The manufacturer recommends the belt be replaced at 60,000 mile intervals for severe service operating conditions.

**REMOVAL & INSTALLATION**

**TIMING BELT**

**Removal (Celica)**

1. Raise and support vehicle. Remove right front wheel and engine undercover. Lower vehicle.
   Remove cruise control actuator from engine mount at timing belt end of engine (if equipped).
2. Support weight of engine with a floor jack. Remove engine mount at timing belt end of engine.
3. Loosen water pump pulley bolts, then remove all accessory drive belts.
4. On 1.8L (7A-FE engine), remove A/C compressor front engine mount with hoses attached.
   Remove A/C compressor mount from engine.
5. On 1.6L and 1.8L engine, remove upper and center timing belt covers.
6. Rotate crankshaft so that No. 1 cylinder is at TDC of compression stroke. Notch in crankshaft pulley must align with "0" timing mark on timing belt cover. Hole in camshaft timing pulley must align with mark on bearing cap. See [Fig. 1](#).
7. Remove water pump pulley. Remove crankshaft pulley bolt. Using gear puller, remove crankshaft pulley. Remove lower timing belt cover. See [Fig. 2](#). Remove timing belt guide (large washer) from crankshaft sprocket.
8. If reusing timing belt, mark direction of rotation on timing belt. Match mark on timing belt with marks on both sprockets for installation reference. See [Fig. 3](#). Place arrow on belt to indicate original direction of rotation.
9. Loosen idler pulley (tensioner) bolt. Push idler pulley as far to the left as possible, and snug tighten bolt. Remove timing belt.
Fig. 1: Aligning Timing Marks (1.6L Shown; 1.8L Uses Same Camshaft Sprocket Timing Mark)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.
Fig. 2: Exploded View Of Timing Belt & Components (1993-97 1.6L & 1.8L)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.
FIG. 3: PLACING MATING MARKS ON TIMING BELT & SPROCKETS
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

**Inspection (Celica)**

1. Check timing belt teeth for cracks or damage. If tooth damage is found, ensure camshaft and crankshaft sprockets are okay. If wear or cracks on flat side of belt face are found, check for nicks on idler pulleys. If wear or damage to only one side of belt is found, check belt guide and alignment of each pulley and sprocket.

2. Check free length of idler pulley tension spring. See **Fig. 4**. Replace spring if free length is not 1.51" (38.4 mm) for 1.6L (4A-FE engine), or 1.252" (31.8 mm) for 1.8L (7A-FE engine).

3. Check tension at installed length. Tension should be 8.8 lbs. at 1.976" (4 kg at 50.2 mm) for 1.6L (4A-FE engine), or 11.7 lbs. at 1.480" (5.3 kg at 37.6 mm) for 1.8L (7A-FE engine). If tension is not as specified, replace spring.
Installation (Celica)

1. Ensure No. 1 cylinder is at TDC on compression stroke. Crankshaft Woodruff key will be at 12 o'clock position. On 1.6L engine, timing mark notch on crankshaft sprocket will align with timing mark on oil pump housing. See Fig. 1. Crankshaft sprocket on 1.8L engine does not have notch. On 1.6L and 1.8L, hole in camshaft sprocket must align with mark on bearing cap.

   **NOTE:** Loosen idler pulley (tensioner) bolt and allow pulley to move against belt. Install timing belt guide on crankshaft (dished side facing away from belt).

2. Ensure idler pulley (tensioner) is pushed as far to the left as possible and pulley bolt is snug tight. If reusing old timing belt, install belt and align match marks made during removal. Install new timing belt.

3. Loosen idler pulley (tensioner) bolt and allow pulley to move against belt. Install timing belt guide on crankshaft (dished side facing away from belt).

4. Install lower timing belt cover. Install crankshaft pulley. Install crankshaft pulley center bolt. Rotate crankshaft CLOCKWISE 2 revolutions from TDC to TDC.

5. Ensure crankshaft pulley notch aligns with "0" timing mark on lower timing belt cover. Ensure camshaft sprocket timing marks align. If timing marks are not aligned, remove and reinstall timing belt. If timing marks are aligned, final tighten crankshaft pulley center bolt. See TORQUE SPECIFICATIONS.
6. With idler pulley bolt still loose, measure timing belt deflection at midway point of belt longest run. See Fig. 5. Deflection should be .20-.24" with pressure of 4.4 lbs. (5-6 mm at 2.0 kg) applied. If deflection is not as specified, readjust tension on belt by moving idler pulley (tensioner).

7. Tighten idler pulley bolt. Install upper and center timing belt covers. When installing valve cover, ensure sealant is apply in correct positions. See Fig. 6.

8. Install water pump pulley. On 1.8L engine, install A/C compressor mount to engine. Install A/C compressor.

9. On 1.6L and 1.8L engines, install all accessory drive belts. Adjust belts to proper tension. Final tighten water pump pulley bolts.

10. Install engine mount to timing belt end of engine. Install front wheel and engine under cover. Install cruise control actuator (if equipped).
.236-.276" (6-7 mm)

Apply 4.4 Lb. (2Kg) Here

G00019672
Removal (1988-92 Corolla)

1. Raise and support vehicle. Remove right front wheel and engine undercover. Remove washer tank. Loosen water pump pulley bolts, then remove all accessory drive belts. Remove valve cover.

2. Disconnect engine wiring harness from upper timing belt cover. Rotate crankshaft so that No. 1 cylinder is at TDC of compression stroke. Notch in crankshaft pulley must align with "0" timing mark on timing belt cover.


5. If reusing timing belt, mark direction of rotation on timing belt. Match mark timing belt with marks on both sprockets for installation reference. See Fig. 3. Place arrow on belt to indicate original direction of rotation.

6. Loosen idler pulley (tensioner) bolt. Push idler pulley as far to the left as possible, and snug tighten bolt. Remove timing belt.

**Inspection (1988-92 Corolla)**

1. Check timing belt teeth for cracks or damage. If tooth damage is found, ensure camshaft and crankshaft sprockets are okay. If wear or cracks on flat side of belt face are found, check for nicks on idler pulleys. If wear or damage to only one side of belt is found, check belt guide and alignment of each pulley and sprocket.

2. Check free length of idler pulley tension spring. See Fig. 4. Replace spring if free length is not 1.51" (38.4 mm). Check tension at installed length. Tension should be 8.8 lbs. at 1.976" (4 kg at 50.2 mm).

**Installation (1988-92 Corolla)**

1. Ensure No. 1 cylinder is at TDC on compression stroke. Crankshaft key will be at 12 o'clock position, and timing mark notch on crankshaft sprocket will align with timing mark on oil pump housing. See Fig. 1. Hole in camshaft sprocket must align with mark on bearing cap.

   **NOTE:** Engine should be cold when installing timing belt.

2. Ensure idler pulley (tensioner) is pushed as far to the left as possible and pulley bolt is snug tight. If reusing old timing belt, install belt and align match marks made during removal. Install new timing belt.

3. Loosen idler pulley (tensioner) bolt and allow pulley to move against belt. Rotate crankshaft CLOCKWISE 2 revolutions from TDC to TDC.

4. Recheck timing mark alignment. If timing marks are not aligned, remove and reinstall timing belt.

5. With idler pulley bolt still loose, measure timing belt deflection at midway point of belt longest run. See Fig. 5. Deflection should be .20-.24" with pressure of 4.4 lbs. (5-6 mm at 2.0 kg) applied. If deflection is not as specified, readjust tension on belt by moving idler pulley (tensioner).

6. Tighten idler pulley bolt to specification. See TORQUE SPECIFICATIONS. Install timing belt guide to crankshaft sprocket.

7. Install timing belt covers. Install crankshaft pulley. Tighten center bolt to specification. See TORQUE SPECIFICATIONS. When installing valve cover, ensure sealant is apply in correct positions. See Fig. 6.

8. Install water pump pulley. Install accessory drive belts. Adjust drive belts to proper tension. Final tighten water pump pulley bolts.

9. Install front wheel and engine undercover.

**Removal (1993-97 Corolla)**

| Tips | Click a link to view tip |
1. Raise and support vehicle. Remove right front wheel and engine undercover. Lower vehicle.
2. Remove windshield washer tank. Remove cruise control actuator from right side of engine compartment. Loosen water pump pulley bolts, then remove all accessory drive belts. Remove water pump pulley. Remove valve cover.
3. On models with A/C, remove A/C compressor from mount bracket with hoses attached, and set aside. Remove A/C compressor mount bracket from engine.
4. On all models, disconnect engine wiring harness from upper timing belt cover. Rotate crankshaft so that No. 1 cylinder is at TDC of compression stroke. Notch in crankshaft pulley must align with "0" timing mark on timing belt cover.
5. Remove upper timing belt cover. With No. 1 cylinder at TDC, hole in camshaft sprocket must align with mark on bearing cap. See Fig. 1.
8. If reusing timing belt, mark direction of rotation on timing belt. Match mark timing belt with marks on both sprockets for installation reference. See Fig. 3. Place arrow on belt to indicate original direction of rotation.
9. Loosen idler pulley (tensioner) bolt. Push idler pulley as far to the left as possible, and snug tighten bolt. Remove timing belt.

**Inspection (1993-97 Corolla)**

1. Check timing belt teeth for cracks or damage. If tooth damage is found, ensure camshaft and crankshaft sprockets are okay. If wear or cracks on flat side of belt face are found, check for nicks on idler pulleys. If wear or damage to only one side of belt is found, check belt guide and alignment of each pulley and sprocket.
2. Check free length of idler pulley tension spring. See Fig. 4. See **TENSION SPRING FREE LENGTH (1993-97 COROLLA)** table. Replace spring if free length is not to specification.
3. Check tension at installed length. See **TENSION SPRING INSTALLED TENSION (1993-97 COROLLA)** table. Replace spring if tension is not to specification.

**TENSION SPRING FREE LENGTH (1993-97 COROLLA)**

<table>
<thead>
<tr>
<th>Application</th>
<th>Free Length - In (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993-94 1.6L (4A-FE)</td>
<td>1.453 (36.9)</td>
</tr>
<tr>
<td>1995-97 1.6L (4A-FE)</td>
<td>1.717 (43.6)</td>
</tr>
<tr>
<td>1993-97 1.8L (7A-FE)</td>
<td>1.252 (31.8)</td>
</tr>
</tbody>
</table>

**TENSION SPRING INSTALLED TENSION (1993-97 COROLLA)**
### Installation (1993-97 Corolla)

1. Ensure No. 1 cylinder is at TDC on compression stroke. Crankshaft woodruff key will be at 12 o'clock position. On 1.6L engine, timing mark notch on crankshaft sprocket will align with timing mark on oil pump housing. See [Fig. 1](#). Crankshaft sprocket on 1.8L engine does not have notch. On 1.6L and 1.8L, hole in camshaft sprocket must align with mark on bearing cap. **

   **NOTE:** Engine should be cold when installing timing belt.

2. Ensure idler pulley (tensioner) is pushed as far to the left as possible and pulley bolt is snug tight. If reusing old timing belt, install belt and align match marks made during removal. Install new timing belt.

3. Loosen idler pulley (tensioner) bolt and allow pulley to move against belt. Install timing belt guide on crankshaft (dished side facing away from belt).

4. Install lower timing belt cover. Install crankshaft pulley. Install crankshaft pulley center bolt. Rotate crankshaft CLOCKWISE 2 revolutions from TDC to TDC.

5. Ensure crankshaft pulley notch aligns with "0" timing mark on lower timing belt cover. Ensure camshaft sprocket timing marks align. If timing marks are not aligned, remove and reinstall timing belt. If timing marks are aligned, final tighten crankshaft pulley center bolt. See [TORQUE SPECIFICATIONS](#).

6. With idler pulley bolt still loose, measure timing belt deflection at midway point of belt longest run. See [Fig. 5](#). Deflection should be .20-.24" with pressure of 4.4 lbs. (5-6 mm at 2.0 kg) applied. If deflection is not as specified, readjust tension on belt by moving idler pulley (tensioner).

7. Tighten idler pulley bolt to specification. See [TORQUE SPECIFICATIONS](#).

8. Install upper and center timing belt covers. When installing valve cover, ensure sealant is apply in correct positions. See [Fig. 6](#).


10. Install all accessory drive belts. Adjust belts to proper tension. Final tighten water pump pulley bolts.

11. Install engine mount to timing belt end of engine. On 1995-97 models, ensure engine ground strap is connected to ground wire on passenger side shock tower. Install front wheel and engine undercover. Install cruise control actuator (if equipped).

### TORQUE SPECIFICATIONS

#### TORQUE SPECIFICATIONS
<table>
<thead>
<tr>
<th>Application</th>
<th>Ft. Lbs. (N.m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/C Compressor Mount Bracket-To-Engine</td>
<td></td>
</tr>
<tr>
<td>Celica (1.8L)</td>
<td>35 (47)</td>
</tr>
<tr>
<td>A/C Compressor-To-Mount Bolts</td>
<td></td>
</tr>
<tr>
<td>Celica (1.8L)</td>
<td>18 (25)</td>
</tr>
<tr>
<td>Camshaft Sprocket Bolt</td>
<td>43 (58)</td>
</tr>
<tr>
<td>Crankshaft Pulley Bolt</td>
<td>87 (118)</td>
</tr>
<tr>
<td>Engine Mounts</td>
<td></td>
</tr>
<tr>
<td>Celica (1993)</td>
<td></td>
</tr>
<tr>
<td>Mount Bolt</td>
<td>47 (64)</td>
</tr>
<tr>
<td>Mount Nut</td>
<td>38 (52)</td>
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<tr>
<td>Mount-To-Engine Bracket Bolt</td>
<td>47 (64)</td>
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<tr>
<td>Mount-To-Engine Bracket Nut</td>
<td>38 (52)</td>
</tr>
<tr>
<td>Through-Bolt</td>
<td>64 (87)</td>
</tr>
<tr>
<td>Corolla (1993-97)</td>
<td></td>
</tr>
<tr>
<td>Mount-To-Body Bolt</td>
<td>19 (25)</td>
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<tr>
<td>Mount-To-Engine Bracket Bolt</td>
<td>47 (64)</td>
</tr>
<tr>
<td>Mount-To-Engine Bracket Nut</td>
<td>38 (52)</td>
</tr>
<tr>
<td>Power Steering Pump-To-Bracket Bolts</td>
<td></td>
</tr>
<tr>
<td>Spark Plug</td>
<td>13 (18)</td>
</tr>
<tr>
<td>Timing Belt Tensioner Pulley Bolt</td>
<td>27 (37)</td>
</tr>
<tr>
<td>Wheel Lug Nut</td>
<td>76 (103)</td>
</tr>
<tr>
<td><strong>INCH Lbs. (N.m)</strong></td>
<td></td>
</tr>
<tr>
<td>Timing Belt Cover Bolt</td>
<td>65 (7.4)</td>
</tr>
<tr>
<td>Valve Cover Cap Nuts</td>
<td></td>
</tr>
<tr>
<td>1988-92 1.6L</td>
<td>69 (7.8)</td>
</tr>
<tr>
<td>1993-97 1.6L &amp; 1.8L</td>
<td>52 (5.9)</td>
</tr>
<tr>
<td>Water Pump Pulley Bolt</td>
<td>82 (9.3)</td>
</tr>
</tbody>
</table>

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