

# Diagnostic Tools

## ALLDATA Version 3.0 Software Release

ALLDATA Corporation has released ALLDATA for Windows Version 3.0®. Version 3.0 includes new product features and an updated electronic database of automotive diagnostic and repair articles, technical diagrams, illustrations and technical service bulletins (TSB's). One of the many new features of ALLDATA for Windows Version 3.0 is how each screen displays hierarchical information. Version 3.0 provides new menus and icons that flow left to right. More information about the contents of each menu icon are displayed automatically, allowing technicians to navigate more easily and quickly through the systems. The new Windows version also responds to customers' requests to print magnified screen images. ALLDATA technicians can now print 'zoomed' images in a magnified format, showing more detail in wiring diagrams and technical illustrations.



**ALLDATA**  
Circle No. 241

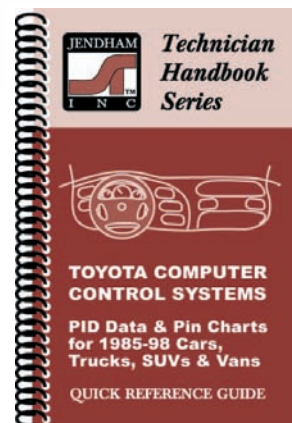
## Toyota Handbook

A new Technician's Handbook covering 1985-98 Toyota vehicles equipped with TCCS is available from JENDHAM. The handbook is the seventh in JENDHAM's Technician Handbook Series, and is entitled "Toyota Computer Control System PID Data,

Pin Charts and OBD II Diagnostics for Cars, Trucks, SUVs and Vans." The 484-page handbook contains sections on:

- Introduction to PID Data, Pin Charts & OBD II Diagnostics,
- OBD II Diagnostics for Toyota Vehicles with Fuel Injection,
- Pin Charts for Cars with Fuel Injection,
- Pin Charts for Sports Utility Vehicles with Fuel Injection,
- Pin Charts for Trucks with Fuel Injection,
- Pin Charts for Vans with Fuel Injection.

**JENDHAM**  
Circle No. 242



## Automotive Multimeter

TIF has introduced the TIF280 Deluxe Automotive Multimeter. This multi-function meter comes complete with a large, easy-to-read digital screen with analog bar graph, a compact and protective case, durable leads and accessories. In addition to conventional DMM func-



tions, the unit can be used for temperature and tach readings. The TIF280 comes with a three year warranty.

**TIF**  
**Circle No. 243**

## Halogen Hawk Leak Detector

The TIF XP-1 X-tra Performance Halogen Hawk refrigerant leak detector features MPC circuitry which monitors the sensing tip 2000 times per second. This feature combines with a tri-colored LED progressive visual leak intensity indicator to actually diagnose leak sizes. The LEDs also double as a true battery voltage indicator.



The unit's seven sensitivity levels permit an increase of 64X from level 1 to 7. Color-coded tactile keypad controls, automatic circuitry with one-touch reset, a mechanical pump, audio mute, constant power indication and a three year warranty are a few of the TIF XP-1's other features.

**TIF**  
**Circle No. 244**

## Laser-Sighted Infrared Thermometer

Noncontact temperature measurements are useful for many sorts of automotive diagnostic purposes, from identifying a misfiring cylinder (its exhaust run-

ner will be cooler) to fingering a dragging brake (its disk or drum will be warmer) or testing for catalytic converter function (the outlet should be warmer than the inlet). This directional thermometer includes an aiming laser to isolate the measurement point precisely. The manufacturer reports a range from -32 to +400 degrees C (-25 to +750 degrees F) and accuracy within +/- 1 percent of the displayed reading. The Raynger ST3 comes from Raytek.



**Raytek**  
**Circle No. 245**

## Infrared Thermometer Software

The Raytek non-contact thermometers can now be connected to a PC though software developed to allow recording changes in temperature over time. The DataTemp MX software comes either with the Raytek thermometers or separately.



**Raytek**  
**Circle No. 246**

# Diagnostic Tools

## Small But Powerful Blacklight

The Tracer Titan TP-8200 blacklight, used for fluid leak detection in combination with fluorescent dyes, uses light-filtering technology that enhances the apparent brightness of the leaked dye up to 30 times more, according to the manufacturer. Such leak detection systems work on air conditioning and engine coolant as well as on other hydraulic circuits. The Titan light works on 12-volts and is rugged enough for a shop environment: the manufacturer claims the light, bulb and filter resist breakage even when dropped.



**Tracer Titan**  
Circle No. 247

## Battery and Charging System Tester

"It's not charging!" Does that mean the alternator, the battery or something in the harness? You can check these possibilities one at a time, but this tester allows testing the system entirely, in about 40 seconds. The OTC Accuracy Plus checks the vehicle battery, starter, voltage regulator and diodes. According to the manufacturer, the tool can even work with a discharged battery, without waiting for a recharge. It also monitors, plots and analyzes cranking voltage and alternator diode output waveforms and loads the system enough to provide a reliable test. The tool covers ampere ranges from 50 to 2000 CCA and voltages from 1.0 to 14 volts on 6- or 12-volt batteries.



**OTC**  
Circle No. 248

## Asian Import Software for OBD II

OTC's new and updated diagnostic software for Asian cars features a simplified vehicle entry system for greater accuracy (make, model and year are all that are needed). A software update allows the mechanic to save the last three vehicle systems surveyed. This translates into re-entering a previous vehicle's system

with less keystroking. The OTC system includes complete terminal display and printing support. All the software's standard features have been retained, such as connector location, retrieval information, code procedures and technical service numbers. For the new update, a "System Smart Insert" and cable add a hardware insert that updates the cable, eliminating the need to buy new cables every time the car-makers change something. The Asian Import Software comes in three configurations, depending on the coverage you want.



**OTC**  
Circle No. 249

## ABS Diagnostic Software

OTC introduces the ABS '98 Pathfinder software for the Enhanced Monitor scan tool. This diagnostic software can provide fast and accurate troubleshooting diagnostics for the most common ABS systems on the market, including most Fords, vans and trucks, GM and many imports. The ABS '98 Pathfinder employs OBD II Class II communication standards and is the only non-GM cartridge with GM-approved software for bi-directional control of Delco VI systems. The diagnostic mechanic can activate solenoids, relays or electric motors to confirm proper operation while troubleshooting the system. The software also has codes and code descriptions, data stream information and hard-to-find specifications like wheel speed sensor output voltages and torque settings. The Pathfinder feature includes OE bleed procedures, ABS computer and connector locations, references by service bulletin and more. Covers vehicles from 1987 to 1998.



**OTC**  
Circle No. 250

## Electronic Specifications Database

This hand-held unit holds and displays underhood, undercar and maintenance specs from 1987 to



the present, covering fuel pressure, idle speed, lube information and torque settings. The major advantage of the system, according to the manufacturer, is convenience and speed. It goes where you go and eliminates computer searches or paging through manuals. You simply select the year, make and model of the vehicle and open the menu screen, presenting a choice of specification categories. The underhood section covers batteries, ignition, spark plugs, belt tension, engine torque, alternator and regulator specifications, engine computer and fuel system. The undercar category covers brakes, steering, suspension, tires, wheel alignment and torque specifications. The maintenance section covers air conditioning, cooling system, crankcase, differential, transmission and lubrication.



**Thexton**  
Circle No. 251

## Fuel Cap Pre-Tester

Many of the current emissions tests not only require a gas cap test, but also won't allow a practice run with the tester. Stant's new 12300 fuel cap tester system allows pre-screening before the official test is run, possibly tagging a car as a polluter for a problem that can be quickly fixed with a new gas cap. Indications are that about 8 percent of cars have gas caps that leak excessive fuel vapor to the atmosphere, and this is probably the least expensive emissions-related repair on a vehicle. While fuel cap monitoring is not specifically federally mandated at this point, states do get EPA emissions credit if they employ them, which translate into more federal highway funding, so this tool can perhaps help your customer.

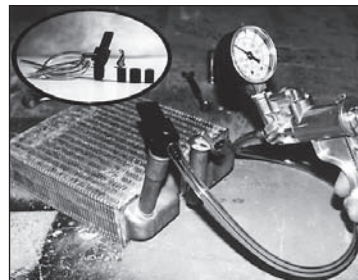


**Stant**  
Circle No. 252

## Heater-Evaporator Core Tester

As hard as it is to get a heater core out of a car, you certainly don't want to discover that the one you repaired or replaced also leaks. This tester from

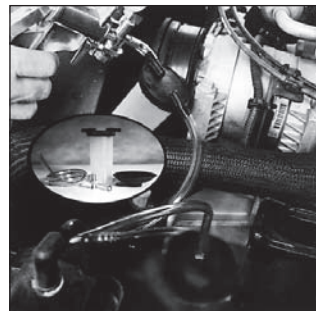
MityVac allows you to verify the piece going in will hold pressure once installed. Four adapters offer full coverage of heater cores, according to the manufacturer.



**MityVac**  
Circle No. 253

## Power Steering Vacuum Bleeder

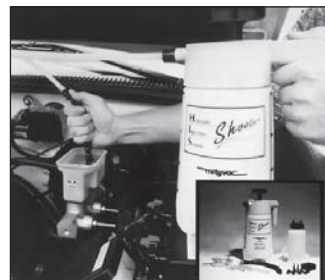
Sometimes it can be very difficult to get the last bubbles of air out of a replacement power steering rack, especially if you have to turn it back and forth so often the oil foams. This bleeder-filler kit, used in combination with a vacuum pump, will evacuate the air from the system before you put the oil in. Most jobs will take about five minutes instead of as long as 30 or 40, according to the manufacturer.



**Mityvac**  
Circle No. 254

## Clutch and Brake Bleeder

This bleeder tool works several different ways, including reverse flushing, to get the air and old fluid out of hydraulic clutch and brake lines. It can also serve to fill differentials, transfer cases and transaxles with filler plugs in difficult places. The Hydraulic Injection System Shooter is self-contained, requiring no air pressure from shop lines (and the potential risk of moisture contamination). Its parts are all composite materials, impervious to the rust and corrosion hydraulic fluids like to convey. The two-quart reservoir transfers fluid by trigger action, and the business end of the tool is a flexible pressure bleeding and flushing adapter the manufacturer calls a "Flex-Wand."



**Mityvac**  
Circle No. 255

# Diagnostic Tools

## Mastertech Pro -Series Products

The latest offerings from Vetronix designed to enhance the mastertech® Multi-Function Tester are the Ignition Scope Kit, the Current and Temperature Probes, the Noise, Vibration and Harshness Diagnostic Kit, as well as a comprehensive Asian Diagnostic Software package.



The heart of this new functionality is an 8MB Mass Storage Cartridge (MSC) and a new 8MB Program Card that has enough storage capacity to house the programs you need to diagnose and repair the toughest problems. These new features and further enhanced with a new, brighter mastertech® display screen.

**Vetronix Corporation**  
Circle No. 256

## Multimeter And Current Clamp Lineup

Jensen Tools of Phoenix offers digital multimeters and current clamps from their full-featured JTM-105, a true-RMS meter, to their JTM-63, an economical pocket-sized meter. The company includes a three-year warranty and can ship meters with certificates of calibration for a small fee.



**Jensen Tools**  
Circle No. 257

## Laser Noncontact Thermometer With Graphing Software

3M's graphing infrared thermometers, Scotchtrak IR-60 and IR-60EXP, include a 16-point circular laser pattern to outline the actual area measured. The distance-to-spot ratio is 60 to 1, so at a distance of five feet, you measure an area one inch in diameter. For areas that you still can't get to with the laser pattern, an optional contact-type



thermocouple is available for direct temperature measurements. The thermometers record temperatures from -25 degrees F/-30 degrees C to 1600 degrees F/900 degrees C; the Windows-based graphing software stores up to 10,000 datapoints. The manufacturer also offers several models with higher temperature resolutions over a narrower temperature scale, as well as backlit displays reading to tenths of a degree.

**3M**  
Circle No. 258

## Reset Tools

Erickson Tech Services has introduced two new service interval light reset tools to the US market: the SIR IV for VW and Audi and the SIR V for Volvo. These high quality German-made tools allow any shop to reset the "Service" and "Oil Change" lights on these vehicles. Erickson Tech Service is an independent distributor of diagnostic and specialty tools for European cars.



**Erickson Tech Service**  
Circle No. 259

## DGA 1000 Gas Analyzer

The Sun® DGA 1000 Gas Analyzer's digital, real-time measurements are displayed on a nine-inch, high resolution monitor, when testing a vehicle's carbon dioxide, carbon monoxide, hydrocarbon and oxygen levels. Nitric oxide testing is offered as an option. Other options include a tachometer, an oil temperature probe to monitor engine warm-up progress, a light pen that commands the unit when pressed against the screen, a wireless remote control and an internal printer.

When testing emissions levels, technicians may enter user-programmable limits specific to a vehicle's model year and make. In addition, tests may be performed using two sets of rpm limits, simulating both highway and idle engine speeds. Technicians who want to perform tests while the vehicle is under load can detach the unit from its test stand, place it on the passenger's seat and collect emission data while driving the vehicle.



**Snap-on Diagnostics**  
Circle No. 260

## Wagner Wet Check

Wagner's Wet Check™ Brake Fluid Test Strips provide a quick, easy and inexpensive way to check brake fluid moisture. It takes just 30 seconds to test the brake fluid with Wet Check Strips. One color pad on the strips indicates whether the fluid is DOT 3 or 4 and the second color pad identifies the condition of the fluid and whether it should be changed. Cost per vehicle is less than one dollar and the strips provide visible evidence of brake fluid condition that can be presented to the customer.



**Wagner Brake Products**  
Circle No. 261

## New Infrared Thermometers

Yokogawa's new non-contact infrared thermometers provide fast, accurate temperature measurement. These pocket-sized instruments can safely measure temperatures up to 752 degrees F in about one second and are accurate to  $\pm 1$  percent of the reading.

Three models offer a range of options. The Model 530 01 is for general-purpose measurements with a distance to target ratio of 10:1. The Model 530 03 is designed for small objects and fea-



tures an analog output. The Model 530 04 features laser sighting and can measure small targets down to 35 mm at a distance of one meter. All models are switchable between degrees F and C, dark to bright emissivity and max/hold mode.

**Yokogawa Corporation of America**  
Circle No. 262

## Leak Detection System

Car Care Parts Manufacturing Company has added a Dye Injection A/C Leak Detection System to its temperature control product line. The A/C Leak Detection System uses pre-filled disposable cartridges, each containing four fluid ounces of universal A/C dye

(enough to service 16 vehicles). The system is designed to save shop professionals time and money by efficiently injecting the precise amount of A/C dye needed for a single application (1/4-ounce) with each squeeze. The System meets all SAE J2297 and OEM standards and comes complete with:

- R-12 and R-134a connectors,
- a powerful 12-volt high output, compact UV light with 16-foot cord,
- battery clips,
- on four ounce cartridge of universal A/C dye,
- UV-enhancing eyeglasses,
- a rugged plastic storage case.



**Car Care Parts Manufacturing Company**  
Circle No. 263



## Fuel Injection Service Kit

This service kit from OTC lets you diagnose many fuel injection problems from a weak fuel pump or restricted filter to a leakdown or volume test. The kit includes a gauge ranging from zero to 100 psi and 18 of the most common fuel injection adapters, each equipped with a quick-disconnect Schrader valve.



**OTC**  
Circle No. 264

## ShopKey® Shop Management System

The ShopKey® system from Snap-on tools replaces existing systems with one set of modules that allow technicians to keep digital files for, and instantly access information on, every vehicle serviced, through every step of the repair process. According to Snap-on, ShopKey® is the only fully integrated software family that combines repair, estimating and business management components in one easy-to-use package.

The ShopKey® system is designed for use on a standard personal computer or any Sun® Machine-series analyzer. Installation and use of the ShopKey® software is aided by step-by-step prompts that guide users through the system's many functions. The program is organized into two basic modules—offering thousands of pages of information including technical service bulletins, illustrations, parts locators and researched labor times.



**Snap-on Tools**  
Circle No. 265

## Emissions Service Center

The EMC1000 combines on one cart—tools and gauges for cleaning intake passages, fuel injection systems, valves, combustion chambers oxygen sensors and catalytic converters in, according to the

company, as little as ten minutes. This effectively reduces vehicle emissions, enhances fuel economy and improves vehicle performance. The EMC1000 uses a single cleaning fluid for both injector cleaning and combustion chamber decarbonizing, thus reducing chemical inventory needs. The device injects cleaning fluid into the air intake boot either with a special syringe or directly into the air intake opening with a misting adapter. It does not require 'plumbing' the fuel rail to introduce the cleaning fluid. To avoid the risk of spark and fire, the unit works entirely by compressed air from the shop system, which is stored in a chamber on the EMC1000, allowing portable use beyond the reach of the shop's pneumatic lines.



**Mac Tools.**  
Circle No. 266

## Dual Trace Lab Scope

Combining a high sampling rate with data acquisition at one million per second and a glitch detection function allows the Mac Wave Enhanced scope to collect and display the data necessary to diagnose almost all vehicle electrical problems accurately, even intermittent signal anomalies that can generate driveability problems very hard to trace. The screen is 3.0 by 3.5 inches, and the scope can display DMM graphs and scope traces simultaneously in a split-screen format. The tool includes a "Preset Test" function to allow follow-the-prompt diagnosis until the work becomes more familiar. Upgrading and options can be added through any PC with a modem, eliminating the need for replacement cartridges.



**Mac Tools**  
Circle No. 267

## Fuel Injection Diagnostics

The Scanalyzer fuel delivery system tested uses an automated, systematic approach to fuel system diagnostics, reducing the prospects of a misdiagnosis. Some of its other benefits include hookup to the vehicle in under five minutes, a complete fuel system

# Diagnostic Tools

analysis in less than 15 minutes, automatic injector balance tests, flow tests to manufacturer's specifications, and pressure readings during road testing. The user can also choose to perform specific tests instead of the entire routine, if there is reason to pinpoint first.



## Mac Tools Circle No. 268

### Multi-Tester pro

Autodiagnos has completed development of the Multi-Tester pro, successor to the Multi-Tester plus. Major features of the Multi-Tester pro include:

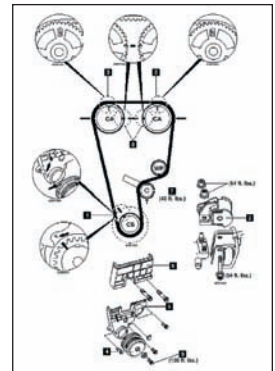
- The ability to diagnose European engine management, ignition and ABS systems with one tool.
- Diagnostic capabilities through on-board diagnostics and parallel connections.
- Displays of up to 36 lines of data.
- A backlit display that's easy to read regardless of surrounding light intensity.
- Serial diagnostics interface compatible with SAE and ISO protocols. CAN bus equipped for compatibility with future CAN bus-equipped vehicles. VW, Audi and Volvo applications available now; BMW and Mercedes-Benz applications coming second half of 1999.
- Stores automatic and manually triggered snapshots of live datastream using parallel connections. Memory not battery-dependent. Snapshots may be downloaded to a PC.
- A new ignition diagnosis module interfaces through the Multi-Tester pro and is compatible with DIS, COP and standard ignition systems. Software is downloaded from Multi-Tester pro cassette, simplifying future upgrades.



## Autodiagnos Circle No. 269

## 1999 Timing Belt Book

Autodata's 1999 edition of their timing belt book not only lists which engines are interference and which are free-wheeling, but has a consistent page layout with charts for the sprocket configurations for each engine, tips specific to individual engine models, warnings about some engines



that require more hands than one person has to do the job, or whether a specific temperature is required. It even lists all the engines that don't have timing belts – those with timing chains or gears – so you won't make an embarrassing mistake when talking to a customer.

## Autodata Circle No. 270