CLARK

TORQUE CONVERTER

MAINTENANCE & SERVICE MANUAL

C-270 SERIES

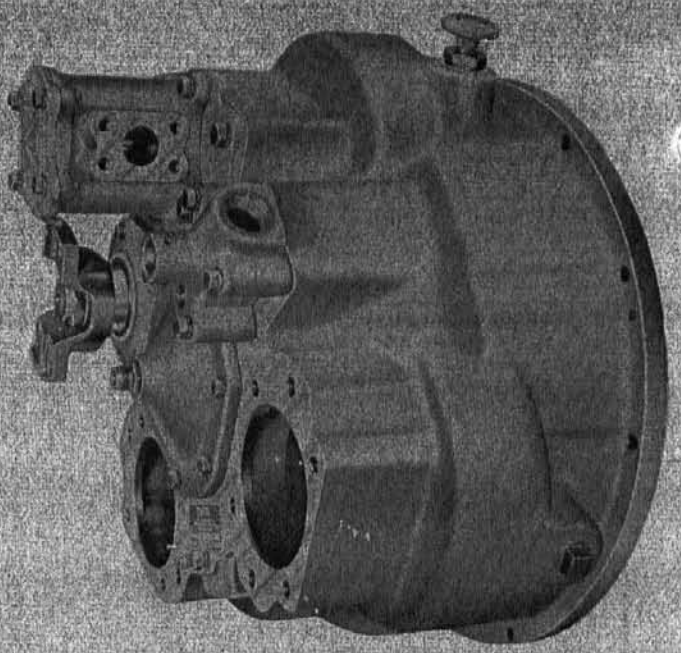
CLARK EQUIPMENT COMPANY

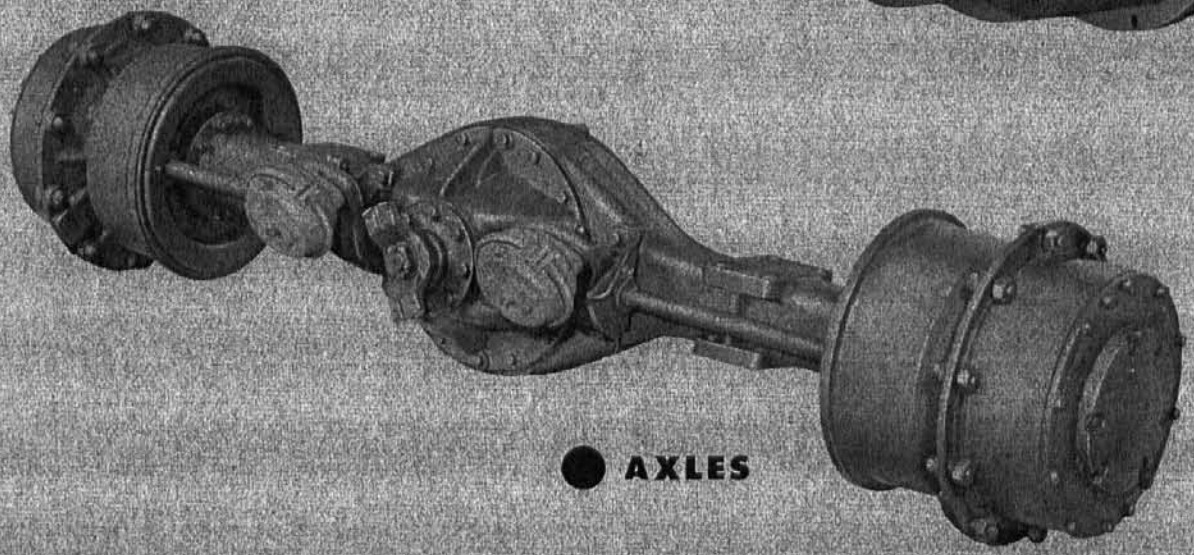
CUSTOMER SERVICE DIVISION

PUBLICATION DEPT. — JACKSON, MICHIGAN

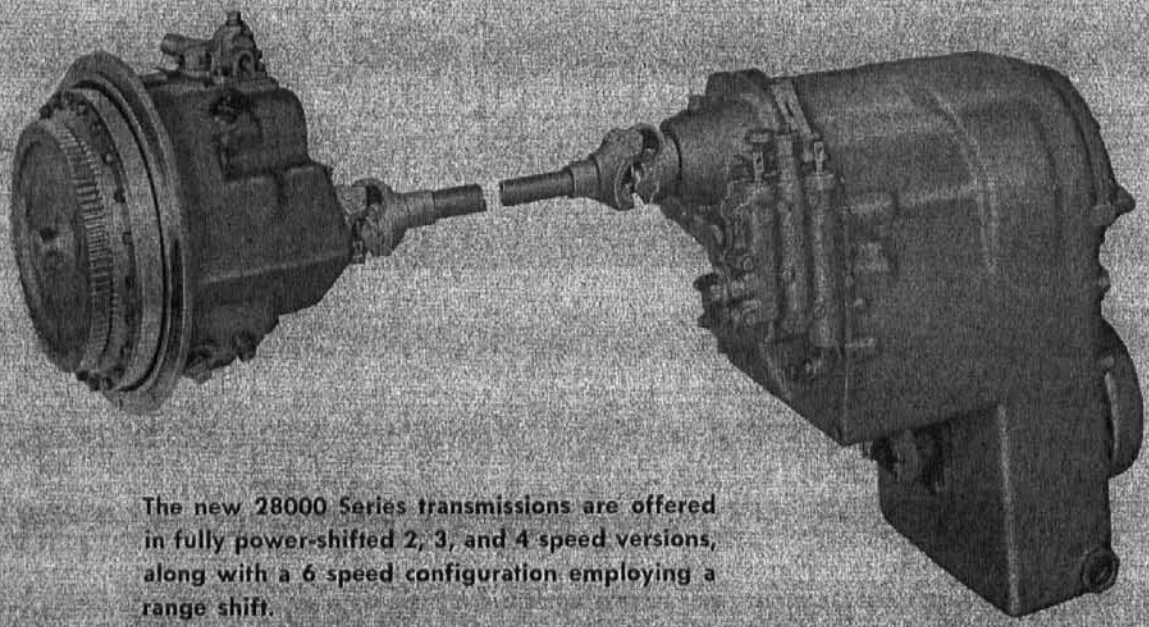
- **TORQUE CONVERTERS UP TO 1000 HORSEPOWER**

- **TRANSMISSIONS UP TO 1000 HORSEPOWER**





- **AXLES**



The new 28000 Series transmissions are offered in fully power-shifted 2, 3, and 4 speed versions, along with a 6 speed configuration employing a range shift.

FOREWORD

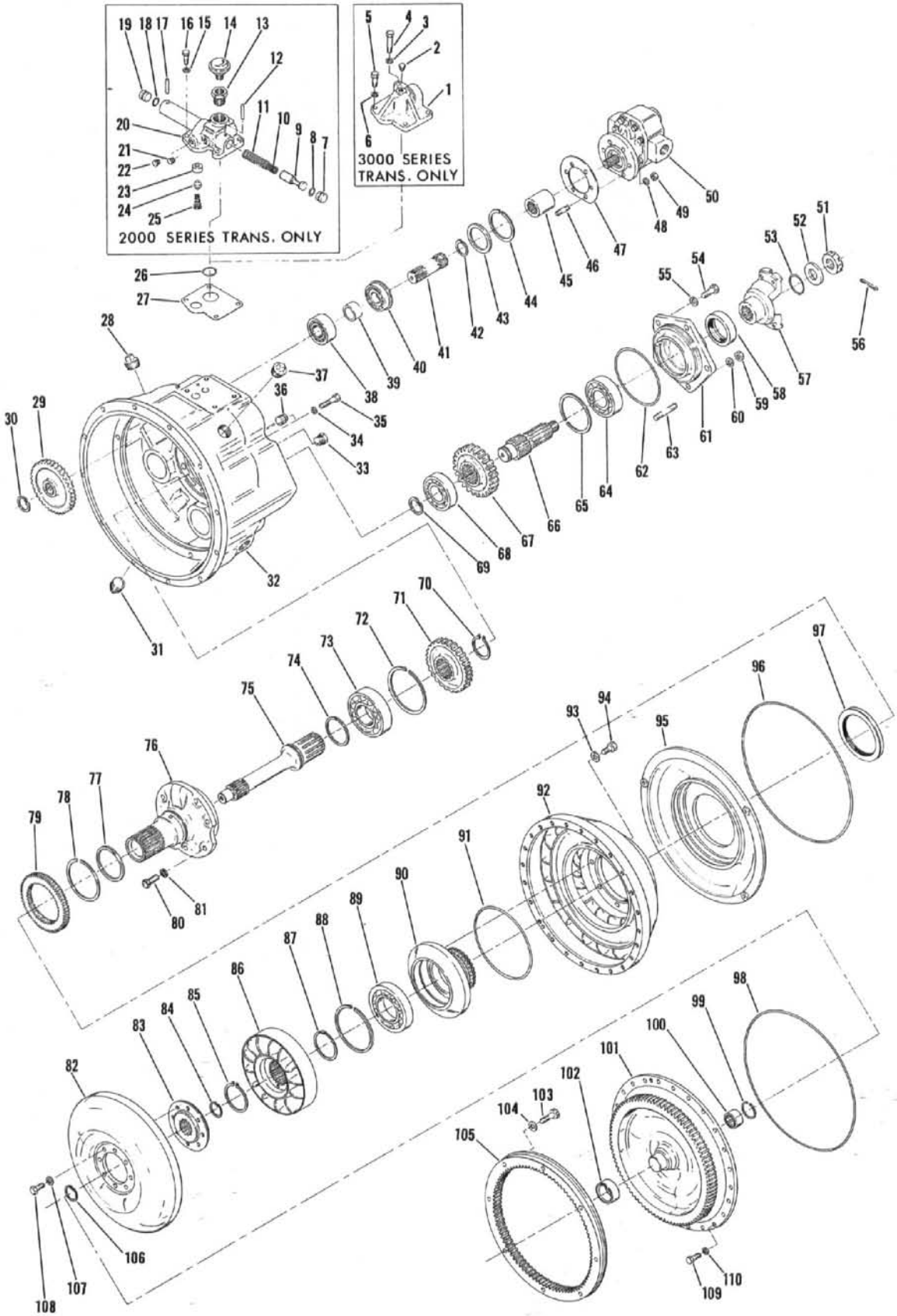
This manual has been prepared to provide the customer and the maintenance personnel with information and instructions on the maintenance and repair of the **CLARK** Torque Converter.

Extreme care has been exercised in the design, selection of materials and manufacturing of these units. The slight outlay in personal attention and cost required to provide regular and proper lubrication, inspection at stated intervals, and such adjustments as may be indicated will be reimbursed many times in low cost operation and trouble free service.

In order to become familiar with the various parts of the torque converter, its principal of operation, trouble shooting and adjustments, it is urged that the mechanic study the instructions in this manual carefully and use it as a reference when performing maintenance and repair operations.

Whenever repair or replacement of component parts is required, only Clark-approved parts as listed in the applicable parts manual should be used. Use of "will-fit" or non-approved parts may endanger proper operation and performance of the equipment. The Clark Equipment Company does not warrant repair or replacement parts, nor failures resulting from the use thereof, which are not supplied by or approved by the Clark Equipment Company. IMPORTANT: **Always furnish the Distributor with the converter serial and model number when ordering parts.**

CLARK EQUIPMENT

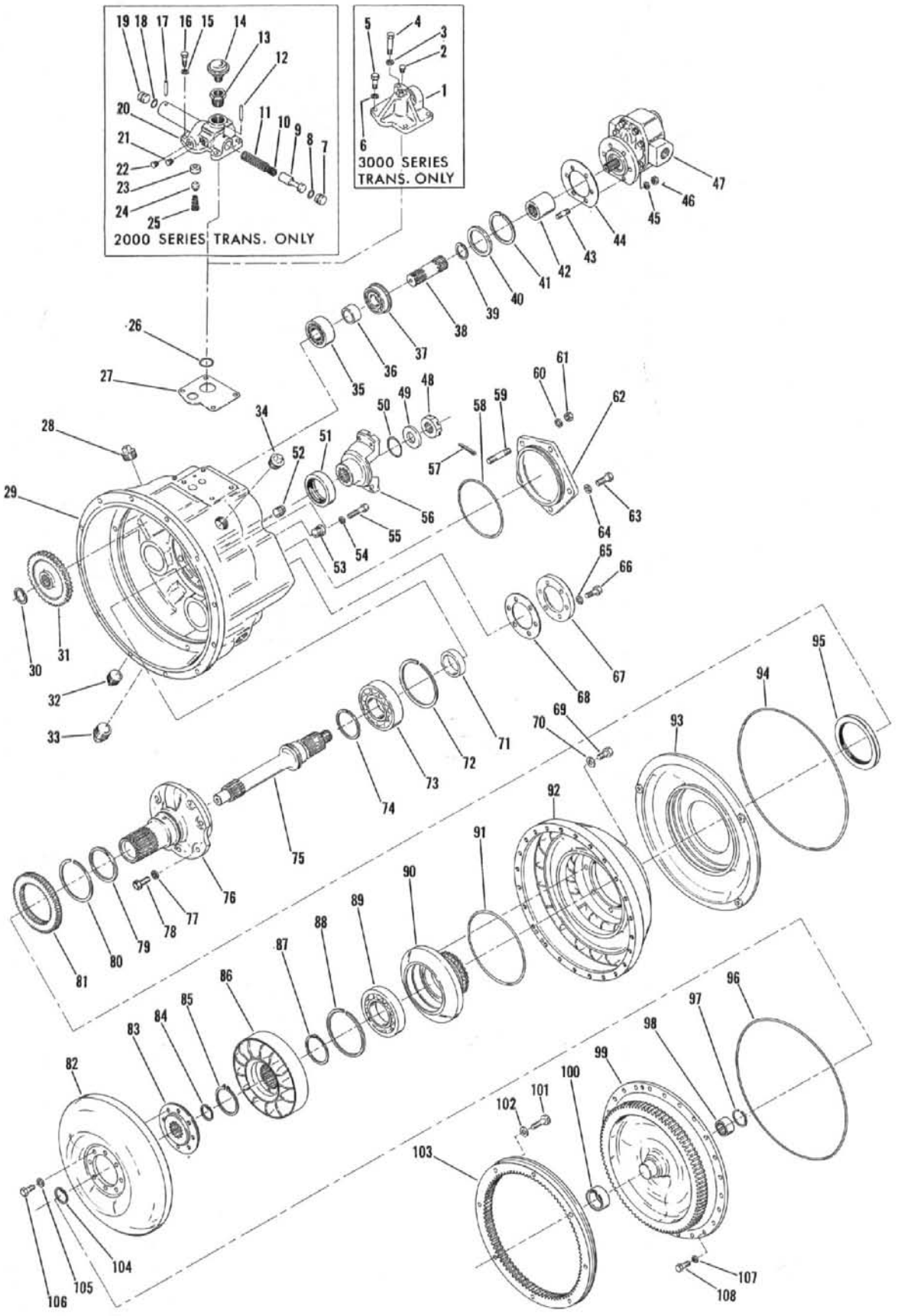


CLARK EQUIPMENT

C-270 CONVERTER WITH OFFSET OUTPUT

ITEM	DESCRIPTION	QTY.
1	Inlet Cover (3000 Trans. only)	1
2	Inlet Cover Plug (3000 Trans. only)	1
3	Cover Bolt Lockwasher (3000 Trans. only)	1
4	Cover Bolt—Long (3000 Trans. only)	1
5	Cover Bolt—Short (3000 Trans. only)	3
6	Cover Bolt Lockwasher (3000 Trans. only)	3
7	Valve Stop	1
8	Valve Stop "O" Ring	1
9	Valve Piston	1
10	Valve Spring—Inner	1
11	Valve Spring—Outer	1
12	Valve Stop Roll Pin	1
13	Air Breather Check Valve Assembly—Out of Location	1
14	Air Breather—Out of Location	1
15	Regulator Valve to Housing Screw Lockwasher	4
16	Regulator Valve to Housing Screw	4
17	Valve Stop Roll Pin	1
18	Valve Stop "O" Ring	1
19	Valve Stop	1
20	Regulating Valve Assembly	1
21	Valve Housing Pipe Plug	1
22	Valve Housing Pipe Plug	1
23	Safety Valve Seat	1
24	Safety Valve Plunger	1
25	Safety Valve Spring	1
26	Regulator Valve to Housing "O" Ring	1
27	Regulator Valve to Housing Gasket	1
28	Converter Housing Pipe Plug	2
29	Pump Drive Gear	3
30	Pump Drive Gear Snap Ring	3
31	Converter Housing Pipe Plug	1
32	Converter Housing	1
33	Converter Housing Pipe Plug	2
34	Oil Baffle Screw Lockwasher	3
35	Oil Baffle Screw	3
36	Converter Housing Pipe Plug	1
37	Converter Housing Pipe Plug	1
38	Pump Drive Shaft Bearing	3
39	Pump Drive Shaft Spacer	3
40	Pump Drive Shaft Bearing	3
41	Pump Drive Shaft	3
42	Pump Drive Shaft Snap Ring	3
43	Pump Shaft Washer	3
44	Pump Shaft Snap Ring	3
45	Charging Pump Sleeve	1
46	Pump Mounting Stud	6
47	Pump Gasket	1
48	Pump Mounting Stud Nut Lockwasher	6
49	Pump Mounting Stud Nut	6
50	Converter Charging Pump	1
51	Output Shaft Nut	1
52	Output Shaft Washer	1
53	Output Shaft "O" Ring	1
54	Bearing Retainer Screw	3
55	Bearing Retainer Screw Lockwasher	3
56	Output Shaft Cotter Pin	1
57	Companion Flange	1
58	Bearing Retainer Oil Seal	1
59	Bearing Retainer Stud Nut	2
60	Bearing Retainer Stud Lockwasher	2
61	Bearing Retainer	1
62	Bearing Retainer "O" Ring	1
63	Output Shaft Bearing Retainer Stud	2
64	Output Shaft Rear Bearing	1
65	Output Shaft Bearing Snap Ring	1
66	Output Shaft	1
67	Output Shaft Gear	1
68	Output Shaft Front Bearing	1
69	Bearing Snap Ring	1
70	Output Gear Snap Ring	1
71	Turbine Shaft Gear	1
72	Turbine Shaft Snap Ring	1
73	Turbine Shaft Bearing	1
74	Turbine Shaft Piston Ring	1
75	Turbine Shaft	1
76	Stator Support & Sleeve Assembly	1
77	Stator Support Piston Ring	1
78	Impeller Hub Gear Snap Ring	1
79	Impeller Hub Gear	1
80	Stator Support Screw	6
81	Stator Support Screw Lockwasher	6
82	Turbine	1
83	Turbine Hub	1
84	Turbine Shaft Snap Ring	1
85	Reaction Member Snap Ring	1
86	Reaction Member	1
87	Reaction Member Spacer	1
88	Impeller Bearing Snap Ring	1
89	Impeller Hub Bearing	1
90	Impeller Hub	1
91	Impeller Hub "O" Ring	1
92	Impeller	1
93	Hub to Impeller Screw Lockwasher	8
94	Hub to Impeller Screw	8
95	Oil Baffle	1
96	Oil Baffle "O" Ring	1
97	Oil Baffle Oil Seal	1
98	Impeller to Cover "O" Ring	1
99	Impeller Cover Bearing Snap Ring	1
100	Impeller Cover Bearing	1
101	Impeller Cover	1
102	Impeller Cover Sleeve	1
103	Ring Gear Screw	8
104	Plain Washer	8
105	Flywheel Ring Gear	1
106	Turbine Shaft Snap Ring	1
107	Turbine Hub Screw Washer	8
108	Turbine Hub Screw	8
109	Impeller to Cover Screw	24
110	Impeller to Cover Lockwasher	24

CLARK EQUIPMENT



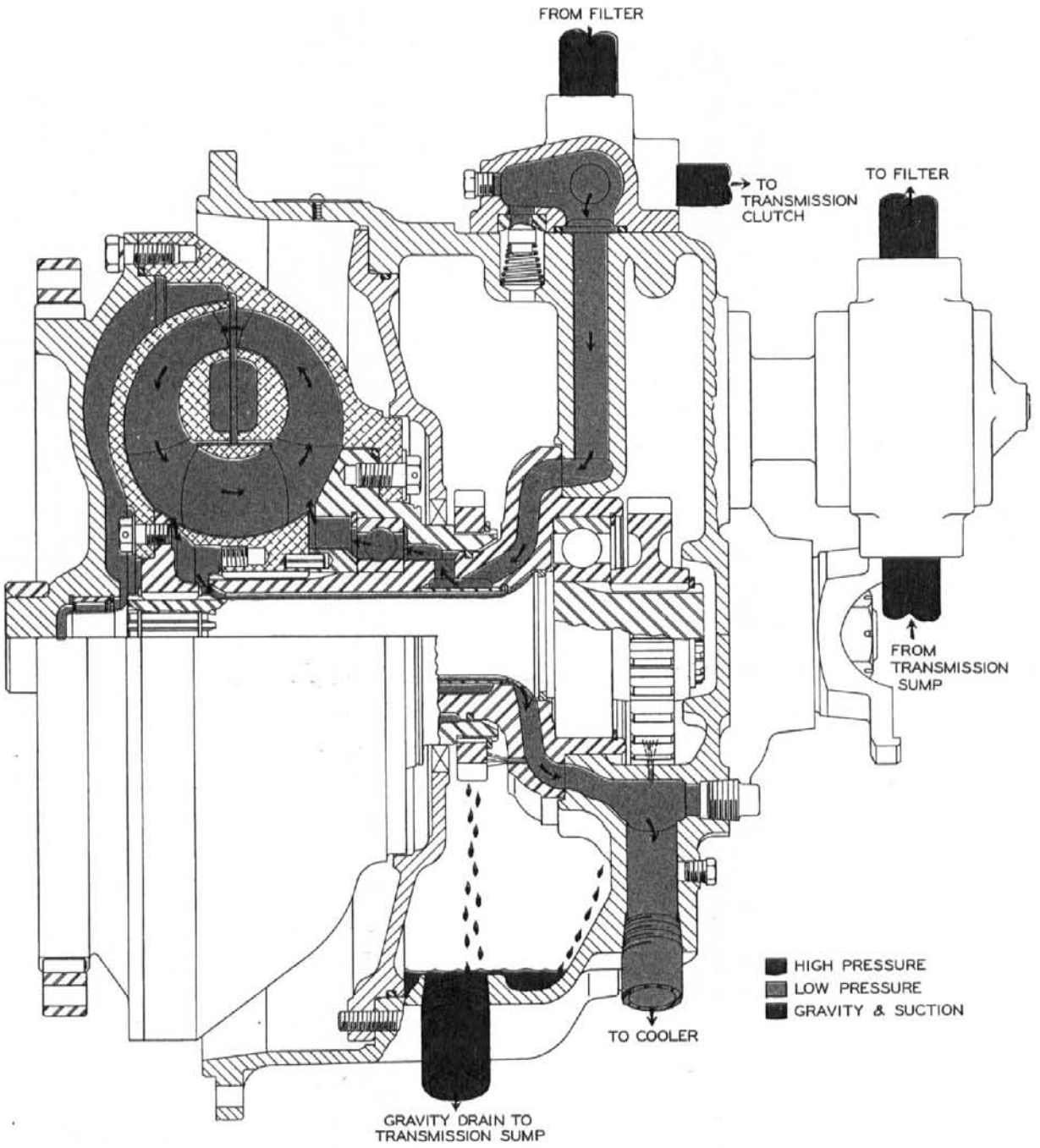
CLARK EQUIPMENT

C-270 CONVERTER WITH INLINE OUTPUT

ITEM	DESCRIPTION	QTY.
1	Inlet Cover (3000 Trans. only)	1
2	Inlet Cover Plug (3000 Trans. only)	1
3	Cover Bolt Lockwasher (3000 Trans. only)	1
4	Cover Bolt—Long (3000 Trans. only)	1
5	Cover Bolt—Short (3000 Trans. only)	3
6	Cover Bolt Lockwasher (3000 Trans. only)	3
7	Valve Stop	1
8	Valve Stop "O" Ring	1
9	Valve Piston	1
10	Valve Spring—Inner	1
11	Valve Spring—Outer	1
12	Valve Stop Roll Pin	1
13	Air Breather Check Valve Assembly—Out of Location	1
14	Air Breather—Out of Location	1
15	Regulator Valve to Housing Screw Lockwasher	4
16	Regulator Valve to Housing Screw	4
17	Valve Stop Roll Pin	1
18	Valve Stop "O" Ring	1
19	Valve Stop	1
20	Regulating Valve Assembly	1
21	Valve Housing Pipe Plug	1
22	Valve Housing Pipe Plug	1
23	Safety Valve Seat	1
24	Safety Valve Plunger	1
25	Safety Valve Spring	1
26	Regulator Valve to Housing "O" Ring	1
27	Regulator Valve to Housing Gasket	1
28	Converter Housing Pipe Plug	2
29	Pump Drive Gear	3
30	Pump Drive Gear Snap Ring	3
31	Pump Drive Gear	3
32	Converter Housing Pipe Plug	1
33	Converter Housing Pipe Plug	1
34	Converter Housing Pipe Plug	1
35	Pump Drive Shaft Bearing	3
36	Pump Drive Shaft Spacer	3
37	Pump Drive Shaft Bearing	3
38	Pump Drive Shaft	3
39	Pump Drive Shaft Snap Ring	3
40	Pump Shaft Washer	3
41	Pump Shaft Snap Ring	3
42	Charging Pump Sleeve	1
43	Pump Mounting Stud	6
44	Pump Gasket	1
45	Pump Mounting Stud Nut Lockwasher	6
46	Pump Mounting Stud Nut	6
47	Converter Charging Pump	1
48	Turbine Shaft Nut	1
49	Turbine Shaft Washer	1
50	Flange "O" Ring	1
51	Oil Seal	1
52	Converter Housing Plug	1

ITEM	DESCRIPTION	QTY.
53	Converter Housing Plug	2
54	Oil Baffle Screw Lockwasher	3
55	Oil Baffle Screw	3
56	Output Flange	1
57	Turbine Shaft Cotter Pin	1
58	Offset Drive Hole Cover "O" Ring	1
59	Cover Stud	2
60	Cover Stud Nut Lockwasher	2
61	Cover Stud Nut	2
62	Offset Drive Hole Cover	1
63	Cover Screw	3
64	Cover Screw Lockwasher	3
65	Pump Hole Cover Screw	12
66	Pump Hole Cover Screw Lockwasher	12
67	Pump Hole Cover	2
68	Pump Hole Cover Gasket	2
69	Hub to Impeller Screw	8
70	Hub to Impeller Screw Washer	8
71	Companion Flange Spacer	1
72	Snap Ring	1
73	Turbine Shaft Bearing	1
74	Piston Ring	1
75	Turbine Shaft	1
76	Stator Support & Sleeve Assembly	1
77	Stator Support Screw Lockwasher	6
78	Stator Support Screw	6
79	Piston Ring	1
80	Impeller Hub Gear Snap Ring	1
81	Impeller Hub Gear	1
82	Turbine	1
83	Turbine Hub	1
84	Turbine Locating Snap Ring	1
85	Reaction Member Snap Ring	1
86	Reaction Member	1
87	Reaction Member Spacer	1
88	Bearing Snap Ring	1
89	Impeller Hub Bearing	1
90	Impeller Hub	1
91	Impeller Hub "O" Ring	1
92	Impeller	1
93	Oil Baffle	1
94	Oil Baffle "O" Ring	1
95	Oil Seal	1
96	Impeller to Cover "O" Ring	1
97	Bearing Snap Ring	1
98	Impeller Cover Bearing	1
99	Impeller Cover	1
100	Impeller Cover Sleeve	1
101	Ring Gear to Flywheel Bolt	8
102	Ring Gear to Flywheel Bolt Washer	8
103	Ring Gear	1
104	Turbine Retaining Snap Ring	1
105	Turbine Hub Screw Washer	8
106	Turbine Hub Screw	8
107	Impeller to Cover Bolt Lockwasher	24
108	Impeller to Cover Bolt	24

CLARK EQUIPMENT



C-270 SERIES CONVERTER OIL FLOW DIAGRAM

CLARK EQUIPMENT

IRREGULARITIES IN PERFORMANCE

C-270 Series Converters

TROUBLE	PROBABLE CAUSE	REMEDY
1. Low converter OUT pressure (Below 25 P.S.I. with engine at 2000 RPM — NO LOAD)	Worn oil sealing and "O" rings	A. Trouble is internal and will require a complete tear-down of the converter.
	Worn oil pump.	B. Replace.
	Safety Valve stays open.	C. Clean and check valve spring and valve.
2. Suction line taking air.	Low oil level.	D. Fill to proper level.
	Suction line connections taking air.	E. Check oil line connections and tighten securely.
	Worn oil pump.	F. Replace.
3. High converter OUT pressure (Above 40 P.S.I. with engine at 2000 RPM — NO LOAD)	Oil cooler or oil lines restricted.	G. Check oil cooler line and oil cooler for restrictions. Clean or replace.
	Oil too heavy	H. Check oil weight. See oil recommendations.
	Cold oil.	I. Converter pressure in cold weather will vary. As soon as converter gets hot, pressure should drop.
4. Over-heating	See items No. 1 & 2.	
	Oil cooler or oil cooler lines restricted causing safety valve to stay open.	J. Clean and check oil cooler and oil cooler lines. Replace if necessary.
	Oil cooler too small.	K. Replace with larger cooler.
	Worn oil pump	L. Replace oil pump.
	Converter drain line to transmission or oil sump not installed properly.	M. Install at lowest drain opening in converter housing. Line must maintain constant gradual drop to oil sump for gravity drain.
5. Noisy Converter.	Worn coupling gear.	N. Replace.
	Worn oil pump	O. Replace.
	Damaged bearing.	P. A complete teardown will be necessary to determine this. Replace if necessary.
	Worn drive gears.	Q. Replace.
6. Low clutch pressure. (See pressure specifications)	Transmission malfunction.	R. Close pressure line to transmission control valve. If clutch pressure returns to normal, trouble is in transmission.
	Worn oil pump.	S. Replace.
	Regulator valve stuck open.	T. Clean and check valve for worn or dirty parts, replace if necessary.

CLARK EQUIPMENT

IRREGULARITIES IN PERFORMANCE (Cont'd.)

C-270 Series Converters

TROUBLE	PROBABLE CAUSE	REMEDY
7. High clutch pressure. (See pressure specifications)	Regulator valve stuck closed.	U. See item T.
8. Lack of power.	Improper engine function.	V. Tune engine.
	Engine stall speed below normal.	W. Tune engine. Check governor.
	Low converter out pressure.	X. See item No. 1.
	Air in the oil.	Y. See item No. 2.
	Improper oil.	Z. See oil recommendations.
9. Oil in engine flywheel housing.	"O" ring between impeller cover and impeller damaged.	AA. Replace.
	Oil baffle "O" ring damaged.	BB. Replace.
	Oil baffle oil seal damaged.	CC. Replace.

GENERAL INFORMATION:

Use Clark 228190 or 1533614 Oil Filter only.

Use Clark 215502 Oil Filter Element only.

Use minimum number of Pipe and Hose Fittings.

Gravity drain from Converter Sump to Transmission must be of minimum length and have no "U" bends to trap air or oil.

Cooler capacity for normal application, 30 per cent of net Engine Horsepower at Governed Speed.

Check oil level with engine idling and transmission in neutral.

CHANGE OIL FILTER ELEMENT EVERY 250 HOURS. DRAIN AND REFILL SYSTEM EVERY 500 HOURS.

TORQUE SPECIFICATIONS:

3/8" Capscrew	20 to 25 Pounds Feet Torque
7/16" Capscrew	35 to 40 Pounds Feet Torque
1/2" Capscrew	45 to 50 Pounds Feet Torque
Turbine Hub Bolt	30 to 35 Pounds Feet Torque
Output Flange Nut	200 to 250 Pounds Feet Torque

Apply Permatex No. 2 or Crane Sealer to all Pipe Plugs and Hose Connections.

Apply a light coat of Permatex No. 2 on all bores that take a Lip Type Oil Seal.

CLARK EQUIPMENT

OIL PRESSURE AND LUBRICATION RECOMMENDATIONS
for
C-270 SERIES CONVERTERS

Make all checks after complete system is up to normal operating temperature (200°F.)

A. CONVERTER PRESSURE CHECK

Operate Engine at 2000 R.P.M.
Place Transmission Direction and Speed Levers in neutral.

Converter OUT..... 25 Minimum
40 Maximum

TRANSMISSION CLUTCH OIL PRESSURE P.S.I.

The C-270 Converter will be equipped with one of three variations involving the clutch regulating valve. They are as follows:

1. Inlet cover for **Converter oil only** with clutch pressure valve in transmission control cover. **180 to 220 P.S.I.** pressure range. (See note)
2. Pressure regulator valve on Converter with a **240 to 280 P.S.I.** pressure range. (See Note).
3. Pressure regulator valve on Converter with a **180 to 220 P.S.I.** pressure range. (See Note).

NOTE: All pressure must be equal within **5 P.S.I.** If clutch pressure varies in any one clutch more than **5 P.S.I.** repair clutch. All pressures must be taken with two clutches engaged.

B. OIL IN A TORQUE CONVERTER is used primarily as means of transmitting power as well as providing adequate lubrication. Such oil must have the following properties:

1. It must remain fluid at all prevailing temperatures.
2. It must not foam excessively nor materially increase in volume.
3. It must be chemically stable at elevated temperatures.
4. It must be free from additives and impurities which would centrifuge out during operation.
5. IT MUST BE CLEAN. Dirt in the converter hydraulic circuit will cause wear and shorten life. Also it will cause malfunction by damaging the hydraulic pump, pressure regulating valves and oil seals within the unit.

RECOMMENDED OILS FOR CLARK POWER SHIFT TRANSMISSIONS AND CONVERTERS HAVING COMMON OIL SYSTEM		
Prevailing Ambient Temp.	**SAE Spec.**	**Type**
	INITIAL FILL	
Above 0° F	Type "A" Suffix "A" or Dexron * Type C-2	Automatic Transmission Fluid Hydraulic Fluid
Below 0° F	Type "A" Suffix "A" or Dexron *	Automatic Transmission Fluid
	SUBSEQUENT FILL OR REFILLS	
Above 0° F	Type "A" Suffix "A" or Dexron * Type C-2 SAE 10 Mil. 2104B	Automatic Transmission Fluid Hydraulic Fluid MS-DG Grade 10
Below 0° F	Type "A" Suffix "A" or Dexron *	Automatic Transmission Fluid

* DEXRON is a Registered Trademark of General Motors Corporation

CLARK EQUIPMENT

C-270 SERIES CONVERTER

The following instructions will cover the disassembly and assembly of the C-270 Converter in a sequence that would normally be followed after the Converter has been removed from the vehicle.

CAUTION: Cleanliness is of extreme importance and an absolute must in the repair and overhaul of the Converter. 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.

DISASSEMBLY

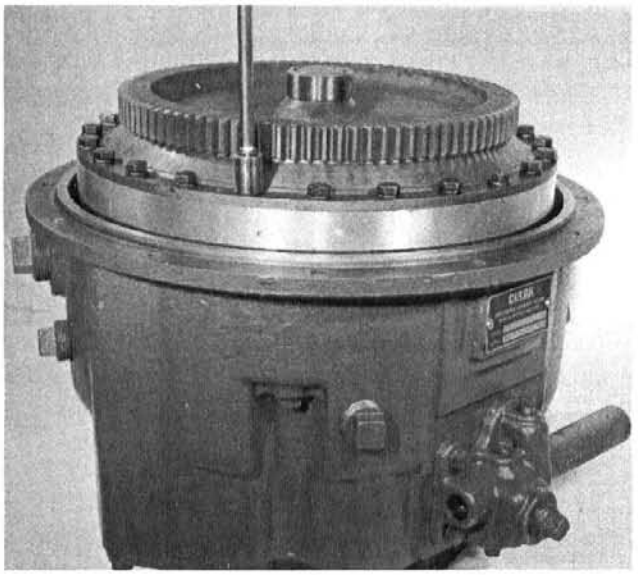


Figure 1

Remove bolts securing impeller cover to impeller.

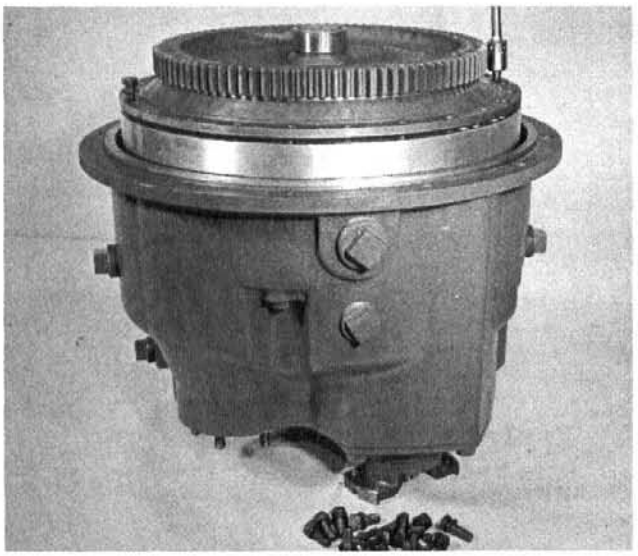


Figure 2

Use two bolts in threaded puller holes 180° apart to remove impeller cover from impeller.

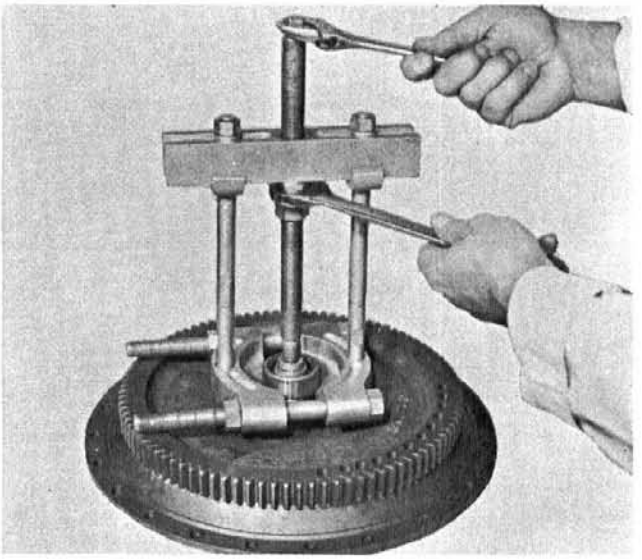


Figure 3

If pilot bushing sleeve is to be replaced use procedure as shown above.

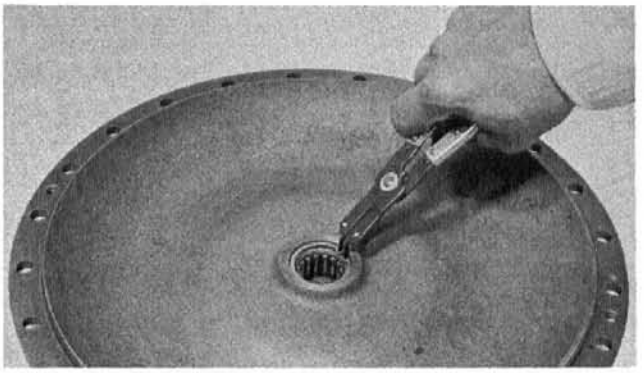


Figure 4

If necessary to replace pilot bearing, remove retainer ring and use small inside bearing puller.

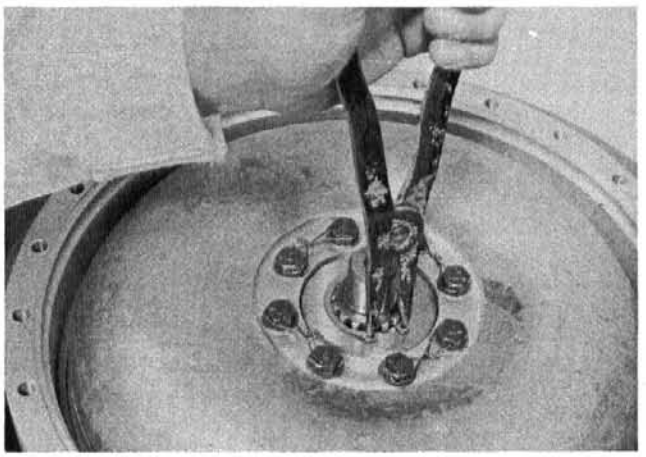


Figure 5

Remove outer turbine hub retainer ring.

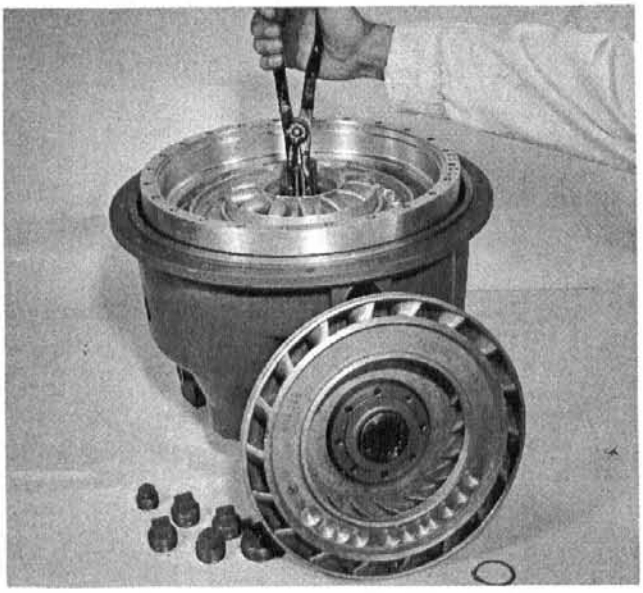


Figure 6

Remove turbine and hub assembly from turbine shaft. Remove turbine locating ring.

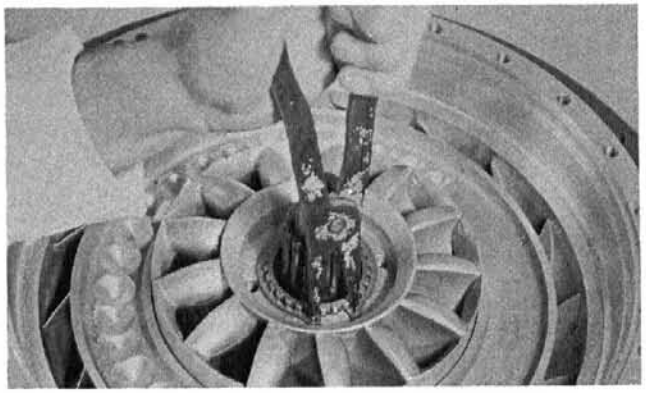


Figure 7

Remove reaction member retainer ring.

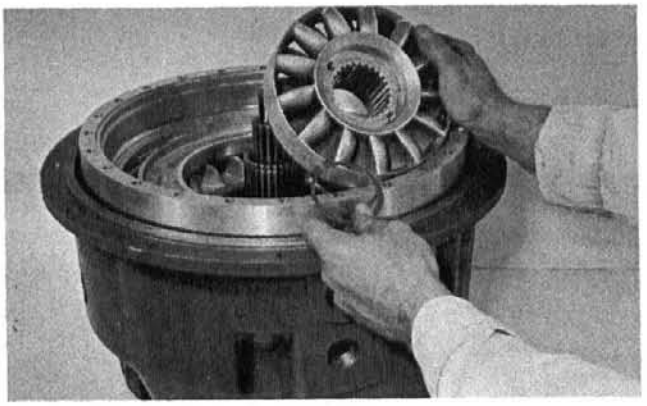


Figure 8

Remove reaction member from stator support, threaded puller holes are provided should reaction member be too tight to be removed by hand.

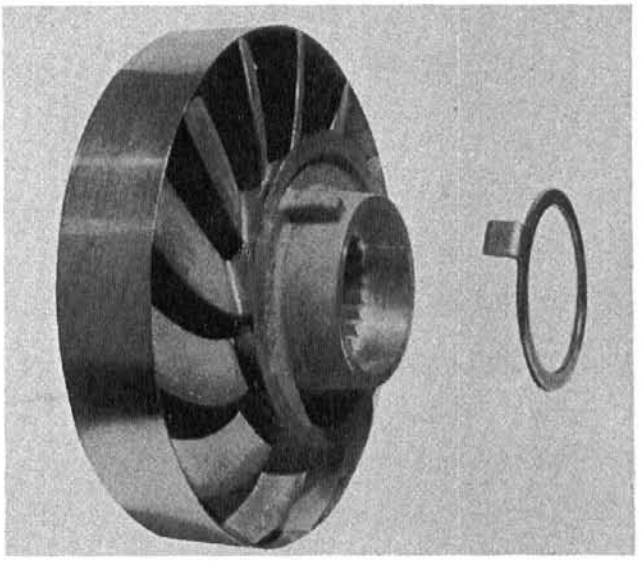


Figure 9

Reaction member and spacer.

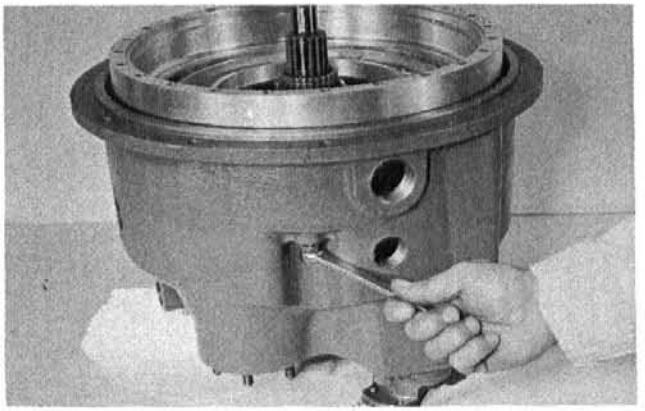


Figure 10

Remove three bolts that secure oil baffle to Converter Housing.

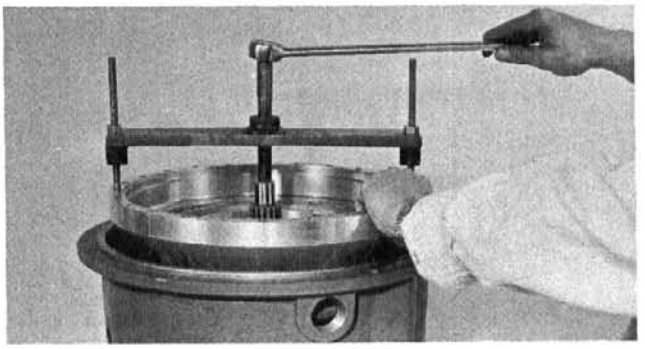


Figure 11

Install special puller tool as shown above, turn jack screw pulling oil baffle and impeller from stator support as an assembly. Special tool can be made for easier removal of impeller assembly but it is not necessary. (See Figure 12).

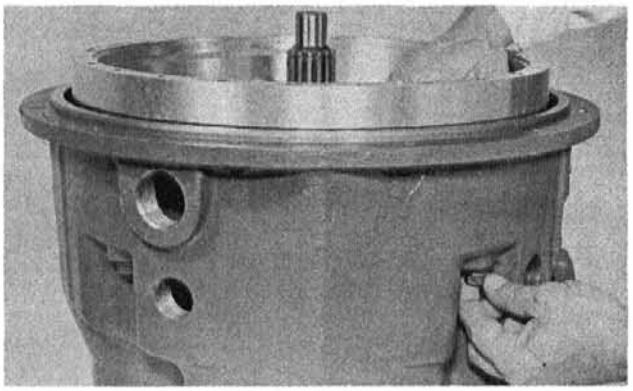


Figure 12

If special tool is not available, remove oil baffle bolts part way. Tap lightly on each bolt, this will loosen oil baffle from Converter Housing, remove oil baffle and impeller from housing as an assembly.

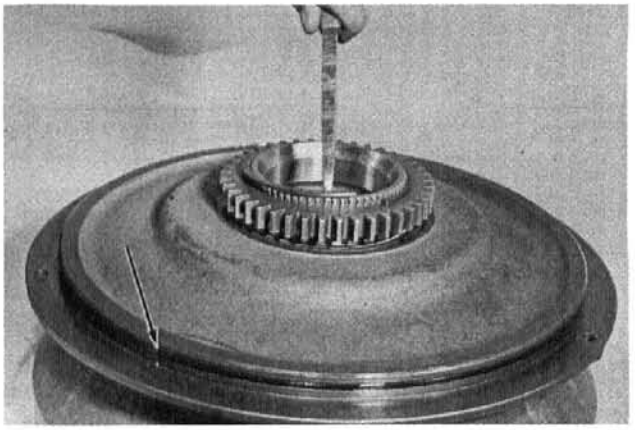


Figure 13

Remove impeller hub gear retainer ring.

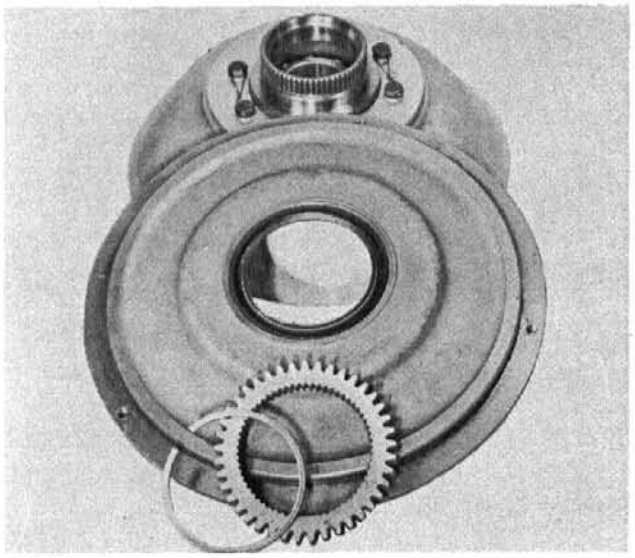


Figure 14

Remove impeller hub gear and oil baffle from impeller.

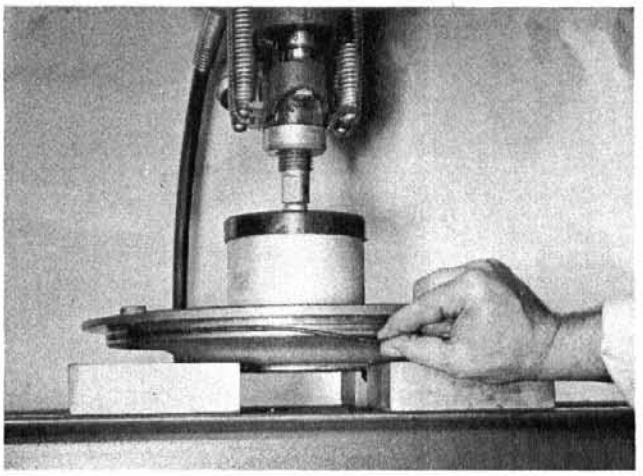


Figure 15

Remove oil baffle oil seal and "O" ring. **NOTE:** Oil seal should be removed only if it is to be replaced.

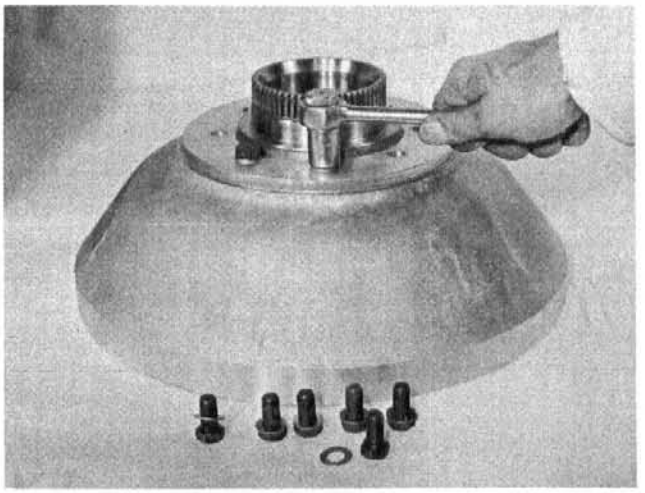


Figure 16

Remove impeller hub bolt lockwire and hub bolts.

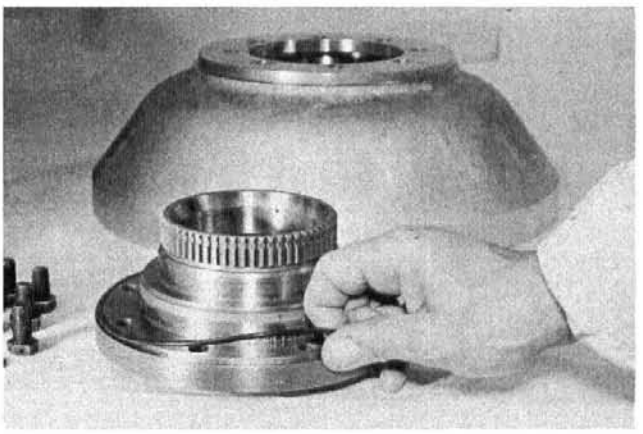


Figure 17

Remove impeller hub from impeller. Remove hub "O" ring.

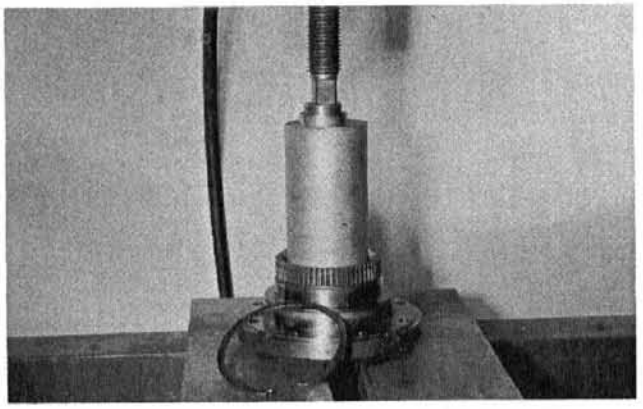


Figure 18

Remove hub bearing retainer ring and press bearing from hub.

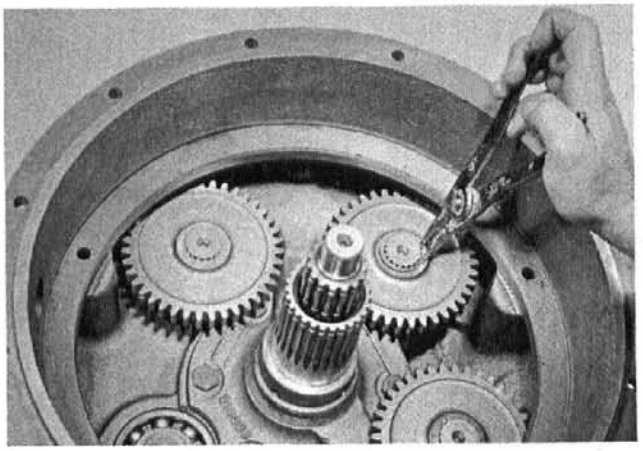


Figure 19

PUMP DRIVES VARY IN QUANTITY FROM ONE TO THREE — ALL DRIVES DISASSEMBLE THE SAME.

Remove oil pump drive gear retaining rings. Remove drive gears from pump shafts.

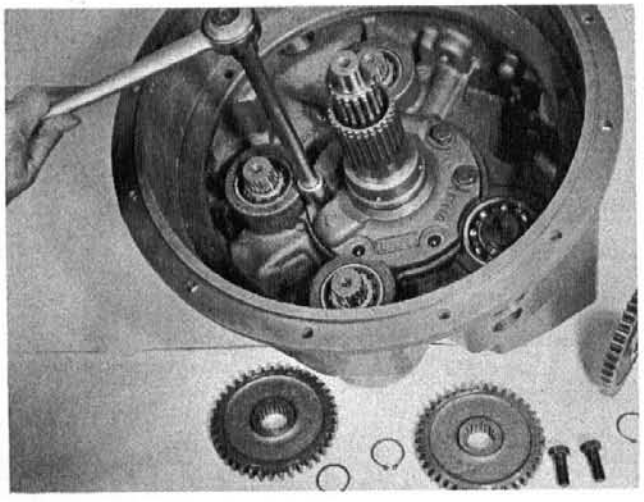


Figure 20

Remove stator support bolts.

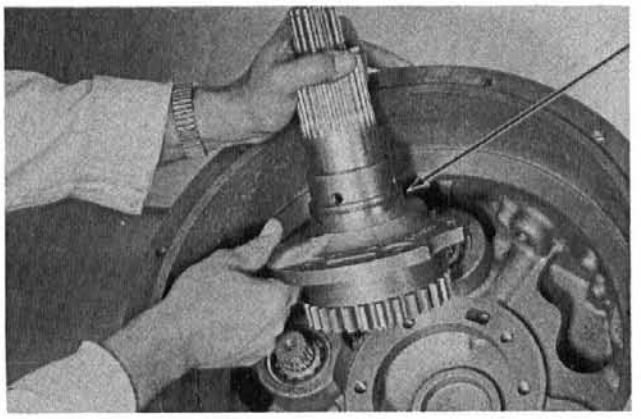


Figure 21

On offset output, remove stator support and turbine shaft assembly from Converter Housing.

Figure 22

On inline output remove companion flange cotter, nut, washer, "O" ring, and companion flange from inline turbine shaft.

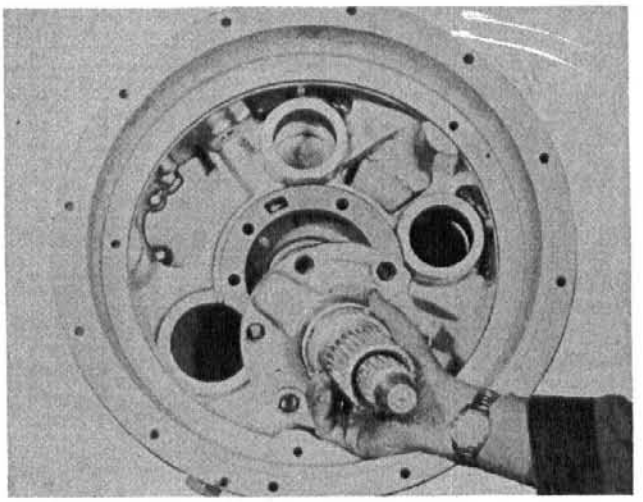


Figure 23

Remove inline turbine shaft by using a brass hammer and tapping on threaded end of shaft. Stator support and turbine shaft will come out as a unit.

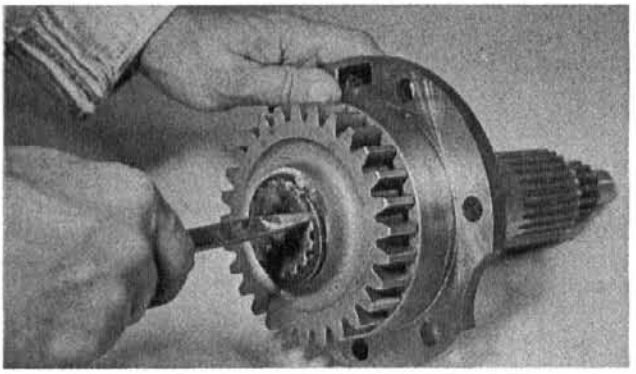


Figure 24

On offset output remove turbine shaft gear retainer ring and turbine shaft gear.

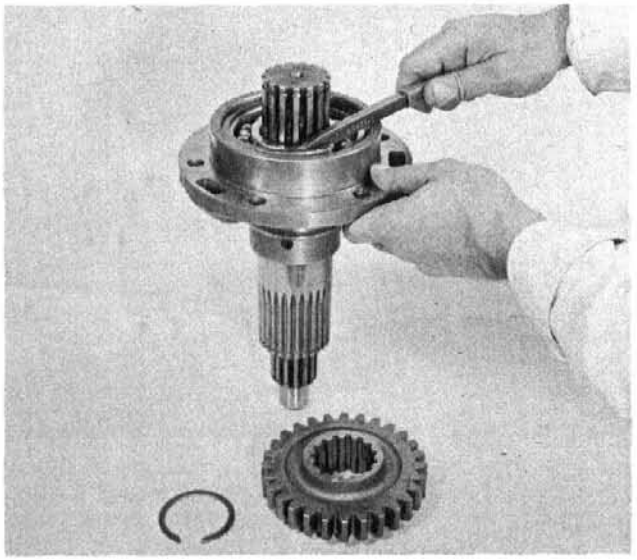


Figure 25

Remove turbine shaft bearing retainer ring from stator support. **NOTE:** Use same procedure on inline output or offset output.

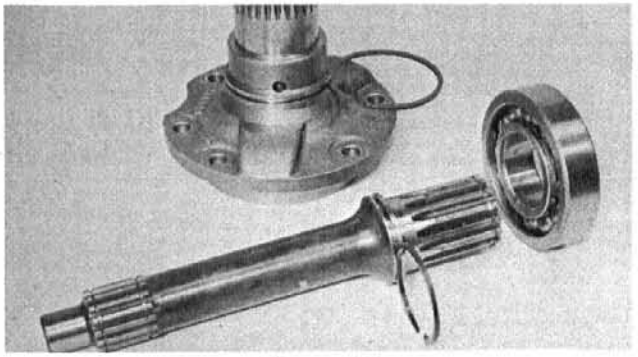


Figure 26

Press turbine shaft from stator support. Press turbine bearing from turbine shaft. Remove oil sealing rings from stator support and turbine shaft. **NOTE:** Use same procedure on inline output or offset output.

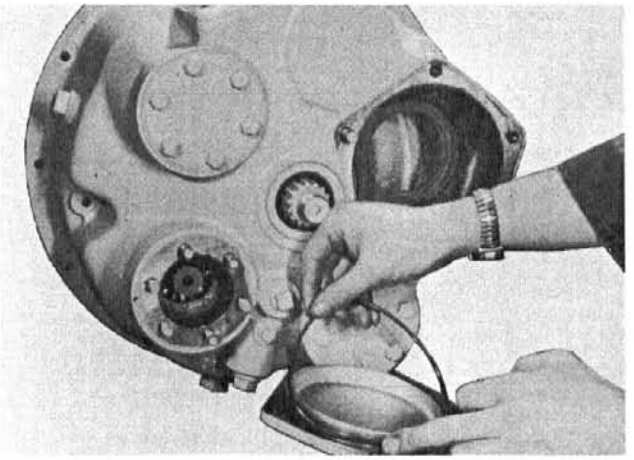


Figure 27

On the inline output Converter, the offset output shaft cover need not be removed unless "O" ring is to be changed.

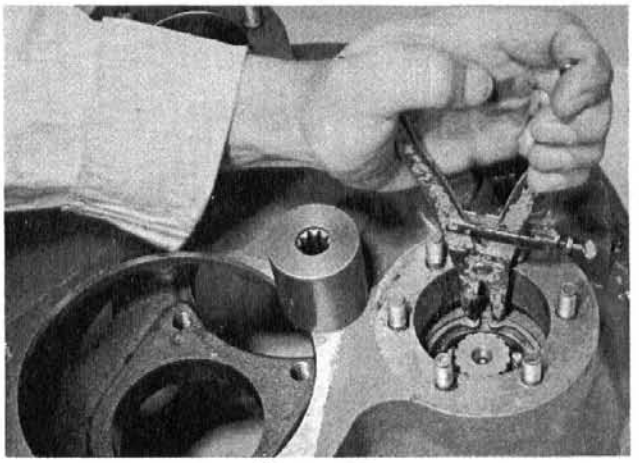


Figure 28

Remove pump adaptor sleeve from pump shaft. Remove pump shaft washer retainer ring and pump shaft washer.

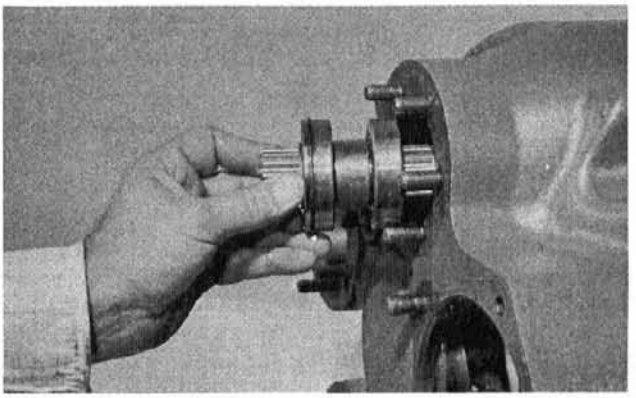


Figure 29

Tap on pump shaft from inside Converter Housing, pump shaft and bearings will come out as an assembly.

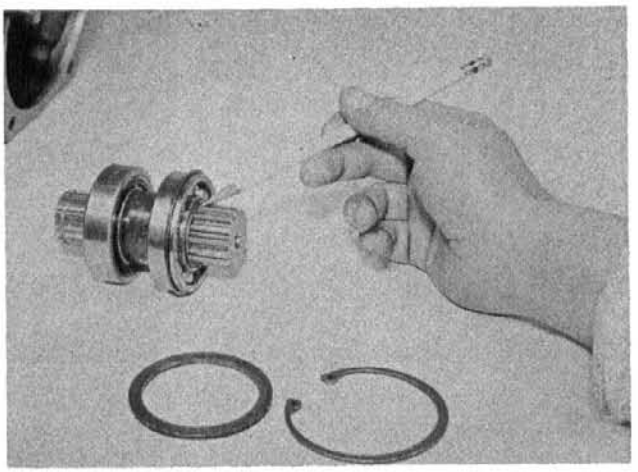


Figure 30

Remove pump shaft bearing locating ring. Press bearings from pump shaft.

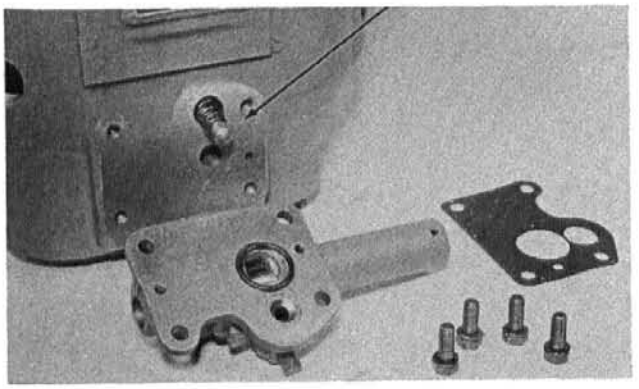


Figure 31

Remove pressure regulator valve assembly. Use caution as not to lose safety valve plunger or spring (See arrow).

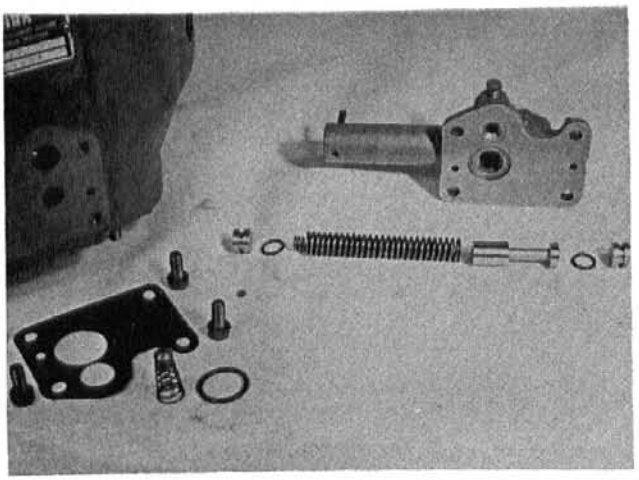


Figure 32

Depress piston stop and remove piston stop roll pin. Remove piston stop and inner and outer spring. Remove roll pin at opposite end. Remove valve stop and valve piston.

CLEANING AND INSPECTION

Cleanliness of the respective parts is absolutely necessary in re-assembling. Dirt in its many forms can and will cause trouble. Therefore, re-assembling the Converter or any of its parts be sure all parts have been thoroughly cleaned with a suitable cleaning fluid. After cleaning, all parts should be dried with moisture free compressed air.

A thorough visual examination of all parts should be made before re-assembly. Any parts that show excessive wear or damage should be replaced. Small nicks or burrs may be removed with a hone or crocus cloth. It is recommended that all gaskets, oil seals, piston sealing rings, "O" rings and internal lockwashers be replaced.

A light coat of Permatex No. 2 applied to the outer diameter of oil seals, assures a good oil tight fit between oil seal and housing. The use of grease is recommended when positioning new gaskets in their respective locations. Piston sealing rings and "O" rings should be coated with Automatic Transmission Fluid to facilitate assembly.

REASSEMBLY

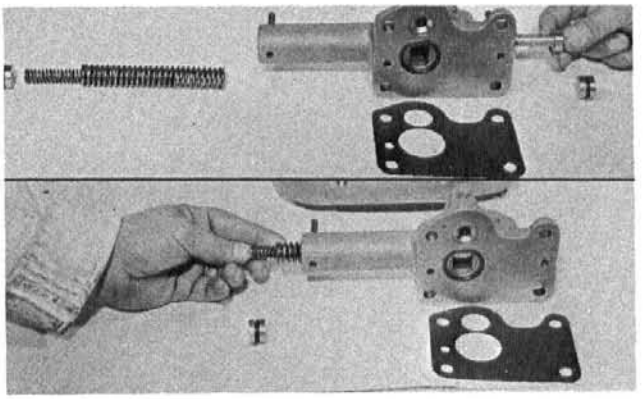


Figure 33

Install valve piston (Top view Figure 33). Install valve stop and new "O' ring in valve housing and secure with roll pin. Install inner and outer valve spring in valve housing. Install valve spring stop and new "O" ring in valve housing. Depress spring stop and install spring stop roll pin.

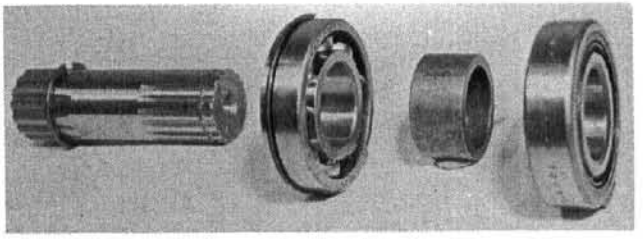


Figure 34

Install pump shaft rear bearing locating ring. Press rear bearing on pump shaft with bearing snap ring toward rear of shaft. Install bearing spacer and press front bearing on shaft until it shoulders against bearing spacer.

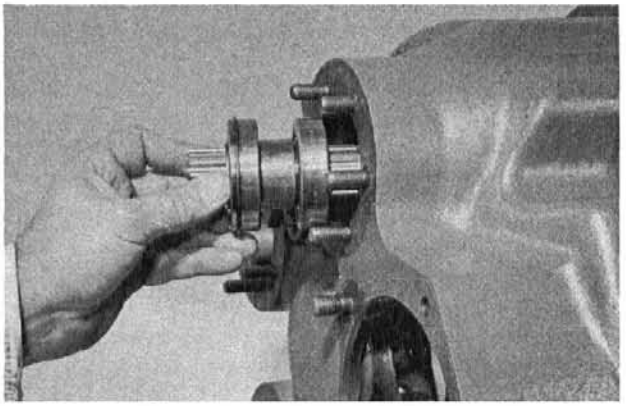


Figure 35

Install pump shaft and bearing assembly in Converter Housing.

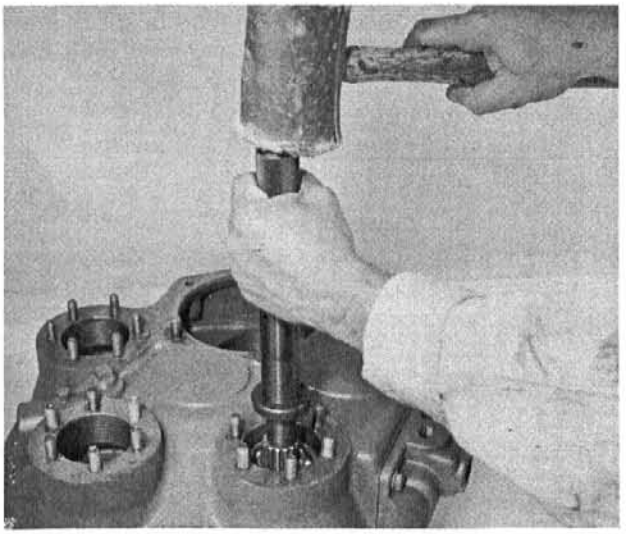


Figure 36

Tap pump shaft and bearing assembly in Converter Housing until rear bearing snap ring shoulders against bearing bore.

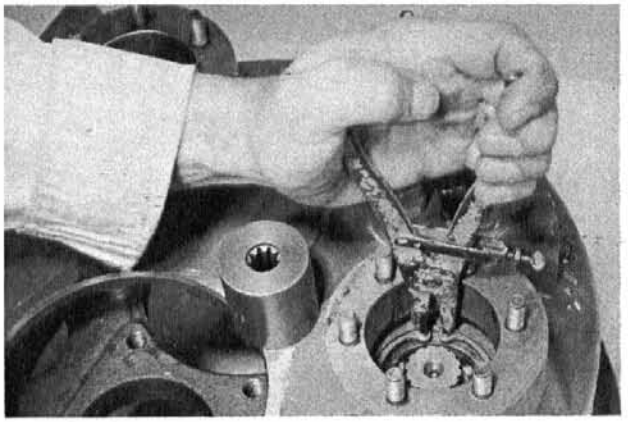


Figure 37

Install pump shaft washer and washer retainer ring. Pump adaptor sleeve can be installed just before pump.

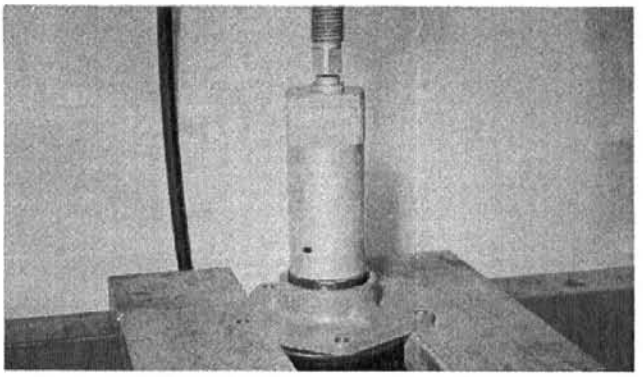


Figure 38

Press offset output shaft oil seal in bearing retainer, Lip of seal in. **NOTE:** Oil seal must be pressed 5/16" below rear face of bearing retainer. Press rear output shaft bearing in bearing retainer and secure with retainer ring. Press inline output shaft oil seal in Converter Housing. Lip of seal in. **NOTE:** Oil seal must be pressed 5/16" below rear face of Converter Housing.

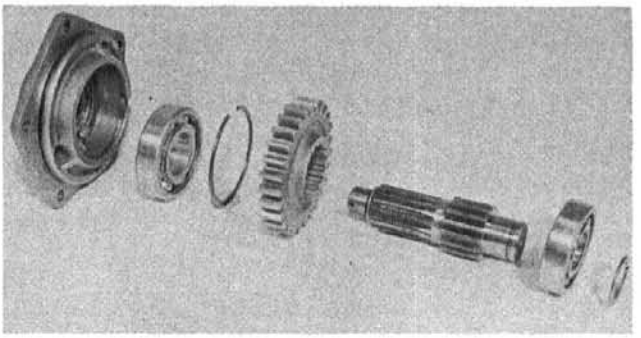


Figure 39

Press front output shaft bearing on offset output shaft and secure with bearing retainer ring. Install output shaft gear on output shaft.

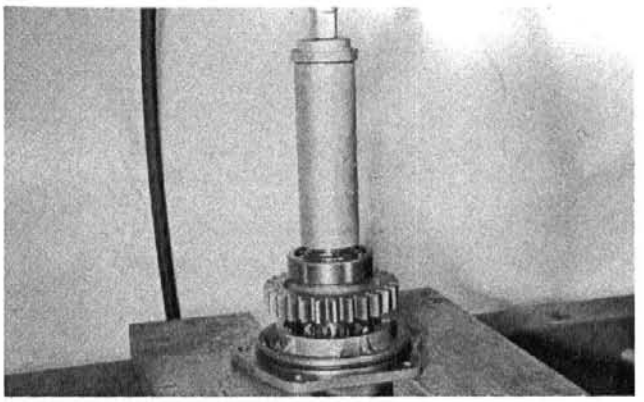


Figure 40

Press offset output shaft, gear and bearing assembly through rear bearing and bearing retainer. Secure output shaft gear in vise equipped with soft jaws. Install companion flange, new flange "O" ring, flange washer and flange nut, tighten nut 200 to 250 foot pounds torque. Install nut cotter.

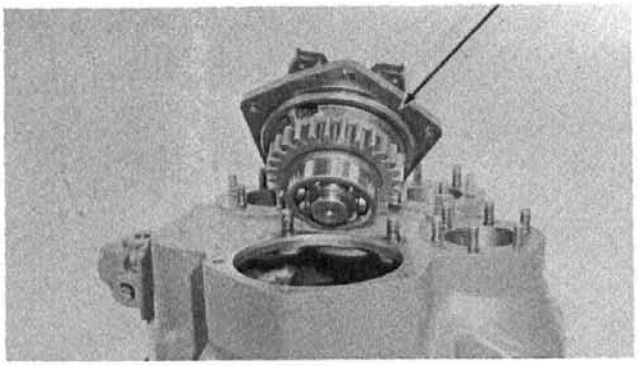


Figure 41

Install new "O" ring (See arrow) on offset output shaft bearing retainer. Install output shaft assembly to Converter Housing and secure with nuts, bolts and lockwasher, tighten 35 to 40 foot pounds torque.

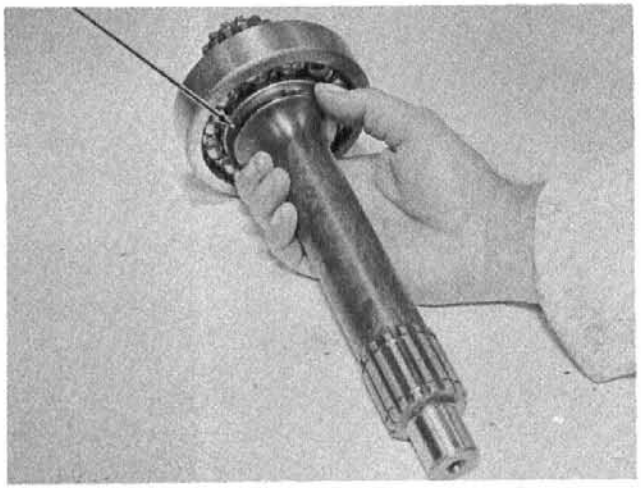


Figure 42

Press rear bearing on turbine shaft, this is also the output shaft for the inline output Converter, install shaft oil sealing ring (See arrow).

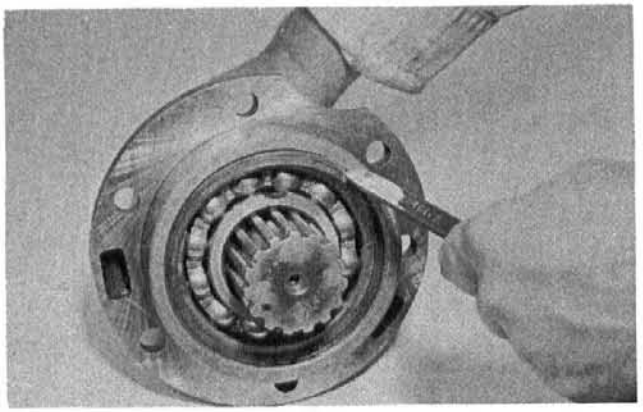


Figure 43

Press shaft and bearing assembly in stator support. Use Caution as not to damage oil sealing ring. Secure bearing with retainer ring. Use same procedure on inline output or offset output.

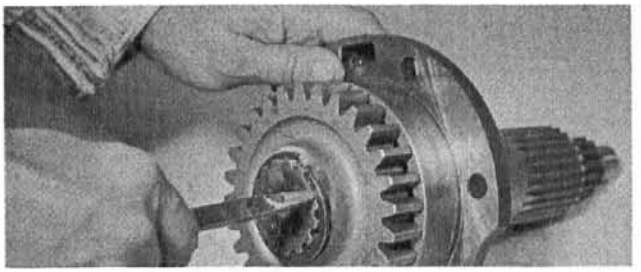


Figure 44

Install output shaft gear on offset output shaft and secure with retainer ring.

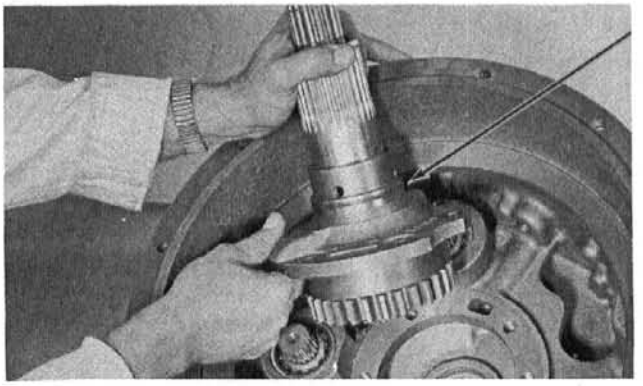


Figure 45

Install oil sealing ring (See arrow) on stator support, Use same procedure on inline output or offset output.

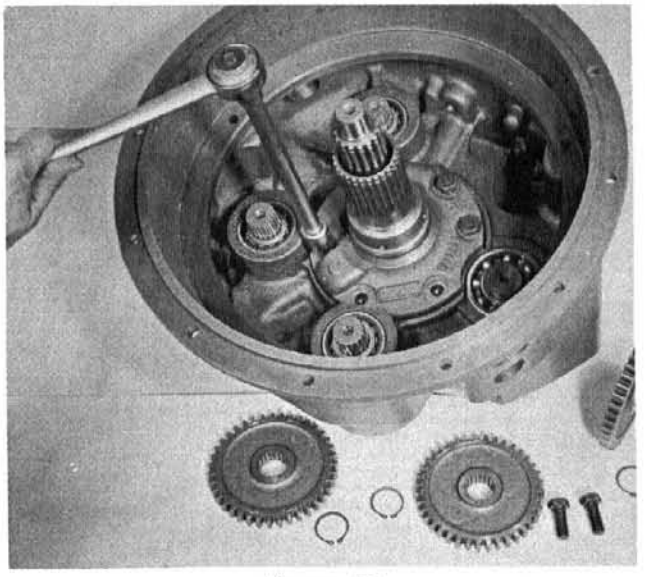


Figure 46

Install companion flange spacer on threaded end of inline output shaft. **NOTE:** Spacer must be put on shaft before shaft installation in Converter Housing, as spacer will not pass through oil seal. Align holes in stator support with holes in Converter Housing. Install bolts and tighten 45 to 50 foot pounds torque. Lockwire in pairs to prevent loosening. On stator support, use same procedure on inline output or offset output.

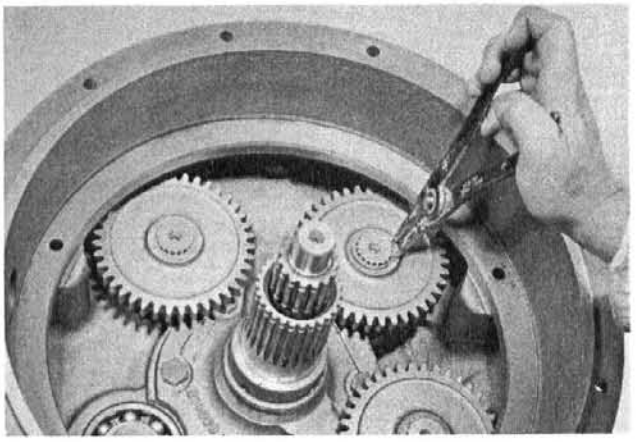


Figure 47

Install oil pump drive gears and secure with retainer rings.

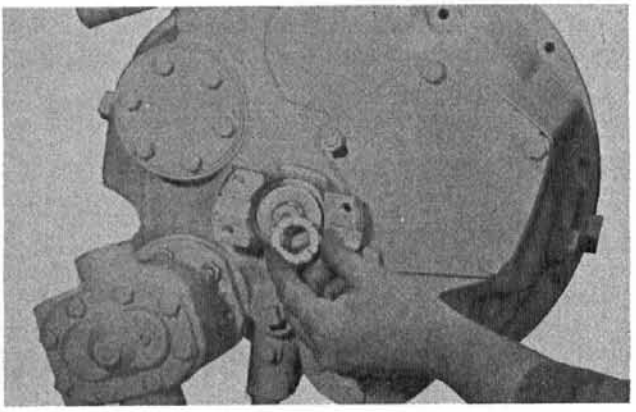


Figure 48

On inline output shaft install companion flange, new flange "O" ring, flange washer and flange nut. Tighten nut 200 to 250 foot pounds torque. Secure with cotter pin.

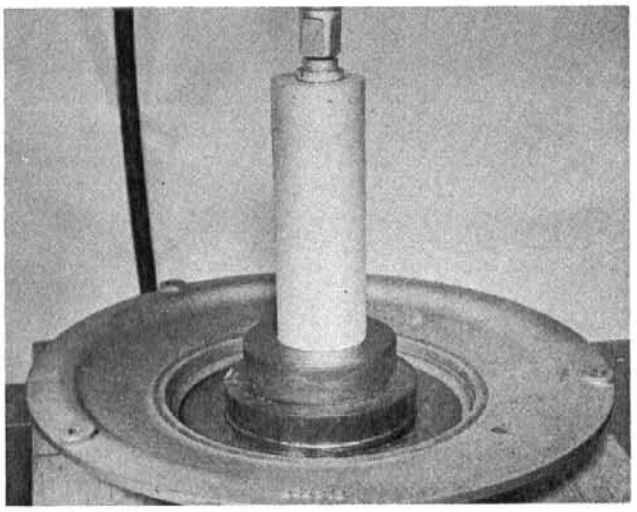


Figure 49

Press new oil seal in oil baffle with lip of seal down.

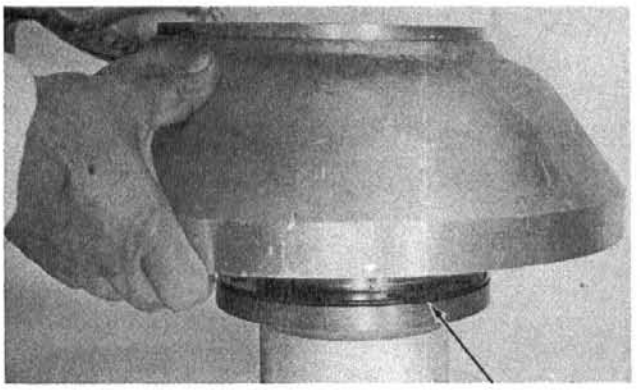


Figure 50

Press impeller bearing in impeller hub and secure with retainer ring. Install new "O" ring (see arrow) on impeller hub. Align holes in impeller hub with holes in impeller. Install bolts and tighten 35 to 50 foot pounds torque. Lockwire in pairs to prevent loosening.

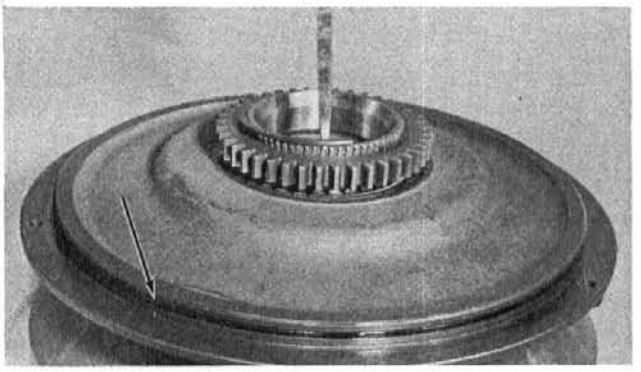


Figure 51

Install oil baffle on impeller assembly. Install impeller hub gear on impeller hub and secure with retainer ring. Install new "O" ring on oil baffle (See arrow).

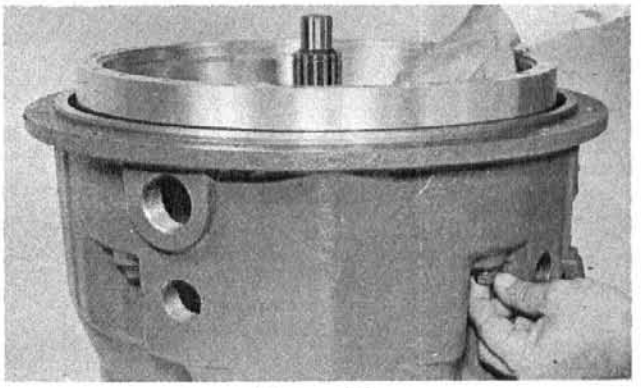


Figure 52

Install impeller and oil baffle assembly over stator support and into Converter Housing. Align holes in oil baffle with holes in Converter Housing. Install bolts and lockwashers into oil baffle. Tighten baffle bolts evenly to prevent damaging oil baffle "O" ring. Tighten 20 to 25 foot pounds torque.

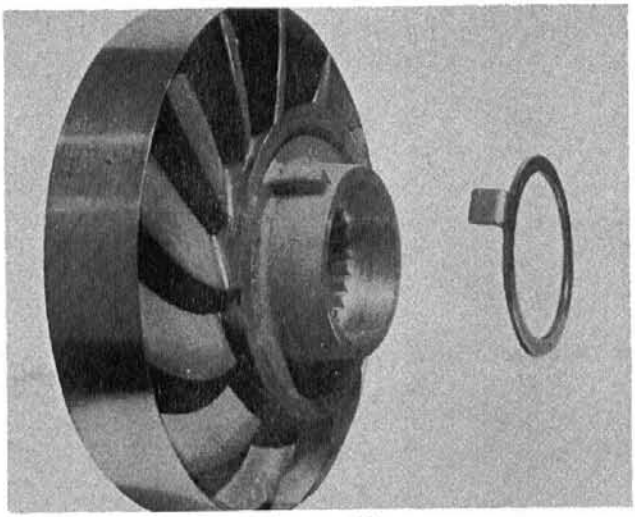


Figure 53

Install reaction member on stator support with tang as shown.

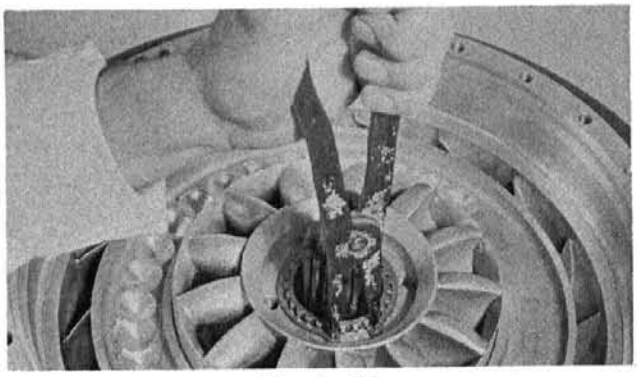


Figure 54

Install reaction member on stator support and secure with retaining ring.

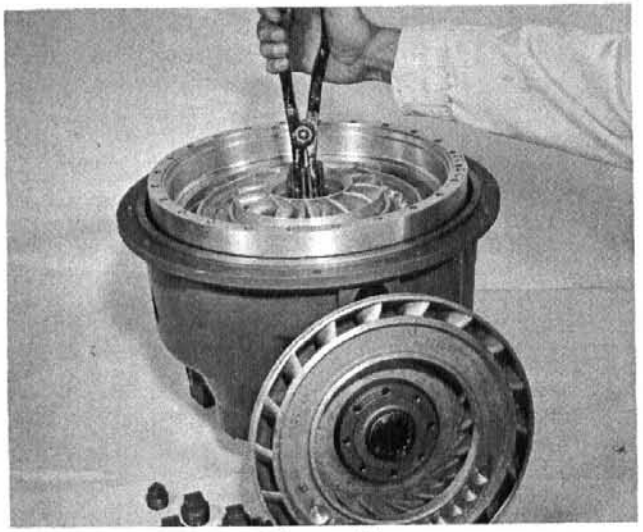


Figure 55

Install inner turbine locating ring on turbine shaft.

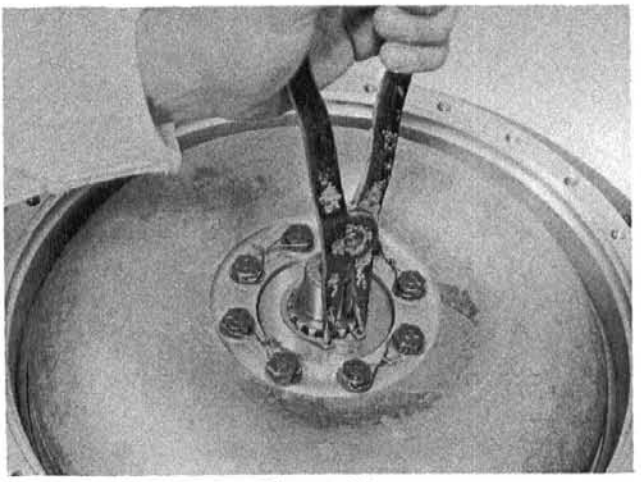


Figure 56

Install turbine and hub assembly on turbine shaft and secure with outer retaining ring.

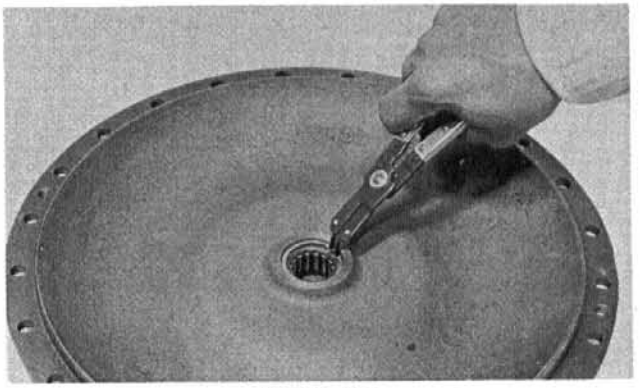


Figure 57

Press pilot bearing in impeller cover and secure with retainer ring.

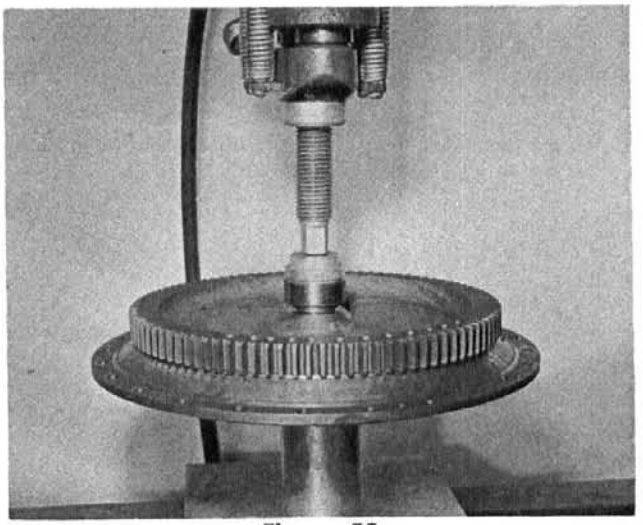


Figure 58

Heat impeller cover sleeve to 200° and press on impeller cover.

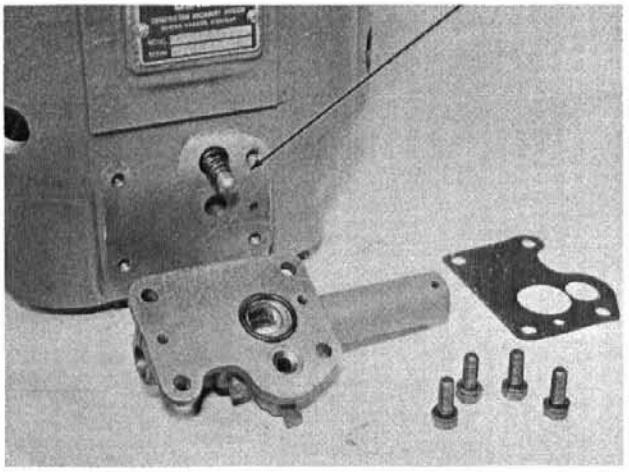


Figure 59

Install spring and plunger in Converter Housing. (See arrow). Install new gasket on valve assembly. Install new "O" ring on valve assembly. Secure valve assembly to Converter Housing with bolts and lockwashers. Tighten 20 to 25 foot pounds torque.

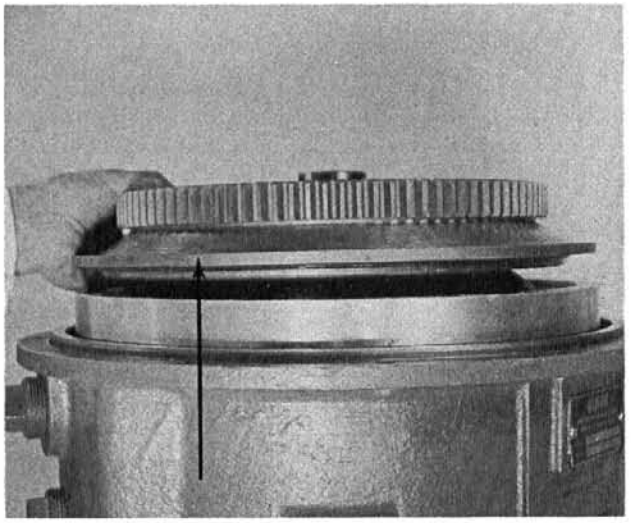


Figure 60

Install new "O" ring (See arrow) on impeller cover. Align holes in impeller cover with holes in impeller.

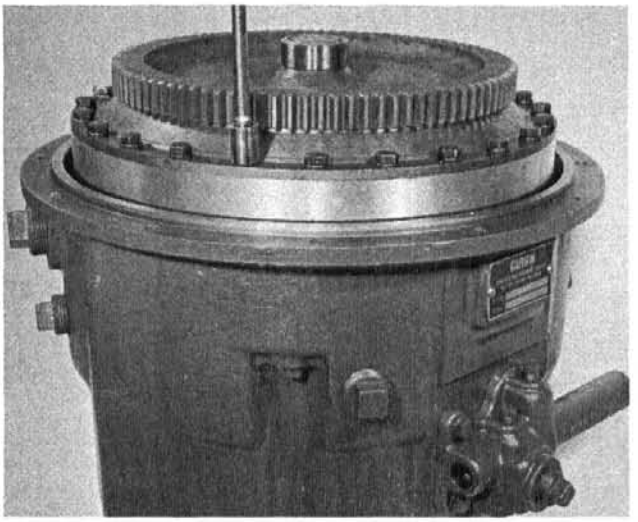
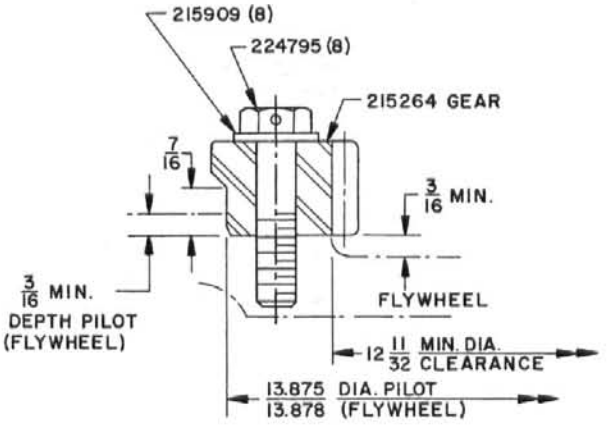


Figure 61

Install impeller cover to impeller bolts and lockwashers and tighten 20 to 25 foot pounds torque.

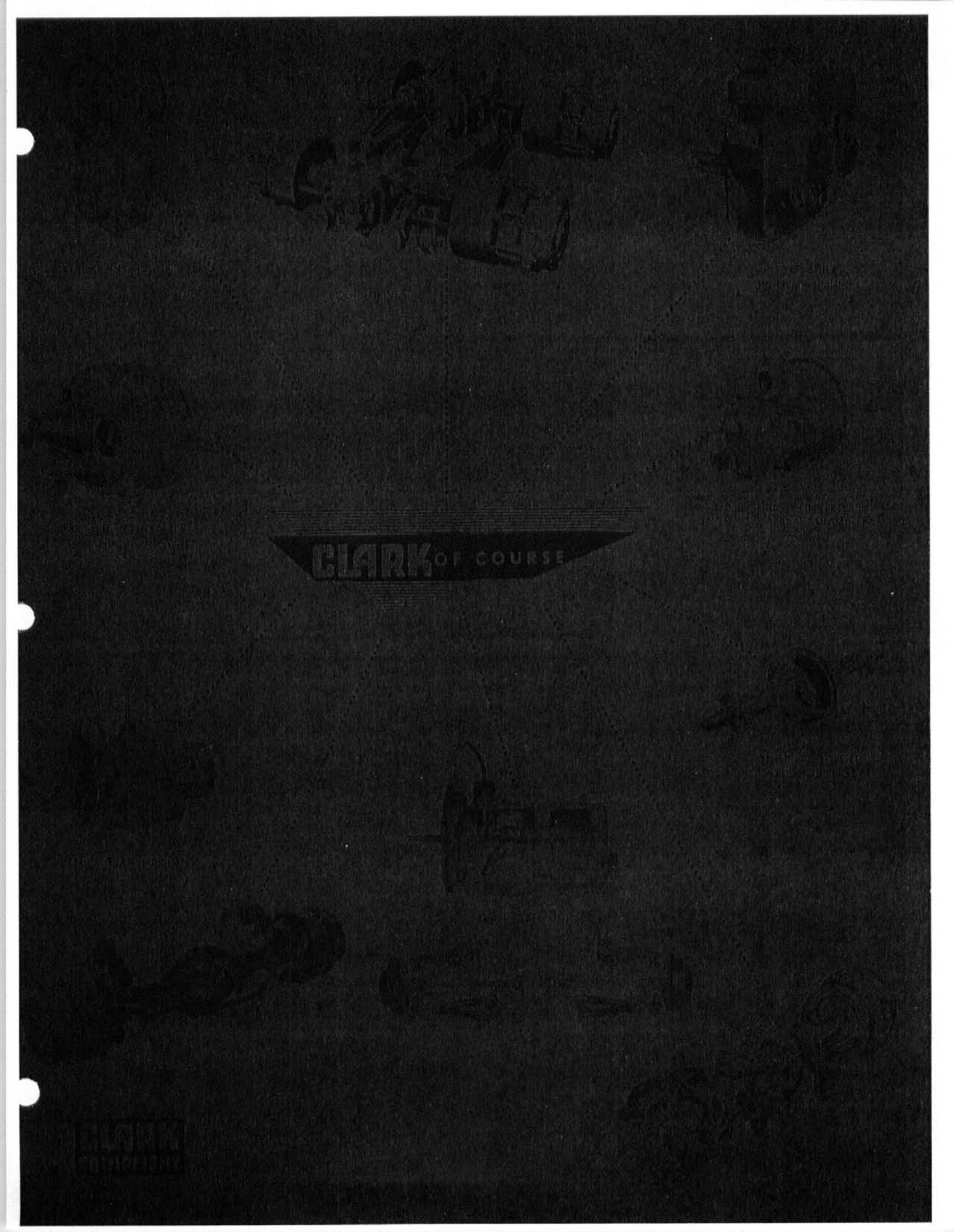
FLYWHEEL RING GEAR INSTALLATION
C-270 SERIES CONVERTER ONLY

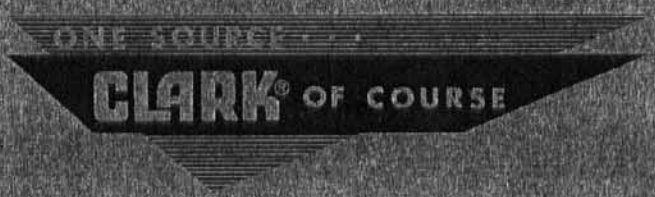
IF THE FLYWHEEL RING GEAR IS REMOVED OR REPLACED FOR ANY REASON, IT MUST BE INSTALLED AS SHOWN BELOW.



TIGHTEN SCREWS TO 20-25 FT. LB. ABOVE TORQUE REQUIRED TO RUN SCREWS INTO PLACE. (SCREWS HAVE INTERFERENCE FIT THREADS.)
LOCKWIRE IN PLACE.

CAUTION
LOCKWIRE MUST NOT INTERFERE WITH TOOTH ENGAGEMENT BETWEEN THE DRIVE RING AND IMPELLER COVER.


CLARK OF COURSE



Printed in U.S.A.