

# PTEN

Professional Tool & Equipment News

## The Independent Tool Authority



▲ Allows hands-free wheel mounting



▲ Protects against A/C canister debris



▲ Handheld device provides nitrogen readings

# maxME

By Matco Tools

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**LAUNCH**





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## In the Next Issue:

It's that time of year again! The May issue of PTEN will feature more than 100 nominees for the his year's PTEN Innovation Awards.



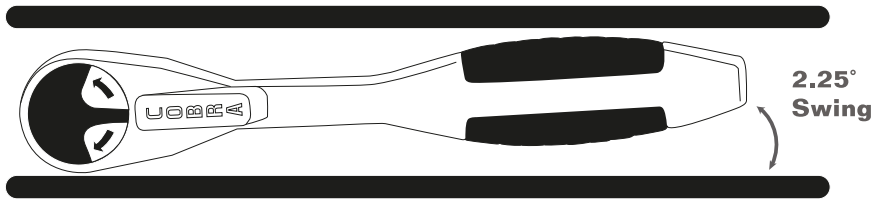
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98885	160	N/A	2 PC. 1/4 & 3/8" DRIVE 160 TOOTH RATCHET SET
98860	160	N/A	3 PC. 1/4, 3/8 & 1/2" DRIVE 160 TOOTH RATCHET SET

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Professional Tool & Equipment News  
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Published by Cygnus Business Media  
P.O. Box 803, 1233 Janesville Ave.  
Fort Atkinson, WI 53538-0803  
920-563-6388 • 800-547-7377  
Fax: 920-563-1699

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Professional Tool & Equipment News (USPS #012-426, ISSN #1081-4485) is published 10 times a year in February, March, April, May, June, July, August, September, October, and December by Cygnus Business Media. Periodicals postage paid at Fort Atkinson, Wisconsin, and additional mailing offices. Subscription rates, in U.S. currency only, are: one year, \$45; two years, \$85; Canada/Mexico, one year, \$65; two years, \$120; international, one year, \$95; international, two years \$180. Back issues are \$10 per copy. Send check to: PTEN, P.O. Box 3257, Northbrook, IL 60065-3257. Postmaster: Please send change of address or subscription information to *Professional Tool & Equipment News*, P.O. Box 3257, Northbrook, IL 60065-3257. Call toll-free 877-382-9187 or 847-559-7598, fax 847-291-4816. Canada GST #842773848. Canada Post PM40612608. Return undeliverable Canada addresses to: PTEN PO Box 25542, London, ON, N6C 6B2.

Printed in the U.S. Vol. 26, No. 3; April 2015



## Tool Review

Online exclusive! A review of the Milwaukee Tool Shockwave Impact Duty Magnetic Bit Tip Holders. To read, visit: [VehicleServicePros.com/12038827](http://VehicleServicePros.com/12038827)

## Featured Products



HD Code Plus CAT,  
No. HD CODEPCAT  
CanDo International  
[VehicleServicePros.com/12037250](http://VehicleServicePros.com/12037250)



AIRCAT Spot Sander,  
No. 6320  
Florida Pneumatic  
[VehicleServicePros.com/12033692](http://VehicleServicePros.com/12033692)



Sensor and ECU  
Test Lead Kit,  
No. ASLK12  
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## Video



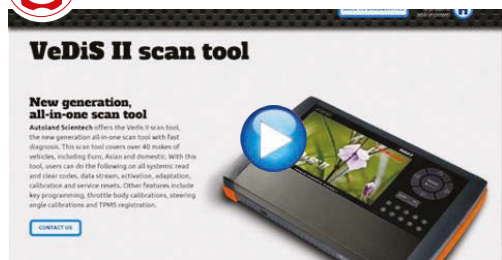
SK Hand Tool X-Frame Ratcheting Wrench Video. To watch the video, visit: [VehicleServicePros.com/12051195](http://VehicleServicePros.com/12051195)

## Ask The Expert



How do I know what size air compressor I need for my new shop? To read, visit: [VehicleServicePros.com/12051104](http://VehicleServicePros.com/12051104)

## Featured Video



Get product info on the Tool Chest iPad app. To watch a demo video, visit: [VehicleServicePros.com/10835042](http://VehicleServicePros.com/10835042)

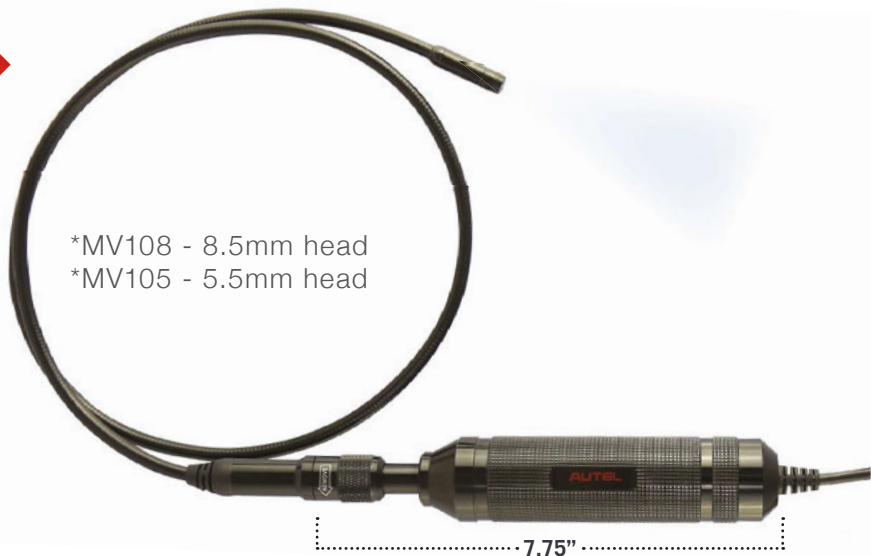
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## Are you prepared (yet) for



## changes in A/C service?

Whether you're just taking on air conditioning service, or have been working on these vehicle systems for awhile, it's important to stay up-to-date on tool and regulation changes in the aftermarket.

By Erica Schulz-Schueller, Editor  
Erica@VehicleServicePros.com

Every year about this time, you hear about a **ir conditioning s**ervice i in the s hop. N ow t hat t he " new" R-1234yf refrigerant has been circling around the fringe of aftermarket shops for the last couple years, it's certainly making headway into t ooling a nd e quipment — b ut t hat doesn't m ean y ou s till w on't b e w orking on older systems that use R-134a. That's why it's important to be prepared for both.

In this month's Tool Briefing article, contributing writer Barry Hoyland focuses on an inoperative A/C system in a 2010 Dodge Caravan. While this article covers the diagnosis and repair of the vehicle's air conditioning, it's important to note the type of refrigerant used in this Dodge: R-134a. (Turn to page 46 to read the article.)

While Hoyland covers a number of tools when servicing this vehicle, including an RRR machine and electronic leak detector, did you know that there are different standards for tooling up for the new refrigerant, versus products you may have in the shop already?

During the VISION Hi-Tech Training & Expo earlier this year in Kansas City, Mo., I had the opportunity to sit in on a course covering changes to HVAC vehicle systems. While this course delved into extensive parts and component changes for late-model vehicles, the class also covered many tool and equipment updates being made

to the market. These include updated SAE standards for equipment used to service R-1234yf refrigerant, as well as products OE and aftermarket shops should consider if they plan on servicing these types of vehicles.

Recently I also had the chance to talk with a number of air conditioning tool and equipment manufacturers on the current and upcoming changes in A/C service. Like many changes in mechanical aspects of a vehicle, it takes the aftermarket a few years to see the trickle-down effect of these changes. To be sure, vehicles using R-1234yf refrigerant will be showing up at your shop soon, if they haven't already.

What's more, if you do plan on servicing hybrid vehicles, that's another aspect to consider for tools.

Did you know that, while traditional belt-driven compressors

use PAG oil in the A/C system, high-voltage systems require the use of POE oil? Because POE oil doesn't attract moisture, it won't conduct electricity. As a result, there are different RRR machines used to service each (or a hybrid unit that can service vehicles with both types of oil).

If you're seriously considering taking on A/C service, or you'd just like a refresher on new tools and equipment available, check out my full article, *A primer on air conditioning: what to know about changes in refrigerant and tooling*. To read online, head to [VehicleServicePros.com/12056587](http://VehicleServicePros.com/12056587). **PTEN**

Like many changes in mechanical aspects of a vehicle, it takes the aftermarket a few years to see the trickle-down effect of these changes.



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# FEATURED New Products

Kicking off the New Products section each month, our Featured New Products page includes brand new products showcased on the cover that are available to the automotive market.

## Pay-as-you-go software, subscription-based scan tool

The Matco Tools maxME bi-directional scan tool features a patented, pay-as-you-go software subscription service. Designed to be both affordable and customizable, the maxME allows users to only pay for the car makes they work on. Subscriptions are offered by car make, region or one that covers everything. At any time, users can add, delete or update makes, right from the tablet's screen. In addition to being an advanced diagnostic tool, it's also a full-featured, personal tablet. Troubleshoot engine codes, stream music and play apps — all from one tool.



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## Handheld device provides nitrogen readings

The Analytical Industries Palm N2 Analyzer measures the nitrogen concentration in tires. Utilizing the company's galvanic fuel cell and a two-button keypad, the analyzer provides reliable nitrogen readings in seconds. Testing the nitrogen concentration is a similar process to checking tire pressure. According to the company, tires filled with nitrogen hold pressure longer and are unaffected by the oxidation that leads to tread separation. The red, handheld Palm N2 Analyzer has a 12-month warranty.

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## Protects against canister debris

The Airsept Refrigerant Canister Filter protects against A/C service equipment downtime due to debris and contaminants found in virgin refrigerant cylinders. The Refrigerant Canister Filter traps metal shavings and non-metallic debris. The filter should be installed inline between the refrigerant canister and the tank fill hose. The internal screen features a tapered design that forces debris to the side, ensuring that the center of the filter remains open for flow. The filter features multiple O-rings and an OE-fit connector design, and it is available 1/2 Acme and 1/4" SAE flare. The filter is serviceable and replacement screens are available.

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## Allows hands-free wheel mounting

The Lock Technology Wheel Weight Hammer, No. LT845, offers a second spring-loaded hammer inside the hammer's handle. This allows technicians to mount weights 1 oz and smaller without pinching fingers. This wheel weight hammer offers a spring-mounted pull pin that adjusts to remove all wheel weights from the wheel's rim, and it allows technicians to remove any size wheel weight including truck weights.

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## Leverless tire changers

The **Tire Works by Sice USA TECO 48 TOP** is a line of automatic leverless tire changers with a swing arm configuration, specifically designed for industry professionals and suitable to handle oversized and heavy car, van and motorcycle wheels, using an optional accessory. The 48 TOP has a total clamping capacity from 11" to 27". The TECO 48 TOP comes standard supplied with the patented automatic device TPH, which assists the operator to easily mount and demount particularly tough or low-profile tires such as run-flats. This is also standard supplied in a two-speed version with a two-speed turntable (for three-phase models).

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## Angled tip for increased leverage

Products in the **GearWrench Standard Prybars** line feature an angled tip to allow for increased leverage and access. With ergonomic handles that are resistant to cracking in cold temperatures, these prybars come with a black, phosphate-coated shaft that helps reduce corrosion. Sizes in this line include 8" by 1/4" (No. 82408), 12" by 3/8" (No. 82412), 17" by 3/8" (No. 82417), 25" by 1/2" (No. 82425), 31" by 1/2" (No. 82431), 36" by 1/2" (No. 82436) and a 3-pc set (No. 82403) with 12", 17" and 25" prybars. According to the company, the tools exceed applicable ASME performance requirements.

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## Available in 8-pc and 5-pc sets

The **Wiha Tools Insulated 1000V Slotted and Phillips PicoFinish Screwdrivers** offer durable, molded-on insulation and spray-coated, CV steel blades. The tools provide safety when working with live equipment, like terminal screws, up to 1,000V AC and 1,500V DC. The ergonomic handles have a soft zone for comfort and a rotating cap for precision. The screwdrivers are available in an 8-pc set (No. 32088) with 1.5mm, 2mm, 2.5mm, 3mm and 3.5mm slotted tips and Nos. 000, 00, 0 and 1 Philips heads; as well as a 5-pc set (No. 32085) with 1.5mm, 2.5mm and 3.5mm slotted heads and Nos. 0 and 1 Phillips heads.

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## For DEF tank applications

The **Global Sales Group EZ Oil Drain Valve** is available in stainless steel for Diesel Exhaust Fluid (DEF) tank applications. The SS version of the EZ Oil Drain Valves uses the ball valve design, and is available in a 3/4-16 UNF thread size. A lock nut feature on the SS version allows the valve's final position to be orientated perfectly during installation. A hose can be attached to drain the DEF to prevent it from any spills. As DEF is highly corrosive, the SS version EZ Oil Drain Valve is designed to withstand these properties, using all SS 316 components and a Viton O-ring to seal.

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## Meets CSA safety requirements

The **Blue Tongue Station Boots** have TPU non-marking soles and are oil-, acid- and slip-resistant. A woven Lenzi footbed provides puncture protection from foreign objects, and allows for more flexibility than a steel plate without transmitting heat or cold. The spring-back polyurethane midsole and EVA removable insole combine to provide maximum comfort for users, according to the company. The optional Composite Safety Toe is lighter than the steel toe cap while meeting the same ASTM and CSA safety requirements. Available in U.S. sizes 7 to 13.

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## Lockable roller mechanism

The **Autoland Scientech DC-1 Diagnostic Cart** is specially designed for diagnostics and programming tool placement and storage. The shelves allow room for laptops, scan tools and a battery maintainer while the plastic construction keeps the electronics safe from electrical shock and dust or rust. The lockable roller mechanism keeps the cart in place and the rollers make the DC-1 easy to maneuver within shop bays. The smart cable bundle frame allows easy organization of network, power cords and other cables and adapters. The DC-1 has a carrying capacity of 110 lbs.

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## New Products



### Most popular drill sizes all in one case

The KnKut 12-pc Quick Release Drill Bit Set places the most popular drill sizes all in one storage case. The hex shank holds the drill securely in place and the 135-degree split point starts without the use of a center punch, making starting holes simple and easy. Along with a quick release adapter, this 12-pc set includes the following bit sizes: 1/16", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 5/16", 3/8", 7/16" and 1/2". This set comes in a molded plastic storage case.

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### Reinforced high-wear area

The Cestus RockHard Original glove features a one-piece goat-skin leather palm that is dual layered and reinforced with double stitching for durability. Padding in high-impact areas of the palm gives the user added protection, while the coarse zip grip saddle adds grip control and reinforces a high-wear area. Flexible Thermoplastic Rubber (TPR) shields cover the knuckles and back of fingers for protection that bends with the fingers and guards against light impacts and lacerations. Back-of-hand, form-fitting spandex adds breathability to the glove, while the terry cloth backing on the thumb absorbs moisture and can be used for brow wiping.

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### Increase lift height by 3'

The Rotary Lift Extended-Height Two-Post Lift, No. SPO12, allows technicians to service high-roof vehicles like Class 3 work vehicles. The extended-height option, available for both the Standard and Shockwave models, increases a lift's overall height by 3'. The SPO12 features a symmetric design that keeps the vehicle's center of gravity directly between the columns for maximum stability. The lift is equipped with three-stage arms and adjustable frame-contact adapters for reaching a wide range of pick-up points, and its lightweight, aluminum stackable adapter inserts assist setup. When equipped with Rotary Lift's Shockwave technology, the SPO12 EH3 lift can raise a vehicle 80" in 25 seconds and lower it in 19 seconds.

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### Two-speed, large capacity rotating turntable



The Bosch TCE4475 Traditional Tilting Back Tire Changer is capable of safely and efficiently handling virtually any wheel combination for both passenger and light truck vehicles. The extreme structural rigidity by virtue of the patented G-frame design greatly reduces mount/demount head flexing which essentially eliminates damage to wheels and tires, according to the company. The two-speed, large capacity rotating turntable allows for exact torque when needed, and only requires a 110V electric circuit. This tire changer has a wide range of features designed to provide maximum performance and speed when changing even the most difficult passenger car and light duty truck tires.

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### With 98.5 percent efficiency

The Robinair 34788NI A/C machine recovers, recycles, evacuates, leak-tests and recharges R-134a with improved 98.5 percent efficiency. The improved enclosure allows for tighter packaging of all interior components to reduce the machine's footprint in the shop. Additionally, the new design features a larger graphical display, more memory and automatic features such as leak testing, automatic refrigerant refill and oil drain/inject - putting A/C lubricant back in the system, saving time. The 34788NI-H model performs all of the above functions for high-voltage systems found on hybrid and electric vehicles.

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### Micro-controller senses temperature and amperage

The Snap-on 18V 3/8" Cordless Impact, No. CT8810A, provides 3,480 blows per minute, 2,400 rpm and an output rating of 230 ft/lbs of torque. The tool, which includes a built-in 1-watt LED that projects light directly onto the work area, has a digital fuel gauge and micro-controller to sense temperature and amperage, cutting power to the motor before it can overheat. The 4.0 Ah 18V battery charges in 55 minutes. According to the company, the slender design and balanced ergonomic control make it easy to use for long periods of time without getting fatigued.

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## New Products

### Trigger-mounted forward/reverse switch

The Florida Pneumatic AIRCAT Pneumatic 1/2" Compact Impact Wrench, No. 1055-TH, weighs only 2.75 lbs while offering 500 ft/lbs of torque. The Jumbo Hammer mechanism delivers maximum power while increasing reliability, according to the company. The patented Silencing Technology reduces the noise level to 89 dBA and the low-weight aluminum alloy housing reduces weight while the trigger-mounted forward/reverse and power-management system switch provide control with one-handed operation. This impact wrench offers a patented grip design for comfort and control.

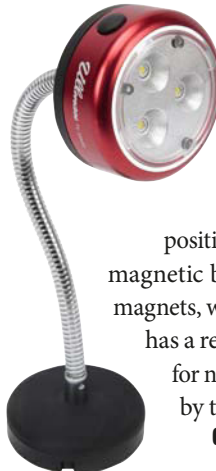
Circle 36 on card, or enter at "e-inquiry" on VehicleServicePros.com



### Provides 110 lumens of brightness

The Ullman Devices FL-3SMD flexible magnetic SMD worklight features three powerful SMD LEDs and provides 110 lumens of brightness. A strong heavy duty spring keeps the worklight in a fixed position, adding sustained visibility. The powerful magnetic base contains six neodymium-iron-boron magnets, which attach to ferrous metals. This base also has a recessed swivel hook for increased versatility for non-metal surfaces. The FL-3SMD is powered by three AAA batteries.

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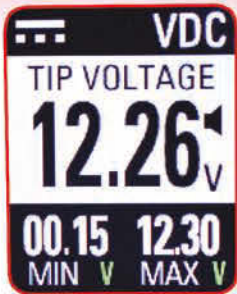
### Stainless steel frame

All four drawers in the Homak Manufacturing 35" Stainless Steel 4-Drawer Service Cart feature aluminum pulls and 416mm ball-bearing drawer slides, which are capable of handling up to 100 lbs per pair. The stainless steel frame provides durability and strength while a full length push handle offers easy handling and plastic embossed bumpers guard against collisions. The cart has four chrome-plated 5" by 2" swivel casters with locking levers. Additional storage space is available in the flip-top lid, which is equipped with gas struts and a deep-set bottom shelf. In addition to HMC's high security tubular locking system, EVA foam liners and a five-year warranty are included for extra protection.

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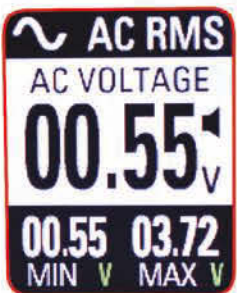
# The All New POWER PROBE IV FOR TECHNICIANS OF ALL LEVELS



**VDC Mode**  
DC Voltmeter with the Ability to Activate Components with Battery Power or Ground



**Power Feed Test**  
Display Resistance in Ohms & Compares Battery Voltage to Tip Voltage

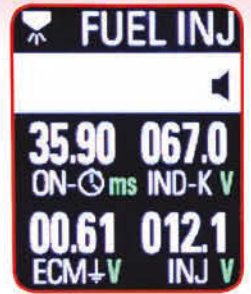


**AC Volts RMS**  
Standard AC Voltmeter RMS and Displays the Min/Max Values



**AC Volts P-P**  
Peak to Peak AC Voltmeter which Displays Total Voltage Between the Lowest-Highest AC Signal and Displays Min/Max Values

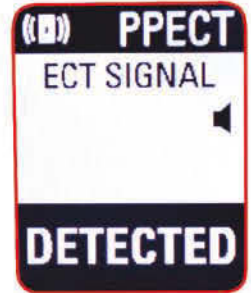
**Fuel Injector**  
Simultaneously Displays Injector On-Time, Inductive Kick Voltage, ECM Ground Voltage and Injector Supply Voltage



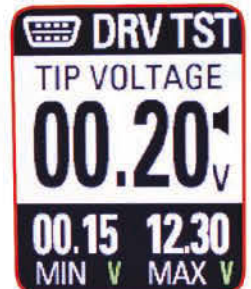
**Frequency Counter**  
Display Hertz and Both Neg/Pos Pulse Width



**ECT Mode**  
Detects the ECT Transmitter Signal on Contact with Probe Tip



**Driver Tester**  
Verifies Proper Operation of a Pull Down Output Driver



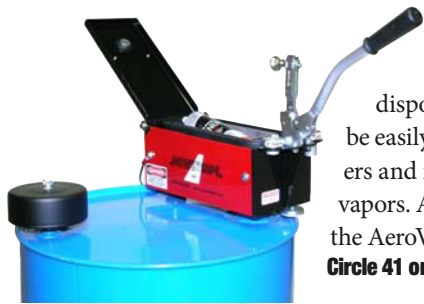
**POWER PROBE**

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**VIDEO**



watch it in action at [www.powerprobe.com/iv](http://www.powerprobe.com/iv)



**Puncture and drain in one step**

The AeroVent1 Aerosol Can Disposal System by Newstripe helps reduce the cost of hazardous waste disposal, according to the company. The AeroVent1 can be easily installed on standard 30- or 55-gal waste containers and includes an activated carbon filter to trap escaping vapors. Aerosol cans are quickly loaded in the machine and the AeroVent11 punctures and drains the cans in one step.

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**Automatic data entry system**

The Tire Works by Sice USA TECO 68 is an electronic wheel balancer with 19" LCD monitor for vehicle wheels with a maximum weight of 165 lbs. TECO 68 is equipped with an automatic data entry system, electronic shaft locking system and automatic balancing position search. The product offers the following main software programs: static and dynamic balancing mode, seven ALU programs dedicated to alloy rims including two ALU-P "Precision" programs, three motorcycle balancing programs (Dynamic, ALU and "Split Moto") and "Self-calibration" and "Self-diagnosis" programs.

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**Repairs plastic parts on bumpers**

The Shark Industries Mini Plastic Hybrid Tack Welder, No. 17042, repairs plastic parts on bumpers, motorcycles, snowmobiles, trucks and more. The unit quickly reinforces the repair or tear with a metal staple that is embedded into the cracked or broken area. The patented ironing tool smooths the plastic and seals in the metal staples after the repair has been made. The included mesh 1' by 1' metal square can be cut and used for repairing holes. The unit, which is smaller and less expensive than the company's Pro-Tack Plastic Welder, is capable of doing soldering on some applications.

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**PULL THE PIN ON YOUR OLD UNIVERSALS. GO GEARWRENCH® PINLESS.**

GearWrench Pinless Universal Impact Sockets have a four-lug, ball-in-socket design for extreme durability compared to standard pinned universals.

True 360° socket end rotation and up to a 30° operating angle provide unsurpassed access.

And all GearWrench Pinless Sockets come with a Lifetime Warranty.

So pull the pin on your old universals and step up to GearWrench Universal Pinless—the sockets that will always GET IT DONE.™

*Pinless 4-lug design provides ultimate strength and durability.*



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## Features roll-cage construction

The Waterloo Professional HD Series line of tool storage products feature roll-cage construction, deep drawers for extra capacity, ball-bearing drawer slides with the patented Posi-Latch system and industrial casters that support 3,500 lbs. Chests and cabinets are available in 36", 46" and 56" widths with drawer ratings of 200 to 400 lbs. Cabinets can be used with or without chests, and side cabinets and lockers can be added for extra storage. Professional HD Workstations are built for use without a top chest. The ball-bearing drawers support 120 to 240 lbs and products are available in 39" or 46" widths.

**Circle 46 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## Rivets panels up to 6.5mm

The Dent Fix Self-Piercing Riveter, No. DF-SPR67, joins aluminum panels together with a cold-forming technique that does not require heat, pre-drilled holes or adhesive. The ergonomically designed tool can be used to rivet panels up to 6.5mm. The pressure and speed control increases accuracy and enables the rivets to be inserted without panel distortion. The kit includes a standard matrix, two matrix keys, a strap, one HR1 arm and a box of 6 by 50 steel punch rivets.

**Circle 49 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## Direct weight location and split/hidden weight programs

The BL Systems/CEMB C71 EVO Wheel Balancer has all the standard CEMB 2D automatic features, including "direct weight location" and split/hidden weight programs. It comes standard with CEMB's 40mm shaft with quick nut and 165-lb weight limit, and it also has an optional 3D sonar width and software program available. The standard splash guard and foot brake for weight location assistance round out the features needed in a busy tire shop.

**Circle 47 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## Storage cabinet keeps pieces organized

The JDI/Dynamic TPMS Master Assortment Package, No. DVT-802, contains 227 total pieces, including multi-application DVT sensors, DVT valve stems, TPMS service kits, TPMS replacement valve stems and a DVT torque tool. Everything is contained in the 30" high by 20" wide by 9" deep TPMS-72 Storage Cabinet, which features a large center storage area, a pull-out drawer and side wing storage shelves. It can be mounted on a wall, and an optional floor stand is available.

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## Meets or exceeds OE requirements

Idemitsu Automatic Transmission Fluids (ATF) are engineered for the exact friction materials and pressure settings of Honda, Mazda, Subaru and other import transmissions, including continuously variable transmission (CVT) technologies. Idemitsu ATF uses the same lubricant technology as that of the vehicle manufacturers, according to the company, and meets or exceeds OE heat, wear, friction and extended-drain requirements. The Idemitsu Type H meets the requirements for Honda Z1 automatic transmissions.

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## Converts data to the J1708 protocol

The NEXIQ Technologies Universal J560 PLC Adapter extracts data from the power line and converts it to the J1708 protocol, and it's designed to work with virtually any OEM heavy duty vehicle communication interface or scan tool. The adapter's ability to convert data to J1708 extends the capabilities of J1708/J1587 diagnostic tools, enabling those tools to support J2497 Power Line Carrier (PLC) communication. When used with an ABS diagnostic software application, the technician can detect ABS warning lamp messages coming from the trailer ECU, test the in-cab trailer ABS warning lamp and test SAE J1708 MID 10 and 11 messages and J1587 MIDs 136 through 139.

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# THE LOWDOWN ON LOW-PROFILE DESIGN



MODEL SHOWN XPR-10A-LP FEATURING LOW-PRO™ ARMS



Quicker and more efficient could be the mantra for BendPak's latest two-post lifts featuring our exclusive Low-Pro™ arms. If you're servicing sports cars or other low riding vehicles, having a two-post lift equipped with low-profile arms can turn that disruptive chore into fast and efficient service. Learn more about BendPak's latest LP models available in 9,000 or 10,000-pound capacities. Visit [www.bendpak.com/lowpro](http://www.bendpak.com/lowpro).

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**BP** **BendPak**  
PROVIDING AUTOMOTIVE SERVICE SOLUTIONS

# WHERE OTHERS STOP, WE'RE JUST GETTING STARTED

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At over six feet of rise, the TransJak® reaches where others don't. Original and still the best, it's the heavy lifting champ with one ton capacity, steel roller bearings, fully adjustable universal saddle, hardened chrome-alloy ram, extra-wide base and four heavy duty swivel bell bearing casters. Find out why the TransJak is America's most popular transmission jack – visit [www.bendpak.com](http://www.bendpak.com) or call 1-800-253-2363

CALL 1-805-933-9970  
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PRODUCTS



### Saves programmed electronic settings

The OEM Automotive Tools OBD2 Memory Saver, No. 24453, protects onboard automotive computer memory when the battery is disconnected. It can be used with any power source and preserves stored fault codes and programmed electronic settings such as clocks, radios, seat positions, keyless entry systems and more. The device, which offers a replaceable fuse to protect sensitive vehicle components from damage, plugs directly into the vehicle's OBD-II port and includes a power plug to OBD-II connector adapter lead.

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### Solvent-free formula

The Imperial Supplies Cherry Soy, Citrus Soy and Antibacterial lines of hand soaps are for use where bacteria reduction is a concern. The soybean-oil based cleansers contain fibril scrubbers for extra cleansing power and provide an all-natural, solvent-free formula. The soy lines of hand soaps are offered in citrus and cherry scents in 2,125ml bottles and 4,000ml bottles.

Circle 55 on card, or enter at "e-inquiry" on VehicleServicePros.com



### Clip-point blade

The Taylor Brands Schrade M.A.G.I.C. Dual Action Manual and Assisted Opening Liner Lock Folding Knife, No. SCHA10B, offers black AUS-8 high carbon stainless steel and a clip-point blade with ambidextrous thumb knobs and thumb-rest jimping. The grey ridged aluminum handle has a model selector switch, spine jimping, lanyard hole and pocket clip.

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## WHEN IT HAS TO START



Service operations that employ *Jump-N-Carry* jump starters know that no starting task is too daunting. They know from experience that every aspect of a *Jump-N-Carry* is designed to deliver extreme jump starting power, from the battery to the heavy-duty cables. *Jump-N-Carry* is all about power delivery.

For information on *Jump-N-Carry* jump starters, visit [www.jumpstarter.com](http://www.jumpstarter.com).

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## Flexible Magnetic SMD Work Light

Sturdy aluminum housing with (3) high intensity SMD LED Lights.

- 110 Lumens
- Heavy Duty Spring adjusts light beam to needed angle with limitless positions.
- Strong magnetic base easily attaches to ferrous metal surfaces.
- Recessed swivel hook for increased versatility
- Comes with (3) Energizer AAA batteries.

Item Number:  
FL-3SMD



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Ullman Devices Corporation

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[www.ullman-devices.com](http://www.ullman-devices.com)

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**Ideal for metal shaping, forming and fabrication**

The Trusty-Cook line of bossing mallets feature shaped heads that make them ideal for metal shaping, forming and fabrication. These mallets are available in three models, various sizes and several weights to complement the Trusty Cook line of ball pein, sledge, slimline and standard soft face dead blow hammers.



**Circle 59 on card, or enter at "e-inquiry" on VehicleServicePros.com**



**Nose-mounted LED illuminates the work area**

The Snap-on 14.4V 3/8" Drive MicroLithium Cordless Impact, No. CT761, provides 120 ft/lbs of torque output and produces 2,000 rpm of free speed to handle a wide range of applications. A nose-mounted LED illuminates the work area, and the CT761 warns the user if they are under voltage or over current, shutting down the impact before it overheats. The impact can access restricted applications, and a variable-speed, toggle-style trigger gives the user control, avoiding over-torquing or snapping fasteners. The tool, which weighs approximately 2 lbs, uses a 2.0 Ah rechargeable battery, and the fuel gauge notifies the operator how much battery life is left.



**Fully automatic operation**

The Clore Automotive Pro-Logix 6/12V 4.0A Battery Charger/Maintainer, No. PL2140, from SOLAR, combines fully automatic operation and the ability to properly maintain the different batteries found in almost any light duty application. The PL2140 utilizes advanced microprocessor-controlled logic to deliver a fully automatic, precisely controlled charging routine to optimally charge and maintain each battery serviced. This charger adapts its approach based on the needs of each battery it services, and it also offers an advanced battery maintenance routine once the battery has reached full charge, ideal for extended storage applications. The PL2140 features an operator-activated recovery mode which enables the unit to automatically recover from power outages.

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**Access nuts on long, threaded rods**

The Beta Tools Double-End Offset Socket Wrenches, No. 933, feature a six-point deep socket on the long end and a hollow six-point socket on the short end to help access nuts on long, threaded rods. The hollow socket allows a long, threaded stud to pass through the tool, to access fasteners like those found on rear-engine mounts. The wrenches, which are chrome vanadium with a chrome finish, come with a lifetime warranty and are available in 25 metric sizes ranging from 6mm to 32mm.

**Circle 62 on card, or enter at "e-inquiry" on VehicleServicePros.com**



**Operated with one hand**

The Lock Technology LT890 Truck Brake Spring Tool can be operated safely with one hand. The device connects to rear drum brake return springs. The slotted ends on the tool holds the spring at the proper working angle. There is no need to leverage the tool against a solid surface during spring installation.

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**Includes five relay adapters**

The Electronic Specialties Diagnostic Relay Buddy 12/24 Pro Test Kit, No. 193, includes five relay adapters, the Diagnostic Relay Buddy 12/24 tester and a blow mold case. Three of the adapters test shielded relays, and the other two adapters test two new relay types commonly used on fuel pumps and other powered devices. The tester is suited for 12V automotive vehicles, 24V electrical systems in heavy duty vehicles and 24V battery-powered equipment. A good test result is displayed as a green light, but if the relay fails, one of three programmed diagnostic codes will flash the red LED. The product, which has a one-year warranty, uses the vehicle's battery for its power source and works with most common 4/5 Pin 12V and 24V relays.

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# FINDING YOUR WAY AROUND ANY ALIGNMENT PROBLEM JUST GOT SIMPLER.

## INTRODUCING THE **V2200** IMAGING WHEEL ALIGNMENT SYSTEM

It's time to take your alignment business in a whole new direction. With advanced technology previously found only on high-end aligners, and easy-to-use, intuitive software, the V2200 is simple enough for any technician to navigate. Yet it's sophisticated enough to provide the most accurate XD target and camera system. For more details on the entry-level system that can help drive your bottom line north, visit [www.JohnBean.com](http://www.JohnBean.com)



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## New Products



### For use on Ford Triton engines

The Lisle Corporation Broken Spark Plug Remover Kit, No. 65700, is designed for use on 2004 to 2008 Ford Triton three-valve engines. The kit removes spark plugs that have seized in the engine head and includes a Porcelain Puller Tool that locks onto the terminal of a broken spark plug to pull the porcelain if only the metal collar of the plug comes loose. A Porcelain Pusher is included for when the porcelain breaks off in the spark plug tip, and a Self-Tapping Puller can remove the seized metal tip. The kit comes in a blow mold plastic case for storage.

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### Full coverage for BMW i3, i3 Rex and i8

The AutoEnginuity Giotto Version 13.1 scan tool for Windows platform features a touch-friendly user-interface with larger icons and pinch zoom, a graphical tool bar to replace the selection tabs, improved smart vehicle selection, improved graphics for high-resolution devices, improved VIN decoding and more. This scan tool also now includes full coverage for the BMW i3, i3 Rex and i8; Kia Soul EV; and Prius PlugIn. It offers additional features for Ferrari, Ford, GMC, Hyundai, Mazda, Mercedes and Toyota.

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### With exclusive rust-proof cabinet

The CEMB ER85 Diagnostic Wheel Balancer is made for the high volume professional shop, and features an exclusive rust-proof cabinet. The ER85 comes standard with CEMB patented pneumatic chucking. Also standard is the 3D automatic entry, radial runout sonar and lighted laser locator for inside weight positioning. The capability to identify out of round tires or rims on each spin makes this balancer a great diagnostic tool. The video touch-screen monitor, the electric brake positioner and all the other standard programs make this balancer a great choice for the professional shop. Comes standard with setup and training and a full year parts and onsite labor warranty.

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# Thank You

## MIKE SMITH

After 23 years representing KNIPEX, our Automotive Sales Manager and great friend is retiring. Mike led KNIPEX to become the #1 choice of mechanics all across North America with dedication, attention to detail and above all, honesty. We wish Mike and Cheryl the best as they hit the road to future adventures.



KNIPEX Quality – Made in Germany



### Three wrench lengths available

The K-Tool International line of Digital Torque Wrenches includes the 3/8" drive torque wrench (No. KTI72133), which offers a 15" long shaft and a torque range of 14.8 to 73.8 ft/lbs, the 19-3/8" long 1/2" drive torque wrench (No. KTI72134) with a torque range of 29.5 to 147.5 ft/lbs and the 22-1/4" long 1/2" drive torque wrench (No. KTI72135) with a torque range of 25 to 250 ft/lbs. Both 1/2" drive torque wrenches offer 72-teeth gear ratchets and all three wrenches are covered by a one-year warranty.

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**B**artec USA, part of the global Bartec Group of Companies, has a reputation for delivering market first innovation to the automotive service industry. Bartec knows that this means their customers can service more vehicles and be more profitable doing it. At Bartec, our goal is to continually deliver the features, benefits and excellent customer service that our customers have come to expect. Bartec has served the North American market since 2004, and manages Automotive Assembly Plants, OED dealers and the entire Aftermarket. Our TPMS tool solutions range from simple activation tools to complex automated antenna systems.

Bartec's latest innovation, the Tech500, is the winner of the first ever People's Choice Award. The Tech500 carries on the Bartec tradition of more market first technology. This advanced TPMS tool features wireless updating, wireless data transfer, wireless key fob testing, wireless



sensor programming and wireless charging.

Bartec added the features that our customers asked for, in a newly designed enclosure, and made it faster and easier to use.

With each new software update, Bartec continues to add value to the Tech500. For example, the recently released update 52 references the Technical Tips from the Tire Industry's TPMS Relearn Chart. This feature links the valuable information contained in the chart to the relearn

# Tech Tips Advertorial

process and the tool. Also included is new sensor programming for Standard Motor Products, Inc. (SMP®) new QWIK-SENSOR™ Multi-coverage TPMS sensor line. With the launch of update 52, the Tech500 is the only TPMS tool currently that can complete an OBD relearn on Suzuki vehicles.

Bartec TPMS tools like the Tech500 are made in the United Kingdom by hardworking people just like us. These tools are then kitted here in the United States and distributed by North America's finest and most professional automotive aftermarket companies. We know that we're only as good as our last tool update or our last tech support call, so we take very seriously how we take care of distributors and the users of our tools. To learn more about Bartec and our complete line of TPMS tool solutions please visit our website, or contact our office to find a distributor near you.

## Wirele\$\$ TPMS\$ Where it Count\$



Passive Entry & Wireless Ignition



Bluetooth Device Pairing



Wi-Fi Updating



Wireless Inductive Charging



**Relearns are easier with Bartec!**

Visit our booth **1549** at **automechanika Chicago** April 24<sup>th</sup>-26<sup>th</sup>



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**Made with Kevlar engineered yarns**

The MCR Safety Memphis Orange glove is cut resistant and uses patented DuPont Kevlar engineered yarns. The ANSI Cut Level 4 product features a high level of cut protection in a thin, flexible glove with dexterity. This bright orange material provides greater visibility for a higher level of safety awareness, according to the company.

**Circle 71 on card, or enter at "e-inquiry" on VehicleServicePros.com**



**English and Spanish language options**

The Injectronic CJ500 scan tool, compatible with optional modules such as the labscope, offers extensive vehicle coverage and is very easy to use, according to the company. This scan tool was designed to easily add new functions and applications with downloadable updates five times per year. Main features of this scan tool include English and Spanish language options, a 1024 by 600 pixel color display, updatable touchscreen applications, optional hardware and software applications, free updates for two years and a two-year warranty.

**Circle 74 on card, or enter at "e-inquiry" on VehicleServicePros.com**



**Reach difficult lift points**

The Mac Tools 3 Ton Floor Jack, No. JSA350LR, can reach difficult lift points with its 15" throw at a 1/8" increase in height, which helps ensure the vehicle is not raised from the pinch weld. The minimum height of 3-3/4" eliminates the need for ramps. The 3-1/2 ton capacity jack has a controlled accelerated lift that allows the 4.56" saddle to reach the lift point in one stroke on vehicles less than 9-1/2" and reach a maximum height of 21-1/4". The 50" handle has a rubber pad to prevent damage to components when the jack is under the vehicle. The jack's back clearance allows it to reach any vehicle differential that has a minimum height of 6".

**Circle 72 on card, or enter at "e-inquiry" on VehicleServicePros.com**



**Features a built-in voltmeter**

The Access Tools Ultra Probe 3 multi-tester probe tool is designed for a variety of automotive electrical diagnostic tests. The tool enables the user to power electrical components, perform voltage and ground detection tests, test relays and components, check continuity and identify short circuits. The Ultra Probe 3 features a built-in voltmeter, an audio indicator tone, an LED flashlight, extra-long jumper cables that reach the rear of the vehicle with ease and a heavy duty carrying case.

**Circle 75 on card, or enter at "e-inquiry" on VehicleServicePros.com**



**Customizable shop solutions**

The Borroughs Automotive Workstations offer a customizable solution for technicians. The cabinets and storage systems can be configured in a multitude of ways to suit specific needs and tools, according to the company. The Automotive Workstations provide power outlets, USB and Ethernet ports all as available options. Hinged, reinforced doors are available to secure bulky items on static shelves and removable lock cores are available in 2,000 different key codes. Heavy duty stainless steel legs allow for cleaning under lower cabinets and they can be adjusted vertically for system leveling. They are available in widths of 24", 30", 45" and 60". Shelves are adjustable, drawers can be sub-divided using partitions and dividers and drawers offer full-width handles that come flush with the housing face.

**Circle 73 on card, or enter at "e-inquiry" on VehicleServicePros.com**



**90-degree tips made from forged steel**

The Beta Tools External Ring Pliers, No. 1038, are made from forged steel rather than stamped sheet metal. These pliers are spring-assisted and have PVC-coated handles for comfort. The precision-ground, forged-steel 90-degree tips are slightly flared and evenly ground. This tool comes in five metric sizes for snap rings ranging in diameter from 3/8" to 7-3/4".

**Circle 76 on card, or enter at "e-inquiry" on VehicleServicePros.com**

# KNIPEX Tools

**K**NIPEX is currently introducing their new and improved 8" CoBolt® Cutter (71 01 200, 71 02 200 and 71 12 200). The CoBolt mini bolt cutter is a tremendously popular pliers for cutting almost anything you can get between the jaws up to 1/4". Soft, medium or hard, this tool cuts it all.

Now with precision laser-etched cutting blades, this cool tool holds the item being cut securely near the tool axis for the most powerful cutting performance. Round hard wires or rods can have the tendency to slide out away from the tool axis as you squeeze the handles when cutting. These new, precision laser-etched cutting blades now grab the wire and hold it in place giving the user the best and easiest cutting performance.

In most applications, this high-leverage tool will cut with 300% more power than a regular diagonal cutter and 150% easier than a normal bolt cutter.

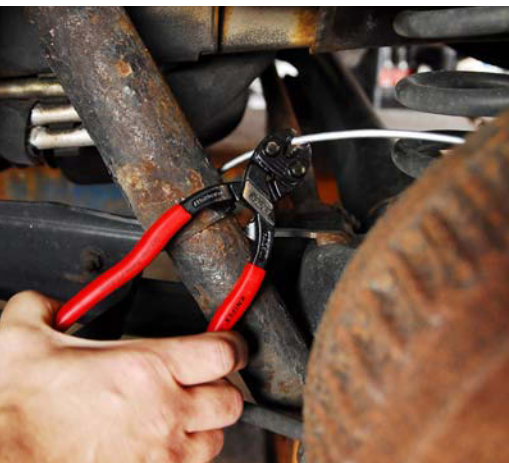
Most users will describe this cutter as THE tool to cut all those things you normally can't cut—Wire, Rod, Brake Linings, Fencing, Springs, Steel Strapping, Nails, Bolts, Rivets and more.

For the fisherman, this tool does a great job cutting stainless steel hooks and leaders used in Musky and other big game sport fishing.

The KNIPEX CoBolt Cutter is available with dipped handles, larger Comfort Grip handles and is spring loaded for repetitive-use applications.

Like all KNIPEX tools, the CoBolt has a lifetime guarantee.

See this and all the 1,400+ pliers at [knipex.com](http://knipex.com).



## CUTS THE TOUGH STUFF

**NEW** and improved, KNIPEX CoBolt® Mini Bolt Cutters are *the* heavy-duty tools for cutting almost anything that fits between its jaws.

- Laser-etched cutting edges grip round objects better
- Gripping zone below the joint for pulling and gripping
- 60% less effort compared to conventional high-leverage diagonal cutters
- Cuts hard, soft and piano wire, bolts, screws, rivets and nails up to 1/4"
- 20° angled version provides an almost flush cut



**KNIPEX** – Tools Designed With Your Hand in Mind

**NEW** etched blades, **NEW** grip zone and now less force required on cuts, KNIPEX CoBolt® Mini Bolt Cutters—small in size and now even **BIGGER** in performance. To see a video about this one-of-a-kind tool: <http://plie.rs/cobolt-en>



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KNIPEX Quality – Made in Germany

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# Android 10.1" Scan Tool Allows For Diagnostics ...Without the Vehicle!

Launch Tech USA Inc.



**T**he PAD II is a robust, drop-tested and waterproof Android based scan tool tablet with a 10.1-inch ultra-high resolution touch screen and wireless Bluetooth OBD communication. The PAD II features coverage for all makes and all models – including powerful special test functions with module coding capabilities and boasts up to 15 color graphs of live data.

The best part about the PAD II is that it features Remote Diagnostics/Telematics capability called GOLO CarCare™. GOLO CarCare™ allows the PAD II to read, clear codes and view data in all modules while your customer is at home, work or from thousands of miles away!

GOLO CarCare™ for OBDII compliant vehicles transmits live data via the bluetooth GOLO OBDII connector to the car owner's cell phone (Android & iOS) and then to the technicians PAD II. The technician can read & clear codes and review live data from thousands of miles away.

With voice and text communications between Customer and Shop, they will never be left stranded on the side of the road.

GOLO CarCare™ can change OBD Diagnostics for both the repair shop and customer experience, connecting them all together. Best of all there is no extra data plan needed. All of this leading to customer retention and satisfaction, resulting in increased shop productivity—boosting overall profits!

The PAD II also features automatic module ID, giving immediate access to all available controllers for trouble codes, live data, actuations and more! A 12,000 mAh Lithium ion battery allows the PAD II to last for more than 8 hours of use for even

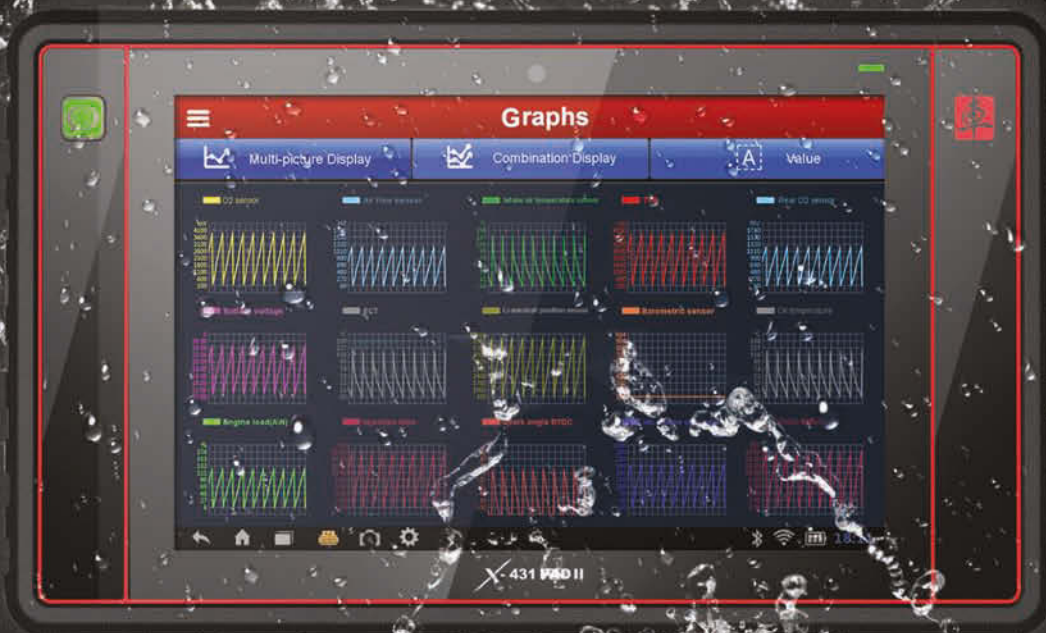
the longest days at the shop. The PAD II is also expandable with optional modules such as a Sensor Simulator/Waveform Generator, 4 Channel Lab Scope and Video Borescope.

**The Pad II with GOLO "No Car Needed" diagnostics capability is truly a game changer in the scan tool market**



FROM THE CREATORS OF THE X-431 PAD COMES

# THE PAD II



**IP65 WATERPROOF RATING. DROP TESTED, DUST PROOF DESIGN.**

ANDROID™ OPERATING SYSTEM: ACCESS GOOGLE PLAY, DOWNLOAD THIRD PARTY APPS & MORE  
• LARGE 10.1" HIGH RESOLUTION IPS CAPACITIVE TOUCH SCREEN • CODE SEARCH: QUICKEST RESPONSE FOR CODE SOLUTIONS, AUTO SEARCH GOOGLE WITH DTC & RELATED INFORMATION  
• REAL-TIME REMOTE DIAGNOSIS WITH GOLO: SCAN CUSTOMER VEHICLES FROM ANYWHERE

**LAUNCH**  
CREATE CHANGE

**IP-65** WATERPROOF RATING  
DROP-TESTED  
DUST-PROOF DESIGN.

golo



[www.launchtechusa.com](http://www.launchtechusa.com)

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**Eliminates need to remove motor for bench test**

The Thexton PowerUP Tester, No. 807, is designed to aid the technician in diagnosing electrical problems which energize motors, solenoids or lamps by isolating the desired circuit. This tool is used to energize or supply power or ground to a component that may not be functioning correctly, and it eliminates the need to remove

motors from the vehicle to perform a "bench test." The PowerUP includes the tester, an insulated alligator clip assembly, a medium sized Round Terminal Assembly (for Deutsch, evaporative emissions solenoid and horn applications), a 1/4" female assembly, a 1/8" female assembly (commonly used on fans, windows, wipers, sunroofs, blower motors, etc.), a 110 AC wall charger and a protective plastic case.

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**Pinpoints leaks in A/C and fluid systems**

The Tracerline EZ-Ject A/C and Fluid Kit, No. TP-8657, pinpoints leaks in A/C and fluid systems. It features concentrated, premium-quality, OEM-approved fluorescent dyes, according to the company. The dyes are used and approved by major OEM manufacturers, including BMW, Chrysler, Ford, GM, Nissan, Volkswagen and more. Included in the kit is the TP-8655 OPTI-PRO Plus; a cordless, "true UV" LED leak detection flashlight with convenient onboard recharging. This light emits less visible light, making leaks clearer and easier to spot. Its high-output LED provides optimal fluorescent dye response and contrast, ensuring that every leak glows brilliantly.

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**Drip free nozzles**

The Exair Siphon Fed Atomizing Spray Nozzles, available in round and flat-fan patterns, require no liquid pressure and can be used with gravity fed liquids or lift liquids from a siphon height as high as 36". Siphon-fed nozzles can be used on liquids up to 200 centipoise. The compact nozzles feature a no-drip mechanism and have interchangeable liquid and air caps. The No Drip Atomizing Nozzles are ideal where no post-spray drip is permissible, according to the company. When the compressed air supply is shut off, the no drip nozzle positively seals off the flow of liquid eliminating the possibility of drips. Applications include painting, coating, rinsing, cooling and more. They are CE compliant and conflict mineral free.

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**Can run each operation individually**

The Mastercool R134a and Hybrid RRR machine can be programmed to complete a continuous recovery/recycle, vacuum and recharge and can be set to run each operation individually. An upgradeable refrigerant capacity database is included with refrigerant capacities for U.S. and import makes and models. The machine performs an auto vacuum leak test, auto oil discharge, auto air purge and service hose flushing. The unit offers high voltage protection, an auto filter alarm, a full-tank alarm and low-refrigerant alarm, automatic oil injection and a thermal printer. The machine is compliant with SAE J2788, according to the company.

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**Protective coating for spray booths**

The DeWalt Clean Clear Glass Coat is a water-based protective coating for indoor spray booth glass surfaces. Designed for easy spray-on application and peel-off removal, Glass Coat is durable and long lasting, according to the company. To cover a typical 30' spray booth, the company suggests using 3 to 4 gallons. The Clean Clear Glass Coat lasts up to 500 bake cycles or for six months.

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# Blackhawk Platinum Series

The start of a trend or fundamental paradigm shift?

**T**he last real major paradigm shift in the American economy was when as a country, we began to accept the idea and the trend that quality built products from America, and other highly developed and industrialized countries were replaceable with cheap, third world, manufacturing processes from lesser-developed countries.

The Shinn Fu Company of America, a world leader in professional portable hydraulic lifting devices, has decided to take the lead in manufacturing and begin the process of reversing this current paradigm. Its introduction of the **Blackhawk Automotive Platinum Series** of portable lifting equipment is the start of that leadership.

Shinn Fu believes that the professional end users of its products have become weary of the "I can buy two for the

price of one" thought process and have resolved into the fact they WILL need to buy two or three to last half as long as a quality built product.

The Platinum Series design, development and engineering will be done here at Shinn Fu's American headquarters located in Kansas City, Missouri. The production will be brought back from China to Shinn Fu's original World Headquarters and manufacturing facilities in Taiwan. The Platinum Series product line will be made to "Exacting" quality standards and tolerances no longer found in other import products of their kind. Only premium components will be utilized within the Platinum Series of products such as military-grade high/low temperature oil, seals and chromed or anodized, high-grade

steel. Extensive and ongoing cycle testing, before any products are released, gives Shinn Fu the confidence to offer an unprecedented five-year warranty along with a lifetime manufacturer's -defect warranty.

Webster's defines a paradigm shift as "an important change that happens when the usual way of thinking about or doing something is replaced by a new and different way." The Shinn Fu Company of America is taking the lead in becoming one of the first companies in the industry to lead the trend that will start the next paradigm shift.

*Shinn Fu Company of America*  
[www.shinnfuamerica.com](http://www.shinnfuamerica.com)  
[Profsales@shinnfuamerica.com](mailto:Profsales@shinnfuamerica.com)  
Phone: 816-891-6390  
Tollfree: 888-332-6419  
Fax: 816-891-6599

Coming Soon



Coming Soon





**Add to existing or new units**

The **Lista Aluminum Anodized Drawer Handle Cover** is available in brushed silver, gloss black and chrome finishes. The anodized surface stands up to harsh environments and applications, according to the company, and the smooth shape can be easily cleaned. The handle cover can be ordered with new cabinets or retrofitted to existing units. Lista drawers have a fully extendable design, a 440-lb capacity, full-height sidewalls with full-height partitions and dividers and slots located at 0.67" intervals.

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**Tightens wheel nuts with continuous driving force**

The **Chicago Pneumatic CP7600 series of BlueTork Nutrunners** can tighten wheel nuts to a precise specification without using impact force. The ergonomically designed, handheld tool uses continuous driving force and operates at 79 dBA, with vibrations of less than 2.5m/s. Operators can reset torque for each use, and the shutoff valve controls the tightening process, while the torque reaction is taken by a reaction bar. The dual motor setup provides an initial run-down at 100 rpm (50 ft/lbs) to snug the nut, and the second motor rotates at 8 rpm to deliver the specified torque. The BlueTork tools are available in four versions, and some versions can be specified with an extended gearbox to reach deeper bolts.

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**Smooth inner wall eliminates O-ring abrasion**

The **AirSept Heavy Duty A/C Oil Injector** offers professional grade design that gives not only accuracy and ease of use, but also the long service life that technicians demand of an everyday shop tool. A heavy duty Pyrex inner wall functions as a handy sight glass, reassuring technicians that they are actually injecting the desired amount of fluid. AirSept's Heavy Duty Oil Injector provides greater accuracy, faster flow, extended O-ring life, reduced leakage and higher injecting pressures. It is all made possible by the smooth inner wall that eliminates O-ring abrasion that occurs with rougher machined aluminum injectors. Higher injecting pressure—up to 230 psi (16 bar), compared to a maximum capacity of only 115 psi (8 bar) for traditional aluminum injectors—gives greater flow in high ambient applications.

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**Automatic vehicle height tracking**



The **Hofmann geoliner 790 Imaging Wheel Alignment System** offers wireless communication that helps eliminate connections between the camera towers and the cabinet, allowing for greater mobility and a variety of installation configurations in the service bay, according to the company. The geoliner 790 also offers automatic vehicle height tracking that allows the camera system to follow the height of the vehicle, eliminating the need to adjust the aligner when the lift is moved. The geoliner 790 supplies user readings in under two minutes on a wide variety of vehicles and wheel sizes. The vehicle specification database undergoes frequent updates, and the geoliner 790 offers optional features that include AC400 clamps that only engage the tire, eliminating the possibility for damage to the rim.

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**Handles larger wheel and tire assemblies**

The **John Bean ATC 1000 Automatic Tire Changer** is designed for high-volume tire specialty shops and dealerships. It uses Smart Vision profiling to automatically identify the wheel's edge and relies on computer-controlled, robotic bead removal tools to perform tasks without damaging the bead or wheel. The wheel lift is designed to handle larger wheel and tire assemblies. It provides safe and precise operation as the wheel position is automatically determined to speed removal, and the automatic scanning, combined with the precision controls, assures reliable bead breaking and tire removal for all types of tires.

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**Easy-grip housing**

The **Auto Meter 100 PSI Tire Pressure Gauge**, available for heavy duty applications, offers a 2.25" dial face with bold race-inspired artwork. Major and minor tick marks every 2.5 psi make it easy to read in nearly any circumstance, according to the company. This pressure gauge includes a 10.5" braided stainless line, a shock-dampening, easy-grip housing, a thumb-operated pressure bleed for easy air-down adjustment and a carrying case.

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# When your tool's not on, you're losing money.

**Y**our phone, computer and TV seem to start instantly, why not your scan tool? After all, a minute idle is a minute you're not making money. The OTC Encore, the industry's first fully integrated scan tool for the Android platform was built to get you working faster. An intuitive mobile platform means faster boot times, faster scans and less down time.

## Fully Integrated

"What we mean by a fully integrated tool is the ability to search, using the tool, Web resources and forums via Wi-Fi, as well as on-tool databases of code definitions and fixes," said Ed Lipscomb, OTC Senior Product Manager, Diagnostics. "There's no walking away from the car to search, you can do it all right at the fender."



Of course, what good is a fast scan tool without the vehicle coverage you need to back it up? Behind Encore's seven-inch touch screen is a wealth of OEM-level coverage, more than 30 years to be exact, for Asian, Domestic and European makes and models.

## How the system works

Once Encore pulls a code, it relies on well-known resources and embedded video to offer a fix. The system automatically searches its on-tool database, relying on millions of experience-based and reported fixes. The databases, including Code-Assist™, Repair-Trac™ and Symptom-Assist™, combine to search more than 30 million confirmed fixes, specific to vehicle year, make and model.

"We've made diagnostics easier, faster and more efficient with the Encore," added Lipscomb. "We take the code, search the Web and the tool, giving you the most likely fix, second most likely and so on."

Not only does it offer the technician a fix, embedded video can help guide the repair.

Additionally, Encore scans Identifix® Direct-Hit® and Google, requiring technicians to enter their Identifix

Direct-Hit login just once to enable automatic searches

for fixes during vehicle scans. OTC is also currently expanding to integrate IATN into the Encore.

## Extent of Coverage

For a technician, nothing beats an all makes/all models tool. One purchase to service all vehicles saves money and expands the opportunity to profit.

As a scan tool in the OTC family, Encore boasts OEM data providing broad and deep coverage from late model 2013 all the way back to the early 1980's, including Domestic, Asian and European vehicles. The data, from generic to OE-specific codes, also includes component locations, specs, test procedures and TSB references for quick access and quick fixes. Encore also features bi-directional testing and vehicle data stream.

## Proof is in the Product

Automatically searching onboard resources and integrated technician networks, including likely fixes and guidance, provides the type of guidance needed to find the issue, make the fix and keep you working – and profiting. While a scan tool is not an end-all to fixing a vehicle, Encore gives you what you need in a simple, familiar layout in the Android system. Other tools on the market offer similar services, but none in a complete package like the Encore, nor at the tool's price point.

The bottom line? Encore offers an intuitive, fix-it-quick scan tool for all makes and models service, backed by OTC's trusted diagnostics coverage.

## OTC

28635 Mound Road. Warren, MI 48092

1-800-533-6127

[inquiry@service-solutions.com](mailto:inquiry@service-solutions.com)

[www.OTCtools.com](http://www.OTCtools.com)

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# New Products



## Database houses over 25,000 vehicles

The Launch Tech X-631+ Wheel Aligner offers four sensors with soft touch keys and an LCD display, 11" to 25" four-point wheel clamps and a 42" wheel grabber kit, including an alloy kit. The X-631+ features two turn plates, a brake pedal depressor, a steering wheel holder and two speakers. Equipped with the Windows 7 operating system, the device utilizes a Dell Commercial PC with a 19" LCD screen, keyboard, mouse and HP Ink Jet printer. The computer uses Version 6.33 software with 2D and 3D graphics and has access to the 2014 U.S. database with more than 25,000 vehicles.

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## Resistance to heat and cold

The Bear & Son G13 Sideliner Lock knife offers a 3" modified drop-point blade made of 440 high-carbon stainless steel with a satin finish. Heat-treated to a 56-58 Rockwell hardness, it will hold an edge and is corrosion-resistant. A thumb-hole on the blade makes it easy to open with one hand and is secured open by a sideliner lock. This knife has a black handle made of G10, a lightweight material that provides strength, resistance to heat or cold and grip in wet or dry conditions. Three lightening holes in the G13 handle keep the weight at just 2.7 oz, including a metal pocket clip for easy carry. Closed length is 4-1/2".

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## Adjustable saddle

The Cornwell Line of Telescoping Transmission Jacks, Nos. HEW41000CW and HEW41001CW, have a 1/2-ton capacity and an adjustable saddle for quick adjustment for most pan configurations. The 1/2-ton Telescoping Transmission Jack has chrome-plated rams, which are operated with a foot pedal. The extra-wide base lowers the center of gravity and promotes stability, while a nylon safety strap helps anchor transmissions. The jack has steel wheels and full-swivel ball bearing casters. The 1/2-ton Telescoping Air Transmission Jack is air actuated and equipped with an Air Turbo Motor.

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## Compatible in gasoline and diesel engines

BlueDevil Radiator & Block Sealer is designed to be an easy-to-use formula that will repair and seal leaks in radiators and engine blocks. It does not contain solid or fibrous materials, and it will not clog or harm cooling systems, according to the company. This sealer will bond to plastic, cast iron, aluminum, alloy or metal. BlueDevil Radiator & Block Sealer is compatible in gasoline and diesel engines. It serves as a guaranteed permanent repair, says the company.

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## Attach to vest, belt or pocket

The Streamlight ProTac 1AAA light uses one AAA alkaline battery, and delivers up to 70 lumens measured system output and 550 candela peak beam intensity. The ProTac 1AAA allows users to select one of three programs: high/low/strobe, high only or low/high. The light delivers 30 minutes of continuous run-time on high over a beam distance of 47m, 11 hours on low, and 1.2 hours in strobe mode, using an alkaline battery. For an extended run-time, a Lithium AAA battery can be used. The ProTac 1AAA weighs 1.3 oz and measures 3.94" in length. It features an anti-roll face cap and a removable pocket clip for attaching the light to a vest, belt or pocket. Available in black, the ProTac 1AAA includes Streamlight's limited lifetime warranty, a AAA battery, a ballistic nylon holster and neck lanyard.

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## Anti-vibration feet

The Jenny Products C-Series compressors offer single-stage "C" pumps and 6.5hp Honda GX commercial engines. The C-series compressors deliver 9.8 cfm at 125 psi and are available with 8-, 15-, 17- and 30-gal air tanks, which are powdercoated and ASME certified. For maximum durability, the "C" pumps are constructed of cast iron and are splash lubricated with Jenny "Ultimate Blue" synthetic compressor-pump oil. The pumps are belt driven with large flywheels for easy start-ups and extra cooling, and directional air shrouds help further reduce pump temperatures. Special unloading valves also are included to assist in engine starting. Other standard features include an enclosed heavy duty belt guard, anti-vibration feet for smoother operation and more.

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# Wheel Weight Hammer

Lock Technology

Lock Technology has added a new Wheel Weight Hammer to its line of Automotive Specialty Tools. According to Ellery Casey, CEO of Lock Technology, Inc., technicians run into several common problems when balancing tires which created the need for the LTI#845 Wheel Weight Hammer. The first problem is that wheel weights are often one-half ounce or smaller, making it difficult to mount tires without pinching fingers. This coupled with the fact that there are so many different wheel weights on the market means technicians typically have to rotate their hammer around several different contact

points to remove them, a very cumbersome task. A third common problem technician's encounter is the fact that removing H D T ruck weights requires the use of yet a second hammer. Luckily, all of these common problems are eliminated with Lock Technology's new Wheel Weight Hammer.

The patent-pending LTI #845 Wheel Weight Hammer is the only tool of its kind featuring a second spring-loaded weight mechanism located inside its handle. According to Casey, the result is a new tool that

"allows technicians to mount weights weighing one ounce or less to the wheel rim without pinching their fingers." In addition to this feature, the hammer also has the ability to remove all wheel weights from the wheel rim, including truck weights, with one contact point. "It's basically two hammers for the price of one," said Casey.



For more information on this and other Automotive Specialty Tools, contact Lock Technology Inc. at 1-800-421-7241, or [ltitools.com](http://ltitools.com).

## INNOVATIVE NEW PRODUCTS

### LT845 TIRE WHEEL WEIGHT HAMMER

- "Patent Pending" hammer inside a hammer design
- No more pinched fingers
- Cock and fire inside hammer to mount wheel weight hands free
- Non marring nylon tips
- Spring loaded clip removes any size wheel weight



### LT890 TRUCK BRAKE SPRING TOOL

- Easily connects rear drum brake return springs
- Easy one hand operation
- Slotted ends on tool always hold spring at correct work angle
- No need to leverage tool against a solid surface during spring installation
- FAST EASY SAFE



### LT599 METRIC SHOCKIT SOCKET SET

- Shock loose frozen nuts and bolts
- Custom punch designed for air hammer use
- Ideal for hard to reach situations
- Custom see thru blow molded case
- Includes 9 popular metric sizes - 19mm 15mm 12mm 17mm 14mm 11mm 16mm 13mm 10mm



Your Automotive Specialty Tool Source

LOCK TECHNOLOGY, INC.  
Toll Free 800-421-7241  
[www.ltitools.com](http://www.ltitools.com)  
[ltitools@ltitools.com](mailto:ltitools@ltitools.com)



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# New Products



## Approved for hand and power tools

The VIM Tools 64-pc Mechanics Master Set, No. MMS64, combines the company's TMS34PF and HSM26 sets and adds T70 Torx, 13mm, 21mm and 22mm hex options. The heat-treated drivers are made of steel, the sockets are satin chrome and the bits are gunmetal grey. The set offers a range of Torx drivers size T8 to T70, tamperproof Torx size TR10 to TR55 and Torx sockets size E4 to E20, SAE hex options 1/8" to 3/4" and metric hex choices 2.5mm to 22mm. The set is approved for hand and power tools, comes in a plastic case and has a lifetime warranty.

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## Communicate wirelessly with PC

The Car-O-Liner handEye for Android is a free software application compatible with the Car-O-Tronic Vision X3 wireless electronic measuring system and software. The mobile solution communicates with a PC via wireless network technology, eliminating the need to move back and forth between the vehicle and computer screen. What the software is displaying on the PC screen is visible on an Android smartphone in real time. The Android version can be downloaded through Google Play, and handEye is also available for iOS and may be downloaded from the iTunes/Apple online store.

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## Light tilts 270 degrees

The Larson Electronics Explosion Proof Light Cart, No. EPLC-24-4L-LED, features a 7,690 lumen LED output, a swiveling fixture assembly and a wheeled cart. The 2' light fixture, constructed from aluminum assemblies, aluminum reflectors and screw-on end caps, is UL listed Class 1 Division 1 and Class 2 Divisions 1 and 2. The cart is made of aluminum alloy with four solid, non-sparking wheels and features a swiveling fixture mount, allowing the light to tilt 270 degrees. Included are 50' of SOOW cord fitted with a straight blade, explosion proof plug and an inline explosion proof switch rated Class 1 Division 1. This multi-voltage unit can operate on 120V to 277V AC, and an available low-voltage version accommodates those who need 12V and 24V DC.

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## 30 lumen onboard LEDs

The GTE Tools MasterPry LED, is an interior/exterior trim panel tool set with 30 lumen onboard LEDs. This tool provides a straight edge and fork tip tool, precision edges for scraping and tight plastic panel separating, an angle wedge tip, an easy-grip ergonomic body, a no-slip knurled finish and batteries. It is made of military-spec. advanced polymer plastic.

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**GOLD**  
STANDARD  
IN REFRIGERANT  
MANAGEMENT

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# John Bean

## Get the Latest in Alignment Technology with the John Bean V3400 Wheel Alignment System



**F**ast, accurate and built-to-last, the new John Bean® V3400 Wireless Imaging Wheel Alignment System delivers unsurpassed features and benefits that make this alignment system unlike anything on the market today. The John Bean V3400 provides flexible installation, usage and mobility options and the digital camera tracking automatically adjusts to the height of the vehicle.

“The accuracy, repeatability and quality of the new John Bean V3400 are unmatched,” said Adam Brown, product manager for John Bean. “With precise alignment readings in only two minutes, an array of software productivity enhancers and a comprehensive vehicle data base with frequent updates, the V3400 is specifically designed to make shops more successful and profitable.”

The John Bean V3400 Wheel Alignment System has unique advantages, including versatile and accurate hardware with features such as drive through design, wireless communication, automatic camera tracking and high mobility that allow sharing between bays or relocation within the shop as needed.

Extremely fast and productive, the John Bean V3400 offers automatic vehicle height tracking where the camera system follows the height of the vehicle, eliminating the need to adjust the aligner when the user moves the lift. In less than two minutes, the V3400 provides fast and accurate readings, which result in increased productivity and less waiting for measurements. A comprehensive vehicle specification database with frequent updates ensures that the user

always has the information to do the job right and VIN scanning speeds the vehicle selection process.

Productivity enhancing software like automated caster sweep, 3D animations, rolling radius and cross diagonal measurement, A-arm adjust and EZ Toe will help the user get accurate and precise results the first time. The John Bean V3400 also can be set to automatically guide the service technician through specific, OEM approved, alignment procedures.

An optional feature of the John Bean V3400 is the award-winning AC400 Touchless Alignment Wheel Clamping System with XD Targets, which provides secure clamping without touching the rim. The clamps only engage the tire, eliminating the possibility for damage to the rim. The XD targets are lighter and take up less space than previous designs.

“The camera system on the John Bean V3400 follows the height of the vehicle, so they’re always where you need them to be,

and wireless communication eliminates connections between the camera towers and cabinet, giving the user more flexibility and installation options than wall or floor mounted systems,” said Brown. “The V3400 also provides continuous third camera calibration for even more precise readings. In addition to secure wheel clamping without touching the rim with the AC400, the V3400 also features the most advanced software and hardware we’ve ever offered. The John Bean 3400 Wireless Imaging Wheel Alignment System is so simple to operate, any service technician can perform quick, accurate alignments with confidence.”

*To find out more about the John Bean V3400 Wheel Alignment System or other innovative wheel service products, visit [JohnBean.com](http://JohnBean.com).*

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## New Products



### Rotate brushes for maximum life

The Tru-Balance Heavy Duty Stud Brush, No. X-2756-SB, is lightweight and balanced for easy, fast cleaning, according to the company. Independent brushes can be rotated for maximum life and no reverse rotation is required. The 20/22mm wheel stud cleaner has greater durability, strength and safety because of its enclosed design and can be used on steer, drive or trailer wheel studs. Equipped with an internal brush system that features heavy duty 0.010 wire diameter stainless steel brushes, this item comes with a 1/2" drive for use with an electric air tool.

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### Resists temperatures up to 1,300 degrees

PlastiKote Hi-Temp Paint is formulated to resist intermittent temperatures up to 1,300 degrees F. The paint can be used on engines, exhaust manifolds and headers. According to the company, once properly cured, the paint forms a hard, lasting finish that resists salt spray and will not chip or peel. The Hi-Temp Paint, which dries to the touch in 60 minutes, is available in black, white, red, aluminum, orange, blue and cast grey.

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### Interchangeable options

The Stark Professional Tool R2 Revolution TM line of open-end torque wrench heads offer users a patented ratcheting action. Tools in the R2 Revolution TM line offer interchangeable options that tighten in less than a 60-degree arc with a 1-pc design, no welds needed. Non-ratcheting versions and a broad range of sizes are available for custom applications. These tools are manufactured in the U.S.A.

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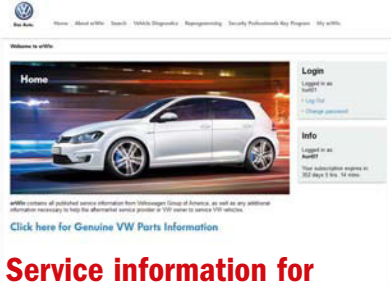


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## Service information for Volkswagen and Audi

The Volkswagen erWin service information source contains all published service information for Volkswagen and Audi vehicles sold in the U.S. and Canada, and any additional information necessary to help aftermarket service providers, auto body repair specialist or owners professionally service these vehicles. Technicians can use the guided search to find specific vehicle information. Model, engine and transmission codes are available through the "build guide." Because the information is provided online, it is continuously updated and always current, according to the company. To register, users can visit <https://erwin.vw.com> or <https://erwin.audiusa.com>.

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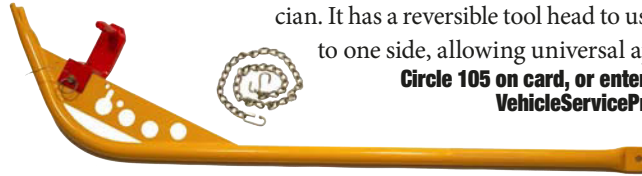
## IPX7 water-resistance rating

The Pelican 7000 LED Flashlight features Type II Hard Anodized aluminum construction, an IPX7 water-resistance rating and an anti-slip knurled pattern. The flashlight offers a removable clip for easy pocket storage and transport. It weighs 5.6 oz with the two included CR-123 Lithium batteries. The flashlight can be operated with optional rechargeable cells. Four lighting modes include high (602 lumens), medium (311 lumens), low (64 lumens) and strobe. In addition to standard functionality, it offers four separate programmable lighting modes. The high-efficiency LED shines for up to 1.5 hours on high and 16 hours on low.

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## Reversible tool head

The Sim Tools Control Arm Tool allows one-man operation for CV axle and strut replacement. The patented design holds its position and leverage so the operator can pry the control arm down and replace CV axles without the help of an additional technician. It has a reversible tool head to use when access is limited to one side, allowing universal application.



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**Several sizes available**

The **Ideal Industries Reflex T-Stripper** features an ergonomic handle curved 45 degrees to provide a more natural hold than conventional models. This advantage results in a reduced occurrence of repetitive motion fatigue injuries, including common wrist stress, according to the company. The no-slip grip extends to the cutting head to cushion the thumb and fingers from metal. The multi-purpose nose has precision-ground, knife-type blades for clean, accurate stripping of a wide range of wire sizes. The black oxide finish on the blades resists damaging corrosion. The stripper also features easy-to-read laser marking and looping holes. The Reflex T-Strippers are available in several different sizes to cut wire ranges from 10-26 AWG solid and stranded wire.

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**Application-specific designs**

The **Milwaukee Tool line of fastening and cutting pliers** includes straight jaw, hex-jaw and cutting options with slim grips and application-specific designs. The straight jaw pliers, which include several sizes from 6" to 20",

offer exposed metal handles with a ground head for reaming and punching applications. The hex-jaw line features 8", 10" and 12" sizes that are optimized for hex-bolt applications. The lineup of cutting pliers consist of a 9" High Leverage Lineman's Pliers with Crimper, Long Nose Pliers and Diagonal Cutting Pliers. The 9" High-Leverage Lineman's Pliers come equipped with an onboard crimper for INS and non-INS terminals. The Long Nose Pliers offer 2" of gripping surface. The Diagonal Pliers are available in 6", 7" and 8".

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**Extended lengths for better access**



The **Cornwell Line of Pneumatic Hammers**, Nos. OF2001, OF2002 and OF2003, feature extended lengths designed for applications that are difficult to access. Available in 12", 18" and 24" options, these pneumatic hammers have a 0.401 shank and are made from S2 tool steel. They are heat-treated for durability and have a black oxide finish to resist corrosion.

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**Compact, durable lighting**

The **Steelman PRO Bump-Lite**, No. 96877, lights up an entire workspace with 500 lumens from a compact, durable package. The Bump-Lite features 10 SMD LEDs contained in the anodized aluminum housing, which is surrounded by a nylon cage. TPR block bumpers on both

ends ensure that Bump-Lite will survive the drops and falls that it will undoubtedly take during the workday. Bump-Lite is powered by a 25' SJTOW cord and can be attached to a surface by either the integrated folding nylon hook, or the heavy duty magnetic holder.

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**Bend restrictor reduces kinking**

**KTI Ultralight Flexible Blubird Air Hoses** can withstand temperatures from -50 degrees F to 180 degrees F. The high-strength polyester reinforcement offers strength and durability. The cover is ozone- and abrasion-resistant EPDM blended. The air hose also has a bend restrictor to reduce kinking and is equipped with 1/4" NPT fittings with brass ferules. This air hose is available in 25', No. KTI72014, or 50' lengths, No. KTI72015. The 100-percent rubber hose is 3/8" in diameter with max 300 psi. The KTI72014 has a RMA Class C oil-resistant synthetic rubber tube and cover.

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**Strong polycarbonate lens**

The **Gateway Safety Cyclone impact-to-splash goggles** feature a strong polycarbonate lens surrounded by a sturdy vinyl frame. Users can add the optional Double-Take inserts to the top and bottom of the goggle frame to turn the Cyclone Impact into Cyclone Splash, an impact-plus-splash goggle. This two-in-one solution offers convenience for workers who require both types of goggles during one day or shift. The Whirlwind anti-fog ventilation system helps prevent or reduce fogging when Cyclone is used as an impact goggle only. The Whirlwind anti-fog system not only reduces the risk of fogging but also is designed to improve user comfort.

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**T-handle automatically locks jaws**

The Posi Lock Model 104 general purpose puller is designed to remove gears, bearings, pulleys and other press fit items. The device's patented, steel Safety Cage holds the jaws open or closed, preventing them from slipping, flexing or snapping back at the user. The T-handle opens, closes, aligns and locks the jaws automatically. The slim, tapered jaws allow easier gripping and access to tight spots, according to the company. With one-person operation, the tool has a 5-ton capacity, a 4" reach and a 1/2" to 5" spread. The puller weighs 4 lbs and comes fully assembled with no loose parts.

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**Performs live cranking tests**

The Electronic Specialties Starter Buddy, No. 165, diagnoses starting and cranking problems. This product performs a live cranking test on the vehicle to determine exactly which part of the electrical circuit has the issue. Starter Buddy works on both 12V and 24V systems and includes a DVD with three 15-minute videos explaining, teaching and demonstrating the process. In addition to the tool and DVD, the 165 includes an instruction manual, a zippered carrying case and a one-year warranty. The Starter Buddy is made in the U.S.A.

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**Keep nuts, bolts and parts close**

The Lisle Corporation Multi-position Magnetic Cup, No. 67300, has a strong magnetic base that attaches securely to any ferrous metal object. The item keeps nuts, bolts, tools or parts close by because it can attach horizontally, vertically or in any angle in between. The magnet has a coating to protect work surfaces, is oil- and fuel-resistant and can hold up to 5 lbs in a vertical position. The 6" diameter cup is made of ABS plastic for durability.

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# New Products



## Digital LED display

The Associated Equipment Industrial Jump Starter, No. KS400, instantly jump starts vehicles without the need of another vehicle. This jump starter includes a heavy duty 22Ah sealed AGM battery, plastisol-coated 400 amp steel clamps, a 12V 600mA internal charger, a built-in digital voltmeter, a 12V power port, a USB power port, a 12V male-to-male DC cord, a high-impact-resistant case with a rubber base and a digital LED display that offers state-of-charge readings. The Industrial Jump Starter offers a transportable design that can be used in the field. This product is made in the U.S.A.

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## Tensile strength of 800 psi

The J-B Weld HighHeat is a hand-mixable epoxy putty stick specifically formulated to bond and repair materials that will be exposed to high temperatures in automotive applications. It cures to a tough, hard bond with little to no shrinkage. This industrial-strength product sets in one hour at room temperature. After eight hours, it can be drilled, tapped, machined, ground, filed and painted. HighHeat is rated at a tensile strength of 800 psi and cures to a machine grey in color. It is able to withstand continuous heat exposure of 400 degrees F and intermittent heat exposure to 550 degrees F.

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## Does not kink

The OEM Automotive Tools ViperFlex 3/8" by 50' Air Hose, No. 24423, is made from composite materials, making it both durable and flexible in weather conditions ranging from -30 to 150 degrees F. With an abrasion-resistant outer cover and bend restriction to reduce wear and tear, the hose retains no memory of being coiled, allowing it to lay out flat, and does not kink. It has a 1/4" brass M by M NPT connector on both ends and behind the restrictor. The hose, available in multiple sizes, features 300 psi working pressure and comes with a limited lifetime warranty.



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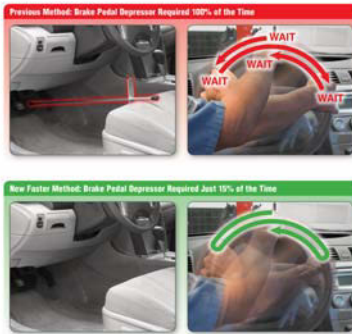
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## Jumbo hammer mechanism

The Jonnesway 1/2" Impact Wrench, No. JAI-1014, weighs 2.87 lbs and includes a jumbo hammer mechanism design. This impact wrench provides 450 ft/lbs of torque, a free speed of 10,000 rpm and it has a patent design of tool-free switch for left- or right-hand operation. The user-friendly torque control regulator increases one-hand operating comfort and can be used in narrow and tight spaces, according to the company.



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## Makes alignment procedures faster

**Hunter WinAlign 14.3 Software** reduces the number of steers required to obtain caster measurements in order to make the alignment procedure faster and more efficient. Rather than installing the brake pedal depressor on every vehicle, this software only requires brake pedal depressor installation on those vehicles with caster out of specification that are caster adjustable. In addition to speeding the alignment process, brake light induced battery drain is also reduced.

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## Only sets when exposed to UV light

The Boss Products RapidFix UV liquid plastic adhesive sets in 10 seconds when exposed to UV light. This adhesive can be sanded, filed, drilled and painted. The pack contains a UV flashlight and the UV adhesive. A refill pack is also available. This product is made in the U.S.A.

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## Two headrest options available

The **Monster 40" Creeper** is designed with a heavy duty vinyl cover and padded cushion for added comfort. It has drop shoulder grooves and six industrial swivel casters for easy maneuvering. The creeper offers a steel construction with a heavy duty powdercoat for a smooth finish. It has a maximum capacity of 300 lbs. According to the company, the Monster 40" Creeper helps keep technicians mobile and comfortable while doing any job. This creeper is available with a three-position adjustable headrest (No. MST13018) and with a fixed headrest (No. MST13019).

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## Made from high-grade tempered steel

The **PBT Metric and Imperial Stud Kits**, Nos. 71120 and 71121, are designed to remove and install mounting studs without damaging the thread. The dedicated 2-pc removal tool is screwed onto the stud then tensioned to lock onto the stud for removal. The install tool allows the stud to be installed and tensioned, then an internal set screw is reversed to remove the tool. The tools are manufactured from high-grade tempered steel for durability. The kits come in a custom blow mold storage case.

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## Built-in temperature sensor

The **CTEK Professional Battery Charger and Support Unit**, No. MXS 25EC, is a fully automatic eight-step smart charger and battery support unit that delivers 25A to 12V batteries from 40 to 500Ah. The MXS 25EC offers an automatic diagnostic function that tests whether a battery is able to take and hold a charge and a supply function that allows it to be used as a power supply to support the battery during diagnostic work. The MXS 25EC also offers a built-in temperature sensor, a built-in hanging bracket, 19.7' of extended cables and a two-year warranty.

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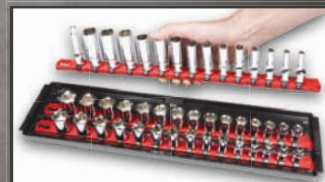
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# Air conditioning

A compressor clutch replacement and TIPM (Totally Integrated Power Module) replacement help solve this 2010 Dodge Caravan air conditioning issue.

By Barry Hoyland,  
Contributing Writer



In this month's tool briefing we will look at a 2010 Dodge Caravan that came to the shop with an A/C system that was blowing warm air.

## 1 GATHER INFORMATION AND PULL CODES

The first step in all diagnostic procedures is gathering information. This information not only means obtaining system diagrams, specifications, component locators and TSBs from reliable vehicle information sources, but all of the information available from the customer.

The main reason for this is in order for the technician to start their diagnostic process he or she needs to verify the complaint. If an issue is intermittent, information from the customer will allow the technician to duplicate the conditions that initiate the failure. Once the tech has duplicated the customer's concern he

will be able to determine which system(s) may be the potential causes of the issue.

Our Caravan had an issue with the air conditioning system blowing warm air under all conditions. The potential causes of this could be a problem with the air conditioning system, a problem within the Body Control Module, engine overheating or a blend door operating incorrectly.

One of the first observations was the compressor not operating. Looking at the system diagram in Mitchell 1, the Powertrain Control Module (PCM) controls compressor operation based on various inputs from sensors inside the vehicle as well as engine sensors.

Since the PCM controls compressor operation, we used our scan tool to check for

▲ **Fig. 1.** With the A/C issue on this Dodge Caravan, there was a code U0141 for a loss of communication with the TIPM (Totally Integrated Power Module).

fault codes. We used the Delphi Scan Tool, but most aftermarket scan tools will provide this information, even in generic rather than enhanced mode. There was a code U0141 for a loss of communication with the TIPM (Totally Integrated Power Module)(Fig. 1).

Communication loss with any module on CAN vehicles should be checked first, and a scan tool is one of the most useful tools to do so. Being that it can provide a DataStream as well as allow the technician the ability to operate some components by sending a command through the scan tool to the various modules (bi-

**VEHICLE APPLICATION:**  
2010 Dodge Caravan

**CUSTOMER CONCERN:**  
A/C inoperative, blows warm air.

# g system issues



▲ Fig. 2. Using the Power Probe III, we found there was no power at the connector, when the scan tool commanded it.



▲ Fig. 3. We disconnected the connector and checked for power again. We found that with it disconnected, voltage showed when the PCM commanded it, but we lost it when we connected to the clutch.



For more information on the Power Probe III, visit: [VehicleServicePros.com/10167639](http://VehicleServicePros.com/10167639)

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directional), the scan tool should be one of the first pieces of equipment used.

This vehicle has a PID (Parameter Identification) value for A/C pressure as well as one for the compressor signal being on or off. Our scan reading showed the pressure was 487 psi. According to Mitchell 1, the compressor should operate at this pressure. The PID for compressor command was "on."

## 2 TEST THE SYSTEM

The next step is to test the system to see why the compressor was commanded "on" but was not operating. Using the Power Probe III, we tested the A/C compressor fuse and found it was good.

We then tested the connector at the compressor clutch for power and it showed no power at the connector. Using the Power Probe III, we applied power to the connector and the circuit breaker built into the Power Probe III tripped, which indicates a short in the circuit. Since we determined that a short existed, disconnecting the connector at the compressor and using the Power Probe III to test the circuit again will show if the circuit from the compressor connector to the vehicle has the issue, or if the compressor itself was the cause.

We found when we applied power to the compressor clutch, the breaker tripped again, which indicated a shorted clutch coil. To verify this, we connected a DMM set on Ohms to the clutch and found no resistance in the circuit, which confirmed the short. Since we observed on the scan tool that the compressor was being commanded "on," we checked for power at the connector with the clutch disconnected and found power was present.

## 3 REPLACE THE COMPRESSOR CLUTCH

There can be reasons a clutch shorts out. Simply a faulty clutch could cause it, but a compressor that is binding or taking more power to operate can cause the clutch to work harder and eventually cause a failure. Contamination of the incorrect refrigerant and over-charging also may cause failures.

We know we need to replace the clutch, but we want a long-lasting repair so we need to determine the cause of the failure.

We started by using the refrigerant identifier to make sure there was no contamination in the system. The readings verified no contaminants, so the next step is to evacuate the system to see if the amount of refrigerant matched the charge

specification. We evacuated the correct amount so that indicated there was not an overcharge that caused the clutch failure.

The next thing to verify is to turn the compressor to check for binding, especially when first turning the compressor. Use the appropriate socket and a 1/4" drive ratchet to turn the compressor. This will allow the technician to "feel" the compressor resistance easier than with a larger size ratchet and socket.

The steps taken, checking for contamination, the amount of refrigerant, and compressor resistance should be performed in the order given to save time. Using the identifier first is necessary to make sure that if there is contamination, it does not enter your evacuation equipment.

Evacuating the system next will allow you to test the compressor without any resistance from pressure in the system. In order to assure a complete repair it is a good idea to fully evacuate and charge the A/C system prior to delivering the vehicle to the customer, even if there is a repair that does not require recharging the A/C system.

In this Caravan, there was very little resistance when rotating the compressor. Combined with the mileage on the odometer (31,500 miles) we determined the

*(Continued Page 48)*

## REFRIGERANT IDENTIFIERS



▲ For more information on the Robinair DiscovR refrigerant identifier, visit: [VehicleServicePros.com/10100185](http://VehicleServicePros.com/10100185)

Circle 214 on card, or enter at "e-inquiry" on VehicleServicePros.com



▲ The first step to determining why the compressor clutch failed is to test the refrigerant in the system. To do this, use a refrigerant identifier like the Robinair DiscovR.



▲ For information on the Neutronics Mini ID refrigerant identifier, visit: [VehicleServicePros.com/10103866](http://VehicleServicePros.com/10103866)

Circle 215 on card, or enter at "e-inquiry" on VehicleServicePros.com

clutch could be replaced without replacing the compressor.

After installing the clutch, we used our Matco RRR charging station to add the correct amount of oil (the amount removed from the system) and the correct amount of refrigerant. Our shop also has been in the habit of replacing Schrader valves and caps in all service ports when working on air conditioning systems to prevent leaks, and therefore, comebacks. Use the appropriate valve tool or socket to replace the service port components.

## 4 TEST THE SYSTEM TO ASSURE A COMPLETE REPAIR

In most cases this repair would be complete. In this case though, because of the design of the system, when the compressor clutch shorted, there were additional repairs necessary.

Once we assumed the repair was complete, we started the vehicle and turned the A/C on. Based on our earlier tests we expected the compressor to function properly after the clutch was replaced as we

had power at the clutch connector when the scan tool commanded the compressor on. What we found was the clutch did not operate. One assumption could be that we had a defective clutch coil, another could be that there was an issue with the connector.

We used the Power Probe III to supply power to the clutch and it engaged normally. Since it did, it confirmed that the issue was not due to a defective component. Using the Power Probe III again we found there was no power at the connector when the scan tool commanded it

## R-134A RRR MACHINES



▲ The MAHLE ArcticPRO ACX1180 machine works to recover, recycle and recharge R-134a refrigerant from vehicles. For more information on this product, visit: [VehicleServicePros.com/12042733](http://VehicleServicePros.com/12042733)

Circle 213 on card, or enter at "e-inquiry" on VehicleServicePros.com



▲ The Mastercool R-134a and Hybrid RRR machine helps recover, recycle and recharge R-134a refrigerant for traditional and hybrid vehicles, in the same unit. For product information, visit: [VehicleServicePros.com/12056501](http://VehicleServicePros.com/12056501)

Circle 212 on card, or enter at "e-inquiry" on VehicleServicePros.com



▲ For product information on the CPS FX Series RRR machines, visit: [VehicleServicePros.com/12022504](http://VehicleServicePros.com/12022504)

Circle 211 on card, or enter at "e-inquiry" on VehicleServicePros.com



▲ Evacuating the A/C system with an RRR machine, like this Matco Tools RRR machine, will allow you to test the compressor without any resistance from pressure in the system.

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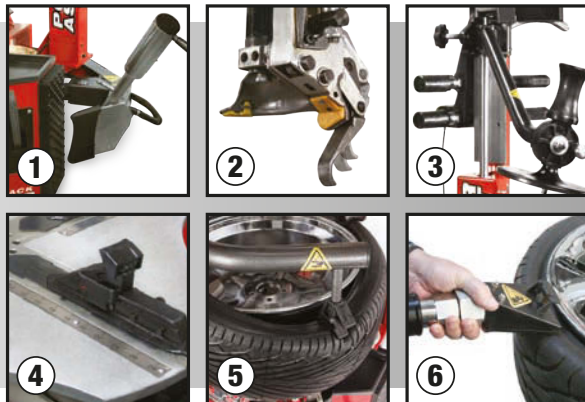
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**AUTO  
DATA ENTRY**

# TIP THE BALANCE IN YOUR FAVOR

Model DST-64T



MSRP  
**\$2425**  
WITH FREE  
SHIPPING!\*



Ever wished psychic powers? Because that's kind of what it's like to use our newest wheel balancer. While the other guys are still figuring out wheel dimensions, the **DST-64T** has already told you where to stick the weights—all thanks to genius features like these: (1) multi-directional anti-glare, user-friendly control panel, (2) DataWand™ and inner data set arm with automatic wheel info entry, (3) inner wheel LED lighting for perfect visibility, (4) Drive-Check™ technology to simulate driving conditions and hypothetical imbalances, (5) robust accessory and mounting cone package, and (6) tape weight feeder with 200 wheel weights, on the house. Now, we're not saying the DST64T is magic...but it does come with a wand, so you be the judge.

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## TOOLS USED:

- Vehicle information
- Bi-directional scan tool
- Power Probe III
- Digital multimeter/clamp meter
- Refrigerant identifier
- A/C RRR machine
- A/C service port valve tool
- Electronic Specialties Fuse Buddy
- Temperature gauge
- Temperature probe
- A/C pressure gauge set
- J2534 Programmer

(Fig. 2). We disconnected the connector and checked for power again. We found that with it disconnected, voltage showed when the PCM commanded it, but we lost it when we connected the clutch (Fig.3). Our suspicion was that there was resistance somewhere in the circuit and it was not allowing enough current to flow to the compressor clutch.

Using the DMM, we performed a voltage drop at the connector with it commanded on. Our voltage drop reading at the connector showed 10V, meaning that there was so much resistance in the circuit that it was only capable of delivering 10V less than system voltage (around 4V; system voltage of 14V less 10V of resistance).

## 5 REPLACE THE MODULE

Going back to the circuit diagram we determined that the A/C fuse delivered power to the A/C relay and the PCM would energize the relay for compressor operation. Checking for the relay, we found that the relay was integrated into the TIPM.

Remember the U-code for loss of communication in the TIPM? We located the wire from the TIPM to the compressor and found no resistance in it. The next step was to check the relay itself but found that the relay was not a replaceable component and it would be necessary to replace the entire module. If you are not familiar with the TIPM, it is the entire fuse and relay box under the hood on this Dodge. Since this module is part of the CAN communication bus and is the “Gateway” module that carries all low-speed communication, it likely will need to be programmed upon replacement in order to “introduce” it to the network of modules as the new path of communication.

► For more information on the Electronic Specialties 688 amp clamp, visit: [VehicleServicePros.com/11303607](http://VehicleServicePros.com/11303607)

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▲ Fig. 4. As a final check, use an ESI 315 Fuse Buddy placed into the A/C fuse to make sure that the amperage to the compressor is within specifications. For information on this product, visit: [VehicleServicePros.com/10103238](http://VehicleServicePros.com/10103238)

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After replacing the module and using our J2534 programmer to provide both VIN and mileage information to the module, we started the vehicle and had the A/C system working normally.

Performing additional verification tests will make sure that the repair is complete. These tests include:

- Using a Fuse Buddy placed into the A/C fuse to make sure that the amperage to the compressor was within specifications (Fig. 4).
- Use A/C pressure gauges to make sure pressures are within specifications.
- Use a thermometer in the center vent to verify outlet temperature is correct.
- Use a temperature probe and your DMM on the evaporator inlet and outlet to make sure that there is no more than a +/-5 degree F drop in temperature (Fig. 5).

All of these tests will assure that the system is operating normally and you have made an effective repair as well as the correct charge in the system. P>TEN



▲ Fig. 5. Use a temperature probe, like the Electronic Specialties 688, and your DMM, on the evaporator inlet (left) and outlet (right) to make sure that there is no more than a +/-5 degree F difference in temperature.

# Top Ten Tools



## Top 10 diagnostic scan tools

A Michigan-based technician identifies his favorite scan tools.

*By Mike Schmidt, Managing Editor*

**TECHNICIAN:** Eric Muir

**LOCATION:** Brighton, Mich.

**SHOP:** Brighton Auto Service

Eric Muir performs diagnostics, programming and repairs on foreign and domestic high-end vehicles. He also installs and configures all warning and control system modules, including airbags, park assist, object detection, stability and back-up sensors and more. In addition, Muir also beta tests new-to-market scan tools for various scan tool companies and tool dealers around the United States.

**1** "I have put this thing through the ringer and tested it against every scanner I get my hands on," says Muir. "Nothing can touch it yet!" This tool offers an A9 quad-core processor and a large 10" LED screen. For more information, visit:

[VehicleServicePros.com/11534608](http://VehicleServicePros.com/11534608)

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**2** "We all know how tough Chrysler systems are to diagnose," says Muir. The wiTech utilizes a VCI to connect the vehicle to the PC and, through the specially configured Internet access point, performs diagnostics, reprogramming and security functions. For more information, visit: [VehicleServicePros.com/12057080](http://VehicleServicePros.com/12057080)

**Circle 162 on card, or enter at "e-inquiry" on VehicleServicePros.com**

**3** "This OE tool is a workhorse, and has never let me down," says Muir. The Ford IDS OEM level diagnostic tool covers all Ford models from 1996 to current year. For more information, visit: [VehicleServicePros.com/12057091](http://VehicleServicePros.com/12057091)

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**4** "This tool requires a lot of hands-on time," says Muir. "The more time you put into it, the more you will get out of it. Factory-level functions of the Ross-Tech VCDS tool include coding, basic settings, adaptations and output tests for Audi/VW vehicles. For more information, visit: [VehicleServicePros.com/11229756](http://VehicleServicePros.com/11229756)

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**5** "This is an excellent device for Global A vehicles," says Muir. The GM MDI scan tool manages the transfer of data between a vehicle's onboard ECU network with an auxiliary CAN bus.

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**6** "Along with the MDI (#5, above), this system is even better, faster (and) stronger than the Tech 2 Win," says Muir. The GM GDS2 Global Diagnostic System is the diagnostic software for the GM MDI scan tool. For more information on the GM MDI scan tool and GM GDS2 Global Diagnostic System, visit: [VehicleServicePros.com/12057055](http://VehicleServicePros.com/12057055)

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**7** This tool runs on a PC and interfaces via USB to the DRB III+ Pass-Thru hardware device, enabling all the original functions a DRB III has for correct diagnosis and repair. For more information, visit: [VehicleServicePros.com/10913188](http://VehicleServicePros.com/10913188)

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**8** "This tool does it all," says Muir. "It will get you out of a jam." Features of the Magneti Marelli Vision include an 8" touchscreen display, Bluetooth and USB port capability. For more information, visit: [VehicleServicePros.com/11305391](http://VehicleServicePros.com/11305391)

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**9** "This rugged little thing gets with the program," says Muir. Features of the Autel tool include extensive vehicle coverage for more than 30 domestic, Asian and European makes. For more information, visit: [VehicleServicePros.com/10176527](http://VehicleServicePros.com/10176527)

**Circle 169 on card, or enter at "e-inquiry" on VehicleServicePros.com**

**10** The Drew Tech CarDAQ-M supports full OEM diagnostics for VW/Audi vehicles using the ODIS dealership software. For more information, visit: [VehicleServicePros.com/10225921](http://VehicleServicePros.com/10225921)

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AUTEL MAXISYS MS908 SCAN TOOL

1



FORD IDS OEM LEVEL DIAGNOSTIC TOOL

3



ROSS-TECH VCDS FACTORY-LEVEL DIAGNOSTIC TOOL

4



CHRYSLER WITECH SCAN TOOL

2



GM MDI SCAN TOOL

5



GM GDS2 GLOBAL DIAGNOSTIC SYSTEM

6



CONTROLLER TECHNOLOGIES DRB III EMULATOR

7



AUTEL MAXIDAS DS708 DIAGNOSTIC SYSTEM

9



MAGNETI MARELLI VISION STAND-ALONE DIAGNOSTIC SYSTEM

8

DREW TECHNOLOGIES CARDAQ-M TOOL

10



# Category Spotlight

Lifts, Jacks and Stands

In addition to product details on a specific category, this section now features a number of different resources on this subject. Use the key below to determine what type of content you're reading.



PRODUCT



VIDEO



ARTICLE



ASK THE EXPERTS



TECH TIPS



## FOR SMALL TO MIDSIZE VEHICLES

The **Monster 1.75 Ton Aluminum Roadside Assistance Jack**, No. MST13001, offers a lightweight aluminum design. The MST13001 weighs 39 lbs, offers a 4-3/4" saddle diameter, has a low working height of 3-1/2" and a maximum working height of 16-1/2". This jack is made to lift small to mid-size vehicles. The dual-piston power unit provides fast rising to load, while the overload and bypass valves prevent the jack from being used beyond its rated capacity and prevent over extension of ram. While this jack is lifting it provides frame and under-vehicle protection with its rubber-saddle padding. The MST13001, complies with ASME PALD/2009 safety standards and has a two-year warranty on material and workmanship.

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## MAXIMUM HEIGHT OF 7'

The **Rotary Lift RS4 Supplementary Tripod Jack Stand** is designed to stabilize vehicles loaded on two-post surface and in-ground lifts. The lightweight stand has a capacity of 4,000 lbs and can be raised to a maximum height of 7'. To use the jack stand, technicians can pull the locking pin from the top of the stand, raise the column to a desired height and reinsert the pin. A screw-up adapter at the top of the column provides a fine-adjustment range of 5-1/2". The adapter has a rubber contact pad to ensure a secure connection. The RS4 Jack Stand complies with the ASME PALD-2009 safety standard for portable automotive lifting devices.

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## SAFETY BYPASS SYSTEM TO PREVENT OVERLOADING

The **Ace Tool Jacko Transnational 2 Ton Super Low Profile Floor Jack** features an extra-wide body, a heavy duty frame and a swivel saddle. The product also offers a safety bypass system that prevents overloading. This jack provides safe, controlled lowering when weight is detected. With a 2-ton capacity, this jack includes a saddle diameter of 4", a minimum height of 2.75", a maximum height of 24", and it takes eight strokes to get to maximum height.

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## SNAP-ON 2-TON FLOOR JACK VIDEO



To watch a video demo of this product, go to: [VehicleServicePros.com/12060094](http://VehicleServicePros.com/12060094)



## SERVICE CARS AND LIGHT TRUCKS

The **Mohawk System I Two-Post Lift** has a 10,000-lb lifting capacity that incorporates Mohawk's patented hydraulic synchronization system and is ideal for servicing all cars and light trucks, according to the company. Standard equipment includes 3" and 6" truck frame adapters for hard-to-reach vehicle frames and automatic swing arm restraints for vehicle security and safety. The System I comes with a 25-year structural and 10-year mechanical warranty. All Mohawk Lifts are designed, welded and manufactured in the U.S.A.

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## CHICAGO PNEUMATIC WORKSHOP EQUIPMENT RANGE VIDEO



To watch a video demo of this product, go to: [VehicleServicePros.com/12030922](http://VehicleServicePros.com/12030922)



## SERVICE A VARIETY OF DRIVELINE COMPONENTS

The **OTC DriveMaster Driveline Lift**, No. 5130, with a 1,000-lb capacity, has a low profile of 6" and raises to 30", enabling the handling of a wide variety of driveline components, from light duty to heavy duty. The included differential adapter makes the tool even more versatile, spreading the purchase cost among multiple uses. Multi-use tools help technicians and shop owners by accounting for their daily and occasional use, ensuring a specialty tool can accommodate as many needs as possible. Available adapters for heavy duty auxiliary boxes and light duty transmissions create a full service, multi-use driveline lift for a shop.

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## FLOOR CRANES AND THE TECHNICIAN

A floor crane can be called many things by technicians, such as a shop crane or a cherry picker.

"Regardless of what it is called the floor crane can be a valuable addition to any shop's tool list," says Todd Michalski, vice president, Gray Manufacturing Company, a family owned and operated business specializing in manufacturing and selling portable lifting equipment for use by professional technicians. These cranes "can help improve shop and technician productivity and safety in a variety of ways."

Floor cranes are used for lifting, shifting and moving heavy items – such as engines, radiators, engine heads and driveline components – in and around the shop, he explains. Without such shop equipment, such tasks "can be very time consuming, require a lot of energy from the technician and be a serious safety hazard."

### REPETITIVE LIFTING

The main advantage of having a quality floor crane is the handling of repetitive lifting with minimal effort required by the technician, says Michalski. "Repetitive lifting throughout the workday creates large energy drains from the technician, which can lead to lower productivity, decreased quality of work and greater risk of accidents or injury.

"Lifting injuries to a technician's back tend not to happen with a single event, but damage accumulates over time, creating chronic problems," he goes on. "The use of a floor crane can help prevent injuries and extend the productive career of the technician."

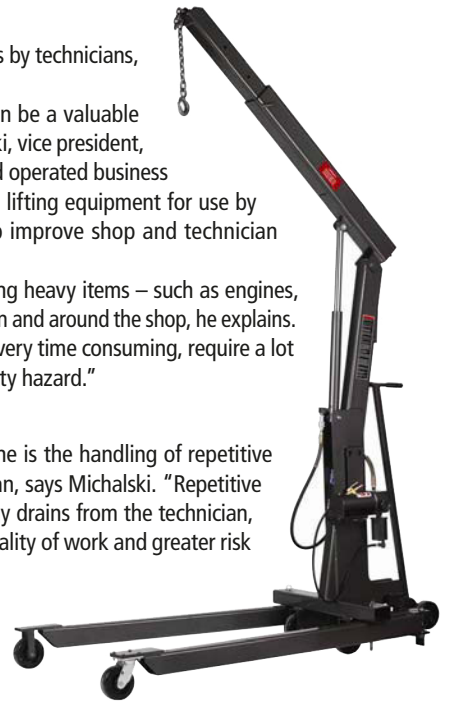
Floor cranes will help with many tough lifting jobs while easily maneuvering the items around the shop, adds Michalski. Moreover, they offer "a more flexible option than overhead cranes because the technician can take the crane to the work and does not have to take the work to the crane."

### WHAT TO LOOK FOR

When investing in a shop crane, Michalski says there are some factors to consider.

- Construction of the crane. A rugged, well-manufactured frame using quality materials will help extend the life of the crane.
- Storage. In some shops, storage is a major problem, so determining how easily and completely the crane folds up for compact storage may be a key factor.
- Adjustability. When using a floor crane, the legs may cause clearance issues. In such an instance, look for a crane with adjustable legs for better clearance options.
- Speed. A crane with a high-quality two-speed hydraulic lifting cylinder provides efficient, long-lasting and precise operation. A crane with an air-operated system can improve speed and productivity.
- Boom extension. Understand how far the telescopic boom extends and the coinciding lift capacity as it extends.
- Industry standards. Make certain the floor crane being considered meets all of the current industry standards for safety.

Information provided by: *Gray Manufacturing Company*



## ? IS IT LEGAL TO BUY UNCERTIFIED VEHICLE LIFTS?

In North America, it is legal for companies to sell or purchase vehicle lifts that are not certified by the Automotive Lift Institute (ALI). However, building and safety codes in many jurisdictions can prevent these lifts from being installed. It is the buyer's responsibility to research, purchase and install certified lifts if he or she operates in a location where certification is required.



ALI certifies vehicle lifts under ANSI/ALI ALCTV-2011, the national standard governing lift design and construction. Testing and certification through the program is completely voluntary. All lifts submitted for certification are tested for structural integrity, proper function of controls and load-holding devices and proper lowering speeds. While protection against overloading is also verified, it is never safe to load a lift beyond its rated capacity. The manufacturer's production facility also must meet quality control requirements and open itself for regular plant inspections to ensure compliance with standard and program guidelines.

Information provided by *Dale Soos, Automotive Lift Institute (ALI)*



## LIFT INSPECTION TIPS

"There's more riding on your vehicle lifts than trucks," says Ron Lainhart, parts and service manager for Rotary Lift, a leading brand of vehicle lifts and equipment designed to increase technician productivity. "Vehicle lifts support your business."

"Productivity studies conducted by fleets and truck maintenance providers have found that a single vehicle lift can add \$100,000 or more to the bottom line in terms of annual profits or reduction in labor overhead. If a lift is down for repair, productivity in that bay can be cut in half."

To keep vehicle lifts operating properly, good maintenance and inspection practices are crucial, he says, and offers the following advice:

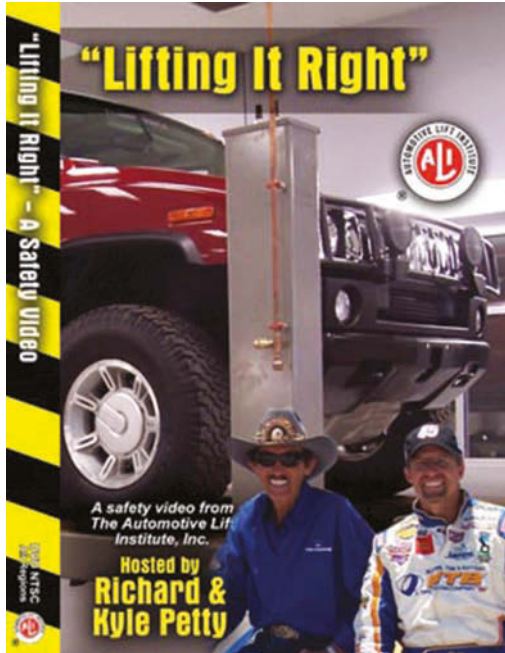
- Read and follow the guidelines in the lift's owner's manual. Maintenance and inspection requirements vary for different styles and brands of vehicle lifts. The owner's manual will cover the specific needs of each lift.
- Schedule annual lift inspections for all vehicle lifts. This inspection should be performed by a factory-authorized technician. The lift manufacturer can recommend authorized service companies in your area.

In a few months, the first group of Automotive Lift Institute (ALI) Certified Lift Inspectors will be available to perform lift inspections. The ALI is a trade association that provides manufacturers of automotive lifts throughout the U.S., Canada and North America with the most current regulatory information available.

- Whether maintenance is performed in-house or by an outside service company, be sure to insist on genuine OE replacement parts. OE parts were designed by the lift manufacturer to original design specifications.

Aftermarket parts are reverse-engineered and may not use the same materials or incorporate the latest design changes, Lainhart notes. ALI recommends using OE parts to ensure proper fit and function. Using aftermarket parts on an ALI-certified lift may void that lift's certification.

ALI offers general lift maintenance and inspection guidelines in a variety of materials, including the *Lifting It Right* training manual and DVD which, features racing legends Richard and Kyle Petty discussing the importance of inspecting all automotive regularly and proper lifting techniques. These materials are available directly from ALI or through its members. Visit ALI's website at [www.autolift.org](http://www.autolift.org) for details.



## RESISTS TWIST FORCE WHEN LIFTING

The **NAPA Professional Lifting Equipment's 3.5 Ton Service Jack**, No. 791-6420, features a two-year, no-hassle replacement warranty and has a nationwide service center network for a long life of service. Weighing in at just under 100 lbs, it features a flanged side-plate design to resist twist force that can occur when lifting loads on uneven surfaces. The sealed twin-piston pump, coupled with its padded, 50" handle, controls loads to a maximum lifting height of 20.5" and rests at a 4" low height. This jack features a removable saddle and saddle pad for use with transmission adapter, No. 791-7130.

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## ADJUSTABLE CUSHIONED BACKREST

The **Lisle Low Profile Seat Creeper**, No. 95302, features an adjustable cushioned backrest, and its legs and wheels can be flipped over for a 5" or 8" working height at the top of the seat cushion. The seat creeper assembly is 30" wide by 13" deep with 1" of ground clearance. The backrest has a 3" adjustment range with a quick-release pin, or it can be removed when used as a knee creeper when working under the dash. Two locking wheels offer extra stability when needed. According to the company, the product is great for working on wheels or brakes, and it is also useful for body work.

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## RAMS OPERATED WITH FOOT PEDAL

The **Cornwell Economic 1/2-ton Transmission Jack**, No. HEW41003CW, has an extra-wide base that lowers the center of gravity and promotes stability. With a maximum height of 73-1/8" and a minimum height of 36", the chrome-plated rams are operated by a foot pedal. The adjustable saddle with a base of 9-7/8" by 9-7/8", adjusts for most pan configurations. The jack has steel wheels and full-swivel ball bearing casters, and a nylon safety strap helps anchor the transmission.

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## NO CROSS BEAMS BETWEEN PLATFORMS

The **Ravaglioli U Series double scissor lifts**, Nos. 535 and 540, are available in 7,000-lb and 9,000-lb capacities and are ALI/ETL certified. The hydraulic system uses advanced, twin-cross synchronization that consists of two hydraulic systems, which are cross-locked between each platform. The result is a synchronized lift without any cross beams between platforms. There is also a multi-position, pneumatically operated mechanical lock on each platform. The lifts have platform lengths that can be adjusted to lift the smallest car to light trucks. The lifts offer maximum heights of 75".

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## SIX LOCKING POSITIONS

The **Sunex 1003AJ 3-ton Aluminum Jack Stand** features pin-style locks, is constructed of 100-percent aluminum and weighs less than 10 lbs. A heavy duty flanged base and ASME-PALD 2009 compliance ensure safety and stability while working. Six locking positions secure the load in multiple heights from 10.6" to 15.4".

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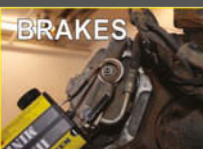
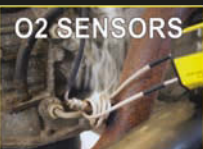


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The **K-Tool International 3.33-Ton Low-Profile Service Jack**, No. KTI 63133, provides easy access under low ground-clearance vehicles, according to the company. This jack has a lift range from 3-1/2" to 21-3/8". It offers a 50" long pump handle, which provides easy pumping under load. The dual-pump piston power unit raises the saddle to its maximum height in just eight full incremental pump strokes with no load. The KTI 63133 features load-limiting and bypass valves to prevent use beyond its rated capacity and over-extension of the ram.

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## VSP NEWS: KOLMAN'S KORNER, EPISODE 73 - VEHICLE LIFT SAFETY



Steve Perlestein, sales manager for Mohawk Lifts, discusses vehicle lift safety standards, sources of information on lift safety and common sense lift safety ideas.

To watch this video, visit:  
[VehicleServicePros.com/12045640](http://VehicleServicePros.com/12045640)



## FULLY-ADJUSTABLE SADDLE TILTS FOUR WAYS

The **Ranger TransJack**, No. RTJ-1, is a 1-ton capacity telescoping transmission jack with a fully-adjustable saddle, which tilts four ways and adapts to most passenger car and light duty truck transmissions or assemblies. With a foot-operated pump, the jack features a two-stage design to provide an extended lifting height of more than 73". Its steel construction and double-sealed hydraulics provide durability, and included heavy duty chain anchors keep loads secure. Steel roller bearings and adjustment screws assist moving and adjusting the table. The system overload protection prevents the jack from being used beyond its rated capacity of 2,000 lbs in the first stage and 1,000 lbs in the second stage. The jack stands 37" tall when lowered.

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## WITH SINGLE POINT MECHANICAL LOCK RELEASE

The **Mountain two-post lift**, No. MTN5590, features a 10,000-lb lifting capacity with three-stage front arms to allow for lifting both asymmetrically and symmetrically in the same service bay. This ALI-certified lift fits up to 12' ceilings. A single point mechanical lock release allows the technician to disengage both columns simultaneously. Rubber door guards provide added security against door damage along with a padded overhead shut-off bar to prevent vehicle damage from being raised too high. Heavy duty telescoping screw pads minimize the need for truck adapters, by meeting a wider range of OEM-recommended pick-up points. Available in red and blue premium powdercoat finishes, these lifts come with a one-year warranty on parts and labor. Mountain equipment features the exclusive "1-Call Program," meaning once the product is ordered through a qualified tool dealer the Mountain Equipment Team will take care of all arrangements for delivery and installation.

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## VARIOUS AVAILABLE CAPACITIES

The **MAXIMA ML4030** is a heavy duty mobile column lift that can be used indoors or outdoors on truck, bus and RV applications. Each column lift is easily moved by one individual from job-to-job. The ML4030 offers adjustable wheel supports for all sizes of wheels, a remote control handle with a 16' cable and an LCD screen that shows the exact operating status and conditions of the lift. This lift guarantees user safety with the hydraulic flow control and mechanical locks. There are various lifting capacities available depending on the application it is used for and this lift is ISO9001 and CE approved.

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## UP TO 10,000 PSI

The **Porter-Ferguson Line of Jacks** offer several choices of powerful remote-control manual or pneumatic-powered hydraulic models. Each jack comprises either a hand- or air-powered hydraulic pump, a hydraulic hose, a quick connect coupler and a ram. The five pump options range from 7,000 psi to 10,000 psi and all can be used with a variety of ram sizes and types. All pumps feature a steel, drop-forged broad base, ensuring stability even in awkward positions and able to withstand years of hard use. These jacks are made in the U.S.A.

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## MAC TOOLS JSA350LR LOW RISE JACK VIDEO



To watch a video demo of this product, go to: [VehicleServicePros.com/11574854](http://VehicleServicePros.com/11574854)



## WORK AT AN ERGONOMIC HEIGHT

The **Challenger Lifts CLHM-135** is a wireless mobile column lift with a 13,500-lb lifting capacity per column and a total lifting capacity of up to 108,000 lbs in a set of eight columns. This lift is fully battery and hydraulic operated, with no cords and cables. This lift is also capable of lifting vehicles of any axle length or wheelbase. The CLHM-135 has an integrated touchscreen control console for precise operating and 25 heavy duty safety locks every 2-1/2", which allow technicians to work at an ergonomic height. This lift is made in the U.S.A.

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## 360-DEGREE ENGINE ROTATION

The **Beta Tools Folding Engine Stand, No. 3014**, offers a gear-driven wheel for turning the engine while providing an anti-return mechanism so the engine stays in position. The wheel allows 360-degree rotation of the engine and can be turned forward and in reverse. The stand provides a working load of 1,000 lbs, and the folding design allows it to be stored while taking up minimal floor space.

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The **Kar Lift Solutions by Omer JAB Lifts** are medium-pressure, steel cassette style, in-ground lifts that only require 60" of depth. JAB lifts are available in 32,000- and 50,000-lb per cylinder lifting capacities, telescoping or full stroke plungers and both steel cassette and concrete installations.

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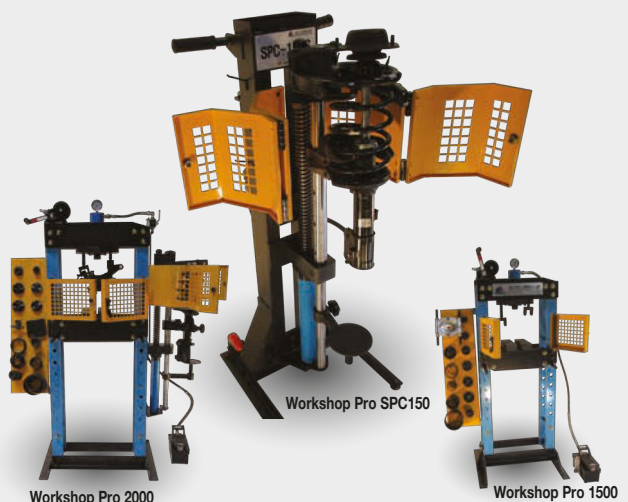
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## Irwin Vise-Grip Curved Jaw Locking Pliers

By Josh Smith, Assistant Editor



**L**ou Fort, lead technician at K.A.R.S. Inc. in Huntingburg, Ind., enjoyed the comfort of the soft form grip handles on the Irwin Vise-Grip Curved Jaw Locking Pliers as he used the tool on a multitude of projects around his shop.

“I have been using vise-grip pliers for more than 30 years,” says Fort. While Fort says there was no noticeable time savings compared to working with older vise-grip pliers, the new 10CR jaw

design on the Irwin Vise-Grip Curved Jaw Locking Pliers worked better than the traditional jaws found on vice grips.

“The new jaw design seems to provide a better hold on your work,” Fort says. For improvements, Fort suggested a thinner jaw with the same clamping force would be ideal.

Fort says he appreciated the pleasant grip on the easy-to-use tool.

“The soft form grips on the handles, they give these pliers a more comfortable

feel in my hand,” says Fort.

Whether it was making toe adjustments during vehicle alignments, changing out stabilizer links or keeping rounded bolt heads from turning while removing nuts, he found a number of uses for the Irwin Vise-Grip Curved Jaw Locking Pliers.

“In general whatever messed up job that needed something, (this tool) held fast,” says Fort.

The only setup required to use the tool, which comes packaged in a simple, clear plastic cover, was adjusting the screw to suit each specific task.

Fort gave the Irwin Vise-Grip Curved Jaw Locking Pliers a rating of 10 out of 10 because in addition to the better hold, he liked having the option of using an Allen wrench to make force screw adjustments and appreciated that the tool still comes with a lifetime warranty.

“The quality of construction is excellent,” says Fort. “The clamping force is outstanding.” **PTEN**

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### PRODUCT DESCRIPTION:

The Irwin Tools Vise-Grip Curved Jaw Locking Pliers delivers three times more gripping power than traditional locking pliers, with absolutely no slipping or stripping, the company says. They are available in two models: Fast Release, with a one-handed, triggerless release and anti-pinch and non-slip ProTouch Grips, and Original, with a classic trigger release. The pliers feature a patented 10CR curved jaw for securely gripping and torquing multiple surface shapes and for putting pressure on four points of any style nut or bolt head.

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## Steelman PRO Cobra Series 160 Tooth Ratchets

By Mike Schmidt, Managing Editor



**L**ou Fort, lead technician at K.A.R.S Inc., recently reviewed the Steelman PRO Cobra Series 160 Tooth Ratchets at his in Huntingburg, Ind.-based shop.

Fort tested the ratchets on a variety of applications. He utilized the 1/4" drive to change HVAC actuators and lower fan shroud hardware on Ford diesels. Fort also employed the 1/2" ratchet for servicing suspension components and performing adjustments during alignments. But of all the tools in the set, the 3/8" ratchet saw the most action in Fort's shop. It was used to change out spark plugs, tend to alternators and service caliper style brakes.

Fort was quick to praise the ratchets after putting them through a considerable amount of testing.

"I like the extremely low swing arc of these ratchets," he says. "At only 2.25 degrees, you can definitely remove or install fasteners in tight spots faster."

Fort says he appreciates the shapes of the handles and the soft grips molded into them, noting that they are quite comfortable to hold. He also says the ratcheting heads of the tools in the set were all "very smooth." Though he mentions that he found them to be "a bit tight," Fort says he expects the ratcheting heads to loosen up with continued use.

"All three of these ratchets are quite hefty," Fort continues. "They have some weight to them, and I couldn't help but feeling like I was really holding something when I was using them."

While the Steelman PRO Cobra Series 160 Tooth Ratchets do not come with any accessories, they do come in a slip-covered tray that can be used to organize them neatly in a tool drawer. Fort says the slip cover also features quite a bit of information about the tools, including a picture of the ratchets, a reminder they have a lifetime warranty, a list of the set's contents, a picture of one of the ratchets in use and more.

A few features Fort didn't like were the design of the directional lever or the size of the heads on the ratchets, but he is quick to say "both of these drawbacks are almost not worth mentioning, and I expect they are as result of the 160-tooth ratchet mechanism."

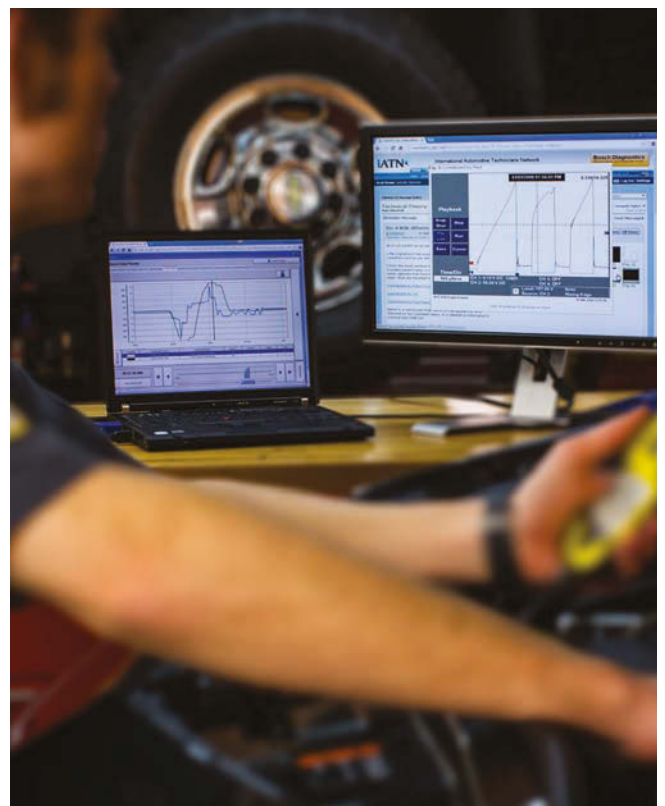
Overall, however, Fort thought highly enough of the Steelman PRO Cobra Series 160 Tooth Ratchets to give them a rating of 10 out of 10.

"The low swing arc and hefty feel of these ratchets leave a favorable impression," he says. **PTEN**

### PRODUCT DESCRIPTION:

The Steelman PRO Cobra Series 160 Tooth Ratchets have the finest tooth count available on the market to ensure performance in the tightest of spaces, according to the company. These ratchets only require a 2.25-degree swing to move the ratchet drive. A dual TPR and chrome handle provides an ergonomic grip and sleek style. All Cobra 160 Tooth Ratchets exceed ANSI specifications. Steelman PRO 160 Tooth Ratchets are available in 1/4" (No. 98861), 3/8" (No. 98862) and 1/2" (No. 98863) drive sizes. In addition, a 2-pc set with 1/4" and 3/8" drives (No. 98885) and a 3-pc set with 1/4", 3/8" and 1/2" drives (No. 98860) are also available.

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## Hickok COP Interceptor

According to the reviewer, the tool gets easier to use with time, especially if its user takes a few simple steps to ensure reliable results.

By Mike Schmidt, Managing Editor

**L**ou Fort, lead technician at K.A.R.S. Inc., recently tested the Hickok/Waekon COP Interceptor on several jobs at his Huntingburg, Ind.-based shop. According to Fort, the tool gets easier to use with time, especially if the user takes a few simple steps to ensure reliable results.

“There is a learning curve to understanding some of the readings taken at different levels of sensitivity,” says Fort, who also emphasizes the importance of reading and re-reading the user manual prior to employing the COP Interceptor on jobs. “There are four of them (readings). It took me just a few uses and con-

firmations of my interpretations of the readings to quickly confirm my diagnostics and be very comfortable using the tool.”

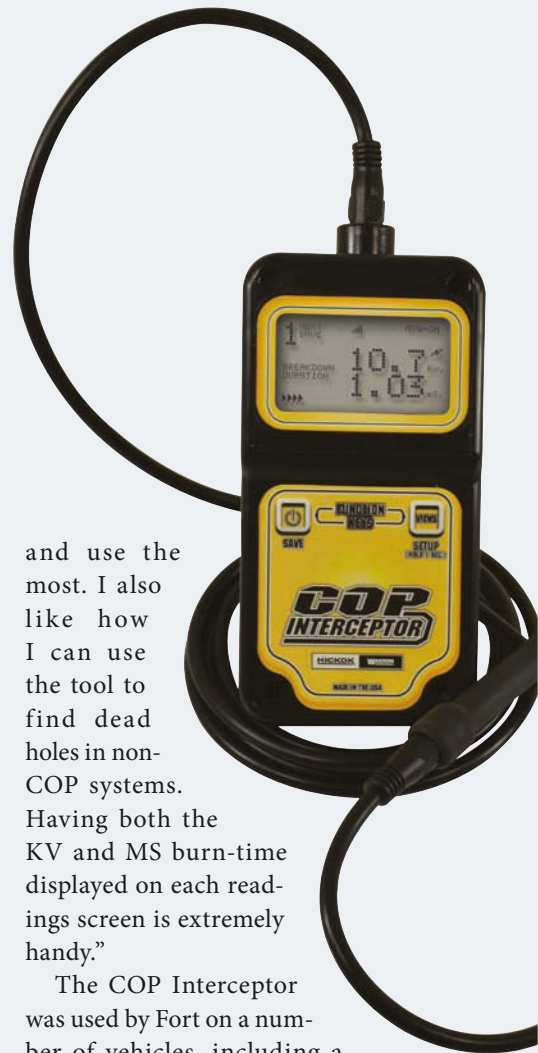
According to Fort, the tool requires the user to do a number of things prior to employing it in the shop. First, the probe must be connected to the unit. Then one of two different probe tips must be selected, and the unit must be powered by pressing the left “Save” button. The user must then calibrate the tester using “Auto-Set” by pressing and holding the right “Setup” button to access the menu.

“You can skip this step, but I wouldn’t recommend it,” says Fort. “Then follow the instructions found in the manual to begin testing. Once, you have read the manual and used the tool, all of this can be done in under 30 seconds.”

Fort is quick to note that the information found in the manual isn’t difficult to read or understand, but that he doesn’t trust what he thinks he has read until he has re-read it and confirmed it.

Of features Fort liked, he commented on using the “Trend View” frequently.

“The one feature I have been using the most is the ‘Trend View’. I have been doing the full deal by taking each cylinder’s reading in ‘Digits View,’ followed by switching to the ‘Balance View,’ then moving on to the ‘Trend View.” he says. “The ‘Trend View’ is the one I like



and use the most. I also like how I can use the tool to find dead holes in non-COP systems. Having both the KV and MS burn-time displayed on each readings screen is extremely handy.”

The COP Interceptor was used by Fort on a number of vehicles, including a Ford F-Series, a Chevrolet C&K Series, a Toyota, a Mitsubishi and an Audi, among others.

He even employed it on non-COP ignitions and power/waste setups.

“One good example is a Ford Escape that had a dead miss,” he says. “I found the bad cylinder in under a minute and knew it wasn’t an issue in under two minutes.”

According to Fort, a running compression test with a pressure transducer hooked to the scope determined a burnt exhaust valve was the cause of the miss.

“That vehicle only had a P0300,” he says. “Mode 6 misfire data did point to No. 1 as a possible problem, as did No. 3, and the ‘check engine’ light was not flashing.”

While Fort has used a previous version of the tool, he says the COP Interceptor offers quite a bit more than its predecessor.

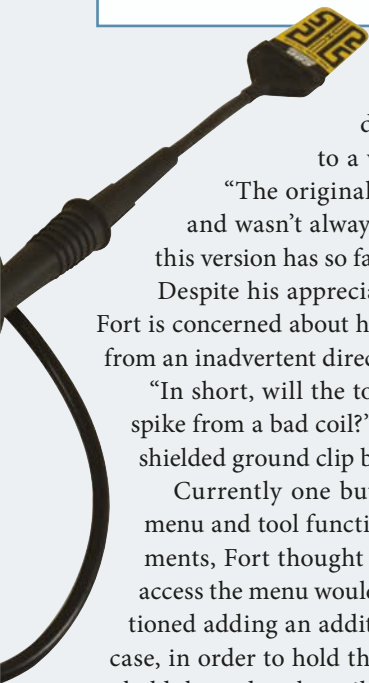


▲ The COP Interceptor measures, displays and can save each coil on plug’s secondary ignition data in real-time for detailed ignition analysis.

## PRODUCT DESCRIPTION:

The Hickok/Waekon COP Interceptor, No. 76564, provides advanced ignition diagnostics over and above scan tools and is simpler than an oscilloscope to operate, according to the company. The Interceptor measures, displays and can save each coil on plug's secondary ignition data in real-time for detailed ignition analysis. View trend data for visual verification of intermittent misfires that may not set codes. The auto-set function means the 76564 works on multiple styles of COP ignition systems.

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"This new one with the digital display brings it up to a whole new level," says Fort.

"The original had a steep learning curve and wasn't always the most reliable, whereas this version has so far proven very reliable."

Despite his appreciation for the tool's features, Fort is concerned about how well the tool is protected from an inadvertent direct KV hit.

"In short, will the tool survive, say, a direct KV spike from a bad coil?" asks Fort. "Would having a shielded ground clip be of any benefit?"

Currently one button provides access to the menu and tool functions. For suggested improvements, Fort thought having a separate button to access the menu would be beneficial. He also mentioned adding an additional pouch to the carrying case, in order to hold the test leads, as well as a clip to hold the pad to the coil while the tool was in use. "It would be nice to free up both of my hands."

Nevertheless, he gave the COP interceptor a rating of 10 out of 10 "without any hesitation."

Adds Fort, "It's fast, easy enough to set up and use." PTEN

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To watch a video demo of the Hickok COP Interceptor, visit: [VehicleServicePros.com/12059902](http://VehicleServicePros.com/12059902)

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# Tool Review

## Spec Tools Hand Held Bending Brake Tool

The reviewer had success creating fuel line and mounting brackets on smaller vehicles.

By Mike Schmidt, Managing Editor

**E**ric Moore, co-owner of DeMary Truck, put the Spec Tools Hand Held Bending Brake to the test at his Columbus, Ohio-based shop and was impressed by the added convenience it offered him.

"Because (it) is a tool used more for fabricating than for actual repairs, I am not able to correlate (it) with any time savings," says Moore. "Convenience is another matter entirely."

Moore used the tool for making brackets on motorcycles and other powersports vehicles. More specifically, he made fuel line brackets for a 1995 Sea Doo XP personal watercraft, mounting brackets for a headlight on a 2001 Yamaha WR250F motorcycle and fairing stay mounts for a 2000 Honda CBR600F4 motor-

cycle. In addition, he modified a throttle cable bracket on the Sea Doo.

"I did not find any features I did not like," says Moore of the tool. "I can see a use for larger and smaller versions of the Spec Tools Hand Held Bending Brake being useful."

He also states he found the Spec Tools Hand Held Bending Brake easy to use, though it took a few tries for Moore to dial in the proper width opening for the material he was working with and the type of bend he was making.

While Moore had not used a previous version of the tool, he says he once tried to make something like the Spec Tools Hand Held Bending Brake using duckbill pliers and locking pliers.



### PRODUCT DESCRIPTION:

The Spec Tools Bending Brake, No. BRB-100, is a patented fabricators hand-held bending brake, for accurate bending of sheet metal strip material for brackets. A duckbill clamping plier, fitted with a pivoting bending jaw, it handles metal widths to 3" in thin materials, down to 3/4" in gauges up to 5/64" thick. This tool is especially useful for making pattern brackets and fabricating intricately shaped strap material for metal-mounting brackets. A reversible jaw provides extra leverage to create tight Z-bends with the jaw mounted at 90 degrees. Users also can dismount the tool, flip it over and remount the jaw straight off for maximum hand leverage on thick materials like muffler brackets and accessory mounts.

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"It did not work nearly as efficiently," notes Moore.

After testing the tool on a number of applications, Moore says he sees a need for larger and smaller versions of the Spec Tools Hand Held Bending Brake. However, he has nothing but praise for the current iteration of the tool and rates it a 10 out of 10.

"I found it to be useful, allowing me the ability to creatively repair items I would normally have to order OEM replacement brackets for," says Moore. **PTEN**

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To view a video demonstration of this product, visit: [VehicleServicePros.com/12059901](http://VehicleServicePros.com/12059901)

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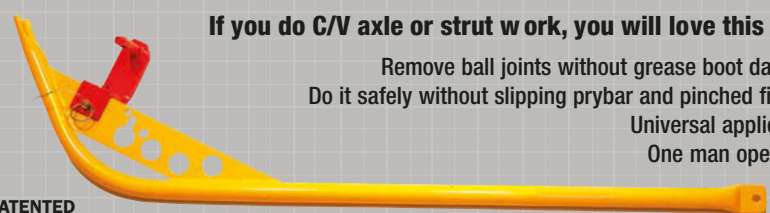
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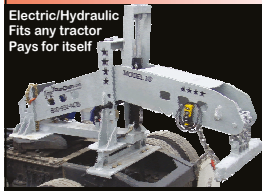
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# Big-Time Boxes

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OWNER:

**Brandon Russell**  
Orr Cadillac  
Shreveport, La.

## Custom-built box

By *Mattie Gorman, Assistant Editor*

**“It does everything I need it to do,” says Brandon Russell of his custom-built 6328RX Series-6S Matco Tools toolbox.**

As the ASE-certified lead engine technician at Orr Cadillac in Shreveport, La., Russell works on all General Motors vehicles. Since October 2013, Russell has

been designing this toolbox, which currently stands 70” tall by 77” long by 28” deep and is comprised of the initial lower toolbox and later-added hutch. Russell has plans to add two side lockers in the near future. “(The side lockers) will offer additional drawers as well,” says Russell. The side lockers will be custom-painted to match the white and copper colors of Russell’s current toolbox.

Aside from the additional lockers, Russell doesn’t have plans to continue to build his box, yet. “I wouldn’t say that would be it, but I don’t have plans because I haven’t seen anything more that I would need... Once you put lockers on the sides you really can’t put anything else on the sides.”

He says, “The only thing that I may be able to do would be to add an additional storage cabinet on top of the hutch.”

More than anything, Russell

likes that his box is “one of a kind.” He says, “What makes my box so special is that it was custom-built for me. The paint scheme is very rare — pale horse white with copper-head-painted drawers — and (it) really stands apart from other boxes.”

“I also customized the drawers to have more storage space and make frequently-used tools more accessible.” With every drawer full, he can’t be sure how many tools are inside. “But (the toolbox) is nice and neat or I’d go crazy,” says Russell. Each drawer has a slip-proof mat inside that helps keep Russell’s tools organized when closing the drawers. “Nothing can move,” he says.

“It’s a great box and I really enjoy having it,” he adds. **PTEN**

*Want to see more photos of Brandon’s box?*  
Go to: [VehicleServicePros.com/12051280](http://VehicleServicePros.com/12051280)



▲ Each drawer of Russell’s box has a slip-proof mat that holds tools in place, which helps him stay organized.



Want to show off YOUR Big-Time Box?  
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