

Camshaft Degreeing Instructions

Intake Centerline Method - To verify the location of the intake centerline in reference to the piston position

Step 1: Install the camshaft and timing set. Make sure that the timing marks on the cam and crank sprockets are aligned

Step 2: Install the intake lifter for cylinder #1

Step 3: Attach the degree wheel to the crankshaft snout or balancer

Step 4: Attach a pointer to the front of the block and position just on the outside of the degree wheel

Step 5: With the #1 piston down in the cylinder bore, install a piston stop over the cylinder. Rotate the crankshaft until the piston touches the piston stop and mark the degree wheel adjacent to the pointer. Rotate the crankshaft the opposite direction so the piston travels down and back up to the piston stop. Make a second mark adjacent to the pointer

Step 6: Remove the piston stop after marking the two points on the degree wheel. Rotate the crankshaft to the midpoint of the two marks. This point is TDC for cylinder #1. Without rotating the crankshaft, adjust the degree wheel to read 0 degrees at the pointer. You are now ready to locate the intake lobe centerline relative to TDC. This step is critical to proper cam alignment

Step 7: Attach the dial indicator to the dial indicator mount. Position the dial indicator on the outer edge of the intake lifter. It is important that the indicator plunger be parallel to the lifter. Any variance in the angle of the indicator will introduce errors into the lift readings

Step 8: Rotate the engine in the normal direction of rotation until you reach maximum lift. The dial indicator will change direction at the point of maximum lift. At this point, set the dial to zero

Step 9: Back the engine up (opposite normal rotation) until the indicator reads .100.” Next, turn the engine forward in the normal direction of rotation until the dial indicator reads .050” before maximum lift. Record the degree wheel reading

Step 10: Continue to rotate the engine over in its normal direction of rotation until the indicator goes past zero to .050” on the closing side of maximum lift. Again, record the degree wheel reading

Step 11: Add the 2 numbers together and divide by 2. That number will be the location of maximum lift of the intake lobe in relation to the piston position, in degrees ATDC. This

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is the intake centerline. For example: The first degree wheel reading was 96 degrees. The second reading was 116 degrees. These two numbers (96 + 116) added together will be 212. Then 212 divided by 2 equals 106. The actual intake centerline is 106 degrees ATDC. Reference back to the cam card and compare it to the recommended intake centerline. If the measurement does not match the camshaft specs, it may be necessary to either advance or retard the cam to meet the suggested intake centerline