

**IMPORTANT NOTICE**: This installation should be done by an experienced mechanic who has access to a factory service manual and all required tools.

CAUTION: Incorrect installation can cause engine damage not covered under warranty. Failure to install components correctly can cause engine seizure and may result in serious injury to motorcycle, operator, passenger, and/or others.



#### ASSEMBLED ENGINE CASE PISTON COOLING JET PRESSURE TESTER

This pressure test tool is a must for any M8 or Twin Cam engine builder. Bench test the piston cooling jets before installation to ensure proper operation. Another great diagnostic tool to add to your collection! Leaking or prematurely releasing piston cooling jets can cause high engine case oil levels (sump) and lower oil pressure to your lifters' bores. Piston cooling jets that fail to pop off will reduce piston lubrication leading to increased heat and wear. With this tool, you'll be able to verify operation prior to start up or diagnose an issue.

- \* STANDARD 1 YEAR WARRANTY:
- WARRANTY COVERS MANUFACTURE DEFECTS.
- Does not cover parts that have failed due to improper installation, maintenance, excessive crankshaft runout, or misuse.
- DOES NOT COVER ANY CONSEQUENTIAL DAMAGE RESULTING FROM A FAILURE OF A FEULING PRODUCT.
- \* OPTIONAL 2 YEAR WARRANTY:
- ADDITIONAL YEAR WARRANTY IS ONLY AVAILABLE IF PARTS ARE INSTALLED BY A PROFESSIONAL INSTALLER.
- THE ONLINE WARRANTY FORM MUST BE COMPLETED BY THE DEALER PRIOR TO BIKE DELIVERY.
- OIL TANK MUST BE DROPPED & CLEANED.
- CRANKSHAFT RUNOUT MUST BE BELOW 0.005"

### TOOL PREP

1. Clean all components and gasket surface on the tool. Install gasket onto tool if not done already.

Apply Loctite 545 to one end of NPT stand off, then install into tool plate. Apply Loctite 545 to thread reducer and install into regulator.









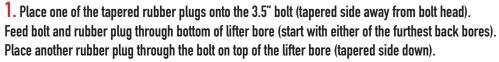
2. Apply Loctite 545 to other end of NPT stand off and install regulator with thread reducer.
Apply Loctite 545 to PSI gauge and install into top of regulator. Install <u>YOUR</u> air line fitting into rear of regulator using Loctite 545.
We do not include the air hose nipple.





# INSTRUCTIONS

# **TWIN CAM FITMENT**













Use plastic knob to tighten down firmly (firmly pushing up on the bolt from below will help reduce effort needed). Repeat on other 3 lifter bores

Ensure gasket and engine case surface are clean. Place the two 1/4-20 x 1.250" bolts into the tool using the "TC" marked holes. Hand tighten bolts into engine case until snug. After bolts are snug, install your air line.





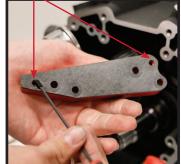


3. Slowly open regulator and record when the jet opens. 12-18psi is a typical range.

If the top end is assembled, carefully listen for the jets to open. You can also place your fingers in the cam bearing holes and feel air flow. If it is hard to tell if both are operating correctly, you are able to test one jet at a time by installing the 10-32 x 3/8" set screw into one of the threaded feed ports in the back of the tool (either hole can be used).

If the top end is removed, you can spray some oil onto jet to see when it opens. You may also intermittenly block the jet with a finger as you bring up the pressure, while watching for movement in the gauge needle. If gauge needle raises when jet is blocked, the jet is opening. Be sure to also inspect for any leaks around base of piston cooling jet.













## INSTRUCTIONS

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1. Place one of the tapered rubber plugs onto the 3.5" bolt (tapered side away from bolt head). Feed bolt and rubber plug through bottom of lifter bore (start with either of the furthest back bores). Place another rubber plug through the bolt on top of the lifter bore (tapered side down).



M-EIGHT FITMENT









Use plastic knob to tighten down firmly (firmly pushing up on the bolt from below will help reduce effort needed). Repeat on other 3 lifter bores

2. Ensure gasket and engine case surface are clean.

Screw 10–32 allen head bolt into the rear of tool plate, near the skinnier tapered end of plate.







Blocks unused passage on M-Eight

3. Place the two 1/4-20 x 1.250" bolts into the tool using the "M8" marked holes. Hand tighten bolts into engine case until snug. Install your air line. Slowly open regulator and record when the jet opens. 12-18psi is a typical range.

# If the top end is assembled,

carefully listen for the jets to open. You can also place your finger in the cam bearing hole and feel air flow. Unfortunately, you can only test both jets at the same time on M8 engines (unlike Twin Cam engines).







If the top end is removed, you can spray some oil onto jet to see when it opens. You may also intermittenly block the jet with a finger as you bring up the pressure, while watching for movement in the gauge needle. If the gauge needle raises when jet is blocked, the jet is opening. Be sure to inspect for any leaks around base of piston cooling jet.









Even if you do not hear the jet opening, the gauge shows us that it is releasing pressure