

# Prevent breakdowns by changing the oil and filter

Changing your engine oil and oil filter frequently keeps your car's engine runhing trouble-free. It is one of the easiest and least expensive maintenance proce-

dures to do yourself

Once you gain experience, you will find changing the oil and filter in your car takes less time, less money, and is more convenient than taking it to a service station. In addition, you can make sure that only the highest quality oil and oil filters are used.

## Why oil, filter changes are needed

The oil in your car's engine forms a thin lubricating layer between moving engine parts. This prevents destructive metal to metal contact. Over time, however, as the oil becomes used, it loses its cleaning properties," according to Tom Clemmer, Director of Technical Services and Catalog for WIX Filters.

The oil filter keeps the oil clean by trapping abrasive particles in the oil, and removing them from the lubrication system before they can cause excessive wear. Made from resin-coated, pleated paper, a good filter traps more than 95 percent of the contaminants. But, over a long period of time the contaminants may build up and clog the filter. If it is not changed on a regular basis, a bypass valve will open, allowing unfiltered dirty, oil to circulate through the engine, accelerating engine wear," Clemmer says.

### A small investment reaps big rewards

mend oil and filter changes every 7,500 to 10,000 miles. However, you can greatly increase the life of your engine and reduce the chance of costly engine repairs simply by cutting these intervals in half. This will add about 10 oil and filter changes over 100,000 miles of operation. When you do the change your self, this represents an investment of about \$100 over the life of the car," according to Clemmer.

# Planning ahead

Before you change your oil and filter for the first time, make sure you have everything you need. The tools you will use are inexpensive and easy to find: a container that fits under the oil pan and is large enough to hold all the oil that drains out (four to six quarts); an oil drain plug wrench; an oil filter wrench; and a small plastic funnel. You will also need an oil filter and oil. Buy a high quality filter, such as WIX. The new filter should have the correct part number recommended for the vehicle.

Buy enough oil for a complete oil change (check your car's manual for the right grade). It's important to buy a high quality, reputable brand. The oil will work better and last longer.

# Changing your oil and filter

Oil and filter changes are most efficient when the engine is warm. Dirt and other particles are suspended in warm oil and drain more easily from the engine. So, begin by taking a short drive to warm up the car. Stop the car on level ground and leave it for ten minutes. This will lat the oil cool down enough so you will not burn yourself when you remove the oil drain plug.

If you plan to use ramps, set the parking brake before you begin, then spread old newspapers on the ground under the oil pan and position your container under the oil drain plug. Loosen the drain plug with the drain plug wrench, and unscrew

it with your fingers.

Place a container under the filter. Remove the old filter by turning it counter-clockwise with the filter wrench. If the filter is hard to remove (either difficult to reach or overtightened), try a different type of filter wrench. If all else fails, drive a screwdriver through the body of the filter with a hammer, and then use the extra leverage provided by the screwdriver handle to remove the filter. Thoroughly clean the mounting base. Be sure to check to see that the old "O" gasket was removed.

Now you are ready to install the new filter First, smear a thin film of clean oil on the rubber gasket—this ensures easy tightening. Spin the new filter onto the mounting stud until the gasket contacts the mounting surface highten the filter by hand as recommended by the filter manufacturer.

By this time the engine oil will have finished draining. Replace the oil drain plug and tighten with the drain plug wrench.

Remove the oil fill cap and refill the engine with the correct quantity and type of oil. Start the engine and check for oil leaks, especially around the filter. Stop the engine, let it stand for a few minutes, and check the oil level using the dipstack. Add enough oil to bring the level up to the full mark.

Pour the old oil into a plastic container. Take it back to the store where you bought your new oil to dispose of it properly—don't pour it down the drain.

Your oil and filter change is done! For about \$10, you've done a most effective preventive maintenance job to ensure many miles of trouble-free, fuel-efficient service.



