



Short Blocks



Start Up and Break In Procedures

- 1:** After engine installation verify that the crank case is filled with non-synthetic motor oil, Dart recommends Royal Purple break in oil for the first 250 operating miles. After the first oil change we recommend Royal Purple 10W40 synthetic oil to maximize performance and engine longevity. Be sure to verify that all other necessary engine liquids have been supplied.
- 2:** Prime the engine with oil before start-up, using an engine oil priming tool (Dart Part # ???). This will ensure that oil gets to the bearings before you start the engine. The engine should also be primed after sitting for extended periods.
- 3:** Check to verify that the vehicle emergency brake is set, the wheels are chocked and that the car can not fall into gear.
- 4:** Start the engine and adjust the initial timing. The ignition timing should be set to 32 degrees on Chevy motors and 28 degrees on Ford motors. The engine idle speed should be set to 1,000 to 1,200 for hydraulic roller cams and 2,000 to 2,500 for flat tappet cams. Rotate the distributor counterclockwise to advance the timing and clockwise to retard the timing. Leave the vacuum advance disconnected.
- 5:** Allow the engine to warm up prior to driving the vehicle. Oil sump and water temperatures should be around 180 degrees Fahrenheit before taxing the engine heavily.
- 6:** The engine should be driven through a range of loads and conditions for the first 30 miles without a wide open throttle or sustained high Rpm acceleration. Run five medium throttle accelerations to around 4,000 Rpm and back to idle. Then run three hard throttle accelerations to about 5,000 Rpm and back to idle.
- 7:** Change the oil and the oil filter. 10W40 Royal Purple racing oil and a Fram oil filter should be used. Inspect the old oil and filter for any foreign particles to ensure that the engine is functioning properly.
- 11:** The next 500 miles should be driven under normal conditions. Avoid exposing the engine to extended periods of high load.
- 12:** Change the oil and filter. Inspect for particulate matter again.
- 13:** Synthetic oils are not suitable for the break in process! After the second recommended oil change synthetic oil may be used.