

# intune

## The Heater Core

During the winter, you trust that when you turn that climate control knob to the red zone, warm air will flow from the vents. And while you understandably take your heater for granted, you may not know that warmth comes from the hot coolant that circulates through the engine and radiator. In fact, the “heater core” inside the dashboard that is responsible for interior warmth and windshield defrosting is itself a small radiator.

It's true! Behind the heater controls, buried deep inside the dashboard, is a small radiator just like the big one in front of the engine. The circulating coolant is hot, and the climate control system's fan blows the heated air around the heater core through the vents and defrosting system.

There are signs the heater core in your vehicle may need to be inspected or replaced.

They include:

- An absence of or noticeably reduced heat blowing through the vents
- A sweet odor inside the vehicle, sort of like maple syrup
- A fine, slightly oily mist that appears on the windshield when the defroster is on
- A damp spot on the floor, typically under the dashboard

Unless you like wearing three sets of mittens on your drive to work, don't wait for the coldest day of the year to have your heater core inspected.



## Fall into Winter

### Tips to get your vehicle ready for cold weather

Did you see your breath this morning? Is the meteorologist talking about high temperatures that make your refrigerator feel like a greenhouse in comparison? Then there's no denying it: Winter is almost here.

Even residents of warmer-weather states wake up to frost every now and then, so it's a season that affects almost everyone—and almost everyone's vehicles. Cold weather can kill off an already weak battery, reduce tire pressure and more. A thorough inspection at your ACDelco-affiliated service center will help you get your vehicle ready for winter. Have your technician check the following:

**Battery:** Cold weather can severely affect the cranking power of a battery. Your technician can test the battery's strength and recommend a replacement if it's too weak. Along with the battery, the cables, wires and terminals around the battery should be inspected for corrosion, fraying and cracks.

**Coolant/antifreeze:** It's simple: The coolant/antifreeze in your vehicle should provide freeze-free protection for the most extreme temperatures experienced in your area. Your ACDelco technician can perform a simple test that quickly determines the threshold of protection. If the protection level isn't deemed sufficient, consider having the old coolant replaced with new antifreeze that's suitable for colder temperatures.

**Belts and hoses:** Old, frayed and cracked belts and hoses can be more susceptible to failure in cold temperatures, as they experience greater temperature extremes—from possible sub-zero temperatures on cold morning start-ups, to high heat as the engine warms. Have them inspected and replaced, if necessary.

**Engine oil:** Some vehicles' engines, particularly older ones, benefit from using less viscous (thinner) oil during the winter, such as 5W30 instead of 10W30. Reference the vehicle's Owner's Manual or consult your ACDelco-affiliated technician before making this change.

**Tires:** Your tires literally connect your car to the road. There are two items to point out here: tire pressure and tread wear. Because cold air is denser than warm air, you may lose air pressure in your vehicle's tires during the winter. For the best performance, safety and fuel economy, have the tire pressure checked throughout the winter—even if your vehicle is equipped with a tire pressure monitoring system. When it comes to tread wear, drivers in areas of frequent snow should have their vehicles' tires inspected to ensure they have adequate tread to push through the white stuff. You may also want to consider snow tires, particularly for rear-wheel-drive vehicles.

**One final tip:** Keep your car washed regularly through the winter—especially if you live in an area that uses road salt. Road salt is extremely corrosive to brakes, the undercarriage and even to the body of your vehicle. A trip through a drive-through car wash every couple of weeks will help extend the life of your vehicle.

## BY THE NUMBERS:

**46,700:** The approximate number of Interstate miles in the United States.

**3,233:** The number of Interstate miles in Texas, the state with the most.

**3,100:** The approximate mileage on I-90 between Boston and Seattle—the longest roadway in the Interstate system.

**1956:** The year President Eisenhower signed the Federal-Aid Highway Act, ushering in the age of the superhighway in America.

**70:** As in I-70, the first Interstate in the country with the first mile created in Kansas.

**41:** The number of Interstate miles in Delaware, the state with the fewest.

**1.06:** The mileage of I-375 in Detroit—the shortest official Interstate in the country.



## The Power of Sunlight



The world's largest rooftop solar photovoltaic power installation rests atop General Motors' car assembly plant in Zaragoza, Spain. In operation since 2008, it covers about 2 million square feet of roof and includes a stunning 85,000 solar panels that are capable of generating 12 megawatts (MW) of power.

GM also has two of the largest solar power installations in the United States, located on the roofs of parts warehouse facilities in Rancho Cucamonga and Fontana, California. The solar array in Rancho Cucamonga was the first public solar project in the U.S. greater than 1 MW. Together, the three facilities generate the equivalent power consumed by about 1,900 homes every year. GM is also forging ahead with two solar installations at facilities in Germany, as well as one at the Detroit, Michigan, plant for the Chevrolet Volt electric vehicle. Those three new installations will bring nearly 18 MW of solar power online.

It looks like a bright future for solar power at General Motors.



## Technology: Chevy Silverado HD's New Exhaust Brake

The new 2011 Chevy Silverado 2500HD and 3500HD trucks offer an innovative exhaust brake system on models equipped with the Duramax Diesel 6.6L V-8 Turbo engine. You may not be familiar with the concept of an exhaust brake, but you've likely heard it from big rigs that make a flatulent, staccato sound as they're slowing (commonly known as a "jake brake"). In those vehicles and the Chevrolet Silverado, the concept is the same: The compression of the engine is used to slow the vehicle without the driver pushing the brake pedal. It can provide the driver with better control and save wear and tear on the brake pads. The Silverado's exhaust brake feature is virtually silent, providing the benefits of a big rig's system without sounding as if the driver filled the tank with bean burritos!



## ACDelco Professional-Series Battery

Cold weather is hard on batteries. If yours barely made it through last winter, have your ACDelco technician inspect it—and if it needs to be replaced, ask about ACDelco Professional-Series batteries. They're available in 5-Year, 6-Year and 7-Year models to fit just about anything with four wheels. Each comes with a great limited warranty that includes free replacement\* for 20 months (5-Year battery), 30 months (6-Year battery) or 50 months (7-Year battery). The 50-month replacement period for the Professional-Series 7-Year battery is the best in the industry!

Don't risk another winter on a weak battery. Professional-Series batteries are maintenance-free, deliver the cranking power you need on cold mornings and are built in America.

\*Free replacement period for original retail purchaser. Installation not included. See retailer for complete details.



## Paint it White

As a driver in North America, chances are very good that your vehicle is white, black or silver. They're the most popular new-vehicle colors, according to DuPont's annual survey. In the past year, nearly 18 percent of new cars were white, followed by 17 percent black and 16.7 percent silver. Those three hues have remained at the top of the popularity list for years—a fact quickly reinforced by a swift scan of any mall's parking lot—but there are signs of change. Black's popularity is up about 5 percentage points in the past five years, while white and silver have retreated a bit. Red and blue hues are making a comeback, with each rising from about 11 percent to 12 percent of all new models since 2006.

### What's that sound?



Do you sometimes hear the pinging sound similar to a rattling spray paint can during hard acceleration or other driving conditions? If so, you'll want to have your vehicle inspected immediately. That sound could be from a condition known as detonation or spark knock, and it could be very harmful to your vehicle's engine. There are many conditions that cause detonation, but the longevity of the engine is at stake if the problem is not corrected. In some cases, a higher octane gasoline, such as 89-octane or 91-octane, can temporarily alleviate the condition; but if the engine previously ran fine on regular unleaded, head for your ACDelco-affiliated service center as soon as possible for an inspection.