32}$ " off the bottom of the tool, as described in the November, 1954 Service News, will drive the stud to the $1\frac{3}{4}$ " required for the early production low boss head. When installing studs to the later production high boss heads, the reworked tool should be used to drive the studs to $1\frac{3}{4}$ " after which the studs will have to be pressed in further to $1\frac{41}{64}$ ".

Vacuum Leak

Investigation of vacuum leak on some V-8 engine cars equipped with power brakes and electric windshield wipers has shown that some early models did not have the proper Tee connection at the carburetor. As a result some dealers, when making windshield washer installations, are cutting into the power brake line between the check valve and the reserve tank.

Powerglide Valve Body Springs

Effective with 1955 Powerglide Transmission Serial No. C-103, a new closed throttle downshift cushion valve spring has been installed in the valve body. The following spring data is presented to

enable the serviceman to identify the closed throttle and forced downshift cushion valve springs on both early and later run transmissions and prevent possible improper installation:

	EARLY PRODUCTION			CURRENT PRODUCTION		
	Spring Free Length (Approx.)	Wire Dia.	Total Coils	Spring Free Length (Approx.)	Nominal Wire Dia.	Total Coils
Closed Throttle Downshift Cushion Valve Spring	2.04	.054 ± .001	14½	2.10	.039 ± .001	18
Forced Downshift Cushion Valve Spring	2.02	.047 ± .001	14½	2.02	.047 ± .001	14½

The above corrects and supersedes the information presented in the "Caution" on Page 7-73 of

the 1955 Passenger Car Shop Manual.

Powerglide Cover Pilot and Crankshaft Interference

In cases where interference is encountered between the cover pilot and the crankshaft when installing a service crankshaft on 1950-52 Powerglide models, a slight rework will provide the necessary clearance. Clearance may be obtained by filing the edge of the pilot as indicated in Figure 1.

Powerglide Filler Plug

On passenger cars equipped with air conditioning and Powerglide, provision has been made to check transmission fluid level and add lubricant from underneath the vehicle. This was made necessary since the dipstick and filler tube are inaccessible through the engine compartment with the conditioning unit installed.

Although the dipstick and tube have not been removed from the side cover they cannot be used from an under the vehicle position. A filler plug with gasket has been incorporated into the side cover for use in both checking fluid level and adding lubricant. The lubricant should be level with the bottom of the filler plug hole and should be checked with transmission oil hot, control lever in neutral (N) and engine idling.

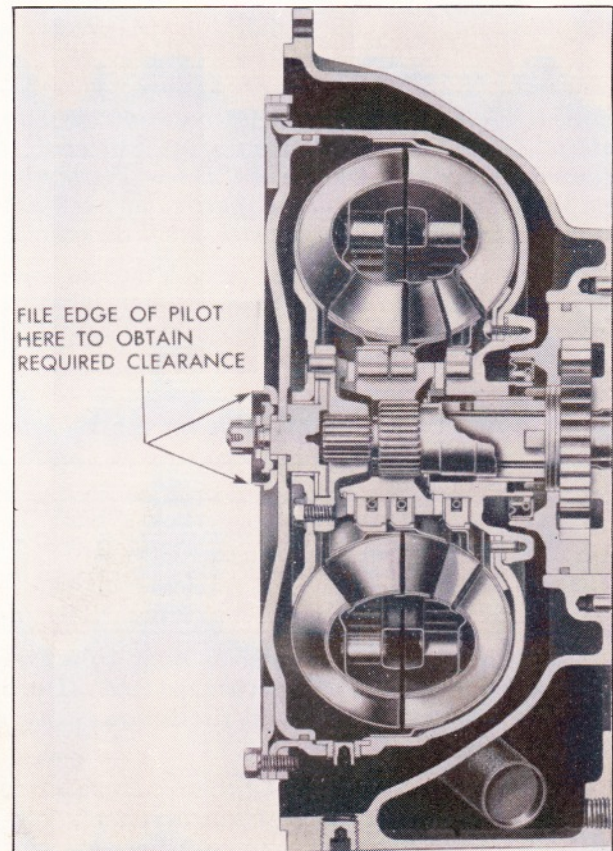


Figure 1

between narrow tread grooves, attach short extension tube.

8. Insert the metal tube with plug into nozzle of the plug-insertion tool, turning to the right until it is locked by the pin inside the nozzle.

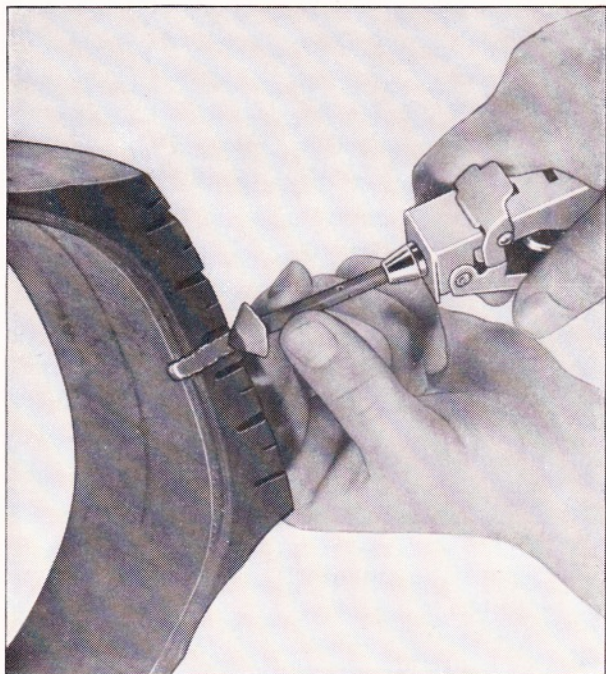


Fig. 11—Starting Plug into Puncture

Lubricate head of plug with rubber cement. Place plug head over puncture hole—holding lower end of metal tube to guide it and prevent bending—and push the entire metal tube

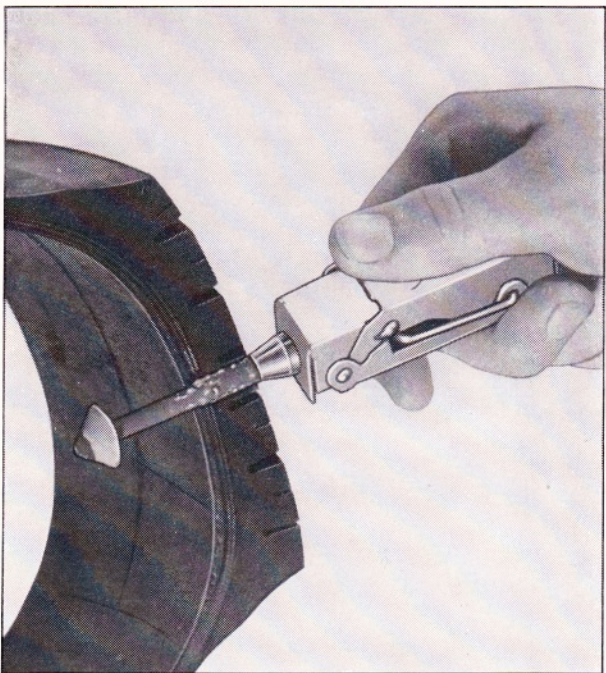


Fig. 12—Applying Remainder of Cement with Plug Inserted

into the puncture hole up to the base of the nozzle (fig. 11). Now press red spring stopper and squeeze the balance of cement into the tire (fig. 12). Retract metal tube with continuous clockwise turning and pulling action (fig. 13). Do not pull, but trim off excess of rubber plug protruding from puncture. The repair is now complete and the tire is ready for immediate use.

9. Clean your tools. Especially remove hardened rubber cement before using the plug-insertion tool for the next repair.

NOTE: If the puncture is an irregular cut that will not seal completely by this method, a self-vulcanizing patch or a hot patch repair should be made.

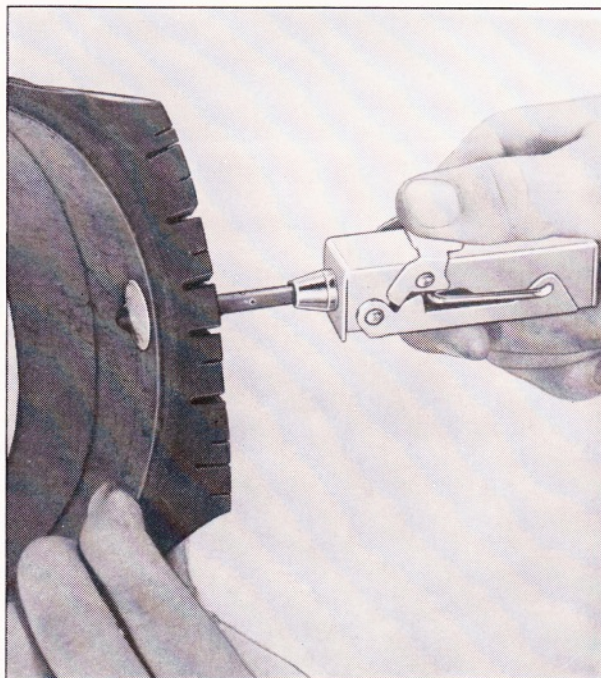


Fig. 13—Seating Plug to Complete Repair

Powerglide Low Band Adjustment

Slippage of the low band on Powerglide models can be corrected by tightening the low band adjusting screw to 4-5 inch-pounds as measured with J-5853 torque wrench prior to backing off the screw four turns.

This recommendation supersedes the Shop Manual instructions which required only that the screw be tightened firmly prior to being backed off.

Experiments conducted show that this controlled method of adjustment results in more uniform apply and extends band life.

bracket to the transmission case has a reduced torque of 7 to 9 ft.-lbs. Former specification was 15 to 18 ft.-lbs. The change should also be made in the table on page 7-155.

- Page 7-148, step 31 of **Transmission—Assembly** covering attachment of front oil pump to transmission case should have a torque value of 15 to 18 ft.-lbs. added. This change should also be made in the table on page 7-155.
- Page 7-148, step 37 of **Transmission—Assembly** covering attachment of rear oil pump to case should have a torque value of 7 to 9 ft.-lbs. added. This specification should also be added to the torque table on page 7-155.
- Page 7-148, step 38 of **Transmission—Assembly** covering installation of thermal by-pass valve should have a torque value of 7 to 9 ft.-lbs. added. This lowered torque specification should also be noted in the table on page 7-155 to replace the former specification of 15 to 18 ft.-lbs.
- Page 7-149, step 43 covering installation of special hollow bolt in valve body should be revised to carry a reduced torque of 18 to 21 ft.-lbs. Former specification of 20 to 25 ft.-lbs. should also be changed in torque table on page 7-155.

- Page 7-149, step 47, covering attachment of case extension to case should carry a torque of 23 to 26 ft.-lbs. This new specification should also be noted in the table on page 7-155 to replace the former value of 25 to 29 ft.-lbs.

Powerglide Low Band Anchor Strut Installation

Improper installation of the Powerglide low brake band anchor strut (5, fig. 9) will limit movement of the band.

Service personnel are cautioned that the guide stamping of the anchor strut assembly must be installed *toward* the band as illustrated. This same illustration is carried as figure 86 in Section 7 of both the 1955 and 1957 Passenger Car Shop Manuals.

Positraction Rear Axle Lubrication

Lubrication requirements for the "Positraction" limited-slip rear axle option are the same as those

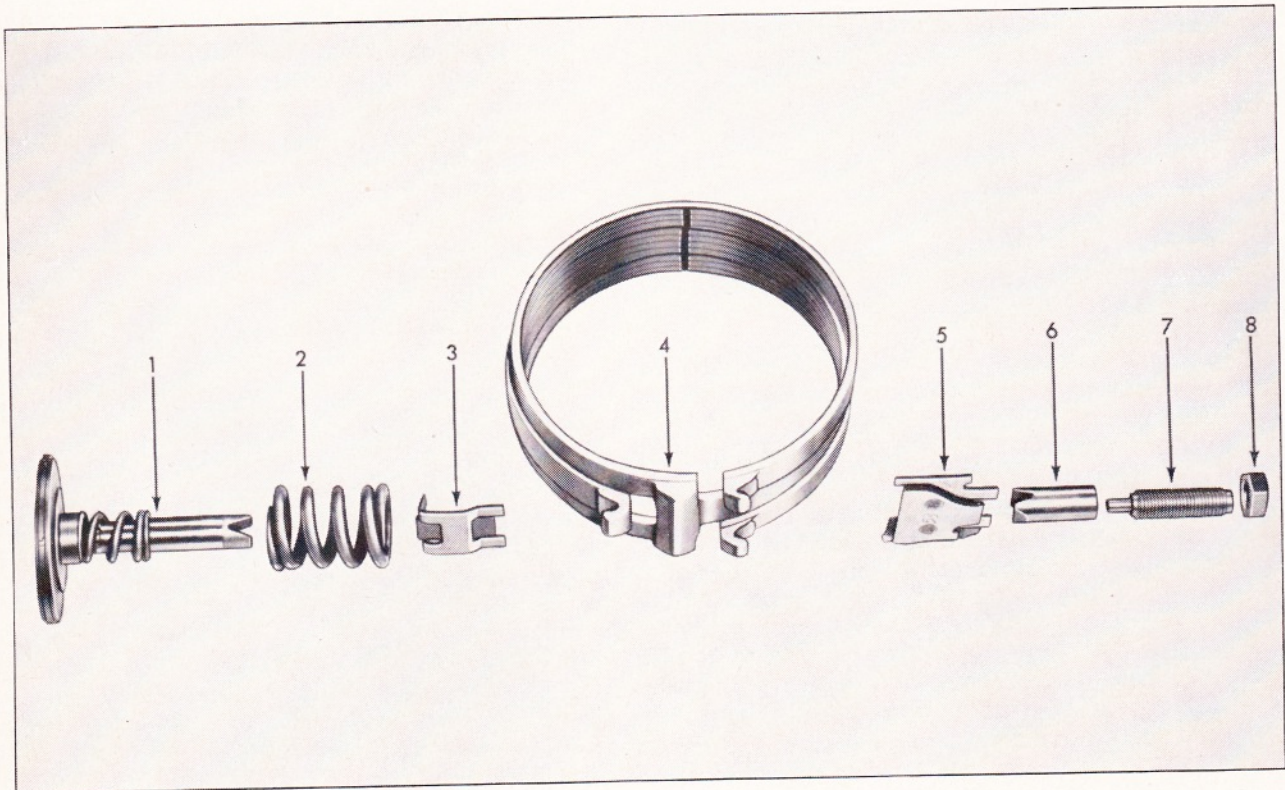


Figure 9

Powerglide Thrust Washers Change

The "roller type" low sun gear thrust washer (.078" thick) used in 1957 Powerglide has been superseded for production use at the same location by a bronze thrust washer (.095" thick). Production will continue to establish correct clearance in the parts stack by selecting a clutch drum thrust washer (tanged) of proper thickness.

When servicing all 1957 Powerglide clutch assemblies installed in 1953 thru 1957 vehicles where either the low sun gear thrust washer (roller type or later .095" bronze) or the clutch drum thrust washer requires replacement it will be necessary to replace the washer at both of these locations. Service procedures for obtaining end play however, differ from production in that service will now use an untanged clutch drum thrust washer of predetermined thickness at the oil delivery sleeve and a selective fit thrust washer at the low sun gear location.

The procedure for selecting and installing the service thrust washers in all units using the 1957 clutch will be as described on pages 7-86 and 7-87 of the 1955 Passenger Car Shop Manual except that the low sun gear to reverse gear clearance will be .025"-.050" and the thrust washers used will be those listed below.

Part Name	Part No.	Size
*Clutch Drum Thrust Washer (untanged)	3745897	.061
**Low Sun Gear Thrust Washer	3719296	.095
**Low Sun Gear Thrust Washer	3719297	.120
**Low Sun Gear Thrust Washer	3719298	.145

*Install bronze face toward clutch drum

**Selective fit

1950-57 Powerglide Replacement Clutch or Clutch Plates

The following chart lists all clutch assemblies, drive and driven plates for 1950-57 Powerglide. This parts usage supersedes all previous information.

Model Year	Clutch Assembly (Complete)	Drive Plate (Double Faced)	Per Job	Driven Plate	Per Job
1950-52	3694476	3713694	4	3689707	5
1953-55	3743840	3713694	4	3703210	5
1956	3743840	*3719256	4	*3719254	5
1957	3743840	3719256	4	3742398 **3719254	3 2

*Complete sets of both drive and driven plates must be used when replacing "original equipment" plates.

**One plate to be located at each end of stack (.070" thick).

NOTE: For all model years, drive and driven plates are to be stacked alternately, beginning and ending with a driven plate.

Rocker Arm Ball Studs Available for 1957 V-8 Engines

New rocker arm ball studs made specifically for service replacement on the 265 and 283 cu. in. V-8 engines in 1957 vehicles are now available. It will therefore no longer be necessary to rework 1956 service studs for use in 1957 engines.

The new studs, No. 3747003 (.003 oversize) and No. 3747001 (.013 oversize) are 2.50" long and must be installed using the 1957 stud installer Tool 6880.

For background information relating to the new studs, refer to article headed "1956-57 V-8 Engine Rocker Arm Ball Studs" which appeared in the February issue of *Service News*.

Replacement Cylinder Blocks for 265 Cu. In. Engine

When a new engine cylinder block is used on these 1955 or 1956 V-8 engines, all cylinder head bolts must be coated liberally on installation with Permatex No. 3.

Previous instructions were to apply sealer to only the cylinder head short bolts, however, many service replacement cylinder blocks for these engines, when gang-drilled on 1957 "setup" will also have the waterjacket penetrated by the cylinder head long bolt holes.

Therefore, as a precaution, when using any replacement cylinder block on the 1955 or 1956 engines both the long and short cylinder head bolts should be sealed when installing the cylinder head. This sealing of all cylinder head bolts conforms with the procedure being used for 265 and 283 cu. in. engines in 1957 vehicles.