

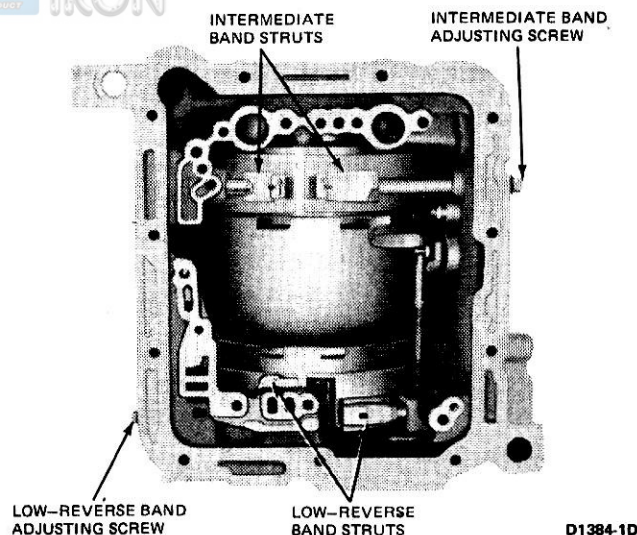


FIG. 17 Band Adjusting Screws and Struts—Typical

3. The input shaft is a loose part and has to be properly engaged with the spline of the forward clutch hub during the end play checking procedure. Move the input shaft and gear train toward the rear of the transmission case.
4. With the dial indicator contacting the end of the input shaft set the indicator at zero (Fig. 18).
5. Insert a screwdriver behind the input shell (Fig. 18). Move the input shell and the front part of the gear train forward.

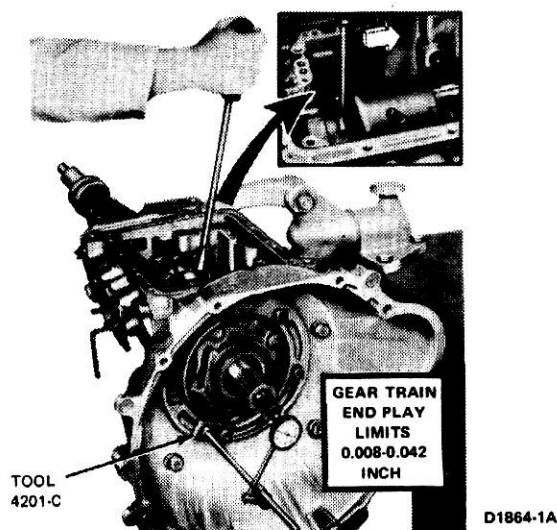


FIG. 18 Checking End Play

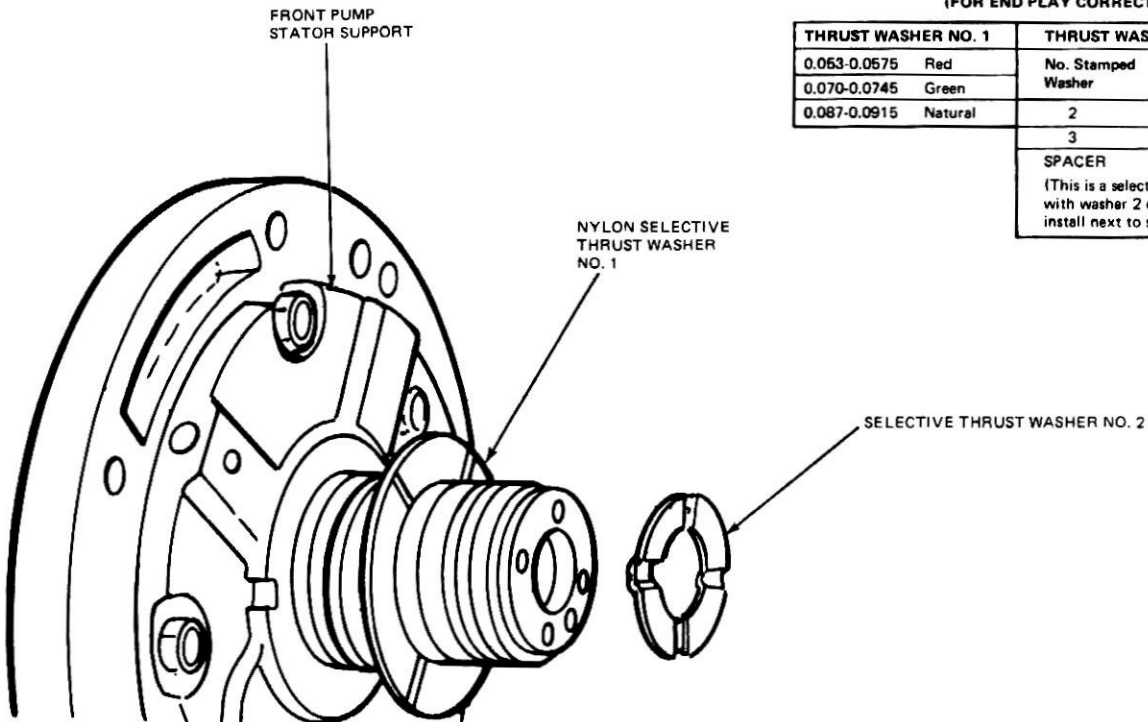
6. Record the dial indicator reading. The end play should be 0.008 to 0.042 inch. If the end play is not within limits, the selective thrust washers (Fig. 19) must be replaced as required. The selective thrust washers (No. 1 and 2) can be replaced individually to obtain the specified end play.
7. Remove the dial indicator and remove the input shaft from the front pump stator support (Fig. 20).

Removal of Case and Extension Housing Parts

1. Rotate the holding fixture to put the transmission in a vertical position with the converter housing up.
2. Remove the five converter housing-to-case attaching bolts (Fig. 20). Remove the converter housing from the transmission case.
3. Remove the seven front pump attaching bolts. Insert a screwdriver behind the input shell (Fig. 21) and move the input shell forward until the front pump seal is above the edge of the case. Remove the front pump and gasket from the case. If the selective thrust washer No. 1 did not come out with the front pump, remove it from the top of the reverse-high clutch.
4. Remove the intermediate and low-reverse band adjusting screws from the case. Rotate the intermediate band to align the band ends with the clearance hole in the case (Fig. 22). Remove the intermediate band from the case. **If the intermediate band is to be re-used, it must not be cleaned in a vapor degreaser or with a detergent solution. Wipe it clean with a lint-free cloth.**
5. Using a screwdriver between the input shell and rear planet carrier (Fig. 23), lift the input shell upward and remove the forward part of the gear train as an assembly (Fig. 24).
6. Place the forward part of the gear train on a bench (Fig. 25).
7. Remove the reverse-high clutch and drum from the forward clutch (Fig. 26).
8. If thrust washer No. 2 (Fig. 19) did not come out with the front pump, remove the thrust washer from the forward clutch cylinder. If a selective spacer was used, remove the spacer. Remove the forward clutch from the forward clutch hub and ring gear (Fig. 26).
9. If thrust washer No. 3 (Fig. 26) did not come out with the forward clutch, remove the thrust washer from the forward clutch hub.
10. Remove the forward clutch hub and ring gear from the front planet carrier (Fig. 26).
11. Remove thrust washer No. 4 and the front planet carrier from the input shell (Fig. 26).
12. From inside the transmission case (Fig. 24) remove thrust washer No. 6 from the top of the reverse planet carrier.
13. Remove the reverse planet carrier and thrust washer No. 7 from the reverse ring gear and hub (Fig. 27).
14. Move the output shaft forward and with the tool shown in Fig. 28, remove the reverse ring gear hub-to-output shaft snap ring.
15. Remove the reverse ring gear and hub from the output shaft. Remove thrust washer No. 8 from the low and reverse drum (Fig. 27).
16. Remove the low-reverse band from the case (Fig. 29).
17. Remove the low-reverse drum from the one-way clutch inner race (Fig. 27).
18. Rotate the one-way clutch inner race clockwise, and remove inner race from the outer race (Fig. 27).

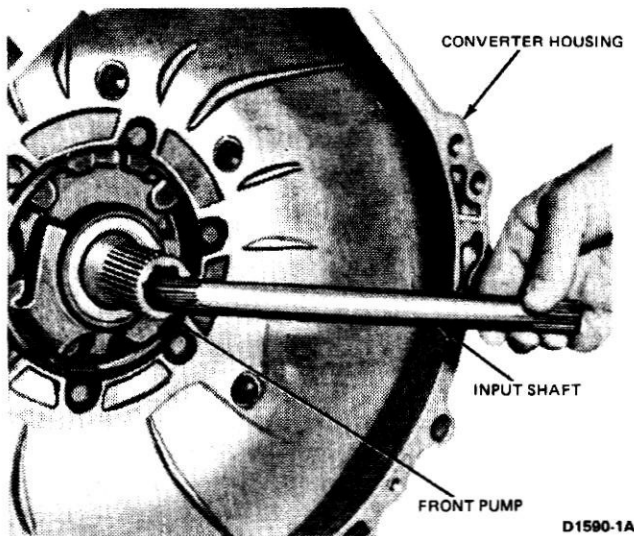
SELECTIVE THRUST WASHERS (FOR END PLAY CORRECTION)

THRUST WASHER NO. 1		THRUST WASHER NO. 2	
0.053-0.0575	Red	No. Stamped Washer	Metal Thrust Washer
0.070-0.0745	Green		
0.087-0.0915	Natural	2	0.058-0.056
		3	0.075-0.073
		SPACER	0.036-0.032
		(This is a selective spacer used with washer 2 or 3. When used, install next to stator support.)	



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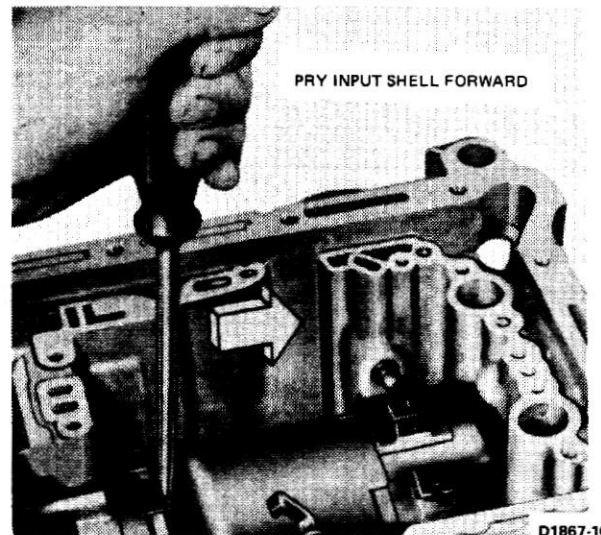
FIG. 19 Selective Thrust Washer Locations



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FIG. 20 Removing or Installing Input Shaft

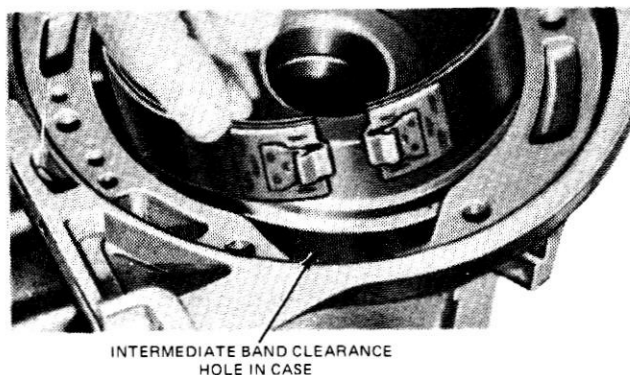
19. Remove the 12 one-way clutch rollers, springs and the spring retainer from the outer race (Fig. 27). **Do not lose or damage any of the 12 springs or rollers. The outer race of the one-way clutch cannot be removed from the case until the extension housing, output shaft and governor distributor sleeve are removed.**
20. Remove the transmission from the holding fixture. Position the transmission on the bench in a vertical position, with the extension housing up. Remove the four extension housing-to-case attaching bolts.



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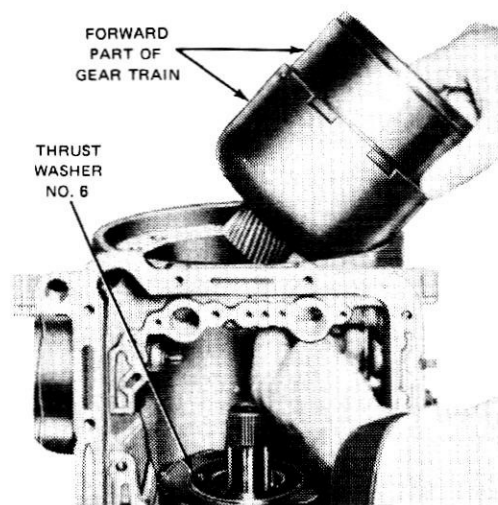
FIG. 21 Removing Front Pump

- Remove the extension housing and gasket from the case.
21. Pull outward on the output shaft and remove shaft and governor distributor assembly from the governor distributor sleeve (Fig. 30).
22. Remove the governor distributor snap ring from the output shaft (Fig. 31). Remove the governor distributor from the output shaft.
23. Remove the four distributor sleeve-to-case attaching bolts. Remove the distributor sleeve from the case. Do not bend or distort the fluid tubes as



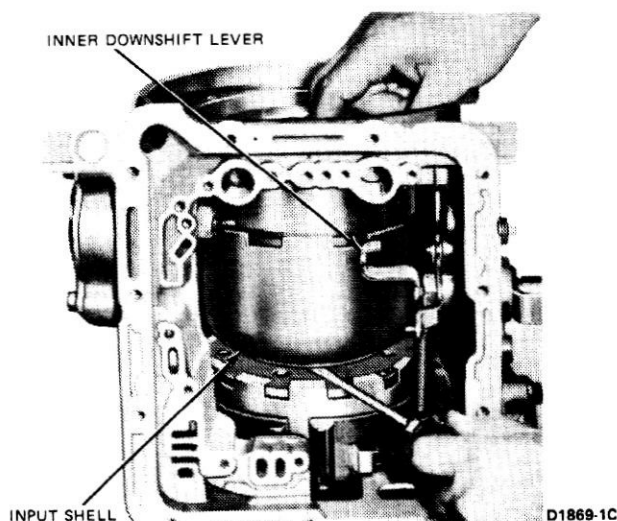
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FIG. 22 Position of Intermediate Band for Removal or Installation



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FIG. 24 Removing or Installing Forward Part of Gear Train



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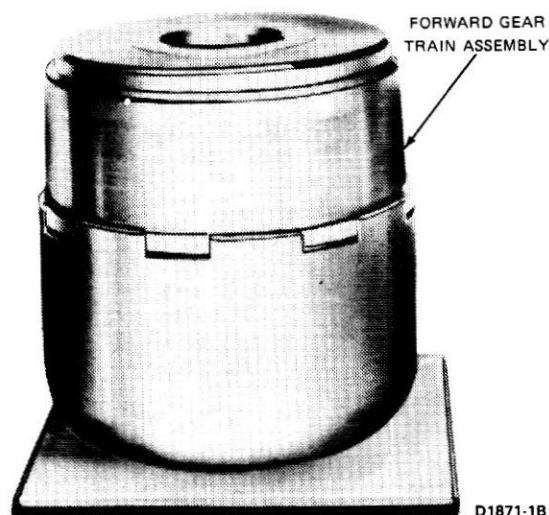
FIG. 23 Lifting Input Shell and Gear Train

the tubes are removed from the case with the distributor sleeve.

24. Remove the parking pawl return spring, pawl, and pawl retaining pin from the case (Fig. 32).
25. Remove the parking gear and thrust washer No. 10 from the case.
26. Remove the six one-way clutch outer race-to-case attaching bolts with the tool shown in Fig. 33. As the bolts are removed, hold the outer race located inside the case in position. Remove the outer race and thrust washer No. 9 from the case (Fig. 27).
27. If the transmission case bushing is worn or damaged, replace it with the tools shown in Fig. 34.

Assembly

When assembling the transmission sub-assemblies (Fig. 35), make sure that each thrust washer is installed in the correct position.



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FIG. 25 Forward Part of Gear Train

Lubricate internal parts with clean transmission fluid. Petroleum jelly should be used to hold the thrust washers in their proper location. If the end play is not within specifications after the transmission is assembled, either the wrong selective thrust washers (No. 1 and 2) were used, or a thrust washer came out of position during the transmission assembly operation.

1. Install thrust washer No. 9 inside the transmission case (Fig. 36).
2. Place the one-way clutch outer race inside the case. From the back of the case install the six outer race-to-case attaching bolts. Torque the bolts with the tools shown in Fig. 37, according to Specifications at the end of this Part.
3. Place the transmission case in a vertical position with the back face of the case upward. Install the parking pawl retaining pin in the case. Install the