

Fig. 2-189

Reassembly of drive shaft and clutches

Insert the bearing outer races of all the bearings in their seats on the transmission housing.

Note — When bearings that have many work hours are reused, pay attention that the initial location of the outer races are respected.

AN = Input
 KV = Forward clutch
 KR = Reverse clutch
 K1 = 1st speed clutch
 K2 = 2nd speed clutch
 K3 = 3rd speed clutch
 K4 = 4th speed clutch
 AB = Output

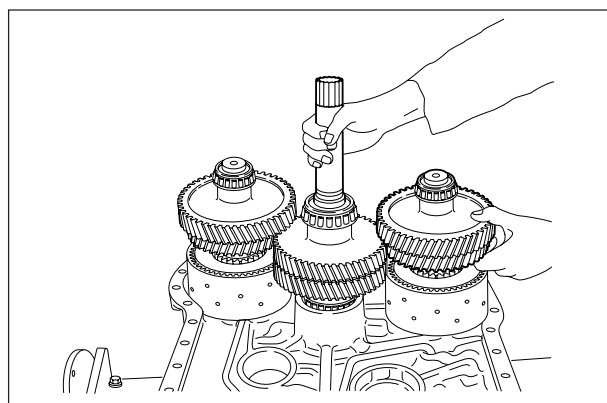


Fig. 2-190

WARNING

Prior to reinstalling the clutches and drive shaft, smear grease on the rectangular rings and centre them on the relevant shafts.

Insert clutch **KR**, drive shaft and clutch **KV** together in the transmission housing cover.

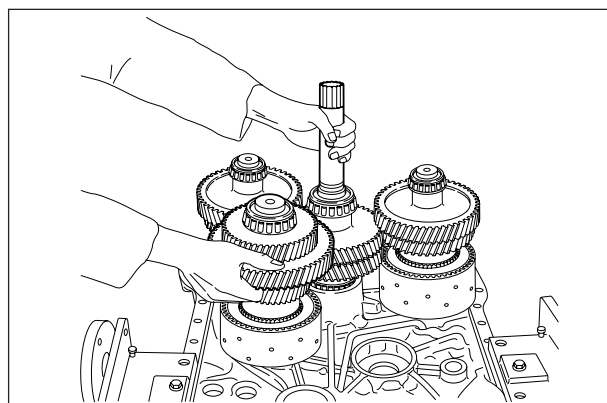


Fig. 2-191

Lift the drive gear and position clutch **K4**.

Reinstall clutch **K3**.

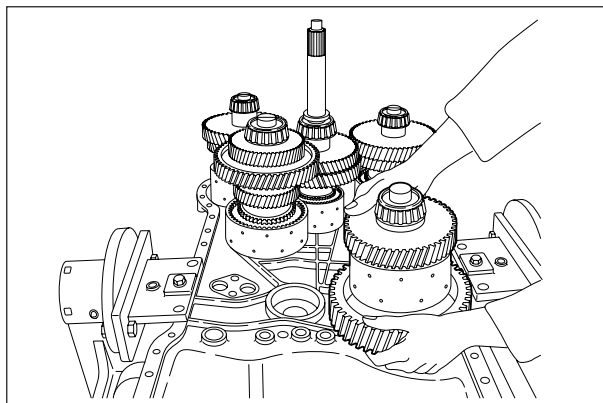


Fig. 2-192

Position clutch **K2**.

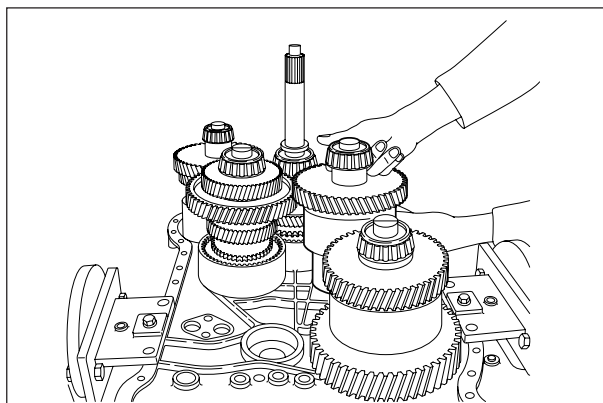


Fig. 2-193

Lift clutch **K4** and position clutch **K1**.

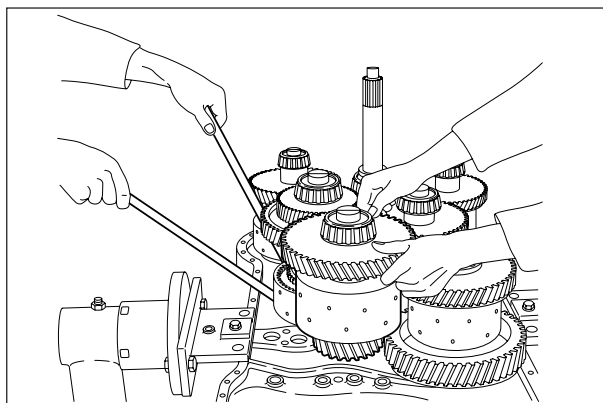


Fig. 2-194

The figure on the left illustrates the reinstallation position of the single clutches in the transmission housing cover.

Smear grease on the rectangular rings (arrows) and centre them on the relevant shafts.

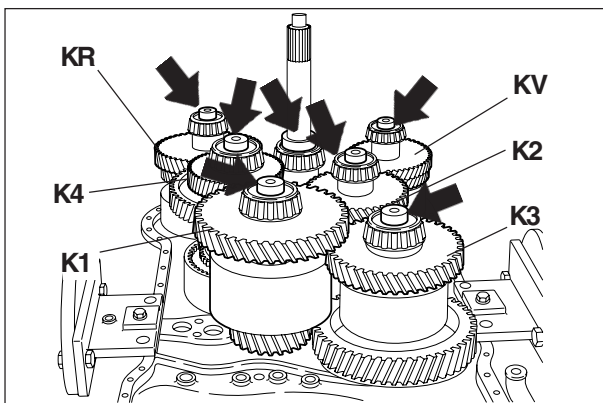


Fig. 2-195

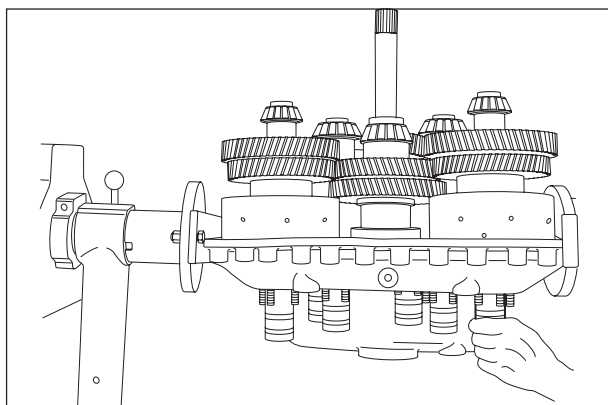


Fig. 2-196

Secure all the clutches using the appropriate tools **75301800**.

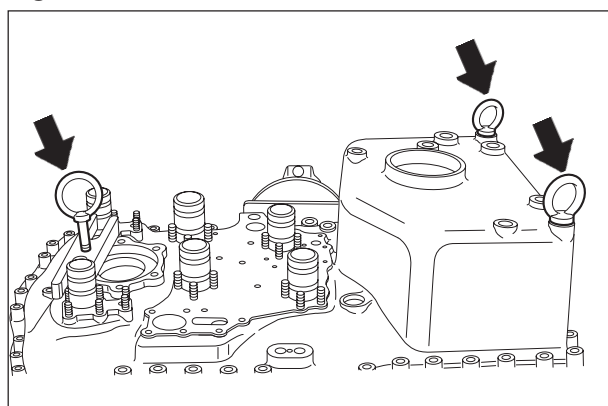


Fig. 2-197

Turn the stand 180°.

Install lifting hooks (arrows).

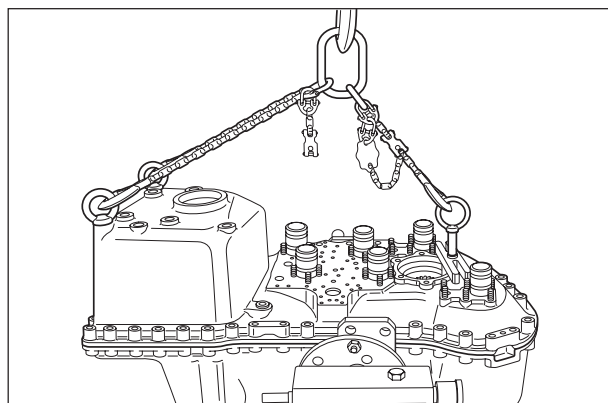


Fig. 2-198

Smear grease on the O-Rings of the two oil pipes.

Smear the mating faces with sealing compound Loctite (type No. 574).

Position carefully, using an appropriate lifting rig, the cover previously pre-assembled on the transmission housing until they contact.

Note — *Make sure that the oil pipes coincide with the relevant holes of the transmission housing cover.*

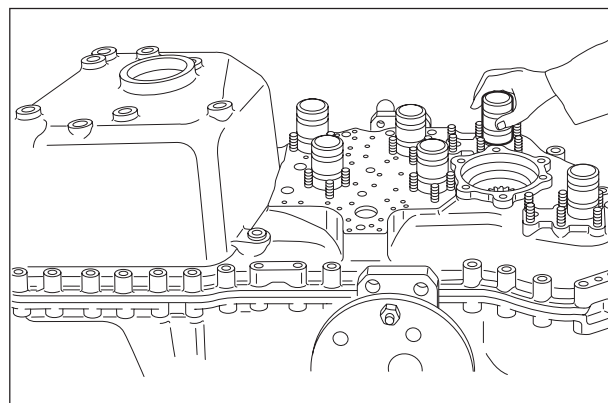


Fig. 2-199

Remove the clutch locking tools **75301800**.

Insert the two dowels centrally on the front side of the housing.

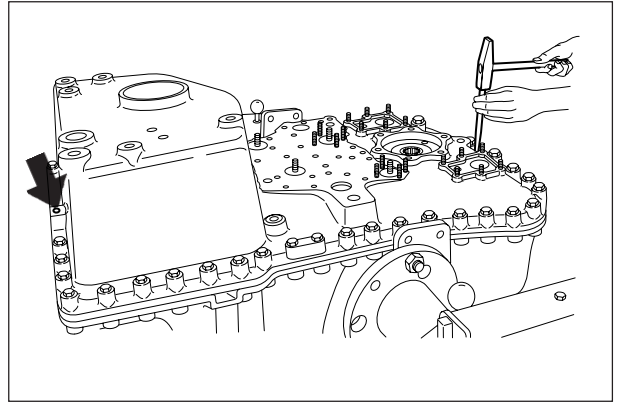


Fig. 2-200

Secure the transmission housing cover with the recessed head hex screws.

Tightening torque (M10/8.8) 46 Nm

Note — Pay attention to the position of the lifting hook; see the figure).

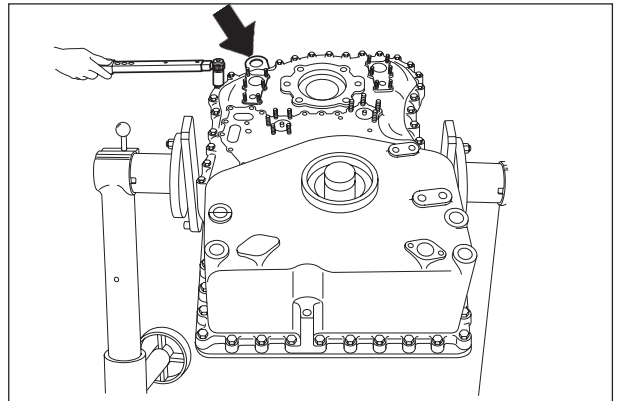


Fig. 2-201

Assembly of the pump shaft (P.T.O.)

Install the ball bearing.

Install the rectangular ring (arrow) in the relevant slot.

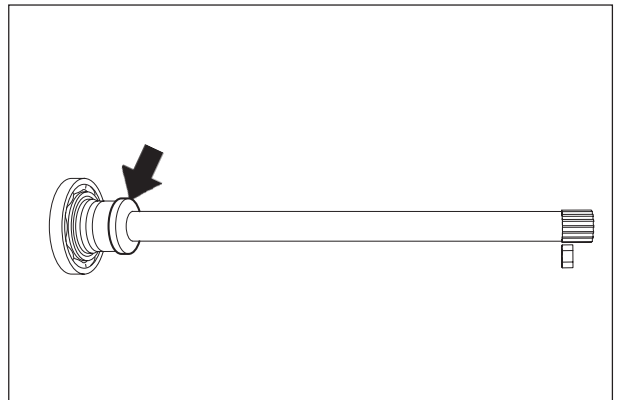


Fig. 2-202

Smear grease on the rectangular ring, centre it with the shaft and insert the pump shaft until it shoulders.

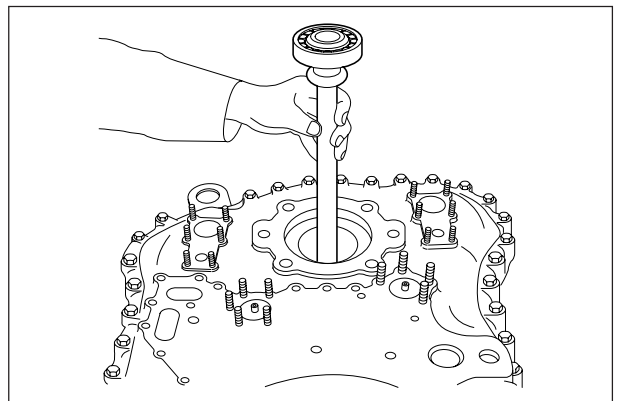
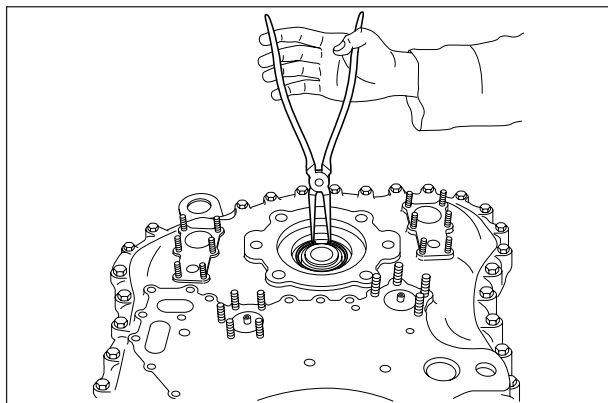
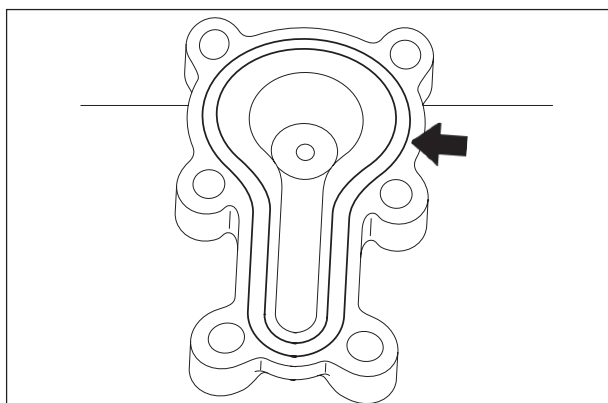


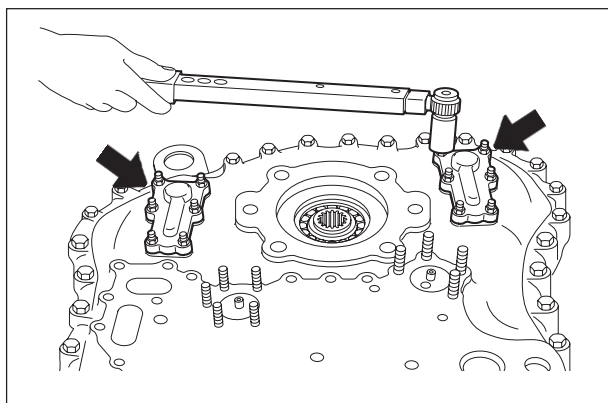
Fig. 2-203

**Fig. 2-204**

Secure the pump shaft using the circlip.

**Fig. 2-205**

Insert the O-Ring (arrow) in the ring slot of the oil supply covers.

**Fig. 2-206**

Install the two covers (arrows) using hex nuts (use flat washers).

Tightening torque 23 Nm

Reassembly of the output flanges

Install the seal with the lip directed toward the cavity containing the oil.

Note — Use the appropriate punch **75301813** to obtain the correct mounting position.
Wet the rubber lined outer diameter with alcohol.
Smear grease on the sealing lip.

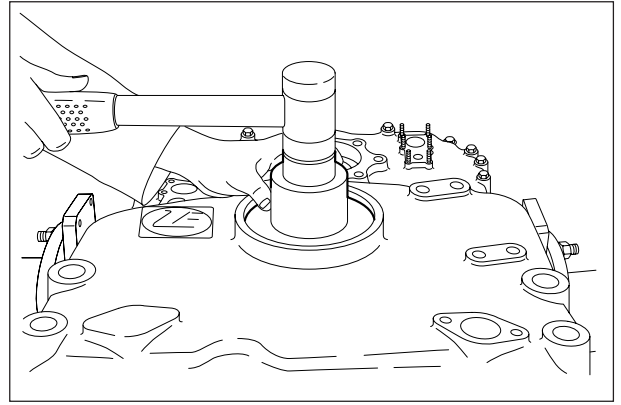


Fig. 2-207

Install the output shaft.

Install the O-Ring (arrow) in the gap between flange and shaft.

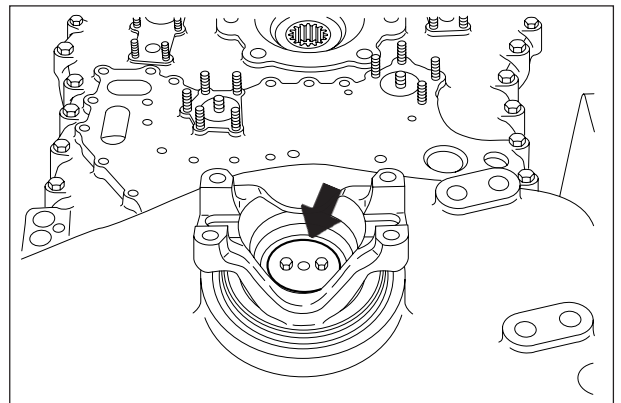


Fig. 2-208

Secure the output flange using the retaining plate and the recessed head hex screws.

Tightening torque (M10/8.8) 46 Nm

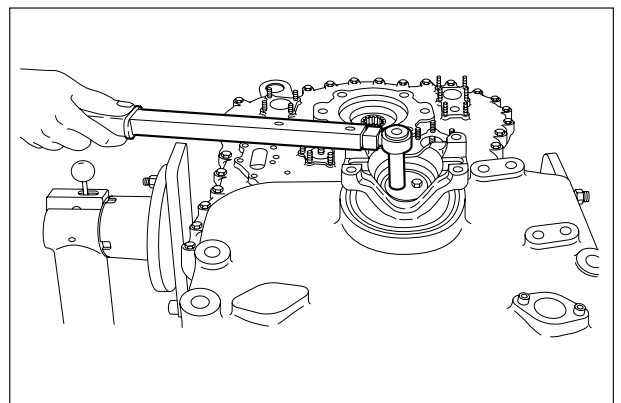


Fig. 2-209

Secure the recessed head hex screws using the safety plates.

Punch **75301812**
Punch handle **75301797**

Install the converter side output flange in the same manner.

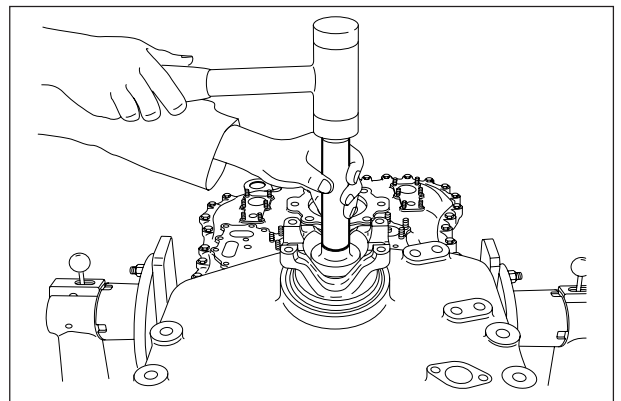


Fig. 2-210

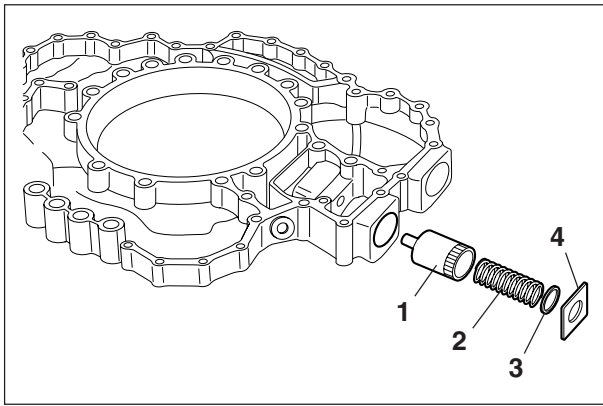


Fig. 2-211

Torque converter pressure valve

The figure on the left illustrates the components of the torque converter pressure valve.

- 1 = Plunger
- 2 = Spring
- 3 = Resting plate
- 4 = Retaining plate

Note — Install the resting plate with the point (6 mm diam) directed toward the retaining plate.

Insert the components in the sequence illustrated in Fig. 2-211, press the spring and secure the valve with the retaining plate.

Tighten the plug (arrow) equipped with a new O-Ring.

Tightening torque (M14x1.5).....25 Nm

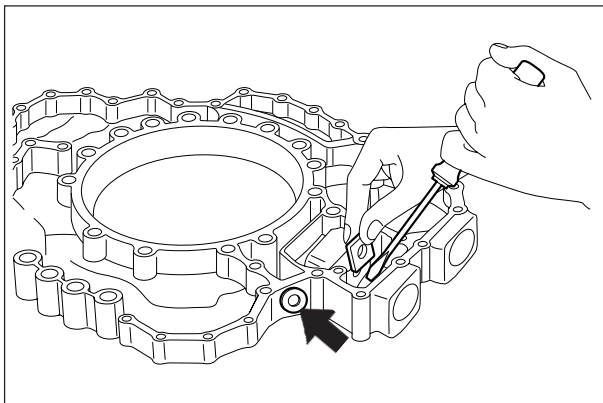


Fig. 2-212

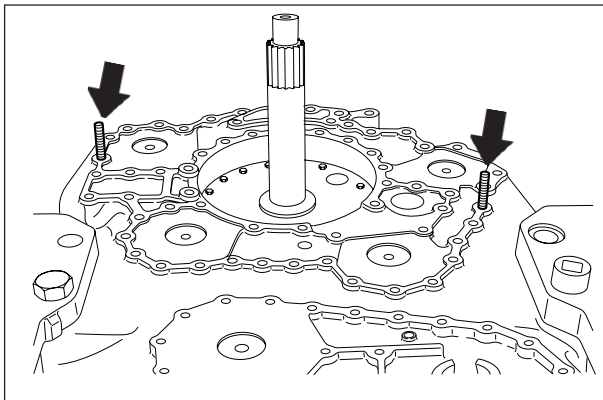


Fig. 2-213

Oil supply housing - Transmission pump

Install setting screws 75301799 (arrows) and install the seal.

Position the oil supply housing and secure it temporarily using the recessed head hex screws.

Note — Install only the screws required to obtain a good contact – **do not tighten.**

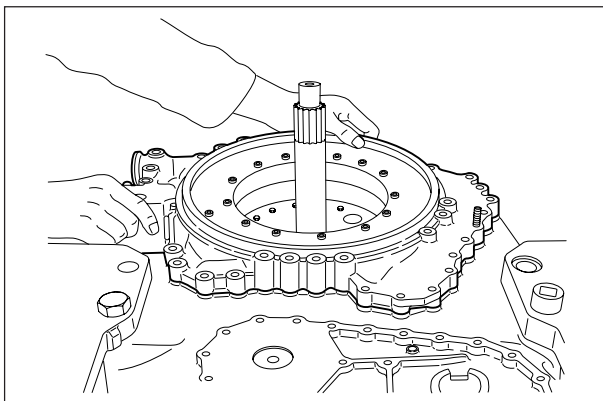
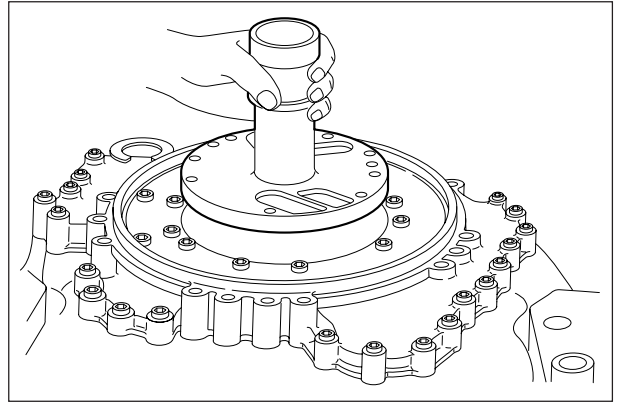


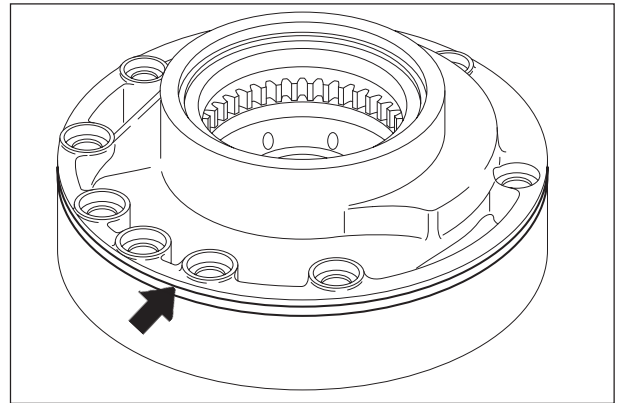
Fig. 2-214

Install the two setting screws **75301798** and insert the stator shaft until it shoulders.

Note — *Pay attention that the holes coincide.*

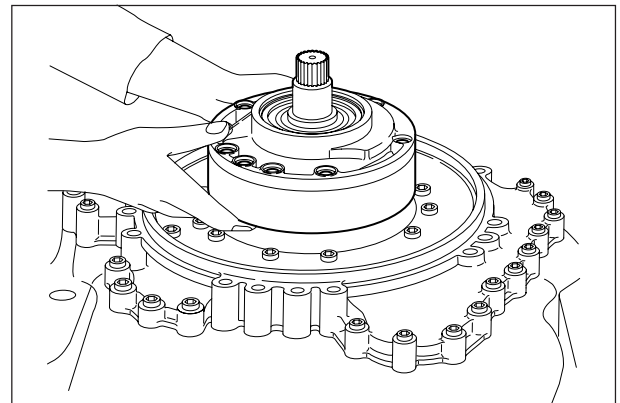
**Fig. 2-215**

Insert the O-Ring (arrow) in the slot and lubricate it with oil.

**Fig. 2-216**

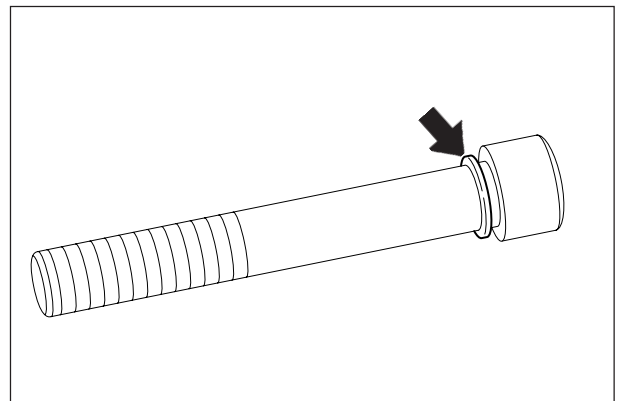
Install the transmission pump assembly and rest it against the shoulder in a uniform manner, using the recessed head hex screws (at this time without O-rings).

Then remove the recessed head hex screws again.

**Fig. 2-217**

Install new O-Rings (figure) on the recessed head hex screws.

Note — *Smear grease on the O-Rings.*

**Fig. 2-218**

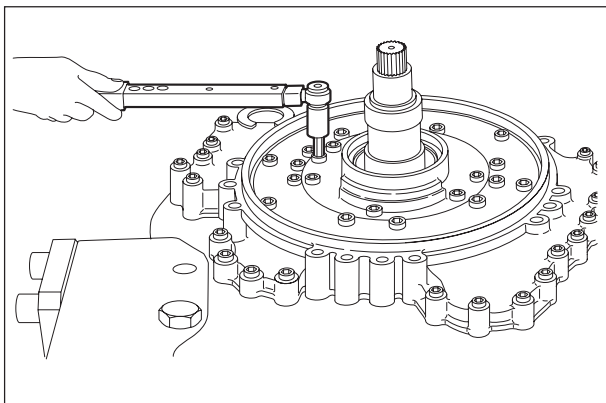


Fig. 2-219

Secure the pump the transmission using the recessed head hex screws.

Tightening torque 46 Nm

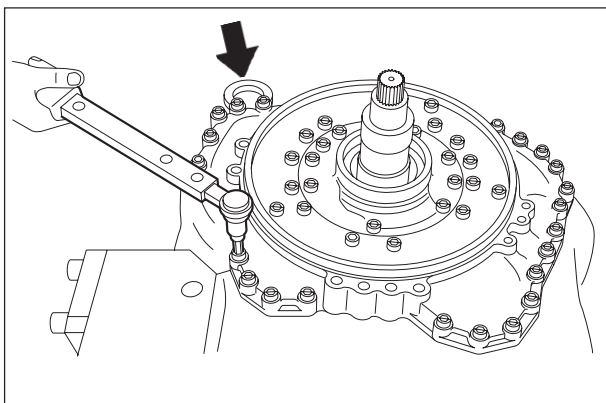


Fig. 2-220

Secure the oil supply housing using recessed head hex screws and hex head screws (q.ty 2).

Tightening torque (Recessed head screw)23 Nm

Tightening torque (Hex head screw) 46 Nm

Note — Pay attention to the position of the lifting hook; see arrow.

Hex wrench **75301795**.

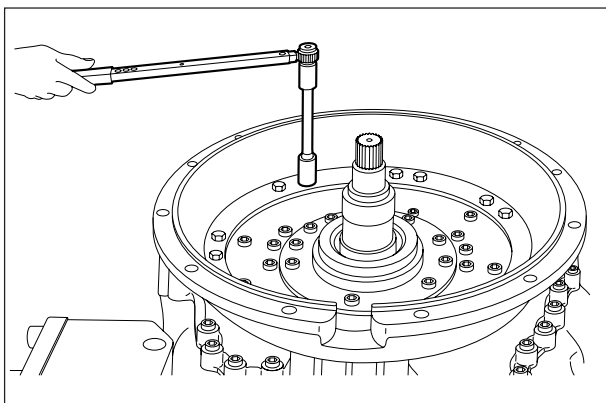


Fig. 2-221

Installation on engine - Torque converter

Tighten the torque converter bell with hex head screws.

Tightening torque (M10/10.9) 68 Nm

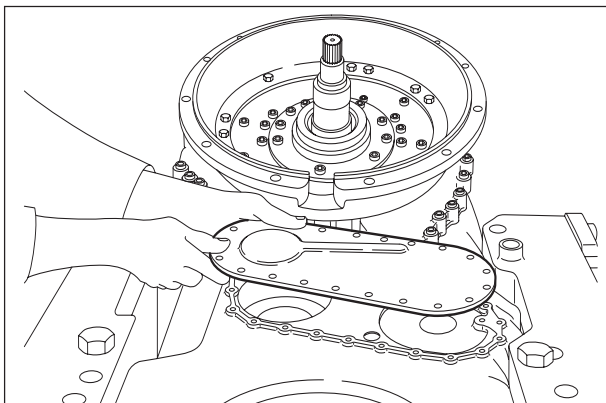


Fig. 2-222

Install the gasket and secure the cover with hex head screws.

Tightening torque (M8/8.8) 23 Nm

Insert the torque converter bringing it to contact.

Note — The impulse generating disc on the torque converter must be located in a central position with respect to the hole of the induction sender; see arrow/figure 2-221.

This is the only way to make sure that the torque converter is perfectly inserted into the bell.

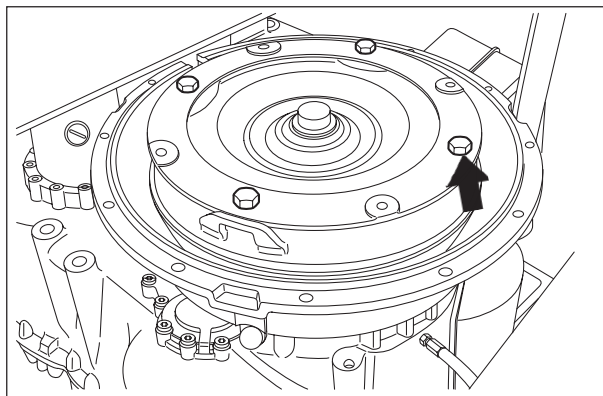


Fig. 2-223

Secure the flex disc on the torque converter tightening the hex head screws to the prescribed torque.

Tightening torque (M12/10.9) 115 Nm

Note — Install the screws with Loctite (Type no. 262)

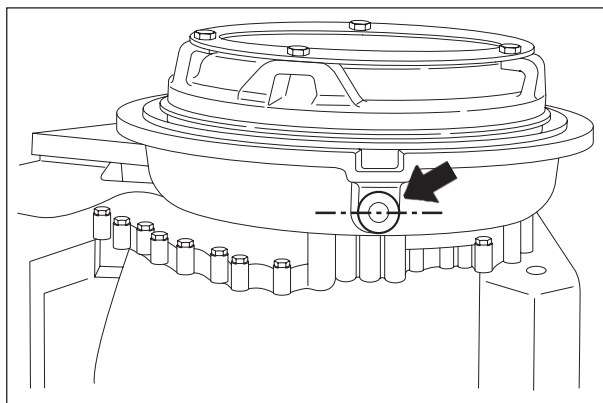


Fig. 2-224

Torque converter safety valve

Insert the safety valve (assembled) into the hole on the transmission housing.

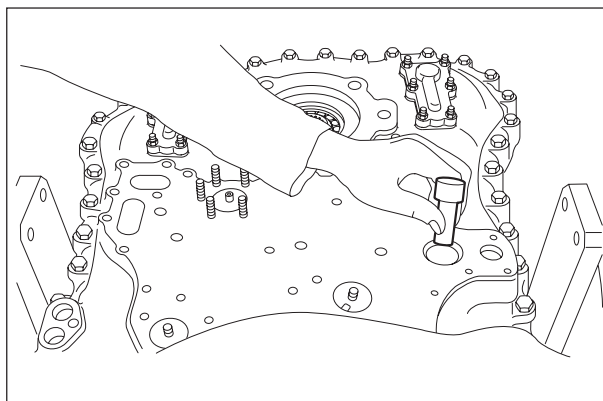


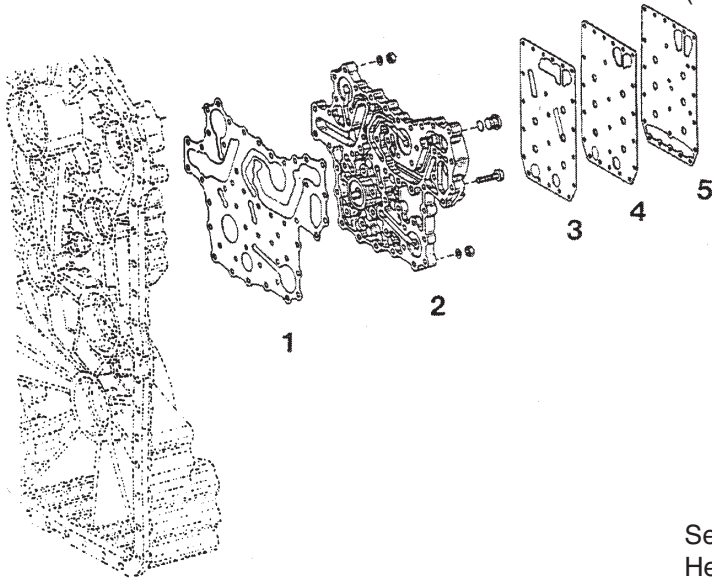
Fig. 2-225

Installation of the oil ducts plate and transmission control valve

Install the components as illustrated in the sketch here below.

Tightening torque (M8) 23 Nm
(Hex nuts and recessed head hex screws)

Note — Pay attention to the mounting position of the various gaskets.

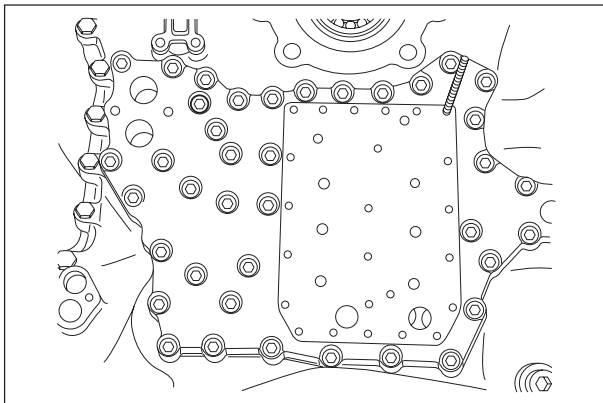


Drawing ref.

- 1 = Gasket
- 2 = Oil ducts plate
- 3 = Gasket
- 4 = Intermediate plate
- 5 = Gasket

Setting screws **75301794**
Hex wrench **75301795**

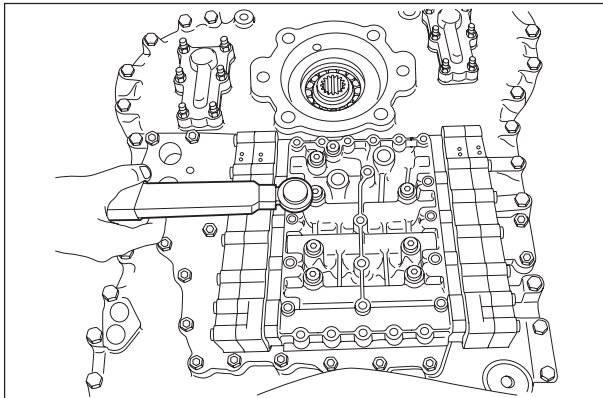
Fig. 2-226



Tighten the plug (arrow) with a new O-Ring.

Tightening torque (M16x1.5) 30 Nm

Fig. 2-227



Secure the transmission control valve with two setting screws **75301794** then install the recessed head hex screws with tool **75301792**.

Tightening torque (M6) 9.5 Nm

Fig. 2-228