

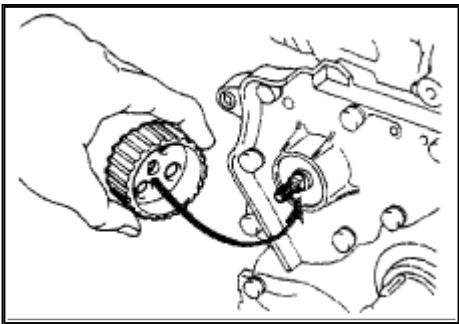
1993 Toyota Camry Sedan L4-132 2164cc 2.2L DOHC (5S-FE)

[Vehicle Level](#) → [Engine, Cooling and Exhaust](#) → [Engine](#) → [Timing Belt](#) → [Service and Repair](#) → [Timing Belt Installation](#) ←

Timing Belt Installation

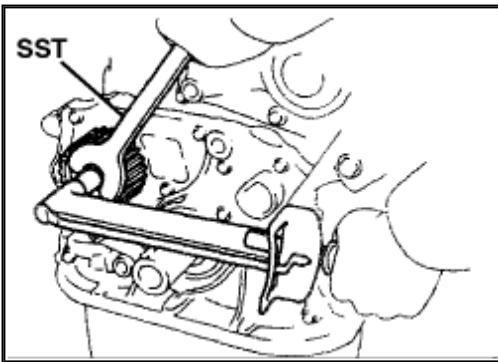
[Notes](#)

TIMING BELT / INSTALLATION



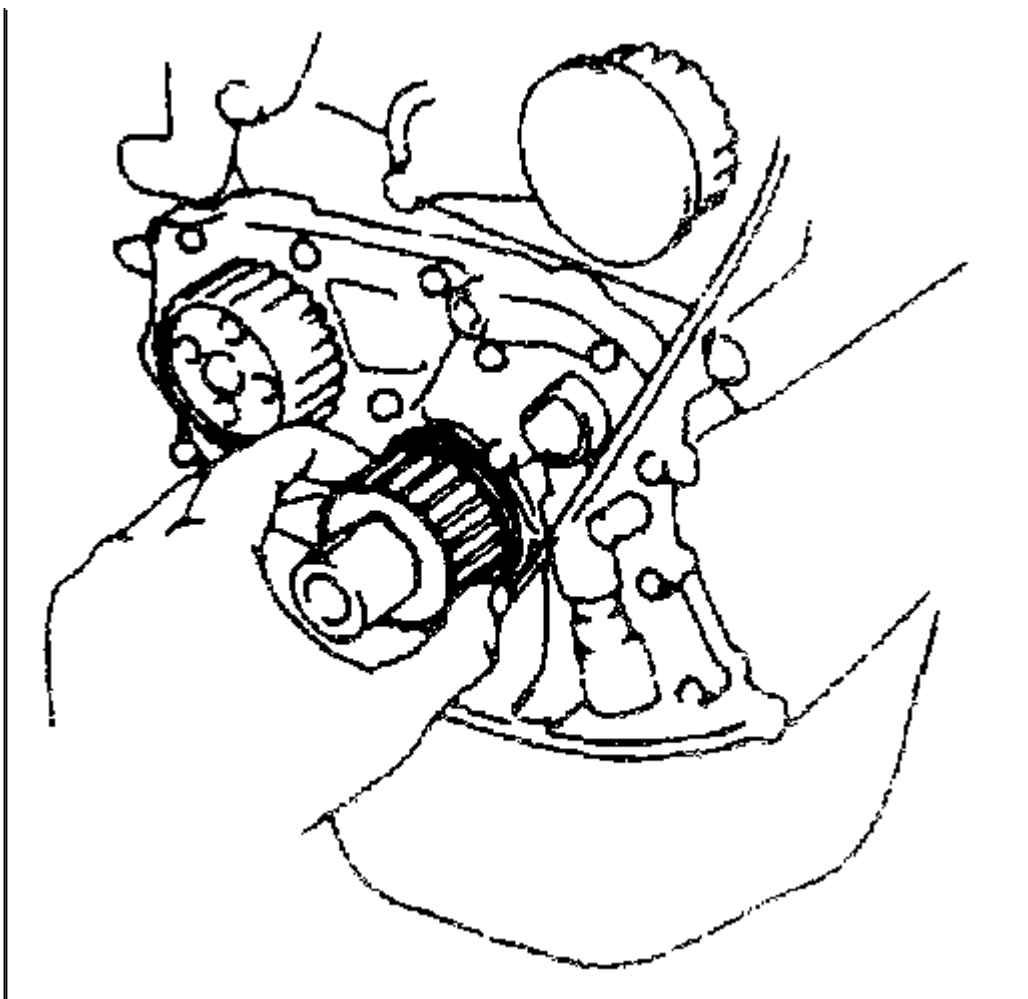
1. INSTALL OIL PUMP PULLEY

- a. Align the cutouts of the pulley and shaft, and slide on the pulley.



- b. Using SST, install the nut. **SST: 09616-30011 Torque: 26 N.m (290 kgf.cm, 21 ft.lbf)**



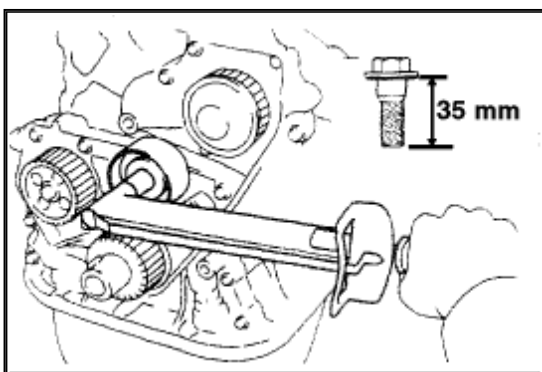


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2. INSTALL CRANKSHAFT TIMING PULLEY

- a. Align the timing pulley set key with the key groove of the pulley.
- b. Slide on the timing pulley, facing the flange side inward.

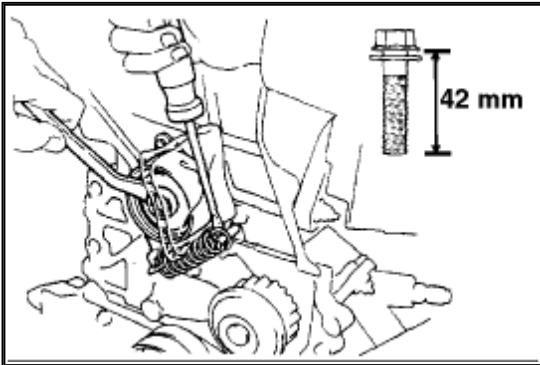


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3. INSTALL NO.2 IDLER PULLEY

- a. Install the pulley with the bolt. **Torque: 42 N.m (425 kgf.cm, 31 ft.lbf)** **HINT:** Use bolt 35 mm (1.38 in.) in length.
- b. Check that the idler pulley moves smoothly.



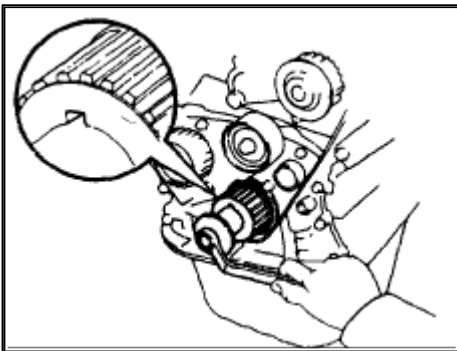
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4. TEMPORARILY INSTALL NO.1 IDLER PULLEY AND TENSION SPRING

- a. Install the pulley with the bolt. Do not tighten the bolt yet. **HINT:** Use bolt 42 mm (1.65 in.) in length.
- b. Install the tension spring.
- c. Pry the pulley toward the left as far as it will go and tighten the bolt.
- d. Check that the idler pulley moves smoothly.

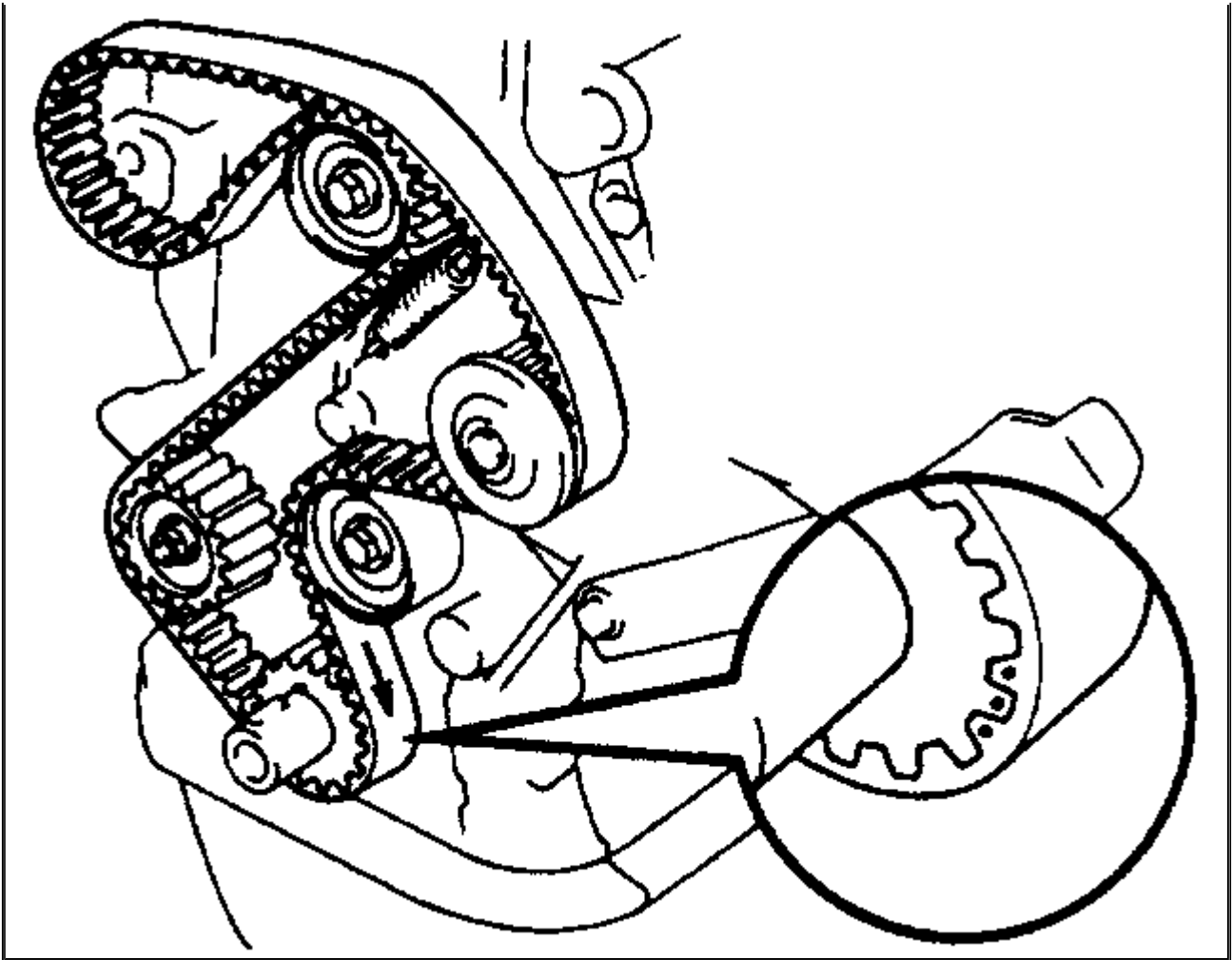
5. TEMPORARILY INSTALL TIMING BELT **NOTICE:** The engine should be cold.



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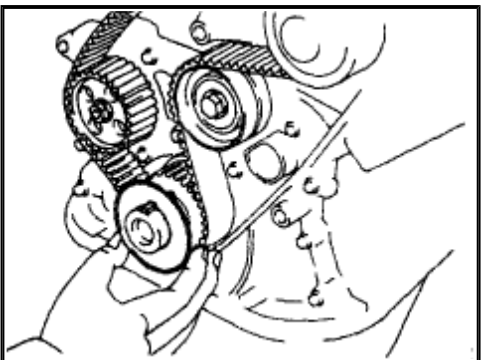
- a. Using the crankshaft pulley bolt. turn the crankshaft and position the key groove of the crankshaft timing pulley upward.



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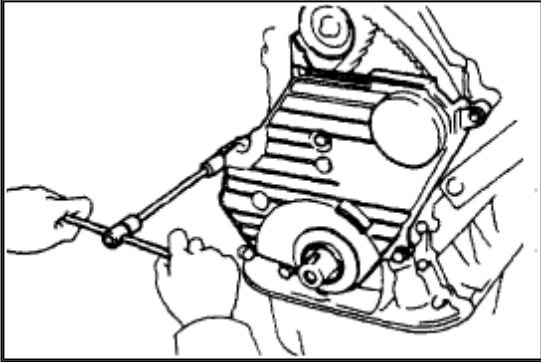
- b. Remove any oil or water on the crankshaft pulley, oil pump pulley, water pump pulley, No.1 idler pulley, No. 2 idler pulley and keep them clean.
- c. Install the timing belt on the crankshaft timing pulley, oil pump pulley, No.1 idler pulley, water pump pulley and No.2 idler pulley. **HINT:** (When re-using timing belt): Align the points marked during removal, and install the belt with the arrow pointing in the direction of engine revolution.



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6. INSTALL TIMING BELT GUIDE Install the guide, facing the cup side outward.

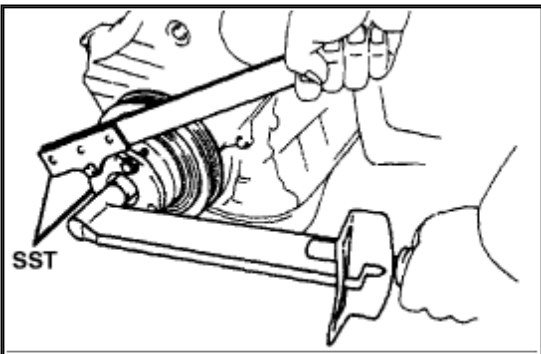


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7. INSTALL NO.1 TIMING BELT COVER

- a. Install the gasket to the timing belt cover.
- b. Install the timing belt cover with the four bolts.



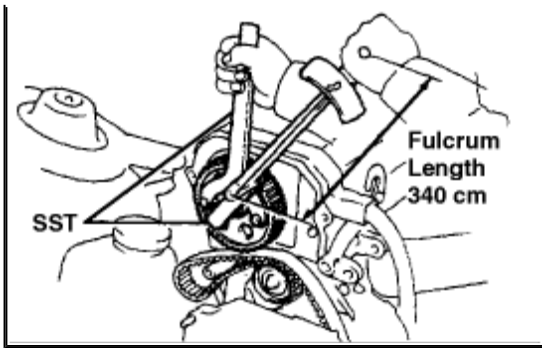
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8. INSTALL CRANKSHAFT PULLEY

- a. Align the pulley set key with the key groove of the pulley, and slide on the pulley.
- b. Using SST, install the pulley bolt. **SST: 09213-54015 (91651-60855), 09330-00021 Torque: 108 N.m (1.100 kgf.cm, 80 ft.lbf)**





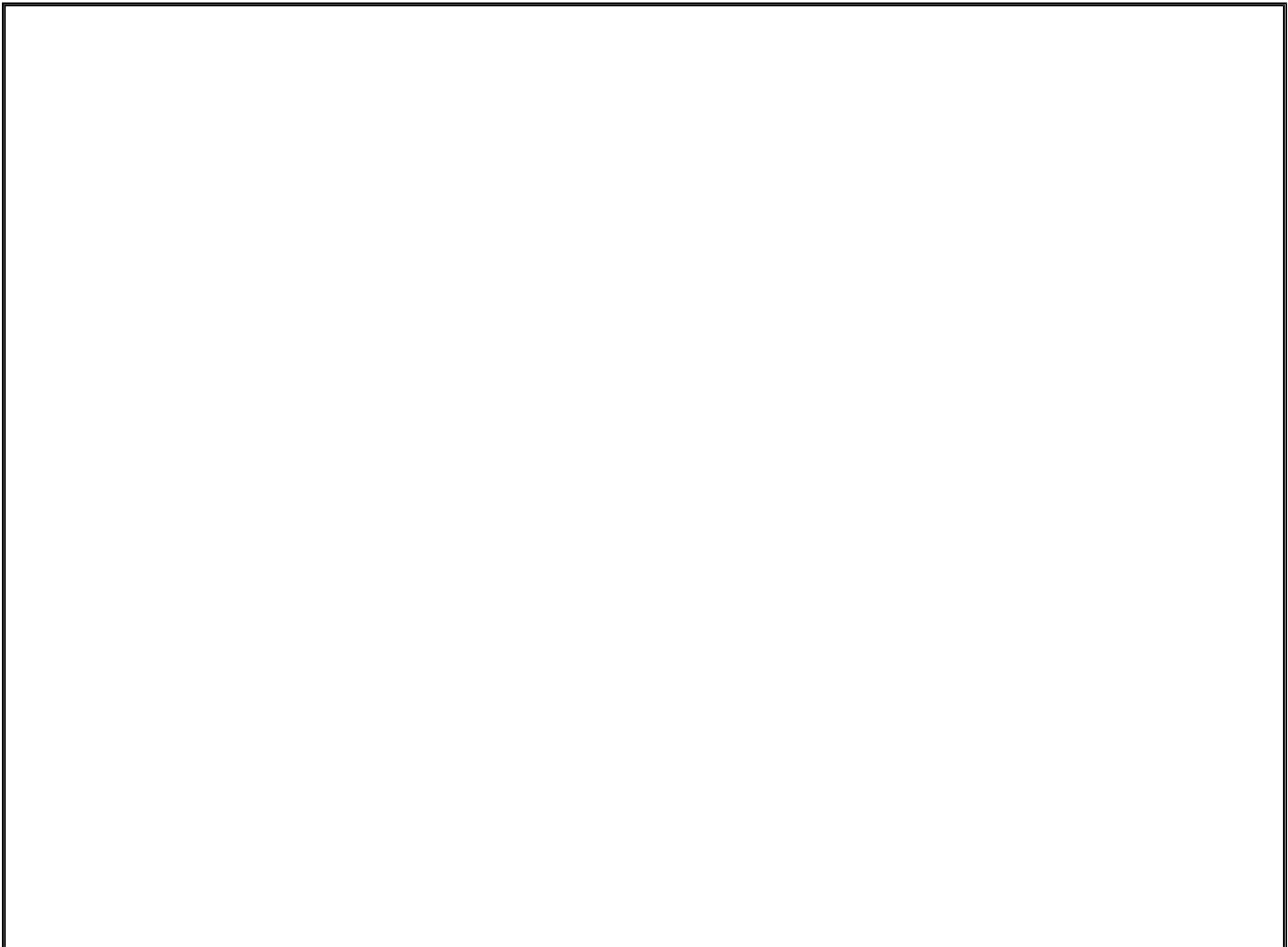
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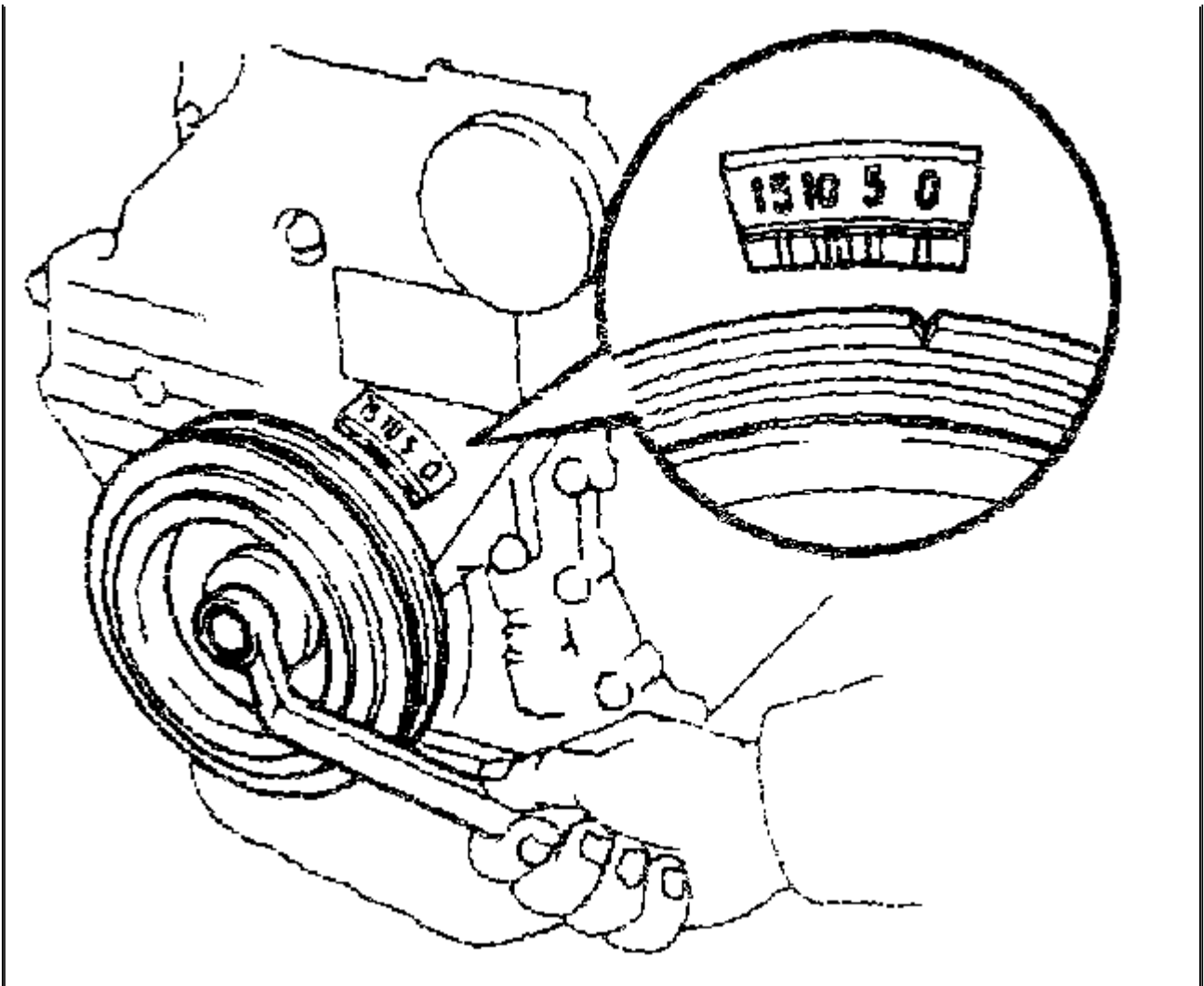
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9. INSTALL CAMSHAFT TIMING PULLEY

- a. Align the camshaft knock pin with the knock pin groove of the pulley, and slide on the timing pulley.
- b. Using SST, install the plate washer and bolt. **SST: 09249-63010 and 09276-54012 Torque: 37 N.m (380 kgf.cm, 27 ft.lbf) HINT: Use a torque wrench with a fulcrum length of 340 cm (13.39 in.)**

10. SET NO.1 CYLINDER TO TDC/COMPRESSION

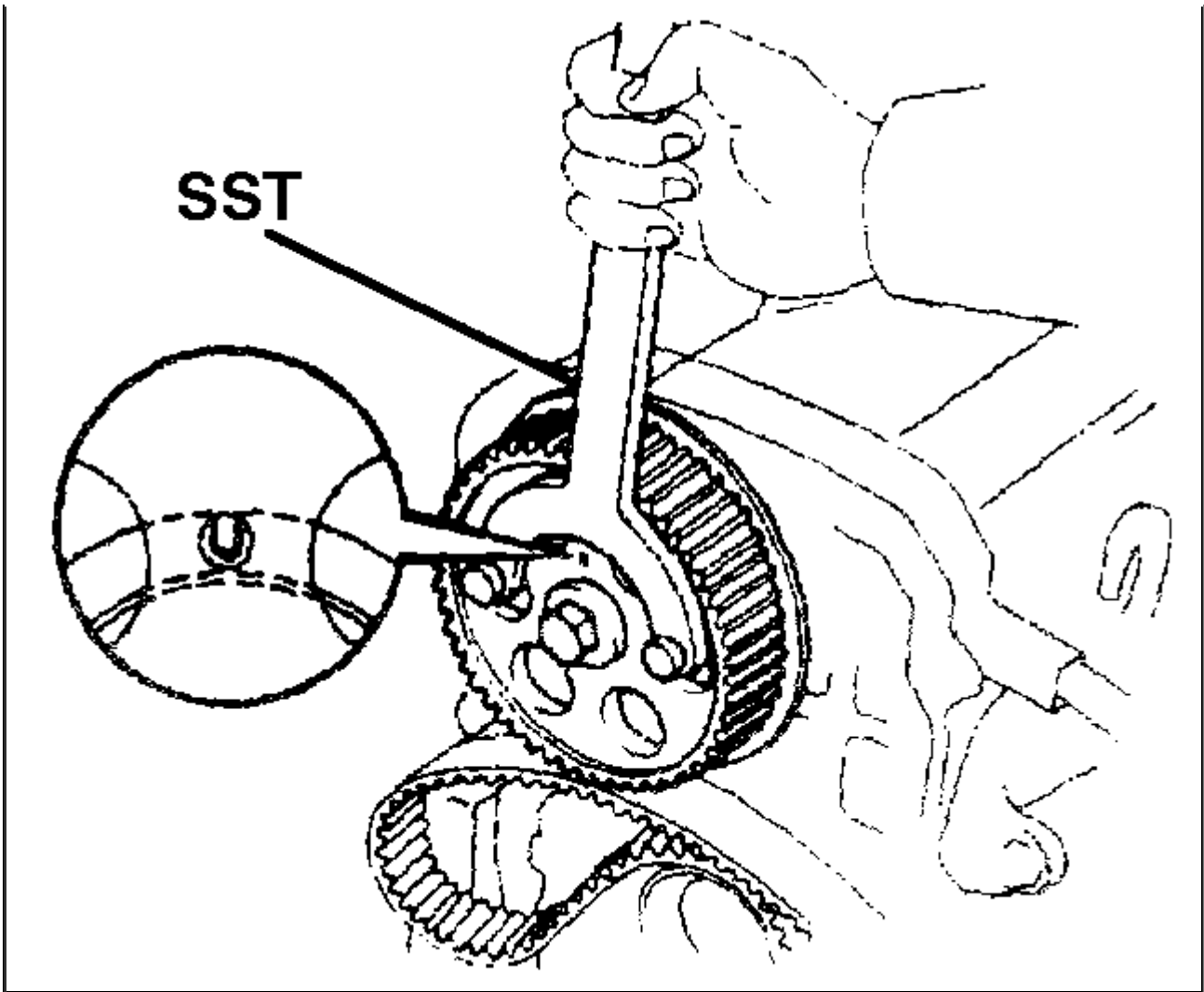




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- a. Turn the crankshaft pulley, and align its groove with timing mark "0" of the No.1 timing belt cover.



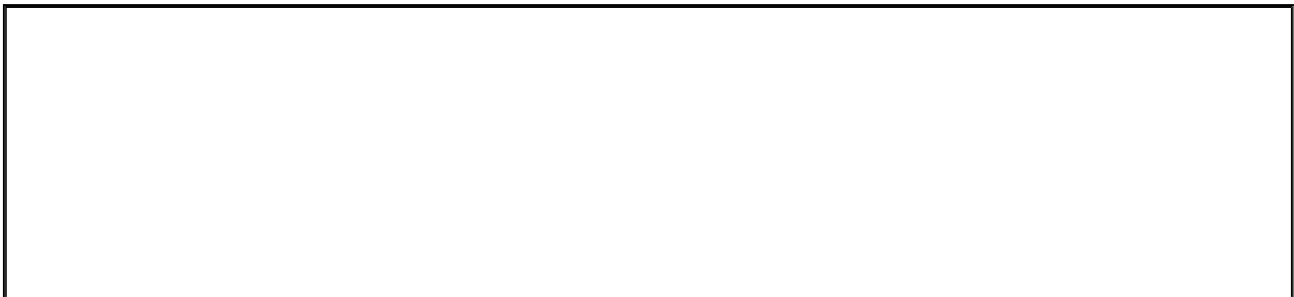
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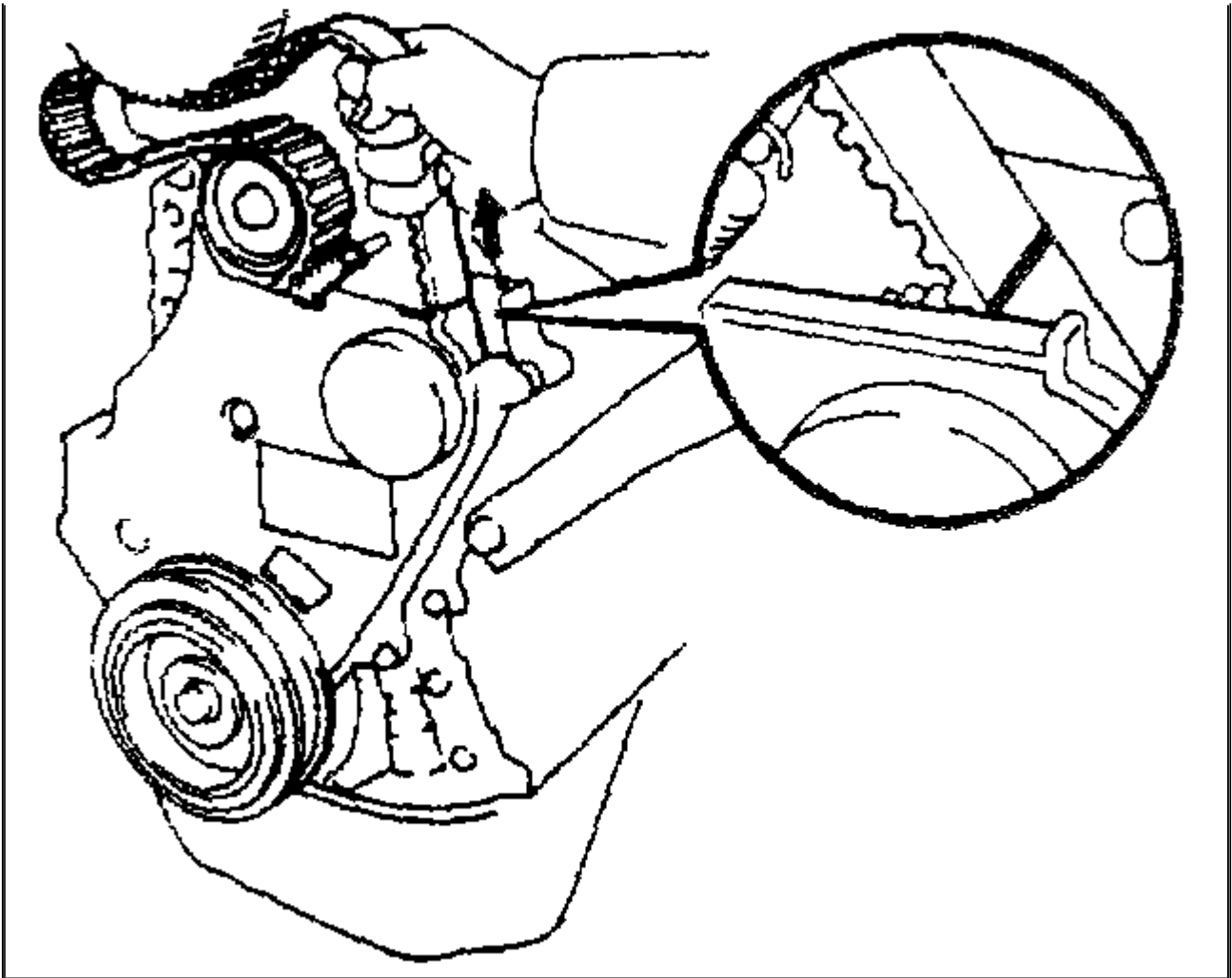
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- b. Using SST, turn the camshaft, and align the hole of the camshaft timing pulley with the timing mark of the bearing cap.

SST: 09278-54012

11. INSTALL TIMING BELT **HINT:** (When re-using timing belt):



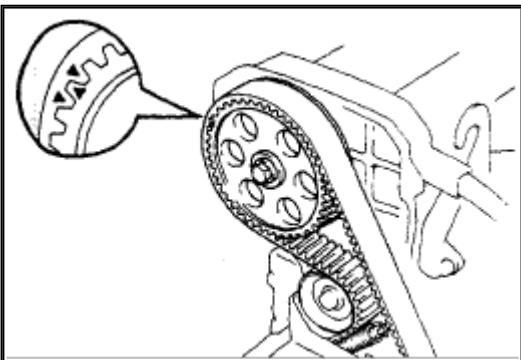


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- Check that the matchmarks on the timing belt matches the end of the No.1 timing belt cover.

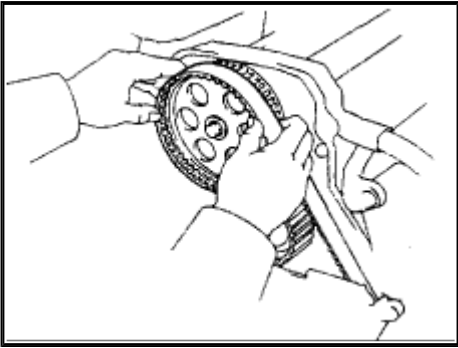
If the matchmarks does not align. shift the meshing of the timing belt and crankshaft timing pulley until they align.



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- Align the matchmarks of the timing belt and camshaft timing pulley.

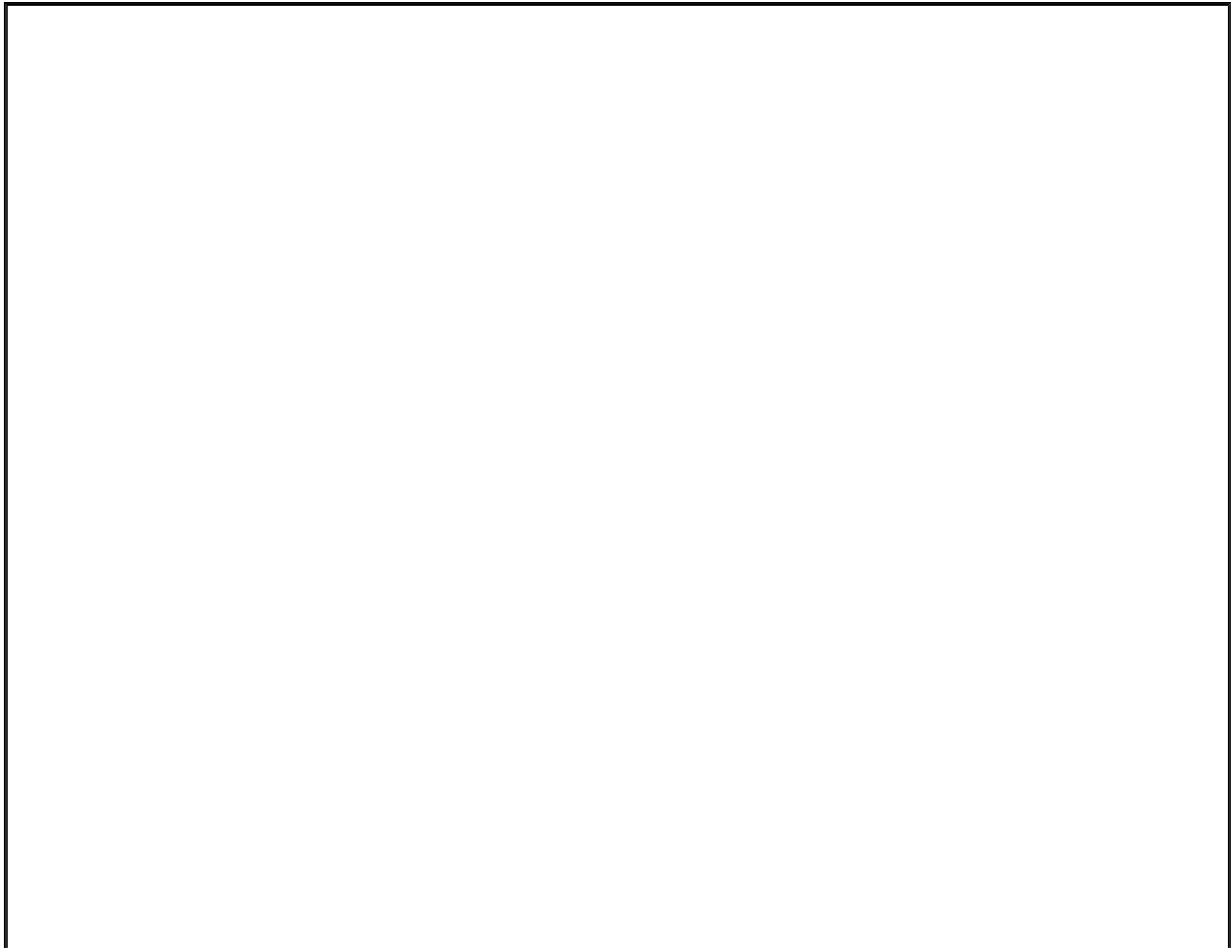


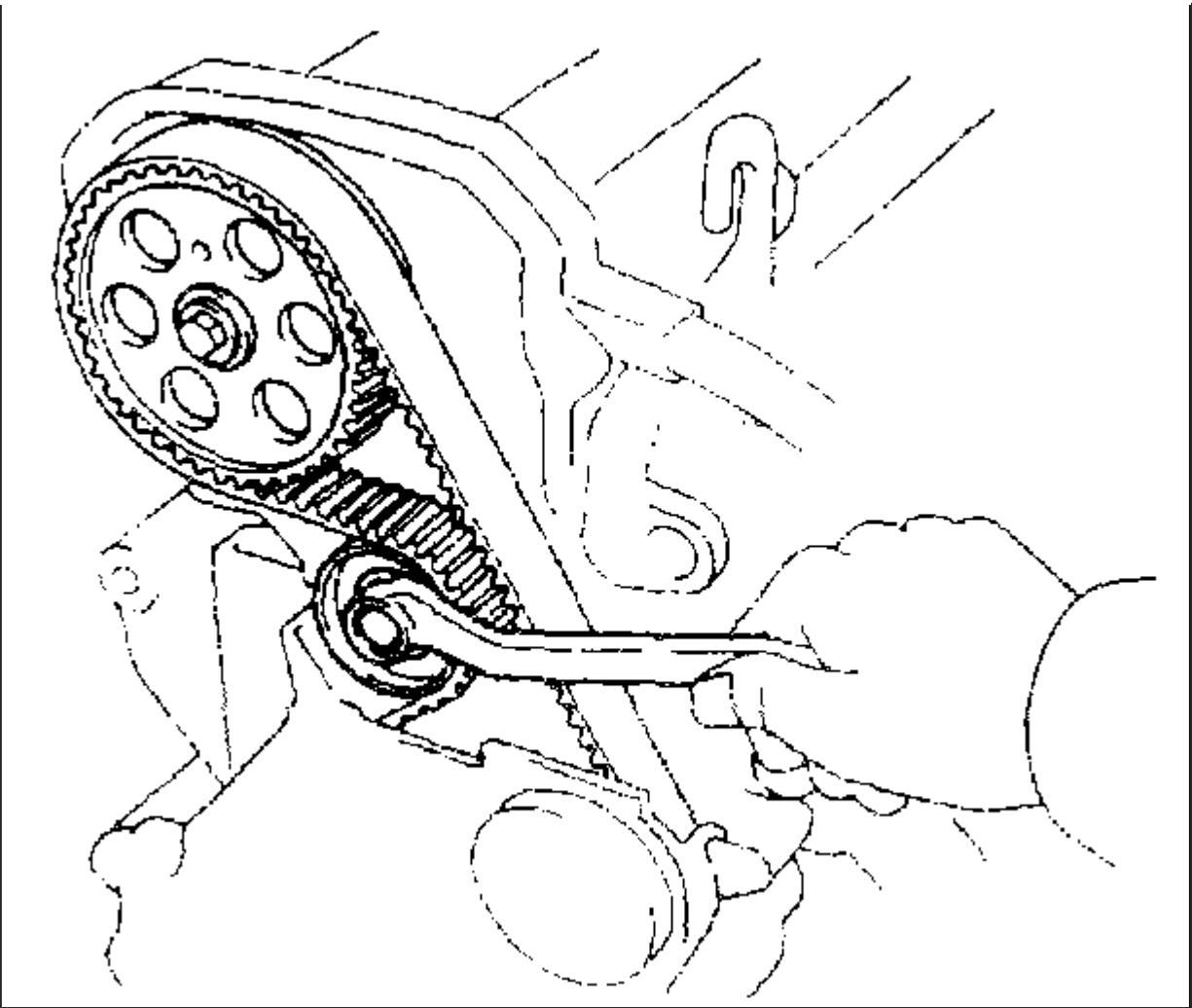
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- a. Remove any oil or water on the camshaft timing pulley, and keep it clean.
- b. Install the timing belt, and checking the tension between the crankshaft timing pulley and camshaft timing pulley.

12. CHECK VALVE TIMING



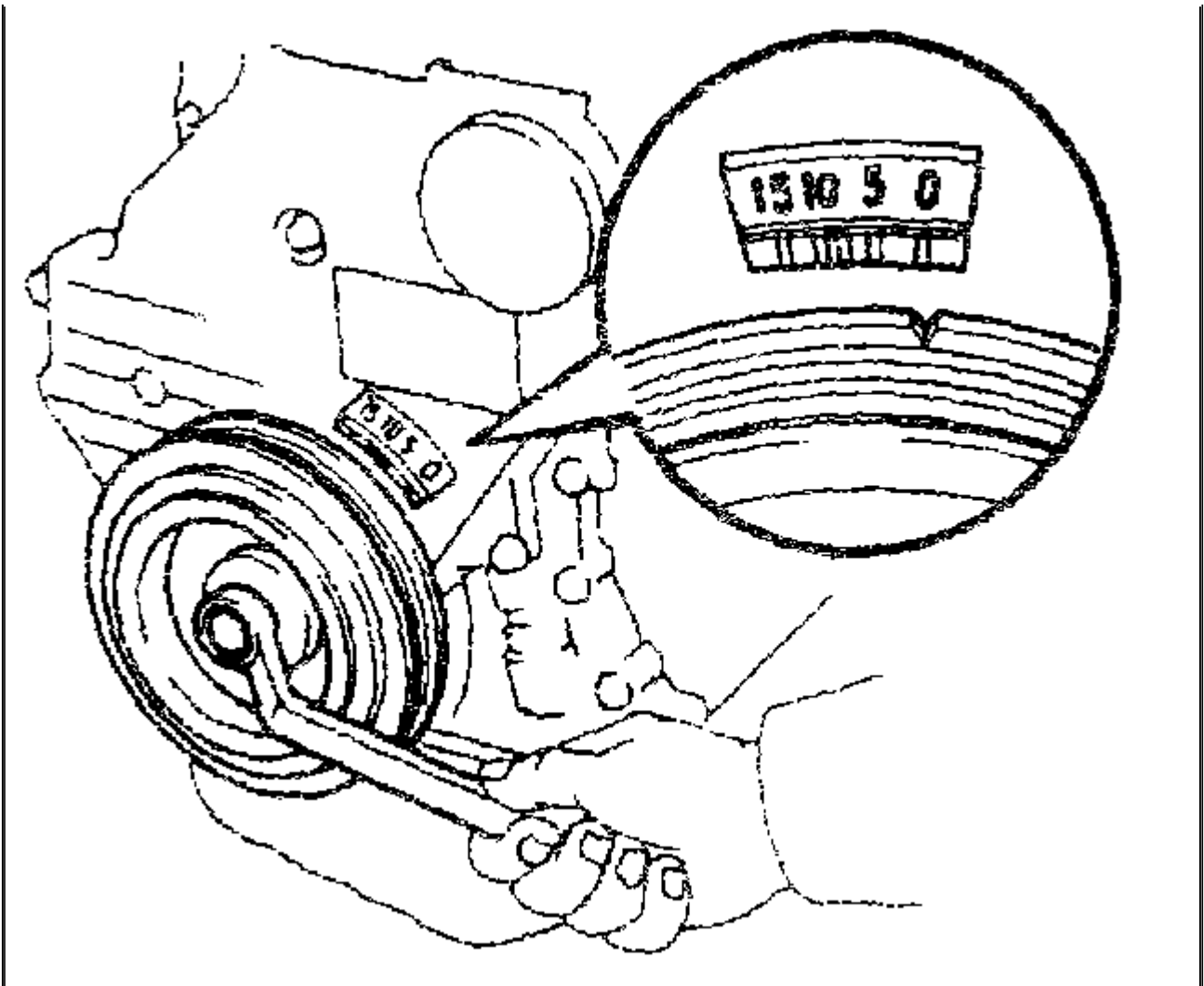


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- a. Loosen the No.1 idler pulley bolt 1/2 turn.



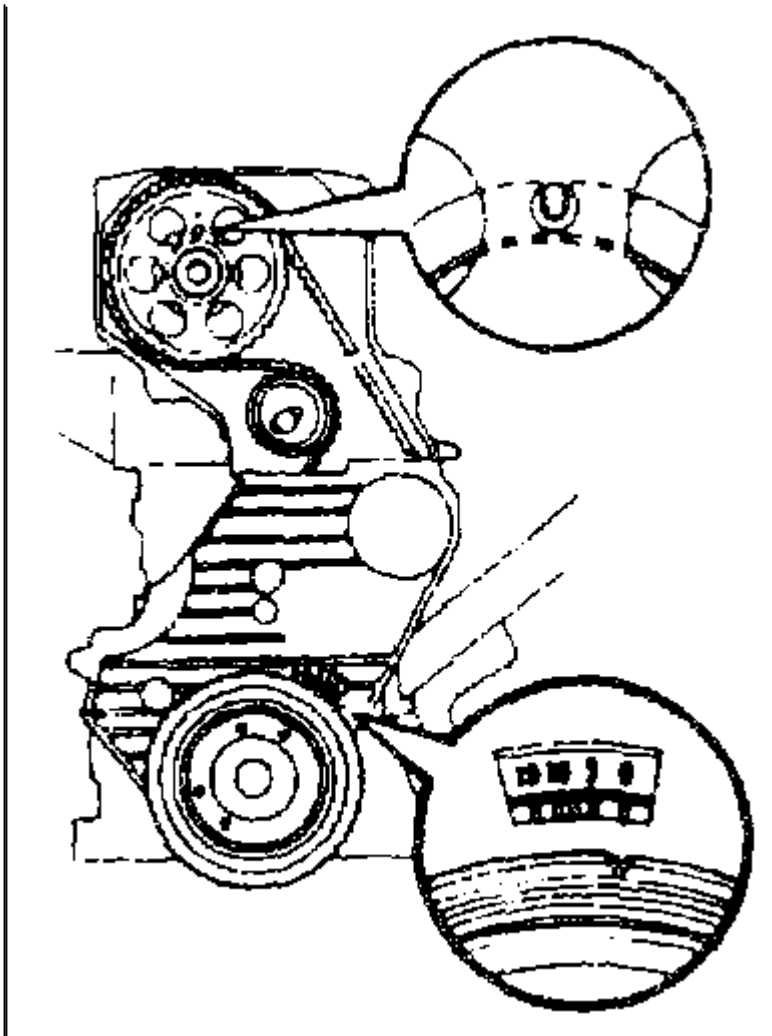


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- b. Turn the crankshaft pulley two revolutions from TDC to TDC. **NOTICE:** Always turn the crankshaft clockwise.

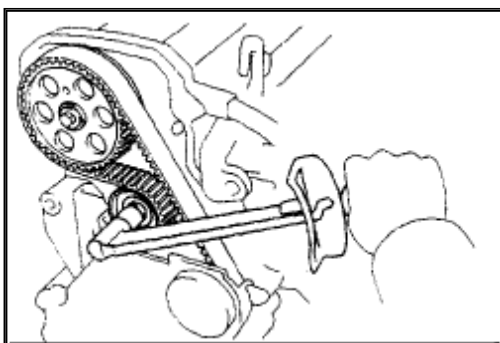




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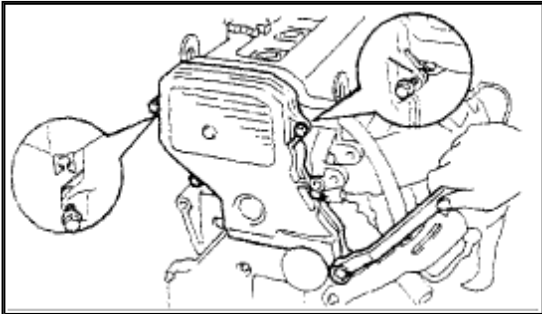
- c. Check that each pulley aligns with the timing marks as shown in the illustration. If the timing marks do not align, remove the timing belt and reinstall it.
- d. (w/Tension spline Green color) Slowly turn the crankshaft pulley 1 and 7/8 revolutions, and align its groove with the mark at 45° BTDC (for No.1 cylinder) of the No.1 timing belt cover. **NOTICE:** Always turn the crankshaft clockwise.



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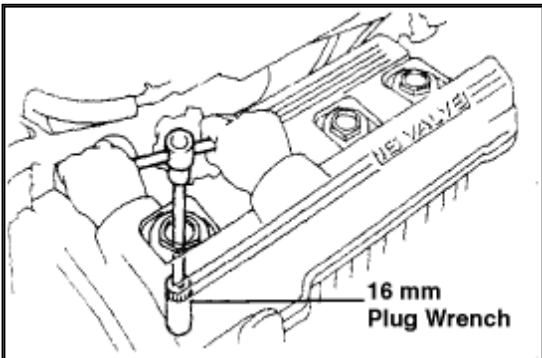
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- a. Torque the mounting bolt of the No.1 idler pulley. **Torque: 42 N.m (425 kgf.cm. 31 ft.lbf)**

[Zoom](#)[Sized for Print](#)

13. INSTALL NO.2 TIMING BELT COVER

- a. Install the two gaskets to the No.1 and No.2 belt covers.
- b. Install the belt cover with the five bolts.
- c. Align the two clamps of the engine wire with cover mounting bolts.

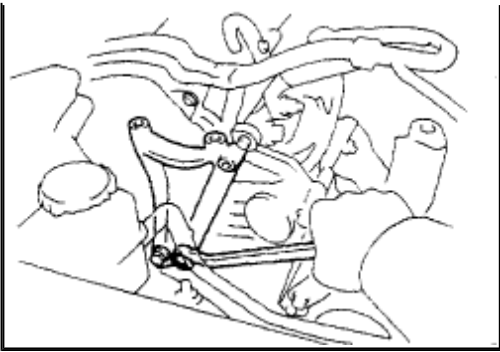
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14. INSTALL SPARK PLUGS

- a. Using a 16 mm plug wrench, install the [spark plug](#).
- b. Connect the [high-tension cords](#).

15. INSTALL NO.2 ENGINE MOUNTING BRACKET

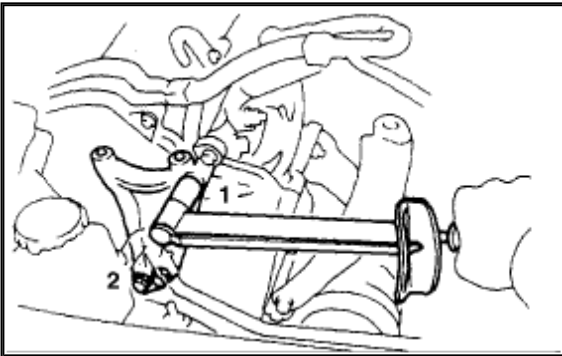




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- a. Temporarily install the No.2 engine mounting bracket with the two bolts.

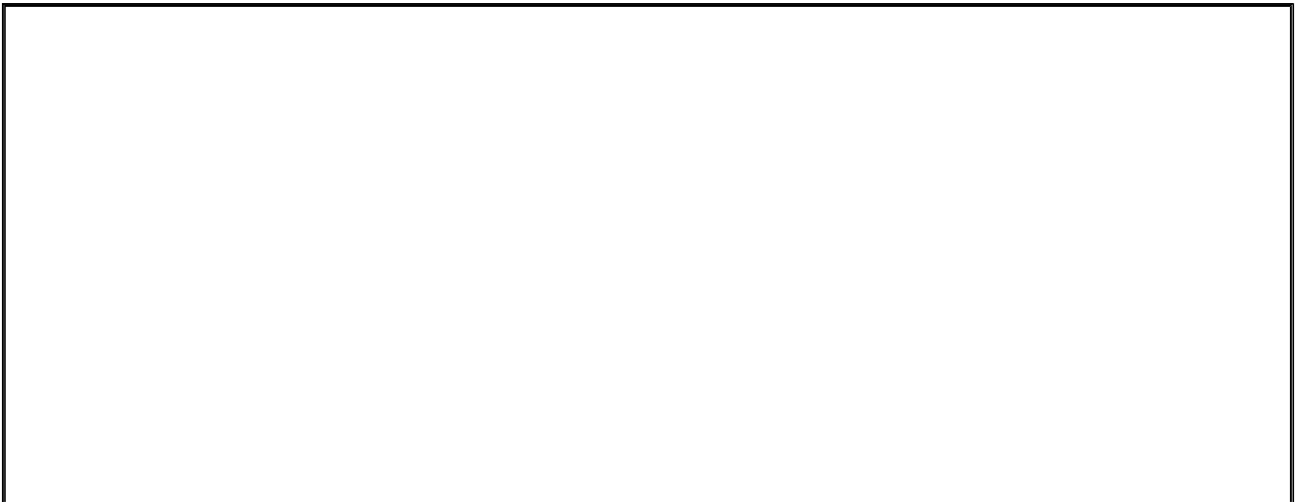


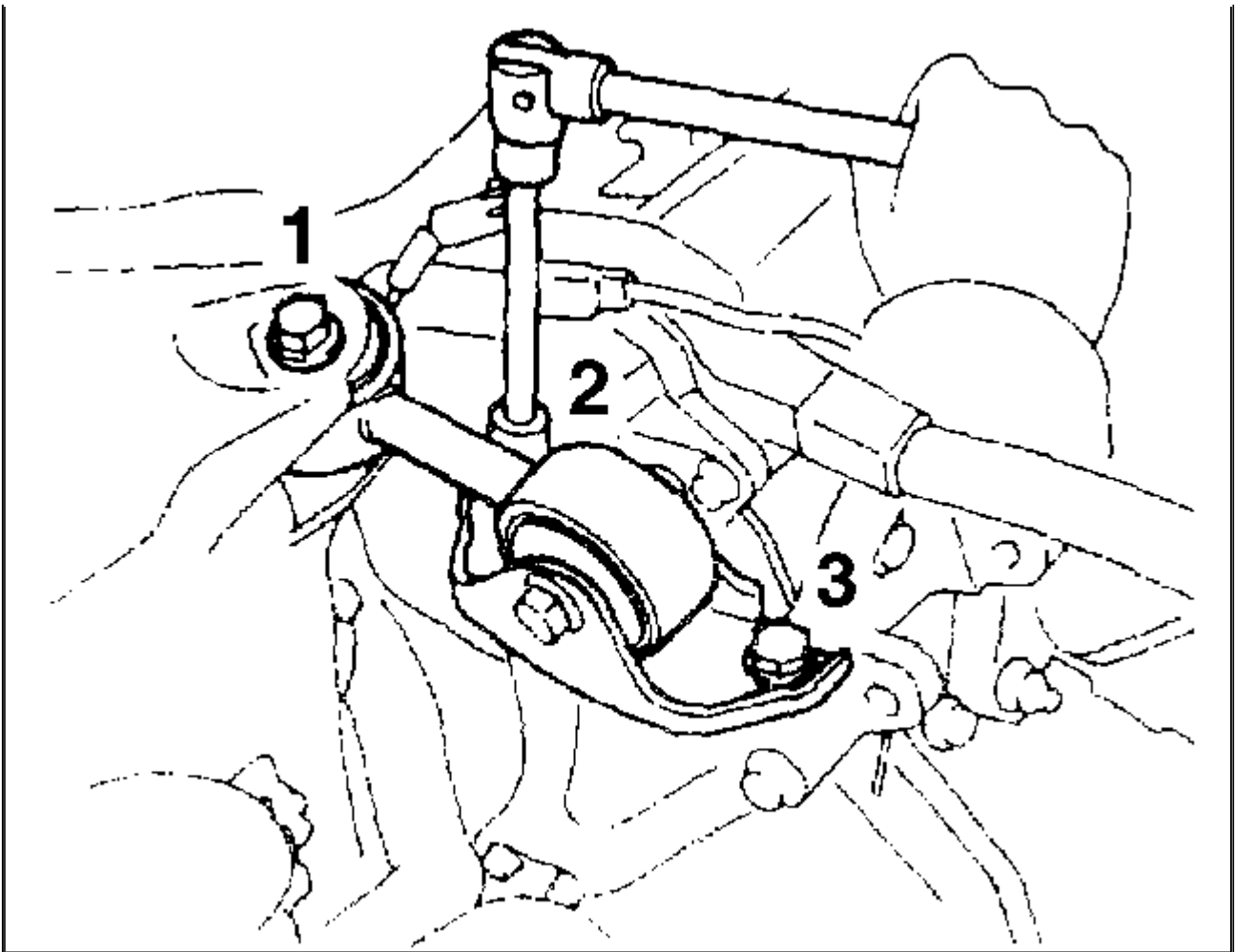
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- b. Install the remain bolt.
- c. Tighten the three bolts in the sequence shown. **Torque: 52 N.m (530 kgf.cm, 38 ft.lbf)**

16. CONNECT CONNECTOR TO GROUND WIRE ON RH FENDER APRON
17. INSTALL ENGINE MOVING CONTROL ROD

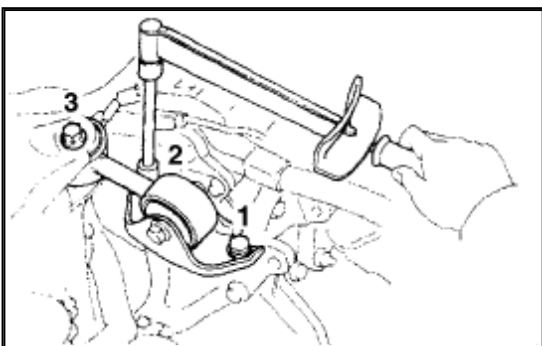




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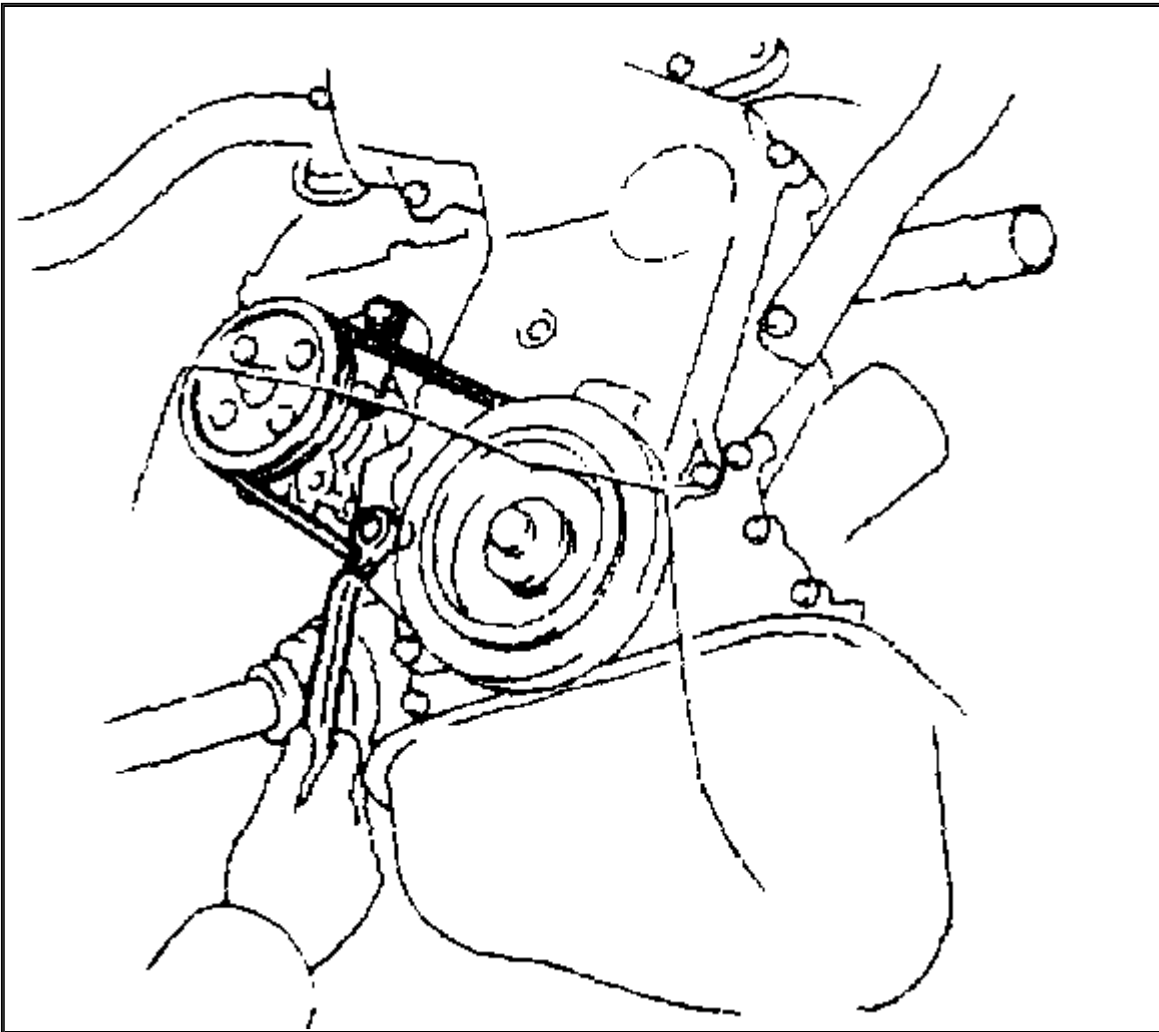
- a. Temporarily install the engine moving control rod with the three bolts in the sequence shown.



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- b. Tighten the three bolt& in the sequence shown. **Torque: 64 N.m (650 kgf.cm. 47 ft.lbf)**

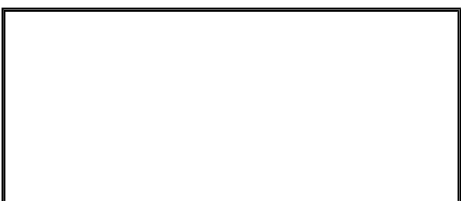


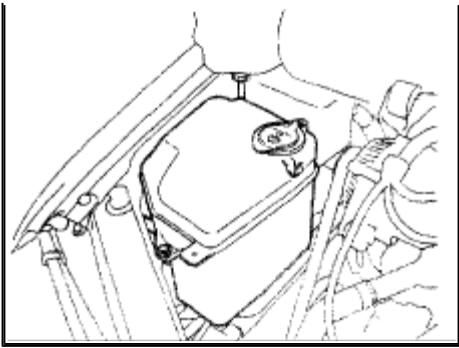
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- 18. INSTALL AND ADJUST P/S [DRIVE BELT](#) Install the drive belt with the pivot and adjusting bolts. [Drive Belt Tension: New Belt...125 +/- 25 lbf Used Belt...80 +/- 20 lbf](#)
- 19. INSTALL RH FENDER APRON SEAL
- 20. INSTALL RH FRONT WHEEL
- 21. INSTALL GENERATOR [Drive Belt Tension: w/ A/C](#)

New Belt...175 +/- 5 lbf
Used Belt...130 +/- 10 lbf
w/o A/C
New Belt...125 +/- 25 lbf
Used Belt...95 +/- 20 lbf

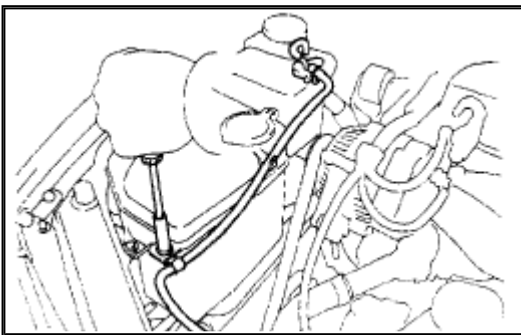




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22. INSTALL COOLANT RESERVOIR TANK



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23. INSTALL WASHER TANK

- a. Connect the connector and vinyl hose to the washer tank.
- b. Install the washer tank with the three bolts.

24. INSTALL COOLANT RESERVOIR HOSE Connect the reservoir hose with the bolt.

25. CONNECT CABLE TO NEGATIVE TERMINAL OF BATTERY