



MARINE ENGINE BREAK-IN PROCEDURE

In order to ensure a long lasting life, your new or remanufactured engine must go through what's referred to as a "break in procedure". The "break in" allows crucial engine parts to mate together such as the camshaft and lifters as well as the piston rings and cylinders. There are a few simple ways to do this, but first let's start with what not to do. Do not let the engine idle for a prolonged period of time (more than 2 minutes). When the engine is idling there is little oil pressure as well as little oil splash which is crucial to engine lubrication. It is recommended that you allow a cold engine to high idle for 2 minutes to warm up and then ease into operation. Also do not run the boat for prolonged periods of time at a steady RPM. Steady RPM does not allow the engine to vary its load, which is important for piston ring seating.

The best way to "break in" your new engine is to vary the vessels speed and the engine load. A good example of this would be to bring the boat up onto plane and then back the throttle off as much as possible without letting the boat fall off its plane (likely around 2800-3100RPM). Run the boat at this cruise speed for a few minutes then bring the engine up a few hundred RPM, then back down a few hundred RPM after a few minutes. Vary the engine speed in a similar fashion for the first 10 minutes of operation. It is a good idea not to run the new engine for periods longer than 20 minutes at a time to allow the new engine to heat cycle.

The "break in" period is 10 hours (the first hour being the most crucial). During this period it is important to follow a strict oil change schedule. This allows you to flush harmful contaminants from the engine. The first oil and filter change should be done at 3-5 hours (except when engine is equipped with a flat tappet camshaft, see flat tappet cam break in sheet). The next oil change should be at 25 hours, and regular service interval oil changes after that. Failure to follow this schedule could result in internal engine damage and will void the warranty. Canadian Crate Engines recommends Joe Gibbs Driven engine oil HR2 10w-30 conventional oil. ***Do not run synthetic oil in your engine!*** If you do want to run synthetic oil please contact us before doing so.

As with any new engine it is important to monitor you gauges closely. With any rise in temperature or drop in oil pressure you should shut the engine down immediately when safe.

Key points:

- no prolonged idling!
- follow the oil change schedule!
- vary the engine RPM and load!

Note: It is the customer's responsibility to monitor the engine extremely closely especially during the first 10 hours. This includes frequently checking oil and coolant levels, listening for odd sounds, noting any odd smells, checking for unusual vibrations, etc. Failure to report any of the above immediately will affect the engines warranty.

Call us immediately if you notice anything out of the ordinary!

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