

Crankshaft Balancing

Meets NATEF Task: (Not specified by NATEF)

Name _____ Date _____ Time on Task _____

Make/Model/Year _____ VIN _____ Evaluation: 4 3 2 1

_____ 1. To determine the amount of bob weight (if needed), measure the weight of the following:

- piston with pin: _____ grams
- locks: _____ grams
- rings: _____ grams
- bearings: _____ grams
- rod big end: _____ grams
- small end: _____ grams
- oil weight: _____ grams (usually 3 to 6 grams)



NOTE: Even though the balance machine will often calculate the bob weight, the following formula is used:

Piston weight
 Pin weight
 Locks weight
 Rings weight
Small end of rod weight
 TOTAL = _____ X 2 (if a V-8) = reciprocating weight
 Reciprocating weight X 50% (balance factor) = calculated reciprocating weight.
 Rotating wt. = calculated reciprocating wt. + insert weight + rod big end weight X 2.
 Bob weight = calculated reciprocating weight + rotating weight.

_____ 2. Install the harmonic balancer and flywheel (flexplate) if externally balanced.

_____ 3. Amount of weight needed to be added or removed to balance = _____

_____ 4. Balance (should be within 3 grams). **OK** _____ **NOT OK** _____