

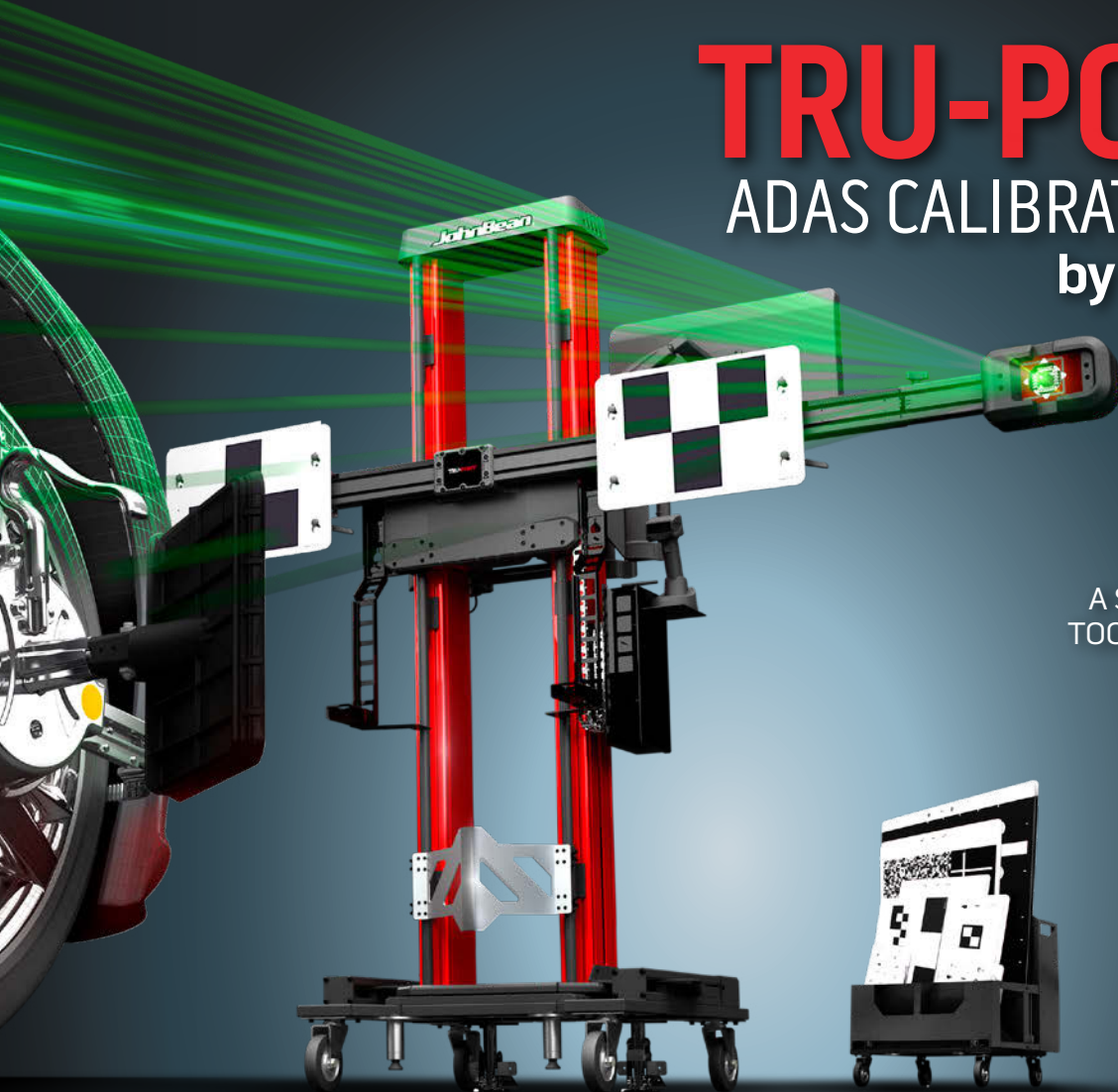
# PTEN

PROFESSIONAL **TOOL & EQUIPMENT** NEWS

\$15.00 • April 2021  
Volume 32, Number 3



## TRU-POINT™ ADAS CALIBRATION TOOL by John Bean®



### AFTERMARKET PROFILE

A SNAPSHOT OF WHAT  
TOOLS AND EQUIPMENT  
SHOP OWNERS AND  
TECHNICIANS ARE  
PURCHASING

**PAGE 22**

### CATEGORY SPOTLIGHT

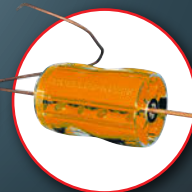
A/C SYSTEM TOOLS  
& EQUIPMENT

**PAGE 60**

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



▲ Black oxide  
finish to resist  
corrosion



▲ No additional  
tools needed



▲ Features a  
3-1/2" stroke length



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- C. 24609: Rechargeable Diagnostic Work Light
- D. 25245: Infrared Thermometer
- E. 37377: A/C Flush Kit



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to get deals on all OEMTOOL A/C Repair Tools



**NEW**

# ADAS CALIBRATIONS MADE EASY

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

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

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

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



Reflector for blind spot radar calibrations



Mobile and easy "all around" system for Volkswagen 360° camera calibrations



Contact us for more information  
about our diagnostic solutions.

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+1 855.200.8392

**TEXA**



17



22



59



60



66

## DEPARTMENTS

### 8 EDITOR'S NOTE

Understanding the reality that not all experiences can thrive virtually.

### 60 CATEGORY SPOTLIGHT

This month's section features product information and user tips on A/C tools and equipment. In addition to product details, this section features links to Tech Tips, related articles, and more.

### 65 MARKETPLACE

### 66 BIG-TIME BOXES

**Owner:** Eric Armstrong

**Shop:** Armstrong Automotive Repair

**Location:** Muskogee, Oklahoma

# CONTENTS

APRIL 2021 | VOL 32 | ISSUE 3

## ON OUR COVER

**Tru-Point ADAS Calibration Tool**  
by John Bean



## EXCLUSIVE

### 2021 AFTERMARKET PROFILE

See the feedback from shop owners and technicians on purchase plans and industry expectations for the coming year.

Purchasing Information  
**Page 25**

Diagnostics  
**Page 30**

Training  
**Page 34**

## FEATURES

### 10 FEATURED NEW PRODUCTS

Check out the new tools from John Bean, GEARWRENCH, Mighty Seven, and Mueller-Kueps. Then, read about all the other new products, beginning on page 11.

### 56 TOOL REVIEWS

Our review panel gives feedback on the following tools:

- Snap-on **TRITON-D10 Integrated Diagnostic System**
- Phil's Probes and Services **11" Phil's Electrical Piercing Probe**
- Ledlenser **P4R and P2R Work Pen Lights**
- Knipex **Cobra XS Water Pump Pliers**

## IN THE NEXT ISSUE

See what's new in Safety, Personal Gear, and Consumables in Category Spotlight.



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# WIRE STRIPPING REDEFINED

Part # 13 71 8



**NO THREADING REQUIRED** - Just push and cut, cutting screws just got faster!



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Shear type blades easily cut NM-B and BX/MC cables.

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**See the New Forged Wire Stripper in Action!** <http://bit.ly/KNIPEXFWs>

# NOW ONLINE AT **VEHICLESERVICEPROS**.com

## TOOL REVIEW



The reviewer appreciated the anti-fog feature, especially when having to wear a mask. **To read more, visit: [VehicleServicePros.com/21211833](http://VehicleServicePros.com/21211833)**

## BLOG



In establishing a career development plan, it helps if both management and technicians align on a baseline of where techs are currently at in their careers, where they want to go with their careers, and how they're going to get there. **To read more, visit: [VehicleServicePros.com/21212738](http://VehicleServicePros.com/21212738)**

## TECH TIP



Like all equipment, floor jacks should be inspected regularly for damage and kept clean. The owner's manual is the best source for specific recommendations on lubrication, when to change the hydraulic fluid, and other maintenance requirements. Bendpak provides five tips on maintaining your floor jacks. **To read more, visit: [VehicleServicePros.com/21165269](http://VehicleServicePros.com/21165269)**

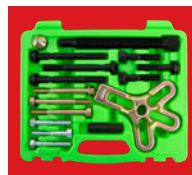
## VIDEO



Scott Brown, ASE Master Certified L1 Technician, provides a troubleshooting tech tip on using the SpeedSmoke unit from Redline Detection when addressing DTCs P0171 and P0174.

**To watch this video, visit: [VehicleServicePros.com/21211616](http://VehicleServicePros.com/21211616)**

## FEATURED PRODUCTS



### OEMTOOLS

Harmonic Balancer Puller, No. 37187

**[VehicleServicePros.com/21215093](http://VehicleServicePros.com/21215093)**



### Milwaukee Tool

Extended Handle Ratchets

**[VehicleServicePros.com/21212318](http://VehicleServicePros.com/21212318)**



### Milton Industries

5 In ONE Universal Safety Exhaust Couplers

**[VehicleServicePros.com/21215304](http://VehicleServicePros.com/21215304)**



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

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# Building contact back into our day

Understanding the reality that not all experiences can thrive virtually.

by **Krista McNamara**, Editorial Director  
*KMcNamara@EndeavorB2B.com*

**T**hese days, it is all about the “virtual” experience. It has taken over many of our schools, work environments, and even social engagements one would have never thought possible on a screen — birthday parties, holiday celebrations, even weddings and happy hour. You can have groceries delivered, a doctor’s appointment and — as we know too well — a vehicle repair, all while remaining contact-free.

As vaccines continue to roll out and we inch back toward closing the laptop and interacting in person, many of these virtual elements of life that have become routine will remain. While it is not a model that works best in a shop, a recent poll by Gartner reported that 80 percent of responding companies planned to allow remote work at least part of the time going forward.

Customers may continue to prefer a no-contact key exchange and text notification when repairs are complete, rather than scrolling through social media with a cup of coffee in your waiting room.

Technicians may find it easier to work on continued technical training through on-demand streaming options they can access on their own time, as opposed to having to travel to training events and adjust their work and family schedules accordingly.

The use of ecommerce for ordering tools and equipment continues to tick upward, and as we report in our Aftermarket Profile this month, 74 percent of our *PTEN* readers pur-

chase from online retailers including Amazon, eBay, Tooltopia, and more. Does this mean the automotive aftermarket is trending toward a model of as little contact as possible? Not quite.

Zoom, Microsoft Teams, Skype, and the like may have had a banner year. But the need for and importance of live, in-person communication and interaction remains. Ecommerce may be growing, yet our readers still name mobile tool distributors as their No. 1 source for tool and equipment purchases.

Over the past year, we’ve learned the meaning of “essential” in terms of the workforce. In keeping your business profitable and properly equipped, personal relationships also remain essential. Whether that be maintaining communication and connection with your customers or talking through a new tool or equipment purchase with your mobile dealer, some interactions cannot be replaced with virtual options.

As the newly appointed editorial director of Endeavor Business Media’s Vehicle Repair Group, I look forward to the opportunity to connect with our readers — both virtually when needed and in person when able. In better understanding our audience and their needs, I hope to help our group’s five brands — *PTEN*, *Professional Distributor*, *Motor Age*, *Auto Body Repair Network (ABRN)*, and *Aftermarket Business World* — remain a staple in the aftermarket space. It is a role that after nearly 15 years of experience in the industry I’m excited to tackle, albeit from my home office. So, while I prefer to meet you with a handshake and a hello, for the time being, virtual will have to do. ✕



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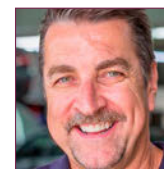
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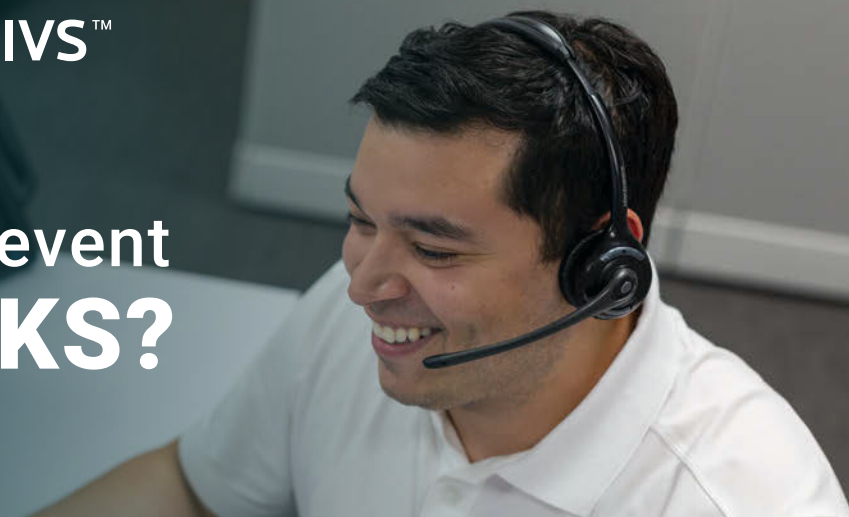
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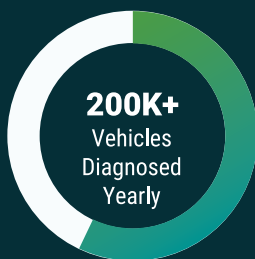


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# FEATURED NEW PRODUCTS



## BLACK OXIDE FINISH TO RESIST CORROSION

The **GEARWRENCH 7-pc 1/4" and 3/8" Drive SAE Bolt Biter Impact Extraction Socket Set**, No. 83911, features a bidirectional design for removing or tightening damaged fasteners. The sockets have a square drive with a hex base for use with impact guns, ratchets, wrenches, or pliers. With a tapered entry, the sockets easily seat on a damaged fastener. The sockets have a black oxide finish to resist corrosion and high-visibility laser etched markings to provide quick size identification. They are made with chrome molybdenum alloy steel for strength and long lasting durability. The set includes five SAE Bolt Biter extraction sockets and two impact adapters.

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## FEATURES A 3-1/2" STROKE LENGTH

The **Mighty Seven Heavy Duty Air Hammer with Long Barrel**, No. SC-212C, features an industrial-grade aluminum body, alloyed steel cylinder, and hardened piston. It delivers 2,200 bpm and has a 3-1/2" stroke length. The air hammer comes with a 4-pc round shank chisel set, designed for cutting and shearing various surfaces and materials. It's held by a spring-type quick-change retainer and has a one-year warranty.

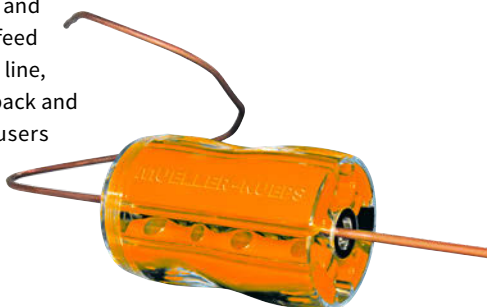
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## NO ADDITIONAL TOOLS NEEDED

The **Mueller-Kueps 1/4" Brake Line Straightener**, No. 462 046, is designed to straighten 1/4" brake line when it's bent. Using 16 ball-bearing precision rolls, the tool removes bends out of the line, resulting in a straighter line while saving the technician time. The tool is easy to use and doesn't require additional tools. Simply feed the brake line through the tool, hold the line, and with the other hand move the tool back and forth. If the line is particularly bent, users might need to move the tool back and forth a couple times.

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



## CREATES A 3-D MODEL OF THE VEHICLE FOR A COMPLETE ANALYSIS

**Tru-Point** from **John Bean** uses highly accurate advanced camera technology, targets, and software to quickly uncover any alignment problems the vehicle might have so technicians can perform ideal ADAS calibrations. With a simple streamlined process and real-time visual target placement indication, the system eliminates the need for manual measurements or guide references. By creating a 3-D model of the vehicle and its surroundings, Tru-Point can check if the vehicle meets the required OEM alignment specifications and also automatically compensates for the levelness of the workshop floor. The system is designed to help increase shops' productivity while eliminating uncertainty, the company says.

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## HAS A TWO-STAGE POWER LOCK-OFF

The **Makita 4-1/2" / 5" Paddle Switch Angle Grinder with AC/DC Switch**, No. GA5052, offers an 11A motor and delivers 11,000 rpm to handle high demanding applications, all in a compact size. The large paddle switch design allows for easy power start in multiple grip positions. The grinder features a narrow barrel grip design and rubberized side handle for increased user comfort. The guard can be rotated with a tool-less adjustment for increased productivity. Additionally, there is no lock-on power switch, but there is a two-stage power lock-off. The AC/DC switch allows the grinder to be used with an alternative power source.

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## ENABLES EASIER CUTTING OF THICKER MATERIALS

The **KNIPEX CoBolt S Compact Bolt Cutter with Blade Recess** is designed for cutting thicker materials with ease. The cutters feature a compact size, measuring 6-1/4" in length, and provide high cutting power, easily cutting bolts, nails, and rivets up to 11/64" in diameter. It has a slim head for better access to confined areas, a strong lever action mechanism that allows the user to exert less effort when using the cutter, and below the joint is a gripping surface for pulling wires with a diameter from 3/64". In addition, it has laser-cut edges on the blades which prevent material being cut from slipping.

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## OFFERS CLEAN AND SMOOTH DC POWER

The **Pro-Cut International X9D Rotor Matching System** is an on-car lathe powered by a variable speed DC motor, providing a quiet operation and smooth surface finishes. With less motor noise, the resolution is better during the compensation process, which leads to tighter run-out tolerances on finished brake rotors, the company says. The X9D offers variable speed with full digital control to allow the user to operate at any speed, insuring that axles with speed control-locking hubs can be machined without having to drop a drive shaft. In addition, the system tracks usage and ROI, and features a cutting head with 0.001" click adjustments.

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## PROVIDES EXTRA-LONG REACH FOR MORE ACCESSIBILITY

The **Cal-Van Tools XL Clip Lifter Set**, No. 114, features an extra-long reach for more accessibility when dealing with fasteners in limited space. The set utilizes 5mm and 11mm spreads, applicable across the automotive industry. Each lifter is offset for increased leverage, constructed of chromed high-strength steel, finished with vinyl grips, and easily stored in the included EVA foam tray.

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## HEAT-TREATED THREADS FOR DURABILITY

The **Lisle Corporation Small & Medium U-Joint Pullers**, Nos. 42890

and 42900, are designed to quickly and easily remove sealed U-joint caps without damage to driveshafts, yokes, or bearing caps. The two sizes allow users to



work on many cars, trucks, and agriculture equipment. They both have heat-treated threads and casting for durability. The 42890 works on cars, light duty trucks, and agriculture equipment with 1" to 1.25" bearing caps. The 42900 works on cars, medium duty trucks, and agriculture equipment and light industrial vehicles with 1.25" to 1.7" bearing caps.

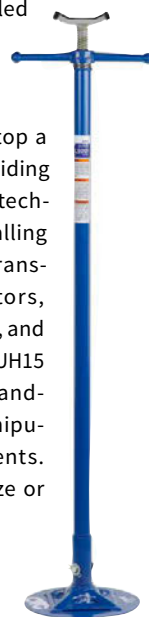
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## IDEAL FOR SUPPORTING POWERTRAIN COMPONENTS AND DRIVETRAINS

The **OTC 1,500 lb Capacity Auxiliary Stand**, No. UH15, is designed to provide partial support for positioning of vehicle components during their installation and removal, from Class 1 through Class 8 vehicles. Height is controlled by a threaded rod with a bearing-mounted T-handle for smooth and easy use.

An adjustable saddle sits atop a fixed column and base, providing high reach assistance to a technician for removing or installing vehicle components like transmissions, U-joints, radiators, driveshafts, exhaust systems, and catalytic converters. The OTC UH15 Auxiliary Stand is a freestanding device that can be manipulated to position components. It is not intended to stabilize or support vehicles.

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- Uses the force and vibration of an air hammer
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- Interlocking design keeps punch from slipping off crows foot
- 30% more steel, 30% stronger
- Built to precise ISO 1174-2 DIN tolerances
- Shockit Punch Kit and Individual Punches sold separately
- Patent #7,677,143 and other patents pending



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LT1910-24 in use  
with LT1910PS



### HEAVY DUTY INDUSTRIAL/HYDRAULIC SHOCKIT CROWS FOOT SETS

#### LT1900 10 Piece SAE Shockit Crows Foot Set

- Loosens hydraulic fittings on tractors, forklifts and heavy equipment
- Fits into small spaces between hydraulic lines
- Packaged in a custom display tray with clear cover

##### SET INCLUDES

3/4"	1-1/16"
13/16"	1-1/8"
7/8"	1-3/16"
15/16"	1-1/4"
1"	1-5/16"



#### LT1910 10 Piece Metric Shockit Crows Foot Set

- Loosens hydraulic fittings on tractors, forklifts and heavy equipment
- Fits into small spaces between hydraulic lines
- Packaged in a custom display tray with clear cover

##### SET INCLUDES

14mm	19mm
15mm	20mm
16mm	21mm
17mm	22mm
18mm	24mm



### HEAVY DUTY AUTOMOTIVE/HYDRAULIC SHOCKIT CROWS FOOT SETS

#### LT1920 13 Piece SAE Shockit Crows Foot Set

- Loosens fittings on steering, brake, AC & fuel systems
- Loosens the most difficult steering neck fittings
- Packaged in a custom display tray with clear cover

##### SET INCLUDES

1/4"	9/16"	13/16"
5/16"	5/8"	7/8"
3/8"	11/16"	15/16"
7/16"	3/4"	1"
1/2"		



#### LT1930 12 Piece Metric Shockit Crows Foot Set

- Loosens fittings on steering, brake, AC & fuel systems
- Loosens the most difficult steering neck fittings
- Packaged in a custom display tray with clear cover

##### SET INCLUDES

6mm	10mm	14mm
7mm	11mm	15mm
8mm	12mm	16mm
9mm	13mm	17mm



### SHOCKIT PUNCH KIT AND INDIVIDUAL PUNCHES

#### LT1910PK Shockit Punch Kit

- Offset design for greater access
- Non-turning slots
- Individual Punches also sold separately
- Patent pending
- Kit includes: 5.5" Short Punch
- 11" Standard Punch
- 22" Long Punch



#### LT1910PS 5.5" Short Punch

#### LT1910P 11" Standard Punch

#### LT1910PL 22" Long Punch



#### LT994 Shockit Socket O2 Sensor Removal Kit

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

- Air hammer powered Shockit Socket to easily access, loosen, and remove frozen and obstructed O2 sensors & diesel NOx sensors
- Works when ratchets, wrenches and regular sockets don't fit
- Includes low profile design for limited access and long profile design for deep recessed Ford®, Toyota® and Lexus® applications
- Removes NOx sensors on Kenworth®, Cummins®, International®, Detroit & Volvo® diesel truck engines
- Non-slip self centering air hammer angled 11° punch for limited access applications
- 18mm dual sided tap/bottoming die for O2 sensor and mounting hole threads
- Dual ear socket design for 90° rotation without repositioning socket
- Engineered to precise German DIN standards
- Additional Punch sizes available - see above
- Patent #7,677,143 and other Patents pending



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



IN USE

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**We Make**



# INNOVATIVE AIR POWERED TOOLS!

## LT886 Radiator Rocket Coil & Line Cleaner

- Think AIR rocket powered broom/wand
- Clean cooling coils for radiators, transmission lines, oil and fuel lines
- Clean air to air aftercoolers, condensers, evaporators, fluid coolers and much more
- Ideal for trailer truck, dump truck, earth moving tractors, agriculture, municipal, construction and fleets
- Can be configured in 3 foot; 2 foot; or 1 foot lengths
- Eliminates need for vehicle jacks or lifts to access buried coils
- Four inch air slot for maximum air cleaning volume and pressure
- Removable brush head for access to space constrained coils
- Able to access gaps of 1" with brush, .7" without brush
- Use close-up without fear of air pressure bending fins



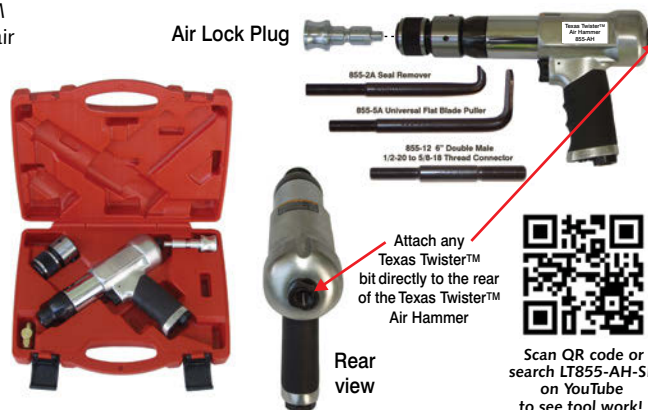
## LT855A Texas Twister™ Air Hammer Pulling Kit

- Now you can convert your air hammer into a pneumatic slide hammer with the Texas Twister™
- Simply snap the Texas Twister™ curved Primary Drive Bar into the collet of your hammer with one of the bits attached. Reverse the air hammer handle in your hand now using thumb to push the hammer trigger
- Feel the 3000 air hammer blows per minute turning into new pulling power
- One hand operation allows you to hold parts with your other hand
- Safe controlled part removal without parts and fluids crashing to the floor
- Use 21st century air hammer pulling power to get the job done SAFE, FAST & EFFICIENT instead of a slow, manually powered 19th century slide hammer
- Extend the reach of the tool by using the 20" extension
- Includes two puller connectors - 1/2"-20 to 5/8" and 1/2"-20 to 3/4" to connect the Texas Twister™ to your 5/8" & 3/4" slide hammer bits and pullers
- Includes the 855A-18 Vise Grip Adaptor to connect your 7/16-14 thread vise grips to the Texas Twister™
- **NOW COMES PACKAGED IN A CUSTOM PLASTIC GRAY DISPLAY TRAY**
- Includes a custom black ballistic nylon carrying case
- Patent #7,036,211



## LT855-AH-SK Texas Twister™ Bidirectional Air Hammer Starter Kit

- Bidirectional - use as air hammer or pneumatic slide hammer - 2500 BPM
- Just install the included air lock plug into quick release chuck in front of air hammer to convert to pneumatic puller
- Unlimited applications in automotive, aircraft, marine repair, farm implement maintenance, manufacturing industries
- Packaged in blow molded carrying case
- Includes air lock plug, quick release chuck, 1/4" NPT adjustable brass air flow regulator
- Vibration dampening system for reduced user discomfort and fatigue
- Patent #7,036,211
- Texas Twister™ Air Hammer Pulling Kit accessories included:  
855-2A - 7" Seal Remover - Pulls seals, bearings, brake hubs, axles, diesel injectors and axle pinion flanges and much more.  
855-5A - 7" Universal Flat Blade Puller - Use on engine pulleys, speed sensors, distributors. Pull body panels without breaking clips  
855-12 - 6" Double Male Thread Connector - Use to attach your specialty pullers directly to the Texas Twister™ Air Hammer



## LT4996 17 Pc. Foreign & Domestic Brake Caliper Socket & Bit Kit

- Works on most foreign and domestic vehicle brake caliper applications
- Most vehicle brake caliper bits/sockets when you need them
- Parts attached to your 1/4", 3/8" and 1/2" drive ratchet or similar tool
- Packaged in a custom blow molded case
- LT4996 upgrades and replaces the LT4995
- Individual parts for LT4995 are available as needed



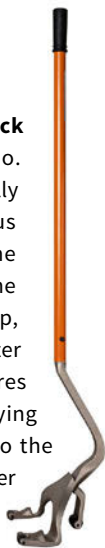
17 Pc. Kit Includes -	
1/4" drive bit - 9mm x 20mm	1/2" drive sockets - 11.5mm x 50mm
3/8" drive bits - 7mm x 24mm 8mm x 24mm 9mm x 50mm 7mm x 65mm 7mm x 92mm 11mm x 100mm	AS22 x 48mm 10PT x 15mm 10PT x 20mm 7pt PENT x 10mm PENT x 12.5mm PENT x 14mm PENT x 19mm
1/2" drive bit - 10mm	



## FEATURES ROLLERS AT THE ENDS OF ITS PRYING POINTS

The **Martins Industries Truck Tire Demounting Tool**, No. MDT-T, is designed to manually demount semi truck and bus tires from their rim. Once the valve core is removed and the bead is broken and lubed up, users can demount in a matter of four steps. The tool features rollers at the ends of its prying points to prevent damage to the tire or wheel as well as a rubber handle for a firm grip.

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

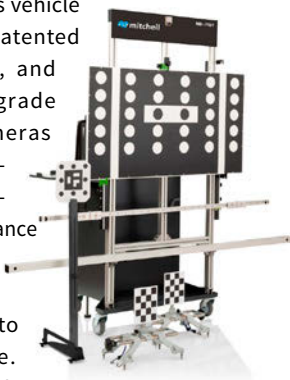


## GUIDES TECHNICIANS THROUGH EACH STEP

The **MD-TS21 ADAS Target System** from **Mitchell** and **Bosch** is a computer-based target system designed to allow repair facilities to quickly and precisely calibrate front-facing cameras, blind-spot monitors, and radar sensors in popular automobile models with ADAS. The MD-TS21 uses Bosch's vehicle coverage, patented technology, and industrial-grade digital cameras to automatically measure the distance and angles of targets in relation to the vehicle.

With the help of guided lasers, technicians can easily adjust the target board and radar reflector positioning in minutes without the need for plumb bobs, tape measures, and mirrors. The system is controlled by the accompanying MD-500 wireless tablet which includes Mitchell's cloud-based software.

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## ALLOWS FOR QUICK TIGHTENING WHEN RATCHETING IS NOT REQUIRED

The **VIM Tools 1/4" and 10mm Hex Reversible Bit Ratchet with Removable 1/4" and 3/8" Square Drive Adapters**, No. HBR1046, allows for quick tightening or loosening when ratcheting is not required due to its quick disk on the drive head. Its reversible 72-tooth gear head requires five degrees of sweep and the opposite end has a reversible 60-tooth gear head that requires six degrees of sweep. The small, low-profile ratchet is made of heat-treated Cr-V alloy steel and works with all 1/4" bits and 10mm fasteners. It includes 1/4" and 3/8" square drive inserts.

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## MEASURES 6.5" IN OVERALL LENGTH

The **Matco Tools 20V+ Cordless Infinium 3/8" Brushless Impact Wrench Kit**, No. MCL2038HIK, features a patented impact mechanism that reduces vibration. Its compact design measures 6.5" in overall length and its brushless motor technology provides 600 ft-lbs of breakaway torque. The impact wrench has four LEDs to illuminate the entire work area clearly and to light the way in poorly lit shop environments or engine compartments. In addition, the composite glass-filled nylon housing is durable against drops and resistant to shop chemicals while the soft rubber-over molded handle provides a comfortable and confident grip.

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## USED TO REMOVE BROKEN BOLTS OR REPLACE NEW BOLTS

The **Cornwell Tools 15-pc 3/8" Drive Bolt Extractor Set**, No. CTGBE15ST, is designed to provide greater surface control for less chance of slipping and less chance of damaging the bolt, the company says. The set may be used to remove broken bolts or replace new bolts. The size range includes: 1/4", 3/8", 7/16" (11mm), 1/2", 9/16", 5/8" (16mm), 11/16", 3/4" (19mm), 8mm (5/16"), 10mm, 12mm, 13mm, 14mm, and 17mm. The set also has a punch bar.

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## CLEARLY MARKED IN AN ORGANIZED CASE

The **Dent Fix Equipment Nylon Rivet Assortment Kit**, DF-NRAK, organizes six common nylon rivet sizes in a clearly marked tackle box style case. Technicians can simply reorder part numbers as they are marked above the different compartments and are easily viewed when working on a vehicle. The sizes include: 13/64" diameter, 15/32" flange, 15/64"-25/64" grip range; 13/64" diameter, 15/32" flange, 1/8"-15/64" grip range; 17/64" diameter, 1/2" flange, 3/32"-3/16" grip range; 1/4" diameter, 1/2" flange, 5/32"-13/32" grip range; 1/4" diameter, 21/32" flange, 5/32"-13/32" grip range; and 17/64" diameter, 23/32" flange, 3/32"-3/16" grip range.

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**TWO-POST**



**FOUR-POST**



**ALIGNMENT**



**MOBILE COLUMN**



**LOW / MID-RISE**



**PARKING**

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Model D2-10A

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The new D2-10C and D2-10A proudly adds to Dannmar's distinctive history of building feature-packed lifts with evolutionary steps in ergonomics, power, safety, durability and performance. Available in either asymmetric or symmetric configurations, each lift features a 10,000 pound lifting capacity, dual direct-drive hydraulics and a full 36-month warranty. The ALI Gold Label is proof of product compliance to rigid ANSI/ALI ALCTV safety standards.

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**12-Piece Adapter Set Included**



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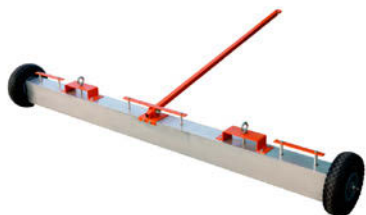
\*Special sale price ends 6/30/2021.

\*\*Free shipping applies to most destinations in the 48 contiguous United States.

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## SAFELY CLEANS UP FERROUS METAL DEBRIS

The **Master Magnetics VersaSweep 4-in-1 Magnetic Sweeper** can be used in four different configurations including tow, mount, hang, and push to quickly and easily clean up hazardous ferrous metal debris from indoor and outdoor traffic areas preventing costly injuries and repairs. Available in sweeping widths from 48" to 96", the VersaSweep works over any terrain and in any weather condition. The adjustable sweeping height allows for efficient cleaning of varying sizes of debris and the quick-release function makes cleanup fast and safe.

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

## OFFERS PRE-SET RPM AND IPM LEVELS

The **Milwaukee Tool M18 FUEL 3/8" Compact Impact Wrench w/ Friction Ring**, No. 2854-20, measures 4.8"

to fit in tight applications and delivers up to 250 ft-lbs of nut-busting torque. It also features 250 ft-lbs of fastening torque, along with the company's proprietary Powerstate brushless motor, Redlink Plus intelligence, and Redlithium battery pack. For increased visibility in confined and low-light workspaces, the tool has tri-LEDs to deliver bright light with less shadows. Additionally, the four-mode Drive Control feature offers greater precision with a range of pre-set rpm and ipm levels, and includes an auto shut-off mode and bolt removal mode.

**Circle 42 on card, or enter at "e-inquiry" on VehicleServicePros.com**



## FEATURES A SEE-THROUGH DESIGN

The **OEMTOOLS 8-pc Noid Light Set**, No. 37161, is designed to check electrical impulses from the wiring harness to the fuel injectors. It features a see-through design to check electrical pulses including GM TBI, GM SCPI, GM PFI, Ford TBI, GEO TBI, Bosch PFI, Bosch Type 2, and GM Multec 2. The set comes in a sturdy blow molded case.

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



## FULLY WELDED BOX FRAME CONSTRUCTION FOR DURABILITY

The **XTM Extreme Duty Reel** from **Coxreels** is designed for high demand industries requiring a level of construction above truck duty. Built with mining, off-road, heavy equipment, and heavy equipment lubrication in mind, the XTM series offers professional grade features inside a solid all-welded box frame with an integral roller bracket. The series features dual lubricated precision bearings, 1" stainless steel pinch-proof guide rollers, stainless steel lock ratchet, and an external fluid path with swivel retaining plates. Mounting options include bottom mount, floor mount, and wall mount. The XTM series is made in the U.S.A.

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## SPINDLE LOCK FEATURE FOR QUICK AND EASY ACCESSORY CHANGES

The **AIRCAT 115 Degree Angle Die Grinder**, No. 6295, features a .6hp motor and the company's silencing technology. The rotational rear exhaust with internal silencing reduces noise level to 87 dBA. In addition, the tool has a conveniently located spindle lock to provide quick and easy accessory changes as well as a speed control switch at the top of the tool for added control. The 6295 offers 18,000 rpm and a standard 1/4" Erickson-style collet. It weighs 1.65 lbs and measures 7.8" in length. The tool is ideal for working in tight or challenging spaces.

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## PROBE CAMERA CAN BE BENT IN TWO DIRECTIONS

The **Oasis Scientific Vividia W2240 Wi-Fi/USB Wireless 2-Way Articulation Borescope for Diesel Engines** features a small camera (less than 4mm/0.157" diameter) at the end of a 39.4" long probe. The small diameter is ideal for diesel engine applications such as cylinder inspections. The probe camera can be bent in two directions with a turning wheel from 0 degrees (front view) to 180 degrees (rear view) each direction. The insertion probe is flexible for easy operation and insertion. Users are able to record and save photos and videos. The built-in Wi-Fi and USB connection is compatible with iPhones, iPads, Android devices, Windows PC, MacBook, and Chromebook.

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NEW

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- Water & Dust resistant (IP68)
- 3 brightness settings
- Advanced Focus System
- Hardhat mounting option



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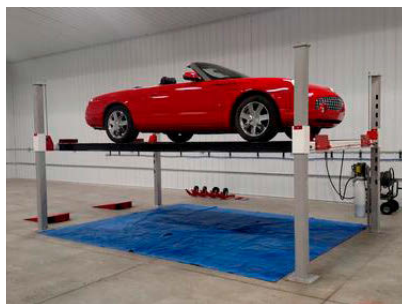
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## FEATURES 14 GAUGE OIL RESISTANT CORD

The **Legacy Manufacturing Flexzilla 50' Retractable Extension Cord Reel**, No. FZ8140503, includes 50' of 14 gauge oil resistant cord, a lighted triple tap outlet, and grounded 5' lead-in cord. The reel also contains a circuit breaker with a reset button, adjustable cord stopper, power indicator light, and a swivel mounting bracket. The reel locks the cord out in 1' increments and can be mounted to the wall or ceiling. The impact-resistant housing protects and stores the extension cord when not in use. The retractable reel is ideal for general, commercial, and industrial use in dry, indoor locations.

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



## OFFERS 6' OF CLEARANCE UNDER THE PLATFORM

The **Service Four-Post Lift by Backyard Buddy** features an overall length of 14' 5", height of 7' 5-1/8", and width of 8' 6". The lift is powered by a 120V power supply (also available in 220V). The unit offers a full 6' of clearance under the platform with extra clearance to accommodate taller vehicles. The lift is ideal for those with an extra tall ceiling.

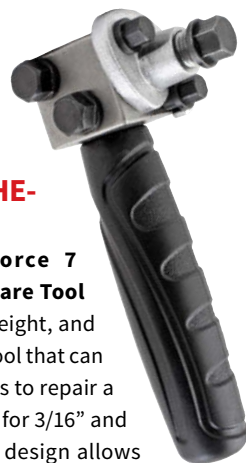
Circle 48 on card, or enter at "e-inquiry" on VehicleServicePros.com

## COMPACT DESIGN ALLOWS ON-THE- CAR FLARING

### The AGS Flare-Force 7 Series Handheld Flare Tool

is a compact, lightweight, and easy-to-use flaring tool that can be used in tight areas to repair a brake line. Available for 3/16" and 1/4" brake lines. Its design allows users to do on-the-car repairs as well as on a work bench. The flare tool has a die block system and two separate flaring heads to ensure a true 45-degree double flare every time. It's ideal for use on steel, nickel, and copper tube, and includes two flaring dies, a magnetic base, and easy-to-follow instructions.

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



## COMBINES FOUR KITS INTO ONE MASTER KIT

The **Schley Products Master Harmonic Damper Pulley Puller Kit**, No. 18000, accommodates applications including 2018 and later Ford Coyote engines, various models and production years of GM/Chevrolet, and other vehicles equipped with 3- and 6-spoke pulleys. It also accommodates many Ford, Dodge, Chrysler, GM and other domestic vehicles along with some import vehicles and compact cars equipped with 3-, 4-, and 6-spoke pulleys. The kit combines four harmonic damper pulley puller kits (Nos. 64900B, 18350, 17400, and 13450A) into one master kit. It also includes an extra set of spring washers and a spare clevis pin and comes in a blow molded box.

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

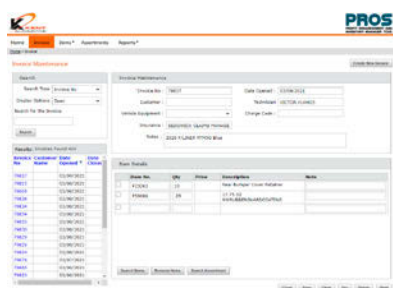




## HAS A FREE SPEED OF 10,000 RPM

The **Mighty Seven 6" Non-Vacuum Air Random Orbital Sander**, No. QB-52602, features a .24hp motor. It has a free speed of 10,000 rpm, air pressure of 90 psi, and a low vibration level. A durable aluminum body along with a heavy duty rubber cover reduces housing damage and downtime. Additionally, it offers a rubber palm grip that allows for one-handed operation, a hook and loop pad, rear exhaust system, and a wrench for easy pad replacement.

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## TRACKS ON-HAND INVENTORY LEVELS AND USAGE

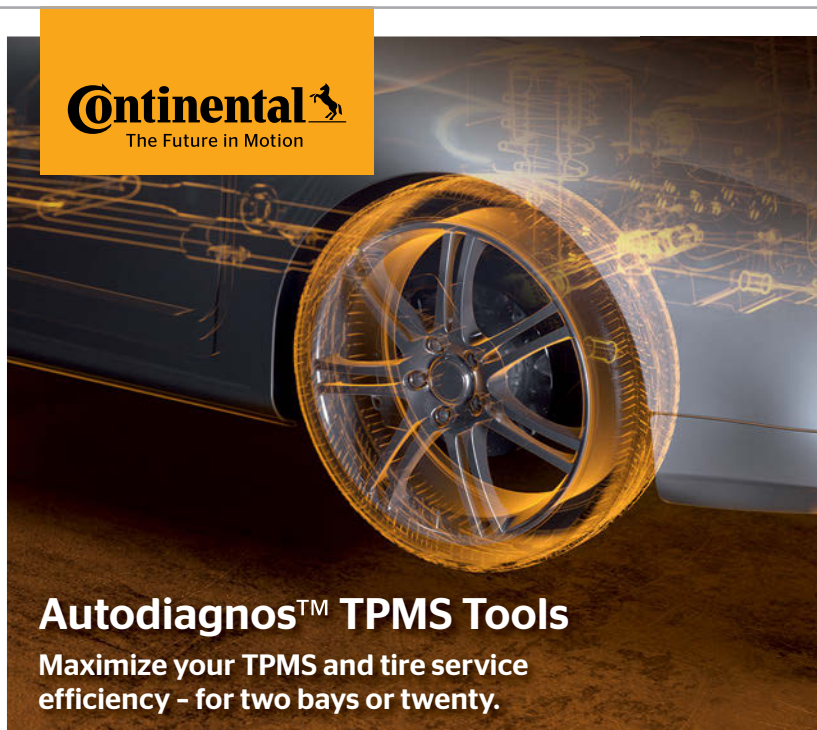
**PROS Profit Enhancement and Inventory Management Tool** from **Kent Automotive** enables body shops and collision repair centers across the U.S. and Canada to track and charge out applicable materials used in repair orders, eliminating waste and recovering the cost of consumable supplies. The cloud-based software and mobile app provides profitability reporting capabilities and an Inventory Manager feature that tracks on-hand inventory levels and usage, flags item minimums, and provides real-time valuation. It integrates with CCC Repair Workflow for fast entry, improved accuracy, and reduced cycle time. It also details all products on each repair order, including non-Kent Automotive items.

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## HAS A WHEEL DIAMETER OF 1-1/2"

The **Ascot Supply Gooseneck Stitcher** is an ideal repair tool for trucks, cars, and motorcycles. With its durable and ergonomic wooden handle, user comfort is optimized. It has a wheel diameter of 1-1/2" and a wheel width of 1/8" to work on a wide variety of repairs.

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## Autodiagnos™ TPMS Tools

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Get best-in-class vehicle coverage and the ability to perform TPMS service with virtually any OE or aftermarket TPMS sensor. Choose the enhanced features of the Autodiagnos TPMS D Tool or the efficient Autodiagnos TPMS SE Tool.

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# ***PTEN***

PROFESSIONAL TOOL & EQUIPMENT NEWS

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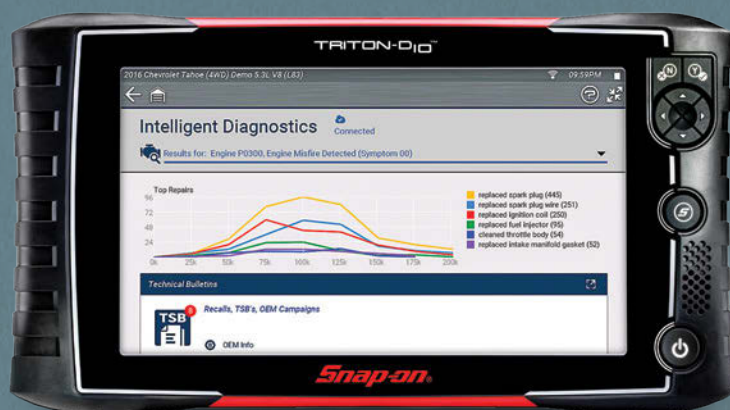
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**FAST-TRACK®**





**A snapshot of what tools and equipment shop owners and technicians are purchasing.**





## • TOP 5 SERVICE OPPORTUNITIES •



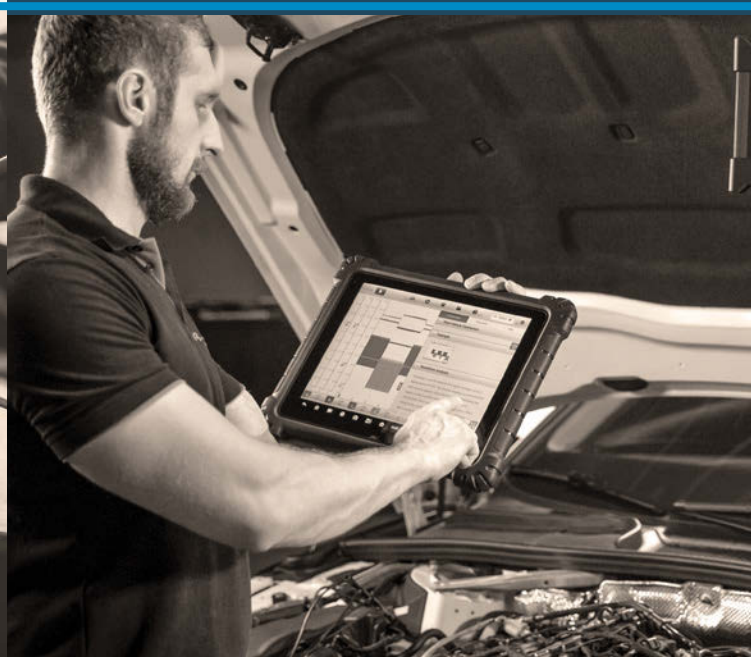
1. Maintenance Services – **45%**

2. Diagnostic Services – **43%**

3. A/C – **30%**

4. Reprogramming/reflashing – **29%**

5. Electrical/hybrid work – **27%**





## ♦ MAINTENANCE & REPAIR ♦

*What types of repairs does your shop offer?*

**87%** – Electrical & Diagnostics

**87%** – Brake

**79%** – Underhood Service

**78%** – Under Car Service

**56%** – Import Cars

**56%** – Tire & Wheel Service

**49%** – Welding

**43%** – Fleet Maintenance Services

**37%** – Tire Sales

**29%** – Hybrid Service

**19%** – Body Work

**13%** – Other



*What types of vehicles does your shop work on?*



DOMESTIC  
**95%**



ASIAN  
**72%**



EUROPEAN  
**58%**

LIGHT DUTY	<b>90%</b>
MEDIUM DUTY	<b>59%</b>
HIGH-PERFORMANCE	<b>32%</b>
CUSTOM/RESTORATION	<b>32%</b>
HEAVY DUTY/SEMI-TRUCK	<b>25%</b>
MUNICIPAL FLEETS	<b>20%</b>
MOTORCYCLES	<b>19%</b>
HEAVY EQUIPMENT/ OFF-ROAD EQUIPMENT	<b>19%</b>
OTHER	<b>6%</b>

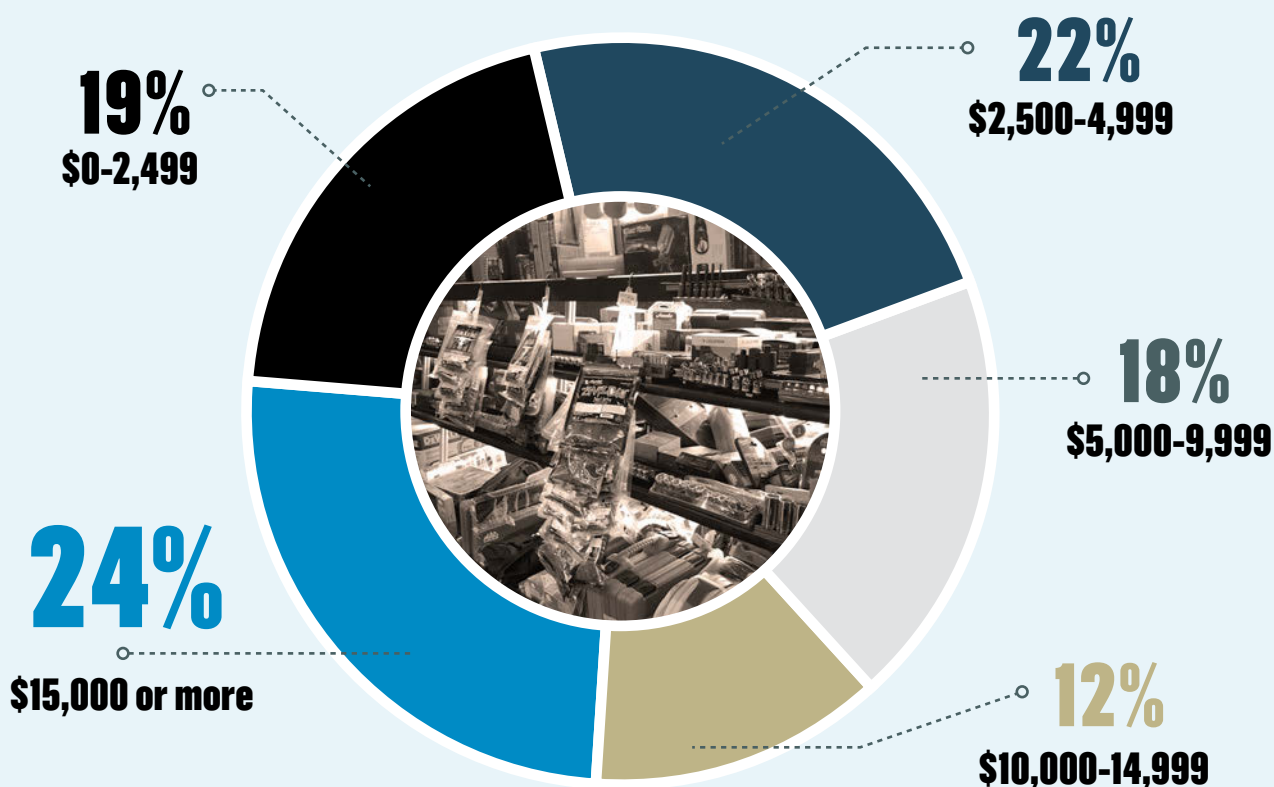
**56%** EITHER ALWAYS OR  
OFTEN CONSIDER  
WHETHER A PRODUCT IS  
MADE IN THE ★★★★★

**USA**

WHEN MAKING A PURCHASE.

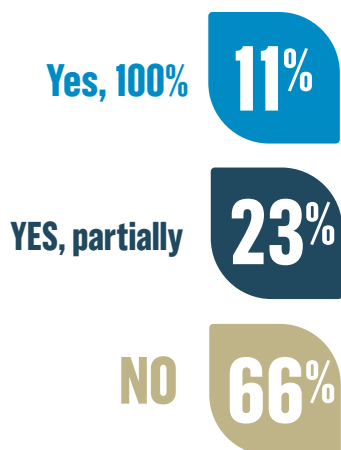
## ◦ BUYING TOOLS & EQUIPMENT ◦

**HOW DO YOU COMPARE?** *We asked shop owners:*  
*How much do you spend each year on tools and equipment?*

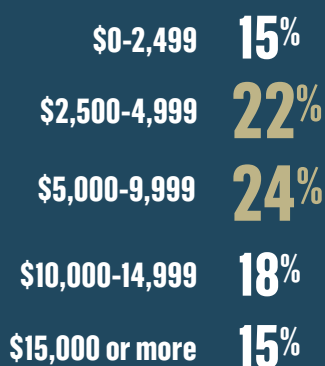


\*5% of respondents selected N/A

**Do you reimburse technicians for tool purchases?**



**How much do shop owners and technicians spend each year on tool purchases alone?**

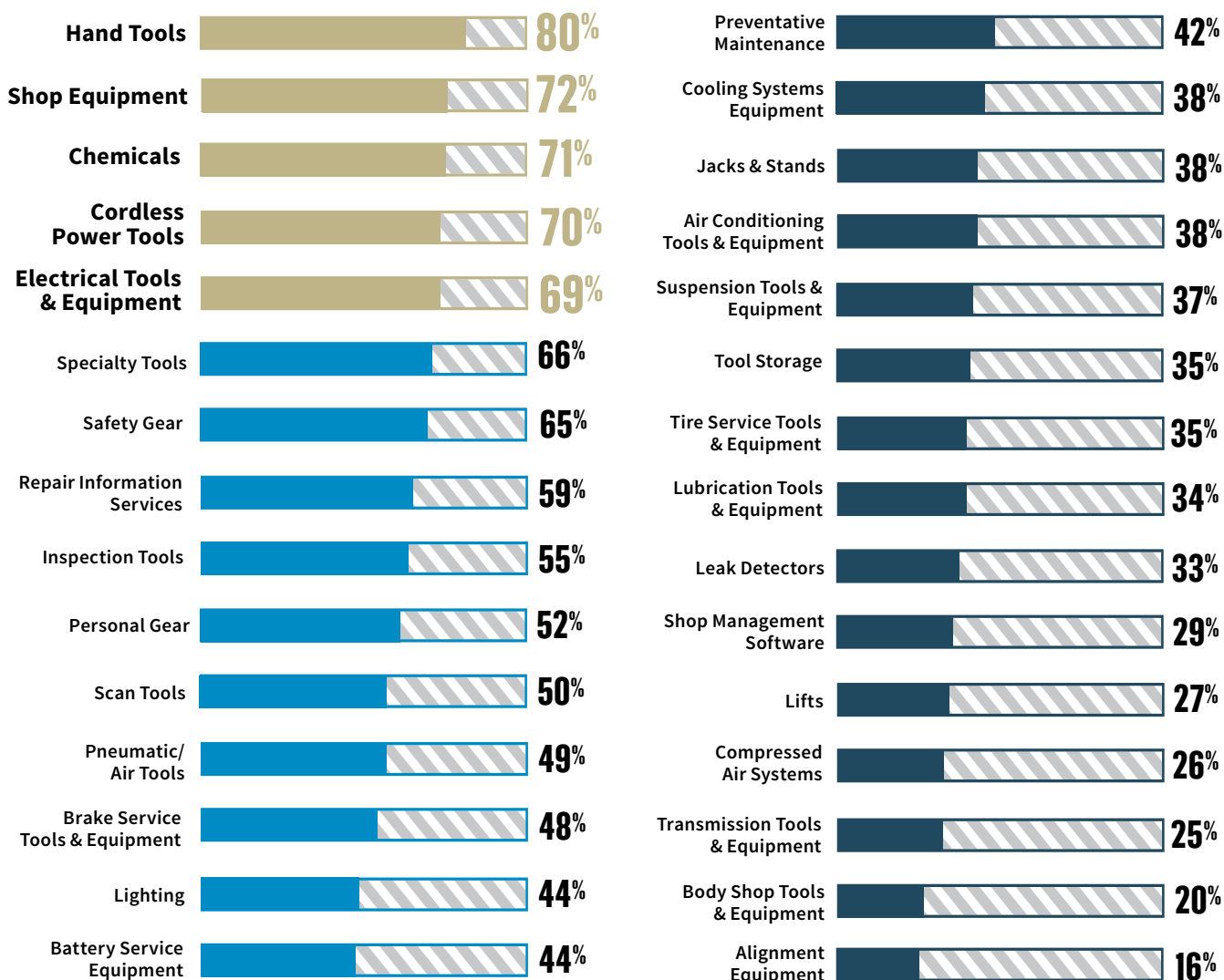


\*6% of respondents selected N/A



## BUYING TOOLS & EQUIPMENT

*Major tool category purchases for shop owners and technicians over the next 12 months.*



**MOBILE TOOL DISTRIBUTORS**

ARE THE

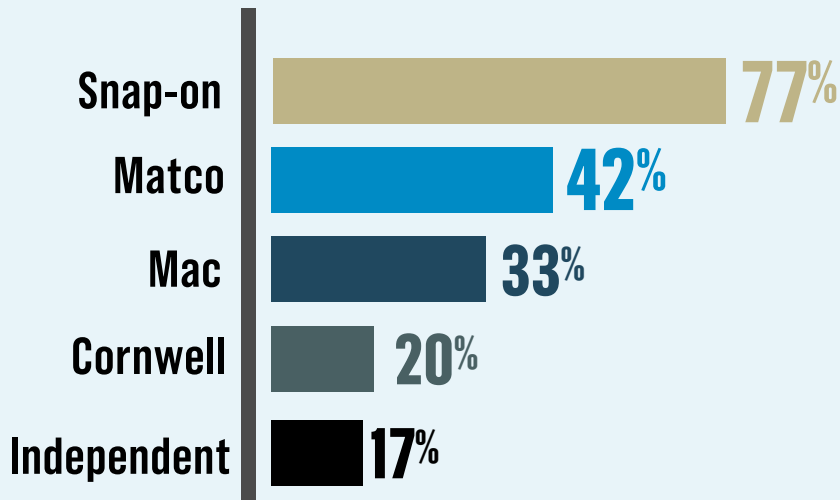
**NUMBER ONE**

SOURCE FOR

**TOOL & EQUIPMENT PURCHASES.**



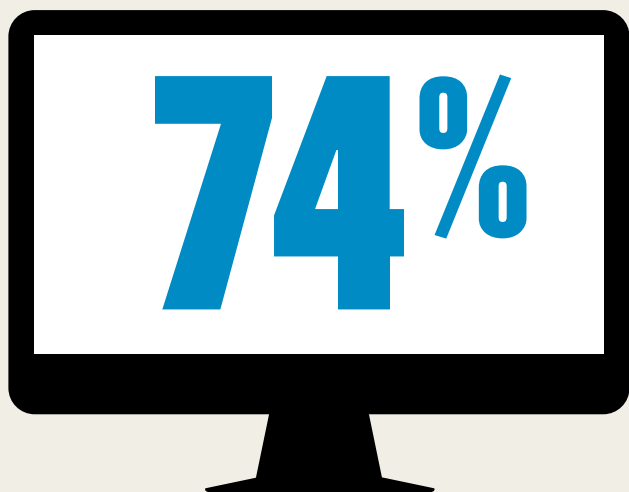
**Which mobile tool distributor(s) do you purchase tools from?**



**54%**  
OF SHOP OWNERS AND  
TECHNICIANS PURCHASE  
TOOLS FROM  
**MOBILE TOOL  
DISTRIBUTORS**  
MOST OFTEN.



**71%** OF YOU ASK YOUR MOBILE  
TOOL DEALER ABOUT NEW  
TOOLS THEY'VE SEEN IN  
**PTEN Magazine.**



OF SHOP OWNERS AND TECHNICIANS  
PURCHASE TOOLS FROM  
**ONLINE RETAILERS.**

(AMAZON, EBAY, TOOLTOPIA, ETC.)

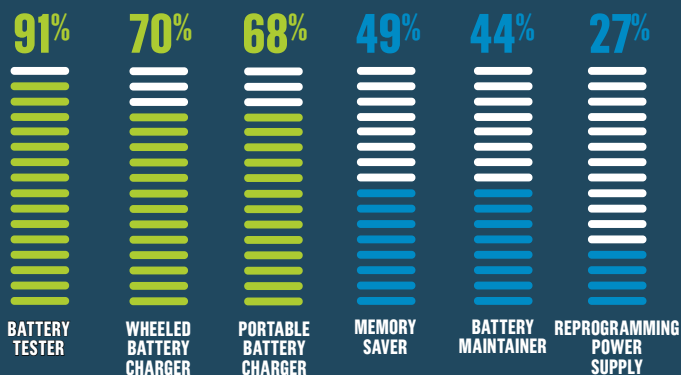
**Which auto parts stores do you purchase tools from?**



## BATTERY SERVICE

We asked shop owners and technicians:

What type of battery service equipment do you own?



Do you have a smart battery charger?

52% YES

41% NO

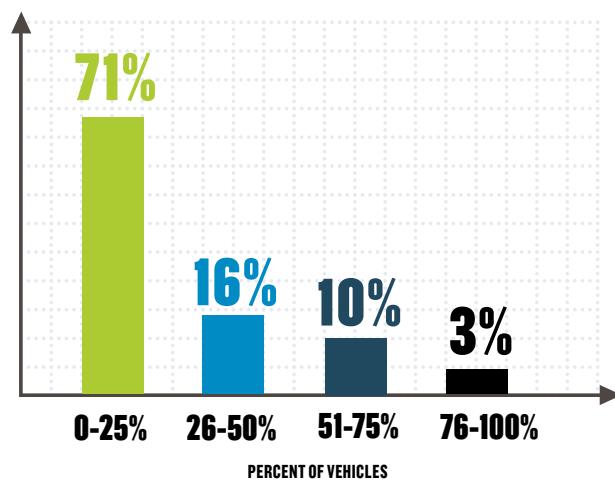
7% NO but plan to purchase in the next 12 months

How often do you see auto start/stop technology?



	2021	2020	2019
DAILY	17%	12%	
2-3 TIMES A WEEK	14%	15%	14%
ONCE A WEEK	11%	12%	10%
ONCE A MONTH	13%	10%	16%
ONCE EVERY FEW MONTHS	22%	22%	22%
NEVER	24%	29%	38%

What percent of vehicles do you service that have an AGM battery?



< **INTRODUCING** >

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## DIAGNOSTICS

**76%**  
OF SHOPS HAVE  
**AFTERMARKET SCAN TOOLS.**

*The leading OEM scan tools for diagnostic information used in shops.*

**59%**



**57%**



**44%**

**GMC**

**30%**



**31%**

**CHRYSLER**

*What diagnostic equipment do you own?*



Scan Tool

**88%**



Digital Multimeter

**87%**



Battery Service Equipment

**86%**



Code Reader

**77%**



Videoscope/Borescope

**63%**



TPMS Testing Tools

**56%**



Smoke Machine

**56%**



Lab Scope/Oscilloscope

**53%**



Digital Inspection Tool

**51%**



J2534 Programming Device

**34%**



Thermal Imaging Camera

**31%**

# 73%

OF SHOPS PROVIDE

## SCAN TOOLS

FOR TECHNICIANS TO USE.

# 70%

OF SHOP OWNERS AND TECHNICIANS  
WOULD ACCESS VEHICLE DATA

## REMOTELY

IF THEY HAD A

## TELEMATICS TOOL

OR DEVICE.



*Does your shop offer reflashing or reprogramming?*

**42% YES** **39% NO**

**19%** I WOULD, but don't own equipment to do so.

	2020	2019	2018
YES	40%	38%	37%
NO	40%	40%	42%
I WOULD	20%	22%	19%

THE NUMBER OF SHOPS OFFERING  
REFLASHING OR REPROGRAMMING

## IS ON THE RISE.



*Have you used a tool that requires a smart device?*



**57%**



**43%**

**We asked shop owners and technicians:**

*Do you have a diagnostic technician on staff?*

**79%** ✓

**YES**

**21%** ✗

**NO**

*Does your shop currently offer or plan to offer ADAS service in the next year?*

**7%** ✓

**YES**

we currently offer  
ADAS services

**17%**

**YES**

we plan to offer ADAS  
in the next year

**76%** ✗

**NO**

## • POWER TOOLS •



**We asked shop owners and technicians:**  
*Do you prefer air tools or cordless tools?*

**CORDLESS 47%**

**AIR 21%**

**NO PREFERENCE 32%**

**69%** OF TECHNICIANS HAVE REPLACED  
SOME AIR TOOLS WITH  
**CORDLESS TOOLS**

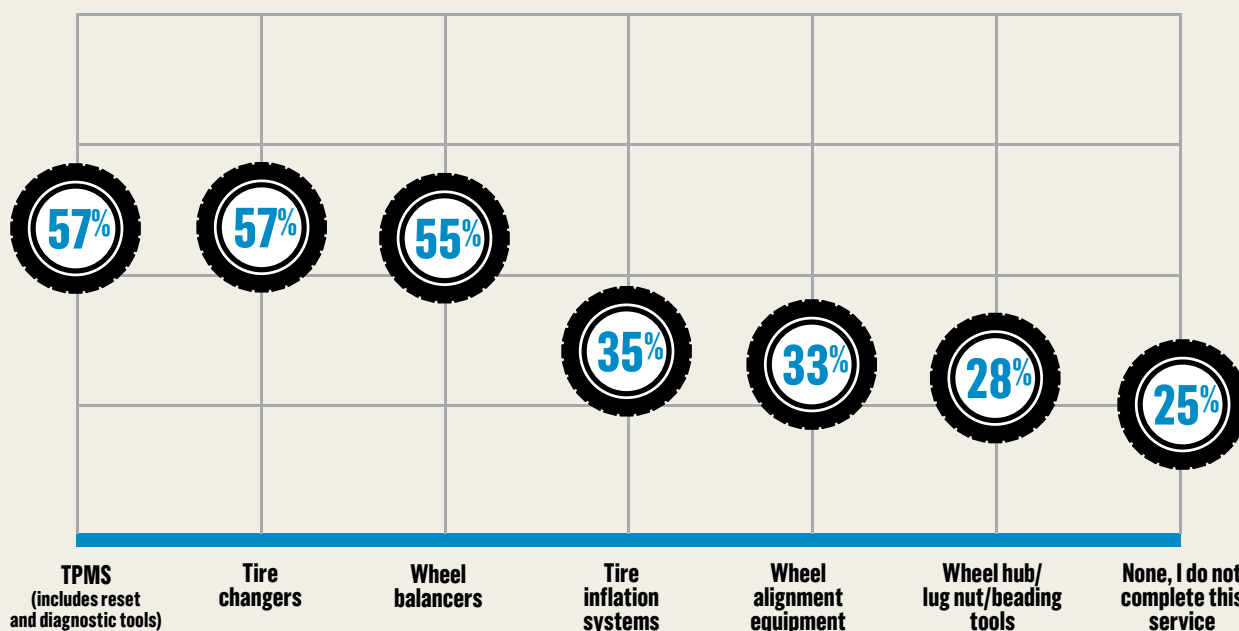
*What voltage of cordless power tools have you purchased?*

8V	12V	14.4V	18V	20V
4%	33%	27%	66%	52%



## • TIRE & WHEEL •

*What type of tire/wheel service equipment do you own?*







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From brake service to wheels and tires, when you want the job done right, choose Ranger. Advanced engineering, breakthrough technology and the highest standards deliver shop-tested performance you can depend on. Enjoy industry-leading performance backed by an assurance warranty that is clear, easy to understand and comes with the best support possible for your business. Call 1-800-253-2363 or visit [www.BendPak.com](http://www.BendPak.com).

**\$11,380**

Tire Shop Package  
SKU# 5140135

**\*FREE SHIPPING!**



## TIRE SHOP PACKAGE INCLUDES:

(1) R980XR Tire Changer + (1) DST30P Wheel Balancer + (1) RL-8500 Brake Lathe + (1) Wheel Weights Combo

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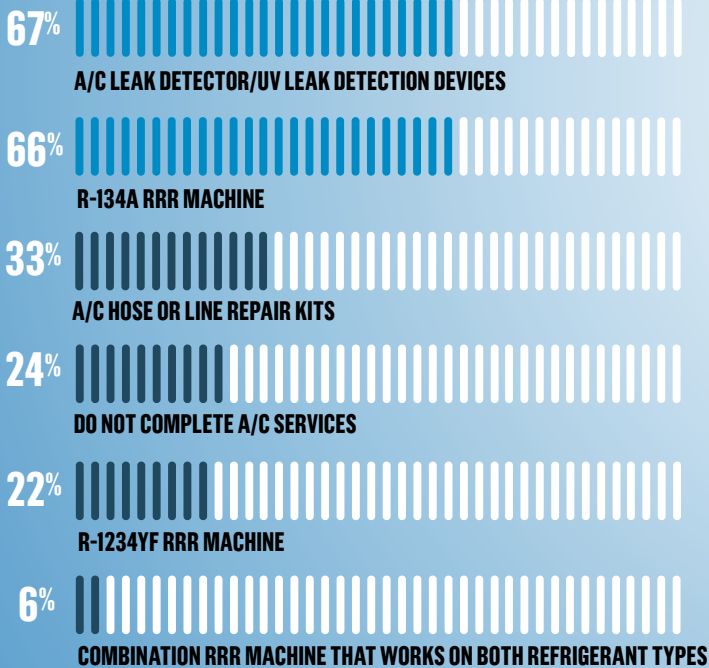
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## A/C SERVICE

*If your shop completes A/C service, what type of equipment do you have?*

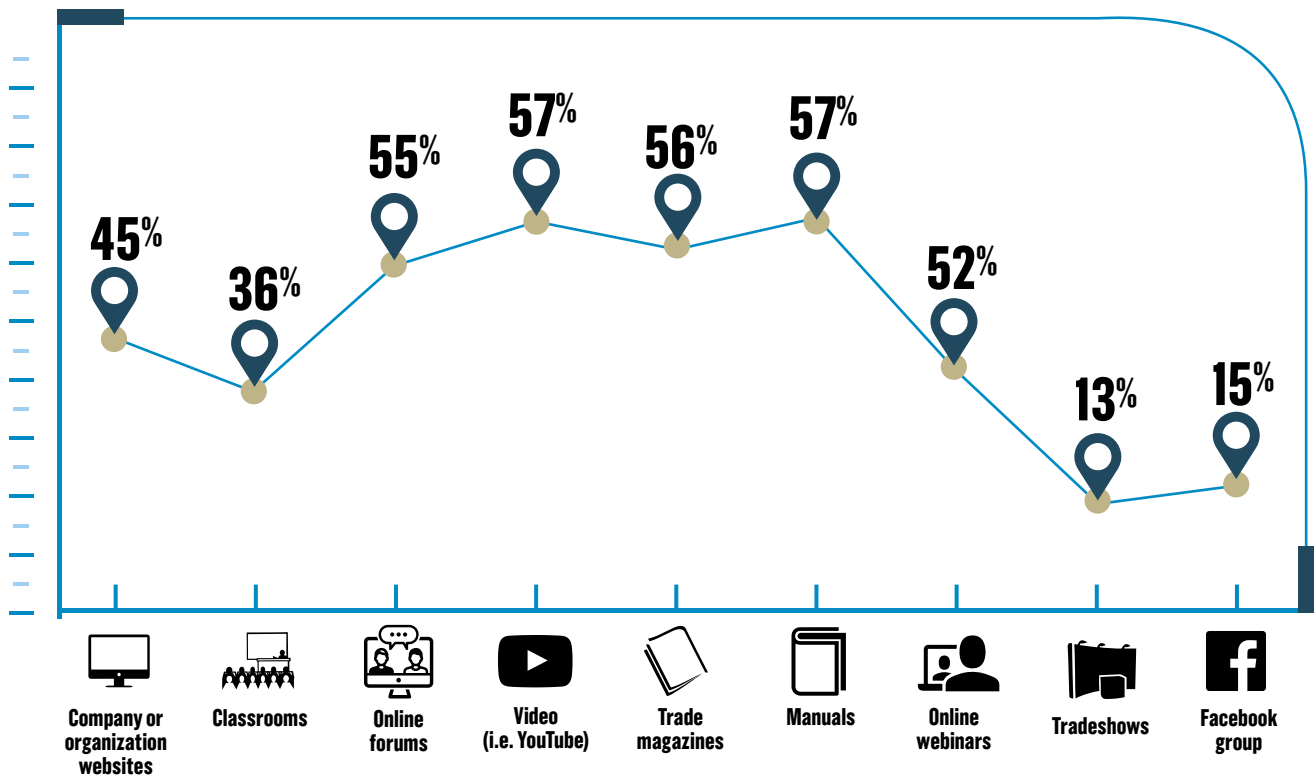


**61%**  
OF TECHNICIANS USE A  
**SMOKE MACHINE**  
TO HELP DETECT LEAKS  
IN VEHICLE SYSTEMS.



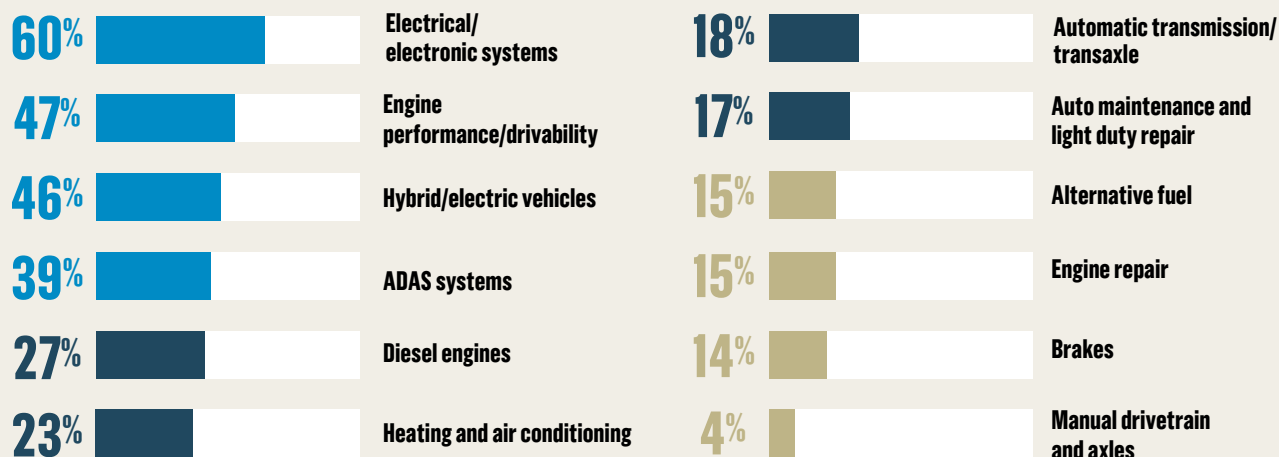
## TRAINING

*Where did you find training information in the last year?*

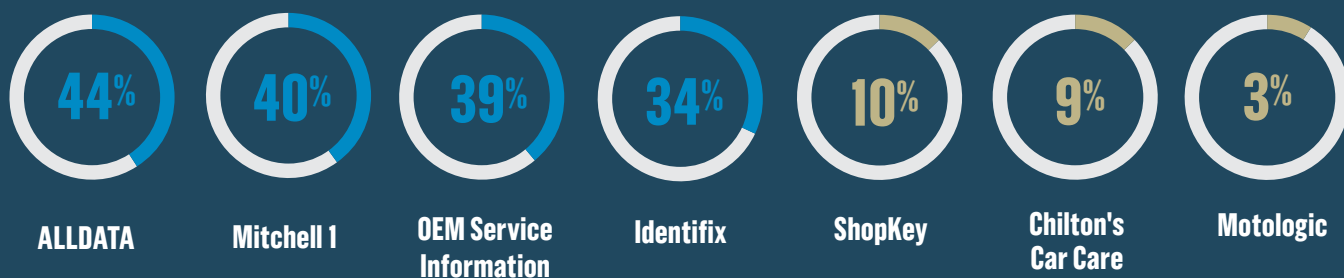




## In what areas do you feel training is most needed?



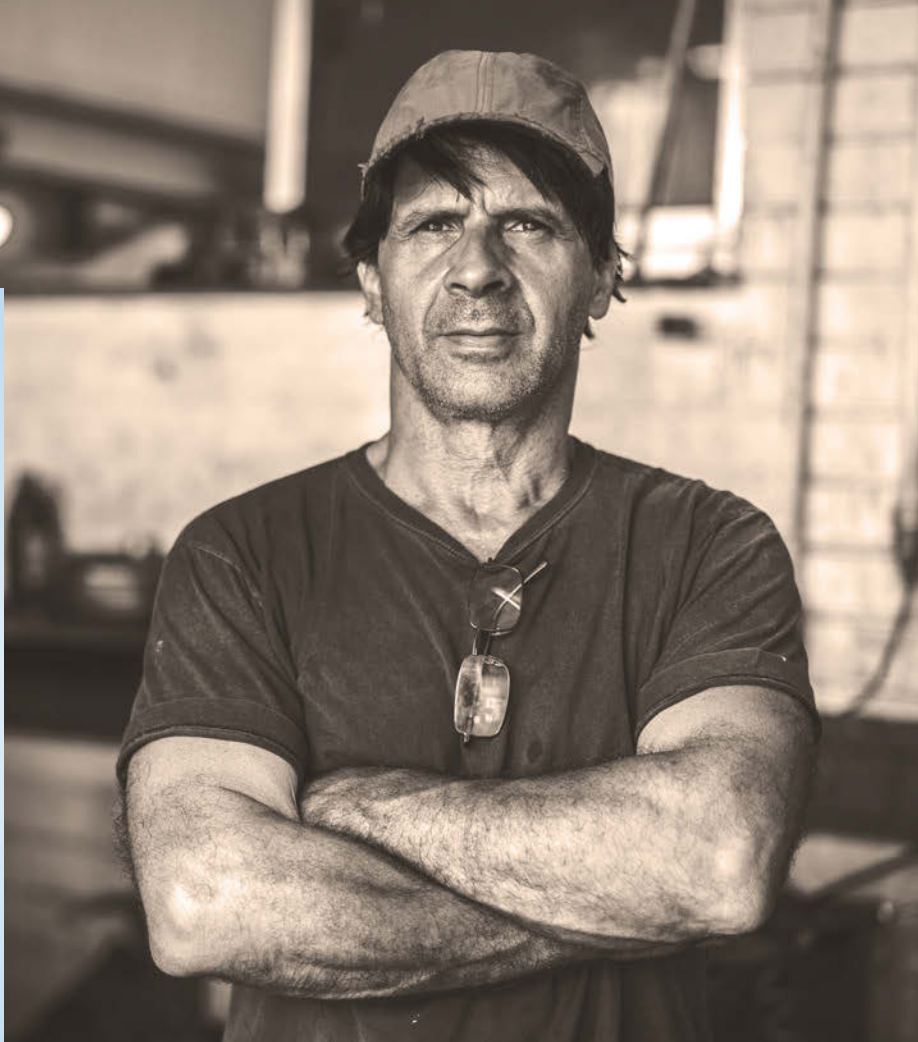
## What service information sources do you use?



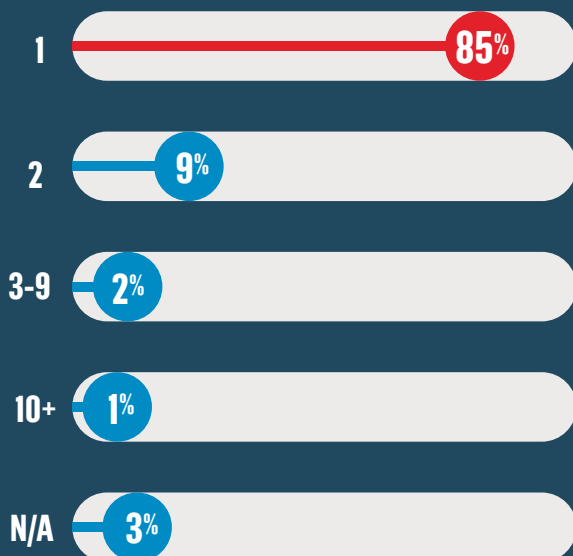


## INSIDE THE SHOP

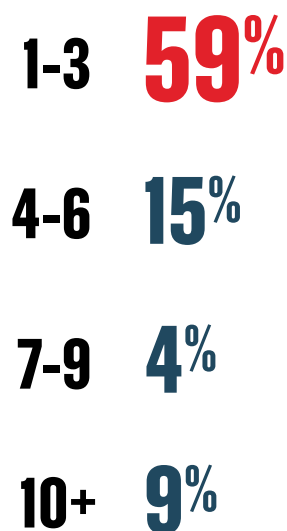
*What best describes your job title?*



**We asked shop owners:**  
*How many shops do you own or manage?*



*How many technicians are at your company (not including you)?*



\*13% of respondents selected "None, I am the only person working on vehicles in the shop."

## What is your primary business?

**52%** **GENERAL REPAIR SHOP**  
(auto, service repair)

**12%** **FLEET**

**7%** **HEAVY DUTY TRUCKING  
AND/OR EQUIPMENT**

**7%** **SPECIALTY REPAIR SHOP**

**7%** **COLLISION REPAIR/BODY SHOP**

**4%** **TRAINING FACILITY**

**4%** **NEW CAR OR TRUCK  
DEALERSHIP SERVICE CENTER**

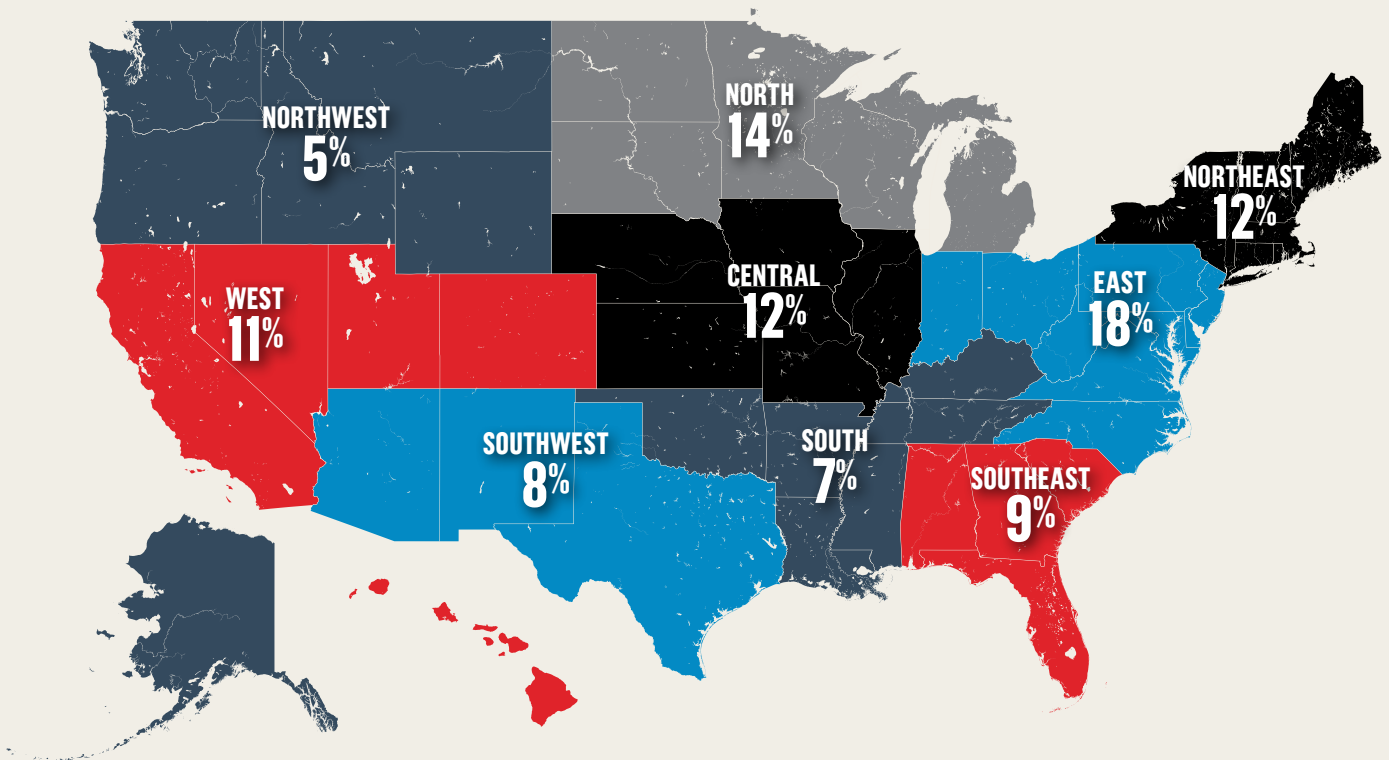
**3%** **IMPORT SPECIALIST**

**2%** **GAS/SERVICE STATION**

**1%** **FRANCHISE CHAIN**

**1%** **LUBE SERVICE**

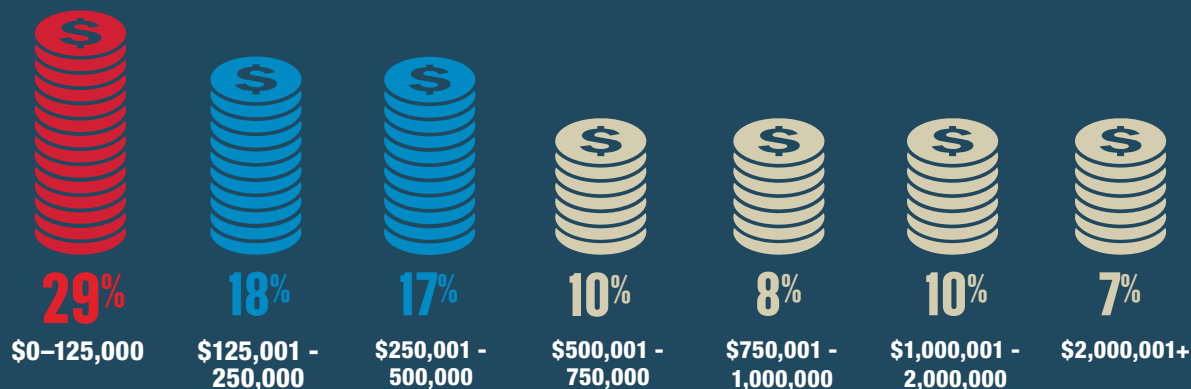
## Where are you located?



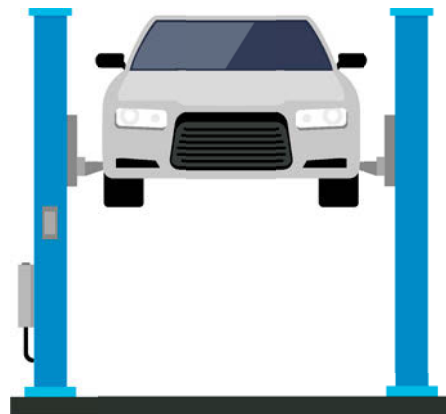
## INSIDE THE SHOP

**MORE THAN  
HALF**  
OF SHOP OWNERS ANTICIPATE  
**HIGHER OVERALL  
REVENUE IN 2021.**

### What is your annual shop revenue?



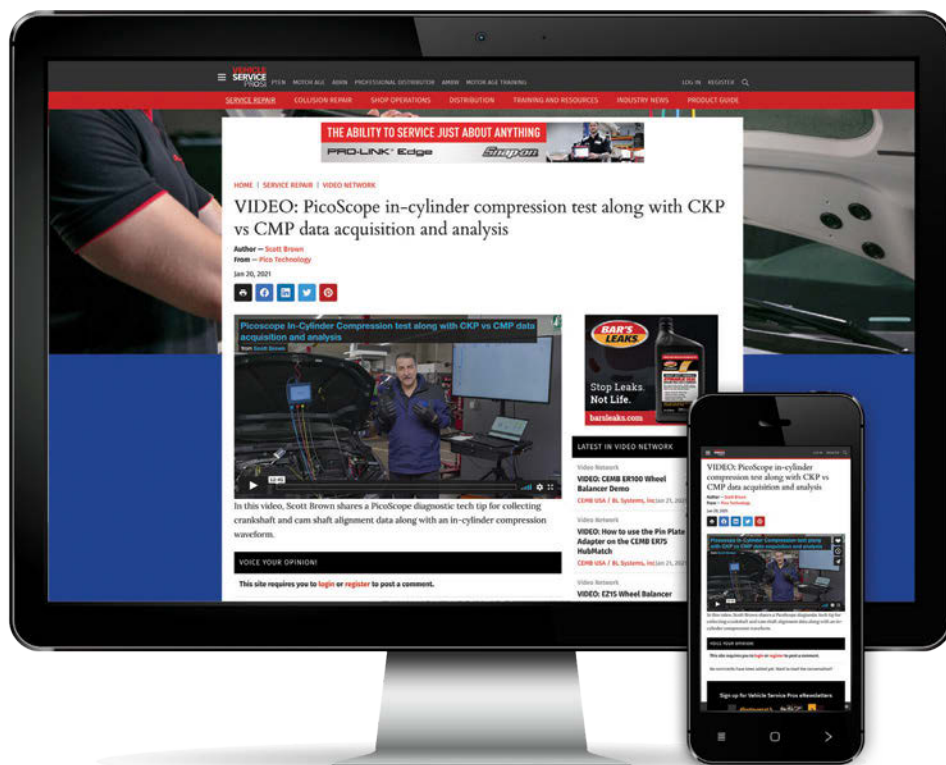
### How many bays are there at your shop?





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AUTO BODY REPAIR NETWORK

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BUSINESS** WORLD

**OUR NEWLY REDESIGNED WEBSITE** now brings you the most comprehensive coverage of the automotive service and repair industry. Combining all that's best from our leading publications, VehicleServicePros.com allows you to find tools, equipment, and parts via our improved Product Guide, browse articles in the updated automotive channels, access training resources, industry events, and so much more — all in one place.

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# Purchasing a TPMS Tool with Legs

So, you are looking to buy a new Tire Pressure Monitoring System (TPMS) tool for your shop. You want one that can activate and read every TPMS sensor out there. One that displays the Relearn procedures for each specific vehicle and can perform OBDII relearns for the mostly Asian vehicles requiring it. You want one that offers a sensor programming solution so you can easily replace damaged or failed sensors once detected. And you want a tool that can diagnose the module itself and its associated antennas and wiring.

OK, TPMS is covered, but those pressure sensors don't just come through the bay doors on their own; there are tires attached. Why not get a tool address the condition of the tires head on? That tool is the MaxiTPMS ITS600. In fact, what truly separates this tool from Autel's preceding TPMS tablets, besides its Android operating system upgrade and a lighter and slimmer design, is the tool's inclusion of much needed industry solutions to overall tire safety.

The ITS600 Tire Identification Number (TIN) scan and forthcoming DOT registration feature produces a real-time safety check for the customer's current vehicle tires and a method to ensure your shop is in compliance with government regulations when selling new tires. The TIN is the string of six to 13 numbers or letters marked on the tire sidewall following the letters DOT (Department of Transportation) identifying among other things, the week and year the tire was manufactured.

The date, of course, is vitally important as tire makers recommend that a tire six years or older be replaced—and a quick scan and the subsequent display of the tire's last four digits quickly identifies the age of that tire and advises the

technician he should recommend a tire placement to the customer.

TIN registration is another matter and one who's responsibility has shifted over the years between seller and consumer. But in 2016, the FAST Act made it mandatory that the tire seller register just-purchased tires on behalf of the customers. The goal, of course, is to alert customers of a tire recall and to get those tires off the road. Eighty-five percent of recalled tires are believed to be still out there. The ITS600 brings the capturing and registering of the TIN into the modern age, eliminating the hassle of mailing in postcards and reducing the possible transcribing errors (40 percent of registrations are invalid because the TIN was incorrectly written). The ITS600 makes compliance easy: Input the customers contact information, scan the tire and tap submit.

Still, the ITS600 offers more. Purchase either the TBE100 or TBE200 Tire Brake Examiners for laser-enabled

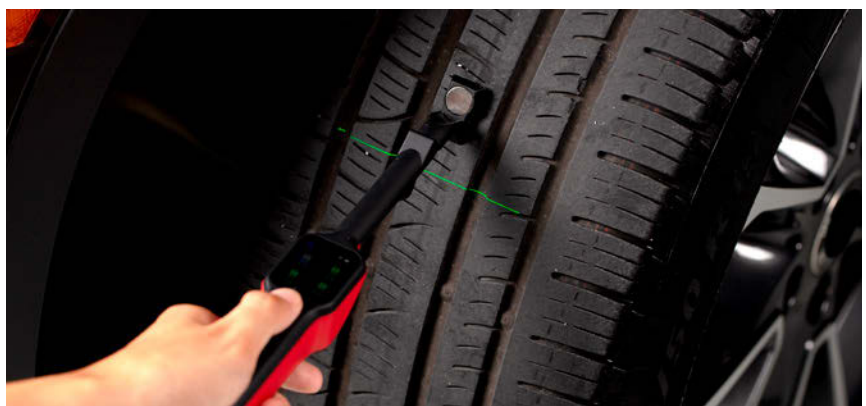
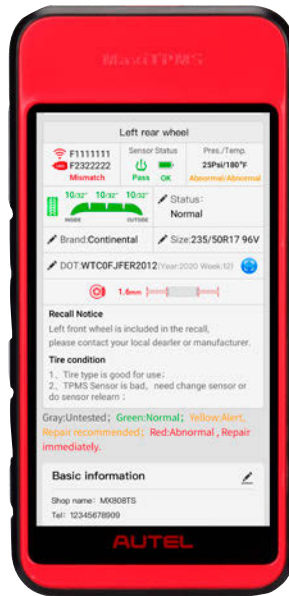
measurement of tread and depth and brake disc wear analysis. Pair either of these tools with the ITS600 to generate detailed customer reports advising of depth and disc wear. Here again, Autel

takes thread depth and wear measurement into the modern age. (Surely, it's time to move on from the Penny test.) The Tire Brake Examiners enlists a laser to scan the surface of the tire and generate a real-time image of the tread depth and overall tire wear. The tools display color-coded values or tire images (TBE100 and TBE200, respectively) alerting the tech to needed tire replacement. In a similar manner, the

TBE100/TBE200 produce detailed analysis of

disc wear. With both tests, the technician need not remove the wheel.

Regardless of the industry, the best tool investment should offer opportunities. Make sure the next TPMS tool you buy enables your shop to measure its success with improved efficiency, greater customer satisfaction and a flourishing bottom line. ■



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AUTEL MAXITPMS

ITS600

# ITSTPMS+MORE

## INTELLIGENT TIRE SERVICE

### TBE200

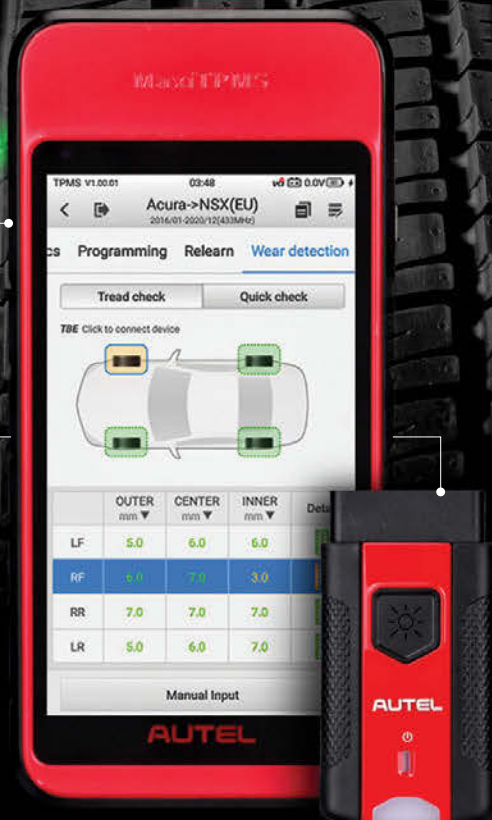
#### LASER MEASUREMENT

- Tire Tread Depth Measurement
- Brake Disk Wear Measurement
- No Need To Remove Wheel During Measurement
- 0.1mm Laser Accuracy

### 1-SENSOR

#### DUAL FREQUENCY

- Programmable Universal TPMS
- 99% Vehicle Coverage
- Exclusive Press Release Button
- Interchangeable Valve Stems



#### COMPLETE TPMS SERVICE

4 SENSOR PROGRAMMING OPTIONS

### ITS600

#### DIAGNOSTICS & SERVICE

- 5.5" Touchscreen Tablet with Android 9.0 OS
- Optical Scanner Identifies VIN / MMY
- Four Service Resets OLS, BMS, SAS and EPB
- Read & Erase All System Codes
- FREE Wi-Fi Software Updates for Life Of Tool

POWERED BY  
**AUTEL**  
DIAGNOSTICS



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COAST's line of Pro-Auto Work Lights includes (left to right) PM500R, FL75R, SX300R, TX14R, PM300, G20 C.O.B and the WLR1.

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At COAST, we are proud to call the garage and shop our ultimate testing grounds. These are the places where our signature optical technologies prove their power time and again—including our famous Inspection Beam and dynamic, flood-to-spot focusing beams. In business for more than 100 years, COAST designs best-in-class lighting solutions for the professional auto worker.

Get the exact quality of light the job demands—bright or soft, flood or spot. Whether you're searching for a line leak or removing a radiator, you can trust the heritage of COAST quality to light the way.

### PICK YOUR POWER SOURCE

When the work tickets keep coming, COAST's Dual Power technology provides you in-the-moment flexibility to use either alkaline batteries or rechargeable batteries—for a more convenient and cost-efficient way to guarantee you are never without your light.

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### INTRODUCING COAST PRO-AUTO WORK LIGHTS

Building on a deep history of innovation, we applied our patented technologies to the needs of automotive professionals and created a cutting-edge line of COAST Pro-Auto Work Lights. This family of hands-free lighting offers a wide array of useful features—such as magnetic bases and tail caps, swiveling heads, and rotating focusing optics—to shine light right where you need it, whenever you need it. No job under the hood can hide. As they say, it's all about working smarter not harder. ■

# COAST®

#### COAST Products

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**TRUSTED TOUGH.**

COAST's rechargeable Pro-Auto Work Lights are equipped with beam-shaping optics and adaptable hands-free features — magnetic bases, clips, and head straps — to keep you nimble and your workspace bright.

## RECHARGEABLE

PM500R Rotating Light



## RECHARGEABLE

FL75R Focusing Headlamp



## RECHARGEABLE

SX300R Stretch Light



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# Bosch ADS X: The Next Generation in Scan Tools

## EXTREME FLEXIBILITY, EXTREME ACCESS AND EXTREME SPEED

**D**iagnostics is at the heart of any vehicle repair. The best technicians know they can't just identify the problem. They understand that getting to the root cause of the problem is the true meaning of diagnostics. To get down to the root cause, a technician needs the right tools. The best diagnostic scan tools are the ones that give the technician flexible access to the tools they need and the speed to access the information required to identify the underlying causes of the problem.

Bosch has designed its new ADS X scan tools to give technicians what they need most: flexibility, access and speed in the most extreme ways. The new ADS X tools are designed from the ground up to be the fastest scan tools in the market. In addition to Quick-Scan, the fastest, complete pre- and post-scan capability, the ADS X tablet uses the latest and greatest hardware powered by an Android 9 (or higher) operating system, to diagnose the problem faster.

With 14 hours of on-screen battery life and weeks of standby time, ADS X also gives technicians the access they need to diagnose and repair vehicles. Bosch scan tools are compliant with OEM vehicle security protocols, giving authorized, secure access to vehicle systems.

The unmatched flexibility of the ADS X scan tools allows technicians to choose their level of repair information. Flexible subscription options give the power to upgrade at any time to an Enhanced subscription, including access to critical, on-screen, repair information through Repair Source, Bosch's on-tool OEM service and repair information library. Bosch ADS X scan tools come with a limited-time 30-day, money-back guarantee. ■

**Learn more at  
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## EXTREME FLEXIBILITY

- **Enhance your software subscriptions** for what you need most. All-access coverage for your first year included, plus 30 day free trial of Enhanced Subscription which includes industry leading, full-system color wiring diagrams and Repair-Source, a complete on-tool OEM service and repair information library. You have the power to upgrade to the Enhanced subscription at any time.
- **Up to 14 hours of uninterrupted battery life** and weeks of standby time will give you superhuman endurance.
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## EXTREME SPEED

- **Quick-Scan** powers all-systems DTC scans that clock in at under 60 seconds and complete scans in 30 seconds or less for many vehicle makes and models.
- Complete **pre- and post-scan reporting** for all possible systems available for the vehicle will have you flexing your new diagnostic muscle.
- **All-new Android 9+ software and redesigned VCI hardware** gives you unprecedented, future-proof processing power – allowing you to browse videos, navigate online resources, utilize productivity tools and more without breaking a sweat.

## EXTREME ACCESS

- Feast your eyes on the **ultra-crisp, widescreen 8" and 10" displays** that provide outstanding visibility indoors and in bright sunlight.
- 100% OE-approved for secure vehicle access. Unlock the FCA Secure Gateway Module (SGW) found in late-model vehicles seamlessly and in seconds.
- Fix the most vehicles with OE-level vehicle coverage as far back as 1976, from the world's leading diagnostic brand.
- **J2534-compliant VCI** for factory programming with your OE subscription and PC.
- **Multipurpose docking station\*** charges the tablet handset and powers the VCI providing seamless wireless updates and access to repair information without being connected to the vehicle.

\*Included with ADS 625X, available as an upgrade for ADS 525X.



ALL-NEW ADS X

# Turn your diagnostic powers into superpowers.

Go from technician to superhuman diagnostic machine with your new secret weapon. Just remember, with great power comes great diagnosability.



## Extreme speed

- ▶ Average all-system scans in under 60 seconds
- ▶ Redesigned wireless VCI for faster, more efficient diagnosing

## Extreme flexibility

- ▶ Battery life for weeks
- ▶ Modular software subscriptions for what you need most

## Extreme access

- ▶ 100% OE-approved for secure gateway access
- ▶ Industry-leading vehicle coverage back to 1976

Uncover the truth about the all-powerful X  
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# Save Time on Electrical Diagnostics

Tracking down electrical problems can be very time consuming without the proper diagnostic tools. Power Probe circuit testers have a unique combination of functions that can save valuable diagnostic time when trouble shooting electrical problems.

While recently diagnosing a car that had no parking or taillights, a blown fuse was quickly found by simply probing the test points on the fuse itself. If the fuse is intact, the readings should be the same on both fuse test points. In this case, the Power Probe indicated for B+ power on one side of the fuse and indicated for ground on the opposite side of the fuse, which means the fuse was open and needs to be replaced. The open fuse shows power to the fuse box on one side only, while a good fuse will show the same readings on both fuse test points.

But now, before replacing the fuse (and possibly blowing it again) you can check the circuit for shorts by quickly applying power to the side of the fuse that indicates ground. Connect the probe tip directly to the fuse test point on the side that shows ground and then press the power/ground rocker switch forward to apply power directly to the fuse. If there is still a shorted condition on the circuit it will trip the Power Probe circuit breaker. If you apply power and the circuit breaker does not trip, then the circuit has no short and you can safely replace the fuse.

In our case the circuit breaker did trip, so we knew we had a short somewhere in the park light circuit. But where to start looking? The parking light circuit goes to every corner of the vehicle and even some interior light circuits. On this particular vehicle many of the individual lights are powered together through a common splice pack, so we could easily unplug the splice connector to separate the different light circuits and then use the Power Probe to supply power to each individual light circuit until we found the one that trips the circuit breaker. For this car we found the short was on the lighting circuit leg that went to the center console and illuminated the shifter, etc. Using the proven time-saving testing capabilities of the Power Probe, the problem was quickly found and corrected in just a few minutes. ■



# POWER PROBE®

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# ***THE MAESTRO™ BY POWER PROBE***

***THE NEXT GENERATION IN DIAGNOSTICS***

The MAESTRO™ is digital circuit tester with multimeter functionality. The tool is capable of supplying Battery Ground and Power along with Diagnostic testing modes to provide automotive technicians with detailed information on the circuits and signals being tested. The MAESTRO™ includes 3 Voltmeter modes: AC/DC Voltage, AC Volts RMS, and Volts Peak-to-Peak; and is also capable of measuring Resistance, Frequency, Pulse Width (Negative & Positive), and Fuel Injectors in oscilloscope-like wave forms.

Also available for download is the Power Probe Tek Pro Series App (available on iOS and Google Play stores), which allows for wireless remote display monitoring as well as data streaming and recording.

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# Mastercool introduces the new 43060-EV Evap Diagnostic Smoke Machine

**M**astercool introduces the new 43060-EV Evap Diagnostic Smoke Machine for all evaporative emissions control systems testing, providing a solution to difficult to diagnose automotive leaks. This specifically engineered unit allows today's technician to quickly and efficiently locate and repair a wide variety of evap, vacuum lines, cooling systems, manifolds, catalytic converters, brake boosters, passenger compartment, air intake, exhaust, water leaks and much more.

Mobile repairs are now possible as the technician isn't required to be in the shop to access shop air. This unit has its own internal compressor which allows the end user to perform all diagnostic testing at any desired location. Conventional shop air and inert gases are also able to be used.

The incorporated flow meter which ranges from 0 to 0.040 psi allows the technician to easily monitor and diagnose any leaks. It is also easily removable for periodic cleaning if necessary. The custom-made pressure gauge which ranges from 0 to 30 in.H<sub>2</sub>O is specifically designed and allows for the reading of minute changes in pressure. The built-in pressure regulator is set at 0.5 psi for safe evap testing and also utilizes a high-pressure safety release valve to protect the unit and the vehicle being tested.

The Evap Diagnostic Smoke Machine comes complete with a full accessory kit which includes a set of block off caps, diagnostic cone, evap valve core removal tool, evap whip hose, 10-foot flexible power cord to connect to vehicle battery, 8 oz bottle of non-toxic smoke producing fluid for hundreds of diagnostic tests and heavy-duty smoke illuminating flashlight. The hand-held flashlight uses 3 "C" cell batteries and provides a telescoping beam of light for wide to concentrated leak inspection. This unit uses a heavy duty 10-foot nylon barrier braided smoke output hose with removable aluminum nozzle which will provide years of reliable service. The durable construction and time-tested high quality internal components allow the Mastercool smoke machines to produce a consistent heavy flow of diagnostic smoke for uninterrupted leak testing. ■

## 43060-EV SPECIFICATIONS:

- Voltage: 12 VDC
- Input Pressure: Max 100 psi (8.2 bar)
- Output Pressure: 12 – 14 inH<sub>2</sub>O (30 – 35 mBar)
- Safety Pressure Relief: 120 (±5) psi
- Auto Shut-off: 5 minutes
- Oil Fill Line Indicator: 3.4 oz (100 ml (±10 ml))
- Flow Meter: 0 – 0.040 in. (0 – 1.0 mm)
- Dimensions: 11.8 x 8.1 x 11 in (300 x 205 x 280 mm)
- Weight: 11.9 lbs (5.4 Kg) (Shipping Weight: 20 lbs (9 Kg))
- Power Consumption: Max 6.5 Amps
- Operating Temperature: 0 °F to 140°F (-17°C to 60°C)
- Operating Humidity: No Restrictions
- Operating Altitude: No Restrictions
- Vapor Output Hose: 10 feet
- Power Cable: 10 feet
- Pressure Supply: Air/Inert gas/Pump



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## 43060-EV EVAP DIAGNOSTIC SMOKE MACHINE

This unit provides the option of compressed air, inert gases and a built-in internal compressor to inject the smoke into the system. Includes multiple options for smoke injection including built-in internal compressor, shop air and inert gases



For all HD truck intakes, exhaust, vacuum lines and components, cabin air and water leaks and much more. Operates on shop air or inert gas.

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• INCLUDES INTERNAL COMPRESSOR •

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**43060-TB**      **TURBO/INTAKE DIAGNOSTIC SMOKE MACHINE**

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**Charge Mode** allows for quick charging of a battery to 75–80%, greatly speeding up the charging process for busy shops. This time-saving feature will increase profitability of shops by allowing them to turn over vehicles in service bays quickly.

The adjustable voltage re-flash power mode is required by several OEM's and gives technicians the ability to do extended vehicle re-flash procedures and key-on/engine-off diagnostics while holding a specific voltage, as defined by the OEM, in both dealership and aftermarket shops. This is especially critical for high end European import vehicles that require 70 amps of constant current for re-flashing vehicles. The unit also features a 12V power port for use with a memory saver for battery changeout and comes with an OBDII cable for use with the memory saver. ■



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# Rislone® CAT Complete™ Fuel, Exhaust and Emissions System Cleaner Clears Check Engine Lights

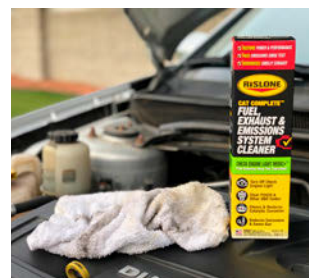
When a customer wants to clear a Check Engine Light as cost effectively as possible, **Rislone's new CAT Complete™ Fuel, Exhaust and Emissions System Cleaner** could be the solution. This unique formula cleans the entire emissions and exhaust system to clear the P0420 and other OBD codes that indicate catalytic converter efficiency issues, and goes a step further to also clean the fuel system to increase power, performance and fuel economy.

Rislone's CAT Complete Fuel, Exhaust and Emissions System Cleaner is formulated with advanced high-performing detergents and heavy-duty cleaning solvents that effectively scrub contaminants, carbon build-up, and residue from engine and exhaust components. Other active chemical ingredients remove remaining inorganic deposits, restoring system function and, with regular use, maintaining efficiency.

CAT Complete can be used as a pre-treatment before emissions tests or as an alternative to replacing catalytic converters. Recommend regular use every 5,000 miles to "tune-up" the fuel, emissions and exhaust system to keep it clean and prevent the Check Engine Light from returning. Installation is

easy for all gas tanks, including standard, obstructed and capless (no fuel cap) systems. It will not void manufacturers' vehicle warranties.

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# AIRCAT 6355 Reciprocating Air Saw

**A**IRCAT recently introduced the 6355 Reciprocating Air Saw. This saw is a must have! Featuring a powerful .5 HP motor, it provides an aggressive cutting action capable of cutting 1/4" thick mild steel and steel pipe up to 3". The saw accepts universal blades and various brands of reciprocating saw blades. The 6355 is ideal for cutting wood, metal, plastic, fiberglass and composite materials.

The 6355 features a unique quick-change blade retainer for ease of blade change. The low weight composite housing reduced the weight to only 2.4 lbs. in turn reducing fatigue. The patented crank design greatly reduces vibration and allows the operator to work through multiple projects at speeds up to 5,000 SPM. This low vibration technology coupled with a dual-speed trigger will greatly improve the quality and accuracy of your cuts.

The AIRCAT line continues to represent the most significant advances in the performance of pneumatic power tools in nearly 30 years. Founded in 1998, our tool line has a substantially reduced level of noise while retaining more power and torque. AIRCAT also incorporates a patented ergonomically

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# NEW Welding Helmets from Jackson Safety

Introducing the all new premium auto darkening helmets from Jackson Safety®. The offering includes 6 styles featuring bold new graphics that will keep users looking sharp while performing at their best. The helmets offer best in class optical clarity, top notch switching speeds and exceptional ergonomic design all for between \$99-209 full MSRP.

**Graphics:** Jackson Safety has teamed with some of the best artists in the world for creating graphics on welding helmets and is proud to launch the 6 Feet Under (47100), Hellfire (47101), Reapers n' Roses (47104), Gray Matter (47102), Bead Demon (47105) and Freedom (47103) Welding Helmet designs.

**Optical Clarity:** The New Auto Weld Helmets feature 1/1/1/1 Optical Clarity with exception of model number 47105 which features 1/1/1/2 optical clarity. Models 47100, 47102 and 47104 are a Shade 3/10 ADF and Models 47101, 47103 and 47105 are all adjustable up to Shade 13 ADF with grinding and cutting functions.

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The FP-200 MIG welder and MST 200 MIG-Stick-TIG welder use inverter-based technology and state-of-the-art digital controls to deliver positive arc starts and a smooth, steady welding arc.

With the technology inside the FP-200 and MST-200, you gain more control over the weld puddle to produce higher quality work for welding steel, stainless or MIG aluminum. You also gain the benefit of lightweight portability (just 29 lbs.), power (up to 200 amps) and dual-voltage (120/230V) flexibility. In the case of the MST-200, you also get excellent Lift TIG and Stick welding performance.

Advanced technology and the LED display also make these welders easier to use. They feature the type of controls found on industrial machines, such as MIG wire run-in, burn-back, variable inductance, 2T/4T trigger control, gas pre- and post-flow, Lift TIG arc starts and Stick hot start and arc force control.

These units also come with a complete Victor, Tweco and Firepower accessory package. All you need to add is shielding gas and filler metal and you're ready to improve welding results on any job encountered by a general repair, muffler, auto body or customization shop. ■



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# Jenny's Electric Two-Stage Horizontal-Tank Stationary Compressors

Jenny Products offers a line of electric two-stage, horizontal-tank stationary air compressors, ideal for applications requiring greater pressure.

Made entirely in the United States with quality and safety in mind, Jenny's two-stage horizontal-tank line features 22 belt-driven models that provide an extensive range of size and power options.

On the smaller end, 2- and 3-horsepower models feature 60- and 80-gallon tanks and displace between 9.1 and 13.4 cfm. Larger units provide 5, 7.5 and 10 horsepower, displace between 18.3 and 43.6 cfm and come with a standard magnetic starter. Tank sizes on the larger end range from 60 to 120 gallons. All models at 10 horsepower or less come in one- or three-phase power.

Two-stage units providing greater than 10 horsepower operate on 208-, 230-, 460- or 575-volt three-phase power and come with 120- or 240-gallon tanks. The 15-horsepower models displace 72.4 cfm, while 20-horsepower units displace 92.6 cfm. The largest units in Jenny's two-stage horizontal-tank line provide 25 horsepower and displace 107.0 cfm at 175 psi.

Built for exceptional durability, Jenny compressors feature a heavy-duty, two-stage cast-iron compressor pump; powder-coated, ASME certified tank; manual tank drain; tank gauge; large canister intake filter with replaceable filter elements and a pressure-relief safety valve.

All Jenny electric compressors are UL Listed, meaning the compressors have been tested and determined to meet UL's strict, nationally recognized Standards for Safety. The approval elevates Jenny compressors to a safety standard not found with most compressor manufacturers. ■



## Jenny

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# Snap-on

## TRITON-D10 Integrated Diagnostic System

The reviewer appreciates the TRITON-D10's two-channel scope, large touchscreen, and quick boot-up.

by **Brittany Vincent**, Managing Editor

### THE REVIEW:

**T**he Snap-on TRITON-D10 scan and scope tool is ideal for shop owners and general technicians that need scope functionality, intuitive diagnostic testing, and system verification from a single source for more all-around certainty, even on complex repairs.

The tool allows technicians to dig deep into vehicle systems and evaluate performance with comparative data. In doing this, it helps to streamline the diagnostic process.

Additionally, the tool features rugged hardware designed specifically for the shop, fast two-second boot-up, and a 10" capacitive touchscreen display.

Scan tools are an integral part of diagnosing vehicle issues. They often provide crucial data as well as any trouble codes to help technicians resolve potential vehicular malfunctions.

Tool reviewer Mike Reynolds, diagnostic technician at Mobile Automotive Service Solutions (MASS) in Charleston, South Carolina, was impressed with how the Snap-on TRITON-D10 scan and scope tool aided him with quick diagnostic checks.

### PRODUCT DESCRIPTION:

The **Snap-on TRITON-D10** scan and scope tool is ideal for shop owners and general technicians that need scope functionality, intuitive diagnostic testing, and system verification from a single source for more all-around certainty, even on complex repairs. TRITON-D10 allows users to dig deep into vehicle systems and evaluates performance with comparative data, and Snap-on's Fast-Track Intelligent Diagnostics helps to streamline the diagnostic process. In addition, the tool features rugged hardware designed specifically for the shop, fast two second boot-up, and a 10" capacitive touchscreen display.

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"I generally use the TRITON for any diagnostics that I know will be quick or [will] need one or two scope channels for," Reynolds says. He often opts for this tool to help diagnose module communication faults.

"With the TRITON and a few scope leads, I am able to verify that the module is not communicating with the scan tool, then measure power and ground to the module with the incorporated multimeter, [and finally] scope the communication circuits to verify that I have a healthy communication circuit," he says.

Reynolds is a "big fan" of the "simple" two-channel scope that comes with the TRITON. He appreciates that it's available when needed, but not "cumbersome" otherwise. He also finds the touchscreen useful, which he says is "big enough" to justify the TRITON as an everyday tool.

The TRITON is big on efficiency as a whole, with a quick and easy start-up sequence. Once it's up and running, it stays powered up through an included data link connector (DLC) cable that

helps keep its internal battery charged.


"I don't think I've used the AC charger other than when installing updates," Reynolds says.

Despite not coming with any instructions, the TRITON was "as user-friendly as its predecessors." Setup was similarly easy, with a few routine prompts that lead to an otherwise "plug and play" installation.

*Editor's note: Reynolds received a pre-production unit of Snap-on's TRITON-D10, which did not come with instructions. However, all units come with a quick start guide and a full user manual, and training is available online.*

Reynolds would be hard-pressed to think of meaningful ways to improve the TRITON. He does want to see the ability to print directly from the unit added eventually, as he prefers interfaces that allow this.

Overall, this technician believes Snap-on's TRITON-D10 is an efficient, easy-to-use, everyday tool.

"It's my go-to aftermarket tool for most of our diagnostics until we need a few extra scope channels, or to watch as many data PIDs as possible at one time." 



# Phil's Probes and Services

## 11" Phil's Electrical Piercing Probe

The reviewer is pleased with the probe's ability to make a positive connection every time.

by Emily Markham, Assistant Editor

### PRODUCT DESCRIPTION:

The **Phil's Probes and Services 11" Phil's Electrical Piercing Probe** is designed to end the frustration encountered with previous piercing probes. The probe was designed and tested by a technician for technicians and built in San Jacinto, California. It is also available in a long version (15") and a short version (6"). Functionality includes piercing wires from 10 to 18 gauge, a banana socket connection or use an alligator clip right on the shaft just below the handle, one-handed operation, and five piercing pins to ensure a good connection.

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### THE REVIEW:

**W**hen using piercing probes to monitor electrical signals, making a positive connection doesn't always happen. But the shop owner of Hilltop Auto Service in Byron Center, Michigan, Ken Elzinga, found that Phil's Probes and Services 11" Phil's Electrical Piercing Probe makes that positive connection every time.

In addition to making that connection, Elzinga was pleased with how the tool was able to save him time on repairs.

"The tool allowed me to pierce a wire to monitor its signal, which is much faster than back probing the wire at a connector," Elzinga says. "This also allowed me to monitor the signal at any location in the circuit instead of just at a connector location."

The easy-to-use probe can be operated one-handed, giving technicians more mobility during repairs, and comes with a simple instruction card describing the

proper hand motion required to open the probe. Technicians should be aware of this because if they are accustomed to using a probe that "screws" into the wire, and they try that with this probe, it will destroy the tool.

Elzinga says he put the tool to work monitoring electrical signals to diagnose failures in components such as door switches, blower motors, ignition coils, and radiator cooling fans.

In his shop, there are four technicians who do the majority of the diagnostic work, and between the four of them the electric piercing probe gets used around two to four times per week.

"It is a good probe to use when you have to tap into a circuit," Elzinga says. "We do use it carefully because here in Michigan we are always mindful of wire piercing with the possible water entry point made by a piercing probe. When we can access a circuit by back probing, we do that first, but sometimes you just have no other choice but to test at a spot where you have to pierce a wire." This is where the

Phil's Electrical Piercing Probe comes in.

Even as the shop owner, Elzinga still spends most of his time out on the floor diagnosing vehicles and assisting his technicians with any jobs they may be working on. As a "lifelong auto tech", he was pleased to find the probe is equipped with several spikes, unlike most other piercing probes that only have one spike. The multiple spikes ensure a positive connection every time, he notes.

One feature of the piercing probe Elzinga would like to see improved is slimming down the "bulky" design of the tool, which makes it difficult to use in tight spaces. In future renditions, the shop owner would also like to see an update to the opening for the hook. Currently, the opening is about 1" from the end of the tool. This makes it challenging to hook onto a wire if it is buried deep in a wire harness.

Overall though, Elzinga was pleased with the Phil's Probes and Services 11" Phil's Electrical Piercing Probe's ease of use and ability to make a connection with every use. ☒

**PRODUCT DESCRIPTION:**

The **Ledlenser P4R Work Pen Light** is a compact, reliable pen light ideal for any toolbox. Slim and lightweight, it features an endcap switch and pocket clip for easy attachment to a shirt or pants pocket. Its patented Advanced Focus System provides precise spot or flood lighting of up to 170 lm. The battery can be easily recharged at any time with its magnetic charge system.

The **P2R Work Pen Light from Ledlenser** is compact and lightweight. It has three light functions: power for high light output, mid-power for medium light output, and low power for long battery life and glare-free reading and working. With the pocket clip, the pen lamp can be easily attached to the shirt or trousers, so it is always ready for use. The P2R Work comes with a rechargeable battery, endcap switch, and the Ledlenser patented Advanced Focus System for efficient, precise flood and spotlighting.

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# Ledlenser P4R and P2R Work Pen Lights

This reviewer is pleased with these lights' unique capabilities.

by *Emily Markham*, Assistant Editor

## THE REVIEW:

**W**hen it comes to pen lights, it may seem like any light is as good as the next, but Lou Fort, lead technician at K.A.R.S. Inc. in Huntingburg, Indiana, found the **Ledlenser P4R and P2R Work Pen Lights have some unique capabilities.**

“I have used several different brands of rechargeable pen lights, Fort says. “These are the first of this size with variable beams. Ledlenser is also the first, as far as I know, that is using a magnetic charge cable.”

The lights were both simple to set up, only needing to be fully charged before use. On either pen light, the user can select from three different levels of intensity, as well as change the focal length by turning the lamp end of the light. This enables users to have both spot and flood lighting depending on the situation.

Fort notes it was a bit tricky getting used to switching between the levels of lighting intensity, but after using the tool for a while he found that a repetitive light press of the switch followed by a more meaningful one to engage the switch in the on position at the selected intensity level is all that is required.



Upon arrival, Fort says the lights both came in “sturdy” boxes that “provide more than adequate protection for their contents,” and “the internal support structure adds additional protection and organized placement of everything.” The boxes also feature the light’s specifications, usage diagrams, and the contents included.

Each light comes with a magnetic charging cord, an adjustable lanyard, and a pouch for the belt. The advantage of the magnetic charging system is that neither of the lights have a micro-USB port. These ports can get clogged with grease, dirt, or chemicals, and then the light is no longer usable.

The instructions are the same for each light and include many diagrams depicting how to replace the battery, change the light’s intensity, adjust the beam, and how to use the pouch. They also show how to use the magnetic charging cable and note that the LED will turn green when the light is fully charged.

Though Fort has no qualms with the lights themselves, he did find some faults with their accessories.

“Neither of these pen lights’ pouches are properly sized,” Fort says. “The P2R is too small, [and] the pouch of the P4R is too big. The light freely moves about, so much so the lamp falls out. While the lanyards are nice, I can’t find a practical place to attach one to either lamp.”

In the future, the lead technician would like to see more of a happy medium with the pouch size, as well as a more obvious attachment point for the lanyard.

Regardless of the accessories, Fort is pleased with the pen lights’ total metal body, their non-removable pocket clips, light weight, and the simple ability to switch from a floodlight to a spotlight.

Fort was able to make good use of the lights when checking fuses under a vehicle’s dashboard or hood, and during wheel-on quick brake inspections to verify pad thickness. He also used them to find parts and tools stored in places where there is little light.

Overall, Fort enjoys Ledlenser’s well-built P4R and P2R Work Pen Lights and notes they “provide a good lighting option.” ☒

# KNIPEX

## Cobra XS Water Pump Pliers

The reviewer appreciates the KNIPEX Cobra XS Water Pump Pliers' handy size and simple, reliable functionality.

by *Brittany Vincent*, Managing Editor

### PRODUCT DESCRIPTION:

The **KNIPEX Cobra XS Water Pump Pliers**, No. 87 00 100, feature a compact design that is just under 4" in length. The Cobra XS features self-locking abilities on pipes and nuts for reduced hand-force and no slipping, as well as jaw geometry, hardened teeth, a pinch guard, and a one-handed adjustment for fitting various workpiece sizes quickly and easily. Other features of the Cobra XS include a secure gripping capacity up to 1", a compact, slim-head design for reaching in tight areas, traditional texturized handles for improved grip, and 11 adjustment positions.

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### THE REVIEW:

**W**hen it comes to servicing water pumps, the right tool makes all the difference. But sometimes, finding the right size can be difficult, as you may need a smaller tool than what you currently have in your inventory. That's where the **KNIPEX Water Pump Pliers Series** comes into play – particularly, the **KNIPEX Cobra XS Water Pump Pliers**, No. 87 00 100.

Tool reviewer Randy Kaiser, diagnostic technician at Rost Motor, Inc. in Manson, Iowa, appreciates the KNIPEX Cobra XS Water Pump Pliers' versatility and "perfect size."

"The pliers are so handy," says Kaiser. "They saved me numerous trips to the toolbox to get a wrench or a different pair of pliers."

Kaiser ensures he has the tool in his pocket at all times, which he found makes them even more convenient.

"Think of your typical water pump pliers (and KNIPEX makes a great one), and then shrink it down to pocket size with

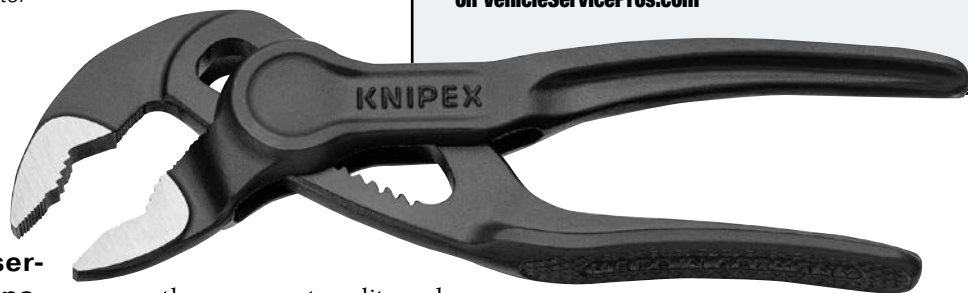
the same great quality and features," Kaiser says. "That makes for one very useful tool to have."

The technician states the pliers were well-packaged upon arrival, arranged in an "impressive" presentation box that would be "suitable for gift-giving." They came paired with a demonstration device to show "how adept [the pliers] were at gripping nuts and bolts as well as round objects."

Everything came safe and secure in foam padding, with a manual included for good measure. Kaiser found no need for the manual, but thought it was simple and easy to understand after checking it out.

"I looked through the pamphlet, but at this point, I don't really need an instruction manual for water pump pliers," Kaiser jokes.

In addition to the pliers' size, Kaiser appreciates their comfortable handle as well as the tool's metal components, noting that it didn't bend or deform when used. The pliers' jaws have the "typical KNIPEX design," he says, for better grip on round objects and nuts.



"The adjustable portion of the pliers seems to fit very well, and appears to be very strong," Kaiser reports. "Being very small and slim made it easy to use the pliers in tighter places than would have been possible with larger water pump pliers."

Kaiser put the pliers to use across a variety of different jobs, including removing nuts and bolts across different systems. He found that it worked great on the smallest of nuts up to the pliers' maximum opening size.

"I also used them on some bolts that the head was partially rusted off of, and it gripped those and removed them as well."

The technician did note that the pliers have a few limitations because of their size, but that's also the same reason they're so handy. It's a "tradeoff," he says, but a worthwhile one when weighing benefits, and "there's probably a larger pair of water pump pliers in your toolbox already."

Overall, Kaiser felt the KNIPEX Cobra XS Water Pump Pliers hit a home run when it comes to durability, sturdiness, and usefulness. ☒





## FEATURES A PROGRAMMABLE VACUUM

The fully automatic **Ranger AC-134 CoolCharge** is designed with a programmable vacuum that allows for fast recharge and recovery of drained air conditioning systems in most cars, trucks, SUVs, and buses. CoolCharge offers a convenient flushing function for rapid discharge of used coolant. According to the company, the machine evacuates and recovers 95 percent of old coolant and recharges vehicle A/C systems within +/- 0.5 oz. of the desired charge. The machine is easy to use and efficient, featuring a large upright display and an optional print feature to allow technicians to quickly access results.

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## INCLUDES ADJUSTABLE SPANNER WRENCH

The **Snap-on A/C Clutch Remover Set**, No. ACT1300B, is designed to simplify the removal and installation of an A/C compressor clutch and clutch plates. The set comes with an adjustable spanner wrench and makes access to shaft seals easier on Ford, Chrysler, and GM vehicle A/C compressors.

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## OFFERS THREE ADJUSTABLE SENSITIVITY LEVELS

The **Techno Tools Refrigerant Gas Leak Detector**, No. D440A, features long life heated sensor technology designed to detect HFC refrigerants such as R-134a in addition to all HCFC and CFC refrigerants including hydrocarbon blends. The digital display is independent from the audio alarm and sensitivity level, allowing the precise pinpointing of the leak source. The D440A features three adjustable sensitivity levels, true mechanical pump, low battery indicator, and automatic calibration and reset to ambient levels. It is also SAE J2791 and CE certified, uses four AA alkaline batteries, and is made in the U.S.A.



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## COMPLETE A/C AND FLUID DYE UV LEAK DETECTION KIT

The **Tracer Products TPOPUV16 Leak Detection Kit** is a complete A/C and fluid dye UV set. The kit includes the EZ-Shot injector, BigEZ cartridge for high-volume A/C servicing, UV cordless LED, R-134a hose/coupler with BigEZ adapter and purge fitting, R-1234yf adapter, spray bottle of GLO-AWAY plus fluorescent dye cleaner, and dye for coolant and oil-based fluid leaks. The universal/ester dyes are compatible with R-1234yf, R-134a, and other widely used refrigerants. The kit treats up to 64 A/C systems.

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## FEATURES A SELF-DIAGNOSTIC CHECK

The **Mastercool Commander2000 Fully Automatic R134a RRR Machine** comes standard with an 8" color touch-screen command center and a graphic interface for ease-of-use navigation. It incorporates a Windows-based tablet, making database and software upgrades easy. Wi-Fi capability allows for real-time, interactive communication. The machine features an onboard conversion calculator, self-diagnostic check, automatic and manual procedures, refrigerant database, auto filter and full tank alarm, multi-colored LED status bar, automatic and manual air purge, auto oil discharge, and more. It has a working temperature range of 50 to 120 degrees F, a 30 lb refillable recovery cylinder, a 6 cfm vacuum pump, a 96" hose, and uses 110V.

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## 9-1/2" FLEXIBLE GOOSENECK PROBE

The **Superior Signals VPE-GN Gooseneck** is designed to quickly pinpoint a variety of hard-to-find leaks in a vehicle including refrigerant leaks in air conditioning systems, vacuum leaks, and window and door seal leaks. It features a 9-1/2" flexible gooseneck probe that runs conveniently off a standard 9V battery. The VPE-GN Gooseneck detects the ultrasonic noise generated by a leak and translates it into a sound the technician can hear. It works with any type of gas whether it's refrigerant, compressed air, nitrogen, or even a vacuum, all without changing a tip or sensor.

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## CLEAR FUNNEL ALLOWS FOR VISUAL CHECK OF FLUID

The **Lisle Corporation 18-pc Spill-Free Funnel**, No. 24780, includes five radiator adapters and six caps to fit most cars, pickups, trucks, and many farm tractors. The funnel is designed to control the proper amount of coolant entering the system and enables unattended filling of the cooling system. By being clear, the funnel allows quick visual checks of the coolant from across the shop. The set comes with a lid to keep contaminants out as well as store the caps and adapters. Two straight extensions and two 45-degree elbows for angled and hard-to-reach applications are also included.

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## VIEW WITH FIVE DIFFERENT COLOR PALETTES

The **Oasis Scientific Vividia HT-A2 IR Infrared**

**Thermal Imaging Camera** with high-quality thermal resolution (320x240 pixels) is an easy-to-use troubleshooting tool for automotive inspection. With the HT-A2 Thermal Imaging Camera, technicians can obtain details in thermal resolution for applications such as detecting parasitic draw, checking HVAC systems and exhaust components for blockages, checking engine manifolds for misfires, and inspecting cooling systems for the correct flow. Technicians can view with five different color palettes. The tool is also able to capture and store photos and measurements.

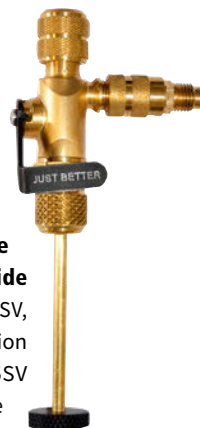
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## DESIGNED FOR FAST EVACUATION AND CHARGING

The **JB Industries Valve Core Removal Tool with Slide Valve Side Port**, No. A32525SV, is designed for fast evacuation and charging. The A32525SV utilizes an additional slide valve on the side port to easily attach and isolate a micron or vacuum gauge. The tool swaps out damaged valve cores under pressurized HVAC/R systems. It also removes valve cores for fast evacuation. It's made of solid brass construction with the tip machined from A2 tool steel extending the product for life. A series of O-rings help stay sealed and not leak during evacuation. The tool is vacuum rated and is also offered in style number A32525ST that automatically sets torque to 3 to 5 in-lbs.

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## FOR CLASS 6, 7, AND 8 VEHICLES

The **CTA Turbo System Tester HD**, No. 7397, is designed to locate leaks in turbo, intake, and cooling systems by plugging the output side of the turbo and intake side. The tool services heavy duty Class 6, 7, and 8 vehicles. Air is pressurized through one end of the adapter to show the presence of leaks within the system. The kit includes a pressure gauge, shut off valve, pressure regulator, and three pairs of stepped adapters. Adapter sizes include: 105mm/110mm, 115mm/120mm, and 125mm/130mm.

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## KIT INCLUDES 18 REPAIRS WITH SMART SPLICE SAE CONNECTORS

**AirSept Smart Splice Pro Series**

– **A/C**, No. 78020, provides technicians with everything needed to fix a damaged metal line or hose for A/C service in five minutes, with no line removal needed, the company says. Ideal for any repair shop, the kit includes 18 repairs with Smart Splice SAE connectors for straight and 90-degrees line-to-line repairs, line-to-hose repairs, and hose-to-hose repairs. A unique HNBR seal sleeve expands the sealing surface and an anti-vibration tension ring ensures repair durability in heavy vibration automotive applications.

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### THX935 MASTER TERMINAL TOOL KIT

- Tools quickly & easily disassemble connectors to remove faulty terminals.
- Each tool is specially designed to depress locking tabs in different connectors.
- Kit Includes: (23) Terminal Tools, 6) Deutsch Terminal Tools, & (1) Brass Brush

### THX927 RELAY BYPASS KIT

- Bypass relays to test and activate components. Also, tests circuitry to determine faulty wiring.
- Custom molded relays dissolve the need to determine which circuit is the power, ground, or signal.
- 5 feet of wire and 4 different relay molds.

### THX926 WIRE INSERTION TOOL

- Great for installing wires for audio electronics, aftermarket lighting, alarm systems, remote start and more.
- The supplied special tubing allows the user to feed the tubing through the tool and is crimpable

### THX430 HOOD/TAILOP PRO

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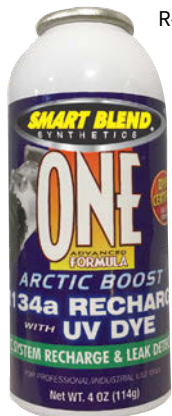


## CATEGORY SPOTLIGHT

A/C System Tools & Equipment

### PROVIDES LUBRICITY

The **Smart Blend Synthetics Arctic Boost R-134a Recharge with UV Dye Leak Detector** adds a 2 oz. charge of A/C performance enhancer and 2 oz. of



R-134a refrigerant without discharging the system, reducing vent temperature by up to 3 to 9 degrees. Smart Blend Arctic Boost provides lubricity, reduces friction, and increases system efficiency, the company says. Smart Blend Arctic Boost contains UV dye to help detect and identify

A/C system leaks. The

product is compatible with all R-134a OEM and retrofit systems, as well as with all ester and PAG oils.

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### AVAILABLE IN 3 OR 5 CFM

The **JB Industries Platinum Flex AC/Battery Powered Vacuum Pump** is available in 3 or 5 cfm, offering a mobile, battery powered pump for applications where A/C power is unavailable as well as a corded A/C pump where long evacuation is required. It features a 1/2hp DC brushless motor, 15 micron vacuum rating, and a run-time of up to 90 minutes. The vacuum pump is made from metal construction with finned aluminum heavy duty housing, brass fittings, and stainless steel valving. It is used for residential and commercial jobs.

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### A FULLY AUTOMATIC R-1234YF ACS MACHINE

Designed for mobile service, the **Robinair Premier R-1234yf Recover, Recycle and Recharge Machine**, No. AC1234-4SL, is a fully automatic R-1234yf ACS machine with an integrated scale lock that eliminates the need to recalibrate your refrigerant scale after transporting long distances. Accessible from outside the machine, the lock secures the scale, preventing damage or inaccurate refrigerant measurement.

The safe startup feature prevents powering on when the lock is engaged, keeping technicians protected. Additionally, an indicator light reminds technicians to lock the scale before transport, while tie-down points and guidelines ensure your machine is secure for mobile service.



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### INCLUDES HIGH PRESSURE SIDE TRANSDUCER

The **Matco Tools R-1234yf Touchscreen Automatic RRR**, No. AC443, features wireless software updates, along with a smaller footprint to take up less space in the shop. The machine has the ability to log and monitor services for proactive improvements and service reminders, refrigerant use optimization, warranty reporting, and more. In addition, the AC443 has an LED status indicator that is visible from anywhere in the shop, a single hand access door for easy service, and fully automatic air purging. An internal identifier is integrated into the low pressure side.



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### INCLUDES UNIVERSAL DIESEL AND GASOLINE ADAPTERS

The **Ansed Diagnostic Solutions HU35025 Universal Digital Pressure Tester** is able to measure diesel and gasoline compression, oil pressure, turbo pressure, cooling system pressure, AD Blue pressure, fuel low and high pressure, vacuum pressure, particle filter pressure, and exhaust back pressure. With a 7" Color TFT touchscreen display, it's easy to learn and easy to use. Technicians are able to save, export to a computer, print, and share all the results. The kit includes a universal diesel compression adapter, universal gasoline adapter, other necessary adapters, as well as two sensors. The tester is multilingual: English, French, and Spanish.



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### INCLUDES AN ORIFICE TUBE EXTRACTOR

The **OEMTOOLS A/C Clutch Hub Puller and Installer**, No. 37150, provides the tools necessary for the removal and installation of pressed on A/C clutches on many domestic and import vehicles. The set also includes an orifice tube extractor and comes in a sturdy molded plastic storage/carry case.

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## INTEGRATED UV DYE INJECTION PROVIDES LEAK DETECTION

The **MAHLE ArcticPRO ACX2150**, No. 460 80445 00, is an R-134a refrigerant handling system. The

ACX2150 features an ergonomic design with a hinged service door to simplify unit service, a 7" capacitive touch LCD display, and an intuitive user interface. Its data and reporting metrics have the ability to log and monitor services which allows analytics for proactive service reminders, refrigerant use optimization, warranty reporting, and more. The unit also includes automatic updates, remote support for technicians, oil system management, network printing to print services provided for the customer, UV dye injection for leak detection, and a two-year warranty.

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## CAN BE USED WITH A STANDARD VACUUM PUMP

The **Mastercool Visual Inspection Sight Glass**, No. 53376-YF, is designed to allow users to see the condition of the refrigerant in a vehicle's A/C system to determine whether it needs to be flushed. The unit can be used with a standard vacuum pump or with the vacuum function on a RRR machine. Instructions are easy to follow and help guides users through the use of either option. The sight glass allows users to visually inspect the refrigerant in any R-134a or R-1234yf system and identify excess dye, oil, or debris. It also allows the user to extract a small portion of the refrigerant for actual visual inspection.

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## DISPLAYS DUAL IMAGING AND EMISSIVITY SETTINGS

The **Autel MaxiIRT IR100 Thermal Imaging Camera** measures -4 degrees F to 842 degrees F, making heat fluctuation, loss, or buildup visible to the human eye. The dual camera overlay feature allows users to view thermal images over standard images, creating easily identifiable images. The IR100 combines high resolution, auto-focus, a 0.98 second refresh rate, and Wi-Fi image transfer to a PC or mobile device, including a MaxiSYS tablet, for a quick and accurate diagnosis. Adjustable emissivity settings and a choice of five color palettes helps customize the user experience. It troubleshoots brakes, exhaust, heated seats, HVAC, and more.



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## ABLE TO HANDLE LOW VOLTAGE CONDITIONS

The **Yellow Jacket SuperEvac PLUS II Vacuum Pump** is designed for use with A2L systems and features an integrated brushless DC (BLDC) motor, providing high efficiency, high torque, and a long life. The SuperEvac PLUS II is able to function in extreme low voltage condi-



tions, including low temperatures, and is field rated to 15 microns. The easy-to-carry, lightweight design is available in 4, 6, 8, and 11 cfm models. It has a two-year warranty and is made in the U.S.A.

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## FEATURES 1/2" ACME FITTINGS

The **CPS Products BlackMax Dual R134a/R1234YF Gauge Manifold Set**, No. MAID8QDL, is able to service both R-134a and R-1234yf refrigerants. The set includes 1/2" ACME fittings, three 8' hoses, and manual couplers. The gauge size is 2.5".

The set comes in a tin case.

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## CATEGORY SPOTLIGHT

A/C System Tools & Equipment

### USES INFRARED AND SURFACE REACTION SENSORS

The **INFICON AST Leak Detector Line** is designed for leak detection in any automotive air conditioning system, from R-134a and R-1234yf to CO2 and hydrogen forming gas applications. The AST (Automotive Service Tools) line includes a UV inspection light to help verify the leak source in systems where fluorescent dye is present. AST300PPM and AST200IR Leak Detectors are certified to both SAE J2791 and SAE J2913 requirements and include a quick check refrigerant gauge to verify refrigerant levels in a R-1234yf system. The AST100FG uses hydrogen forming gas, saving technicians on cost while reducing environmental impact compared to leak checking with traditional refrigerant, the company says.

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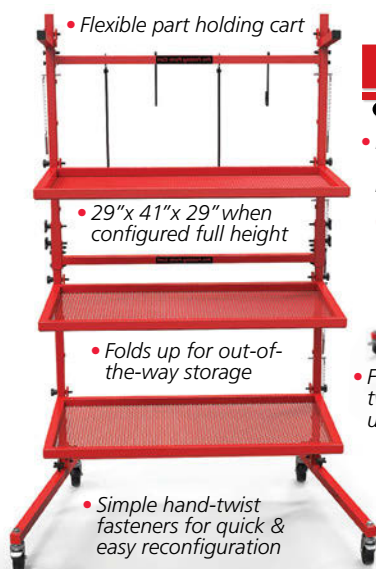
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### ARTICLE



#### A/C SERVICING — ARE YOU DOING IT RIGHT?

System refrigerant and oil capacities are smaller, R-1234yf is more common, and loss due to refrigerant leakage impacts system performance more now than ever. The fundamentals you learned in school or on-the-job still apply when it comes to troubleshooting and servicing these systems but they are increasingly less tolerant of errors. **TO READ THE FULL ARTICLE, VISIT: [VEHICLESERVICEPROS.COM/21197975](http://VEHICLESERVICEPROS.COM/21197975)**

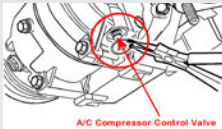
### PODCAST



#### TORQUE FACTOR – EPISODE 7: MOBILE AIR CONDITIONING, A NEW APPROACH TO DIAGNOSTICS

In this episode of Torque Factor, Michael Ingvarlsen from Nissens Automotive joins Scott Brown for a conversation about modern A/C systems and the different service challenges newer vehicles present over their predecessors. Scott also catches up with Donny Seyfer, manager of NASTF, for an update on service issues NASTF is involved with and what new features the group has in their pipeline for security related vehicle issues. **TO LISTEN TO THE PODCAST, VISIT: [VEHICLESERVICEPROS.COM/21148146](http://VEHICLESERVICEPROS.COM/21148146)**

### TECH TIP



#### WHAT TO DO IF A CHEVY AVEO'S A/C BLOWS HOT AIR

The vehicle was brought to the shop because the A/C was not working. The technician tried all they could

think of to fix the A/C before calling ALLDATA

Tech-Assist to get some advice. **TO READ THE FULL ARTICLE, VISIT: [VEHICLESERVICEPROS.COM/21152481](http://VEHICLESERVICEPROS.COM/21152481)**

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#### WHAT IS AN ENTHALPY CHART AND HOW WILL IT HELP DIAGNOSE AN AUTOMOTIVE A/C SYSTEM?

Enthalpy is the measure of energy in a thermodynamic system. In short, it shows the A/C cycle and at what temperature and pressure the refrigerant changes from a gas to a liquid and back to a gas. **TO READ THE FULL ARTICLE, VISIT: [VEHICLESERVICEPROS.COM/21140073](http://VEHICLESERVICEPROS.COM/21140073)**

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## A toolbox to grow with the shop

Shop owner Eric Armstrong's new tool storage setup is something he can continue adding on to as his tool collection and shop grow.

by Emily Markham, Assistant Editor

**F**ive years ago, Eric Armstrong and his wife Robin decided to open their own repair shop: Armstrong Automotive Repair. To keep up with the shop's growth and his expanding collection of tools, Armstrong decided it was time to upgrade his toolbox.

"I was completely out of storage in the [toolbox] I had before. This is about 10 times bigger than my other one," Armstrong says of his new Cornwell Platinum Series toolbox.

Before purchasing his new toolbox about a month ago, Armstrong's old setup was bursting at the seams with his tool collection. His previous box had a hutch, and while he tried to add on to it, he never seemed to have enough space. Armstrong even resorted to buying different tool carts to make up for the lack of storage.

Now, with his 84" two-bank Cornwell toolbox, Armstrong has plenty of room to store his tools. But that's not all he got. The shop owner's new setup also includes a hutch, two lockers on either side of the toolbox, and a roll cart positioned at the end of the setup.

The 6' tall structure is done up in the shop's colors, red and black, and the inside of the hutch sports a wrap featuring the shop's logo, which also happens to be Armstrong's favorite part of his new toolbox. Although, the hutch isn't the only area of the toolbox he customized. On the top of the roll cart, Armstrong had an image of his racecar made into a wrap, making it a standout feature.

As far as organizing his tools in his new setup, Armstrong didn't ... but his wife did.

"My wife put them all in there for me, and I make sure to put them back," Armstrong laughs. "It would have been a disaster if I'd have done it."

Armstrong's wife does more than just organize toolboxes around the shop. She runs everything in the office, and even lends a hand on the shop floor from time to time. Having put together a show car by herself, Robin knows a thing or two about cars.

His wife also played a major role in Armstrong Automotive Repair going from a dream to reality.

Growing up, Armstrong was always helping his father, who was a technician for 31 years. Fast forward to Armstrong work-

### »» OWNER

#### **Eric Armstrong**

Shop: Armstrong Automotive Repair  
Location: Muskogee, Oklahoma

ing for a construction company and being gone all the time, and his wife wanting him home more. He jokingly said, "Let's open a shop." And she said, "Okay." Then, she went out and found a location for the shop, and the rest is history.

Now, Armstrong Automotive Repair has eight employees and does just about everything in terms of automotive repairs except diesel and body shop work.

"We're still trying to grow," Armstrong says.

And with that growth, the shop owner is sure will come future additions to his toolbox. He'd love to get some drawer organizers for his wrenches, pliers, and screwdrivers, as well as another locker or two or maybe another roll cart for the other end of his setup.

Overall, Armstrong is pleased he has a toolbox he can add on to as his shop continues to grow. ☒

Want to see more photos of Armstrong's box?  
Visit: [VehicleServicePros.com/21215102](https://www.VehicleServicePros.com/21215102)



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# LT886 Radiator Rocket Coil and Line Cleaner

**C**ooling coils for radiators, transmissions, oil and fuel lines are numerous in today's heavy duty work vehicles. It's common procedure today for trailer truck, dump truck, earth moving and tractor vehicles to require daily line and coil cleaning in order to run cool and efficient.

High pressure water sprayers get the job done but leave a mess for the shop and the tech under the vehicle. The Radiator Rocket runs on air power which eliminates that problem. Four inch air slot in brush head puts out maximum air cleaning volume and pressure without damaging coils, lines or fins.

For tight accessed stacked multiple coils/radiators, the brush bar inside brush head is removable for easy access.

Cleaning head is always 90° toward radiator fins for maximum cleaning efficiency and coil protection.

Tool shaft can be configured in 3', 2', or 1' lengths to access limited spaces. Includes 1/8" NPT air control valve. Eliminates need for raising vehicle on jacks or lifts to access buried coils under vehicle. Ideal for in field use.

Keep your shop techs, radiators and coils clean with the air powered Radiator Rocket. ■



LT886 Radiator Rocket.



Brush head up close.



ltitools.com



See it work on YouTube.

# LT1940 Series Kentucky Kicker Shockit Driver Kits



**A**n innovative new tool concept to access and remove the most frozen nuts and bolts. Convert any 3/8" - 1/2" - 3/4" drive socket into an air hammer powered Shockit Socket.

Utilizes hypersonic air hammer repetitive vibrations to free bolts and nuts without galling fastener threads.

LT1940 series kits are available in 3 sizes. (LT1940-3/8 3/8" Shockit Driver Kit, LT1940-1/2 1/2" Shockit Driver Kit and LT1940-3/4 3/4" Shockit Driver Kit).

Each LT1940 series Shockit Driver Kit includes a Short Throw Shockit Driver, Long Throw Shockit Driver, Drive Plug which has a low profile design for air hammer punch applications in tight accessed spaces and a Drive Plug Breaker Bar that allows for simultaneous breaker bar/ratchet and air hammer punch operation.

To operate, insert either the Drive Plug or Drive Plug Breaker Bar into the Short Throw or Long Throw Shockit Driver then insert into the socket that you will be using and place on the fastener you want to remove. Now insert one of three different length non-turning punches into your air hammer and insert drive tip end of punch into recessed holes on Shockit Driver and engage air hammer to remove fastener. Insert your breaker bar or ratchet into Drive Plug Breaker Bar for even more power to remove fasteners.

Three, slotted non-turning punches are available in a kit (LT1910PK Shockit Punch Kit) and are also available separately in 5.5" (LT1910PS), 11" (LT1910P) and 22" (LT1910PL) lengths to access and remove the most difficult fasteners.

Patented unique design. Made to precise German DIN standards.

Get kicking with Kentucky Kicker Shockit Driver Kits available from your mobile tool distributor in May 2021. ■



LT1940-3/4 3/4" Shockit Driver Kit shown.



In use with your ratchet or breaker bar.

Shockit Driver Kit with Punch in use.



LT1910PK Shockit Punch Kit.



See it work on YouTube.

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