

# PTEN

Professional Tool & Equipment News

The Independent Tool Authority



# POWER PROBE 3S

By Power Probe TeK



Details on the cover products and other new tools  
Page 10

**Tool Briefing**  
Lab scope v. scan tool:  
Choosing the right tool for diagnosing a MAF sensor issue  
Page 42

**Tool Reviews**  
Technician feedback on products from E-Z Red, Associated Equipment, SP Air and Snap-on  
Page 60



▼ Comes with 10 types of grinding stones

▼ Shaft length features seven locking positions

▼ Live face-to-face technical support





Professional Hand Tools

ITALIAN DESIGN

SINCE 1939



### C27S Collapsible Tool Trolley

Offers technicians a unique tool storage unit that collapses for easy transportation or storage. When collapsed, it has a centralized locking system that secures with keys provided. The two center tray drawers slide-out in either direction enabling easy access to tools. The handles fold-over to make it convenient to store the unit in a car trunk or under a workbench.

• Molded compartments for fasteners and small items.

• Workspace for smart devices

• Tool trays that slide-out to either side

• Large bottom compartment

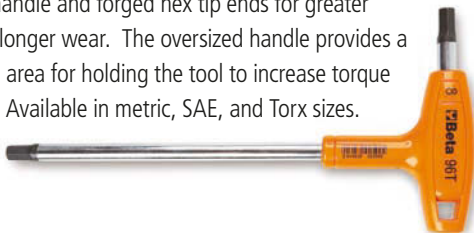
• Collapsible and key-locking

• Swivel casters with brakes



### 96T T-Handle Hex Key Wrench

High torque t-handles have a continuous metal bar running through the handle and forged hex tip ends for greater strength and longer wear. The oversized handle provides a larger surface area for holding the tool to increase torque and comfort. Available in metric, SAE, and Torx sizes.



### 951 Sliding T-Handle Hex Key Wrench

Three usable hex ends that are forged into shape to provide a better fit and longer wear. Available in metric, standard hex, and Torx drive.



[WWW.PEERLESS-BETATOOLS.COM](http://WWW.PEERLESS-BETATOOLS.COM)

Since 1939, Beta Tools of Italy has been considered one of the preferred brands by professional tool users in Europe and they now have a Worldwide Distribution in more than 80 Countries, including the US.

Circle 15 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



CHRYSLER • FORD • GM • HONDA/ACURA • NISSAN/INFINITI • TOYOTA/LEXUS/SCION • AND GROWING!

# A PROGRAMMING REVOLUTION



**Plug-in the kit**



**Give us a call**

## Our ASE Certified Technicians do the rest!

The demands on the Auto Repair Industry are continually changing and always challenging. For completing many electronic-related repairs and part replacements, learning what it takes to be successful in J2534 ECU programming can now be a thing of the past.

Rely on your technicians for diagnostics, repairs, and bay turn-around; let Drew Technologies do the programming for you!

Our RAP-Flash Kit provides everything needed for J2534 ECU programming. DrewTech's ASE-certified Tech Support does the programming for you and the service is **GUARANTEED**. Our pay-per-service includes configuration, setup and security functions, and in many cases, key programming.

**CALL OR VISIT OUR WEBSITE TO REGISTER FOR YOUR RAP KIT TODAY!**



# J2534

844.235.2761 • [J2534RAP.COM/PTEN](http://J2534RAP.COM/PTEN) •    

© 2017 Drew Technologies, Inc. Patent(s) pending. CDT22



# APRIL Contents

## Features

### 10 FEATURED NEW PRODUCTS

Check out new tools from Power Probe TeK, Beta Tools, Mighty-Seven and Farsight. Then, read about all the other new products, beginning on page 11.



10

### 42 TOOL BRIEFING

Tool comparison: A side-by-side comparison of a scan tool versus a lab scope, for mass air flow fault diagnosis.



42

### 46 TOP 10 TOOLS

Technician Audeliz "Junior" Meijas strives to figure out the problems on vehicles when no one else can. The Southbridge, Mass.-based tech shares his list of top tools.



46

### 60 TOOL REVIEWS

Our review panel gives feedback on the following tools:

- E-Z Red Hood Hawk Under Hood Clamp Light System
- Associated Equipment KwikStart Industrial Jump Starter
- SP Air Flex Head Cut-Off Tool

### 63 DIAGNOSTIC TOOL REVIEW

Technicians give their takes on diagnostic tools. This month:

- Snap-on Diagnostic Thermal Imager



60



63



64

## Departments

### 8 EDITOR'S NOTE

The race is on for automakers and technology companies to stake their claim when it comes to the future of the vehicle market.

### 64 CATEGORY SPOTLIGHT

This month's section features product information on diagnostic test equipment. In addition to product details, this section features links to product video demos, tech tips and more.

### 69 MARKETPLACE

### 70 BIG-TIME BOXES

Owner: Craig Nemitz  
Shop: Movin' & Lubin'  
Location: New Berlin, Wisc.

## On Our Cover

Power Probe 3S by Power Probe TeK



## In the Next Issue

We have a record number of product entries this year! Check out the first half of the 2017 PTEN Innovation Awards Nominees in the May issue.



70



**KTI72175**  
**3/4" Drive**  
**Ratcheting-style**  
**Torque Wrench**

- 100-600 ft./lbs
- Accuracy:  $\pm 4\%$  CW
- 42" length
- Includes blow molded case
- 90-day limited warranty



**KTI72135**  
**1/2" Drive**  
**Digital Torque**  
**Wrench**

- 25-250 ft./lbs
- Accuracy:  $\pm 1\%$  CW,  $\pm 2\%$  CCW
- 22-1/4" length
- Includes blow molded case
- 1-year limited warranty



**KTI72126A**  
**1/2" Drive**  
**Micrometer-style**  
**Adjustable Torque Wrench**

- 30-250 ft./lbs
- Accuracy:  $\pm 4\%$  CW  $\pm 6\%$  CCW of indicated value, CW, from 20% to 100% of full scale
- 24-1/2" length
- Includes blow molded case
- 1-year limited warranty



**COMBO PACKAGE:**

**KTI63194COMBO**  
**KTool HD 22 Ton Air Hydraulic Jack**  
**with 1" Air Impact**

- 22 ton capacity truck jack with a lift range from 9.06" to 17.94"
- Air impact wrench: 6" extended anvil, 1,600 ft/lbs of torque, 3 forward and 3 reverse power settings, a D side handle and side exhaust
- The hydraulic jack complies with ASME PASE/2014 safety standards and is covered by a 2-year warranty on material and workmanship
- The 1" air impact wrench (KTI81798A) is covered by a 1-year warranty



**HD**



Circle 17 on card, or enter at "e-inquiry"  
 on [VehicleServicePros.com](http://VehicleServicePros.com)

**HEAVYWEIGHT QUALITY. KNOCKOUT PRICE.**

**1.800.762.6002 | [www.ktoolinternational.com](http://www.ktoolinternational.com)**



# Now Online At

## VEHICLESERVICEPROS.com



### Article

#### How to select the right scan tool

With the right scan tool, you'll be able to identify vehicle issues faster, helping you to fix more cars and make more money. Experts at OTC provide a few considerations to keep in mind when deciding on this purchase. To read the full article, visit: [VehicleServicePros.com/20853738](http://VehicleServicePros.com/20853738)

### Ask the Expert



Why is utilizing a refrigerant identification tool highly recommended and required on some A/C service equipment? To read the full article, visit: [VehicleServicePros.com/20855966](http://VehicleServicePros.com/20855966)

### Tool Review



The Tech-Life Tech-Light is a small-sized bright light which helped these reviewers work in tight spaces. To read the full review, visit: [VehicleServicePros.com/20846215](http://VehicleServicePros.com/20846215)

### Tech Tip



If a vehicle has uneven brake wear and you assume it is a bad caliper and replace it, you may be guessing. Imploded brake hoses and stuck proportioning valves produce hidden symptoms that are not easily diagnosed. To read the full article, visit: [VehicleServicePros.com/20846868](http://VehicleServicePros.com/20846868)

FACEBOOK  
[facebook.com/VehicleServicePros](http://facebook.com/VehicleServicePros)

TWITTER  
[@VehicleSvcPro](https://twitter.com/VehicleSvcPro)

LINKEDIN  
[linkedin.com/company/VehicleServicePros](http://linkedin.com/company/VehicleServicePros)

### Featured Products



#### HD Pro Tab

CanDo

[VehicleServicePros.com/20846330](http://VehicleServicePros.com/20846330)



#### 4512XL Quarter Stick Ratchet

E-Z Red

[VehicleServicePros.com/20843931](http://VehicleServicePros.com/20843931)



#### Cummins Fuel Line Disconnect Set

SP Tools

[VehicleServicePros.com/12267527](http://VehicleServicePros.com/12267527)



Look for this logo in PTEN to identify where you can email to provide feedback and contact us.

# PTEN

Professional Tool & Equipment News  
The Independent Tool Authority

Published by SouthComm Business Media, Inc

PO Box 803 • 1233 Janesville Ave  
Fort Atkinson WI 53538  
920-563-6388 • 800-547-7377

Printed in the U.S. Vol. 28, No. 3, April 2017

GROUP PUBLISHER Larry M. Greenberger  
LGreenberger@SouthComm.com

PUBLISHER Kylie Hirko  
262-473-9497 KHirko@SouthComm.com

EDITOR Erica Schueller  
800-547-7377 x1630 ESchueller@SouthComm.com

MANAGING EDITOR Mike Schmidt  
800-547-7377 x1394 MSchmidt@SouthComm.com

ASSISTANT EDITOR Vesna Brajkovic  
800-547-7377 x1645 VBrajkovic@SouthComm.com

ASSISTANT EDITOR Stefanie Von Rueden  
800-547-7377 x1602 SVonRueden@SouthComm.com

#### MULTIMEDIA ACCOUNT EXECUTIVE

Cortni Jones 800-547-7377 x1391  
CLJones@SouthComm.com

#### MULTIMEDIA ACCOUNT EXECUTIVE

Diane Braden 800-547-7377 x1364  
DBraden@SouthComm.com

#### MULTIMEDIA ACCOUNT EXECUTIVE

Mattie Gorman 800-547-7377 x1636  
MGorman@SouthComm.com

#### INSIDE SALES

Kaylee Kidd  
800-547-7377 x1362 KKidd@SouthComm.com

#### PRODUCTION MANAGER

Wes Gray  
800-547-7377 x1337 WGray@SouthComm.com

#### ART DIRECTOR

Eric Van Egeren

#### LIST RENTAL REP

Elizabeth Jackson  
847-492-1350 x18 ejackson@meritdirect.com

#### AUDIENCE DEVELOPMENT MANAGER

Debbie Dumke

### SOUTHCOMM, INC

CEO - Chris Ferrell

CFO - Bob Mahoney

COO - Blair Johnson

VP, Production Operations - Curt Pordes

VP, Technology - Eric Kammerzell

EVP - Gloria Cosby

Subscription Customer Service

877-382-9187; 847-559-7598

Circ.PTEN@omeda.com

PO Box 3257 • Northbrook IL 60065-3257

Article reprints • Brett Pettilo

Wright's Media 877-652-5295, ext. 118

bpettilo@wrightsmedia.com

*Professional Tool & Equipment News* (USPS 012-426, ISSN 1081-4485 print; ISSN 2150-2072) is published ten times a year in February, March, April, May, June, July, August, September, October, and December by SouthComm Business Media, LLC, 1233 Janesville Avenue, Fort Atkinson, WI 53538. Periodicals postage paid at Fort Atkinson, WI 53538 and additional mailing offices. POSTMASTER: Send address changes to *Professional Tool & Equipment News*, PO Box 3257, Northbrook, IL 60065-3257, Canada Post PM40612608. Return undeliverable Canadian addresses to: *Professional Tool & Equipment News*, PO Box 25542, London, ON N6C 6B2.

Subscriptions: Individual subscriptions are available without charge in the U.S. to qualified subscribers. Publisher reserves the right to reject non-qualified subscriptions. Subscription prices: U.S. \$46 per year, \$88 two year; Canada/Mexico \$67 per year, \$124 two year; All other countries \$98 per year, \$185 two year. All subscriptions payable in U.S. funds, drawn on U.S. bank. Canadian GST#R42773848. Back issue \$10 prepaid, if available. Printed in the USA. Copyright 2017 SouthComm Business Media, LLC.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recordings or any information storage or retrieval system, without permission from the publisher.

SouthComm Business Media, LLC does not assume and hereby disclaims any liability to any person or company for any loss or damage caused by errors or omissions in the material herein, regardless of whether such errors result from negligence, accident or any other cause whatsoever. The views and opinions in the articles herein are not to be taken as official expressions of the publishers, unless so stated. The publishers do not warrant, either expressly or by implication, the factual accuracy of the articles herein, nor do they warrant any views or opinions offered by the authors of said articles.

INDUSTRY FIRST TO COMBINE COMPLETE TPMS WITH ADVANCED DIAGNOSTICS

# WHY BUY A SECONDARY TPMS TOOL?

# DOUBLE THE DIAGNOSTICS

ALL-IN-ONE tool to trigger, relearn, or program **AUTEL** MX-Sensors and quickly test all vehicle systems.



**MAXISYS MS906TS**



## ONLY 2-SKU TYPES

**AUTEL MX-sensor 315 MHz**    **AUTEL MX-sensor 433 MHz**

COMPATIBLE METAL VALVE & RUBBER VALVE

## **AUTEL MX-sensor** UNIVERSAL TPMS

UPDATE DURING INSTALLATION FOR LATEST VEHICLE COVERAGE

- ▶ ...MX-Sensors cover 98% of all OE sensors
- ▶ ...Two sensor types reduce shop inventory
- ▶ ...100% ID clone-able / No relearn required
- ▶ ...Tested & certified to meet SAE standards

Circle 18 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



(855) 288-3587  
[maxitpms.com](http://maxitpms.com)



[autel.com](http://autel.com)  
Register and update tools to guarantee latest coverage  
©2017 Autel Intelligent Technology Inc.



# AUTEL

# Editor's Note



## What does the future of vehicle technology look like?

The race is on for automakers and technology companies to stake their claim when it comes to the future of the vehicle market.

By Erica Schueller, Editor  
Erica@VehicleServicePros.com

**A**s the market for autonomous vehicles continues to evolve, companies sometimes must reinvent themselves to stay relevant.

I recently came across a headline that gave me pause in the New York Times: "Intel Buys Mobileye in \$15.3 Billion Bid to Lead Self-Driving Car Market."

Intel, the same technology company that developed microprocessors found in nearly every personal computer built in the late 1980s and 1990s, is now shifting gears to be part of the automotive technology market.

Mobileye, a main player when it comes to advancing autonomous vehicle technology, provides a bulk of the sensors used on vehicles today for driver assistance systems.

The article focuses on the benefits this acquisition will have to the computer chip maker's portfolio: "[B]y acquiring Mobileye, whose digital vision technology helps autonomous vehicles safely navigate city streets, Intel aims to broaden its offerings beyond just chips to a wider suite of products that driverless vehicles will require. It hopes, as a result, to appeal to automakers that want to offer autonomous driving but lack the in-house expertise and do not want to rely on the likes of Google."

What kind of implications does this have for automakers?

It appears partnerships and collaboration more than anything at this point. After all, Intel already agreed to a partnership with Mobileye and BMW last summer, prior to the acquisition, to introduce an autonomous vehicle in the next five years.

Not to mention, this acquisition comes weeks after the Consumer Electronics Show (CES) in Las Vegas this past January, where automakers and technology companies con-

tinue to join forces to showcase a number of new vehicle technologies.

Taking a look to the future, here are some points to watch, based on these industry shifts:

- As partnerships evolve and technology companies become more involved in the development of vehicles, it adds another player into the mix of who owns the data. This isn't welcome news, if you're familiar with the current state of aftermarket phone repairs, for example. Access to information on how to repair smartphones, and the introduction of "right to repair" legislation for this industry lags far behind the automotive aftermarket repair world. Technology companies may understand the benefits of proprietary data better than any other industry.
- If automakers and technology companies develop fleets of vehicles to service autonomous vehicles used for ride-sharing programs - it's more likely they'll have service centers, too. Consumers may not even have vehicles to service or repair.
- Programming and computer diagnostics will play a more integral role in diagnosing and repairing these vehicles. This only points to a continued and increasing shift on the education and training involved with vehicle repairs.

Not to put the doom and gloom on your plate as we look ahead. This technology is exciting for our industry. It's just a matter of figuring out where independent repair shops fit in. How will the changing landscape force aftermarket shops to reinvent themselves - one, five, 10 years down the road, and beyond? **PTEN**



**Mike Schmidt**  
Managing Editor



**Vesna Brajkovic**  
Assistant Editor



**Stefanie Von Rueden**  
Assistant Editor



**Barry Hoyland**  
Contributing Editor

### **PTEN Editorial Advisory Board**

#### **Technicians**

- John Harris**,  
Brooks-Huff Goodyear, Timonium MD
- Eric Moore**,  
DeMary Trucks, Columbus, OH
- Lou Fort**,  
K.A.R.S. Inc., Huntingburg, IN

#### **Shop Owners**

- Phil Fournier**,  
Phil's Auto Clinic, Hemet, CA
- Edwin Hazzard**,  
Southeast Mobile Tech, Goose Creek, SC
- Barry Hoyland**,  
VSSCA, Camarillo, CA

- Dave Lang**,  
Independent Vehicle Service, Albuquerque, NM
- Pete Rudloff**,  
Pete's Garage Inc., Newark, DE

#### **Equipment Manufacturers**

- Chad Schley**,  
Schley Products/SP Tools
- Jim O'Hara**,  
Clare Automotive



# LAUNCH TECH USA & IDENTIFI<sup>X</sup>

FIND AND FIX FASTER<sup>®</sup>



Launch Tech USA is announcing a new service called Tech to Tech. For the first time, technicians using Launch Scan Tools in need of diagnostic help are no longer alone! Through a recent partnership with Identifix's award-winning Virtual Tech Hotline paid service, one of 45 certified experts can remote directly into your Launch Scan Tool, read your data, and help you perform special function tests—reducing both your diagnostic time AND your stress level. This is the ultimate “How to Fix a Vehicle” support, offered directly by Launch Tech USA.

[www.launchtechusa.com](http://www.launchtechusa.com)  
1820 S. Milliken Ave • Ontario, CA 91761 • phone: 1-877-528-6249

Circle 16 on card, or enter at “e-inquiry” on [VehicleServicePros.com](http://VehicleServicePros.com)

# FEATURED New Products



## Shaft length features seven locking positions

The Beta Tools 1/2" Drive Ratchet with Extendable Shaft, No. 920/55L, offers a twist-n-lock mechanism that allows the shaft to stay in place without movement. The shaft length features seven locking positions, and is extendable from 11" to 16.5" long. Extending the ratchet to its maximum length gives users 70 percent more reach, leverage and torque, according to the company. Beta Tools uses the same sliding forward/reverse switch as the company's other signature ratchets.

Circle 20 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



## Comes with 10 types of grinding stones

The Mighty-Seven Mini Air Die Grinder, No. QA-651N, features an ergonomic handle with an injected composite grip and a one-hand switch for easy operation. The set comes with one air die grinder, a 3mm (1/8") collet, 10 grinding stones (including five 3mm and five 6mm grinding stones), a 1/4" plug, a 2-pc spanner wrench set and an oil box for air tool maintenance. The entire set

comes in a heavy duty carrying case for organization and protection.

Circle 21 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

## Live face to face technical support

The Farsight Live Multi Vehicle Diagnostic System (MVDS) is a rugged, expandable Windows 10 tablet that comes preloaded with European, Asian and domestic diagnostic software, OEM software validation, and available patented ATS engine analyzers and lab scope. The MVDS offers live on-screen face-to-face technical support and live remote programming.

Circle 22 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



**K**icking 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.



## Flip screen displays readings even while holding tool upside down

The Power Probe 3S, an update of the company's Power Probe III, was designed to make circuit testing simpler. The PP3S has compact, ergonomic housing for secure grip and improved circuit access. The PP3S has a menu-driven screen that makes accessing all the different test modes easier, the company says. The tool features a 50-percent larger screen and high-resolution display, as well as a flip screen feature to allow for display screen readings while holding the tool upside down.

Circle 23 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



## Ideal for shop use or road service work

The Mahle Heavy Duty Axle Jack, No. CAJ-25, manufactured by Gray Manufacturing, has a capacity of 50,000 lbs. The compact design and low starting height makes it ideal for shop use or road service work. The air-driven motor powered hydraulic system eliminates manual pumping.

Circle 24 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

## Features a specially formulated foam nitrile coating

The Galeton Otterback Foam Nitrile 3/4 Coated Knit Gloves, No. 12870, are designed to be lightweight and offer enhanced grip, due to the specially formulated foam nitrile coating. The coating is over the palm, fingers and back of knuckles for added protection. The 13-gauge polyester knit shell enables the back of the hand to have breathability to help keep hands cool and dry.

Circle 27 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



## Soft grip designed for comfortable usability

The Cornwell 1/2" Drive Long Flex Head Handled Ratchet, No. SRFB76LH, offers 30 gear teeth to provide a 12-degree handle swing angle. The head thickness is 3/4" and the head width is 1-3/4" with an overall length of 27". The handle has a soft grip designed for comfortable usability.

Circle 29 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



## Solid aluminum scraper head

The E-Z Red Scrapers offer a durable scraper head made of solid aluminum. The scrapers are available in various sizes, including 4", 6", 8" and 13". There is also a kit that includes the 4", 8" and 13" scrapers in a molded box.

Circle 25 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



## Provides dust extraction

The Rupes Slim Backing Pads have a 150mm diameter and a M8 or 5/16" fitting, making them suitable for different models. The pads feature a multi-hole pattern and 10 channels that provide increased air flow and dust extraction during sanding on both horizontal and vertical surfaces. The pads have a low center of gravity designed for better control and precision during all phases of the sanding process.

Circle 28 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

## Designed to make changing hooks simple

Morgan's Pin-Loc Starter Kit, No. PL-5K, offers a design that allows hooks to be changed by removing the pin, changing the hook and reinserting the loc-pin. The kit uses heat-treated chrome-moly steel couplings and comes with a shaft adapter (No. PL-SA). The kit includes the following attachments: Thin Hook (No. PL-1), Large Hook (No. PL-8), Small Hook (No. PL-9) and Straight Hook (No. PL-11). Additional hooks and attachments are also available.

Circle 26 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



## For use on diesel and gasoline engines

The OEMTools Oil Pressure Gauge Set, No. 27262, for use on diesel and gasoline engines, is designed with a 2-1/2" easy-to-read gauge with a protective boot and a range of 0-200 psi. The set includes standard and metric adapters found on most U.S. and import cars, trucks and stationary engines. The set comes in a blow molded case.

Circle 30 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



**Designed to reduce neck strain and fatigue**

Miller Electric's T94 Series Welding Helmets are designed to reduce neck strain and fatigue while improving operator comfort, visibility and productivity. The helmets offer a chiseled shell design that provides skin coverage and accommodates half-mask respirators. The ClearLight Lens Technology improves color and clarity in both welding and light states to reduce eyestrain, the company says. The helmet has four operating modes: weld, cut, grind and X-mode.

**Circle 31 on card, or enter at "e-inquiry" on VehicleServicePros.com**

**Attaches directly to the air hose**

Intercomp's Fill, Bleed and Read Air Gauges make a tedious process into a smooth and easy operation, according to the company. The air gauges attach directly to the air or nitrogen hose. Standard features include a digital pressure gauge with rubber protective cover, a 22" hose with a high-quality swivel nozzle and an industrial grade bleeder valve.



**Circle 32 on card, or enter at "e-inquiry" on VehicleServicePros.com**



**Completely upgradeable**

The Hennessy Coats GTS Series Tire Changers can service tires between 6" and 24" in diameter. The tire changers have a two-speed electric motor and are upgradeable, so they are capable of growing with a shop's needs.

**Circle 33 on card, or enter at "e-inquiry" on VehicleServicePros.com**



**Absorbs up to 14 times its weight in liquid**

SpillTech's Maximizer Line of Absorbents is specifically designed for large spills and high-volume leaks. SpillTech's SmartSorb Technology creates a mat that absorbs evenly throughout for better liquid retention. Maximizer absorbents take in up to 14 times their own weight in liquids and will absorb oils, coolants, solvents and water. The products is available in perforated pads and rolls.

**Circle 35 on card, or enter at "e-inquiry" on VehicleServicePros.com**

**Incorporates interchangeable tooling**

The ProMaxx Rocky II ProKit is designed to make the removal and replacement of broken exhaust manifold mounting studs/bolts faster and easier. The new design incorporates interchangeable tooling that allows for extractor-less repairs. The Rocky II can repair both gas and diesel engines. The Rocky II includes a limited lifetime warranty and unlimited technical support. The kit is made in the U.S.A.

**Circle 34 on card, or enter at "e-inquiry" on VehicleServicePros.com**



**Four-second window testing**

The Lujan Window Tint Meter, No. VLT171, is a 2-pc meter capable of measuring windows and displaying a visual light transmittance percentage. It features one-button operation, four-second testing, automatic shut-off and a 10-year LED light source. The VLT171 comes complete with a calibration sample and a durable hard case.

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



## Patented two-in-one scissors

The patented **Beta Tools Two-in-One Scissors**, No. 1128BAX, offer both traditional blades and a milling profile designed to enlarge holes on plastic without using drills. The special movement of the blades reduces cutting effort up to 20 percent, according to the company. The scissors have large handles with soft rubber inserts for comfort. The diamond-like carbon coating was designed for durability and smooth operation. These scissors come with a molded carrying sheath.

**Circle 37 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## Valve design increases pulse energy by 30 percent

Hecat's **FAC-400 A/C Component Flusher and Mark IV Transmission Oil Cooler Flusher** includes a pulse valve design that produces a 30 percent increase in pulse energy, according to the company. The increased pulse energy is meant to improve scrubbing and cleaning, and also provides the energy to clean complex micro and parallel pathways of high efficiency heat exchangers.

**Circle 39 on card, or enter at "e-inquiry" on VehicleServicePros.com**

## Adjustable temperatures of 120 to 1,100 degrees F

The **Steinel HG2220 E Heat Gun** offers adjustable temperatures of 120 to 1,100 degrees F (50 to 600 degrees C). The HG2220 E offers a continuously variable temperature, fine dust filter, ergonomic soft grip handle and a replaceable power cord. The HG2220 includes a one-year limited warranty.



**Circle 38 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## Purchase one or more of these Lincoln/Mityvac products and receive a VISA gift card

Choose from 18 models with gift card values up to \$50



917 Heavy-duty grease pump



1884 20V Li-Ion PowerLuber

3669 Low-profile drain with electric pump



MV6840 Pressure bleed system



**For details, contact your authorized Lincoln distributor or go to LincolnPromotion.com**

Purchase required of one or more of the specified models between April 1 and June 30, 2017. Gift card promotion is valid only for end-user customers in the U.S. and Canada. Lincoln distributors and wholesaler/retailer employees are not eligible.

© SKF is a registered trademark of the SKF Group | © SKF Group 2017  
© Lincoln and PowerLuber are registered trademarks of Lincoln Industrial Corp.  
Visa is a registered trademark of Visa Inc.



**Circle 40 on card, or enter at "e-inquiry" on VehicleServicePros.com**

# New Products



## Bypass the datalink port on vehicle

The Diesel Laptops Bypass Cables allow users to bypass the datalink port on a vehicle without the hassle of working with separate OEM cables. The 2-pc cable system includes a master harness that provides a 9-pin connector and power supply, and a connection end that is changeable by ECM. Users can purchase the master cable and pick the ends they need, or purchase the Master Cable Kit, which includes the most commonly needed cables.

Circle 41 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



## Helps maximize vehicle performance

The CTEK Battery Sense 2.0 Smartphone App is a Bluetooth enabled battery monitor designed to prevent unnecessary breakdowns and help maximize vehicle performance. Battery sense is easy to install and data is delivered through a free iPhone or Android app. Battery sense can detect if the battery is providing standby power, will send push notifications to users' phones if the battery state of charge falls to a critical level and the app can accommodate multiple vehicles.

Circle 42 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



## Durable rubber toe and heel protection

Georgia Boot's Amplitude offers comfort features and durability, according to the company. The Amplitude collection offer full-grain leather uppers, a high performance interior mesh line, the Georgia Waterproof system and durable rubber toe and heel protection. The oil- and slip-resistant outsole is made from flexible rubber and features abrasion resistance.

Circle 43 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

# EXPERIENCE THE DIFFERENCE



## The Original Wireless Portable Lift System

### Improve productivity and flexibility:

Wireless feature enables technicians to:

- Get set-up **FASTER...**
- Get the vehicle up **FASTER...**
- Get the job done **FASTER...**

800.821.7320 / [www.grayusa.com](http://www.grayusa.com)



U.S. Patents 6,634,461 • 7,014,012 • 7,219,770 Canadian Patent 2,406,340

Circle 44 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

# You Can't Get Here Overnight.

Introducing the **HD Pro Tab**: an open Android, Bluetooth wireless scan tool for Heavy Duty Truck and Agricultural & Industrial applications. **HD Pro Tab** is three years in the making, with software developed at the dealership level. This means OE-level functionality without the costly subscription. Coverage for F150, Freightliner and Farming Equipment – and everything in between – *all in one package.*



Over 60 Manufacturers Covered, including John Deere • Full Brake and Transmission Coverage • Set Parameters  
 Full DPF Reset/Regen • Full Bi-directional Controls • Injector Coding • Cylinder Cutout • Auto-ID all modules  
 One easy-to-use Interface • True IP65 Drop Test and Water Resistant Rating • 10.1" IPS High-Resolution Screen  
 Full Suite of Connectors (inc. CAT-9 and Benz Truck) • 2 Years Free Software



**CanDo**  
INTERNATIONAL, INC.

[www.candointl.com](http://www.candointl.com) • 909-Cando-11 (226-3611)



**HD CODE II**  
Now with  
DPF Regen

Say **NEVER AGAIN** to getting stuck in limp mode – or worse – stranded on the side of the road, just because you need a DPF Reset or Regen!

## Regen Yourself

with the **HD Mobile** from Cando.

- Perform DPF Reset & Regen
- Engine, Brakes & Transmission Coverage
- Read Trouble Codes
- Clear Trouble Codes
- Easy-to-Use with Free Updates



**CanDo**  
INTERNATIONAL, INC.



[www.candointl.com](http://www.candointl.com) • 909-Cando-11 (226-3611)

Circle 45 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

## Fits in most pockets

The Cat Pocket Spot Light, No. CT5120, offers a small, unobtrusive light that fits in most pockets. The light features a spring-loaded clip for hands-free use and a durable ABS case. The switch is conveniently located for operation. The light provides 200 lm on high and 110 lm on low, and will run for up to 7.5 hours on three AAA batteries (included).

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



## Designed for fast, safe and clean filling of DEF

The CTA Manufacturing DEF Filler Funnel Kit, No. 7220, allows fast, clean and safe filling of DEF (Diesel Exhaust Fluid), according to the company. The funnel body features a wide-mouthed opening and built-in hand for one-person filling of 10L containers. The kit features a threaded connector to fit all standard DEF systems, an elbow adapter, a shut-off valve, an air-bleed line and a built-in screen.

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



## Made for heavy and medium duty vehicles

The Noregon JPRO Professional 2017 VI is a diagnostic and repair solution for heavy and medium duty vehicles in North America. JPRO Professional is available in multiple packages, including complete kits with a ruggedized laptops and all necessary cables and adapters. JPRO is sold as an annual subscription with free upgrades and support throughout the life of the subscription.

**Circle 48 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## POWER YOU CAN DEPEND ON.

**JUMP n Carry**

The no questions asked jump starter – Jump-N-Carry – built its reputation on its ability to bring the power every time it is called on for service. Every aspect of a Jump-N-Carry is designed to deliver extreme jump starting power, from its Clore PROFORMER battery to its heavy-duty cables and clamps. So that it can start what doesn't want to be started. Each time, every time.

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

**Circle 163 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## Has a 30-lb refillable refrigerant tank

The Snap-on Polartek A/C Machine, No. EEAC330, is an entry-level recycling machine. It works on R-134a refrigerant and has a 30-lb refillable refrigerant tank. The EEAC330 has a 5" graphic display, side pocket for hose storage and vehicle database. The vacuum pump is 3 cfm, two-stage and on-board oil injection is automatic. The EEAC330 includes a two-year warranty.

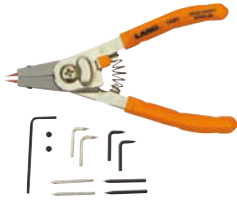
**Circle 49 on card, or enter at "e-inquiry" on VehicleServicePros.com**





## QUICK SWITCH PLIERS WITH TIP KIT

**1421:**



Internal: Inch 1/4"-1" Metric 7mm-26mm  
External: Inch 1/8"-1" Metric 3mm-26mm

- Converts between internal and external with a quick flip of a switch
- Double-dipped custom grip for comfort and durability

**1434:**



Internal: Inch 3/8"-2" Metric 10mm-51mm  
External: Inch 1/4"-2" Metric 7mm-51mm

**75:**



Internal: Inch 1-13/16"-4" Metric 46mm-102mm  
External: Inch 1-1/2"-4" Metric 32mm-102mm

## HEAVY DUTY SNAP RING PLIERS

**1485:**



Internal: Inch 3-1/16" - 6-1/4"  
Metric 78mm-159mm

- Spring ratchet locking mechanism securely holds against snap ring tension
- Includes .120" straight tips, additional tips available in 45° & 90°

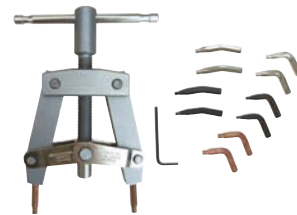
**1486:**



External: Inch 3-1/2" - 6-1/2"  
Metric 89mm - 165mm

## HEAVY DUTY PLIERS WITH TIP KIT

**87:**



Internal: Inch 3-1/2" - 7" Metric 90mm-175mm  
External: Inch 3-1/2" - 7" Metric 90mm-175mm

- Provides safe and stable service of extra large retaining rings
- Compound screw lever for easy ring installation and removal

## 12-PIECE COMBINATION INTERNAL/ EXTERNAL SNAP RING PLIERS SET

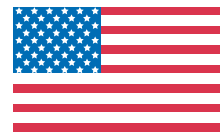
**3495:**



Internal: Inch 1/4"-3-1/4" Metric 7mm-83mm  
External: Inch 3/8"-3" Metric 10mm-76mm

- Pliers are convertible for use on internal and external snap rings with cushioned grip handles
- Pliers have a knurled center screw with spring for easy changing and secure hold

## 85 YEARS OF QUALITY TOOLS!



**MADE IN U.S.A.  
SINCE 1932**

# RED WHITE AND BUILT FOR YOU



**The Original Hansen™ Socket Tray**  
Hansen has the way to straighten out toolbox clutter and chaos. Socket trays come in six sizes, two each in 1/2", 3/8" and 1/4" drives for both SAE and Metric sockets.

*sockets not included*

100% MADE IN THE USA



All Hansen products have a lifetime warranty.



**The ToolHanger® Tool Hanging System**  
A plastic organization board with twist & lock tool hangers to organize, display and hang your tools. It has six unique twist and lock hangers designed to keep tools secure and right where you need them. Organize your garage, basement, shop or anywhere tools are needed.

**HANSEN**  
GLOBAL INC.

251 Taylor Street • Two Rivers, WI 54241  
877-793-5213 • hansenglobalinc.com

Circle 51 on card, or enter at "e-inquiry" on VehicleServicePros.com

## New Products

### Restores optimal working conditions of refrigeration

The Errecom Compressor+ restores optimal working conditions of refrigeration and air conditioning systems. Once the compressor has been replaced or the circuit flushed, add Compressor+ directly to the lubricant. Compressor+ catches and inhibits particles that contribute to corrosion, prolonging the life of the system by as much as 50 percent, according to the company.

Circle 52 on card, or enter at "e-inquiry" on VehicleServicePros.com



### Gas-, oil- and grease-resistant

**Coastal Boot's Lawman**, available from Snap-on, features full-grain leather uppers, stacked heel and a Vibram mini-lug outsole that is gas-, oil- and grease-resistant. The boots are made in the U.S.A. The boots are available in black, and wide width (EE) sizes 8-10.5, 11, 12 and 13.

Circle 54 on card, or enter at "e-inquiry" on VehicleServicePros.com

### Preserves electronic settings and memory

Clore Automotive's 12V Vehicle Memory Saver, No. 1924, provides auxiliary power to the vehicle while the vehicle's battery is replaced to preserve electronic settings and memory. The 1924 features a long-lasting AGM battery, multiple connection options, automatic charging system and a compact shape for use in a vehicle cabin.

Circle 53 on card, or enter at "e-inquiry" on VehicleServicePros.com



### Scotchgard anti-fog coating

The 3M SecureFit Protective Eyewear 600 Series features a scotchgard anti-fog coating that helps provide long-lasting clarity and retain its effectiveness, according to the company. The 600 series also offers an anti-scratch coating; photochromic, polarized or task-specific lens tints; and lens options in various colors and shades.

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

### ETL tested and certified

The Allpart Two- and Four-Post Lift Power Units are ETL tested and certified, pressure-balanced for high volumetric mechanical efficiency and contain a high-performance, pressure balanced pump for fast lift speeds. The 12,000-lb, two- and four-post lift power units feature lowering flow control, a high horsepower and high torque electric motor, a fixed relief valve at 2,750 psi and low-leakage design valves.

Circle 56 on card, or enter at "e-inquiry" on VehicleServicePros.com



# POWER PROBE 3S

OUR MOST POPULAR TOOL MADE EASY



## TECH'S CORNER

As an automotive technician, I have always been fond of the phrase, "If it ain't broke, don't fix it." Basically, if something is working fine, my mentality is "why would you change it and risk possibly screwing something up?" Over the years, I have had to undo many car owner's attempts to modify their vehicles. At the worst, the "so-called" improvements made the vehicle lose performance or quits running altogether. The lesson to be learned here is that when changing a product, care must be taken to ensure there is no feature or functionality loss.

The **Power Probe 3** has been our most popular circuit testing tool for over a decade. Technicians have come to rely on the diagnostic power and testing speed of the **Power Probe 3**. Its combination of streamlined functionality, simple design, and powerful test functions make it an industry favorite. This is truly an indispensable tool for fast and efficient electrical diagnosis.

As with everything else Power Probe TEK does, we cannot leave well enough alone. Our Innovation team has found several ways to make our best-selling product even better.

Introducing the new **Power Probe 3S**, an update to our best-selling PP3. We have made significant improvements without changing any of the test features you have come to know and love:

- \* **Bigger Screen** - Get the all information you need faster with a 50% larger screen.
- \* **Menu Driven** - An intuitive menu screen makes accessing all 6 modes a breeze.
- \* **Slim Body** - The new PP3S has a slim and ergonomic body for a secure and comfortable grip.
- \* **Upside Down? No Problem** - Flip screen mode lets you rotate on screen readings.

After using the new PP3S for a while now, I find that it is even easier and more intuitive to use than our original Power Probe 3. All accessory leads, tips, cables and extensions for the original PP3 still work and are interchangeable with this new tool. The new **Power Probe 3S** does everything the original unit could, but better.

Ask your local tool supplier about the new **Power Probe 3S** and see the improvements for yourself.

Circle 57 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



POWER PROBE TEK

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



# The HOOK

By **POWER PROBE**

**DELIVERS UP TO 100 AMPS**

**EASY! SMART! POWERFUL!**

- ▶ Powers Up Components
- ▶ Measures Current Draw
- ▶ Calculates Resistance

All At The Same Time In One **Diagnostic Tool!**

**WORKS ON 12-48 VDC SYSTEMS**

**Kit Includes:**

- Power Probe Hook Unit
- Detachable 4mm Banana Jack
- 36" Connector Lead **NEW**
- 4mm Back Probe Adapter **NEW**
- Battery Hook-Up Clips
- 3 Wire Continuity Leads
- 20 amp Fuse
- Instructional Manual & DVD



Part # PPH1

## The World's Finest BRAKE BLEEDER ADAPTERS

Exclusively From

**POWER PROBE**



PART # BAKIT01

### CUSTOM FIT MASTER CYLINDER ADAPTERS

*The Master Kit Combines The Best Combination Of Adapters For The Widest Coverage Of Your Vehicles!*

- ☑ Color Coded Anodized Aluminum Caps for Easy Recognition
- ☑ Standard Brass Fittings Ensures Compatibility with All Styles of Brake Bleeders
- ☑ Eliminates Hassles With Air Hoses and Shop Air
- ☑ Expandable O-Rings Guarantees a Leak-Proof Seal Every Time
- ☑ Twist Top Knob to Expand O-Ring & Tighten the Cap
- ☑ Quick and Easy Installation
- ☑ Covers All Makes and Models of Vehicles

**POWER PROBE**

The Ultimate Automotive Circuit Tester

800-655-3585 [www.powerprobe.com](http://www.powerprobe.com)

Circle 58 on card, or enter at "e-inquiry" on VehicleServicePros.com

# New Products

## Charges, conditions and maintains 12V batteries

Optima's Digital 1200 12V Performance Battery Charger charges, conditions and maintains 12V lead acid batteries. The charger offers quick setup and operation with a backlit status indicator. The positive clamp has a push-button LED to illuminate battery terminals for easy hookup in dark conditions. The charger also allows USB charging for devices such as cameras and phones.

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



## Includes free lifetime updates

The Autel MaxiTPMS Premium Kit, No. TS508, is packaged as a kit with eight Autel MX-Sensors to offer TPMS service repair. The TS508 offers a quick mode and an advanced mode for sensor programming. It is grease- and water-resistant and features a TFT color display, auto power-off for battery life conservation and strong plastic housing with a protective rubber boot. The TS508 includes one-year warranty and free lifetime updates.

Circle 60 on card, or enter at "e-inquiry" on VehicleServicePros.com



## Resists the growth of mildew

The New Pig Mildew Resistant Absorbent Sock stops leaks, spills and condensation from spilling into walkways. It can also be placed on windowsills or in doorways to trap rain or snow melt before it enters the building. Unlike cellulose-filled absorbent socks, this 100-percent polypropylene skin and filler resists the growth of mildew. The sock is available in two color options: yellow for high visibility, or blue to blend in with the surroundings.

Circle 61 on card, or enter at "e-inquiry" on VehicleServicePros.com



## Built with a 30-degree swivel head

The Monster XXL 12" Swivel Socket sets, Nos. MST99777 and MST99789, are made of cro-moly forged steel with black oxide coating and built with a 30-degree swivel head for more usable torque. The pinless joint design prevents binding and is safer than universal joint designs. The MST99777 11-pc metric set includes sizes 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18 and 19mm. The MST99789 10-pc SAE set includes sizes 6/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16" and 7/8". Both sets come with a lifetime warranty.

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



# DELIGHTFULLY SOUND-FREE



Model# RS7580H-603  
MSRP: \$4250\*



**HUSH** *Quiet*<sup>TM</sup>  
**ROTARY-SCREW AIR COMPRESSOR**

Engineered for high performance, efficiency and reliability, BendPak's Hush-Quiet RS7580H-603 rotary screw air compressor can meet the compressed air demands of high volume tire shops, general maintenance and fleet shops, vehicle body and paint facilities or busy automotive dealerships. Our exclusive Hush-Quiet technology makes it the perfect compressor to install in noise conscious service areas.

Circle 63 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

For more info visit [www.bendpak.com/hushquiet](http://www.bendpak.com/hushquiet) or call 1-805-933-9970

\*Valid at participating dealers. Prices subject to change after June 30, 2017.  
© 2016 BendPak, Inc • BendPak, Inc is a registered trademark.

**BP BendPak**<sup>®</sup>

***This is my BendPak***



***There are many,  
But this one's mine.***

*"Here at Kindig-it Design we specialize  
in Bitchin' Rides and that takes killer  
equipment, that's why we use BendPak"*

- Dave Kindig, Accomplished Designer  
specialized in Hot Rod Customs, Owner of  
Kindig-it Design and star of TV's "Bitchin' Rides"  
[www.kindigit.com](http://www.kindigit.com)

Circle 64 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

© 2016 BendPak, Inc • BendPak, Inc is a registered trademark.

**BP BendPak**

For more information on BendPak's entire product line,  
call 1-800-253-2363 or visit [www.bendpak.com](http://www.bendpak.com)



## Pinpoints leaks in air brakes

Redline Detection's Air Brake NanoLeak Finder pinpoints leaks in air brake, air suspension and air powered accessory systems. The clear, audible and visible signals speed diagnostics and pinpointing of leaks, the company says. The NanoLeak Finder weighs 8.6 lbs, runs on compressed air and 12V DC and utilizes test pressure up to 135 psi.

Circle 65 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

## Rotating 180-degree handle doubles as a stand

The Matco Tools MFL1500 Cordless Rechargeable Stationary 10W COB LED Flood Light features a rugged aluminum housing, ABS corner bumpers and a one-touch battery level indicator. The MFL1500 provides 1,200 lm on high and 600 lm on low, and includes a strong magnetic clip and rotating 180-degree handle. This light is packaged in a blow molded case for storage and transport.

Circle 66 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



## Gear-driven mechanism for reduced stalling

The Mac Tools Heavy Duty Geared Air Saw, No. MPS1911, features a gear-driven mechanism designed to reduce stalling. The air saw offers an adjustable saw blade for precise depth of cut, 360-degree swivel exhaust to direct air away from the user, and a dual chuck that allows for the use of either an air saw blade or reciprocating saw blade. It also has a rubber grip and innovative throttle design with lockout feature.

Circle 67 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

# ERNST

MANUFACTURING INC.

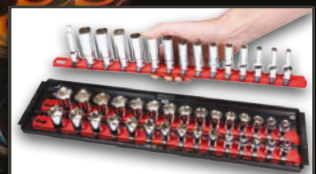
PROUDLY MADE IN THE USA  
LIFETIME GUARANTEE

SEE OUR FULL LINE AT  
[WWW.ERNSTMFG.COM](http://WWW.ERNSTMFG.COM)  
877-376-7885

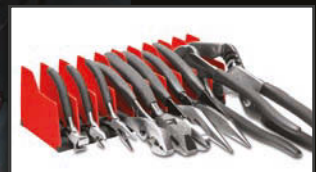


## WE KNOW YOU NEED OPTIONS

Because each tool set is unique - Ernst carries over 200 tool organization products providing you with the most options in one place!



SOCKET BOSS



PLIER PRO



WRENCH GRIPPERS

*The Leader in Tool Organization*

Circle 68 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

**Made with outdoor enthusiasts in mind**



The AllStart Boost Max Camo Edition offers a powerful jump starter, with a design geared toward outdoor enthusiasts. This jump starter features 450 cranking amps, 900 peak amps and weighs less than 2 lbs. The Boost Max is water-resistant to withstand outdoor conditions. It also includes a back-up charger for all types of electronic devices.

Circle 69 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



**Hard chrome finish keeps rust away**

The OEMTools 26-pc 1/2" Drive Ratchet and Socket Set, No. 23995, features a hard chrome finish that won't show prints and keeps rust away. The set includes a 36-tooth ratchet, extensions and popular size sockets. The sockets are thin-walled with a no-slip design that gives users more socket-to-fastener contact. The ratchet has a sealed head that keeps out dirt and provides a 10-degree arc for smooth operation. The set includes 6 pt, 1/2" drive sockets in the following sizes: 1/2", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1", 1 1/16", 1/18" and 12-19mm, 21mm, 24mm; 1/2" drive extensions (3" and 6"); 1/2" swivel U-joint; and 1/2" regular ratchet. The set comes in a sturdy organization case with replaceable metal latches.

Circle 71 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



**Inspect multiple pre-trip vehicle components**

Unique Truck Equipment's Pre-Trip Inspection Tool allows drivers and technicians to perform pre-trip inspections easily and accurately, according to the company. The tool can check multiple vehicle components, including tire tread wear, brake stroke, brake shoe thickness and size of windshield crack.

Circle 72 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

# The Best Air Ratchets in the market!

**SP-1764 (1/4")**  
**SP-1765 (3/8")**  
**SUPER FAST MINI IMPACT RATCHET**

**500rpm/55ft.-lbs.**

**IMPACT MECHANISM PATENTED**

Single Dog Clutch

**SP-7260 (1/4")**  
**SP-7265 (3/8")**  
**SP-7265W (3/8" Wobble Drive)**  
**SEALED FLAT HEAD MINI RATCHET**

**360° Exhaust Sleeve**

Reverse Lever  
• One-handed operation.

Air Regulator

**PATENTED Sealed Flat Ratchet Mechanism**

**Sealed Flat Head For Long Life**

**SP-7786 (3/8")**  
**SP-7787 (1/2")**  
**HEAVY-DUTY SEALED FLAT HEAD RATCHET**

**360° Exhaust Sleeve**

Reverse Lever  
• One-handed operation.

## MADE IN JAPAN

**SP AIR** U.S.A. CONTACT

SP AIR USA, Inc.  
Toll Free 855-438-5313 E-Mail: [sales@spairusa.com](mailto:sales@spairusa.com)

URL <http://www.spair.co.jp/>  
URL <http://www.spairusa.com/>

Circle 70 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



# FIX MORE CARS FASTER

**OTC DIAGNOSTICS  
POWERED BY BOSCH**



## **NEW 3896 EVOLVE**

*The industry's best and only tool with full-system wiring diagrams*

- Built on the OTC diagnostics platform, engineered to give you more
- Wireless, J2534 compliant VCI
- Dual-band WiFi for secure connections to shop WiFi and wireless VCI
- 10" hi-res touch screen



## **3893 ENCORE**

*Fastest from code-to-fix*

- 30 million on-tool fixes, maintenance tests and symptom assist
- Direct link to Identifix and other tech forums
- Industry-leading light-duty diesel coverage
- 7" touch screen

**Get OTC diagnostics at [otctools.com/fix-cars](http://otctools.com/fix-cars)**

Circle 73 on card, or enter at "e-inquiry" on [VehicleService.bosch.com](http://VehicleService.bosch.com)

# COVER ALL YOUR BASES BEFORE THEY LEAD TO SYSTEM FAILURE

**THE EASIEST, MOST ACCURATE AND COMPACT METHOD OF ADDING DYE**  
TP-8657 A/C & Fluid Leak Detection Kit



SERVICES 1   
R-1234yf COMPATIBLE  
SERVICES UP TO 14 



TO LEARN MORE, SCAN QR CODE OR VISIT:  
[WWW.TRACERLINE.COM](http://WWW.TRACERLINE.COM)

**TRACER PRODUCTS**  
A Division of Spectronics Corporation

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

## New Products



### Audible smart-tones indicate positive or negative readings

The Snap-on Multi-Probe Ultra, No. EECT900, features circuit testing and digital multimeter functionality in a single handheld unit for 12V and 24V DC vehicles. The rear-facing LCD has a color-coded on-screen menu, single-function control buttons and audible smart-tones, for easier detection of AC and DC voltage, amperage and ohms. An AC meter displays peak-to-peak, pulse width, duty cycle, frequency and TRMS simultaneously. The unit has patented circuit breaker protected power-up, built-in vehicle battery status check, and the cable length makes checking distance circuits easy. An ergonomic handhold position allows for viewing live display results even if lying under dash.

## HIGH PRODUCTION RIVET TOOLS



Shown with Pistol Grip (SH) Handle

### GB808HVB POWERUNIT

- Fastest Air/Hydraulic power unit on the market
- Remote hydraulic tool installs 3/32"-1/4" structural/non-structural blind rivets
- Millions of cycles without bleeding
- Light-weight & Ergonomic
- Optional vacuum tube to control F.O.D.



Inline (SR) Handle Available



## GAGE BILT RIVET TOOLS

TOUGH TOOLS FOR TOUGH JOBS

  
MADE in the USA

586-226-1500

[gagebilt.com](http://gagebilt.com)

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



### Formulated to be environmentally friendly

The Renegade Jetwash and Parts Wash Detergents for automatic and manual parts washers are formulated to be environmentally safe and health risk free. The detergents remove grease, soil, paint, corrosion, oil and other contamination from the surfaces of different types of parts.

Circle 77 on card, or enter at "e-inquiry" on VehicleServicePros.com

# STOP CHASING

Large soft-touch controls offer an ideal user-interface



Adjustable display adjusts to suit operator preferences



Features tape-weight holder and feeder



Model DST30P  
MSRP: \$1,910  
\*Free Shipping

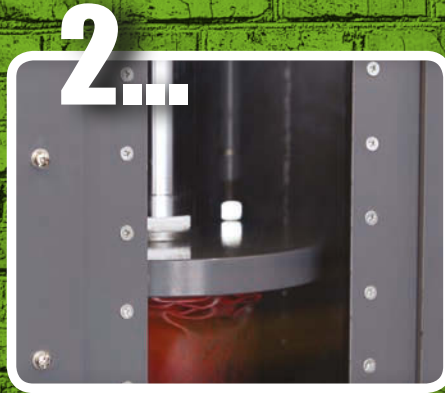
Looking for a one-spin-and-done solution to your wheel vibration problems? Ranger's new DST-30P wheel balancer is a highly accurate, zero-tolerance machine that makes your work faster, easier and more profitable than ever before. Our Eco-balance™ technology precisely calculates the minimum amount of weight needed to achieve an optimal balance, dramatically reducing the weight added per wheel. **Warning:** this will result in REAL savings. If you're tired of chasing weights instead of your dreams, give us a call.

For more info, contact your local BendPak/Ranger dealer or call 1-800-253-2363.

Circle 78 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

\*Free shipping on all Ranger Products to most areas in the 48 contiguous states.  
© 2017 Ranger Products • BendPak Inc. and Ranger Products are registered marks.

**R Ranger**



# CRUSHER

## RECYCLE & REPEAT

**MRP**  
**\$4,850**

**NEW**



**50,000 LBS.**  
**OF CRUSHING**  
**POWER!**

Circle 79 on card, or enter at "e-inquiry"  
on [VehicleServicePros.com](http://VehicleServicePros.com)

### QUICK SPECS /FEATURES

- 2HP electric-hydraulic pump
- Save on waste disposal cost
- Features automatic or manual cycles
- Welded steel plate construction
- Transparent door for convenient view
- Cycle time approximately 8 to 15 sec.

### RP-50FC | OIL FILTER CAN CRUSHER

The RP-50FC high-speed oil filter crusher harnesses 50,000 lbs. of crushing force to flatten just about any car or truck oil filter to 20% of its original size in mere seconds. Reduce filter collection costs, save money on environmental fees and permits and earn extra cash when you start recycling the oil and scrap metal filter pucks. Visit our website [www.rangerproducts.com](http://www.rangerproducts.com) or call 1-800-253-2363 to learn how Ranger can help your business go green, save green and make green with the RP-50FC oil filter crusher.

Call **1-800-253-2363** or Visit [rangerproducts.com/RP-50FC](http://rangerproducts.com/RP-50FC)

\*Free shipping on all Ranger Products to most areas in the 48 contiguous states.  
© 2016 Ranger Products • Ranger Products is a registered mark.





## Integrated 120V power strip

The Cornwell Pro Series 76" Toolboxes are made from 14 to 18 gauge heavy duty U.S. steel. The drawers range from heights of 4" to 10" and fit into a 25" deep cabinet. The toolboxes have a polished chrome handle and an integrated 120V power strip with three outlets and two USB ports. The 6" by 2" casters provide mobility. The toolboxes also feature standard TLC locking drawers, an electronic keypad lock, foam drawer liners and an embossed Cornwell rubber top mat.

Circle 80 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



## Designed for removing stripped fasteners

The Stripped Hex Screw Sets by Cal-Van Tools are available in metric (No. 439) and SAE (No. 440) sizes. These 9-pc sets are designed for removing rounded or stripped fasteners with internal drive heads, though they can be used on new screws as well. The sets feature a reverse twist in the hex key that bites into the stripped out hex for easy removal, according to the company. The sets come in a full range that removes most common sizes.

Circle 81 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

## Available in SAE or metric sizes

The KT Pro 47-pc Socket Set comes in SAE and metric sizes, as well as 6- and 12-point options. The sets include a reversible 8" ratchet, and 3" and 6" extension bars.

Circle 82 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



**LINCOLN**<sup>®</sup>



Model 5900

## Simplify the lubrication process

Lincoln's PowerLock grease coupler optimizes lubricant delivery. This easy-to-use coupler features a reverse-jaw design that holds the fitting securely to the seat for less grease bypass and lower lubricant costs.

### PowerLock coupler advantages:

- Lever activated for quick attachment and release from fitting
- Enables one-handed operation
- Durable, all-steel construction
- Ergonomic design with protective grip
- Flexible rubber sleeve offsets applied pressure and protects hose from wear
- Pressures up to 10,000 psi

Find out more at  
[MoreLincoln.info/ptn417](http://MoreLincoln.info/ptn417)  
or call 800-435-9599

© SKF is a registered trademark of the SKF Group | © SKF Group 2017  
© Lincoln is a registered trademark of Lincoln Industrial Corp.

**SKF**<sup>®</sup>

Circle 83 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



## Powered for productivity. Designed for automotive.



**T**he BWP151 BL-Spec ½" Brushless Impact Wrench is a heavy-duty, high-torque tool suitable for the automotive shop professional. The Brushless Motor Technology gives our BWP151 ½" cordless impact up to a 65.5% torque increase when compared to the existing brushed model (½" cordless impact BWP050). It can also remove up to 37% more bolts per charge vs a brushed tool (BWP050) with a 3AH battery. The BWP151 gives the user the ability to remove 740 nuts per charge on average when removing a 1-7/16 nut at 100 ft. lbs. with a 4AH battery.

Mac Tools continues to build its family of cordless products with BL-Spec Brushless Motor Technology. BL-Spec tools incorporate powerful motors in a compact package allowing the automotive technician the flexibility to complete a wide variety of jobs quickly, meaning they will be more productive. Without brushes to replace, efficient brushless motor technology offers long runtime, extremely beneficial to the automotive technician. These new tools are powered for productivity and designed for automotive applications.

The tool is powerful - this impact wrench has the capability of 1,200 ft. lbs. of max reverse breakaway torque and 700 ft. lbs. of forward max torque. Manufactured with a glass-filled nylon housing, the BWP151 is built to withstand corrosive automotive solvents and fluids common to the automotive repair environment. A 3-speed selector allows for slow reverse and precision forward control in low-RPM speed 1 (0-400 RPM), mid-RPM speed 2 (1,200 RPM), and high-RPM speed 3 (1,900 RPM). Since October 2016, the BWP151 has been made in Charlotte, North Carolina with global materials.

The BWP151 is available bare at \$299.99 or kitted with two 20V MAX 4.0Ah R-Spec batteries, battery charger, and kit bag (BWP151-M2) at \$569.99. The R-Spec batteries are resistant to various solvents and fluids common in automotive including but not limited to: gasoline, kerosene, motor vehicle brake fluid, motor oil, and transmission fluid. BL-SPEC tools come standard with a three year limited warranty.

[MACTOOLS.COM](http://MACTOOLS.COM)

# BL SPEC™ BRUSHLESS MOTOR

POWERED FOR PRODUCTIVITY.  
DESIGNED FOR AUTOMOTIVE.

**BWP151** 20V MAX\* 1/2" DRIVE HIGH TORQUE BRUSHLESS IMPACT WRENCH (TOOL ONLY)



Proudly Made in  
Charlotte, NC, USA  
with Global Components

- Ability To Remove 740 Nuts Per Charge\*\*
- Up to 65.5% Torque Increase\*\*\*
- Removes Up to 37% More Bolts Per Charge†

## **BENEFITS OF BRUSHLESS:**

Powerful Motor - Compact Design  
Long Runtime On a Single Charge  
No Brushes to Replace



Battery and charger  
sold separately

# MAC TOOLS®

Visit [MACTOOLS.COM](http://MACTOOLS.COM)  
or Contact Your Local Mac Tools Distributor

\* Maximum initial battery voltage (measured without a workload) is 20 volts. Measured under a workload, nominal voltage is 18.

\*\* BWP151 when removing a 1-7/16" nut at 100 ft. lbs. with a 4 aH battery \*\*\*BWP151 compared to Mac Tools brushed tool BWP050

† BWP151 vs. brushed tool BWP050 with a 3 aH battery

Circle 85 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

© 2017 Mac Tools

# Different clamps call for different pliers.

## KNIPEX makes them all.



**W**ith the many different types of clamps that need to be opened and closed, just one pair of clamp pliers will not do. However, one pliers maker will do it all – KNIPEX. With distinct styles, KNIPEX builds specific functions and features into each hose clamp pliers to best fit the different types of clamps.

KNIPEX's award-winning, patented hose clamp pliers open and close spring band hose clamps quickly and efficiently, from any angle and in the tightest places. The hose clamp pliers, part of KNIPEX's Cobra® QuickSet line, have the same features as Cobra pliers, with the added benefit of universal, rotatable tips for tight grabbing. The pliers are made to open multiple types of spring band hose clamps, up to 3 inches in diameter. Distinguished by a push-button for fine adjustments, these pliers are quick and comfortable to use.

The easy-to-use KNIPEX locking hose clamp pliers keep the spring band clamps open and locked in position without the need to grip and hold onto the pliers until the user is ready to move the clamp. The pliers feature a lock which opens at the touch of a button and rotatable tips to reliably grip hose clamps in all positions. The pliers can be used on a variety of clamps up to 2 3/4 inches in diameter and offer leverage to allow clamps to be easily opened and moved without exerting great effort.

Click clamp pliers from KNIPEX are designed to easily open and close click clamps in all positions. The pliers eliminate the need to replace OEM clamps with screw clamps and are built to not damage the compressed clamps, allowing the clamps to be used over and over again. Designed for work on fuel hoses, vacuum pipes, suction nozzles and many other applications, the series features maximum leverage for opening and closing clamps without much effort. Rotatable tips reliably grip click clamps in all positions.

Durable KNIPEX ear clamp pliers offer simple and reliable clamping of 1- and 2-ear clamps. Available in front jaw and



dual front and side jaw options, the pliers are designed to not damage the press points on the ear clamps of a workpiece. The ear clamp pliers are ideal for work on CV boots, coolant and fuel lines, air pressure systems and compressors. The pliers come in two options: single and double jaw. The dual-jaw ear clamp pliers option has an additional side jaw for easy clamping at a 90-degree angle when space is limited.

One pair of clamp pliers won't handle all the types of clamps, but one pliers maker will. ■

[www.knipex-tools.com](http://www.knipex-tools.com)



KNIPEX Quality – Made in Germany



# BIG BROTHER IS HERE! THE NEW 10" XL COBOLT.

Part Number: 71 01 250

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

The question we hear the most is, "Can you make the CoBolt bolt cutter longer?" Yes, we can and we did!

Introducing the new 10" XL CoBolt Bolt cutter! This powerful tool will cut hard materials with less effort and hand force than before. Laser-etched cutting edges reduce slippage of material. Available with straight blades or with a notch for easier cutting of larger cross-sections. This tool has been designed to make your cutting jobs easier and with less effort.

**See a video of this tool:** [bit.ly/coboltxl](http://bit.ly/coboltxl)



NEW 10" XL CoBolt

Original 8" CoBolt

©2017 KNIPEX  [facebook.com/knipex.us](https://facebook.com/knipex.us)

Circle 87 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



# 3-in-1 Multi-Use Rechargeable Diagnostic Work Light

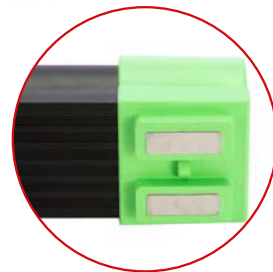
[www.oem-tools.com](http://www.oem-tools.com)

**T**he OEMTOOLS™ 24609 3-in-1 Rechargeable Multi-Use Work Light is your go-to work light—powerful illumination, reliable diagnostics and a dependable back-up power source.

This work light features a bright white light, a yellow light setting for smoke detection and a UV light for A/C leak detection, so you won't need multiple lights for each job. It is also equipped with a built-in power bank, this work light will charge your portable devices anywhere. Built tough, with a lightweight aluminum body, makes this light easily portable to keep in your tool bag and ready for any job. The white light is bright with 400 lumens and lasts more than 5 hours. The light holds a charge for a longer runtime with a 4400 mAh li-ion battery. It has strong magnets on each end that attach to most ferrous surfaces making it the perfect light for under the hood work. It features a digital battery indicator screen to display the remaining battery life so you always know when it needs to be charged. The runtimes range from 5.5 hours (white and yellow lights) to 12.5 hours for the UV/black light. It includes a universal micro USB charging cord. Accessory kits are available. ■



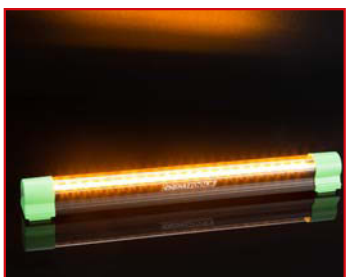
USB Port



Magnetic Ends



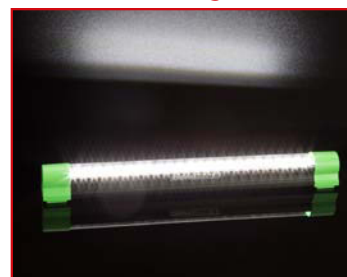
Smoke Detection



UV Detection



White Light





# THE MOST INNOVATIVE 3-IN-1 DIAGNOSTIC WORK LIGHT

13.4" Multi-Use Rechargeable Diagnostic Under-the-Hood Work Light

UV Leak  
Dye  
Detection  
Light

400  
LUMENS  
Super Bright  
Work Light

Yellow  
Smoke  
Detection  
Light



Digital Charge  
Level Indicator



Charge Devices  
with Universal  
USB Port

Magnetic  
Ends

The Light That Does It All

Search #24609 at [oem-tools.com](http://oem-tools.com).

Available through better distributors.

Circle 89 on card,  
or enter at "e-inquiry" on  
[VehicleServicePros.com](http://VehicleServicePros.com)



**Mastercool<sup>®</sup>**  
"World Class Quality"

# Mastercool USA introduces its new **ARCTIC COMMANDER** line of RRR machines

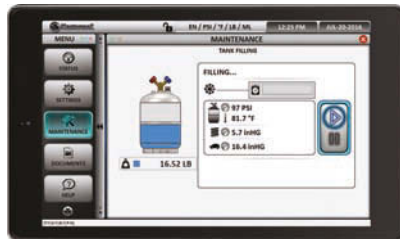
**E**quipped with the latest technology, all models come standard with an 8" color touch screen command center. The graphic interface will enable navigation through all of the functions and features with the greatest of ease. There is no longer a need to read any external instructions or paper manuals, simply sit back and watch as the information is played on the color command center.

The Arctic Commander series of machines incorporate a powerful windows based tablet, making database and software upgrades a breeze. Wi-fi capability allows our technicians access to any machine throughout the world using the team viewer program to aid with any troubleshooting issues.

Keeping the busy technician in mind, the Arctic Commander machines provide enhanced features such as a visual indicator light, on-board conversion calculator and self-diagnostic check. The visual indicator light provides real time progress of the machine status. The conversion calculator allows for the immediate conversion between pounds, ounces, grams and kilograms. The self-diagnostic check can be performed with a simple touch of a button. ■

For more information contact:  
[www.mastercool.com](http://www.mastercool.com)  
(973) 252-9119

## Fully Responsive Touch Screen



**TANK FILL SCREEN**  
View real time progress of tank filling with pressures and temperatures



**VACUUM SCREEN**  
Fully customizable options allow the user to program vacuum and leak test times



**OIL INJECTION SCREEN**  
View real time oil injection and waste oil collection with displayed weights



**MENU SCREEN/STATUS**  
View all pressures, temperatures, refrigerant and oil weights. View vacuum pump run time and oil change



**SETTINGS SCREEN**  
Allows the choice of language, units, temperature, volume and weight measurements



**MAINTENANCE SCREEN**  
Allows for real time diagnostic feedback. Displays all component info

# ARCTIC COMMANDER

RECOVERY / RECYCLE / RECHARGE MACHINES



COMMANDER4000  
R1234YF & HYBRID



COMMANDER3000  
R134a & HYBRID



COMMANDER2000  
R134a FULLY AUTOMATIC



COMMANDER1000  
R134a SEMI AUTOMATIC



## It's about time somebody introduced R/R/R machines for the 21<sup>st</sup> century!

	COMMANDER4000 R1234YF & HYBRID	COMMANDER3000 R134a & HYBRID	COMMANDER2000 R134a FULLY AUTOMATIC	COMMANDER1000 R134a SEMI-AUTOMATIC
8" Color Command Center with Touch Screen	✓	✓	✓	✓
Automatic and Manual Procedures	✓	✓	✓	manual procedures only
Refrigerant Database	✓	✓	✓	optional
Automatic Vacuum Leak Test: Programmable	✓	✓	✓	✓
Auto Oil Discharge, Auto and Manual Air Purge	✓	✓	✓	✓
Auto Filter and Full Tank Alarm, Low Refrigerant Alarm	✓	✓	✓	✓
Auto Oil Injection	n/a	n/a	✓	n/a
Thermal Printer	✓	✓	optional	optional
Hose Flushing	✓	✓	n/a	n/a
Vehicle A/C System Flushing	✓	✓	n/a	n/a
Tank Heater	✓	✓	✓	✓
Vacuum Pump	6 CFM	6 CFM	6 CFM	3 CFM
Refrigerant Identifier	✓	n/a	n/a	n/a
Multiple Languages	✓	✓	✓	✓
New Cabinet Design for Increased Air Flow	✓	✓	✓	✓
Hard Wired Power Cord and Hose Coupler Storage	✓	✓	✓	✓
Solid Durable Wheels with Locking Casters	✓	✓	✓	✓
Multi-colored LED Status Bar	✓	✓	✓	n/a
Wi-Fi Capable	✓	✓	✓	✓

Circle 91 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



**Mastercool**<sup>®</sup> Inc.  
"World Class Quality"

PHONE: 973-252-9119  
FAX: 973-252-2455  
[WWW.MASTERCOOL.COM](http://WWW.MASTERCOOL.COM)

# Ultra Ding Massager Paintless Dent Repair



## WHAT IS PDR AND WHEN IS IT USED?

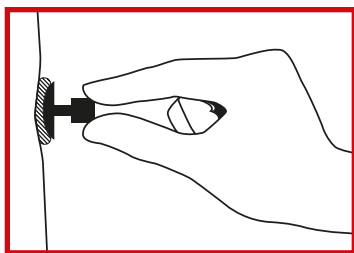
Paintless Dent Repair (PDR) is an effective repair technique used for removing small to medium sized dings and dents without the need for filling, sanding, or repainting the damaged areas. The most common PDR methods used to fix dings in OEM paint utilize a push or pull approach. The push method uses metal rods to push and massage the dent from behind. The pulling method uses various shaped and sized plastic nibs that are glued to the dent. A pulling tool is attached to the other end of the nib and the dent is tapped, pulled, or massaged out.

Location and size of the dent determines which repair solution is best. A glue and nib system like the Ultra Ding Massager is the best solution when there is no access to the back of the panel or when you are trying to avoid drilling an access hole. Glue pulling is easier for the novice but requires patience, as multiple pulls will be necessary. Working your way down from larger to smaller nibs as the dent lessens.

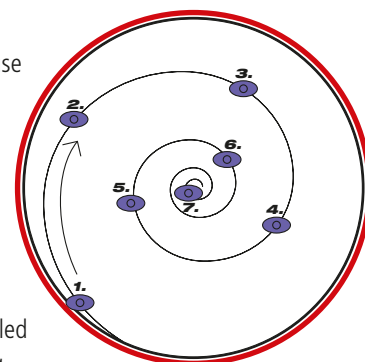
## HOW DOES THE ULTRA DING MASSAGER PDR KIT WORK?

The repair area and the bottom surface area of the nib must be free of wax, grease, and dirt before any nibs are applied. It is also important for the damaged surface to be shaded and cool.

Hot glue is always applied to the entire bottom surface area of the plastic nib before being placed gently on the dent surface. For small dents place the nib with hot glue already applied, to the lowest point of the dent and float the nib approximately 1/8" between the panel and nib surface until the glue dries and hardens (10 to 20 seconds). Allow 2 to 3 minutes for the glue to fully set and then attach the Slide Hammer, Squeeze Puller, or T-Puller to the nib. Pull softly at first, gradually increasing tension & force. The Slide Hammer should be used for tapping action and not used with full force. A quick or forceful pull can release the bond prematurely or break the nib.



For the larger dents, use the gluing process from above but start gently pulling from outside, where the dent is shallowest, and work your way in towards the deepest valley. Multiple nibs will be gulled to the panel while going around pulling outside in different locations.



Crease pulling is now possible thanks to the newly included three piece Crease Nib Set. Using the same gluing technique as before place the Crease Nib "spine" inline with the valley of the crease. The two "wings" of the nib surface should be on either side of the valley. The wings apply lateral and uniform pulling to gently coax the crease back into place.

## WHERE CAN I FIND MORE INFORMATION ABOUT THE ULTRA DING MASSAGER?

Contact your local tool distributor or go to our website. ■

[www.dentfix.com](http://www.dentfix.com) | 1.800.523.1751



# automechanika

## Windy City hosts Automotive Service and Collision Repair Week in July

**N**ACE Automechanika brings together the largest gathering of automotive technicians, shop owners, distributors and manufacturers with a showcase of hot cars, cool products, state-of-the-art technology and first-rate training.

The strategic alliance between the International Autobody Congress & Exposition (NACE), the premier event for the U.S. collision repair industry, and Automechanika Chicago, the largest U.S. trade show dedicated to high-end technical and management-related training, will descend on Chicago July 26-29 at McCormick Place West. With a concentrated goal of training the industry, attendees can take advantage of tracks for both mechanical and collision shops in a strong educational line-up, supported by exhibits ready to demonstrate the new technology and techniques covered in the training program.

A not-to-be-missed event, join an estimated 10,000 attendees with more than 600 exhibitors not only from the US, but Germany, Canada, Italy, Spain, Poland and more. Take part in dozens of interactive product demonstrations. The show will allow you to network with hundreds of industry professionals from the novice, student tech, automotive "lifer", expert trainer and TV celebrity to the YouTube sensation. Here's your chance to see the latest the automotive aftermarket has to offer – right in your own backyard.

Featuring hundreds of major domestic and international manufacturers, NACE Automechanika Chicago represents the prime location for sourcing new products and suppliers. You will gain access to the entire supply chain from parts and components; accessories and customizing; repair and maintenance; management



and digital solutions; car wash, care and reconditioning; and electronics and systems. In addition, there is an increased emphasis on Truck Competence. Highlights throughout the event will focus on the heavy duty/commercial vehicle arena, from truck parts, accessories, workshop equipment to body repairs and care.

Registration is open. Just visit [NACEAutomechanika.com/register](http://NACEAutomechanika.com/register) and take a step towards improving your future with free training and a greater insight on industry trends.

Check out some of the highlights happening this week.

### Hit the Floor

- **The Hot-Spot Welding Center:** Get a birds-eye view of welding techniques all day, every day.
- **Career Connection:** Connect with the hottest jobs in your field, speak with career counselors, learn about résumé building, and pick up your training certificates.
- **Commitment-to-Training Lounge:** Stop by and connect with the industry's leading trainers in a relaxed environment.

- **Innovation Zone:** Catch a glimpse of the industry's most innovative automotive products and services.
- **OE Coliseum:** Your one-stop shop for all OEMs: Toyota, Nissan, Fiat/Chrysler, GM and more.
- **Scan-A-Palooza:** Listen to industry guru, Mike Anderson, as he gives real insight into the world of diagnostics.
- **The Shop of the Future:** Powered by AutoVitals.
- **Tool Alley:** Check out the latest, greatest tools and equipment hitting the market, powered by PTEN.
- **Virtual Stage:** Step into the driver's seat and get hands-on training without getting dirty, or even touching a vehicle.
- **Automechanika Train Station:** Exhibitors will share how to become more efficient using their products and services. Training every hour.
- **The Collection – Dealer Driveway – The Parking Lot:** The hottest cars in these special vehicle areas! ■

For more information go to:  
[www.NACEAutomechanika.com](http://www.NACEAutomechanika.com)



# NACE automechanika CHICAGO

America's leading international trade fair for the automotive service industry targeting trade visitors from the US & Canada



Exhibition: July 26-28, 2017  
Training: July 27-29, 2017  
McCormick Place West, Chicago, IL

## DISCOVER THE LATEST ADVANCEMENTS AND TECHNOLOGY ALL UNDER ONE ROOF

Explore **CUTTING-EDGE EQUIPMENT** from more than 600 exhibitors!  
Find all the latest tools to **BOOST SHOP EFFICIENCY!**  
Expand your skill set at more than 100 **FREE TRAINING** sessions!



[www.NACEAutomechanika.com](http://www.NACEAutomechanika.com) | [www.NACEAutomechanika.com/register](http://www.NACEAutomechanika.com/register)

AFTERMARKET BUSINESS **WORLD** *Motor Age*

Circle 95 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



messe frankfurt

# Choosing the right tool for diagnosing a MAF sensor issue

A side-by-side comparison of a scan tool versus a lab scope, for mass air flow fault diagnosis.

For this Tool Briefing, we take a unique approach of comparing a number of different tools to use with the same diagnosis.

By Barry Hoyland, Contributing Editor



**TOOLS USED:**

- Vehicle information source
- Scan tool
- Lab scope

In the April 2016 Tool Briefing, we discussed how choosing the correct tool can save valuable time by allowing you to obtain a quick and accurate diagnosis. In that issue, we compared diagnosing an oxygen sensor issue using a DMM, a waveform viewer, a scan tool and a lab scope. This month we will be comparing the use of a scan tool and a lab scope to diagnose a mass air flow (MAF) problem.

## OBTAIN VEHICLE SYSTEM INFORMATION

In order to understand both the diagnostic process and the value of any tool, it is necessary to understand how the system works and what, if any, other components are related to the system you are working on. Along with system operation information and specifications, check for technical service bulletins (TSBs) that pertain to the specific vehicle. TSBs can be issued for common failures such as a wiring repair, an updated component, or in some cases, a reprogram of the PCM.

By far the best resource for this information will be within a repair information database such as Identifix Direct-Hit. Information necessary to understand the specific operating parameters on the vehicle you are working on are typically found in the “system and operation” category.

How other sensors are utilized in a system to verify system operation or are used in a calculation of another sensor’s value should also be researched. If any codes are present, it is also very helpful to obtain the specific component operating conditions required to set the code. This data is found in your repair database as well.

## THE SYSTEM: A BACKGROUND ON THE MAF SENSOR

Generally speaking, the mass air flow (MAF) sensor is the primary data input to the vehicles’ fuel management system

**▲ Here, more detailed information found through Identifix's Direct-Hit database, on a MAF sensor.**

**This shows scan tool information with regards to the MAF sensor, obtained from Identifix. ▶**

MAP Performance Test	MAP Performance Test 1	MAP Performance Test 2	TP Performance Test	DTCs: Passed	DTCs: Failed
—	—	OK	OK	P0101, P0106, P0121, P1101	None
OK	OK	Fault	Fault	P0101, P0106, P0121, P1101	None
Fault	OK	Fault	OK	P0106, P0121, P1101	P0101
OK	Fault	Fault	OK	P0101, P0121, P1101	P0106
Fault	Fault	Fault	OK	P0121, P1101	P0101, P0106
—	—	OK	Fault	P0101, P0106, P1101	P0121
OK	OK	Fault	Fault	P0101, P0106, P0121, P1101	None

MAF Sensor	—	3-6 g/s (varies with altitude)	The scan tool displays g/s. The scan tool displays a range of 0.0-655 g/s. The mass air flow (MAF) is the MAF input frequency converted to grams of air per second. This indicates the amount of air entering the engine.
MAF Sensor	—	1,200-1,300 Hz (varies with altitude)	The scan tool displays a range of 0-21,000Hz. The MAF sensor is a hot wire type air flow sensor. The ECM converts current draw needed by the MAF to keep the hot wires at a constant into a frequency signal. The scan tool displays...

to calculate how much air is entering the engine. This allows the management system to provide the correct amount of fuel by varying the fuel injector pulse width, or injection timing, to match the amount of air entering the engine. Knowing how much air is entering the engine, the PCM is able to calculate the correct air/fuel ratio under all conditions.

Another factor used to determine fuel need is engine load. Air flow combined with throttle angle and RPM determine engine load. The PCM uses engine load

to calculate the amount of fuel required to maximize performance, fuel economy and operate within the emission parameters for the vehicle at all times.

To simplify the technology used by most MAF sensors, a heating wire or film element is placed within the sensor to heat and maintain the element to a specific temperature above ambient air temperature. As air flows across the sensing element the amount of current used to maintain the specific temperature is measured to determine the



Lab scope  
**VS.**  
Scan tool

▲ A lab scope will provide a real-time visualization of what the sensor is doing based on changes at the time they occur. For more information on the Pico Technology PicoScope Advanced Automotive Kit, No. 4425, visit: [VehicleServicePros.com/12062840](http://VehicleServicePros.com/12062840)



▲ Be sure the diagnostic scan tool you use for this diagnosis provides freeze frame data, graphing capabilities and access to wiring diagrams and graphing. For more information on the Snap-on VERUS Edge, visit: [VehicleServicePros.com/12120614](http://VehicleServicePros.com/12120614)

quantity of air entering the engine. In essence, more air flowing across the sensor will cause it to cool and it will need more current to heat the sensor back to the required temperature.

Current is measured and calculated to determine the amount of air flowing across the sensor. Because the MAF sensor is heating the element to a specific temperature above ambient air, the PCM

needs to know what the ambient air temperature is in order to set the heated temperature target.

## 1 DIAGNOSIS WITH A SCAN TOOL

Start with obtaining any fault codes and look at freeze frame data associated with any codes that are present. Remember, some scan tools will default

to providing freeze frame data for the first code, or the highest priority code, that was recorded. With that in mind, make sure the freeze frame data is for your specific code.

Fault codes related to MAF sensors can be either performance-related due to higher or lower current than expected, or they can be codes for a MAF heater circuit caused by an open or short.


Other codes that can be related to MAF sensor issues include lean or rich fuel delivery. These can be due to a MAF sensor over- or under-reporting the amount of air entering the engine. Additional issues can be due to mechanical engine problems such as exhaust restrictions not allowing exhaust to escape and causing it to back up into the intake system, restricting fresh air from entering the intake.

Armed with any codes, follow the recommended fault tree for diagnosis and the wiring diagram to verify proper supply voltage and ground circuit integrity to the sensor and heater.

If there are no specific MAF fault codes but you suspect the sensor may be the reason of a rich or lean condition, it will be necessary to observe MAF readings while operating the vehicle under different conditions.

At idle, observe the PID for MAF GPS (grams per second). The widely-accepted specification for this is approximately 1 gram per liter of engine size; meaning a 2.0L engine should read around 2 GPS, a 3.8L engine should be around 3.8 GPS, and so on.

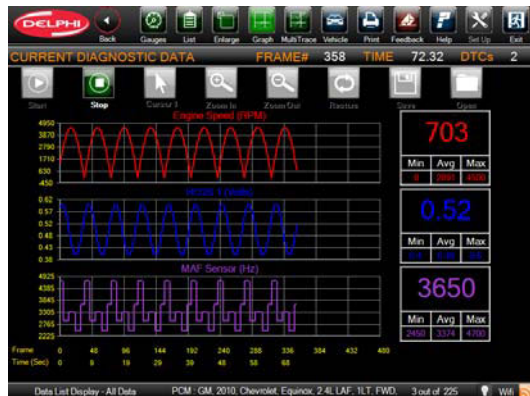
Remember we are speaking in generalities in this article. Due to some newer technologies, such as variable valve timing, intake runner control or some GDI engines that do not have a throttle plate, it is mandatory to check the specifications for the exact vehicle you are working on and use those specifications to diagnose the system.

Some vehicle manufacturers provide specifications for GPS at specified rpm. Using information obtained from Identifix, raise the engine speed to the specified rpm ranges and observe the MAF GPS at the rpm listed. Compare your readings with those obtained 

**VEHICLES AFFECTED:**  
All

**ISSUE:**  
Mass Air Flow (MAF) fault diagnosis

1



▲ This scan tool graphing screenshot compares rpm, O2 voltage and the MAF sensor. Note the graphs all rise at the same rate and time.

CURRENT DIAGNOSTIC DATA		FRAME# 219	TIME 93.27
Ambien			
Description	Value	Unit	
Ambient Temperature	61	°F	
Battery Voltage	14.02	Volts	
Engine Speed	1185	RPM	
Intake Air	79	°F	
MAF	5	gm/s	
Total Fuel Trim #1	0		
Total Fuel Trim #2	0		

▲ This scan tool image shows a reading of faulty MAF. Everything seems somewhat normal until you see the engine size (2.5L) should not be flowing 5 gm/s at 1,185 rpm.

from your database readings— within 10 percent are generally acceptable. If there are small discrepancies, look for contamination on the sensor.

There are some approved cleaners on the market, such as CRC MAF sensor cleaner, that are safe to use for both MAF and oxygen sensors. Other cleaners, such as carb or brake cleaners, can damage the sensing film and should be avoided. Cleaners may work if the contamination has not baked onto the sensing element. If the contamination has baked on, the sensor will need to be replaced.

Use your scan tool to verify operation of other sensors the PCM uses to calculate load and air flow. PIDs for throttle angle and rpm should be checked to verify they are within range and are transitioning smoothly while operating the throttle. Both throttle angle and rpm are used to calculate load so it is critical they are reporting accurately.

Remember to only look at a few PIDs at a time, because the update rate of the scan tool is diminished when you are monitoring multiple PIDs.

Because the MAF is maintaining a heated temperature above ambient air, it is necessary to verify the ambient, or outside, air temperature is measuring properly. Observe the PID to make sure it is reading properly and is not fluctuating. This PID may be listed as “Intake Air

Temperature” on the scan tool.

A useful feature of your scan tool is the graphing feature. You can use it to graph and monitor the MAF sensor to see if it is making smooth transitions as engine rpm is varied up and down, and maintaining a stable reading at any steady rpm. You can also graph MAF, throttle angle and engine rpm to make sure they all correlate as engine speeds change.

We discussed briefly how load affects fuel delivery, and we know that the PCM calculates load using the MAF sensor. Either mechanical engine issues or faulty MAF readings can cause incorrect load values affecting both fuel delivery and performance.

By using the Calculated Load PID on your scan tool, it is relatively easy to determine if it is more likely you have a mechanical or a MAF sensor issue.

Start by warming the engine to normal operating temperature. To be safe, either have an assistant drive the vehicle while you are observing the scan tool readings, or use the record feature on your tool. Accelerate quickly to wide open throttle (WOT) and note the calculated load value and Short Term Fuel Trim (STFT) values.

Normal load values for a naturally aspirated engine are in the 80 to 90 percent range at WOT. This reading equates to how efficiently air is entering and leaving the engine. If readings are

higher than 90 percent or lower than 80 percent, it means either the MAF is misreporting the amount of air entering the engine, or there is a mechanical condition causing a restriction in either the intake or exhaust system.

If the load value is out of range, look at the STFT reading. If it is normal, it means the PCM is delivering the correct amount of fuel matching the amount of air that is entering the engine. It is likely the incorrect load value is caused by a mechanical issue which is restricting air flow and the MAF is correctly reading the amount of air entering the system.

If the load value is incorrect and the STFT value is also correcting fuel by a large amount (over or under 20 percent), then it is likely the MAF is not reporting the amount of air correctly and the PCM is having to make fuel corrections to compensate for varying amounts of air reported by the MAF.

Another way to calculate this is by using a VE (Volumetric Efficiency) calculator formula and entering MAF, IAT and RPM readings from your scan tool. A VE calculator formula can be found at otctools.com.

## 2 DIAGNOSIS WITH A LAB SCOPE

Utilizing a lab scope for diagnosing most automotive sensors is in many cases the preferred method. A lab scope

during a snap throttle test. You are also able to monitor the pattern for “noise,” marked by hash lines, indicating turbulence or erratic sensor operation. The hash lines represent small variations in the signal that can be an indicator of small voltage differences or minor changes in the signal. An example of a minor change in the MAF reading could be a sticking valve causing a pulsation in the air intake stream. This would translate to a small hash line in the voltage signal.

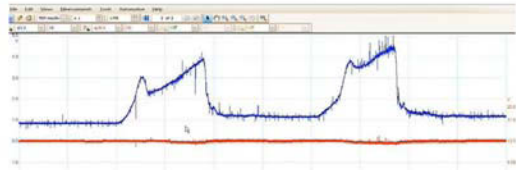
2

## THE APPROPRIATE TOOL FOR THIS DIAGNOSIS

Even though a scan tool and a lab scope will both provide valuable information, using a scan tool will in most cases provide a quicker and complete diagnosis.

This proficiency is accomplished by allowing you to see the multiple PIDs and factors that affect a MAF sensor’s operation more quickly than testing each individual component with a lab scope. **P.TEN**

**Analog MAF Important Point**



◀ *This lab scope screenshot shows the rise in voltage with snap throttle (1V at idle, and around 4V at snap). Being as there are two snaps showing different voltages, numerous tests are necessary to determine a fault. A slight increase in voltage is normal when engine rpm is higher at the beginning of the test and when the test is repeated quickly.*

will provide a real-time visualization of what the sensor is doing based on changes at the time they occur.

For example, you can correlate the signal from a MAF sensor compared to throttle angle and engine rpm to make sure they all respond in the same fashion as engine speed changes. You are able to monitor these same changes with the graphing function of your scan tool with some limitations of how

quickly the tool updates.

The advantage of a lab scope is it allows you to designate the exact time and voltage scales you are using to observe the graphs, possibly giving you the ability to capture glitches you cannot see with a scan tool.

While observing a lab scope pattern, you can see if the response time is reacting quickly to inputs, such as throttle position

## GREASY HANDS DOWN, THE FASTEST, MOST PORTABLE A/C RECOVERY UNIT.

INTRODUCING THE YELLOW JACKET REFRIGERANT MANAGEMENT SYSTEM AUTOMATIC FOR R-134A AND R-1234YF WITH PORTABLE TABLET



### YELLOW JACKET REFRIGERANT RECOVERY SYSTEM FEATURES:

- Portable tablet enables remote troubleshooting/diagnostics
- 30% faster than the competition
- R-134a easily converts R-1234yf with kit
- Colorful, easy-to-use tablet interface
- Made-in-America durability



LEARN MORE AT [YELLOWJACKET.COM](http://YELLOWJACKET.COM)

  
MADE IN THE U.S.A.



Circle 96 on card, or enter at “e-inquiry” on [VehicleServicePros.com](http://VehicleServicePros.com)

# Top 10 Tools



## Top tools for problem solving

Audeliz "Junior" Meijas strives to figure out the problems on vehicles where no one else can. He uses these tools to help him achieve that goal.

*By Stefanie Von Rueden, Assistant Editor*

**TECHNICIAN:** Audeliz "Junior" Meijas

**LOCATION:** Southridge, Mass.

**SHOP:** Five Star Automotive Specialists

Audeliz "Junior" Meijas has worked in a variety of areas in the automotive industry, including chain stores and dealers, since graduating from technical school in 2004. He has worked as a technician for Five Star Automotive Specialists for four years.

"I love the joy of figuring out the problem on vehicles where no one else can," he says. "I really enjoy performing repairs that require a specific set of skills and mindset to complete in the allotted time. I'm almost always up for the challenge."

Meijas works on a wide range of vehicles, since Five Star Automotive Specialists doesn't have any specific specialties. Their goal is simply to employ the most up-to-date software and equipment so that they can provide customers with dealer-level repair and diagnostics at a lower-than-dealer cost.

- 1** This app for Android and iOS offers portable access to Alldata's OEM diagnostic and repair information. "I have everything you can get from Alldata for vehicle service information, all on my tablet," Meijas says. "That's my number-one go-to, all day."  
**Circle 97 on card, or enter at "e-inquiry" on VehicleServicePros.com**
- 2** The PH3050B offers dual elastomer cushions to absorb shock and impact, a direct multi-port front exhaust, a variable speed soft-touch trigger and a built-in air regulator to vary power for different applications. Meijas says that living in New England, he sees a lot of rust, and his motto is, "When in doubt, hammer it out."
- 3** H.B. Products offers an extensive line of Turbosockets for removing damaged hardware. The design works to improve socket grip as more torque is applied. Meijas notes that these turbosockets work great for removing rounded off bolts.  
**Circle 98 on card, or enter at "e-inquiry" on VehicleServicePros.com**
- 4** The SUN3580 set offers many popular sizes of metric and SAE impact sockets. The sockets are forged from alloy steel, meet or exceed ASME specifications and come in a blow molded case. Meijas appreciates that the set is less expensive than what other competitors offer. "They have the same lifetime warranty," he says. "I have quite a few of them, and all of my swivel sockets, in all of the drives, are Sunex."  
**Circle 99 on card, or enter at "e-inquiry" on VehicleServicePros.com**
- 5** The SRRFXLM52T offers a 90-tooth ratcheting system that provides high torque with a 4-degree swing arc. The extended box end provides greater access to recessed fasteners, and the flex end allows access in hard-to-reach areas. Meijas says they are one of his favorites because they can be used for everything.  
**Circle 100 on card, or enter at "e-inquiry" on VehicleServicePros.com**
- 6** Meijas appreciates the Smart Smoke's digital display and push-button start. When connected to a vehicle's EVAP system, the Smart Smoke automatically performs a calibration and leak-test, with pass/fail results in less than five minutes.
- 7** Because the Verus Pro is wireless, Meijas is able to move around the service bay while connected to the vehicle. The Verus Pro offers a scanner, scope, data manager, waveform library, schematics, TSBs, online technical forum, test procedures and verified repair tips.  
**Circle 101 on card, or enter at "e-inquiry" on VehicleServicePros.com**
- 8** The JNC660 offers automatic recharging, provides 1,700 peak amps and 425 cranking amps of starting power. "It gets tons of use," Meijas says. "I use it almost every day on dead cars, and it still fires them up."  
**Circle 102 on card, or enter at "e-inquiry" on VehicleServicePros.com**
- 9** Meijas finds that this funnel saves him money while pouring oil into engines. "You screw the adapter in, put the funnel on and pour the oil in," Meijas explains. "No mess." Lisle's Multi-Application Oil Funnel comes with seven different color-coded adapters and a 45-degree elbow to work on many applications and save storage space.  
**Circle 103 on card, or enter at "e-inquiry" on VehicleServicePros.com**
- 10** These 14" heat-treated pliers remove and reinstall the cable coupler used between the primary parking break cables and the crossover cable. "This thing is awesome," Meijas says. "They could be completely rusted on, and this will take the parking brake cable out of the connector, and also install it. It's amazing how well it works."  
**Circle 104 on card, or enter at "e-inquiry" on VehicleServicePros.com**



Want to show off YOUR Top 10 Tools?  
For more information, email  
[Editor@VehicleServicePros.com](mailto:Editor@VehicleServicePros.com).

# ALLDATA<sup>®</sup>

REPAIR MANAGE MARKET COLLISION

1

ALLDATA MOBILE REPAIR APP

2

SNAP-ON TOOLS HEAVY DUTY AIR HAMMER, NO. PH3050B

H.B. PRODUCTS  
TURBOSOCKETS

3



4

SUNEX TOOLS 80-PC 3/8" DRIVE MASTER IMPACT SOCKET SET, NO. SUN3580



5

MATCO TOOLS 5-PC XL DOUBLE BOX FLEX HEAD RATCHETING WRENCH SET, NO. SRRFXLM52T



6

SNAP-ON TOOLS EELD500 SMART SMOKE



SNAP-ON VERUS PRO

7



LISLE MULTI-APPLICATION OIL FUNNEL, NO. 19342

9



8

CLORE AUTOMOTIVE JUMP-N-CARRY JNC660 JUMP STARTER



10

SP TOOLS PARKING BRAKE CABLE COUPLER REMOVAL TOOL, NO. 10500





# Nes External and Internal thread repair system

Stripped threads are quickly and easily repaired.

**N**es Tools Rethreading System will repair almost any bolt, stud or threaded rod that has damaged, rusted over or just plain gunked-up threads. They will perform this task quickly and easily saving the technician, and his customer, time and money.

Simply hand-tighten the tool on the damaged bolt or stud and spin the device out. Fits all fractional and metric sizes and automatically adjusts to any thread pitch.

**NES 1A:** Fits studs / bolts from: 5/32" - 3/4" (4mm -18mm)

**NES 2:** Fits studs / bolts from: 11/16" - 1 1/2" (17mm - 38mm)

**NES 3:** Fits studs / bolts from: 1 3/8" - 6" (35mm - 152mm)

## INTERNAL THREADS ARE ALSO EASILY REPAIRED WITH THE INTERIOR THREAD REPAIR TOOL

There are 9 Internal thread restoring tools covering bolt hole sizes from 5/16" (8mm) up to 4 1/2" (108mm) all thread counts and pitches.

Simply insert the tool into the damaged thread hole, hand adjust and rotate the tool out of the damaged hole.

Distributed in the US by Anglo American Tools and the best mobile jobbers everywhere. ■



[www.angloamericantools.com](http://www.angloamericantools.com) | 1.856.784.8600

Circle 105 on card, or enter at "e-inquiry" on VehicleServicePros.com

# QUICKLY

repair damaged threads



- Repair BOTH metric and SAE threads—FAST
- Automatically adjusts to bolt size
- Works on right and left hand bolts
- Automatically adjusts to any pitch
- Lifetime warranty on tool body

### NES 1A

5/32" - 3/4"  
(4 - 19mm)

### NES 2

11/16" - 1-1/2"  
(17 - 38mm)

### NES 3

1-3/8" - 6"  
(35 - 152mm)



AVAILABLE FROM THE BEST MOBILE JOBBERS EVERYWHERE!

Distributed in the U.S. by Anglo American Tools

856.784.8600

info: [www.bit.ly/NESquickly](http://www.bit.ly/NESquickly)

video: [www.bit.ly/NesThreadVideo](http://www.bit.ly/NesThreadVideo)



Circle 106 on card, or enter at "e-inquiry" on VehicleServicePros.com





See more at [bartecusa.com](http://bartecusa.com).

# High Powered TPMS and much more

**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 customers typically can service more vehicles and be more profitable doing it.

Bartec USA has served the North American market since 2004, and manages Automotive Assembly Plants, OE Dealers and the entire Aftermarket. In 2017 we are growing our product line with the goal to provide solutions for better vehicle service, while remaining committed to delivering the highest in quality products and support!

program replacement sensors, walk you through completing the TPMS relearn, and when you're done, print an audit report.

### But there's more!

It doesn't stop there by the way. With the Tech400Pro, you can adjust the TPMS placard level, check passive entry and keyless ignition systems, and you can update the Tech400Pro via a wireless internet connection! Try all THAT with a free tool!



### High Powered TPMS Tools

The Tech400Pro is the industry's finest TPMS Diagnostic tool. While the "free tool" manufacturers throw around the word "diagnostic," Bartec makes TPMS diagnostics a reality! The Tech400Pro can detect TPMS fault codes, interpret them,



### Brake, Oil and Battery Management

Today's vehicle technology is advancing faster than ever. That means service tools need to keep pace, while remaining easy to operate. Enter the line of Quick Service Tools from Bartec. The QST300 is an easy to operate service tool that de-energizes electronic parking brakes, resets oil service lights and recalibrates battery management systems, all in one, single and easy to use tool. ■

Circle 107 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

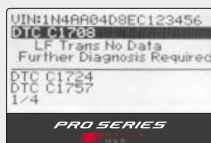
Solutions for better vehicle service



TECH 400 PRO



Better Tools



Real TPMS Diagnostics



Satisfied Customers



## The right formula for a TPMS Diagnostic and Service Tool

### TPMS Service Features That Help to Improve the Bottom Line!

- ✓ More System Relearns through OBDII
- ✓ Placard Pressure Programming
- ✓ Passive Key System Testing
- ✓ Pull TPMS Trouble Codes
- ✓ Bluetooth Data Transfer
- ✓ Wi-Fi Updating



### Bartec On Demand Videos!



Bartec produces loads of training and support material. The goal is to provide our customers the very best in support! Scan the QR code to watch the short training video on your smart device, or go to [bartecusa.com/tpms-tool-training.html](http://bartecusa.com/tpms-tool-training.html)



[bartecusa.com](http://bartecusa.com)  
[855]877-9732

Circle 108 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



IS YOUR SHOP  
SEEING OIL  
CONSUMPTION  
PROBLEMS?

**Guaranteed to:**

- Repair Valve Stem Seal Leaks
- Stop Blue Exhaust Smoke
- Reduce Oil Consumption

**Professional benefits:**

- Reinforced with Synthetic Polymers
- One Dosage Stops Smoking & Oil Burning Guaranteed
- Safe & Easy to Use, and Works Quickly
- Best Repair Formula Money Can Buy
- Synthetic Blend, for All Engines

Works with ALL gasoline and diesel engines.

Use with ALL types of motor oil, including high mileage, synthetic & synthetic blends



Part# VS-1

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

Circle 109 on card, or enter at "e-inquiry" on VehicleServicePros.com

SPECIAL ADVERTISING SECTION



# Valve Seal™ Oil Consumption Repair

The Fast and Easy Repair Solution for Vehicles that Burn Up to One Quart of Oil a Day.

If your customers come to you with an oil consumption problem, you have a fast, cost-effective solution right on your shelf – Bar's Leaks® Valve Seal™ Oil Consumption Repair. It restores valve seals that have shrunk, hardened or cracked due to age, high mileage or storage. This prevents oil from leaking past the seals and burning in the combustion chamber.

If the vehicle isn't burning more than one quart of oil per day, Bar's Leaks Professional Valve Seal Oil Consumption Repair (P/N VS-1) is the perfect remedy. By repairing seals instead of replacing them, you can save your customers time and money. Installing Bar's Leaks Professional Valve Seal Oil Consumption Repair is the fastest, safest way to repair valve stem leaks, stop blue exhaust smoke and reduce oil consumption – without taking the engine apart.

**How does it work?**

- A specially engineered seal restorer additive restores valve seal size, flexibility and elasticity lost due to engine heat, age, high mileage or inactivity during storage.
- An advanced seal polymer builds a polymeric film around the valve seal to help prevent excess oil bypassing the seal during normal engine operation.

Valve Seal Oil Consumption Repair is a synthetic blend that works with gasoline and diesel engines, and all types of motor oils. Once added, it starts to work within 15 minutes of driving or idling the vehicle.

Like all Bar's Leaks products, Valve Seal Oil Consumption Repair is made in the U.S.A.



Learn more at [barsleaks.com](http://barsleaks.com) or call 800.345.6572.

Circle 110 on card, or enter at "e-inquiry" on VehicleServicePros.com



# ATEQ TPMS Service Tools: YOUR TIRE DIAGNOSTIC SOLUTION

**A**TEQ is known worldwide as the leading provider of TPMS service tools. The ATEQ VT56 and VT36 are essential in activating, reading and programming all leading aftermarket and OEM sensors.

## TPMS LIGHT

Figuring out what a dashboard warning light means can be difficult enough, let alone how to turn it off. Drivers are beginning to associate "⚠️" = Tires Need Air" but this solution may not tell the whole story.

## CHECK

Use a TPMS diagnostic tool to compare the vehicle tire pressures to the designated PSI found on your tire information placard, located on your driver's side door jamb.

## INFLATE

Filling your vehicle tires with the proper amount of air is a good place to start when trying to turn your solid TPMS light off, but the issue might not be an underinflated or leaking tire.

## ACTIVATE

A TPMS sensor could be the issue. First, use a TPMS service tool, like ATEQ's VT56, to activate any OEM or universal sensor to read if it is transmitting a signal. Scan the vehicle's VIN to select Make Model Year, then trigger each sensor. Tools display tire pressure, temperature, sensor ID, frequency and battery status data.

## REPLACE

TPMS issues can often be solved by replacing system components:

- TPMS Service Kit Valve Parts
- TPMS Sensor
- TPMS Receiver



## RELEARN

Vehicles equipped with TPMS have a specific set of relearn instructions, which can be conveniently found directly on the VT56, to activate and update communication between the TPMS sensor and the vehicle's ECU, turning off the warning light. ■

Please visit [www.ateq-tpms.com](http://www.ateq-tpms.com) for more information

Circle 111 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

TPMS Solutions  
We turn this OFF!

## TIRE DIAGNOSTICS

### VIN SCAN

MMY Lookup

### ACTIVATE

Sensors

### CHECK

Tire Pressure

### PROGRAM

Sensors

### REPLACE

Sensors

### RELEARN

TPMS

[ateq-tpms.com](http://ateq-tpms.com)

Circle 112 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

# M7 Air Impact Wrench

## Reliability in a small package



**D**oesn't everyone long for a trusty gun that never lets them down? The reliability and consistency of an air impact wrench are the cornerstones of its performance. The line of air impact wrenches from M7 delivers that desired performance, while also being committed to the most innovative design and materials.

Among M7's innovative and quiet line of guns is the impressive NC-4255Q. The first thing most users recognize about this gun is the power to weight ratio; it's much lighter than its counterparts, weighing in at only 3.74 Lbs. Compared to heavier wrenches, the NC-4255Q reduces the fatigue that can result from a heavy tool.

The NC-4255Q features a magnesium alloy and composite material construction. The adjustable torque settings are well set out for workshop use and the dial on the back of the tool has max forward and reverse settings at either end of the dial. There are also two lines in the center, which provide a fixed lower output that combats over tightening.

There are many advantages to the continued commitment to air impact wrenches over battery-powered alternatives. Air impact



wrenches like the NC-4255Q are half the weight and size than their battery-powered counterparts. These qualities prove to be beneficial when working with

an impact wrench any extended period of time. The reliability and consistency of an air impact wrench is of utmost importance in the workshop or on the jobsite.

When considering the design and performance of the NC-4255Q users find a top quality tool that will become a staple in their toolbox.

### Have a question?

Call 800-537-1077 or e-mail [info@calvantools.net](mailto:info@calvantools.net). ■

Circle 113 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

## M7 Air Impact Wrenches

### Often Imitated... Never Duplicated



M7 Air Impact Wrenches provide users with high performance, smaller size and lighter weight!



NC-4255Q

NC-4650Q

[www.mighty-seven.com](http://www.mighty-seven.com)



Phone: 800-537-1077  
Fax: 800-537-1717  
Email: [info@calvantools.net](mailto:info@calvantools.net)

Circle 114 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



# LT1350 Lug Ripper

**T**he Lug Ripper II™ is a state of the art tool that removes seized or frozen lug nuts off of the rim of a vehicle in a matter of minutes. This highly designed tool offers technicians a solution to the never ending problem of removing rusted, seized or frozen lug nuts from a vehicle.

This "one of a kind" tool is a specialized drill bit that is so strong it can cut into four inches of steel up to 200 times. The Lug Ripper II™ is designed to remove lug nuts without damaging the tire rim of a vehicle. The Lug Ripper II™ will save you time and money and will become every technicians "go-to" tool when an immobile lug nut needs to be removed. The name says it all... The Lug Ripper II™, You Strip'em, We Rip'em!

The Lug Ripper II™ is designed for 17mm, 19mm, 21mm & 23mm lug nuts. It is made out of carbide metal strong enough to remove lug nuts multiple times. The cutting head or threads are designed for cutting out the inside of the lug nut only. The center of the shaft is hollow to allow the stud to go inside during the drilling process. The stud will be reduced in size during this process and will need to be replaced. The mounting end has a round shaft that will be inserted into a standard low rpm 1/2" air drill. The Lug Ripper II™ must be used with one of our specially designed guides. We offer 17mm, 19mm, 21mm & 23mm guides for these size lug nuts. The Lug Ripper II™ is a Patent Pending and Trademarked Product. 3 months limited warranty. ■

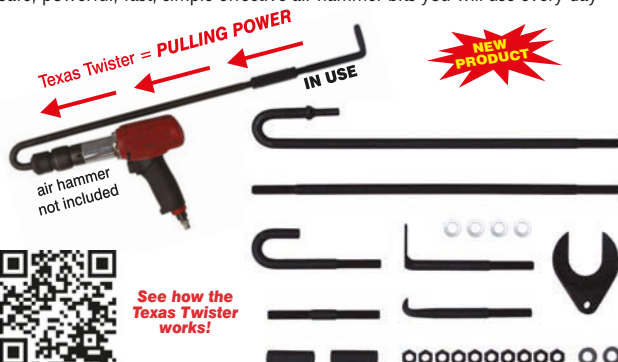


Circle 115 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

## INNOVATIVE PULLING KIT

### LT855 TEXAS TWISTER AIR HAMMER PULLING KIT Patent No. 7,036,211

- Now you can convert your air hammer into a pneumatic slide hammer with the **Texas Twister**
- Simply snap the **Texas Twister** curved air bit into the collet of your hammer with one of the bits attached and reverse the air hammer handle in your hand now using thumb to push the hammer trigger.
- Feel the 3000 air hammer blows per minute tuning into new pulling power
- One hand operation allows you to hold parts with your other hand
- Safe controlled part removal without parts and fluids crashing to the floor
- Use 21st century air hammer pulling power to get the job done **SAFE, FAST & EFFICIENT** instead of a slow, manually powered 19th century slide hammer
- Extend the reach of the tool by using the 20" extension
- Use the double ended male 1/2"-20 connector bar to connect the **Texas Twister** to your current pullers
- Safe, powerful, fast, simple effective air hammer bits you will use every day



**We Make Good Ideas**

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

## EUROPEAN WHEEL LOCK REMOVAL

### LT4150 VW/AUDI WHEEL LOCK KEY KIT

- 23 piece factory reproduced master wheel lugnut key/bolt kit
- Removes all 1st generation 1996-2012 VW/Audi factory wheel lugnut locks
- 22 piece splined lugnut bolts w/nylon sleeved 1/2" drive 17mm installer socket
- Identical to factory set - uses same factory part numbers

### LT4160 BMW WHEEL LOCK BOLT KIT

- 20 piece factory reproduced master wheel lock key set
- Removes all 2nd generation 2009-present VW factory wheel lugnut locks
- Identical to factory set - uses same factory part numbers
- NO WARRANTY - CAN'T BE USED WITH AN IMPACT GUN

### LT4155 VW 2nd GENERATION WHEEL LOCK MASTER KEY SET

- 21 piece duplicate factory lugnut keys
- Removes all 1st generation 1996-2012 BMW internal spline drive wheel locks
- Includes anti-scratch nylon sleeved installer socket
- Identical to factory set - uses same factory part numbers

### LT4165 BMW 2nd GENERATION WHEEL LOCK MASTER KEY SET same as MERCEDES "B" WHEEL LOCK MASTER KEY SET

- 20 piece factory reproduced master wheel lock key set
- Removes all 2nd generation 2011-present BMW factory wheel lugnut locks
- Identical to factory set - uses same factory part numbers
- NO WARRANTY - CAN'T BE USED WITH AN IMPACT GUN

### LT4170 PORSCHE WHEEL MASTER LOCK SET

- Factory duplicate with factory part numbers
- 20 Piece kit works on 2006-present models

### LT4175 AUDI WHEEL MASTER LOCK SET

- Factory duplicate with factory part numbers
- 20 Piece kit works on 2006-present models
- NO WARRANTY - CAN'T BE USED WITH AN IMPACT GUN

### LT4180 MERCEDES "A" WHEEL LOCK MASTER KEY SET

- 30 piece set works on 2006-present MERCEDES factory wheel lug nut locks
- Factory duplicate - uses same factory part numbers
- NO WARRANTY - CAN'T BE USED WITH AN IMPACT GUN
- NOTE: The MERCEDES "B" set is the same as the LT4165 BMW kit shown above. The two kits together will work on all MERCEDES vehicles

Circle 116 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

# FL75R Headlamp

**COAST**<sup>®</sup>  
LIGHTS • KNIVES • MULTI-TOOLS

**T**he FL75R headlamp is Coast's first rechargeable headlamp in the FL series.

This innovative headlamp uses Coast's Flex Charge Dual Power System, having the ability to run off of its lithium ion rechargeable battery pack or 3 x AAA batteries. The lithium battery pack can be charged when inserted into the headlamp or by itself outside of the light, making sure that you're ready for any situation. The FL75R features 3 power modes and boasts an impressive 530 lumens on high. To focus these lumens, the FL75R uses Coast's patented Pure Beam Focusing Optic allowing the user to focus between the Ultra View Flood Beam and the Bulls-Eye Spot Beam. The headlamp also features 2 fixed red LED light to help preserve night vision. The FL75R is available in 5 different colors and each color includes a reflective safety strap for additional safety benefits. ■



Circle 117 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

**FL75R**  
**RECHARGEABLE**  
**PURE BEAM FOCUSING**  
**DUAL COLOR**  
HEADLAMP



**PREMIER HEADLAMP. BRAND NEW COLORS.**



**COAST**<sup>®</sup>  
LIGHTS • KNIVES • MULTI-TOOLS

SEE IN ACTION AT [COASTPORTLAND.COM/FL75R](http://COASTPORTLAND.COM/FL75R)

Circle 118 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



# Dealer-Level Truck Diagnostic Tool

The TEXA Truck Dealer-Level Diagnostic Tool is perfect for the expert technician working on all makes and models of trucks in the commercial truck industry. Compared to the competition, it offers the deepest and widest coverage and functionality in the market. It works on all commercial truck engines, ABS, transmissions, and more. With this tool, perform forced DPF regens, cylinder cut-out and injector programming, view/fix/clear DTCs, change engine parameters, and more.

[www.DieselLaptops.com](http://www.DieselLaptops.com)  
888-983-1975

## Kit Includes:

- CF30 Laptop or Ruggedized Tablet
- Base Diagnostic Software, Adapter, Cables, and Hard Carrying Case
- Code Look-Up and Troubleshooting Software/Applications
- Lifetime License
- 12-Months Technical Support and Updates

## Features:

- One Tool, All Makes
- Dealer-Level Functionality
- Deepest & Widest Coverage
- USA Based Technical Support
- Software Never Stops Working



Dealer-Level Truck Diagnostic Tool Kit



Navigator TXTs Adapter (Included with Kit)

\*Kit is also available in an off-highway version for the construction and agricultural industries.

Circle 119 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



**The Universal Signature Kit** by Diesel Laptops is the perfect scanner for entry-level applications. The heavy- and medium- duty software is designed for commercial trucks, automobiles, and agricultural and construction machinery. Receive live data and view and clear actual OEM flash codes.

## Kit Includes:

- CF30 Laptop or Ruggedized Tablet
- Base Diagnostic Software, Adapter, and Cables
- OBDII Support
- Code Look-Up and Troubleshooting Software/Applications
- 12-Months Technical Support and Updates

## Features:

- Universal Usage - Commercial truck, automobile, industrial, agriculture, and more
- Deep Coverage
- Easy-to-Use
- Plug and Play
- Remote Connectivity for Technical Questions

A Diesel Laptops exclusive, [TruckFaultCodes.com](http://TruckFaultCodes.com) provides complete repair information for DTCs at your fingertips. This easy to use website can be accessed with a laptop, table, or mobile phone. No contracts with instant access and weekly, monthly, or annual membership options.

Receive complimentary, 12-month access with every Diesel Laptops kit purchase. Try it out today for **FREE** for 30 days by visiting [TruckFaultCodes.com](http://TruckFaultCodes.com) and using promo code **TFCPTEN30**.



Circle 120 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

# New AIRCAT 6700 Series

Jupiter, FL January 2017 Florida Pneumatic Manufacturing Corporation is pleased to announce the launch of the new AIRCAT 6700 Series Low Vibration "Lube Free" Orbital and Geared Sanders, designed for Auto Body Professionals.

AIRCAT has developed a series of "lubrication free" sanders that incorporate the latest engineering concepts, advanced materials and patented designs. The AIRCAT technology reduces weight, noise and vibration, while extending the tool life. The AIRCAT "smooth design throttle lever" and the "ergonomic grip" featured in orbital sanders provide unmatched operating comfort.

- A choice of fifteen models 3/32" and 3/16" orbit options
- Non vacuum, central vacuum and self-vacuum options
- 1", 3", 5", 6" and 8" "Hook & Loop" pad options
- Only 1.6 CFM average air consumption and 6.2 CFM continuous running under load



- Advanced silencing technology reduces noise levels 75 – 78 d(B)A
- Patented double sealed, lubrication free motor prevents dust contamination of the air motor eliminating the need for oiling
- Orbital sanders feature the AIRCAT "Smooth Design" throttle lever and "Ergonomic Grip" providing unmatched comfort
- Patented "Anti-Vibration" motor reduces vibration level to 0.8 m/sec<sup>2</sup>
- Low weight...Orbital sanders 2.0 lbs. and geared sanders 3.4 lbs.
- Low profiles...Orbital sanders 4.3" high and geared sanders 4.5"

For further information regarding 6700 Sander Series or other AIRCAT tools, please contact:

**Florida Pneumatic Manufacturing Corporation**

851 Jupiter Park Lane, Jupiter, FL 33458

Toll free 800-327-9403

[www.aircat.com](http://www.aircat.com) | [tony@florida-pneumatic.com](mailto:tony@florida-pneumatic.com)

Circle 121 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



## POWER RELIABILITY PRICE

Three good reasons why professional automotive technicians bought over 50% more AIRCAT air tools in 2016.

They have all of the power and reliability needed and they're quieter and cost less than other leading brands!



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

Circle 122 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)





# LIQUID WRENCH®

## Working Together Since 1941

**F**or more than 75 years, LIQUID WRENCH products have worked alongside the American tradesman, earning their trust through consistent, superior performance and a commitment to innovation.

Our formulas are expertly engineered and rigorously tested to provide anti-seize protection and long-lasting lubrication for professional applications across the automotive, heavy duty, industrial, MRO, outdoor power equipment and original equipment manufacturing industries, as well as, DIY.

Free stuck nuts and bolts, fight rust and corrosion, protect chains and cables and much more with the full-line of LIQUID WRENCH products, including Penetrating Oil, Silicone Spray, White Lithium Grease, Chain & Cable

Lube and Lubricating Oil, to name a few. For jobs big or small, our line delivers solutions professionals rely on year after year for a job well done, every time.

Our top-selling, LIQUID WRENCH Penetrating Oil cuts the toughest rust, grease and corrosion with a no-stain, low-odor formula that is even safe to use on painted surfaces, rubber and plastic. And it's backed by a 100% money-back guarantee.

Made in the USA in Indian Trail, NC, LIQUID WRENCH is committed to providing products and innovations that are as dependable as you are.

For more information visit [liquidwrench.com](http://liquidwrench.com) or contact our U.S.-based Customer Service team at **(866) WRENCH7** (866-973-6247). ■



Circle 123 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

WE'RE PROUD TO BE THE PROFESSIONAL TRADESMEN'S CHOICE TO CUT THE RUST FOR OVER 75 YEARS. LIQUID WRENCH® WORKS AS HARD AS YOU DO TO GET THE JOB DONE RIGHT.

[LIQUIDWRENCH.COM](http://LIQUIDWRENCH.COM)



# AS DEPENDABLE AS YOU ARE

Circle 124 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

# Snap-on Tools Stud Kits and GearLock



In late 2015 Snap-on Tools launched 2 widely popular Stud Remove and Install Kits, MSK10 covering 5 of the most popular SAE and MSKM10 covering 5 most popular Metric size studs. These innovative kits featured a uniquely designed and patented Removal Tool that uses a tapered collet which eliminates thread damage. A separate Install Tool is used to insert and tension down the stud then released from the stud.

## Stud Kit Add-on Kits MSK16 & MSKMA10

Snap-on is pleased to announce the roll-out of expanded coverage for their Stud kits. The MSK16 will include removal and install tools covering 8 new sizes of SAE studs and the MSKMA10 Kit will cover an additional 5 Metric size studs. The add-on kits provide cover for many HEAVY DUTY and INDUSTRIAL applications.

**GearLock Timing Belt Service Tools MLS500KT, MLS500 & CCS100PK** Snap-on is launching another innovative product that locks valve timing quickly saving significant time when



doing timing belt replacement. The MLS500 Dual GearLock is designed for use on Twin Cam and Quad Cam engines. It is aligned and engaged between the cam gears to lock against rotation during timing belt replacement. For some

engine types, and when conducting engine repair work that requires the timing gears to be removed, the timing gears may need to be locked independent of each other. This can be done using the Single GearLock contained in the CCS100PK Single GearLock 4 pc Set. To complete the range of GearLock products offered the MLS500 Dual GearLock and CCS100PK Single GearLock are in a Master Kit part number MLS500KT. ■

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

Circle 161 on card, or enter at "e-inquiry" on VehicleServicePros.com

## We added NEW STUD SIZES.

**ADD-ON KITS.** Additional sizes have been added to increase the coverage of the very popular MSK10 and MSKM10 kits. Now covering many HEAVY DUTY and INDUSTRIAL applications.



**MSKMA10**  
10 Piece Supplement Metric Stud Removal & Install Kit  
M12 x 1.25, M14 x 1.25, M14 x 1.5, M16 x 2.0 and M18 x 2.5



**MSK16**  
16 Piece Supplement SAE Stud Removal & Install Kit  
1/4" x 20TPI, 1/4" x 28TPI, 1/2" x 13TPI, 1/2" x 20TPI, 9/16" x 12TPI, 9/16" x 18TPI, 5/8" x 11TPI and 5/8" x 18TPI

• Unique design removes and installs stud with no thread damage

### Removal Tool



Split tapered collet design provides positive locking.

### Install Tool



Internal ball bearing and hex screw allow tension to be released after stud is installed.

## Lock in VALVE TIMING.

## Gearlock Timing Gear Clamps



MLS500KT



MLS500 Dual Clamp



CCS100PK Single Clamps

Used to hold valve timing during timing belt replacement

Use on - Single Cam Engines  
- Twin Cam Engines  
- Quad Cam Engines



# FREE: Auto and Plant Maintenance Ideas Bulletin

**M**ore than 100 auto and plant maintenance Ideas, collected from maintenance and operations personnel nationwide, are now available in a revised brochure from Kano Laboratories, the makers of Kroil Penetrating Oil.

Included are ideas for removing lug nuts, rusted manifolds, frozen spark plugs, frozen bearings, loosening corroded bolts, frozen brake cables, removing rust, improving belt power transfer, improving engine performance, increasing gas mileage, and much more. Tips were collected from Auto Mechanics, Maintenance Managers and Engineers at Ford, GM, US Steel and many others comprising most of the Fortune 500. Auto and Plant Maintenance Ideas is available at no charge by contacting Kano Laboratories, producers of Kroil since 1939. ■

**Automotive and Plant Maintenance IDEAS**

From the makers of

**KANO KROIL**  
The Oil That Creeps  
LOOSENS FROZEN METAL PARTS

**NEW INDUSTRIAL GRADE**  
65%  
KANO'S AERO KROIL

[www.kanolabs.com/pten](http://www.kanolabs.com/pten)

Circle 125 on card, or enter at "e-inquiry" on VehicleServicePros.com

# Loosens Frozen Metal Parts



## It Works!

Based on Kano's scientific discoveries, AeroKroil creeps into millionth inch spaces, dissolves rust and lubricates to quickly loosen frozen metal parts, free rusted bolts, free frozen shafts ... serving 480 of the Fortune 500 - Since 1939.

Guaranteed to meet your expectations or your money back

**Trial Offer**  
**2 King Size Cans for \$14.50**  
Plus \$5.95 S&H - Delivered to your door  
Call 1-877-347-9407 and ask for the  
**KROIL WORKS Deal**, or go to  
[www.kanolabs.com/pten](http://www.kanolabs.com/pten)

**KANO LABORATORIES.COM**

Circle 126 on card, or enter at "e-inquiry" on VehicleServicePros.com

## E-Z Red Hood Hawk Under Hood Clamp Light System

The reviewer found that the E-Z Red Hood Hawk provides a lot of light without being in the way.

by Stefanie Von Rueden, Assistant Editor

**H**aving adequate lighting enables technicians to be more productive when working under the hood. According to Brian Noel, an automotive professor at the Cosumnes River College in Sacramento, Calif., the E-Z Red Hood Hawk Underhood Clamp Light System provides a lot of light without being in the way.

Noel says the Hood Hawk was easy to set up. As with any rechargeable tool, the light should be fully charged before use. Aside from that, Noel said, the setup was as easy as sliding the light into the hood clamp adapter and clipping the light over the edge of the vehicle's hood.

The light comes with a hood clamp, a pistol grip accessory and a USB cable and AC adapter for recharging. The manual was included but, Noel says, "the product is so easy to use it's almost unnecessary." He does note that it was helpful to know that the light has a high and a low brightness, and what the expected battery life is.

Noel liked that the underhood light could easily be adjusted to provide more light where necessary.

"The Hood Hawk puts out a lot of light, doesn't get in the way and is quick and easy to set up," he says.

He also appreciated that the hood clamp had legs with oversized rubber grips that held onto surfaces without damaging the paint.

For general-purpose task lighting, Noel said that the Hood Hawk was more convenient than a typical drop light or flashlight. He added that for situations where the light needs to be more portable, the Hood Hawk can easily be removed from the hood clamp and attached to the pistol grip, or can even be used by itself.

"The Hood Hawk is useful for almost any maintenance, diagnosis or repair under the hood or undercar," Noel says.

When the light is being used for quick, focused light, it is not as convenient as a regular flashlight, Noel noted, but he says the Hood Hawk puts out enough light that focused light isn't needed as frequently anyway.

### PRODUCT DESCRIPTION:

The E-Z Red Hood Hawk Underhood Clamp Light System, No. XLUHLS, can be used as hands-free illumination under hoods, wheel wells and the vehicle undercarriage. The COB LED provides 1,000 lm on high and 550 lm on low. It is micro-USB rechargeable - both a cord and A/C adapter are included - and provides a three-hour run-time on high, and six hours on low. Padded bumpers protect the clamped surface from damage and provide a secure grip. The light adjusts through two axes, allowing versatility when directing the light onto a work area. It also includes an interchangeable hand grip for handheld use.

Circle 127 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

Noel found the Hood Hawk had an easier setup than other underhood lights he has used in the shop, which typically clamp onto both sides of the hood and straddle in between.

As an improvement for the Hood Hawk, he did suggest making the battery removable so that it would be possible to have a spare fully charged battery.

Overall, Noel found that the Hood Hawk was convenient, easy to use and provided plenty of light and utility without being in the way. **PTEN**



To watch a video demonstration of this product, visit: [VehicleServicePros.com/12267261](http://VehicleServicePros.com/12267261)

## Associated Equipment KwikStart Industrial Jump Starter

The reviewer appreciated the longer 84" length of the leads included with this jump starter.

by *Stefanie Von Rueden, Assistant Editor*

**E**specially in colder weather, technicians need a reliable booster or jump starter to jump start dead vehicles. Eric Moore, owner of DeMary Truck in Columbus, Ohio, found that the Associated Equipment KwikStart Industrial Jump Starter, No. KS401, worked well and was easy to use.

"The KS401 was great for saving technicians the trouble of having to roll out jumper cables and line up an additional vehicle to jump start a dead vehicle," Moore says.

Moore appreciated the almost 84" long charger leads. He also liked that the charger had a USB port for charging personal electronics: something he has noticed is increasingly common for newer boosters on the market. He says the the clamps have good spring tension, and that the enclosed charger allowed technicians to plug the extension cord right in, instead of having to keep track of an adapter or inverter.

When the temperatures dropped just before this past winter, Moore and his technicians used the KS401 to start numerous vehicles, cars, light trucks, snow throwers, a lawn tractor, gasoline-powered medium duty trucks and some smaller diesel trucks. On bigger trucks, Moore says that the KS401, "seemed to start strong but faded fast, and didn't end up starting all of the bigger vehicles."

The KS401 was shipped in a simple box without any accessories. It did include an

easy-to-follow manual that was printed in multiple languages. The only setup involved was ensuring that the KS401 was fully charged before use.

Moore did notice that since the digital voltage display was also a message center, it was sometimes a bit confusing for technicians because of the scrolling text. He ended up printing out an index for the information and taping it to the unit so his technicians could decipher it more quickly. As an improvement, Moore suggests making the information display easier to read or adding an analog gauge so technicians can tell the amount of charge at a glance.

"We had good feedback for the KS401," Moore says. "With the only drawback being that the information display can be hard to understand."

Overall, Moore emphasized how much the longer leads were appreciated by tech's in the shop, in addition to the unit's ease of use.

"The Associated Equipment KS401 jump starter is very easy to use," he says. "There is a large red 'on/off' switch for 12V power, as well as a status button to push for an update on overall charge of the unit." **PTEN**



### PRODUCT DESCRIPTION:

The Associated Equipment KwikStart Industrial Jump Starter, No. KS401, includes light diagnostics displaying voltage output of the vehicle battery, voltage output of the vehicle alternator and 7' long DC cables. The heavy duty portable power unit can be set on the ground and reaches the battery in most 4x4 pickups, sport utility and other high-profile vehicles. An ergonomic, impact-resistant case with rubberized base protects the unit. The 12V 22Ah sealed AGM battery delivers 1,700 peak amps and 360 CCA of cold crank power. The KS401 features a digital LED display with internal battery state of charge readings as well as a 12V power port and USB power port.

Circle 128 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

## SP Air Flex Head Cut-Off Tool

The reviewer says this tool allows for increased maneuverability and utility in some situations.

by *Stefanie Von Rueden, Assistant Editor*



### PRODUCT DESCRIPTION:

The SP Air Flex Head Cut-Off Tool, No. SP-7231, is lightweight and features a three-position flexible head for access to tight work places. The tool has an ergonomic design with a cushion grip handle, rear exhaust, safety throttle lever and built-in power regulator. It has a direct drive motor with a graduated trigger and a metal guard for safety. The SP-7231 can cut muffler and radiator clamps, bolts, sheet metal, fiberglass and steel rods up to 3/4". The cut-off tool has an overall length of 8.6", weight of 2.6 lbs, free speed of 18,000 rpm and air consumption of 4 cfm. This tool is made in Japan.

Circle 129 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

**F**inding tools that work effectively for a certain job can save technicians time and frustration. The reviewer found that the SP Air Flex Head Cut-Off Tool was a well-made tool, but it won't fit every technician's needs.

Brian Noel, an automotive professor at Cosumnes River College in Sacramento, Calif., likes that the tool has a metal shield rather than a plastic one, so it will not be destroyed over time by sparks. He also appreciated the built-in regulator and adjustable exhaust.

"While the tool itself is bulkier than many cut-off tools, the flex head allows it to pivot in different positions, which can increase its maneuverability and utility in some situations," he says.

Noel and his students used the SP Air Flex Head Cut-off Tool primarily in a classroom setting for cutting sheet metal,

metal brackets and general fabrication. For these applications, Noel says this cut-off tool was bulkier than other options, and the flexible head wasn't necessary.

"I could see this tool being very appealing to someone in the collision repair/custom fabrication side of the industry, as it would likely make long cuts in body panels much easier to achieve without awkward positioning of the user's body or hands," Noel says.

Noel found that the tool operated similarly to other cut-off tools in most situations. Using the flex-head feature was as easy as sliding the collar and pivoting the head accordingly.

The tool did require some setup. Like any air tool, the Flex Head Cut-off Tool needed a quick disconnect fitting installed. A cutting wheel also needed to be installed along with the included shield. Noel adds that, if desired, a built-

in regulator can be added to adjust the speed and power output of the tool.

The cut-off tool and shield were boxed along with wrenches to hold the mandrel while installing the cutoff wheel. There was also a one-page brochure about the tool and a generic booklet of precautions applicable to all air/pneumatic tools.

As an improvement, Noel notes that ideally, the tool would have the flex-head and still be able to maintain the slimmer size of other cut-off tools.

"The flex head feature is nice, but is probably overkill for most users outside of collision/custom fabrication areas of the industry," Noel says. "For most general technicians that need to do occasional cutting, the added bulk of the tool probably offsets the versatility of the flex head."

Overall, Noel found that the tool was well made and designed, and could work in a variety of applications. **PTEN**

## Snap-on Diagnostic Thermal Imager

The reviewer appreciates the ability to employ the tool's infrared technology to check for problems just about anywhere on a vehicle.

by Mike Schmidt, Managing Editor

**I**t did not take Barry Hoyland long to see the value in employing the Snap-on Diagnostic Thermal Imager, No. EETH300, and its infrared technology to detect various problems on a vehicle.

The owner of Vehicle Service Solutions of California says he appreciates the thermal imager's ability to be used on nearly every automotive system. According to Hoyland, the tool also provides quite a bit of value as a means to build a database of useful information for future diagnoses.

"If you grab it and just start testing things to form a baseline, then you'll be able to compare future readings to that baseline and start seeing the true value of the tool," Hoyland says.

One useful application for the EETH300, Hoyland says, is for testing whether or not a vehicle's shocks and struts are working properly.

"If functioning properly, a shock and strut will gain heat as you drive the vehicle," he explains. "So, if you have a baseline of what the temperature should be and take it out for a drive, you can see through infrared on whether the temperature is changing properly and if the interval valving of the strut or shock is functioning properly."

According to Hoyland, another specific application the tool would be useful for is addressing a parasitic drain on an electrical circuit.

"I think this would be a quick-grab tool where [technicians] could isolate which

circuit has current flowing through it," Hoyland says.

Other useful applications for this tool Hoyland cites include: diagnosing A/C issues, testing brake functionality, determining whether or not a bearing is overheating and dealing with a battery drain.

"If you have a battery drain in the system, and you put the infrared imager on the fuse panel, you can see actually which fuse is generating current because of the heat signature of that one fuse," he explains "So you'd be able to see where a certain circuit is active."

Hoyland says there are a number of features he appreciates about the EETH300, like its rechargeability and image sharability. He says he likes that the tool allows for the ability of images to be captured on a mini secure digital (SD) card and uploaded to a computer and then easily shared with customers.

The tool arrived in a plastic form box complete with instructions, a quick-reference chart and a USB charger/plug-in adapter.

"I would suggest providing a carrying pouch or some sort of belt clip so the tool is a little more protected and easier to carry," he adds.

Overall, Hoyland appreciates the performance and versatility offered by the Snap-on Tools Diagnostic Thermal Imager, No. EETH300, as well as its database of guided tests, automotive applications and reference images.

"It's [a tool that] adds value the longer you use it," he says. **PTEN**

### PRODUCT DESCRIPTION:

The Snap-on Diagnostic Thermal Imager, No. EETH300, uses infrared technology to make heat "visible" and reveal problems anywhere on a vehicle, such as brakes, heaters, A/C, engine performance, electrical and bearings. This technology includes detailed thermal images made up of 4,800 distinct temperature zones, an exclusive database of guided tests, automotive applications and reference images to help interpret results and automatic scaling to show the temperature of everything in the image. This tool can show the source of heat to track faults, such as bearing wear, friction, brake heat, misfires, electrical impedance and coolant blockage. The thermal image reveals heat sources, shows extreme temperatures up to 840 degrees F and has the ability to save and store images.

Circle 130 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



To watch a video demonstration of this product, visit: [VehicleServicePros.com/20854816](http://VehicleServicePros.com/20854816)

# Category Spotlight



## TROUBLESHOOT ENGINE, TRANSMISSION AND BRAKING SYSTEMS

The **VDA20P** utilizes **Diagnostic Innovations LLC** proprietary Vehicle Diagnostic Assistant software to help technicians diagnose and troubleshoot engines, transmissions and braking systems found in today's heavy and medium duty vehicles. The system harnesses the power of Panasonic's Toughbook 20. The Toughbook 20 is Panasonic's latest fully ruggedized touchscreen laptop with the mobility and versatility of a tablet that can operate in the toughest climates and dirtiest environments. The system integrates OEM software into an easy-to-use intelligent graphical interface. Multiple fleet options are available with numerous diagnostic software applications.

**Circle 131 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## CAN IMPROVE PRODUCTIVITY AND REDUCE DOWNTIME

**Jaltest 17.1**, developed by **Cojali USA**, can improve productivity and reduce downtime by connecting the diagnostic tool with a shop manager, according to the company. The new Jaltest software integrates a complete technical information database with electrical, operating or fuse and relay diagrams, component information, service data, TSBs and systematic repair guides by symptomatology or fault codes. Jaltest complies with the RP1210 standard.

**Circle 134 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## SUPPORTS MORE THAN 40 AUTOMAKERS

The **Autoland Sciencetech VeDis-II diagnostic scan tool kit** offers an OEM-level diagnostic system, which supports more than 40 automotive manufacturers with ongoing software updates via internet download. The tool's interface promotes ease of operation. The VeDis-II offers scan tool functions including reading and clearing DTCs, data streaming, activation, adaptation, coding and programming. It also offers advanced vehicle coverage on Audi, BMW, Land Rover, Mercedes Benz, Porsche, Volvo, Volkswagen and more. The kit includes J2534 in a self-contained unit, which does not require any additional hardware or external interfaces.

**Circle 132 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## REMOTELY PROGRAM AND DIAGNOSE ANYWHERE

The **BlueLink Remote Programming Kit** allows users to remotely program and diagnose anywhere. The company's partners communicate directly with cars in the shop, via the internet. This kit helps technicians and shop owners avoid hidden costs of flat-bedding and other wasted technician time maintaining expensive tools and equipment that go out of date. This kit can be used with the company's 12' Drew Technologies J2534 device and more. All purchases include the 722.9 VGSNAG software for Mercedes Benz transmission diagnostics and the CAN Analyzer which finds Mercedes CAN-B units causing erroneous bus wake and battery draw.

**Circle 135 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## FULL COVERAGE FOR ASIAN AND DOMESTIC VEHICLES

The **Ottotest Diagnostics iFlash scan tool and J-2534 programmer** (optional) in one VCI, offers full coverage for Asian and domestic vehicles. This scan tool includes comprehensive bi-directional controls, Mode 6 functionality, up to eight multi-trace graphing functionality, snapshot, units conversion, a simple-to-use interface and in-tool feedback that is answered within 24 hours, according to the company. Live customer support is open during EST business hours and software updates can be purchased for one year or on a pay-as-you-go program.

**Circle 133 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## CONNECTS PC TO ALL J2534 VEHICLES

The **DG Technologies d-briDGe PRO** is a diagnostics and reprogramming tool that securely connects PCs to all J2534 vehicles. The d-briDGe PRO is a single tool that is compatible with many OEM software subscriptions and also includes OBD-II DG diagnostic software. This tool is made in the U.S.A. and includes free technical support.

**Circle 136 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## Category Spotlight



### VIEW LIVE DATA AND OEM FLASH CODES

The **TEXA Truck Diagnostic Tool Kit** from **Diesel Laptops** is well-suited for expert technicians working in the heavy duty and medium duty commercial truck industries who need dealer-level functionality inside an easy-to-use program. TEXA offers the widest and deepest diagnostic coverage that spans across all commercial trucks. This includes DPF regenerations, injector programming, engine parameter changes, injector tests, and more. Unlike competitors, there are no required

annual fees. The kits come complete with no end user installation or configuration needed, and is ready to go, out of the box. Software updates and technical support are free for 12 months. The company offers free onsite demonstrations and web demonstrations as well.

**Circle 137 on card, or enter at "e-inquiry" on VehicleServicePros.com**

### SCAN TOOL FOR EUROPEAN MAKES AND MODELS

The **Hella Gutmann Mega Macs 56 Diagnostic Tool** offers up to five hours of standalone operation time. The tool is battery-operated and features a Linux-based operating system and a high-resolution 10.4" touchscreen that operates like a tablet screen.

It's power supply comes from an all-in-one battery with an integrated charge controller that is charged in an optional docking station. The Mega Macs 56 is designed for users who focus on European cars.



**Circle 138 on card, or enter at "e-inquiry" on VehicleServicePros.com**



### TWO PC-BASED DIAGNOSTIC SOFTWARE APPLICATIONS

The **NEXIQ Technologies eTechnician Software Combo** includes two PC-based diagnostic software applications, eTechnician Heavy Duty Standard (HDS) and eTechnician Light and Medium Truck (LMT). The eTechnician HDS application provides technicians with the ability to perform heavy duty diagnostics, using both J1708 and J1939 communication protocols on a PC platform. It includes coverage for heavy duty engines, transmissions, brakes, trailers, body controllers, instrument clusters and emissions. The eTechnician LMT application provides OEM proprietary diagnostic capabilities for engines, transmissions and brakes on a wide range of light and medium duty trucks. It features hundreds of diagnostic tests, and the application includes generic OBD-II. Both pieces of software allow techs to switch between each of the elements of the system, saving both repair and vehicle downtime.

**Circle 139 on card, or enter at "e-inquiry" on VehicleServicePros.com**



### AVAILABLE FOR WINDOWS AND IOS PLATFORMS

The **AutoEnginuity Giotto Version 14.3** is available for the Windows and iOS platforms. It allows users to read a vehicle's diagnostic trouble codes, live vehicle sensors and IM240 system test results to quickly determine what service the vehicle requires. AutoEnginuity offers manufacturer-specific options for BMW, Ford, GM, Chrysler, Toyota, Nissan, Hyundai, Kia, Land Rover, Jaguar, Honda, Subaru, Porsche, Mitsubishi, Isuzu, Audi/VW, and Mazda group vehicles. It also offers expanded Ferrari/Maserati coverage to include several new models, adds dozens of new controllers and improved existing coverage. Version 14.3 has a focus on Audi/VW, BMW/MINI and Mercedes Benz coverage.

**Circle 140 on card, or enter at "e-inquiry" on VehicleServicePros.com**

# FF310 Fault Finder

## Short and Open Circuit detector and tracer



### A faster and easier way to find short and open circuits:

- ▶ *Identify short and open circuits*
- ▶ *Trace faulty wires inside conduits, harnesses, behind panels and upholstery*
- ▶ *Locate faults in broken, open or shorted wires*
- ▶ *Long (8") and flexible antenna for accurate tracking of wires in congested or hard to reach places*

To watch a demo video online and for more information visit

**www.gtc.ca**  
or call us toll free  
**1-800-440-5582**

GTC, V Ready and FaultFinder are trademarks of General Technologies Corp. - © 2017 General Technologies Corp

**Circle 141 on card, or enter at "e-inquiry" on VehicleServicePros.com**

# Category Spotlight

Diagnostic Test Equipment



## PERFORMS DIAGNOSTICS ON MORE THAN 60 BRANDS

The **Autel MaxiSYS commercial vehicle diagnostics scan tool**, No. MS908CV, performs enhanced system diagnostics on more than 60 commercial light duty, medium duty and heavy duty vehicle brands. The MS908CV is built on the MaxiSYS Android-based platform. The complete tool kit comes with the latest compact size J2534 MaxiFlash Elite to perform pass-thru programming function and complete an array of tool-guided maintenance services, then diagnose manufacturer specific systems including Allison transmissions, Bendix ABS brake systems, Detroit Diesel engines and Eaton and Wabash ABS trailer brakes.

**Circle 142 on card, or enter at "e-inquiry" on VehicleServicePros.com**

## UPDATED MODEL, SYSTEM AND FUNCTIONALITY CAPABILITY

The **C.A.S of New England G-Scan 2 2016 Software Update** is now available to download for users that have a current subscription. The 70 pages of release notes cover updated model, system and functionality capability on Asian, European and domestic vehicles. The G-Scan 2 features the integration of an optional five-channel digital scope plus J2534 programming, a 7" sun-readable LCD screen, screen capture, memo function, fast graphing and smart update. Options include the 'piggy back' oscilloscope, and complete adapter package, as well.

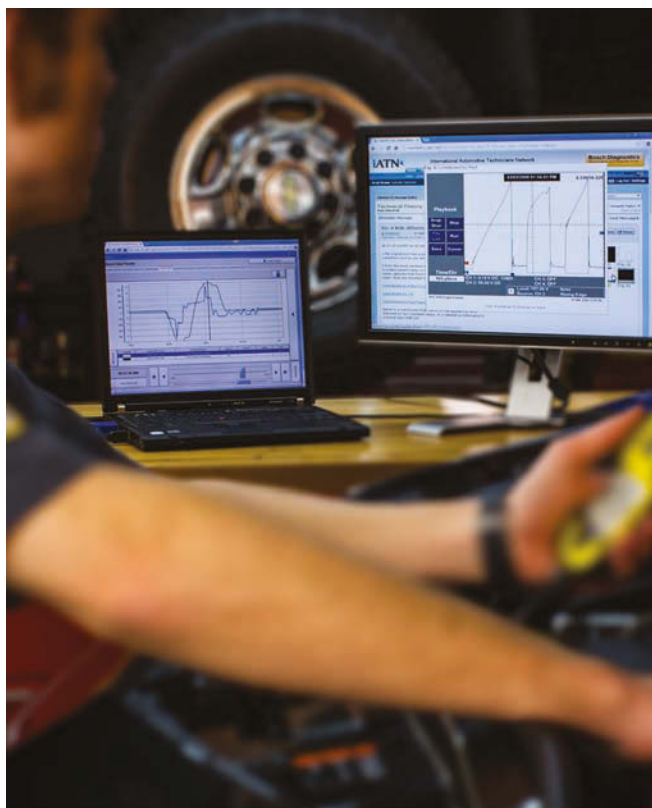
**Circle 143 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## DIAGNOSES MORE THAN 25,000 VEHICLE SYSTEMS

The **OTC Evolve diagnostic tool** can diagnose more than 25,000 vehicle systems and 58,000 vehicle ECU combinations using Bravo 3.0 software and a fast Android operating system. Capabilities include performing more than 11,000 actuation tests and more than 1,400 adjustment tests. In addition, the OTC Evolve enables a streamlined diagnostic process for any issues that a technician may encounter. The ruggedized tablet features a 10.4" optically bonded screen, providing visibility in most conditions, including direct sunlight. Dual Wi-Fi architecture means a dedicated Wi-Fi connection to the included J2534-compliant wireless VCI with simultaneous Internet connection to the shop, so technicians can move freely to check and test components while still being connected to the vehicle. The diagnostic kit includes a tablet docking station and backpack for storage.

**Circle 144 on card, or enter at "e-inquiry" on VehicleServicePros.com**



**iATN**  
International Automotive Technicians Network

**Learn from your peers.**  
Transport your career to the next level at [iatn.net](http://iatn.net)

**Circle 145 on card, or enter at "e-inquiry" on VehicleServicePros.com**

## IMPROVE CYCLE TIMES AND PROVIDE MORE ACCURATE REPAIRS

The **asTech remote diagnostic device**, from **Collision Diagnostic Services**, is designed to help repair shops improve cycle times, provide more accurate repairs, and improve customer satisfaction by allowing users to see what can't be seen with the naked eye.

The repair technician connects the asTech device to the battery supported vehicle, which communicates via the internet to the OEM factory scan tool, operated by a master technician. The master technician completes the diagnostic scan and sends a full report directly to the shop.

**Circle 146 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## WORKS ALONGSIDE TECHNICAL DATA

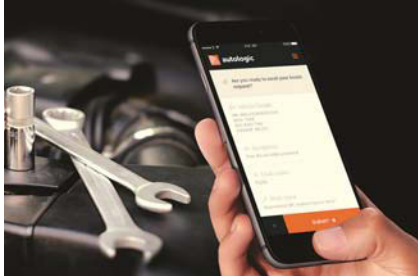
The **Auto Workshop Supplies Diagnostic Assistance software** works alongside technical data and is focused on guiding the

technician on how best to analyze a fault and identify the origin of the cause. The Diagnostic Assistance also explains how to test individual components, how the components work and also give professional hints and tips. This tool helps to fix a fault quickly, and also serves as a teaching system, according to the company.

**Circle 147 on card, or enter at "e-inquiry" on VehicleServicePros.com**

# Category Spotlight

Diagnostic Test Equipment



## ACCESS TECHNICAL SUPPORT FROM ANY MOBILE DEVICE

The **Autologic AssistMobile** complements the company's Autologic Assist solution, the first and only cloud-based, vehicle-connected diagnostic solution, according to the company. AssistMobile allows users to gain access to Autologic's team of more than 100 dealer-trained, certified master technicians from any iOS or Android device. AssistMobile collects details about problematic car issues by scanning VIN barcodes, and automatically asks users for specific details. AssistMobile also incorporates standard smartphone functions to send relevant data directly to the tech team.

**Circle 148 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## ULTRA-FAST GRAPHING

The **Matco Maximus 2.0A Tablet Scan Tool**, No. MDMAX2A, features ultra-fast graphing with the ability to display 15 graphs at once on the full-color 10.1" 1920x1200 IPS capacitive touchscreen. Designed to work with all current add-on boxes, it offers immediate bi-directional access to all available controllers for trouble codes, live data, actuations and more. The tool provides one-click commonly used resets, including brake reset, oil light reset, SAS reset, battery reset, electronic throttle relearn, TPMS reset, among others. The MDMAX2A is drop-tested, dustproof and waterproof to IP65 specifications, and it features a true docking station with VGA, audio out, Ethernet, two USB ports and connector storage. With a high resolution 2 MP front and 8 MP rear cameras with still and video capabilities, the tool includes a Class-2 Bluetooth 4.0 connector for optimum wireless connectivity. Capable of providing one-click Wi-Fi updates, the MDMAX2A also supports Identifix.

**Circle 150 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## COVERAGE FOR MORE THAN 25,000 VEHICLE SYSTEMS

The **Mac Tools MDT 10** is an ergonomically-designed vehicle diagnostic tool that features best-in-class coverage for more than 25,000 vehicle systems. The premium hardware device features an optically-bonded screen, a rear camera with flash, front camera, dual speakers and HDMI output to an external monitor. It comes in a rugged tablet that's balanced specifically for one-handed operation. MDT 10 includes a charging/docking station that allows the technician to work away from the vehicle. Other features include top reported DTC fixes, drive cycles and maintenance reset procedures. MDT 10 is built into an Android chassis. Its large 10.4" screen comes standard and provides high visibility even in direct sunlight.

**Circle 149 on card, or enter at "e-inquiry" on VehicleServicePros.com**



To watch a video demo of this product, go to: [VehicleServicePros.com/12190264](http://VehicleServicePros.com/12190264)



## TRANSFORMS SMARTPHONE INTO CLASS 4-8 SCANNER

The **CanDo HD Mobile** transforms a smartphone - iOS or Android - into a class 4-8 code scanner with DPF reset/regen capabilities. The app may save time and money, since it allows users to diagnose unknown driveability issues while on the road, potentially saving the cost of an unnecessary tow truck. The HD mobile also works on OBD-II. The app and updates are free.

**Circle 151 on card, or enter at "e-inquiry" on VehicleServicePros.com**



**DO IT ONCE.  
DO IT RIGHT.  
BUY A MOHAWK!**

**LIFTS THAT LAST  
A LIFETIME**



### TWO POST LIFTS

7,000 through 30,000 lb. capacities with 25 year structural warranty. **Inquiry #10**



### STORAGE LIFTS

10,000 through 18,000 lb. capacities for storage and vehicle service. **Inquiry #11**



### MOBILE COLUMN LIFTS

MP-Series electric-hydraulic mobile lifts available in 2, 4, 6, or 8 post configurations. **Inquiry #12**



### FOUR POST RUNWAY LIFTS

19,000 through 120,000 lb. capacity models give complete under vehicle access. **Inquiry #13**



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

Phone: 518-842-1431 • Fax: 518-842-1289

**1-800-833-2006**

**Circle 152 on card, or enter at "e-inquiry" on VehicleServicePros.com**

## VW/AUDI DIAGNOSTICS ON ANY DEVICE



The **Ross-Tech Wireless VCDS Professional Kit** turns a PC, tablet, or smartphone into a professional solution for VW/Audi diagnostics. Included in the Kit is the HEX-NET Pro Wi-Fi/USB interface. Using a Wi-Fi/USB connection to a Windows PC, the VCDS scan tool software provides better performance than the company's previous generation wired system. Embedded in the HEX-NET Pro is the VCDS-Mobile software, a web solution allowing a connection to any smart device without the need of an app. With both software licenses built into the HEX-NET, the shop will have all the flexibility needed to do VAG diagnostic work. Also included: a right angle OBD-II extension,

VCDS manual, 15 vehicle support tickets and a carrying case.

**Circle 153 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## URNS PAD II INTO A HEAVY DUTY TRUCK SCAN TOOL

The **Launch X-431 Heavy Duty Truck Add-On Module** turns the Pad II into a full-function heavy duty truck scan tool. The module communicates

via Bluetooth, or can be hardwired to the vehicle. Users can download the HD Truck app to work on 12V or 24V systems. The module offers extensive model coverage and special functions. It works on CAT, Cummins, Detroit, Freightliner, International, KW, Peterbilt, Sterling and Volvo.

**Circle 154 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## BRAND SPECIFIC COVERAGE FOR MORE THAN 50 MAKES

**Injectronic's Professional OBDII Scan Tool and Oscilloscope**, No. CJ4-R, includes global OBD-II and brand-specific coverage for more than 50 popular automotive makes. The CJ4-R is integrated with a two-channel oscilloscope and labscope. It also has a Bluetooth wireless communication channel that can display diagnostic results on a smartphone or tablet. The CJ4-R is built to withstand extreme temperatures and moderate impacts. This tool includes free updates for two years and a two-year warranty.

**Circle 155 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## WITH BUILT-IN WI-FI

The **Snap-on VERUS Edge**, No. EEMS330, has a fully-integrated software suite, comprising diagnostics, component tests, expert information resources, a complete repair information system and vehicle data manager. Exclusive resources include SureTrack Real Fixes and verified parts replacement records, Fast-Track Troubleshooter and Guided Component Tests, along with direct access to OEM recalls, campaigns and TSBs. The built-in solid state drive, Internet browser and Wi-Fi facilitate open information access from anywhere in the bay. The thin, lightweight tablet-style device - complete with a touch-screen - boots up in a minute and from 'ready mode' in only five seconds, aiding efficiency. With up to five hours of battery life, it provides techs with OEM-specific coverage for more than 40 domestic, Asian and European makes and dozens of vehicle systems.

**Circle 156 on card, or enter at "e-inquiry" on VehicleServicePros.com**



To watch a video demo of this product, go to [VehicleServicePros.com/12190264](http://VehicleServicePros.com/12190264)

## CUT MORE HOLES...

**in More Sizes...**  
with tools that last **10x** Longer



Rotabroach® Cutters

...& cut **3X** Faster than twist drills or hole saws.



Holcutters

**Blair**

Blair Equipment Co.  
[www.blairequipment.com](http://www.blairequipment.com)  
800-426-7818

**Circle 157 on card, or enter at "e-inquiry" on VehicleServicePros.com**

## Every Toolbox Needs...

### WALTON™ Tap Extractors & Tap Extensions

*Performance professionals have depended on high-quality Walton tools since 1908.*

**Tap Extractors** will remove broken taps simply and safely, without drilling, lasers, damaged threads, scrapped parts or repair inserts. Available in every tap size, both inch and metric.

**Tap Extensions** will extend the reach of regular-length taps and allow tapping in deep holes and awkward locations. Square and round sockets conform to leading tap sizes, and these tools are suitable for both machine- and hand tapping.



*Tapping into good ideas for over 100 years*

600 New Park Avenue, West Hartford, CT 06110  
Tel: (860) 523-5231 • Fax: (860) 236-9968

Email: [sales@waltontools.com](mailto:sales@waltontools.com)  
[www.waltontools.com](http://www.waltontools.com)

**Circle 158 on card, or enter at "e-inquiry" on VehicleServicePros.com**



More from this category online

**VEHICLESERVICEPROS**.COM

## ARTICLE



### VEHICLE DIAGNOSTICS: WHERE WE ARE AND WHERE WE'RE HEADED

VehicleServicePros.com recently chatted with Autologic CEO Jeremy Fry about the changing landscape of vehicle diagnostics, what the future holds for diagnostic technology and more. To read the full article, visit: [VEHICLESERVICEPROS.COM/20837773](http://VEHICLESERVICEPROS.COM/20837773)

Information provided by Autologic

## ASK THE EXPERT



### WHAT DO YOU LOOK FOR WHEN SELECTING A HEAVY DUTY DIAGNOSTIC TOOL?

It is critical to find a tool that assists in the repair process and diagnosis process. Full bi-directional capabilities are a must as well. To read the full article, visit:

[VEHICLESERVICEPROS.COM/20851676](http://VEHICLESERVICEPROS.COM/20851676)

Information provided by Noregon Systems



### VSP NEWS: TOOLBOX TOPICS, EPISODE 9 -- DREW TECHNOLOGIES AND VEHICLE REFLASHING AND REPROGRAMMING

In this video, Glen Eaton, product manager of J2534 products at Drew Technologies, talks with *PTEN* Editor Erica Schueller about J2534 and how it relates to aftermarket shops. To watch the full video, visit:

[VEHICLESERVICEPROS.COM/20854116](http://VEHICLESERVICEPROS.COM/20854116)

Call Kaylee Kidd direct at: (920) 568-8362

# Marketplace

Toll Free: (800) 547-7377 ext. 1362 • Fax: (866) 717-0902 • Email: [kkidd@southcomm.com](mailto:kkidd@southcomm.com)

## TURN YOUR TOOL IDEA INTO MONEY

**LISLE CORPORATION CURRENTLY PAYS ROYALTIES TO OVER 120 INDIVIDUALS.**

Lisle has been in business for over 110 years and for over 40 years have been working with individuals on an award or royalty basis. If you have an original tool idea which others may need, we have a procedure to evaluate your idea.



Respond now to request an idea disclosure packet.

P.O. Box 89 • Clarinda, IA 51632-0089  
712-542-5101 • Fax 712-542-6591  
[www.lislecorp.com/about/program](http://www.lislecorp.com/about/program)

Premium **J2534** Tool

**d-briDGePRO**

DIAGNOSTICS  
REPROGRAMMING

Made in the U.S.A.

**DG TECHNOLOGIES: Vehicle Network Tools**  
248.888.2000 | [www.dgtech.com](http://www.dgtech.com)

The d-briDGe PRO is a one solution tool to connect with a wide variety of OEM software applications to provide reprogramming and diagnostics to essentially all J2534 compliant Domestic, Asian and European vehicles.

## WE WANT YOUR HAND TOOL IDEAS!

- LTI Tools has an awards and royalty program for your new hand tool ideas.
- We offer you international distribution.
- If you have a new product or idea, please call, write or e-mail LTI Tools.

Lock Technology, Inc.  
Toll Free 800-421-7241  
[www.ltitools.com](http://www.ltitools.com)  
[litools@litools.com](mailto:litools@litools.com)



## End Greasing Frustration

Grease goes in not on, the machine!



(603) 795-2298

Email: [sales@locknlube.com](mailto:sales@locknlube.com)  
[www.locknlube.com](http://www.locknlube.com)

Dealer Inquiries Welcome

Advertise in



**PTEN**  
Professional Tool & Equipment News  
The Independent Tool Authority

CALL Kaylee Kidd  
at 800-547-7377, ext. 1362  
[kkidd@southcomm.com](mailto:kkidd@southcomm.com)

# Big-Time Boxes

READERS OFFER A PROUD LOOK AT THEIR AWESOME TOOL STORAGE SYSTEMS.



◀ Nemitz works out of a 22-drawer 10' wide by 29" deep by 6' tall Snap-on Master Series toolbox, with an added locker and hutch, as well as a power cabinet and tool cart.

OWNER:

Craig Nemitz

Movin' & Lubin'  
New Berlin, WI



▲ Nemitz has a tool cart designed to house a Snap-on Verus Edge scan tool. The cart features a 32" display monitor and four drawers.

## Diagnostics on the move

In addition to a large main box, this general manager has a tool cart dedicated entirely to diagnostics

by Vesna Brajkovic, Assistant Editor

Everything has a place in Craig Nemitz's Snap-on setup, from his hand tools to his diagnostic equipment.

So much so that outside of his main box, a silver Snap-on Master Series three-bay box with added hutch and locker, he has a power cabinet dedicated to Milwaukee Tool cordless tools and a diagnostic station specifically designed for the Snap-on Verus Edge scan tool.

Nemitz, general manager of Movin' & Lubin in New Berlin, Wis., was one of the first technicians in Wisconsin to purchase the diagnostic station. After seeing the cart displaying a Verus Edge on a Snap-on Diagnostics distributor truck, he knew he had to have it for himself.

The tool cart features a 32" flatscreen display monitor, hooked up to his Windows-based Verus Edge scan tool, which sits in the first drawer of the cart, in a molded setting. The three other drawers on the cart house other diagnostic tools like multimeters, fuel pressure testers and TPMS tools.

"The main reason I wanted to get that cart, and set it up like that, was so I could

wheel it around and go right to the job with the cart," Nemitz says. "It was really just about being able to have everything right there for me. We have a fairly large shop, so to keep having to go back and forth to grab this tool, or grab this connector for my multimeter – or something like that, it just became too much of a hassle."

Additionally, hugging the main box is a blue Snap-on power cabinet, which he eventually wants to get powdercoated in "Milwaukee Tool Red" to match his diagnostic station. The cabinet houses several Milwaukee Tool impacts—some of his favorite tools to use—along with a sawzall, angle grinder, hammer drill and work lights, among other things.

Both the power cabinet and the scan tool station were purchased within the past two years as an addition to the main box, which Nemitz has had for six years.

The 22-drawers of the almost 10' long, 6' tall main box are 29" deep and organized by category, as are the three shelves and four pull-out drawers in the side locker.

The wood worktop is kept clear, featuring easy-to-reach tools displayed on the peg board of the hutch.

"I'm an extremely organized person," Nemitz says. "My theory is that if I can go to my box and grab a tool with my eyes closed it's going to make me a more efficient tech."

Eventually, Nemitz says he would like to get a bulk storage cabinet for the top of the hutch to house any extra miscellaneous items that currently sit on top of the box, although he considers this addition to be low priority.

"I'd like to get [those items] all secured and inside the box, so it looks real clean from the outside," Nemitz says.

Although Nemitz likes to keep his tools in place and organized, he says if you look at his box you can tell they're well used. After all, he has been a technician for 13 years, starting out at Movin' & Lubin' as a support technician and working his way up to general manager. **PTEN**

Want to see more photos of Nemitz's box?  
Visit: [VehicleServicePros.com/20854114](http://VehicleServicePros.com/20854114)



Want to show off YOUR Big-Time Box?  
For more information, email  
[Editor@VehicleServicePros.com](mailto:Editor@VehicleServicePros.com).

AVAILABLE NOW AT:



41" PRO SERIES COMBO

35" SLIDE-TOP CART

35" FLIP-TOP CART

30" 1-DRAWER CART

\* May not be available at all locations.  
Quantities and Colors may be limited.

# Homak®

LOCATIONS  
GLOBALLY  
**KNOWN &  
PROFESSIONALLY  
TRUSTED**  
*Since 1947*

Circle 159 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)

800-874-6625 | [www.homak.com](http://www.homak.com)



# THE V1200 WHEEL ALIGNMENT SYSTEM

## THE EASIEST WAY TO ADD ALIGNMENTS AND BOOST YOUR BOTTOM LINE.



Circle 160 on card, or enter at "e-inquiry" on [VehicleServicePros.com](http://VehicleServicePros.com)



### INSTALLATION, MEASUREMENT, ALIGNMENT AND MAINTENANCE MADE EASY.



With a self-calibrating wireless system that easily installs and uninstalls from any existing alignment lift, the new V1200 Wheel Alignment System fits in even the smallest of spaces. The all-new interface with rolling runout is easy for techs to learn and use, even stopping errors before they can result in bad alignments.

The hot-swappable battery system charges in minutes and runs all day long. For more details on how the rugged V1200 can help supercharge your alignment business, visit [www.johnbean.com](http://www.johnbean.com)

# JohnBean