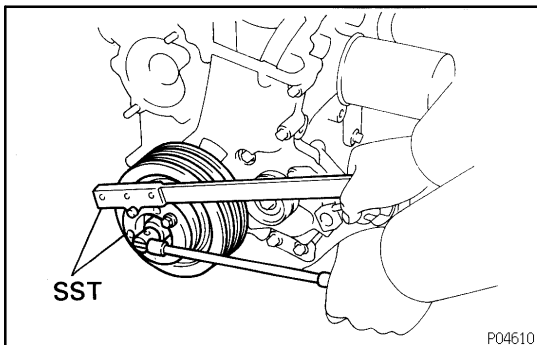


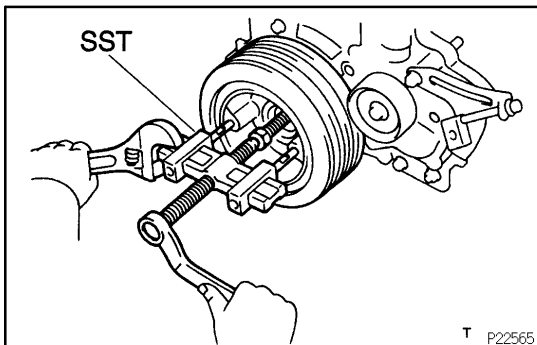
REMOVAL

1. DRAIN ENGINE OIL
2. DRAIN ENGINE COOLANT
3. REMOVE ENGINE UNDER COVER
4. REMOVE RADIATOR (See page [CO-14](#))
5. DISCONNECT A/C COMPRESSOR AND BRACKET (See page [EM-81](#))
6. REMOVE RADIATOR PIPE (See page [EM-81](#))
7. REMOVE WATER PUMP (See page [CO-4](#))
8. REMOVE CYLINDER HEAD ASSEMBLY (See page [EM-25](#))
9. REMOVE NO.2 AND NO.1 OIL PANS (See page [LU-5](#))



10. REMOVE CRANKSHAFT PULLEY

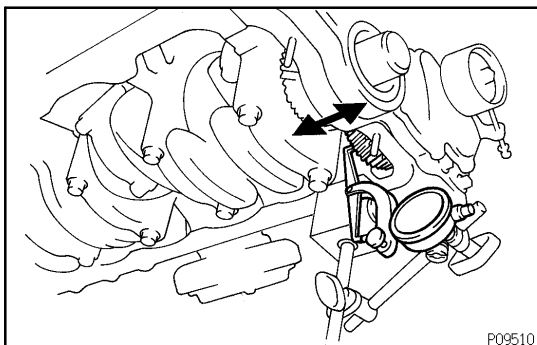
- (a) Using SST, remove the pulley bolt.
SST 09213-58012 (90201-08131, 91111-50845), 09330-00021
- (b) Remove the crankshaft pulley.



HINT:

If necessary, remove the pulley with SST.

SST 09950-50010 (09951-05010, 09952-05010, 09953-05010, 09953-05020, 09954-05020)



11. CHECK THRUST CLEARANCE OF OIL PUMP DRIVE SHAFT GEAR

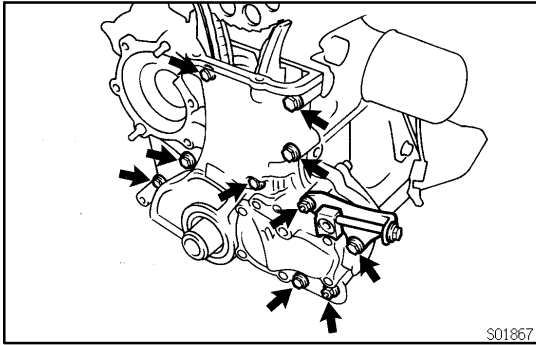
Using a dial indicator with lever type attachment, measure the thrust clearance.

Standard thrust clearance:

0.040 – 0.160 mm (0.0016 – 0.0063 in.)

Maximum thrust clearance:

0.30 mm (0.0118 in.)



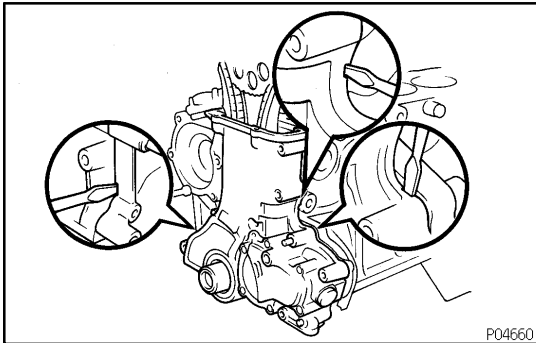
If the thrust clearance is greater than maximum, replace the oil pump drive shaft gear and/or timing chain cover.

12. REMOVE DRIVE BELT IDLER PULLEY

Remove the bolt and idler pulley.

13. REMOVE TIMING CHAIN COVER

(a) Remove the 9 bolts, 2 nuts and drive belt adjusting bar.



(b) Remove the oil pump by prying the portions between the cylinder block and oil pump with a screwdriver.

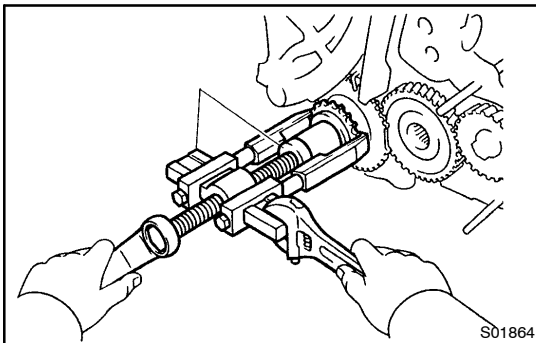
NOTICE:

Be careful not to damage the contact surfaces of the cylinder block and oil pump.

(c) Remove the 2 O-rings from the oil pump.

(d) Remove the gasket from the oil pump.

14. REMOVE TIMING CHAIN AND CAMSHAFT TIMING GEAR

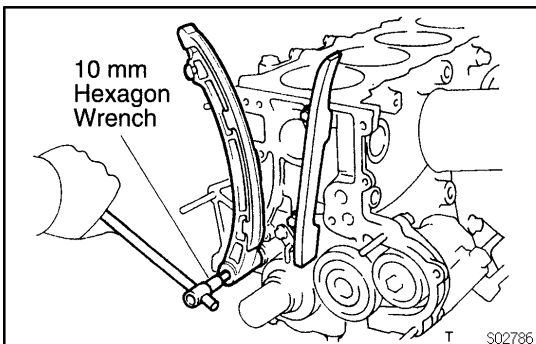


15. REMOVE CRANKSHAFT TIMING GEAR

HINT:

If necessary, remove the gear with SST.

SST 09950-40010 (09951-04010, 09952-04010, 09953-04020, 09954-04010, 09955-04060), 09950-60010 (09951-00350)



16. REMOVE CHAIN TENSIONER SLIPPER

Using a 10 mm hexagon wrench, remove the bolt and slipper.

17. REMOVE CHAIN VIBRATION DAMPER

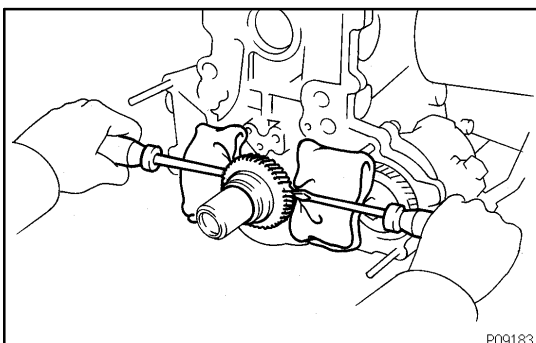
Remove the 2 bolts and damper.

18. REMOVE OIL JET

Remove the bolt and oil jet.

19. REMOVE CRANKSHAFT ROTOR

20. REMOVE OIL PUMP DRIVE SHAFT GEAR



21. REMOVE PUMP DRIVE SHAFT GEAR

If the pump drive shaft gear cannot be removed by hand, use 2 screwdrivers.

NOTICE:

Position shop rags as shown to prevent damage.