GM Engine Basic Break-In Recommendations

Caution
This engine assembly needs to be filled with oil and primed. You should add the specified oil (see start-up instructions) to your new engine. Check the engine oil level on the dipstick and add accordingly.

Start-up and Break-in Procedures:
1. After installing the engine, ensure the crankcase has been filled with 5W30 or 10w30 ***NON-Synthetic*** motor oil to the recommended oil fill level on the dipstick. Also check and fill as required any other necessary fluids such as coolant, power steering fluid, etc.

2. The engine should be primed with oil prior to starting. Please use an engine oil priming tool. Newer V8 and V6 engines will require the usage of a pressurized oil tank specifically designed for oil priming. For older Chevrolet V8 engines you can prime the engine in this method: To prime the engine, first remove the distributor (if it is already installed) to allow access to the oil pump drive shaft. Note the position of the distributor before removal. Install the oil priming tool. Using a 1/2" dill motor, rotate the engine oil priming tool clockwise for three minutes. While you are priming the engine, have someone else rotate the crankshaft clockwise to supply oil throughout the engine and to all the bearing surfaces before the engine is initially started. This is the sure way to get oil to the bearings before you start the engine for the first time. Also, prime the engine if it sits for extended periods of time. Reinstall the distributor in the same orientation as it was removed. After the engine has been installed in the vehicle, recheck the oil level and add oil as required. It is also good practice to always recheck the ignition timing after removal and reinstallation of the distributor. See step 4 or engine specifications for the proper timing information.

3. Safety first. If the vehicle is on the ground, be sure the emergency brake is set, the wheels are chocked and the car cannot fall into gear. Verify everything is installed properly and nothing was missed.

4. Set initial spark timing as required in the Owner's Manual or GM Service Guide. Rotate the distributor counterclockwise to advance the timing. Rotate the distributor clockwise to retard the timing.

5. You should always allow the engine to warm up to 180°F prior to driving. It is always a good practice to allow the oil sump and water temperature to reach 180°F before towing heavy loads or performing hard acceleration runs after your engine has gone thru the break-in period.

6. Once the engine is warm, verify that you have the correct Total Timing.

7. The engine should be driven at varying loads and conditions for the first 30 miles and a minimum of one hour without any wide open throttle (WOT) or sustained high RPM accelerations.

8. After completing the initial drive time. Run five or six medium throttle (50%) accelerations to about 3000 RPM and back to idle (0% throttle) in gear.

9. Run two or three hard throttle (WOT 100%) accelerations to about 3000 RPM and back to idle (0% throttle) in gear.

10. Change the oil and filter and inspect the oil and the oil filter for any foreign particles to ensure that the engine is functioning properly. Replace the oil with ***NON-Synthetic*** motor oil with the correct viscosity weight as specified in the Owner's Manual or as specified for the engine. Use the correct AC Delco oil filter.

11. Drive the next 500 miles under normal conditions or 12 to 15 engine hours. Do not run the engine at its maximum rated engine speed. Also, do not expose the engine to extended periods of high load.

12. Change the oil and filter. Again, inspect the oil and oil filter for any foreign particles to ensure that the engine is functioning properly.

13. Do not use synthetic oil for break-in. It would be suitable to use synthetic motor oil after the second recommended oil change and mileage accumulation. In colder regions, a lower viscosity oil may be required for better flow characteristics.