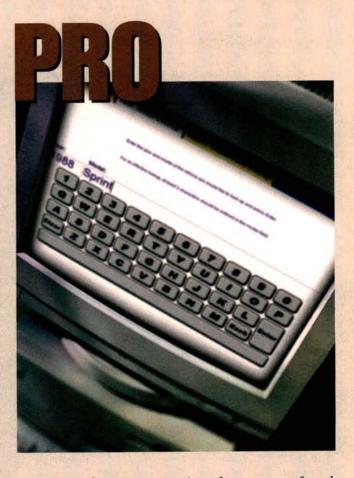
Cybroarts Service Information Website

utomotive repair history can be divided into two periods: B.C. (Before Computers) and A.C. (After Computers). The B.C. period stretches back longer than anyone alive can remember — back to Henry Ford, Karl Benz and beyond. On the time divide, the A.C. days are still very young. In fact they're younger than any technician old enough to work in our profession today.

Back in B.C., all automotive service information was compiled in service manuals and other sorts of printed material. Shops that placed a value on this information usually dedicated a special room in the shop or at the very least a special set of bookcases to store their perpetually growing library of service information. If a shop stayed in business for even a few years, the bookshelves soon began to strain and sag under the accumulated weight of the reference material.

If you needed to look something up, the first thing was to find the correct manual. Depending on how well organized your shop happened to be, you might find the manual on the bookshelf. Then again, you might not. Perhaps it was on top of another technician's workbench, in his toolbox, or worse yet, had been accidentally left on the front seat of a customer's now-departed car.



Let's use a best-case scenario and assume you found the manual you were looking for. Maybe one of your co-workers decided he needed a 'personalized' copy of a particular wiring diagram and had carefully sliced it from the book before returning the volume to the shelf. Of course, this would inevitably be the exact wiring diagram you were looking for. Even if you were lucky enough to find your wiring diagram, years of rough handling would have made the book far less readable than when it was printed.

You can see where this history report is heading. We should never underestimate the importance of printed material to the advance of civilization. But we can agree that an automotive repair shop is the last place you would want to take a valuable First edition. Paper just doesn't hold up very well after it's been treated with a mixture of dirt, grease and cleaning solvents.

Everything changed when we entered the A.C. era, of course. Words and pictures changed from drops of ink on pages to multi-colored patterns of pixels on a computer screen. Turning the 'page' deletes all the letters and images on one page, only to replace them with a fresh set of letters and images on the next. If you want to transform the images on the screen back into ink and paper, the computer can do that for you, too. It didn't take long before this new technology was harnessed for automotive use and we had the first computer-based automotive information systems. These systems have adapted their information for onscreen retrieval and use. Hypertext links, screenbased user interfaces, CD's, DVD's and other computer-specific tools have made it easier and faster to retrieve a specific needle of information from an evergrowing haystack of possible sources. Unless you really love the heft of a 2000-page service manual in your hands, it's no longer necessary to leaf through a collection of dog-eared books to find what you need.

'Dot-Com' Commotion

It's been impossible to ignore the explosive growth of the Internet. Every day brings a new batch of announcements of innovative ways that companies and individuals have found to harness the power of the Internet to connect businesses to individuals, individuals to individuals and businesses to businesses. The Internet's accessibility to nearly every part of the country (and to the rest of the world), combined with its relatively low entry cost, makes it a powerful engine that has steadily driven down the cost of nearly everything it touches.

One company harnessing the power of the Internet for the benefit of the automotive service industry is cybrrparts.com, a provider of Internetbased automotive diagnostic and repair information. After five years' development, cybrrparts' newly-launched www.cybrrpartsPRO.com subscription website offers an Internet alternative to independent repair shops looking for the information they need to service import and domestic vehicles. The Nichols library of Chilton repair information is the source for a large chunk of the information to be found on the cybrrparts PRO website. The website is updated on a daily, not quarterly, basis, and new information is constantly being added by cybrrparts personnel.

The cybrrparts PRO website is optimized for use with Microsoft Internet Explorer 4.0 or higher. Microsoft and Netscape have gone their separate ways with regard to certain Internet standards. Netscape Navigator might cause some unplanned weirdness while viewing the cybrrparts PRO site, so stick with IE. A screen resolution of 1024 X 768 is recommended.

Information Interface

After entering your user id and password, you'll see a display that looks like a large typewriter keyboard (Figure 1). That's because the site has been designed for use with a touchscreen monitor. Touching individual letters and numbers on the screen sends a search engine the information it needs to identify the vehicle you're working on.



Unless you plan on taking the time to clean your hands thoroughly each time you walk over to the computer, some of that stuff on your hands is going to rub off each time. When (not *if*) the touchscreen accumulates a layer of grease, there's less risk of damage to the other peripherals (keyboard and mouse) and cleanup is faster and easier.

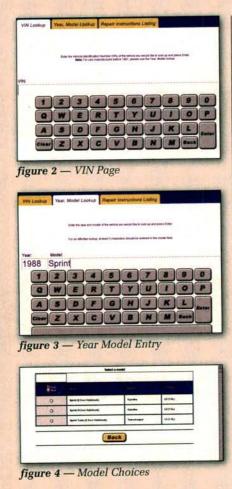
If you're buying a computer for the first time, or if you plan to dedicate one computer to cybrrparts PRO and other Internet use, the purchase of a touchscreen monitor costs a few hundred dollars more than a standard monitor of the same size (less than \$600 US for a 15-inch monitor and less than \$900 US for a 17-inch monitor). If you already own a computer and monitor, don't want to buy a touchscreen monitor or just prefer using a keyboard and mouse, the entire cybrrparts PRO site can also be navigated using conventional mouse-and-keyboard.

Vehicle Identification

Probably the easiest way to get bad information from any computer-based information system is to give it the wrong information to begin with. It's the old 'garbage-in, garbage-out' pitfall. If you tell any information system that you're working on a 1995 Camry when you're really working on a 1994, there's no reason to expect the database to return the correct information about the Camry that you really need.

While that's pretty obvious, it's actually much easier than you think to make a small mistake while identifying a vehicle, a mistake that can have the same junk-output consequences. Remember, the accuracy of your vehicle description identification also determines which parts are sent to you by your parts supplier. Correctly identifying the vehicle avoids the frustration and lost time that results when wrong parts arrive.

While adhering to the Automotive Aftermarket Industry Association (AAIA) standard, cybrrparts has enhanced the standard to define vehicle populations with a greater degree of accuracy. You have two options for identifying a vehicle: VIN or year and model. When properly entered, the VIN provides all the information necessary to make a positive identification of the vehicle in your bay (Figure 2, page 26).



A simple year and model identification is also offered, should you prefer. You don't have to wear out your fingertips pointing to all the

your fingertips pointing to all the letters in the model name either; three letters are all that are needed, and they don't have to be the first three letters of the model name. If the database returns more than one possible match to your three-letter query, it gives you a multiple-choice list.

Finding Information

Typing "1988 Sprint" (Figure 3) yields three identification choices on the next page because there were three Sprints to choose from that year (Figure 4). The cybrrparts PRO vehicle identification process should eliminate the 'yeah, but' syndrome. After answering all the applicable questions, the information you'll see on the site is tailored to the specific vehicle in your stall. There's no need to sift through long lists of procedures and specifications that don't apply to your vehicle.

The blue bar across the top of the page (Figure 5) displays all of the pertinent information about the vehicle in the stall. Now when the guy at the parts store asks for the vehicle wheelbase or some other vehicle specs, you'll have the answer for him. Figure 5 also shows the various choices available under the Repair Information section for this vehicle. Other headings (Aftermarket Bulletins, Maintenance and New Vehicle lookup) can be accessed by pressing the yellow buttons in the upper blue bar area.

Sample Repair Information Page

Each major section is divided into several layers of chapters, subchapters and individual repair sections. As you 'drill down' through this information, a yellow button appears below the blue bar representing each chapter and subchapter above your current page (Figure 6). To go back to another section of the repair information, there's no need to hit the BACK button a half-dozen times to get there. Press the yellow button for the section you need, and you'll leapfrog to that page without any intermediate steps. You'll find the same history buttons at the bottom of the page too.

Repair information pages are formatted for transmission and viewing via the Internet, using a standard 56k modem. When necessary, a high resolution, larger version of individual graphics can be viewed in a separate window for better legibility. If you need to take the information with you to the service bay, all cybrrparts PRO pages can be printed on standard 8.5 X 11 paper. Printed pages can also be used to give your customers a visual explanation of needed work.

Maintenance Schedules

Cybrrparts has created a database version of the OE maintenance schedules (both "normal" and "severe") for all vehicles manufactured over the past 10 years. Figure 7 shows a sample maintenance schedule. These schedules can also be printed and used to plan routine maintenance for your customers or to promote additional services.

Diagnostic Trouble Codes

A diagnostic trouble code 'decoder' is also offered (Figure 8a). Entering any OBD-I or -II DTC gives the code description for that number (Figure 8b). At present, entering an OBD-I code returns all code descriptions matching the number for every vehicle line. So you may see code descriptions for vehicles other than your current vehicle. Version 2 of this feature will be vehicle-sensitive and will also allow you to enter more than one DTC at a time. This feature will be added without additional cost to cybrrparts PRO subscribers.

Non-manufacturer-specific OBD-II DTC's (second digit 0) are SAE-standardized for all manufacturers, so entering a generic OBD II DTC number will return a unique code description. Entering a manufacturer-specific code (second digit 1) returns the manufacturer's name and code description.

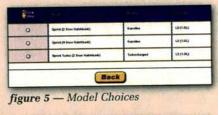




figure 6 — Sample Page



figure 7 — Maintenance Schedule

Aftermarket Bulletins

Many aftermarket parts manufacturers issue bulletins to identify specific problems and recommended fixes, often in areas overlooked by OE manufacturers. These bulletins are available on a vehicle-sensitive basis. So if you're working on a brake system, and a brake parts manufacturer has issued a bulletin that applies to your selected vehicle, the bulletin will be available online.

OEM Bulletins and Recalls

Cybriparts plans to offer OE manufacturer bulletin and recall information on the cybriparts PRO website during the second quarter of 2000. This feature will be incorporated without additional cost to cybriparts PRO subscribers.

Other Scheduled cybrrparts PRO Features

A labor estimating system is planned for the first quarter of 2000. The first generation of this system will operate separately from the rest of the vehicle lookup system. In other words, you'll need to describe the car you're working on to the estimating system, even though you may have already entered this information during a service information previous search. The second generation estimating system, due in the second quarter of 2000, will be fully integrated, meaning one vehicle identification will carry across all of the site's features. Once again, this feature will be incorporated without additional cost to cybrrparts PRO subscribers.

An online parts catalog is also in the works. The catalog will allow you to look up aftermarket part numbers in real time. The accuracy of the cybrrparts PRO vehicle identification process takes on added importance here. The parts listings in the catalog will be keyed to the vehicle you selected when you log in. Instead of relying on a parts supplier for part number identifications, this feature will allow you to do the job yourself if you choose.

The online parts catalog is approximately one year away from full integration with the rest of the cybrrparts PRO website features. The online parts catalog, as well as a business marketing function, will be offered as optional upgrades to the basic cost of a cybrrparts PRO subscription.

Brief Recap

The cybrrparts PRO website currently offers:

- an advanced vehicle lookup and identification system,
- Chilton repair instructions, diagrams and specifications covering most domestic and import vehicles since 1968,
- vehicle maintenance schedules,
- aftermarket service bulletins,
- an OBD-I and -II diagnostic trouble code decoder.

Planned features and site upgrades will include:

- a hardware purchase program,
- OEM technical bulletin and recall information,
- a parts/accessory catalog linked to the vehicle identification process,
- online shop management and marketing assistance.

Pricing

Distributing service, repair, maintenance and parts information directly to its subscribers over the Internet eliminates many of the fixed costs (paper, printing, warehousing, periodic CD manufacturing, packaging,

postage) associated with paperbased or other electronic means of distributing automotive service information. This lets cybrrparts deliver its cybrrparts PRO services to your computer for a monthly subscription price that's less than two hours of your shop's posted labor rate. AutoDigest.com, a consumerbased website with basic do-itvourself service information and an online 400-page Chilton's DIY service manual, is also available for a yearly subscription cost of \$9.95.

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figure 8b — DTC Decoder Results

Try It Out On Us

Import Service, through its parent company Gemini Communications, has formed a strategic alliance with cybrrparts. You're invited to visit the cybrrparts website (www.cybrrparts.com). Take the online tour of the cybrrrparts PRO site, then decide for yourself whether it's a tool your shop can use. If you sign up for a six month cybrrparts PRO subscription, be sure to enter "Gemini, Import Service, Parts Pro or Parts Professional" in the Affiliate box during the signup process.