# Professional Tool & Equipment News The Independent Tool Authority

**€**ENDEAVOR



# APOLLO-D9 by Snap-on



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Category Spotlight: Tool Storage Page 58 Details on the cover products and other new tools

Page 10



▲ For crimping wire end sleeves



Measure amps' draw, cranking volts, resistance, duty cycle, and more



A Generates 1,400 ft-lbs of torque with reduced vibration

# WORK HANDS-FREE WITH COAST LIGHTS

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- Remote Diagnosis
- · Open Android 9.0
- · Code Assist by Identifix
- Security Gateway access by FCA

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- ADAS Calibration •
- VW & AUDI Guided Functions
- IP65 Waterproof & Dustproof
  - Quick Charge technology
    - **Docking Station**
- Battery Test, Sensor Simulator, Videoscope
  - **Code Assist by Identifix**
  - Security Gateway access by FCA



X-431 Throttle



#### **#PROFESSIONAL**

- Auto Detect VIN
- VW & AUDI Guided Functions
- 10.1-inch IPS Screen
- OBD I Adaptor Kits
- Code Assist by Identifix
- Security Gateway access by FCA

X-431 Torque

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**SGW** Certified By **FCA** 

**CODE ASSIST** Powered By **IDENTIFIX** 





# OCTOBER CONTENTS

#### **EXCLUSIVE**

#### PEOPLE'S CHOICE WINNERS

The 2020 PTEN People's Choice collection features the top 27 products selected by our readers, per product category, that were originally nominated for the 2020 PTEN Innovation Awards.

#### **FEATURES**

#### FEATURED NEW PRODUCTS

Check out the new tools from Ansed Diagnostics Solutions, JPW Industries, and KNIPEX. Then, read about all the other new products beginning on page 12.

TOOL BRIEFING
A handle on hydraulic brake systems.

## TOOL REVIEWS Our review panel gives feedback on the following tools:

• Ledlenser **iH11R** 

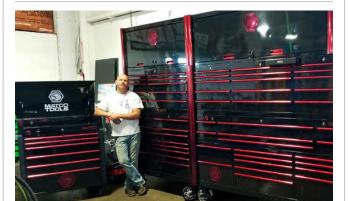
- Snap-on Apollo D9
- Induction Innovations

  Mini-Ductor Venom HP
- Wera Tools Wheel Impaktor C 1/2" Drive Socket Set









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#### **FIVE-IN-ONE VCMI**

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- MULTIMETER
- NEW PROTOCOLS

#### TOPOLOGY MODULE MAP

- ALL SYSTEM STATUS SCREEN
- COLOR CODED FAULTS

### INTELLIGENT DIAGNOSTICS

- REPAIR ASSIST
- GUIDED DIAGNOSTICS



MAXISYS

- 9.7" SCREEN / ANDROID 7
- INTELLIGENT DIAGNOSTICS
  - FIVE-IN-ONE VCMI



MAXISYS

- 9.7 SCREEN / ANDROID /
- INTELLIGENT DIAGNOSTICS
- NEW PROTOCOLS

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# NOW ONLINE AT **VEHICLESERVICEPROS**

#### **NEWS**



ALLDATA's scan tool is able to access the FIAT Chrysler vehicle network through the Secure Gateway module using AutoAuth, FCA's approved authentication provider,

and perform essential diagnostic functions. To read more, visit: VehicleServicePros.com/21154690

#### WHITEPAPER



Whenever I consider purchasing any new tool I analyze the ROI (Return on Investment) to see if it will be worthwhile, what the cost of performing the service should be, and how long it will take to pay for the tool.

To read more, visit: VehicleServicePros.com/21155121

#### **PODCAST**



Professor Ken Mays from Central Oregon Community College joins Scott Brown for a discussion on what the future holds for vehicle technology, and what impact it will have on service. To listen to this episode, visit: VehicleServicePros.com/ content/21153174

#### TECH TIP



An overview of the minimum shops should do monthly for most two-post and four-post lifts. To read more, visit: VehicleServicePros.com/21152486







LINKEDIN linkedin.com/company/ professional-equipment-tool-news

#### **FEATURED PRODUCTS**



**Redline Detection LLC** SpeedSmoke, No. 95-0135 VehicleServicePros.com/ 21153902



**SK Hand Tool** 1/4" Drive Bit Ratchet with

32-pc Bit Hex Set, No. 82102 VehicleServicePros.com/ 21154234



Channellock Forged Wire Stripper, No. 968 VehicleServicePros.com/

21153636

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



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#### **EXECUTIVE VICE PRESIDENT - TRANSPORTATION**

Reggie Lawrence rlawrence@endeavorb2b.com

VP/GROUP PUBLISHER, ENDEAVOR VEHICLE

REPAIR GROUP Kylie Hirko 630-253-4034 Kylie@VehicleServicePros.com

**EDITOR** Sara Scullin

920-568-8394 Sara@VehicleServicePros.com

MANAGING EDITOR Brittany Vincent 502-519-7978 Brittanv@VehicleServicePros.com

ASSISTANT EDITOR Emily Markham 920-234-6359 Emily@VehicleServicePros.com

ASSISTANT EDITOR Kayla Oschmann 920-563-1764 Kayla@VehicleServicePros.com

MULTIMEDIA ACCOUNT EXECUTIVE Cortni Jones 920-568-8391 CJones@EndeavorB2B.com

MULTIMEDIA ACCOUNT EXECUTIVE Diane Braden 920-568-8364 DBraden@EndeavorB2B.com

MULTIMEDIA ACCOUNT EXECUTIVE Mattie Gorman 920-563-1636 MGorman@EndeavorB2B.com

PRODUCTION MANAGER Connie Wolf 920-563-1679 CWolf@EndeavorB2B.com

LIST RENTAL REP Michael Costantino 402-836-6266 Michael.Costantino@infogroup.com

LIST RENTAL REP Kevin Collopy 402-836-6265 Kevin.Collopy@infogroup.com

AUDIENCE DEVELOPMENT MANAGER Debbie Dumke

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**Subscription Customer Service** 877-382-9187; 847-559-7598

Circ.ProfDistmag@omeda.com PO Box 3257 • Northbrook IL 60065-3257

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FIVE LINE LASER 1 PERSON PROCEDURE QUICK & SIMPLE SETUP





https://www.youtube.com/auteltools









# SEDITOR'S NOTE



# No breaks for networkers

This fall carve out some hours, get cozy in your favorite chair, and connect with your colleagues online.

**By Sara Scullin,** Editor Sara@VehicleServicePros.com

As we navigate our way through COVID-19, we find ourselves in this perpetual state of planning, replanning, and reworking many of the processes and events that were once the status quo.

The PTEN team typically spends a good amount of time on the road, covering trade shows, industry events, and new product demos and reveals. The biggest events of the year, of course, are the AAPEX and SEMA shows in Las Vegas at the start of November. Like many of you, we value this show because it's where we trek the miles upon miles of eye-popping tool and equipment booths. It's where we catch up with friends old and new.

While things will be a bit different this year, don't clear your schedules quite yet.

In the last couple months, both AAPEX and SEMA announced they will take the popular Vegas tool shows online. The AAPEX virtual event will happen November 3-5, and SEMA360 will take place November 2-6. The AAPEX digital event will aim to highlight the show's usual elements, including offering AAP and MAAP accredited courses on topics ranging from diagnostics and business best practices to ADAS and attracting top talent.

Bill Hanvey, AAPEX president and CEO, said it best when he said, "AAPEX didn't become the extraordinary event it is today by thinking small and not evolving to changing times and circumstances. While we had hoped to meet in person, we are excited to use technology to bring together the supply chain of essential services to conduct business."

In similar fashion, SEMA360 is billed as

"an online marketplace to allow manufacturers and resellers in the specialty automotive segment to connect and conduct business."

Chris Kersting, SEMA president and CEO, says "Creating a platform where the industry can gather and discover new products and trends has always been a SEMA priority."

SEMA's virtual platform will allow buyers to interact with manufacturers, see new products, check out vehicle builds, and participate in classes and educational opportunities.

There's sure to be something for everyone at each of these shows, so check out the sites (aapexshow.com and semashow.com), peruse the speaker lists, and make note of any products or manufacturers you've been meaning to investigate.

Maybe you've realized by now (like I have) that a pandemic does not necessarily mean business – or networking – slows. It just changes.

As for us, we'll miss the handshakes, the dinners, and the impromptu run-ins (sometimes literal) in the Las Vegas Convention Center halls. But where there's a will there's a way, and we will not miss out on new tools! PTEN

Look for PTEN's AAPEX and SEMA coverage next month on VehicleServicePros.com. We'll be logging on to investigate and share info on new products and industry happenings, as well as celebrate PTEN's own virtual Innovation Awards ceremony. Stay tuned!



**Brittany Vincent** *Managing Editor* 



Emily Markham Assistant Editor



Kayla Oschmann Assistant Editor



Barry Hoyland
Contributing Editor



**Scott Brown** Technical Editor

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# **FEATURED** NEW PRODUCTS



Measure amps' draw. cranking volts, resistance, duty cycle, and more

The HU31025 SCOPE+ Electrical Circuit Troubleshooting Tester from Ansed Diagnostic Solutions features color-coded screens to give technicians an easy-to-see status of the circuit. For example, when measuring voltage, the color-coded screen indicates green (ok), yellow (caution), red (no), or blue (over limit). The tester measures

amps' draw without removing fuses, voltage (maxi-

mum 50VDC), cranking volts with auto hold function, resistance, frequency with peak to peak volts (up to 20 kHz), duty cycle, continuity test, and diode/LED test. It is easy to use and ideal to use in conjunction with the HU31035 Sensor Simulator.

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#### **Generates 1.400 ft-lbs of** torque with reduced vibration

JET's line of 3/4" and 1" Composite Impact Wrenches deliver power, durability, and a lightweight design in a short and well-balanced package. These tools generate 1,400 ft-lbs of torque with reduced vibration. The balance of these tools gives the user the control they want without losing the power they need to get the job done, says the company. These tools work well for large fastener breakdowns and fastening, general maintenance, and general truck repairs.

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#### For crimping wire end sleeves

The KNIPEX Twister16 Self-Adjusting Crimping Pliers, No. 97 53 18, is designed to crimp wire end sleeves. It offers eight locking positions and has a 360-degree slim crimping head that can be rotated for optimal accessibility. The Twister16 features a square crimp profile and self-adjusts to the desired size of wire end sleeve, reducing errors caused by using the wrong crimping die or an incorrect setting. In addition, the crimping pliers are

chrome-plated and offer repetitive, high crimping quality



due to its integral lock. Crimping of twin wire end sleeves up to 2 by 6 mm sq. is possible.

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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.



The **Snap-on Apollo D9** is designed to provide technicians with a diagnostic tool that helps them get the job done. It offers access to Intelligent Diagnostics for filtered codes and vehicle specific data that's constantly updated for guick and confident repairs. APOLLO-D9 features a four-way thumb pad for quick navigation, a 9" capacitive color touchscreen display, and 5 GHz wireless compatibility. Its fast boot-up, as well as one-touch code scan and clear, enables technicians to move quickly from start to print. It also offers advanced graphing features and OEM-level data, along with OEM-specific scanner coverage for over 49 Asian, domestic, and European makes and over 100 vehicle systems.

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#### Designed to activate, read, and service all major OEM sensor brands

The ATEQ TPMS Tools VT37 is ideal for DIYers, technicians, and front counter



workers. The tool is designed to activate, read, and service all major OEM and aftermarket sensor brands. **Ouarterly updates** allow for the newest TPMS sensors to be added to the tool effortlessly, the company says. Its compact size makes it

easy to store, whether it's stored in a glove compartment or toolbox.

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#### Sanitizes vehicle interior touch points

MIST X-TREME Sanitizing Kits, Nos. 590250SK and 590260SK, from CPS Products are designed to disinfect and sanitize vehicle interior touch points while treating the entire HVAC system and interior air spaces for sources of mold, mildew, and bacteria. The 590250SK kit includes sanitizing spray, 12 bottles of cleaning solution, 12 service vent tags, and 24 point of sales brochures. The MiST Ultrasonic machine is sold separately.

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#### Anti-roll design

The Streamlight Stinger 2020, No. 78100, is a rechargeable, work-ready flashlight designed for inspection, identification, and repair uses. Its aluminum alloy body with anti-roll design is ergonomically shaped for an ideal grip. It features dual power switches and an intuitive mode selector switch for ease of use. On high, the Stinger 2020 emits 2,000 lm, a 315m beam distance, and a two hour run-time; on medium, 850 lm, a 200m beam distance, and a four hour runtime. On low, it offers an extended run-time of 24 hours with 100 lm and a 70m beam distance

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TEXA has proudly introduced to North America its famous Radar Camera Calibration System (RCCS2) offering a complete range of functionalities for all ADAS systems.

Also "2" identifies the second generation of this powerful tool that was engineered and launched by TEXA back in 2016.

After 4 years of ADAS experience all over the world the company has introduced its professional system also in the US. TEXA has mastered all aspects of ADAS calibrations offering technical solutions and technologies that simplify the vehicle positioning and its calibration.

Working on ADAS systems has never been this easy thanks to an intuitive software, detailed step-by-step procedures, targets sized according to OE specifications, US based tech support and innovative solutions like laser meters and levels.





Contact us for more information about our diagnostic solutions.

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TEXA USA Inc. 409 Joyce Kilmer Avenue New Brunswick, NJ 08901 www.texausa.com northamerica@texa.com +1 855,200,8392



## NEW **Products**

#### Handle folds down

The Cornwell Quality Tools Heavy Duty Single/Dual Bottle Welding Cart, No. MMWUWC4, can be used to hold portable wire welders, plasma cutters, and TIG welders, along with the bottle of shielding gas needed for that application. Its unique cylinder rack allows users to configure it to carry one bottle of gas up to 10" in diame-

ter and up to 300 cu. ft.; or two bot-

tles of gas up to 7-1/2" in diameter or 150 cu. ft. each. Additionally, users can also hold two separate welders, a welder and a plasma cutter, or they can use as a power source and feeder cart.

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#### **Color-coded for** quick identification

The Ascot Supply 8-pc Brake Lining Thickness Gauge features color-coded brake gauges to provide effective identification with clear and accurate depth readings for quick and easy use. Constructed of durable metal, the gauge features both SAE and Metric measurements. The set is divided into three colors: red (two), yellow (three), and green (three). It is an easy-touse indicator and visual aid for determining the remaining brake pad life. Red indicates brakes must be serviced. Yellow indicates brakes are in need of service soon. Green indicates brakes are sufficient and do not need attention at this time.

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#### **Self-extinguishes work shirt**

The VolCore Work Shirt, No. FRS-003, from Radians helps protect workers from short-term thermal hazards, including arc flash and flash fire. The work shirt is compliant with ASTM 1506, NFPA 2112,



FR standards. According

to the company, because the work shirt self-extinguishes and does not melt when exposed to flame, it dramatically reduces the severity of burn injuries. It is made with 7 oz. 100 percent cotton soft woven twill and provides comfort and mobility. The shirt is available in navy, gray, and khaki and sizes M-XL and tall sizes.

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#### **ADVANCED DIAGNOSTICS**

OE-Level Diagnostics with industry leading coverage for more than 80 domestic, European and Asian vehicle brands, the Phoenix Pro and Phoenix Lite provide Tech-To-Tech support for maintenance service to module coding & programming. The new T-Ninja 1000 provides advanced key programming.

#### **POWER & BATTERY**

Consisting of three tool lines, TOPDON Battery Testers, Battery Maintenance and Power Supply product lines support 6V, 12V, or 24V vehicle systems and provide wireless operation for support when you need it most.

#### **CODE READERS**

Industry leading coverage for domestic, European and Asian vehicles 1996 and newer. TOPDON scanners support OBDII and EOBD vehicle system and provide quick, powerful and reliable features to pinpoint trouble codes and confirm repairs.



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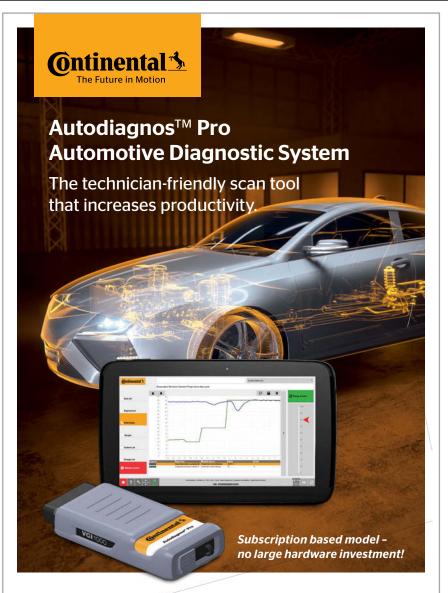


#### Moisture-wicking mesh lining

The Wolverine ShiftPlus Work LX 6" Boot is designed to provide the toughness of a work boot with the comfort of a sneaker. It features Wolverine's DuraSpring cushioning to power through extra-long hours and a rubber lug wedge outsole for stability and traction. The outsole and upper are forged together for durability. A full-grain leather upper and optional low-profile alloy safety toe offer maximum protection

without the bulk. It also offers breathable waterproof membrane with moisture-wicking mesh lining and a cushioning midsole.

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#### Mount on top of CUBET tanks

The Samson Tankless Bulk Fluid Dispensing Packages PM2 3:1 are designed to be mounted on top of CUBET tanks. They are ideal for service shops, fast lube centers, auto and truck dealers, and vehicle maintenance centers. Fluids handled include: synthetic and mineral based oil, antifreeze solutions, and water based solutions. Packages include the PumpMaster 2 3:1 Stub Pump with bung adapter, hose reel (choice between the 1400 Series dual arm steel or 506 Series single arm aluminum), EC8 metered handle with formable outlet and quarter turn tip, mini piggyback filter-regulator, as well as a quick coupler and nipple. Packages do not include extension tube for the stub pump.

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#### Has a 12' total cord reach

The Schumacher Electric 12V/24V 200A

**ProSeries Manual** Battery Charger/ Engine Starter, No. DSR140, features a 135-minute manual timer to allow the user to stay in control. Additionally, it offers large, color-coded professional metal clamps for a solid connection, 6-gauge output cables that stay flexible in cold weather,

a convenient 12' total cord reach. The DSR140 can put out a 200A engine start, 50A boost, 10A charge, and 25A boost mode that handles both 12V and 24V batteries. It is made from heavy duty construction for strong starting power.

easy-to-read meter, and

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#### Handles 52" diameter and 500 lb assemblies

The Hunter HD Elite Heavy Duty Wheel Balancer combines features of Hunter's Road Force Elite and ForceMatch HD balancers to help eliminate wheel-related vibration and increase truck

tire life. The HD Elite offers fast cycle times with a new laser vision system for touchless wheel measurement, automatic dimension, and runout measurement, and eCal Auto-Calibration. which eliminates the need for an operator to manually

calibrate. It has capacity handling 52" diameter and 500 lb assemblies, and is equipped with an intuitive, touchscreen interface that simplifies operation for technicians at all

experience levels. Additionally, an optional load roller measures runout to correct the leading cause of vibration in heavy duty tire assemblies.

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#### **POWERFUL BATTERY PROTECTION** SERVICING SUPPORT FOR YOUR WORKSHOP The PRO25S from CTEK gives you fast, reliable battery charging with a stable 25A power supply to protect sensitive vehicle electronics. Powerful, rugged and with brand new advanced technology, the PRO25S and PRO25SE are the ultimate everyday battery chargers for the workshop and showroom. · Works with all types of 12V batteries including lithium (LiFePO4, Li-Fe, Li-iron, LFP) • Extremely stable 25A power supply • Automatically adjusts voltage in response to ambient temperature Fast, safe, tough and reliable PRO25SF includes 19.6 ft, cable, wall hanger and bracket For more info visit www.sma

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#### Ideal for use on battery terminals, wiring, electronics, and more

The Fluoramics Rust-Stopping **Lubricating Oil** is designed to stop rust while lubricating. It's



available as a pocket oiler and features a needle-like application tip for precise application. The oiler comes with a removable pocket clip so users can keep it secure in their pocket while in the shop or performing everyday maintenance. The oiler is ideal for use on pivot points, protecting moving parts that cannot be painted, battery terminals, wiring and electronics, and machine/equipment maintenance. Rust-Stopping Lubricating Oil is based on HinderRUST, which allows it to soak deep into cracks and crevices to lubricate and protect areas not visible to the eye.

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#### Adjusts to four positions from 12" to 20"

The AFF 22-Ton Pin Style Safety Stand, No. 6522, is ideal for

supporting trucks, trailers, and equipment in agricultural, construction, and industrial work environments. Its pin style design provides maximum security, and the heavy gauge steel frame design prevents warpage. The stand adjusts to four positions from 12" to 20". Its large v-shaped saddle allows for more contact with the

load, and its 10" by 10" base provides added security. When used in pairs, it achieves the capacity of 22 tons and meets ASME-PASE 2014. In addition, its tethered pin safeguards against loss,

and it has a carrying handle for easy transport.

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#### Able to reprogram domestic, Asian, and European vehicles

The Snap-on Pass Thru Assistant expands automotive repair and collision technicians' J2534 programming capabilities, making it easy for them to keep vehicles in the shop, finish the job correctly, and increase profits and customer satisfaction, the company says. The Pass Thru Assistant reprograms domestic, Asian, and European vehicles with the same easy-to-use process. It sup-

ports brands including BMW, Chrysler, Ford, GM,

Honda/Acura, Hyundai, Kia, Mercedes-Benz, Nissan, and Toyota/ Lexus/Scion. The kit contains a Windows tablet PC, J2534 device, 4G modem, and a 90A battery maintainer capable of handling European amperage requirements.

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#### Features 180-degree bending back short probe camera tip

The Oasis Scientific Vividia VA-450 **Borescope** is a high definition, two-way articulation inspection camera that features a 4.5" LCD IPS monitor and 1m long 5.5mm diameter, two-way articulation IP67 waterproof probe camera. The 180-degree bending back short probe camera tip with six LEDs make the VA-450 borescope ideal for inspecting the insides of cylinders. The VA-450 inspection camera with 1280 x 720 resolution allows users to capture pictures or videos with clarity through focus range from 1cm to far away. A set of screw-on 5.5mm accessories (hook, magnet, and side-view mirror) are included. The Vividia VA-450 Borescope is ideal for engine and motor inspection, as well as other industrial applications.

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#### **Powered by compressed air**

The Guardiar Corporation Syphon Spray System is designed to spray cleaning solutions and disinfectants onto workplace surfaces to keep employ-

ees safe from infection. Powered by compressed air, the system provides wide-area spray capability to thoroughly disinfect floors, walls, and

workbenches, as well as tools, machinery, and equipment. The system features a 12" Syphon Spray Gun, delivering up to 16 gallons of liquid per hour. Adjustable nozzle tip controls flow and spray pattern from a steady stream to a light mist. The easy-to-maneuver system is dolly mounted and comes complete with push handle. All components are suitable for use with common, noncorrosive, disinfecting solutions.

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#### For removing broken oil dipsticks

The ProMAXX Oil Tube Extractor is designed to improve productivity and speed when removing broken oil dipsticks. The stainless-steel Oil Tube Extractor inserts into the damaged tube, and the aggressive thread bites into the steel tube, allowing it to remove the damaged piece from the top of the block without any further action, the company says. This tool is made in the U.S.A. and includes a limited lifetime warranty. The tool is available in two iterations: one for GM LS 4.8L, 5.3L, 5.7L, 6.0L, and 6.2L engines, and one for Ford 4.6L, 5.4L, 6.2L, and 6.8L engines.

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#### Removes engine oil, coolant, brake fluids, and more

The JohnDow Industries Fluid Extractors, Nos. JDI-277EV, JDI-172EV, and JDI-050EV, are designed to provide a clean, fast, and simple way to evacuate a wide range of fluid types, including engine oil, transmission fluids, gear oil, coolant, brake fluids, and more. They have a polyethylene construction that is impervious to automotive chemicals and include 5' flexible hosing and rigid dip-stick tubes for engine oil removal. The hose assembly incorporates an in-line fluid shut-off valve and universal adapter for brake bleeding, while the air shut-off valve allows the unit to be used away from an air source. The extractor line includes a 2.7-gal pneumatic model (No. JDI-277EV); a 1.7-gal hand pump model (No. JDI-172EV), and a .5-gal pneumatic model designed exclusively for brake fluid exchanging (No. JDI-050EV).

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#### Offers custom fixtures to secure parts and components in place

The Renegade TMB 8100 Stretch HRPW **Horizontal Rotating Parts Washer** rotates engine components from its balanced centerline, while the high pressure spray manifold thoroughly flushes fine particulates from blind holes and other hard-to-clean cavities with aqueous detergent. The unit features custom fixtures to secure parts and components in place in the top load parts washer. Heavy engine blocks or transmission assemblies are cleaned of grease, oil, or lubricants in a high temperature environment. Pump and heater capacities are integrated to the load and sump capacities for ideal throughput. Additional features include PLC programmable wash cycle timer, heater timer, and a gear-driven rotary fixture system.

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#### Removes and installs a variety of bearing races

The Tiger Tool Bearing Race Starter Kit is a patent-pending design where bearing races can be removed precisely and installed in minutes on aluminum and steel hubs. The split ring is forced to expand over the wedge, increasing the diameter of the ring until it clamps onto the bearing race, easily pulling it free. A shop press is applied to the adapter kit assembly to remove and install a variety of bearing races. The Bearing Race Starter Kit provides a safer alternative to welding, hammering, and punching methods, says the company.

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#### Features chrome-vanadium finish

The Matco Tools 65-pc 1/4" & 3/8" Socket

Set, No. SAB65SE, features a mirror polish chrome-vanadium finish and stamping marks for easy identification. The 72-tooth ratchet offers a push-button release. The set includes a durable blow molded case.

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#### For MaxiSYS, MaxilM, and MaxiCheck tablets

The CAN FD Adapter from

Autel is designed to connect to compatible vehicle communication interfaces (VCIs) to enable its tablets to communicate via the CAN FD (flexible data-rate) communications protocol and diagnose the vehicle. Vehicles currently using the CAN FD protocol include many General Motors and Ford 2019 and 2020 vehicles.



Autel's MX808, MS905, MS906, MS906BT, MS906TS, MS908, MS908S, MS908P, MS908SP, MSELITE, IM508, and IM608 tablets will be able to diagnose CAN-FD equipped vehicles when the adapter is plugged into the VCI directly, as in the case of the smaller VCI units or into the OBD-II cable that is connected to the larger VCIs and into the vehicle's OBD-II port.

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#### **Includes stubby, standard,** deep, flex, and magnetic impact sockets

The CTA 10mm Socket Set, No. 3805,

features five popular style 10mm sockets in 1/4" and 3/8" drives. The includ-



are stubby, standard, deep, flex, and magnetic impact sockets. The magnetic impact sockets are manufactured using chrome molybdenum for durability and are also coated with manganese phosphate to better withstand corrosion. All other sockets have a polished chrome finish and a knurled non-slip ring for maximum grip when in hand (except on the two U-joint sockets). All 10mm sockets come packed on a socket rail for an organized and easy storage solution.

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# COMMERCIAL GRADE LIFTS DESIGNED WITH THE PROFESSIONAL SHOP IN MIND.



## NEW **Products**



#### Small in size to fit in tight areas

The Lisle 4-pc Mini Hook and Pick Set, No. 31750, removes hoses, moldings, clips, clamps, seals, O-rings, cotter pins, and gaskets. The set includes a hook pick, straight pick, 90-degree pick, and combination pick. The tools are small enough for versatility in tight and hard-to-reach places and feature dual material handles with heat treated tips for durability.

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#### Serrated edge tip for maximum gripping power

The Lock Technology 2-pc Skinny Rod Lock Out Kit, No. LT-128, features a U-shaped patent-pending serrated edge tip that effortlessly grabs and lifts the lift buttons or can be maneuvered to activate power door locks. For quick and easy entrance of tools, the LT-128A rod is 44" long by .187" thin. The LT-128B is shorter, measuring 34" in length by .125" width. To achieve maximum strength and rigidity the angled bend inflection points are stamped flat. Also, included in the kit is the LT276 Super Wedge. Its sharp edge and ribbed washboard surface ensures it won't slide out of door during use and is easy to insert.

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#### Works with any 12V vehicle battery

The CTEK PRO25S 25A Battery Charger and Power Supply is designed to meet the needs of the automotive professional. Combining power and advanced technology with safety, portability, and flexibility to work with any 12V vehicle battery, including lithium (LiFePO4, Li-Fe, Li-iron, LFP). To meet the demands of busy workshops, CTEK also offers the PRO25SE, which comes with 19.5' cables, a wall hanger, and bracket.

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#### H15R WORK ©

- 2,500 Lumens
- Dimming Wheel
- Drop Proof to 3 Meters
- Advanced Focus System
- Magnetic Charging System

#### P4R WORK ©



- 170 Lumens
- Advanced Focus System
- Chemical and Fluid Resistant
- Magnetic Charging System

#### P5R WORK ©



- 480 Lumens
- Drop Proof to 3 Meters
- Waterproof
- Magnetic Charging System
- Advanced Focus System

#### H19R CORE ©



- 3,500 Lumens
- Fusion Beam Technology
- Magnetic Charging System
- Waterproof
- Constant Light Output



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#### **Serrated jaws** offers more torque

The Mayhew Tools Screw Pliers, No.

95685, are made from industrial quality tool steel. The heavy duty 8" pliers are used to remove damaged, corroded, rusted, painted over, or tamperproof screws, nuts, and bolts. The serrated jaws at the tip of the pliers have a radius that conforms to the most common size screw heads to increase surface area contact allowing for better grip and more torque. The plastisol slip-on grips provide more secure and comfortable grasp of the handle.

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#### **Specialty locking pliers**

The OTC Brake Line Bending Pliers, No. 6719BP, offer technicians an easy way to bend brake lines on vehicles in tight and hard-to-reach areas. Thanks to its design, the pliers allow more force to be applied to jaws for easier bending, and adjustable for any degree bend. Integrated magnets hold the bending jaws firmly in place on the plier jaws. Dual slotted bending jaws bend 3/16" (4.75mm) and 1/4" (6mm) diameter. Features copper, brass, aluminum, and steel diameter tubing. Capable of bends with a 5/8" radius to 360 degrees and greater.

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#### Compatible with all major OEM software

The Cojali Jaltest DATA-LINK features rugged edges, technology capable of supporting four CAN channels,

fast speeds, and is ID 40 compliant, making it waterand dust-resistant, ideal for the

shop environment. Like

any RP1210, it is designed to work with OEM software solutions and provides a basic software that will read codes, clear codes, and read measurements and ECM data for all makes and all models at no extra cost and no renewal fee. The DATA-LINK also offers the option of upgrading to Jaltest INFO online. The kit includes a carrying case, Jaltest DATA-LINK, a ninepin connector, an OBD connector, a six to nine pin adapter, and all makes software.

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THE NEW APOLLO-D9

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For greater focus on every repair, and greater efficiency for you and your shop. With features and advantages you'd otherwise expect only from a more advanced diagnostic tool.

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Intelligent Diagnostics from Snap-on.
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Smarter, Faster, Fixed.





#### Helps prevent air leaks

The Dill Air Controls Truck Valve Stem Holder, No. 673, is designed to hold truck tire valves in place with minimal effort by allowing extended access. Technicians are able to consistently tighten tire valves at the correct angle every time, preventing air leaks. The tool has a precision drilled inside diameter for smooth install and removal. It is made from durable plastic and made in the U.S.A.

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## **REASONS MECHANICS** CHOOSE EZRED... INNOVATION **NK10 Alkaline Neck Light Rechargeable Neck Light EZTRAY-QRD** Collapsible NK15-OR GREEN **Magnetic Quad Tray** EZTRAY-CLR Collapsible **Magnetic Trays EZTRAY-QOR EZTRAY-QGR** Driven by innovation. ezred.com

#### A fully automatic **R-1234vf ACS** machine

Designed for mobile service, the Robinair Premier R-1234yf Recover, Recycle, and Recharge Machine, No. AC1234-4SL, is a fully automatic R-1234yf ACS machine with an inte-



grated scale lock that eliminates the need to recalibrate your refrigerant scale after transporting long distances. Accessible from outside the machine, the lock secures the scale, preventing damage or inaccurate refrigerant measurement. The safe startup feature prevents powering on when the lock is engaged, keeping technicians protected. Additionally, an indicator light reminds technicians to lock the scale before transport, while tie-down points and guidelines ensure your machine is secure for mobile service.

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#### For all-purpose cleaning and disinfecting

The Mi-T-M Pressure Washer Mister **Combinations** were designed in response to the need for disinfecting equipment. The electric combination 1400-psi cold water pressure washer and 350-psi low pressure dispensing mister is easy to use and is available as a hand carry or portable model. Use it for all-purpose cleaning and, in mister mode, use it to put disinfectant right where it's needed. Each unit includes a 36" lance and trigger gun with quick connect nozzles for pressure washing, a trigger gun with misting nozzle, and 75' by 1/4" hose. The electric motor enables safe use for both inside and out.

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# PRO-SOLDER 50

50 W RECHARGEABLE SOLDERING KIT

### SLIM, LIGHT and POWERFUL

The PRO-SOLDER 50 looks and performs like a professional soldering iron.





Ideal for quick wiring repairs, whether at home or in the shop.



Soldering, Brazing, Loosening Fasteners, and Heat Shrinking.



Reaches the operating temperature (536°F) in 10 seconds.



#### Features of the Pro-Solder 50

- Rechargeable Lithium Battery Technology (2,500mAH)
- · 600°c max soldering temperature
- 50w High Power Output
- · Fast charging time 3.5hrs
- · 45 min continuous run time
- Charging, Discharging & short circuit PCB protection
- · LED work light
- Micro USB charging
- 5 Twist and lock interchangeable solder tips
- 10 second FAST start

#### Advantages of the Pro-Solder 50 -

- No more butane refills.
- No more cables, adaptors plugs or electricity.
- Excellent low ambient temperature performance -20°c.
- · Cool to Touch Housing.
- · Safe to carry on a plane.
- · No need to purchase or store Butane refills.
- · No Heat adjustment required.

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Buy the **ORIGINAL**. Buy Hansen.



- Organize tools by size & style for easy identification and peace of mind.
- Secure regular, deep and semi-deep sockets all on one tray.
- New 3-row trays available in 1/2", 3/8" and 1/4" drive.
- Available as single tray purchase, or in 4 & 6 pack sets.
- All trays are molded from rugged ABS plastic to shrug off grease, chemicals, and other debris, and are built to LAST.

### **NEW** Magnetic Plier and Screwdriver Organizers



 Magnetic Pliers Organizer Holds 6 pliers, industrial strength rubber coated magnets support up to 10lbs.

Magnetic Screwdriver Organizer

Holds 11 screwdrivers, industrial strength rubber coated magnets support up to 10lbs.



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#### Offers resistance to punctures and tears

The MCR Safety NitriShield Gloves with MAXBio Technology, No. 6041, contain no latex proteins and offer resistance to punctures and tears. According to the

company, they are three times more puncture resistant than rubber and can be used to offer superior resistance to many types of chemicals. The 6041 is an industrial-grade



cuff and textured grip. There are 100 gloves included per box. Circle 71 on card, or enter at "e-inquiry" on VehicleServicePros.com

packaging. The gloves also have a rolled

#### **Designed to save time**

The Innovative Products of America 3-pc Specialty Blow Gun Assortment. No. 8055, are designed to save on time

and to be applicable in every industry. The BlowBack Gun cleans debris from the bottom of a bolt hole and out of all the threads. The Air Bender Blow Gun reaches hard-to-access areas with a focused, highpressure, 90-degree angle output. The Air

Scraper Blow Gun is used to remove gasket materials hardened to a surface. The stainless-steel shaft and hardened scraper tip combine air pressure and scouring action to remove and blow away stuck-on



debris quickly. The blow gun tubes are 3/8" in diameter, 7" in length, and made from anodized aluminum and stainless steel.

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**DrivePro ES** combines industry-leading scan tool features with real-time support from OE Brand-Specific Master Technicians dedicated to helping you diagnose the problem right the first time, every time.

#### **☑** World-Class Technical Support:

Live brand-specific repair guidance from 100+ OE-trained Master Technicians who can remote directly into the vehicle and seamlessly share data to complete the repair.

#### **☑** Built-in Remote Assisted Programming:

Hassle-free, flash programming remotely performed by **IVS 360** using OE software to eliminate the uncertainty of programming a vehicle yourself.

#### **☑ OE-Licensed Diagnostic Software:**

Provides OE diagnostic software when typical aftermarket scan tools miss—for all major US, Asian, and European vehicle brands.

#### ✓ Increase Profitability and ROI:

**DrivePro ES** enables you to increase billable hours by maximizing shop efficiency and expanding your service offerings with confidence.



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## NEW **Products**

#### **Multipurpose programming** and frequent updates

The Bosch TPA 300 TPMS Tool is a compre-

hensive TPMS tool designed



for sensor programming, activation, and ECU reset, including checking remote keyless entry signal. The full-color, intuitive interface guides the user when replacing and servicing TPMS sensors. When paired with a compatible Bosch diagnostic scan tool, like ADS 325 or 625, users can reset the ECU in less

than two minutes. The TPA 300 supports all known OE and aftermarket programmable sensors for all light vehicles. Frequent updates allow new features, vehicles, and sensor coverage to be added regularly.

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#### **Appropriate for the majority** of vehicle openings

The Access Tools Essential Long Reach **Kit** includes all of the required tools for the majority of vehicle openings, with the addition of the popular Button Master accessory and a Long Carrying Case to hold everything together. Included in this set is the Quick Max Long Reach Tool, the Button Master, the One Hand Jack Tool, the Super Air Jack air wedge, the 60" Long Heavy Duty Carrying Case, and the Quick Instructional Manual and Videos.

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The Milwaukee Tool M18 FUEL 1"

D-Handle Extended Anvil High Torque Impact Wrench w/ONE-KEY, No. 2869-22HD, delivers up to 2,000 ft-lbs of nutbusting torque and 1,900 ft-lbs of fastening torque. The company's Redlink Plus Intelligence is designed to protect the tool against overloads, overheating, and overdischarge. The tool also offers a four-mode Drive Control feature that allows users to switch between modes to match the power and speed for the application. Through ONE-KEY, users can access Lug Nut Mode to prevent the risk of over-torquing commercial lug nuts. The kit includes the D-handle impact wrench, two M18 Redlithium High Output HD12.0 battery packs, the M18 and M12 Rapid Charger, a 360-degree tool-free adjustable handle, a lanyard loop, and a contractor bag.

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#### Able to be read in direct sunlight

The Continental Autodiagnos TPMS SE is designed to work with all passenger vehicle OE sensors and aftermarket sensors from REDI Sensor and EZ-sensor, helping shops optimize their investment in TPMS and tire service. The tool is also able to perform relearns on 98.6 percent of all domestic, European, and Asian TPMS compliant vehicles, the company says. It is ideal for shops with multiple bays and the need for more than one tool. The TPMS tool offers a unique graphical user interface that allows it to be used in a variety of lighting conditions and easily read in direct sunlight.

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#### NO MORE O2 SENSOR OR DIESEL KNOCK SENSOR REMOVAL ACCESS PROBLEMS!

#### LT994 SHOCKIT SOCKET 02 SENSOR REMOVAL KIT YOUR AIR HAMMER TO EASILY REMOVE

**OBSTRUCTED 02 SENSORS & DIESEL KNOCK SENSORS** 

- Air hammered powered Shockit Sockets to access, loosen, and remove frozen O2 sensors
- Includes low profile design for limited access and long profile design for deep recessed Ford, Toyota and Lexus applications
- Removes knock sensors on Kenworth, Cummins, International, Detroit and Volvo diesel truck engines
- Non-slip self centering air hammer angled punch for limited access applications
- 18mm dual sided tap/bottoming die for O2 sensor and mounting hole threads

• Dual ear socket design for 90° rotation without repositioning socket

• Works when ratchets, wrenches and regular sockets don't fit

• Engineered to precise German DIN standards

• Patent #7,677,143 and other patents pending

· Lifetime warranty

#### **PARTS LIST & SIZES**

LT994-1 22mm SHORT SOCKET LT994-2 22mm DEEP SOCKET











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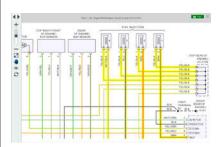
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#### Four programmable light modes

The Ledlenser H14R.2 Headlamp is rechargeable and offers 1,000 lm with quick and easy light dimming via a rotation wheel on the rear battery box. It features the company's patented Advanced Focus System, which allows users to transition light from a broad flood beam to a focused long-distance beam, as well as four programmable light modes to shine the light where it's needed most. Users stay visible from all angles with a rear red light that won't accidentally turn on and lose power due to its transportation lock, the company says.

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#### **Service information system**

The Mitchell 1 ProDemand provides complete OEM repair, estimating and maintenance information, and real-world industry knowledge in a single lookup, to help automotive technicians repair vehicles more efficiently. The company's search engine, 1Search Plus, presents the information needed in a user-friendly graphical layout for diagnosis and repair. Key features include expert-based Real Fixes, ADAS quick reference, scalable color wiring diagrams, the latest TSBs, common repair procedures, Top 10 Repairs dashboard, and integrated estimating with the Mitchell 1 Manager SE shop management system.

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# WORKPLACE HEAT-EXPOSURE HAZARDS. KNOW THE LAW.

Did you know that OSHA law requires employers to provide a workplace free of heat exposure risks? Every year, thousands of workers become sick from occupational heat exposure – sadly, many cases are fatal. The Cool Boss™ portable evaporative air cooler uses plain tap water to chill stifling hot air up to 26-degrees F cooler for about a buck a day\*\*.

It's automatic fill system, combined with a massive 30" fan, automatic swing louvers and programmable digital control make the Cool Boss the most compact, space-cooling powerhouse on the market. To learn more call **855-223-2665** or visit **www.thecoolboss.com**.

\*\*Operating costs and cooling efficiency may vary depending on location, humidity, and ambient temperature.

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COOL BOSS



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#### **Color coded for easy** identification

The AFF 7-pc Thin Wall Impact Socket Set, No. 58007, offers a durable outer sleeve and insert to protect wheels and lug nuts. Made with professional



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to deeply seated lug nuts. They are also

color coded for easy identification and

come in a blow molded case.



#### Design ensures wheel won't slip off the hanger

The CTA 2-pc Wheel Hanger Set - M12 x P1.25, No. 8871, is designed to thread into the wheel hub on vehicles that use lug bolts instead of wheel studs for easier alignment and installation of the wheel onto the hub. The heavy duty finish and concave design at the center of the tool ensure the wheel does not slip off the hanger. The Wheel Hanger Set is designed to make servicing a wheel easier, especially if the vehicle is equipped with painted calipers that users wouldn't want to scratch, the company says. The set includes a hole at the end for use with a screwdriver or any bar for turning.

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#### **Includes three** interchangeable nozzles

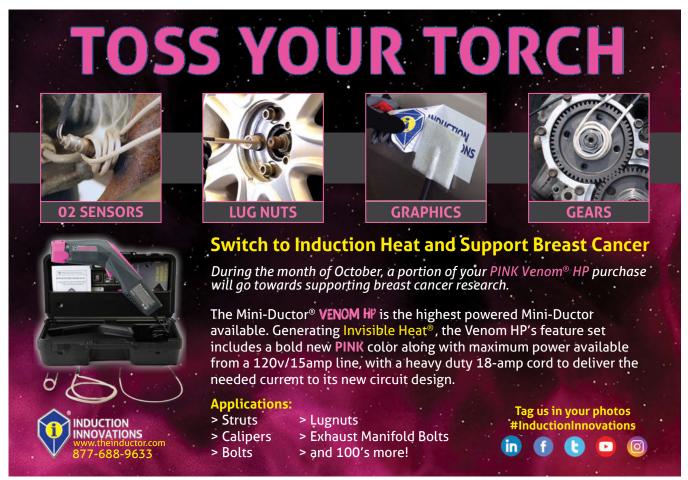
The SP Tools by SP Air 12V Industrial Cordless Rivet Gun Kit, No. SP81371, is designed to set 300 rivets in one charge.

It includes three interchangeable nozzles and is able to set 1/16", 1/8", 5/32", and 3/16" (2.4mm, 3.2mm, 4.0mm, and 4.8mm) aluminum rivets. In addition, the riveter

features a maximum pull-

ing force of 1,102 lbs, has a one hour auto shut-off charging time, and an ergonomic soft grip handle for comfortable use. The set includes the industrial riveter, 12V maximum lithium 2.0Ah battery pack, charger, and a black carrying case.

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## NEW **Products**



industrial-grade pump

The Legacy Manufacturing Flexzilla Portable Air Compressors feature Quiet Technology, so they operate at a noise level no louder than a normal conversation. Each model has an industrial-grade pump, two quick-connect universal brass couplers, a pressure regulator and gauge, a tank pressure gauge, a manual tank drain, an elastomeric ergonomic grip, and a power cord. The industrial-grade pump comes with a two-year limited warranty.

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#### Sanitizes vehicles and shop equipment quickly

The Killer Tools Mr. Fogger is available as a 110V plug-in or 18V cordless tool. Its handheld mister can be used to sanitize an entire office/seating area, vehicles, and shop equipment quickly with a 36-micron mist that reaches into every crevice. Use it to spray a light mist of the EPA-registered Bioesque Disinfectant that kills 99.9 percent of most allergens upon contact. It's all-natural, non-corrosive, free from chlorine, and does not have to be wiped off surfaces. Mr. Fogger is built in the U.S.A. with globally sourced components, and comes with 1 qt. of Bioesque disinfectant, as well as a one-year warranty.

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#### Minimizes the risk of damaging wheels

The Coats 80C Center Clamp Tire Changer is ideal for high-volume shops and built on a Coats swingarm platform. It offers a centerclamp design to help minimize the risk of damage to wheels. It features a 220V, 2 hp electric motor for trucks and low-profile assemblies, an upgraded chassis for extended durability, RoboRoller Powered Assist to provide direct pressure and

prevent bead rollover, as well as standard ABS to seal difficult beads more efficiently.

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## **NEW! TOOL STORAGE**



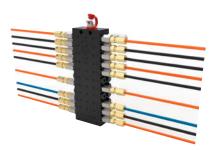
# KT175106 26" 6-DRAWER

- Overall size: W 26.4" x D 22" x H 40"
- Body thickness :1.2/1.0mm. Drawers thickness: 0.8mm. Peg board side storage
- Aluminum trim tubing handle
- Polypropylene Casters load rated 250lbs.ea. 4 swivel with lock
- Covered by a 1 year warranty

Ask about our PRO SERIES 54" 8-Drawer Tool Chests & 10-Drawer Rolling Tool Cabinets available in red and black.

www.ktoolinternational.com /// 800.762.6002

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### Easily grease trucks, tractors, and trailers

The Improved EZ Greaser Flow Divider Valve Assemblies from Graco Inc. are compact and ideal when space is tight and weight matters. The EZ Greaser assemblies use compact series progressive (CSP) divider valves to add centralized lubrication to trucks, tractors, and trailers. They are 30 percent lighter than the previous generation, the company says. Users can safely and easily grease many points from one fitting, shortening the amount of time spent greasing and ensuring no grease points are overlooked.

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### Holds eight universal tips

The Mayhew Tools 11-in-1 Screwdriver and Nut Driver, No. 51011, is an easy-tochange screwdriver and nut driver in one that holds eight universal tips and converts to three nut driver series. The tool, backed by a lifetime warranty, features a three-point grip made from high quality material with a superior method for bonding the grip to the core, the company says. The thicker grip material offers the user a cushioned, more comfortable grip. The tool includes No. 1 and No. 2 Phillips, 3/6" and 1/4" slotted, #1 and #2 Square Recess, T10 and T15 Torx, along with 1/4", 5/16", and 3/8" nut driver.

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### Kits available with gloves, hardhat, and face shield

The Cementex UltraLite Series Arc Flash PPE Task Wear is designed to combine complete safety with comfort. The 11 cal/cm2 UltraLite garments include a balaclava-hooded long-sleeve t-shirt and high-waisted 12 cal/cm2 pants, made to fit comfortably over daily-wear clothing, with kits available that

include gloves, a hardhat, and a clear face shield. UltraLite Task Wear ensures workers are safe and prepared for the job. All Cementex products are made in the U.S.A.

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Expand Your



or the sixth year in a row, we asked our readers to weigh in on the PTEN Innovation Awards. Named the 2020 PTEN People's Choice, the following pages feature the top 27 products selected by our readers, per product category, that were originally nominated for the 2020 PTEN Innovation Awards.



### **CAY Industries**

Socket Roll Pro

The CAY Industries Socket Roll **Pro** offers a clearly-labeled, stowable storage solution for sockets, wrenches, and drives in a one-piece, compact roll-able case with magnet-

ic patches to keep hardware secure while working. The Socket Roll Pro holds 66 tools of the most common socket sizes for 1/4", 3/8", and 1/2" drives in both metric and SAE, as well as six wrench slots on the back side. The organizer has been improved with higher tensile strength thread to prevent breakage from heavy use, outfitted with upgraded Cordura nylon and the company's patented locking stitch mechanism for more power. It is made in the U.S.A.

CATEGORY: Tool Organizers

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### **Associated Equipment**

Intellamatic Smart Battery Charger and Analyzer

The Associated Equipment Intellamatic Smart Battery Charger and Analyzer, No. IBC6008MSK,

is designed to charge all battery types and has adjustable charging amperage and voltage with patented diagnostics to detect weak or defective batteries and an adjustable reflash power mode for extended vehicle diagnostics. The easy-to-read

backlit interface guides technicians through a variety of charging parameters for different battery types. The partial charge mode allows for a quick test and charging of a battery to 75-80

percent; greatly speeding up the charging process for busy shops. The unit also features a 12V power port for use with a memory saver for battery changeout and comes with an OBD-II cable for use with the memory saver.

CATEGORY: Battery Service

Circle 100 on card, or enter at "e-inquiry" on VehicleServicePros.com

### **Snap-on Tools**

NOZZLEGRP Snap Grip Hose Nozzle with Shut Off

The Snap-on NOZZLEGRP Snap Grip Hose Nozzle with Shut Off is designed to clean projects of all sizes. It's made with aircraft-grade aluminum, stainless steel, durable

plastic, and Santoprene rubber. The hose nozzle features a handle grip that can be locked in either a pistol or in-line position. A simple twist takes the nozzle's water flow from an



ordinary garden nozzle to a powerful jet pattern for cleaning tough shop grime. The design provides an uninterrupted direct flow path with an on/off lever for quick shut-off without changing the spray pattern.

CATEGORY: Shop Equipment

Circle 99 on card, or enter at "e-inquiry" on VehicleServicePros.com

### **Snap-on Diagnostics**

Triton-D8

The Snap-on Diagnostics Triton-D8 features Snap-on's intuitive Intelligent Diagnostics software. It includes advanced features to save time, boost productivity, and help technicians by guiding them straight through the diagnostic workflow, from pinpointing the problem to finding the fix, while filtering out unnecessary steps. Only information that is relevant to the specific vehicle and fault code is displayed on one scrolling, easy-to-navigate screen. The Triton-D8 also broadens the technician's coverage and capabilities by allowing them to verify component failures.

CATEGORY: Automotive Scan Tool Circle 101 on card, or enter at

"e-inquiry" on VehicleServicePros.com









#### **Induction Innovations**

Mini-Ductor Venom HP

The Induction Innovations Mini-Ductor Venom HP is the fourth generation of the Mini-Ductor handheld induction heater. The Mini-Ductor Venom HP offers more power than any other Mini-Ductor, making the Venom HP the highest-powered Mini-Ductor available. From a 120V/15A line, with a heavy duty 18A cord, the Venom HP allows users to heat larger metal fasteners and components fast. The Mini-Ductor product line releases metal from corrosion or thread lock compounds in a matter of seconds and without the collateral damage of an open flame, the company says. Applications include bearings, graphics, exhaust manifold bolts, lug nuts, 02 sensors, u-bolts, fuel tank straps, and more.

CATEGORY: Specialty Tools

Circle 102 on card, or enter at "e-inquiry" on VehicleServicePros.com

### **Snap-on Diagnostics**

Service Resets & Relearns

The Snap-on Service Resets & Relearns feature is a guick and comprehensive solution to complete a repair. The feature is for Zeus, Triton-D8, Apollo-D8, and Verus Edge and provides procedures such as functional tests, resets, and relearns related to the service selected. It also automatically checks top repairs from SureTrack expert information, plus technical service bulletins (TSBs) to ensure a complete fix. When replacing a component or simply starting, a service technician can be confident the tool returns all resets and relearns that must be performed to successfully carry out the repair, the company says.

CATEGORY: Repair Information

Circle 104 on card, or enter at "e-inquiry" on VehicleServicePros.com

### **Snap-on Tools**

3/8" Drive TechAngle Flex-Head Torque Wrench

The Snap-on 3/8" Drive TechAngle Flex-Head Torque Wrench, No. ATECH2FR125B, features a torque range of 5 to 125 ft-lb to save technicians time on jobs that require exact standards for fasteners. The tool is ideal for most torque applications. It features dual progressive LEDs, LCD screen with backlight, four alert modes, six scales, 10 presets, torque then angle, low profile buttons, power interruption technology, cycle counter, battery level indicator, plus additional customizable features. The 80-tooth ratchet offers a shorter, 4.5-degree arc for confined jobs allowing technicians to work on a wider array of popular applications including engines, suspensions, and passenger tires.

CATEGORY: Tire. Wheel Service

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#### Robinair

Connected R-134a ACS Machine

The Robinair Connected R-134a ACS Machine, No. 34998, recovers, recycles, evacuates, leak-tests, and recharges R-134a with improved 98.5 percent efficiency, says the company. The new design features a large 10" capacitive touch LCD display and automated features including automatic internal refrigerant refill, oil drain and inject, and UV dye inject. It has full wireless capabilities for Wi-Fi or Bluetooth communication, which enables automatic machine software updates and enables database downloads. The Android operating system effectively manages and stores machine metrics and data related to

services performed with the ACS machine to add to vehicle service reports. It can also export service reports to store or share digitally.

#### CATEGORY:

Air Conditioning Service

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







#### Autel

MaxiSYS ADAS MA600

The Autel MaxiSYS ADAS MA600 calibration frame quickly folds and disassembles for transport to calibrate in many locations. Designed to support adapting repair businesses, the MA600 helps shops affordably target a new revenue stream of ADAS Calibration, the company says. The MA600 provides accurate calibration procedures for camera based systems

with accessories and oversize AVM patterns available to purchase separately. The step-by-step tutorial graphics and five line laser leveling process offers a quick and efficient vehicle centering and squaring to calibration frame procedure. A compatible tablet with ADAS software is required.

CATEGORY: Diagnostics & ADAS

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



### **Snap-on Tools**

Pro-Link Edge Scan Tool

The Snap-on Pro-Link Edge Scan Tool, No. EEHD189090, is ideal for commercial truck shops, general repair, mobile service, and municipalities. Its diagnostic computer provides an easy and efficient way to diagnose complex commercial repair jobs and the modern interface makes it easy to scroll through information, review data lists, and cross-reference generic HD standard codes to OEM specific codes. The heavy duty scan tool offers thousands of OEM tests, maintenance routines, and programmable parameters for most major systems on commercial vehicles. The base starter kit comes equipped with a carry case, three standard adapters, and support for J1708, J1939/1578, and OBD-II/EOBD. Additional OEM specific customization options are available through 10 add-on software suites as well as other accessory adapters.

CATEGORY: Heavy Duty Scan Tools

Circle 108 on card, or enter at "e-inquiry" on VehicleServicePros.com

### **Snap-on Diagnostics**

Thermal Laser

The Snap-on Diagnostic Thermal Laser, No.

EETH311, combines laser-guided temperature readings, thermal imaging capabilities, and storage for hundreds of images, all in one tool. The Diagnostic Thermal Laser brings together temperature readings of up to 1,800 degrees F (1,000 degrees F in thermal mode) and thermal imaging capabilities for a variety of applications. It's a two-in-one system with thermal and laser modes, making it ideal for jobs such as checking inlet and outlet temperatures of catalytic converters. An ergonomic pistol-grip design allows for easy, precise control. CATEGORY: Inspection Tools, Lab Scopes

Circle 107 on card, or enter at "e-inquiry" on VehicleServicePros.com

#### **Snap-on Tools**

Oil Filter Canister Socket for Toyota Vehicles

The Snap-on Oil Filter Canister Socket for Toyota Vehicles, No. OFT1, is designed to assist with the removal and re-installation of the canister cover on Toyota/Lexus Inline 4, V6, and V8 engines. Crafted from special higher alloy steel, the oil filter socket is precision-built and heat-treated

for optimum strength and durability. The unique low profile 14-point, 3/8" drive socket gives technicians the strength and accessibility needed to remove and install these popular canister style Toyota filters.

CATEGORY: Chemicals, Oil, & Lube

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



### Lumax

Magnetic LED Light

The Lumax Magnetic LED Light, No. LX-1436, attaches securely to most hand tools and is ideal for use on grease guns, screwdrivers, wrenches, pliers, ratchets, and more. The company says the strong magnets hold onto the tool securely during operation and will not fall off. The compact, lightweight design makes it easy to store and put in a toolbox. The Magnetic LED Light has

a long-life lithium battery that lasts for up to seven hours of continuous use. Batteries are included.

CATEGORY: Lighting

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







### **Snap-on Tools**

68" 9-Drawer Double Bank EPIQ Series Stainless Steel PowerTop with LED

The Snap-on 68" 9-Drawer Double Bank EPIQ Series Stainless Steel PowerTop with LED, No. KETP682A2PU, features a PowerDrawer, SpeeDrawer, and an LED-lighted PowerTop. The PowerTop combines 10 staggered outlets, four 2.1A USB ports, raised edges throughout, and an integrated LED shining down into the drawers for increased tool visibility. Designed for a lifetime of use, the roll cab has three extra-wide drawers at the top providing access to frequently used tools. The PowerDrawer offers dedicated space for power tool organization and charging with a five staggered outlet and two USB port power strip. The 2" SpeeDrawer, with color matching dividers, allows organization of small parts and fasteners.

CATEGORY: Tool Boxes & Carts

Circle 111 on card, or enter at "e-inquiry" on VehicleServicePros.com



### Robinair

Tracer Gas Leak Detector Service Kit

The Robinair Tracer Gas Leak Detector Service Kit, No. LD9-TGKIT, with sensor technology is designed to detect a 5 percent hydrogen / 95 percent nitrogen tracer gas mixture. The detector's full color liquid crystal display (LCD) and sweep mode function convey messages, graphics, and prompts to help technicians locate the source of a leak. A patented three LED inspection light aids in locating and inspecting suspected leak sources. According to the company, filling a system with tracer gas is quick and effective, with a lower cost than refrigerant. The kit detects leaks as small as 0.5 oz. per year for R-134a and .015 oz. per year for R-1234yf refrigerant. CATEGORY: Leak Detection

Circle 113 on card, or enter at "e-inquiry" on VehicleServicePros.com

### **Snap-on Tools**

Dual Machine Welding Cart with Storage for Two Gas Cylinders The Snap-on Dual Machine Welding Cart with Storage for Two Gas Cylinders, No. MIGCARTDLA, easily rolls from one work space to another with two wheels and swivel casters, plus hooks on both sides of the cart for organized and neat cord storage. The heavy duty design is tough enough to hold up to 350 lbs of MIG/TIG welders and plasma cutters, and its extra wide shelf allows for the dual storage of gas cylinders with a maximum diameter of 7" side by side. The two shelves provide ample space to securely store accessories.

CATEGORY: Welding

Circle 112 on card, or enter at "e-inquiry" on VehicleServicePros.com

### **Snap-on Tools**

Digital Multimeter Enhanced

The Snap-on Digital Multimeter Enhanced, No. EEDM525F, measures ohms, AC/DC volts, true-RMS AC, AC/DC amps, Hz/frequency, capacitance, and more to cover most automotive electrical needs. Designed to help technicians diagnose circuit or component problems, the enhanced meter offers a 4" color display for easy identification of readings and symbols, as well as a horizontal handhold position for user comfort. The multimeter also features CAT III and CAT IV capabilities, allowing it to be used on hybrid vehicles as well. The tool comes with a test-lead storage wrap with a retention strap and a seven-year warranty.

CATEGORY: Electrical Testing Tools

Circle 114 on card, or enter at "e-inquiry" on VehicleServicePros.com







### **Snap-on Tools**

Cooling Refill/Retention Tool

The Snap-on Cooling Refill/Retention Tool, No. RADKITULTRA, is designed for use on auto and truck radiator systems during leak location, repair, and coolant refill. The RADKITULTRA is ideal to use during radiator, heater-core, thermostat, and radiator hose replacement, with no draining required. The RADKITULTRA performs both coolant refill and retention/barrier with one easy-tochange setting. With vacuum up to 30 inHg, it removes air pockets that can cause a vehicle to overheat. An additional safety feature directs coolant mist away from the work through a 5' exhaust hose and a protective gauge boot helps prevent damage and scratches.

CATEGORY: Engine Service & Repair

Circle 115 on card, or enter at "e-inquiry" on VehicleServicePros.com



#### Mitchell 1

SocialCRM

The Mitchell 1 SocialCRM allows consumers to book auto repair appointments with a few clicks from their shop's website or email the shop sent to them by the SocialCRM shop marketing service. The automated online appointment request feature is powered by the integration between SocialCRM and the Manager SE shop management system. With the click of a button, consumers can submit an appointment request at their convenience. To avoid schedule conflicts, the system only offers available time slots based on the shop's calendar. Shops can quickly view appointment requests that are delivered right to their shop management system. Shop managers simply click to accept or decline the request, generating an automatic verification back to the customer.

CATEGORY: Shop Software

Circle 118 on card, or enter at "e-inquiry" on VehicleServicePros.com

#### **Snap-on Tools**

1.75-Ton Aluminum High-Performance Floor Jack

The Snap-on 1.75-Ton Aluminum High-Performance Floor Jack, No. FJ175, features a low 3.4" height to easily fit under most vehicles with a maximum lifting height

of 18". The jack offers a 3,500-lb lifting capacity. The lightweight, aircraft-grade aluminum design features roller thrust bearings in the rear caster assemblies that allow technicians to work on heavier

load capacities, while a single front roller allows easy navigation through narrow, tight work areas. In addition, the jack is equipped with a hydraulic pump assembly with seals and highperformance oil for extreme temperatures and reduced wear.

CATEGORY: Lifts. Jacks. & Stands

Circle 116 on card, or enter at "e-inquiry" on VehicleServicePros.com

### **Snap-on Tools**

**Heavy Duty** Reciprocating Air Saw

### The Snap-on Heavy Duty Reciprocating Air

Saw, No. PTRS1000, is designed to cut through 1/8" metal. Featuring a cushioned grip for reduced vibration and less fatigue, the PTRS1000 has a paddle-style trigger for additional safety and front-air exhaust for a more visible work area and a cooler blade. The PTRS1000 has an improved, powerful motor and is compatible with both air and sabre saw blades.

CATEGORY: Air Tools

Circle 117 on card, or enter at "e-inquiry" on VehicleServicePros.com

### **Snap-on Tools**

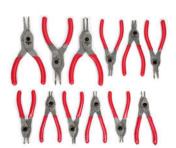
SRPCR Series Snap Ring Pliers

The Snap-on SRPCR Series Snap Ring Pliers feature a patentpending, push-button convertible design to easily switch between internal and external rings, and 45-degree and 90-degree jaws to make it easier to reach retaining rings. The SRPCR series offer a wide cushion grip to keep hands comfortable while powering through transmission repairs, AC compression clutches, and starter and turbo chargers, in addition to aviation and heavy duty truck applications. They also feature cold-forged steel with a higher alloy content

for durability and a natural steel finish with a protective clear coating to defend against corrosion.

CATEGORY: Hand Tools

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### **Carlyle Tools**

Adjustable Engine Creeper

The Carlyle Tools Adjustable Engine Creeper is designed to take the strain off of a technician's back and legs while safely working on engines. An adjustable sliding pad allows the technician to fine tune their comfort, and a parts storage pouch helps to keep parts and tools in reach. It has a 400-lb load capacity and is adjustable from 48" to 64". When not in use, the Carlyle Adjustable Engine Creeper easily folds down for compact storage.

CATEGORY: Creepers & Seats

Circle 120 on card, or enter at "e-inquiry" on VehicleServicePros.com

### **Snap-on Tools**

1/2" Drive 17mm Subaru Caliper Bolt Impact Swivel Socket

The Snap-on 1/2" Drive 17mm Subaru Caliper Bolt Impact

Swivel Socket, No. BTCS1, is designed to allow technicians to reach obstructed front caliper bracket bolts. The BTCS1 impact-rated, swivel socket was produced to specifically meet the needs of technicians working on Subaru vehicles. Its special geometry and swivel design give access to front caliper bracket bolts that are blocked by suspension components and allows for the use of a 1/2" drive impact gun. Made from special higher alloy steel, the socket is precision-built and heat-treated for optimum strength and durability, plus its industrial finish helps protect against corrosion.

CATEGORY: Brake Service

Circle 122 on card, or enter at "e-inquiry" on VehicleServicePros.com

### **Mayhew Tools**

Rechargeable LED Multi Tool

The Mayhew Tools Rechargeable LED Multi Tool, No. 17945, is a detachable 13-in-1 tool featuring an easy and safe opening and closing mechanism, along with a nylon pouch for durable storage

while carrying. Key toolsets cover a wide range of applications including long nose pliers, bent nose pliers, a wire cutter, knife blade, saw, rope cutter, hammer, four screw bit pieces, a USB port, and an LED. When the light is fully charged, it offers 1.5 hours of continuous use. The battery is charged by using a common 2.0 USB cable. To remove the detachable part, simply press the button and lift up.

CATEGORY: Safety & Personal Gear

Circle 123 on card, or enter at "e-inquiry" on VehicleServicePros.com



### **Snap-on Tools**

2-pc Instinct Non-Marring Trim Pad Tool Set

### The Snap-on 2-pc Instinct Non-Marring Trim Pad Tool Set,

No. ASGP102BG, is designed to remove clips while reducing the chances of damage. The tool set allows for the removal of clips and fasteners from a vehicle's interior without marring adjoining components. The vinyl dip on the 90-degree portion of the tool still allows for leverage while reducing the chance of damage to a vehicle's interior. The set offers durable, nickel-chrome finished blades, and comfortable ergonomic Instinct handles. The kit includes two separate tools for removing the most common size clips.

CATEGORY: Body Shop

Circle 121 on card, or enter at "e-inquiry" on VehicleServicePros.com

### **Snap-on Tools**

18V High Output Impact Wrench

The Snap-on 18V High Output Impact Wrench, No. CT9075, delivers 900 ft-lb tightening torque and 1,200 ft-lb breakaway torque. The durable, professional grade impact breaks away stubborn fasteners and the digital microprocessor-controlled switch maximizes performance/run-time with three forward and reverse settings. These settings are independent of each other which provides the technician the ability to use the impact in full power, in one direction, and partial in another without using the selector switch. A built-in brake quickly stops the anvil

to prevent throwing fasteners and sockets while the brushless motor prevents toolslowing buildup.

CATEGORY: Power Tools

Circle 124 on card, or enter at "e-inquiry" on VehicleServicePros.com





# A handle on hydraulic brake systems

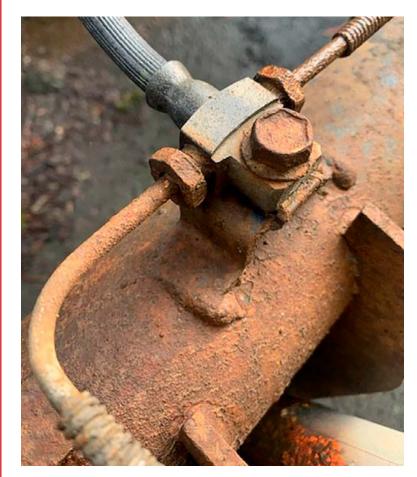
Step one – Check for contamination. Step two – Enlist the right tools.

By Barry Hoyland, Contributing Editor

rake hydraulic systems are relatively simple and maintenance-free, as long as you can keep moisture away from the inside and rust and corrosion away from the outside. If moisture enters the hydraulic fluid two things occur: a lower boiling point of the fluid, which can cause brake fade, and rust forming inside the system, which can affect the seals and pistons and bores of hydraulic components.

One thing to keep in mind if you see signs of rust on hydraulic brake interior components (wheel or master cylinders, calipers, or brake lines) - there is a leak allowing air into the system. Just like an engine's cooling system, rust cannot form unless air is entering into the closed system, so the presence of rust means there is air entering from somewhere. It can be from a caliper seal, a loose fitting, or possibly a faulty gasket on the master cylinder reservoir.

Exterior components that rust are typically not an issue unless you need to either service the system, such as bleeding the brakes, or replace a component where its removal is made more difficult from the rust. Even though I have spent most of my time in this business on the West Coast and have not had to deal with rust and corrosion from salt used to clear ice from roads, I have had to repair vehicles that at some point were used in those areas. I've also dealt with local vehicles that were used or parked near the ocean, causing oxidation of undercar components. In this article,





A Rusted brake lines can be problematic when replacing them.

 A rounded off bleeder screw can be very difficult to remove.

### **TOOLS USED:**

- Brake Fluid Test Strips
- Vehicle Repair Information
- Bidirectional Scan Tool
- Brake Hydraulic System Flush Machine
- Brake Bleeder Screw Wrench
- Brake Line Wrench
- Venom Mini-Ductor
- Brake Fitting Rethreading Kit
- Mueller Kueps Brake Line Straightener
- Brake line bending tools
- Brake line flaring set

we will discuss some ways to overcome problems in a brake system caused by rust or corrosion.

### **ISSUE: MOISTURE IN THE SYSTEM**



Since moisture is the start of rust, determining whether moisture is present is one of the first steps. One of the easiest and least expensive tools to use to test for contamination is a fluid test strip. Innovations over the past few years have allowed electronic testers to be available and less expensive, while also able to accurately test for contamination in any type of brake fluid with a single tool.

### **REMOVE THE CONTAMINATED FLUID**

If moisture is detected, you must completely "flush" the system of the contaminated fluid. In my opinion, "flushing" the brake system on a late model vehicle with ABS is extremely difficult, due to the complexity of the ABS module and the volume of brake fluid in the system. Most shops use brake fluid "flush machines" that are, in fact, fluid exchangers that do not completely replace all the fluid in the system.

Now, to flush a system, it is technically necessary to not only replace all of the fluid in the system but also to use a flushing agent to clean the system, while simultaneously activating ABS solenoids to flush those components as well. Since most technicians do not have the equipment, nor the time, to completely flush the system, they exchange the majority of the fluid and assume the problem is taken care of. To help resolve possible residual contamination after a fluid exchange, drive the vehicle and safely activate the ABS system a few times, then re-test the fluid after the vehicle has been driven for a while to see if any moisture returns to the reservoir.

When performing a fluid exchange, it is a good idea to also bleed the brakes and even take a few extra minutes to collapse the calipers with the bleeder screw open in order to remove contaminated fluid at each caliper. Start by accessing your repair information database to determine what tools are required, and what the brake bleeding procedure is. Don't forget to determine what the proper order of bleeding is, whether it is the traditional farthest from the master cylinder to the closest, or a variation of that due to ABS.

Next, you will need to see if a scan tool is required to activate the ABS system in order to allow the flow of fluid through the solenoids. If so, your scan tool will be used in the manner directed by both the vehicle information and by the scan tool user instructions.

### ISSUE: RUST/CORROSION **ON EXTERNAL BRAKE COMPONENTS**

Rust or corrosion on external brake components can include brake bleeder screws that are corroded so much that a



▲ Mueller-Kueps' Brake Line Straightener is used to easily straighten coiled brake lines.

TOOL BRIEFING

wrench will not turn them, or they break in an attempt to loosen them. One of the best ways I have found to deal with these is to spend a few moments prior to loosening or removing the component to clean and lube the part. I have had relatively good success by using WD-40 Specialist Rust Release and a wire brush to clean bleeder screws before removing them. I also use a bleeder screw wrench, which is a 6-point wrench, rather than a 12-point combination wrench, which not only can provide a better grip on the screw, but usually a better angle to work with.

For more stubborn parts, I use the Venom Mini-Ductor to heat the caliper or wheel cylinder housing to break the screw loose. This tool works very well for breaking loose brake lines as well.

Occasionally, a bleeder screw will be rounded off, making it very difficult to remove with a wrench. In those cases, I will use the Bolt Biter from GEARWRENCH. This set of sockets will remove almost any bolt that has a stripped head by gripping it securely in its tapered grooves. Once the bleeder screw is removed, make sure the threads of the caliper or cylinder are clean and undamaged before installing a new bleeder screw.

If the threads are damaged, the LT993 brake rethreading kit by Lock Technologies (LTI), is a great tool to repair or clean threads while not damaging the seat of the female flared-end fitting. Using a typical tap will usually cause damage to the seat.

Replacing corroded brake lines can also be challenging. Not only will



you need to remove a rounded off fitting, you will need to remove any fasteners or clamps that hold the brake line to the chassis, which are also typically rusted. The same type of tools you used on a rounded off or stubborn bleeder screw can be used to remove brake line fittings or hold down clamps.

When it comes to replacing a damaged brake line, you may be able to obtain an exact replacement from either the vehicle manufacturer or an aftermarket source. In many cases, you will need to bend your own replacement line to fit. In this case, you can either buy a straight line of the correct length or use multiple lines and a connector fitting if the length is too long for a single line. I do not like to add connector fittings, so I will use bulk line, typically made of stainless steel, to help

avoid corrosion problems in the future.

The problem with using bulk line, especially stainless steel, is that the line typically comes coiled in a roll and is difficult to straighten prior to bending to shape. The company Mueller Kueps has made a tool for straightening either bulk line or re-straightening a bent line if it has been bent incorrectly. This tool slips over the line and allows you to straighten even the hardest stainless-steel tubing with ease.

When it comes to bending lines, it may be helpful to have a variety of benders. Since some brake lines have multiple compound bends, sometimes close together, a single design of a tool may not be enough. I use a combination of the OTC 6515 three-way bending tool and the Lisle 44150 pliers. This combination allows me to make sweeping bends with the OTC tool and close, tight bends with the pliers.

The last step in making brake lines is flaring the end fitting. First of all, don't forget to place the fitting on the tubing prior to flaring the end! A little hint here; if the last bend is close to where the end of the line and fitting will be, wait to make this bend until after the flare is made. Once the fitting is in place, use a highquality double flaring tool to make the flare. Check carefully for cracks in the seating area once the flare is complete.

To summarize, having the correct tools to determine if contamination is present on internal components, plus the right tools to make repairs on external parts, can make brake service both easier and more profitable. PTEN

### **RELATED TOOLS**



### **Mastercool**

Universal Hydraulic Flaring Tool Set, No. 72485 Circle 125 on card, or enter at "e-inquiry" on

VehicleServicePros.com



### **Lang Tools**

**Brake Line Wrench** Set. No. 5455

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



### **Cal-Van Tools**

Mirror Tube Bender, No. 75902 Circle 128 on card. or enter at "e-inquiry" on VehicleServicePros.com





The RL-8500 by Ranger Products was made to offer techs faster rotor and drum resurfacing than any other brake lathe. With infinitely adjustable feed rates, operators can easily modify the speed of each cut with the turn of a dial. Get the precision finish you need, whether it's an initial rough cut or a single-pass micro-finish. Includes built-in, super-bright LED lamps, a standard heavy-duty bench and optional 32-pc. truck adapter set. There's simply no job too big for Ranger's RL-8500 brake lathe.

See it on YouTube

Search "Ranger Nickel Test"



Fully equipped tool package comes standard

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**EZ-RED** Work Light & Tool Bundle

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7-THF Vehicle

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**Vessel Tool MEGADORA Body** Shop 6 Piece Set 9706EVA (4)

Prize value: \$119.99/set

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## Ledlenser iH11R

This reviewer appreciated the flashlight's handsfree usability.

by Emily Markham, Assistant Editor

### PRODUCT DESCRIPTION:

The **Ledlenser iH11R** is a rechargeable 1,000 lm LED headlamp. The iH11R features helmet mounting options, a magnet mount, and Bluetooth connectivity. Paired with the Ledlenser Pro Connect app, users can customize and program functions for the exact light needed. It features the Ledlenser patented Advanced Focus System which allows users to transition light from a broad flood beam to a sharply focused long-distance beam, and Optisense technology for automatic adjustment of the light based on the user's surroundings. The iH11R features red, blue, and green LEDs and can be quickly charged via a magnetic charging cable.

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### THE REVIEW:

s a technician, properly lighting a workspace can be tricky at best, especially when both hands are needed to complete the job. Scott Brown, ASE Master Certified L1 Technician at Connie & Dick's Auto Service Center in Claremont, California, found a way around the hassle with Ledlenser's iH11R, a head-mounted flashlight that he says, "is pretty doggone cool."

The flashlight comes mounted to a strap that wraps around the head, but other options are included for mounting the iH11R to helmets, such as the magnetic or glue-on mounts. Additionally, the flashlight comes with a carrying pouch that can be attached to a belt.

Brown is impressed with the iH11R's battery run-time of seven hours and the ease of recharging the light. The device's rechargeable battery doesn't have to be removed to recharge it. Brown explains that it's as simple as plugging the charging cable into the supplied USB adaptor

and connecting the other end of the cable to the magnetic mount on top of the light to charge it up.

The only frustration Brown has with the product is its user manual, which he did not find very intuitive. That said, Brown does recommend users get the app, Ledlenser Pro Connect. The app gives users full control over the iH11R's features and allows them to tailor the light's functionality to their needs.

Other features of the light include red, blue, and green colored LEDS, strobe light capability, zoom functionality with Ledlenser's Advanced Focus System, Optisense technology, which adjusts the light based on the user's environment, and an S.O.S. function that will output a Morse Code signal for S.O.S.

Brown appreciates the handsfree usability of the light. He had the opportunity to use the flashlight while working under the dash of a vehicle. The repair called for the use of both hands, meaning he didn't have a hand free to maneuver a flashlight, so being able to strap the iH11R to his head was very beneficial.

"[You] point it in the direction you need to see, and you can just move your head around a little bit to get the light to where it belongs," Brown says.

Overall, Brown found the Ledlenser iH11R to be a useful tool to have around the shop. PTEN

To watch a video review of the Ledlenser iH11R, visit VehicleServicePros. com/21143893.





## Snap-on APOLLO-D9

The reviewer said this is one of the most user-friendly scan tools he has used.

by Kayla Oschmann, Assistant Editor

### THE REVIEW:

hen diagnosing a vehicle, the quicker it is to set up and complete a full system scan for technicians, the better. Tool reviewer Chad Austin, lead diagnostic technician at Austin Automotive in Canon City, Colorado, was impressed by how fast the Snap-on APOLLO-D9 scan tool functioned.

"[The APOLLO-D9 has] almost instant boot-up and a much faster full system scan compared to other brands and previous versions from Snap-on," Austin says. "[The] automatic ID process begins when the scan tool is connected to the car, so there are less buttons to press to get connected."

Austin uses the APOLLO-D9 in his shop mainly for full system scans, engine data PIDs, and reset procedures after a repair has been performed. He also uses it regularly for functional tests, reset adaptions, reset maintenance reminders, and looking up oil specifications.

The scan tool's ability to look up oil specifications and service interval resets is also ideal for lube technicians. This makes it easy to ensure the proper fluids are being used, and that the customer doesn't return with a maintenance light still on, Austin notes.

When the scan tool arrived, it came in a soft case with a power cable and OBD-II cable. Austin didn't bother to look for

### **PRODUCT DESCRIPTION:**

The Snap-on APOLLO-D9 is designed to provide technicians with a diagnostic tool that helps them get the job done. It offers access to Intelligent Diagnostics for filtered codes and vehicle specific data that's constantly updated for quick and confident repairs. APOLLO-D9 features a four-way thumb pad for quick navigation, a 9" capacitive color touchscreen display, and 5 GHz wireless compatibility. Its fast boot-up, as well as one-touch code scan and clear, enables technicians to move quickly from start to print. It also offers advanced graphing features and OEM-level data, along with OEM-specific scanner coverage for over 49 Asian, domestic, and European makes and over 100 vehicle systems.

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a manual (even though it was included). The tool has a built-in help section and embedded videos to help with setup though, he adds.

For the most part, the scan tool is ready to use right out of the box. There are just a few features that require online registration prior to use, such as FCA secure gateway access and Snap-on's cloud sharing site.

"I think it's one of the most user-friendly scan tools available," Austin notes. "Even a new user should be able to figure out the basics without any guidance."

Austin has used nearly all previous Snap-on scan tools, whether in his own shop or others'. He likes the new larger 9" screen and improved touch sensitivity that allows scrolling with a swipe of a finger instead of tapping buttons up and/ or down.

Along with how fast the scan tool functions, its included Snap-on Cloud is another favorite feature. Austin likes how the scan tool automatically saves full system scans to Snap-on's Cloud and includes keywords to make it easier to search for at a later time, if needed. It's also easier to print and email from.

As far as a way to improve the APOLLO-D9, Austin says a wireless scan module such as the one found on the Snap-on Zeus and Verus scan tools is a good idea. However, he believes it isn't really needed.

Overall, the Snap-on APOLLO-D9 was easy to use and its speed won this diagnostic technician over. PTEN



## Induction **Innovations** Mini-Ductor Venom HP

This tool helped the reviewer facilitate rusted parts removal in tight spots.

by Sara Scullin, Editor

### THE REVIEW:

ust happens, and every technician has had to face it. Rusted fasteners and stripped screw heads can slow down an otherwise straightforward repair.

Scott Brown, ASE Master Certified L1 Technician and co-owner of Connie & Dick's Service Center in Claremont, California, says heat will sometimes do the trick. Brown recently tried out Induction Innovation's Mini-Ductor Venom HP at his shop to help pry loose stuck bolts and fasteners.

"Where we're at [in California], we don't run into a lot of rust-bucket type vehicles," says Brown. "But the [technicians] who are in those areas will truly understand the benefits [of such a product] when you can apply a little bit of heat to a fastener that's completely rusted."

The goal, Brown says, is to try to increase your chances of successfully disassembling the part without breaking anything.

When Brown put the Mini-Ductor Venom HP to work at his shop, he found PRODUCT DESCRIPTION:

The Induction Innovations Mini-Ductor Venom HP is the fourth generation of the Mini-Ductor handheld induction heater. The Mini-Ductor Venom HP offers more power than any other Mini-Ductor, making the Venom HP the highest-powered Mini-Ductor available. From a 120V/15A line, with a heavy duty 18A cord, the Venom HP allows users to heat larger metal fasteners and components fast. The Mini-Ductor product line releases metal from corrosion or thread lock compounds in a matter of seconds and without the collateral damage of an open flame, the company says. Applications include bearings, graphics, exhaust manifold bolts, lug nuts, 02 sensors, u-bolts, fuel tank straps, and more.

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the tool was "pretty quick and simple to use, especially if you want to avoid using an open flame." He notes the unit plugs into the wall and has a "nice little LED light at the tip."

The Mini-Ductor Venom HP kit comes with three adapters: one for a wheel bearing setup, a universal loop that technicians can fabricate into whatever they'd like, and the preassembled unit that technicians can form into whatever angle or shape they need. This feature, says Brown, makes the Venom an

exceptional tool to use underneath vehicles and in tight spaces. "Especially when you have brake caliper conditions, like when you want to [get] the bleeder loose," he says. "In that case you can [heat up the part], maybe add a little bit of penetrating oil to it, and then hopefully get that apart."

The company also offers several adapter kits that technicians can purchase separately.

Brown suggests users do their homework before using this tool.

"[The Venom] comes with a quick and easy user's manual. I highly suggest technicians read the manual ahead of time," Brown says. He cautions, "[The tool] is only for ferrous metals; you don't want to use it on anything aluminum."

What is this ASE technician's overall take on the Mini-Ductor Venom HP?

"It's a pretty cool tool," Brown says. PTEN

To see a video review of this product, go to www.vehicleservicepros.com/21139731.



## **Wera Tools** Wheel Impaktor **C** 1/2" Drive **Socket Set**

The reviewer ranks this socket set top-of-the-industry.

by Kayla Oschmann, Assistant Editor

### **PRODUCT DESCRIPTION:**

The Wera Tools Wheel Impaktor C 1/2" Drive Socket Set No. 05004595001, is designed for use with electric or pneumatic impact wrenches. The socket set includes three sizes: 17mm, 19mm, and 21mm. Each socket features a rotating plastic sleeve that allows for higher control during screwdriving and an internal plastic insert to protect the surfaces of the wheel bolts. In addition, the surface of the rim is protected, and the plastic sleeves are interchangeable. Its hexagonal profile enables precise and profile-preserving screwdriving with high power transmission.

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### THE REVIEW:

cott Brown is a technician and coowner of Connie & Dick's Auto Service Center in Claremont, California, The shop is a fixture in the region, serving customers in the vehicle repair business since 1960. That makes sixty years of growing, changing, and wrenching. In the last sixty years both vehicles and toolboxes

have exploded with new technology. Even so, some things about this work are enduring, like the feel of a wellmade socket that helps a technician complete work that is both quick and clean.

Brown recently shared his thoughts on Wera Tools' Wheel Impaktor C 1/2" Drive Socket Set. After putting these tools to work removing vehicle wheels in the bay, he described the set as "high quality" and "very easy to use". He adds he would rank the toolset top-of-the-







industry alongside other market leaders.

With no setup or manual needed, the sockets were ready to go out of the box.

With Wera Tools' "Take it easy" tool finder system, technicians can quickly find the profile and size they need - simply by looking at the colored band found on each tool, a feature that Brown liked. The "Take it easy" system is a colorcoded system for hexagon drive screws, external hex drive screws and nuts, and TORX drive screws.

"The [Wheel Impaktor C 1/2" Drive] sockets are clearly labeled for size and have a color-coded band so locating the right socket only takes a quick glance," he says.

Another feature that Brown likes about the socket set is its heavy-duty outer plastic sleeves. The rotating plastic sleeves surround each socket, protecting the rim when technicians change out wheels.

"Some wheels have a deep recess leading to the lug nut and if a hard tool is inserted, it could damage or mark up the

wheel," Brown says. "This plastic sleeve prevents that from happening."

The sockets in this set also feature an internal plastic insert to protect the surfaces of the wheel bolts. Brown notes he hasn't had the need for this feature vet in his shop but said it would be a nice touch when it comes to working with long studs.

Brown was very satisfied with how easy the sockets were to use. He said he wouldn't change anything, and that they are "nicely built". PTEN



# **Delivering professional** automotive repair and service

Navigating today's voluminous data sets.

By Scott Brown, Technical Editor

utomobiles are one of the most sophisticated devices most humans will ever interact with." That comment came from Dr. John Heywood, a mechanical engineering professor at the Massachusetts Institute of Technology. Heywood has been an instrumental figure in the development of the modern engine design technology that we see in vehicles today. If you think about the statement above and let it sink in, you'll realize how critical your job is at solving problems when these sophisticated products experience failures.

### **DROWNING IN DATA**

If you're going to utilize the volumes of information needed to accurately address a vehicle's problem, access to digital service information is paramount. Knowing how to search through a database like this is the first part of the challenge. Being able to also accurately reference and scrutinize that information, and apply the effective repair methods to vehicles, is equally challenging. Additionally, scan tools and other diagnostic devices are needed to communicate with these complex machines.

While we have many choices of equipment options, several tool companies are continuously developing products that are never 100 percent complete when they hit the market. For many of these companies, when they embark on developing a tool, they need to make significant investments in a number of areas to provide a viable tool for the marketplace. For the most part, software development for these tools is continuously advancing, and when these companies decide to enter the market with their product or service, they usually have to figure out how they're going to fund the continuous development of these products. In most cases, a software subscription model is usually chosen. We'll go more in depth on this topic later in this article.

### **SERVICE INFORMATION**

While there are numerous aftermarket service information platforms out there, one needs to really analyze and challenge the information offered when using it to apply a repair to a vehicle. In my shop, we have access to multiple information resources, including aftermarket and OEM information services. It would be nice if there was a single location that had all of the most up-to-date and comprehensive information available, but that simply does not exist due to the complexities involved in our field.

In most cases, aftermarket service information platforms source their information directly from the vehicle manufacturers. This information is usually licensed from the OEM. For the most part, the information is gathered, parsed, and then re-published. However, you may realize that there are many potential failure points along the way. Even the OEM at times can have a mistake or the wrong information published with service literature. Fortunately, we're all living in a digital world today which means updates can occur at any time. Now, this could be a good thing but could also mean that there might be some latency in accuracy with that service information depending on your source.

For example, I recently discovered where Toyota made an update to the requirements calling for a lane camera calibration. Prior to July 2020, the service literature stated that if a toe-in adjustment had occurred on the vehicle, then a lane camera calibration process would be required. If you're accessing the factory service information that's included with the Toyota Techstream subscription, you'll have access to the latest information available. However, if you access this information in an aftermarket resource, you may be reading the old information.

### **CASE STUDY**

On July 27, 2020, a 2014 Toyota Highlander Hybrid arrived in my shop for new tires and a wheel alignment. I advised one of my service writers to research the post wheel alignment requirements since this vehicle was equipped with all of the advanced driver assistance features available for that

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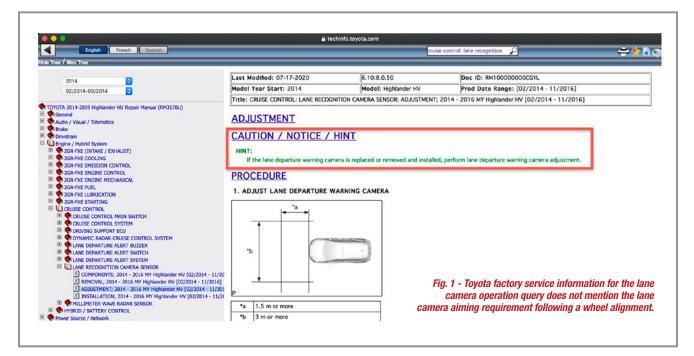












vehicle. He first performed the research within one of our aftermarket resources. This resource, like many, sources their information right from the OEM. For this particular query using "lane camera" as the search term, he found the following language within the Caution/Notice/ Hint section: "If the lane departure warning camera is replaced or removed and installed, or the toe-in is adjusted, perform lane departure warning camera adjustment."

Reading this language is pretty straightforward. It basically states that if you perform a wheel alignment and a toe adjustment is required, a lane camera calibration would be a required service. Normally, we would have just proceeded to recommend and perform the service operation, but we weren't sure how much labor was required for the lane camera operation and decided that we would place an inquiry to the local dealer in order to get an idea of what the cost would be for a wheel alignment and ADAS calibration(s).

When we contacted the local Toyota dealer and asked for an estimate on a wheel alignment and a lane camera calibration, the service advisor advised us that the camera calibration is only required if the vehicle was in a collision or if the windshield was replaced, but not in the case where the vehicle has a wheel alignment. To me, this information seemed new, so we wanted to know more.

We proceeded to double check with Toyota's factory service information by looking up the same lane camera operation in Toyota's Technical Information Service (TIS) and found a document with a release date of July 17, 2020, version 6.10:8.0.50. (Fig. 1)

Although the wheel alignment operation calls for a Lane Camera Calibration, when we look at the Caution/Notice/ Hint section within the Lane Camera Calibration document, the language that once talked about wheel alignment has been removed. What does this mean for the repair professional? If one had only landed on the lane camera calibration document and relied solely on that information alone, the vehicle service paths may have taken different routes depending on which version of the document you referenced. What did we do? We decided to include the camera calibration process as part of the overall service we provided to the customer during this visit.

### DIAGNOSTICS

Given that the state of our vehicle market is primarily driven by electronics and managed by software, many vehicles today are repaired by updating the software found within certain modules on the vehicles. If you've been involved with repairing vehicles over the past decade, there's no doubt that you've already encountered a vehicle in your bay that needed some sort of software update. Depending on your situation, you may have experienced little to no difficulty with performing the required software update.

Today, in my opinion, a modern service center in pursuit of delivering expert service must consider budgeting access to multiple software solutions, whether they be for access to service information, diagnostics, support, or module programming operations. When it comes to choosing your diagnostic software programs, you should be aware that it takes a significant commitment for a company to properly license and develop their offering. I reached out to the Equipment and Tool Institute (ETI) and spoke with Greg Potter, CTO, and Brian Plott, executive director, in order to gain a little perspective on what it takes for a scan tool company to begin developing their products.

Plott reported that the outlay for one year of data licensing may run in the ballpark of \$75-125,000, which would cover approximately 90 percent of the car parc. From there, the company could then begin developing their product so it can be packaged and distributed to the market. As you can see, it takes a substantial investment and commitment by these companies to even begin developing scan tools to help you do your job. Please keep this in mind when you're looking at making an investment in a diagnostic scan tool.

### **SUBSCRIPTIONS**

A subscription model is becoming more commonplace nowadays and from what was mentioned earlier, it makes sense. But I wanted to take a moment and distill this a little further. For those of us in the service market to continue to thrive, we need recurring revenues which come from the vehicle services and repairs we provide. The same holds true for these scan tool companies. They need to continue licensing new data, developing their tools to support new models, and come up with new, innovative products that help us do our jobs more efficiently.

To support those initiatives, the tool company needs a revenue model that supports it. This is why the subscription model is popular. It's sort of like becoming their business partner. You certainly want to see them succeed so that they can continue to develop and innovate. Just like your great customers want to see you continue to be there for them when they need you.

### THE FUTURE

Security will continue to provide challenges for us all. Now, I'm not talking about keys and key fobs. I'm talking about gaining access to certain modules or networks in the vehicle so we can conduct business. If you've come across a 2018+ FCA vehicle, you've like-

ly encountered the "Secure Gateway" obstacle. This is a security measure implemented by FCA in order to protect critical systems like driver assistance and telematics. In order to gain passage into the secure gateway, FCA has worked an arrangement with a third party called Integrity Security Services who runs a service called AutoAuth. According to AutoAuth.com, they work with OEMs, independent tool manufacturers, and independent service providers in order to create a working security relationship with all parties.

The National Automotive Service Task Force's (NASTF) Secure Data Release Model (SDRM), is another security subscription worth looking into. One can obtain a Vehicle Security Professional (VSP) license by visiting NASTF.org. There's definitely a process to get signed up, but one that can help you smooth out the challenges that lie ahead, especially when dealing with vehicles that contain what the OEM has classified as theft relevant parts or even reprogramming modules. In our shop, we've had to use our VSP in order to purchase transmission parts in the past.

We are operating in a complicated space, as vehicles are complicated machines. And for you, the service professional, the stakes are high and the motoring public is counting on you to be able to competently service and repair their vehicle. A lot has changed in the past forty years, but in the past ten years the technology curve has grown exponentially, and I don't see it slowing down. PTEN

### **Training resources:**

ETI - etools.org

Toyota - techinfo.toyota.com

NASTF - nastf.org

AutoAuth - autoauth.com



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### **FEATURES A LOW PROFILE DESIGN**

The E-Z Red Collapsible Magnetic Parts Tray, No. EZTRAY, allows for low profile storage, coupled with versatility to expand and securely hold parts. Using a high-tensile silica material, the EZTRAY will hold up to the harshest conditions and is impervious to most automotive fluids. The inside base plate of the EZTRAY is made of polypropylene plastic which integrates five strong neodymium magnets. These magnets secure ferrous metal parts to the inside of the tray. The base plate will also stick to most metal surfaces. The expanded depth is 2" deep and the width is 4.25". The EZTRAY is available as a tri-color three pack and includes red, orange, and green.

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### **EVA LINERS KEEP TOOLS** IN PLACE

The OEMTOOLS 28" 7-Drawer Tool Cart. No. 24566, provides 9,505 cu. in. of storage space and is designed for efficiency

and durability. Its welded dual-wall construction with 19-gauge steel and 16-gauge caster reinforcement provides strength and durability. An integrated pegboard on the exterior walls provides easy access to frequently used tools and supplies. For safety, the cart features heavy duty 5" by 2" casters and four bumpers on the edges of the cart to prevent damaging vehicles. EVA liners keep tools and supplies in place, while a quick lock system automatically locks the drawers closed when the cart is in motion.

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### **ACCOMMODATES STORAGE FOR 76 SOCKETS**

The Mechanic's Time Savers Five-Row Lock-a-Socket Tray in matte black with green posts accommodates storage for 76 sockets in 1/4", 3/8", and 1/2" drive sizes. The interchangeable locking posts are available separately to customize the tray. The product dimensions are 21" x 9" x 2". The locking posts per size per row are as follows: 1/4" drive - one row of 20 green locking posts, 3/8" drive - two rows of 14 green locking posts, and 1/2" drive - two rows of 14 green locking posts. Rubber pegs are located underneath for surface grip and protection, and the swivel handles are included for easy carrying. These trays are made from 16-gauge powder coated steel for extra strength and durability.

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### **KEEPS TOOLS AND SMALL PARTS CLOSE**

The WeatherTech FlexTray is designed to simplify cleanup and organize any project. The multi-use tray features a raised outer lip to catch and contain spills and splashes or to keep track of tools, nuts, and bolts. Made of heavy duty silicone, FlexTray is lightweight, easy to clean, and foldable. It measures 8" by 13" and can protect almost any surface against germs, damage, or stains caused by heat, chemicals, spills, accidents, and more. It is made in the U.S.A. and comes with a zippered storage case.

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### **EOUIPPED WITH STRONG N35 MAGNETS**

The Ullman Devices' 10-1/4" Magnetic Rail, No. UMR10, is equipped with strong N35 magnets that allow the rail to be mounted to benches, toolboxes, and inside of service vehicles. The mounting holes allow the rails to adhere to walls and other non-magnetic surfaces. The Magnetic Rails allow technicians to neatly organize their tools and sockets, saving them time from sifting through cluttered drawers and toolboxes.

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### **MOUNTS TO TOOLBOXES** AND CARTS

The Lisle Corporation 24" Locking Tool Holder, No. 49490, mounts to toolboxes and carts to secure up to 13 tools including pry bars, extensions, and air tools. The tool holder offers four 3/8" slots, one 7/16" slot, four 1/2" slots, two 5/8" slots, and two 3/4" slots. A lock feature secures tools to the toolbox without taking up drawer space (lock not included). Slotted mounting holes fit most toolboxes and carts.

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### **FEATURES QUICK-ADJUST DIVIDERS TO FIT VARIOUS MATERIALS**

The Milwaukee Tool PACKOUT Compact Tool Box provides users an additional storage option to stack within the company's existing PACKOUT systems. Featuring a 75-lb capacity and quick-adjust dividers, the PACKOUT Compact Tool Box allows users to make internal adjustments to the toolbox's layout in order to accommodate various materials. The toolbox is constructed with impact-resistant polymers and an IP65-rated weather seal to withstand all environments.

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### **HARD-MOLDED BOTTOM FOR DURABILITY**

The Carlyle Tools 16" Tool Bag with Organizer is designed to keep tools organized. The tool bag features a hardmolded bottom for durability and padded, adjustable shoulder straps for added comfort. Also included is a heavy duty transparent organizer with adjustable partitions to keep small parts organized. The tool bag contains eight exterior and 14 interior pockets.

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### **SELF-LATCHING DX QUICK RELEASE DRAWER PULLS**

The Extreme Tools DX Series 72" 17 Drawer Roller Cabinet, No. DX722117RC, features two extra-long drawers and patent-pending, self-latching DX Quick Release drawer pulls. With ball bearing slides load rated to 100 to 200 lbs per drawer (double slides) and exclusive mag wheel casters, this cabinet is designed to be fully loaded. This unit is designed to offer the user plenty of space at an affordable price and durable quality.

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### PROTECTIVE DRAWER LINER INCLUDED

The K-Tool International Pro Series 54" **Top 8-Drawer Tool Cabinets** feature a gas strut for the top lid and single ball bearing slides for two top drawers and double ball bearing slides for two bottom drawers. The overall weight capacity is 1,200 lbs. The top tray has a 200-lb capacity, the single slide drawers have a 100-lb capacity, and the double slide drawers have a 200-lb capacity. The 8-drawer tool cabinet measures 53" length by 24.1" width by 21.4" height. It has a powder coating finish for durability and includes a protective drawer liner. It is available in black or red.

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## Loosens Frozen Metal Parts

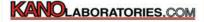


Based on Kano's scientific discoveries. AeroKroil creeps into millionth inch spaces, dissolves rust and lubricates to quickly loosen frozen metal parts, free rusted bolts, free frozen shafts ... serving 480 of the Fortune 500 - Since 1939.

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### **CLINGS TO SMOOTH, FLAT,** AND CURVED SURFACES

The ESCO GeckoGrip Flexible Travs feature a soft silicone texture to cling to smooth, flat, or curved surfaces, protecting any surface from dents, dings, or scratches. The trays help organize and store loose parts, paint, or tools. Cast out of foodgrade silicone with a built-in carrying handle, the GeckoGrip trays are impervious to most chemicals and heat-resistant up to 395 degrees F. Convenient built-in compartments allow for easy storage of small components and liquids. Sold in hivisibility yellow, GeckoGrips are available individually in a small, medium, or large size, as well as a 2-pc set that includes one small and one medium-size tray, or as a 3-pc set that includes all three sizes.

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### HOLDS DEEP, SEMI-DEEP, AND STANDARD SOCKETS

The Olsa Tools 6-pc 3-Row SAE & Metric **Socket Holder** is designed to keep sockets organized. The socket storage trays hold deep, semi-deep, and standard sockets. Each post is marked with socket sizes at the top for instant identification, while red SAE and black metric socket trays make it easy to distinguish the sockets. The socket set includes two holders for each 1/2" drive, 3/8" drive, and 1/4" drive; one for SAE and one for metric sockets. The trays hold up to 261 sockets in total (141 metric sockets and 120 SAE sockets).

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### **FOUR POWER TOOL HOLSTERS WITH MAGNETIC BASES FOR EASY** RECONFIGURATION

The Mac Tools Macsimizer HD Modular Storage System offers strength, versatility, and standard features throughout the workstation, as well as add-on units. The workstation measures 56" long by 28-1/2" width by 50-3/4" high. Each drawer offers a handle latch, integrated organization system, and maintenance-free industrial roller drawer slides. Each drawer has a 440-lb capacity. The PowerTech drawer includes four power tool holsters with magnetic bases for easy reconfiguration. The workstation is topped with an included stainless steel work surface. The matching hutch includes a stainless steel pegboard on all three interior walls, dual power strips, integrated motion-sensor LED lighting, and mounting points for parts bins and optional monitor arms. Side boxes are available to add more drawers to the lower and upper units.

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### **CUSTOMIZABLE TO FIT YOUR** SPACE AND STORAGE

The Beta Tools Racing System C55 modular workshop combination allows users to create a modern work environment customized to fit their space and storage needs. A rationally organized transport system designed for users' tools enables users to have everything needed within reach, says the company. Customize a workspace with workbenches in 6.5', 9', and 13' lengths. Select fixed or mobile roller cabinets with two to eight drawers, or workbench legs configured for hose reels, power outlets, or waste and paper roll compartments.

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### **CUSTOM CONFIGURATIONS**

The Steck Manufacturing Pro Folding Parts Cart, No. 35950, is a versatile parts cart with locking pin fasteners that allow each shop to custom configure up to three shelves/mesh baskets vertically or flip for dual-sided access. Additionally, mesh baskets can be added as needed, as well as cart hooks to hang bumpers, hoods, fenders, and other components. Wide 4" polyurethane casters attached to telescopic legs (29.7" to 45.7") allow the cart to easily support up to 396 lbs.

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### **FEATURES A 120V POWER** STRIP THAT INCLUDES THREE OUTLETS AND TWO USB PORTS

The Cornwell 6-drawer Sliding Top Cart features a locking till with a 120V power strip that includes three outlets and two USB ports. There is pry bar and screwdriver storage on both sides of the cart. The 5-drawer cart offers 6" by 2" casters and an overall capacity of 23,289 cu.-in. The 6-drawer Flip Top Cart features a 120V power strip with three outlets and two USB ports. The 6-drawer cart offers dual 30 lb gas shocks, cutouts on the sides for large tool storage, 6" by 2" casters, and an overall capacity of 24,817 cu.-in. Once the unit is unlocked, the lid will move to the opened position. The carts are made in the U.S.A.

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### MAGNETS ON BOTH SIDES

The Magnetic ToolMat from Master Magnetics is designed to securely hold tools and small parts while in the workshop, garage, or on the job site, allowing the user to stay organized, work fast, and be more productive. The mat has magnets on both sides to attract to any flat or curved ferrous metal surface. It's a mobile tool rack that keeps tools and parts with the user as they work. It features reinforced grommets and a sewn-in handle for mounting options and easy carrying, as well as durable synthetic leather that wipes clean easily and is resistant to damage, grease, oils, and common shop chemicals. The ToolMat is available in three sizes.

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Tool Storage



### HAS A 450-LB CAPACITY

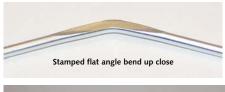
Badass Workbenches at Trick-Tools are made in the U.S.A and feature extreme duty construction. Whether welding, grinding, cutting, or hammering, the workbenches are able to hold up to the user's needs and demands, says the company. Backed by a lifetime warranty, the three-bay, two bay, and single drawer workbenches are built with a 4" square frame and feature magnetic drawer closures and have a 450-lb capacity each. The patented drawer hinge design features a 1" solid steel hinge rod, with grease fittings for each drawer, meant for a lifetime of service.

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### THE AUTO REPOSSESSORS SECRET

### LT-128 2 PC. SKINNY ROD LOCK OUT KIT

- Designed and developed by an auto professional repossessor.
- Auto repossessors do not have the time to use air wedges, double sided tape, or pull wires to open car doors.
- Lift buttons have always been a problem to unlock using conventional door unlocking tools.
- U-shaped patent pending serrated knife like work edges effortlessly grab and lift the slickest of lift buttons or can be maneuvered to activate power door locks.
- For quick easy entrance of tools, the LT-128A rod is 44" long x .187" thin. The LT-128B is 34" long x .125" super thin. To achieve maximum strength and rigidity the angled bend Inflection points are stamped flat.
- Included in the kit is the LT276 Super Wedge. Its knife sharp edge and ribbed wash board surface ensure it is easy to insert and won't slide out of door during use. Also can be used to hold window in door channels during window regulator work and removes body moldings with sharp edge. Three tools in one wedge.







LT-128A serrated offset tip up close





U-shaped tip up close

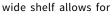


LOCK TECHNOLOGY, INC. Toll Free 800-421-7241 www.ltitools.com ltitools@ltitools.com



### **ABLE TO HOLD UP TO 350 LBS OF EQUIPMENT**

The Snap-on Dual Machine Welding Cart with Storage for Two Gas Cylinders, No. MIGCARTDLA, easily rolls from one work space to another with two wheels and swivel casters, plus hooks on both sides of the cart for organized and neat cord storage. The heavy duty design is tough enough to hold up to 350 lbs of MIG/TIG welders and plasma cutters, and its extra





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### A HARDY PORTABLE SOCKET STORAGE SYSTEM

The CAY Industries Socket Roll Metric Pro is made in the U.S.A. with double-layered nylon with PVC backed base fabric. With plastic straps behind the socket rows, high-grade military woven elastic, and patented locking stitch technology to keep sockets firmly secured. The Socket Roll Metric Pro is ideal for separating tools for job-specific tasks. It measures 14" by 4" and includes individual 1/4", 3/8", and 1/2" drives that are numbered to give users easy access to the deep and standard sockets they need quickly, with the 1/4" drive adding an additional 10" extension sleeve for those hard-to-reach places. Each Socket Roll Metric Pro features a convenient handle and hook/loop straps.

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### OFFERS MOBILITY. SECURITY. AND EASE OF ACCESS

The **OEMTOOLS 3-Drawer Slide Top** Tool Cart, No. 24731, features integrated power in the top compartment for the user to store power tool batteries within reach and charge them conveniently as needed. The tool cart offers a tubular lock for secure storage with a quick lock feature to prevent drawers from opening during motion. Constructed with a 19-gauge steel shell coated with a durable matte finish, the cart finish protects against signs of wear. The drawer slide capacity is 100 lbs with a full length, anodized aluminum drawer pull. Its overall dimension is 36" wide by 21" deep by 46" high.

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## NEW **PTEN** PODCAST





Tech Tips, Industry News, Case Studies, Tool Info, & more!

Hosted by Scott Brown











### PATENTED DRAWER INTERLOCK SYSTEM

The Versatility 6-Drawer Mechanics Rolling Workstation, No. VT-42000 is designed to get tools close to the job while providing a large, stable work surface. The Mechanics Rolling Workstation features a lockable high capacity side cabinet with adjustable shelf. The item has a 150-lb drawer weight capacity with foam inserts that can be customized for customers to organize tools, gauges, and instruments. It also features a patented 1-ata-Time drawer interlock system that allows only one drawer to be opened at a time.

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### **INCLUDES POWER TOOL CHARGING AND STORAGE**

Harbor Freight ICON Storage is a line of tool cabinets and accessories designed for automotive professionals. Each cabinet is built with modern features, including integrated power, power tool charging and storage, double-wall construction, and endless expansion options. They are available in four colors and three sizes: 36", 56", and 73". The cabinets include free delivery and a lifetime warranty.

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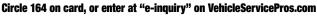


### **OFFERS UV PROTECTED POWDER COAT FINISH**

The Homak Manufacturing CTS (Centralized Tool Storage) is an ideal solution to help technicians keep their tools - and shop - organized. The CTS is 24" deep and is constructed with 16- and 18-gauge steel. It includes 100- to 200-lb drawer slides and lift latch drawer handles. It also features a UV protected powder coat finish. The CTS is available in three colors and four sizes: 36", 41", 54", and 72".

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### **SUPPORTS UP TO 10 LBS**

The Hansen Global Magnetic Screwdriver Organizer, No. 8210, holds 11 screwdrivers and the industrial strength rubber coated magnets support up to 10 lbs. The organizer features twist and lock technology to secure tools and hangers to the ToolHANGER board. The organizer is made in the U.S.A. and backed by a lifetime guarantee against workmanship and defects.

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#### **VIDEO**



SUNEX TOOLS 3-DRAWER **SERVICE CART** WITH SLIDING TOP

In this video, Sunex Tools showcases the 3-Drawer Service Cart with sliding top. To watch the video, visit:

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### **BLOG**



### **BENEFITS OF KEEPING TOOLS ORGANIZED**

Does this sound familiar?"Aaaahhhhhh!!! They took my square

again!!" One of our shop workers was obviously upset by something. "Who's they?" I replied. "Second or third shift. When I left yesterday, all my tools were right here by my machine. I come in this morning and they're gone again. Now I'm going to have to spend the next hour hunting them all down." As I tried to understand his frustration, I could see that he basically just threw all his tools on a shelf beside his press brake when he wasn't using them. There was no straightforward way of knowing what was or wasn't there. I was aware of a great management tool called an end of shift checklist.

To read the full article, visit:

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### **TOOL REVIEW**

### **BETA UTILITY WORK CART**

Over the years, Scott **Brown of Connie &** Dick's Service Center in

Claremont, California, says he has "grown to appreciate the thought and effort put into a piece of equipment, and [the Beta Utility Work Cart, No. CX49] clearly has had a lot of thought and effort put into it." The cart has plenty of room for the storage of meters, leads, scan tools, laptops, and many more tools, Brown says. "There are adjustable hangers for cables and/or small hoses on one side, and the other [side has] low profile storage areas for small items like banana clips, test lead connectors, et cetera," he explains. To view Brown's video review of this product, visit:

VEHICLESERVICEPROS.COM/21096287



### **200-LB CAPACITY** PER DRAWER

The Rousseau Metal R2V Vertical **Storage** is designed to be stacked on top of the company's R cabinet, helping users reclaim floor space by making use of vertical space. The drawers open to maximum extension, which eliminates the hard-to-reach areas found in traditional shelf storage and ensures users have full access to the contents, the company says. The R2V Vertical Storage features a 200-lb capacity per drawer and is compatible with 5S accessories, such as utility panels, trays, magnetic dividers, shelves, and hooks to help manage inventory. Made in North America.

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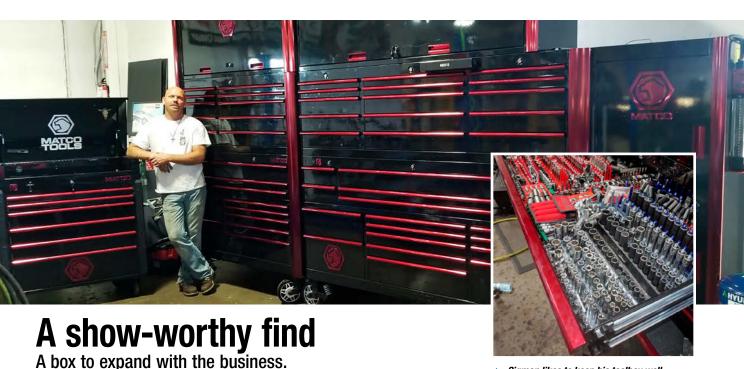
## MARKETPLACE ~

Call Jeffrey Patton at 920-358-9677

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by Kayla Oschmann, Assistant Editor

harles Sigman, owner of DIY Auto Repair Shops in Denver, Colorado, loves buying new tools. When he steps into a mobile tool truck and sees something new, he has to have it. So it was no surprise that when he decided to condense all his tools into one primary box, Sigman turned to a mobile tool dealer for help. While attending a tool expo in Las Vegas last year, his tool dealer called to say he found just the one: a Matco Tools 6 Series.

Sigman not only purchased the one toolbox, but also four smaller matching toolboxes for service bays, as well as a Matco Tools JSC773 service cart. All are black with red trim.

His new primary box measures 9' high by 15' long. It consists of two top cabinets, a side locker that houses his diagnostic tools, and drawers - "lots of drawers," he notes. There are also power strips in a couple of the drawers, along with four built-in USB ports and two 110V outlets on the front of the toolbox for easy access.

When asked what his favorite part of

### OWNER:

### **Charles Sigman**

Shop: DIY Auto Repair Shops Location: Denver, Colorado

the toolbox is, he laughed, "It's not the payment, I'll tell you that." Kidding aside, he enjoys how well-built the box is and says it's "a great quality toolbox."

Sigman likes to keep his toolbox well organized by drawers and sections.

"I have all my wrenches in one drawer, sockets in another drawer, electrical tools are in a section," he lists. "Everything is laid out."

Although Sigman has owned the toolbox for nearly a year and keeps his tools neatly in place, he still finds himself looking around for tools. Often, in doing so, he finds tools that he didn't know he had.

"My problem is that I have so many tools that I forget what tools I have," he admits. "It's to the point that when a tool truck comes by, if it's not a new tool to them then I already have it."

Sigman likes to keep his toolbox well organized. Each drawer is sorted by type of tool.

Sigman is looking to franchise his Do It Yourself (DIY) auto repair business model. In October, he is planning to move his shop to a larger facility nearby.

It will be more of a dealership-type environment, with more room to work in the bays, and include a motorcycle bay, he says.

Like his shop, Sigman has also reached capacity with his new toolbox and is in need of more room.

"I'm actually going to have to add on because I've already run out of space, believe it or not," he says. "[My tool dealer] is looking to get me another side locker for [the setup]."

With a new facility in sight, and as business grows, Sigman says he will continue to add to his Matco Tools 6 Series, as needed, to make it "even bigger yet." PTEN

Want to see more photos of Sigman's box? Visit: VehicleServicePros.com/21153797





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### **ACTUAL SIZE**

### KNIPEX - Tools Designed With Your Hand in Mind

The Cobra® XS is the world's smallest 4" water pump pliers. Engineered for strength and stability, the XS features a 1" jaw capacity making it a must have for everyday applications where space and reach might be an issue.

The tool offers eleven adjustment positions to help you find the perfect fit and specially hardened teeth to hold strong on the workpiece. Textured handles allow for a better grip while one-handed operation is as easy as opening the handle and sliding the jaws.

See a video of this tool: https://bit.ly/3hrAmAe



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