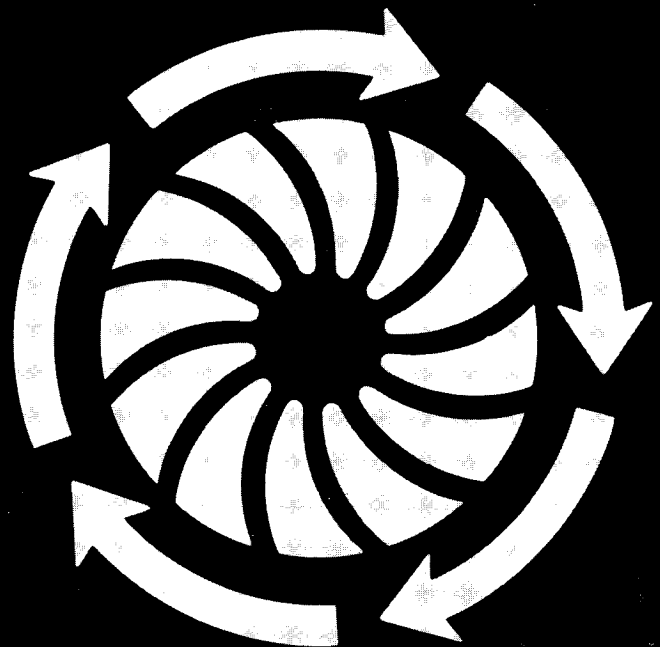


C-5000 SERIES

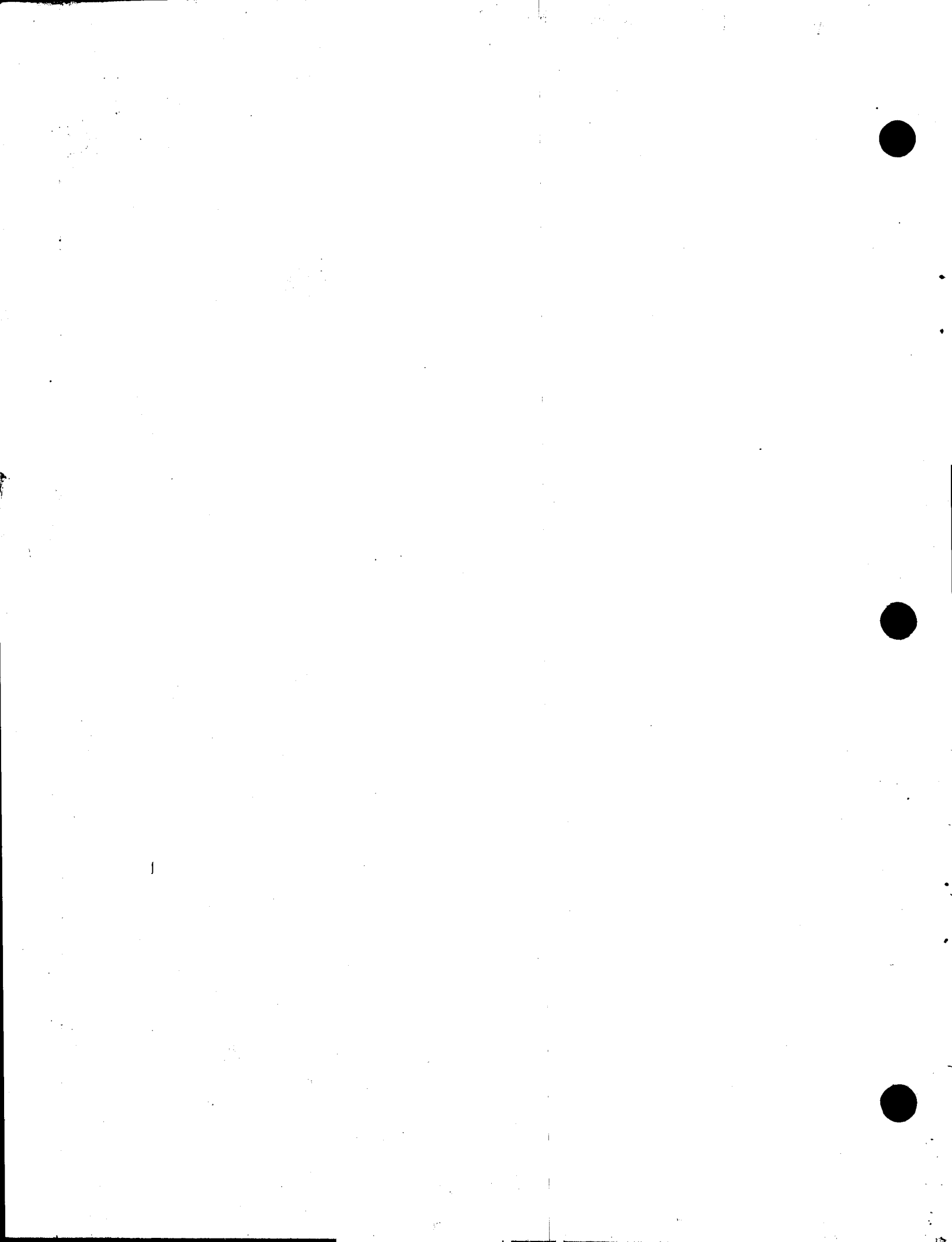
TORQUE CONVERTER

MANUAL

NO. 2451



VOLVO BM
MICHIGAN
EUCLID



MICHIGAN

**TORQUE
CONVERTER
MANUAL**

**PUBLICATION
NO. 2451**

C5000 SERIES

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TORQUE CONVERTER OPERATION

The torque converter portion of the power train enacts an important role in delivering engine power to the driving wheels. In order to properly maintain and service these units it is important to first understand their function and how they operate.

The torque converter and transmission function together and operate through a common hydraulic system. To obtain maximum serviceability they have been designed and built as separate units. It is necessary, however, to consider both units in the study of their function and operation.

The torque converter is composed of four members: The impeller which is the driving member, the drive disc or impeller cover, the turbine, which is the driven member and the reaction member. The reaction member is splined to the converter support and does not rotate in either direction. The impeller and drive disc form the outer shell. The turbine runs within the outer shell and is connected to the output shaft. The oil is the only connection between the turbine and impeller members.

Three pump drive gears are bearing mounted in the converter housing and meshed with a gear splined to the impeller hub. With the engine running the pump drive gears rotate at engine speed. The pumps are externally mounted on the converter housing and the splined pump shafts are inserted in the pump gear shaft.

With the engine running, the converter charging pump draws oil from the transmission sump and directs it through oil filters to the pressure regulating valve located in the control cover. The control cover is mounted on the top of the transmission. From the regulating valve it is then directed through the control cover to the transmission clutches and to the converter.

The pressure regulating valve remains closed until required pressure is delivered to the transmission for actuating the direction and speed clutches. This regulator valve consists of a hardened valve spool operating in a closely fitted bore. The valve spool is backed up by a spring to hold the valve spool against its seat until the oil pressure overrides the spring force. The valve spool moves toward the spring until a port is exposed in the side of the bore. The oil can flow through this port into a distributor which directs the oil through a line to the converter inlet port.

After entering the converter, the oil is directed into the converter support through the impeller bearing and to the converter cavity.

Three members of the torque converter are composed of a series of blades. The blades are curved in such a manner as to force the oil to circulate from the impeller to the turbine, through the reaction member and again into the impeller. Oil enters the inner diameter of the impeller and exits from the outer diameter into the outer diameter of the turbine, then exits from the inner diameter of the turbine and through the reaction member. The oil again enters the inner diameter of the impeller.

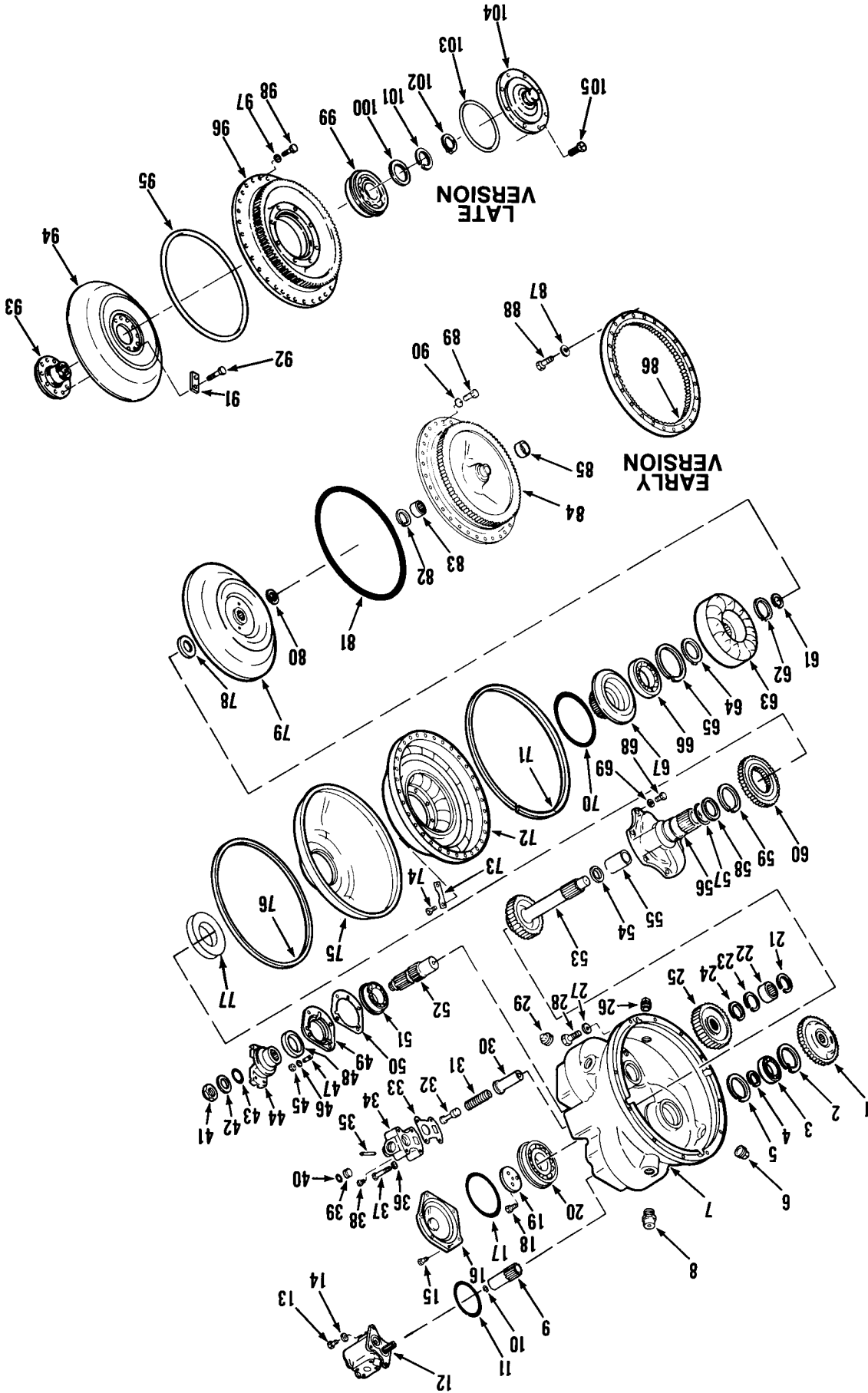
The oil exits between the turbine shaft and converter support and through an oil distributor which directs the oil out of the converter, through a regulating valve and to the oil cooler. After leaving the cooler the oil is directed to the lubricating oil inlet on the transmission and through a series of tubes to the transmission bearings, and clutches. The oil is internally returned to the transmission sump.

The converter lube and leakage oil is returned to the transmission sump by a flexible hose installed in the lowest pipe tap hole in the converter housing. This line must have a continuous drop to allow leakage oil to return to the transmission sump by gravity flow.

A safety valve is built in the transmission control cover and will open to bypass oil only if an excessive pressure is built up due to a blocked passage.

With the engine operating at any speed and the turbine and output shafts stationary, the converter is in a "stall" condition. Full power or wide open throttle "stalls" for more than 30 seconds at a time will generate excessive heat and may cause converter or transmission seal damage.

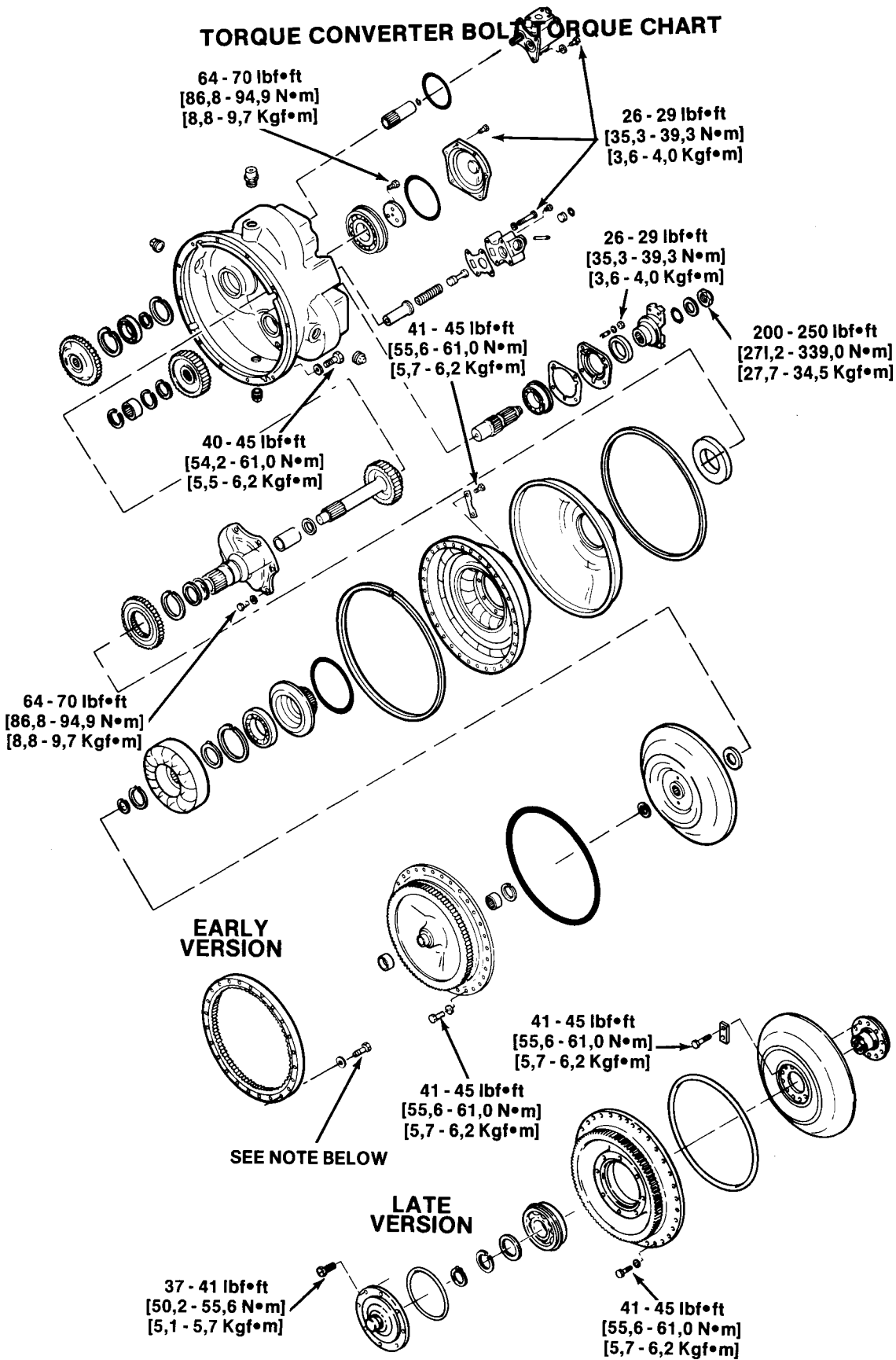
The converter pressure regulator valve consists of a valve body, valve spool and back-up spring. The spool is backed up by a spring to hold the valve closed until a specified oil pressure builds up. The valve is used to maintain a given pressure within the converter to insure proper performance under all conditions.



TORQUE CONVERTER ASSEMBLY PARTS IDENTIFICATION

No.	Qty.	Description	No.	Qty.	Description
A	1	Converter Assy	52	1	Shaft
1	3	Gear	53	1	Turbine Shaft
2	3	Snap ring	54	1	Ring
3	3	Bearing	55	1	Sleeve
4	3	Snap ring	56	1	Stator support
5	3	Snap ring	57	1	Ring
6	2	Plug	58	1	Ring
7	1	Housing	59	1	Snap ring
8	1	Breather	60	1	Gear
9	1	Sleeve	61	1	Snap ring
9A	1	Snap ring	62	1	Snap ring
10	1	Snap ring	63	1	Reaction member
11	1	O-ring	64	1	Spacer
12	1	Pump conv charging	65	1	Snap ring
13	2	Bolt	66	1	Bearing
14	2	Washer	67	1	Hub impeller
15	6	Bolt assy	68	6	Bolt
16	1	Cap	69	6	Washer
17	1	O-ring	70	1	O-ring
18	3	Bolt	71	1	Ring
19	1	Retainer	72	6	Converter impeller
20	1	Bearing	73	4	Lockplate
21	1	Snap ring	74	8	Bolt
22	1	Bearing	75	1	Baffle
23	1	Snap ring	76	4	Seal
24	1	Snap ring	77	1	Seal
25	1	Gear	78	1	Washer
26	1	Plug	79	1	Turbine
27	10	Washer	80	1	Snap ring
28	10	Bolt	81	1	O-ring
28A	1	Breather	82	1	Snap ring
29	1	Plug	83	1	Bearing
30	1	Retainer	84	1	Cover
31	1	Spring	85	1	Sleeve
32	1	Piston	86	1	Drive Gear
33	1	Gasket	87	24	Washer
34	1	Housing	88	24	Bolt
35	1	Roll pin	89	32	Bolt
36	4	Washer	90	32	Washer
37	4	Bolt	91	5	Lockplate
38	1	Plug	92	10	Bolt
39	1	Stop	93	1	Turbine hub
40	1	O-ring	94	1	Turbine
41	1	Nut	95	1	O-ring
42	1	Washer	96	1	Cover
43	1	O-ring	97	32	Washer
44	1	Flange	98	32	Bolt
45	4	Nut	99	1	Bearing
46	4	Washer	100	1	Spacer
47	4	Stud	101	1	Snap ring
48	1	Seal	102	1	Snap ring
49	1	Retainer	103	1	O-ring
50	1	Gasket	104	1	Hub
51	1	Bearing	105	8	Bolt

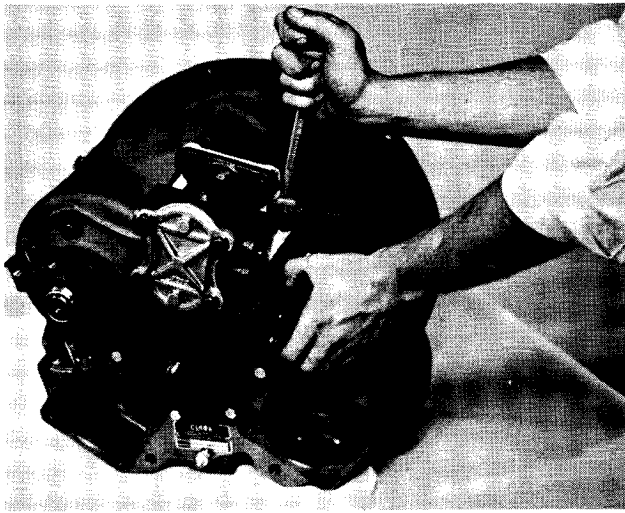
TORQUE CONVERTER BOLT TORQUE CHART



Note: See installation of the torque converter drive gear in this manual for the correct procedure.

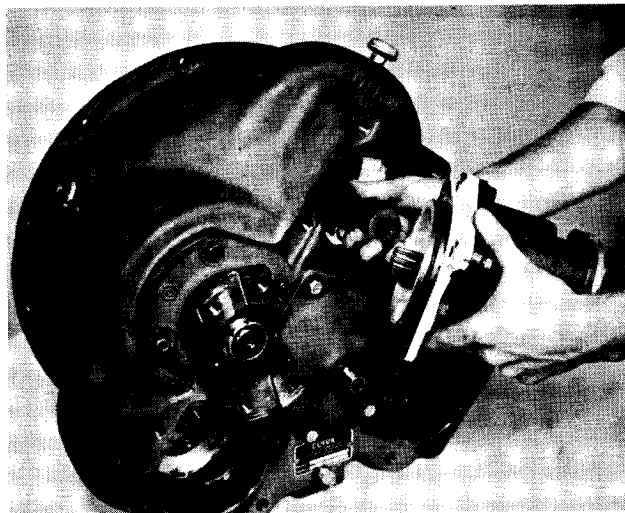
DISASSEMBLY OF THE TORQUE CONVERTER

NOTE: Cleanliness is of extreme importance and an absolute must in the repair and overhaul of this unit. Before attempting any repairs, the exterior of the unit must be thoroughly cleaned to prevent the possibility of dirt and foreign matter entering the mechanism.



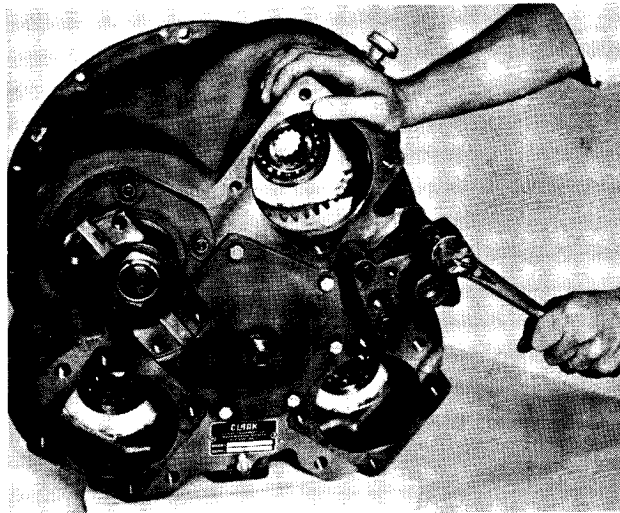
TS-36526

1. Remove charging pump adaptor mounting bolts and washers.



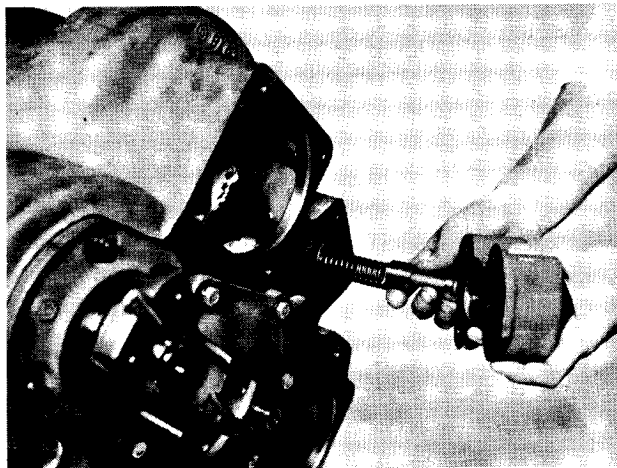
TS-36527

2. Remove charging pump and pump drive sleeve. Remove and discard the o-ring.



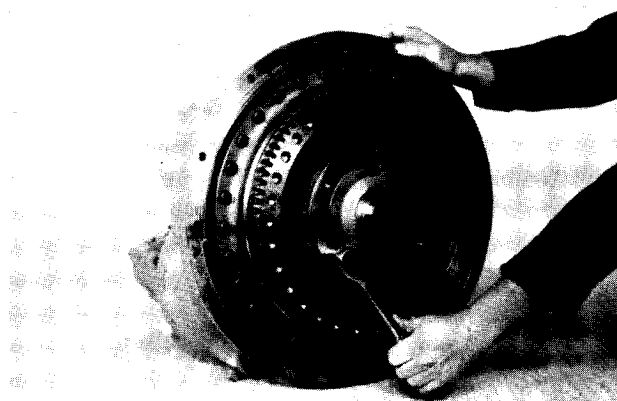
TS-36528

3. Remove downstream pressure regulating valve mounting bolts and washers.



TS-36529

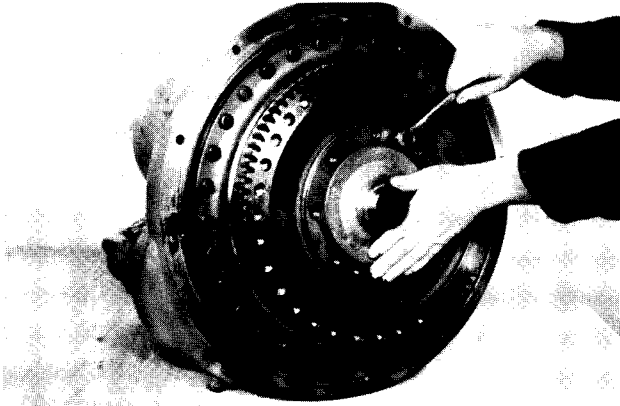
4. Remove downstream pressure regulating valve body, gasket, piston, spring and spring retainer. Discard the gasket.



TS-37184

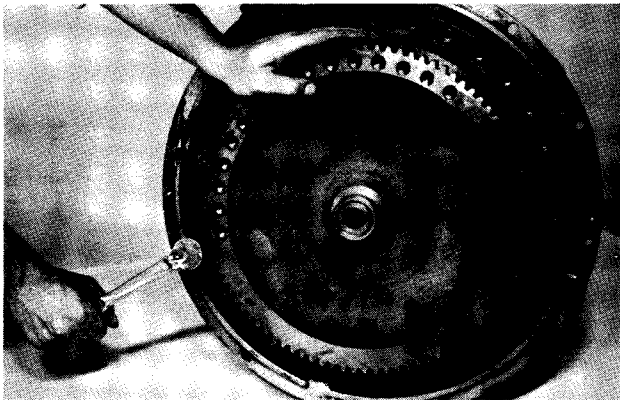
5. (Later version only.) Remove hub bolts.

DISASSEMBLY OF THE TORQUE CONVERTER (Continued)



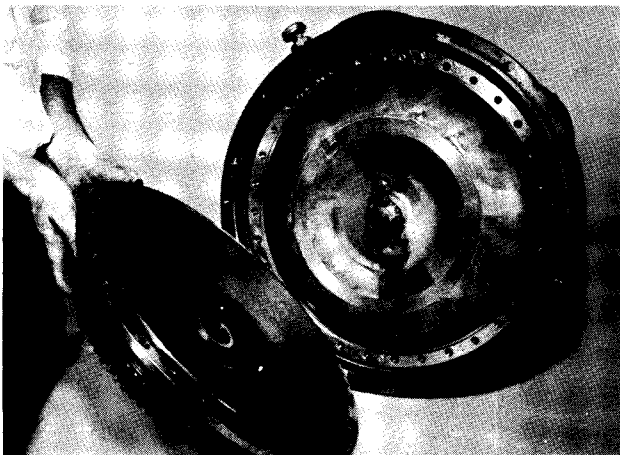
TS-37201

6. (Later version only.) Install two bolts in threaded holes in cover hub. Turn bolts evenly to remove hub. Remove the hub. Remove and discard the o-ring.



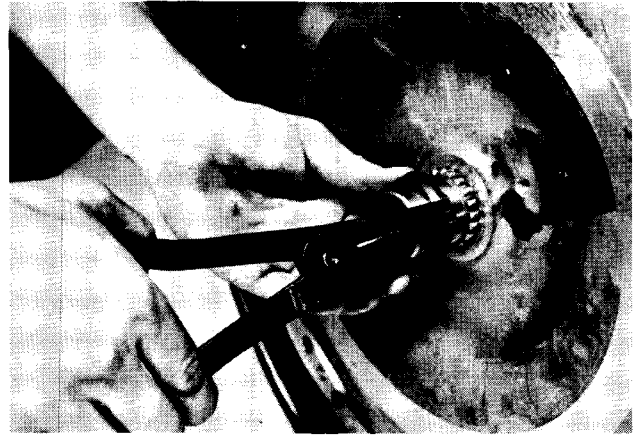
TS-36530

7. Remove impeller cover bolts and washers from impeller. (Early version shown, later version similar.) Install two bolts in threaded holes in the impeller cover. Turn bolts evenly to remove impeller cover and sleeve.



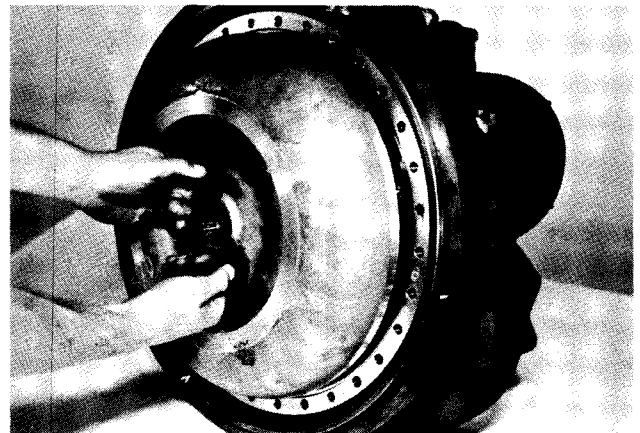
TS-36531

8. (Early version only.) Remove impeller cover assembly. Remove and discard o-ring.



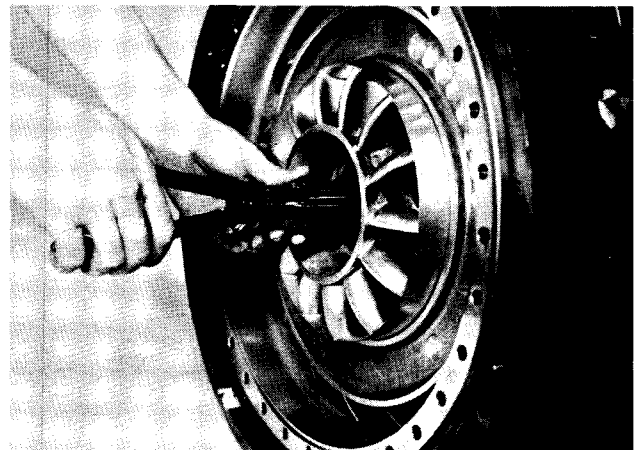
TS-36532

9. (Early version only.) Remove turbine retainer ring.



TS-36533

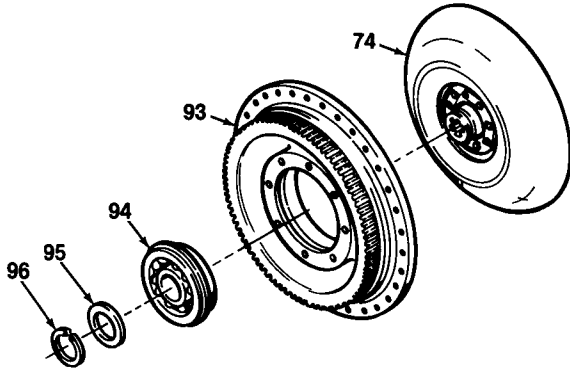
10. (Early version only.) Install two bolts in threaded holes to facilitate turbine removal.



TS-36534

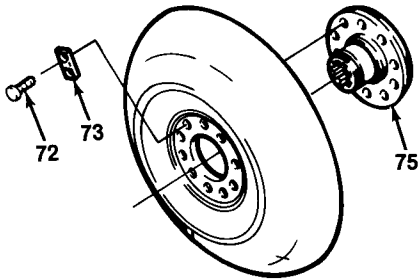
11. (Early version only.) Remove trapping ring and turbine locating ring.

DISASSEMBLY OF THE TORQUE CONVERTER (Continued)



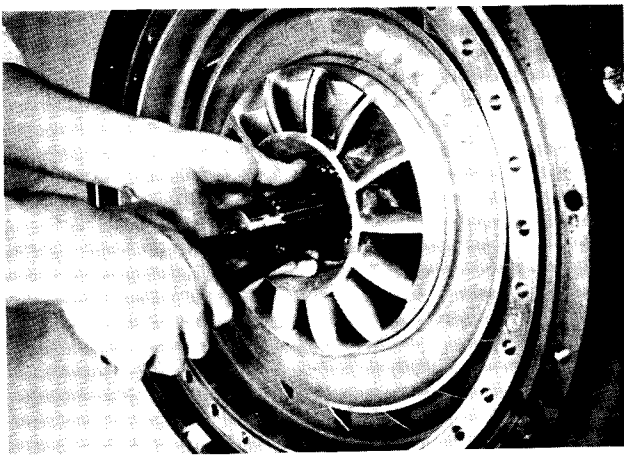
TS-16969

12. (Later version only.) Remove snap ring (96) and spacer (95). Remove bearing internal snap ring and remove bearing (94). Separate impeller cover (93) and turbine (74).



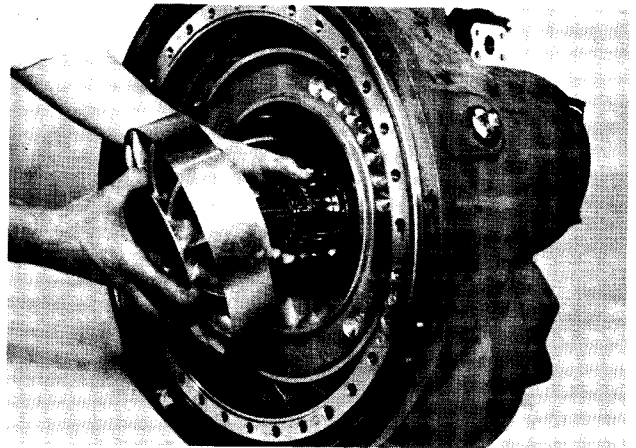
TS-16970

13. (Later version only.) Bend corner of lock plates (73) away from bolts (72). Remove bolts and lock plates. Remove hub (75) from turbine.



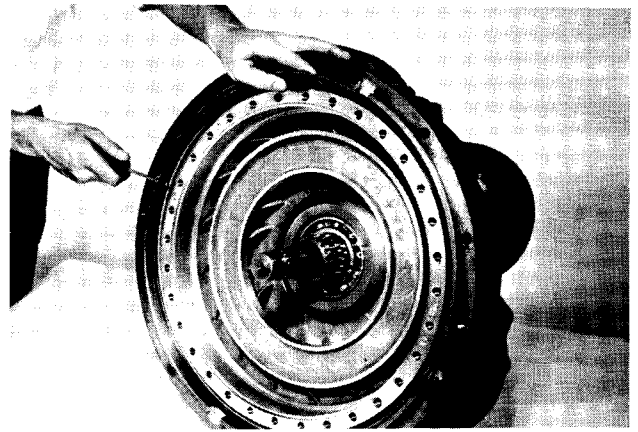
TS-36535

14. Remove reaction member retainer ring.



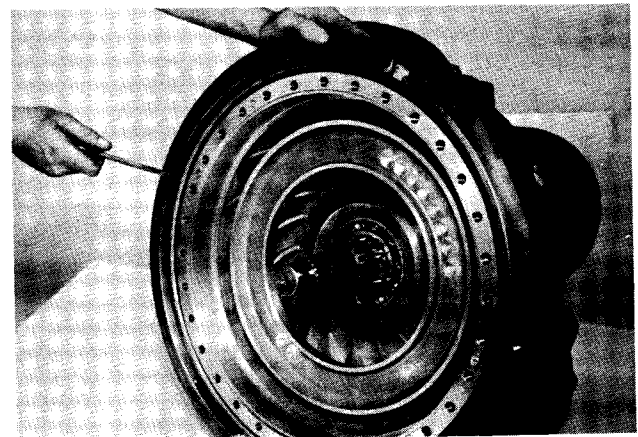
TS-36536

15. Remove reaction member and spacer.



TS-36537

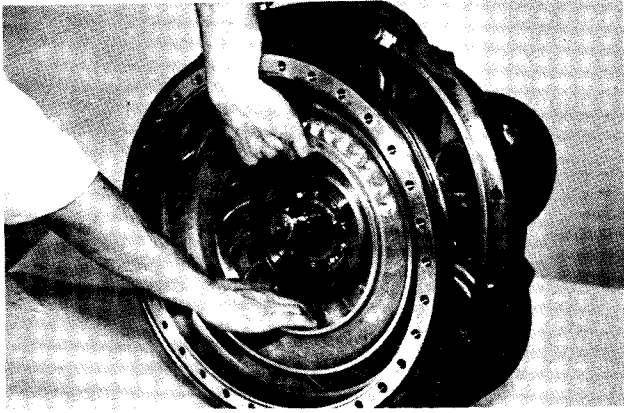
16. Using slots provided in converter housing remove oil baffle retainer ring.



TS-36538

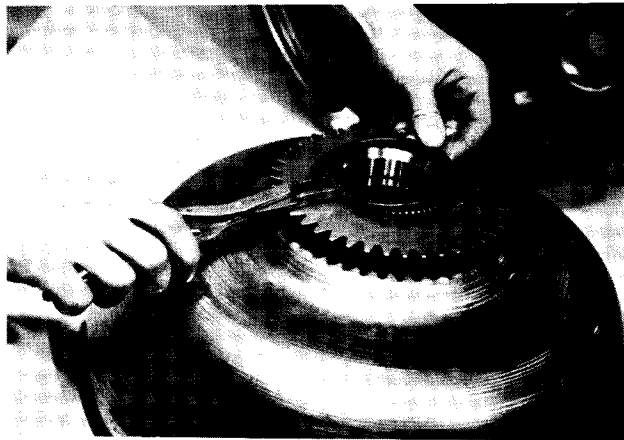
17. Using slots provided, pry oil baffle and impeller assembly from housing.

DISASSEMBLY OF THE TORQUE CONVERTER (Continued)



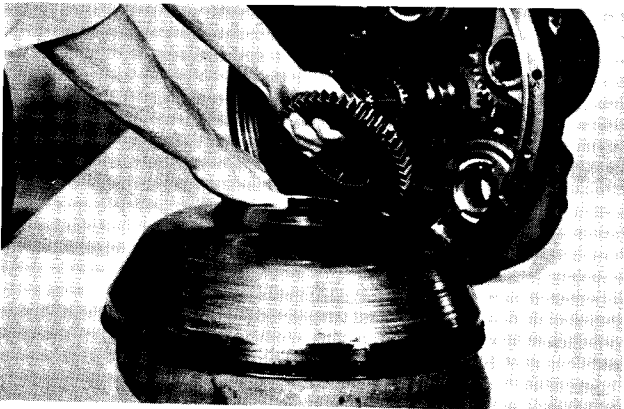
TS-36539

18. Lift impeller assembly from stator support.



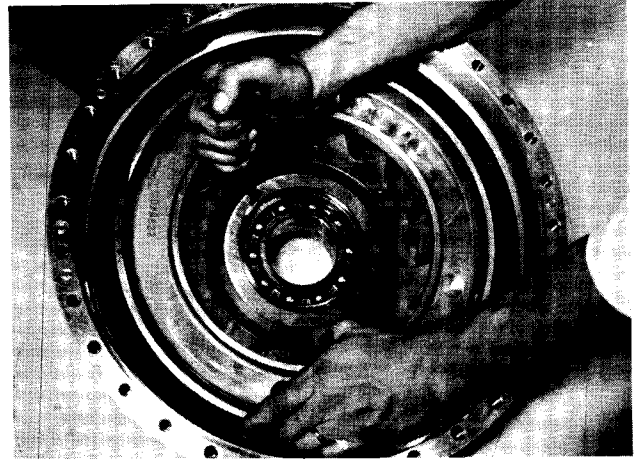
TS-36540

19. Remove impeller hub gear retainer ring.



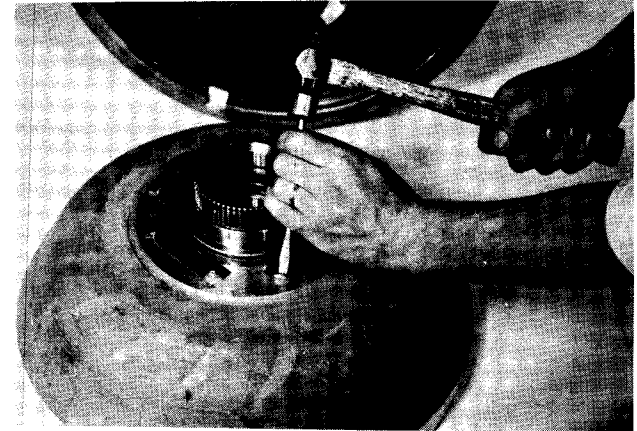
TS-36541

20. Remove impeller hub gear and oil baffle from impeller. Remove impeller seal and discard.



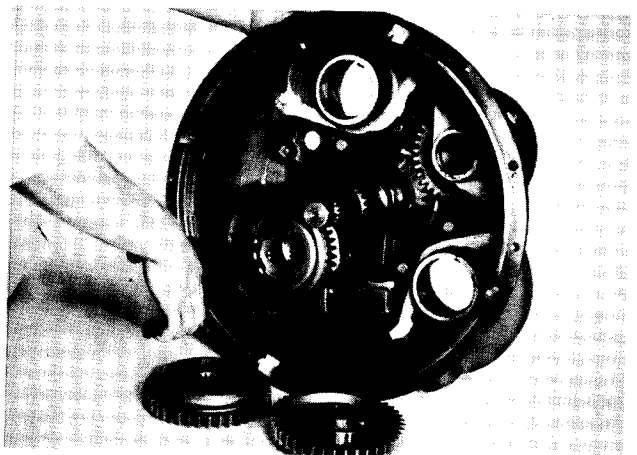
TS-36542

21. Remove impeller hub bearing retainer ring. Turn impeller over, tap bearing from hub.



TS-36543

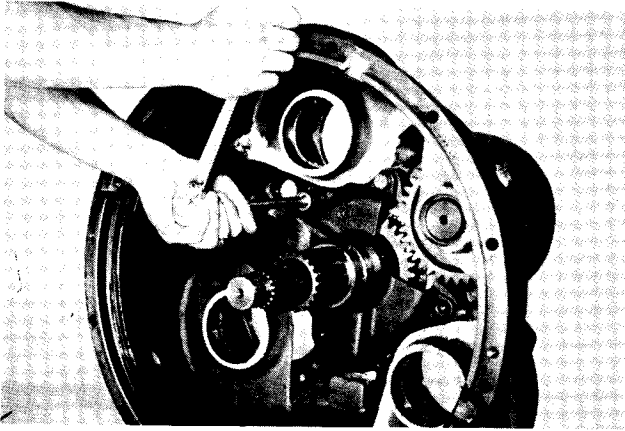
22. Straighten corners of impeller hub bolt lock plates. Remove impeller to impeller hub bolts. Remove impeller hub and o-ring.



TS-36544

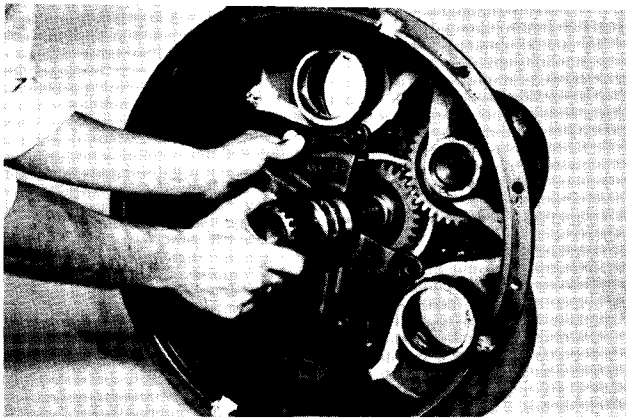
23. Rotate pump gears to expose snap ring ends in pump gear slot. Remove snap ring from snap ring groove. From rear of converter housing, tap pump gear and bearing from housing. Locating ring removed will remain between pump gear and bearing.

DISASSEMBLY OF THE TORQUE CONVERTER (Continued)



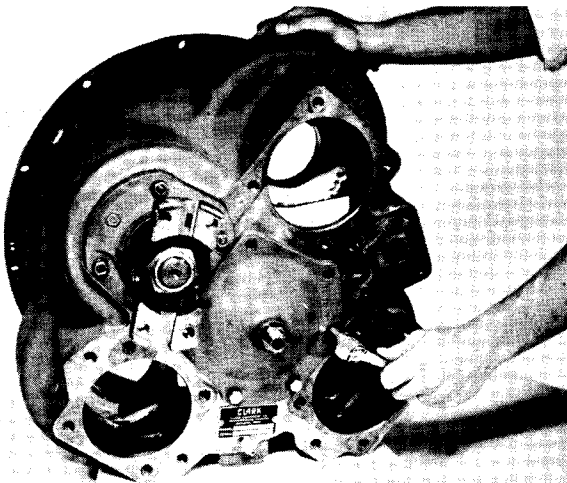
TS-36545

24. Remove stator support bolts and washers.



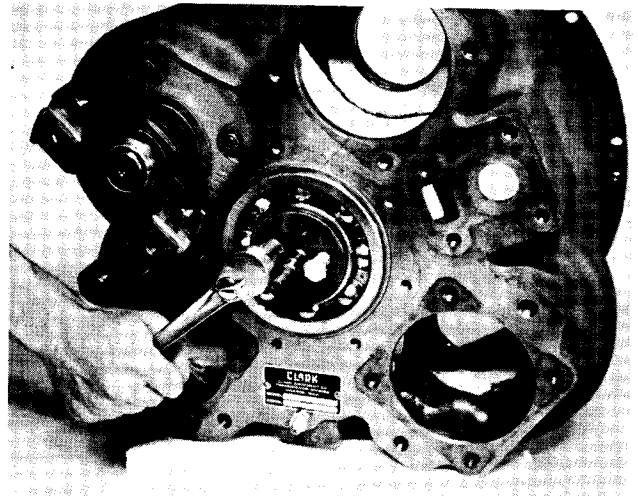
TS-36546

25. Remove stator support assembly.



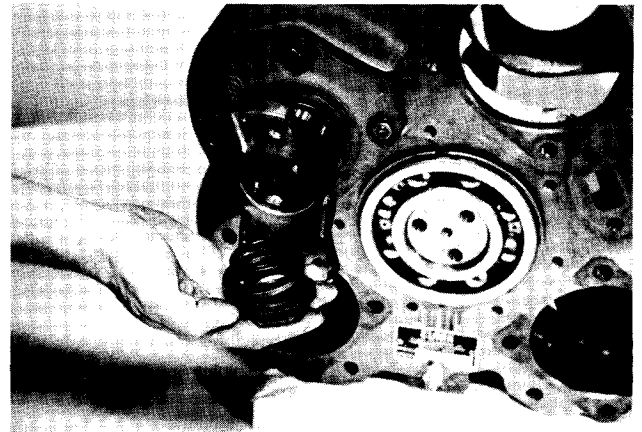
TS-36547

26. Remove turbine shaft bearing cap bolts. Remove bearing cap and o-ring. Discard the o-ring.



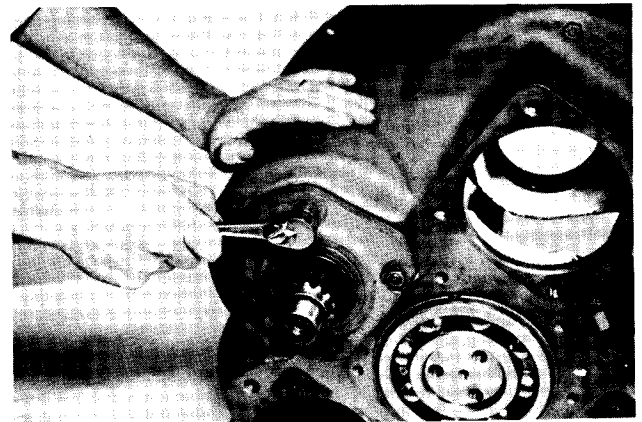
TS-36548

27. Remove turbine retainer bolts. Install two bolts in threaded holes, turn evenly, remove retainer. (Optional tachometer drive shown)



TS-36549

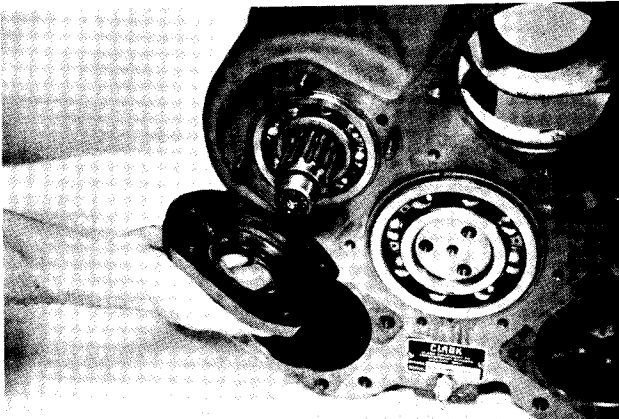
28. Lock output gears with a soft bar. Remove companion flange nut, washer, o-ring and flange from output shaft.



TS-36550

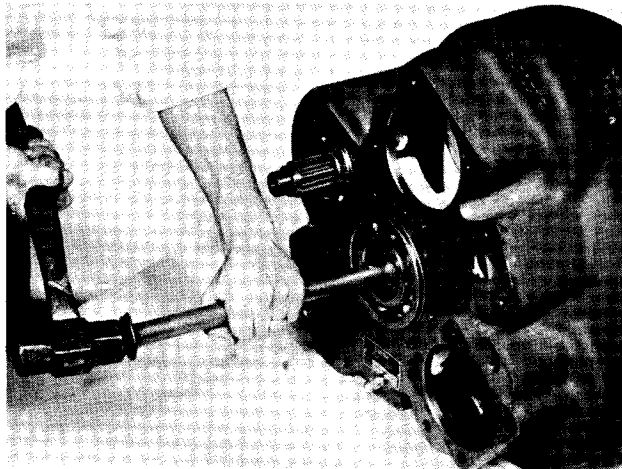
29. Remove output bearing cap stud nuts and washers.

DISASSEMBLY OF THE TORQUE CONVERTER (Continued)



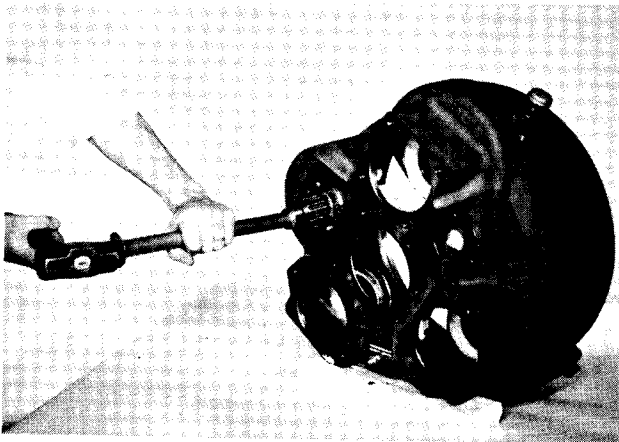
TS-36551

30. Remove output bearing cap, oil seal and gasket. Discard gasket and oil seal.



TS-36552

31. Drive turbine shaft and gear assembly from bearing and remove bearing. Remove ring from shaft and discard.



TS-36553

32. Tap output shaft to relieve output shaft to gear snap ring. See Diagram A.

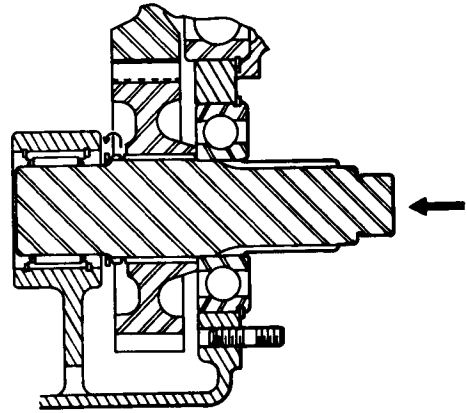
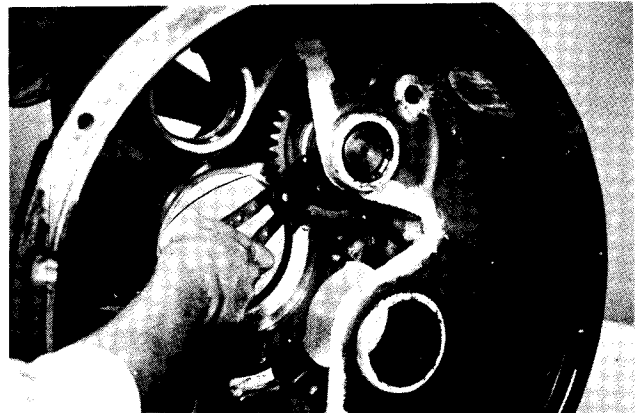


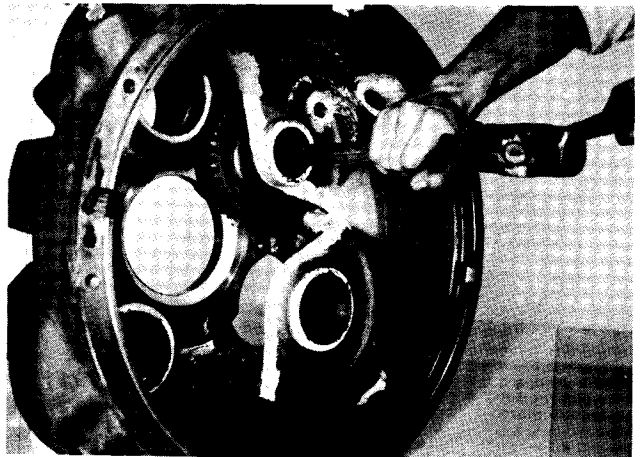
DIAGRAM A

TS-17291



TS-36554

33. Using a pair of 45° external snap ring pliers as shown, remove gear to shaft snap ring from snap ring groove.



TS-36555

34. Drive output shaft assembly through gear and out of converter housing. See Diagram B and C.

DISASSEMBLY OF THE TORQUE CONVERTER (Continued)

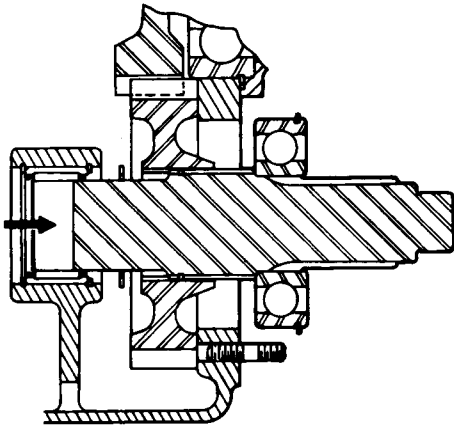


DIAGRAM B

TS-17292

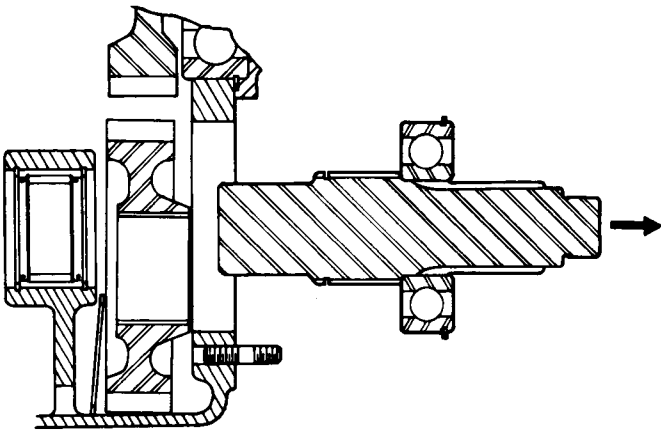
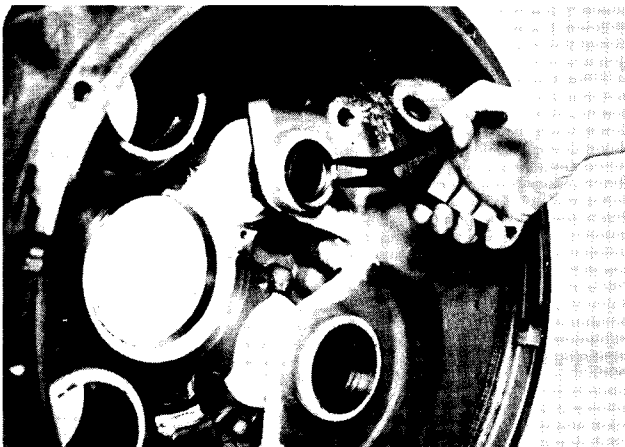


DIAGRAM C

TS-17293



TS-36556

35. Remove output shaft front bearing retainer ring, remove bearing from housing.

CLEANING

Clean all parts thoroughly using solvent type cleaning fluid. It is recommended that parts be immersed in cleaning fluid and moved up and down slowly until all old lubricant and foreign material is dissolved and parts are thoroughly cleaned.



WARNING: Care should be exercised to avoid skin rashes, fire hazards and inhalation of vapors when using solvent type cleaners.

Bearings

Remove bearings from cleaning fluid and strike flat against a block of wood to dislodge solidified particles of lubricant. Immerse again in cleaning fluid to flush out particles. Repeat above operation until bearings are thoroughly clean. Dry bearings using moisture free compressed air. Be careful to direct air stream across bearing to avoid spinning. Do not spin bearings when drying. Bearings may be rotated slowly by hand to facilitate drying process.

Housings

Clean interior and exterior of housings, bearing caps, etc., thoroughly. Cast parts may be cleaned in hot solution tanks with mild alkali solutions providing these parts do not have ground or polished surfaces. Parts should remain in solution long enough to be thoroughly cleaned and heated. This will aid the evaporation of the cleaning solution and rinse water. Parts cleaned in solution tanks must be thoroughly rinsed with clean water to remove all traces of alkali. Cast parts may also be cleaned with steam cleaner.



WARNING: Care should be exercised to avoid skin rashes, fire hazards and inhalation of vapors when using solvent type cleaners.

All parts cleaned must be thoroughly dried immediately by using moisture-free compressed air or soft, lintless absorbent wiping rags free of abrasive materials such as metal filings, contaminated oil or lapping compound.

INSPECTION

The importance of careful and thorough inspection of all parts cannot be overstressed. Replacement of all parts showing indication of wear or stress will eliminate costly and avoidable failures at a later date.

DISASSEMBLY OF THE TORQUE CONVERTER (Continued)

Bearings

Carefully inspect all rollers, cages and cups for wear, chipping or nicks to determine fitness of bearings for further use. Do not replace a bearing cone or cup individually without replacing the mating cup or cone at the same time. After inspection, dip bearings in Automatic Transmission Fluid and wrap in clean lintless cloth or paper to protect them until installed.

Oil Seals, Gaskets, Etc.

Replacement of spring load oil seals, o-rings, metal sealing rings, gaskets and snap rings is more economical when unit is disassembled than premature overhaul to replace these parts at a future time. Further loss of lubricant through a worn seal may result in failure of other more expensive parts of the assembly. Sealing members should be handled carefully, particularly when being installed. Cutting, scratching, or curling under of lip of seal seriously impairs its efficiency. Apply a thin coat of Permatex No. 2 on the outer diameter of the oil seal to assure an oil tight fit into the retainer. When assembling new metal type sealing rings, same should be lubricated with coat of chassis grease to stabilize rings in their grooves for ease of assembly of mating members. Lubricate all o-ring and seals with Automatic Transmission Fluid before assembly.

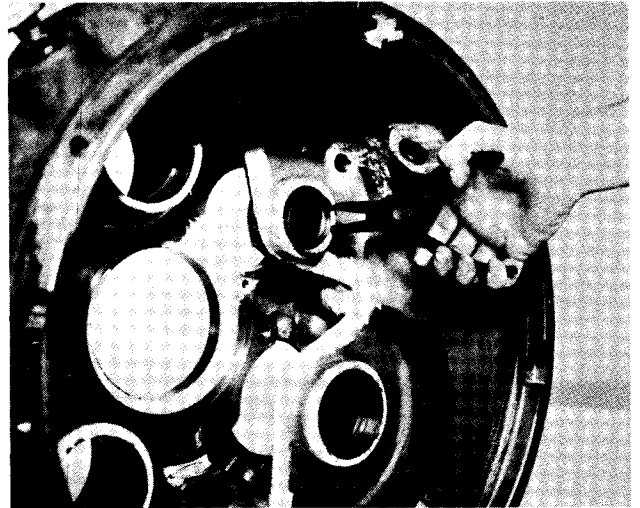
Gears and Shafts

If magna-flux process is available, use process to check parts. Examine teeth on all gears carefully for wear, pitting, chipping, nicks, cracks or scores. If gear teeth show spots where case hardening is worn through or cracked, replace with new gear. Small nicks may be removed with suitable hone. Inspect shafts and quills to make certain they are not sprung, bent, or splines twisted, and that shafts are true.

Housing, Covers, Etc.

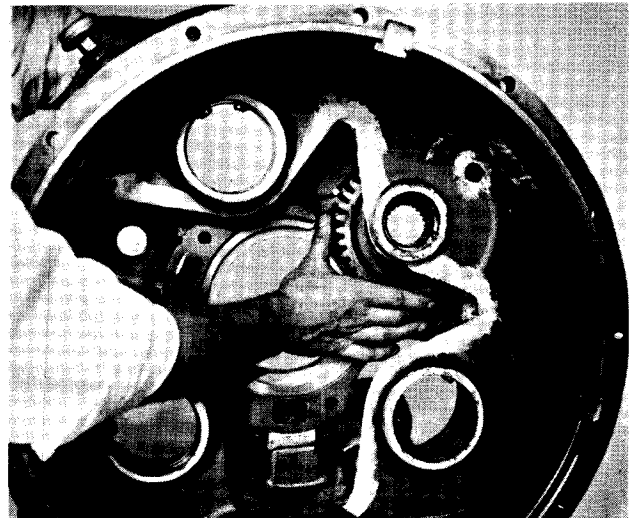
Inspect housings, covers and bearing caps to be certain they are thoroughly cleaned and that mating surfaces, bearing bores, etc., are free from nicks or burrs. Check all parts carefully for evidence of cracks or condition which would cause subsequent oil leaks or failures.

ASSEMBLY OF THE TORQUE CONVERTER



TS-36556

1. Install output shaft front bearing and secure with retainer ring.



TS-36557

2. Position output gear in converter housing with longer hub of gear toward rear of housing. See Diagram A.

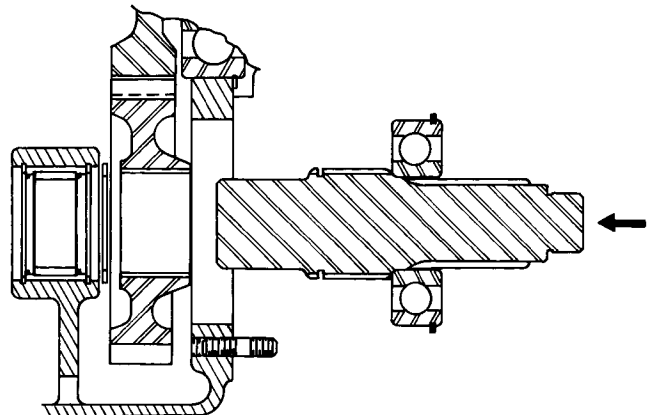
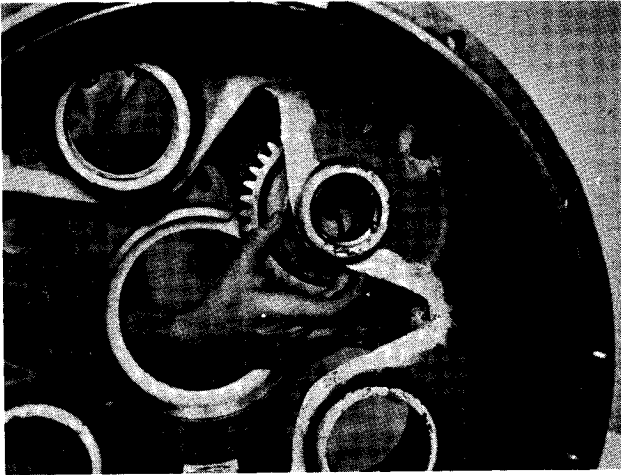


DIAGRAM A

TS-18089

ASSEMBLY OF THE TORQUE CONVERTER (Continued)



TS-36557

3. Insert output shaft assembly thru rear of converter housing. Align splines of output gear with splines on shaft. Position snap ring on shaft before shaft enters front bearing. See Diagram B.

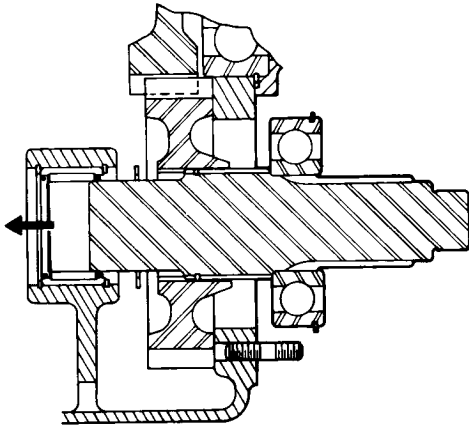
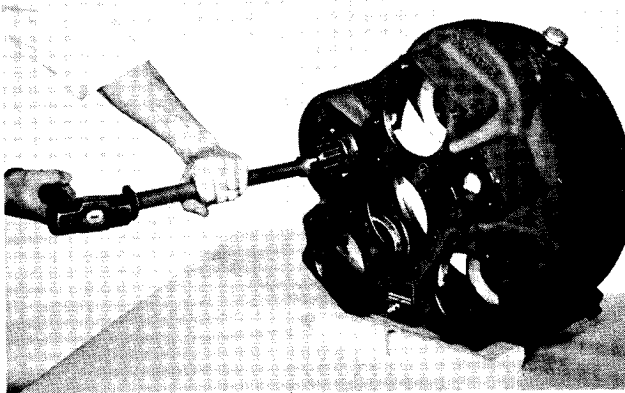


DIAGRAM B

TS-17292



TS-36553

4. Tap output shaft assembly and bearing in housing and thru output gear. See Diagram C.

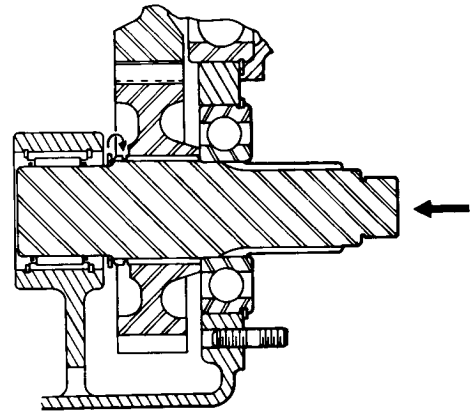
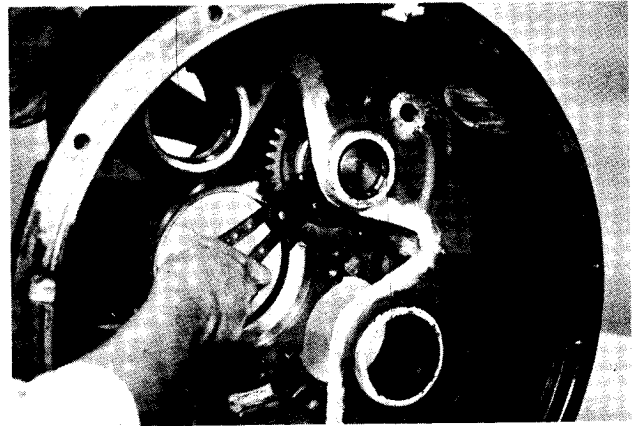


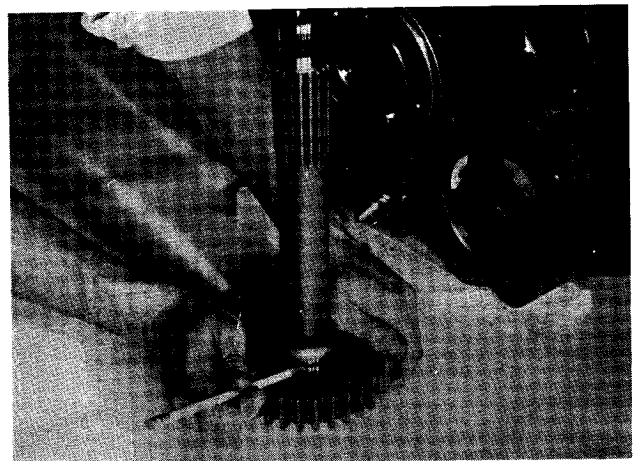
DIAGRAM C

TS-17293



TS-36554

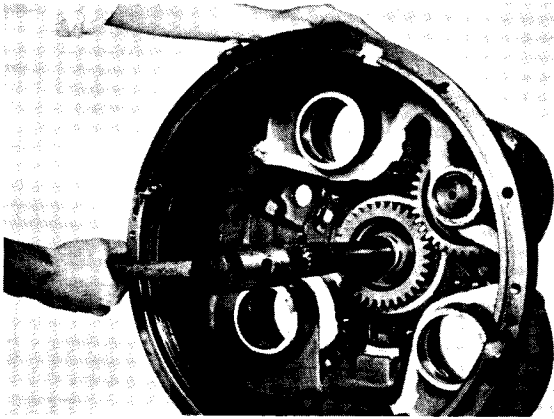
5. Tap output shaft thru gear until snap ring groove clears output gear. Using a pair of 45° external snap ring pliers, install snap ring, being certain ring is in full position in groove.



TS-36558

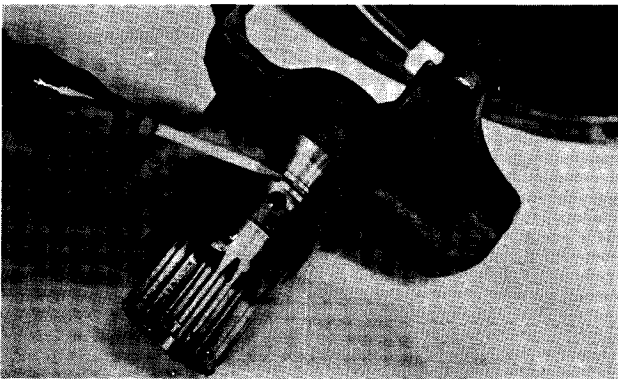
6. Install turbine shaft rear bearing in converter housing. Position new ring on the turbine shaft.

ASSEMBLY OF THE TORQUE CONVERTER (Continued)



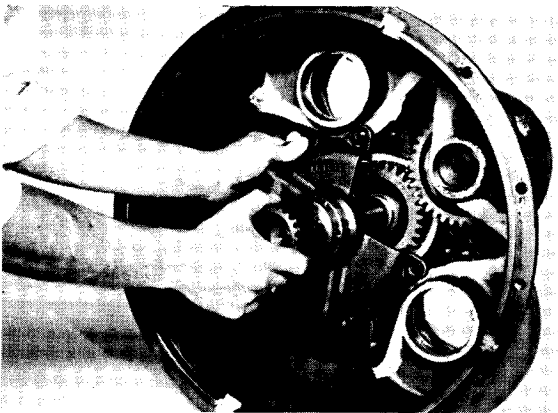
TS-36559

7. Tap turbine shaft in rear bearing.



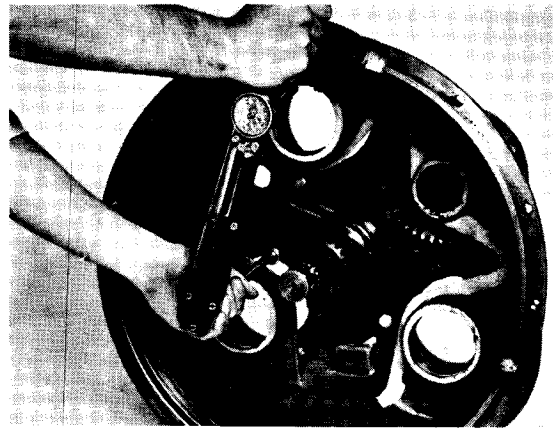
TS-36560

8. Install new sealing ring expander spring and oil sealing ring on support. Expander spring gap to be 180° from sealing ring hook joint.



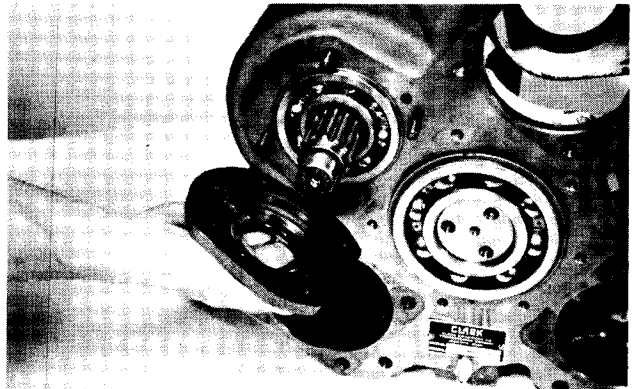
TS-36546

9. Install stator support over turbine shaft using caution as not to damage turbine shaft oil sealing ring.



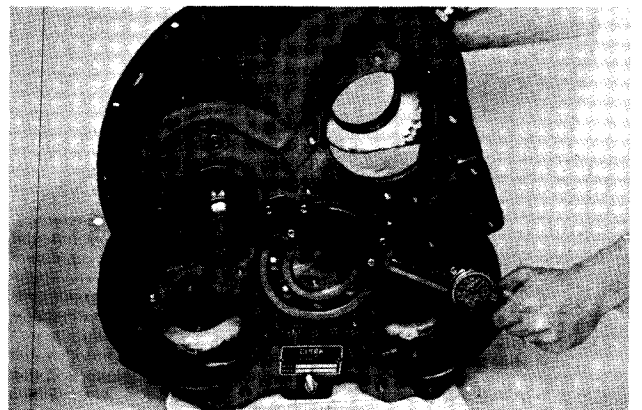
TS-36561

10. Install stator support bolts and tighten to a torque of 64-70 lbf·ft (86,8-94,9 N·m) (8,8-9,7 kgf·m).



TS-36551

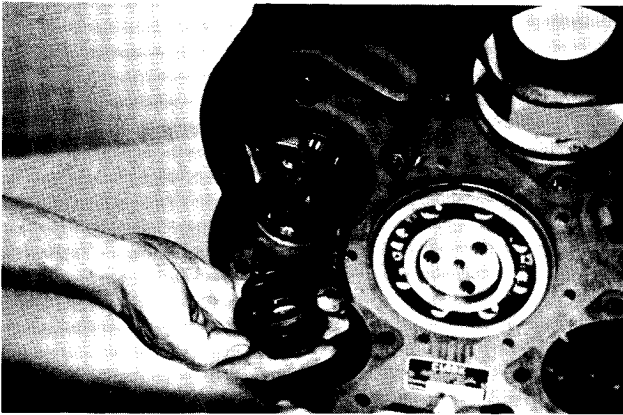
11. Apply a light coat of Permatex No. 2 on the outer diameter of the output oil seal. Press oil seal (lip of seal down) in rear bearing retainer. Position new gasket on bearing retainer. Install retainer on studs.



TS-36562

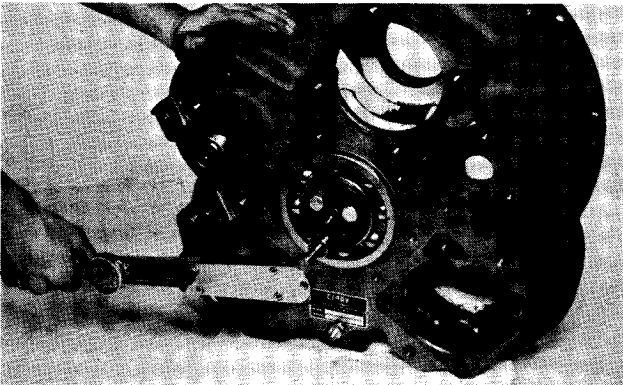
12. Install retainer washer and nuts, tighten to a torque of 26-29 lbf·ft (35,3-39,3 N·m) (3,6-4,0 kgf·m).

ASSEMBLY OF THE TORQUE CONVERTER (Continued)



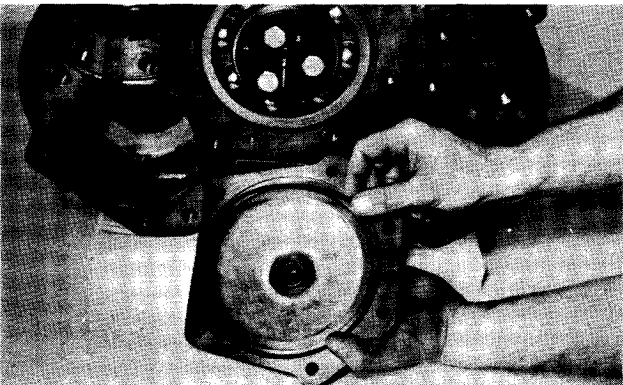
TS-36549

13. Install output companion flange, o-ring, washer and nut. Block output gears with soft bar. Tighten flange nut to a torque of 200-250 lbf·ft (271,2-339,0 N·m) (27,7-34,5 kgf·m)



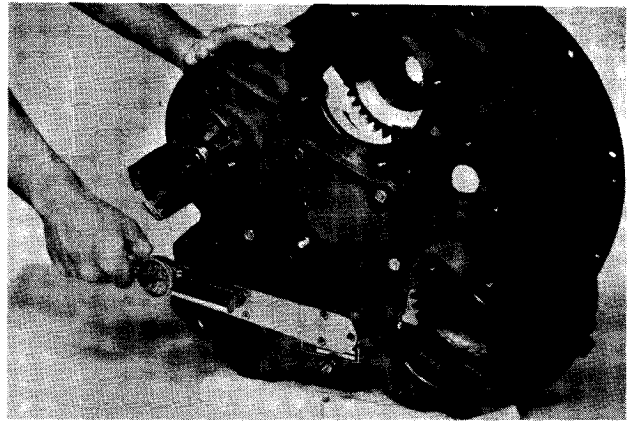
TS-36563

14. Position turbine shaft retainer on shaft. Install bolts and tighten to a torque of 64-70 lbf·ft (86,8-94,9 N·m) (8,8-9,7 kgf·m). Optional tachometer adapter shown.



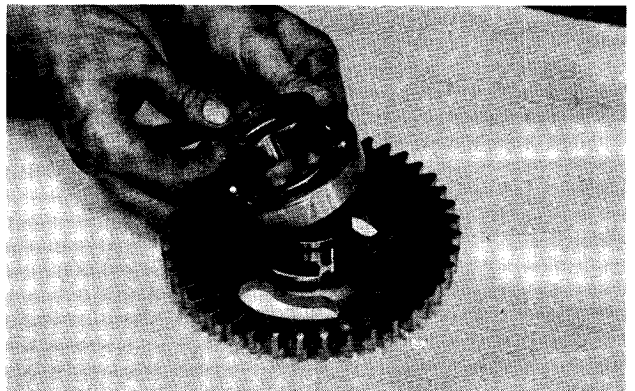
TS-36564

15. Install new o-ring on retainer, position retainer on converter housing.



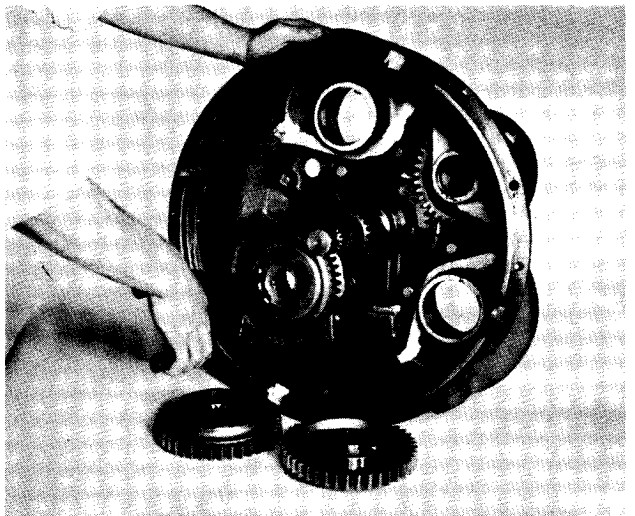
TS-36565

16. Install retainer bolts and tighten to a torque of 26-29 lbf·ft (35,3-39,3 N·m) (3,6-4,0 kgf·m).



TS-36566

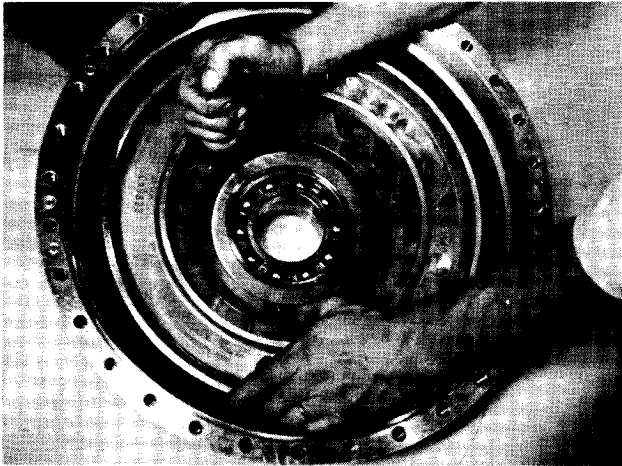
17. Position pump gear bearing retainer ring on pump gear. Press pump gear bearing on gear hub and secure with retainer ring.



TS-36544

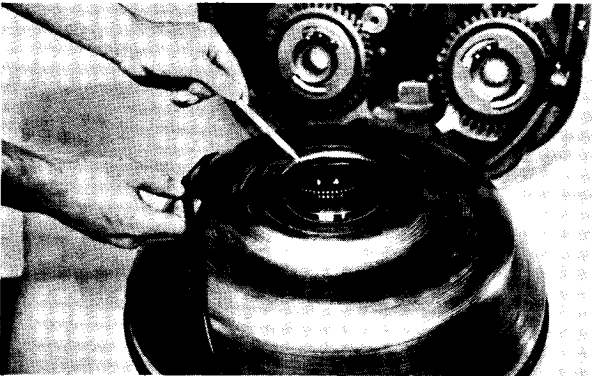
18. With pump gear bearing locating ring in housing, tap gear and bearing in housing pump bore. Rotate pump gear to expose snap ring ends. Install snap ring being certain ring is in full position in groove.

ASSEMBLY OF THE TORQUE CONVERTER (Continued)



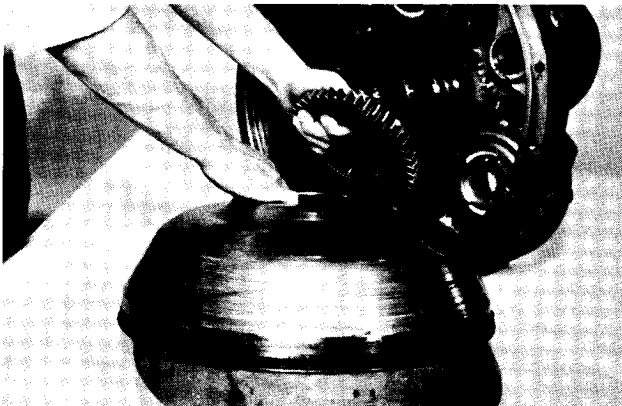
TS-36542

19. Install new o-ring on impeller hub. Secure hub to impeller with lock plates and bolts. Tighten bolts to a torque of 41-45 lbf·ft (55,6-61,0 N·m) (5,7-6,2 kgf·m). Bend a corner of retainer plate over flat of hub bolt. Install hub bearing and secure with retainer ring.



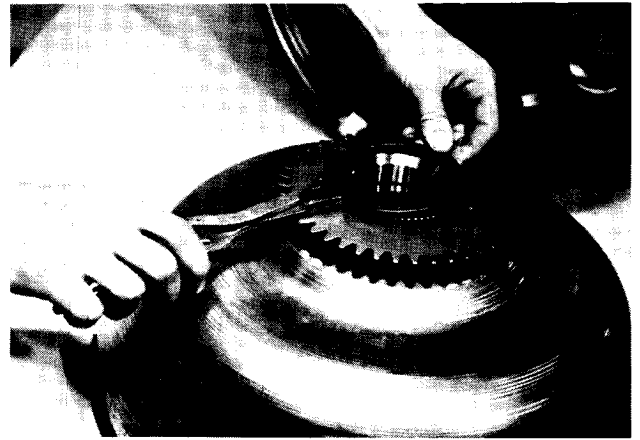
TS-36567

20. Apply a light coat of Permatex No. 2 on the outer diameter of the oil baffle oil seal. Press seal (lip of seal up) in oil baffle. Lubricate baffle seal ring. Position flat with no twist on baffle.



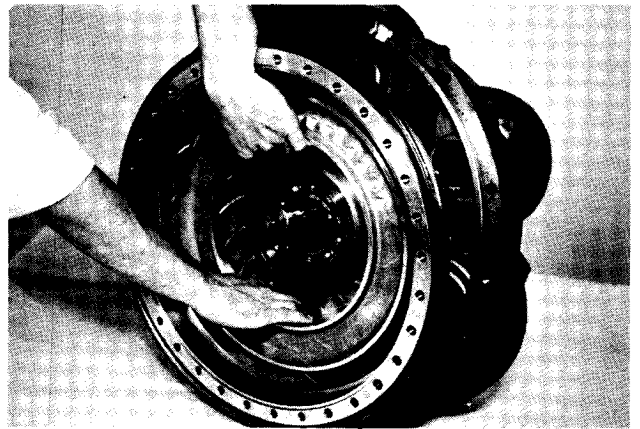
TS-36541

21. Install oil baffle on impeller using caution as not to damage baffle oil seal.



TS-36540

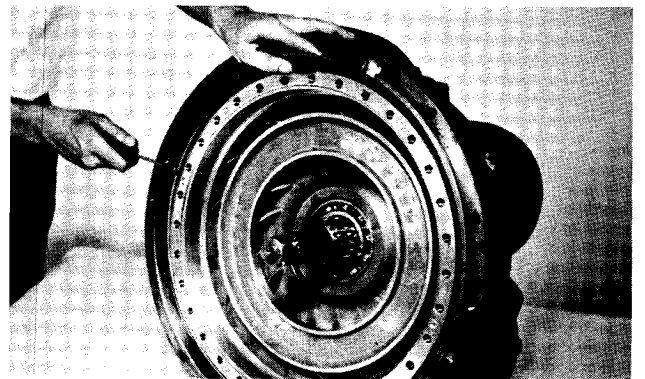
22. Install impeller hub gear and secure with retainer ring.



TS-36539

23. Position oil baffle and impeller assembly on stator support.

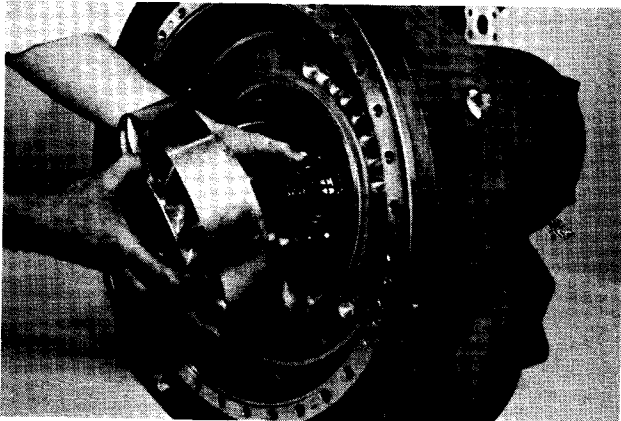
Note: Do not damage support sealing ring or baffle seal ring.



TS-36537

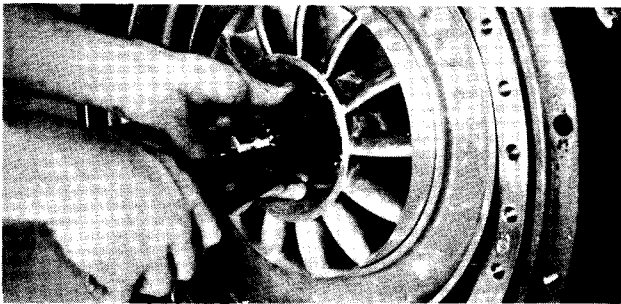
24. With oil baffle and impeller in full position install oil baffle retainer ring.

ASSEMBLY OF THE TORQUE CONVERTER (Continued)



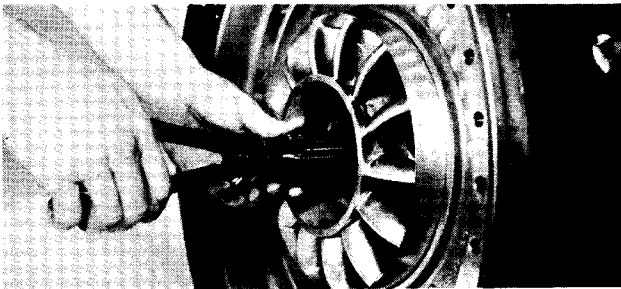
TS-36536

25. Install reaction member spacer on stator support with tang on spacer out. Install reaction member.



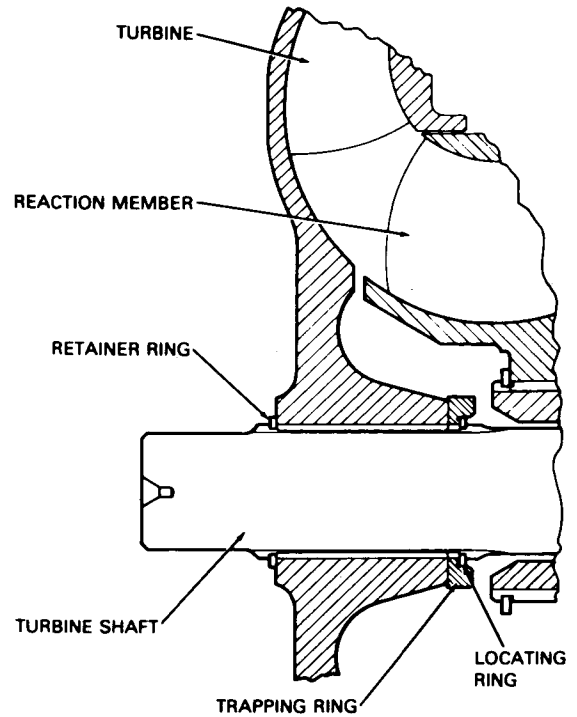
TS-36535

26. Secure reaction member with retainer ring.



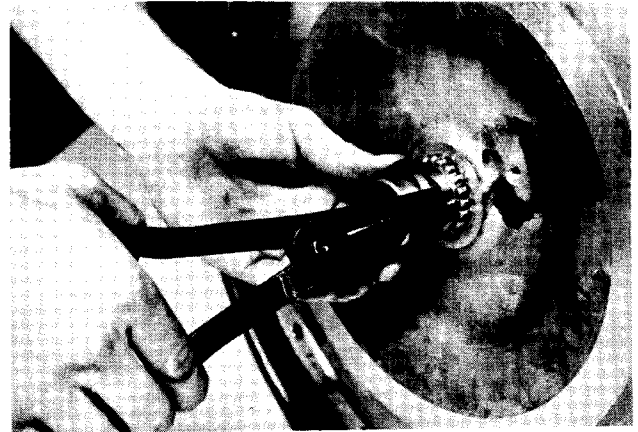
TS-36534

27. Install turbine locating ring in inner snap ring groove. Use caution as not to overstretch this ring or the trapping ring will not fit in full position. (See 28).



TS-17294

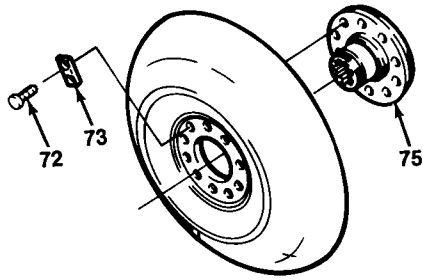
28. (Early version only.) Install trapping ring over locating ring being certain trapping ring is in full position as shown. Install turbine on turbine shaft.



TS-36532

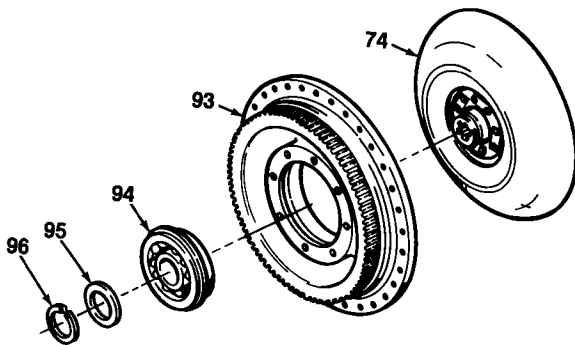
29. (Early version only.) Install turbine retainer ring.

ASSEMBLY OF THE TORQUE CONVERTER (Continued)



30. (Later version only.) Attach hub (75) to turbine (74) with lock plate (73) and bolts (72). Tighten bolts to a torque of 41-45 lbf·ft (55,6-61,0 N·m) (5,7-6,2 kgf·m). Bend a corner of the lock plate over flat on bolt.

TS-16970



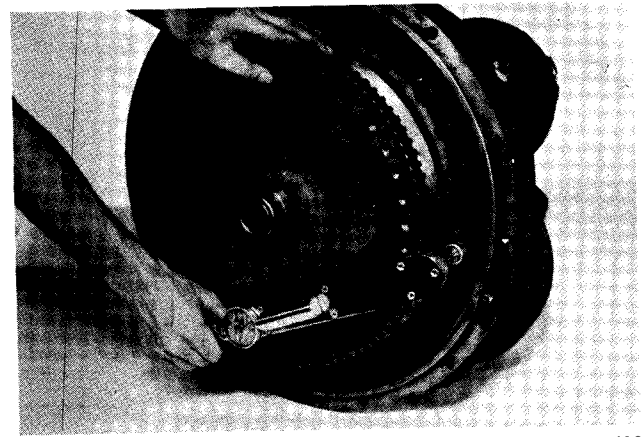
31. (Later version only.) Position turbine (74) into impeller cover (93) and install bearing (94), spacer (95), and snap ring (96).

TS-16969



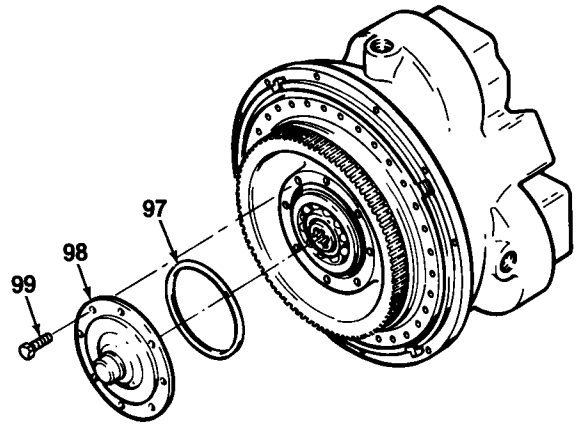
TS-36568

32. (Early version shown, later version similar.) Lubricate new o-ring and position on impeller cover.



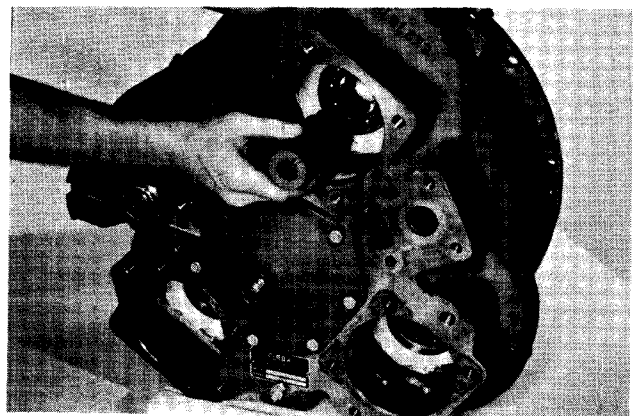
TS-36566

33. (Early version shown, later version similar.) Position impeller cover on impeller using caution as not to damage cover to impeller o-ring. Install sleeve. Install cover bolts and tighten to a torque of 41-45 lbf·ft (55,6-61,0 N·m) (5,7-6,2 kgf·m).



34. (Later version only.) Lubricate o-ring (97) and install on impeller cover hub (98). Install hub on impeller cover (93) using caution not to damage o-ring. Install bolts (99) and tighten to a torque of 37-41 lbf·ft (50,2-55,6 N·m) (5,1-5,7 kgf·m).

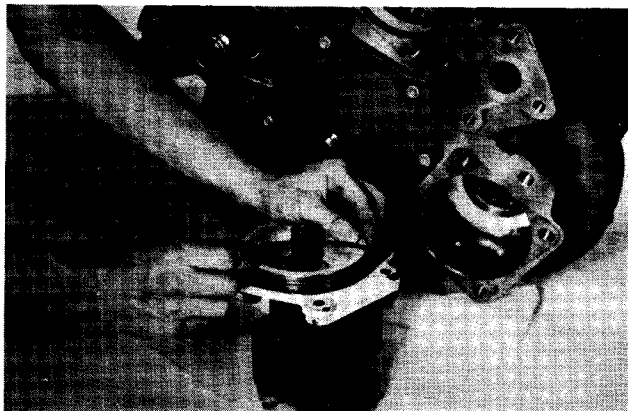
TS-16928



TS-36571

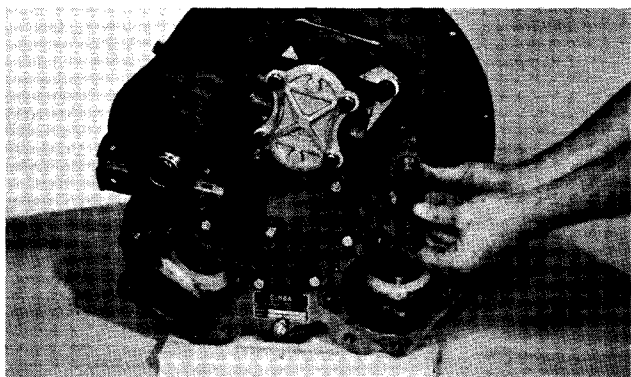
35. With snap rings in position on the outer and in the inner splines of the pump drive sleeve, insert sleeve in pump drive gear.

ASSEMBLY OF THE TORQUE CONVERTER (Continued)



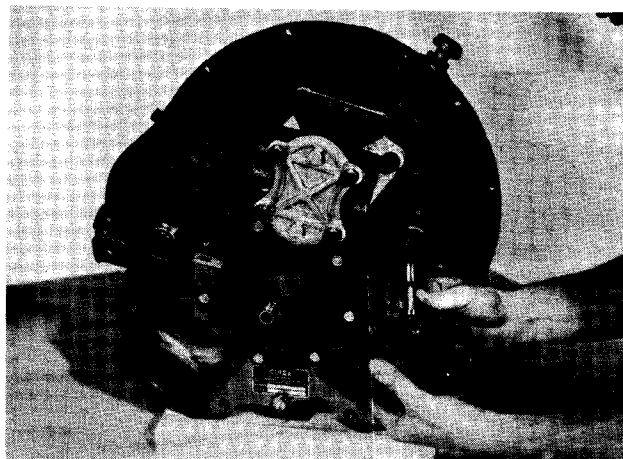
TS-36570

36. Lubricate new o-ring and position on charging pump adaptor. Install charging pump on converter housing and secure with bolts and washers. Tighten bolts to a torque of 26-29 lbf·ft (35,3-39,3 N·m) (3,6-4,0 kgf·m).



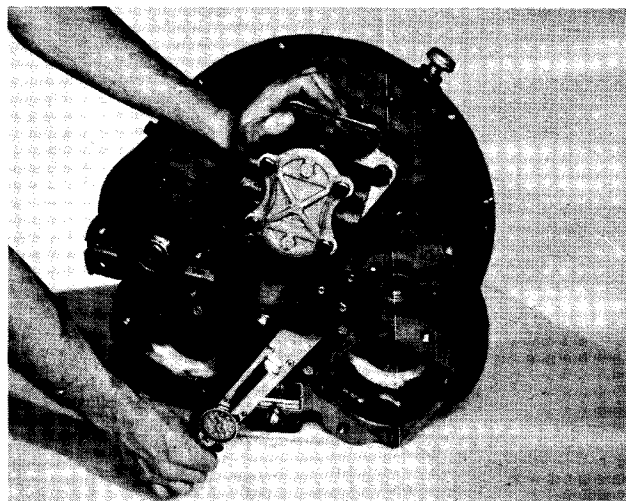
TS-36572

37. Insert downstream pressure regulating valve spring in spring retainer, position spring and retainer in housing.



TS-36573

38. Insert valve piston in valve body as shown. With new gasket in place compress valve spring with piston and valve body. Install retainer bolts and washers.



TS-36574

39. Tighten valve body bolts to a torque of 41-45 lbf·ft (55,6-61,0 N·m) (5,7-6,2 kgf·m).

SERVICING MACHINE AFTER TORQUE CONVERTER OVERHAUL

The transmission, torque converter, and its allied hydraulic system are important links in the drive line between the engine and the wheels. The proper operation of either unit depends greatly on the condition and operation of the other; therefore, whenever repair or overhaul of one unit is performed, the balance of the system must be considered before the job can be considered completed.

After the overhauled or repaired torque converter has been installed in the machine, the oil cooler, and the connecting hydraulic system must be thoroughly cleaned. This can be accomplished in several manners and a degree of judgment must be exercised as to the method employed.

The following are considered the minimum steps to be taken:

1. Drain entire system thoroughly.
2. Disconnect and clean all hydraulic lines. Where feasible, hydraulic lines should be removed from machine for cleaning.
3. Replace filter elements, cleaning out filter cases thoroughly.
4. The cooler must be thoroughly cleaned. The cooler should be "back flushed" with oil and compressed air until all foreign material has been removed. Flushing in direction of normal flow will not adequately clean the cooler. If necessary, cooler assembly should be removed from machine for cleaning, using oil, compressed air and steam cleaner for that purpose. **DO NOT** use flushing compounds for cleaning purposes.

5. Remove drain plug from transmission and inspect interior of housing, gears, etc. If presence of considerable foreign material is noted, it will be necessary that transmission be removed, disassembled and cleaned thoroughly. It is realized this entails extra labor; however, such labor is a minor cost compared to cost of difficulties which can result from presence of such foreign material in the system.

6. Assemble all components. Refer to the specifications section in the Preventative Maintenance Manual for the correct fluids to use in the torque converter and transmission system.

Fill to the full level mark on the sight glass and replace the filler plug.

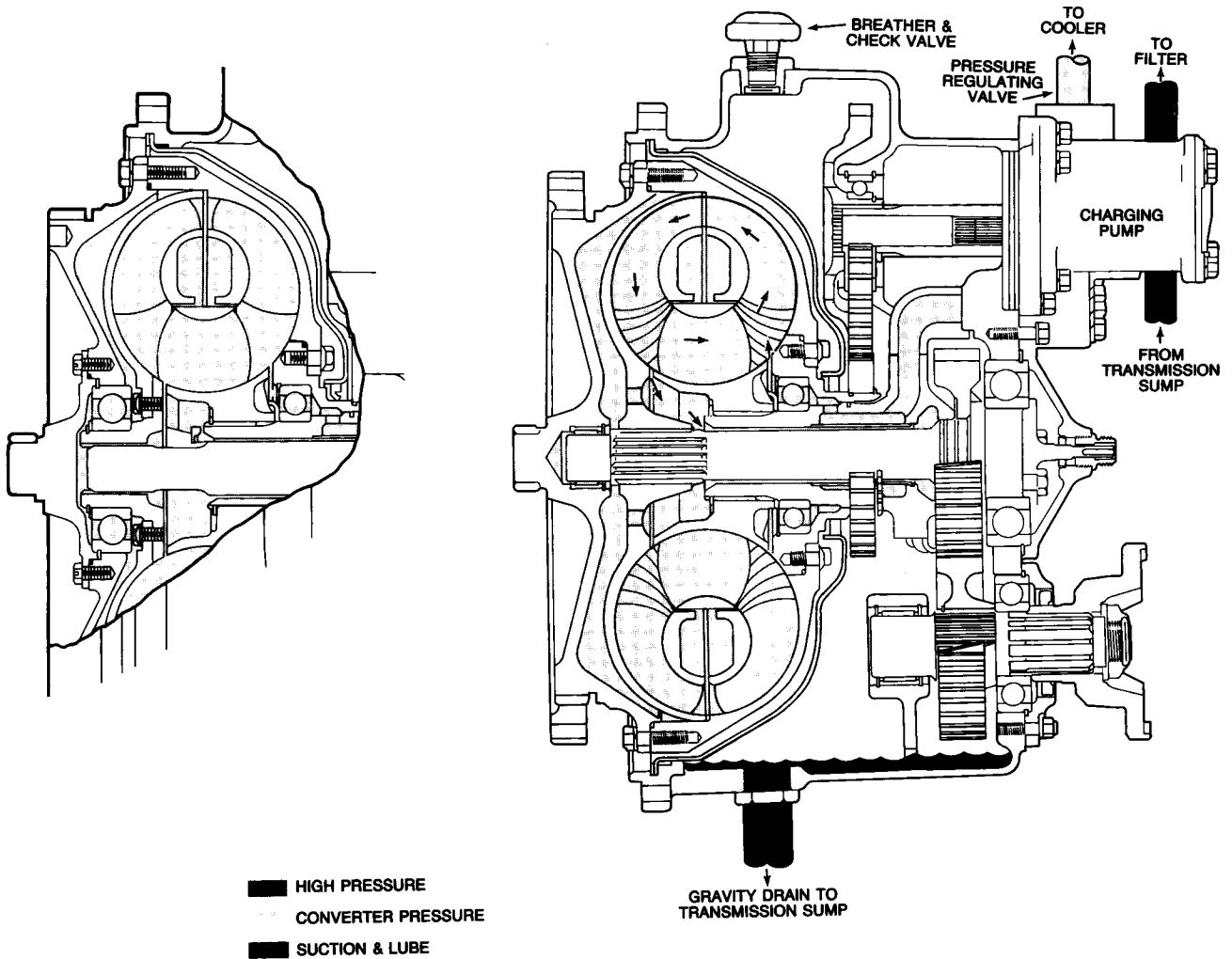
Run engine two minutes at 775-825 rpm to prime torque converter and hydraulic lines. Recheck level of fluid in transmission with engine running at idle (775-825 rpm).

Add quantity necessary to bring fluid level to full mark on sight glass. Recheck with hot fluid (180-200°F (82,2-93,3°C)).

Bring fluid to **FULL** mark on sight glass.

7. Recheck all drain plugs, lines, connections, etc., for leaks and tighten where necessary.

CONVERTER OIL FLOW DIAGRAM



TS-16931

Two versions of Model C-5502 torque converters are currently in use. The later version includes a one piece turbine shaft and drive gear, an enlarged impeller hub bearing, a turbine hub bearing to replace the impeller cover roller bearing, and an impeller cover hub.

TYPICAL TORQUE CONVERTER CROSS SECTION

