



Break In Your Engine, Don't Break It

Smeding Performance Offers Tips On Breaking In Your Engine

([PRWEB](#)) September 22, 2004 -- Everyone seems to have their own theory for engine break-in procedures these days, but Smeding Performance sticks to the old fashioned way of doing things. "Getting a new engine is a wonderful thing, some liken it to having a new child," says Ben Smeding, owner of Smeding Performance. We here at Smeding Performance treat all of our engines as part of the family and want to see that they have the best care possible. That's why we have put together these 8 tips to help you do the right thing when breaking in your new engine.

Before you start your engine, keep the following things in mind:

Set Your Timing

It's important before you ever even start your new engine that your initial timing is set properly. Start with rotating your crankshaft to top dead center for the number 1 piston on the compressions stroke and install your distributor with the timing as close as possible to the recommended specs. Install your plug wires and check the arrangement of your plug wires on the cap. Before starting the engine, double-check the order of the plug wires.

Don't Forget About The Carburetion

Don't harm the new engine by installing a carburetor that is too small or too lean and mess up the air to fuel ratio. "Be sure to follow the size and jetting recommendations that come with your new engine," says Ben Smeding, owner of Smeding Performance. "Choosing the wrong carburetor is not covered by most crate engine warranties and it would be a shame to hurt your new engine before it was ever even started."

Remember To Oil, Oil, Oil

"One of the most important steps you can take in giving your engine a good start in life is pre-oiling it," says Ben Smeding, owner of Smeding Performance. This pre-oiling step should be the last step before installing the distributor and firing the engine. Make sure not to pre-oil the engine and then start it up for the first time a month later. Initial lubrication of all the new wear surfaces is critical.

Adjusting Your Valves

"DON'T DO IT," says Ben Smeding, owner of Smeding Performance. "Your valve adjustments were set correctly when your engine was assembled and no further adjustment is necessary. The new lifters (hydraulic-cam applications) may have a clicking sound during the initial engine running, but that noise will disappear as the lifters fill with oil. This is one step you don't have to worry about, when you buy a Smeding engine."

Cool It Right

Make sure you have new hoses and that they are tightly secured. A new, quality thermostat should be in place and the belt driving the water pump and/or fan must be tightened to spec, but not over-tightened. Fill the cooling system with new antifreeze and water in a 50/50 mixture. If you have an electric fan, make sure it is hooked up and working before starting the engine.

Get Exhausted Outside



Your full exhaust system should be in place. The noise of open exhausts or exhausts leaks can cover up noises from the engine that may warn of potential problems. Also, no matter the weather, the car should be started outdoors or the exhausts ducted completely out of the garage, for everyone's best interest and safety.

Be Fan-tastic

Smeding Performance suggests a large "box" electric fan be placed in front of the vehicle during break-in, even if the vehicle is being started outdoors. During break-in you need all the cooling help you can get, and if the vehicle is in a garage with the door open, the fan can help get the exhaust outside.

Now that you have completed the set up and installation process, you're ready to start it up and take care of it. Remember if you have set it up properly the engine should fire as soon as there is fuel to the carburetor. If it is constantly backfiring, stop and recheck your plug wiring and ignition timing.

Once the engine is started, you're almost there:

1. Hold the throttle above 2000 rpm until the engine reaches normal operating temperature
2. Once normal operating temperature has been achieved, drop the rpm to idle just long enough to check the timing with a timing light (If necessary, make quick timing adjustments and resume holding the engine at 2000 rpms for the next 20 minutes)
3. During the time the engine is running at this steady 2000 rpm (below this speed the oil pump will not supply enough oil flow for components to properly wear in), check all around the engine for any possible leaks.
4. Correct any leaks right away (There may be some smells and even some smoke during the break-in period, but these are nothing to be concerned about. This is normal and usually the result of oily handprints on the engine and exhaust system and the curing of all the new painted engine parts)
5. After the engine has cooled somewhat from the break in procedure but is still warm, change the engine oil and filter and install new oil.
6. Check again for any signs of leaks and check all fluid levels before driving the vehicle for the first time
7. Plan on easy driving for some time, (i.e., no towing, steep hills, sustained high speed or racing around town)
8. After 50-100 miles of easy cruising, find a secluded straight road and accelerate quickly from 30 to 50 mph, then just as quickly back off the throttle and coast down to 30 again. This puts a load on the piston rings to get them to seat. Repeat the 30-50-30 procedure about a dozen times and you're done.

Final thoughts

Now that you're finally done breaking in your engine, the rest of your driving can be normal after this (still without towing or racing). When highway driving it will help if you don't spend all day driving at one speed, but vary the speed occasionally. After 600 miles, change the oil and filter again. At 1200 miles, you can consider the engine broken-in and after another oil and filter change, you are prepared for many years of performance and driving pleasure.

About Smeding Performance

Smeding Performance specializes in building reliable, low-maintenance crate engines for truck, car and marine applications. These engines are not rebuilds: Smeding crate engines feature brand-new engine blocks and brand-new premium components. For more information, contact Smeding Performance, Dept. ____, 3340 Sunrise Blvd. #E, Rancho Cordova, CA 95742, 916-638-0899, www.smedingperformance.com.

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**Contact Information****Dana Mones**

Smeding Performance

<http://www.smedingperformance.com>

818-407-3496

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