

REMOVAL & INSTALLATION

CAUTION: This application is an interference engine. Do not rotate camshaft or crankshaft when timing belt is removed, or engine damage may occur.

TIMING BELT

Removal

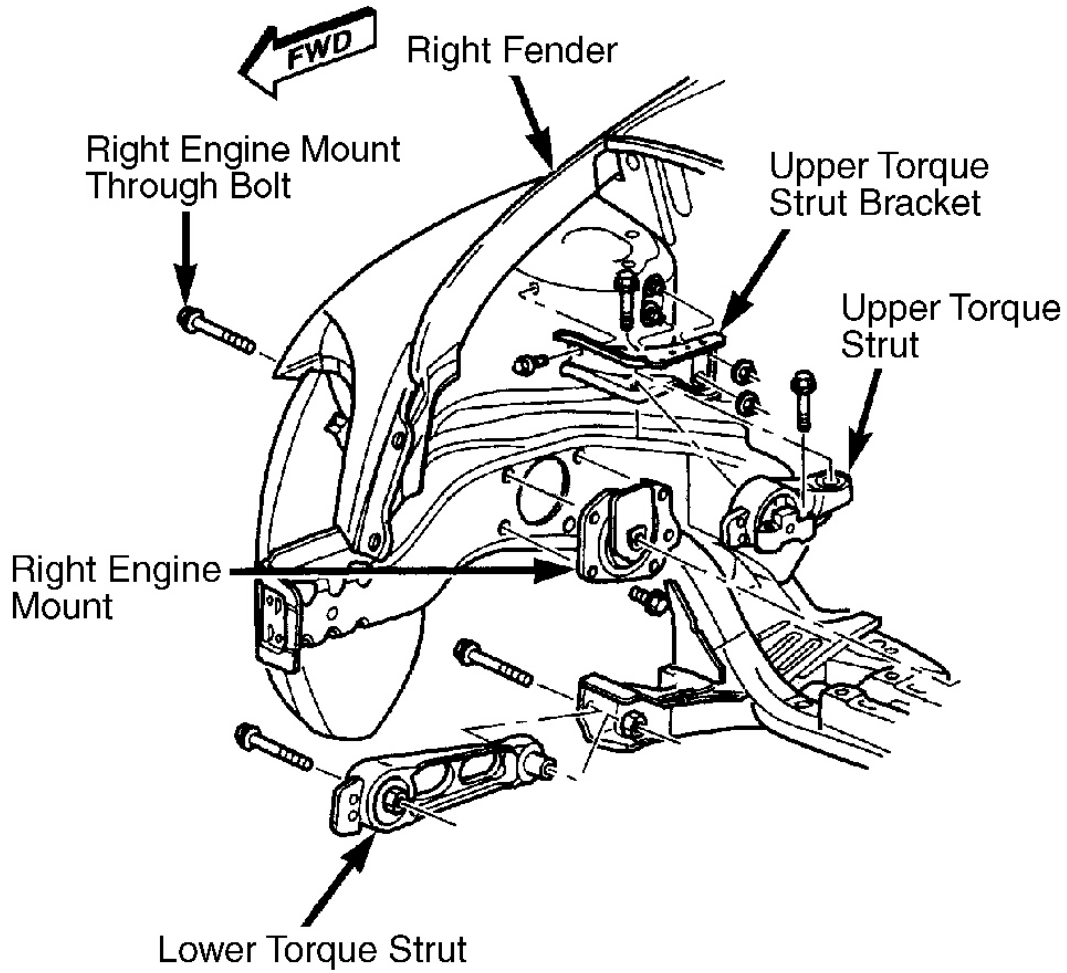
1. Disconnect negative battery cable. Remove upper engine torque strut attaching bolts and remove engine torque strut. See **Fig. 5** . Remove engine torque strut bracket from strut tower. On PT Cruiser (Turbo), discharge and evacuate A/C system. Disconnect A/C lines at junction block near upper timing belt cover.
2. On all models, remove upper timing belt cover bolts and remove cover. See **Fig. 6** . Raise vehicle on hoist and remove right front wheel. Remove splash shield. See **Fig. 7** . Remove accessory drive belts. Remove crankshaft damper. See **Fig. 8** . Remove pencil strut. See **Fig. 2** . Remove lower engine torque strut. See **Fig. 5** .
3. Disconnect exhaust system front pipe from manifold. Disconnect A/C pressure switch at rear of compressor housing. Lower vehicle and support engine with a jack. If not done previously, discharge and evacuate A/C system. Disconnect A/C lines at junction block. Remove screw attaching ground strap to strut bracket. Remove torque strut bracket from strut tower. Remove upper radiator closure panel. Without disconnecting lines from power steering pump, remove pump and bracket and set pump aside.
4. With engine properly supported, remove right engine mount through-bolt. See **Fig. 5** . Raise engine with jack until engine support bracket bolts are accessible, and remove engine support bracket. See **Fig. 9** . Remove lower timing belt cover bolts and remove cover. See **Fig. 6** .

CAUTION: When aligning crankshaft and camshaft timing marks, always rotate engine from crankshaft. Camshaft should not be rotated after timing belt is removed, or damage to valve components may occur.

CAUTION: Crankshaft sprocket TDC mark is located on the trailing edge of sprocket tooth. Failure to align trailing edge of sprocket tooth to TDC mark on oil pump housing will cause camshaft timing marks to be misaligned.

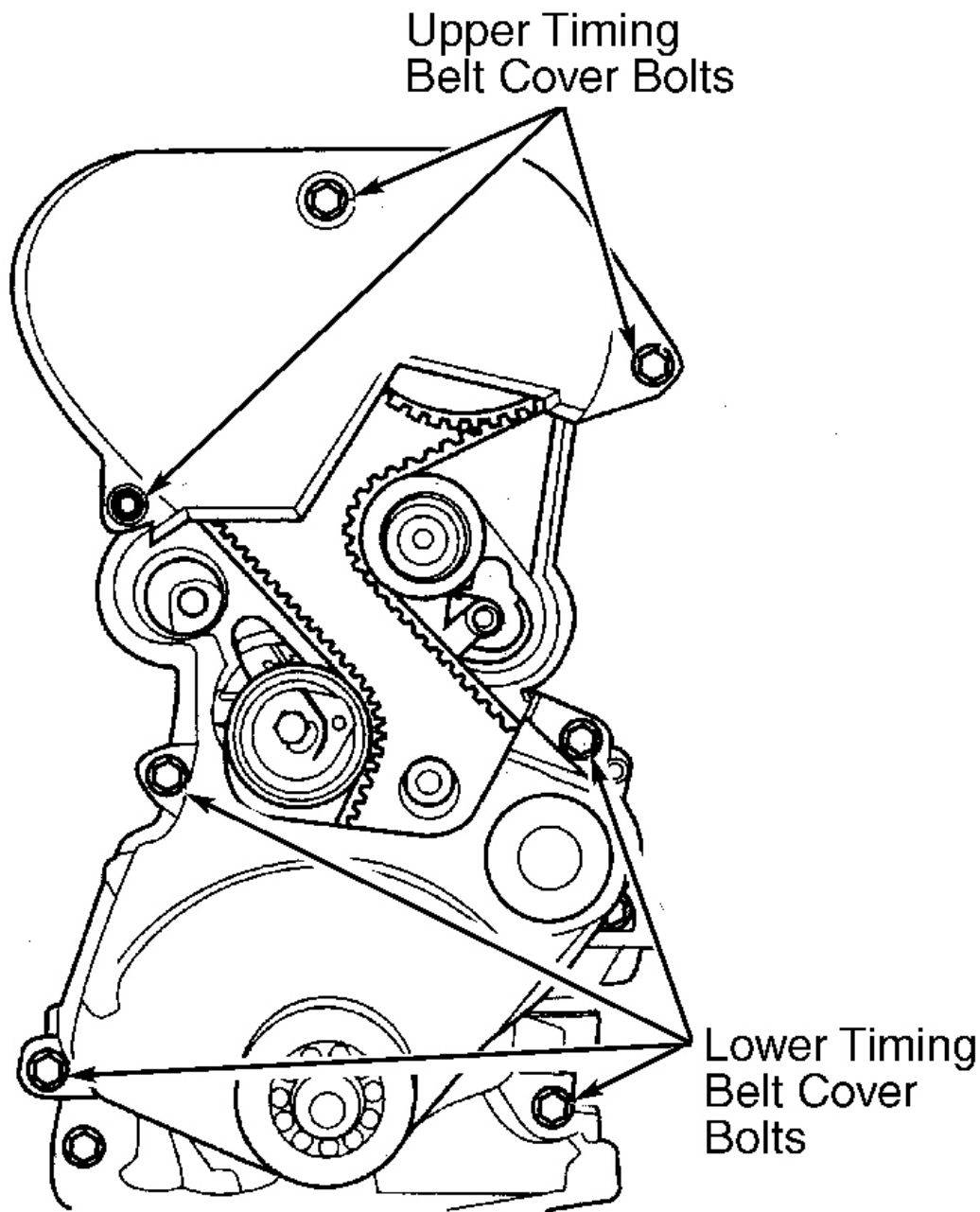
5. Before removal of timing belt, rotate crankshaft until TDC mark on oil pump housing aligns with the TDC mark on crankshaft sprocket (trailing edge of sprocket tooth). See **Fig. 10** .
6. Loosen timing belt tensioner lock bolt, and insert a 6-mm Allen wrench into hexagon opening located on top plate of belt tensioner pulley. See **Fig. 11** . Rotate top plate clockwise until there is enough slack in timing belt to allow for removal. If reusing old timing belt, mark belt with arrow to indicate original direction of rotation. Remove timing belt.

CAUTION: If timing belt was damaged due to incorrect rotating tracking (alignment), belt tensioner pulley and bracket must be replaced as an assembly.



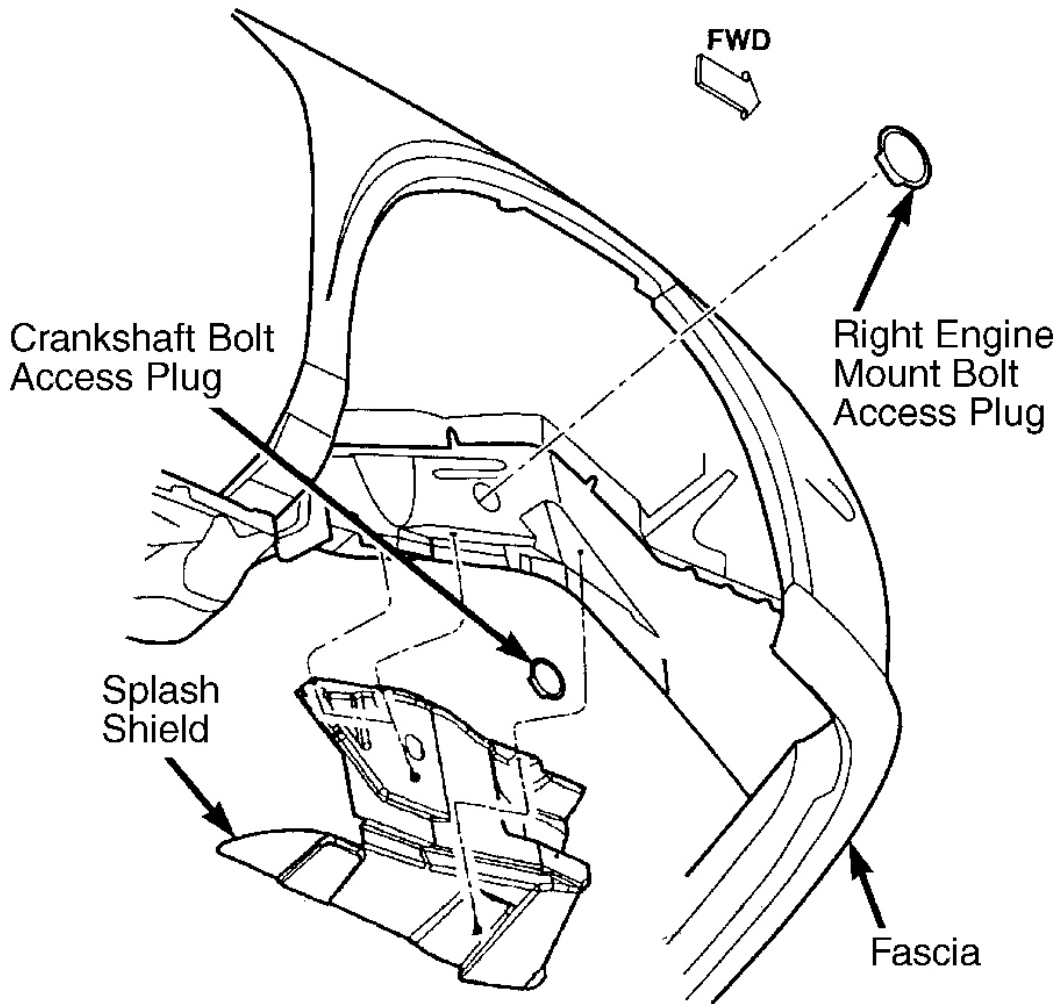
G00256403

Fig. 5: Locating Engine Mounting Components
Courtesy of CHRYSLER CORP.



G00256404

Fig. 6: Removing Front Timing Belt Covers
Courtesy of CHRYSLER CORP.



G00256405

Fig. 7: Removing Right Front Splash Shield
Courtesy of CHRYSLER CORP.

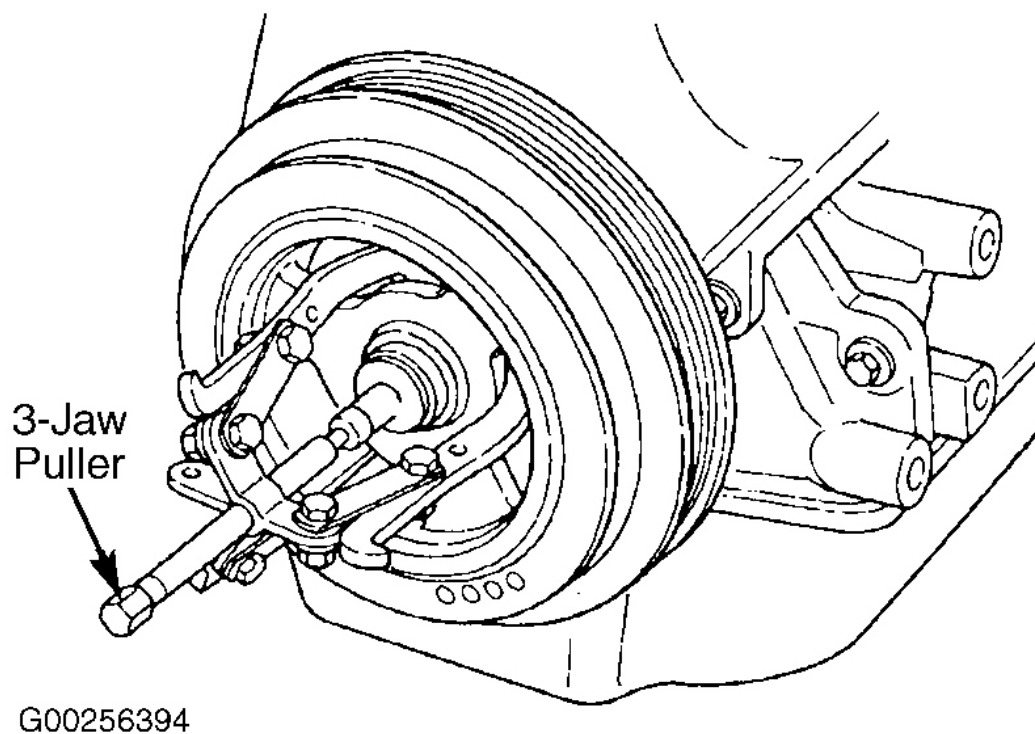
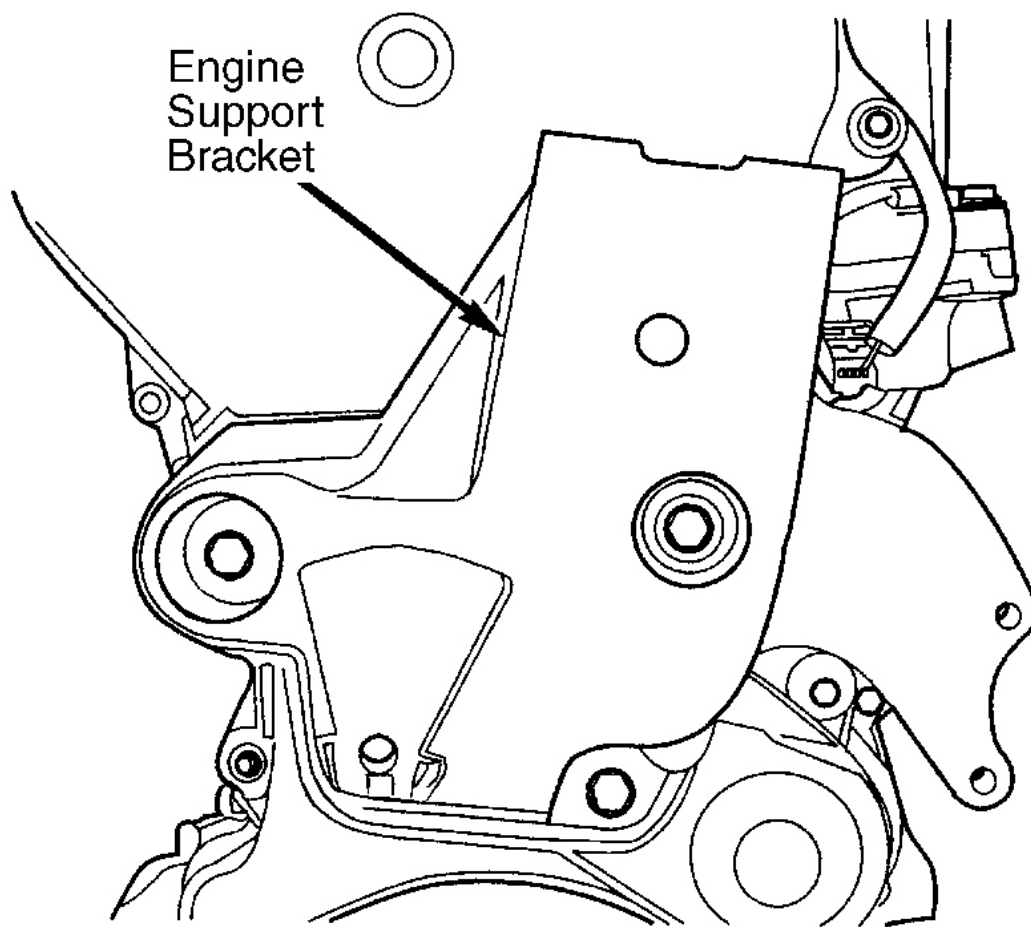
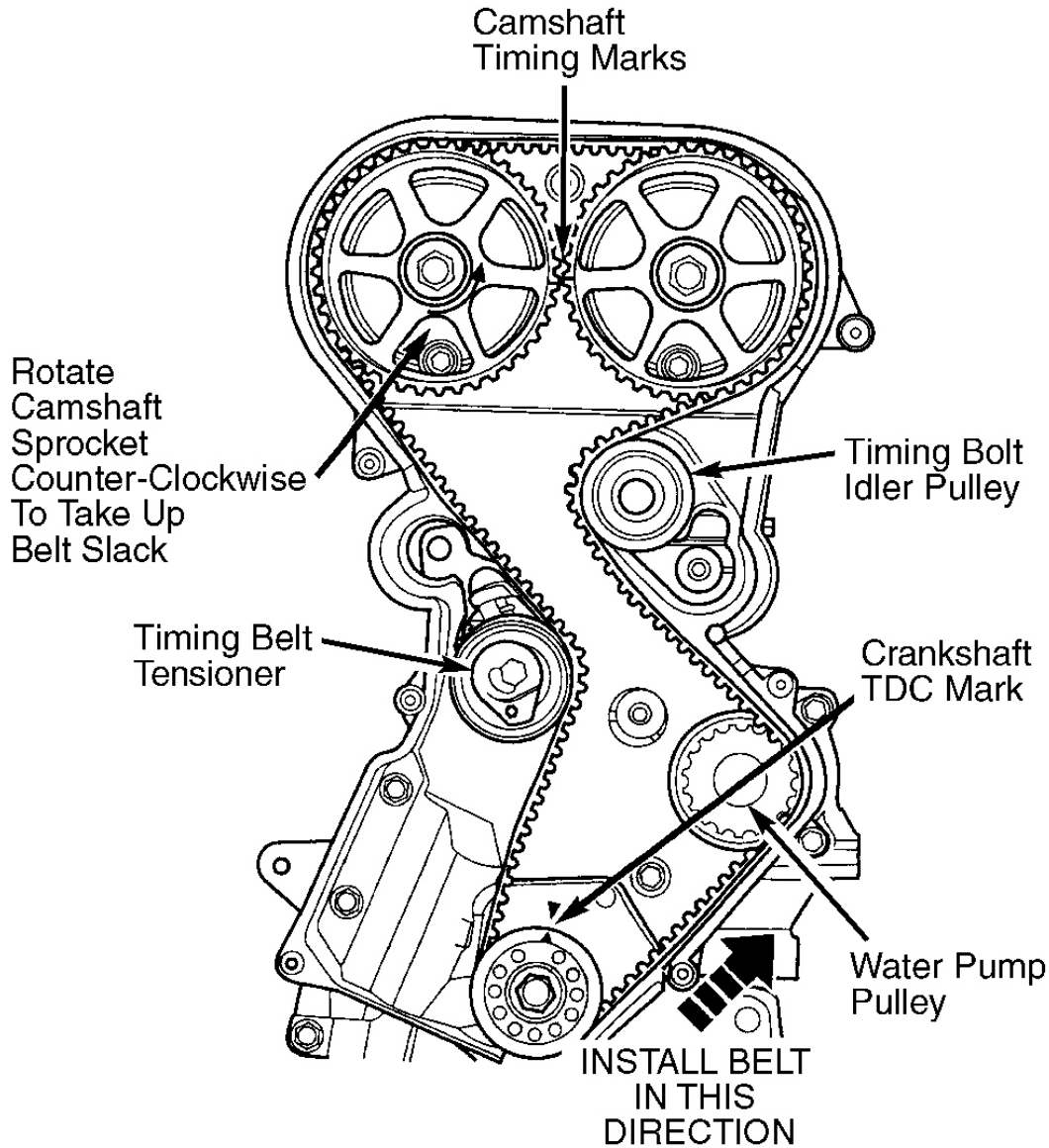


Fig. 8: Removing Crankshaft Damper
Courtesy of CHRYSLER CORP.



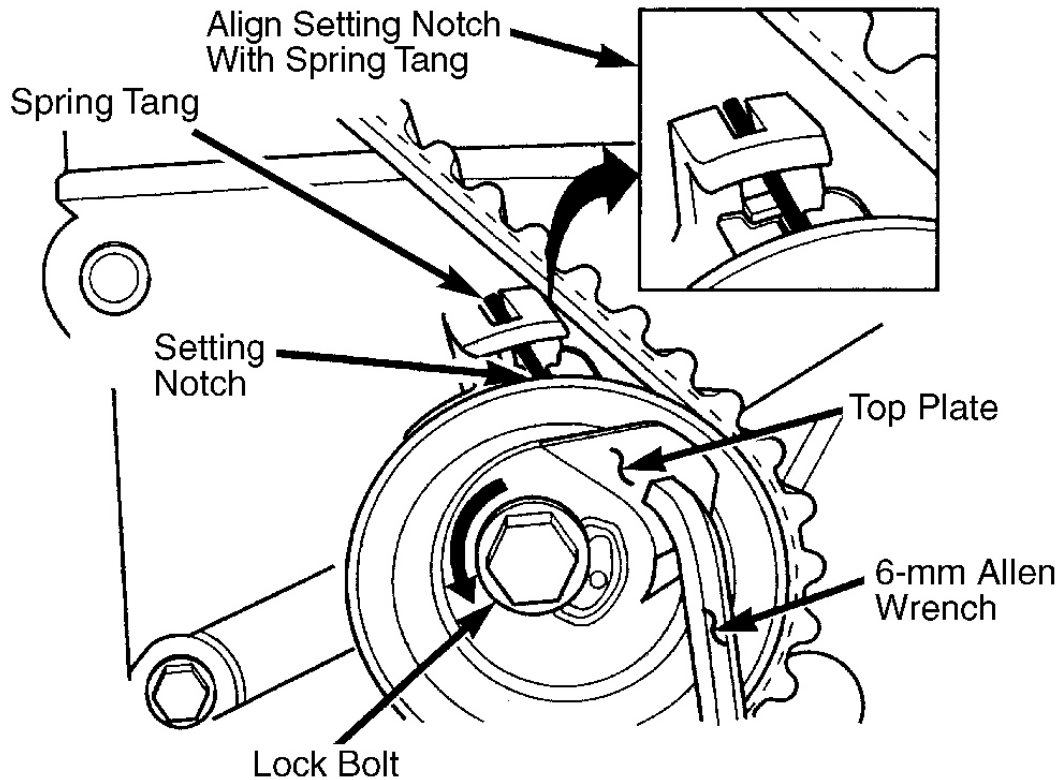
G00256406

Fig. 9: Removing Engine Support Bracket
Courtesy of CHRYSLER CORP.



G00256407

Fig. 10: Identifying Camshaft & Crankshaft TDC & Timing Marks
Courtesy of CHRYSLER CORP.



G00256409

Fig. 11: Adjusting Timing Belt Tension
Courtesy of CHRYSLER CORP.

Inspection

Inspect timing belt for damaged teeth, cracking and oil contamination. Check timing belt tensioner for worn bearing. Replace damaged components as necessary.

Installation

CAUTION: Ensure that arrows on both camshaft sprockets are facing up.

1. Set crankshaft sprocket to TDC by aligning sprocket with arrow on oil pump housing. Also set camshaft timing marks so that exhaust camshaft sprocket is a 1/2 notch below intake camshaft sprocket. See **Fig. 12**.
2. Install timing belt. Starting at the crankshaft, go around water pump sprocket, idler pulley, camshaft sprockets, and then around tensioner. See **Fig. 10**. Move exhaust camshaft sprocket counterclockwise to align marks and take up belt slack. Insert a 6-mm Allen wrench into hexagon opening located on top plate

XXX

Tuesday, January 13, 2009 9:47:35 AM

Page 8

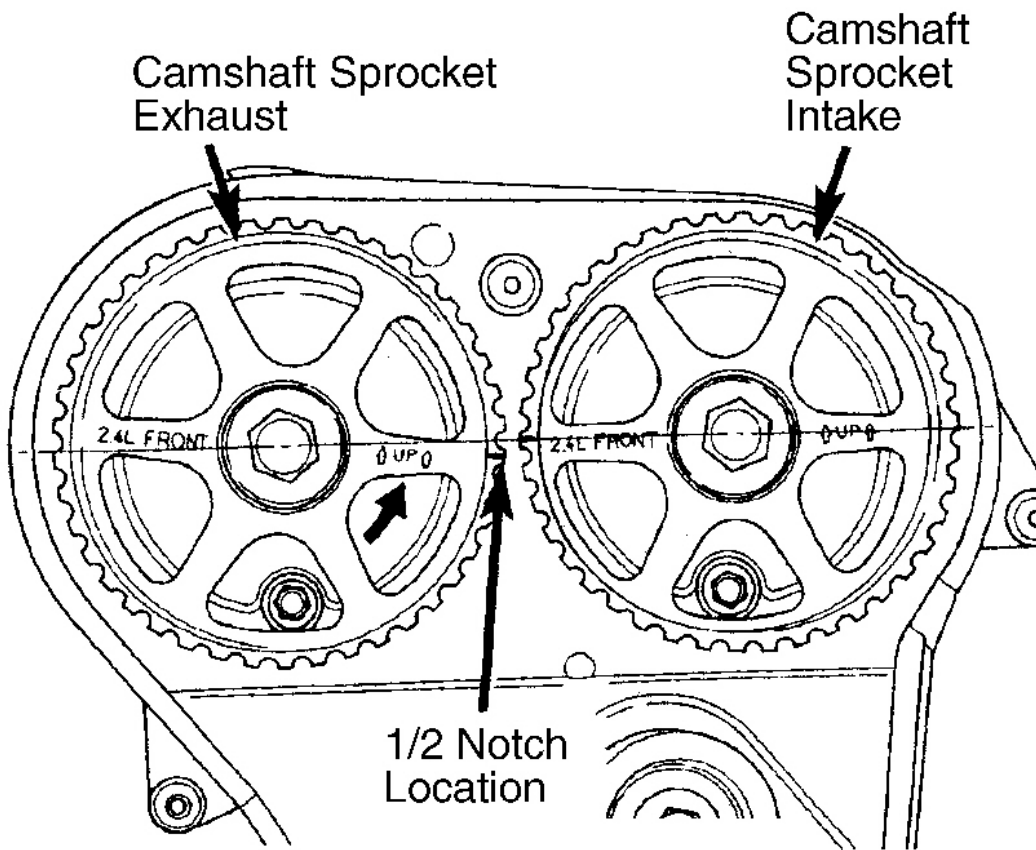
© 2005 Mitchell Repair Information Company, LLC.

of belt tensioner pulley, and rotate top plate counterclockwise. See [Fig. 11](#) .

3. Tensioner pulley will move against belt and tensioner setting notch will eventually start to move clockwise. Watching movement of setting notch, continue rotating top plate counterclockwise until setting notch is aligned with spring tang. See [Fig. 11](#) . Using Allen wrench to prevent top plate from moving, tighten tensioner lock bolt to specification. See [TORQUE SPECIFICATIONS](#) . Setting notch and spring tang should remain aligned after lock bolt is torqued. Remove Allen wrench and torque wrench.

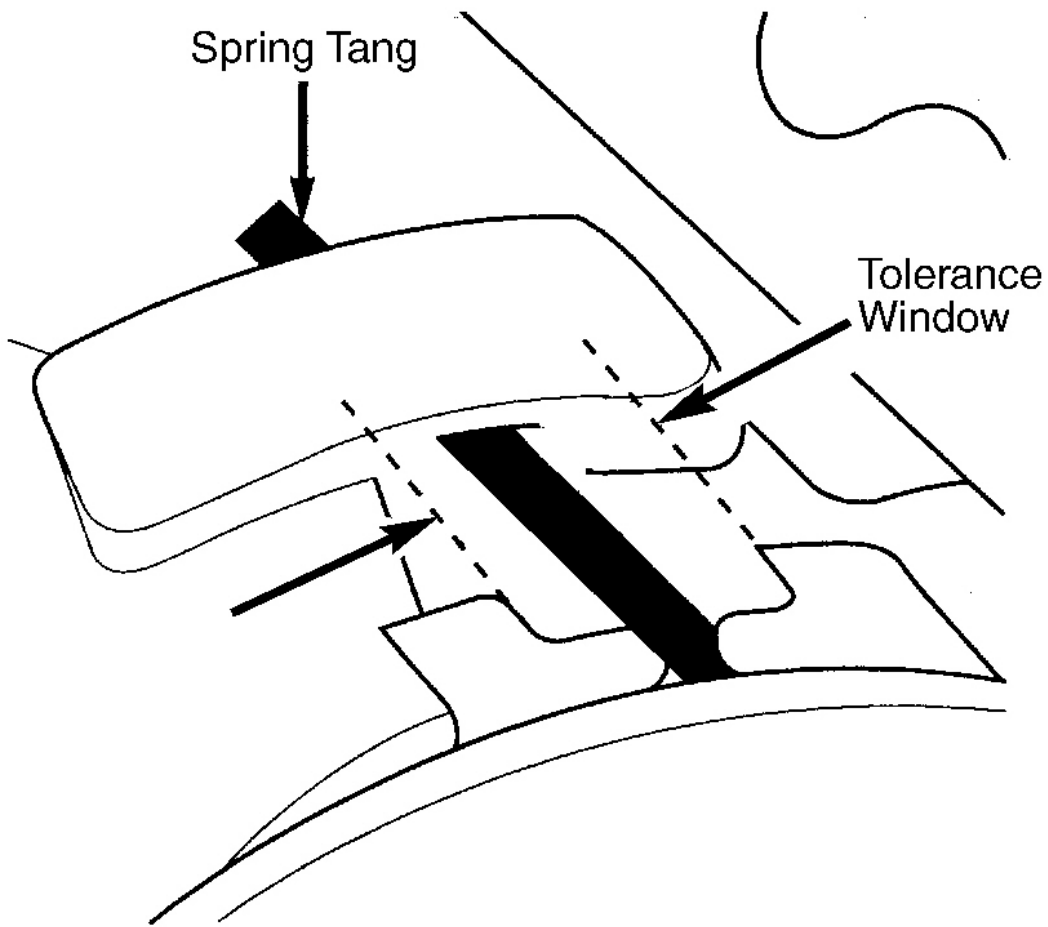
NOTE: **Repositioning the crankshaft to the TDC position must be done only during the clockwise rotation movement. If TDC is missed, rotate a further 2 revolutions until TDC is achieved. DO NOT rotate crankshaft counterclockwise.**

4. Rotate crankshaft clockwise two complete revolutions manually for seating of belt until crankshaft is repositioned at TDC position. Verify that camshaft and crankshaft timing marks are in proper position. See [Fig. 10](#) .
5. Check if spring tang is within tolerance window. See [Fig. 13](#) . If spring tang is within tolerance window, installation process is complete and nothing further is required. If spring tang is not within tolerance window, repeat installation procedure from beginning.
6. Install upper and lower timing belt covers, and tighten bolts to specification. See [TORQUE SPECIFICATIONS](#) . Install engine support bracket. Ensure power steering pump is properly located in mounting location on bracket and tighten mount bracket bolts to specification. See [TORQUE SPECIFICATIONS](#) .
7. Lower engine into mounting position and install right engine mount through-bolt. See [Fig. 5](#) . Install power steering pump and bracket. Install upper radiator closure panel. Install engine torque strut bracket to strut tower. Connect ground strap to bracket. Tighten all bolts to specification. See [TORQUE SPECIFICATIONS](#) . Install upper torque strut attaching bolts. See [Fig. 5](#) .
8. Connect A/C lines, evacuate and recharge system. Raise vehicle and connect exhaust system to manifold. Connect A/C pressure switch connector. Install crankshaft damper and accessory drive belts. Install lower torque strut. Perform torque strut adjustment. See [ENGINE TORQUE STRUT ADJUSTMENT](#) under [ADJUSTMENTS](#). Install pencil strut. See [Fig. 2](#) . Install splash shield and install right front wheel. Tighten all bolts to specification. See [TORQUE SPECIFICATIONS](#) . Connect negative cable to battery.



G00256408

Fig. 12: Identifying Camshaft Sprocket Alignment For Timing Belt Installation
Courtesy of CHRYSLER CORP.



G00256410

Fig. 13: Verifying Timing Belt Tension
Courtesy of CHRYSLER CORP.