

1999 Toyota RAV4

TOYOTA 2.0L 4-Cylinder - RAV4

TOYOTA

2.0L 4-Cylinder - RAV4

MANUFACTURER'S SUGGESTED SCHEDULED MAINTENANCE

For 1996-97 model years, the manufacturer recommends the belt be replaced every 60,000 miles for severe service operating conditions. For 1998 model year, the manufacturer recommends the belt be replaced every 90,000 miles for severe service operating conditions. For 1999-00 model years, the manufacturer recommends the belt be replaced every 90,000 miles or 72 months.

REMOVAL & INSTALLATION

TIMING BELT

Removal

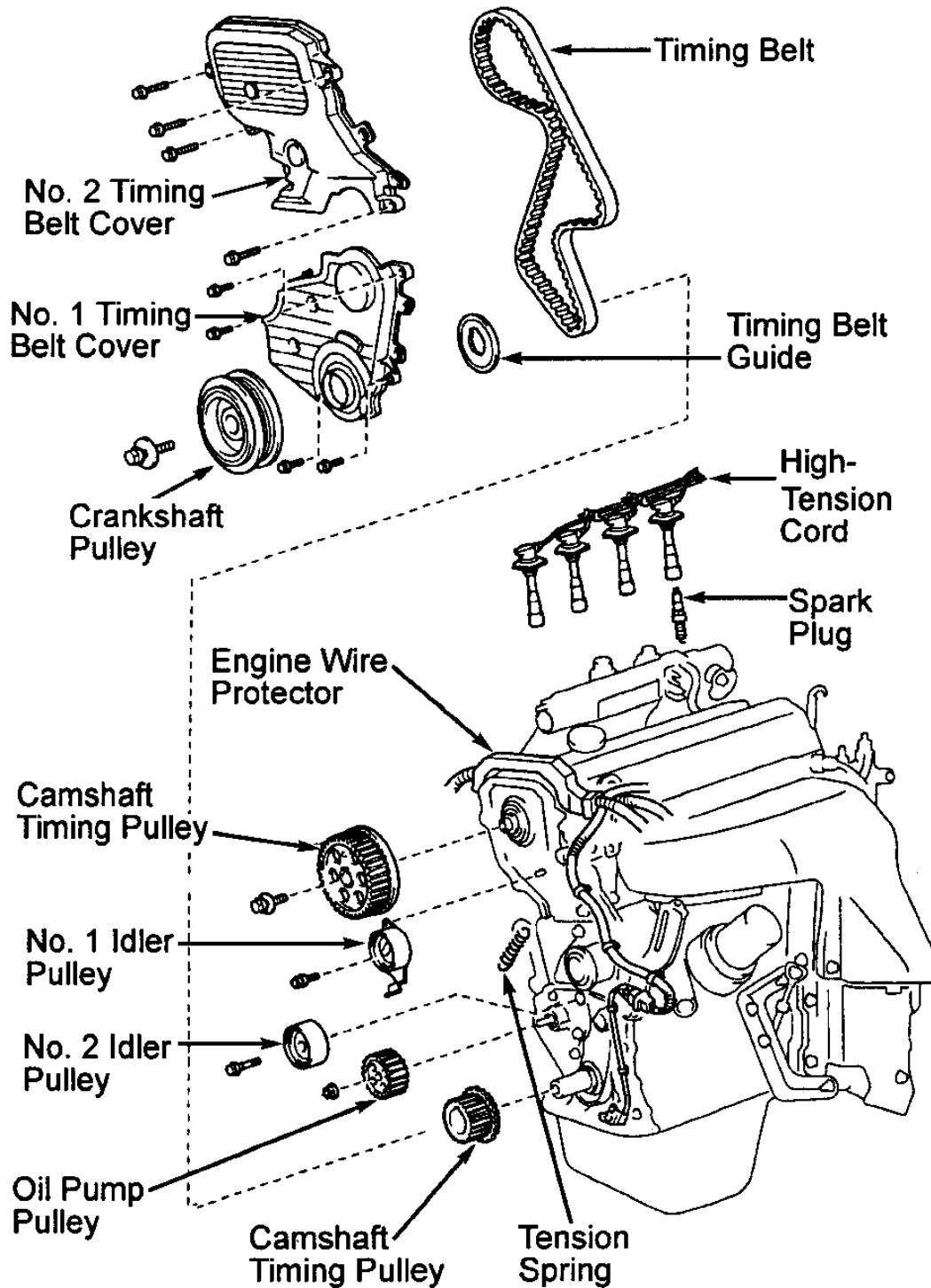
1. Disconnect negative battery cable. Disconnect power steering reservoir, and remove reservoir bracket. Disconnect wire harness bracket for Data Link Connector No. 1. Remove generator and generator bracket.
2. Remove ABS actuator. Raise and support vehicle. Remove right front wheel. Remove right engine undercover. Remove power steering drive belt. Slightly jack up engine and remove right engine mounting insulator.

NOTE: Always turn crankshaft clockwise.

3. Remove spark plugs. Remove crankshaft pulley. See **Fig. 1** . Remove right engine mounting bracket. Remove No. 2 timing belt cover. See **Fig. 2** . Temporarily install crankshaft pulley with pulley bolt. Set No. 1 cylinder to TDC on compression stroke. See **Fig. 3** .
4. Loosen mounting bolt of No. 1 idler pulley and shift pulley toward left as far as it will go to relieve belt tension. See **Fig. 4** . Temporarily tighten idler pulley. Remove crankshaft pulley and No. 1 timing belt cover.
5. If reusing timing belt, mark direction of rotation on belt. Also place match marks on belt and camshaft pulley. See **Fig. 5** . Remove timing belt from engine.

1999 Toyota RAV4

TOYOTA 2.0L 4-Cylinder - RAV4



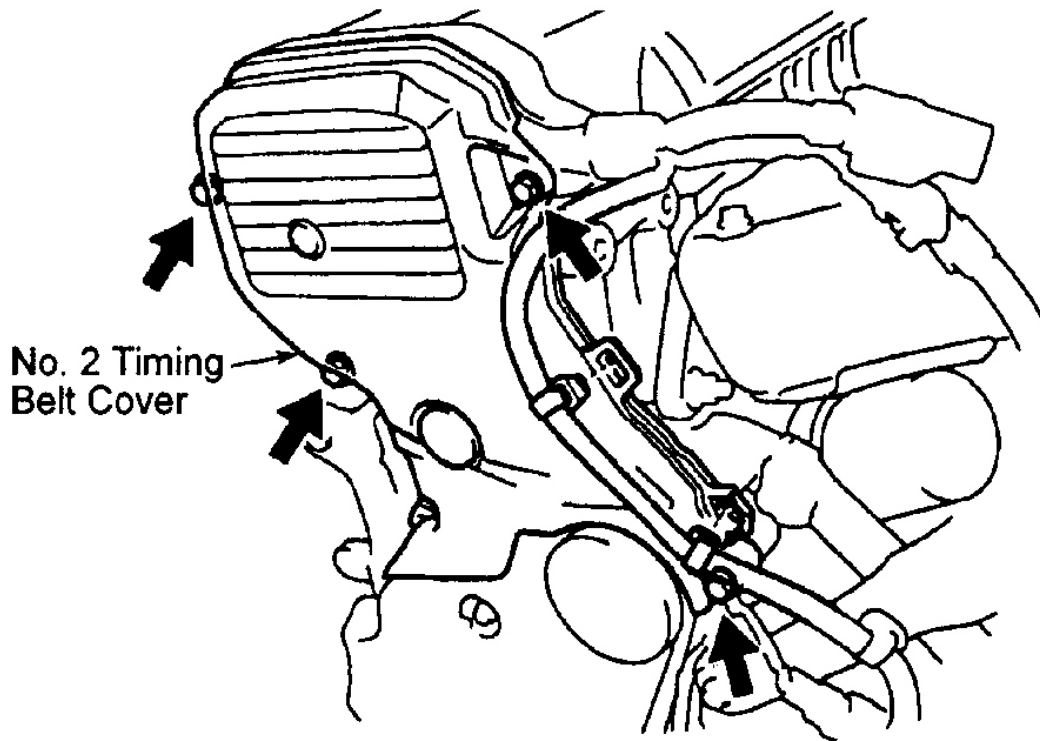
G00214380

Fig. 1: Exploded View Of Timing Belt & Components

1999 Toyota RAV4

TOYOTA 2.0L 4-Cylinder - RAV4

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00214377

Fig. 2: Removing No. 2 Timing Belt Cover

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

1999 Toyota RAV4

TOYOTA 2.0L 4-Cylinder - RAV4

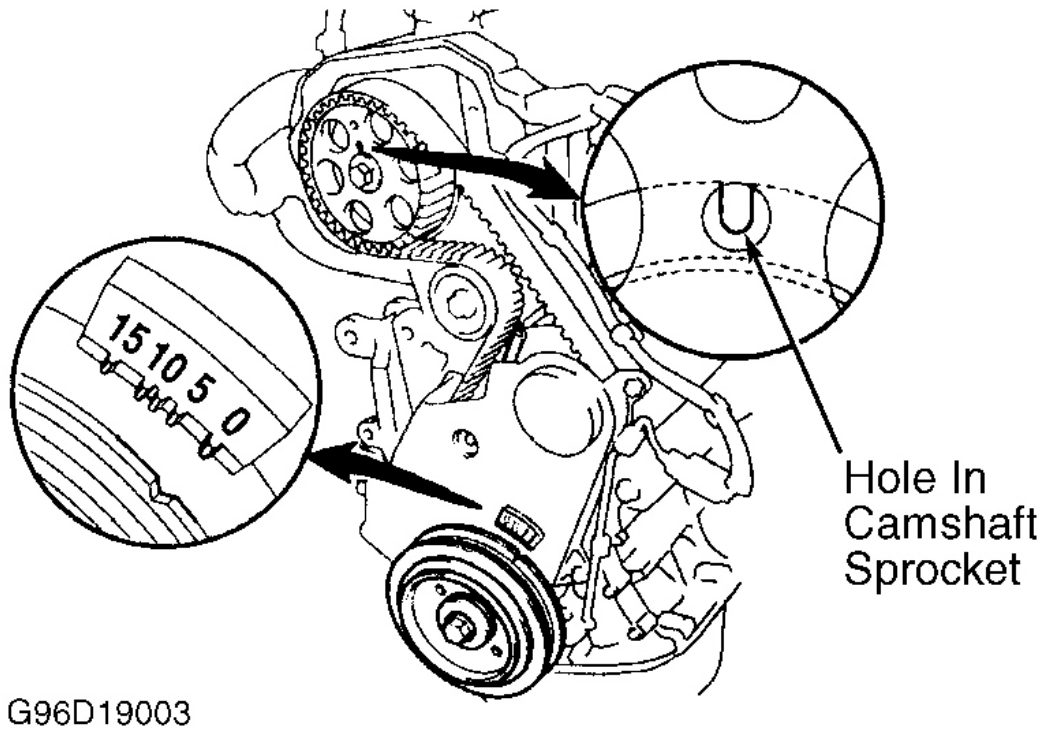
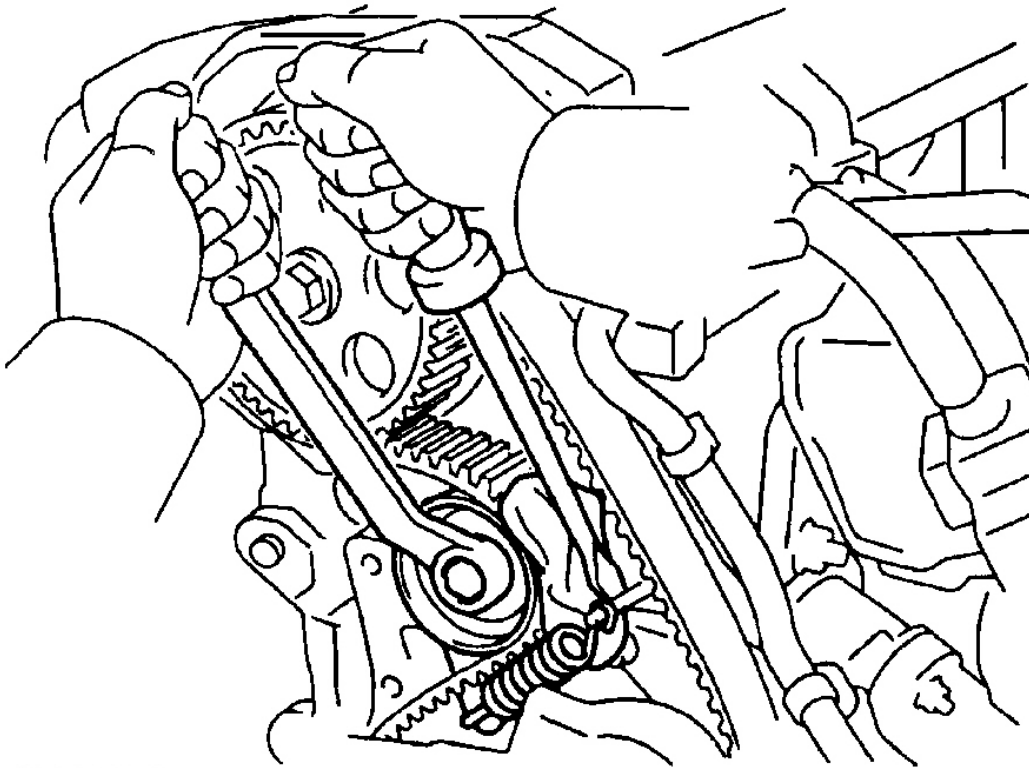


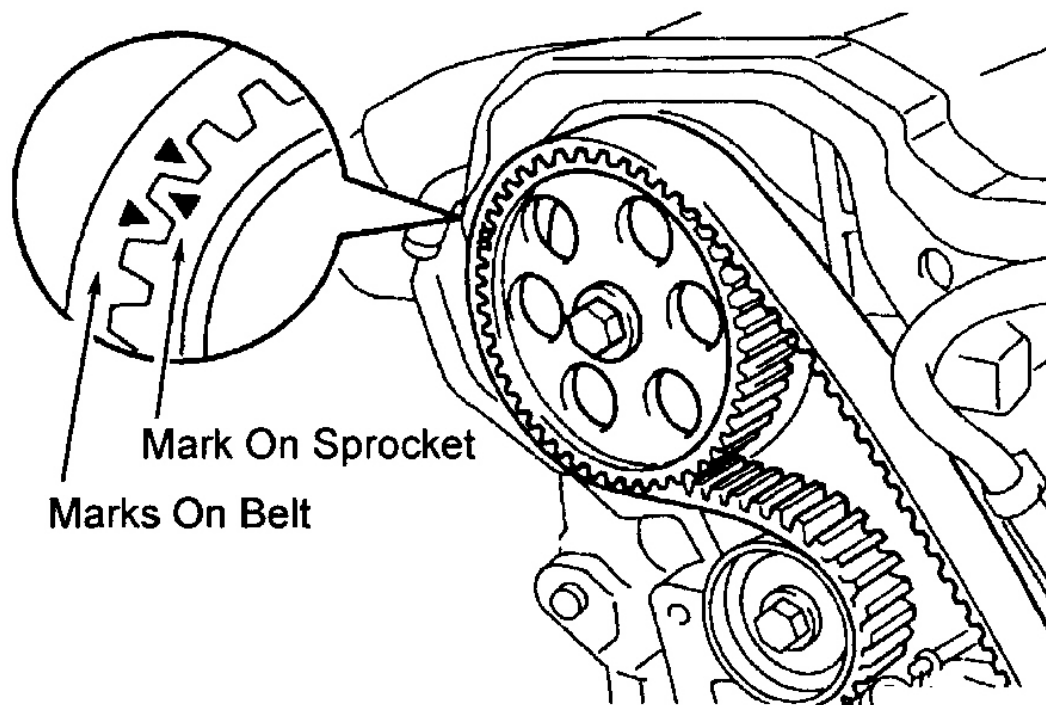
Fig. 3: Setting No. 1 Cylinder To TDC

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.



G00214378

Fig. 4: Loosening No. 1 Idler Pulley Mounting Bolt
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

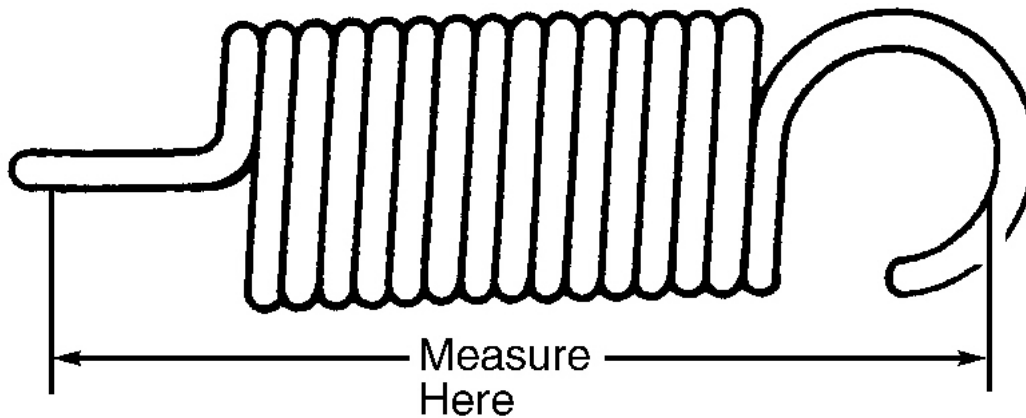


G00214379

Fig. 5: Aligning Matching Marks Of Timing Belt & Cams
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Inspection

1. Inspect idler pulleys for smoothness. Ensure free length of tension spring is 1.653" (42.0 mm). See **Fig. 6** . Spring tension should be 8.5 lbs. (3.85 kg) at length of 1.988". If not as specified, replace spring. Inspect timing belt cover gaskets. Replace if gaskets are cracked or peeling.



G00019631

Fig. 6: Measuring Tensioner Spring Free Length

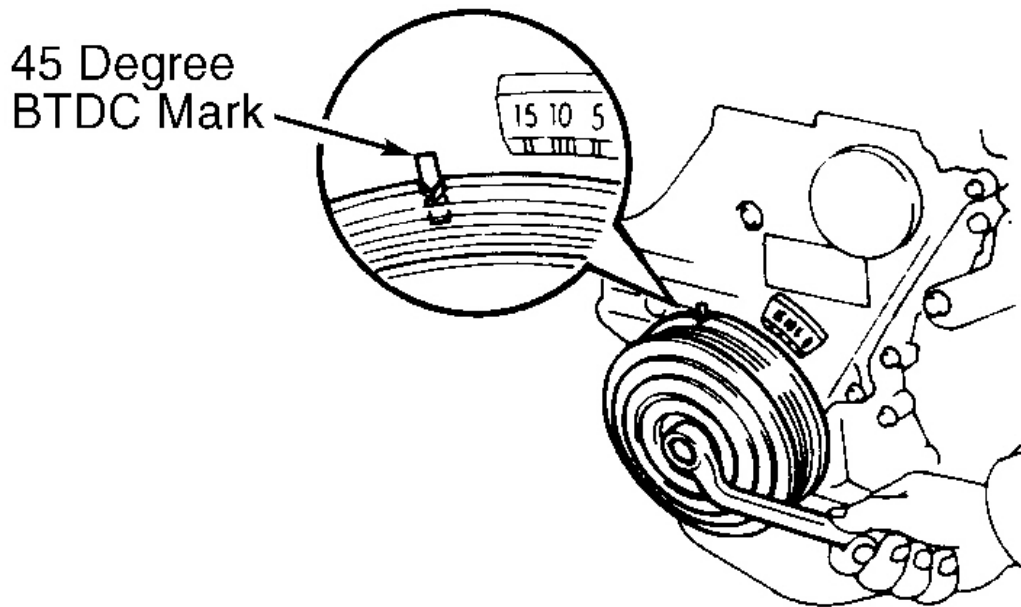
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Installation

1. Ensure that No. 1 cylinder is set to TDC on compression stroke by temporarily installing No. 1 timing belt cover and crankshaft pulley. Align groove with timing mark "0" on No. 1 timing belt cover. Ensure that camshaft and timing belt match marks are aligned. Remove crankshaft pulley and timing belt cover. Install timing belt. If reusing old belt, ensure rotation direction and mating marks are in correct position.
2. Install timing belt guide on crankshaft with cup side facing out. Install No. 1 timing belt cover, crankshaft pulley, and crankshaft pulley bolt. Loosen No. 1 idler pulley 1/2 turn to tension timing belt. Slowly turn crankshaft pulley 2 revolutions from TDC to TDC.
3. Check that each pulley aligns with timing marks as shown. See **Fig. 5**. Slowly turn crankshaft pulley 1-7/8 revolutions and align groove with mark at 45 degrees BTDC (for No. 1 cylinder) of No. 1 timing belt cover. See **Fig. 7**. Tighten No. 1 idler pulley mounting bolt to specification.
4. Place right engine mounting bracket in position, but do not install bolts. Install No. 2 timing belt cover. Disconnect engine wire protector between cylinder head cover and No. 3 timing belt cover. Install No. 2 timing belt cover. Install engine wire to No. 2 timing belt cover. Install engine wire protector to mounting bolts of No. 2 timing belt cover.
5. Remove crankshaft pulley. Install engine mounting bracket-to-engine bolts and tighten to specification. Install crankshaft pulley, and tighten pulley bolt to specification. See **TORQUE SPECIFICATIONS**. To complete installation, reverse removal procedure. Adjust drive belts to proper tension.

1999 Toyota RAV4

TOYOTA 2.0L 4-Cylinder - RAV4



96C07955

Fig. 7: Locating 45 Degree BTDC Mark
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Camshaft Timing Pulley Bolt	40 (54)
Crankshaft Pulley Bolt	80 (108)
Generator Bracket Bolts	31 (42)
Engine Mount Bracket-To-Engine Bolts	38 (52)
Engine Mount Insulator-To-Body Bolts	38 (52)
Engine Mount Insulator-To-Bracket Nut	27 (37)
No. 1 Idler Pulley Mounting Bolt	31 (42)
Wheel Lug Nut	76 (103)
	INCH Lbs. (N.m)
Water Pump Bolts	78 (8.8)