

PROFESSIONAL DISTRIBUTOR

FEBRUARY 2022
VOL. 30 NO. 1

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 ENDEAVOR
BUSINESS MEDIA

CRASH COURSE IN COLLISION

Stay up to date with new technology and materials to equip your collision customers with the right tools and equipment.

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Show Me Your Truck Page 34

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Todd Smith, Mac Tools distributor

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ARTICLE:

Find out how Mobile Tool Network can turn a 20' truck into a 50' truck.



VIDEO:

How to get a sales presentation back on track.
[VEHICLESERVICEPROS.COM/21248692](https://www.vehicleservicepros.com/21248692)



TOOL REVIEW:

Technical instructor reviews KNIPEX's TwinGrip Slip Joint Pliers.
[VEHICLESERVICEPROS.COM/21237821](https://www.vehicleservicepros.com/21237821)

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AMANDA SILLIKER
EDITOR
asilliker@
endeavorb2b.com

The winding road

New expert advice and a community forum coming your way.

Alan Sipe's column this month is sure to ring true with each and every one of you. He talks about the "long and winding road" of a sales presentation and it could not be more accurate! While I know some of you are the "just wing it" types, you still have a general idea of what you want to say about any given product when presenting it to a customer. Unfortunately, many customers can get distracted and derail your presentation very easily by chatting about the game last night, lamenting about their money problems, or basically anything that pops into their head! Sipe offers some concrete advice on how to get the presentation back on track and make the sale.

On that note, we heard from you all in our reader survey that you would like more tips on running your business. We are happy to announce a new partnership with GEARWRENCH who will be submitting blogs for our website VehicleServicePros.com/Distribution. They will be writing about a variety of relevant topics, including how to better understand your customer's needs, what questions to ask them before your next visit, how to identify all the tools they might need for a particular project, and much more. We are always looking for writers to share their stories with our readers, so if you've been in the mobile tool dealer game for some time now and have some wise words to pass on, please reach out about writing a blog and sharing your wisdom!

In this month's cover story

on page 26, associate editor Emily Markham reveals tips and tricks for selling to body shops. According to our reader survey, 83.6 percent of you have at least one body shop that you call on. One of the best pieces of advice from the sources she interviewed was from our cover subject Todd Smith who has been a Mac Tools dealer for 31 years. When a customer at a body shop asked him to help him decide on the right product for his business, Smith was admittedly unsure, so he sought out an expert from Mac to help the customer. Not only does Smith get bonus points for being honest about what he does and does not know, but he went the extra mile and got an expert from his company to help his customer choose the right tool for the job. Naturally, with this level of customer service, Smith got the sale, and this customer will continue to come to him as new tools and equipment needs surface in the ever-changing industry.

Here at *Professional Distributor*, we recognize that the job of a mobile tool dealer can sometimes be a bit isolating. We want to create a sense of community amongst our readers and make a space where you can share sales successes, bounce ideas off each other, and share tips and tricks. We would love your feedback on how best to go about this. A Facebook group? A LinkedIn group? Some other forum? It would be non-promotional and only mobile tool dealers would be allowed in the group. Please let me know your thoughts at asilliker@endeavorb2b.com. **PD**

CORRECTION

In the December issue, we incorrectly printed "2,000 miles" in the opening paragraph of the cover story on page 49. It should have read "two miles". We deeply regret the error.

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The Mobile Distribution Network Connection

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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 Amanda Silliker
ASilliker@EndeavorB2B.com

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

ASSOCIATE 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

MULTIMEDIA ACCOUNT EXECUTIVE Lisa Mend
949-259-5654 LMend@EndeavorB2B.com

MULTIMEDIA ACCOUNT EXECUTIVE Michael Parra
925-307-8779 MParra@EndeavorB2B.com

MULTIMEDIA ACCOUNT EXECUTIVE Paul Ropski
815-255-4118 PRopski@EndeavorB2B.com

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

ART DIRECTOR Vilma Alvarez

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

ENDEAVOR BUSINESS MEDIA, LLC

CEO - Chris Ferrell

President - June Griffin

CFO - Mark Zadell

COO - Patrick Rains

Chief Administrative and Legal Officer - Tracy Kane

EVP/Group Publisher - Transportation - Reggie Lawrence

EVP Special Projects - Kristine Russell

EVP Marketing Solutions & Data - Jacquie Niemiec

FOUNDER RUDY WOLF

Subscription Customer Service

877-382-9187; 847-559-7598

Circ.ProfDistmag@omeda.com

PO Box 3257 • Northbrook IL 60065-3257

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

bpetillo@wrightsmedia.com



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Welcome to Sneak Peek!

This section features recently introduced automotive tools and equipment. See new products even before automotive technicians read about them in *PTEN* magazine.



APPLIES ADDITIONAL FORCE TO THE WHEEL HUB

The **ProMAXX Tommy Rail** is crafted from solid, hard-coated American aluminum and attaches to the outside of the lower push flange, creating a powerful structural link similar to an automotive rear-end four-bar linkage setup. It's designed to work with the company's Tommy Wheel Bearing Puller, allowing technicians to apply even more force to the wheel hub to make any wheel bearing removal quick and easy on select Ford and Subaru Models. The tool is made in the U.S.A. ■



1,000V AC/DC VOLTAGE AND 10A AC/DC CURRENT

The **Lang Tools CAT IV Digital Multimeter**, No. 13811, is a handheld professional multimeter that can measure up to 1,000V AC/DC voltage and 10A AC/DC current. It can also measure resistance, diode, continuity, and mx-Pulse/duty cycle. The multimeter features auto ranging, data hold, and is CAT III 1000V and CAT IV 600V rated. The multimeter includes test leads, batteries, temperature probe, and a manual. ■



INCLUDES HEAVY DUTY QUICK CHANGE CHISEL RETAINER

The **AIRCAT Super Duty 0.498" Shank Air Hammer**, No. 5300-B-T, has a 0.498" shank opening with a 2-11/16" piston stroke. It's heavy duty Quick Change Chisel Retainer prevents chisels by-passing conventional spring retainers. The patented AIRCAT grip has been ergonomically designed to provide ideal comfort. The tool is designed for ultra heavy duty and for driving out shackle pins and kingpins; and cutting large bolts, nuts and fasteners. ■

IDEAL FOR THE COLLISION REPAIR INDUSTRY

Opus IVS DriveSafe + IVSTrio is a diagnostic tool ideal for the collision repair industry. IVSTrio includes QuickScan, an aftermarket vehicle scan that delivers results in two to four minutes; True-OE, authentic OE scans and OE scan reports run by Opus IVS expert technicians using OEM-licensed software; and IVSRepair, a full aftermarket multi-brand diagnostic software with live data, bidirectional controls, system tests, and ADAS calibration functions. ■



FEATURES A TWO-WAY PIVOTING 5.5MM PROBE CAMERA

The **Oasis Scientific Vividia VA-455i USB Flexible Smartphone Two-Way Articulating Inspection Camera Borescope** is an ideal diagnostic inspection camera for auto mechanics and technicians. It features a 5.5mm diameter, 1m long flexible probe that is covered with a durable and water-proof polymer tube. The VA-455i has bright LEDs, two-way pivoting 5.5mm probe camera, and can be directly connected to an iPhone, iPad, or Android phone or tablet via a USB data cable. The inspection camera is suitable for many applications, such as looking into engine cylinders, behind instrumental panels, or inside brake systems. Note: some Android devices may not work due to the restriction of the Android developers. ■



HOW TO USE VIVIDIA VA-455I ON A SMARTPHONE OR TABLET

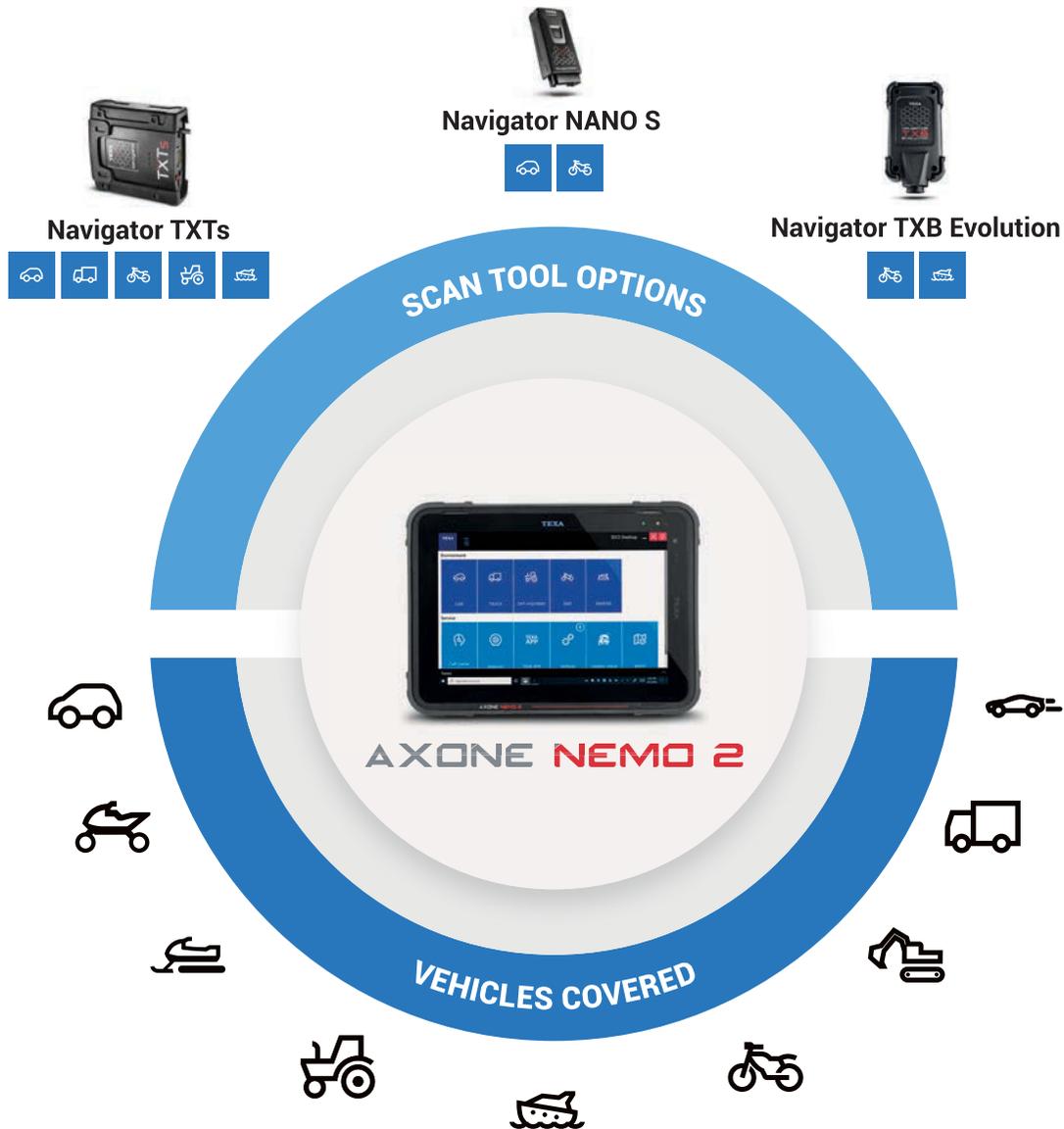
Step 1:

- iPhone or iPad - Search for "Finder Borescope" in the App Store or scan the QR code to download and install the app.
- Android device - Search "Finder Borescope" in Google Play store, or scan the QR code to download and install the app. The app can be downloaded from apkpure.com.

Step 2 : Put your phone or tablet on the holder, and connect to your phone with connecting cable.

Step 3: Press the power button for three seconds to turn the scope on, and open the app on your phone.

ONE TOOL TO SCAN THEM ALL



TEXA is the only company in the world that offers an extended vehicle coverage that goes from motorcycles to cars, off-highway vehicles, boats and heavy duty trucks.

The TEXA AXONE NEMO 2 is an award winning rugged tablet that can be used with different scan tools and different Software licenses simultaneously.

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TRACKS TOOLS AND EQUIPMENT

The **Milwaukee Tool ONE-KEY Bluetooth Tracking Tag** can easily be attached anywhere, allowing users to track their tools and equipment from a computer, tablet, or smartphone. By leveraging the ONE-KEY network and Bluetooth technology, the Tag provides information on the last seen date, time, and location of a tool when within 300' of any ONE-KEY device. The Tag features a built-in speaker to help locate tools when not in sight and a built-in NFC and scannable QR code to identify a specific item even when the One-Key app is closed. With a compact design, the Tag can securely attach to anything through glue, screw, rivet, or zip tie. ■



FEATURES AN LED WORKLIGHT

The **Marson BT-5 Battery Powered Riveter** from **Howmet Fastening Systems** is designed to deliver reliable performance at a valuable price point. The BT-5 is lightweight and offers an ergonomic grip. It also features an LED worklight and has a stroke length of .866". The Marson BT-5 kit includes nose tips for 1/8", 5/32" and 3/16" rivet diameters. An optional nosepiece allows users to install 3/32" rivets, as well. ■



SIMULATES REAL-WORLD DRIVE CONDITIONS AND CYCLES

The **Launch Tech USA S2-2 Sensorbox** is a testing module designed to diagnosis various sensors, actuators and electrical components that require a higher level of analysis to determine faults. Working in conjunction with a X-431 series diagnostic scan tool, the S2-2 mimics the protocols of the ECM and simulates real-world drive conditions and cycles. Technicians are able to analyze, in real time, waveforms, cyclical graph data and voltage readings, which can be used to deduce sensor issues, electrical issues or high-level ECM faults. ■



FOR ELECTRIC AND HYBRID VEHICLES

The **EV Battery + Coolant Leak Detector** from **Redline Detection** is designed to test the integrity of battery enclosures in electric and hybrid vehicles. Durable and compact, the unit connects to the battery enclosure on or off the vehicle, giving audible and visual progress and precise pass/fail indication, specific to that battery and vehicle type, when testing is complete. Data logging and reports can be accessed remotely and the machine is programmable for future battery configurations. ■

INCLUDES ENHANCED DIAGRAM NAVIGATION

The **Mitchell 1 ProDemand Advanced Interactive Wiring Diagrams Update** streamlines navigation within a diagram set or from one diagram set to a completely different diagram set, as well as adds interactivity to connectors, grounds and splices. Improvements also include a dropdown history that shows the previous 10 diagrams viewed in a session. Advanced Interactive Wiring Diagrams let users navigate via the diagram directly to repair information for components. Connectors, grounds, and splices are also now searchable in 1Search and include active hyperlinks that take users directly to related content. ■



Learn more about this tool's features here: VehicleServicePros.com/21246313

AVAILABLE IN 1/2" OR 3/4" ANVIL SIZE OPTIONS

The **Durofix 60V Cordless Brushless Jumbo Impact Wrenches**, Nos. RI60164 and RI60164-6, have two anvil size options: 1/2" (No. RI60164) and 3/4" (No. RI60164-6). The 1/2" impact wrench delivers up to 1,500 ft-lbs of maximum reverse torque and offers three pre-set torque stages (332, 450, and 1,000 ft-lbs). The 3/4" impact wrench has a maximum reverse torque of 1,605 ft-lbs and offers three pre-set torque stages (332, 450, and 1,070 ft-lbs). Both feature a built-in LED light and battery power indicator. ■



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COMBINES TPMS SERVICES WITH OBD-II DIAGNOSTIC FUNCTIONS

The **ThinkTPMS T109** from **Thinkcar** combines TPMS services with OBD-II diagnostic functions. With rugged, easy-to-hold housing and an internal power supply, the T109 is ideal for a variety of tire shop functions such as reading sensor data including pressure, temperature, battery life, and id number; TPMS sensor activation, programming and relearning; TPMS health check; reading/clearing TPMS trouble codes; generic OBD-II functions with DTC lookup and reset; I/M test readiness test for emissions test prep; as well as O2 sensor and EVAP testing. The T109 provides coverage of 98 percent of import and domestic passenger cars and trucks with a capacity up to 1 ton. ■



HAS AN ONBOARD AIR PRESSURE GAUGE

The **Ingersoll Rand 3/4" Impact Wrench**, No. 2146Q1MAX, features an air gauge that indicates whether it is operating at, below or above the tool's maximum rated air pressure of 90 psi. The onboard air pressure gauge is situated on the back and monitors the air pressure ranging from 60 psi to 120 psi. The tool delivers up to 2,000 ft-lbs of nut busting torque, has the ability to quickly dial-in optimal power settings, has a six-vane motor to remove stubborn bolts reliably, and is built to withstand tough use. Also available with a 1" drive (No. 2146Q2MAX). ■

“It's always been a mystery how much air is a pneumatic tool getting? Mystery solved. The integrated air pressure gauge provides the answers. Technicians need to know they are operating the impact at optimal power.”
David Dobersztyn, Ingersoll Rand.



PROVIDES DIGITAL VEHICLE INSPECTION FUNCTIONALITY

The **BOSS Inspect** from **Shop Boss** is an integrated tool that gives shop owners more digital vehicle inspection (DVI) functionality within the Shop Boss cloud-based application. The tool delivers a comprehensive inspection and accompanying reports, enabling technicians to evaluate, estimate, and communicate vehicle repairs more efficiently. Additionally, it offers two-way customer communication via the Shop Boss DVI; flexibility to add notes, descriptions, and images to the digital report; comprehensive inspection reports that include images and estimates; and digital invoice and payment acceptance with BOSS Pay. ■



WELDS MATERIAL FROM 22 GAUGE UP TO 3/8"

The **ESAB EM 210 MIG/Flux Cored Welder** weighs 29 lbs and delivers up to 200A of MIG welding power. It features an easy-to-read LED digital display, professional-grade arc characteristics, and full-featured digital controls which enable fine-tuning of the arc performance to deliver ideal welds. The inverter-based power source is small in size, yet delivers professional-grade power and performance for most auto/truck repair and restoration work. The EM 210 welding system has a 30-200A output and welds material from 22 gauge up to 3/8" in a single pass. The unit accepts 4" and 8" diameter wire spools. ■

REPAIRS AND RESTORES ALL STANDARD THREADS

The **Rotary Thread 8-pc Standard Thread Restoration Kit**, No. RTK3.1, is designed to repair and restore all standard threads. The patented kit fixes inch, metric, SAE, and pipe threads no matter the size, length, or diameter without having to measure thread pitch. Each piece can be attached to a drill, die grinder, or Dremel tool. It features an embedded diamond super abrasive, tuned for smooth controlled damage removal. It's lightweight and fixes most hard-to-reach threads. ■



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EXTENDABLE TOP DECK

The **Stan Design Engine and Transmission Lift Table**, No. TA2600, is designed to safely and efficiently remove entire engine assemblies as well as remove or install transmissions. It has a 2,600 lb capacity and measures 30" by 51". With an air/hydraulic design, the lift table reaches a maximum height of 75" and a minimum height of 23". It features an extendable top deck, locking casters, dual hydraulics, pull handle, and a drilled and tapped surface for mounting fixtures. The deck angle is also adjustable. Optional features include a remote operated pump unit and a fixture kit. ■



PATENTED IMPACT MECHANISM REDUCES TOOL VIBRATION

The **Matco Tools 16V Cordless Infinium 1/2" Drive Stubby Impact Wrench**, No. MCL1612SIK2, features a brushless motor capable of high torque and extended durability. The impact wrench measures 5" in length and offers 300 ft-lbs of breakaway torque. It has a glass filled nylon housing with overmold to provide all day comfort, a patented impact mechanism that reduces tool vibration, and dual element LEDs to light the work area. The kit includes tool, two batteries, MCL16CHRG charger, and a carry bag. ■

PROVIDES LIVE ACCESS TO EXTENDED VEHICLE DIAGNOSTIC DATA

The **Continental Autodiagnos Drive** is a remote vehicle data solution designed to deliver advanced diagnostic information that service providers, fleet managers, and repair facilities can use to maximize their data-driven services. The easy-to-install, plug-and-play technology provides users with live access to extended vehicle diagnostic data for all popular makes and models of passenger cars, light trucks, and commercial vehicles. Autodiagnos Drive helps customers increase productivity, reduce downtime, enhance customer service, and gain better insights into the condition of the vehicles they service or manage. The system will also help them to quickly provide vehicle owners with reliable and up-to-date information about their vehicle's health and performance parameters. ■



6-POINT DESIGN WITH A 3/8" SQUARE DRIVE

The **ATD Tools 7-pc Filter Socket Wrench Set**, No. ATD-5232, is for use on vehicles equipped with cartridge-type filters to unscrew the housing without damage and access/replace the cartridge element inside. It provides multiple contact points to engage the housing cap securely for maximum removal torque. The filter socket wrenches have a 6-point design with a 3/8" square drive for use with a ratchet or extension. They are made from chrome vanadium (CR-V) steel for strength and corrosion resistance. Applications include BMW, Buick, Cadillac, Dodge, Ford, Mercedes, Mini Cooper, and SAAB. Sizes include: 24mm, 27mm, 29mm, 30mm, 32mm, 36mm, and 38mm. ■

FOR MEDIUM AND HEAVY DUTY TRUCKS

The **AME International JACKZILLA Premium 20-Ton Air/Hydraulic Bottle Jack**, No. 14455, is designed for tire changing applications on commercial fleets, agricultural, construction, and maintenance equipment. It comes with a 10" by 10", 50-ton jack plate for optimal weight displacement on uneven or non-compacted surfaces as well as a Flexzilla hose assembly for maximum durability in all climate conditions. Additionally, the unit has an in-line regulator that limits inlet pressure to 94 psi to prevent air bypass. The bottle jack reaches a maximum height of 18.5" (minimum height of 9.7"). ■



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REMOVES SHEPPARD PITMAN ARMS

The **Specialty Products Company Class 8 Pitman Arm Popper**, No. 73140, is designed to remove Sheppard pitman arms for short sector and long sector shafts with a bolt or nut attachment. The heat-treated pusher screw features fine threads and a ball bearing tip to make removal easier without damaging expensive steering box components. ■

OFFERS A WIDE RANGE OF SIZES

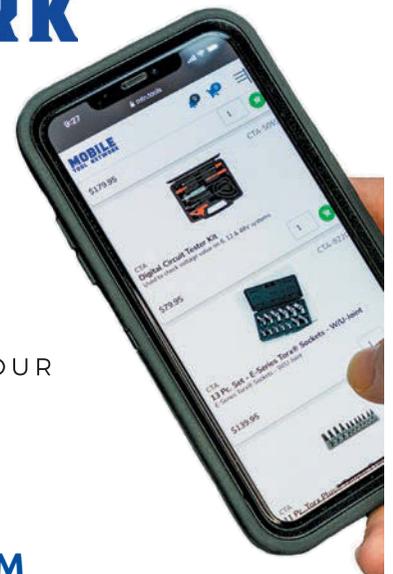
The **CTA 15-pc Torx Plus Socket Set**, No. 5420, offers a wide range of sizes to service elliptical-shaped Torx Plus fasteners found on many vehicles where standard Torx or Ribe designs will not fit these fasteners. The set includes: EP6, EP7, EP8 (1/4" drive); EP10, EP12, EP14, EP16 (3/8" drive); and EP18, EP20, EP22, EP24, EP26, EP28, EP30, EP32 (1/2" drive). Packed in a blow molded case for easy storage. ■



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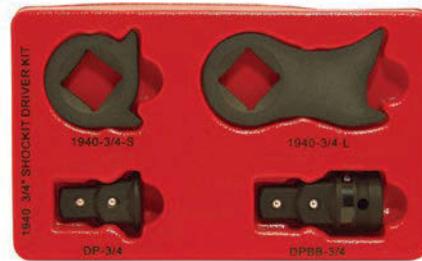


VAPOR-BLASTED TIPS FOR ADDED PROTECTION AGAINST CORROSION

The **Mac Tools 12-pc Soft-Grip Combination Screwdriver Set**, No. SDB12DG-S, features a 360-degree ergonomic, textured soft grip for comfort for high torque applications. The nylon-alloy soft-grip handle is chemically resistant to gasoline, disk brake cleaner, brake fluid, motor oil, hydraulic fluid, ethylene glycol, and acetone. Each tool has a molded tip ID for easy recognition of tip type in the vertical position. The tips are also vapor-blasted for added protection against corrosion and improved gripping force. The screwdrivers feature a high-quality alloy-steel bar with hex bolster for additional torque application. The set includes six slotted and six Phillips screwdrivers. ■



FOR MORE INFORMATION ABOUT ANY OF THESE PRODUCTS, CLICK ON "PD E-INQUIRY" at VehicleServicePros.com.



AVAILABLE IN 3/8", 1/2", AND 3/4"

The **Lock Technology Kentucky Kicker Shockit Driver Kit**, No. LT1940, is air hammer powered and available in 3/8", 1/2", and 3/4" sizes. Each kit includes four tools: short throw Shockit driver, long throw Shockit driver, low profile drive plug, and a plug breaker bar. The low profile drive plug allows for use in tight spaces with an air hammer and the plug breaker bar allows breaker bar and air hammer simultaneous operation. By repetitive hammering, users are able to remove stubborn nuts and bolts. The tools must be used with Shockit Punches (sold separately) for maximum performance and warranty coverage, the company says. ■

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UNIVERSAL FOR LIGHT AND HEAVY DUTY DIESEL ENGINES

The **Mueller-Kueps NOX Sensor Thread Restorer Kit**, No. 506 021, is designed to allow technicians to professionally restore the NOX sensor hole thread without damaging the exhaust system. The kit is universal for light and heavy duty diesel engines. It features an alignment guide at the front of the restorer to ensure proper angle and is extra short, enabling it to be used with a socket or ratchet spanner for narrow spaces. The time-saving tool can also be used for the diesel particulate filter as well as any exhaust sensor, even those located in a catalytic convertor. Available in sizes M20 x 1.5 and M22 x 1.5. ■

LASER ETCHED FOR EASY IDENTIFICATION

The **Titan Professional Tools 17-pc Impact Adapter Set**, No. 81483, is heavy duty impact grade and made of heat-treated chrome-molybdenum. They're coated in corrosion resistant black phosphate and are laser etched for easy identification. The components also feature quick change spring-loaded detent balls to ensure a tight, secure fit. The set includes 1/4", 3/8", and 1/2" universal joints; 1/4", 3/8", and 1/2" wobble extension bars in various lengths; and 1/4", 3/8", and 1/2" adapters. The set comes packed in a convenient organizer tray for storage. ■



FROZEN/DAMAGED LUG NUT PROBLEMS?

LT1350 Lug Ripper II

- Don't torch frozen/damaged lug nuts off - just drill out the lug nut threads and the wheel stud ONLY in 11 minutes or less
- Easily replace damaged lug nut and wheel stud without damaging rim
- **NEW & IMPROVED 16mm STEP UP COBALT DRILL BIT**
- Comes with a locking collar clamp for safety
- Includes 4 drill guides
- Packaged in a custom blow molded carrying case
- Patent # 10,549,355 B1
- **KCT1350-8 Water Bladder is NOW AVAILABLE AGAIN.** Conveniently portable coolant source. Hang it on the vehicle, no matter where you are, using the two included s-hooks. **ALLOWS FOR ONE PERSON OPERATION.** Includes 6' hose with water control valve.



NEW & IMPROVED LT1350-6 16mm STEP UP COBALT DRILL BIT



Drills out the lug nut threads and the wheel stud only



Scan QR code to see an instructional video for the new & improved LT1350-6 drill bit!



LT1350-8 WATER BLADDER



BACK BY POPULAR DEMAND!

Drill guide sizes -

- 17mm - 11/16"
- 19mm - 3/4"
- 21mm - 13/16"
- 23mm - 7/8"



LT1350-8 IN USE

FROZEN & OBSTRUCTED O2 SENSORS REMOVAL PROBLEMS?

LT994 Shockit Socket O2 Sensor Removal Kit

NO MORE CATALYTIC CONVERTER REMOVAL OR DROPPING MOTOR MOUNTS TO ACCESS O2 SENSORS!

- Must be used with Shockit Punches for maximum performance & warranty coverage
- Air hammer powered Shockit Sockets to easily access, loosen, and remove frozen and obstructed O2 sensors
- Works when ratchets, wrenches and regular sockets don't fit
- Includes LT1910P non-slip self centering air hammer powered offset 11" Standard Shockit Punch for limited access applications
- Includes 22mm low profile design for limited access and 22mm long profile design for deep recessed Ford®, Toyota® and Lexus® applications
- 18mm dual sided tap/bottoming die for O2 sensor and mounting hole threads
- Additional Shockit Punch sizes available - LT1910PS 5.5" Short Punch
LT1910PL 22" Long Punch

AIR HAMMER POWERED



PARTS LIST & SIZES

- | | |
|---------|--------------------|
| LT994-1 | 22mm SHORT SOCKET |
| LT994-2 | 22mm DEEP SOCKET |
| LT994-3 | 18mm THREAD CHASER |
| LT1910P | 11" STANDARD PUNCH |



Scan QR code or search LT994 on YouTube to see tool work!



IN USE



IN USE

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PROVIDES HIGH TORQUE, HIGH EFFICIENCY

The **Yellow Jacket BULLET DC Vacuum Pump** features a brushless DC (BLDC) motor, capable of providing high torque and high efficiency. The unit functions in extreme low voltage conditions and is field rated to 25 microns. The easy-to-carry, lightweight design is available in 7 cfm to handle most residential and commercial applications. Pulling down to less than 25 microns, BULLET DC protects the system from contaminants and non-condensable gases, which can damage components, reduce efficiency, and cause system failure. ■



FULLY WELDED HYDRAULIC PUMP AND CYLINDER

The **AFF 22-Ton Air Assist Truck Axle Jacks**, Nos. 565F and 565F1, are ideal for heavy duty truck and trailer shops, rail and bus work, farm vehicles, industrial equipment, and more. Their engineered high-speed air motor delivers fast and efficient operation while the compact and low-profile design easily fits between tandem wheels. The jacks feature a fully welded hydraulic pump and cylinder, heavy-duty wiper seals, large 8" diameter rubber wheels, and a built-in overload and bypass safety valve. The handle also locks in three different positions from 90 to 180 degrees. The 565F comes with a two-piece handle, whereas the 565F1 comes with a one-piece handle. ■

See us at
Matco Booth #726 and
Mac Booth #812

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ESS6100 Smart Charger



JUDGES COMMENTS:

"Great charger/maintainer that will keep a battery charged whether it is being stored, or is low and needing a charge. Works to keep a vehicles battery level where it needs to be during diagnostic procedures, or module programming."

"Very versatile small charger."



- OE Approved Smart 12V Battery Charger and Diagnostic Support Unit
- Supports up to 100 Amps for Vehicle Diagnostics and Re-Flashing using 15A 120VAC
- 100% Connected and 100% Customizable via USB
- 4 Operating Modes: Charging, Diagnostics, Showroom, Tester
- Extends Life and Performance of Vehicle Batteries



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CREATES SAFE WORK ENVIRONMENT

The **Dynabrade Mini-Raptor Vac Standard Packs**, Nos. M1004SP and M1002EX, are designed to provide a mobile sanding solution for dusty shops, fending off dust and creating a safe, efficient work environment. Featuring a small footprint, the mobile vacuum systems offer ideal dust particle collection via its ergonomic 1" by 20' vacuum hose assembly. The M1004SP comes with the Dynorbital-Sprite Random Orbital Sander, No. 59182, and the M1002EX comes with Dynorbital Extreme Random Orbital Sander, No. X61VHS. A standard HEPA filter and HEPA bag also included. ■



ELIMINATES BROKEN FASTENERS

The **Lisle Corporation Long Door Panel Tool**, No. 35600, measures 19.75" in length, making it ideal to reach upholstery clips in the middle of a door panel. Its square notch design removes both plastic and metal clips on cars and trucks. The tool helps eliminate broken fasteners and is easy to use. Simply place the tool under the edge of the door upholstery panel, insert into the fastener as far as possible, and then simply pry up. It's heat treated for durability. ■



FEATURES A STABILIZATION BAR FOR FASTER CUTS

The **KNIPEX Tools CutiX Universal Snap Knife**, No. 90 10 165 BKA, features an extendable stabilization bar that keeps the blade from bending for quicker cutting. The stabilization bar can be engaged or retracted based on application and allows the user to apply more pressure directly on the blade. The CutiX also features a hardened steel pin to secure the blade. Constructed with a lightweight magnesium housing, the knife has non-slip gripping surfaces and two separate sliders - one for the blade and one for the stabilization bar. Suitable for all 18mm snap-off blades, the CutiX comes with two blades that have seven cutting points, stored in the handle. ■



ABLE TO MELT, SOLDER, OR PLASTIC WELD

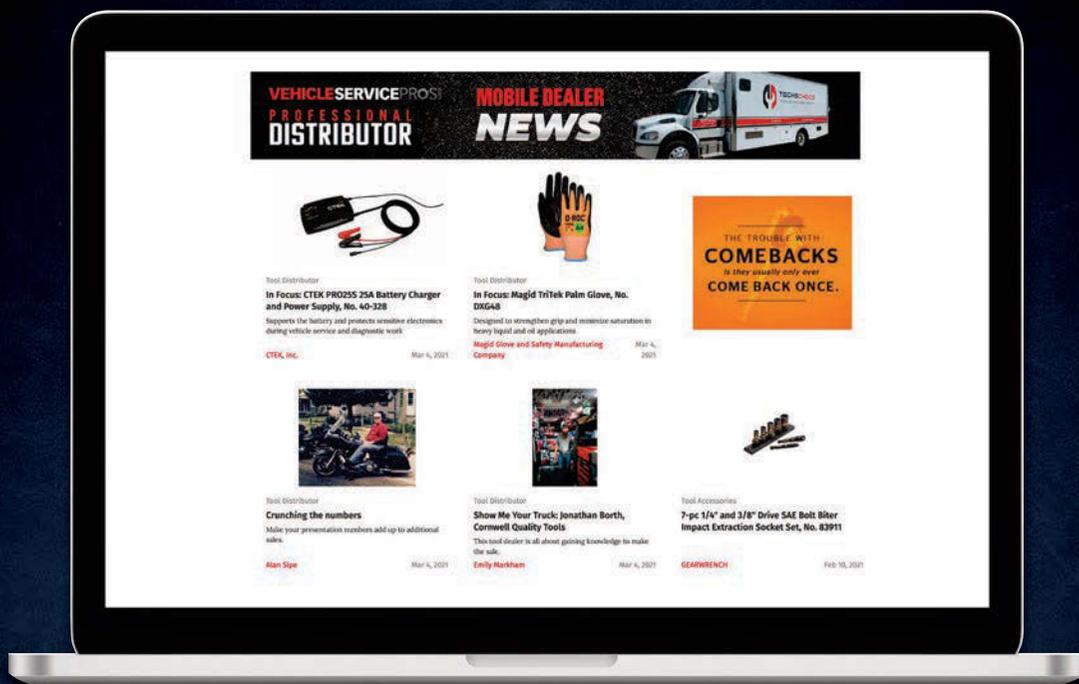
The **Portasol ProPiezo Hardware Kit**, No. PP-H, is portable, easy to use, and is completely powered by butane. One tank-full of butane will run this soldering iron for more than 90 minutes, and provide 15-75 watts of power. The tool can melt, solder, or plastic weld. The kit comes with a 2.4mm Df tip fitted on the soldering iron, a stainless steel focus hot air tip, and a plastic welding tip as well as a universal welding rod. Heat is transferred through direct contact versus hot air, allowing users to weld next to heat-sensitive components without damaging or destroying them. The tool is made with butane-compatible plastics to prevent leakage. Also available in farm and marine kits (Nos. PP-F and PP-M). ■

HAS A LIFTING RANGE FROM 6" TO 22"

The **OTC 5-Ton Service Jack**, No. HDJ5, features a durable long chassis and is ideal for lifting step vans, bucket trucks, and smaller work vehicles. A built-in safety overload feature prevents users from using the jack beyond its rated capacity. The jack has a lifting range from 6" to 22" and has a reach of 47". It also features a convenient foot pedal to speed the lifting operation and handle lock and release controls that are located on top of the 40" spring-loaded handle. The handle can be locked into any position from vertical to horizontal. Meets all five ASME PASE-2019 safety standards for service jacks. ■



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MOST WANTED

Do YOU stock it?

The following products are among the most requested tools and equipment from recent issues of *PD's* sister publication, *PTEN*. Perhaps you've already received requests about some of these items. Take a closer look at stocking them.

A BMW/Ford 22mm x 16 Pt. Socket

The **CTA BMW/Ford 22mm x 16 Pt. Socket**, No. 3870, is designed to remove the later style central valve on BMW Vanos hubs and Ford VCTs. It services BMW/MINI B36 (1.5L), B38 (1.2L and 1.5L), B48 (2.0L), B58 (3.0L) Vanos, and Ford (1.0L) EcoBoost VCT modules. The 3870 is 22mm by 16 points, with a 1/2" square drive. It has a chrome molybdenum with black phosphate finish.



A



B



C



D



E

B Ratcheting Line Wrenches

The **AGS Ratcheting Line Wrenches** are designed to get into hard-to-reach places at the right angle, making flare nut removal and installation a snap. The patented open-ended ratcheting assembly is made from chromium molybdenum alloy steel giving it great strength and wear resistance. Its stainless steel body construction ensures long-life durability and the no-slip comfortable handle provide users a tight grip even when covered in brake fluid. The Ratcheting Line Wrenches are available in SAE and metric sizes 3/8", 7/16", 1/2", 5/8", M10, M12, and M15 for all popular domestic and imported applications.

C Pipe and Connector Pliers

The **KNIPLEX Pipe and Connector Pliers Series with Plastic Inserts**, No. 81 11 250, features dual-component inserts designed for gently loosening hoses and nozzles. The materials include a soft blue outer layer and a firm red inner layer. The Pipe and Connector Pliers series offer 25 easy adjustments with a push of a button. They have a sturdy box-joint design and include a soft jaw to prevent corrosion by not allowing metal from being transferred onto the workpiece. Their rounded jaws also grab round pipes and connectors up to 3-5/32" in diameter, suitable for tightening and loosening screw connections, plastic pipe fittings, and round nuts.

D 3-pc SUV/Light Truck Spline Plus Kit

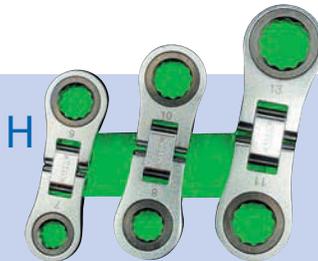
The **AME International 3-pc SUV/Light Truck Spline Plus Kit**, No. 68025, is 1/2" impact-rated and provides coverage for SUV and light truck applications requiring a larger size socket. It works in cases of corrosion and rounded lug heads, and is ideal for specialty aluminum wheels. The kit is able to work on different fastener types, including: spline, 6-point, 12-point, star, square, and 50 percent rounded-off heads. Color-coded protective sleeves offer easy identification to help prevent damage to custom wheels.

E Rechargeable Bulls-Eye Spot Safety Glasses

The **Coast Products SPG500 Rechargeable Bulls-Eye Spot Safety Glasses** feature a built-in high/low spot beam on the frame for improved up-close and long range sight. The rechargeable eyewear shines up to 13 hours on a single charge (charging cable included). For added control, the light operates in high or low mode while keeping user's hands free and increasing on-the-job safety. The glasses are ANSI-tested for impact resistance and offers anti-scratch and anti-fog lenses, including a set of interchangeable yellow lenses to enhance contrast and depth perception in low-light conditions. They also have padding on the nose and temple for comfort and a snug, secure fit.

F Tire Changer

The **Ascot Supply Manual Tire Changer**, No. 441-00202, is a high-quality, energy-saving, and environmentally friendly piece of equipment. The portable device is equipped with professional accessories and can be operated easily without the use of power or pneumatic supplies. It can work on a wide range of tires and is ideal for home and commercial garages, racing teams, and emergencies.



G Battery Pack and Powertrain Lifting System

The **BendPak SL24EVT EV Battery Pack and Powertrain Lifting System** is designed to help technicians safely and efficiently remove, service, and install heavy electric vehicle battery packs or internal combustion powertrain components. Compact and portable, it has a pallet-jack type steering wheel and oversized urethane casters to provide low rolling resistance and unparalleled maneuverability. With a press of the button on the pendant controller, the SL24EVT elevates to more than 6' in less than 20 seconds. The lift table securely supports 2,400 lbs on its oversized 40" by 60" cushioned rubber platform. The SL24EVT is powered by a maintenance-free 12V deep-cycle battery and includes a fully automatic three-stage battery charger.

H Ratching Wrench Set

The **VIM Tools Nano Flex Ratcheting Wrench Set**, No. FPRW100, features a compact size for fast and easy hand movements in confined spaces. Its double-joint design meets and exceeds ANSI torque specifications and its 72-tooth ratcheting mechanism allows for a small swing arc of 5 degrees. The ratcheting wrench set is ideal for use in tight spaces including dashboards, door panels, engine bays, and many other areas with limited access.

I Digital Video Scope Kit

The **ANSED Diagnostic Solutions Hi-Res Digital Video Scope Kit with 4.5mm Dual Camera Probe**, No. DVSK-45DC, is a versatile and flexible videoscope used to monitor, capture, and inspect hard-to-reach spaces and cavities. The video monitor features a 3.5" full view IPS LCD screen, 1280 x 720 resolution, and supports 13 languages. The small diameter, high-definition digital videoscope kit comes with the 4.5mm diameter dual camera imaging probe, allowing the user to view forward and side views with just a flick of a button without the need for a mirror or multiple probes. It also includes an 8G SD mini card, USB cable for charging, and a manual in a zippered carrying case.

J 4-pc Gasket Scraper Set

The **Lang Tools 4-pc Gasket Scraper Set**, No. 855-4ST, is drop forged from high carbon steel and have a black oxide finish for corrosion resistance. The bits extend the entire length of hand to the strike plate. The hard-capped handles are ergonomically designed for comfort and durability as well as provides a secure grip. The blade face and scraping ends are precision ground. The set includes 1/2" face, 1" face offset, 1" face pull, and 1" face stubby. The gasket scrapers are made in the U.S.A.



FOR MORE INFORMATION ABOUT ANY OF THESE PRODUCTS, CLICK ON "PD E-INQUIRY" at [VehicleServicePros.com](https://www.VehicleServicePros.com).



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TOPDON ArtiDiag800 Diagnostic Tool

The TOPDON ArtiDiag800 Diagnostic Tool offers full system diagnostics and comprehensive maintenance functions in one tool.

APPLICATION

The TOPDON ArtiDiag800 Diagnostic Tool supports full system diagnostics, including reading and clearing codes, viewing live data, and retrieving ECU information, in addition to providing 26 common reset and relearn services.

ORIGIN

TOPDON developed the ArtiDiag800 in response to seeing a need for a simple, easy-to-operate, and cost effective, yet professional tool with complete basic diagnostic functions for small and medium-sized repair shops.

FEATURES AND BENEFITS

- Competitively priced.
- Offers full system diagnostics and comprehensive maintenance functions in one tool.
- Provides a detailed and clear guide.
- Saves diagnostic reports locally and to cloud synchronously and can be sent to computer via email for printing.



SELLING POINTS

- Covers most brands of vehicles worldwide.
- Provides 26 common maintenance services.
- Applies one-touch AutoVIN technology for a quick and accurate diagnosis.
- Utilizes Android 7.0 OS for easy updates via Wi-Fi connection.

STORAGE AND DISPLAY

The diagnostic tool comes in a hard paper box with an internal blow molded case and EVA bag for easy storage and shock resistance.

MANUFACTURING SPECS

The ArtiDiag800 measures 9.64" by 4.86" by 1.45". It has a 7" LCD touchscreen with 1024 x 600 resolution. It has 2G RAM and 16G ROM. Made in China.

\$ SUGGESTED RETAIL PRICE
\$339

i FOR MORE INFORMATION
Contact sales@topdon.com or 1-883-629-4832.



To watch a video demonstration of this product, visit: VehicleServicePros.com/21240798

VEHICLESERVICEPROS

ANSED

Hi-Res Digital Video Scope Kit

The ANSED Diagnostic Solutions DVSK-60ART Hi-Res Digital Video Scope Kit with 6mm Articulation Probe assists with inspecting hard-to-reach parts.



Compact
digital hi-res
videoscope

MANUFACTURING SPECS

Concept and design from the U.S., manufactured in Taiwan. Total package in plastic case weighs about 1.5 lbs.



SUGGESTED RETAIL PRICE

\$999



FOR MORE INFORMATION

Contact Todd Haner at
todd@ANSEDdiagnostics.com.

SELLING POINTS

- Smallest model of a digital video scope with full high-definition and with the smallest diameter Articulation Imaging Probe (6mm).
- Handheld monitor with large 3.5" color display.
- Able to capture photos and videos on an 8G SD mini card.
- Lithium polymer rechargeable battery is easy to charge with a USB cable.
- Additional imaging probes available to use with the kit, including 4.5mm dual camera imaging probe and a 3.9mm front view imaging probe.

APPLICATION

One of the most practical applications for the ANSED Diagnostic Solutions DVSK-60ART Hi-Res Digital Video Scope Kit with 6mm Articulation Probe is to monitor, capture, and inspect hard to reach spaces and cavities. Important applications include inspection in the inside of the engine (including camshaft, fuel nozzles, diesel injectors, glow plug ports, brake systems, catalytic converter tubes, A/C and evaporator systems); behind the instrument panel; and behind and under the dashboard and body panels.

FEATURES AND BENEFITS

This digital, hi-res scope with an articulation probe will give the technician a clearer and more precise image, and allow them to take a photo or a video while enjoying up to 310-degrees of total swing. There is also a zoom feature up to 2X the image. A solid rubber boot protects the videoscope.

ORIGIN

ANSED had a demand to create a digital, hi-res scope with the smallest diameter Articulation Imaging Probe. The problem with analog systems is the lower resolution, and in most applications, a higher resolution and clearer image is necessary. This scope has a resolution of 1280 x 720.

DEMONSTRATION

The best way to demonstrate it is to turn it on and put into A/C vent.

STORAGE AND DISPLAY

The DVSK-60ART Kit is shipped in a hard-shell plastic case, measuring 13.5" by 12" by 3".

Cal-Van Ratcheting Harmonic Balancer Puller

The Cal-Van Tools Ratcheting Harmonic Balancer Puller has a wide range of applications.



APPLICATION

The Cal-Van Tools Ratcheting Harmonic Balancer Puller is ideal for use on Ford 4.6, 5.4, and Coyote 5.0; GM 5.3L, 5.7L (LS1), 6.0L (LS2), 6.2L (LS3), 7.0L; and most three to six spoke harmonic balancers/pulleys.

ORIGIN

The Ratcheting Harmonic Balancer Puller was designed to fit in to tight access areas. Ratcheting legs are easy to adjust and makes it easier for technicians to accomplish the task.

FEATURES AND BENEFITS

- Three ratcheting legs with puller feet eliminate the need for bolts
- No need to remove radiator or other components with this compact design
- Legs quickly adjust and hold their position
- Push-turn-click design
- Interchangeable legs work as three jaw or two jaw puller.

DEMONSTRATION

It is recommended to assemble the product and show customers the leg ratcheting function.

SELLING POINTS

- Innovative
- Wide application range
- Competitively priced

STORAGE AND DISPLAY

The product comes assembled in a retail friendly clamshell that can hang or stand on a shelf.

MANUFACTURING SPECS

The product is made of steel for durability, yet is lightweight at 2.5 lbs and carries a 7-ton pulling capacity.

\$ SUGGESTED RETAIL PRICE
\$101

i FOR MORE INFORMATION
Contact Cal-Van Tools at
1-800-537-1077.



FOR MORE INFORMATION ABOUT ANY OF THESE PRODUCTS, CLICK ON "PD E-INQUIRY" at VehicleServicePros.com.

Flexzilla

High Dexterity Fingerless Gloves

The Flexzilla High Dexterity Fingerless Gloves are cross-functional and work well for technicians or for sport.



Lightweight Lycra back to keep hands cool



Polyurethane non-slip grip palm and thumb back

MANUFACTURING SPECS

- Terry cloth brow wipe
- Neoprene wrist
- Machine washable (lay flat to dry)
- One pair of gloves weighs 0.19 lbs

\$ SUGGESTED RETAIL PRICE
\$16.83

i FOR MORE INFORMATION
Contact info@flexzilla.com.

SELLING POINTS

- Finger pulls for quick and easy glove removal
- Polyurethane non-slip grip palm and thumb back
- Lightweight Lycra back to keep hands cool and comfortable
- Four-way spandex knuckle reinforcement
- Adjustable thermoplastic rubber (TPR) wrist closure and pull tab for secure fit

STORAGE AND DISPLAY

- Shipped with retail packaging card
- One pair per package
- Merchandising options available

APPLICATION

The Flexzilla High Dexterity Fingerless Gloves are cross-functional and work well on the job or for sport.

ORIGIN

Fingerless gloves allow for maximum dexterity and control for intricate or delicate tasks while providing protection to the palm of your hands.

FEATURES AND BENEFITS

- Engineered using carefully selected materials to ensure extreme flexibility, rugged durability, and comfort.
- For use with light to heavy duty automotive and construction projects or cycling and other sports.
- Available in sizes medium, large, XL, and XXL.



ELEKTRON

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MultiMig 522

Inverter

Double Pulse Synergic

Double Wire Feeder

MUNGEN



When WORLDS COLLIDE

As new technology and materials are being introduced to vehicles, mobile tool dealers must be ready with the tools, equipment, and knowledge to help prepare their collision repair stops.

By Emily Markham, Associate Editor

The automotive industry is constantly changing. As new technology comes into play, technicians must adapt — purchasing new tools, receiving more training, and educating themselves on what's to come. But it's not only the technicians that must adapt, it's the mobile tool dealers, too.

Todd Smith has been a Mac Tools distributor for 31 years. During his time in the industry, he's seen many changes take place. Most notably, at the body and fender shops he services, scan tools have become a product of interest.

Recently, a customer at one of these shops asked Smith what he knew about pre- and post-scans as these are now required by insurance companies. Smith notes how a few years back a conversation such as this would never have taken place. And because his customers are mainly heavy duty truck shops, along with some automotive and body and fender shops, he, unfortunately, had to tell his customer he didn't know much.

Finding the right welder for your shop is important. Chief Collision Technology offers many different welders, including their MultiMig 522.

Image courtesy of Chief Collision Technology

However, that didn't stop Smith from getting the information his customer requested. Smith called up Mac's tech guy to get a better understanding of their scan tools' capabilities and then requested that a local representative who was more knowledgeable on scan tools come out to show them to his customer. This way the customer was able to see all the scan tools Mac has to offer and was able to choose the scanner that best fit their shop's needs.

When these kinds of changes in the industry happen, it's okay not to always have the answers, but that doesn't mean giving up. If Smith hadn't worked to educate himself and find someone to speak with his customer, the sale would have been lost. Instead, he's adapted to the situation and is preparing himself for the next time it comes up.

CHANGES IN THE COLLISION INDUSTRY

In 2015, Ford released an all-aluminum F-150 — the catalyst for a major change in the collision industry. Though other vehicles were using aluminum before this, Ford was the biggest manufacturer to do this and do it with a major selling vehicle, says Eric Sponhaltz, national sales and marketing manager at H&S Autoshot.

With mixed metals brought in to ensure vehicles abided by the Environmental Protection Agency's mile per gallon regulations, as well as to make vehicles lighter, faster, and smaller, collision shops were forced to find solutions fast or wind up out of business. According to Jason Mahugh, director of engineering and technical services at Forney Industries, the aluminum and high-strength steels going into the vehicles call for different tools and equipment when being cut or welded.

These changes coupled with the new technology of electric vehicles and ADAS have caused great shifts in the collision industry, blurring ↻

Photo courtesy of Todd Smith

the lines between it and the automotive repair industry. In the past, notes Mike Croker, global repair and training product manager for Chief Collision Technology, the line between collision and auto repair was fairly black and white. But with all the new technology and materials being used, the collision side has to have an understanding of repairs that would have traditionally been mechanical processes.

On top of a wider range of tools and equipment needed, Croker says, comes a need for technicians who know how to run that equipment and understand how to perform those procedures if the collision shops want to keep all their repairs inside their own shops. Once a repair leaves their shop, it's out of their control. It's no longer on their timeline, and they can't be sure the repair is being done properly.

So, how do the collision shops keep their work in-house? Training.

TRAINING

"You can never have enough (training), and what I think people can't forget is that you're never going to stop learning because when you stop learning, you're done," Croker says.

As the manager of Chief's training department, Croker knows how essential training is to ensuring repairs are right. If shops aren't constantly training, something is going to go wrong. A vehicle could be repaired incorrectly, and that's "really frightening," Croker notes.

Figuring out training and certifications can seem overwhelming with all the different options out there, but Sponhartz says, I-CAR, an entity for training and curriculum in the collision industry, has created procedures, testing, and certifications for technicians and shops to help them navigate all these changes.

Of course, if something is OEM specific, then the shops may need to go to that manufacturer for training or



When it comes to customers, Smith cannot stress enough the importance of showing up and doing everything you can to take care of them.

Photo courtesy of H&S Autoshot



With the mixed-metal bodies of vehicles nowadays, it's important to have tools that work with different metals such as H&S Autoshot's Aluminum Dent Puller.

certification. On the bright side, Sponhartz notes, many vehicle manufacturers have taken a "common sense" approach to repairs, meaning that repairs can be done based on the capabilities of the shop's tools, not on what brand of tool they use.

GET INSIDE THE CUSTOMER'S HEAD

When attempting to make a sale, it's important to understand where the customer's head is at – what are they

looking to get out of the product? In turn, this will help inform what tools and equipment, you'll need to keep in stock on your truck.

Your customers have many factors to consider when making a purchase and will likely have many questions for you.

"When you're asked a question about something, you need to follow up on it," Mac distributor Smith says. "They don't want to have to go searching for that stuff; that's why they have their tool guy to get the information rounded up and find the best options. From there, they can pick what they want, what works the best for them."

As their mobile tool distributor, it's your job to collect as much information from the customer as possible to present them with solutions to fit their needs. For collision repair tools and equipment, Sponhartz recommends looking for versatility to maximize their investment.

For instance, H&S Autoshot offers a stud gun that welds both aluminum and steel called the Dual-Spotter. All technicians have to do is change the nose of the tool to prevent cross-contamination and they've got two tools in one.

A consideration to keep in mind if your customer is looking for a welder is the type of metal they are working on. With the construction of vehicles including aluminum and high strength steels, it's likely they'll need more advanced equipment than just a 12" to 15" welding torch, notes Forney's Mahugh. An attachment like an aluminum stool gun may be necessary.

Also, Mahugh warns that shops probably don't need as big and expensive of welding and cutting machines as they may think. He explains that Forney makes a 120V welding machine and cutting machine, and both can cut up to 1/4", which should be all a technician needs when working on a vehicle. Of course, there are always exceptions to this, so be

sure to ask your customer exactly what they need the machine to do.

Additionally, your customers should keep in mind the service and support available from the manufacturer of the product they purchase.

“Are you buying it from a reputable company? Have they been around for a while? Do they have multi-level support functions? So not only the guy showing up to help sell it to you, but does he have a guy that can train the equipment?” Croker says.

SELLING COLLISION TOOLS AND EQUIPMENT

Demos are a great way for mobile tool dealers to show customers how a product works and what features it possesses, but not all products can be easily demoed.

Many products essential to collision repair, such as welders, aren't

necessarily equipment a mobile tool distributor will have extensive knowledge on, so Croker recommends distributors contact the manufacturer. This way the company can send a product expert to demo the tool and answer any questions the distributor couldn't. Understandably, Croker notes, distributors may feel wary of doing this because they don't want to lose their sale, but a bad demo could just as easily ruin the sale. Also, if you're working with a company like Chief, they will have processes in place to protect your sale.

Sponhaltz advises distributors not to make assumptions. Many times, you'll walk into a shop and see that they have this equipment or that tool and figure they have it covered, but you may not be getting the whole story. They could be unhappy with the product they currently have, but you'll never know if you don't ask. Sponhaltz

suggests having a conversation like this with your customer.

“I see you have an aluminum dent puller over there. Mr. Customer, can you tell me a little bit about that? Is it meeting all of your needs?” Sometimes the answer is yes. Sometimes the answer is no, and that's an opportunity to bring some different solutions,” he says.

But the most important advice for making the sale, Smith says, is showing up and taking care of your customers. Just as Smith did for that customer who asked about scan tools. Even if Smith didn't have all the answers, he found a way to get his customer what they needed.

“I guess this is age-old, but I really think the trick is to be there every week and ask them how you can take care of them,” Smith says. “Let them tell you what they need and go from there.” PD

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Find out what shop owners are reading about in this month's pages of **PTEN**

Advanced diagnostics: Approaching a diesel engine mechanical fault

Use a capable lab scope and pressure transducer to see the changes in pressure of the exhaust system.

By **Brandon Steckler**,
PTEN Technical Editor

Not a heavy duty diesel tech? That's fine; neither am I. But one tried-and-true method of acquiring new knowledge is to implement the tools we've learned to trust and invest some time in some research. This combination has served me well in developing hypotheses and proving them out through experimentation.

THE TASK AT HAND

The subject of the day, a huge Caterpillar 14.7L 3406e diesel engine situated in a Kenworth W900 dump truck. The truck comes to us with the complaint from the operator that the powerplant's compression brake doesn't seem to slow the vehicle as it has in the past. With a little research and input from my brilliant HD tech friend and instructor, Brent Delfel of Advanced Diagnostic Consulting, I'd like to show you what I have learned from him.

The compression-brake system assists in slowing the tremendous vehicle in two ways. First, utilizes the compression stroke of the large diesel engine to slow the crankshaft down. At the top of the compression stroke, the highly pressurized cylinder charge is then "wasted". Just at the point when combustion of the diesel fuel would normally occur, the delivery of the fuel is canceled and the exhaust valve is momentarily allowed to open. As

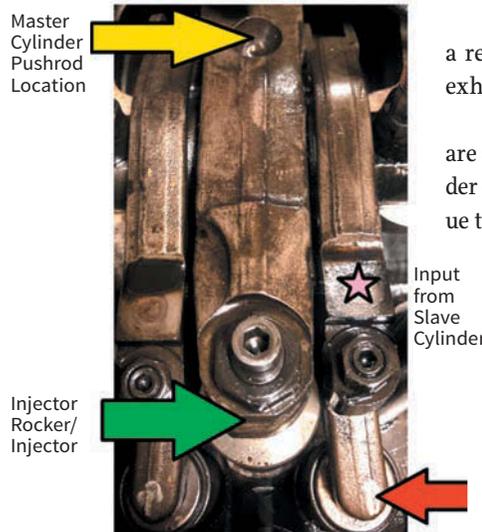


Figure 1: The camshaft-driven rocker arms (top) for a single cylinder. The center rocker arm operates the MEU injector (bottom).

a result, compression is shed on the exhaust stream.

A moment later, the exhaust valves are allowed to close, sealing the cylinder once again. The piston will continue to descend on what would normally be a power stroke. Instead, as it's descending a negative pressure (or "vacuum") is created in the cylinder, on top of the piston. This vacuum in the combustion chamber is what also assists in

slowing the crankshaft down. Engine-braking occurs when there is no accelerator input and the clutch engages the engine and the transmission. As long as the engine is mechanically connected to the transmission and road wheels, the vehicle will slow as well. This is why it's called an "engine brake."

There are three levels of engine braking (low/medium/high). In low, only two cylinders have engine-braking capability (cylinders 3 and 4). Medium allows for four of the cylinders to provide engine-braking capability (cylinders 1, 2, 5, and 6). High allows for all six cylinders to provide engine braking.

HOW IS THE GOAL ACCOMPLISHED?

Now that I have an understanding of the system's goal, I can begin to understand how that goal is carried out. The first thing we have to understand is that

this Caterpillar uses mechanical electronic unit injectors (MEUI). The engine's camshaft has an additional lobe (for each cylinder) to operate an intensifier piston on top of the injector itself (Figure 1). The ECM will command the injector solenoid on/closed to trap the fuel in the injector. The cam lobe will operate the rocker/piston and with the injector solenoid energized the trapped fuel will be pressurized and delivered to the combustion chamber. When the solenoid is off, fuel is not trapped but vented from the injector to a return fuel circuit.

It's this same rocker that is used to operate the injector piston that is also used to operate the engine brake system. As the rocker is driven by the camshaft, it pivots on a fulcrum, like any other rocker. The camshaft-side lifts and the injector-side travels down (like a seesaw). It's the upward motion of the rocker that drives a pushrod connected to a master hydraulic cylinder. This system diagram is drawn in a state of "engine-brake operation" and demonstrates only one cylinder's circuit but functionality is the same for all six cylinders.

SYSTEM OPERATION

Pressurized oil is supplied from the engine. During normal operation of the engine, the oil is vented back through the oil drain circuit via the de-energized solenoid control valve. However, when engine-braking is called upon, the solenoid control valve is energized by an ECM and allows supplied oil to reach the hydraulic control

valve which is being held closed by a spring.

As the pressure of the supply oil overcomes the spring tension of the hydraulic control valve, the valve begins to shuttle and unseats the check-ball as well. Supply oil is then allowed to fill/feed the hydraulic circuits of the master and slave cylinders. This will cause the master cylinder pushrod to extend and come into contact with the injector rocker at the camshaft (as indicated by the yellow arrow in Figure 1).

The motion of the cam lobe operates the injector rocker and drives the pushrod of the master cylinder up. As a result, the oil in the feed circuits is displaced, and the check-ball in the hydraulic control valve seats. Pressure begins to increase in the hydraulic circuits as the oil is now trapped and the master cylinder pushrod is displaced by the rocker.

The movement of the master cylinder pushrod is transferred in the hydraulic circuit, to the slave cylinder and it extends to operate the exhaust valve rocker (this area can be seen on Figure 1 and is indicated by the pink-colored star). Compression is vented to the exhaust stream and the valve will close as the lobe of the injector rocker rotates past its apex.

When the ECM de-energizes the solenoid control valve, the supply oil is vented. Spring tension forces the hydraulic control valve to shuttle closed and the high-pressure oil in the master/slave cylinder circuits is vented to the top of the hydraulic control valve. Normal engine operation is restored. ➔

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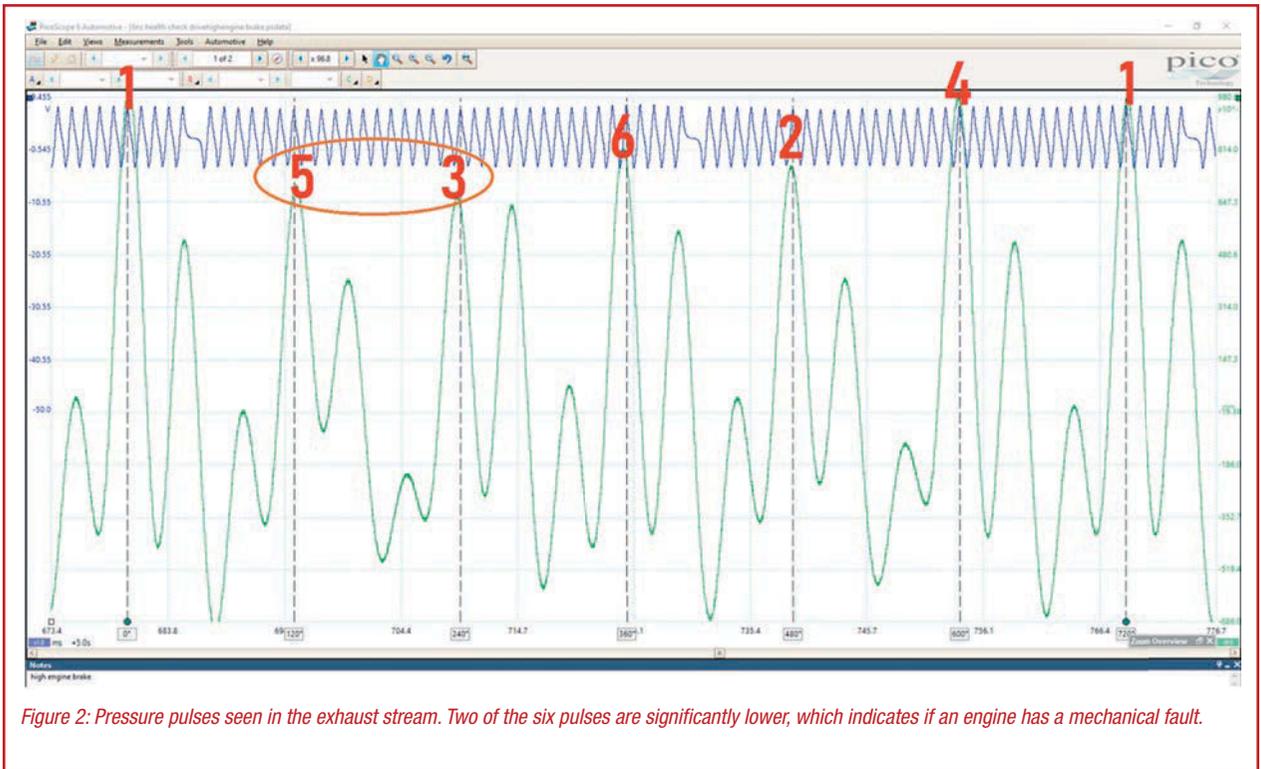
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WATCHING THE SYSTEM IN ACTION

So, how can we use tools to monitor this system? A better question may be “Why would we want to?” Seeing a system in operation will allow us to determine what “normal” looks like. And, as I always say...

“If we know what ‘Normal’ looks like, ‘Bad’ sticks out like a sore thumb.”

Using a capable lab scope and pressure transducer, in this case a PicoScope and WPS500, we can not only see the changes in pressure of the exhaust system but we can also correlate these changes to specific cylinders. In plain English, it can help us determine why the engine-brake system may not be functioning as it should and which cylinder(s) are at fault.

With what was described above, we are now aware that the compression pressure harnessed in the cylinder is then vented to the exhaust stream. This event occurs just before the top of the compression stroke. Meaning,

a pressure spike should be visible at this time, in the exhaust stream. All pressure spikes should be visible from each engine-braking cylinder and they should all be similar in amplitude (pressure-value).

Look at the capture (Figure 2). The channels are as follows:

- BLUE= CKP sensor signal
- GREEN=Exhaust system pressure pulses

This capture was taken during a deceleration event, in “high” mode (all cylinders were commanded to provide engine braking). Referencing service information, the firing order for this engine was determined to be 1-5-3-6-2-4. In a known-good capture, it was determined that the #1 fuel injector (fired near TDC of the compression stroke) was occurring at four CKP pulses to the left of the CKP sync pulse. On the screen is two full engine rotations (one complete engine cycle) representing 720 degrees of crankshaft rotation.

The waveform was partitioned equally in six ways to associate the pulses with each of the six cylinders. As can be seen, two of the six pulses are considerably low compared to the other four. This lack of engine-braking contribution can likely be attributed to low cylinder compression.

A relative compression test was performed and it was determined that multiple cylinders had a loss of integrity but cylinders 5 and 3 were the worst offenders. The point is not that the vehicle requires repair. It’s not even the fact that we can see the variances in the exhaust pressure waveform. The true point is that we can take what we know from our past experiences and the results of the tests we have grown to trust, and apply them to what we are trying to now understand. I think we’ve proven that as a success in this case.

The shop was instructed to carry out the next step of a cylinder pressure leakage test in cylinders 5 and 3. I don’t have a conclusion for you at this



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PicoScope 4823
8-channel high-speed automotive oscilloscope

point as the truck is awaiting further testing but again, that wasn't the point of this article.

Being familiar with the tools we choose to implement, taking the time to educate ourselves on the systems we face and the components of that system, we can capitalize and learn testing techniques that you will likely never see published in service information.

The best part is these same tools and techniques will likely yield you the information you desire with far less time and energy invested than that which is published in service

information and so heavily relied upon throughout the rest of the industry. Be different, take a new approach and learn how to learn. It will serve you well for the rest of your days, I can promise you that! ❌



BRANDON STECKLER is a technical editor for *PTEN*. He has worked in the field

for more than 18 years and holds ASE certifications A1-A9, X1, L1, L2 and L3 and C1, and specializes in driveability and diagnostics. He also teaches for both CarQuest Technical Institute and WorldPAC. bsteckler@endeavorb2b.com

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Dress to impress

This seasoned tool dealer prioritizes a clean truck and professional attire.

By **Amanda Silliker**, *Editor*

Leroy and Mike Hess made up the first multi-route at Mac Tools, and they spent many years as the flag's number 1 two-man team. When Mike decided to retire after 30 years in the business, Leroy purchased his brother's truck and route, transitioning the multi-route operation into one large route that Leroy runs himself. Leroy sold his 22' step van and now drives his brother's former truck, a 22' 2018 Kenworth T270.

When a customer first walks on to the truck, the first thing they see is Hess' Mac Tools display. He has special holders that stand the tools up out of the box. He also has special drawers on tracks that pull out to display all the used tools he sells.

While most tool distributors put their toolboxes at the front of the truck, Hess puts his at the very back so that interested customers need to walk all the way through the truck.

"It's like putting milk at the back of the store or the candy dish at the back of the truck. They go back there to get free candy but they might pick something up on the way, you never know," he says.

When it comes to organization, he has his KNIPEX pliers in a certain section, torque wrenches on the ceiling in bungee straps, and air tools displayed standing up.

He had a special desk built into the truck and while some people may say it's a waste of space, Hess likes it because it's his own personal area. With the step van that he used to own, all the customers had to go through his workspace to get to the tools.

"I like the cabin chassis better because they don't come through my workspace. I can stand behind a desk, this is my personal space, nobody comes in it," he said.

Cleanliness is of the utmost importance to Hess. He has

two rugs that Cintas, a business services company, changes out once a week for him and his niece, Chelsea Hess, cleans his truck on weekends for some extra cash.

He also is very adamant on proper attire on his tool truck. He prides himself on dressing up and his standard work ensemble is dress pants (never shorts), collared shirt, and nice shoes.

"It is so simple and cheap to do, and it is amazing to me that it's overlooked," Hess says. "If you went to buy an expensive car, wouldn't you expect them to be dressed up a little bit? We are selling super expensive tools."

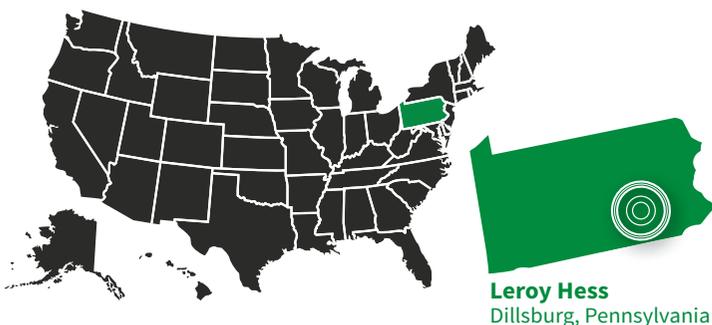
Hess mostly calls on automotive repair shops, heavy truck repair, car dealerships, farm equipment dealers, and farms themselves in the Dillsburg, Pennsylvania, area. Farms have been very good to Hess as they have millions of dollars of equipment and have several hundred dollars' worth of tools to repair them. He explains that farms have been "gold mines" for him because most tool guys don't call on farms.

"I grew up on a farm and a lot of my farm customers ask, 'Why do you come to my shop?' and I tell them, 'When I lived on a farm, we would have spent thousands of dollars on tools if someone would have come to us,'" he says. "They have become very regular, valuable customers."

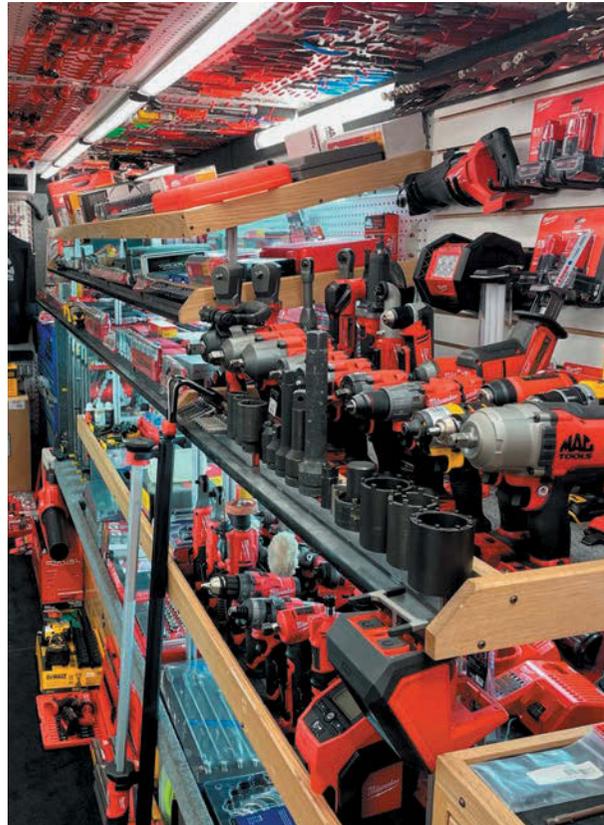
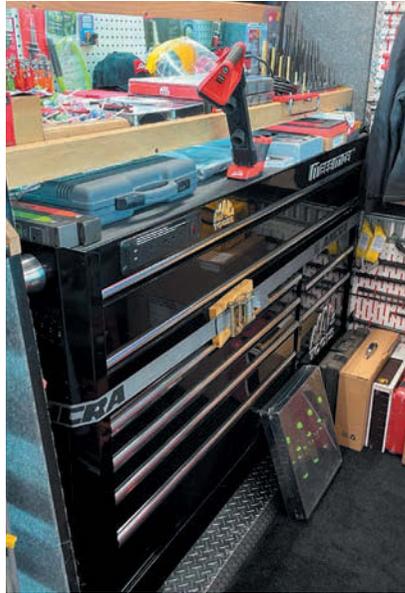
Hess notes that he has a great working relationship with his district manager, Kevin Wendt. He says it's important to be on the same page as your district manager, as he has been for more than 15 years.

One key to Hess' success is that he never leaves any stone unturned.

"I live by this motto: never overlook it when a customer tells you, 'I have a friend that has a shop at such and such a location. I always go see that person,'" he says. 



TO VIEW MORE PHOTOS
OF LEROY'S TRUCK,
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Top Left- Sliding drawers on tracks reveal more tools for sale. **Top Right-** Hess loves the custom made desk he had built into the truck because it's his own, distinct workspace. **Bottom Right-** Milwaukee tools are prominently displayed on the truck. **Bottom Left-** Hess always looks professional on his truck, wearing a clean, pressed shirt and pants. **Middle Left-** The air tools on Hess' truck are prominently displayed standing up. **Center-** All toolboxes are at the very back of the truck, which Hess compares to putting the milk at the back of the store.

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The long and winding road of a sales presentation

Maybe the Beatles were singing about you?

By Alan Sipe, *Contributing Editor*

While sitting in your truck munching on your lunch or bouncing down the road to your next stop, I'm sure the Beatles song "Long and Winding Road" has been on your radio. The Beatles released their super-hit last album *Let it Be* in May of 1970 and I'll bet they had no idea that the song "Long and Winding Road" could be the theme song for mobile jobbers everywhere. Just like a family road trip, you would like to drive from home to your destination directly, but rest stops, fuel stops, sightseeing, eating, and getting lost makes the trip seem like a long and winding road.

I know you have walked out of a vehicle repair facility from time to time and wondered, "Am I really a tool salesperson or am I a brochure delivery service, a broken tool replacer, a skip chaser, a marriage counselor, a commercial visitor with the weather or sports report or – even worse – a non-sale closer?" You started in the door to a sales call with a good plan and came out with nothing, and sometimes it seems like there is almost nothing you can do about it.

Fortunately, there is a lot you can do about it. So don't give up the ship – or in your case, the mobile store.

A TYPICAL SALES SCENARIO

A sales career would be pretty easy, but boring, if all you had to do was walk in the customer's door, say hello, give your presentation, ask for the order and have the customer say

yes. Depending on how you look at the challenge of sales, fortunately or unfortunately this quick and easy sales scenario seldom, if ever, happens.

In the real world what often happens is you walk in the shop door with a planned sales presentation for your customers, you drop off the latest promotional brochure at each workstation and then everything that could go wrong does go wrong from the get-go.

The entire shop is upset about some new rule the workers don't like or some hot-topic union issue and no one wants to hear about your cool new tools. So, with each of your personal calls within the shop you must hear about that person's take on the latest grievance. Or, it seems like every one of your technicians is dealing with some major subject they must unload on you before you can get through with your selling business. The list of subjects can go on forever: kids, spouse, money, health, sports, weather, broken tools, lousy boss, government, religion, etc.

Additionally, customers have a knack for changing the subject during a demonstration, wanting to tell you their latest life story, or answering a phone call during your demo. Essentially, a presentation almost never goes on a straight line from, "Hello" to the demonstration, to questions, to agreement, and to a sale. Every sales call can turn into a "Long and Winding Road" to reach a final yes or no conclusion.

Here's a diagram of how you would like your sales call to go.



1. Hello
2. Product Demonstration
3. Q & A Session
4. Close
5. Customer says yes
6. \$\$\$

In reality, here's a winding road diagram of how sales calls really go. The green line is what you planned for the presentation discussion and the red line is how the discussion goes, winding all around topics such as money problems, sports talks, broken tools, and more money problems.



These uncontrollable situations and interruptions happen every day and the better you deal with them the better your sales results will be.

Since you walked in the door with a sales plan in mind for your various customers it is important for you to keep those plans as you visit each customer.

You probably know each individual customer well enough to know who is going to complain the most about whatever is going on in the shop and who will not even mention it. Prepare yourself to take control of the discussion quickly and keep it on track.

GET BACK ON TRACK

Like we have discussed in previous columns it is almost always best for you to own the objections and in this case if you bring up the current



all-shop gripe you can control the discussions. Try this:

“I understand many of the techs are upset about the new policy and I sure hope things calm down about it shortly so let’s talk about something more pleasant like cool new tools?”

The customer may simply agree with you and move on or may complain a bit, but they now know you are aware of the issue and hopefully will not harp on it for long. Just don’t ask them how they view the issue since that will throw gasoline on their current fire.

Presenting to the customer who takes every opportunity to get your demonstration off track can be a big challenge for any salesperson so don’t feel alone on this.

During your presentation when you mention the great grip on your screwdriver and the customer switches the conversation to the quarterback losing his grip on the football last Sunday what should you do?

Initially you will need to let the customer go on for a bit without interruption and as soon as he stops for a second or two simply go back into your

demonstration. Never ask a question about their topic, never give an opinion on the topic simply listen for a bit and move on. If the customer asks you a question about the topic they are on, answer it quickly and shortly and while you are in control of the conversation go right back to your presentation.

Since this customer may or may not be focusing and understanding what you are saying it is even more important than ever to trial close often and get an answer of understanding and agreement before you move on to the next point.

Certainly, there are some subjects you can’t just sluff off which are emotional for the customer but leading them on and adding your opinions can just get the conversation more off track and can potentially become too emotional for you to move on.

You will also find it very helpful to do a quick trial close review with this customer before you go for the final close, so you and them are sure where their head is on this product.

Go back over each important product benefit quickly and remind

the prospect that they liked each one.

Each of our customers is different and each must buy their tools from someone, so it might as well be you! Hang in there when the presentation gets off track.

When things go awry keep your focus, keep your cool, keep bringing the conversation back to the demonstration, refrain from asking questions or giving opinions about the off-topic subject. Trial close often, review the benefits before the final close and as always, ask for the order.

Now go sell something. **PD**



ALAN W. SIPE has spent the last 42 years in the basic hand tool industry including positions as president of KNIPEX Tools

North America, senior vice president of sales and marketing at Klein Tools, manager of special markets at Stanley Tools, and sales manager at toolbox manufacturer Waterloo Industries. Currently, Sipe is the owner of Toolbox Sales and Consulting, a company specializing in sales strategy, structure, development, and training.

alansipe@gmail.com

DRIVING SALES

Safety, personal gear, and lighting

Safety, personal gear, and lighting

Safety has long been overlooked in automotive repair shops, but this is slowly starting to change. The younger generation of techs coming in are used to safety measures in their every day lives (they don't remember a time without seatbelts) and are likely looking for ways to stay safe on the job. Stocking some personal protective equipment on your truck is a good idea, and might as well have a few work shirts, hoodies, and comfortable work pants too. Personal lighting, such as pocket flashlights and headlamps, are important in helping your customers get the job done quickly and safely.



REMOVEABLE POCKET CLIP

The **Wedge Slim Everyday Carry Flashlight** from **Streamlight** is a compact, high-performance EDC light designed for clean pocket carry. It's outfitted with a rotating thumb switch that provides control over its two lighting modes: constant-on and THRO (temporarily heightened regulated output). The rotatable switch also has a battery level indicator. The flashlight measures 5.65" in length, is made of anodized aluminum, and has a waterproof USB-C port. In addition, the deep carry, removeable pocket clip is able to attach on either side of the light. ■



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The **Fenix Lighting HM65R Rechargeable Headlamp** features both an independently controlled spotlight and floodlight for a combined maximum 1400 lms of neutral and white light. Powered by the included 3500mAh battery, the headlamp is USB-C rechargeable and includes a battery level indicator. It's made of a magnesium alloy for strength and is impact resistant to 6.6', with less weight. Additionally, it's dust-proof and waterproof to 6.6'. ■



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The **Brass Knuckle SmartCut Gloves**, No. BKCR4420, offer A4 cut resistance with double-coated protection that combines slip resistance and permeation protection in a dexterous glove. The gloves feature a water-based polyurethane base coat on full fingers and palm, plus a second coat of foam nitrile for added grip security for oils, petrochemicals, fuels, and most acids. The sandy grip finish increases abrasion resistance and cut protection. This layered protection is breathable and flexible, delivering high cut resistance without the bulk. They are have a full knit wrist that provides a snug fit and prevents dirt, debris and cold from getting inside the glove. ■



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feature advanced fog resistance. The glasses also have adjustable temples and an adjustable nose piece to help ensure fit and wearer comfort, as well as brow guard protection. The lenses are made from high-impact polycarbonate and are available in clear or gray. ■





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The Milwaukee Tool Rechargeable 500L Everyday Carry Flashlight with Magnet, No. 2011R, delivers up to 500 lm of TRUEVIEW high definition output and is designed to provide the ability for users to use in hand or work handsfree. The magnetic base allows users to quickly switch from handheld use to handsfree, while a reversible clip makes it easy to attach to the brim of a hat or pocket. The flashlight has three output modes, including high, medium, and a low mode, and comes with USB charging and an on-board battery indicator. Additionally, it's designed with Bulls-Eye Beam Pattern to provide optimized distance and up-close illumination. ■

CUSTOMER REVIEW:
 “ Milwaukee has made its best personal flashlight. Lightweight, powerful, small size, quality all inside this little baby. Good job! ”



ADDED THERMAL PROTECTION

The Mechanix Wear Flux Welding Gloves, No. WS-FLX, from Magid are designed to handle high heat stick work and MIG welding applications. The Flux is crafted with Durahide top grain cow leather, lined with flame-resistant cotton, and finished with high-tenacity Kevlar thread. The patented HiRoller fingertip design repositions exposed seams to improve dexterity, durability, and control. ■

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FEATURES SKIN SENSITIVE TECHNOLOGY

The **Adenna Optify Nitrile Disposable Gloves** are 9 mil thick, blue, extended cuff disposable gloves that feature skin sensitive technology which means all sulfurs and chemicals that users may be allergic to in gloves are removed. The gloves are resistant to chemicals and are strong that they have been tested to be resistant to Chemo and Fentanyl, the company says. With a 12" extended cuff more of the users wrist and forearm are protected during dirty jobs. The gloves come 50 per box, 10 boxes per case. ■



EXTENDS FROM 49.5" TO 79.75"

The **BendPak LITESTIX** is a bright, versatile LED worklight powered by a rechargeable lithium battery to offer complete portability. It uses dual 90-degree swivel handles equipped with magnetic ends to mount on any flat or off-angle metallic surface. The lamp's all-steel telescoping cradle frame can extend from 49.5" to 79.75" in length and can secure to the underside of a vehicle hood with the help of grabbing hooks attached at both ends of the frame. With high and low settings, the worklight provides up to six hours of continuous use between charges. Designed for a long life of heavy duty use, LITESTIX features an impact-resistant polycarbonate housing. ■



SWIVELING LAMP HEAD

The **Ledsenser H19R Core Headlamp** features a fusion beam light pattern that combines the power of two lenses and enables individually controllable flood and spotlights with intuitive operation, the company says. It has a red light to preserve night vision, a swiveling lamp head, and a removable battery with magnetic charging. The headlamp is both dustproof and waterproof. ■

CUSTOMER REVIEW:
“ I am blown away. I can't say enough good things about the quality of these products. This headlamp is unlike anything I've seen before. ”

DETACHABLE MAGNETIC BASE

The **Pro Spot 5,000 lm COB LED Rechargeable Area Light** from **Mac Tools** provides five adjustable lumen outputs ranging from 500 lm to 5,000 lm. It features a 180 degree rotating bracket, detachable magnetic base with anti-slipping rubber pad, and a foamed PU bumper for easy handling and impact protection. The battery provides up to 10 hours continuous use. The area light is IP67 dust and water resistant. ■



FOR MORE INFORMATION ABOUT ANY OF THESE PRODUCTS, CLICK ON "PD E-INQUIRY" at VehicleServicePros.com.



MEASURES JUST UNDER 4”

The **Coast XP6R Rechargeable Dual Power Flashlight** emits up to 400 lm and is easy to carry, measuring less than 4” in length and weighing 2.6 oz. The flashlight features Coast’s patented Slide Focus optical technology that transitions seamlessly between Ultra View flood beam and Bulls-Eye spot beam. With three output modes and multi-beam capability, the flashlight is powered by a Coast ZITHION-X rechargeable battery (charging cable included) but can also run on a CR123 lithium battery (purchased separately). ■

CUSTOMER REVIEW:
“ I’ve used a Coast flashlight for years for work and it lasted and survived lots of abuse thanks to my type of work. This flashlight is small, but it really gives off a nice bright beam of light and it fits easily in my work pants pocket. ”

MULTI-PURPOSE AND POWDER FREE

Glove King Premium Black Nitrile Gloves from **PermaSafe** are powder free, latex free, and non-sterile. The nitrile gloves are extra thick, measuring 6 mil, ideal for heavy duty industrial and automotive use. Additionally, they are designed to provide a flexible fit, are chemical resistant, and offer biological protection. Packaged 100 per box and ten boxes per case, the gloves are available in sizes from medium to XL. They have a three year shelf life. ■



EMITS UP TO 1,800 LM

The **Grote Industries BriteZone Handheld LED Work Lamp**, No. BZ421-5, features a digital readout that lets users know precisely what battery charge level is left. The magnetic polymer base secures the lamp to most metal surfaces. The work lamp emits up to 1,800 lm and offers three light patterns (100 percent, 50 percent, and SOS). The rechargeable light charges in 3-1/2 hours and has a runtime of three hours. ■



URNS ON/OFF WITHOUT TOUCHING THE HEADLAMP

The **Saber 200 Lm LED Rechargeable Motion Activated Headlamp**, No. ATD-80250A, features a motion sensing mode to turn light on/off without touching the headlamp. It has a pivoting head to allow users to focus light where needed, a battery charging indicator to show charging progress, two floodlight settings (200 lm and 100 lm), and an automatic shut off and overcharge protection to prolong battery life. It also has a memory function that records setting after five seconds and is recalled the next time device is activated. The headlamp is IP65 rated for dust and water resistance as well as IK07 rated for mechanical impact protection. Includes USB type-C charging cord. ■

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Own your strengths and weaknesses

This Cornwell dealer thrives with selling scan tools and listening to his customers.

By Amanda Silliker, Editor

Mike West is the first to admit that time management is quite the challenge. Like most mobile tool dealers, he often struggles to fit in all of his daily stops.

"I have a good size territory to cover, but I don't want to rush. By the end of the day, I've run out of time and I'm trying to figure out how to squeeze them in the next day," says West, a Cornwell Quality Tools dealer in Quinton, Oklahoma, who is also a volunteer fire fighter.

For West, being honest with the customer about his time management struggles helps build strong relationships and they are often sympathetic to the situation.

"I want to make sure I'm putting a customer first. If I do miss a shop I say, 'Hey look guys, I'm sorry, I got tied up over here, it's my fault, didn't mean to cut you out, I just got caught up,'" he says. "You need to be honest with the customer."

If the apology doesn't suffice, West will surely win them over with his fully stocked beverage and candy selection on the truck. He has a mini fridge with a selection of drinks, including Monster, Coke-Cola, and Mountain Dew, along with a candy bar display rack with Reese's peanut butter cups, Snickers, and Hershey bars.

West's route takes him around rural Oklahoma to a mix of car dealerships, independently owned shops, and mom n' pop shops. He also serves paint and body shops, heavy truck shops, and a couple of lawn mower shops.

Last year, West decided to up his focus on scan tools. If a customer is



Mike West says honesty and consistency has served him well in the mobile tool business.

interested in a scan tool, he lets them borrow a demo for a week to see if it's the right fit for them.

"They can test drive it to see if it does what they want," he says. "They like to try it out first."

This demo approach along with having more conversations about scan tools with his customers has resulted in West seeing increased sales in this category. His best seller is Autel, but he also sells TEXA, CanDo, and OTC.

West says that Milwaukee's electric tools essentially "sell themselves" off his truck. He got a new tool truck two years ago – a freightliner M2 with 24-foot chassis – and he made sure he had a dedicated Milwaukee display area.

"It's the one thing that comes off the shelf quick. Everybody can't get enough of it," he says.

He also moves a lot of tool storage and tool carts, too.

When it comes to tips for new mobile tool dealers who are just starting out, West stresses the importance of being consistent.

"Be there at the same time, same day of the week and take care of their needs," he says.

He also says it's important to listen to the customer and make sure you have the right inventory on your truck for them. When he was starting out, West was serving body shops, but he didn't have that background, so he made sure to act fast if he needed certain items on the truck.

"If they wanted something I didn't have, I would get one for them and one for the truck, that way I would be ready for next time," he explains. "Listen to your customer, find out what they're working on and what they need."

Having been a mechanic for 18 years prior to becoming a mobile tool dealer, West says learning the business side of things was a learning curve. Fortunately, his wife is "really good with numbers" and she helps out on evenings and weekends.

West is hopeful that one day his 17-year-old son will be interested in joining the business as well.

"Maybe down the road we could add another truck and bring him on," says West, adding that his son sometimes helps him stock the truck. "Down the road if he decides he wants to be a part of it, I would definitely support it." **PD**

FUN FACTS:

 **Music for the road:**
Classic rock, sometimes country

 **Favorite road snack:**
Beef jerky

 **Can't live without:**
Sweet tea

 **Most random thing he sells:**
Swords and daggers

 **Hobbies:**
Hunting, fishing, trail riding

What's your story?

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