PONTIAC
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STRATO-FLIGHT SEALS CHANGED

NEW PISTON SEALS USED IN STRATO-FLIGHT TRANSMISSION

The inner and outer overrun clutch piston seals, neutral clutch piston seals, and reverse clutch piston seals are being changed from metal rings to composition rubber lip type. To accommodate the new seals it was necessary to redesign the seal grooves for both the inner and outer seals. These changes affect service as follows:

1. Overrun Clutch -- The new seals for the overrun clutch piston are now in production. In conjunction with the use of new seals, a new front pump assembly and overrun clutch piston assembly went into production. The difference in design of the seal grooves in these parts can be seen in Fig. 1.

2. Reverse Clutch -- The new seals for the reverse clutch piston are now in production along with a new rear pump (to accommodate the inner seal) and a new clutch piston (to accommodate the outer seal). The seal grooves in the early and late hubs are shown in Fig. 1. The ring grooves in the early and late reverse clutch pistons are very similar and both look like the late type in in Fig. 1. The only sure identification of the early and late reverse clutch pistons is to test the fit of the metal oil ring in the groove. The metal ring will not fit in the groove designed for the rubber seal since this groove is slightly narrower.

3. Neutral Clutch -- The new seals for the neutral clutch will go into production in the near future. Along with the change in seals a new case center support and neutral clutch piston will be required in production. The difference in design of the seal grooves can be seen in Fig. 1. Also required is a new neutral clutch drum (Fig. 2).

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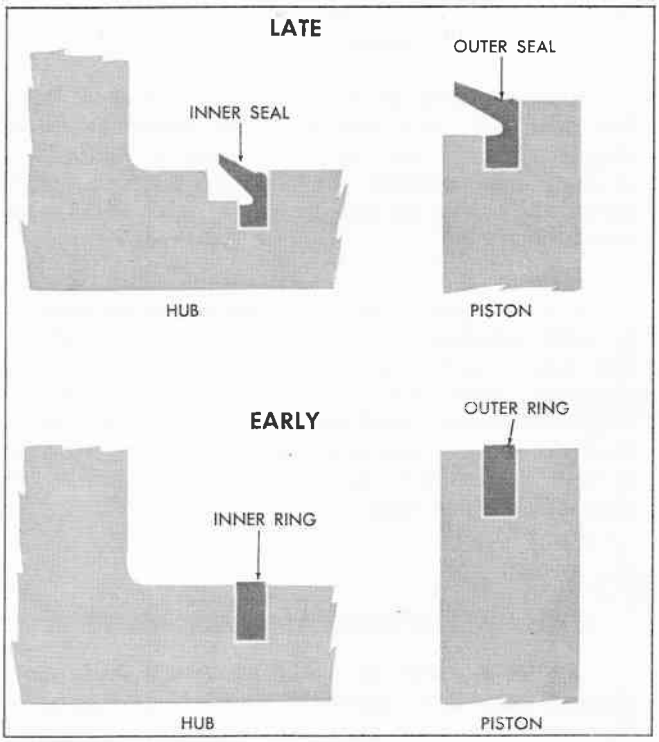

Fig. 1 Early and Late Type Hub and Piston

EDITORS NOTE:

This issue contains an index of the 1955 Service Craftsman News. Remove this index and place it in the front of your Service News Binder.

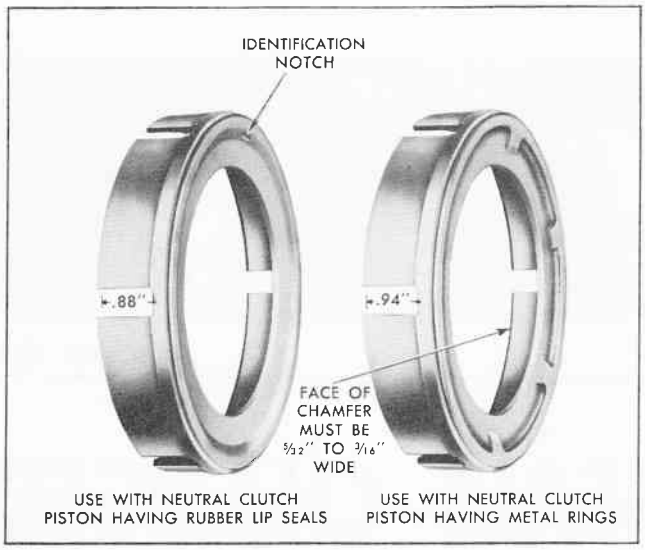

Fig. 2 Early and Late Type Neutral Clutch Drum

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In each clutch all parts must be the same type. For example: If a late type front pump having the step type groove for the rubber seal is installed in an early transmission, the late type overrun clutch piston and rubber lip type inner and outer seals must also be installed.

If a late type case center support is installed in an early transmission, it is necessary to install the late type neutral clutch drum as well as the new piston and seals. Both the early and late type pistons, rings and neutral clutch drum will be serviced. Service front pumps, case center supports and rear pumps of both types will be serviced temporarily to be replaced by the late type only in the future .

HYDRA-MATIC FLUID RECOMMENDATIONS

As is covered in the 1955 Hydra-Matic Shop Manual only G.M. Hydra-Matic Fluid or Automatic Transmission Fluid (Type A) supplied by a reputable petroleum marketer and identified by Armour Institute Qualification Number "AQ-ATF...." should be exclusively used in Pontiac Hydra-Matic Transmissions.

Some "unauthorized" and "unqualified" fluids are being packaged in containers and under brand names that resemble "qualified fluids". These "unqualified" fluids do not actually carry an Armour Qualification number but may incorporate the initials "ATF" in a code, catalog or batch number on the lid of their containers in such a manner as to mislead the purchaser that the fluid is qualified. Extreme care should be exercised when purchasing fluid that only the "qualified" type is obtained.

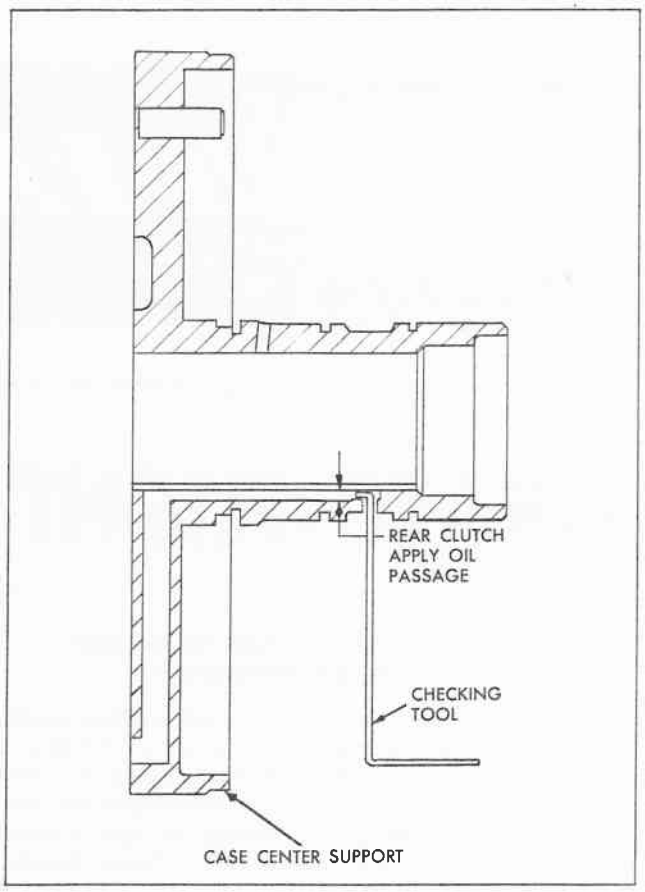

Fig. 3 Checking Rear Clutch Apply Oil Passage

STRATO-FLIGHT CASE CENTER SUPPORT PASSAGE ENLARGED

The rear clutch apply oil passage in the case center support has been enlarged to obtain an improved 2-3 shift. This passage should always be checked before the case center support assembly is put into a transmission, to make certain the improved part is used.

The special tool (.068" gauge) which was furnished attached to News Flash 55-39 should be inserted into the rear clutch apply oil passage as shown in Fig. 3. If the tool will enter the passage, the support can be used. If the tool will not go into the passage, the support should be replaced.

NEW TYPE HOSE CLAMPS USED

The Corbin type hose clamp used previously on radiator hoses is now being used on all heater hoses and on the transmission oil cooler hoses. To facilitate removal of these clamps, special tool J-5284, Corbin hose clamp pliers, is required These pliers are available from Kent-Moore Organization.

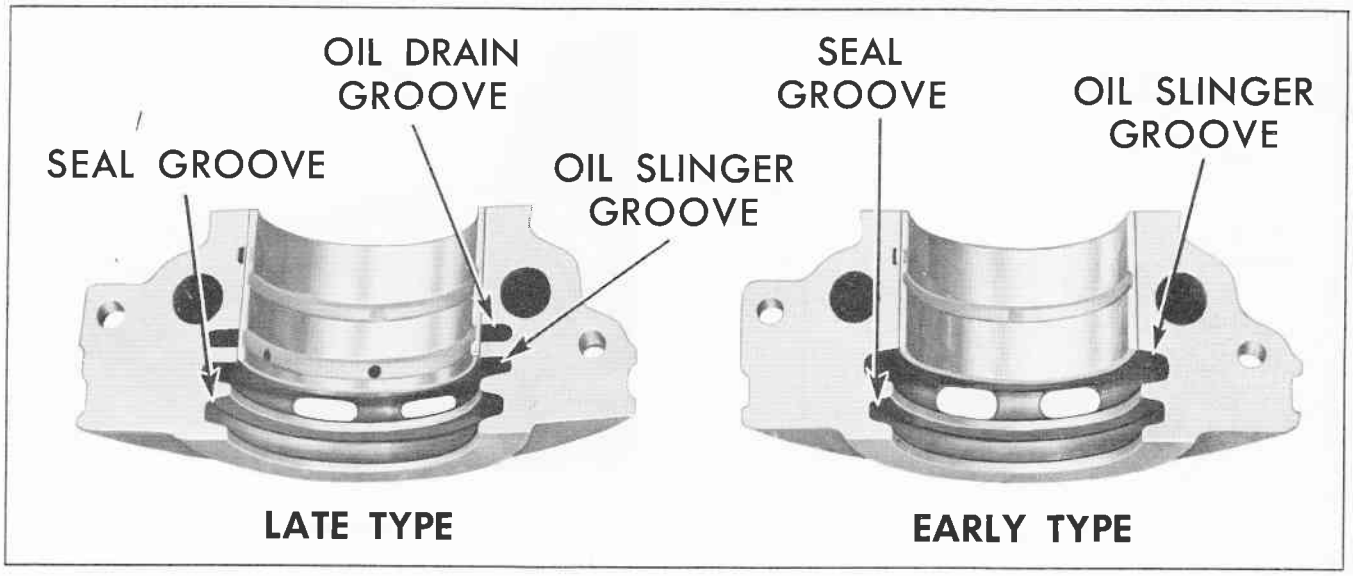

Fig. 4 Comparison of Early and Late Type Rear Main Bearing

ENGINE REAR MAIN BEARING CHANGED

Fig. 4 illustrates the new rear main bearing design now being used to reduce the possibility of crankshaft rear main oil leaks. As shown in the illustration a groove and three oil drain holes are now incorporated in the bearing shell. These holes index with a machined oil drain groove in the main bearing cap and engine block. The new design allows oil drainage from the crankshaft journal and thereby eliminates oil getting to the packing seal under normal operating conditions. The packing seal is required for acceleration of the car or steep up hill driving.

Engines built on or after January 3, 1956 have the new type rear bearing shells, however, a number of engines were built after December 16, 1955 with the grooves machined in the block and cap but with the first type bearing shells installed. This was done because new shells were not available. If leaks are encountered on engines having the new groove and first type bearing shells, the second type shells may be installed.

When installing the new type shells it will be noted that the upper and lower shells are not interchangeable due to a difference in tang location.

The new bearing shells are released under package number 522825 (one upper and one lower) and are available as a zone warehouse item.

CARBURETOR UNLOADING PROCEDURE

If an engine fails to start after a reasonable amount of cranking it may be flooded. In this case forcibly depress the accelerator to the floor to open the choke. Hold firmly in this position while cranking, do not pump accelerator at any time. If this procedure does not relieve the flooding it is possible that there is interference between the accelerator pedal and the floor mat at the "hump" above the transmission. To correct this, loosen the accelerator pedal to floor bracket attaching screws and move top of pedal to the left so that when depressed it does not interfere with the floor mat at this point.

Throttle linkage adjustment should be checked to ascertain that the TV lever stop does not interfere with unloading action at the carburetor with the choke fully on.

A thick floor mat will sometimes prevent full travel of the accelerator pedal thereby interfering with choke unloading. In cases of this nature check and correct unloader adjustment as covered in the 1955 Shop Manual and instruct owners on the correct unloading procedure emphasizing that the pedal must be forcibly depressed.

In all instances service men should observe the carburetor to see that it can be unloaded by using the correct procedure. This should be done before releasing car to the owner.

CORRECTION OF ROCHESTER 4-JET VACUUM LEAK

Engine stalling during warm up on cars equipped with the Rochester 4-Jet Carburetor may be due to a leak in the choke piston vacuum passage. A leak in the passage reduces the effect of engine vacuum in opening the choke thereby allowing engine to "load-up." Investigation of cases of this nature indicates that the usual cause of the condition is a leak at the carburetor throttle body to bowl gasket. The gasket originally used was shaped in such a manner that it could cause a leak between the vacuum passage and one of the secondary throats.

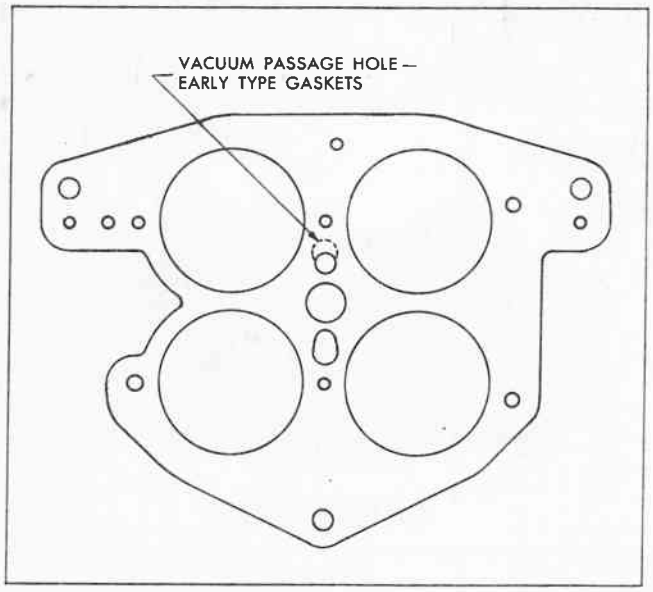

Fig. 5 Rochester 4-Jet throttle Body To Bowl Gasket

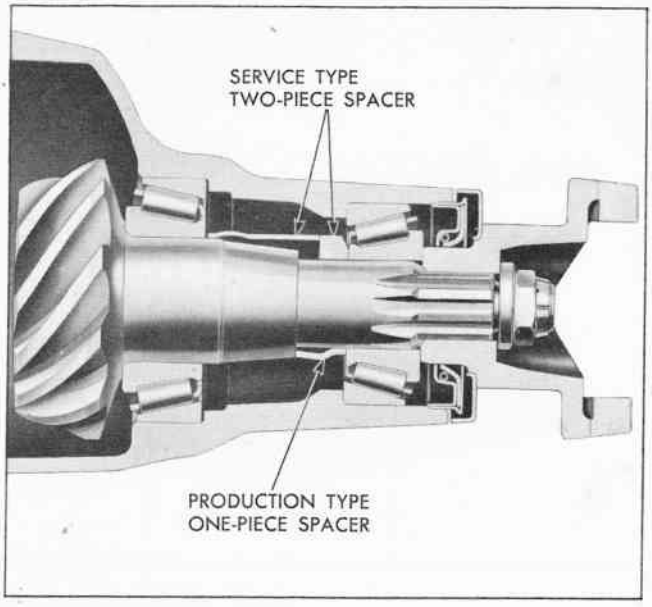

Fig. 6 Service and Production Pinion Bearing Spacers

A new gasket is now being used in production to eliminate the possibility of a leak. The new gasket is available under part number 7009762 through the zone warehouse. All future carburetor gasket and repair kits will contain the new gasket.

The new gasket is illustrated in Fig. 5. The dotted line on the illustration shows the outline of the vacuum passage hole on early type gaskets.

To test for a choke vacuum leak, remove the choke housing to manifold pipe and check the vacuum at the choke housing. If vacuum is less than 10 inches, improper choke action will result. Replace the first type gasket with the 7009762 gasket and recheck choke vacuum to be certain condition is corrected. When gasket is being installed inspect upper face of throttle body for smoothness and complete finish. The time allowance for this operation is 1.2 hours.

TWO PIECE PINION BEARING SPACERS USED FOR SERVICE

Several Product Information Reports have been received indicating a misunderstanding of the difference between production and service pinion bearing spacers.

In early 1955 production a two piece differential pinion bearing spacer was used. In later 1955 and 1956 production a one piece spacer was used. However, the two piece spacer was retained for service for all 1955 and 1956 models (Fig. 6 illustrates the one piece production type spacer and the two piece service type).

SERVICE MANAGER—IMPORTANT

This News contains important service information on Pontiac cars. Each subject should be cross-referenced in the space provided at the end of each section in the Shop Manual or its Supplement. ***Be sure and cover every point with your entire organization.***

Each service man should sign in the space below after he has read and understands the information in this issue.
