

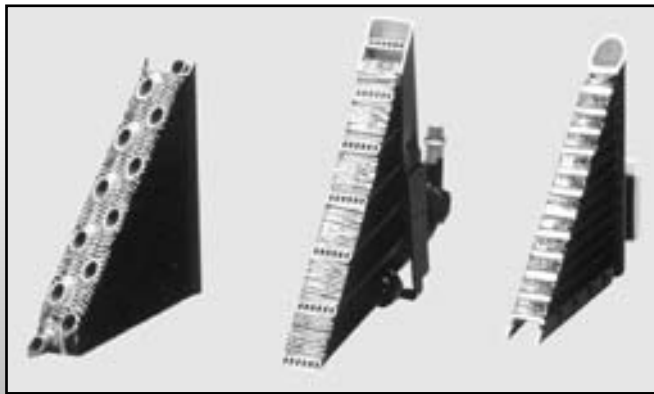
PRODUCT INFO

NEWS ABOUT CARQUEST ENGINE AND TEMPERATURE CONTROLS

A/C Condenser Tips

The A/C condenser is often neglected and overlooked. On every job, you should straighten the condenser fins, remove bugs and trash, and clean the dirt from the condenser. Check for loose or missing air dams, electric cooling fans that draw too many amps or don't run at all, or a fan clutch that's slipping. Any of these can result in poor condenser performance, and may also damage the compressor through elevated high side pressures.

It doesn't take much to plug a condenser, and this



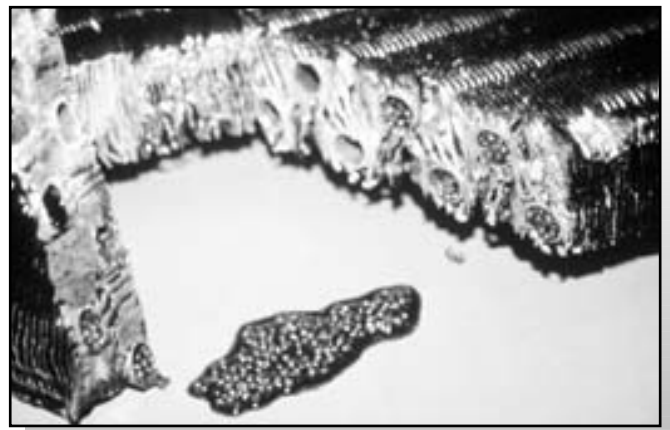
will probably destroy the compressor. The tube openings in a parallel flow or serpentine condenser may not be much larger than the head of a ballpoint pen. Whenever the compressor is replaced, the condenser must be flushed under pressure, using only 141B or Dura Flush. Pressurize the flush with shop air and blow it through the condenser, or use a power flusher that pulsates the flush. Closed-loop flushing systems are usually not effective unless an in-line filter is installed first. Also be sure to remove all of the flushing solvent from the system when finished. This is a must since any residue solvent will take up vital space needed for refrigerant, and can also contaminate the new compressor lubricant.

Flushing won't always cure a plugged condenser. If the high side gauge connector is

located past the condenser on the high side liquid line, it can disguise the fact that a plugged condenser exists. The best location is between the compressor and the condenser, and an even more effective method is to have another connection after the condenser to determine a drastic pressure drop.

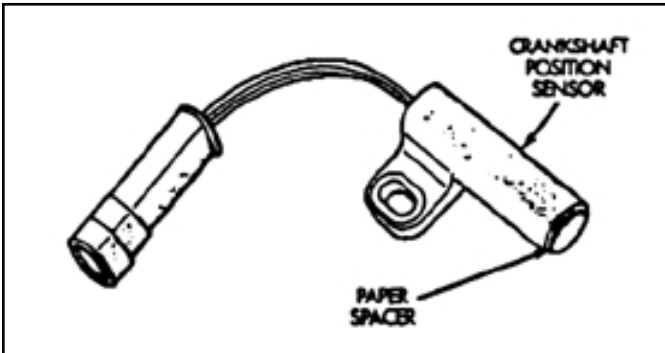
If an FX15 compressor equipped system dies from "Black Death" and leaves a gooey substance in its wake, or if a failed GM DA6 unit peels off the piston rings, sending the particles of ring material through to the condenser, replace the condenser (or else warn your customer that more trouble may be on its way). The replacement compressor can sometimes run for a short time, but may experience premature clutch failure due to the elevated pressures. Without flow, the compressor is pumping with no place for the pressure to go. This elevated pressure will soon overwork and overheat the compressor and/or clutch.

Check the pressure in the condenser, or use a pyrometer to check the temperatures across the condenser surface. A good A/C system will have up to a 60 degree drop between the condenser inlet and outlet. If you encounter a drop larger than 60 degrees, try flushing it first, and then check the inlet and outlet temperatures again. If the drop remains high, the condenser should be replaced.



Don't Remove the Paper Spacer

On Chrysler 4.0L engines with automatic transmissions, the crankshaft position sensor uses a



single slotted hole to adjust its depth. A self-adhesive paper/cardboard type spacer is attached to the bottom of the sensor to set this depth. After the sensor has been installed and the engine has been started, this temporary spacer will be sheared off.

When installing a replacement sensor, be sure the paper/cardboard spacer has been stuck on the bottom of the sensor. This spacer must be installed; if it isn't, the sensor will be damaged once the engine is started. If the original sensor is being reinstalled (such as with transmission or flywheel removal), clean the bottom of the sensor, obtain a new spacer and remove the paper backing; then install the self-adhesive side to the bottom of the sensor.

For proper depth adjustment, the sensor mounting bolt should first be installed finger-tight. Then gently seat the sensor until the paper spacer contacts the outer edge of the flywheel, and tighten the sensor mounting bolt to 60 in.lbs. Then connect the electrical connector, and install the wire clip and the mounting nut.

Exact Match or Universal?



When it comes to oxygen sensors, technicians generally prefer an exact match to what came off the

vehicle, for three very good reasons: it's more professional, there's no electrical splice to introduce an element of possible flakiness, and the entire part (including the connector) is new. A good example is SG5 vs. SG12 — both part numbers are identical, but SG5 has a 10 1/2" lead, and an electrical connector custom-tailored to fit General Motors and related emission-control systems. SG12 is the same part, but with a 10" lead ending in a crimp-style fitting; you cut off the old connector and attach it to the new sensor.

CARQUEST catalogs an enormous number (over 340 part numbers) of exact-match O.E. sensors, with the electrical connectors tailored to specific vehicles. But universal model SG12 still accounts for a huge percentage of our total sales. When a technician asks his CARQUEST jobber for an oxygen sensor, he strongly prefers the OE type, but the jobber will pull the universal type off the shelf, even though he might also have the exact match in stock.

Chrysler Throttle Body Injectors

From the mid-80's to the early 90's, Chrysler used several different throttle body injectors, from Holley and Bosch.

The parts looked different but were functionally the same, and if asked for a replacement, the Chrysler dealer



might have a Holley or a Bosch in stock. CARQUEST TJ22, 24 and 40 are the correct replacements; whichever one the catalog shows is the correct injector for the application.

Here's another tip: when installing a TBI injector on a Chrysler motor (any injector at all), be sure to install it straight, not cockeyed — put the injector in first, then line up the pigtail.

Cabinet Too Much To Handle?

If a complete wire cabinet's too big or too expensive, this program may be right up your alley. The STA18 assortment includes 16 popular wire terminal numbers from the STP series, and a handy "spill drawer" cabinet. This small cabinet

keeps the terminal inventory very orderly and right at your fingertips — the two 8-compartment shelves tilt out for easy access.

For a limited time, the spill drawer assortment



is available at a special price — the cost of the terminals themselves (490 in all) plus a very modest charge for the cabinet. The cabinet is made of the same heavy-gauge steel as the AB99W, but measures 19" wide, 10" high and 4" deep.

Plastic Cap Prevents Contamination

Something new has been added to CARQUEST's oxygen sensors - a plastic cap over the part of the sensor that's embedded in the exhaust stream. An O2 sensor is a delicate thing — the Zirconia or Titania sensing element is very sensitive to contamination, and can easily be "poisoned" by anti-freeze or silicone even at the time of installation. This "allergic" reaction to lead, sulfur and oil ash continues even after the sensor is installed.

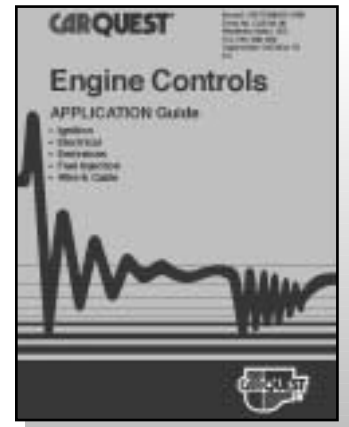
The oxygen sensor is a critical part; the computer depends on its signal to continuously modify the on-off cycling of the injectors. A sensor which is failing but not actually dead can fool the computer into believing it's OK. Meanwhile, it could hurt engine performance and waste hundreds of dollars of gasoline. Testing with a scan tool or DVM won't catch a slow or sluggish O2 sensor — the only accurate test is with an oscilloscope. That's why car makers recommend routine replacement at 30,000 to 50,000 miles for unheated sensors, 60,000 to 100,000

miles for sensors with built-in heaters.

CARQUEST catalogs hundreds of O2 sensor part numbers, for exact match to O.E. performance specifications. Our supplier sells to O.E. car manufacturers as well as the aftermarket.

New Engine Management Catalog

Soon to be released—the all-new CARQUEST Engine Management application guide, with Y2K (year 2000) coverage! The new catalog replaces the old application guide and the supplements. This is our biggest catalog yet, over 1400 pages — and it just fits in a catalog rack holder. See your CARQUEST District Sales Manager for a copy.

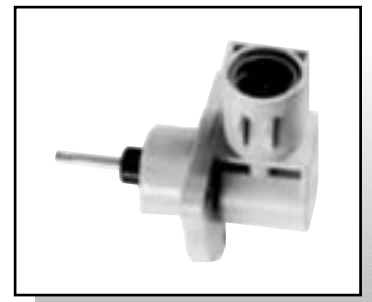


Replace the Coil Only

For '89 to '94 Mitsubishi Eclipse 1.8L engines, the coil often needs replacement even though the rest of the distributor is OK. For these applications, O.E. makes you buy the complete distributor, which is a very expensive part. For these CARQUEST sells the UF-202 coil alone, at substantially lower cost.

Ford EGR Position Sensors

In some cases, when Ford supersedes an EGR valve, the original EGR valve position sensor will not fit onto the new valve because some EGR valves have threaded studs, while



others have threaded holes. Whenever you replace an EGR valve for a Ford application, check on whether a new EGR position sensor is also needed. This part should be checked for proper operation when EGR valve service is performed.

O.E. Quality Blower Motors

CARQUEST Temperature Control blower motors = O.E. quality in every detail — magnet size, lamination stack length, etc. We know that taking vital components out of a blower motor may reduce the motor's price, but it also reduces the motor's life and performance.

For example, there's the matter of magnet size. Some competitors reduce the magnet length by over 45%, to reduce their production costs. But we know



that O.E. would use these smaller magnets if they could — and they'd pocket the cost savings, multiplied by millions of motors per year. They refuse to do this, and so do we.

This also holds true for the length of the lamination stack in a blower motor. Reducing the size of the laminations cuts the manufacturing cost, but it also significantly increases the amp draw, shortens the motor's life and reduces its performance.

Corner-cutting is rampant in radiator cooling fan motors too. Cheapie motor manufacturers cut costs by removing critical items like flux rings, and not compensating with other added materials — or using smaller wires and fewer turns in the armature windings. These help reduce the cost of the product, but they also reduce the motor's output speed and power. Our philosophy is, if the O.E. motor required a certain amount of power to properly cool the radiator and condenser, then our replacement motor should meet the same standards. Don't be fooled by low prices — insist on quality and performance.

Ford Alternator Pigtail

CARQUEST's new S-737 is a repair pigtail for internally regulated Ford alternators. This pigtail is frequently requested because the old one burned out or became brittle with age. OE doesn't supply this connector; they make you buy the complete harness. Now you can avoid running around trying to find a replacement; your CARQUEST jobber has the right connector.