



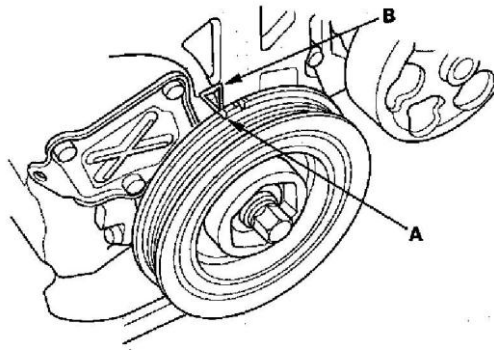
Timing Chain: Service and Repair Acura TSX 2.4 L4 2008

Cam Chain Removal

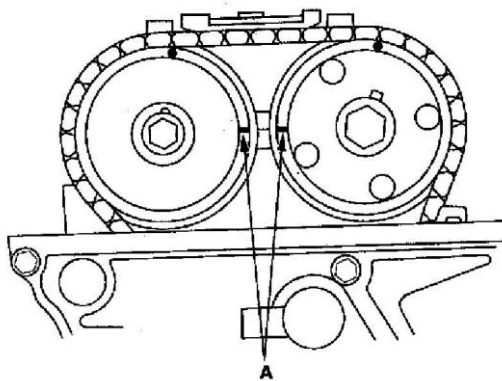
Cam Chain Removal

NOTE: Keep the cam chain away from magnetic fields.

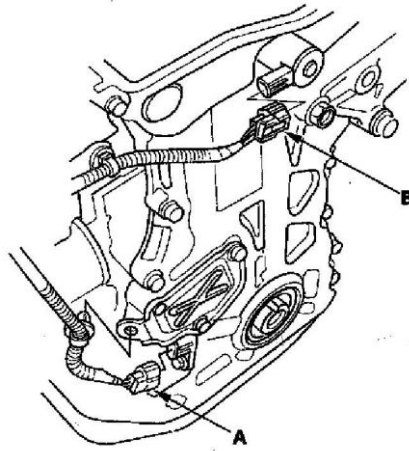
1. Remove the front wheels.
2. Remove the splash shield.
3. Remove the drive belt.
4. Turn the crankshaft pulley so its top dead center (TDC) mark (A) lines up with the pointer (B).



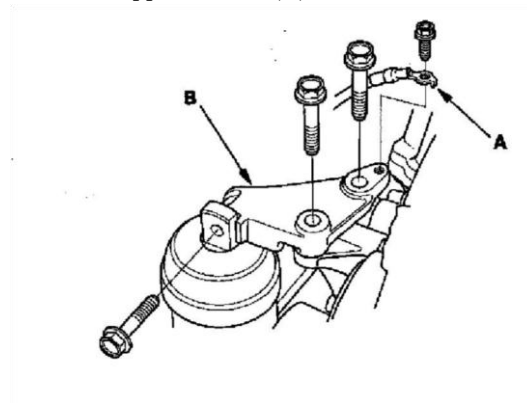
5. Remove the cylinder head cover.
6. Check that the No. 1 piston TDC marks (A) on the variable valve timing control (VTC) actuator and exhaust camshaft sprocket are aligned.



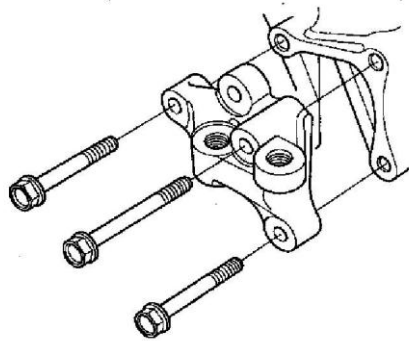
7. Remove the crankshaft pulley.
8. Disconnect the crankshaft position (CKP) sensor connector (A) and VTC oil control solenoid valve connector (B).



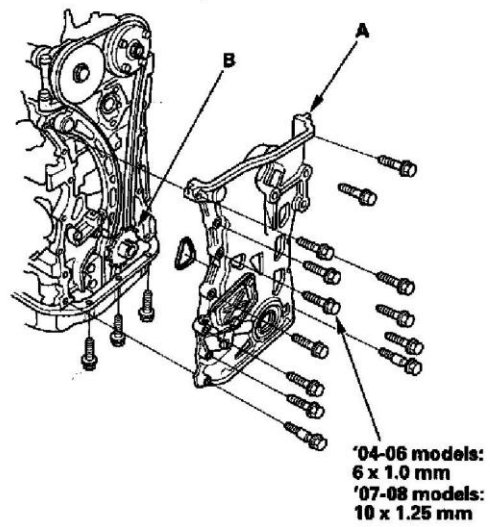
9. Remove the VTC oil control solenoid valve.
10. Support the engine with a jack and wood block under the oil pan.
11. Remove the ground cable (A), and remove the upper bracket (B).



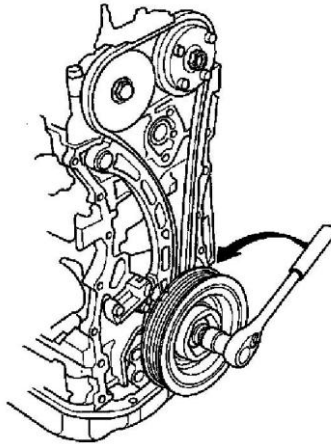
12. Remove the side engine mount bracket.



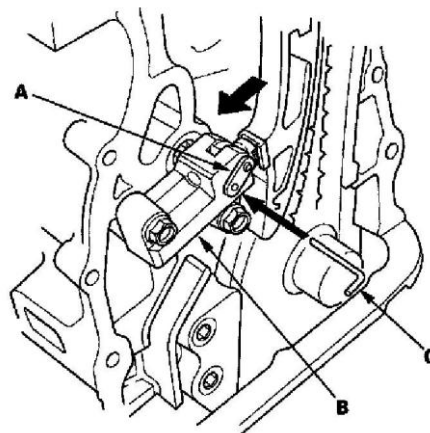
13. Remove the chain case (A), then remove CKP pulse plate (B).



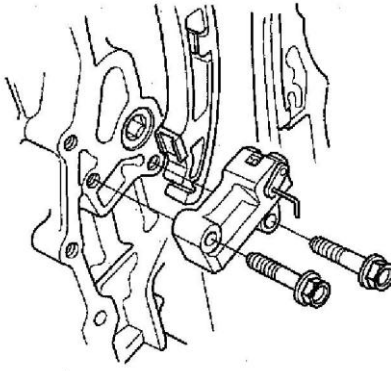
14. Loosely install the crankshaft pulley.
15. Turn the crankshaft counterclockwise to compress the auto-tensioner.



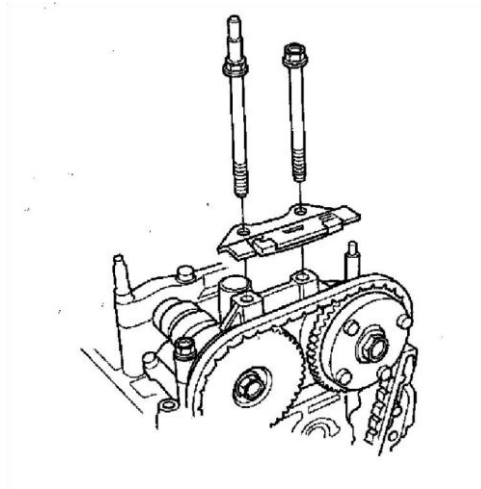
16. Align the holes on the lock (A) and the auto-tensioner (B), then insert a 1.2 mm (0.05 in.) diameter pin or lock pin (P/N 14511-PNA-003) (C) into the holes. Turn the crankshaft clockwise to secure the pin.



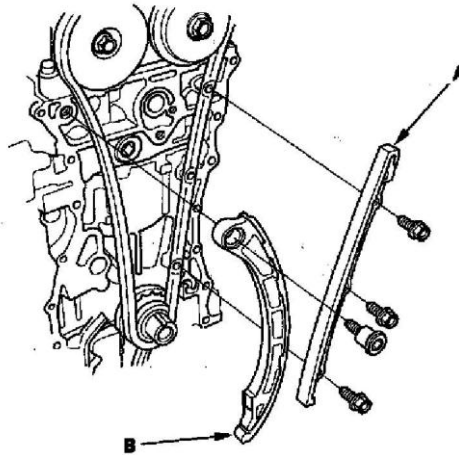
17. Remove the auto-tensioner.



18. Remove the crankshaft pulley.
19. Remove the cam chain guide B.



20. Remove the cam chain guide A and tensioner arm (B).



21. Remove the cam chain.

Timing Chain: Service and Repair

Cam Chain Installation

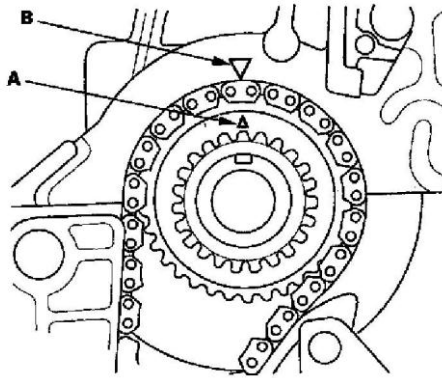
Cam Chain Installation

Special Tools Required

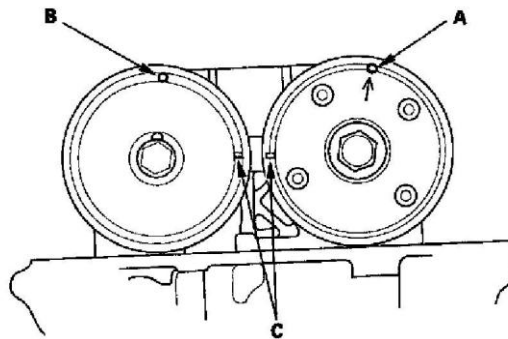
Camshaft lock pin set 07AAB-RWCA120

NOTE:

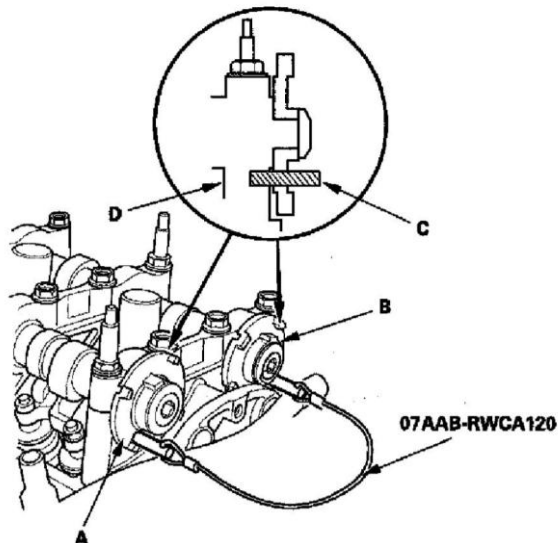
- ^ Keep the cam chain away from magnetic fields.
 - ^ Before this procedure, check that the variable valve timing control (VTC) actuator is locked by turning the VTC actuator counterclockwise. If not locked, turn the VTC actuator clockwise until it stops, then recheck it. If it is still not locked, replace the VTC actuator.
1. Set the crankshaft to top dead center (TDC). Align the TDC mark (A) on the crankshaft sprocket with the pointer (B) on the engine block.



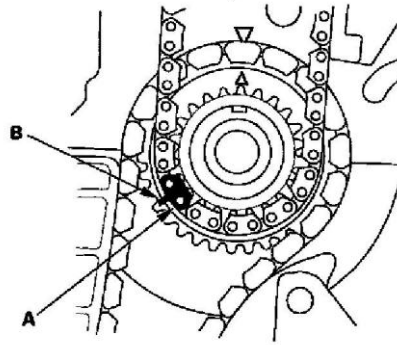
2. Set the camshafts to TDC. The punch mark (A) on the VTC actuator and the punch mark (B) on the exhaust camshaft sprocket should be at the top. Align the TDC marks (C) on the VTC actuator and exhaust camshaft sprocket.



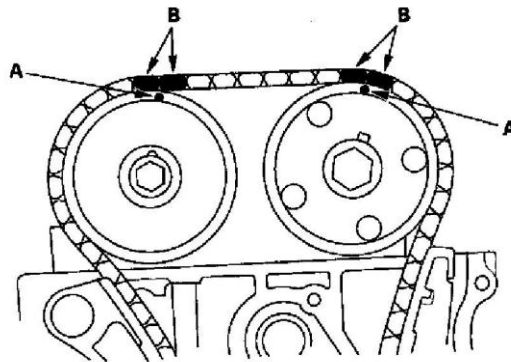
3. To hold the intake camshaft, insert one of the pins (C) from the camshaft lock pin set into the maintenance hole in the camshaft position (CMP) pulse plate A and through the hole in the No. 5 rocker shaft holder (D).



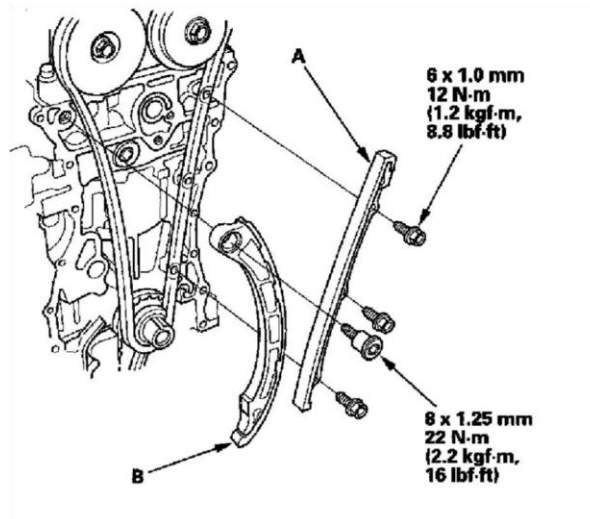
4. To hold the exhaust camshaft, insert the other pin from the camshaft lock pin set into the maintenance hole in the camshaft position (CMP) pulse plate B and through the hole in the No. 5 rocker shaft holder.
5. Install the cam chain on the crankshaft sprocket with the colored link plate (A) aligned with the mark (B) on the crankshaft sprocket.



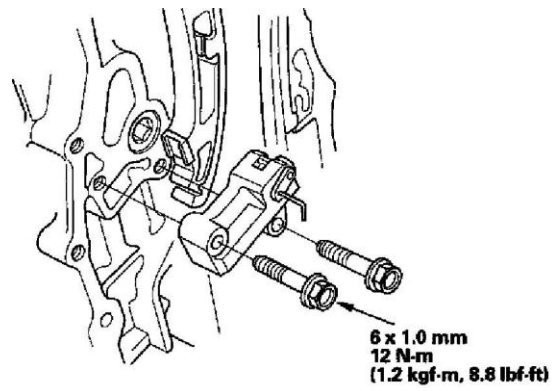
6. Install the cam chain on the VTC actuator and the exhaust camshaft sprocket with the punch marks (A) aligned with the center of the two colored link plates (B).



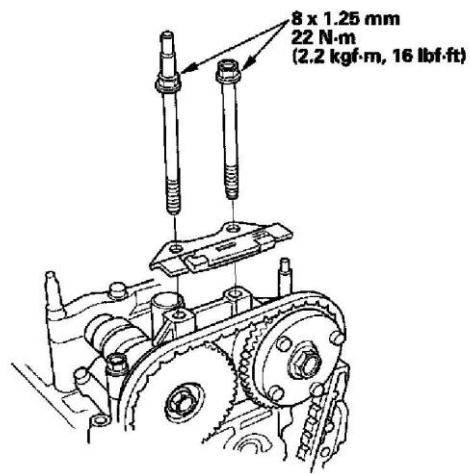
7. Install the cam chain guide A and the tensioner arm (B).



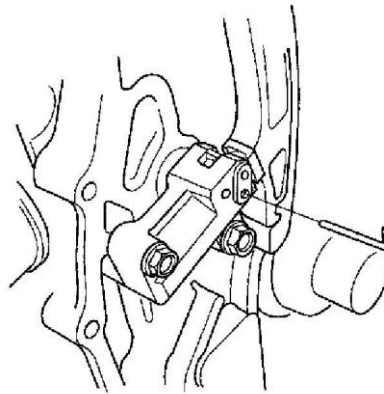
8. Install the auto-tensioner.



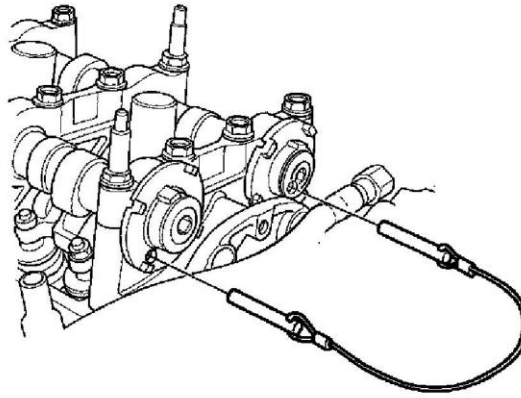
9. Install cam chain guide B.



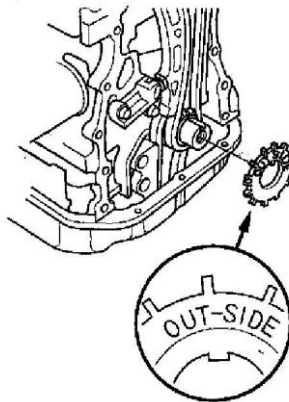
10. Remove the pin or lock pin (P/N 14511-PNA-000) from the auto-tensioner.



11. Remove the camshaft lock pin set (P/N 07AAB-RWCA120).



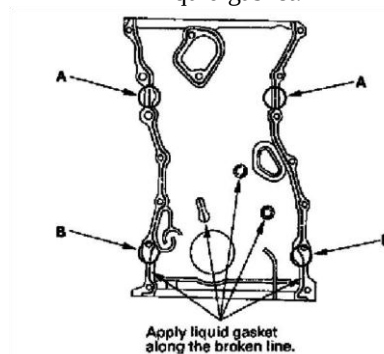
12. Install the crankshaft position (CKP) pulse plate.



13. Check the chain case oil seal for damage. If the oil seal is damaged, replace the chain case oil seal.
14. Remove all of the old liquid gasket from the chain case mating surfaces, bolts, and bolt holes.
15. Clean and dry the chain case mating surfaces.
16. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the engine block mating surface of the chain case. Install the component within 5 minutes of applying the liquid gasket.

NOTE:

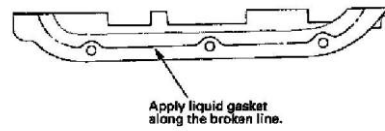
- ^ If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
- ^ If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply new liquid gasket.



17. Apply liquid gasket to the engine block upper surface contact areas (A) on the chain case and lower block upper surface contact areas (B) on the chain case.
18. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08717-0003, or 08718-0009, evenly to the oil pan mating surface of the chain case. Install the component within 5 minutes of applying the liquid gasket.

NOTE:

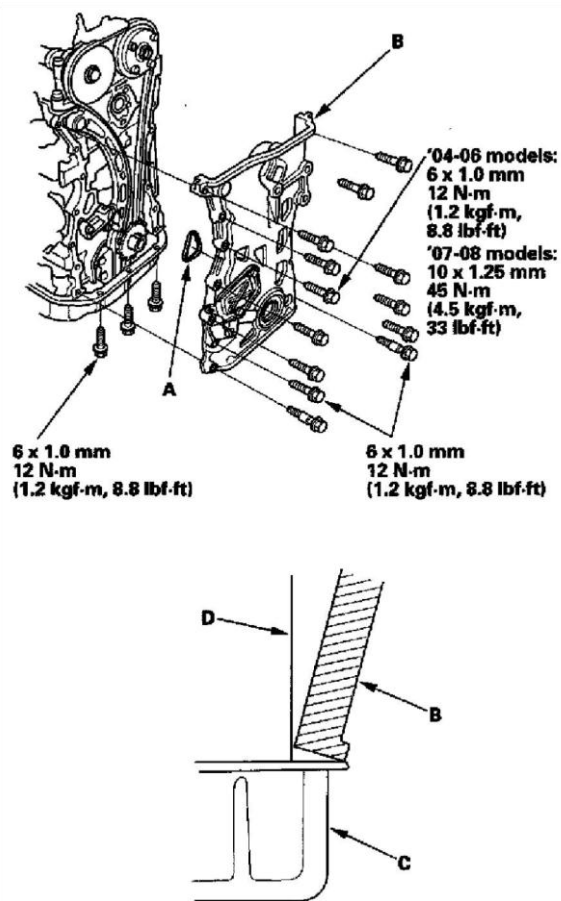
- ^ If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
- ^ If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply new liquid gasket.



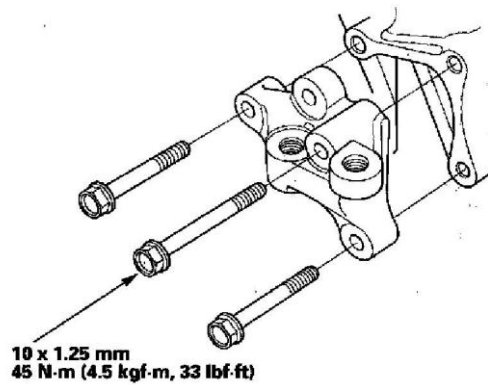
19. Install the new O-ring (A) on the chain case. Set the edge of the chain case (B) to the edge of the oil pan (C), then install the chain case on the engine block (D). Wipe off all of the excess liquid gasket on the oil pan and chain case mating surface.

NOTE:

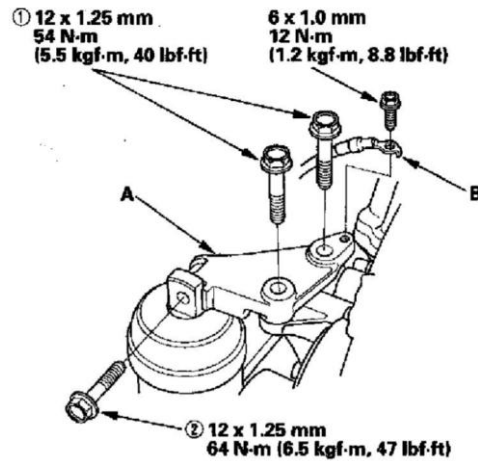
- ^ When installing the chain case, do not slide the bottom surface on the oil pan mounting surface.
- ^ Wait at least 30 minutes before filling the engine with oil.
- ^ Do not run the engine within 3 hours after installing the chain case.



20. Install the side engine mount bracket.



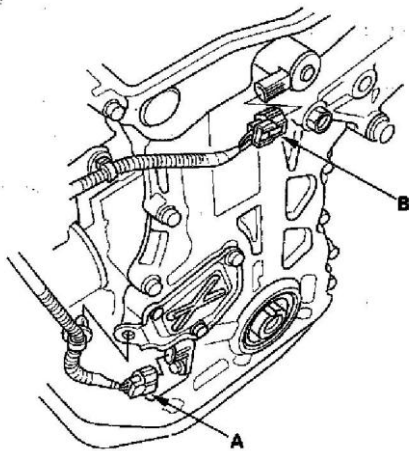
21. Install the upper bracket (A), then tighten the bolts in the sequence shown.



22. Install the ground cable (B).

23. Install the VTC oil control solenoid valve.

24. Connect the CKP sensor connector (A) and VTC oil control solenoid valve connector (B).



25. Install the crankshaft pulley.

26. Install the cylinder head cover.

27. Install the drive belt.

28. Install the splash shield.

29. Install the front wheels.

30. Do the CKP pattern clear/CKP learn procedure.