

## **PRIMARY TIMING CHAIN INSTALLATION PROCEDURE**

Chrysler V6, 2.7L DOHC Engines. If the following procedure is not followed correctly, upon start up, valves will bend.

- 1) Install right and left side short chain guides.
- 2) Install left lower chain guide and right lower tensioner arm.
- 4) Align crankshaft sprocket timing mark to the mark on oil pump housing. NOTE: Lubricate timing chain and guides with engine oil before installation.
- 5) Place left side primary chain sprocket onto the chain so that the timing mark is located in-between the two plated links on chain.
- 6) Lower the primary chain with left side sprocket through the left cylinder head opening. NOTE: The camshaft sprockets can be allowed to float on the camshaft hub during installation.
- 7) Loosely position left side camshaft sprocket over camshaft hub.
- 8) Align plated link to the crankshaft sprocket timing mark.
- 9) Position primary chain onto water pump drive sprocket.
- 10) Align right camshaft sprocket timing mark to plated link on timing chain and loosely position over camshaft hub.
- 11) Verify that all plated links are properly aligned to timing marks on all sprockets.
- 12) NOTE: Inspect O-ring on chain guide access plug before installing. Replace O-ring as necessary. Install chain guide access plug to left cylinder head.
- 13) See instructions below for primary timing chain tensioner set up procedure. CAUTION: If tensioner is not set up properly, timing chain noise will result.
- 14) After the set up procedure has been completed install primary chain tensioner into the right cylinder head.
- 15) Starting at the right cylinder bank, insert a 3/8" square drive extension with a breaker bar into intake camshaft drive hub. Rotate camshaft until the camshaft hub aligns to the camshaft sprocket and damper attaching holes.
- 16) Turn the left side camshaft by inserting a 3/8" square drive extension with a breaker bar into intake camshaft drive hub and rotate camshaft until the sprocket attaching bolts can be installed.
- 17) Rotate engine slightly clockwise to remove timing chain slack, if necessary.
- 18) Activate the timing chain tensioner by using a flat bladed pry tool to gently pry tensioner arm towards the tensioner. Then release the tensioner arm. Verify the tensioner is activated (extended out of body). NOTE: After installation of a reset tensioner, engine noise will occur after initial start-up. This noise will normally go away within 5-10 seconds.

### **Primary Timing Chain Tensioner Set Up Procedure**

When removal of the primary chain tensioner is necessary, it is very important to follow the steps. If the timing chain tensioner is not set up properly, timing chain noise will result.

For the primary tensioner, the use of Tool #8186 is required for purging and resetting. To correctly reset, purge and install the tensioner, Chrysler offers the following information.

- 1) Remove the tensioner from the tensioner body.
- 2) Place the check ball end of the tensioner in the shallow end of tool Part #8186.
- 3) Slowly depress tensioner until oil is purged out of the tensioner. This can be done by hand pressure.
- 4) Reinstall the tensioner into the housing of the tensioner body.
- 5) Reset the timing chain tensioner by positioning cylinder plunger into the deeper end of the tool #8186.
- 6) Apply a downward force until tensioner is reset. Note: If oil was not first purged from the tensioner, use light finger pressure to assist the center arm of tool #8186 to unseat the tensioner check ball.

Caution: Make sure that the tensioner is properly reset. The tensioner body must be bottomed-out against the top edge of tool #8186. Failure to properly perform resetting procedure may cause the tensioner to jam.