

Twin Cam® Oil Bypass Shim

Installation Instructions For Part #'s 12-0108, 12-0141, 12-0145

Note: Installation of this kit should be performed by an experienced technician having specific knowledge and skills relating to performance engines and components.

Consult your Service Manual during this procedure to ensure proper assembly and torque of components. Ensure all components of the kit are installed in the proper sequence. Ensure all components in the kit and the cam support plate are CLEAN before installation.

- **Dissassemble the top end of the engine only so far as necessary to remove the pushrods and lifters, following the instructions provided in your Service Manual.**
- **Positioning a suitable container underneath the gearcase area, remove the gearcase retaining bolts and gearcase cover.**
- **Using Cam Chain Tensioner Tool, 16-0793, to remove the tension from the cam chains and install the retaining pins included with the tool.**
- **Remove the cam drive chain and sprockets, discarding the bolts.**
- **Remove the pin from the outboard chain tensioner, remove snap ring from the shaft and lift the tensioner off the cam support plate.**
- **Remove the retaining screws from the oil pump and cam support plate, retaining for later reinstallation.**
- **Carefully remove the cam support plate, leaving the oil pump in position.**
- **With the Cam Support Plate still assembled, locate the number 1, cast into the boss below and to the left of the pinion bushing. Immediately to the left of the number 1, you will find the retaining pin for the pressure relief spring. (See Photo)**
- **Using a small punch, gently tap out the pin until it no longer retains the spring. (The punch will retain it)**



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- **With your hand held over the port to the left of the pin, remove the punch, allowing the springs to extend.**
- **Install the Oil Bypass Shim in the end of the spring. Using a small screwdriver or scribe, push the shim and spring back into the bore of the port until it can be retained by the roll pin. Gently reinstall the roll pin maintaining pressure on the spring until the pin has been fully reinstalled.**
- **Release tension on the spring. Reinstall the cam plate, drive chain and other components, following the instructions provided in your Service Manual.**



Thank You For Choosing V-TWIN!