

Break-in recommendations for your 301 big-bore kit

Break in is the final machining operation on the engine. It's the process of mating the cylinder to the piston rings and it ensures optimal performance and longevity. With the following protocol, you can break in your new big-bore in about 30 miles.

We strongly suggest using [Maxima Break-In Oil](#) or another name-brand **non-synthetic** oil for the first 100 miles before switching to a regular performance oil such as [Maxima ProPlus](#). Honda oils (GN4, HP4, etc.) are NOT recommended as we've seen cylinder scuffing and shifting issues with these oils. Honda's oils are an older, out-of-date SJ service grade.

For the first startup, run the bike in neutral until the cylinder is very warm to the touch (usually 2-3 minutes) while gently varying RPM to no more than half the rev limit, then allow the engine to fully cool. A fan pointed at the motor will expedite this process.

Repeat this process three times, allowing the engine temperature to rise a little higher each time. Finally, run the engine until it reaches full operating temperature. Since component size changes with temperature, the goal of this heat-cycle process is to gradually bring the components to operating tolerances.

Now it's time for light-load riding; no more than 50% throttle or 6,000 rpm with plenty of RPM variation. Ride the bike for 10 miles then stop and allow the engine to fully cool.

Do this light-load riding once again, this time for 15-20 miles, with occasional and brief runs up to full RPM.

Allow the bike to fully cool, check for leaks, and check the oil and coolant level. At this point the engine can be considered properly broken in and ready to perform.