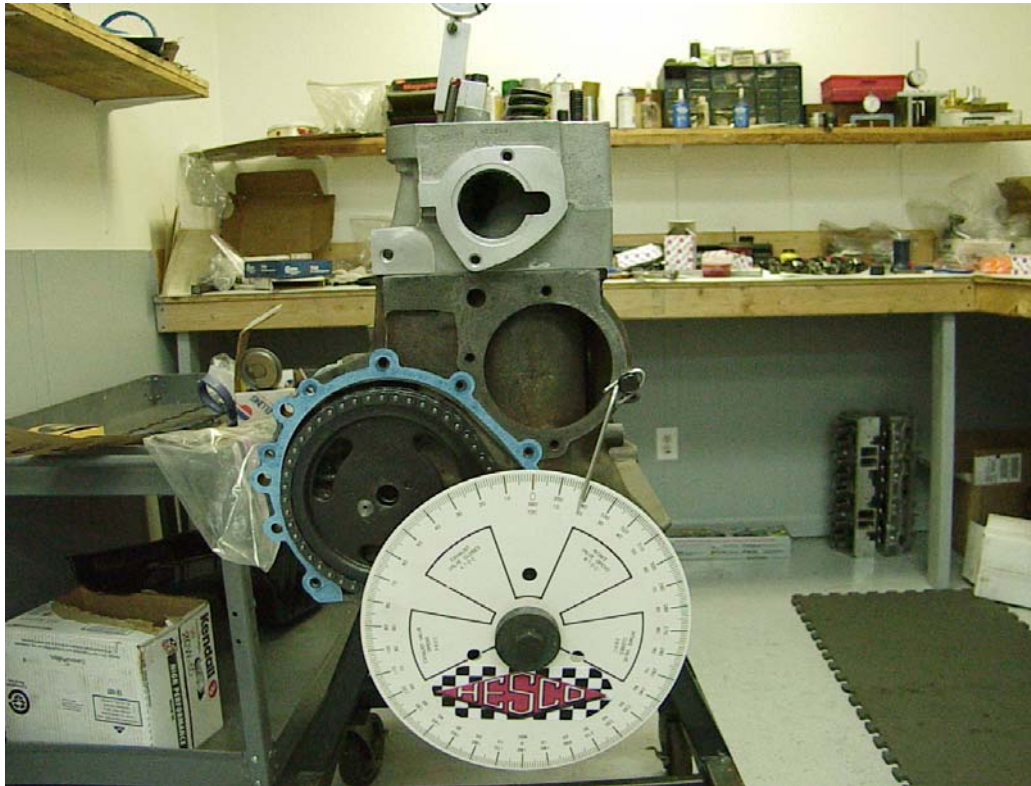


HESEZCAM Instructions

1. Once the camshaft & timing set have been installed, make sure the marks on both the camshaft and crankshaft gears are aligned properly (mark to mark)
2. Install the #1 intake valve lifter & pushrod only at this time.
3. Attach the pointer to the block. You can use one of the water pump bolts to accomplish this. (see photo below)



4. Install the supplied crank socket on the snout of the crankshaft. Mount the degree wheel on the adapter.
5. Before installing the piston stop, rotate the crankshaft to get the #1 piston in the top dead center position. This can be a rough guess, but it can save you from making a mistake later. Adjust your pointer to zero on the TDC section of the degree wheel.
6. Turn the crankshaft opposite to the engine rotation approximately 15-20 degrees. This will lower the position enough to allow the supplied **piston stop** to be installed in the #1 spark plug hole. Screw in the piston stop until it touches the piston. Continue to rotate the engine in the same direction until the piston moves back up and touches the piston stop. Mark the degree wheel on the number the pointer is on. Now turn the engine in the other direction (same as engine rotation) until the piston comes back

- and touches the piston stop again. Mark the degree wheel again at the number the pointer is on.
7. Remove the piston stop after making the two marks on the degree wheel. Rotate the crankshaft to the midpoint of the two marks. This point is TDC (top dead center) for cylinder #1. Without rotating the crankshaft, adjust the degree wheel to read "0" (zero) degrees at the pointer. **If you are not absolutely sure that your mark is set at TDC, repeat this procedure. This step is critical for proper cam alignment.**
 8. Attach the supplied dial indicator to the dial indicator mount. Using your rocker arm bolts, bolt the mount to the #1 intake rocker arm mount on the cylinder head. Position the dial indicator mount so the tip will contact the pushrod of the #1 intake valve lifter (see photo below)



9. Rotate crankshaft counter clockwise until the lifter is on the base circle of the camshaft. Zero the dial indicator.
10. Rotate the crankshaft clockwise until you read zero on the degree wheel. Read the dial indicator. Your number should be between 48 & 58 thousands depending on the choice of camshaft.
11. Rotate crankshaft clockwise until you reach max lift on the dial indicator. Zero the dial indicator.

12. Rotate crankshaft counter clockwise moving the indicator about .100 then rotate the crankshaft back clockwise to .050 before the max lift "0" on the dial indicator. Read the number on your degree wheel and write it down.
13. Continue to rotate the crank clockwise to max lift "0" and back to .050 after max lift. Read the degree wheel and write the number down again.
14. Add the numbers from step 12 & step 13 together and divide by 2. This is your camshaft centerline. Your number should be between 104 – 107 degrees.

For technical assistance call (205) 251-1472.