



## Camshaft Sprocket/Pulleys

### REMOVAL & INSTALLATION

#### Z24i and KA24E Engines

1. Remove the timing chain with the camshaft sprocket.

**NOTE: The engines are designed so that the camshaft sprocket MUST be removed at the same time that the timing chain is removed.**

2. To install, use new gaskets and reverse the removal procedures.

#### VG30i and VG30E Engines

1. Remove the timing belt.
2. Using an adjustable spanner wrench (to hold the camshaft pulley) and a socket wrench, remove the camshaft pulley bolt and washer.
3. Remove the camshaft pulley(s) from the camshaft(s). Be careful not to lose the Woodruff keys.

**NOTE: The right and left camshaft pulleys are different parts. Install them in their correct positions. The right pulley has an R3 identification mark and the left pulley has an L3.**

#### To install:

4. To install the camshaft pulleys, perform the following:
  - A. Remove the cylinder head covers.
  - B. Loosen the rocker arm shaft assembly bolts.
  - C. Remove the spark plugs.
  - D. Make sure the Woodruff keys are in position, then install the camshaft pulleys.
5. Install and adjust the timing belt.
6. Install the timing belt covers.

Fig. 1: Tightening the camshaft sprocket bolt with a spanner-type wrench — 4-cylinder engines

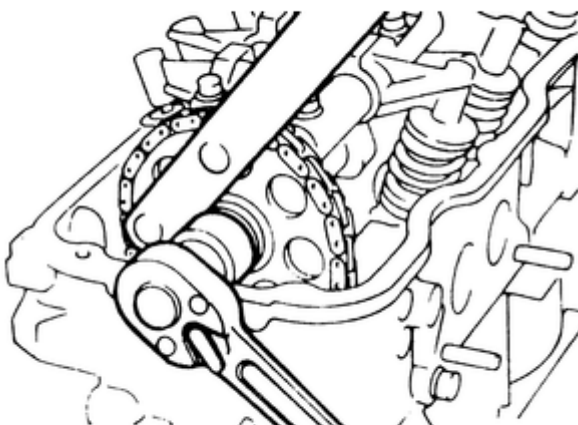


Fig. 2: Loosen the camshaft pulley retaining bolt



Fig. 3: Remove the camshaft pulley retaining bolt



Fig. 4: View of the camshaft pulley — note the timing mark on top of the pulley



Fig. 5: Tighten the camshaft pulley retaining bolt — note the tool to hold the pulley in place

