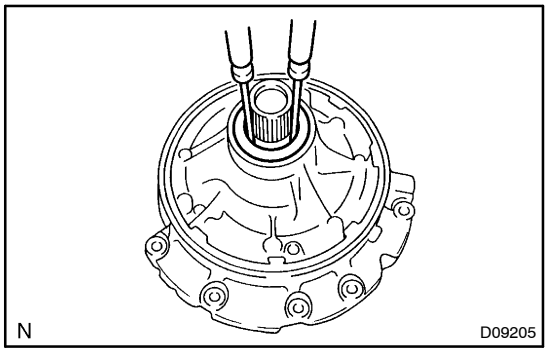
OIL PUMP ASSY (U140E/U140F)

OVERHAUL

4006F–01

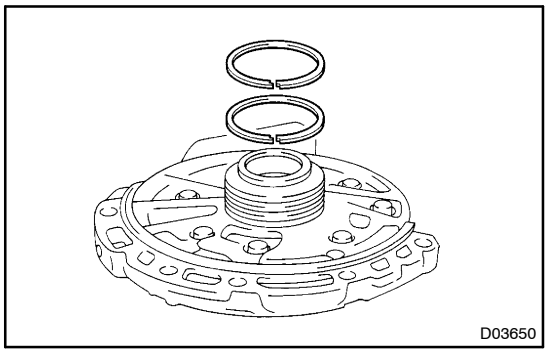


1. INSPECT OIL PUMP ASSY

(a) Turn the drive gear with 2 screwdrivers and make sure it rotates smoothly.

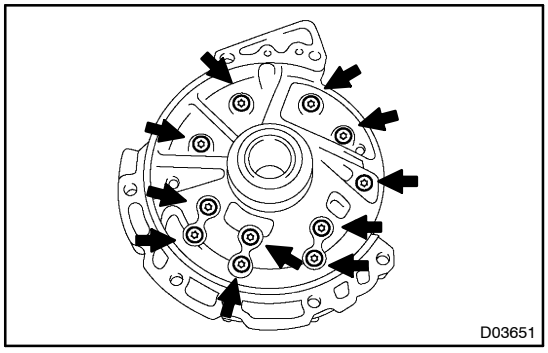
NOTICE:

Be careful not to damage the oil seal lip.



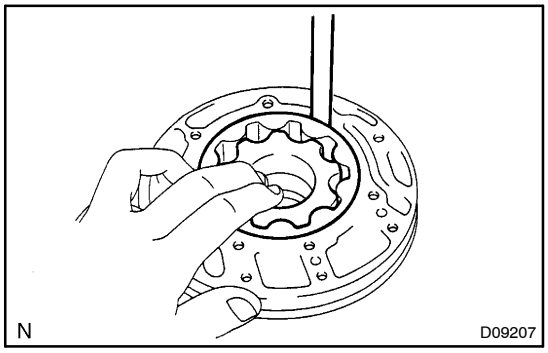
2. REMOVE CLUTCH DRUM OIL SEAL RING

(a) Remove 2 clutch drum oil seal rings.



3. REMOVE STATOR SHAFT ASSY

(a) Using a torx socket (T30), remove the 11 bolts and stator shaft. Keep the gears in assembling order.



4. INSPECT CLEARANCE OF OIL PUMP ASSEMBLY

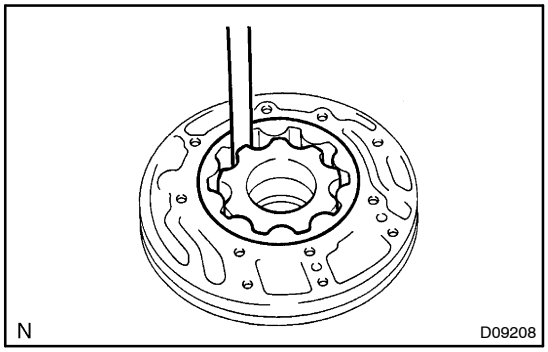
(a) Push the driven gear to one side of the body. Using a feeler gauge, measure the clearance.

Standard body clearance:

0.10 – 0.17 mm (0.0039 – 0.0067 in.)

Maximum body clearance: 0.17 mm (0.0067 in.)

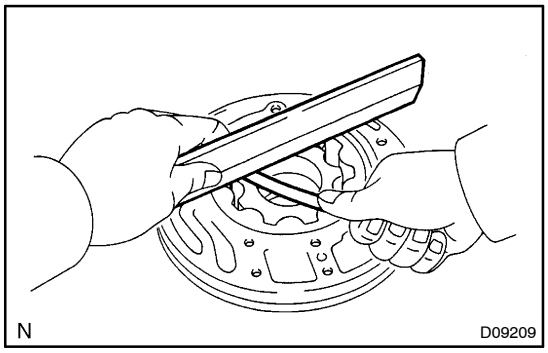
If the body clearance is greater than the maximum, replace the oil pump body sub–assy.



(b) Measure the tip clearance between the driven gear teeth and drive gear teeth.

Standard tip clearance:
0.07 – 0.15 mm (0.0028 – 0.0059 in.)
Maximum tip clearance: 0.15 mm (0.0059 in.)

If the tip clearance is greater than the maximum, replace the oil pump body sub–assy.



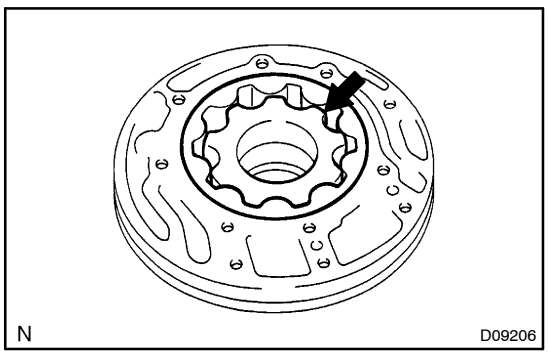
(c) Using a straight edge and feeler gauge, measure the side clearance of both gears.

Standard side clearance:
0.02 – 0.05 mm (0.0008 – 0.0020 in.)
Maximum side clearance: 0.05 mm (0.0020 in.)
Drive gear thickness: mm (in.)

Mark	Thickness
1	10.690 – 10.699 (0.4209 – 0.4212)
2	10.700 – 10.709 (0.4213 – 0.4216)
3	10.710 – 10.720 (0.4217 – 0.4220)
4	10.721 – 10.730 (0.4221 – 0.4224)
5	10.731 – 10.740 (0.4225 – 0.4228)

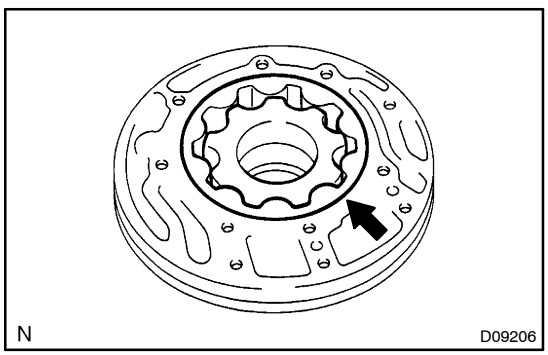
Driven gear thickness: mm (in.)

Mark	Thickness
1	10.690 – 10.699 (0.4209 – 0.4212)
2	10.700 – 10.709 (0.4213 – 0.4216)
3	10.710 – 10.720 (0.4217 – 0.4220)
4	10.721 – 10.730 (0.4221 – 0.4224)
5	10.731 – 10.740 (0.4225 – 0.4228)



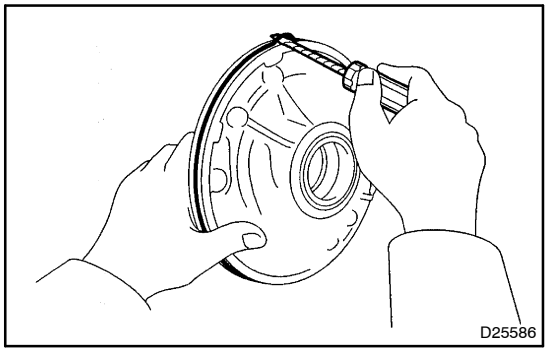
5. REMOVE FRONT OIL PUMP DRIVE GEAR

(a) Remove front oil pump drive gear.



6. REMOVE FRONT OIL PUMP DRIVEN GEAR

(a) Remove front oil pump driven gear.

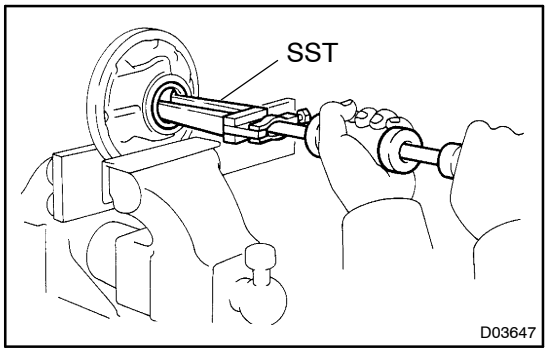


7. REMOVE FRONT OIL PUMP BODY O–RING

(a) Using a screwdriver, remove the O–ring.

HINT:

Tape the screwdriver before use.

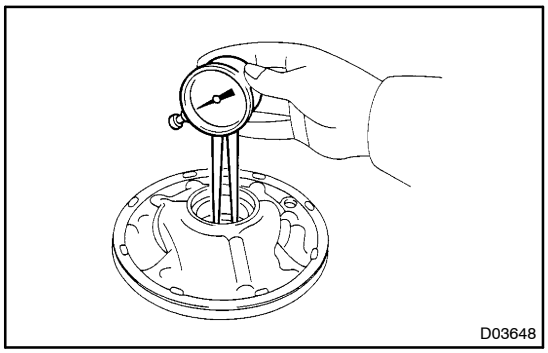


8. REMOVE FRONT OIL PUMP OIL SEAL

(a) Mount oil pump in a soft jaw vise.

(b) Using SST, remove oil seal from the oil pump body.

SST 09308–00010



9. INSPECT FR OIL PUMP & GEAR BODY SUB–ASSY

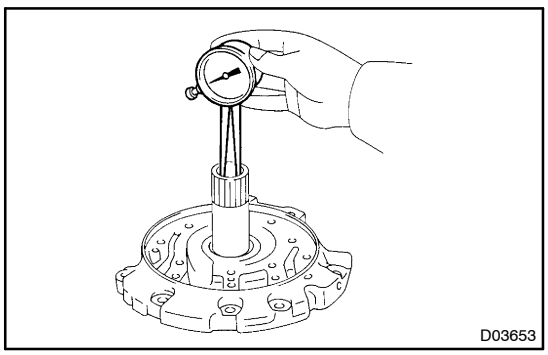
(a) Using a dial indicator, measure the inside diameter of the oil pump body bushing.

Standard inside diameter:

38.113 – 38.138 mm (1.50051 – 1.50149 in.)

Maximum inside diameter: 38.188 mm (1.50346 in.)

If the inside diameter is greater than the maximum, replace the oil pump body sub–assy.



10. INSPECT STATOR SHAFT ASSY

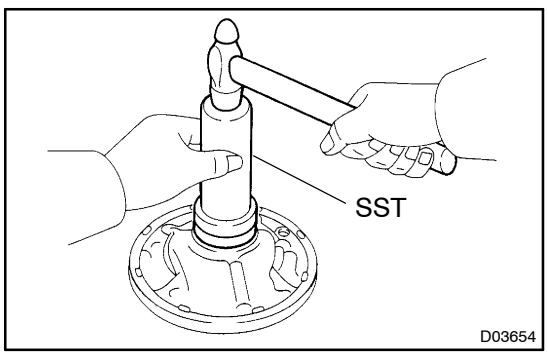
(a) Using a dial Indicator, measure the inside diameter of the stator shaft bushings.

Standard inside diameter:

21.500 – 21.526 mm (0.84646 – 0.84748 in.)

Maximum inside diameter: 21.57 mm (0.8492 in.)

If the indicator diameter is greater than maximum, replace the stator shaft.



11. INSTALL FRONT OIL PUMP OIL SEAL

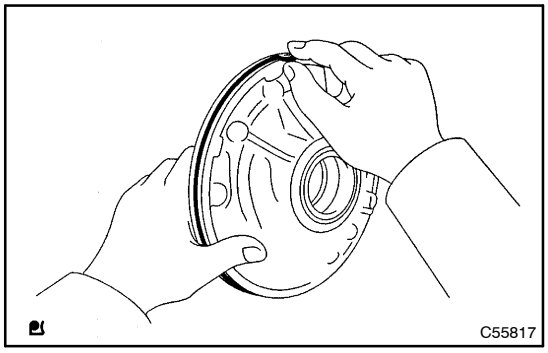
(a) Using SST and a hammer, install a new oil seal to the pump.

SST 09350–32014 (09351–32140)

HINT:

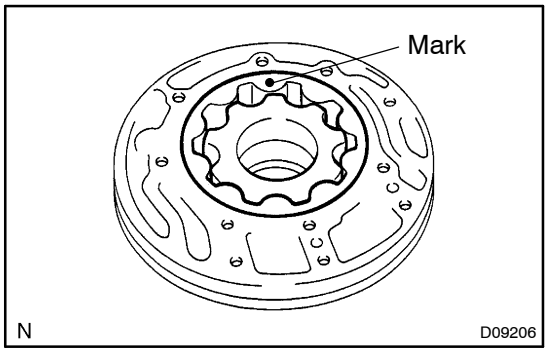
The seal end should be flat with the outer edge of the oil pump.

(b) Coat the lip of the oil seal with petroleum jelly.



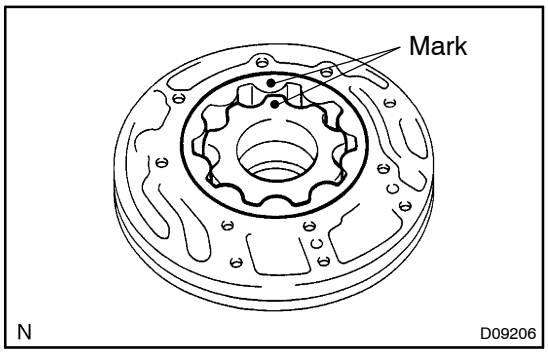
12. INSTALL FRONT OIL PUMP BODY O–RING

(a) Coat the new O–ring with ATF, install it to the oil pump body.



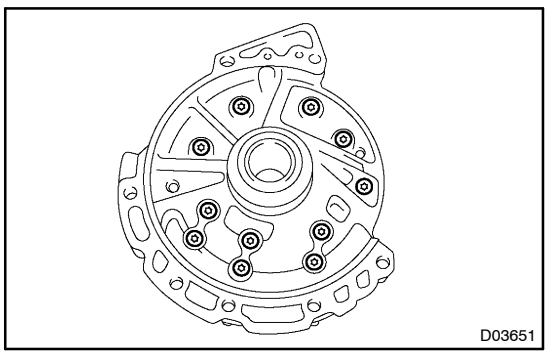
13. INSTALL FRONT OIL PUMP DRIVEN GEAR

(a) Coat the front oil pump driven gear with ATF, install it to the oil pump body with the maked side up.



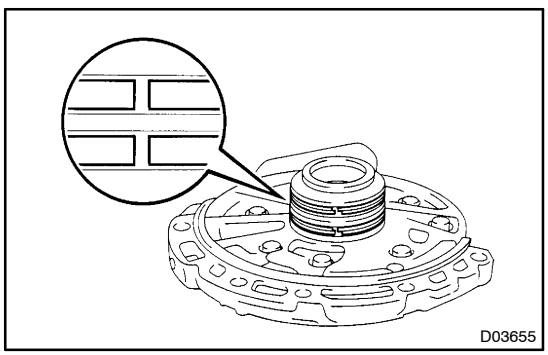
14. INSTALL FRONT OIL PUMP DRIVE GEAR

(a) Coat the front oil pump drive gear with ATF, install it to the oil pump body with the maked side up.



15. INSTALL STATOR SHAFT ASSY

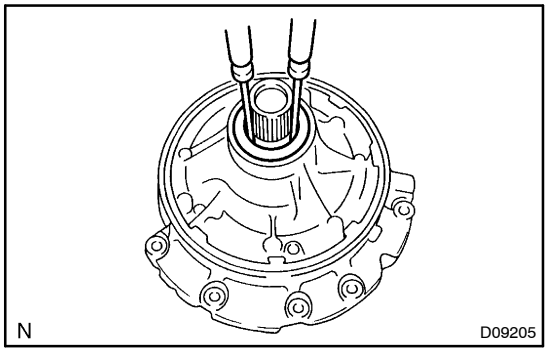
(a) Set the stator shaft by aligning each bolt hole.
(b) Using a torx socket (T30), install the 11 bolts.
Torque: 9.8 N·m (100 kgf·cm, 87 in.·lbf)



16. INSTALL CLUTCH DRUM OIL SEAL RING

(a) Install 2 clutch drum oil seal rings.

NOTICE:
Do not expand the ring ends excessively.



17. INSPECT OIL PUMP ASSY

(a) Turn the drive gear with 2 screwdrivers and make sure it rotates smoothly.

NOTICE:

Be careful not to damage the oil seal lip.