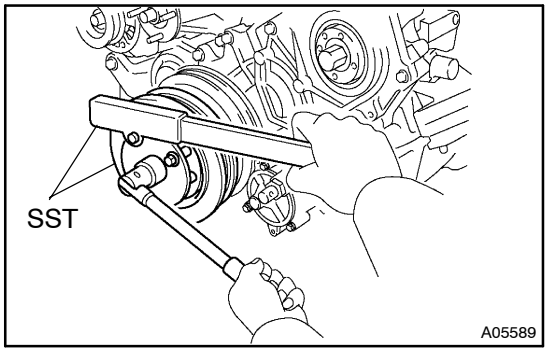
EM1SY–01

REMOVAL



1. REMOVE DRIVE BELTS, FLUID COUPLING AND WATER PUMP PULLEY

2. LOOSEN CRANKSHAFT PULLEY

Using SST, loosen the pulley bolt.

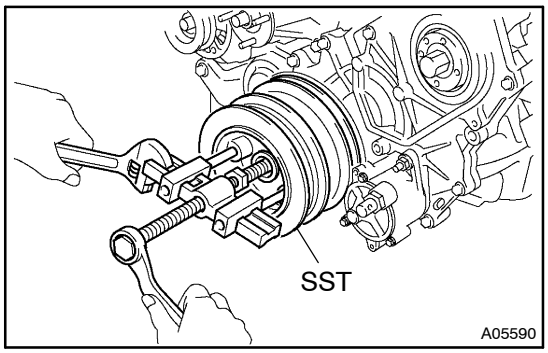
SST 09213–58013 (90201–08131, 91111–50845), 09330–00021

NOTICE:

If the timing belt is disengaged, having the crankshaft pulley at the wrong angle can cause the piston head and valve head to come into contact with each other when you remove the camshaft timing pulley causing damage.

3. REMOVE TIMING BELT AND TIMING PULLEYS

(See page EM–3)



4. REMOVE CRANKSHAFT PULLEY

(a) Remove the pulley bolt and plate washer.

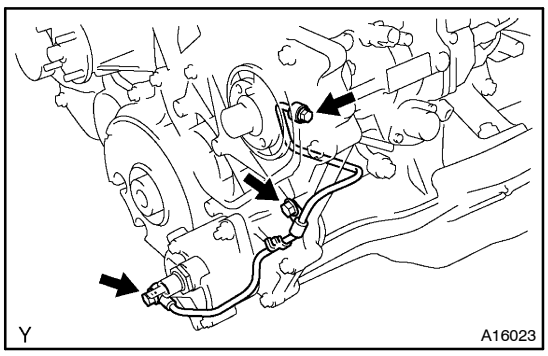
NOTICE:

Do not turn the crankshaft pulley. The valve heads will hit against the piston top.

(b) Using SST, remove the crankshaft pulley. The valve heads will hit against the piston top.

SST 09950–50013 (09951–05010, 09952–05010, 09953–05010, 09953–05020, 09954–05021)

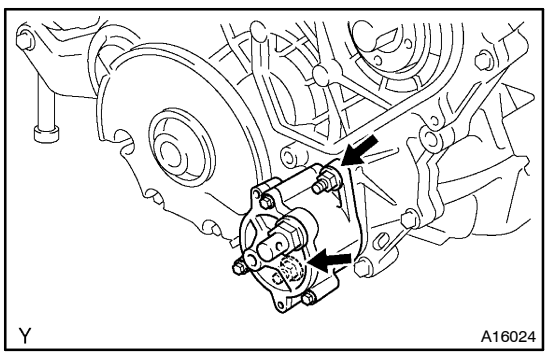
(c) Remove the O–ring from the crankshaft pulley.



5. REMOVE OIL PIPE

(a) Remove the 2 union bolts and 4 gaskets.

(b) Remove the bolt and oil pipe.



6. REMOVE VACUUM PUMP

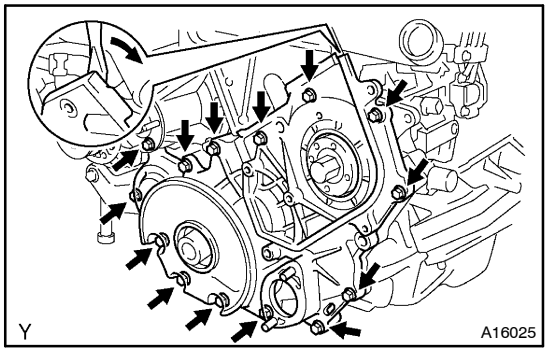
(a) Remove the 2 nuts and vacuum pump.

(b) Remove the O–ring.

7. REMOVE CAMSHAFT OIL SEAL RETAINER

(See Pub. No. RM617E, on page EM–91)

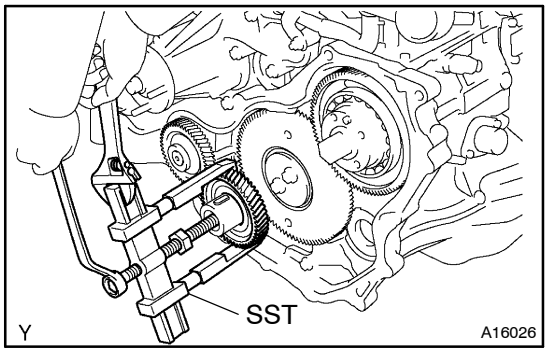
8. REMOVE NO.2 CYLINDER BLOCK INSULATOR



9. REMOVE TIMING GEAR COVER

(a) Remove the 14 bolts.

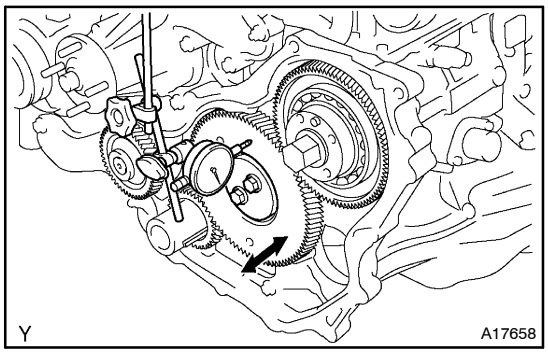
(b) Pry out the timing gear cover.



10. REMOVE OIL PUMP DRIVE SHAFT GEAR

Using SST, remove the drive shaft gear.

SST 09950–40011 (09951–04010, 09952–04010, 09953–04010, 09953–04020, 09954–04010, 09955–04061)

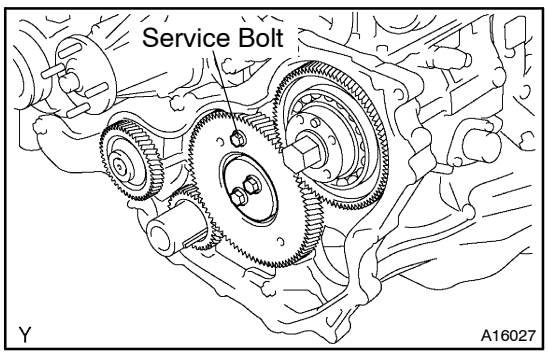


11. CHECK THRUST CLEARANCE OF IDLER GEAR

Using a dial indicator, measure the thrust clearance.

Standard thrust clearance:
0.07 – 0.12 mm (0.0028 – 0.0047 in.)
Maximum thrust clearance:
0.12 mm (0.0047 in.)

If the thrust clearance is greater than maximum, replace the thrust plate. If necessary, replace the idler gear and/or idler gear shaft.



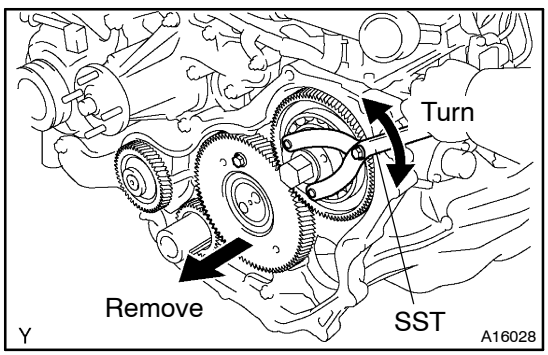
12. REMOVE IDLER GEAR

(a) Secure the idler sub–gears to the idler gear with a service bolt.

Recommended service bolt:

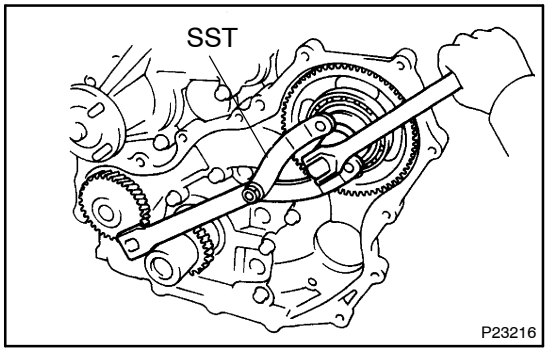
Thread diameter	8 mm
Thread pitch	1.25 mm
Bolt length	25.0 mm (0.98 in.)

(b) Remove the 2 bolts and thrust plate.



(c) Using SST, turn the injection pump drive gear clockwise or counterclockwise and remove the idler gear.
SST 09960–10010 (09962–01000, 09963–00600)

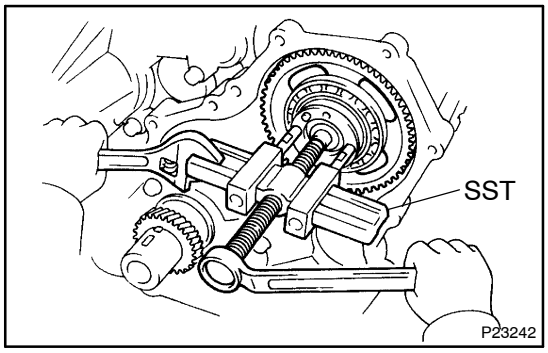
(d) Remove the idler gear shaft.



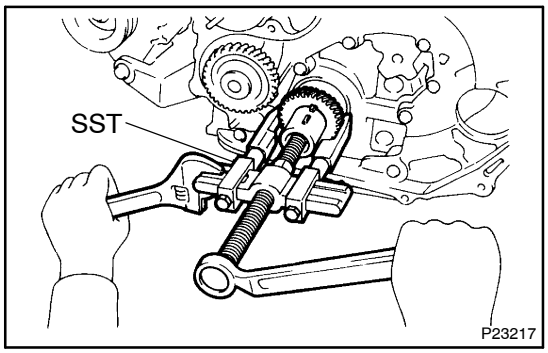
13. REMOVE INJECTION PUMP DRIVE GEAR

(a) Using SST, loosen the gear nut.
SST 09960–10010 (09962–01000, 09963–00600)

(b) Remove the gear nut and O–ring.



(c) Using SST, remove the drive gear.
SST 09950–50013 (09951–05010, 09952–05010, 09953–05010, 09954–05021)



14. REMOVE CRANKSHAFT TIMING GEAR

Using SST, remove the timing gear.
SST 09950–40011 (09951–04010, 09952–04010, 09953–04020, 09954–04010, 09955–04061)