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Converter Pump Shaft—Oil Pump Rotor Splines

WORN OR STRIPPED
54th-55th-56th Series
(Correction)

Please cancel the complete article on the above subject published in your Service Counselor Vol. 30, No. 3, March, 1956.

Several reports have been received of worn or stripped splines on the converter pump shaft where it engages with the front oil pump rotor and in some cases, the splines in the rotor were worn or stripped. This condition may occur in 54th Series Gear-Start transmissions, 55th and early 56th Series Ultramatic transmissions.

"A" figure 1, shows the front oil pump rotor having 20 internal splines that is used in 54th Series Gear-Start, 55th and early 56th Series Ultramatic transmissions.

On 54th Series Gear-Start, all 55th Series and 56th Series Ultramatic transmissions up to transmission

serial number 5-40469, oil pressure for the direct drive clutch came out of a passage on the front side of the pump. See "A" figure 2. The oil pressure is directed through a passage in the bell housing, then past the open splines in the rotor to the input shaft.

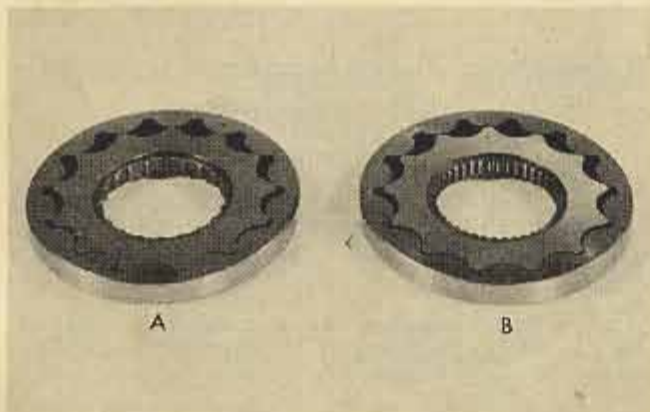


Fig. 1

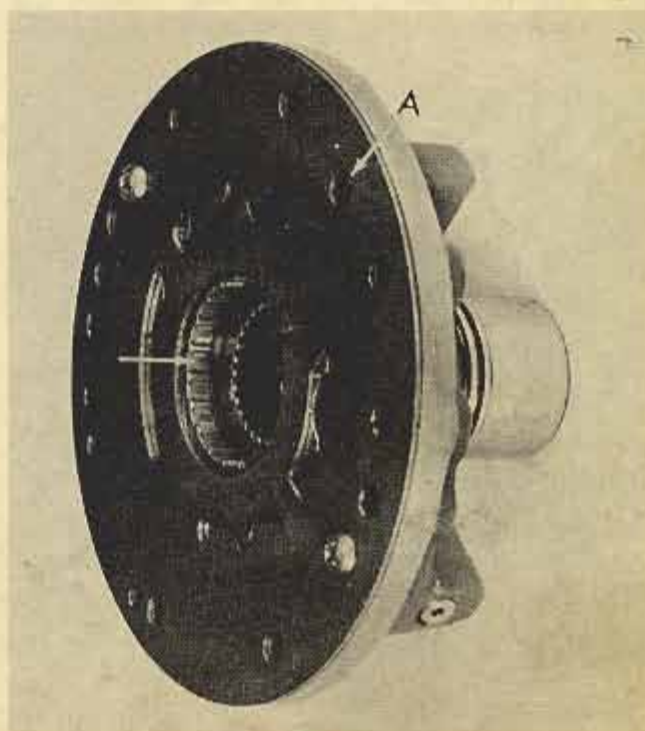


Fig. 2

56th Series transmissions after the above serial number have front oil pumps with the direct clutch oil passage in the rear side of the pump. "See arrow figure 3." The outlet for this passage is between the two bushings inside of the pump hub, also note the oil passage hole is not in the front plate. However, these pumps have the 20 tooth splined rotors. (40 tooth rotor is shown in the illustration.)

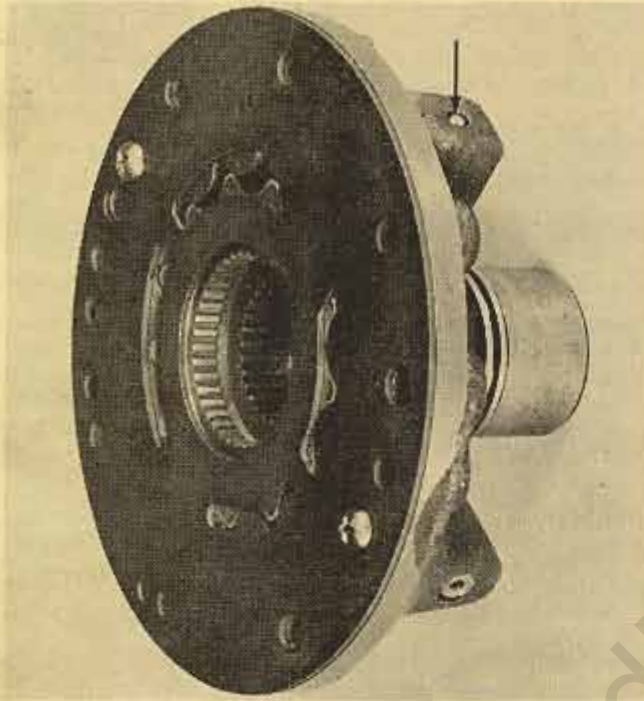


Fig. 3

New rotors with 40 splines and front pump assemblies with 40 spline rotors have been released for service replacement and are listed for your ready reference.

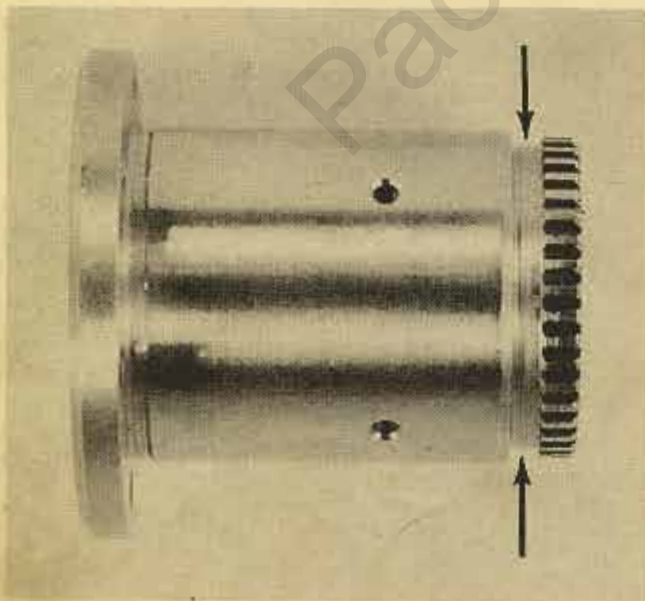


Fig. 4

54th SERIES GEAR SHAFT TRANSMISSION

Part No. 450257 Converter Shaft Assembly

Part No. 6484526 Front Pump Assembly

Part No. 6489367 Front Pump Rotor Assembly

The pump assembly listed above has the oil passage in the front side of the body and the rotor has 40 splines, therefore it will be necessary to drill six $\frac{1}{8}$ " holes evenly spaced through the annular groove just back of the splines in the converter shaft to provide an oil passage to the direct drive clutch. "See arrows figure 4." This also applies when replacing the rotor assembly. Be sure to remove burrs from edges of $\frac{1}{8}$ " holes and internal bushing after drilling.

55th SERIES ULTRAMATIC TRANSMISSIONS

56th SERIES ULTRAMATIC TRANSMISSIONS

(Prior to 56th Series transmission serial number 5-40469)

Part No. 450257 Converter Shaft Assembly

Part No. 6484527 Front Oil Pump Assembly

Part No. 6489367 Front Oil Pump Rotor Assembly

The information described for the "54th Series Gear-Start Transmission" also applies to the 55th Series, and 56th Series transmissions prior to the above listed number.

56th SERIES ULTRAMATIC TRANSMISSIONS

(Starting with transmission serial numbers A-1001, B-1001, C-1001)

Part No. 450257 Converter Shaft Assembly

Part No. 6489368 Front Oil Pump Assembly

Part No. 6489367 Front Oil Pump Rotor Assembly

The $\frac{1}{8}$ " holes are not required in the above listed Converter Shaft because the direct clutch oil passage is in the rear side of the pump body.

56th Series Production transmissions starting with serial numbers A-9681, B-6012, C-1143, D-1862 have front oil pumps with the direct clutch passage in the rear and also have the rotors with 40 tooth splines on the internal driving section, "B" figure 1.

Whenever worn or stripped splines are found on one of the units, always replace both units to provide proper spline mesh.

Adjusting Accelerator Linkage

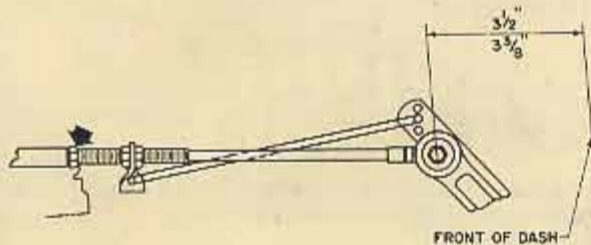
ULTRAMATIC TRANSMISSIONS

56th Series

No one single item affecting proper performance and durability of the transmission is of more importance than the proper adjustment of the accelerator linkage.

This linkage matches the transmission capacity with that of the engine and can materially alter the shift point if maladjusted.

In adjusting linkage, two important settings must be made before attempting any other adjustments.



1. With engine warmed up and carburetor off fast idle, set engine idle speed at 450 RPM with selector lever in "H" position.

2. Loosen the lock nut indicated by arrow in the illustration and adjust the length of the rod to obtain $3\frac{3}{8}$ " to $3\frac{1}{2}$ " measurement from the front side of the dash in the reinforcement channel to the center of the screw in the lever.

After these two important adjustments have been made, proceed with the other adjustments as described in Service Technical Bulletin 56T-7, February 8, 1956.

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Caribbean Seat Back Falls Forward

56th Series

A few reports have been received of the right front seat back falling forward upon sudden application of the brakes.

Production is now installing a ball stud and spring catch on the seat struts to prevent this condition. The ball studs and spring catches are available for service, and can be installed as follows:

1. Remove the front seat cushion.

Drive out both hinge pins and lift off the right front seat back.

2. Refer to the two sections "A-A" in the illustration.

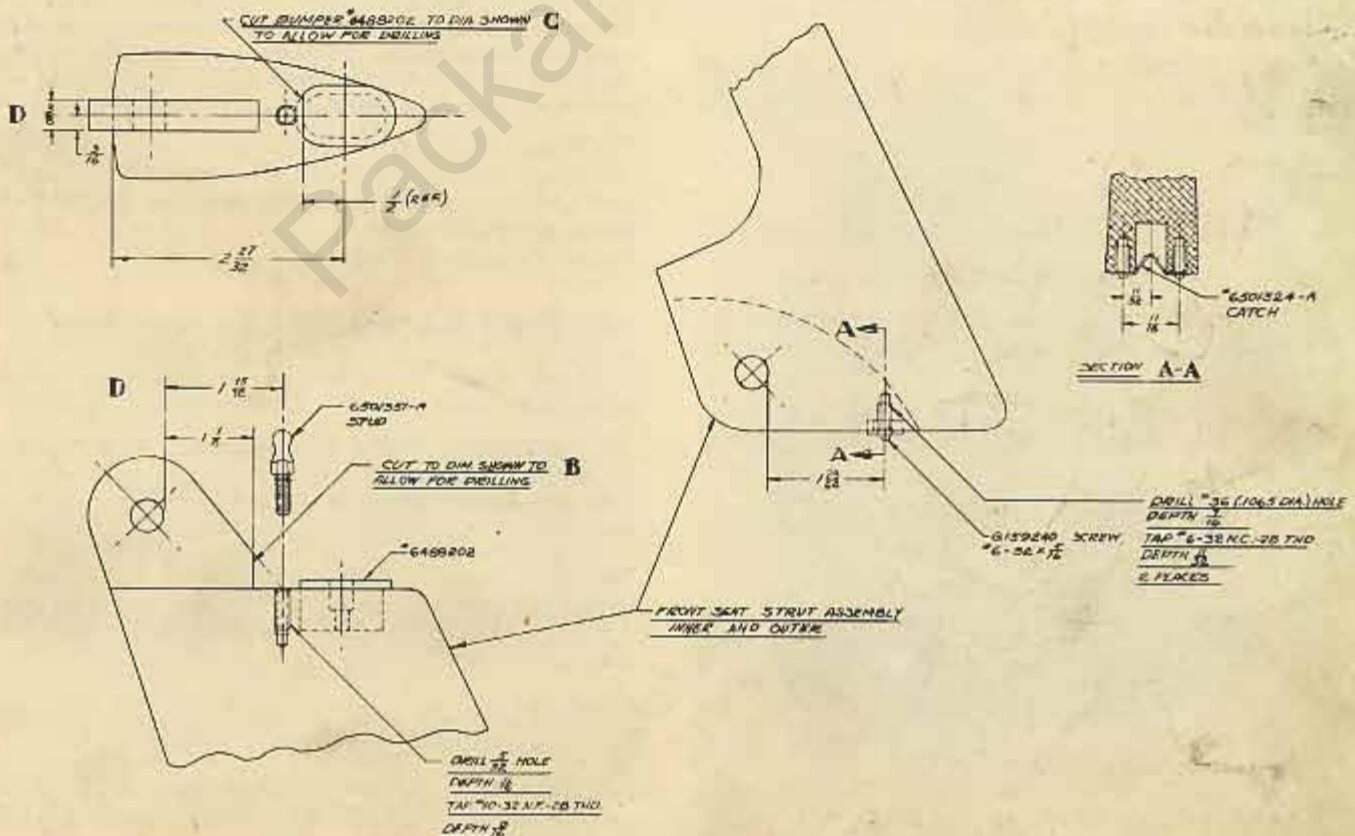
(a) Install the two hinge pins in the seat back struts.

(b) Using a 12" scale, line up one edge of the scale with the bottom of the strut with the end of the scale resting against the hinge pin.

(c) Measure $1\frac{29}{64}$ " distance and mark this location on the bottom of the strut.

(d) Set the spring catch in the strut as shown at the $1\frac{29}{64}$ " location.

INSTRUCTIONS FOR INSTALLING BALL STUD AND SPRING CATCH IN THE FRONT SEAT STRUT ASSEMBLY TO ELIMINATE THE SEAT FROM FALLING FORWARD UPON SUDDEN APPLICATION OF BRAKES



Center punch, drill and tap two holes, using a No. 36 drill and 6-32 tap.

Install the spring catch and perform the same operation on the other seat back strut.

3. Measure $\frac{1}{2}$ " forward from the hole in the rubber bumper and cut off the edge of the bumper "C" to provide space for the stud.

4. Install the two hinge pins in the seat frame struts.

(a) Using a 12" scale, line up one edge on the top flat surface of the seat frame strut with the end of the scale against the hinge pin.

(b) Mark the $1\frac{1}{8}$ " dimension and cut off portion "B" of the strut to provide space for drilling and installation of the stud.

(c) Using the 12" scale, mark the $1\frac{15}{32}$ " location as indicated by "D."

(d) Center punch, drill and tap one hole in the exact center of the strut using $\frac{5}{32}$ " drill and 10-32 tap. Perform the same operation on the other seat frame strut.

5. Reinstall seat back and insert hinge pin. Install seat cushion.

The parts are available in a kit and can be ordered as follows:

Part No. 6484572 Front Seat Back Anti-Tilt Ball Stud and Spring Catch Kit (1).

The Kit consist of:

Part No. 6501351 Ball Stud (2).

Part No. 6501324 Spring Catch (2).

Part No. G-159240 Screw (4).

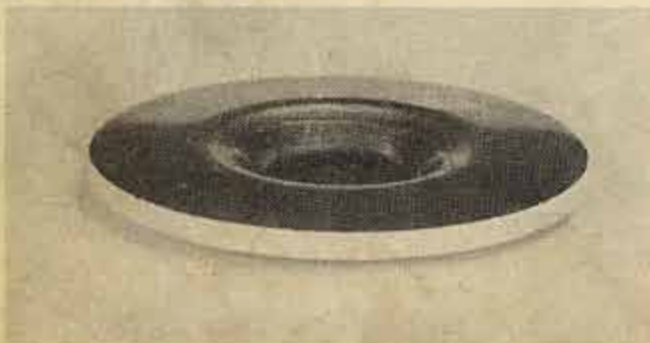
NOTE: The Kit listed is for one seat back, should you desire to rework both seat backs, double the quantity when ordering.

Ultramatic Low Brake Cap

56th Series

A few reports have been received stating that the low brake cap in the 56th Series transmission was distorted.

Illustrated is the 56th Series low brake cap. You will note it is "bellied" upward slightly from its outer edge which is its designed shape.

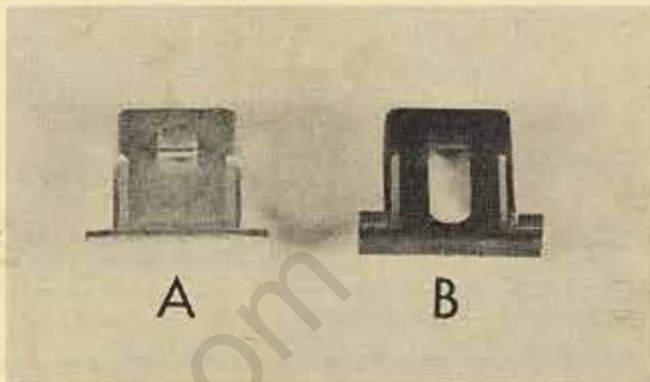


Inside Door Handle Retainer

55th-56th Series

The inside window regulator and door lock remote control handle retainers have been revised to prevent the handles from falling off.

The old retainer is indicated by "A" and the new is indicated by "B" in the illustration.



The new retainer can be ordered under Part Number 6485347.

Rear Shock Absorber Grommet Spacer

56th Series

A few reports have been received of a squeaking noise in the rubber grommets at the lower end of the rear shock absorbers. In shaking the shock absorbers fore and aft at the lower end, excessive end play was found causing premature grommet wear.

The excessive end play can be corrected by removing the lower end of the shock absorber and grommets, and installing a spacer washer Part No. 6489457 in back of the grommets.

Part Number—Correction

Please make the following correction in Service Counselor Vol. 30, No. 1, January 1956.

In the article "Valve Spring Baffles" Part Number 6489038 is listed for the valve spring lockwashers. The correct Part Number is 6489048. Please correct your copy accordingly.

Front Wheel Bearing Adjustment

(Correction)

Please refer to your Service Counselor Vol. 30, No. 3, March 1956, on the above subject.

Change item 4 in the article to read "Back off nut one full hex and then back off to the first cotter pin slot in the nut."