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RCCS

\$15.00 • April 2023 Volume 34, Number 3



AFTERMARKET PROFILE

WHAT ARE SHOP OWNERS AND TECHS BUYING THIS YEAR?

PAGE 16

CATEGORY SPOTLIGHT

POWER AND AIR TOOLS PAGE 36

RCCS3 DIGITAL TARGET REPRESENTATION

ADAS CALIBRATION OEM SPECIFIED
DIGITAL POSITIONING SYSTEM
BY TEXA



▲ Measures down to +/-0.01mm



▲ Holds bits firmly in place



▲ Solid textured and contoured handle

DETAILS ON THE COVER PRODUCTS
AND OTHER NEW TOOLS **PAGE 10**

VehicleServicePros.com, official website of PTEN



SMARTER CONNECTIVITY

MULTI-ENVIRONMENT VEHICLE INTERFACE

Single Diagnostic VCI Able to Auto Select Advanced Protocol and Connection Options Backlit Display Confirmation of System Voltage and 40+ Messages



A/C SERVICES

RECOVERY RECYCLING RECHARGING EQUIPMENT

KONFORT 780 TOUCH

R1234yf / R134a = Separate 20lb Tanks = Android Touchscreen = Full Auto Functions = WiFi - BT Compatible =



KONFORT 760 TOUCH

R1234yf System =
20lb Tank In Cabinet =
Android Touchscreen =
Full Auto Functions =
WiFi - BT Compatible =



KONFORT 750R

R134a System = 50lb Tank In Cabinet = 9ft Service Hoses =

















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ON OUR COVER

RCCS3 Digital Target Representation 75" 4K Monitor by TEXA



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PHOTO GALLERY





The Midwest Auto Care Alliance's VISION Hi-Tech Training and Expo, March 2-5 in Overland Park, Kan., boasted record attendance of around 3,500, including 970 first-time training attendees. This year's theme was Amp Up!

VehicleServicePros.com/53027863

TECHNICIAN PROFILE



TechForce Humble Mechanic scholarship winner I'Rule Faison learns all he can by applying himself in his schooling and apprenticeship. He has his sights set on becoming a Volkswagen master technician.

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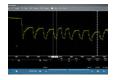
SHOP SERVICES



Looking to expand your shop services into ADAS? Entering the space of ADAS calibration doesn't need to be scary; shop owners can manage this by taking small steps that make sense for their shop instead of a giant leap.

VehicleServicePros.com/21295903

CASE STUDY



A 2002 Ford Explorer was brought in with a no-start after a PCM install. The engine did start after a parameter reset, but a short time later it wouldn't start again.

VehicleServicePros.com/21293650

SHOP SAFETY



While color might seem like a non-vital style element, colorful PPE can help improve shop safety. Here are four tips for choosing colorful PPE and how they can help improve safety.

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FEATURED PRODUCTS



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Mueller-Kueps LED-DUO Lamp, No. 904 996 VehicleServicePros.com/ 53027684



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Our 10AP Series offers the convenience of wide or narrow installation wrapped up into one configurable package. This durable, safe, and reliable car lift features an expandable top beam and BI-METRIC™ arms to suit virtually every vehicle lifting requirement – symmetric or asymmetric. The 2-in-1 design gives operators the option of loading vehicles either symmetrically (centerline of vehicle at column) or asymmetrically (centerline of vehicle behind column). The simple, yet highly sophisticated is sure to keep operating costs low and productivity high. Check out the full line of 10AP lift series at **bendpak.com/10AP** or call us at **1-800-253-2363**.

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Numbers never lie

This year's Aftermarket Profile results are in, and the numbers will tell you exactly what you need to know about which tools and equipment you should be adding to your shop, what training your techs need, and so much more.

By Emily Markham, Editor FMarkham@FndeavorB2B.com

t's time for one of my favorite issues of the year! As many of you know, our April issue showcases our Aftermarket Profile. This yearly PTEN purchasing study consists of data gathered from shop owners and technicians across the country. We asked questions about the types of repairs and services you perform, the tools and equipment you own, your current and future purchasing plans, and much more.

Taking a quick look at the findings, it's no surprise that 49 percent of you noted diagnostic and electrical services as one of the top five service opportunities for your shop. As the years go by, vehicles are only becoming more and more complex. With the addition of all the sensors and cameras needed for ADAS, advanced infotainment centers, and hybrid/EV batteries, the technicians at your shops are likely seeing more diagnostic and electrical repairs than ever.

This leads me to my next statistic. According to our findings, 66 percent of you plan on purchasing electrical tools/equipment in 2023. This falls in line with what we've been talking about, but what I found most interesting was how many of you use print magazines (92 percent), videos (41 percent), and eNewletters (23 percent) to help make your purchasing decisions. I love seeing that print magazines are No. 1, though I might be a bit biased. Even if the other sources I mentioned aren't as highly referenced, be sure you're signed up for our newsletter and subscribed to PTEN's YouTube channel to receive exclusive content about the latest tools and equipment hitting the market.

Moving on, with all these potentially complex repairs coming into your shops and the advanced equipment needed to fix them, training will need to be top of mind. Our respondents noted that electrical/ electronic systems (62 percent), hybrids/ EVs (48 percent), and engine performance/ drivability (47 percent) were the top three percent), and online webinars (50 percent). If you're looking for some industry training to keep your shop on top, take a look at our Training and Events Calendar at vehicleservicepros.com/events.

I could go on about other statistics found in the survey, but I think you'll get more out of this by checking it out yourself. Flip to page 16 for the full survey results.

If you have any questions or just want to discuss the findings in this report, feel free to reach out. As PTEN's new editor, I'm looking forward to chatting with as many of you as I can about this and many other topics down the road. 😵

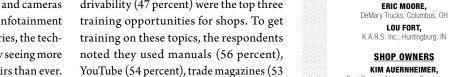
Editor's Correction: In the Diagnostic Tech article featured in our February issue, an image of the Automotive Test Solutions product was placed with an image of Pico Technology's PicoScope 4425A with an incorrect caption. The images should not have been placed together and should have been separately captioned with each product's name. We apologize for the error.

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- Techs aged 35 or younger (Must be born after January 1, 1988)
- At least 2 years experience in the industry
- Shown career development, innovation in their role, technical or educational achievement, community service and importance to the shop
- Techs can be nominated or nominate themselves



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FEATURED* **NEW PRODUCTS**

The Olsa Tools Digital Caliper Measuring Tool, No. 1589, features a large LCD screen to easily read measurements quickly and accurately. By the use of one button, users can easily switch between three measuring units: millimeters, inches, and fractional inches. Its high-resolution, internal digital sensor provides precise measurements down to +/-0.01mm. Made from hardened stainless and measuring jaws for inside measurements.

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LARGE LCD SCREEN

steel, the tool offers precision-ground jaws for ideal parallelism and an all-metal construction for strength and durability. It also features a depth gauge, step gauge, zero button, thumbwheel, locking screw,

HOLDS BITS FIRMLY IN PLACE

The Bit Buddy from Ernst Manufacturing measures 8" in length and fits up to 30 bits. With rare-earth magnetics, the Bit Buddy holds strong whether on the side of a toolbox or upside down. Its taper lock system keeps bits firmly in place and releases them easily when needed. The bit organizer also has a specifically designed hole that fits one 3/8" drive chuck and offers three configuration options for long and short bits. Available in black/red and Hi-Viz/black color combinations.

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SOLID TEXTURED AND CONTOURED HANDLE

The ARES Tool 32 oz. Slim Line Deadblow Hammer, No. 23052, features a slim-profile head design for greater precision and easier work in tight and obstructed spaces. The hammer's shot filled canister in the head maximizes driving force while reducing rebound and vibration for less strain on the hand and wrist when hammering. Featuring one-piece polyurethane construction for durability, even in high-impact applications, the hammer also offers a solid textured and contoured handle to reduce the risk of

> slipping in the hand while providing a comfortable, sturdy grip and control. The long head of this 32 oz. hammer is also ideal for driving pistons into place with ease in addition to other unique applications. Made in the U.S.A. Also available in 8 oz., 18 oz., and 26 oz.

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FOR MORE INFORMATION ON THESE PRODUCTS, CLICK ON "PTEN E-INQUIRY" at VehicleServicePros.com OR CIRCLE THE NUMBER ON THE CARD.

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



DOESN'T DEFORM OR RESIZE TARGET IMAGES

The TEXA RCCS3 Digital **Target Representation 75"**

4K Monitor does not deform or resize the target images to provide ADAS calibrations that meet OEM specifications. Continuous TEXA IDC5 software updates easily provide new digital vehicle coverage targets to clear considerable space in the workshop from multiple physical targets. Simplify operator calibration workflow with the latest laser measurement digital positioning system. A single operator can easily center and square the calibration frame to the vehicle using the laser measure system in combination with the latest IDC5 guided positioning software to quickly perform micro adjustments with precision.

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QUICKLY REMOVES STUCK FUEL INJECTORS

The ProMAXX Ford Power Stroke 6.7L Fuel Injector Seat Restorer Service ProKit - Robby enables technicians to quickly remove stuck fuel injectors and easily refurbish the fuel injector seat in the 6.7L cylinder head. The Robby tool restores the seat's seal in approximately 15 seconds, maintaining cylinder head compression and engine performance. The ProKit is designed to remove carbon deposits and restores the seat to factory new. It includes the company's PowerPull 6.7L Fuel Injector Removal Kit, which pops stuck fuel injectors quickly by not bolting/unbolting from the cylinder head. Engineered and American made.

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REPAIRS WHEEL STUDS SAFELY AND CHIP-FREE

The **GEDORE Thread Reset Tool**, No. 3435644, is designed to repair wheel studs safely and chip free. The tool can be used universally on wheel bolts with M12 x 1.5 and M14 x 1.5. According to the company, repairs are done in just 30 seconds and will not weaken the thread. The thread becomes chipless by rolling (forming, pressing, embossing) back to its original geometry. No material is removed and the strength of the wheel bolts are fully retained. Use with a standard hex socket with reversible ratchet.

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CHARGES 6V, 8V, OR 12V BATTERIES

The Snap-on Bench Top Battery Charger Plus, No. EEBC30A12V, can charge 6V, 8V, or 12V AGM, standard lead acid, and LiFeP04 vehicle batteries. The EEBC30A12V features a rugged, compact design with a unit wraparound storage for its power cord and charging cables as well as bristles to secure the clamps in place. Performing a multi-stage charge cycle, the unit offers a charge rate of 2A, 15A, or 30A (2A or 10A for LiFeP04) and a stable power mode that maintains vehicle battery voltage during repairs and offsets battery drawdown while the engine is off. Included with the unit are long reach 82" copper-aluminum blend 8-gauge multitemperature flex cables with 300A steel clamps and an AC power cord.

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SLOW TARGET SCAN MODE

The Mastercool Black Series Infrared Refrigerant Leak Detector, No. 55600, uses an infrared sensor to effectively identify halogenated gases. The ergonomic design and rugged construction provides refrigerant leak detection all while allowing the technician to easily adjust sensitivity to adapt to different environments. The unit detects the refrigerant by scanning the area in a slow target scan mode. Moving the sensor back and forth until the alarm sounds; the IR sensor zeroes out when held over a leak. The leak detector provides the same trigger conditions for all refrigerants, and features an auto-off function. Kit includes charging cable and replacement filters.

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FEATURES A REMOVABLE TANK FOR TRANSPORT

The **Carlyle Tools ACM Series** is designed to efficiently recover, recycle, and recharge automotive A/C systems. The A/C machines are compatible with both electric and traditional engine-driven compressors. Built with a welded steel frame, the units' heavy duty construction is made to last. They also feature patented motor-controlled ball valves, a patented oilless compressor, and have a removable tank for transport. Available in three models.

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MEASURES INTERNAL AND EXTERNAL BRAKE PADS

The **Tool Aid In-Line Brake Pad Gauge**, No. 65300, is calibrated for standard 6mm backing plates and measures both internal and external brake pads. The in-line style allows readings to be taken without removing the wheels on many vehicles. The metric, color-coded scale allows for quick, at-a-glance readings.

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FEATURES A CUTTING CAPACITY OF 7/8" CLEAN CUT

The Forney Industries 45 P PRO Plasma Cutter features a cutting capacity of 7/8" clean cut (1/2" aluminum) and 1-1/8" sever cut. The 25' Forney Ignite Plasma Torch offers drag torch technology that supports all skill levels. The integrated air pressure and water separator provide additional protection to the machine while maximizing consumable life. This plasma cutter is dual-voltage and runs off 120V or 240V (adapter included). The Forney 45 P PRO Plasma Cutter is generator friendly (8 KW of continuous power for 240V) and comes with a three-year power source warranty.

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ADJUSTS UP TO 75.5"

The NextLED Dual Color/Power Tripod Work Light, No. NT-6926M, is equipped with an 8,000 mAh built-in Li-ion battery and features a remote control which allows users to control the brightness of the light up to 100'. The NT-6926M offers adjustable color temperature and illuminations settings. Users can easily switch between color temperatures (4,000k warming light and 6,500k bright light) and brightness levels (6,000 lm, 2,000 lm, and 500 lm) to fit different applications. The lamp head can be detached and mounted to wherever needed thanks to its magnet and hook design. The heavy duty tripod light stand adjusts up to 75.5" and the multidirectional LED heads rotate 360 degrees and pivot 90 degrees.

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LONG LASTING AND DURABLE ADHESIVE

The Dent Fix Equipment Cold Adhesive Glue Slide Hammer Set, No. DF-CGS71, is a lightweight kit designed to enable auto body professionals to quickly and safely move large areas of metal efficiently. The kit includes the company's 2.8 lb Slide Hammer, 50 grams of Mammoth Tar Cold Glue, and four tabs. Each tab is aluminum for strength and durability. Tab sizes include: 38mm and 52mm round tabs and 22mm by 57mm and 36mm by 80mm rectangular tabs. The Mammoth Tar Cold Glue provides almost instantaneous, strong adhesion and will not harm the finish of the vehicle, the company says.

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COMMANDER2000 R134A FULLY AUTOMATIC RECOVERY/RECYCLE/RECHARGE **MACHINE**

- Automatic oil injection
- · Two sealed bellows design bottles, one used oil bottle
- Status light
- Refrigerant database
- SAE J2788 certified
- · Made in USA





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REMOVES STANDARD AND DAMAGED LUG NUTS

The Lisle Corporation 7-pc Flip Socket Set, No. 12950, offers two hex sizes in each socket for the removal of standard and damaged lug nuts found on many vehicles. The 6-point impact sockets are made from chrome moly steel and have a black oxide finish. The set includes a 1/2" drive extension, 17mm/17.5mm, 19mm/19.5mm, 21 m m / 21.5 m m, 22 m m / 22.5 m m, 27mm/27.5mm, and a deep thin-walled 19mm/21mm socket. The 19mm/21mm socket includes a plastic sleeve that prevents scratching the wheels. The set comes in a blow molded case for storage.

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SELF-GRIPPING JAW DESIGN

The Matco Tools 3-pc Cobra Pliers Set, No. PC3SG, now available in green, offers a gripping surface that has special hardened teeth and is wear resistant and grips any shaped object — round, square, hex, or flat. Self-gripping jaw design and selflocking ability prevents slipping off the workpiece. The pliers open wide with an easy push button. Adjust once and it stays while fine-adjustment provides optimum opening for different size workpieces. The pliers also feature a guard to prevent finger and hand pinching as well as a thin head to fit into tight spaces.

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FEATURES A 3-1/2" **LCD SCREEN**

The Mac Tools Advanced Code Reader, No. ET1400, features a 3-1/2" LCD screen, allowing users to analyze real-time graph data in the palm of their hand. It offers access to 10 OBD-II modes functionality, supports DTC lookup, records and playbacks data, and prints data via PC. The ET1400 provides vehicle coverage of up to 33 domestic, Asian, and European makes and models.

language options for English, Spanish, and French, and reads and erases codes as well as views live data of ABS, SRS, and automatic transmission systems.

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RATED TO 2,500 PSI

The Coxreels Extreme Duty XTM Dual Hydraulic Reel, No. XTM-DMP-450, is ideal for any application where dual hydraulic lines are required such as remote hydraulic equipment or accessories, including rescue tools, motors, saws, and more. Coxreels' single-sided, dual-bodied hydraulic swivel is featured on this reel allowing for the inlet connections to both be on the same side of the reel. The hose included on the withhose models is a twin-line fully bonded hose for smooth performance and handling. The Extreme Duty XTM Reel is rated to 2,500 psi and U.S.A. made.

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STAMPED SOCKET SIZES

The Milwaukee Tool 47-pc 1/2" Drive Ratchet and Socket Set with PACKOUT Low-Profile Organizer, No. 48-22-9487, features a 90-tooth ratchet that has 4 degrees of arc swing and a slim profile for working in tighter spaces. It also has a flush directional lever. The sockets have four flat sides to prevent rolling and sizes are stamped into each socket for easy-to-read visibility. The organizer offers a clear top for easy identification of contents, is IP65 rated, and is built from impact-resistant materials for durability on and off the jobsite.

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OFFERS 225A ENGINE START ASSISTANCE

The PRO-LOGIX 12V 40/15/5/225A Wheel Charger with PS Mode and Engine Start, No. PL3740, from Clore Automotive is designed to deliver versatile service to today's busy shops, from battery charging and engine starting to power supply support for a variety of applications. With charge rates to 40A, the unit makes quick work of charging and it has a charge setting for flooded and AGM/spiral wound batteries. The PL3740 features a knob control for easy operation, 225A engine start assistance, temperature compensation, a multi-phase charging process, and a PS mode for diagnosis, repair, maintenance, and ADAS support. It also offers both an auto charge mode and traditional timed (manual-style) charge settings, including 20,40,60,90, and 120 minutes.

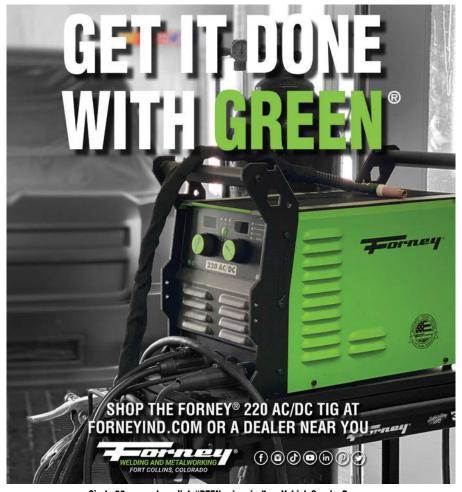
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HAS A FOUR-PRONG **FORK DESIGN**

The CTA Manufacturing Ford Fuel Injector Connector Disconnect Tool, No. 6515, features a spring-loaded mechanism that allows for easy removal of a connector. The tool services 6.4L power stroke injectors for 2008+ 6.4L F-250, F-350, F-450, and F-550 applications. Its four-prong fork design maximizes the surface area on the injector and connector to limit damage.

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Find out what shop owners and technicians are buying this year.

The Aftermarket Profile

is a comprehensive profile of the automotive aftermarket that provides insights from over 300 PTEN readers on tool and equipment purchases they've made recently or plan to make soon. For years, PTEN readers have turned to this survey to discover what is trending among their fellow technicians and shop owners and within the industry as a whole. No one else conducts research like this and we sincerely hope it helps you stay up-to-date on new tools you might want to add to your toolbox and equipment to help your shop run as efficiently as possible. We've included some statistics on trending topics such as ADAS and EVs to keep you ahead of what's happening in the industry.

TOP 5 SERVICE OPPORTUNITIES

55% Maintenance services

Diagnostic and electrical services

% Tire/wheel

29% Suspension repair

BUYING TOOLS & EQUIPMENT

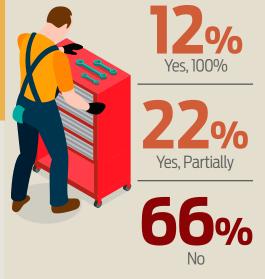




of shop owners and technicians have purchased tools based on what they've seen in **PTEN** magazine.

2023 BUDGETS FOR TOOLS AND EQUIPMENT

Less than 2022



1317669434, 1201149783 | Getty Images

BUYING TOOLS & EQUIPMENT

WHERE TOOLS/EQUIPMENT ARE BEING PURCHASED 84-% Mobile tool distributor (Cornwell. Mac, Matco, Snap-on, independent) 50% Auto parts store (Carquest, NAPA, etc.)

TOP TOOL PURCHASE CONSIDERATIONS

70% Price



86% Quality



52% Availability

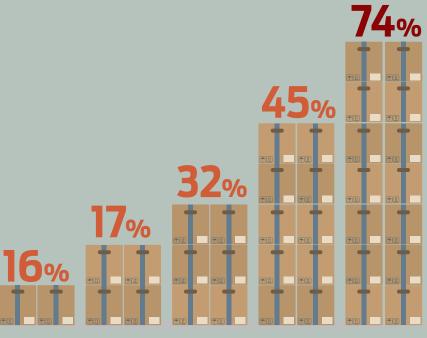


MOBILE TOOL DISTRIBUTOR(S) TECHS ARE BUYING FROM



Bought used/

secondhand













BUYING TOOLS & EQUIPMENT

PERCENTAGE OF TECHS/SHOP OWNERS PLANNING THE FOLLOWING PURCHASES IN 2023

Hand tools	81%
Shop equipment	Tire service/equipment
77%	34%
Chemicals	Suspension tools/equipment
72%	33%
Cordless power tools	Air conditioning tools/equipment
71%	32%
Electrical tools/equipment	Jacks/stands
66%	30%
Safety gear	Lubrication tools/equipment
64%	30%
Specialty tools	Tool storage
Beautiful for weather consists	Lock detectors
Repair information services 57%	Leak detectors 26%
Personal gear	Shop management software
55%	23%
Inspection tools	Cooling systems equipment
53%	21%
Scan tools	Lifts
46%	20%
Pneumatic/air tools	Body shop tools/equipment
44%	19%
Brake service tools/equipment	Compressed air systems
41%	19%
Lighting	Transmission tools/equipment
40%	18%
Battery service equipment	EV charging stations
39%	12%
Preventive maintenance	Alignment equipment
38%	10%

BUYING TOOLS & EQUIPMENT



62%



41%



37%

31%



19%



8%



5%





either always or often consider whether a product is made in the U.S.A.

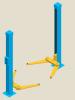


TYPES OF MEDIA THAT CONTRIBUTE TO SHOP **OWNERS/TECHS PURCHASING DECISIONS**

Print magazines

92%
Publication websites
49%
Videos
41%
Webinars/podcasts
30%
Events
27%
eNewsletters
23%
Social media 17%
Email marketing











MAINTENANCE & REPAIR

REPAIRS AND SERVICES PERFORMED

Brake 85 9	%
Electrical and diagnostics85°	%
Engine performance	%
HVAC and Engine repair (underhood) 74 °	%
Alignment, steering, suspension, exhaust	%
Tire and wheel619	%
Tire sales469	%
Welding469	%
ECU programming and coding459	%
Fleet maintenance services/ truck and trailer repair419	%
Hybrid & EV service279	%
Bodywork199	%
Other	%
ADAS calibration80	%

SERVICE INFORMATION SOURCES USED IN SHOPS

Mitchell 1

ALLDATA

Identifix

WHAT TYPES OF VEHICLES ARE SHOPS WORKING ON?







Light duty vehicles



Medium duty vehicles



Custom/ restoration



Highperformance



Municipal fleets (including fire trucks)



Heavy duty vehicles/

semi trucks

Heavy equipment/offroad equipment



Motorcycles

No. neither one

Yes, just hybrid

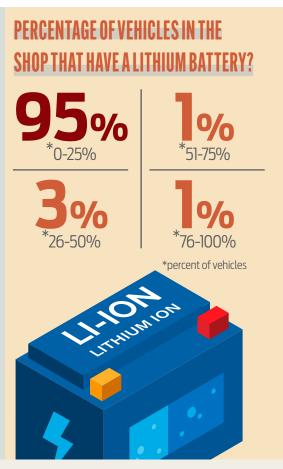
Yes, just electric



167689687, 223084963, 55097254, 59051020, 91204396, 59049362 | Dreamstime

BATTERY SERVICE

BATTERY SERVICE EQUIPMENT SHOPS OWN Battery tester (for testing starting system, charging system, battery capacity, etc.) 91% Wheeled battery charger Portable battery charger Battery maintainer (for battery racks, collision repair, welding applications, etc.) Memory saver (maintains system voltage when battery removed) Reprogramming power supply



a smart battery charger

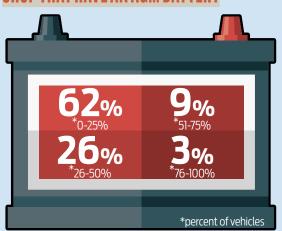
Of shops have

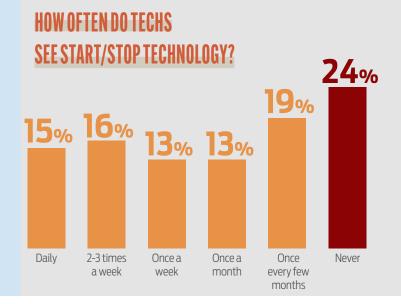
34%

Do not have a smart charger

Plan on purchasing a smart battery charger in the next 12 months







269190599 | Dreamstime

DIAGNOSTICS

LEADING OEM SCAN TOOLS FOR DIAGNOSTIC INFO

64% 63% 53%









SHOPS OFFERING ADAS SERVICES

No, we currently outsource ADAS services.

Yes, we plan to offer ADAS in the next year.

Yes, we currently offer ADAS services.

WHY SHOPS AREN'T OFFERING ADAS SERVICES

The size and layout of my shop is not conducive to target setup	50%
Not a profitable opportunity at this time	34%
Concerns about setup cost	.28%
Concerns about training and maintenance	21%
Need more information on the market for ADAS service	21%
Other local businesses already offer this service	21%
Other	8%

SCANTOOLS/SUBSCRIPTIONS TECHS RELY ON IN THE SHOP

2% **Aftermarket**

scan tools

OEM specific scan tools

OEM limited-time subscription access

ARE SCAN TOOLS A SHOP PURCHASE OR A TECHNICIAN PURCHASE?

Shop purchase

We have shop scan tools, but I also purchase my own

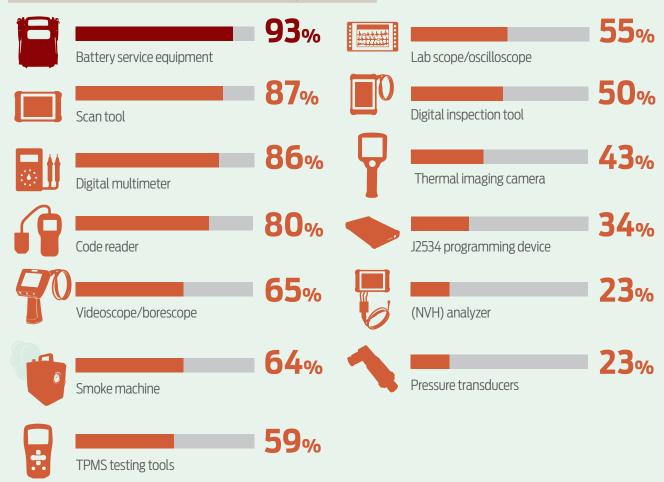
Technician purchase



1201149783 | Getty Images

DIAGNOSTICS

DIAGNOSTIC EQUIPMENT THAT SHOP OWNERS/TECHS OWN



DO SHOPS OFFER REFLASHING **OR REPROGRAMMING?**

Yes

I would, but don't own equipment to do so.

PERCENTAGE OF TECHS WHO'VE USED A TOOL THAT REQUIRES A SMART DEVICE

No

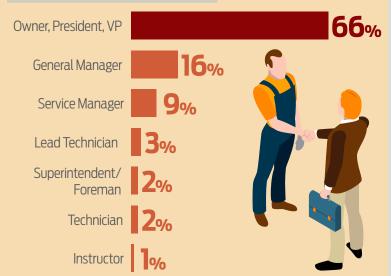


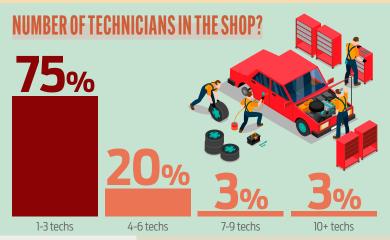


of shop owners and technicians said they would remotely access a customer's vehicle data if they had a telematics tool or device.

INSIDE THE SHOP

SURVEY RESPONDENT JOB TITLES





Almost half of shop owners anticipate higher overall revenue in 2023.



NUMBER OF BAYS IN THE SHOP?

4-9 bays

1-3 bays

10+ bays

4% Not applicable

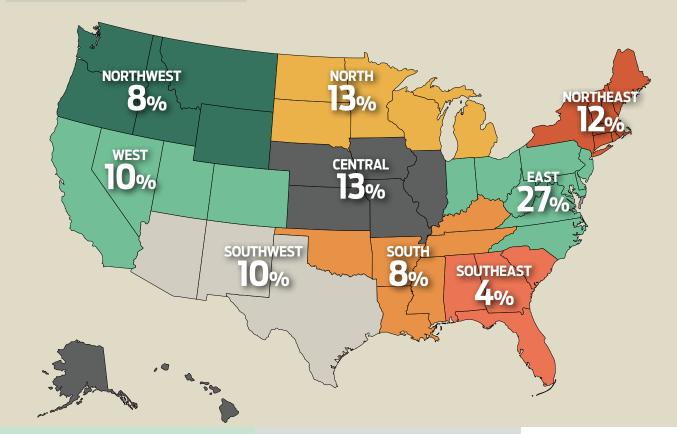
PRIMARY AREA OF BUSINESS?



General repair shop (auto, service repair)	60%
Specialty repair shop (exhaust, transmission, performance, etc.)	9%
Collision repair/body shop	8%
Fleet	7%
Heavy duty trucking and/or equipment	6%
Import specialist	4%
New car or truck dealership service center	3%
Gas/service station with repair bays	1%
Lube service	1%
Training facility	1%
Franchise chain	
(Midas, Pep Boys, etc.)	0.3%

INSIDE THE SHOP

LOCATIONS OF SURVEY RESPONDENTS



INVESTMENTS FOR 2023

Repair information	60%
Digital inspection tools	30%
Shop management software	25%
None	21%
Recruiting/training technicians	17%
Marketing and customer	
communication tools	11%
Customer retention software	10%

ANNUAL SHOP REVENUE?

\$0 - 125,000	
N	32%
\$125,001 - 250,000	
	12 %
\$250,001 - 500,000	
	18%
\$500,001 - 750,000	
	11%
\$750,001 - 1,000,000	
	12 %
\$1,000,001 - 2,000,000	
	11%
\$2,000,001+	
	4%

NUMBER OF **SHOPS UNDER** THE SAME OWNER?

90% 1 shop

2 shops

3-10 shops

10+ shops

POWER TOOLS & A/C EQUIPMENT

WHICH DO TECHS PREFER, AIR TOOLS OR CORDLESS TOOLS?



PERCENTAGE OF TECHS WHO HAVE REPLACED AIR TOOL USAGE WITH CORDLESS TOOLS

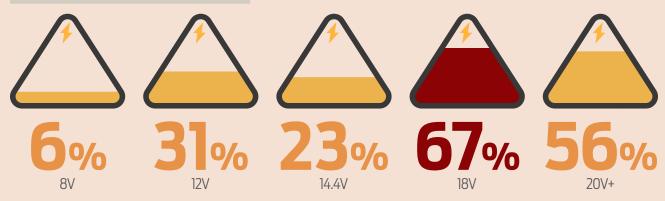
72%

Yes, I have replaced some of my air tools with cordless tools.

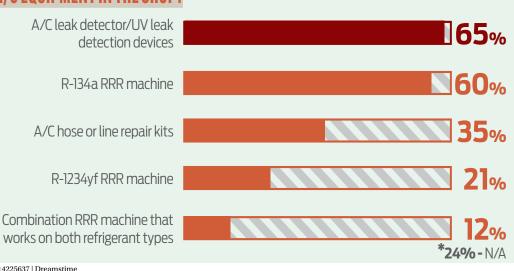
Yes, I have replaced all of my air tools with cordless tools.

No. I have not replaced my air tools with cordless tools.

MOST POPULAR POWER TOOL VOLTAGE



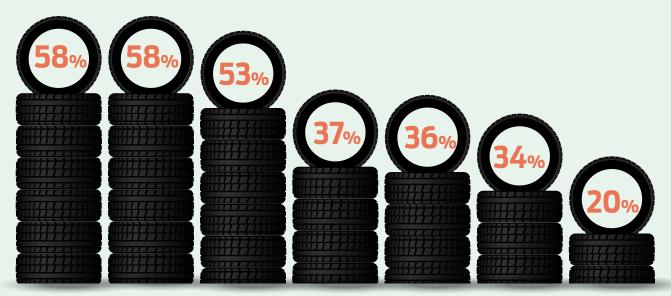
A/C EQUIPMENT IN THE SHOP?



114225637 | Dreamstime

TIRE/WHEEL & TRAINING

TIRE/WHEEL SERVICE EQUIPMENT THAT SHOPS OWN



Tire changers

TPMS tools (includes reset and diagnostic tools)

Wheel balancers

Wheel hub/ lugnut/beading tools

Tire inflation systems

Wheel alignment equipment

N/A

RESOURCES USED FOR TRAINING IN THE PAST YEAR

Manuals	56%
Video (i.e. YouTube)	54%
Trade magazines	.53%
Online webinars	50%
In-person training	
(classroom style)	47%
Online forums	45%
Company or	
organization websites	.41%
Tradeshows	.15%
Facebook group	10%

BIGGEST TRAINING OPPORTUNITIES



2% Electrical/ electronic systems

Hybrid/ electric vehicles

Heating and air conditioning

Alternative fuel

Engine performance/ drivability

Engine repair

Diesel engines

ADAS systems

Auto transmission/ transaxle

Water leaks/ wind noise/NVH

Ingersoll Rand's 1" Cordless Impact Wrench, No. W9691

Q&A with Sean Fitzgibbons, director of product management at Ingersoll Rand.



Q: What makes this product innovative?

A: First of all, with the power of the tool you are getting 3,000 ft-lbs of breakaway torque for when you're removing a bolt, for example, or removing a fastener. Then it's 2,200 ft-lbs of fastening torque when you're going in that direction. And so, the power of the tool means that you can perform a much broader range of applications than you can with the typical or smaller class of impact wrench.

And what that also means for our users is that before this tool, you mainly would have needed to use a pneumatic tool to perform an application at that type of high-power level, and with this 1" cordless product now you can perform those same applications but with the quick setup time and freedom of movement and maneuverability of a cordless tool.

Q: How will this product improve the lives of technicians and shop owners?

A: One of the things that we hear a lot when we're working with users is that pneumatic tools certainly have their place, however, there are some situations where the hoses that you need to attach to pneumatic tools can become tangled. They can become trip hazards in some situations or if you're working in an area where you need to be maneuvering the tool around, the hose can get tangled or pinched. So, being able to just simply grab a cordless tool, get a grip, and pull the trigger improves your productivity because you're able to perform that application and move around with the tool much more quickly.

When you're running a business that depends on how many services you can do in a day, the faster setup and in some cases the faster actual performance of that application is actually letting you get more jobs done, so that's growing your productivity and that's growing your business as a business owner.

Q: What has been the feedback from technicians who've purchased this tool?

A: One of the things that stands out is the ergonomics of the tool. It has a really unique industrial design where it uses two of the IQV20 batteries on board. That gives it more run-time and more power, but the way that it's designed is that they are placed opposite of each other on either side of the tool, and they are sort of tucked into a space where they're not obtrusive when you use it, so the tool feels really well balanced. The other thing is that it has this sort of classic D-handle design on the back, and then it has an auxiliary handle on the front, where the auxiliary handle can rotate and lock in at any position, 360 degrees. That way you can get your grip position exactly where you want it, and it's just very comfortable

Q: Any other important features?

A: One other thing is that it's made to be durable in the rugged environments. Whether it's in vehicle service applications where you're exposed to grease or it's in industrial settings where you risk dropping the tool on concrete or metal or bumping it into hard surfaces and things like that, the tool has a very robust design. It's also protected against dust and water. It has an IP56 rating, and it comes with a 3-year warranty, so if there are any issues with the tool, Ingersoll Rand will support that and get you back up and running quickly. &

PTEN is the only publication to feature the prestigious "Innovation Awards." Every year since 1999, the Innovation Awards highlight the newest and most innovative products introduced to the automotive aftermarket. For 2022, PTEN



received 121 submitted product entries in 23 categories. We will be featuring the top scoring products in monthly Innovation Award Profiles. To view a full list of winners online, visit: VehicleServicePros.com/2022IAWinners.

The Innovation Awards honor companies that take their products to another level and offer unique features that make a technician's job easier. The 2023 Innovation Awards are now underway. Stay tuned for the winners to be announced in our August issue!

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Mayhew Tools 3-pc Hammerless Set, No. 89021

Reviewed by John Baumgardt III, owner/operator of Baumgardt's Auto Repair in Fillmore, Ind.

Q: How did the tool function as far as saving you time?

A: The hammerless set saved time trying to figure out how to get a punch and hammer into a space with limited room.

Q: How has using this tool impacted your shop's profitability?

A: These increase profitability mainly by not having to repair or replace something after accidentally hitting it with a hammer while trying to hit a punch or chisel in a confined area.

Q: What types of jobs/repairs did you use this tool for?

A: I used it to remove a couple roll pins and small bushings from transmission parts. This set includes a roll pin punch, ham-

PRODUCT DESCRIPTION

The Mayhew Tools 3-pc Hammerless Set, No. 89021, includes a prick punch/center punch combo, a pin punch/hammer combo, and a cold chisel/hammer combo. Available in a convenient pouch for easy storage. The spring-powered tools are safe to use while also delivering extreme force and precision while marking, cutting, punching, starting, and/or setting, without the need for a traditional hammer. Ideal for use on wood or metal surfaces. these tools deliver up to 3,500 lbs of striking force. Simply place the tool directly on the work surface, pull back

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the spring, and release.



mer, center and prick punch, and a door pin punch. The door pin punch shines brightly when you need to remove the pin from the bottom hinge on the doors inside your shop or house.

Q: What features did you like?

A: I liked their simple, easy-to-use design.

Q: How was its packaging?

A: Nicely packaged in a pouch that is see-through from one side. It's wide enough to hold six punches and still lay flat. There is a metal re-enforced hole for hanging and a button to keep the tools inside for when you toss it in a tool bag.

Q: Is there anything you had questions or concerns about in regard to the tool?

A: Initially I wondered if there would be other sizes available, but after looking at the Mayhew Tools website I learned that there are quite a few other sizes. I will be purchasing them to add to my tool arsenal.

Q: How does this tool compare to other tools you've used like it?

A: I've used the old hammer and punch method, and also automatic center punches. There is a huge advantage over the hammer and punch when there is limited space to work. There is even an advantage over the automatic center punch in some cases because you don't have to put a bunch of pressure on the punch to make it operate.

Q: How easy was it to use?

A: Easy as can be. Hold one end of the punch or chisel in place and pull the other end against the spring tension and then release the end not being used.

Q: On a scale of 1 to 10, how would you rate this tool overall? Why?

A: I would give this a 10. This is a super simple design that is easy to use and that will make many jobs easier. It really shines when there isn't much room to hold a punch or chisel and fit a hammer and be able to swing it. You also have very good control of the pressure or force you are applying to the fastener. According to Mayhew, the tool can deliver 350 psi of force. 😵



JOHN BAUMGARDT III is the owner/operator of Baumgardt's Auto Repair in Fillmore, Indiana. He has been a professional auto tech for about 20 years. He attended the two-year Auto

Mechanics program at Lancaster Vocational High School. Previously, Baumgardt worked at AAMCO Transmissions and earned about a dozen AAMCO certificates. He believes it's important to provide an honest, quality service that people can depend on.



Milwaukee Tool **Auto Hammers**

Reviewed by Brian Culotta, shop foreman/master technician at Dave's Auto Care in Willoughby, Ohio.

Q: How did the tools function as far as saving you time?

A: Repairing vehicles in the heart of the Rust Belt, hammers become a technician's wing-man. Having a premium hammer by your side certainly makes the day go by smoother. You might be thinking "It's just a hammer, how special can it really be!?" Trust me when I say these hammers have been a game-changer.

Q: How has using these tools impacted your shop's profitability?

A: Having a complete assortment of hammers makes any repair technician more



The Milwaukee Tool Dead Blow **Hammers** are designed to provide maximum impact with minimal rebound when striking surfaces. They're also designed to provide maximum durability with a steel-reinforced handle. Available in two sizes: 28 oz. and 48 oz.

The Milwaukee Tool Steel Ball Peen **Hammer** features a shockshield grip to reduce vibration. The peen end can shape, form, and spread metal while the smooth face is meant to strike punches and chisels. Available in two sizes: 16 oz. and 24 oz.

The Milwaukee Tool Dead Blow Ball Peen Hammer is designed to offer higher striking power with minimal effort. The hammer's overmold handle and anti-slip grip provide more control while swinging to strike objects. Available in two sizes: 16 oz. and 32 oz.

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efficient and effective at their tasks. Using these hammers offered the power and strength needed to handle tough jobs while at the same time having the appropriate balance and control to not cause unwanted damage to the component you're striking, or its neighbor.

Q: How easy were they to use?

A: The fantastic comfort/anti-slip grip handle these hammers have has given me a new level of confidence when going into battle. Pair that level of confidence with the added control and power a dead blow hammer offers and you got yourself a new best friend.

Q: What features did you like?

A: The overall balance of these hammers is fantastic and they come with a lifetime warranty.

Q: Is there any way you could think to improve or add to these tools?

A: The clear-coat type finish on the striking end of the hammers is nice when they're new, but it does become "smudged" up. However, this is only a cosmetic issue.

Q: On a scale of 1 to 10, how would you rate this tool overall? Why?

A: Ten. This is a premium quality product!



BRIAN CULOTTA is a graduate of the Universal Technical Institute in Chicago, Illinois. After graduating, he started working for an independent car dealership as a lead technician

for seven years. He then moved to a new job at an independent repair shop where he stayed for three years. He now works at Dave's Auto Care in Willoughby, Ohio, as the shop foreman and ASE Master L1, L3 technician.

This product was given to the reviewer free of charge from the manufacturer.



Channellock 10" WIDEAZZ Adjustable Wrench, No. 10WCB

Reviewed by Pete Rudloff, owner of Pete's Garage Inc. in Newark, Del.

Q: How did the tool function as far as saving you time?

A: By incorporating an unusually wide jaw set into a small-to-store tool, it's like having multiple adjustable wrenches in one.

Q: How has using this tool impacted your shop's profitability?

A: The tool reduces setup time, specifically MIG welding bottles and gauges.

Q: What types of jobs/repairs did you use this tool for?

A: This is a tool for no precise fasteners like for welding bottle connections on MIG or TIG setup or switching oxy acetylene outfits. I also see value in hooking nitrogen

PRODUCT DESCRIPTION

The Channellock 10" WIDEAZZ Adjustable Wrench, No. 10WCB, features a wide 2" jaw opening to support large sized nuts and bolts. The combination of a smart and comfortable tapered handle design with Code Blue grips, a four-thread knurl, and minimal head width improves performance in confined spaces. Additionally, the tool offers laser engraved measurement scales, is made from rugged chrome vanadium steel, and has a chrome finish for rust prevention. The Channellock adjustable wrenches are made in Spain.

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test bottles up to A/C systems. Basically, anything with standard fittings of most sizes this wrench will work well with.

Q: What kind of setup was involved before using the product?

A: There was zero setup, just unbox it and use it. It's very intuitive.

Q: What features did you like?

A: For sure the extra wide and extra deep jaws. The rubberized handle is nice and comfy too.

Q: How does this tool compare to other tools you've used like it?

A: I own several different sized adjustable wrenches, but by far this one is way more versatile because of its adjustability.

Q: Is there anything you had questions or concerns about in regard to the tool?

A: None, the tool is quite user friendly and does exactly what it is designed to do.

Q: On a scale of 1 to 10, how would you rate this tool overall? Why?

A: A solid nine. I think it's a great tool and has lots of practical purpose. It's not overly fancy and performs quite well.

Side note: While reviewing this tool, I had it sitting on my desk and a local distributor happened to notice it and mentioned he's getting a lot of technicians asking for him to order them one. I'm not really surprised but am surprised something similar hasn't been available sooner. 😵



PETE RUDLOFF is a nationally awarded technician, national automotive instructor/consultant, technical writer, software developer, automotive trade advocate, and owner of Pete's

Garage Inc. in Newark, Del. Rudloff has a national reputation as friend to the general auto repair shop and is known for fixing difficult to fix cars and facing challenging trade issues head-on. In 2016, Rudloff created FlexCheck Auto DVI in order to help independent auto repair shops nationwide increase their revenue.



Carnage Tools

1,000 Im Multi-Function Work Light

Reviewed by John Baumgardt III, owner/operator of Baumgardt's Auto Repair in Fillmore, Ind.



Q: How did the tool function as far as saving you time?

A: The size makes it quick and easy to grab without being bulky. The light is bright so you can see what you're looking for.

Q: Was there a manual included? If so, did you use the manual, and was the manual easy to understand?

A: Yes, it came with a very small manual that contained instructions, features, and precautions. I always read through the literature; I prefer to get the longest

PRODUCT DESCRIPTION

The Carnage Tools 1,000 Lumen Multi-Function Work Light, No. CT1KWL, is a 1,000 lm, USB-C rechargeable, professional worklight. The CT1KWL is handheld and is durable. Rated IP65, the worklight is able to withstand harsh environments without compromising performance. The light includes a 170 lm flashlight for focused inspection and also a 1,000 lm COB main light to illuminate a wider area. The CT1KWL can be utilized handsfree with it's 180-degree pivoting handle, internal magnets, and hanging hooks.

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life out of my tools and want to use them as intended.

Q: What kind of setup was involved before using the product?

A: You just have to connect the supplied charge cord to a USB adapter or socket and charge it up.

Q: What features did you like?

A: This light has so many features. I like the one-button operation, the two different types of light beams or coverage, and the power/charge indicator lights. The combination of mounting options is awesome. The magnets do not scratch paint, but other stuff that sticks to the magnets will so be careful. The hooks are the perfect size and seem pretty durable.

Q: How does this tool compare to other tools you've used like it?

A: I have used a lot of different lights, but this is one of my favorites.

Q: What types of jobs/repairs did you use this tool for?

A: I used it to replace a couple of sets of blend door actuators. It fit nicely under the dash and provided plenty of light. It also squeezed nicely in between the engine and

firewall on a Nissan pickup where I was replacing camshaft sensors. The hooks and magnets held the light right where I needed it when servicing the brakes. I also took it on vacation, turns out it works well for hunting sharks' teeth at night too.

Q: Is there any way you could think to improve or add to this tool?

A: Being marketed as an inspection light, I think it would be great with UV lights built in to help look for fluorescent dyes.

Q: On a scale of 1 to 10, how would you rate this tool overall? Why?

A: Nine—this is a great light! The battery life and charge time are very good. The variety of options you have to mount and position the light is outstanding. The (top) flashlight works well but could stand to be a little brighter. The main lighting is awesome.



JOHN BAUMGARDT III is the owner/operator of Baumgardt's Auto Repair in Fillmore, Indiana. He has been a professional auto tech for about 20 years. He attended the two-year Auto

Mechanics program at Lancaster Vocational High School. Previously, Baumgardt worked at AAMCO Transmissions and earned about a dozen AAMCO certificates. He believes it's important to provide an honest, quality service that people can depend on.

This product was given to the reviewer free of charge from the manufacturer.

CATEGORY SPOTLIGHT

POWER TOOLS & AIR TOOLS

ho doesn't love a new power tool? While you may already have a go-to impact wrench or cordless ratchet, it never hurts to see what's new in the market. Power and air tools are constantly evolving. Whether it offers a better power-to-weight ratio, longer reach, faster charge time, built-in LEDs, or perhaps it can handle a specific application more efficiently, it's always worth checking out. Besides, your arms and back may thank you for the upgrade.



FEATURES A 3/4" BORE SIZE

The Ingersoll Rand 135MAX Heavy Duty Air Hammer is designed for vehicle, truck, bus, and heavy machinery repair. Weighing in at 4.5 lbs, the 135MAX HD Air Hammer delivers 2,600 bpm, with a 3" piston stroke. It also has a feather-touch trigger that provides the accuracy needed for fine-tuned pin driving and steering, making it ideal for jobs that require light handling. Featuring a 3/4" (19mm) bore size, the air hammer is available in a convenient kit that includes five chisels and the air hammer in a carrying case or as an individual tool.

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FOR PRECISE GRINDING AND MILLING

The **Mueller-Kueps Micro Die Grinder**, No. 297 001, is a mini composite tool ideal for precise grinding and milling with a variable speed twist throttle giving users superior speed control. The tool features maximum concentricity through its precision collet, minimal vibration, and less kick back. It also has a low noise level and is easy to handle due to its BIONIGRIP surface. Air exhaust goes through the hose to the rear.

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GEDORE

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Reliabilty and Durability for the Most Extreme Bolting Applications



DREMOMETER. THE ORIGINAL "LENGTH INDEPENDENT" TORQUE WRENCH

Extension tube friendly for increased leverage without risk of reading error. Over 25 different models 6 - 3,000 Nm range, accuracy +/- 3% Indestructable 100% milled aluminum exterior design. Clear audible and tactile "click" function.



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BATTERY OR MANUAL DRIVEN

The Vessel Rechargeable
Ball Grip Screwdriver
with 25-pc Bit Set, No.
220USB-25U, is ideal for
working in tight areas. The
cordless screwdriver can be
used manually for higher torque

or breaking screws loose or electric powered for quick tightening. The screwdriver charges in one hour and includes a USB cable for recharging. Also included is an extension for the bits. The kit comes in a solid plastic case.

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MAXIMUM TORQUE OF 35 FT-LBS

The Milwaukee Tool M12 FUEL 3/8" Extended Reach High Speed Ratchet is able to fit into tight spaces while delivering up to 35 ft-lbs of maximum torque. Featuring a long reach and small head size, users can complete critical applications around automobiles and heavy duty equipment. The extended neck design provides more reach and its compact head profile and recessed forward-reverse shift knob reduces the width, providing access at 0.76". The high speed ratchet delivers 450 rpm, weighs just over 2 lbs, and is also available in 1/4".

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How do you plan to service EV battery packs?

BendPak's revolutionary **Mobi-EVSTM** is a full-rise battery powered mobile scissor lift table that is perfectly suited for Electric Vehicle Service and EV Battery Pack replacement. With its compact design, this space-saving scissor lift can be easily transported anywhere in the workplace, making it ideal for multi-bay facilities or workplaces with confined areas.

To learn more visit www.bendpak.com/mobi-evs



Power Tools & Air Tools





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

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

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OUICK-CHANGE LOCKING COLLET

The 6-pc 4V Cordless Screwdriver Set, No. SBD4V6S, from Mac Tools features a compact design with a 300 rpm motor that maximizes speed while helping to minimize strain. The IP54 rating and durable handle material ensure jobsite protection against water and dust, while an internal locking mechanism stabilizes and protects gearing when manual torquing is required. Additionally, it offers five LEDs, a threestage charge indicator, a simple push button for driving and reversing, and an intuitive, quick-charge collet for bit swap-out and secure hold. Fully recharges in 70 minutes.

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PULLING FORCE OF 3,579 LBS

The Marson BT-8 Battery-Powered Rivet Nut Installation Tool from Howmet Fastening Systems is designed to deliver reliable pull-force for high-volume assembly applications. Engineered for versatility and extensive use, the tool is lightweight, has an ergonomic grip and built-in LED, offers ideal balance, and has a recharge time of approximately 45 minutes. The tool has a stroke length of 0.25" and a pulling force of 3,579 lbs. The BT-8 kit includes one tool with battery, battery charger, and carrying case.

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CATEGORY SPOTLIGHT 🔀



NOW AVAILABLE IN BLUE

The Matco Tools Long Barrel Pneumatic Air Hammer - Blue, No. MT2916B, delivers 2,300 bpm from a 3-3/4" piston stroke. The forward grip design gives the technician total control and helps maintain the chisel on the work piece. A rubber dampener helps reduce hand fatigue, shock, and vibration for ideal user comfort when powering through challenging applications. It also features a soft rubber overmold handle for a comfortable grip, an integrated chuck design for quick bit installation, and a front exhaust system that directs air away from the end user.

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OFFERS A MAXIMUM SPEED OF UP TO 7,000 RPM

The Martins Industries Impulse 1/2" Classic Impact Wrench, No. MX-C1, is equipped with a twin hammer design and delivers a maximum working torque of 531 ft-lbs with a maximum speed of up to 7,000 rpm. Designed with an ergonomically, grooved grip handle which maintains operator control, efficiency, reduces fatigue, and slippage during extended periods of time. The five-speed impact wrench also has a control mechanism to easily switch between clockwise and counter-clockwise rotational torque direction to suit users' lug nut fastening needs with the accompaniment of a 1/2" drive socket.

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Clamp Probe Set Cat. No. 21200

Originally designed to allow a lone technician to test for voltage drop on top battery posts; its handsfree operation is a useful diagnostic tool when a third hand is needed.

- Works with standard 4mm banana plugs
- Probe swivels and adjusts in height to test where you need it
- Works great for testing recessed connections
- Clamp tips for added grip
- Available individually as the 21215 (black) and 21216 (red)

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IDEAL FOR GENERAL CUTTING, BODY PANEL CRIMPING, AND MORE

The SP Air Long Barrel Air Hammer, No. SP-1400, is ideal for general cutting, body panel crimping, shearing, rust/paint removal, chipping, and scraping. It has a built-in air regulator, comfortable non-slip ergonomic grip, and a graduated tripper control. With an aluminum alloy housing, the tool is able to withstand tough environments, repeated drops, and exposure to harsh chemicals. Its quick change coil spring retainer allows for fast and easy chisel changes (chisel not included). It weighs 3.63 lbs, measures 8.5" in overall length, and has a free speed of 3,000 bpm.

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UPDATED FOUR-MODE SPEED SETTINGS

The DeWalt 20V MAX XR 1/2" High Torque Impact Wrench with Hog Ring Anvil, No. DCF900GP2, delivers up to 1,030 ft-lbs of maximum fastening torque and 1,400 ft-lbs of maximum breakaway torque. Its Precision Wrench mode helps prevent overtightening in forward and run-off in reverse for additional user control. Additionally, the impact wrench features updated four-mode speed settings, a variable speed trigger, and an on-tool LED. It measures 8.8" in length and 9.1" in height, and weighs 6.4 lbs.

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PROVIDES OPTIMAL DRILLING SPEED CONTROL

The Snap-on Mini Right Angle Air Drill, No. PDRR2005, is designed to allow technicians to access hard-to-reach areas quickly and more accurately. The variable-speed trigger provides optimal drilling speed control and smooth operation for high performance, plus an added degree of accuracy when precise drilling is critical. Weighing only 1.45 lbs, this compact air drill is small enough for technicians to tackle work in cramped compartments, while providing ideal power and durability.

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FEATURES ONE-HAND REVERSE SYSTEM

The Chicago Pneumatic 1/2" Cordless Impact Wrench, No. CP8854, is lightweight and compact, weighing 5.51 lbs with a length of 7.44". The CP8854 is ideal for tire changing and quick service wheel applications on light vehicles including cars and vans. Technicians can easily use the wrench to remove wheels quickly for access to brakes, suspension, and shock absorbers, and thanks to a built-in shut off feature, can then pre-tighten wheel nuts with no risk of overtightening. In addition, the tool features Chicago Pneumatic's one-hand reverse system (CP Side2Side) for ease of use and a bi-material handle that gives a comfortable grip.

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Power Tools & Air Tools



OFFERS 1,250 FT-LBS OF LOOSENING TORQUE

The AIRCAT 1/2" Composite Impact Wrench, No. 1125, weighs 3.8 lbs and offers 1,250 ft-lbs of loosening torque and 1,000 ft-lbs of maximum torque. Other notable features include a twin hammer mechanism, a patented ergonomic handle design, a patented quiet-tuned exhaust that reduces noise level to 87 dBA, an easy-to-use forward/reverse power management lever, and a low-weight, durable composite housing with a magnesium hammer case. The tool measures 7.1" in length.

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ALLOWS FOR LEFT OR RIGHT-HANDED USE

The Dynabrade 1-1/4" Diameter Mini-Dynorbital Extreme, No. X125TR, is a random orbital sander ideal for smallscale sanding applications. Its integrated speed control allows for fine adjustment of rpm for artistic results, sensitive workpieces, or when sanding/repairing a coated surface. Weighing just over 1 lb, the X125TR reduces fatigue and the likelihood of repetitive motion injuries during extended use. The tool is also compact, and has an ambidextrous design to fit naturally in most hands and allows for left or right-handed use. Includes tool hanger bracket for easy storage and a vinyl-face, locking-type pad (No. 54037) for quick and easy pad changes.

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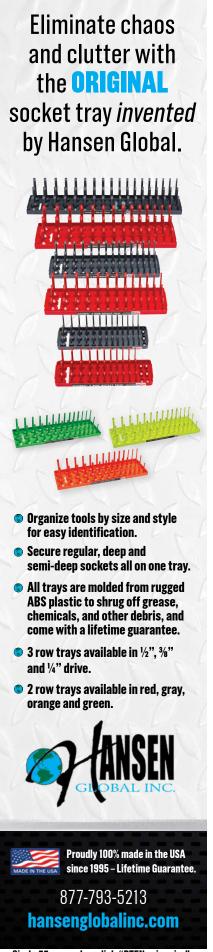
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A modular solution to tool storage

This technician used Milwaukee Tool PACKOUT storage to give him the freedom to modify his setup whenever he needs.

By Emily Markham, Editor

hop owner, technician, and drift racer Taylor Ray, has a rather unique tool storage setup. Where some technicians buy toolbox after toolbox to try and fit their everexpanding tool collection. Ray has a more modular solution.

A CHANGEABLE SETUP

After growing out of his previous Milwaukee Tool toolbox, Ray decided to take a new approach—he bought two 61" long Milwaukee toolboxes with worktops and pegboard backs as well as a variety of Milwaukee PACKOUT drawers, crates, and organizers. From there, he created a workstation for each side of his shop. The two sides mirror each other in that they both have one of the toolboxes and the same setup of PACKOUT storage. However, the setup on the less-used side



OWNER

Taylor Ray

Shop: Garage Built Co. Location: DeBary, Fla.

of the shop holds tools Ray doesn't use as frequently. Though both do contain the basics so tools don't have to trek from one side of the shop to the other.

Ray notes that "The reason I wanted to do it that way is...I can just switch them easily. I'm not stuck, so it's easier over time to tailor it."

Though Ray enjoys the flexibility of the PACKOUT storage, his favorite part of the setup is the pegboard backing on the toolbox. For him, it's an area where he can place his most used tools so he doesn't have to dig around in a drawer to find them. He also appreciates that the pegboard is on a track, so if he doesn't want to have it up he

doesn't have to. Additionally, he finds the worktops of the toolboxes to be must-haves.

"Having worktop spaces is like the most important thing in my opinion in the shop," Ray says. "If you don't have a place to put stuff while you're taking something apart or putting it together it makes it so difficult to stay organized."

Ray also appreciates that the wooden worktops are reversible, so when one side gets torn up, he can just flip it over to have a nice, clean slate.

WHY MILWAUKEE?

"I got my first Milwaukee box because it was pretty obviously the best value," Ray explains.

He recalls that for him there really wasn't any other option, and when his roommate wanted to get the same box, it was, unfortunately, no longer being made. They made a point to look for anything non-Milwaukee specifically to see if they could find anything better. Only after looking at all the toolboxes in his friend's price range they could, Ray felt that none were on par with Milwaukee. Ray has had his first Milwaukee toolbox for 16 years and has never had a problem with it.

KEEPING IT ORGANIZED

For Ray, organization is key. Like many technicians, he prefers to keep similar tools together so they can be easily found. The PACKOUT storage also offers him the ability to unclip the drawers from the wall so he can take those tools with him

In the future, Ray would like to add some tool storage cabinets to his setup. Overall, though he's happy with where his setup is at now.

To view a video of Ray setting up his workstations, check out his YouTube video here: youtube.com/watch?v=bVWtDa3S7Go. ⊗

Want to see more photos of Ray's box? Visit: VehicleServicePros.com/53028933





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