

GENERAL MOTORS

1.6L 4-Cylinder - Aveo

MANUFACTURER'S SUGGESTED SCHEDULED MAINTENANCE

The manufacturer requires that the belt be replaced every 60,000 miles.

REMOVAL & INSTALLATION

TIMING BELT

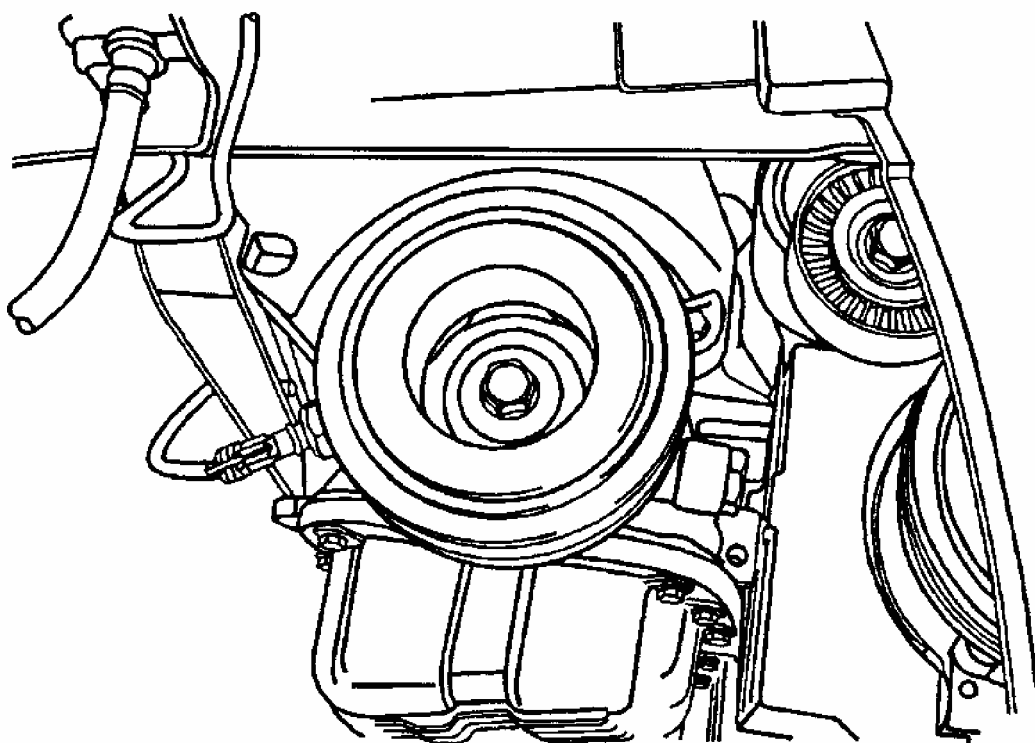
CAUTION: This application is an interference engine. Do not rotate camshaft or crankshaft when timing belt is removed, or engine damage may occur.

Removal

1. Disconnect the negative battery cable. Disconnect the Intake Air Temperature (IAT) sensor connector. Disconnect the air intake tube from the throttle body. Disconnect the breather tube from the valve cover.
2. Remove the air filter housing bolts and housing.
3. Remove the right front wheel. Remove the right front splash shield.
4. Remove the accessory drive belt. Remove the crankshaft pulley bolt and pulley. See **Fig. 1**.
5. Remove the upper front timing belt cover bolts and cover. See **Fig. 2**. Remove the lower front timing belt cover bolts and cover. Remove the power steering mounting bolts, if equipped.
6. Install the crankshaft pulley bolt. Using the crankshaft pulley bolt, rotate the crankshaft clockwise until the timing mark on the crankshaft gear is aligned with the notch at the bottom of the rear timing belt cover. See **Fig. 3**.
7. Slightly loosen the coolant pump retaining bolts. Using the Timing Belt Adjuster (J-42492-A or KM-421-A), rotate the coolant pump counterclockwise to release the tension on the timing belt. See **Fig. 4**. Remove the timing belt behind the power steering pump. See **Fig. 5**.

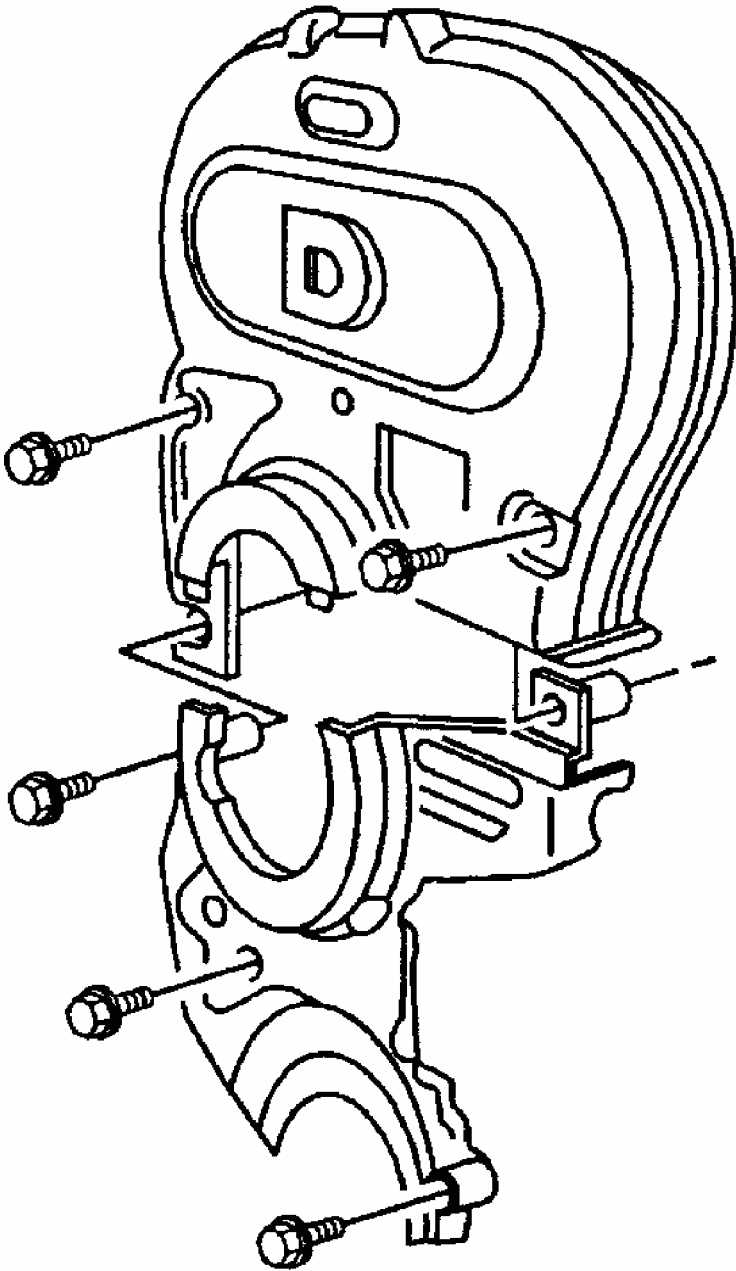
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Fig. 1: Removing Crankshaft Pulley
Courtesy of GENERAL MOTORS CORP.

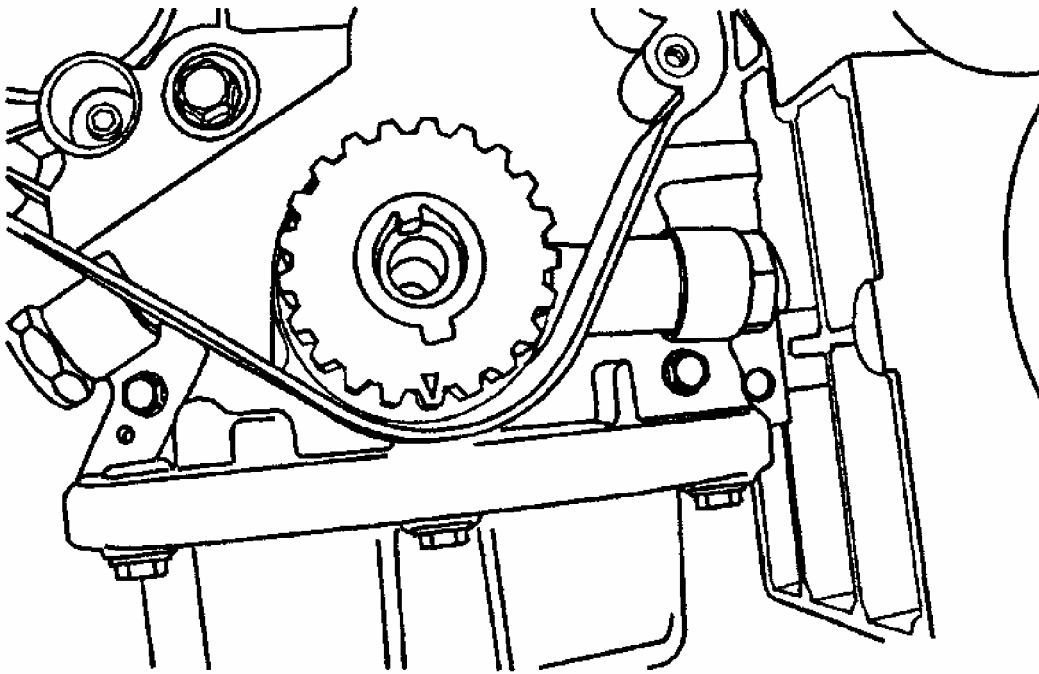


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Fig. 2: Removing Front Timing Belt Covers
Courtesy of GENERAL MOTORS CORP.

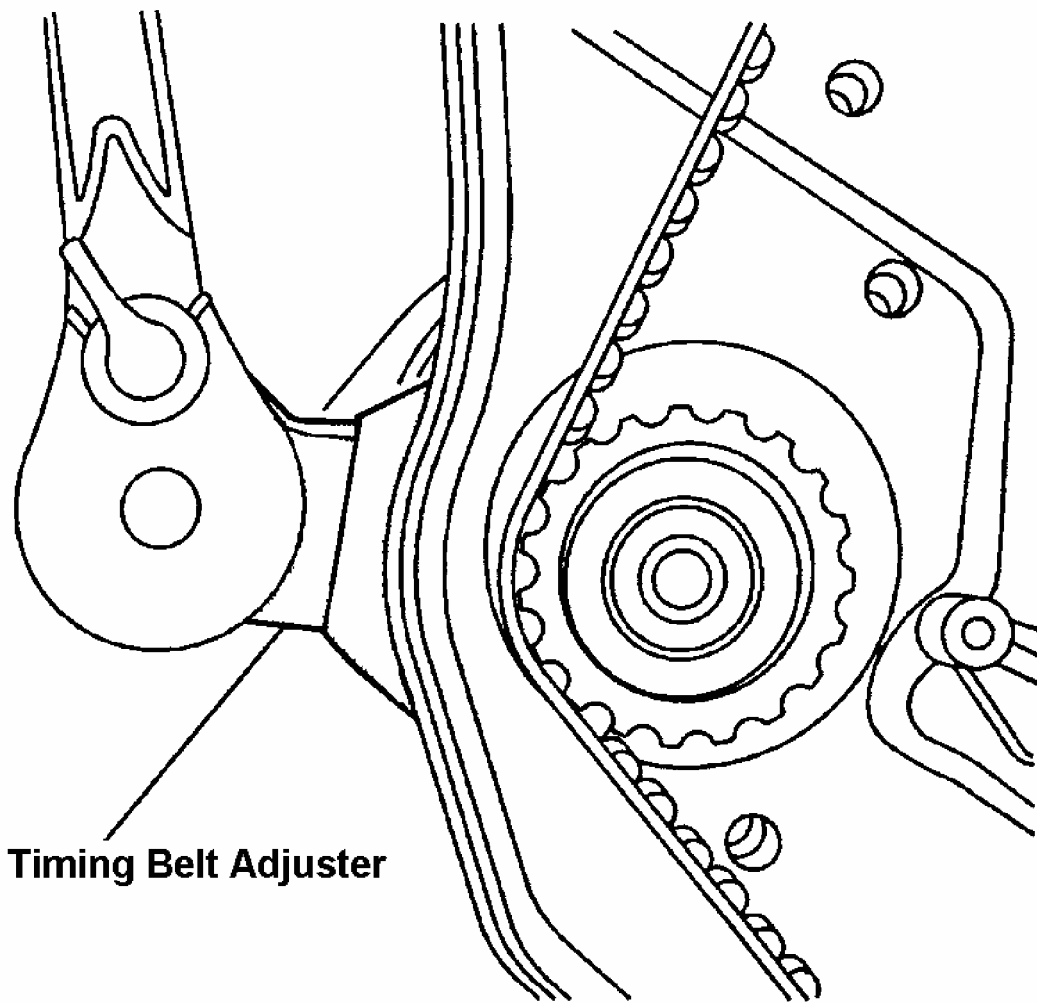
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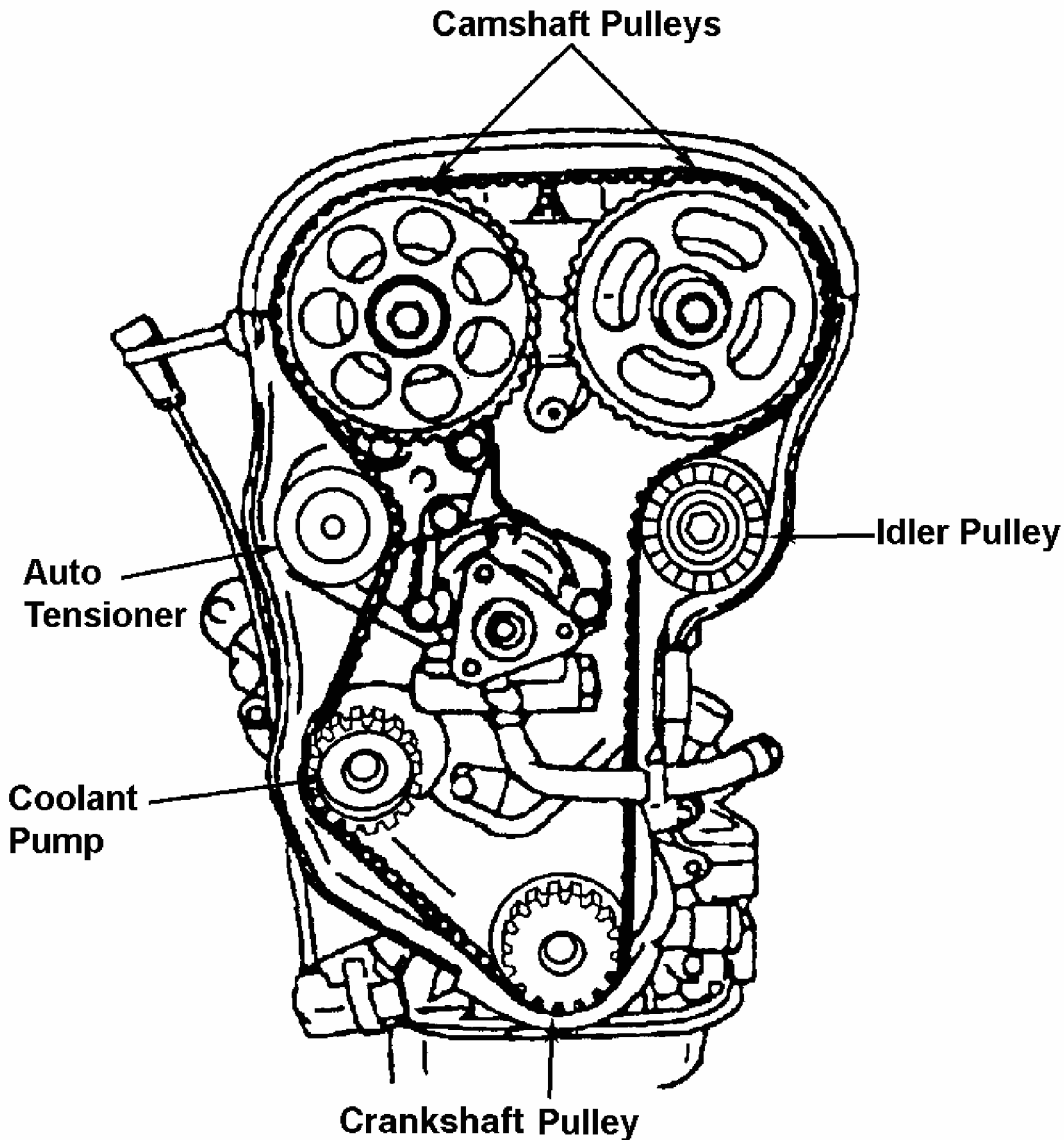
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Fig. 3: Aligning Crankshaft Timing Mark
Courtesy of GENERAL MOTORS CORP.



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Fig. 4: Rotating Coolant Pump Using Timing Belt Adjuster
Courtesy of GENERAL MOTORS CORP.



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Fig. 5: Removing & Installing Timing Belt
Courtesy of GENERAL MOTORS CORP.

Inspection

Check timing belt for cracks, cracked or missing teeth, and separating canvas. Inspect timing belt tensioner and idler pulleys for worn bearings.

Installation

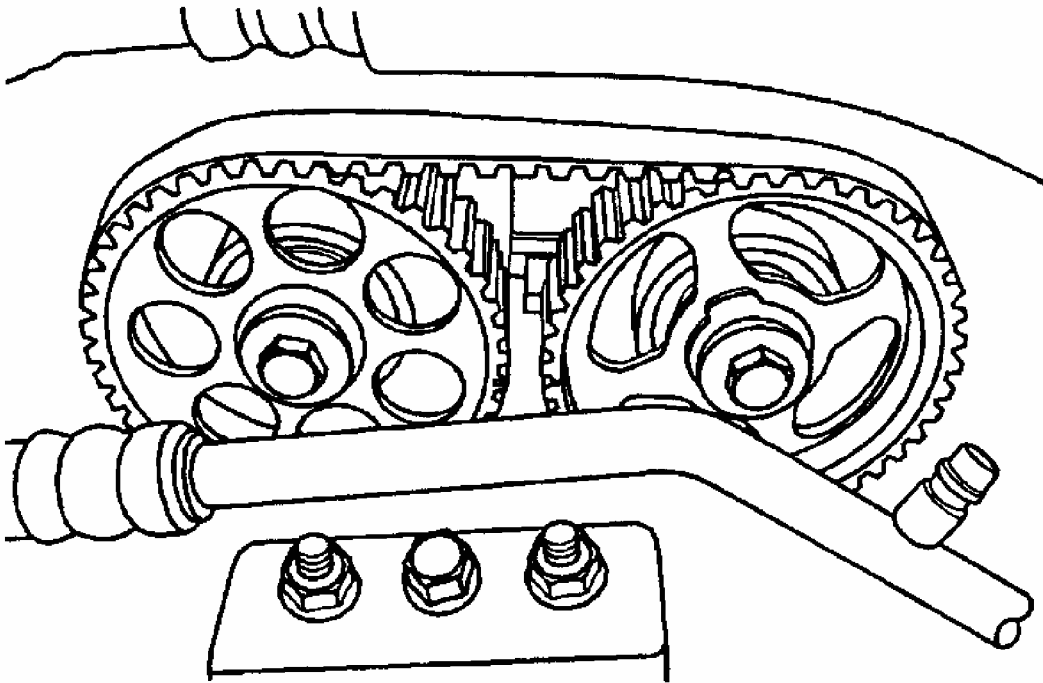
1. Align the timing mark on the crankshaft gear to the notch on the bottom of the rear timing belt cover. See **Fig. 3**. Align the timing marks on the camshaft gears. See **Fig. 6**.

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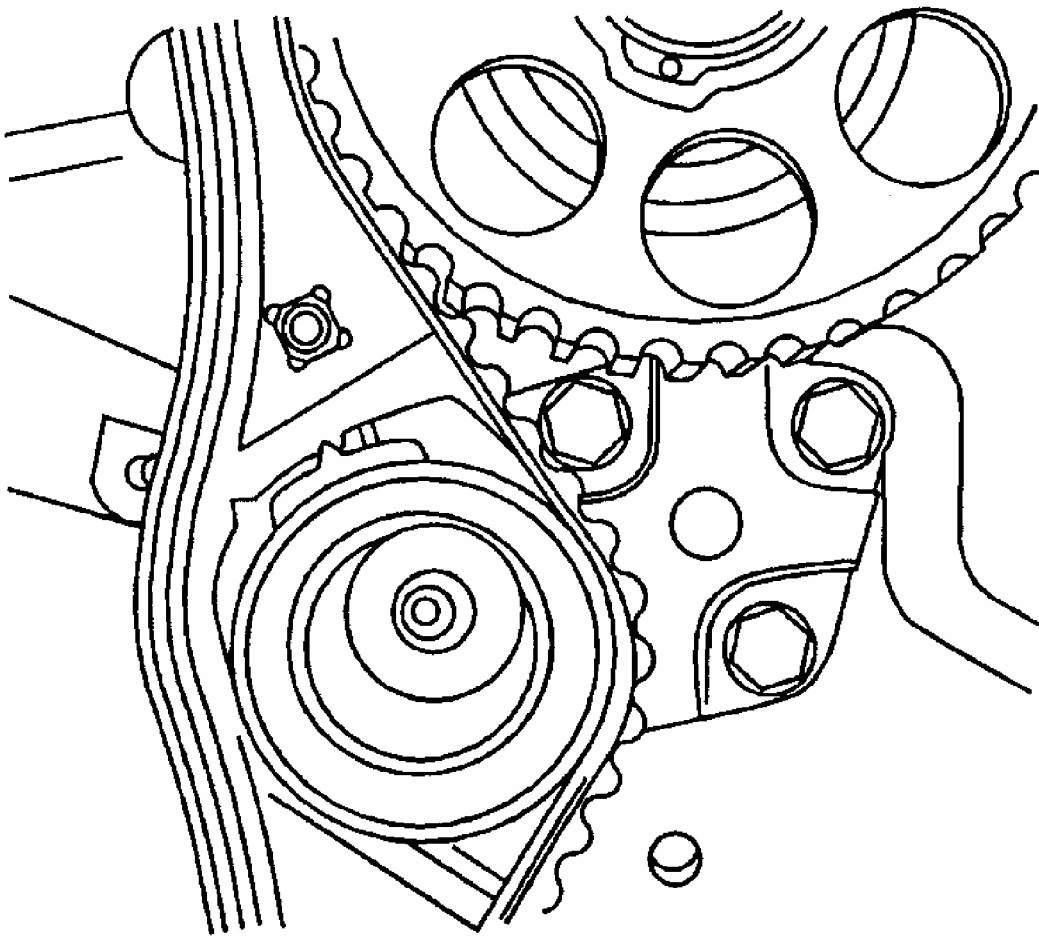
Install the timing belt. See **Fig. 5**.

2. Using the Timing Belt Adjuster (J-42492-A or KM-421-A), rotate the coolant pump clockwise. See **Fig. 4**. Rotate the coolant pump clockwise until the adjust arm pointer of the timing belt automatic tensioner is aligned to the notch in the timing belt automatic tensioner bracket. See **Fig. 7**.
3. Tighten the coolant pump retaining bolts. Rotate the crankshaft 2 full turns clockwise using the crankshaft pulley bolt. Loosen the coolant pump retaining bolts. Rotate the coolant pump until the adjust arm pointer of the timing belt automatic tensioner is aligned with the pointer on the timing belt automatic tensioner bracket. See **Fig. 8**.
4. Tighten the coolant pump retaining bolts to specification. See **TORQUE SPECIFICATIONS**.
5. Remove the crankshaft pulley bolt. Install the upper and lower front timing belt covers and bolts. See **Fig. 2**. Tighten the bolts to specification. See **TORQUE SPECIFICATIONS**.
6. Install the crankshaft pulley and bolt. See **Fig. 1**. Tighten the bolt to specification. See **TORQUE SPECIFICATIONS**.
7. Install the accessory drive belt, if equipped. Install the right front splash shield. Install the right front wheel. Tighten wheel lug nuts to specification. See **TORQUE SPECIFICATIONS**.
8. Install the air filter housing and bolts. Tighten bolts to specification. See **TORQUE SPECIFICATIONS**.
9. Connect the air intake tube and breather tube to the throttle body. Connect the IAT sensor connector. Connect the negative battery cable.



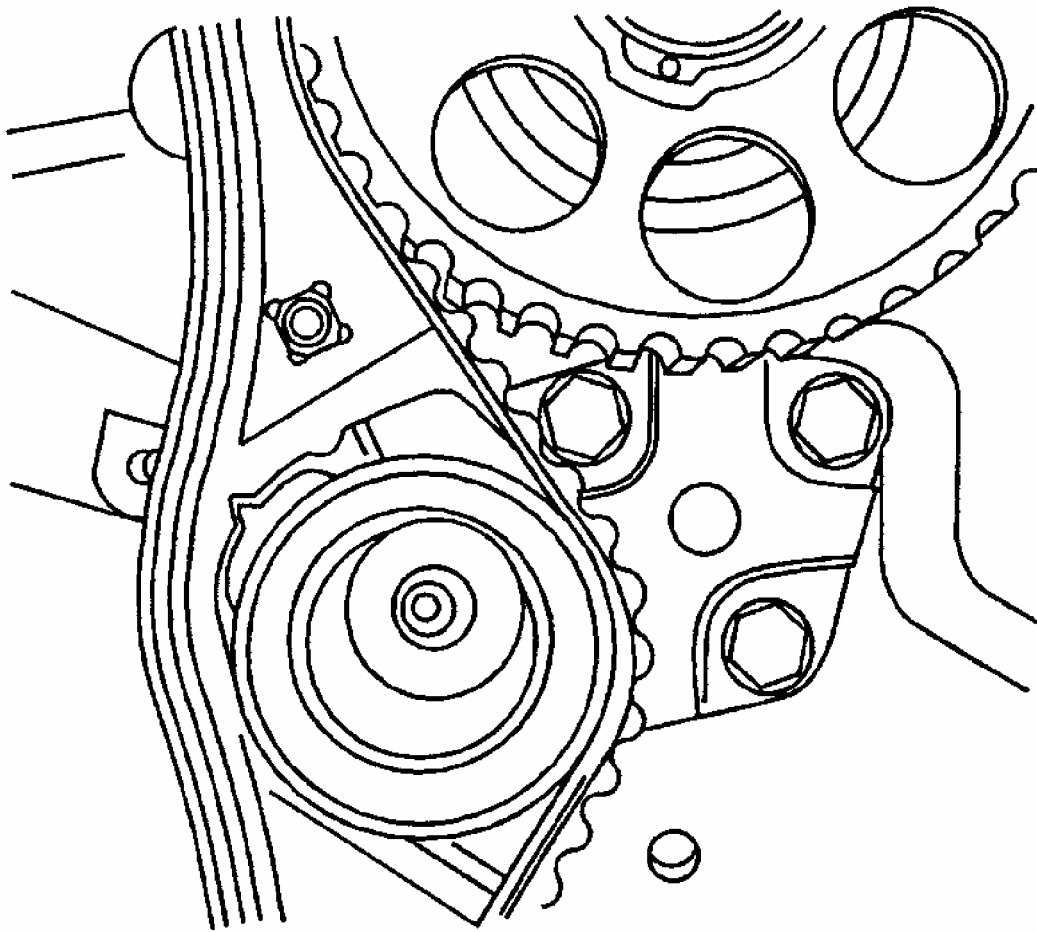
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Fig. 6: Aligning Camshaft Timing Marks
Courtesy of GENERAL MOTORS CORP.



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Fig. 7: Aligning Automatic Tensioner With Bracket Notch
Courtesy of GENERAL MOTORS CORP.



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Fig. 8: Aligning Automatic Tensioner With Bracket Pointer
 Courtesy of GENERAL MOTORS CORP.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Crankshaft Pulley Bolt	
Step 1 ⁽¹⁾	70 (95)
Step 2 ⁽²⁾	Tighten 30 Degrees, Then An Additional 15 Degrees
Wheel Lug Nuts	88 (120)

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	INCH Lbs. (N.m)
Air Filter Housing Bolts	71 (8)
Coolant Pump Retaining Bolts	89 (10)
Lower & Upper Front Timing Belt Cover Bolts	89 (10)
(1) Tighten using torque wrench.	
(2) Tighten using Angle Meter (J-45059) or Angular Torque Gauge (KM-470-B).	