



Filter Facts

Cars, trucks and SUVs are full of filters of all types. You're probably aware of the two biggies: air filters and oil filters. Each serves as a vital barrier between dirt and other contaminants that could harm your vehicle's engine. But there are more filters than that under the hood and periodically, they all need to be changed.

Here's a quick guide to help you learn about the filters found in most vehicles and their role in protection:

Engine air filter – Helps block particles that are harmful to the engine's combustion chambers.

ACDelco's engine air filters can block even microscopic dirt and particles as small as a grain of salt.

Cabin air filter – Designed to filter out common airborne pollutants from the interior of the vehicle, including molds, pollen, allergens, smoke, fumes and odors. When changed regularly, cabin air filters can help reduce wear on the vehicle's heating, ventilation and air conditioning systems.

Oil filter – Helps keep vitally important engine oil clean. It can capture contaminants that can affect the engine's performance and life span. ACDelco offers oil filters to fit 97 percent of all the cars, light trucks and SUVs on the road today.

Fuel filter – Maintains a consistent fuel flow by helping prevent contaminants—including dirt, scale and rust—from flowing into it. Fuel filters are used on all types of vehicles, including modern fuel-injected models and those with older, carbureted engines. ACDelco offers a wide range of fuel injection in-line-style and fuel injector filters, as well as in-carburetor-type filters.

Transmission filter – Designed to help maintain the operating life of the transmission and keep it operating at optimum levels. ACDelco transmission filters use special composite materials of plastic, steel, brass and felt to produce a reliable filter that's sealed without gaskets or sealants—and ACDelco offers a wide variety of them to fit many of the vehicles on the road today.

As we mentioned above, the filters on your vehicle require periodic replacement. The replacement schedule—even for oil filters and engine air filters—varies among vehicles. If you're not sure when to change each filter, consult the experts at your ACDelco-affiliated service center. They can help determine when it's time for a change.

Spring Break Road Trip Checklist

The days are getting longer. The weather is getting warmer. And the lure of the spring break road trip is too hard to ignore.

But before you hit the highway in search of sand, sun and fun, a quick vehicle inspection will help ensure your vacation doesn't include a visit to a distant repair shop—one that probably doesn't offer cold drinks with little umbrellas in them.

Below is a pre-trip checklist to perform on your car. It should only take about 10 minutes to run through it, and mechanical aptitude is definitely not a requirement. Just about anyone can do it.

Spring Break Checklist

- Check all the major fluids, including engine oil, power-steering fluid, brake fluid and transmission fluid—and don't forget the antifreeze/coolant.
- Make sure the windshield washer solvent container is topped off.
- Check the engine's belts and hoses, which can become cracked, brittle, frayed, loose or show signs of excessive wear—especially if you didn't look under the hood during the cold months of the winter. They are critical to the proper function not only of the engine, but the electrical system, air conditioning, power steering and cooling systems.
- Check the tires' air pressure and tread condition. Proper air pressure helps optimize fuel economy and reduce tire wear, while poor tread condition and other problems, such as bald spots or uneven wear, can potentially cause tire problems on a long trip.
- Replace the windshield wiper blades if they've been chattering, smearing or streaking.
- Check the function of the exterior lights, including the headlamps, turn signals, taillamps and brake lamps. Recruit someone to help by having him or her stand near the front and rear of the car as you activate the various lights.

If you don't feel comfortable performing some or all of the checklist items, your ACDelco affiliated service center can do the inspection for you—and quickly replace or repair any of the items that require attention. The time it takes to inspect and correct your vehicle is minimal, but it could save possible delays that may spoil an otherwise fun road trip.

BY THE NUMBERS:

5 days, 17 hours and 30 minutes: The record time it took Erwin George "Cannonball" Baker in 1926 to drive a loaded GMC 2-ton work truck from New York to San Francisco—a time when paved roads were rare west of the Mississippi River and freeways didn't exist.

1940: The year that General Motors introduced the modern automatic transmission. It was offered first on Oldsmobile and Cadillac models; most automatic transmissions today are based on its design.

19 and 23: The respective rankings for Canada and the United States when it comes to petroleum use per capita. Canada's 70.178 barrels of oil per day for every 1,000 residents is greater than the United States' 68.672-barrel rate.*

16 cylinders: The large engines found in some Cadillac models from 1930 through 1940. Despite their mammoth size, they developed less than 200 horsepower.

10 microns: The size of particles that an ACDelco oil filter can trap—the equivalent of only one-third the width of a human hair!

*2008 statistics from CIA World Factbooks.



Future Technology: Combustion Without a Spark

You probably know that gasoline engines use spark plugs to initiate the combustion process in an engine. In the quest to improve fuel efficiency, General Motors is working on technology that removes the spark from the combustion process.

The technology is called Homogenous Charge Compression Ignition (HCCI), and its advantage comes in a more efficient burn of the air/fuel mixture, using the compression of the cylinders and other technologies to initiate the combustion process. There is less wasted heat energy than a traditional spark-ignited combustion, so the engine requires less fuel—and produces fewer emissions—than a comparable engine with conventional spark ignition.

GM's testing has shown up to a 15-percent increase in fuel economy and lower emissions on HCCI-enabled vehicles, when combined with other enabling technologies. In fact, with HCCI technology, a gasoline engine approaches the efficiency level of a diesel engine. The spark plug isn't completely eliminated, however. Because heat is required to help generate combustion, spark plugs are used to start and operate the engine when cold. When the conditions are right for HCCI, electronic controls switch the engine from spark ignition to compression ignition.

GM has HCCI test cars on the road, but more work still needs to be done to refine HCCI for the variety of climates and environments that drivers experience all across the country. That means HCCI-powered cars are still a few years from hitting the showroom floor, but the future for this efficiency-enhancing technology looks bright—even without a spark.



Sign Up for ACDelco eNews

If you want to be among the first to learn about all that's new at ACDelco, our eNews feature is for you. It's a quarterly, electronically delivered newsletter filled with car care tips, new product information and more.

It's easy to sign up for ACDelco eNews. Simply go to acdelco.com and click on the ACDelco eNews box at the bottom of the screen. It will take you to a sign-up page, where we ask only for your e-mail address and ZIP code. No other personal information is required.

We'll see you online!

ACDelco's Consumer Assurance Program Delivers Peace of Mind

Just like the confidence that comes with a new vehicle warranty, ACDelco delivers assurance when your ACDelco affiliated service center installs a new ACDelco part; most parts are eligible for a 12-month/12,000-mile limited warranty (whichever comes first).

In addition to the 12/12 warranty, participating Total Service Support (TSS) shops also provide you with the ACDelco Consumer Assurance program. This means, during the warranty period, that you can call a toll-free number (1.800.ACDelco, prompt #3) for help in the event you're 25 miles or more from the original repair facility and your ACDelco part fails. In that case, ACDelco will pick up the cost of the parts and labor at the nearest ACDelco affiliated service center and cover the towing, too.

What's That Sight?



Brake dust can harm your wheels

That dark, grimy appearance on your vehicle's wheels—especially on the front wheels—is more than dirt accumulated from everyday driving. Brake dust, which is generated by the brake pad material rubbing against the disc brake rotor when the brakes are applied, settles on the wheels, too. If left unchecked, brake dust can harm the protective coating that's on many aluminum wheels or dull/discolor the appearance of polished wheels.



Generally speaking, a drive-through car wash may take care of most of the dust, but typically it accumulates in corners and crevices that require hand cleaning with soap and water for maximum effectiveness. You can help reduce the chance of damage and make future cleanups easier by applying a coat of wax to the wheels after you've cleaned them.

