

PROFESSIONAL DISTRIBUTOR

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AMPING UP THE VOLTAGE

With the surge in different vehicle batteries over the past few years, the tools and equipment used to service them have evolved. Find out what your customers need to perform battery maintenance.

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Most Wanted Page 10

Show Me Your Truck Page 30

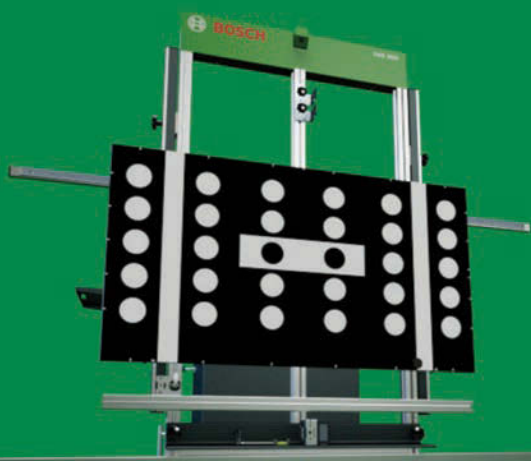
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Danielle and Richard Downing are the Texas-based independent mobile tool distributor team who make-up Big Country Tools.

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VIDEO:

In this video, John Baumgardt III reviews the Ingersoll Rand W3111 IQV20 1/4" Compact Impact Driver.

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NEWS:

The Auto Care Association objects to the right-to-repair "pact" between ASA, SCRS, and the Alliance for Automotive Innovation.

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PHOTO GALLERY:

Check out some of the personal gear featured in Professional Distributor's 2023 Product Showcase.

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The future of business

AI is on the rise, so here are a few ways you can incorporate it to help with your business.

A I is everywhere nowadays. Whether it's asking Siri to schedule a reminder to call the dentist or telling Google to add eggs to your grocery list, it's becoming a part of many of our everyday lives. While some people are still unsure about the technology, those who have embraced it have not only utilized it in their personal lives, but some have also looked to add it to their professional lives as well.

In this month's Go Sell Something article, Alan Sipe discusses an email he received from a friend who put AI to the test and asked ChatGPT to put together a few paragraphs on teaching people how to sell tools (page 32). After reading through the AI's quick how-to, Sipe admits that it does hit many of the topics he stresses in his monthly articles and goes on to expand those points into a full lesson on selling tools.

However, what Sipe does not mention in his article is how mobile tool distributors can use AI to help their businesses. Whether you're looking to just dip your toe into the AI waters or are taking a deep breath to dive right in, here are a few suggestions on how you can use AI to help run your business.

Customer experience: Though many of your interactions with customers happen face-to-face, there are still plenty of phone calls, emails, texts, etc. to field as a mobile tool distributor, so why not try using chatbots? Using chatbots as your first line of customer

engagement requires less effort on your part while also providing your customers with faster responses and will potentially handle the issue entirely without your involvement, leaving more time for you to take care of other matters.

Marketing: If you're looking to create more personalized marketing AI can help. AI technology can be used to collect and analyze customer data such as behavior, preferences, and demographics to create personalized marketing messages through email campaigns, social media ads, and other content.

Content creation: Much like Sipe's friend, you could also use AI to look up pointers on how to sell tools or to help you create product presentations, social media posts, email promotions, and other content for your business. However, when asking AI to help you create content, be sure to carefully look it over before actually using it. AI is a useful tool, but it doesn't always get things right, so you'll need to check that the content is high quality and matches your business' voice.

With AI on the rise, it's only a matter of time before it becomes the norm for many business practices. Do you use any AI programs to help run your business? If so, for what? Or are you, perhaps, in the midst of adding AI? Or are you among those who would rather steer clear of AI altogether? Please feel free to send me an email at Emily@VehicleServicePros.com and let me know your thoughts on AI. **PD**

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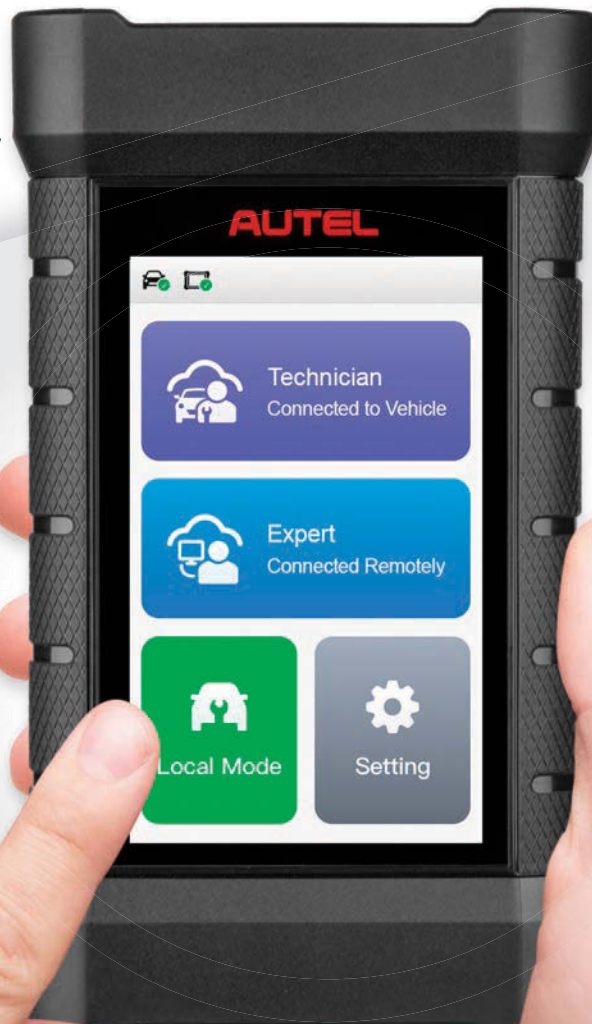
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Welcome to Sneak Peek!

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



FEATURES NEW WIRELESS SENSORS

The **TD 2.0 Wi-Fi Alignment System** from **Atlas** is designed to eliminate the need for a drive-on scissor or four-post alignment lift. While the system will work on standard alignment lifts, users can also use two-post lifts, non-alignment four-post lifts, scissor lifts, and pit lifts. The TD2.0 system is PC free, Wi-Fi compatible, handheld, and can be stored on the wall to help eliminate clutter and maximize floor space. In addition, the system features new wireless sensors, Wi-Fi and Bluetooth technologies, a tablet, an eight camera optical system, a brake pedal depressor and steering wheel lock, and a portable design. ■

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PROVIDES A UNIFORM LIGHT SPREAD

The **NextLED Cordless Drop Light**, No. NT-2061A-10UV, is equipped with a 1,000-lm output that provides a bright and efficient lighting solution. With its cordless design and 360-degree swivel hook, it offers versatility and convenience in various settings. The COB LED technology provides a uniform light spread while the UV feature allows for easy detection of leaks and stains. This light is ideal for use in automotive tasks. ■

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IDEAL FOR LARGE AREAS

The **Cool Boss Tempest and Windstorm Series HVLS Industrial Ceiling Fans** are designed to deliver optimized temperatures and air circulation in large interior spaces while reducing energy costs. The high-volume, low-speed (HVLS) fans are available in a range of sizes, from 11.5' to 24' in diameter. They're quiet, using high-strength, fatigue-resistant aluminum alloy for the blades. The blades are powder coated to ease cleaning and ensure long life. The Tempest Series has two models (CB-11HVLS and CB-16HVLS), both of which have six blades. The Windstorm Series includes two five-blade models: CB-20HVLS and CB-24HVLS. Both Windstorm fans feature a built-in ion generator air purification system to improve air quality. ■

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Watch this product in action here: VehicleServicePros.com/53067086

CLEANS UP TO 300 TRUCK HUBS

The **Martins Industries Checkpoint Truck Stud and Hub Cleaning Tool**

is designed to quickly remove rust, corrosion, and dirt from medium and heavy trucks' rotors, drum brakes, hubs, and studs. It's meant to help ensure the secure fitment of wheels

and wheel nuts to minimize the risk of a wheel detachment. It also prevents the hub from running off center leading to vibrations, accelerated wear and tear on bearings and other components. Additionally, its abrasive pads can clean up to 300 truck hubs and are compatible with 1/2" impact wrenches. ■

For more information, click on "PD e-inquiry" on VehicleServicePros.com



CUSTOM MACHINED FOR PRECISE FIT

The **6-pc Cushion Grip Screwdriver Set**, No. MT200-6, from **Milwaukee Tool** is manufactured with tips that are custom machined to deliver a precise fit and reduce stripping during demanding fastening applications. In addition, the tips are laser etched to increase the gripping surface and each screwdriver is made with high-strength, boron-infused steel for added hardness. Providing increased versatility, select screwdrivers include a wrench-ready bolster for added torque and a knurled shank for precision control. The screwdrivers also have quick identification markings on the handle that are designed to make it easier to identify tip size, including Phillips, slotted, and cabinet tips. This set includes screwdrivers offered in 3" to 6" shank lengths. ■

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EQUIPPED WITH D-HANDLE

The **Air Impact Wrench with 1" Drive and 8" Anvil**, No. NC-8382-8, from **M7** is designed to handle lug nuts and other automotive fasteners. Featured in this tool is a forward torque range of 200 to 1,600 ft-lb and a maximum reverse torque of 2,500 ft-lb. To balance that power, the tool is equipped with a D-handle for stability while in operation. The pinless hammer clutch mechanism is designed to help the tool deliver high torque power while reducing tool vibration. ■

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SIZES ARE LASER ETCHED

Dynamic 3/8" Drive Starter Socket Sets feature both standard and deep length sockets in SAE and metric sizes. The industrial-duty sets come with clip organizers for convenient storage and have a chrome finish for maximum corrosion resistance. Sizes are laser etched for easy identification, and a knurled ring provides ideal grip when removing the sockets from ratchets and attachments. The socket sets meet ANSI standards. ■

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SLIP RESISTANT

The **SureWerkx Airwalk Safety and Occupational Footwear Line** brings Airwalk's commitment to the action sports lifestyle into the safety and occupational footwear world. The footwear line includes safety features like slip resistance, puncture resistance, electro-hazard protection, and SD10 protection in a composite or soft toe option. The shoes are designed for ultimate comfort with a breathable lining and dual-density PU insole. ■

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NOW INCLUDES A T-PULLER

The **CTA Tools Updated Ford Water Pump Pulley Tool**, No. 8069, now includes a T-puller, making it more versatile. The 8069 is designed to remove and install the water pump pulley on Ford, Lincoln, and Mercury 3.0L DOHC engines. The tool includes a forcing screw with a shaft protector, a pulley removal plate, a T-Puller, and two hex head cap screws with washers. Additionally, this tool is comparable to Ford factory tools and is designed to reduce the chance of damage to the pulley or other components, the company says. ■

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FEATURES HEAVY DUTY GLUE GUN

The **H&S Autoshot GPR-Pro Glue Pull Repair System**, No. GPR-7571, includes minor dent tabs as well as heavy damage ring tabs for increased pulling capabilities, lift and lateral pull straps for complex repairs, a heavy duty glue gun, and special glue for both large and small pull areas. ■

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FEATURES WI-FI CONNECTIVITY

The **High-Voltage Module Balancer**, No. xMB-9640, from **Midtronics** is designed to assist technicians in performing module-level balancing of EV batteries with speed, efficiency, and safety. The compact balancer features an intuitive user interface, offering a range of functionalities such as module balancing, transportation discharge at the module level, and module diagnostics. With Wi-Fi connectivity, the xMB-9640 is capable of over-the-air software updates and analytical reporting as well as allows users the option of emailing results and capturing and reviewing usage data. ■

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COMPACT AND LIGHTWEIGHT

The **Dynabrade Nitro Series Pistol Grip Mini Orbital Sander (DN1)** is ideal for a wide variety of small-scale sanding applications. Its 1-1/4" (32mm) diameter pad size focuses sanding effort and provides ideal control when working on small parts like vehicle hoods, fenders and doors, side-view mirrors, interior parts, spoilers, and motorcycle parts. The DN1 offers very low vibration which reduces hand and arm fatigue, and is best for sensitive workpieces or when sanding/repairing a coated surface. Compact in size, the DN1 is lightweight and allows for left or right-handed use. ■

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GLASS-FILLED NYLON INJECTION DESIGN

The **ARES 4-in-1 Water in Fuel Filter Sensor Wrench**, No. 14023, is designed to remove and replace water in fuel filter sensors of all current OE and aftermarket sensor sizes. Includes wrench sizes in 40mm (12pt), 41mm (12pt), and 46mm (8pt notched). Features a glass-filled nylon injection design and precise fitment that is intended to provide maximum durability and protect sensors during maintenance, ARES says. This wrench works on 6.6L Duramax and 6.7L Cummins diesel engines. Additionally, the 40mm and 41mm end can be used for 2001 to 2011 Chevy Silverado and 2500/3500 GMC Sierra vehicles. ■

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▶ Watch this product in action here: VehicleServicePros.com/53065567



CHARGES IN 75 MINUTES

The **DeWalt Rechargeable LED Flashlight**, No. DCL183, is designed to illuminate low-light work areas, helping the user focus on the task at hand and work hands-free using the light's magnet and hook. The hook can be hung on hoses, pipes, tubes, or cables. With an output of up to 1,000 lm of brightness on high mode, the light runs for around 6.5 hours and can charge in about 75 minutes using 5VDC 3A power supply/brick. ■

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IDEAL FOR TIRE SHOPS

The **BendPak 12AP-SRT 12AP-SRT Short-Column Two-Post Lift** is designed to improve tire shop productivity and efficiency while mitigating risk. With a 12,000 lb rated capacity, a large wingspan that reaches most OEM lifting points, and the versatility of both symmetric and asymmetric lifting, the 12AP-SRT can quickly raise 99 percent of cars, SUVs, and trucks to a comfortable working height, says the company. It also features short 93.5" columns, a single-point safety lock system, automatic arm restraints, and has a maximum lifting height of 47". ■

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ALL-IN-ONE SOLUTION FOR A/C SYSTEM REPAIRS

The **CPS Products UView SpotGun Jr Injection Starter Kit**, No. 390100, is an all-in-one solution that removes the hassles of outdated methods and allows users to easily tackle A/C system repairs and maintenance, says the company. This kit includes the SpotGun Jr Injector with purge valve adapters, R-134a and R-1234yf couplers, two SpotGun Jr service hose assemblies, four universal oil cartridges (1 oz/30 ml), two ExtenDye cartridges (1 oz/30 ml), and two LeakGuard OneShot cartridges (1 oz/30 ml). ■

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SUPPORTS A NOBLE CAUSE

The **Miller Electric Digital Infinity Series Honor Welding Helmet** features a camouflage design and supports a noble cause. For every Honor helmet sold, Miller will donate to Semper Fi and America's Fund, a nonprofit organization that provides assistance to wounded, critically ill, and injured members of the U.S. armed forces and their families. The Honor Helmet has a 13.4 sq. in. viewing area and is integrated with advanced technologies, including ClearLight 2.0 for a clear, bright, and more realistic view, X-Mode to eliminate sunlight interference, InfoTrack 2.0 to monitor arc time and arc count, and AutoSense which automatically sets the helmet sensitivity by sensing the user's environment. ■

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LONG REACH BODY FOR NARROW SPACES

The **Matco Tools 2-pc Extra Long Double Box Flex Head Ratcheting Wrench Set**, No. SRRFXLM22T, features a patented design of box end that is intended to open and fasten even a 50 percent rounded off screw. Its 90 teeth are designed to provide high torque, requiring only 4 degrees of movement. The wrenches' long reach bodies allow the user to access narrow and deep spaces. Featured in this wrench is a chrome-vanadium material which provides a heat treatment process as well as durability and additional strength. ■

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REMOVES YOKES SAFELY

The **Lisle Corporation Heavy-Duty Yoke Puller**, No. 60050 is for use on yokes with a bearing diameter between 1-7/8" and 2-3/16". This yoke puller is designed to remove yokes on transmissions and rear-end differentials without damage to the yokes or other components. The kit comes with three sets of grade eight flange bolts to fit different bolts. All components are heat treated. ■

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ADDS COVERAGE FOR LIGHT, MEDIUM, AND HEAVY DUTY 2023 VEHICLES

The **MaxiSYS 909CV Software Update** from **Autel** extends basic and advanced diagnostics, including performing active tests and special functions coverage for popular light, medium, and heavy duty 2023 vehicles. This includes the Ford F-series; the Chevy Silverado; the Ram Pickup; trucks; buses; and SUVs from GMC, Hyundai, Kia, Mitsubishi, Nissan, Toyota, and VW. ■

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RECHARGEABLE VIA USB-C

The **W2R Work Pen Light** from **Ledlenser** is a rechargeable pen and test light designed to ensure precise illumination, either via its wide-area floodlight or via its spot LED in the lamp head. The W2R Work can easily be attached to breast pockets using a clip and can be charged quickly and easily using a USB-C. The light emits up to 160 lm. Other notable features include a nubbed surface for a strong grip, a handy transport lock, a low battery warning function, and a battery charge level indicator. Also available in a non-rechargeable version, the W2 Work Pen Light requires two AAA batteries. ■

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Watch this product in action here: VehicleServicePros.com/53066535



REMOVE WARPED AND DAMAGED CHROME-CAP LUGS

OEMTOOLS 5-pc 1/2" Drive Flip Lug Nut Socket Set, No. 25555, is designed to remove warped and mangled chrome-cap lugs. Made from Cr-Mo and equipped with flip-design sockets that offer two hex sizes in one socket, this socket set is half-metric sized to remove damaged lugs found on many Chrysler, Ford, GM, Honda, Range Rover, and Toyota vehicles. The socket set comes in a blow molded case for storage and includes 1/2" drive sizes: 18.5mm x 19.5mm, 19mm x 21mm, 21mm x 21.5mm, 22mm x 22.5mm plus a 1/2" drive extension. ■

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INCLUDES 14 PUNCH SIZES

The **Killer Tools Bumper Perfect Hole Punch Deluxe Kit**, No. ART251DX, is ideal for automotive professionals seeking maximum versatility. The kit encompasses a comprehensive range of 14 punch sizes (17mm, 18mm, 18.2mm, 19mm, 20mm, 22.5mm, 24mm, 26mm, 26.7mm, 27mm, 28.1mm, 29.3mm, 32mm, and 38.9mm), combining the ART251 and ART251EX functionalities into a single, convenient package. ■

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COVERS STANDARD AND LARGE VALVE CORES

The **FJC R-1234yf Valve Core Remover/Installer**, No. 6819, is designed to remove and install valve cores with no refrigerant loss. This tool covers standard and large valve cores for R-1234yf vehicles and comes in a set of two tools (blue LS and red HS). Made with a high-quality brass construction, the tool can be adjusted. ■

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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 Designed for EV technicians

The **Carlyle Insulated Hand Tools** range has been developed specifically for electric vehicle service in the automotive aftermarket and offers a full line of tools. Each tool is individually tested and certified to meet VDE, GS, IEC60900, and ASTM F1505 standards and rated to 1,000V AC/DC to minimize the threat of severe injury to technicians, prevent damage to customers' cars, and to mitigate the risk of fire inside repair shops and garages.

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B Push button for easy adjustments

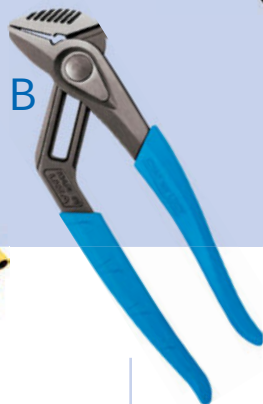
Designed to meet the ever-changing demands of America's trades pros, **Channellock SpeedGrip Tongue and Groove Pliers** combine the dependability of the company's original Tongue & Groove Pliers with an innovative push button for fast and easy adjustments that lock into place. Forged from high-carbon U.S. steel and featuring laser heat-treated crosshatch teeth, SpeedGrip Pliers are built for maximum strength and grip 2.5 times better than traditional tongue and groove-style pliers, says the company.

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C Safely releases roof panels

The **CTA Manufacturing 2-pc VW Roof Grab Release Tool Kit**, No. 3033, is designed to help Volkswagen technicians easily and safely release the roof panels. The kit includes CTA's VW Roof Grab Release Tool (v2), No. 1464, and VW Roof Grab Release Tool (v1), No. 8061. These tools are specifically designed to fit Volkswagen vehicles and are made with high-quality materials to ensure durability. The v2 tool features an updated design with a different angle and shank dimensions, as well as a more secure grip. The tool is also made with hardened steel for added strength and durability.

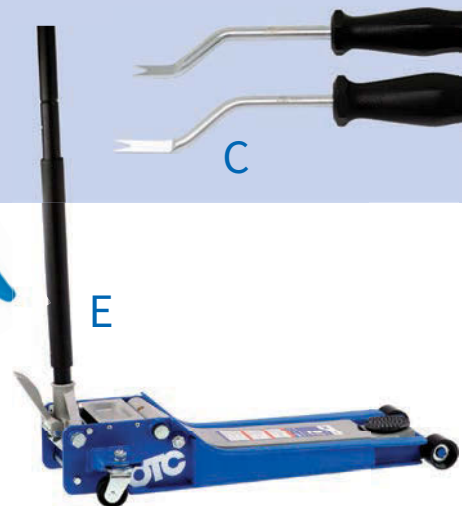
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D Performs EV battery pack analysis

The **Autel EV Diagnostics Upgrade Kit** adds EV and hybrid vehicle diagnostics without the need of having to purchase a new tablet. It performs a state of charge and state of health analysis for true battery condition. The kit includes the EVDiag Box, testing software, and adapters for specific EVs to enable testing of battery packs. The Upgrade Kit connects with existing MaxiFlash VCI or VCMI, and is compatible with the MaxiSYS Ultra, Ultra ADAS, MS919, and MS909.

For more information, click on "PD e-inquiry" on VehicleServicePros.com



E Has a lifting range from 3" to 21"

The **OTC 2-Ton Low Profile Long Reach Service Jack**, No. LDJ2, is ideal for general service and high-volume service shops looking to lift midsize cars, trucks, SUVs and compact cars and SUVs. Safety-tested design provides lifting with an extended reach to accommodate OE lifting points, and a low profile for vehicles with low-to-ground aerodynamic treatments. The LDJ2 has a lifting range from 3" to 21", a reach of 69", four casters (two front fixed, two rear swivel), a frame height of 2.75", and a 4" diameter round rubberized saddle. The handle measures 50" in length.

For more information, click on "PD e-inquiry" on VehicleServicePros.com

F Removes damaged and frozen fasteners

The **ARES Tool 18-pc Combo Turbo Socket Set**, No. 29022, comes with 16 1/4" drive turbo sockets with SAE and metric size markings, a 1/4" drive hex adapter, a knockout pin, and a storage case. Socket sizes include 3/16", 7/32", 1/4", 9/32", 5/16", 11/32", 3/8", 4.5mm, 5mm, 5.5mm, 6mm, 6.5mm, 7mm, 7.5mm, 8mm, 8.5mm, 9mm, 9.5mm, and 10mm. Made of premium hardened steel, the impact grade turbo sockets feature a helical teeth design that offers a secure grip and reduces slippage when removing damaged, tapered, rounded, or frozen fasteners. The set is ideal for automotive repair involving rusted and damaged fasteners, and small engine care.

For more information, click on "PD e-inquiry" on VehicleServicePros.com



G Works in tight spots

The **Lisle Corporation Electrical Disconnect Pliers**, No. 37960, is designed to easily remove locking push tab style electrical connectors found on mass air flow sensors, fuel injectors, ignition coils, and other applications. Simply use the hook on the end of the pliers to pull the tab out to unlock and then use the point to engage the tab. Squeeze the tabs together and lift to separate the connector from the sensor without damage. The pliers allow technicians to use the tool with one hand and to work on sensors in tight spots. The tool measures 8" in length and has dual durometer grips for comfort.

For more information, click on "PD e-inquiry" on VehicleServicePros.com

H Compatible with all DeWalt 20V Max tools

The **DeWalt POWERSTACK 20V Max 5Ah Battery** is lightweight, weighing in at 1.5 lbs, to provide tool maneuverability, high precision, and reduced fatigue when used in tight workspaces. It features an impact-resistant, rubber over molded base and includes a charge indicator with three LEDs. The POWERSTACK 20V Max 5Ah Battery offers 50 percent more power than DeWalt's previous 20V Max 5Ah Battery (DCB205). The battery is compatible to work with all DeWalt 20V Max tools and chargers.

For more information, click on "PD e-inquiry" on VehicleServicePros.com

I Available in two sizes

The **Portasol-Patch** from **Portasol** is an instant, multi-purpose repair patch available in two sizes: 3" by 6" and 6" by 9". It's easy to use, is self-adhesive, and is a long-lasting solution for a wide variety of applications, including automotive repairs from bumpers, radiators, exhaust leaks, fuel tanks and lines, headlights, and more. The Portasol-Patch is a durable fiberglass-reinforced polyester that can be sanded, grinded, drilled, tapped, and painted. It's waterproof, weather-proof, rot, rust, fire and impact-proof, while also being chemical and temperature resistant from -40 to 392 degrees F. The non-toxic patch will work on almost any hard surface and will not shrink or expand during application, or when cured.

For more information, click on "PD e-inquiry" on VehicleServicePros.com



J Straightens tubing up to 3/8"

The **AGS EZ Fit Adjustable Tubing Straightener** is designed to straighten tubing including NiCopp, copper, aluminum, stainless steel, and plastics up to 3/8" in diameter. It can be used by hand or in a vise. It also has a wheel, allowing users to run it along a workbench or floor surface. Constructed of a corrosion-resistant plated steel body and eight stainless-steel rollers with nylon bearings to ensure smooth tube rolling. The adjustable open side entrance allows users to straighten lines that are already flared. Simply open the jaws, insert the line, use the hand lever to adjust to the tube diameter, and squeeze the handle.

For more information, click on "PD e-inquiry" on VehicleServicePros.com



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

INGERSOLL RAND G5351 Cordless Grinder

This grinder combines the power of a pneumatic tool at 1hp output with up to 8,000 rpm and the mobility of a cord-free tool.



APPLICATION

The G5351 IQV20 Cordless 4.5/5.0" Angle Grinder from Ingersoll Rand offers countless possibilities for unrestrained metalworking across numerous applications, including vehicle service and industrial worksites.

SELLING POINTS

- The Ingersoll Rand G5351 weighs 30 percent less than its leading competitor to lighten the workload for industrial and automotive repair technicians.
- By providing maximum versatility, impressive power, and cordless freedom in a compact form, hardworking technicians can get more work done with less fatigue.
- This impressive new tool is compatible with all IQV20 batteries and is available in a convenient kit that includes one grinder, two guards, one side handle, two batteries, and one battery charger.

FEATURES AND BENEFITS

- The G5351 features a brushless motor that delivers 1hp output with up to 8,000 rpm in a cord-free tool.
- **Its lightweight, slim handle with over-molded grip makes the G5351 comfortable for extended use.**
- Anti-kickback and e-brake features provide safe, reliable performance.
- Tool-free guard and spindle-lock button allow quick and easy accessory changes to reduce downtime.
- Included side handle attaches on the left or right side for added convenience and flexibility.
- Compatible with all IQV 20V Batteries.

ORIGIN

Metalworking with an angle grinder, even for a limited time, is known to quickly produce fatigue in the hands and joints from the vibrations. By significantly reducing the weight and improving the ergonomic design, the Ingersoll Rand G5351 empowers technicians to comfortably work longer and in tighter spaces.

MANUFACTURING SPECS

The G5351 measures 13.25" in length and weighs just over 5 lbs. It produces 1hp and 8,000 rpm.

STORAGE AND DISPLAY

The G5351 is packaged in a box, with one unit per box.

\$ SUGGESTED RETAIL PRICE
\$199.00

i FOR MORE INFORMATION

For more information, visit IRTools.com/G5351 or contact your local sales representative.



To watch a video demonstration of this product, visit:
VehicleServicePros.com/53067747

VEHICLESERVICEPROS
LTD.



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

COOL BOSS

Coolee CL-240 Portable Air Cooler

A three-in-one portable air cooler designed to keep individuals cool and comfortable.

APPLICATION

Coolee CL-240 by Cool Boss is ideal for mobile service operations where techs work outside, as well as outdoor bays, shops without air conditioning, and home garages/workshops.

ORIGIN

Cool Boss' product development team came up with the idea during a very hot round of golf two years ago, noting, "Wouldn't it be great if we could bring a Cool Boss evaporative cooler with us on the golf cart?" The result is a piece of equipment that can create a personal oasis virtually anywhere, delivering a refreshing breeze, cold drinks, and cool tunes on the golf course, in the shop, at the track, and beyond.

SELLING POINTS

- Combines a portable air cooler, ice chest, and Bluetooth player in one compact, rechargeable unit.
- Uses a heat exchanger and a water-circulating pump to deliver cold, dry air on a personal scale.
- Unique, patent-pending product.
- Keeps techs comfortable with refreshments and entertainment close at hand.

STORAGE AND DISPLAY

Coolee ships in colorful and engaging retail packaging with full-color illustrations of features and benefits to help sell itself. The box is easy to stack, or the unit can be put on display by the snacks and be stocked with cold drinks.



FEATURES AND BENEFITS

- Allows techs to control their personal environments with cooling, music, and refreshments wherever they need it.
- Improves productivity by improving personal comfort.
- **Can blast out air up to 35 degrees cooler than the outside temperature.**
- Has dual high-flow cooling fans to provide concentrated ice-chilled air wherever it's needed.
- Keeps up to a dozen 12 oz. cans, lunch, or snacks chilled in the 14 qt. ice chest.
- Streams music, podcasts, and more through weather-resistant 4.5" Bluetooth speakers.

MANUFACTURING SPECS

- Nominal Voltage: 12V DC
- Dry weight with battery pack: 13.5 lbs
- Rechargeable 10,000mAh Li-ion battery
- Battery charge lasts up to 4.5 hours on low, 3 hours on medium, and 2.5 hours on high
- Exterior dimensions: 15" height by 13" width by 12" depth

\$ SUGGESTED RETAIL PRICE
\$340

i FOR MORE INFORMATION
Visit coolboss.com/coolee or call 855-2BE-COOL.



To watch a video demonstration of this product, visit: VehicleServicePros.com/53066382

VEHICLESERVICEPROS_{INC.}

ASSENMACHER SPECIALTY TOOLS

10mm Bypass Wrench

Designed to access hard-to-reach nuts and bolts by going around obstructions.



APPLICATION

The Assenmacher Specialty Tools 10mm Bypass Wrench, No. BY10, is designed to assist in removing and replacing nuts and bolts on various CASE Construction Equipment and Chelsea-Allison PTOs as well as any other applications requiring a 10mm.

ORIGIN

Originally, the company came out with 13mm and 14mm Bypass Wrenches. In response to receiving requests from technicians for a 10mm version, the company soon launched the BY10.

STORAGE AND DISPLAY

The BY10 wrenches are sealed in individual bags. The company suggests displaying the tools next to other wrenches on the truck.

SELLING POINTS

- Enables access to hard-to-reach places.
- Provides leverage to 3/8" tools.

FEATURES AND BENEFITS

- **Used to access nuts and bolts by going around obstructions that are in the way and would normally need to be removed or cannot be removed otherwise.**
- Has a 3/8" drive.
- Also available in 13mm (No. BY13) and 14mm (No. BY14).

MANUFACTURING SPECS

The wrenches are made from forged steel in their production facility in Taiwan.

\$ SUGGESTED RETAIL PRICE

BY10 - \$35.34

BY13 and BY14 - \$39.02

i FOR MORE INFORMATION

Contact sales@asttool.com.



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

ANSED DIAGNOSTIC SOLUTIONS

HU31035 Automotive Sensor Simulator

A handheld tool designed to work independently from scan tool platforms on ICE and EV vehicles.

APPLICATION

The ANSED HU31035 Automotive Sensor Simulator is designed to help technicians with diagnostic testing by simulating sensors used in ICE and EV vehicles.

SELLING POINTS

- Demand: Technicians are often looking for affordable ways to verify sensor operation and connectivity to a vehicle's computer systems.
- Application: The simulator is a handheld tool that is designed to work independently from scan tool platforms on current ICE and EV vehicles.
- Display: The case is compact in order to be displayed easily on the truck.

FEATURES AND BENEFITS

- Simulates signals and actuates sensors.
- Can determine if the sensor, wiring, or computer signals are faulty.
- **Verifies wiring connectivity between the sensor and computer systems.**
- Has ohms, voltage, and square waveform settings, versatile for most applications.
- 4A power drive activates and verifies operations of 2.5 to 12V components.
- Configurable single trace scope diagnoses signals generated by the sensor or from the vehicle on-board computer systems.

MANUFACTURING SPECS

The HU31035 was designed and engineered in Europe by diagnostic engineers and technicians and produced in Taiwan using high-quality materials and manufacturing processes.



ORIGIN

The HU31035 Automotive Sensor Simulator was designed to provide an affordable diagnostic tool simplifying the process of determining if a sensor code or perceived sensor problem is actually the sensor, wiring issues, or a signal problem generated by the onboard computer system. Many diagnostic scan tools enable the technician to pull codes and verify voltage, signals are sent to sensors from the onboard computer system but fall short unable to test the actual sensor and the wiring connecting the sensor to the computer's system. The HU31035 addresses all these needs and more.

STORAGE AND DISPLAY

The HU31035 is packaged individually in a black protective hard-shell case, 11" long by 8" tall by 3" deep. The ideal display would be case open, powered by 12V, in a high-traffic area where technicians look for diagnostic tools.

\$ SUGGESTED RETAIL PRICE
\$479.00

i FOR MORE INFORMATION
Contact sales@ANSEDDiagnostics.com.



To watch a video demonstration of this product, visit: VehicleServicePros.com/53065049

VEHICLESERVICEPROS_{INC.}



Demoing battery testers can be difficult on the truck, so Downing takes the demos inside the shop to showcase all the product's features.

Photo courtesy of Danielle Downing

AMPING UP the voltage

With the surge in different vehicle batteries over the past few years, the tools and equipment used to service them have evolved. Find out what your customers need to perform battery maintenance.

By **Emily Markham**, *Editor*

As more and more technology gets packed into the modern vehicle, batteries have become increasingly important. A car battery's function isn't just to turn on the vehicle, it runs your headlights, your A/C, your GPS, the radio, and so much more — making proper care and maintenance a priority for vehicle owners. However, when a technician pops the hood to give a vehicle's battery a little TLC, there are quite a few options for what they might find.

Over the past few years, there's been a surge in different battery technologies. From start-stop batteries to electric, technicians may be seeing enhanced flooded batteries (EFBs), enhanced cyclic mat (ECM), absorbed glass mat (AGM), lithium-ion, gel cell, or others. With all these different types of batteries come variations in how to maintain them as well as potentially different tools and equipment to get that job done.

Richard and Danielle Downing are the Texas-based independent mobile tool distributor team who make-up Big Country Tools. The duo makes sure their truck is stocked with the battery

maintenance tools and equipment their customers need. With a variety of stops ranging from heavy duty to independent to dealerships, they try to have plenty of product options available.

Richard is the face of the business, driving the truck and meeting up with the customers, and Danielle handles the behind the scenes work of managing the accounts payable, ordering, receiving orders, checking orders in, and stocking the truck. Richard notes that she is the "backbone" of the business.

"If it wasn't for her," he says, "I wouldn't be where I am today."

And where he's at now is almost seven years working as a distributor

(with Danielle by his side every step of the way). Previously, Downing worked as a heavy duty technician for about 16 years. With this industry knowledge, it makes it easy to ensure he's putting the right tools into his customers' hands.

WHAT A SHOP NEEDS FOR BATTERY MAINTENANCE

As with any vehicle system, there's an assortment of tools and equipment that a technician needs to do their work.

On the truck, Downing keeps the SOLAR line from Clore, equipment from Midtronics, and occasionally some products from TOPDON to fill his customers' battery maintenance needs.

More specifically, however, shops will need quality testing equipment — ideally a digital tester and a carbon pile tester — as well as a jump starter and a battery charger that includes a power supply mode.

"The first thing [a technician has] to know is what batteries need service,"



Downing uses his prior experience as a heavy duty technician to help him take care of his customers.
Photo courtesy of Danielle Downing



Richard and Danielle recently acquired a second tool truck and have another driver starting to work with them.
Photo courtesy of Danielle Downing

says Jim O'Hara, vice president of marketing for Clore Automotive. "So, I would start with quality testing equipment."

O'Hara recommends that shops have both a digital battery tester (with a printer) and a carbon pile tester, as there are some batteries that can fool one of the testers, but it's very rare to have a battery that can fool both. Another reason to suggest your customers grab both

testers is the potential of a remotely located battery.

"In order to get an accurate reading on [a remotely located] battery, [technicians] need to apply an accurate load," explains Kim Cottle, president and CEO of Associated Equipment. "And typically, carbon pile load testers are the best method for doing remotely mounted batteries."

Moving on to battery chargers. Due to the power demands on a vehicle's battery, it's best to think of charging the battery proactively.

"We like to say, 'The hood goes up, the charger goes on,'" O'Hara says.

Whatever work a technician may be doing on a vehicle, whether it's ADAS calibration, reprogramming, or something else, they're going to want to keep the vehicle's battery charged and at a consistent voltage, which is where having a battery charger with a power supply mode comes in.

If the technician isn't keeping the battery at an appropriate voltage, they may not be able to complete the job they're working on, O'Hara notes. And if they do continue, this could cause damage to the battery either causing it to need to be replaced, which is expensive, or significantly shortening the life of the battery. The power supply mode helps prevent this by keeping the battery at a consistent voltage level.

Part of keeping the battery at its required voltage level also comes from using the correct charger, which is why it's so important for the technician to know what type of battery they are charging. Cottle notes, that way they can pair the necessary charger and battery together and prevent unwanted damage.

PURCHASING CONSIDERATIONS

Before making a purchase it's likely your customers will have some questions. Some customers will have a specific idea of what they're looking for while others may not even know where to start. Regardless of which type of customer you're dealing with, it's best to try to prepare for whatever questions you may receive.

Versatility

With all the different types of batteries (lead acid, lithium, etc.), it can be difficult to have battery maintenance tools that do it all, so when you're stocking

K-TOOL WELDING PROTECTION



KT170046

Auto Darkening Welding Goggles Kit

- + Adjustable shade 5-13 for grinding to TIG welding
- + Time and sensitivity fully adjustable
- + Hood includes bump cap for safety
- + Lightweight and ideal for working in confined spaces
- + Kit contains: fire retardant hood and bump cap, auto darkening welding goggles, protective shield and carrying bag.



KT170044

Standard Entry Level Welding Helmet

- + Shade: DIN 9 ~ 13
- + Arc Sensor: 2
- + Shade Control: Internal, Variable Shade
- + Power On/Off: Fully Automatic
- + Sensitivity Control: Adjustable by dial knob



KTIXDTM25-USA

Red, White, Blue Patriotic Welding Helmet

- + Shade: Variable 9 ~ 13
- + Arc Sensor: 2
- + Shade Control: External / Internal
- + Power On/Off: Fully Automatic
- + Sensitivity Control: Low~High, by infinitely dial knob



KTIXDTM25-DP

Desert Patriotic Welding Helmet

- + Shade: Variable 9 ~ 13
- + Arc Sensor: 2
- + Shade Control: External / Internal
- + Power On/Off: Fully Automatic
- + Sensitivity Control: Low~High, by infinitely dial knob



KTIXDTM7

Premium Red Flame Welding Helmet

- + Light State: Shade 3, Grind State: Shade 3, Cutting Shade: Shade no. from 5 to 8, Welding Shade: Shade no. from 9 to 13
- + Arc Sensor: 4
- + Shade Control: Internal, Variable Shade, Digital Display Control





Downing often looks to some of the senior technicians he serves to stay up-to-date on what's new in battery maintenance.

Photo courtesy of Danielle Downing

your truck, try to find versatile products to offer your customers.

Associated Equipment's Intella-matic Smart Battery Charger and Analyzer is designed to charge a variety of different batteries including enhanced flooded and lithium, Cottle notes. Users can also adjust the amperage and voltage within a certain range on the machine.

Additionally, CTEK's PRO25S 25A Battery Charger and Power Supply also has the ability to charge both lead acid and lithium batteries, as well as offering an option for battery support, explains Tony Zeal, training manager for CTEK.

Multi-functional products save customers money, time, and space in the shop.

Shop dynamics

Before recommending any products to your customers, make sure you have a good understanding of what their shop does. An independent shop versus a heavy duty shop may have different needs. Knowing the number

of bays and/or technicians in the shop is also important.

"If you've got five technicians," Zeal says, "and they all have a requirement for a battery charger, it's no good purchasing one battery charger."

Some shops may be able to get by with just one battery charger, but Zeal notes, this could mean only getting through one job a day per technician as they wait their turn to use the battery charger. An insufficient amount of equipment could also mean a job is being rushed to pass along the charger and done poorly, which could result in a customer's vehicle breaking down resulting in a negative impact on the shop's reputation.

"Our personal philosophy at Clore," O'Hara says, "is that every bay should have a charger."

Quality

Though quality seems like an obvious consideration to make before purchasing a product, some of your customers may

only pay attention to the price. While buying a cheaper product may seem like a good idea at the time, Zeal notes that "If you buy cheap, you buy twice."

Though just telling your customers that the cheaper products may not be as high of quality may not convince them to purchase a better product, however, discussing ripple in battery chargers might.

"Very few people actually look into these things, but there are chargers out there with a high ripple," Zeal says, "and it's usually associated with cheaper chargers."

Ripple occurs in a battery charger when it converts from AC to DC and some of the AC signal gets through to the DC side of the system, Zeal explains. A high ripple (anything over two percent) tends to heat up the battery and can cause internal damage.

Be sure to stock quality battery maintenance equipment on your truck and be ready to offer your customers guidance if they get starstruck by a low price.

SALES TIPS

Selling battery maintenance tools and equipment isn't always easy, but if you understand your product and can show your customers what it can do, it'll help you close that deal.

1. Use your experience

As a technician turned independent distributor, Downing is able to put himself in his customers' shoes.

"I was never a salesman," Downing says, "but I can relate to people on what they are working on."

He often uses a story from when he was still working as a tech, to help sell his SOLAR battery tester. Downing had received a call from a man whose vehicle wouldn't start. The vehicle's battery was only four or five months old, and even after trying to jumpstart it, it still did nothing. At first, Downing



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E-XTEQ

1012EVO Battery Charger and Maintainer

For more information, click on "PD e-inquiry" at VehicleServicePros.com



OEMTOOLS

6-pc Battery Service Kit

For more information, click on "PD e-inquiry" at VehicleServicePros.com



OTOFIX

BT1 Lite Battery Tester

For more information, click on "PD e-inquiry" at VehicleServicePros.com

was going to take a look at the wiring, but then decided against that and used his SOLAR battery tester instead. After testing the battery, he found it had a shorted cell, and once he replaced the vehicle's battery it worked just fine. This experience sold Downing on the SOLAR brand, and now he uses it to help convince his customers of the same thing.

2. Understand your product

Being able to have a conversation with your customers about the products you're selling is a part of making the sale, but if you don't understand the products you're selling, it's difficult to convince your customers that this is something they need.

Downing notes his technical background has certainly helped him with understanding battery maintenance and what tools his customers need, but even with that background he still has to put in work to stay up to date. He likes to attend webinars put on by companies like SOLAR, TOPDON, or anybody offering a webinar on the topic. Additionally, he'll

just ask his customers.

"Honestly, I lean a lot on some of my more senior technicians," Downing says. "I just try to touch base with them, feel them out. 'Hey, what's coming out? What's new? What do I need to be looking for?' And they're usually pretty helpful."

3. Show the product in action

Some products don't lend themselves as easily as others to being demoed, and battery maintenance tools are no exception.

O'Hara points out that something like Clore's JNC770 Jump Starter is an easier product to demo, where distributors can show things like how long the cables are, the on/off switch, the USBs, etc. Whereas with something like their PL2320 Battery Charger, it's difficult to demo anything unless you have a battery to attach it to, especially with the feature that enables it to force a battery at 0V to start charging.

This is why Downing typically takes his demos in-house.

"If I get a guy on the truck that's looking for battery testing equipment, he's usually got a vehicle sitting in the shop that needs battery testing," Downing says. "So, we'll take it off the truck from there and then we'll run a demo on the vehicle that he's working on."

4. Look for add-on sales

Safety is an important aspect of battery maintenance.

"There's obviously the safety requirements where you should always be using goggles because of the fact that you're dealing with a caustic chemical," Cottle explains. "There are also safety [measures] that you need to take into consideration in terms of understanding how you hook [the maintenance tools] up, how you charge [the batteries], and then how you unhook [the tools]."

Keeping this in mind while selling battery testers and other equipment, you may be able to sell a pair of safety glasses or gloves to help protect your customer while they get the job done. **PD**

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

Sensors for the future: Understanding ADAS sensors, part 2

Uncovering the technology behind ultrasonic sensors, radar, and other computer vision technology used in advanced driver assistance systems and autonomous vehicles.

By **Scott Brown**, *Technical Editor*



Figure 1 — Audi Night Vision Assistant on a 2019 A6
Photo courtesy of Scott Brown

In the first part of this article, we discussed some of the types of computer vision (CV) sensors used in modern cars. These included cameras, time-of-flight cameras, and stereo cameras. In this second and final part of the article, we will take a closer look at thermal imaging, ultrasonics, and radar.

Looking at the New Car Assessment Programs (NCAP) for both the U.S. and regions of Europe is a good indicator of where the market is heading regarding vehicle safety

systems. The sensors that we will likely see more of are thermal/infrared-based cameras.

The standards that drove the capabilities of today's vehicles fall short in demanding performance requirements around protecting vulnerable road users (VRUs) at night where an overwhelming majority of the vehicle to VRU injuries and deaths occur. The reason is primarily driven by the current state of the market's technological capabilities. However, regulators are moving the industry toward



Figure 2 — Spectrum enhanced detection and ranging (SEDAR)
Photo courtesy of Scott Brown

creating incentives to bring low-light VRU protections to market. There is no doubt in my mind that we will continue to see a rise in onboard perception systems with tremendous capabilities. And because of this, we as service professionals need to maintain high-level situational awareness of these technologies and how service operations should be properly performed on tomorrow's vehicles.

Both the U.S. and European NCAPs vary in requirements. In both markets, those requirements are about to change. For example, in the U.S., within the 2021 Infrastructure Investments and Jobs Act bill, NHTSA has established a 10-year roadmap with a deeper focus on enhanced Pedestrian Automated Emergency Braking (PAEB) technologies, especially during low-light conditions. In Europe, their NCAP does not currently test active safety systems with an environmental lighting condition below 5 lux. Twilight is >3 lux and this occurs when the sun is six percent below the horizon. For reference, streetlights bring the lux level to around 15.

Following the tragic death in Arizona of a VRU by an Uber-owned and operated autonomous vehicle back in 2018, Teledyne FLIR later presented at the Computer Electronics Show in Las Vegas how their infrared sensing technology is superior to lidar, radar, and camera vision in situations like this. Their demonstration and claim stated that the VRU was able to be detected up to three times earlier than the current suite of technology deployed on the vehicle by adding infrared thermal camera capabilities. When I saw this presentation, I was amazed by the data and performance of their system, and I certainly expected to see a significant shift in the adoption of such technologies into the market.



Figure 3 — Ultrasonic sensors - Ford
Photo courtesy of Scott Brown

Although this hasn't happened yet by a great margin, I expect to see wide use of these systems in the future.

PASSIVE VS. ACTIVE INFRARED

Passive infrared cameras use the heat (thermal radiation) emanating from a source like humans and animals. An active system casts an infrared signal from the imaging device onto the scene so its sensors can gather low-light information.

Vehicle history: Night vision

In 2000, General Motors offered Night Vision as an option on the 2000 Cadillac DeVille by implementing the use of a passive infrared sensor mounted behind the grill which used the heads-up display (HUD) cast onto the windshield. In 2004, GM eliminated this offering. In 2002, Toyota offered Night View on the Land Cruiser and the Lexus LX470 utilizing an active system that displayed the environment in front

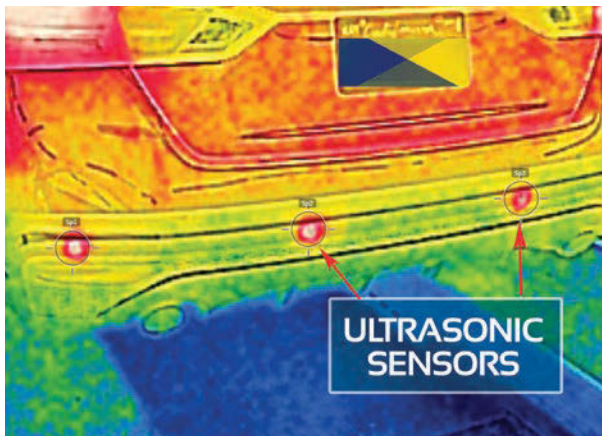


Figure 4 — Ultrasonic sensors – FLIR E5 Infrared Camera
Photo courtesy of Scott Brown



Figure 5 — Ultrasonic sensor testing with AESwave uScope
Photo courtesy of Scott Brown

of the vehicle to the driver via the HUD on the windshield. Audi introduced the Night Vision Assistant (passive) in 2010 on the A8 which displays images in the central instrument cluster between the main gauges. Today, Audi offers this on several vehicles (Figure 1). Audi claims that their Night Vision can look ahead up to about 1,000' and detect VRUs at just over 300'. By my calculations, a vehicle traveling at 85 mph would have about a 3-second lead time in total darkness to take corrective action on a potential threat.

SEDAR – Spectrum enhanced detection and ranging

The company Trieeye has introduced a new mix of potential low-light vision solutions through the implementation of a CMOS-based high-definition short-range infrared (SWIR) sensor that allows for 3-D mapping of the road ahead in all visibility conditions (Figure 2). According to their website trieeye.tech/sedar, they claim at mass production, one can realize a 10 times cost reduction compared to existing lidar solutions available today.

ULTRASONIC SENSORS

Ultrasonic sensors (Figure 3) operate based on the principles of sound waves and their interactions with objects in the environment within their vicinity. It uses the time-of-flight method to measure the distance between the sensor and the target object(s).

Primarily, the ultrasonic sensor consists of a piezoelectric transducer. This device can convert electrical energy into mechanical vibrations, therefore, creating sound waves. When an electric signal is applied to the piezo transducer, it vibrates at a high frequency, typically above 20,000 hertz which happens to be classified as the “ultrasonic” range.

The emitted sound waves travel through the air until they encounter an object in their path. When the sound waves hit the object's surface, they reflect or echo. Some of the sound waves bounce back towards the sensor where it is captured.

Signal reception is captured by the receiver, which is another piezoelectric transducer. This receiver is designed to detect the echoes of the sound waves that have bounced back from the object. Then, the receiver transducer converts the received sound waves into electrical signals. The sensor's electronic circuits use time-of-flight to calculate distance. This time interval is often noticeably short, measured in microseconds.

Ultrasonic sensor diagnostics

Since multiple sensors are installed on the vehicle and their location needs to be known by the domain controller, proper sensor setup needs to be performed whenever replacement or service is required. In most cases, a scan tool and service information can guide you toward an accurate diagnosis. However, there may be other ways to assess some of the operational characteristics. Since the sensors need power to operate, they will indeed generate heat. One test I have performed in the past is by using a thermal camera (Figure 4).

Say that you had a DTC related to a particular sensor and you wanted to investigate further. One way would be to activate the sensors and look with a thermal camera. If the faulty sensor demonstrated a similar heat signature as the others that were operating normally, then one could assume that the sensor was receiving power and ground and therefore could proceed to focus on the signal circuit.

Another test that can be performed is to simply use a listening device such as a stethoscope with only a hose attached to listen to the chirps. Another test could be to use



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a lab scope and an inexpensive microphone probe to have a look as shown in **Figure 5** where I'm using the AESwave uScope and a parking sensor detector probe (microphone) to see the signal.

RADAR SENSORS

An automotive forward-facing radar sensor is designed to detect and track objects in front of a vehicle, providing crucial information for various advanced driver assistance systems (ADAS) and autonomous driving features.

Essentially, the radar sensor emits a high-frequency radio wave, typically in the microwave range which resides between the frequencies of 300 MHz to 300 GHz. Most forward-facing radar sensors operate between 77 and 81 GHz which is 77 to 81 billion times a second. The primary use for this range is because of the environment this sensor is operating in. Radar sensors typically have fewer transmitting antennas than receivers (**Figure 6**).

Antennas are arranged in an array with known distances from each other. This is part of the mathematical equations scientists have been able to exploit to gather information about the environment around the vehicle. Simply put, the flat board radar antennas are mounted to emit radiation chirps in a cone-like fashion and the receiving antennas pick up the reflected chirps. The system calculates the distance via time-of-flight the same way cameras do. As far as the azimuth location, the sensor performs quite a bit of work to accomplish this.

Beam steering

The continuous wave chirp transmitted from the antenna can be transmitted in unison with two or more antennas that are either closer together to each other or not. Additionally, the other antennas transmit the same wavelength out of phase which essentially allows for what is commonly called beam steering.

Check out this link (youtu.be/9WxWunOE-PM) to a MATLAB video covering this topic in more detail if you'd like to learn more (**Figure 7**).

Radar wave interaction: When the emitted radar wave encounters an object, such as another vehicle or an obstacle, a portion of the wave is reflected toward the radar sensor. Radar sensors can track multiple objects simultaneously.

Data fusion: In many automotive systems, the radar sensor's information is combined with data from other sensors, such as cameras or lidar, to provide a more comprehensive understanding of the environment. In the past, I have heard that the forward-facing camera is only used for watching the lane markings, and the radar was used to track objects, which isn't really what's happening. The system's engineer can leverage all inputs to gather intelligence about the environment around the vehicle to support vehicle corrective actions.

By continuously monitoring the environment around the vehicle, an automotive forward-facing radar sensor enhances the vehicle's perception capabilities and contributes to safer and more efficient driving experiences.

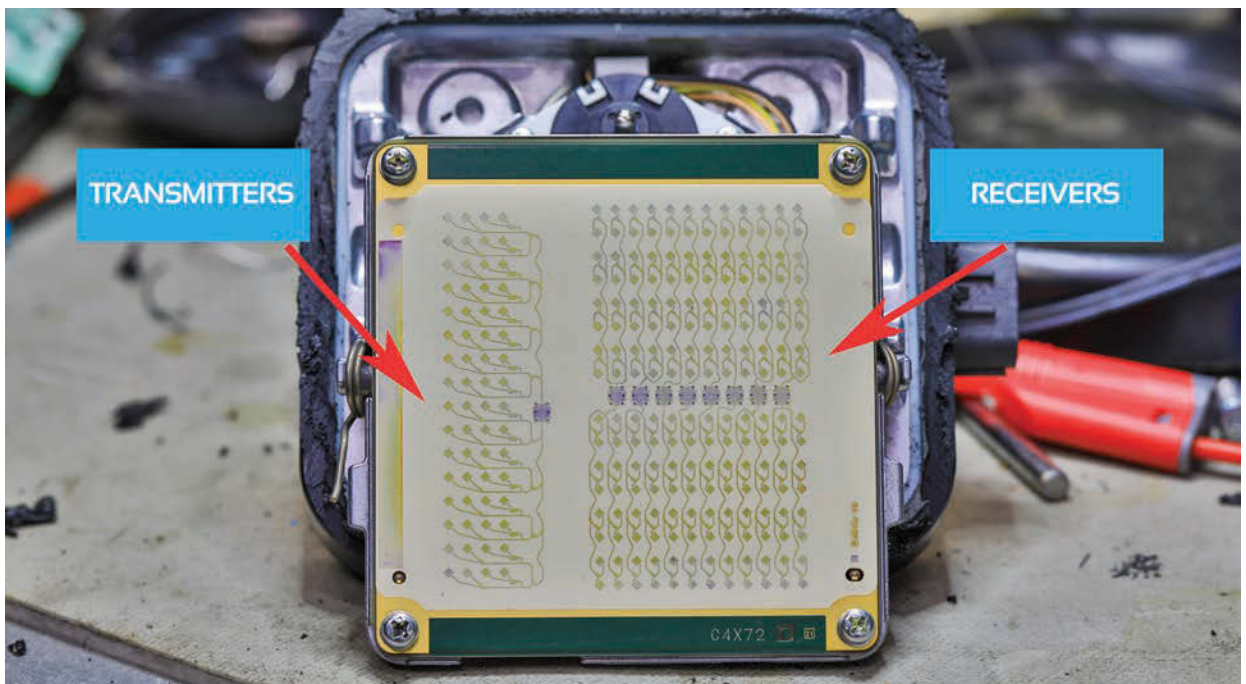


Figure 6 — Radar sensor array
Photo courtesy of Scott Brown

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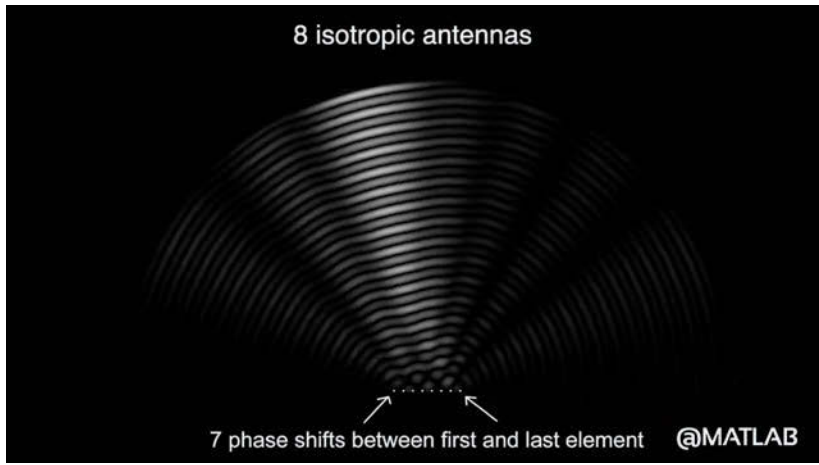


Figure 7 — MATLAB phase shift signal cancellation
Photo courtesy of Scott Brown

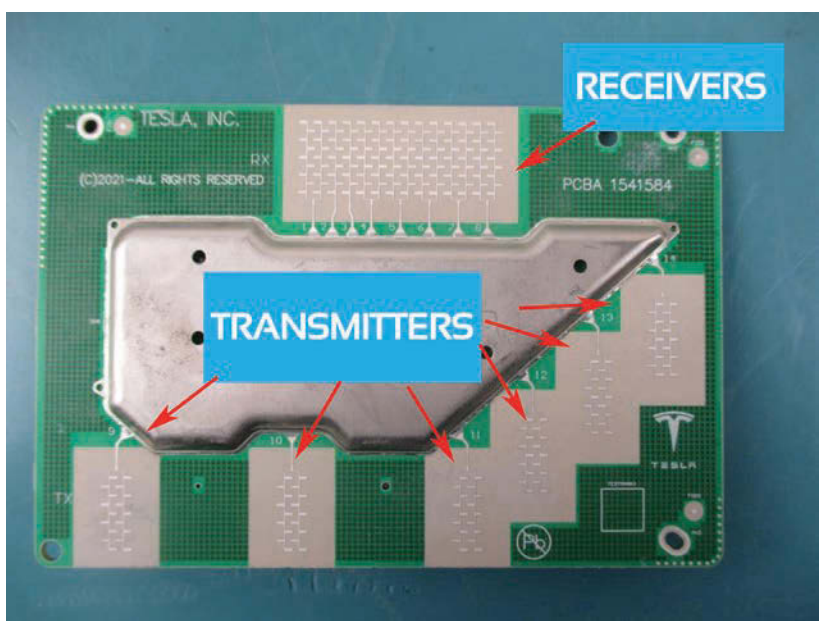


Figure 8 — Tesla HD radar
Photo courtesy of FCC FOIA

In 2021, Tesla announced that they were no longer installing radar sensors on their vehicles. Here's a quote from their website:

"Safety is at the core of our design and engineering decisions. In 2021, we began our transition to Tesla Vision by removing radar from Model 3 and Model Y, followed by Model S and Model X in 2022. Today, in most regions around the globe, these vehicles now rely on Tesla Vision, our camera-based autopilot system."

However, as of the first of the year in 2023, Tesla began installing their new Hardware 4 packages on the Model S and X vehicles which includes a new high-definition radar sensor. I received wind of this in 2022 and when the FCC ID became available (2AEIM-1541584), I shot on over to the FCC to have a look at the internals and this is what I found (Figure 8).

From what I understand, the Tesla vehicles built with radar sensors prior to the move to Tesla Vision no longer

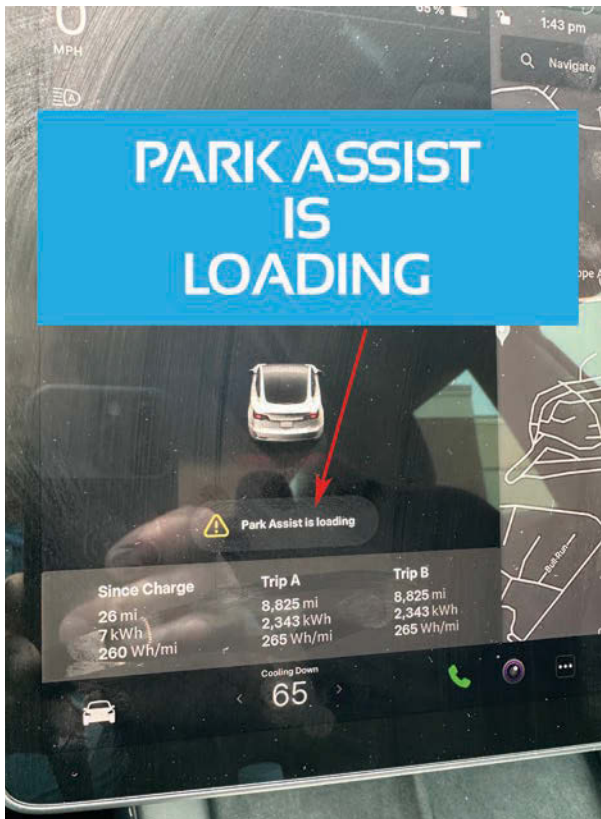


Figure 9 — Parking assistance loading - Tesla
Photo courtesy of Scott Brown

use those sensors as part of their perception systems. Looking at the vehicle configuration options, it appears that if you had one of these vehicles needing a new sensor due to sensor failure or collision, I would assume that the sensor could be decommissioned from the vehicle using Toolbox and the vehicle configuration editor. In our shop, we service several Tesla vehicles, and I have seen Model 3's that are not equipped with a radar sensor; however, the wiring harness is in place. Additionally, Tesla has also removed the ultrasonic sensors from their vehicles. I recently rented a Model 3 with this setup and noticed that the parking assistance wasn't as robust as my vehicle, which is equipped with 12 ultrasonic sensors. During one instance, I was prompted to wait for the parking system to activate (Figure 9).

Radar diagnostics

Radar sensors are delicate devices, and their mounting locations subject them to harsh environments. Typically, if the radar sensor has been in a situation or an event that would equate to dropping the component, it should be replaced. Most radar sensors I have worked with say in bold letters, "SCRAP IF DROPPED." A capable scan tool, DVOM, lab scope, and accurate service information should

be able to help you conquer any diagnostic challenges. And here's a tip that helped me with a recent encounter on a late-model Toyota.

If you're looking at a Toyota with a radar sensor on a 2018 - 2023 Tacoma and have a DTC U0235 stating that the sensor will not communicate, it may have been induced by previous interactions with a scan tool. Toyota's service information displays a "HINT" in green stating the following:

Do not exit Test Mode (Signal Check) within 5 seconds of entering Test Mode (Signal Check). If Test Mode (Signal Check) is exited within 5 seconds of entering Test Mode (Signal Check), DTC U0235 may be stored. If DTC U0235 is output after exiting Test Mode (Signal Check), enter Test Mode (Signal Check) again, wait at least 5 seconds, then recheck for DTCs.

Why this happens has to do with the system taking inventory of the ADAS-related systems when entering test mode. If you exit before the query finishes, you will end up hanging the system in a mode causing this communication problem. I've looked up a 2021 Toyota Highlander and it doesn't appear that this issue is a problem on that vehicle.

Calibration

When you're faced with sensor removal and/or replacement, you may need special calibration tools and equipment to properly place the vehicle back into service. Always check the latest service information for guidance.

CONCLUSION

In the second part of this article, we discussed thermal vision cameras, ultrasonic sensors, and radar sensors used to support ADAS and future SAE J3016 Level 5 vehicles, as well as explaining how these sensors work and their specific use cases. We also discussed the future of ADAS sensors and how they will play a crucial role in the development of fully autonomous vehicles. Overall, this two-part article provides an overview of the several types of ADAS sensors currently in use and their importance in the development of advanced driver assistance systems and a small glimpse into what the future is likely to bring us. ❌



SCOTT BROWN is an ASE Master Certified L1 Technician and has over 37 years of professional service industry experience. He is an independent shop owner in Southern California and is engaged at various levels within the industry. He has a deep understanding of the challenges technicians experience at the service level and is continuously striving to move the industry forward through education and networking. Brown founded Diagnostic Network (diag.net) after 22 years of service at iATN, where he retired as company president in 2018.

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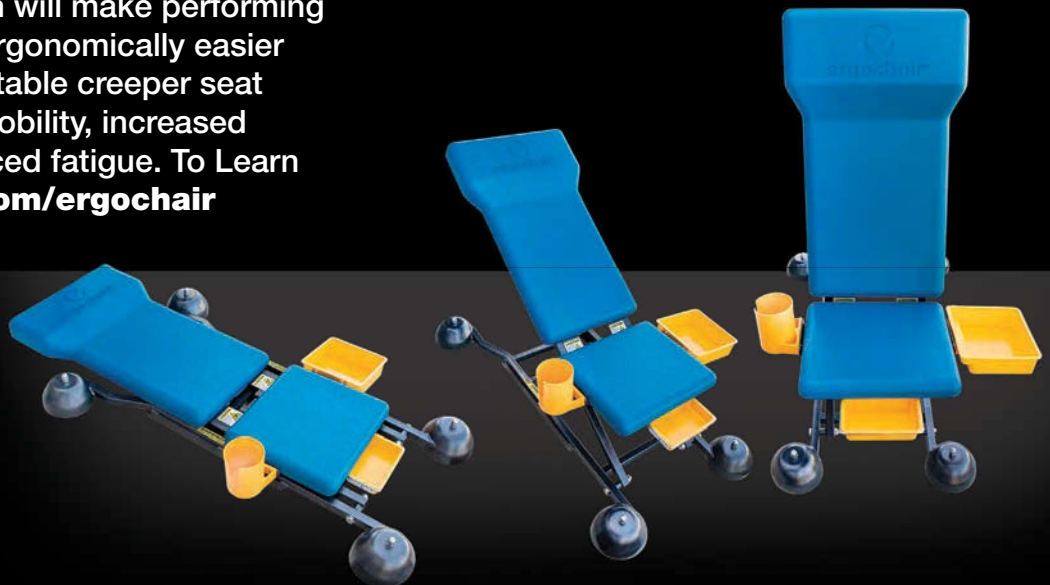
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One truck, two routes

This independent tool dealer keeps busy by running two routes, switching off every other week.

By **Kayla Nadler**, Associate Editor



When Chris Lamberson got tired of low hours and working mostly on warranty work as a technician at a dealership, he spoke to a friend who was a mobile tool dealer and decided to make a career change.

Now as a mobile tool dealer himself, Lamberson enjoys what each day brings.

“I like that every day is different,” he says. “You never know if you’re going to meet a new customer or what you’re going to sell that day. One day you could sell a toolbox and \$3,000 in tools and then the next it could be impact guns.”

Lamberson has been selling tools for nine years, in the last five years he has not only transitioned to becoming independent, but also taking on two routes.

“I took over a route where somebody was going out of business,” he says. “I started from scratch and built it up to what it is now.”

His two routes consist of Pasco County and Hernando County in Florida. He runs one route one week and then the other the next week, switching back and forth.

“I stay pretty busy,” he notes. “I got about 460 customers on the books. It’s a full-time job that’s for sure.”

STAYING ORGANIZED

Lamberson bought his current truck, a 2018 22’ Freightliner MT45, last year. Previously, he had an 18’ Suzuki. The only change he made was to get it wrapped with GEARWRENCH from front to back.

All tools are organized mainly by type. Wrenches with wrenches, pliers with pliers, and so on. Lamberson also likes

to display as many of the tools out of the box as possible to let customers see and touch everything.

For all new items, Lamberson has a special shelf up front near his desk to prominently display them as well as hot selling items and a few snack items to catch customers’ eyes when checking out.

As far as rotation goes, the tool dealer likes to rearrange his stock every three to four months. If something is not selling, he’ll discount it and move it. Although he notes most of what he sells are “fast movers.”

KEEPING IT COOL

To help beat the Florida heat, at the end of each shift Lamberson parks his truck in a 30’ by 60’ air-conditioned facility, along with all his inventory.

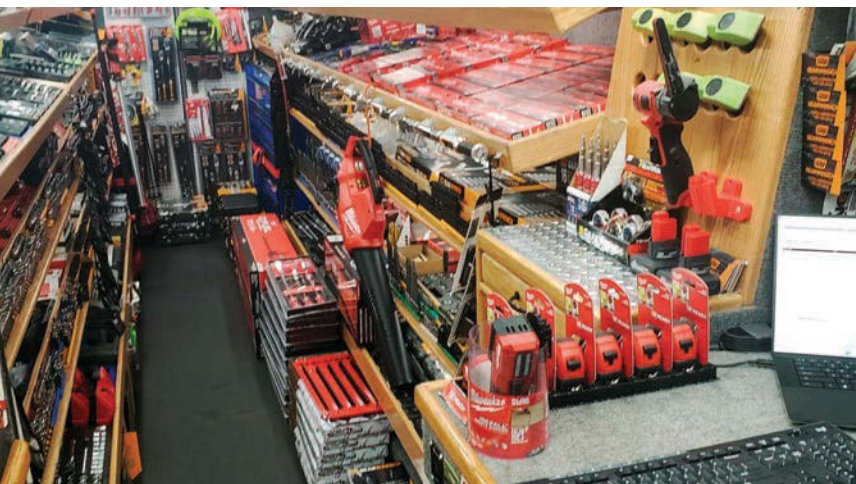
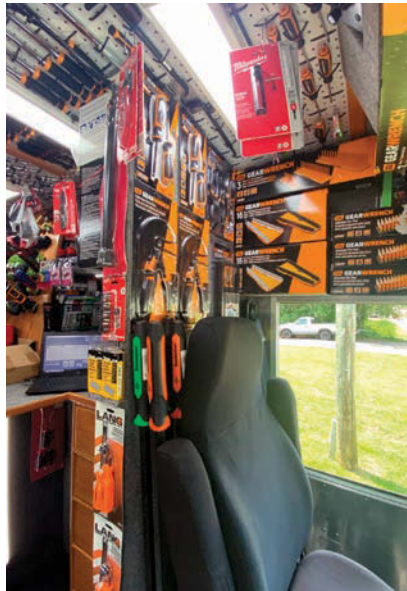
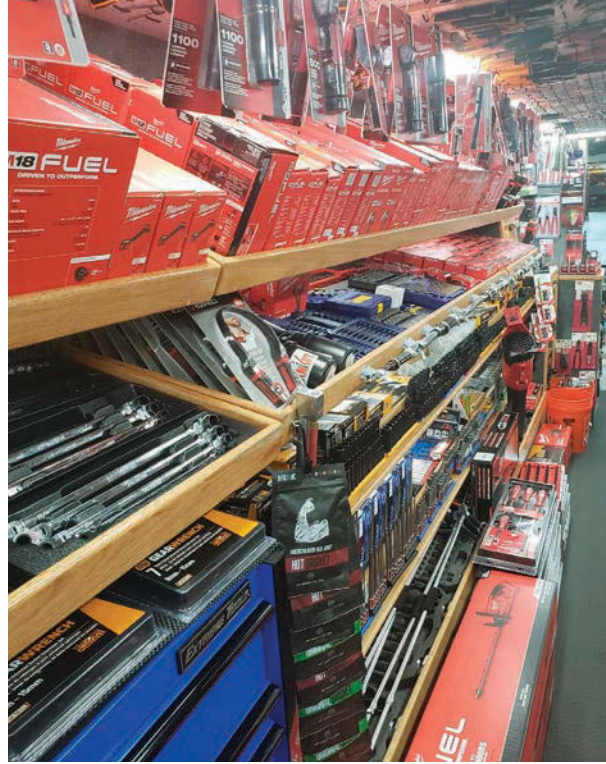
“Every night it goes in there,” he says. “It’s safer, cooler, and all my inventory is in there with my truck so I can stock the truck nightly.”

When looking into the future, Lamberson hopes to grow his business even more by bringing on another driver.

But for now, Lamberson claims “two routes are enough.” **PD**



Chris Lamberson
Pasco & Hernando Counties, FL



Top - Independent tool dealer Lamberson utilizes every space possible on his truck, including up front by the driver's seat and the ceiling. **Middle** - The tool dealer likes to rearrange his stock every three to four months. To beat the Florida heat, he parks his truck in an air-conditioned facility each night, along with all his other inventory. This helps make restocking a breeze. **Bottom Left** - The shelf up front by his desk is dedicated to new items as well as hot selling items and snacks to catch customers' eyes when checking out. **Bottom Right** - Lamberson purchased his current truck just last year, upgrading from 18' to 22'.



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‘The Times They Are A-Changin’

Regardless of what AI can help create presentation-wise, it doesn't matter if you're not going out and putting in the effort to make your sales.

By Alan Sipe, Contributing Editor

A few weeks ago, my friend Rick sent me the following email which shocked the heck out of me.

Hi Alan,

I started using the new Microsoft Edge browser which has the ChatGPT AI built into it. It has a “compose” section where you put in what you are interested in and have it write a paragraph or two on the topic. So, I entered “teach people how to sell tools” and here is the output after about 10 seconds:

Do you want to learn how to sell tools like a pro? Do you want to boost your sales and earn more money? Do you want to impress your customers and make them loyal to your brand? If you answered yes to any of these questions, then this is the guide for you!

Selling tools is not just about showing the features and benefits of your products. It's also about understanding the needs and wants of your customers, building rapport and trust with them, and creating a memorable experience that makes them come back for more.

In this guide, you will learn how to:

- *Identify your target market and their pain points*
- *Research and select the best tools for your niche*
- *Craft a compelling sales pitch that highlights the value of your tools*
- *Demonstrate your tools in action and overcome objections*
- *Close the deal and follow up with your customers*

By following these steps, you will be able to sell tools like a pro in no time. You

will also enjoy your work more and have fun along the way. So, what are you waiting for? Grab your tools and start selling!

For those of you who read this column, this ChatGPT output sounds exactly like the point of all the columns I have written over the last 4–5 years. Let's break down this guide step-by-step and really dive into how to make that sale because, at the end of the day, you can ask AI for as much help as you want, but if you're not putting in the hard work with your customers, it won't matter.

IDENTIFY YOUR TARGET MARKET AND THEIR PAIN POINTS

Pay attention to your customers. Find out what the hard parts or time-consuming tasks of their job are and show them solutions.

For example: “I am told that reaching the fasteners way down deep in a BMW steering column is difficult. I think our 24” Torx screwdriver will help you get down in there quickly and easily.”

RESEARCH AND SELECT THE BEST TOOLS FOR YOUR NICHE

This sounds like simple logic, but just because a tool is on promotion this month is no reason to show a body-work dolly to an alignment specialist.

CRAFT A COMPELLING SALES PITCH THAT HIGHLIGHTS THE VALUE OF YOUR TOOLS

Feature, advantage, benefit selling is the way a professional salesperson ensures success.

A sales presentation that includes only the features and the advantages is only half a professional presentation and in reality, not the important half. The personal benefit to this individual is why they buy and the key to closing the deal.

An example of only feature and advantage presenting: “The protective steel in these work shoes not only protects your toes but unlike many other protective shoes on the market the steel in these shoes comes way up and protects most of your arch.”

An example of feature, advantage, and benefit presenting: “This means that when something very heavy falls on your foot these shoes protect your arch as well as your toes, so your chance of a serious foot injury disability is reduced significantly.”

The last bit is the benefit. This is what gets the prospect turned on about your shoes.

DEMONSTRATE YOUR TOOLS IN ACTION AND OVERCOME OBJECTIONS

Give a complete demonstration showing the features, advantages, and benefits in logical order. A logical order helps you remember where you are in your demonstration when interruptions in your presentation occur. Also, if you present the most important features first you will run out of things to say pretty quickly.

Be prepared for all the likely objections which will probably come up. Build them into your presentation so you are in control.



For example: “There are grinders available with both slower and faster speeds than mine. Our world-famous engineering people researched these grinders and developed a product that will do your job and also give you excellent disk life which I’m sure is what you’re looking for, isn’t it?”

CLOSE THE DEAL AND FOLLOW UP WITH YOUR CUSTOMERS

I recently was asked to give a “sales skills” seminar in Dallas for an automotive aftermarket distributor with a team of seasoned professional salespeople. Although this team doesn’t drive around in a mobile store like you, they are out there every day calling on customers. Here’s what I told them about my experience as a salesperson and closing the deal:

I was fortunate that my first real sales job was selling office copiers back

when most companies didn’t own a copier. (Yea, yea, I’m old!) Every morning, five days a week, before we hit the road to make our 20 cold calls, we would give a training product demonstration to the entire local sales team. These guys were brutal. The slightest product mistake or, god forbid, a missed closing opportunity brought howls and boos from the others. Believe me, you learn to ask for the order in that environment.


Closing the deal should be the easiest part of your selling day. If you give a great demonstration – feature, advantage, benefit – with lots of trial closing, asking for the actual order should be soft, smooth, and effective.

Now, circling back to the title of this article. It comes from the 1964 Bob Dylan hit, “The Times They Are A-Changing.”

You better believe that your selling world is changing. If my accountant friend can produce this good sales

presentation in a few seconds just think of what one of your online or local competitors can whip up with a little technical Chat GPT training.

You need to make your calls, demo greatly, sell hard, close hard, thank your customers for their business every day, and then do it again tomorrow!

Now go sell something. 



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

Diagnostic Equipment

Aside from scan tools, having a range of additional diagnostic equipment is just as important to have on hand for technicians. Whether looking for temperature differences, inspecting difficult-to-access components, testing engine and transmission oil pressure, or detecting intermittent electrical faults, here are some recently released diagnostic tools and equipment we think are worth showing your customers.



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The **Innova Electronics SDS Tech**, No. SDS50, is designed to be an all-in-one OBD-II diagnostics plus OEM diagnostics tool for professional technicians seeking advanced powertrain diagnostics. Its drop-tested 5" touchscreen is ideal for shop environments and its technician-designed interface focuses on speed and navigation. In addition, the tablet is equipped with bidirectional active tests and special functions to access the engine, transmission, anti-lock brakes, and TPMS control modules for Ford, GM, Toyota, Fiat/Chrysler, Honda, Nissan, Hyundai/Kia. Also included are workshop tools with access to 16 of the most popular resets, relearns, routines, calibrations, and vehicle inspections, such as oil maintenance reset, battery reset, EPB reset, TPMS relearn, ABS bleeding, transmission reset, and more. ■

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The **TOPDON TC005 Thermal Imager** is a handheld thermal camera that measures an expansive temperature range from -4 degrees F to 1,022 degrees F, and offers a 12-hour run-time. It features a high-resolution of 256 by 192 pixels, allowing users to capture more detail, as well as offers seven options for pseudo-color display, a 2-megapixel visible light camera for overlapping images, and a picture-in-picture mode. It also has three different measurements to detect center, hot, and cold spots, four imaging modes to identify targets in a timely manner, and users can save and share data on a PC. ■

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The **Blue-Link 2** from **NEXIQ Technologies** is a convenient and easy-to-use mobile vehicle interface that enables users to seamlessly communicate with heavy duty vehicles for quick access to basic diagnostic information. When used in conjunction with the First-Link app, the Blue-Link 2 provides the ability to export vehicle health reports. The pocket-sized, wireless device has greater throughput than its predecessor, and is more powerful in supporting the development of iOS and Android solutions for communicating with vehicles, says the company. Additionally, the advanced mobile vehicle interface supports CAN FD protocol and has Wi-Fi connection capability. ■

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The latest **Mitchell 1 ProDemand Advanced Interactive Wiring Diagrams Update** now includes a wire-to-wire feature, saving technicians time as they navigate electrical issues on today's vehicles. Previously, technicians often had to jump from a wire in one diagram to the related content for a component in a separate diagram to get the full picture of a circuit. With the new wire-to-wire feature, ProDemand takes technicians to the specific wire in a companion diagram with the trace already highlighted. The history navigation arrows can easily take them back to where they started with the original trace highlighted. ■

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The **Smoke Pro Air** from **Redline Detection** comes with its own onboard micro air compressor, eliminating the need to connect to air lines or inert gas. By eliminating the need for shop air or inert gas tanks, technicians can quickly diagnose, locate, and repair leaks anywhere, anytime. Smoke Pro Air improves the accuracy of repairs and eliminates comebacks by verifying that difficult-to-find component leaks are repaired accurately the first time, the company says. ■

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The **PhysICAN SnS GRIP Tester** from **Sital Technology** is a portable USB board that is based on the company's patented Safe and Secure (SnS) technology for CAN bus data buses. By means of enhanced physical layer monitoring, Sital's SnS continuous fault monitoring enables detection and location of intermittent open-circuit and short-circuit faults in cables, connectors, bus terminators, and connected ECUs. The PhysICAN comes with an app, a graphical user interface (GUI) tool, for real-time CAN bus physical layer fault monitoring and cybersecurity. The app uses the PhysICAN SnS GRIP to detect and locate intermittent or continuous electrical faults and indicate its findings as notifications on a diagram of the monitored CAN bus's topology. ■

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The **MotorVac Technologies CoolSmoke Multi-Pressure Diagnostic System** is designed to assist with all types of automotive repairs, including wind/water, vacuum, exhaust, and EVAP system leaks down to 0.5 psi. The high-pressure setting allows up to 60 psi for work on diesel applications and other systems that require increased pressures for proper testing. The patented MotorVac CoolSmoke technology produces smoke without heat, making it safe and reliable. The MotorVac CoolSmoke MP delivers in quality and leak detection, with both smoke and UV dye, all in one easy-to-use leak detection diagnostic system. ■



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The **12V/24V Sensor Voltage Probe** by **Prologics** can emulate signals generated by different types of sensors in a vehicle. Simply set the output voltage to the correct value and activate it with either 3A or 150mA on a permanent output or with a switch. Whether checking the component independently or using a diagnostic scanner, this voltage probe is designed to make it easy to identify if the fault lies in the sensor or its connection. The Sensor Voltage Probe can also be used to measure resistance up to 5K Ohms. ■

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The **Oasis Scientific Vividia CX-6010M Flexible Smartphone Joystick Articulating Inspection Camera Borescope** features a 6mm diameter and 1m long flexible probe, which is covered with a metal-mesh tube for durability and is waterproof IP67. The CX-6010M has a 4.5" LCD monitor, bright LEDs, and a joystick pivoting 6mm (0.236") probe camera, which can be used to look into dark places as a diagnostic inspection camera. The camera head can be steered with the joystick 360 degrees in all directions and all angles. The monitor has a microSD card installed for pictures and videos. Additionally, the Vividia CX-6010M borescope can lock and unlock the articulation angle with a simple trigger and is rechargeable via included USB-C cable. ■



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11 strategies to help generate positive cash flow

To help you generate a positive cash flow, we asked business professionals and leaders for their best insights. From bootstrapping the business to raising your rates, there are several strategies to generate a positive cash flow.

By **Brett Farmiloe**, *Contributing Editor*



Creating long-term relationships with your customers can benefit your business.
Photo courtesy of Chris Nelson

What is one cash flow strategy to help generate a positive cash flow in a business?

To help you generate a positive cash flow, we asked business professionals and leaders for their best insights. From bootstrapping the business to raising your rates, there are several strategies to generate a positive cash flow.

1. BOOTSTRAP THE BUSINESS

The easiest way to be cash flow positive

is to bootstrap the business. That way, if you don't have enough cash, you'll go out of business. The fear of going out of business is a good motivator to focus on what will get a business to be cash flow positive, such as increasing revenue or reducing expenses. Cut the safety net of raising more funds or taking out loans, and a small business will have no other choice than to make money.

—**BRETT FARMILOE**,
Terkel

2. TALK WITH VENDORS TO NEGOTIATE TERMS

Talk with your vendors and see if you can negotiate more advantageous terms with them. For instance, you can ink a longer-term contract with them in exchange for you paying lower prices. Reducing your costs in this area can help generate a positive cash flow. Stabilizing and increasing the longevity of your business arrangements can also help you stay focused and increase

positive cash flow over time.

—CAREY WILBUR,
Charter Capital

3. SAVE ON PRODUCTION COST WITH TECHNOLOGY

With technology advancing at such a rapid pace, we're always on the lookout for ways to reduce costs while still providing quality products to our customers. Using technology is one very effective way to generate a positive cash flow. Depending on your industry, technology can help you save on production costs or even automate certain aspects of your customer service. Embrace the latest technology, use it to reduce costs and you'll see a more positive cash flow.

—HENRY BABICHENKO,
European Denture Center

4. DELAY EXPENSES

One thing you can depend on is that not all customers are dependable. Some clients make promises to pay on time, and then simply can't. When you face such situations, it's tempting to conduct business as usual. However, if your income is delayed, it only makes sense to also delay any expenses you can. By doing so, you can keep tabs on your cash flow and ensure that everything balances out.

—ALLAN J. SWITALSKI,
AVANA Capital

5. START A PARTNER REFERRAL PROGRAM

Consider starting a partner referral program to drive traffic and increase conversions. If you leverage your relationships with other businesses,

you can mutually recommend your services or products to each other's customers, growing both your customer base and sales. With a referral program in place, your cash flow will surely grow.

—BRANDON BERGLUND,
Berglund Insurance

6. HAVE OPERATING ASSETS

One strategy to help generate a positive cash flow in a business would be to have operating assets. Operating assets are used in the course of producing goods or services. If a business has enough operating assets, it may be able to wait on the payment for its invoices until it gets paid, which can help produce a more stable cash flow.

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You can also periodically and systematically look for ways in which the company can save money. Examples of such money-saving measures might be switching cell phone carriers, negotiating with suppliers for better prices, and renegotiating long-term leases.

—CHRIS PANTELI,
LifeUpswing

7. CHECK YOUR INVENTORY

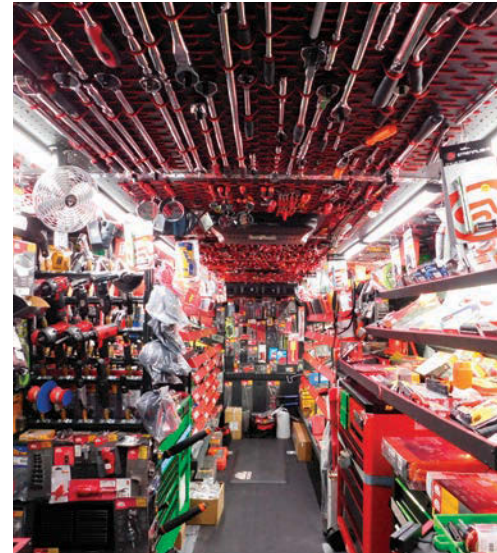
Check your inventory for items that are not selling well. These products tie up your cash flow. Sell those at a discount or bundle them up with another product. You may also decide against manufacturing or buying the same item/s, moving forward. The same goes for unused equipment.

You can either sell it for cash or lease it to another company. The proceeds from the sale can help add funds to your business.

—MICHELLE EBBIN,
JettProof

8. LEVERAGE RELATIONSHIPS

We create long-term relationships based on trust and mutual benefits during our business dealings. One way to generate positive cash flows is to leverage those relationships to negotiate deals based on the needs of your business. Over 80 percent of businesses that fail state cash flow as the main reason for their decline. Purchasing goods from vendors and suppliers often accounts for over 60 percent of daily business costs, which



If you have inventory that's not selling well, try discounting it or bundling it with another product.
Photo courtesy of Dave Fulkman

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means the timing of receiving and pricing goods is critical.

It is important to remember that vendors have a vested interest in your success as it impacts their bottom line. Working with them to renegotiate credit lines, prices, and quantities can dramatically impact generating a positive cash flow. By utilizing the trust you have built to keep your business running at its most efficient level, you can maintain positive cash flows and increase profits.

—ADELLE ARCHER,
Eterneva

9. SEND INVOICES EARLY

If you're providing products or services to others, and get paid by the invoice, don't wait to send those invoices out. It's understandable to want to stick to a predetermined schedule, perhaps sending out invoices all at once each month. This can lead to money crunches, though, and can get in the way of goals or budgets. Keep it all organized, but don't delay when it comes to sending out invoices to have a more steady, positive cash flow.

—ERIC BLUMENTHAL,
Zoe Print

10. IMPROVE PRODUCTIVITY

Improving productivity can be a somewhat overlooked method of generating positive cash flow. By eliminating redundant tasks and automating processes, you open up opportunities for your employees to do more productive work. You can also discover which of your current methods are cash drains by conducting an audit of them. You can then eliminate these processes to ensure maximum cost-effectiveness and savings. The more redundant processes and outdated procedures you eliminate, the more time and resources your staff will have to devote to productive work, ensuring that goals and targets are met.

—DAVID BITTON,
Doorloop

11. RAISE YOUR RATES

Many entrepreneurs launch their businesses with rates that are too low. Lack of experience is no reason to charge less than what it costs to produce your products. The simplest, and most overlooked strategy to produce positive cash flow is to simply raise your rates. Don't sell yourself short. If you're good at what you do, and you've gotten great feedback on your work, don't be afraid to charge your worth. One of the most common reasons why entrepreneurs find themselves getting sales but not

producing positive cash flow is because they're not charging enough!

—NIA LEWIS,

The Solopreneur Hustle

This article originally appeared on score.org. 



BRETT FARNILOE is the founder and CEO of Markitors, a digital marketing company that connects small businesses to customers through organic search. He enjoys converting insights from small business owners into high-quality articles for brands.

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Two is better than one

In order to keep his truck constantly stocked and downtime essentially non-existent, this independent distributor owns two tool trucks.

By Emily Markham, Editor

Independent tool distributor Mike Yarter does things a little differently with his tool-distributing business. While there are many distributors out there with two tool trucks, most of those second trucks also come with a second driver. In Yarter's case, he uses both trucks himself.

"Everybody talks about customer service, but my philosophy is you demonstrate customer service," Yarter says. "I can't go to my customers and say, 'Hey, my truck's down today, I can't get you that tool you wanted, or I can't do anything for you.' So, I took my first truck, and I kept it. It's fully loaded, fully stocked. All I have to do is switch computer systems."

A GRADUAL START

Yarter hasn't always had two tool trucks. In fact, when he was first testing the waters, he was actually driving his brother-in-law Chris Stone's truck on Saturdays.

What's your story?

Share the ups and downs of life on the road with us at Editor@VehicleServicePros.com and you could be featured in our next Tales from the Road column.



The MT55 Freightliner truck (left) is Yarter's original tool truck. He received a call out of the blue asking if he wanted to buy the 20' MT45 Freightliner truck (right), and he couldn't turn it down. Photos courtesy of Mike Yarter

"I worked up the business to where it was quite lucrative for him," the independent recalls.

At the time, he knew his current position at IBM was being lost in a reorganization, so when Saturdays became a success, he got his own truck and began using vacation days to take it out more often. Working up from one to three days a week.

Currently, he's out on his route five days a week visiting dealerships, towing companies, an army base, tractor sales locations, chicken house feed stores, truck shops, body shops, performance shops, and more throughout Lee, Moore, and Cumberland counties in North Carolina.

Read more about Stone and Yarter, back when Yarter was just getting started at VehicleServicePros.com/53065392.

UNCONVENTIONAL SUCCESS

Aside from keeping two tool trucks, Yarter does a few other things to set himself up for success. Starting with keeping a lot of inventory on board. So much so that he's even had customers comment that he has the most out of the other trucks in the area.

"I've learned over the years that these individuals are very what's on their mind right now...so when they come on [my] truck and they see it, 'Oh, man, that's what I need, right there.' It helps my sales," Yarter says.

It's not just a surplus of inventory that helps Yarter make the sale,

it's the customer service he offers. If a customer calls him saying they need a tool right away, Yarter doesn't hesitate to use his personal vehicle to drive it to their location. He also handles all the warranties for his customers. If a tool is broken and needs to be repaired or replaced, Yarter will reach out to the company and get it handled for the technician. On top of that, he will help finance larger purchases for some customers who may not have the credit to finance the purchase themselves.

WHAT'S NEXT?

Much like how his brother-in-law introduced him to the business, Yarter has two nephews with mechanical backgrounds who may be interested in getting into the tool-selling business. If that happens, at least one of them will end up running his second truck, potentially expanding Yarter's business. **PD**

FUN FACTS:



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