



Being Kool

Most of the time we never think about our air conditioning system until the very first hot humid day of the season when we reach for the button on our dash to activate the air conditioner and it blows nothing but HOT air out the vents.

Like most mechanical systems on your vehicle the air conditioning system is subject to wear and deterioration of the components. And if you don't like the idea of being inconvenienced, it pays to head off problems before they start. If you have a funny smell coming out of the vents or hear strange noises coming from under the hood when the air conditioning compressor starts up, it's too late. Having your system checked and serviced before you need it can reduce the odds of having an issue on a hot summer's day.

Know that your air conditioning system is completely independent of anything else on your vehicle. That meaning if you're air conditioning fails, it will not affect the drivability functions of your vehicle. The air conditioning system operates with a special substance (refrigerant) that has the ability to change temperature from hot to cold as it changes from a liquid to a vapor, thus cooling the interior of your vehicle as it circulates through the lines connecting the compressor, evaporator and condenser. There have been various refrigerants used in the past but all vehicle built today use R134A. The older R12 refrigerant was banned a few years ago due to harmful effect to the ozone layer. If your vehicle has R12 it would need converted to R134 or other legal refrigerant.

While there are limited things you can do to service the air conditioning system, checking the condition of the compressor belt, hoses and lines is a good place to start. Then make sure the condenser fins are clear and not clogged with bugs or debris restricting air flow and reducing cooling efficiencies. Certain vehicles use an orifice tube which will trap any debris that could be suspended in the system. If this tube becomes restricted, it can cause the system to cool less efficiently and needs to be replaced. Air conditioning systems are known for collecting small amounts of moisture especially over the cold winter months. Most systems will activate the compressor in defrost mode. This keeps the refrigerant and oil from separating and also prevents seals from deteriorating and leaking. Still a certain amount of moisture is produced which will allow corrosion to occur internally and can cause the metals to deteriorate over time, resulting in leaks. One school of thought is that we should occasionally evacuate the system and put it under a "deep vacuum" to boil off any moisture so corrosion is kept to a minimum.

A system that stops cooling altogether may have an electrical issue (failed switches, wiring, computer), mechanical issue (compressor, condenser evaporator failure,) or may have lost its' refrigerant due to leaks. If repairs to an inoperative system are put off too long more leaks can develop and components can seize up, resulting in higher repair cost when one decides they want the air conditioning functioning again.



Like most things on your vehicle preventative maintenance will help save you money in the long run. A seasonal check up of your a/c system is the best way to be sure the cool air will be coming out of the vents.

June 2008.