

Installation Instructions

9-3113A Hex-A-Just[®] Roller Timing Set with Adjustable Fuel Pump Eccentric

BEFORE YOU BEGIN: READ ALL OF THESE INSTRUCTIONS FIRST !!!

Note: The installation procedures which follow assume that the engine has been disassembled and cleaned as it would be for a normal timing set change.

YOU WILL NEED:

TOOLS:

Torque Wrench
Degree Wheel (Optional, but Recommended)
Depth Micrometer or Good Steel Scale

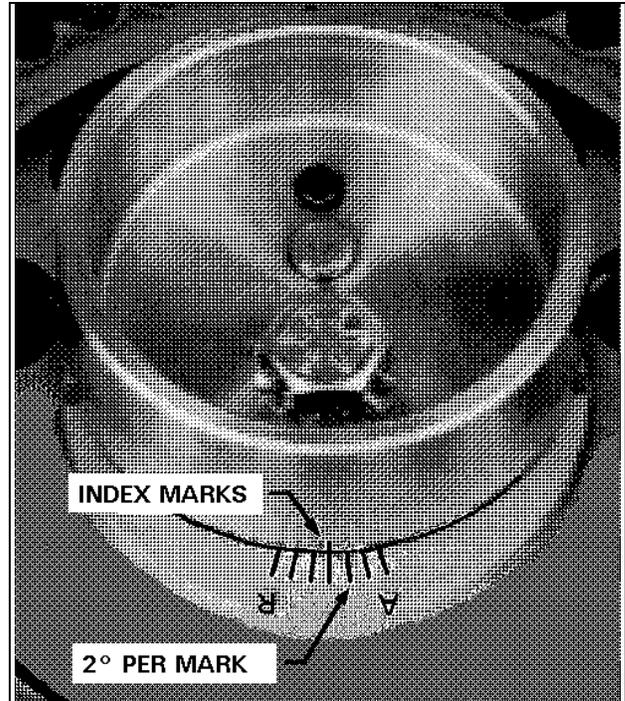
SUPPLIES:

Assembly Lube or Camshaft Lube
Thread Locking Compound (Loctite[®] #271 or equiv.)

1. **Prepare the Engine.** Loosen all rocker arms so that the camshaft can rotate freely.
2. **Clean everything!** Make sure that the engine mounting surfaces and timing set components are as clean as possible. The life of the chain and sprockets depends on it.
3. **Install the Dowel Pin.** Remove the old dowel pin by clamping the pin in a vise and carefully prying the camshaft away. Trial fit the new dowel pin in the camshaft, making sure that it is fully seated in the camshaft. The pin should protrude 9/16" to 19/32" from cam nose. If the pin is too long, grind it until the length is correct. Remove the pin and apply the thread locking compound to the end of the pin. Press the dowel pin back into place, making sure that it is fully seated in the camshaft.
4. **Align the Engine.** Rotate the crankshaft until the number one piston is at top dead center. The crankshaft key should be pointing up to the right. Rotate the camshaft until the dowel pin is pointing straight up.
5. **Assemble the Timing Set.** Select the appropriate keyway and timing mark on the crankshaft sprocket for the camshaft timing baseline desired. We recommend the Standard Timing position, which uses the round timing mark and round keyway. Loop the chain over the camshaft sprocket. Align the camshaft and crankshaft timing marks and loop the chain around the crankshaft sprocket. Lift the sprocket and chain assembly into

place on the camshaft and crankshaft. Slide the crankshaft sprocket onto the crankshaft while sliding the camshaft sprocket onto the camshaft. Make sure that the sprockets are fully seated on their shafts.

4. **Install the Hex-A-Just® Fuel Pump Eccentric.** Install the eccentric onto the camshaft sprocket making sure that the dowel pins fully engage the proper holes in the eccentric. Be sure that the dowel pin installed earlier does not protrude through the eccentric, or the offset washer will not seat properly. Install the old bolt and the offset washer (included) and thread it all the way in, but leave it slightly loose. The **Hex-A-Just®** Adjustable Fuel Pump Eccentric is infinitely adjustable so you can fine adjust your engine's CAMSHAFT TIMING to ***EXACTLY WHERE YOU WANT IT.***



8. **Adjust the Camshaft Timing.** Do NOT try to turn the camshaft with the eccentric unless there is **NO LOAD** on the camshaft. Make sure that the camshaft bolt is **LOOSE**. For a simple installation, adjust the **Hex-A-Just®** Fuel Pump Eccentric to the desired timing setting (Figure 1). For a more accurate installation, use a degree wheel. The degree wheel method is strongly recommended.
9. **Torque Loose Bolt.** Apply a generous amount of Thread Locking Compound to the Camshaft Sprocket Mounting Bolt. Torque the Camshaft Sprocket Mounting Bolt to 40-45 ft-lb.
10. **Lubricate the Timing Set.** Make sure that the engine oil has a clear path to the timing set through the lifter valley oil drain-back holes, or through some other means. A timing set requires plenty of oil to survive. Before installing the timing cover gasket and timing cover, pour plenty of assembly lube over the sprockets and bearings. Assembly lube will stay on the sprockets until the engine is started.
11. **Install the Timing Cover and Gasket.** Install the timing cover gasket using a small amount of gasket sealer if desired. Mount the timing cover and the rest of the engine accessories according to the manufacturer's procedures.