

ULTIMA ID

THE TOOL:

REFRIGERANT IDENTIFIER

THE ULTIMA ID is a new refrigerant identifier offered by Neutronics. The tool itself weighs 8 pounds. It requires 12 to 15 volts, obtained either through clip-leads to the vehicle battery (standard) or an optional, rechargeable internal battery pack. A filter is located on the unit's front panel and turns red when it needs to be replaced.

According to the company, Ultima ID Model # RI-2004DX uses dispersive infrared technology to determine the weight concentrations of R12, R134a, R22, hydrocarbons and air. It has separate lines for hookup to R12 and R134a systems; it also detects the U.S. Environmental Protection Agency's (EPA) "Significant New Alternatives Policy (SNAP)-approved" blends. It also is capable of detecting blends and replacements including propane and butane.

Findings are shown on an LCD display and an internal printer is optional. Once the unit is hooked up and switched on, refrigerant-loop contents are identified and printed out within 70 seconds. The printout includes a blank line, which may be signed by the technician running the test.

THE TESTERS

Bob and Larry Howard



**KLEEN-CORE RADIATOR WORKS
PAWTUCKET, RI**

Kleen-Core Radiator Works is a family company that has been operating for 36 years in the same location. Specialties are all phases of cooling system and air conditioning diagnosis and repair.

Brothers Larry and Bob Howard operate the shop. There isn't a lot of sig-



nage on the premises, but years of hard work have brought Kleen-Core a loyal following and word-of-mouth business.

Derek Spohn

**RAD AIR COMPLETE CAR CARE
WESTLAKE, OH**

Rad Air has four shops in Northern Ohio and by the time you read this a planned, fifth location may be open. As the name implies, Rad Air started out in the cooling system and air conditioning business, but they've branched out into electronics and high-



tech service: Driveability, emissions, antilock brakes, tune-ups, E-check failures, diagnosis and electrical repairs are all tackled by the family-owned chain's ASE-certified technicians.

The "Tool Test" Neutronics Ultima ID went to the Westlake shop. MACS- and ASE-certified Derek Spohn, with nine years' service at Rad Air, is the Westlake shop foreman and our contact for the Tool Test.

Mike Schedler

HAL'S AUTO CARE SACRAMENTO, CA

Founded in 1979, Hal's Auto Care has 16 employees operating out of a 12,500-square-foot building with 10 service bays

PERFORMANCE

2. **Bob Howard:** The big advantage with the new Ultima ID is its built-in printer. Here's why: Our Inspector seems to be able to make the same refrigerant identifications, but you have to keep looking at the small window where it displays what it has found. If it detects more than one thing in the system, it displays them one at a time, one after the other. So if you have to answer the phone or a customer walks in, you could miss what it says and have to start over.

With the printer installed in the new model, even if you're interrupted you get a cash register-style tape with a printout of what it has

found. While we had the machine, a Jaguar came in and the machine detected – and printed out – all sorts of things in the system. It found R12 and R134a, as well as R22, hydrocarbons and some other chemicals that have no business in a car's air conditioning system.

Larry Howard: The printout from this machine also can be helpful when discussing needed repairs with a customer. You can show him what you found and explain, in some cases, how components that need replacing may have been damaged by improper substances inside the refrigerant loop.

Derek Spohn: In service, the tool is amazingly simple and quick

to use, adding only three to four minutes to an A/C Performance Test. Even if it weren't so easy to operate, using an identifier on every car that enters the bay will save the cost of repairing shop equipment that is rendered useless. You can also save the cost of ruining a full tank of pure HFC-134a by contaminating it with only a few ounces of blend or HC-based refrigerants. This is something that is priceless, considering the lack of disposal facilities for contaminated refrigerants, and the huge cost of repair or replacement of A/C equipment. Without this kind of tool, I could not quickly and accurately identify any refrigerant.

Mike Schedler: We've had just

one complaint in using the Ultima ID: We found, in hooking it up, that we needed to torque the line pretty tight where it attaches to the unit or it could leak. This detracted a bit from ease-of-use.

EVALUATION

3 ■ **Bob Howard:** Having that information in front of you helps you decide how to deal with the car: Is system contaminated or how should we recover the refrigerant in the system? Without a tool like this, you can guess and make a mistake, such as with an older car that's been retrofitted to R134a but is missing the decal or the adapter connectors.

Larry Howard: The only potential problem I can see with this tool isn't something that happened during our evaluation. It's just that we had to send our old Neutronics identifier in for repairs twice while it was still relatively new, so we hope this one is more rugged. Maybe it was just our machine.

But I'd have to say that anyone who's serious about staying in the automotive air-conditioning business needs a tool like this so they're not taking chances with the who-knows-what some people put in the loop.

Derek Spohn: My shop actually already owns this same tool and uses it daily. It exceeded expectations from the start. The only improvement I could think of

for it would be to make it identify A/C sealer. To my knowledge only one tool currently does that. A refrigerant identifier is a necessary item at any price due to people's misconceptions about air conditioning service and appropriate charging methods.

The price seems a little high, considering that it can only do so much, but what it does, it does precisely every time. The cost of the tool is extremely difficult to work into an A/C Performance Test because of the competitive nature of the air conditioning service market.

Overall, the Ultima ID is a must-have for any shop that does A/C work on any scale. It is quick, accurate and durable. I wouldn't even think about connecting a machine to a car without first

testing the refrigerant content.

Mike Schedler: We often come across botched retrofits where not only did someone put R134a in an older system and not bother to label it or leave the adapters on, they hadn't taken out all the old R12 to begin with. As a result, the contents are mixed and, in effect, contaminated. We've also encountered propane and other flammable

stuff – potentially dangerous. So we need to know what we're dealing with before we start servicing an A/C system.

This machine identifies R12, R134a, R22, R124, plus a number of other refrigerants. In addition, it identifies hydrocarbons and air. If it finds something and it doesn't know what it is, it will tell you it's contaminated.

Not many shops here in the

Sacramento area will deal with contaminated refrigerants or blend refrigerants. In fact, we consider blends to be contaminated. Of course, we're not allowed to vent refrigerants, so we've dedicated one recovery machine for these contaminated blend refrigerants. We remove and hold the stuff for disposal so we can continue working with the car. Obviously, refrigerant ID is vital for this type of work.

THE COMPANY

Neutronics, based in Exton, PA, makes gas analysis and gas handling equipment. Its gas monitoring equipment is used in manufacturing processes and where hazard warnings are needed. The company's breathing equipment is used in hazardous work environments by rescue personnel and in several military applications. In the automotive industry, the company is known for its refrigerant identification equipment for mobile air conditioning systems, but it also provides the sensors and some of the control equipment for companies that make recovery and recycle equipment.

