



SPICER OFF-HIGHWAY PRODUCTS DIVISION

MODEL NO. 13.5HR32662-631

PART NO. 293660

DATE 04/10/2007

**FRONT OUTPUT FLANGE**

- FLANGE 245786
- NUT 215634
- WASHER 231916
- O-RING 76K328

**HR-28000  
HR-32000**

**BI-DIRECTIONAL P.T.O. FLANGE**

- FLANGE
- NUT
- WASHER
- O-RING

**UNI-DIRECTIONAL P.T.O. FLANGE**

- FLANGE
- NUT
- WASHER
- O-RING

**INPUT FLANGE**

- FLANGE
- NUT
- WASHER
- O-RING

**R-28000  
R-32000**

**REAR OUTPUT FLANGE**

- FLANGE 245786
- NUT 215634
- WASHER 231916
- O-RING 76K328

**INPUT FLANGE**

- FLANGE
- NUT
- WASHER
- O-RING

**MHR-28000  
MHR-32000**

**C**  
**PUMP DRIVE ASS'Y**

(includes the following)  
SNAP RING (INNER)

SNAP RING (OUTER)

**CHARGING PUMP**

**A**  
**PUMP DRIVE ASS'Y**

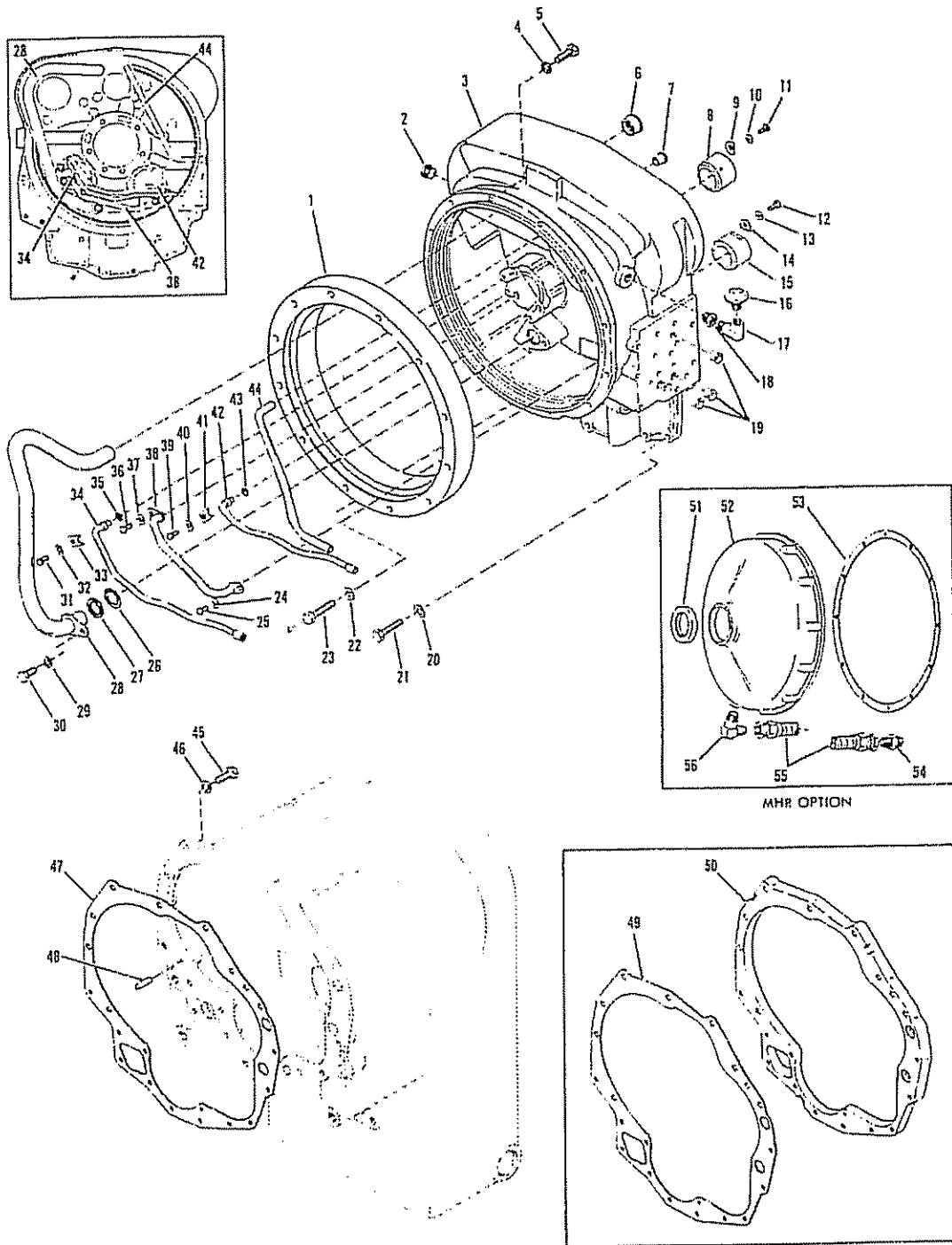
(includes the following)  
SNAP RING (INNER)

SNAP RING (OUTER)

**PUMP DRIVE SLEEVE POSITION**



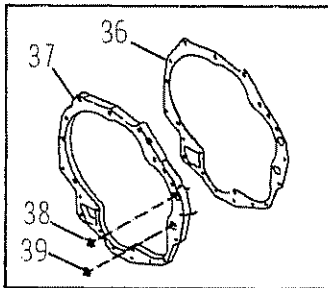
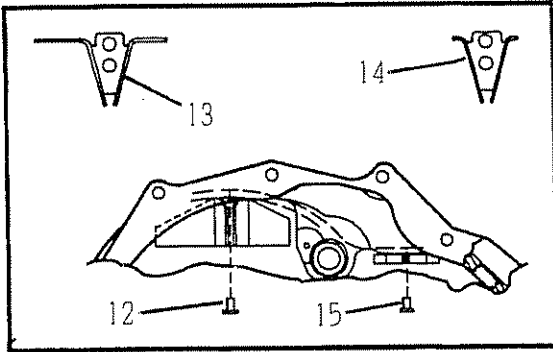
32000 CONVERTER HOUSING GROUP



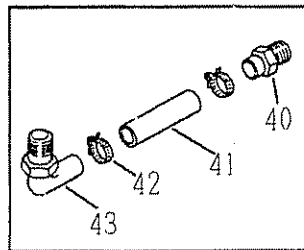
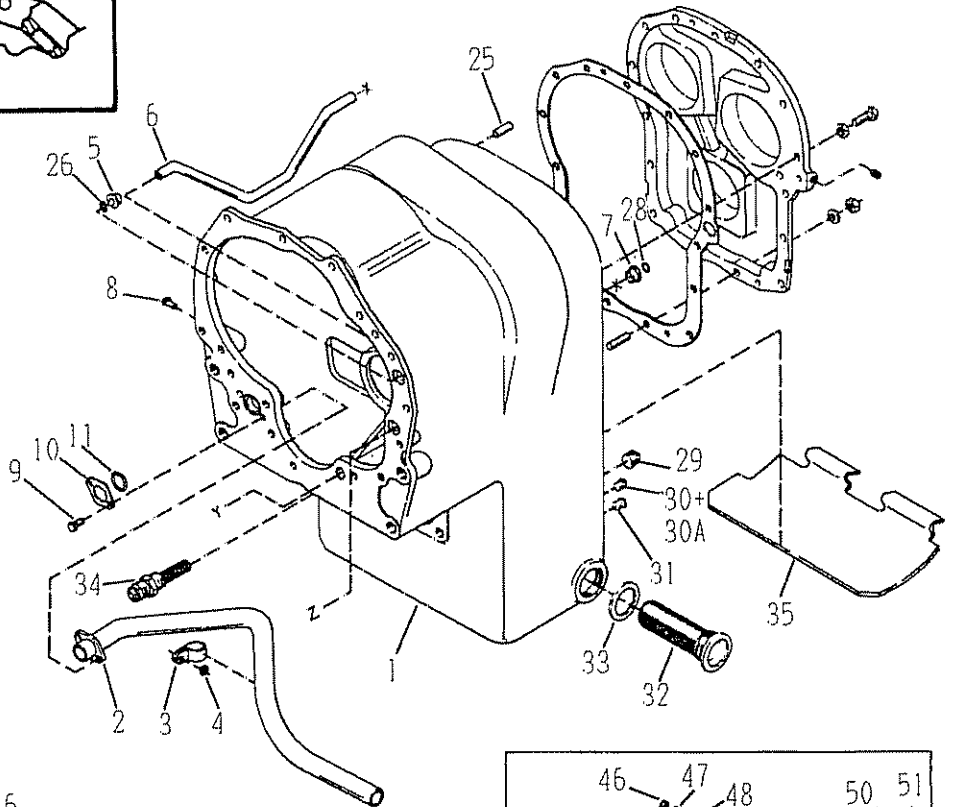
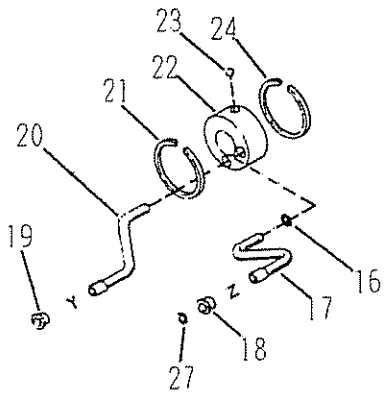
CONVERTER HOUSING TO TRANSMISSION  
CASE SPACER USED ONLY WITH 12  
PLATE CLUTCH PACK ASSEMBLY

32000

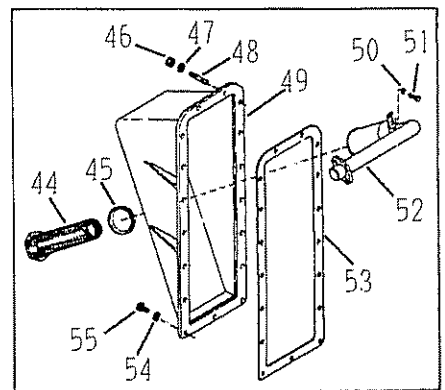
# GROUP-TRANSMISSION CASE



CONVERTER HOUSING TO TRANSMISSION CASE SPACER USED ONLY WITH 12 PLATE CLUTCH PACK ASSEMBLY.



DRAIN BACK HOSE OPTION

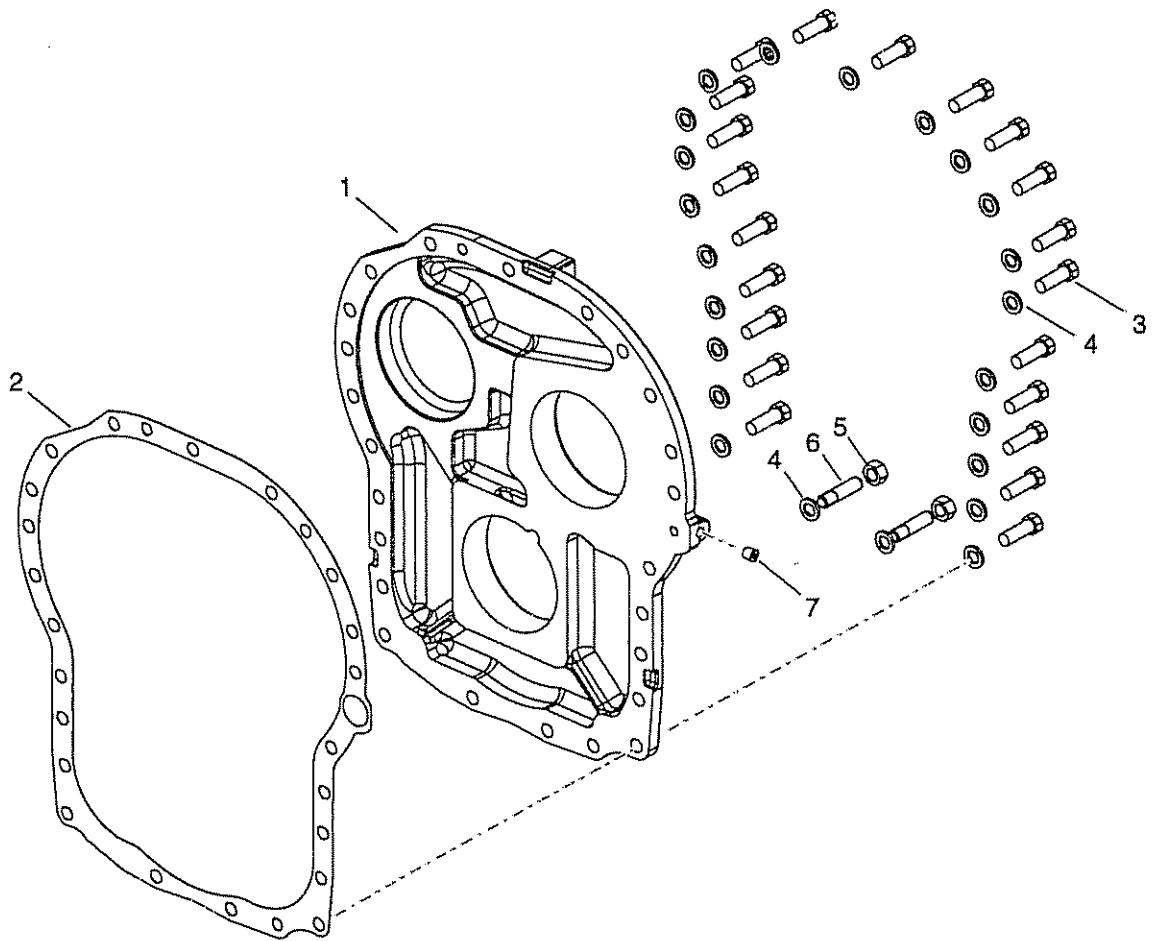


SPECIAL SUMP

GRP32011

# TE15

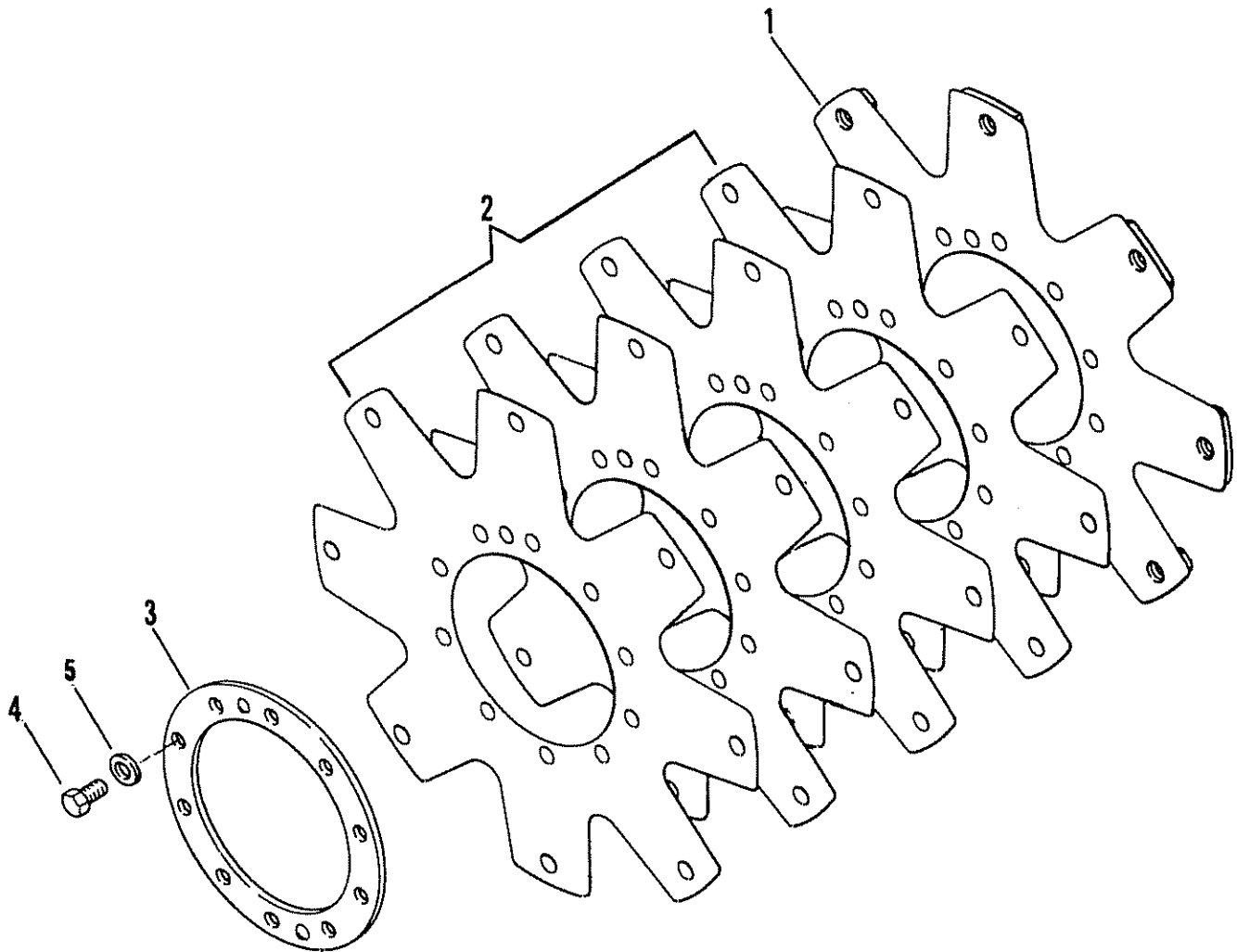
## GROUP-REAR COVER





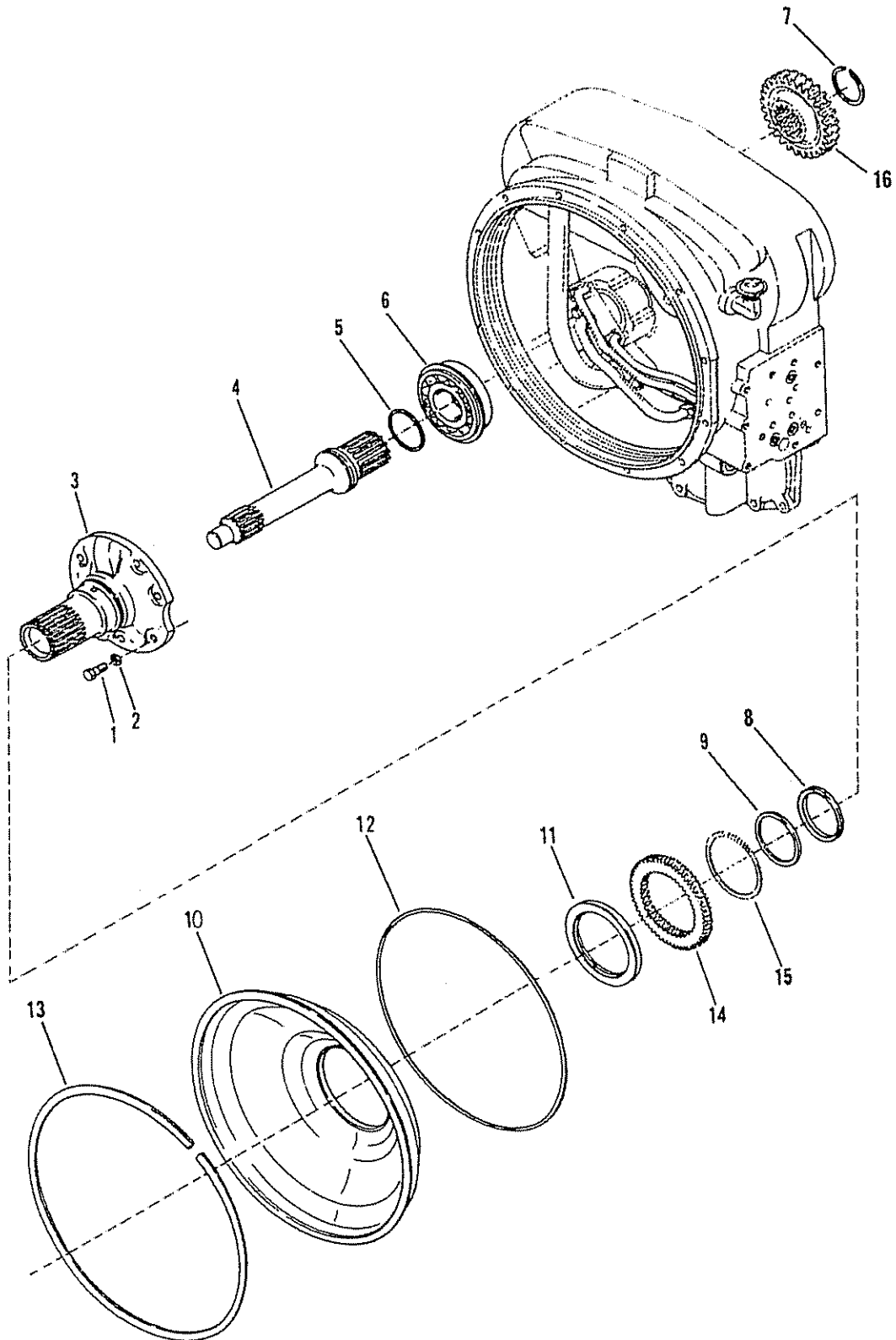
SPICER OFF-HIGHWAY PRODUCTS DIVISION

### DRIVE PLATE GROUP



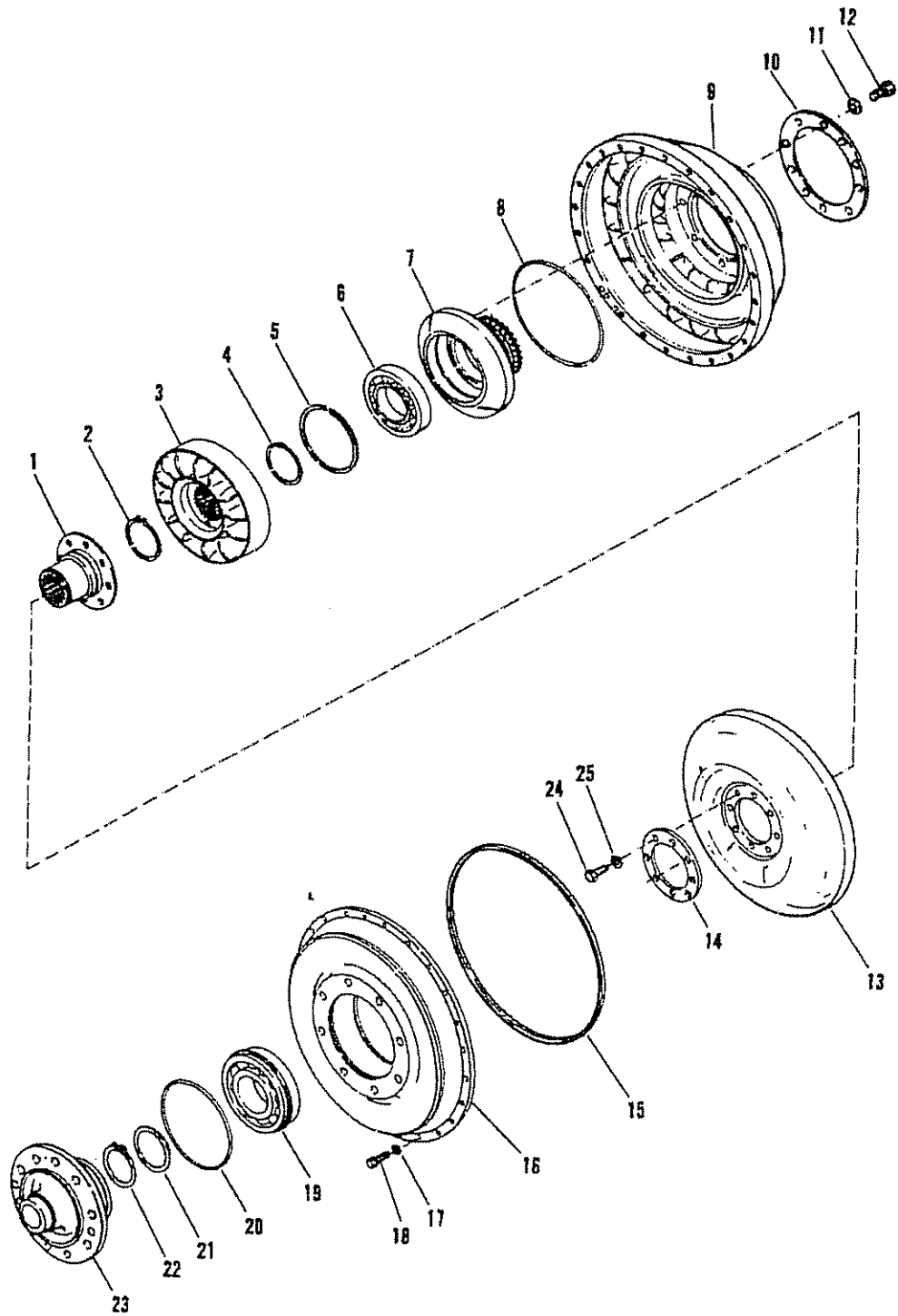
GRPC32051

32000  
GROUP-TURBINE SHAFT





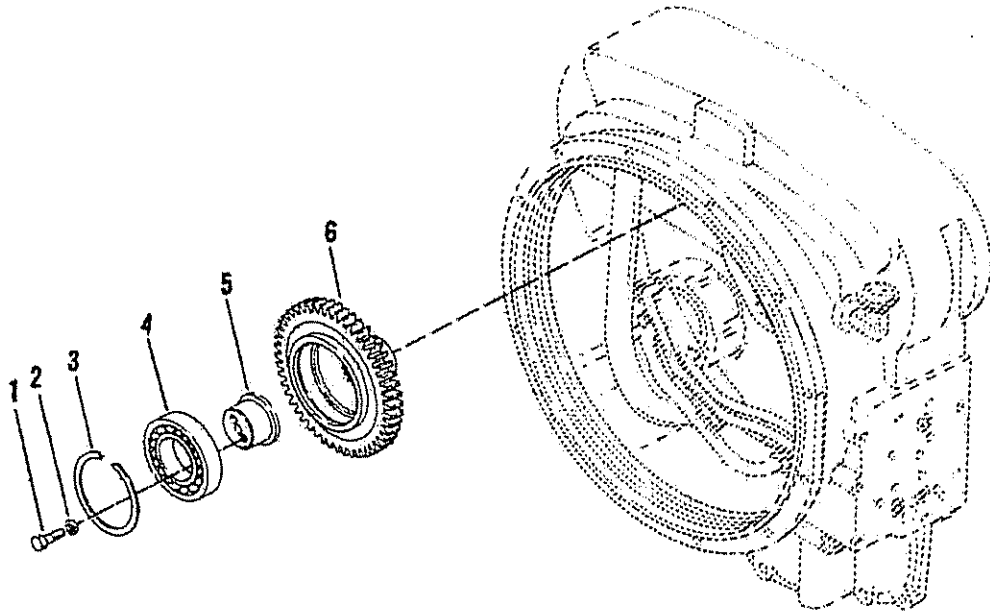
32000 WHEEL GROUP





SPICER OFF-HIGHWAY PRODUCTS

# GROUP-PUMP DRIVE

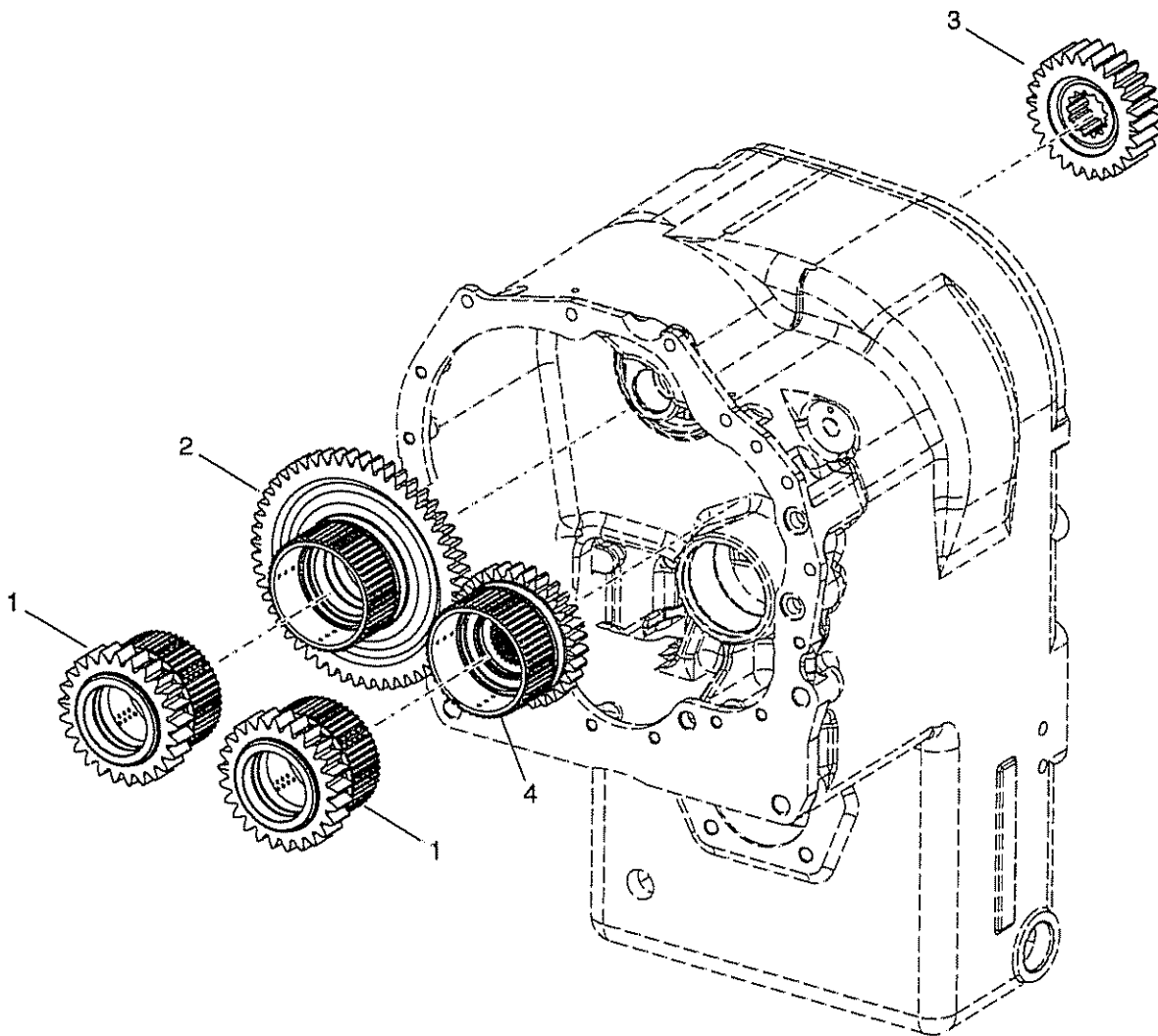


GRP32122



# TE15

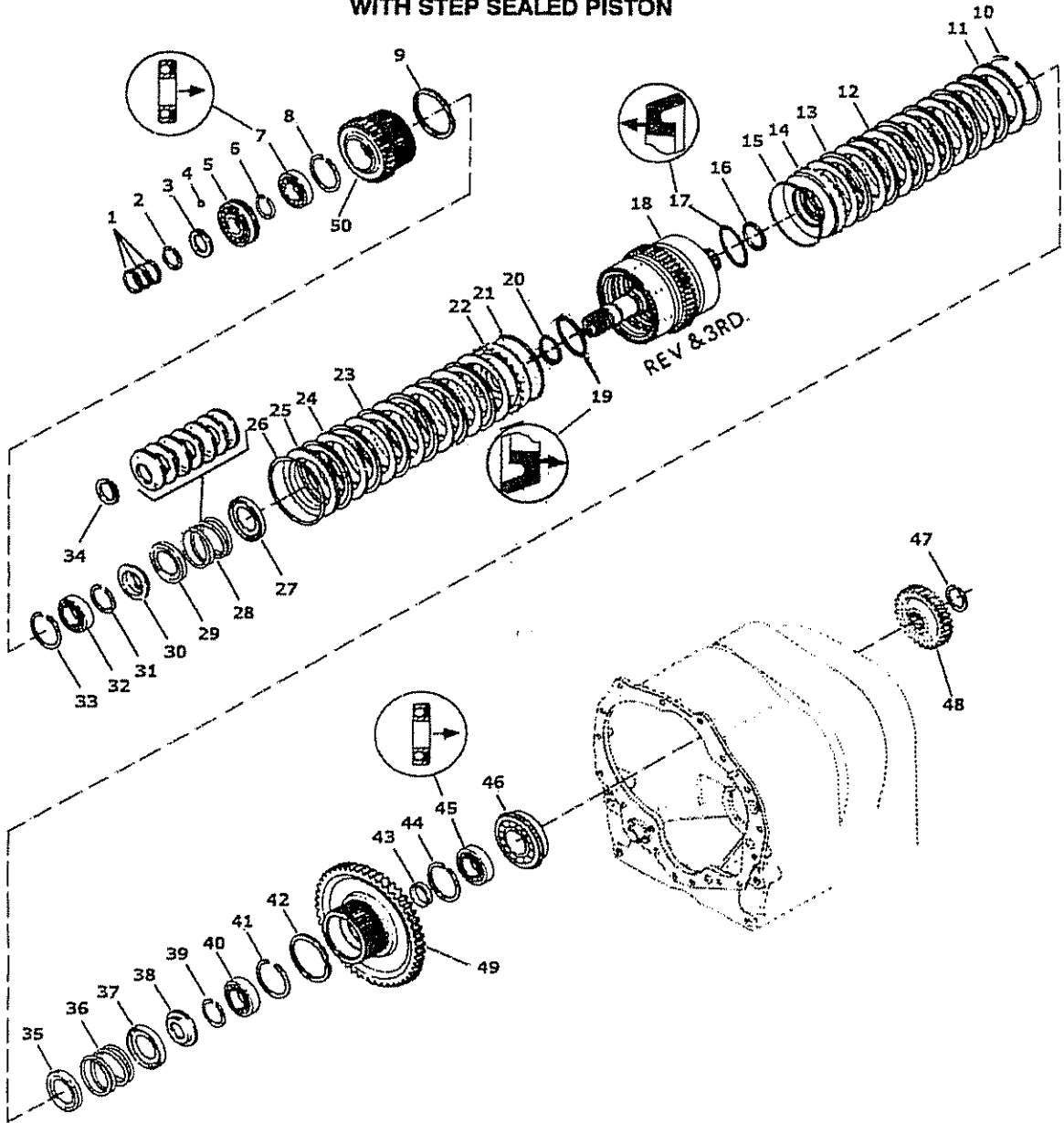
## GROUP-FWD AND REV SHAFT





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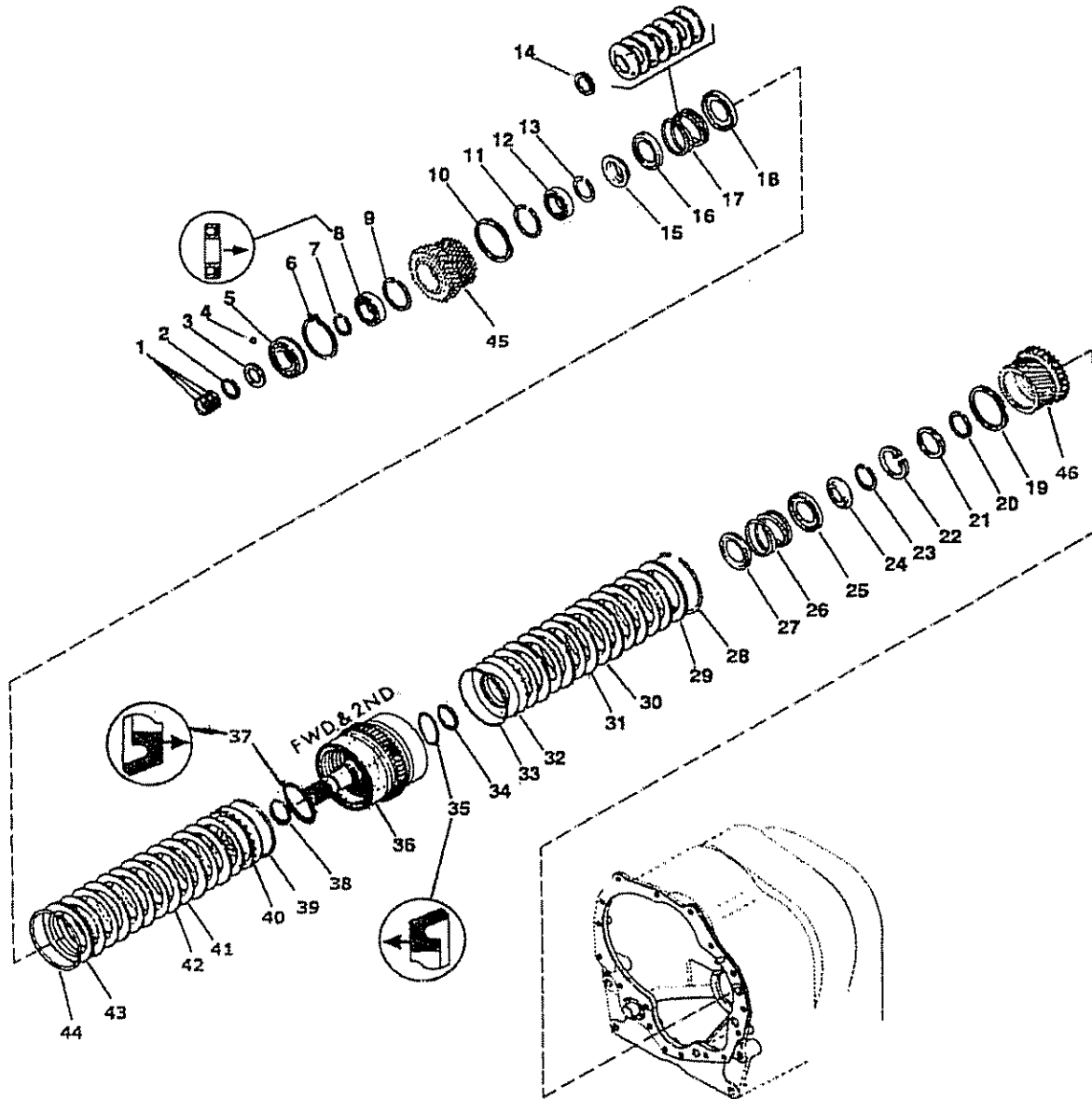
32000  
REVERSE AND 3RD CLUTCH SHAFT GROUP  
WITH STEP SEALED PISTON





SPICER OFF-HIGHWAY PRODUCTS DIVISION

### 32000 FORWARD & 2ND CLUTCH SHAFT GROUP WITH STEP SEALED PISTON

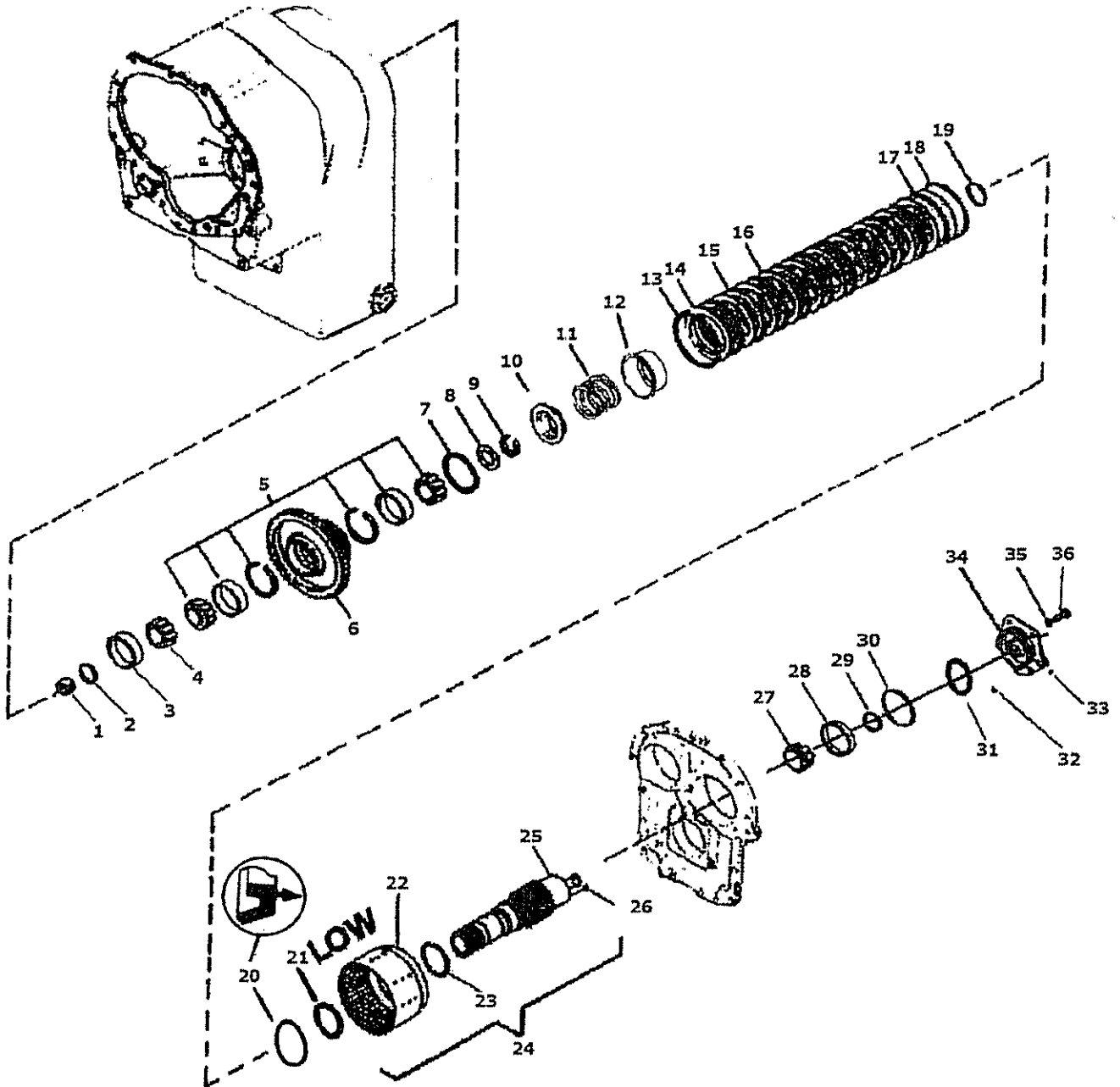


GRP32091

32000  
GROUP-LOW SHAFT

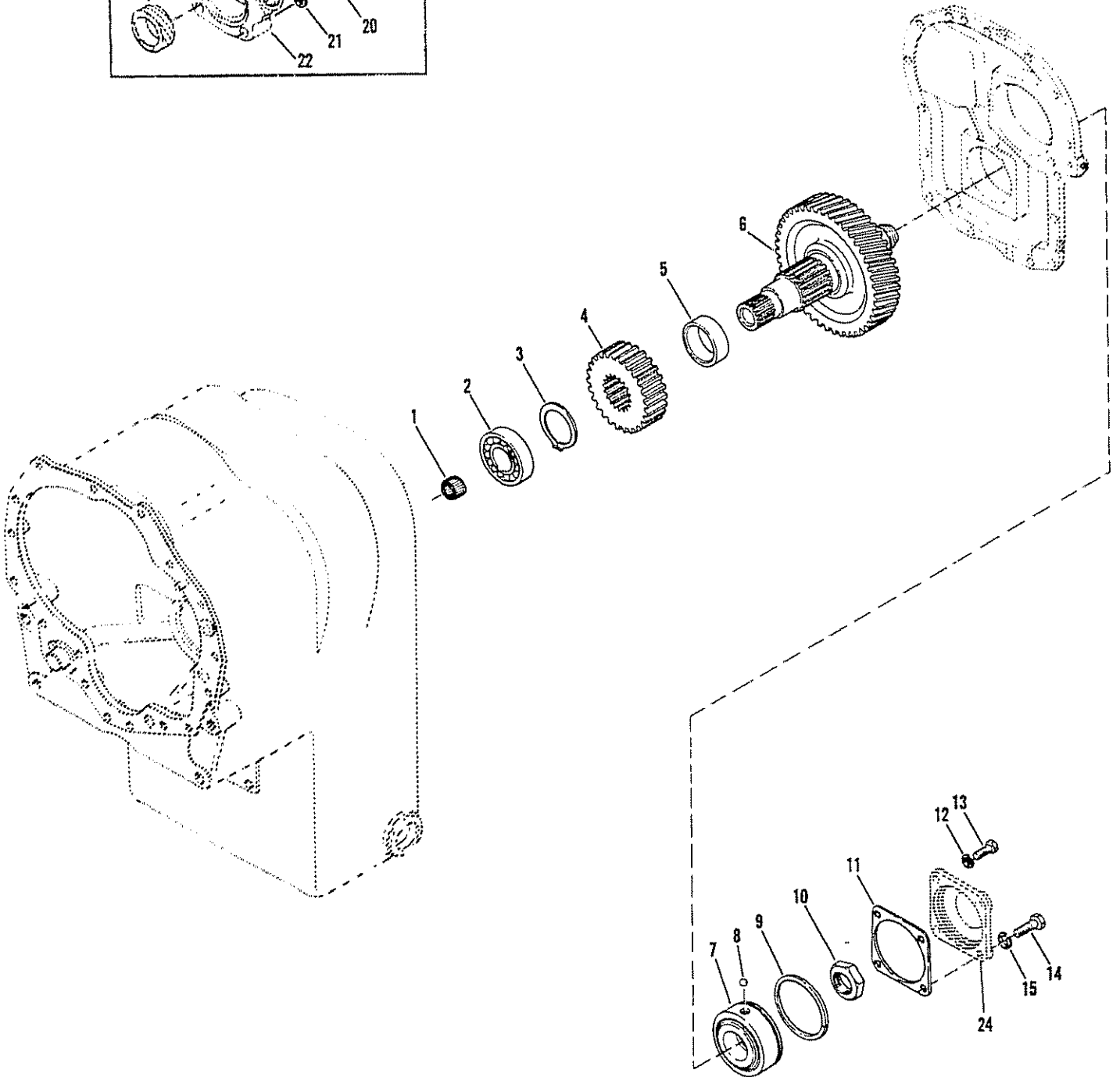
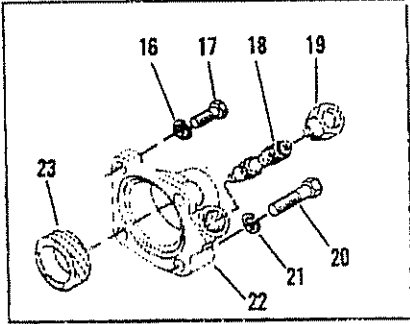


SPICER OFF-HIGHWAY PRODUCTS DIVISION



32000

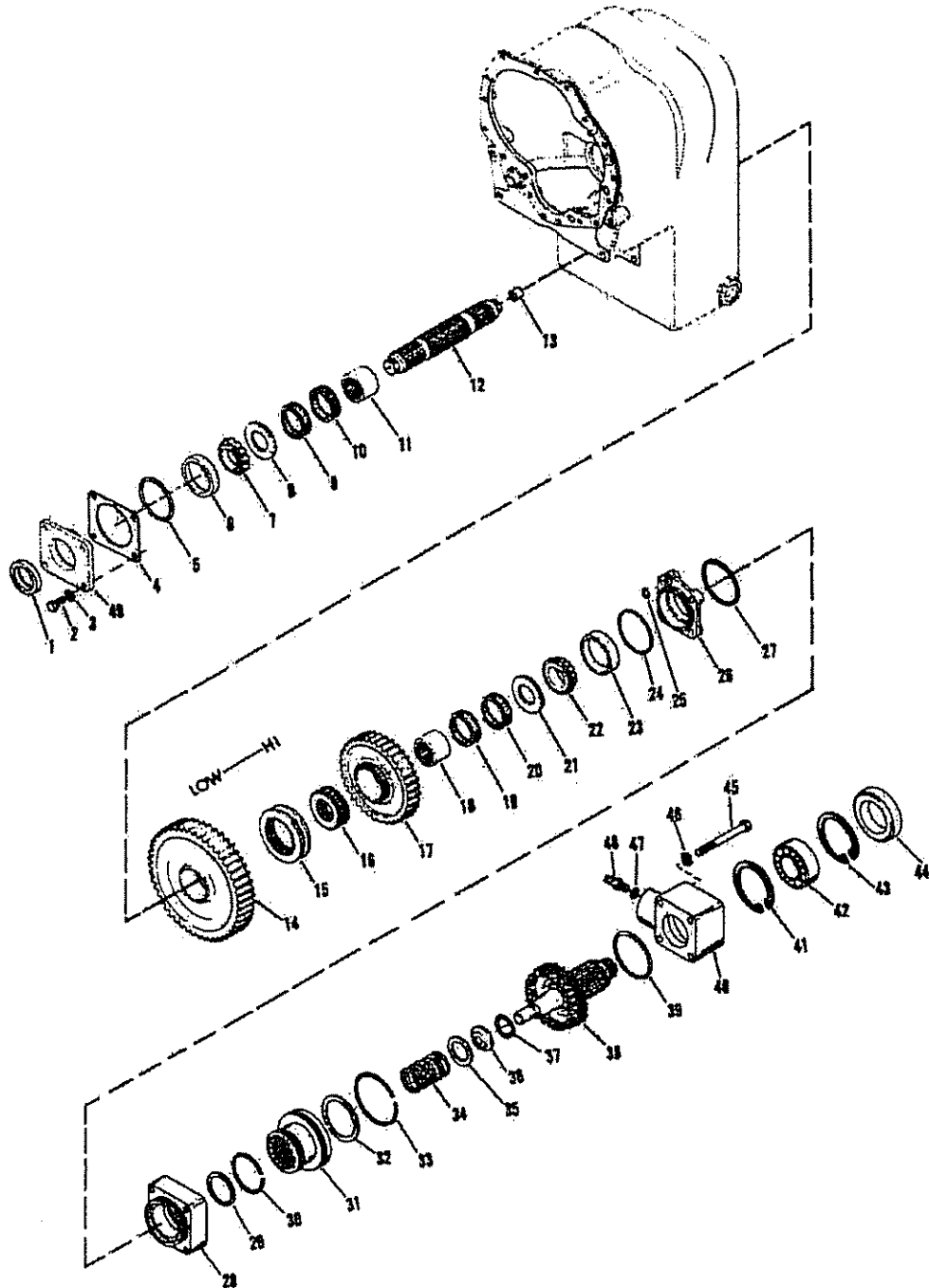
GROUP-IDLER SHAFT





SPICER OFF-HIGHWAY PRODUCTS DIVISION

OUTPUT SHAFT GROUP - REAR DISCONNECT  
8 SPEED

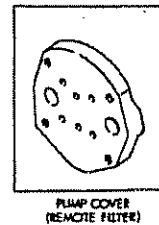
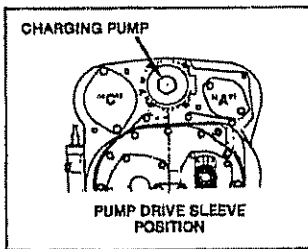
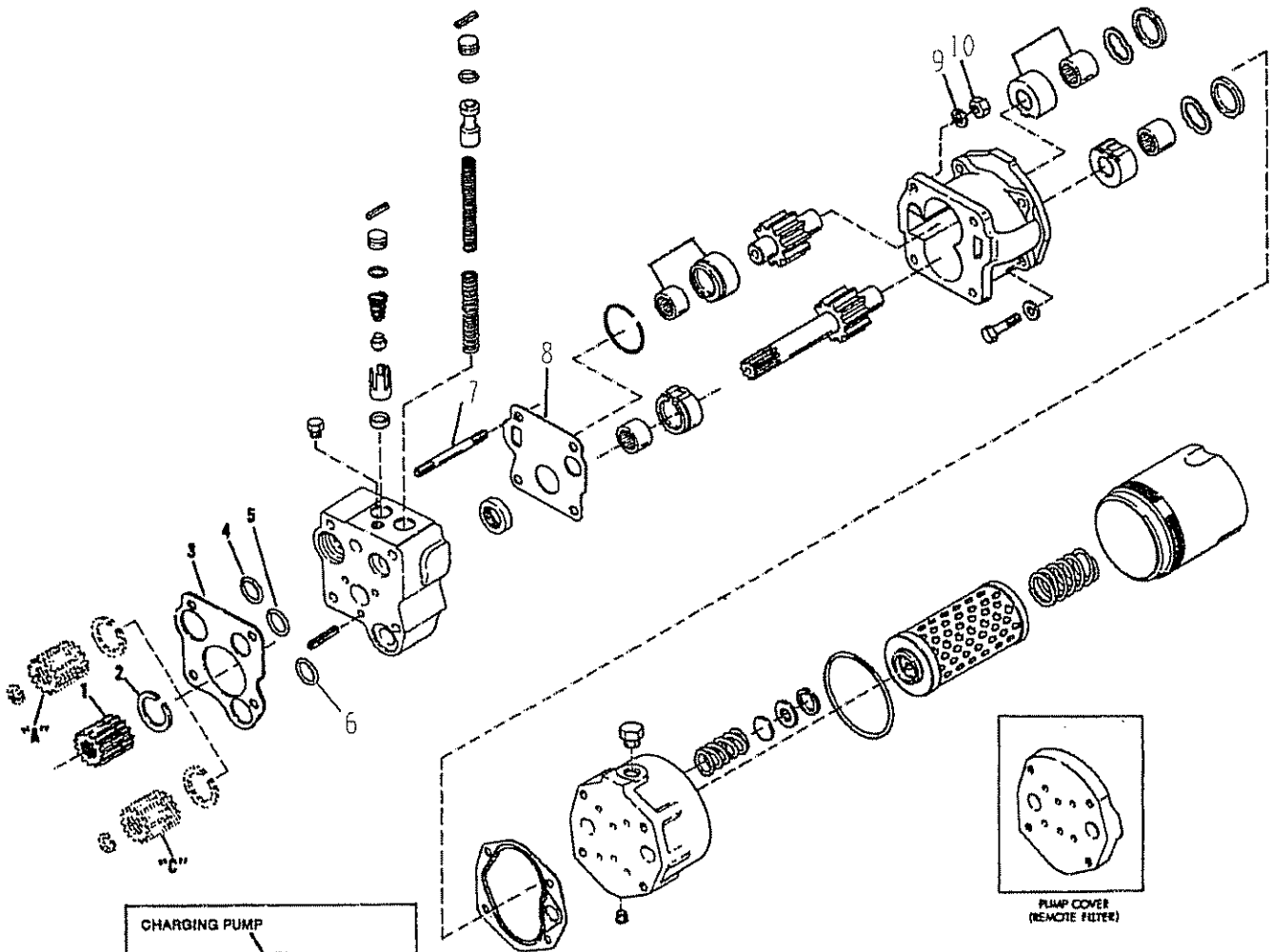
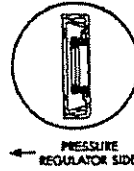
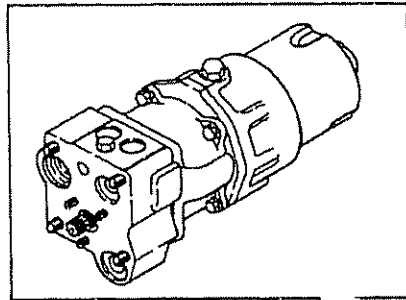


SPICER OFF-HIGHWAY PRODUCTS, DANA CORPORATION  
1293 GLENWAY DRIVE STATESVILLE, NC 28625 TEL: (704) 878-5608

GRP32287

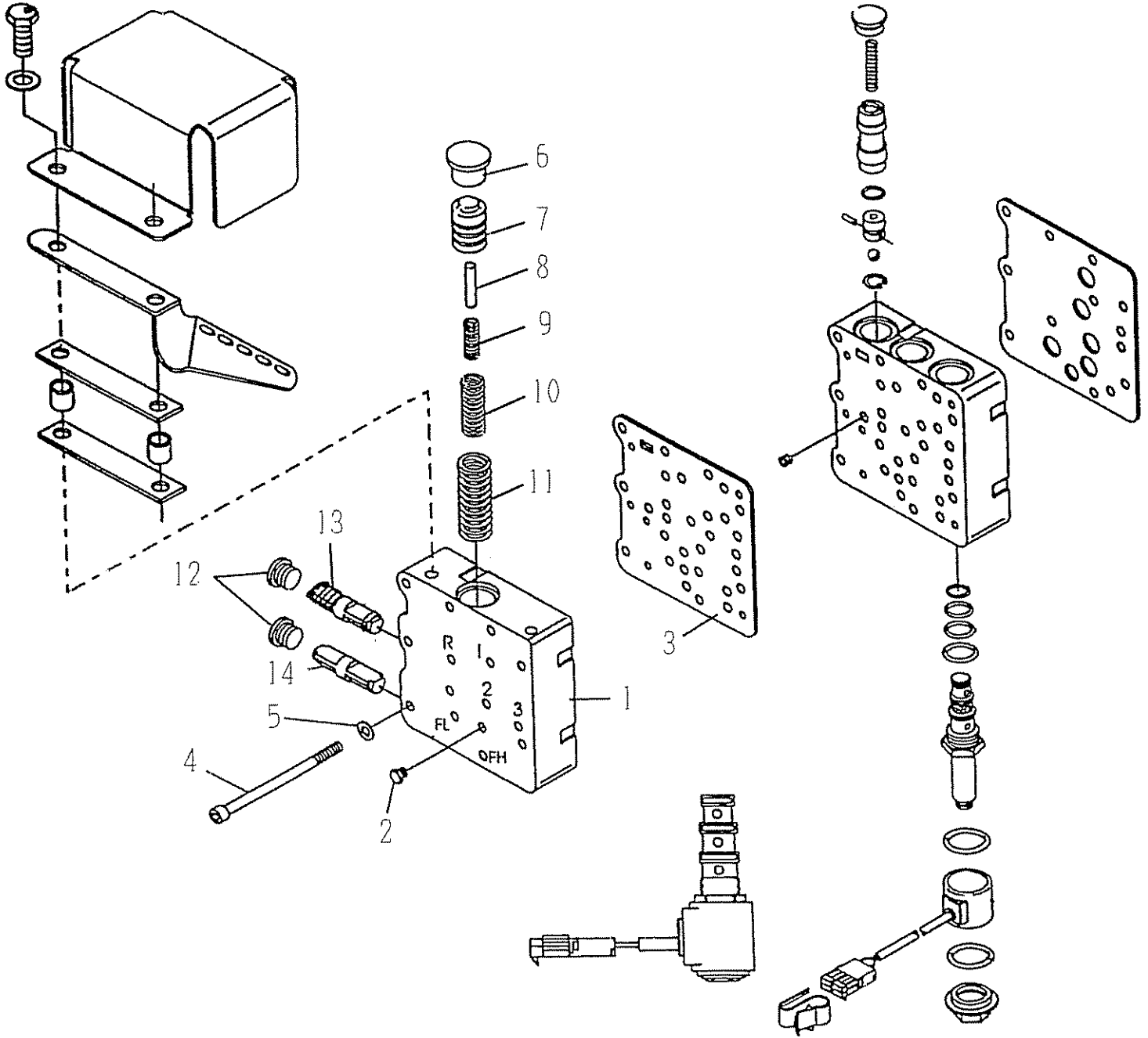


### 32000 PRESSURE REGULATOR VALVE & CHARGING PUMP GROUP





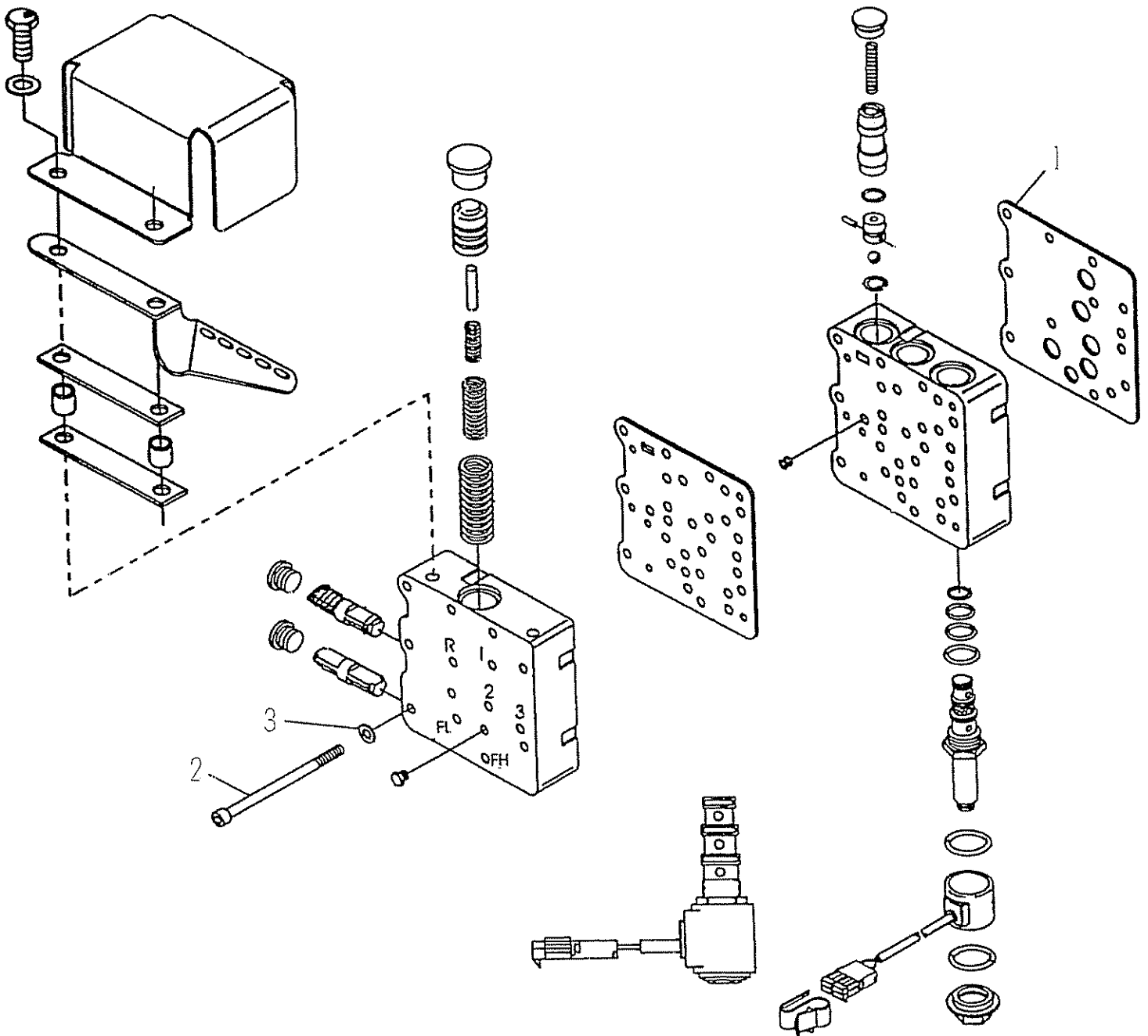
# ASSY-ELECTRIC CONTROL VALVE





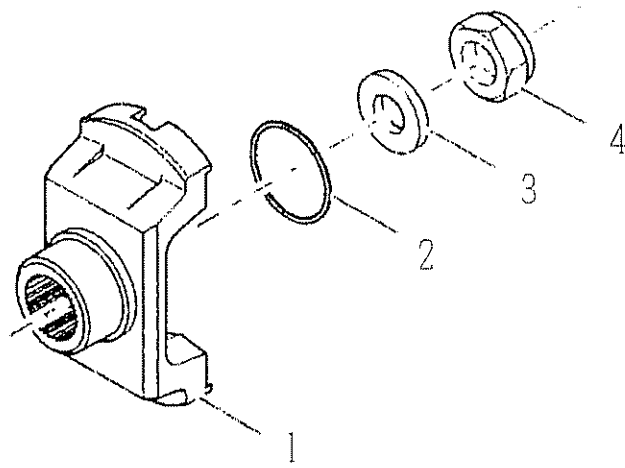


# GROUP-CONTROL VALVE ATTACH PARTS



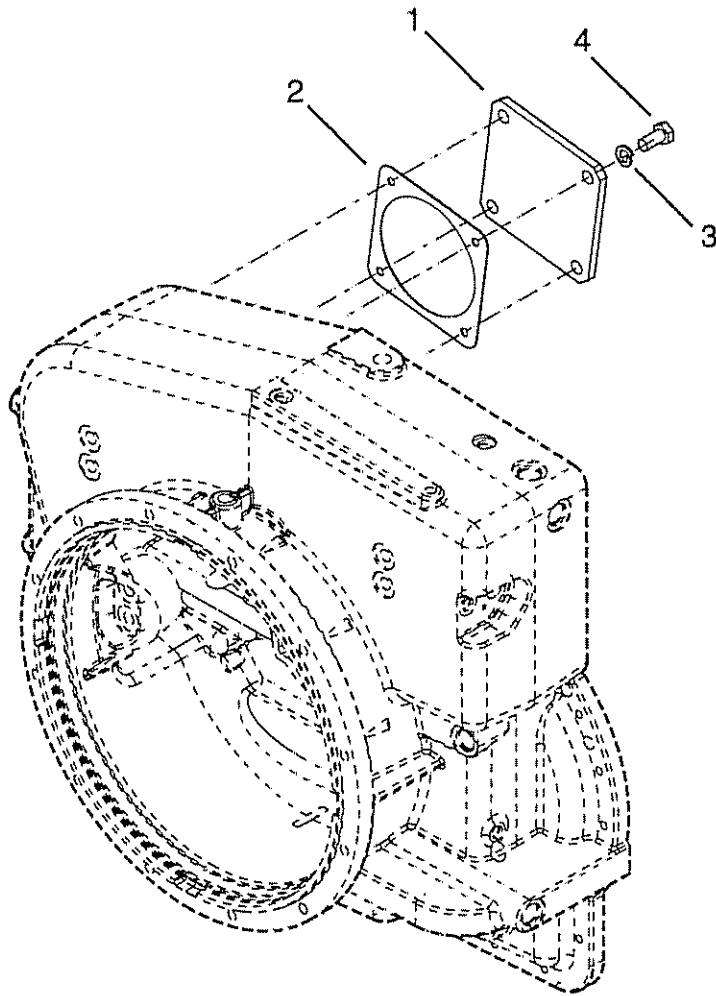


## OUTPUT FLANGE GROUP



# TE17

## SHIPPING COVER GROUP





R & HR 28000 SERIES - VARIOUS OPTIONS  
(FOR ADDITIONAL OPTIONS SEE REVERSE SIDE)

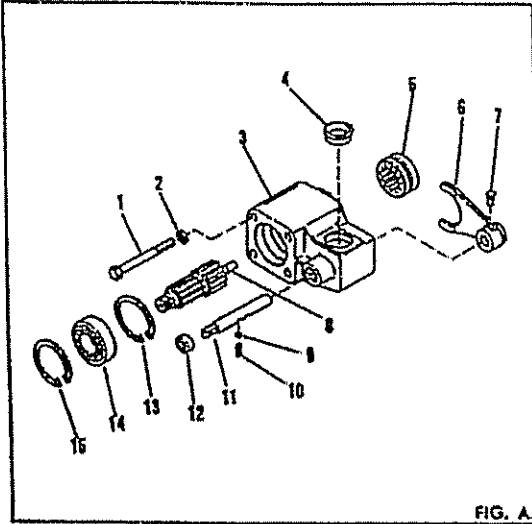


FIG. A.  
DISCONNECT ASSEMBLY

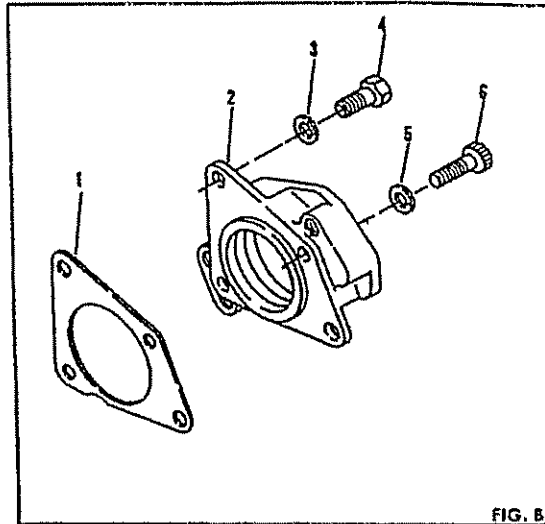


FIG. B.  
"A" SIZE TO "B" SIZE PUMP ADAPTOR

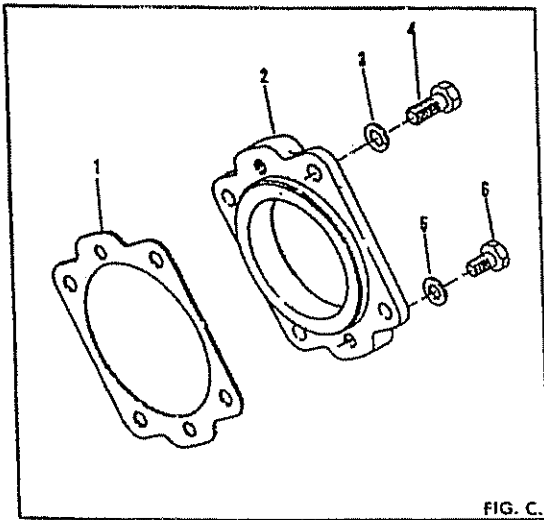


FIG. C.  
"B" SIZE PUMP ADAPTOR

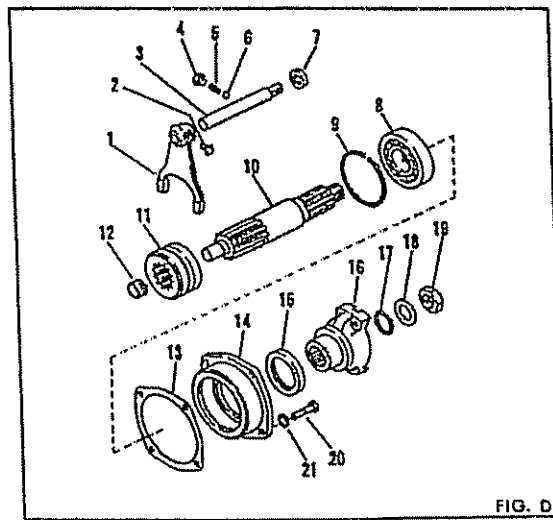
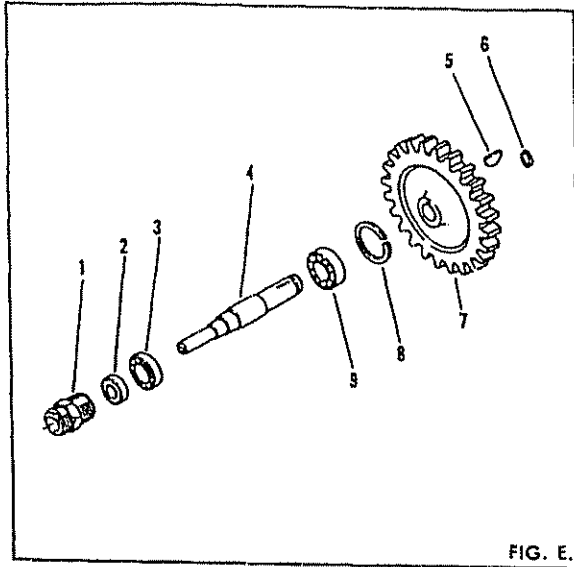
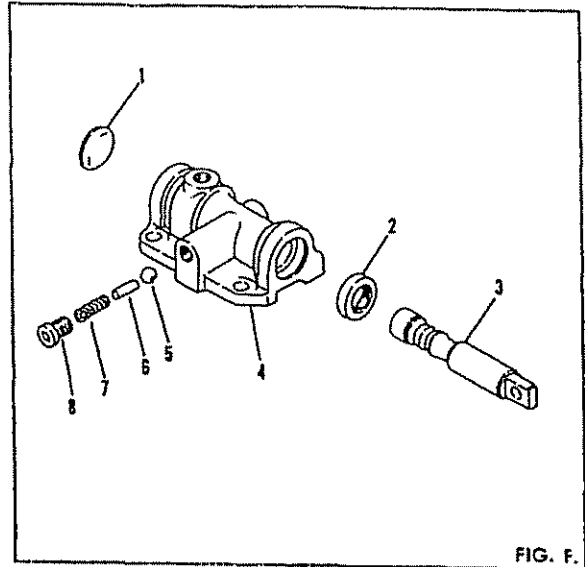


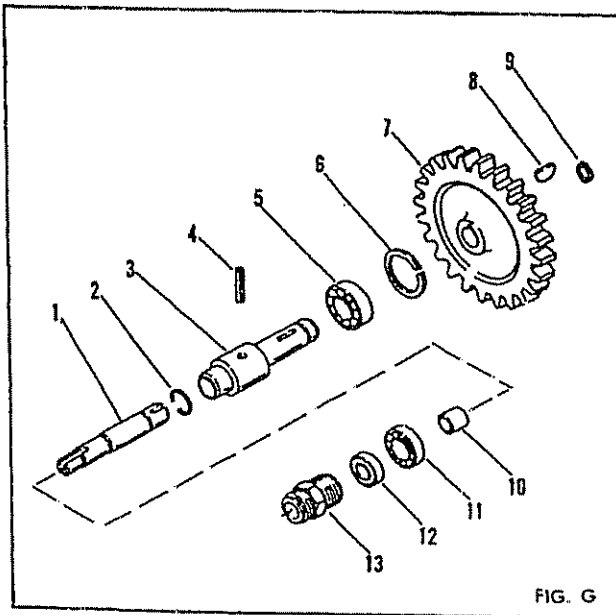
FIG. D.  
FORWARD & REVERSE P.T.O.



TACHOMETER DRIVE



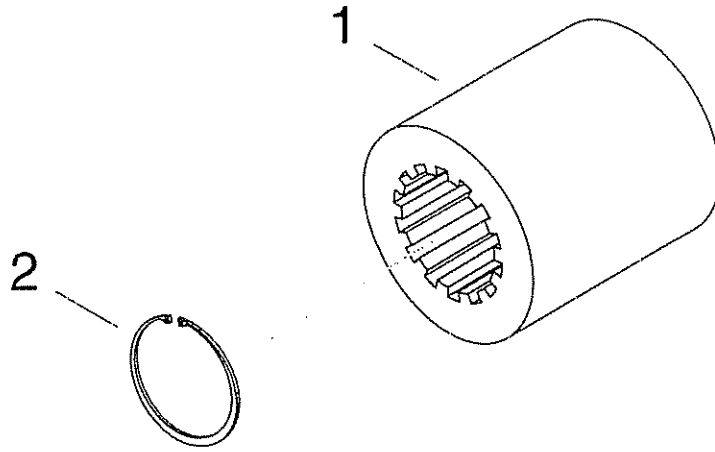
LOCK-UP CONTROL



GOVERNOR DRIVE

# TE32

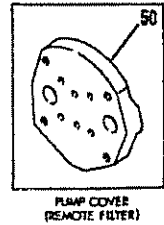
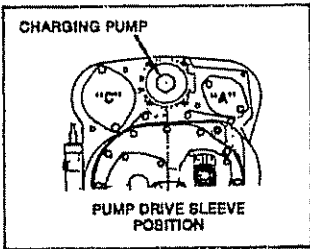
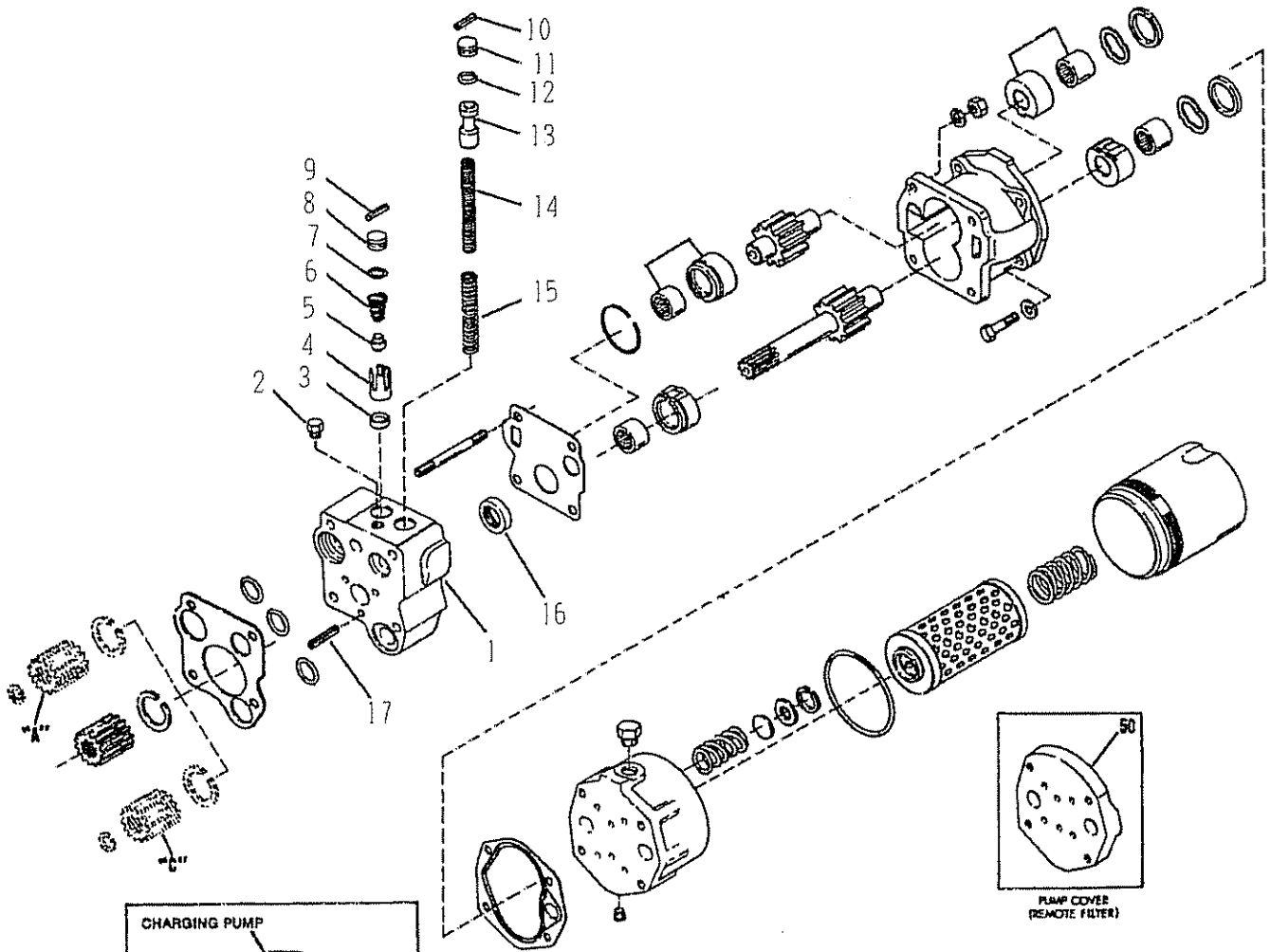
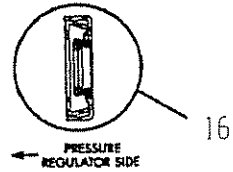
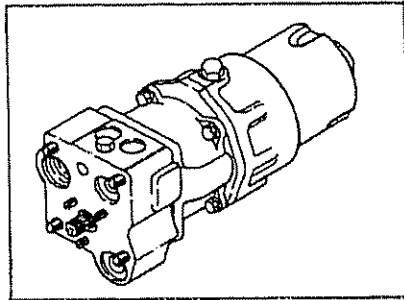
## ASSY-PUMP DRIVE ADAPTOR SLEEVE & SNAP RING





32000

ASSY-PRESSURE REGULATING VALVE

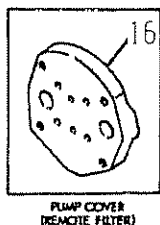
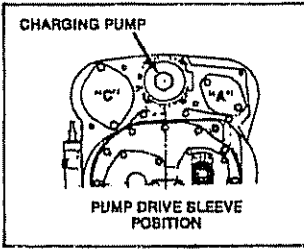
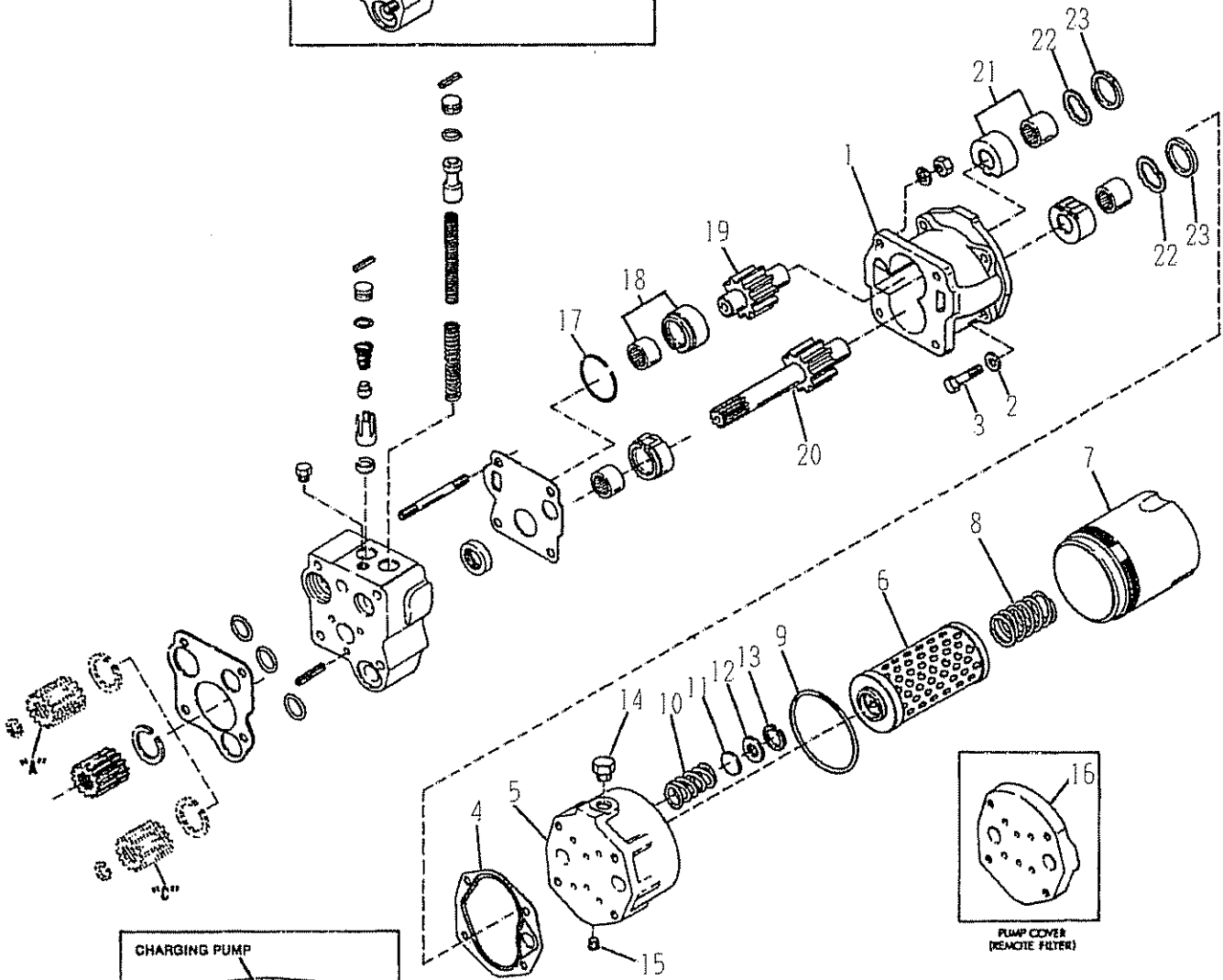
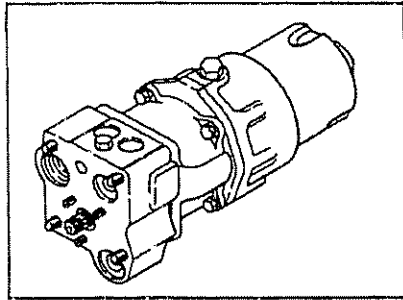






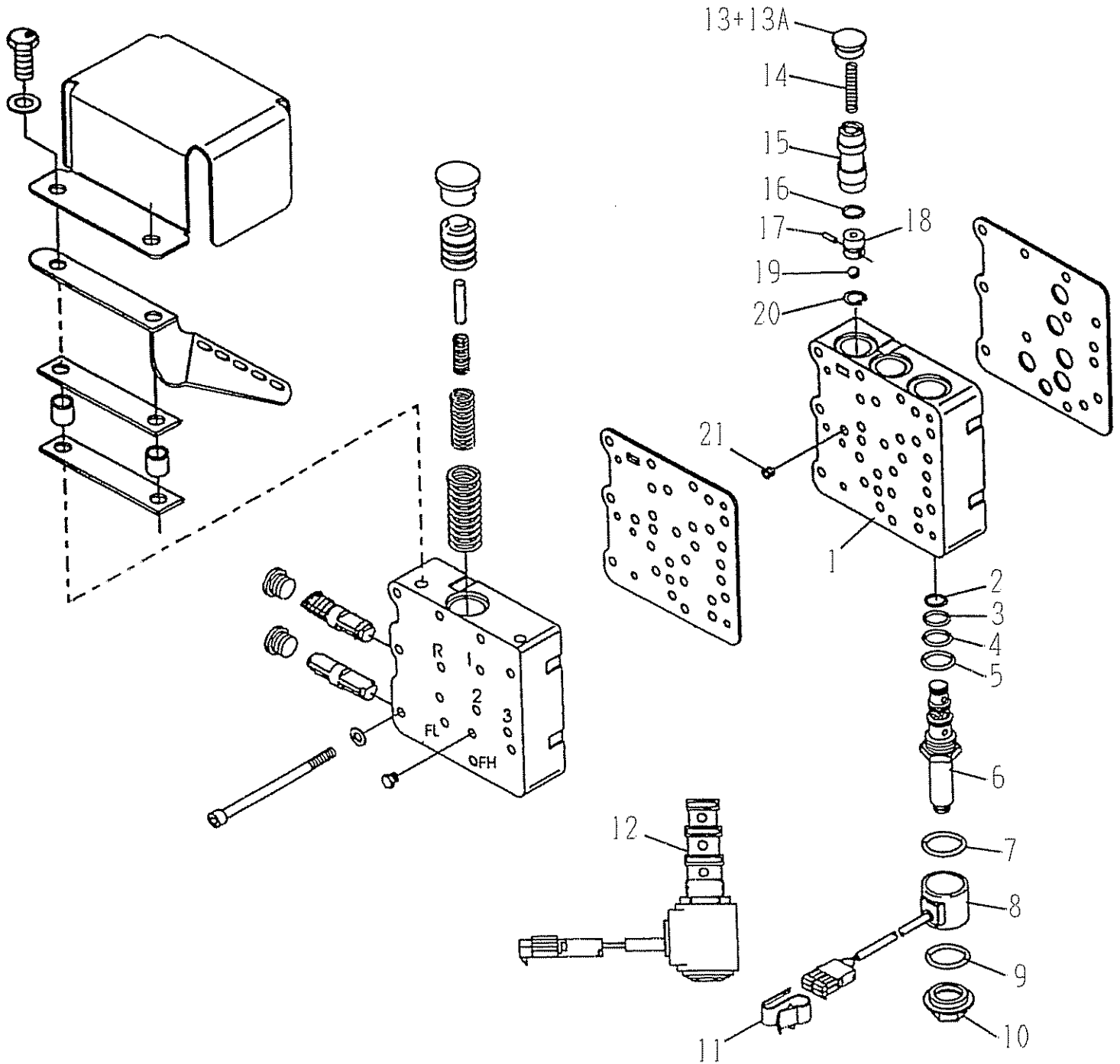
32000

ASSY-CHARGING PUMP AND FILTER



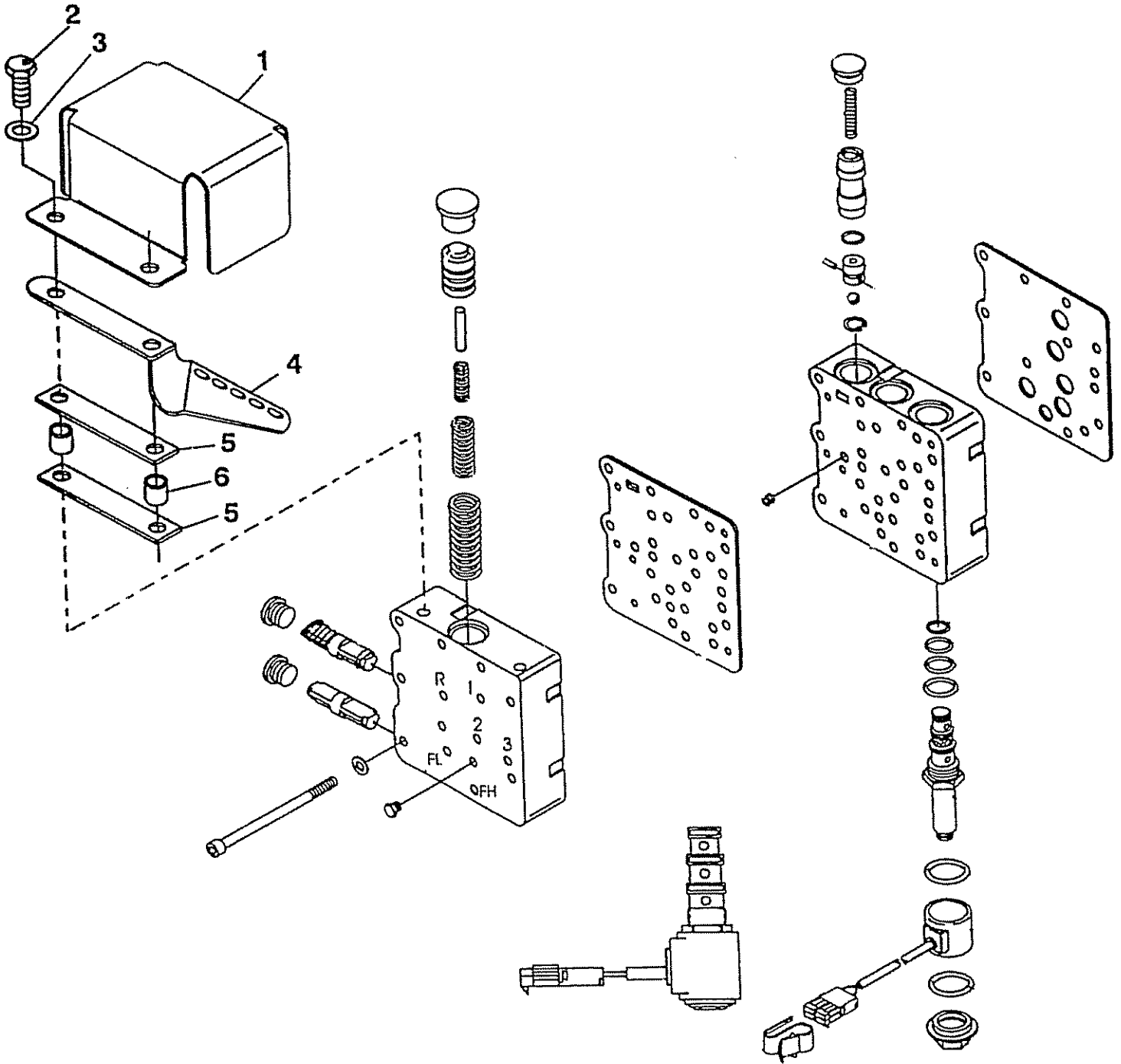


# ASSY-ELECTRIC CONTROL VALVE



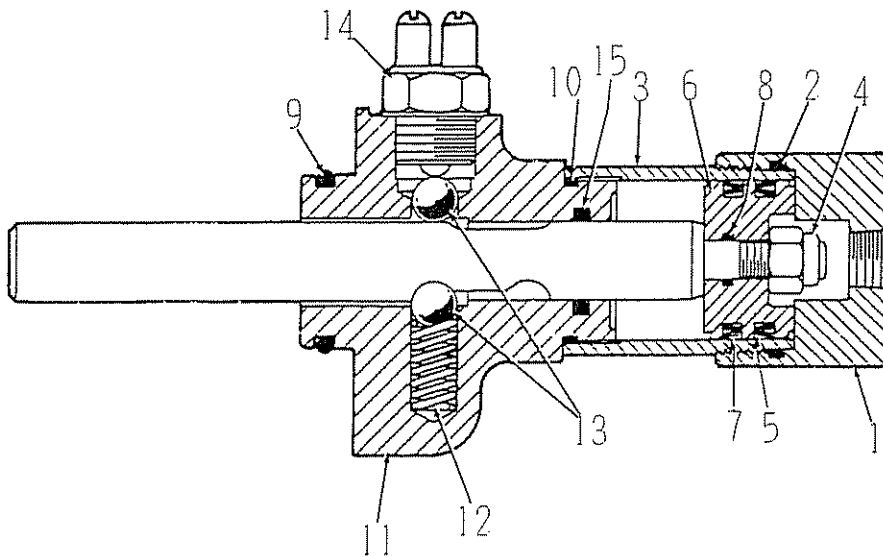
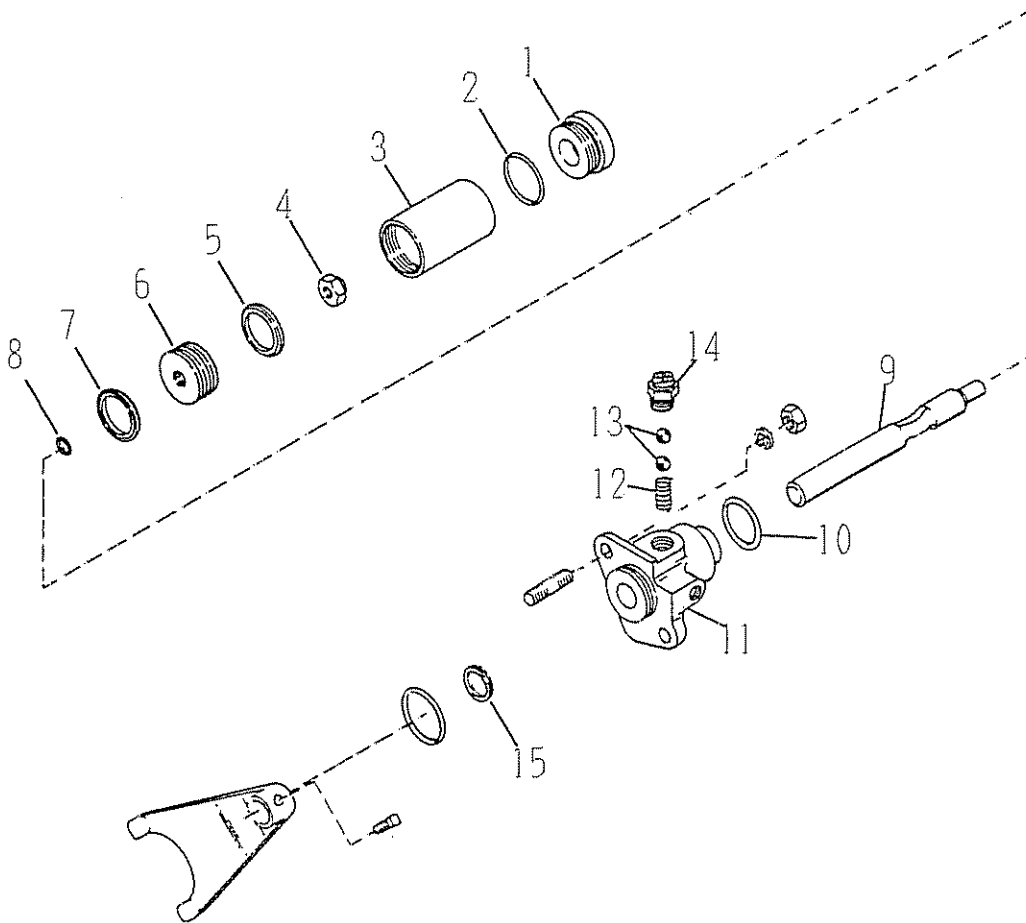


# GROUP-CONTROL VALVE DUST COVER



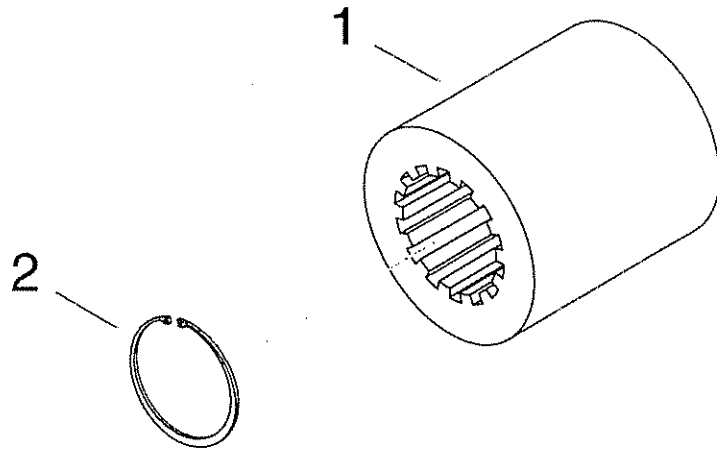
34000

ASSEMBLY-SHIFT CYLINDER



# TE32

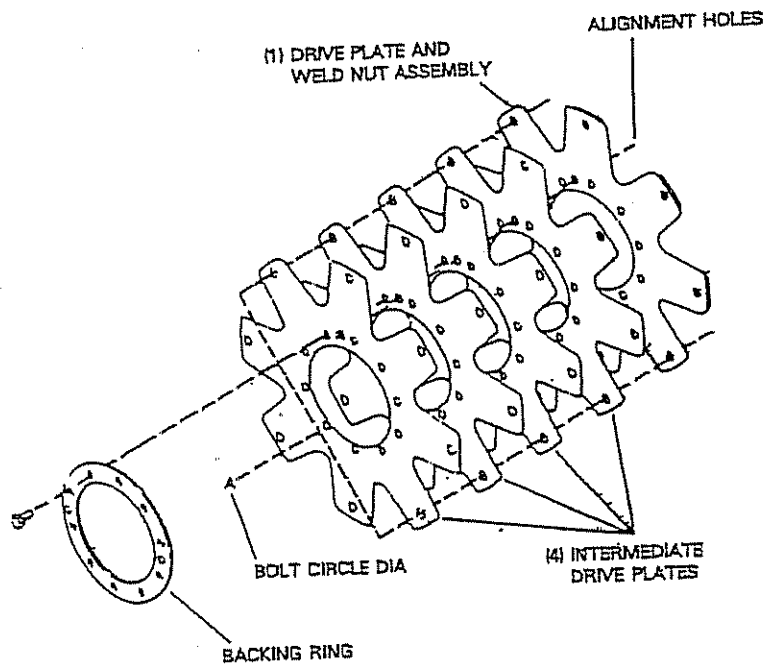
## ASSY-PUMP DRIVE ADAPTOR SLEEVE & SNAP RING



# TECHNICAL SERVICE BULLETIN

SUBJECT: 28000/32000 Series Transmission and C-270/C-320 Series Converter Drive Plate Kits.  
REASON FOR BULLETIN: Proper Identification by Bolt Circle Diameter.

Measure the "A" dimension (Bolt Circle diameter) and order Drive Plate Kit listed below.



### "A" Dimension (Bolt Circle Diameter)

13.125" [333,375 mm] Diameter  
Kit No. 802335

13.50" [342,900 mm] Diameter  
Kit No. 802333

17.00" [431,800 mm] Diameter  
Kit No. 802454

Each kit will include the following parts:

- 4 Intermediate Drive Plates
- 1 Drive Plate and Weld Nut Assembly.
- 1 Backing Ring.
- 10 Screw and Lockwasher Assembly.
- 1 Instruction Sheet.

TO FACILITATE ASSEMBLY, ALIGN SMALL HOLES IN DRIVE PLATES - SEE ILLUSTRATION ABOVE.

Position drive plate and weld nut assembly on impeller cover with weld nuts toward cover. Align intermediate drive plate and backing ring with holes in impeller cover. NOTE: Two dimples 180° apart in backing ring must be out (toward engine flywheel). Install capscrews and washers. Tighten 23 to 25 ft. lbs. torque [31,2 - 33,8 N.m].

Over for TRANSMISSION TO ENGINE INSTALLATION PROCEDURE

## TRANSMISSION TO ENGINE INSTALLATION PROCEDURE

Remove all burrs from flywheel mounting face and nose pilot bore. Clean drive plate surface with solvent.

Check engine flywheel and housing for conformance to standard S.A.E. #3 : S.A.E. J-927 tolerance specifications for pilot bore size, pilot bore runout and mounting face flatness. Measure and record engine crankshaft end play.

3. Install two 3.50 [88,90 mm] long transmission to flywheel housing guide studs in the engine flywheel housing as shown. Rotate the engine flywheel to align a drive plate mounting screw hole with the flywheel housing access hole.
4. Install a 4.00 [101,60 mm] long drive plate locating stud .3750-24 fine thread in a drive plate nut. Align the locating stud in the drive plate with the flywheel drive plate mounting screw hole positioned in step No. 3.
5. Locate transmission on flywheel housing aligning drive plate to flywheel and transmission to flywheel housing.

Install transmission to flywheel housing screws. Tighten screws to specified torque. Remove transmission to engine guide studs. Install remaining screws and tighten to specified torque.

6. Remove drive plate locating stud.
7. Install drive plate attaching screw and washer. Snug screw but do not tighten. Some engine flywheel housings have a hole located on the flywheel housing circumference in line with the drive plate screw access hole. A screwdriver or pry bar used to hold the drive plate against the flywheel will facilitate installation of the drive plate screws. Rotate the engine flywheel and install the remaining seven (7) flywheel to drive plate attaching screws. Snug screws but do not tighten. After all eight (8) screws are installed torque each one 25 to 30 ft. lbs. torque [33,9 - 40,6 N.m.]. This will require torquing each screw and rotating the engine flywheel until the full amount of eight (8) screws have been tightened.
8. Measure engine crankshaft end play after transmission has been completely installed on engine flywheel. This value must be within .001 [0,025 mm] of the end play recorded in step No. 2.

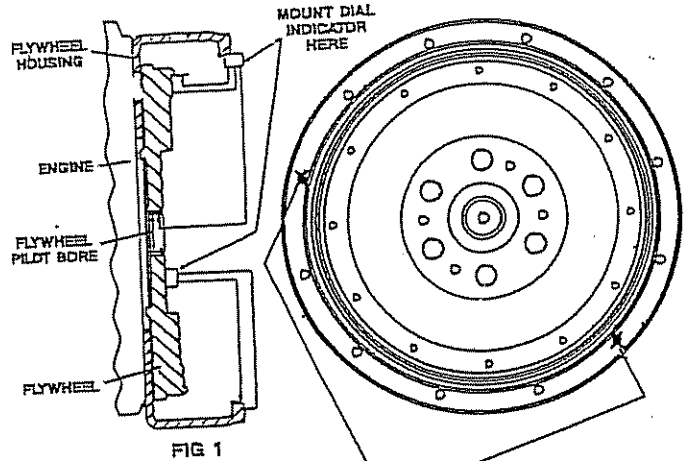


FIG 1

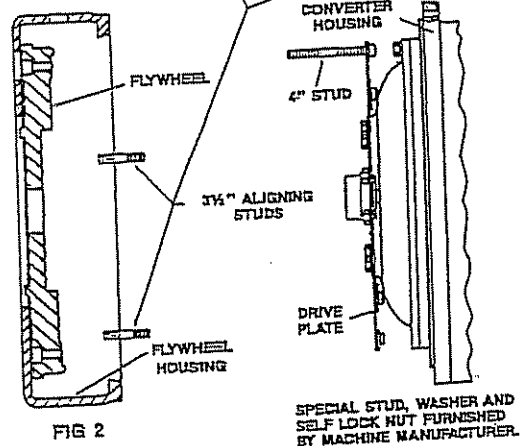


FIG 2

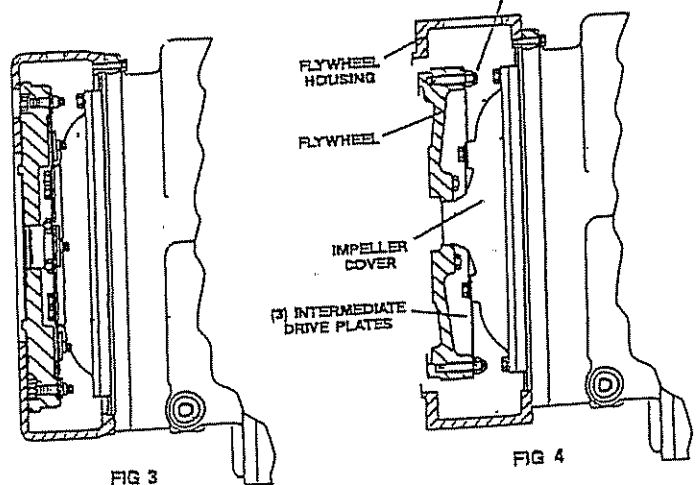


FIG 3

FIG 4