

# Student Tracker

## Engine Block Internal Re-Assembly (EBIR)

Name: \_\_\_\_\_

*Please complete the following competencies using the proper procedures, service information, and tools. Be prepared to explain to the teacher what you did. After completion of each competency, your teacher will initial next to each number.*

Engine: \_\_\_\_\_

1. Demonstrate how to clean engine block and internal parts before re-assembly.

Hone piston bores

Ridge ream bores (if necessary)

Chase all threads

Clean oil galley in block and crankshaft.

Clean piston ring grooves.

Wash engine block and internal parts.

Check engine block for cracks

2. Demonstrate how to properly re-assemble engine block internal components in engine block.

Crankshaft bearing cap torque spec: \_\_\_\_\_

Connecting rod cap torque spec: \_\_\_\_\_

Install oil galley and freeze plugs

Install new camshaft bearings

Install crankshaft bearings, check for proper clearances, and install bearing caps

(and possibly front and/or rear main seals)

Check piston ring gap

Install piston rings on pistons

Install pistons and connecting rods in bore (remember to protect those rod bolts!)

Install connecting rod bearings, check for proper clearances, and install rod caps

Install Oil Pump and shaft

Install camshaft

Install timing chain components (pay attention to timing marks!)

3. Demonstrate how to check/measure engine block internal components for proper re-assembly.

Measure crankshaft endplay

Measure connecting rod spacing

Turn crankshaft (does it bind, does it turn smooth, does it make any noises, etc.)