



FEULING

PART #'S:
9014, 9015, 9016

CRANKSHAFT RUNOUT MEASURING TOOL & GEAR DRIVE BACK LASH MEASURING TOOL INSTRUCTIONS



PART #9014

FITS:
M-EIGHT '17 & UP



PART #9015

FITS:
TWIN CAM: '99-'17
EVO: '89-'99
SHOVEL: '70-'83



PART #9016

IMPORTANT NOTICE:

Damage to Feuling oil pump corporation products from incorrect installation, calibration and or from excessive pinion shaft run out and or valve spring coil bind will void manufacturer's warranty.

This tool simplifies & speeds the process of checking crankshaft run out on engines with the crankshaft installed. The tool mounts to the cam chest side of the engine case using the designated mounting holes of the tool combined with the handled thumb screws & the case cam cover bolt holes. The tool gives quick & accurate readings of the engines crank pinion shaft run out & makes for a great display to show & explain to customers the condition of their crankshaft.

INSTRUCTIONS (PART #9014 M-EIGHT ENGINES)

1. Assemble tool. Install the dial indicator into the top side of the tool plate.
2. Tighten the set screw against the back side of the dial indicator stem to hold indicator in place.
3. Install plate onto engine case, lift indicator to clear crankshaft then use the thumb screws to tighten to engine case.
4. Rotate engine to measure crankshaft runout.
5. Lift end of pinion shaft to measure initial flex & play in crank bearings. Add this number to crankshaft runout for total runout measurement.

*Feuling recommends a maximum of 0.005" crankshaft runout + play in the crankshaft bearings for maximum horsepower/torque and engine longevity.

PART #9014 INCLUDES:
1 - Anodized tool plate
1 - +/-0.001 dial indicator
1 - Set screw 10-24 x 3/8" used to lock down indicator
2 - Thumb screws



*** 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"

NOTE: FOR FULL WARRANTY INFORMATION VISIT WWW.FEULINGPARTS.COM/WARRANTY



INSTRUCTIONS (PART #9015 EVO & TWIN CAM ENGINES)

1. Assemble the tool, install the dial indicator into the top side of the tool plate.
2. Tighten the set screw against the back side of the dial indicator stem to hold indicator in place
3. Use both thumb screws to tighten tool to desired engine case.
4. The tool has 3 mounting holes that are marked to indicate which engine the holes are for, T/C for Twin Cam engine EVO for evolution engine.
5. Rotate engine to measure crankshaft runout.
6. Lift end of pinion shaft to measure initial flex & play in crank bearings. Add this number to crankshaft runout for total runout measurement.

PART #9015 INCLUDES:

- 1 - Anodized tool plate
- 1 - +/-0.001 dial indicator
- 1 - Set screw 10-24 x 3/8"
- 2 - Quick screws, 1/4" x 20
- 1 - Spacer, 1" with 1/4" ID
- 1 - Bolt, 1/4" - 20

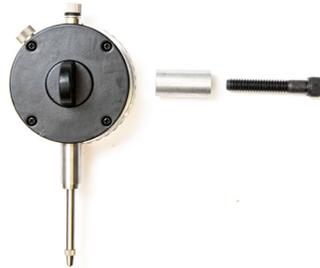
**Feuling recommends a maximum of 0.0025" crankshaft run out for maximum engine horsepower, longevity and reliability.*



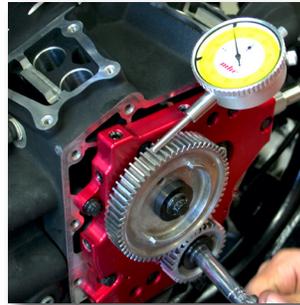
MEASURING GEAR DRIVE BACK LASH



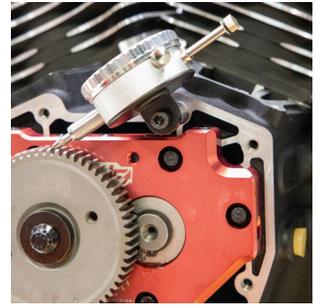
REMOVE TIP FROM DIAL INDICATOR.



USE SPACER & BOLT TO TIGHTEN INDICATOR TO CAM COVER BOLT HOLE.



MEASURE BACK LASH IN 4 SEPARATE LOCATIONS, USE THE AVERAGE AS YOUR GEAR BACK LASH.



USE THE CAM COVER BOLT HOLE TO MOUNT INDICATOR.

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