PROFESSIONAL TOOL & EQUIPMENT NEWS

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⊗ENDEAVOR

PRO-SOI

by Power Probe



(CLUSIVE:

2021 PTEN INNOVATION **AWARDS NOMINEES, PART 2 PAGE 40**

TOOL BRIEFING:

TOOLS FOR STATIC AND DYNAMIC ADAS CALIBRATION

PAGE 30



Features front and side gripping areas



Includes a 360-degree rotating head



lingual support

DETAILS ON THE COVER PRODUCTS AND OTHER NEW TOOLS PAGE 10





PPTMO1AS

THE MAESTRO THE BY POWER PROBE

THE NEXT GERENRATION IN DIAGNOSTICS

The MAESTRO™ is digital circuit tester with multimeter functionality. The tool is capable of supplying Battery Ground and Power along with Diagnostic testingmodes 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.



Circle 15 on card, or click "PTEN e-inquiry" on VehicleServicePros.com





FOR HEAVY LIFTING, WE'VE GOT YOU COVERED

- A. 24837 3-1/4 Ton Low Profile Floor Jack
- B. 24830 2 Ton Folding Engine Crane
- C. 24859 1,000 Lb. Air Hydraulic Motorcycle Lift*
- D. 69000 (4) Vehicle Jack Dollies with Storage Cradle
- E. 24857 (2) 1/2 Ton Vehicle Dollies
- F. 24854 (2) Heavy Duty 22 Ton Axle Stands
- G. 24852 (2) 3 Ton Jack Stands





http://bit.ly/PTENJune21

*Motorcycle not included





12







PRODUCTS

10 NEW PRODUCTS

Check out the latest offerings from TOPDON, Wilton, KNIPEX, and many more.

36 TOOL REVIEWS

Our review panel gives feedback on the following tools:

- Key Making System from XToolUSA page 36
- 11-pc Dual Drive Bit Set from Mayhew page 37
- HD Pro III from CanDo page 38
- Volcano 2000 Battery Pack from TOPDON page 39

48 CATEGORY SPOTLIGHT

Lifts, jacks, and stands

CONTENTS

JUNE 2021 | VOL 32 | ISSUE 5

ON OUR COVER

Pro-Solder 50

by Power Probe
Details on page 10.



EXCLUSIVE

40 2021 INNOVATION AWARDS

We had so many entries that we need two issues to feature all the products! Check out tools and equipment from the annual *PTEN* Innovation Awards.



COLUMNS

8 EDITOR'S NOTE

Meet your new editor, Amanda Silliker.

26 DIAGNOSTIC TECH

Scott Brown explains how to conduct advanced wheel service.

30 TOOL BRIEFING

Matt Fanslow discusses static and dynamic ADAS calibrations.

DEPARTMENTS

53 BIG-TIME BOXES

G. Jerry Truglia, ATTS, Mahopac, New York

1A800

INTELLIGENTADAS

OPTICAL POSITIONING SYSTEM



6 HIGH RESOLUTION CAMERAS

Provides 3-Dimension Optical Recognition for most accurate frame measurement

POWERED BY AUTEL DIAGNOSTICS

Faster frame positioning without mechanical measurement

WHEEL CLAMP & TARGETS

2 Wheel Clamps for ADAS Calibration 4 Wheel Clamps for Alignment Verification

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NEW AWARD



The new Best Young Tech Award honors a technician aged 35 and younger who excels in their role. The winner gets a round trip flight and two nights lodging for AAPEX/SEMA in Las Vegas! Nominations close July 31. VehicleServicePros.com/ 2021bestyoungtech

TOOL REVIEW

Our reviewer says the XPH30R Headlamp from Coast is a "great timesaver" while noting its top features, including a durable outer case and ease of use. To read more, visit: VehicleServicePros.com/21221759



ARTICLE



Panelists at virtual ASA X50 Conference and Expo discussed tactics to keep the best and brightest in the industry amid a skills gap. VehicleServicePros.com/21221217

VIDFO



Motorcar Parts of America outlines seven helpful tips to install hydro-boost assemblies. VehicleServicePros.com/21215066

VOTE NOW

We need your input on the most innovative products in the automotive aftermarket for our People's Choice Awards. Vote by June 30 for your chance to win a \$100 Visa gift card! VehicleServicePros.com/2021pc



FEATURED PRODUCTS



Magid T-REX TRX443 Flex Series Lean Gloves VehicleServicePros.com/ 21222293



Injector Seal Installer and Sizer Adapters, No. 6756 VehicleServicePros.com/ 21217186

OTC



FedPro Free All Deep Penetrating Oil VehicleServicePros.com/ 21210743



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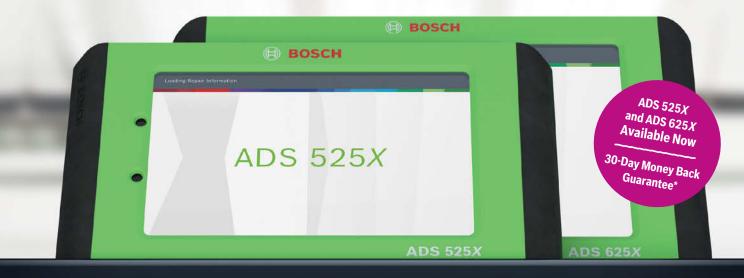
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A new adventure

As your new editor, I'm ready to put the pedal to the metal and help you succeed.

By Amanda Silliker, Editor ASilliker@EndeavorB2B.com

t has certainly been a year of change. The pandemic changed the lives of many people and forced us to reevaluate everything, including our jobs and commutes, what friends and family are worthy of being in our bubble, and where we want to spend our time in lockdown - and I was no exception. My husband and I had a baby, moved across the country from a huge city to a much smaller one, bought our first home and - the cherry on top — I started this new job.

I could not be more thrilled to join Endeavor Business Media as the new editor of *Professional Distributor* and *PTEN* magazines. It truly is a dream for me to marry my B2B magazine expertise with my love of cars. Growing up, my uncle was a stock car driver, and I rarely missed a Saturday night race. I loved the feeling of my feet vibrating in the bleachers as the cars zoomed around the track, cheering proudly as my uncle did his victory lap with the checkered flag (he had a trophy room he won so

much), and even scrubbing the soot off my face when I got home — that's how you know it's a good race.

Sometimes I would help my uncle in his garage get ready for that week's big race, handing him whatever tools he needed. By day, my uncle was the vice-president of service for a family of car dealerships, and although he is now retired, Sunday night dinners always include some shop talk.

For the past seven years, I have been the editor of a health and safety publication where I covered the myriad of personal protective equipment needed to keep workers safe as well as how safety professionals can excel in their jobs. I have a true passion for ensuring the magazines I edit bring value to the reader and help you be the best you can be at your jobs. I believe shop owners and technicians are hard-working, passionate about the work they do, and are always looking for ways to work better. Similarly, I think there is an opportunity to make PTEN even better in meeting your needs. The results of the 2021 Reader Study will undoubtedly provide valuable insight, but I also encourage you to reach out to

me directly with your ideas. How can we improve? What topics do you want to see covered? What is keeping you up at night and how can we help address that?

I very much look forward to meeting you all at upcoming shows and industry events, as well as connecting on social media. You can connect with me on LinkedIn and follow me on Twitter @amandasilliker.

I have already had the pleasure of speaking with a few of you and I can tell I will get along great with this down-to-earth group. I can't wait to go on this new adventure with all of you.















* * * * * * * * * * * *



VOTE ON THE MOST INNOVATIVE TOOLS & EQUIPMENT!

JUNE 1 - JULY 31



SUBMIT YOUR VOTE NOW! VEHICLESERVICEPROS.COM/2021pc



FEATURED* **NEW PRODUCTS**

OFFERS MULTI-LINGUAL SUPPORT

The TOPDON ArtiDiag500 Diagnostic Tool is an Android-based scan tool designed to diagnose PCM, automatic transmission, ABS, and SRS systems. Featuring a 5" touchscreen and one-touch update, the ArtiDiag500 collects and reads diagnostic information

and is easy to use. It provides OE level diag-

nostics for Domestic, Asian, and European vehicles 1996 and newer, and includes the AutoVIN feature for fast vehicle identification. It comes with free software updates and one-year hardware warranty. It offers multi-lingual support. >>19

INCLUDES A 360-DEGREE ROTATING HEAD

Wilton's Multi-Purpose Bench Vise is ideal for light tradesman, utility, MRO, and generalpurpose use. The vise features a 360-degree rotating head to clamp material at any angle, 30-degree indexing increments for quick set up, replaceable pipe jaws, and a V-jaw to

easily hold round objects vertically. The body and movable jaw are 30,000 psi gray cast iron and the base is 60,000 psi ductile iron, providing durability through a wide

range of applications. The vise is available in 4-1/2" (No. 28844), 5-1/2" (No. 28824), and

6-1/2" (No. 28845) jaw widths. >>20



FEATURES FRONT AND SIDE GRIPPING AREAS

The KNIPEX Tools TwinGrip Pliers, No. 82 01 200, are fiveadjustment push-button slip joint pliers. The pliers feature both front and side gripping areas to get the job done easier and faster. The front gripping area is ideal for gripping stripped screws and bolts. Other key features include a slim head, a pinch guard, and a box-joint design. The TwinGrip Pliers are made of German high-grade chrome vanadium electric steel. >>21



aving the right tool for the job is essential when conducting automotive repairs. But sometimes the right tool isn't enough — you need the best tool to maximize productivity and improve your hours per RO. The editors at PTEN are constantly keeping up to date with the latest tools and equipment, and in this New Products section, we've hand selected the latest products that we hope will make your jobs easier.



The Power Probe Pro-Solder **50** is a 50W rechargeable soldering iron kit that is multifunctional and reaches an operating temperature of 536 degrees F in just 10 seconds. Whether in the shop or at home, the Pro-Solder 50 is ideal for soldering, brazing, loosening fasteners, and heat shrinking. The Pro-Solder 50 has a run-time of 35 minutes and full charge time of 3.5 hours. It also has an LED to illuminate the area and provide a safe working environment. The kit includes various interchangeable tip attachments, solder, copper cleaning sponge, safety stand, and USB charging cable all housed in a protective carrying case. >> 22



Honoring technicians aged 35 and younger who are moving the service repair industry forward, who excel in their current roles and are passionate about their work.

DEADLINE TO ENTER: JULY 31, 2021

Prizes

- **➣** Tools & equipment from contest sponsors
- Round trip flight plus 2 nights lodging to 2021 AAPEX / SEMA in Las Vegas
- Trip for two to STX Supplier and Training Expo in March 2022
- Award plaque and uniform patch

Qualifications

- Techs aged 35 or younger (Must be born after January 1, 1986)
- At least 2 years experience in the industry
- Shown career development, innovation in their role, technical or educational achievement, community service and importance to the shop
- Techs can be nominated or nominate themselves



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FOR MORE INFO OR TO SUBMIT YOUR NOMINATION TODAY!



















RESISTS WATER, DUST, AND VIBRATION

The Getac Technology Corporation K120 Windows 10 Tablet is a fully rugged, handheld computer that is IP66 certified and meets the latest military-grade specifications. The K120 features a 12.5" FHD screen, backlit buttons, multi-mode (regular touch, glove, and pen) display with Getac sunlight readable technology, impact-resistant polymer chassis, hot-swappable battery technology, multi-functional hard handle, front and rear cameras, and a wide variety of vehicle and office docks, straps, and harnesses. With the latest-generation Intel Core Processor, the K120 can carry out multiple tasks at once without slowing or overheating, while its Intel Iris Xe Graphics lets users see more with less battery drain, the company says. >> 23



CUSTOMER REVIEW:

Awesome pants. I'm no longer a blue jean guy. Runs way cooler and I am more free to move around.

WRINKLE RESISTANT AND MOISTURE WICKING

The Dickies 874 FLEX Temp-iQ Cooling Work Pants are constructed to meet the needs of a dynamic workday, providing comfort and durability all day. The elastic active waist is equipped with Dickies FLEX

technology that will move right along with the worker no matter which way they bend, twist, or turn. Plus, the Temp-iQ temperature control detects when body heat rises, providing an instant cooling sensation



while absorbing perspiration. The original fit is furnished with side entry pockets, rear pockets, and durable tunnel belt loops. The wrinkle resistant and stain release finish provide easy care and added value while ensuring a professional look. >>24



HAS A VIEWING AREA OF 3.82" BY 2.44"

The Cornwell Quality Tools Variable Shade Welding Helmet, No. MMW67VG, is blue with a racing stripe and features 9-13 variable shade with grind function for use in a variety of applications including: stick, MIG, pulse MIG, TIG, pulse TIG, AC, and DC to 2A and grinding. With ANSI and CSA approval, the auto-darkening welding helmet is safe and functional for the above welding applications. It also has dial sensitivity and delay adjustment, along with a viewing area of 3.82" by 2.44". Additionally, the welding helmet offers quick 1/25,000 second switching time, UV/IR protection to shade 16, auto on/off, solar power supply, low amp TIG to 2A, 5-point adjustment articulating head gear, and a large removable/washable sweatband. >> 25

AUTOMATICALLY DETERMINES THE EXACT WEIGHT NEEDED

The Dannmar MB-240X Manual Wheel Balancer from Bendpak is ideal for small shops requiring precision wheel balancing at a fraction of the cost, the company says. The balancer is accurate and dependable and uses proprietary digital sensor technology to automatically determine the exact weight needed for optimal

balance. It clearly displays the amount and location of weights in about six seconds. The MB-240X is easy to use. Simply rotate a large crank attached to the post mount wheel balancer's axis, observe the display information, then add the required weights to achieve balance. This manual-spin wheel balancer works on wheels up to 26" diameter and on many trailer wheels. >> 26

DIRECTLY CONNECTS TO THE VEHICLE'S TAILPIPE

The **FumeCaddie** from **Plymovent** is designed to capture exhaust fumes at the source, emitted by any vehicle or apparatus running indoors. The portable exhaust fan removes the fumes through a suction hose and delivers the fumes to the outside of the structure through the exhaust hose. It's directly connected to the vehicle or apparatus tailpipe with an easy-to-use nozzle. The extractor consists of a 3/4hp 115V fan assembly, 33' of extraction hose on

the standard FumeCaddie, and 41' of hose on the two hose with "y" adapter FumeCaddie, an easy-to-use nozzle, and a 9' power cord. It's all assembled on an easy-to-maneuver, ergonomic cart. >>27





ADJUSTABLE EAR LOOPS AND NOSE CLIP

The Honeywell Dual Layer Face Cover with Replaceable Filters come equipped with a hidden pocket designed for convenient filter replacement. It offers adjustable ear loops that allow the wearer to find the correct balance of comfort and fit. The face cover also features a 3-D knit construction that provides a four-way stretch, minimizing gaps and enhancing general comfort in the process. The product is designed to withstand multiple washes and when used with a disposable insert, the face cover is capable of blocking 97 percent of 0.3-micron-sized non-viable particles and 0.1-micron-sized aerosolized particles, the company says. >>> 28

AVAILABLE IN THREE VERSIONS

The Goliath Carts ADAS Calibration and Scanning Cart features three screens to increase accuracy and efficiency as well as a locking printer compartment and storage for other necessary tools, calibration weights, and electronics. Calibration and

> scan tools can be mounted on the side in the adjustable cubbies to reduce wasted move-

ment and increase accuracy. There is also a 45A/3-phase charger power system and several adjustable cubbies included with all models. The cart offers up to four days of use on

a single charge and is available in three versions: a base model, a fully loaded laptop model, and a tablet version. >>31

CUSTOMER REVIEW: It seems a lot smoother and 'smarter' about when to retract and when not to than other brands. I would say it's more user-friendly too. 🥊

FEATURES A 12 GAUGE OIL-RESISTANT CORD

The Legacy Manufacturing Flexzilla Pro 60' Retractable Extension Cord Reel, No. FZ8120603, comes with 60' of cord, a lighted triple tap outlet, and grounded 4.5' leadin cord. The 12 gauge oil-resistant cord allows users to power heavy duty equipment in the shop or on the jobsite. The reel utilizes a self-leveling system, which winds the cord evenly as it automatically retracts. The reel also contains a circuit breaker with reset button, adjustable cord stopper, power indicator light, and a swivel mounting bracket. The reel locks the cord out in 2' increments. The impact-resistant housing protects and stores the extension cord when not in use. The retractable reel is ideal for commercial and industrial use. >>29







INCLUDES COMPANY'S AIRKEEPER APP

The G 2-7 Rotary Screw Air Compressors from Atlas Copco Compressors come equipped with an efficiency motor, a lowvibration screw element, and an Elektronikon base controller. The G 2-7 models are the company's smallest rotary screw compressors, ideal for shops with changing compressed air demands that are looking to expand. Designed for intermittent or constant use, the rotary screw technology doesn't require the frequent cooldown periods of a piston compressor. The G 2-7 touts sound levels as low as 61 dBA providing the ability to install the unit close to the point of use without requiring sound attenuation. Available in floor-mounted and tank-mounted models. >>30

REDUCES POST-WELD CLEANUP

The Lincoln Electric Low Silicate GMAW Solution is designed to deliver high-speed, low-spatter welds with low-surface silicates to reduce post-weld cleanup and improve paint adhesion. The solution addresses heightened industry requirements for increased corrosion life on automotive frames, sub-frames, and suspension components, the company says. It combines a Rapid X LS waveform and a specifically formulated SuperArc XLS filler metal. The SuperArc XLS produces GMAW welds with reduced sur-

face silicates, increased corrosion resistance, and a smooth arc operation. The Rapid X LS is designed to deliver low-spatter operation with SuperArc XLS filler metal, providing a high-speed waveform that increases travel speeds and productivity while generating a stable arc. >>32





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

LEARN MORE ABOUT THE AIR HAMMER POWERED

Q - What are Shockit Sockets?

A - Specially designed sockets, crows feet & line wrenches powered by a custom air hammer punch.

Q - Why do I need a Shockit Socket?

A - To gain access and give power to frozen fasteners not accessible with regular sockets, ratchets, or power tools.

Q - How do Shockit Sockets work?

A - They are powered by a special non-turning offset punch connected to an air hammer. The hypersonic vibrations from the air hammer effectively loosen the most rusted fasteners and greatly decreases the chance of thread galling.

Q - Why do Shockit Crows Feet and Line Wrenches look so thin?

A - Shockit Crows Feet and Line Wrenches have a very low profile design to access hydraulic fittings but actually have 30% more steel and strength then standard crows feet and line wrenches.

Q - Do air hammers damage fasteners and sockets?

A - Our research has shown air hammer vibration to be the most effective in loosening frozen bolts and nuts. Usually low air hammer power settings are all that is required to loosen the most rusted frozen fasteners.

Q - Can I use my own punches?

A - For maximum performance, safety and warranty protection, you must use our offset, non turning 8mm radius tip punches. Shockit Punches are available in 5.5", 11" and 22" lengths. Different jobs will require different length punches for maximum access.

Q - What are LT994 O2 Sensor Shockit Sockets?

A - A deep recessed and low profile Shockit Socket design to be used with a Shockit Punch and an air hammer to remove frozen and inaccessible O2 sensors. No more removing exhaust or motor mounts to access hidden O2 sensors.

Q - What are Kentucky Kicker Shockit Drivers?

A - They are air hammer powered socket adaptors that plug into impact and thin wall sockets. Kits are available in 3/8", ½"and 3/4" drive sizes.

Q - How do they work?

A - A driver socket is connected to an impact socket by a drive plug. This set-up can be used together with a ratchet/breaker bar and air hammer to free the most frozen fasteners. For space limited applications, a low profile air hammer driven only driver plug is included in each kit.



SHOCKIT TOOLS THAT EVERYONE IS TALKING ABOUT!

HEAVY DUTY INDUSTRIAL/HYDRAULIC SHOCKIT CROWS FOOT SETS

LT1900 10 Piece SAE Shockit Crows Foot Set



- . Must be used with Shockit Punches for maximum performance & warranty coverage
- · Loosens hydraulic fittings on tractors, forklifts and heavy equipment
- Fits into small spaces between hydraulic lines
- 3/4", 13/16", 7/8", 15/16", 1", 1-1/16", 1-1/8", 1-3/16", 1-1/4", 1-5/16"
- Punches sold separately see below
- Patent #7,677,143 and additional patents pending

10 Piece Metric Shockit Crows Foot Set



- Must be used with Shockit Punches for maximum performance & warranty coverage
- Loosens hydraulic fittings on tractors, forklifts and heavy equipment
- Fits into small spaces between hydraulic lines
- 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 20mm, 21mm, 22mm, 24mm
- Punches sold separately see below
- Patent #7,677,143 and additional patents pending



Scan QR code or search LT1900 on YouTube to see tool work!



HEAVY DUTY AUTOMOTIVE/HYDRAULIC SHOCKIT LINE WRENCH SETS

13 Piece SAE Shockit Line Wrench Set



- Must be used with Shockit Punches for maximum performance & warranty coverage
- · Loosens fittings on steering, brake, AC & fuel systems
- · Loosens the most difficult steering neck fittings
- 1/4", 5/16", 3/8", 7/16", ½", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1"
- Punches sold separately see below
- Patent #7,677,143 and additional patents pending

Scan QR code or search LT1900 on YouTube



[1930] 12 Piece Metric Shockit Line Wrench Set



- Must be used with Shockit Punches for maximum performance & warranty coverage
- · Loosens fittings on steering, brake, AC & fuel systems
- Loosens the most difficult steering neck fittings • 6mm, 7mm, 8mm, 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm
- · Punches sold separately see below
- Patent #7,677,143 and additional patents pending

LT1910PK Shockit Punch Kit



Kit includes: LT1910PS - 5.5" Short Punch LT1910P - 11" Standard Punch

LT1910PL - 22" Long Punch

Individual Shockit Punches also sold separately

Patent pending

LT994 Shockit Socket O2 Sensor Removal Kit



- Must be used with Shockit Punches for maximum performance & warranty coverage
- 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
- Includes non-slip self centering air hammer offset 11" Shockit Punch for limited access applications
- 18mm dual sided tap/bottoming die for O2 sensor and mounting hole threads
- Punches sold separately see above
- Patent #7,677,143 and additional patents pending



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



LT1940 Series Kentucky Kicker Shockit Driver Kits



LT1940-3/8 includes -

3/8" Short Throw Shockit Driver 3/8" Long Throw Shockit Driver 3/8" Drive Plug

3/8" Drive Plug Breaker Bar



LT1940-1/2 includes -

- 1/2" Short Throw Shockit Driver 1/2" Long Throw Shockit Driver
- 1/2" Drive Plug
- 1/2" Drive Plug Breaker Bar



LT1940-3/4 includes -

3/4" Short Throw Shockit Driver 3/4" Long Throw Shockit Driver 3/4" Drive Plug

3/4" Drive Plug Breaker Bar



LOW PROFILE DRIVE PLUG IN USE WITH AN
AIR HAMMER POWERED
SHOCKIT PUNCH



Scan QR code or search IT1940 on YouTube to see tool work!

- Must be used with Shockit Punches for maximum performance & warranty coverage
- Punches sold separately see above
- Patent #7,677,143 and additional patents pending





FOR CLASS 7 AND 8 TRUCKS

The Lisle Corporation Large U-Joint Puller, No. 42910, is designed to quickly and easily remove sealed U-joint caps without damage to driveshafts, yokes, or bearing caps. The unit works on Class 7 and 8 trucks with 1.5" to 2.2" bearing caps. It features heat-treated threads and casting for durability. >>34

FEATURES A BUILT-IN LED

The Vessel Ball Grip Cordless High-Speed Screwdriver, No. 220USBS-1U, is a battery powered/rechargeable or manually driven cordless Ball Grip screwdriver ideal for inserting screws such as those used in electronics and radio/stereo installations. When power driven, it delivers up to 3.5 lbf-in of torque and when manual driven, it withstands up to 88.5 lbf-in torque. The tool features an easy-to-use ball grip and has a charging port and charging indicator with a slide on/off switch. It's slim and compact with a 1/4" hex bit insert. The cordless screwdriver has a built-in LED and comes with a USB charging cord. >>35





DRIVE CONFIGURATION **ALLOWS FOR USE OF** PROPER CAPACITY **TORQUE WRENCHES**

The Snap-on 1/2" Drive 14mm Subaru Head Bolt Socket, No. S6214A, has a drive configuration that allows for use of proper capacity torque wrenches that are required for setting specified torque on cylinder head bolts. Overall socket length is optimized to clear valve train components and maximizes working space between the cylinder head and uni-body frame. Technicians can use proper capacity torque wrenches while the engine is still in the chassis. It's precision machined from special steel with higher alloy content and heat-treated for optimum strength and durability. The S6214A is designed for cylinder head bolts in a majority of Subaru vehicles (2005 and newer) with horizontally opposed flat boxer engines. >> 36

FEATURES A PUSH BUTTON START

The Milwaukee Tool MX FUEL CARRY-ON 3600W/1800W Power Supply provides ideal temporary power. The compact size, zero emissions, and quiet operation of the power supply allow users to safely operate the unit in confined, indoor spaces and a roll cage provides durability for outdoor jobsite use. With a push button start, users can start it in seconds. The MX FUEL Power Supply delivers enough power to run one 15A tool and one lower wattage device simultaneously and can be powered by a single battery or two batteries for double the run-time. Additionally, ONE-KEY provides the ability to track the power supply with community tracking and alerts, complete inventory management, and industry leading smart-equipment technology to secure the user's investment. >>37



DESIGNED FOR A SECURE AND STABLE FIT

The Cal-Van Tools 3-in-1 Cam Subaru Sprocket Holder, No. 754, provides three different tools for holding, removing, and installing multiple cam sprockets on Subaru's, 2002 to present. The tool is ideal for jobs like removing intake

cams, exhaust cams, or AVCS cam sprockets without accidental damage. Each connection is designed for a secure and stable fit. The 754 has a 1/2" square drive to attach a ratchet or breaker bar. The tool replaces problematic methods like locking pliers on the timing belt, the company says. It also works in conjunction with Cal-Van's 10mm Subaru Hex Bit Socket, No. 7541. >>38







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FOUR-POST



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ADJUSTS FROM 48" TO 64" IN HEIGHT

The TraXion Topside Creeper NXT enables technicians to work safety from the topside of the engine compartment. Mounted atop the ladder section is an adjustable padded deck for the technician to rest upon while reaching into the engine compartment. The tool assembles in about 12 minutes, folds flat for easy and compact storage, has locking casters for security and leverage, and offers more height adjustment points than its previous models. Additionally, its I-base design provides flexible positioning around the vehicle. It can adjust from 48" to 64" in height. >>>41

AVAILABLE IN TWO VERSIONS

The Hazet SmartCase Series are compact. foldable tool sets. The easy-to-transport cases are available in two versions: No. 2200SC-1 and No. 2200SC-1. The 2200SC-1 contains a 69-pc screwdriver bit and offset screwdriver set, whereas the 2200SC-2 offers a 50-pc 1/4" nut-driver and screwdriver bit set along with Hazet's 1/4" HiPer Reversible Ratchet. The SmartCases are easy to wipe clean, feature an anti-slip function, and the tools inside are stored in a stable and easily accessible manner. The cases open and close with a quick-operating, wear-free magnetic closure. >>42



COMPATIBLE WITH MANY LIGHT, MEDIUM, AND HEAVY **DUTY VEHICLES**

The Autel MaxiSYS MS909CV Commercial Vehicle Diagnostics Tablet is compatible with more than 80 models of light, medium, and heavy duty vehicles. The 9.7" wireless tablet performs extensive vehicle diagnostics, including the ability to read/erase codes (active and inactive codes), view and graph live data, and perform active tests. The tablet includes a Bluetooth-enabled VCI/J2534 Pass-Thru programmer, alligator clamps, multimeter and amp clamp, and the MaxiBAS B200 battery starting and charging system tester. The tablet, powered by an Octa-Core processor and supportive 126 GB storage memory, includes ADAS calibration software for Class 3 to 5 vehicles and Class 6 to 8 vehicles with dynamically calibrated systems. >>43

QUICK TO JOIN AND DETACH

The Beta Tools COMBO C99 Modular System is comprised of three different types of tool cases. The system is designed to allow users to combine and easily transport different types of tool cases. The tool cases are easily joined to each other by a simple click via the functional side snap-on mechanism. The tool cases are made of sturdy, shockproof ABS and provide an internal load capacity of 55 lbs and bear up to 220 lbs of weight on the lid. The system also includes a wide range of accessories such as hard thermoformed trays, tote trays with removable partitions, small parts boxes with transparent covers, and soft foam precubed inserts. >>44



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

CUSTOMER REVIEW:

The cooling really works when I have worked in the desert at 115 degrees F. Also, very easy to breathe in. 🕊

COOLS INSTANTLY AND LASTS FOR HOURS

Cooling Gear from Magid Cool Powered

by Mission are designed to cool instantly and last for hours. The proprietary fabric cools to 30 degrees below the average body temperature in under 60 seconds, and stays cool for up to two hours, the company says. The product lineup includes a bandana, neck gaiter/face cover,

microfiber towel, skull cap, and towel. >> 45

MAGIN





HAS A SELF-LOCKING THROTTLE TRIGGER

The Mighty Seven Air Die Grinder, No. QA-211, offers a high-powered motor rated at 0.9hp that helps to reduce stalling and has an operating rpm speed of 20,000. Other notable features include a self-locking throttle trigger, OSHA safety rated

> 76dBA working sound pressure, and a rubber grip that reduces users fatigue from vibration. The kit includes a 1/4", 1/8" collets, and two wrenches for quick and easy bit change out. The tool is backed by a threeyear warranty. >>47



The Matco Tools 12V Cordless Infinium 1/4" Impact Wrench Kit, No. MCL1214IWK, provides up to 60 ft-lbs of maximum torque and includes an ergonomic variable speed trigger for precise control. The trigger activates the LEDs. The impact wrench features a replaceable carbon brush motor, making it easy for the user to extend the life of the tool, the company says. It also has a one hand forward/reverse knob to allow users to easily change direction in tight quarters. The compact tool is ideal for work under the hood or in the interior where larger tools have a tough time operating. It includes a motor screen to keep debris out. >>49





CLIP PROVIDES HANDSFREE USE

The Ultra-Compact Pocket Mate from Streamlight is a weather-resistant, USB rechargeable personal light that delivers 325 lm and offers convenient handsfree options. Small enough to carry in a pocket, the Pocket Mate features an anodized spring clip that attaches to zippers or key chains, and clips onto hats, visors and clothing. The light is powered by a bright white LED that offers high and low modes, and has a lithium polymer battery. It charges from any USB power source and includes a charge status indicator. The Pocket Mate is available in silver, red, blue, and pink. >>48



FOR WHEEL WEIGHT **ADHESION**

The Ascot Supply Surface Prep and Cleaning Wipes feature professional strength power for heavy duty cleaning. Prepare the wheel surface for adhesive wheel weight installation. The wipes are compatible with all adhesive wheel weights and are safe for all clear coated wheels. The fast-acting formula doesn't require rinsing. The wipes are ideal for use as a multi-purpose cleaner on vehicle interior and exterior. They are able to clean virtually everything including grease, oil, brake dust, tar, glue, adhesives, decals, fingerprints, sweat, paints, silicones, and more from a wide range of surfaces such as vehicles, tools, equipment, fabrics and tiles, vinyl, leather, metal, floors, walls, and cabinets. >>50



CUSTOMER REVIEW:

You'll be amazed at how many times you grab it to get that one finicky thing done just a tad bit quicker 'n easier. 🔲 📭

AVAILABLE IN THREE DIFFERENT ARM **ASSEMBLY SIZES**

The Makita 18V LXT Brushless Detail Belt Sander, No. XSB01, is ideal for use on wood and metal in refinishing and fabrication applications. It features a belt speed of up to 5,600 ft-min, has three different arm assembly sizes for increased versatility, and is compatible with 1/4" and 1/2" sanding arms. The sanding arm also pivots up to 160-degrees for compact storage and the 21" belt produces 4-5/16" maximum sanding length for faster work. The XSB01 can be connected to dust extractors/vacuums for a cleaner job site. Other features include an electric brake, variable speed control, and adjustable LED. The belt sander is also available in a kit. >>51



TOUCHSCREEN COMPATIBLE

The Ringers Gloves Turbo Plus Glove features soft and durable mesh fabric on top for optimal comfort and flexibility, and synthetic leather on the bottom for long lasting durability. Its wrap-around index finger construction protects vulnerable wear and tear. The fabric between the fingers is lightweight for ideal dexterity. The cuff stays secure with a hook and loop rubber pull tab closure. In addition, the gloves are touchscreen compatible and have a reflective logo on top of hand for increased visibility. They are available in orange and hi-vis. >>> **52**











EASY TO CLEAN

The VIM Tools Magnetic Tool Pad, No. MAGPADLG, is ideal for holding parts and tools conveniently while within reach when working on a vehicle. The magnetic pad is flexible and can stick to most parts of a vehicle's metal body. The material is harmless to finished surfaces. Strong neodymium magnets allow the pad to be placed even on tilted surfaces. It's made with easily cleanable PVC material with a molded TPR insert and double-stitched selvage for durability. >> 54



OFFERS A 0.800" TO 3.000" **RANGE CAPACITY**

The Goodson Tools and Supplies 3-D Fast Cut Setting Micrometer offers a 0.800" to 3.000" range capacity and features a carbide tipped anvil for accuracy and durability. Additionally, it has a .375" diameter precision drill bushing for the calibration standard or pilot to ride on and is accurate to .001". The setting micrometer is ideal for use with any .375" pilot, regardless of top size, to set the cutters. An optional 1" calibration standard is available. >> 55



HELPS PREVENT DAMAGE TO FUEL LINE BUNDLE

The OTC Quick Connect Release Tool, No. 6739, is designed to separate the 4.8mm (3/16") hydrocarbon injection quick-connector, allowing access to service of the fuel line bundle and fuel line replacement without removal of unrelated components. It also helps prevent possible damage to the fuel line bundle. For use on 2010-later GM 2.8L and 6.6L diesel engines. >>56



INCLUDES THREE OUTPUT OPTIONS

The Clore Automotive PRO-LOGIX 12V 1.0A Battery Charger/Maintainer, No. PL2112, from SOLAR utilizes advanced microprocessor-controlled logic to deliver a fully automatic, precisely controlled charging routine to optimally charge and maintain each battery serviced. It has the ability to properly charge different lead acid battery types, including conventional, AGM, gel cell, spiral wound, deep cycle, and marine batteries, as well as LiFePO4 lithium batteries. Additionally, it offers an advanced battery maintenance routine once the battery has reached full charge. The PL2112 also incorporates many safety features, including over-voltage protection, reverse polarity protection, and battery fault detection. It includes three output options: clamps, rings, or 12V male adapter. >> 58



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NEW PRODUCTS 🔀



ABLE TO HANDLE HIGH TORQUE LOADS

The CTA 5-pc Metric Driver Set, No. 8608, features a long flex cable shaft to allow access in tight areas to service hose clamps and other fasteners. The 6-point hex drivers have a rugged cable design that can handle high torque loads. Their molded composite plastic handles have a hang hole for easy storage. Their overall length is 11" and includes sizes: 5mm, 6mm, 7mm, 8mm, and 10mm. >> 59

FOR DODGE HEMI 5.7L AND 6.1L V8 ENGINES

The ProMAXX Alan ProKit is designed to provide accuracy, speed, and consistent reliability in the removal of broken exhaust manifold bolts in the Dodge HEMI 5.7L and 6.1L V8 engine. It has demonstrated repair times of less than 10 minutes per stud, the company says. The Alan ProKit includes ProMAXX's Bolt Blaster machine shop penetrating oil and now offers a smaller footprint, mount-anywhere precision bushings/ fasteners, and two platinum vertical flute bits to punch through hard material. It's made in the U.S.A. >>60

CUSTOMER REVIEW:

ProMAXX products are worth their weight in gold and will save you time and money.



EACH TOOL MEASURES 4.25" IN LENGTH

The Mayhew Tools Low Profile Screwdrivers, Nos. 16990, 16991, and 16992, include a #1 Phillips, a #2 Phillips, and a flat tip. The low-profile design provides ideal performance in hard-to-reach areas. The 10mm alloy steel bit is compact to reach into space limiting areas, while still affording full engagement to the screw at a 90-degree angle. The tools measure 4.25" in overall length and have a contoured handle that fits securely in the palm of the hand to provide a comfortable and reliable grip. The handles have been heat treated to enhance the tool's durability and strength. >>>61





OFFERS ANSI LEVEL A2 CUT RESISTANCE

The Brass Knuckle SmartCut Work Gloves, No. BKCR3520, is a cut-resistant glove offering high dexterity that protects

the common wear area located in the curve between the thumb and forefinger with a reinforced

thumb crotch. The glove's shell is a lightweight 15-gauge high-performance polyethylene (HPPE) fiber that provides ANSI cut level A2 protection. The composite yarn is optimized for fit, function, and cut-protection performance. Nitrile foam coating on

fingers and palm adds abrasion resistance while channeling water, oil, or other liquids away from the surface, providing ideal wet-grip performance. >>63



ABLE TO SOAK UP GREASE, **COOLANTS, DIESEL FUEL, AND MORE**

The Sellars Absorbent Materials EverSoak Light-Duty Absorbent Pads, No. 22883, are designed to soak up both oil and water as well as grease, transmission fluid, coolants, diesel fuel, and many other fluids. They are made with 70 percent recycled cellulose fibers and are Class A fire retardant when pad is dry. With coverstock only on the top side of the sorbent pad, the pad instantly begins to soak up liquid, keeping the pad firmly in one place while still maintaining its durability. They are made in the U.S.A. and not intended for use with aggressive acids or caustics. >>>64



FEATURES ECO-SMART CONTROL

The Kaeser DC-HF Series Desiccant **Dryers** are compact and for point of use or other low flow applications from 7 to 40 scfm and pressures from 58 to 218 psig. The heatless, twin tower regenerating dryers are ideal for sensitive applications that

require pressure dew points from -40 degrees F to 94 degrees F. The dryers include the **Eco-Control Smart** controller with Modbus TCP communications, remote on/off control, maintenance timers, and operational displays. They are easy to install as floor or optional wallmounted units and fea-

ture aluminum desiccant cartridges, purge solenoid valves, and maintenance-free shuttle valves. >>65





951/S8 - 8 pc. set **951/S14** - 14 pc. Set 951/SP6 - 6 pc. set w/ stand

The 951 Series "spinner" drivers from Beta Tools feature a sliding Thandle that can turn into an L-handle for maximum torque, then back to a T-handle for quick fastener spinning. All three ends (extended end plus both ends of the handle) have the same metric (mm) size male hex drive.

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ENSURES NATURAL COLOR RENDERING

The Ledlenser H7R Work Headlamp features a bright, constant, and flicker-free neutral white light. With a high CRI value of 90, the light ensures natural color rendering for accuracy in color critical applications. The H7R Work is resistant to dust and water, as well as from various impacts. It can be easily be dimmed and focused with Ledlenser's patented Advanced Focus System. >>67



CUSTOMER REVIEW: Nice robust headlight. Really simple, really effective and easy to use.



CONTAINS SPILLS UP TO 110 GALLONS

The Andax Industries Big Containment Pac is a spill kit that can contain spills up to 110 gallons and fits in an 18" by 15" by 5" vacuum-sealed package. The kit includes three 48" oil-selective Sorb-Sox (mini-booms), 20 15" by 19" oil-selective absorbent pads, a disposal bag and tie, protective gloves plus a 60" by 10" high pop-up containment pool with a carrying case and CO2 cylinder. In the event of a spill, the mini-booms and absorbent pads can be used to block off a storm drain or waterway while the inflatable pop-up pool can contain the bulk of the spill. >>> 68



HOLDS AND PROTECTS MASKING TAPE

The Polyvance 2" Tape Thing Magnetic Tape Spool, No. 6480, is designed to hold and protect masking and aluminum tape, such as Polyvance's 6482 and 6485 aluminum tape, which is used to hold broken plastic parts together while the parts are repaired with a plastic welder or adhesive. Since the tape is susceptible to being damaged if dropped on the shop floor, the Tape Thing spool protects it from damage and keeps it handy for easy access. The tape spool is easily inserted inside the core of the aluminum tape. The flange of the spool has three strong magnets embedded inside, allowing the spool to stick to any metal surface. >>69





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The Diesel Decoder, No. 904-SCAN, by **Dorman HD Solutions and Diesel Laptops** is a diagnostic scan tool that accurately delivers detailed information to a smartphone for all heavy duty truck makes, without the need for code scanning hardware. The Diesel Decoder can detect all true fault codes, as well as detect and store truck specifications. It grants instant access to the Diesel Laptops repair library, can help plan maintenance intervals using engine operating hours, and generates sharable, printable trip reports. >>> 70





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Advanced wheel service: Tire grading, rotation, and repair

Tire and wheel service on modern vehicles may require special service procedures along with new tooling.

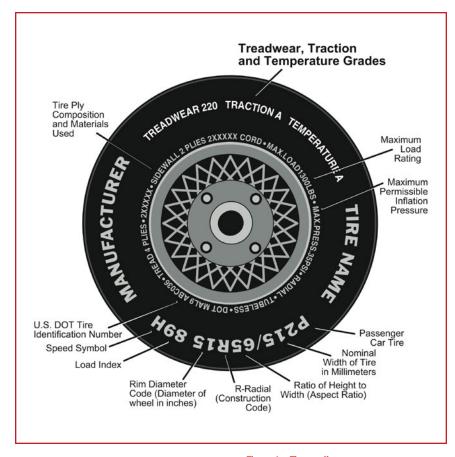
By Scott Brown, Technical Editor

heel and tire service requirements on today's vehicles are quite demanding. Technicians possessing the ability to address tire pressure and monitoring system (TPMS) issues and deal with noise, vibration, and harshness (NVH) are in demand. Consumers today are growing more and more accustomed to a smooth and quiet ride due to the advancements in vehicle design. Given all of the advanced technologies populating the automobile, technicians now must make sure they are adhering to all of the special precautions and service procedures. In fact, you may have run across vehicles that require additional services following a wheel alignment, such as a zero-point calibration or camera/radar aiming.

Today's tire design has evolved tremendously over the years. Tire manufacturers are working hard with OEMs to produce a tire with less rolling resistance and less NVH and continue to deliver a high level of safety.

TIRE GRADING

The National Highway Transportation Safety Administration (NHTSA) has published a document outlining all of the uniform tire grading guidelines. (Figure 1)



This document is available for download and should serve as a great reference when dealing with tires.

When installing new tires, you may have noticed colored dots placed on the sidewall of the tire. Usually, you'll see either yellow, white, or red. Some tires may have just one or a combination. But what do these dots represent? The

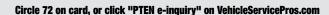
Figure 1 - Tire grading

red mark designates the lightest part of the tire, so, when you install this tire on a cast wheel, you will want to align this dot with the valve stem. When it comes to steel wheels, you'll want to look at the rim closely and find the diamond-shaped indicator with which you would align this red dot. Cast wheels are finely machined

ITS600

INTELLIGENT TIRE SERVICE







DIAGNOSTICS





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□SCAN ME!

components and typically don't have the same balance offset as that found on a steel wheel. The dot is placed at the TPMS sensor because that's the heavier section of the rim. On the other hand, steel wheels are not as refined and typically have a balance factor, hence the need for the diamond indicator.

Now, I'm sure you've seen a lot of tires that are installed on vehicles where these dots don't line up. I believe the main reason for this is because personnel servicing tires and wheels are not aware of this system. Why do you want to do this? When you follow this standard practice, you will ultimately have a far better chance at successfully balancing the entire wheel combination with the least amount of weight needed to achieve a zero-balance condition. Another good reason for following this practice is that you will be able to use this as a reference point if a customer returns after a tire repair complaining of a vibration issue. The first inspection should be to verify that none of the wheel weights had prematurely departed the wheel. Additionally, you can reference the dot alignment versus the valve stem or indicator. If you find that these have shifted, then the tire has rotated on the rim. This could be caused by a combination of things: too much lubricant used on the bead during assembly, the client recently experienced a rapid breaking event, etc.

TIRE ROTATION

Tire rotation is a service that should be performed on a regular schedule as per the vehicle manufacturer's requirements. The reason for rotation is so that we can optimize tire wear evenly across all wheels. In most cases, tire rotation intervals typically run between 6,000 to 7,000 miles. On some vehicles, you'll find that they are not using the traditional wheel studs that are affixed to the hub assembly, but rather they use a screw-type lug nut. For these, you'll want to have a special stud tool (Figure 2) that will help with wheel assembly removal and installation. This will also help you prevent wheel contact with the brake rotor. This is especially important on vehicles equipped with carbon fiber brake rotors

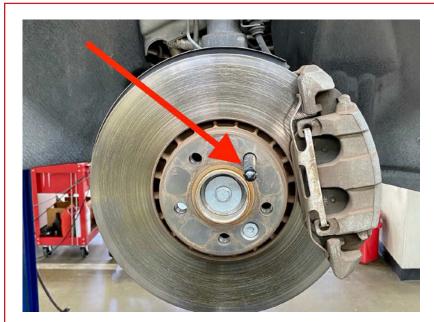


Figure 2 - Tire stud tool



Figure 3 - Patch and plug

that can easily chip or break if a wheel were to encounter it. Tire rotations are a great opportunity to inspect a few items, such as the brake pad thickness and suspension components. Also, take note of the surface between the rim and where it mounts to the brake rotor or hub. If you remove a wheel and observe a lot of rust corrosion or buildup on these surfaces, you'll want to take the time to properly clean and prep the surfaces before reassembly, otherwise, you will likely end up with numerous NVH violations. The date code is an often-overlooked data metric. When installing new tires, all of the date codes should be similar. Additionally, the age of the tire should be noted. Tires in excess of six years may call for replacement. Check with the vehicle manufacturer and tire manufacturer for guidance.

TIRE REPAIR

Puncture repairs can only be performed within certain limits. Proper puncture repairs include the removal of the wheel from the rim followed by an inspection of the puncture area. If the puncture is within the guidelines, then the best practice is to use the proper size patch and plug service patch with the proper tools and procedures to ensure an effective repair (Figure 3). Additionally, there are tires equipped with special acoustic foam inserts that require special handling during puncture service.

WHEEL ALIGNMENT

A wheel alignment offers the technician the opportunity to fine-tune the operational characteristics as they relate to steering, handling, and braking performance. Additionally, vehicles equipped with advanced driver assistance systems (ADAS) may require additional services such as camera/radar aiming, steering angle resets, and more. Service information procedures should be consulted on late-model vehicles and especially for ADAS-equipped vehicles.

TIRE PRESSURE MONITORING SYSTEMS (TPMS)

When servicing wheels and tires with TPMS sensors, the proper service procedures usually include the replacement of the seals, gaskets, and valve cores. Be sure to reassemble using the proper torque levels which can be performed by using torque tools.

NOISE VIBRATION AND HARSHNESS (NVH)

You may find yourself dealing with a vibration complaint on a vehicle occurring at certain speeds and road conditions. Oftentimes these can be difficult to address. There are a few NVH measurement tools out there in the marketplace that can be used to narrow down such vibrations. Automotive Test Solutions offers their Intelligent Vibration Analyzer to help with identifying vibration sources and provides an easy-to-understand visual data map of the vehicle. Pico Technology also offers an NVH tool that can be added on their four-channel scope.



Figure 4 - Major tire damage

The tool offers a graphical display of the vibration levels and what their sources are. The system uses a single three-axis accelerometer as opposed to the four-channel system from ATS.

TIRE INSPECTION

A thorough inspection of the tires during service should always include checking the complete tire including date codes, sizes, and thread condition. The tire in Figure 4 met up with some bad debris on the road and at first glance, it didn't look too bad. A closer inspection revealed a sliced-out section of the tire. Wheel and tire service has evolved, placing additional demands on the service professional. Please make sure that your shop is delivering proper services by following industry guidelines. 😵



SCOTT BROWN is an ASE Master Certified L1 Technician and has over 37 years of professional service industry experience. He is

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



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Tackling calibrations in the shop

Understanding the challenges between static and dynamic calibrations.

By Matt Fanslow, Contributing Editor

dvanced driver assistance systems (ADAS), has quite literally been all the rage for the last several years. So many articles, social media groups, forums, training classes, and podcast episodes have become dedicated to the subject. But why? For starters, in a profession where technology is always evolving, this was a big change from normal service. ADAS is not really all that new, arguably debuting back in 1999 with Mercedes-Benz "Distronic," which used radar for adaptive cruise control (ACC). But now we are seeing it on virtually every high-line vehicle, and it's absolutely trickling down to the more economical models.

Another reason. Far too few mechanical repair shops know enough about ADAS, namely when a calibration is required. Collision shops are very aware, and glass replacement companies are wising up, but it's still far too common of an occurrence that a repair shop doesn't know when a calibration should be performed after seemingly non-related service work or worse, "warnings" are ignored. Service information or even wheel alignment equipment advice about a calibration requirement is given, yet it is ignored.

I could get going on a serious tangent just discussing all the names different manufacturers assign the dif-



▲ Figure 1 - Scan tool

ferent features. It's such an issue that many groups have come together, led by AAA, the National Safety Council, Consumer Reports, J.D. Power, and SAE International to help educate consumers on the benefits, limitations, and proper usage of these technologies by establishing standardized naming that is simple, specific, and based on system functionality.

But this is PTEN, and the focus is, and should be, on the tools and equipment used to maintain, diagnose, and/ or service automobile systems and, in this case, ADAS.

ADAS calibrations really come down to two distinct procedures: static or dynamic (and sometimes a combination of the two).

DYNAMIC CALIBRATIONS

Dynamic calibrations, for the most part, instruct us to verify that the camera, sensor, or radar are properly mounted and leveled. This is where the electronic level/angle gauge is used. A scan tool is used (Figure 1) to put the system into a learn or adaption mode and the vehicle

>>> TOOLS USED:

- SCAN TOOL
- OE SERVICE INFORMATION FROM NASTF
- PLUMB BOBS, MASKING TAPE, CHALK, PERMANENT MARKET, BRAIDED MASON'S LINE, ELECTRONIC LEVEL/ANGLE GAUGE, LASER LEVEL, METRIC TAPE MEASURE
- ADAS CALIBRATION KITS

is driven within parameters outlined by service information — and often conveniently laid out on the scan tool until the calibration is complete. Some carlines, like Chrysler for example, are very nice to us in that they display on the scan tool a percentage leading up to the system calibrating. Others, like Ford and Kia, do not, and you are left driving around waiting for the learn to complete.

There are always outliers, so giving hard numbers for the amount of time for a system to finish calibrating is difficult, but I expect most to complete in 15 to 20 minutes or less. After that time period, I'm often pulling over to the side of the road and checking for any diagnostic trouble codes (DTCs) to give me a clue about potential issues preventing the calibration from completing.

With dynamic calibrations, you need to take into account if a camera is being calibrated, like a forward-facing camera or a radar, like a millimeter-wave radar. Sensor fusion — where there are multiple cameras or a combination of cameras and radar — is being used to accomplish a goal such as autonomous emergency braking or adaptive cruise control. Knowing what is being calibrated can help you with the environment you are driving in. Take, for instance, radar. Radar is probably not concerned with lane markings, but genuinely concerned with obstacles such



▲ Figure 2 - Automaker info on nastf.org



▲ Figure 3 - ADAS calibration tools

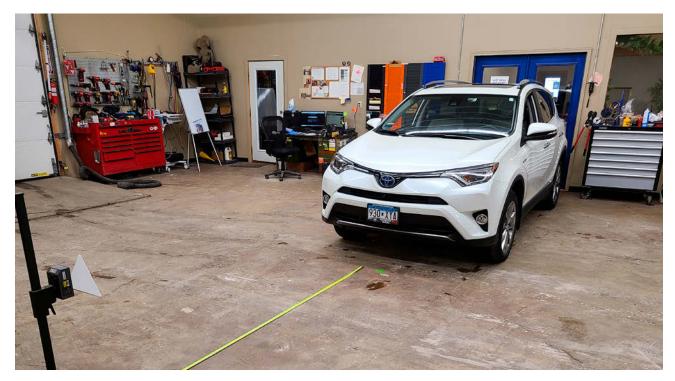
as trees, guardrails, other vehicles, telephone poles, etc. Cameras may take some of that into account, but a camera really cares about lane markings, especially if it's used for lane keep assist.

STATIC CALIBRATIONS

Static calibrations, however, require targets. There's no beating around the bush here, there are lots of targets. Every manufacturer has their own target designs and even then they often differ by platform

(or year range) of their vehicle line-ups. So, what does it take to do these calibrations (namely the static calibration) in the real world? First of all, you need space and lots of it. Open, flat, properly lit (not too bright), space. Maybe you have an area in the shop that can be cleared out quickly. Maybe you need to take into consideration leasing or buying a building where you perform calibrations. But the reality is, for many of these calibrations you will need space. Like everything, it

TOOL BRIEFING





depends on the system as to how much you will need. Many aftermarket calibration system manufacturers/distributors suggest a space of 30' by 45'. But this is a general suggestion and dependent on what vehicles you are serving.

Second, you need to have quality resources for service information. This may seem elementary, but in talking to a few different technicians around the country, I can tell you this isn't as uncommon as it should be. Depending on the year of vehicle, you may need to subscribe to OEM sites directly. A really good source for how to get OE service information and/ or scan tools is nastf.org. You need to be a

▲ Figure 4 - ADAS target setup

◀ Figure 5 - Reflector for calibration

member, but luckily membership is free. Then just go to the automaker info page (Figure 2) and select the manufacturer of interest.

Third, you are going to have to hit the hardware store. A couple of plumb bobs, masking tape (I prefer the wide painter's variety), chalk, permanent marker, braided mason's line, electronic level/angle gauge, laser level (I recommend multiple beam to save time when looking for positions at right angles to vehicle centerline), and a tape measure. Do yourself a favor and make sure your tape measure is metric — specifications are all in the metric system (Figure 3).

And lastly, of course, are the targets themselves. You can choose between OE and aftermarket. It's challenging when you service multiple carlines, as many vehicle manufacturers don't have guides or bulletins with a list of the required equipment across their vehicle platforms. To determine what you will need, you will need to sift through

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the procedure, jotting down the equipment "part" numbers, and then calling the dealer service department or finding a distributor, like an online warehouse, to order up the pieces. Be patient when doing this.

ADAS CALIBRATION SYSTEMS

You have options when choosing an aftermarket ADAS calibration system (Figure 4). Aftermarket systems play well to shops that service multiple carlines, as they sell kits that include many targets and give you a chance to essentially hit the ground running. The cost of these kits may seem hefty, but there is some cost savings with the reduced time investment in searching for the more ala carte offerings from the manufacturers.

There are features from the aftermarket offerings that can improve efficiency. Some of the targets/reflectors (Figure 5) include built-in laser pointers, rulers, levels, and leveling screws. This saves you time by speeding up the process of aligning the target with the camera/ radar being calibrated or squaring up the target with the centerline of the vehicle.

Now I would like to let you in on the secret to successful ADAS calibrations: Follow the instructions to the letter. Do not skip ahead and do not wing it. Some carlines do not want any obstructions as you begin the process, so skipping ahead to set up the target will cause the calibration to fail. You need to follow the directions as written and leave the area in front of the vehicle open until you are instructed to place the target.

ADAS is already here, in your bays right now, and services you are performing that disturb the cameras or radars require reaiming prior to releasing a vehicle to your client. Hopefully, with this article as a guide, some research, a little reorganization or perhaps shop area expansion, equipment purchases, and some training, you can provide these services for your clients and if anything like my situation, for your local collision shops, glass companies, and even your competition. 😵



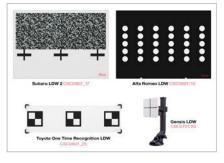
MATT FANSLOW is an ASE CMAT/L1 Diagnostic technician and shop manager for Riverside Automotive, an all makes/all models independent repair

shop in Red Wing, Minnesota. adtmatt@yahoo.com

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XToolUSA Key Making System

Reviewed by Matt Fanslow, diagnostic technician/shop manager, Riverside Automotive in Red Wing, Minnesota.



The XToolUSA Key Making System contains the hardware necessary to cut and program vehicle keys as well as keys and remotes for common vehicle types. The system includes the NITRO bidirectional scan tool, Triton key cutting machine, and Nitrous Keys. The NITRO features key programming functionality, while the Triton key cutting machine is able to originate and duplicate most key types including coupes, sedans, motorcycles, SUVs, pickups, vans, RVs, heavy duty trucks, construction equipment, and more. It can also duplicate house keys.

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

THE REVIEW:

A: The Triton key cutting machine is all-in-one for the most part. My previous key cutting machine required a cell phone app to use it, and if I wasn't around, no key cutting was getting done. The Triton has a touchscreen, so it is part of the machine; it's all-inclusive. It saves me time because I don't have to be around, or I don't need to get employees to download apps on their phones. I've been using it almost primarily as of late and my other one is just kind of collecting dust.

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

A: It's an unforeseen income. It's caused a noticeable increase in phone calls, repair orders, and profit. There's an argument to be made that many may have never brought their car here before, but now they have a specific need that we can fill — and now we have them in our shop and a chance to hopefully impress them with the shop.

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

A: Very little. And the instructions are really, really well done. You set it up and it has you run through a couple of calibrations that are menu-driven. So, you have the manual telling you what to do plus the machine is walking you through it. It's a cakewalk.

Q: How easy was it to use?

A: I find it very, very intuitive. It's all right on the machine. There are diagrams that show you how to line it up to cut the key. If I can do it, I think anybody can do it.

Q: What features did you like?

A: It boots up really fast. It's kind of crazy, but that means a lot. From a cold off, it's booted up and ready to go in a few seconds. Also, you get quite an inventory of keys. When I got into key cutting on my other [machine], I tried to be smart and order the keys. I predicted I would see the most of GM, Ford, Chrysler — I never had the right key. I always had to order a key, or one time, we even ran down to the hardware store to grab a key box. Now with the Nitrous Keys, if I'm doing a backup key or a second key, I usually always have a key here.

Q: What features didn't you like?

A: I guess I would just say that I don't think the scan tool is quite ready to be the shop flagship yet. Maybe it will become so, but right now it makes a really nice backup. 😵

Mayhew 11-pc Dual Drive Bit Set

Reviewed by Audeliz Mejias, field service technician at United Rentals in Worcester, Massachusetts.

PRODUCT DESCRIPTION:

Mayhew's Dual Drive 11-pc Torx Bit Set, No. 16003,

is an 11-pc bit set assembled in the U.S.A. that features a wide range of sizes, giving users the ability to fasten or unfasten the most common Torx screws. Torx screws have become popular in the automotive market due to their ability to generate higher torque, be tamper resistant, and alleviate cam-out effect. This new set includes a convenient storage rail that keeps all bits organized and easily accessible. Additionally, a titanium coating enhances the strength and durability of each piece, a low-profile dual drive design allows for use with a ratchet or 11mm wrench, the popular 1/4" drive is backed by a lifetime warranty.

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THE REVIEW:

Q: How long have you been working in the automotive industry?

A: I worked in the automotive industry for 15 years. I now work in the heavy equipment/aerial equipment industry.

Q: What kind of work do you do at your shop?

A: Currently my shop is "mobile." I am a field service technician. I repair heavy equipment and aerial equipment. Our shop focuses mainly on big aerial work platforms that range anywhere from 12' man lifts to 185' boom lifts.

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

A: This tool saves time by allowing you to use a much smaller drive type than typically needed for larger Torx bits. I found being able to put a 1/4" drive ratchet on a t55 Torx bit was never available in my tool arsenal. You can even put a ratchet wrench on these and get into even tighter spots and still have the ratchet ability.

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

A: Any tool that saves time will always save money.

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

A: No setup is really required. Just pick your drive type and get going.

Q: What features did you like?

A: There were multiple features I enjoyed. I like the titanium coating; it prevents the bits from getting rusty while sitting in my service truck. Secondly, the multiple drive types are awesome. You can use a ratchet, wrench, or ratchet wrench. And the rail it comes with keeps them organized in my toolboxes. Also, they are very short, making the locations they fit in even more accessible. I would think the titanium coating would improve service life as well.

Q: What features didn't you like?

A: There really weren't any features I

did not like. If Mayhew made a "master" set I would 100 percent purchase it.

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

A: I used these on many jobs but more specifically on disassembly of Deutz engines while performing repairs in the field. I find these are also very nice to use while working on BMW engines. Almost all fasteners on these engines are Torx or inverted Torx. There's also not very much room in those engine bays, so the low-profile design and multiple drive types make it a breeze to change just about any component on these engines.

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

A: I have used low-profile Torx bits from other manufactures and none provide as much usability as these do. The Mayhew fits in tighter spaces and allows more drive types that others do not. This tool simply blows the competition away.



CanDo HD Pro III

Reviewed by Sulev Oun, owner, O&K Truck Repairs Ltd. in Tonawanda, New York.

PRODUCT DESCRIPTION:

The CanDo International HD Pro III covers Class 4-8 commercial vehicles and off-highway machinery, such as mining and farming equipment. The HD Pro III is a wired Android tablet that is budgetfriendly. It performs bidirectional controls and change/set parameters, diagnoses hydraulic systems, and performs VGT calibrations as well as DPF reset/regeneration. The tool comes with two years of Motor's FleetCross Service, a repair information system accessible from within the HD Pro III. Two years of software updates and all cables and connectors are also included.

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THE REVIEW:

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

A: I've got quite a few scan tools, especially since I do training and have my own shop, so the tablet format makes it very convenient to just grab it and get in there in a timely fashion. This is important especially when it comes to commercial vehicles because there's somebody on the other end of the line that wants to know if they should schedule the truck.

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

A: The setup was typical of any kind of phone or computer-based device. Basically, you're setting up for Wi-Fi and some personal settings that are required by most scan tools.

Q: How easy was it to use?

A: Yeah, it was easy. It's more buttonology. Because it's a tablet platform, you kind of learn between your smartphones and everything how to start navigating. The bottom line is it's like anything else, you just have to power it up and then start playing with it. You're not going to hurt anything.

Q: How was its packaging? Did it come with any accessories?

A: It came in a fairly sturdy case. It's one of those permanent cases that you want to keep your tools in all the time, and it had various cables laid out very neatly in there. They do have an OBD 16-pin breakout box that comes with it too, so I'm sure that will wind up being useful.

Q: What features did you like?

A: I liked the separation availability of choosing between engines, between vehicles and some of the other stuff too like agriculture and offroad equipment.

Q: What features didn't you like?

A: I think the connection cable should be a

little bit longer than it is, and I would

like to see some printing functionality. It does have Snapshot though.

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

A: I've used it on diagnosing some Cummins' CNG engines. Also, because it's a global platform, they're pretty good about getting into Isuzu's Hinos. That's stuff that would normally be a little hard to get into as far as hooking up and being able to connect and communicate with different vehicles.

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

A: I have quite a few scan tools. The best way I can describe this is this is a budget-minded scan tool. Depending on what your budget is, you do get a good bang for the buck. &

TOPDON

Volcano 2000 **Portable Jump Starter**

Reviewed by Randy Kaiser, technician/service and parts manager at Rost Motor in Manson, Iowa.



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

A: This little multi-function battery pack is a pretty handy piece of equipment. You can not only use it to jump start a vehicle, but it has two USB-A connectors, a USB-C connector, a 12V power point adaptor, a flashlight that has a strobe function, and a built-in wireless charging pad. All of this in one small, easy to carry and store piece of equipment.

Q: How easy was it to use?

A: The battery pack is very easy to use. The USB ports are built in, and you simply have to open a cover to access them. The power point adaptor and the jump start cable adaptors simply plug in after opening a cover. There is a built-in switch to turn on the battery pack or the flashlight. There is a USB-C charging cable included to keep the battery pack charged.

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

A: There was a manual included with the battery pack. It is easy to understand, and written in quite a number of languages. I did refer to it to see how to turn on the



flashlight, which simply required holding down the power button longer.

Q: What features did you like?

A: I really like the fact that the battery pack is so compact, but has so many extra features built in. You can easily store the box with the battery pack and all of the accessories in your vehicle, garage, or toolbox. If you have to jump start a vehicle, charge a cellphone, run a portable air compressor or any 12V accessories, you can do it from this battery pack. The built-in wireless charging pad is a big plus with most newer cellphones having that capability.

Q: What features didn't you like?

A: The covers over the USB and auxiliary ports are pretty stiff. When you have

PRODUCT DESCRIPTION:

TOPDON's Volcano 2000 Portable Jump

Starter delivers a 2,000A peak current for jump-starting a flat 12V lead-acid battery in seconds, with 25-times the boost capability on a single charge. The V2000 is suitable for cars, trucks, motorcycles, SUVs, watercraft, and more, up to 10-liter gasoline or 8-liter diesel engines. It provides up to 25 jump starts on a single charge, offers 10 multiple protections against short circuits, and has dual USB charging ports. The V2000 is a 3-in-1 combination, jump starter, portable power bank, and LED flashlight.

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> a cable plugged in, the cover puts pressure on the cable. Hopefully this won't make the ports fit loose over time.

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

A: I used the battery pack for a quick jump start on a vehicle (the manual recommends only three starting attempts in two minutes). This isn't a replacement for a large jump start pack if you do a lot of jump starting. It's designed more for a quick start or emergency use. I also used it to charge my phone both wired and wirelessly. It charged quickly both ways (up to 10W wirelessly). I used the flashlight. It's decent but not super bright. It does have both a slow and fast strobe feature.

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

A: The battery pack did not come with a charging adaptor of any kind. I know that most people have some around for their cellphones. It would be nice if it came with a charging adaptor, and possibly even an adaptor to recharge it from your vehicle. With it being so portable, I can see people buying one to keep in their vehicle for emergency use. 😵



ach year, the *PTEN* Innovation Awards feature the newest and most innovative products introduced to the automotive aftermarket. This year, PTEN received 137 product entries! We shared the first round of nominees in May PTEN. For the full list of 2021 nominees with full product details, visit: VehicleServicePros.com/2021IANominees.

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Premier R-1234yf Recover, Recycle and Recharge Machine, No. AC1234-4SL CATEGORY: Air Conditioning Service Circle 86 on card, or click "PTEN e-inquiry" on VehicleServicePros.com

Coats

80C Center Clamp Tire Changer CATEGORY: Tire & Wheel Service Circle 87 on card, or

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BOLT ON TECHNOLOGY

NextGear CATEGORY: Automotive Software

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H&S Autoshot

Self-Piercina Riveter, No. UNI-6700 CATEGORY: Body Shop

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Fast Charge 450 Lumen Project Light, No. ECPRD068 CATEGORY: Lighting

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Cojali USA

Jaltest DATA-LINK

CATEGORY: Heavy Duty Scan Tools Circle 91 on card, or click "PTEN e-inquiry" on







Milwaukee Tool

M12 ROVER Service and Repair Flood Light w/USB Charging, No. 2367-20 CATEGORY: Lighting

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ATEQ TPMS Tools

Quickset X TPMS Reset Tool, No. QUICKSETX CATEGORY: Tire & Wheel Service

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Noregon Systems

NextStep Repair CATEGORY: Miscellaneous

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Snap-on Tools

Vertical Chisel Shrinking Body Hammer, No. BF636 CATEGORY: Body Shop

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Mayhew Tools

11-pc Torx Titanium Coated, Low Profile, Dual Drive Set, No. 16003 CATEGORY: Hand Tools

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Streamlight

Stinger 2020 CATEGORY: Lighting

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Relay Bypass Kit, No. 927 CATEGORY: Diagnostic **Equipment**

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Lock Technology

2-pc Skinny Rod Lock Out Kit, No. LT-128 CATEGORY: Specialty Tools

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Carnage Tools

1,000 Lumen Multi-Function Work Light, No. CT1KWL CATEGORY: Lighting

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ALLDATA

Shop Manager CATEGORY: Automotive Software

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XToolUSA

Key Making System CATEGORY: Automotive Scan Tools

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Auto-Grip Oil Filter Pliers, No. V2400G CATEGORY: Specialty Tools

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Lisle Corporation

11-pt Truck Brake Caliper Socket, No. 29120 CATEGORY: Brake Service

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KNIPEX Tools

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CATEGORY: Hand Tools

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Ledlenser

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Logic Light Circuit Tester, No. 81

CATEGORY: Diagnostic Equipment

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Bosch

DAS3000-1 ADAS Recalibration System CATEGORY: ADAS

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Autel

MaxiTPMS ITS600 Intelligent Tire Service and Diagnostic Tablet

CATEGORY: Tire & Wheel Service

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Schley Products

Ford Coyote Harmonic Damper Pulley Puller Kit, No. 18350

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OzonePRO Professional Sanitation System CATEGORY: Shop Equipment

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XPH34R Headlamp **CATEGORY:** Lighting

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Technician Coaching Program CATEGORY: Miscellaneous

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ANSED Diagnostic Solutions

HU31035 Automotive Sensor Simulator CATEGORY: Diagnostic **Equipment**

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Mayhew Tools

6-pc Torx Screwdriver Set. No. 64431 CATEGORY: Hand Tools

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ATD Tools

3/8" Drive 3-in-1 Variable Length Ratchet, No. PLT-99638

CATEGORY: Hand Tools

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Kent Automotive

PROS Profit Enhancement and **Inventory Management Tool** CATEGORY: Automotive Software

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Autel

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2-Jaw Harmonic Balancer Pulley Puller, No. 17400 CATEGORY: Specialty Tools Circle 129 on card, or click "PTEN e-inquiry" on VehicleServicePros.com





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1/4" Drive Dual 80 **Technology Stubby** Ratchets, Nos. TK72 and TKF72 CATEGORY: Hand Tools

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CTEK

PR025S 25A Battery Charger and Power Supply CATEGORY: Battery Starting & Charging

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M18 FUEL Mid-Torque Impact Wrenches w/ Friction Ring **CATEGORY: Power Tools**

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Tire Pressure Sensor System Tool Kit, No. TPMS5 CATEGORY: Tire & Wheel Service

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BJPXR9 Connected **Ball Joint Kit** CATEGORY: Specialty Tools

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Mac Tools

RBRT Socket Extractor Sets CATEGORY: Hand Tools

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Schley Products

Updated Low-Profile Pitman Arm Remover. No. 68800A CATEGORY: Tire & Wheel Service

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ProDemand Estimate Guide CATEGORY: Automotive Software

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4A 12V Battery Maintainer + LiFePO4 Capability, No. EEBM500B CATEGORY: Battery Starting & Charging

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Performance Spray Gun CATEGORY: Body Shop

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Snap-on Tools

Basic Digital Multimeter TRMS, No. EEDM504F CATEGORY: Diagnostic **Equipment**

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Tech450Pro CATEGORY: Tire & Wheel Service Circle 147 on card, or

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Oasis Scientific

Vividia VA-450 LCD/Wi-Fi 2-Wav Articulating Video Borescope CATEGORY: Diagnostic Equipment

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TEXA USA

AXONE NEMO 2 Truck CATEGORY: Heavy Duty Scan Tools

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Launch Tech USA

X-431 Turbo CATEGORY: Automotive Scan Tools

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Snap-on Tools

1/4" Drive 24mm Single Hex Oil Pressure Switch Socket, No. S7400

CATEGORY: Specialty Tools

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Mechanic's Time Savers

52" 7-Drawer Heavy Duty **Toolbox and Workstation** CATEGORY: Tool Storage

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Pro-Cut International

X9D Rotor Matching System CATEGORY: Brake Service

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CATEGORY SPOTLIGHT

LIFTS, JACKS & STANDS



ifts and jacks are some of the most-used equipment in a repair shop. It's important to choose the right piece of equipment and ensure it's working properly in order to keep both the vehicle and the technician safe. Your PTEN editors have compiled a list of relevant products and tips that will help you choose the right lift, jack, and stands for your shop.



35,000-LB CAPACITY

The **Hunter Heavy Duty Four-Post Lift**, No. L494HD, features a 35,000-lb capacity. The L494HD has galvanized runways capable of servicing vehicles up to 320" wheelbase. It comes alignment ready with turnplate pockets and slip plates for servicing standard vehicles. The four-post lift can also be equipped with optional Powerslide and FIA turnplates and slip plates, saving time by eliminating trips around the truck when locking and unlocking plates. The aligner can be connected to control all lock and unlock functions automatically. Additionally, optional 20,000 lb jacks can be added for wheel-free service, and optional LED AlignLights make service easier and safer by illuminating the underside of the vehicle. >>154

DESIGNED TO FIT INTO A SMALL SPACE

The Hofmann 12K 4-Post Alignment Lift System is versatile, yet compact in size and can be used with any vehicle from compact cars to heavy duty pickups. The lift system is designed to fit into a small space while providing up to 12,000 lbs of heavy duty lifting capacity. Offering users four-wheel alignment capabilities that cover a full range of vehicle requirements, its 20.5" wide Pro-Style runways help save time when loading vehicles onto the lift, and the closed front end design maintains a steady, shake-free lift for advanced alignment equipment measurements. >>> 155



360-DEGREE ROTATION SADDLE FOR EASY POSITIONING

The OEMTOOLS 2-ton Scissor Jack, No. 24799, is engineered for lifting vehicles for tire service. The package includes a universal ratchet wrench for quick and easy lifting. The jack has a maximum load capacity of 2 tons and has a 360-degree

rotation saddle for easy positioning. Made of durable steel construction, it has a 4" minimum lifting height and 16.5" maximum lifting height. >> 156



FOLDS FOR EASY TRANSPORT

The Portable Air Over Hydraulic Jack, No. SKB25-2, from Stertil-Koni is ideal for servicing vehicles in the maintenance bay or on the road. Weighing in at 60 lbs, the two-stage jack has a lifting capacity of first stage, 25 metric tons, with a final stage of 10 metric tons. The portable design incorporates a 21.6" handle that folds for easy transport and an optional wall mounting bracket. The jack features a maximum height without extensions of 12.5" and a low 6.3" collapsed height. It also has easy-to-use controls with a dead-man safety switch and a built-in overload valve for added safety.

Includes 2" and 4" extensions. >>> 157







FEATURES A DRIVE-ON HEIGHT OF 4"

The Nussbaum Jumbo HF 7 Double Scissor Lift features a capacity of 7,000 lbs and is an ALI certified, all-around hydraulic lift for workshops where speed, flexibility, and reliability are in demand. The lift has a lifting height of 79", a drive-on height of 4", and offers a flat design with lengthadjustable platforms. It is able to be installed in different installation widths and doesn't require compressed air. The four hydraulic cylinders require very little energy and the control unit is connected to the lift only by the hydraulic hoses which can be positioned freely around the lift. The lift is manufactured in the U.S.A. >>158



LIFTS UP TO 500 TIRES ON A SINGLE BATTERY CHARGE

The Ascot Supply Battery Operated Wheel Lift features an ergonomic oversized handle and four swivel casters to allow users to move the lift to the vehicle or tire balancer easily. The lift



ADJUSTS TO FOUR POSITIONS FROM 12" TO 20"

The AFF 22-ton Pin Style Safety Stand,

No. 6522, is ideal for supporting trucks, trailers, and equipment in agricultural, construction, and industrial work environments. Its pin style design provides maximum security and heavy gauge steel frame design prevents warpage. The stand adjusts to four positions from 12" to 20". Its large v-shaped saddle allows for more contact with the load and its 10" by 10" base provides added security. When used in pairs, it achieves the capacity of 22 tons and meets ASME-PASE 2014. In addition, its tethered pin safeguards against loss and





BUILT FOR RIGOROUS HEAVY DUTY APPLICATIONS

The ESCO Pro Series Bottle Jack Line is designed for rigorous heavy duty commercial applications and range in sizes from 12 to 30-ton capacities. The bottle jacks are equipped with a re-engineered thick base plate, offering a stronger foundation to support heavy loads. They feature fully welded cylinders and frames, as well as have a compact footprint. Their doublespring design allows for controlled and safe descent while releasing pressure from the cylinder. All four bottle jacks operate using air or can be manually adjusted with the included two-piece lifting/lowering handle. Each jack has a 4' swivel-end hose with a handheld push-bar air trigger. >> 160



FEATURES 101" DRIVE-THROUGH CLEARANCE

The Eagle Equipment 9,000 lb Floor Plate Two-Post Lift features an overall height of 111-1/2" and overall width of 134". It offers dual point lock release on both columns, chain rollers, truck adapters, and door guards. The lift's arm locks prevents them from moving from set position for safety. The arm locks also engage automatically when the carriage is raised. The drive-through clearance is 101". >>>162





RATED FOR 500 LBS

The Kent Automotive Lift King Heavy Duty, No. 1620192, mechanically lifts and moves semi-truck hoods, car or truck doors, and pickup beds safely and efficiently with one operator. The multi-use lift is rated for 500 lbs and comes with a 1,600-lb brake winch. It has passed testing at 1,000 lbs, the company says. The bundle contains one lift and one semi hood attachment. The semi hood attachment allows additional tilting mobility for body repair and painting. >>163



COMES WITH A THICK CROSSBAR FOR ADDED SUPPORT

The Advantage SS-11000-WD Four-Post Lift is nicknamed "Big AL", according to the company. The lift provides users 3" longer runways, an additional 10" of through clearance, and an extra 10" from outside of the runways compared to the Advantage DX-9000-XLT Four-Post Lift. It also comes with a thicker crossbar for added support and increased cables and pulleys to handle the added capacity. The SS-11000-WD accommodates dually trucks and other wider trucks such as the Ford Raptor. >>165

ADJUSTABLE FROM 48.75" TO 74.5"

The BendPak MLS-18 Mobile Jack Stand is designed to provide added support and peace of mind when work on a heavy duty vehicle on a lift may cause a shift in its

> center of gravity. Each MLS-18 Mobile Jack Stand has a rated capacity of 18,000 lbs and can be adjusted from 48.75" to 74.5" in height to reach lifting points more than 6' in the air. Additionally, it features a tripod design, foldaway transport handle, and 3" diameter wheels. It's ideal for use in sets of four, six. or eight. >> 164



The Martins Industries 2-ton **Professional Floor Jack**, No. MFJ-P2T, has a lifting capacity of 2 tons, making it ideal for passenger cars, SUVs, and pickup trucks. Its low-profile design allows users to roll it under as little as 7.5 cm of clearance. The protective sleeve along the

lifting arm and the rubberpadded saddle prevent damaging the vehicle when pumping. When work is done, simply pull and twist the handle counterclockwise for a smooth and controlled lowering. It also has a foot pedal that allows it to reach the jacking point in no time for a quick set up and durable nylon wheels to maneuver with ease without scratching garage floors. >> 166

In choosing a lift for your shop, one of the most important questions to consider is: What's the heaviest vehicle you'll ever be raising to service? **Answering this one question** will give you the answers in your search to find the best equipment fit, whether you are lifting a fire truck or an everyday passenger car."

- Steve Perlstein, Mohawk Lifts



DESIGNED TO HANDLE HEAVY ENGINE, DRIVE AXLE ASSEMBLIES, TRANSMISSIONS, AND MORE

The ATD Tools 2,500 lb Powertrain Lifting Table, No. ATD-7478, is engineered to handle heavy engine, drive axle assemblies, transmissions, electric vehicle batteries, and other vehicle components. Its scissor lift design allows access to all four sides of a component and its independent adjusting screws tilt the table 11 degrees side-to-side, front-to-back. The lift table includes two sets of heavy duty ratcheting tie down straps as well as two 8" diameter locking swivel casters for easy movement and secure positioning. The table measures 19.7" by 32" and has an air/ hydraulic foot pump with 10' hydraulic hose extension. >> 167



IDEAL FOR LOW CEILINGS

The AMGO LR10 Low-Rised Portable Lift has a lifting capacity of 10,000 lbs and is ideal for low ceilings. It provides a good working height for tires, brakes, and body repairs. The LR20 features automatic safety locks and a lock release, a minimum height of 4-1/8", and a lifting height of 23-5/8". The portable unit is easy to move around the shop with the power unit stand. Standard rubber pads are included. >>168



INCLUDES THREE SADDLE ATTACHMENTS

The OTC 22-ton Under Axle Jack, No. UA22, features a self-retracting, spring return with long 49-1/2" T-handle to let users easily position the jack under vehicles with long overhangs. One pull of the handle activates the self-retracting 22-ton capacity ram. Large rubber-tired steel wheels aid in maneuverability and movement on most types of terrain. With three included saddle attachments, it has a lifting range from 8.27" to 10-2/3" using the longest saddle. The jack meets all five ASME PASE-2019 safety standards for service jacks and is an ideal size for safely lifting heavy duty vehicles. >>169



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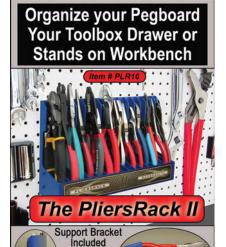
Battery Operated Tire and Wheel Lift, No. LM-200-R2, is a battery-operated safety device with a 200 lb lift capacity. The lift allows the technician to work at a comfortable height, no need to kneel or bend over. It comes equipped with two 12V batteries and a charger/conditioner so that users can't over charge it. The lift is designed with an off-set column for easier access to lug nuts and wheel service equipment. >>> 173



AVAILABLE IN CONFIGURATIONS OF TWO, FOUR, SIX OR **EIGHT COLUMNS**

The Rotary Lift Flex Max, powered by RedFire, is a wireless mobile column lift that can be operated exclusively by remote control or via controls located on every column. The Flex Max is available in configurations of two, four, six, or eight columns and offers lifting capacities of 14,000 or 18,800 lbs per column. The lift can be used to raise most cars, pickups, work trucks, garbage trucks, buses, and other vehicles. Flex Max comes equipped with Rotary's LockLight technology that shows at a glance whether the lift is resting on its mechanical load-holding locks. >>174





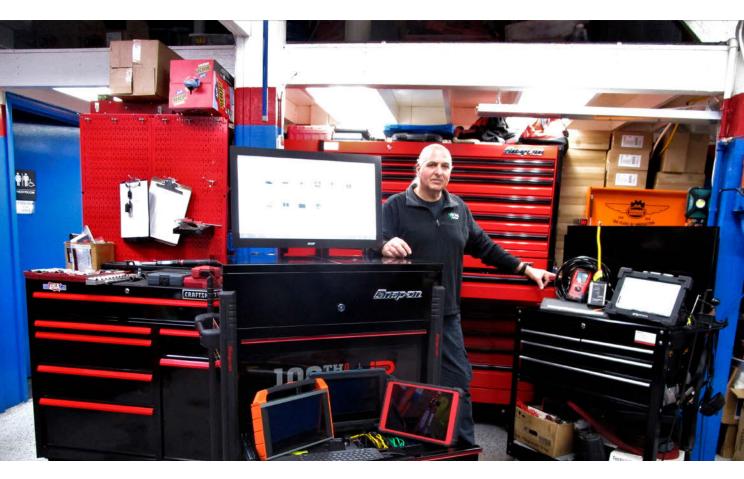
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Wax on, wax off

G. Jerry Truglia keeps his 84" box clean, well-organized, and insured.

By Amanda Silliker, Editor

It's the Lamborghini of boxes." That's how G. Jerry Truglia describes his 84" EPIQ Snapon toolbox. Five years ago, he traded in his previous Snap-on toolbox to get this bigger version because he just needed more room.

"I was running out of places to really put the tools and I wanted it more centralized," says Truglia, who is the owner of ATTS (Automotive Technician Training Services) in Mahopac, New York. "But there's never enough room. When you've been in this business as long as me, you keep getting tools — you can't help it."

Truglia, who has been in the industry for 47 years, says his toolbox is great value and he particularly enjoys how he

OWNER

G. Jerry Truglia

Shop: ATTS

(Automotive Technician Training Services) Location: Mahopac, New York

can configure the drawers in whatever way he wants, such as deep or shallow, long or short, side drawers or full length. When it comes to organizing the toolbox, Truglia keeps the most-used items easily accessible and uses the higher-up drawers for those tools he uses less frequently, such as fuel line disconnect tools, spark plug pullers, and a manual hacksaw.

"I'm 6' tall but this box is taller than me. I sometimes need to use a little step ladder to look in the back of the top drawers," he says.

His favorite part of his toolbox is his socket drawer.

"It's nice and big and everything is organized where I can see it all," he says. "I know where everything is in my head. If I need that particular socket, boom, I go right there."

When it comes to choosing a favorite tool, Truglia doesn't skip a beat: it's the Bullseye Leak Detector from ATS.

"I just used it in a class I taught on Saturday and it found a great leak that I couldn't find any other way. That tool has made me so much money. It's a really, really great tool," he says.

Truglia's shop is under video surveillance and the tools are insured. Him and his technicians take pictures of what's in





their toolbox drawers regularly and send them off to their insurance company to stay up on the value of all their tools.

"Some of these things are super expensive to replace even a little piece," Truglia says. "It's a huge investment."

BACKGROUND

Truglia never thought he would work on cars for a living. When he was younger, he was going to school in New York City for criminology to be an FBI agent and was working on cars in his spare time — and making some good money. He started working at Goodyear and they asked him to take the brand-new National Institute for Automotive Service Excellence (ASE) test in 1972. While he didn't know anything about the test itself, he passed it, won the Gold Wrench award from Goodyear, and got a raise and a bonus. This quickly made him decide to leave his FBI plans behind.

"Am I going to get shot and killed for \$30,000 a year back then?" he quips. "I always loved fixing things and in the old days, you got lots of satisfaction when something wasn't running well and you made it run well, it was like, 'Oh my God this is great,' and you felt really good about it."

Now, Truglia still works on the problem cars that show up at his shop, but doesn't spend much time changing tires or oil. His time is mostly spent in training. He runs a ton of hands-on classes from his shop, including those covering air conditioning, diagnosing hybrid vehicles, and electrical.

People have come from all over the world to take his classes, including Saudi Arabia and Australia. During the pandemic, he did many online videos which enabled him to reach some new clients — so he isn't slowing down any time soon.

"I don't see myself retiring right now. I love what I do and I love teaching others," he says.

In fact, he has taught in every state, except for Montana.

"I might have to do a free class there just for the heck of it," he laughs.

Running a training business out of his shop means Truglia has even more tools and equipment than other shops might have kicking around. Despite having a "pretty damn big" Snap-on

Truglia likes how he can configure the drawers in his EPIQ Snap-on toolbox to fit his needs.

box, Truglia is always needing more. He has three secondary Craftsman toolboxes, a deck above the toolboxes where more tools are stored, various cabinets around his shop, and a truck that stores bigger tools.

"I'm running out of room... I have loads of equipment and I can't fit much more," he says.

Truglia takes very good care of his box, and he encourages his technicians to take the same care with their own. He cleans every tool before putting it back in, and he keeps the box as clean as he can.

"I wax the toolbox like I wax my car, and my guys wax their toolboxes as well," he says, adding he uses touch-up paint on the outside when needed. "That box was \$26,000 — you can buy a car for that... It's really like a car. You can have a junky car or a nice-looking car — and mine is a nice-looking box." 8





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See a video of this tool: http://bit.ly/KNIPEXTwinGrip

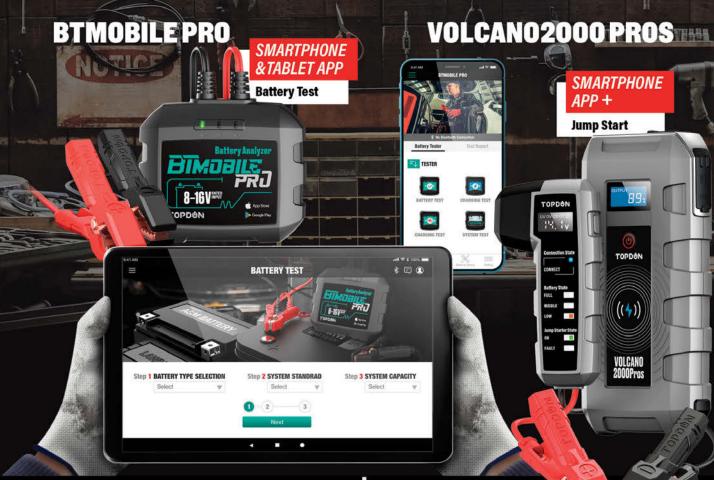


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PROFESSIONAL TOOL & EQUIPMENT NEWS

SCANTOOL SPEC GUIDE 2021



A comparative list of functions and features for a large selection of aftermarket scan tools from 23 equipment manufacturers.

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SCAN TOOL SPEC GUIDE 2021

CONTENTS

- 6 GLOBAL OBD-II SCAN TOOLS
- 12 PROFESSIONAL DIAGNOSTIC SCAN TOOLS
- **22 PRODUCTS**
- **26 HEAVY DUTY DIAGNOSTIC SCAN TOOLS**
- 34 COMPANY DIRECTORY



elcome to the 2021 Scan Tool Spec Guide, brought to you by Professional Tool & Equipment News, Professional Distributor, and Fleet Maintenance magazines.

By Emily Markham, Assistant Editor

Diagnostic scan tools are a must for almost all vehicle services and repairs nowadays. Though a variety of tools are needed to perform any given work on a vehicle, using a scan tool to query for diagnostic trouble codes tends to be step one for most technicians.

Many shops own a multitude of scan tools – both OE and aftermarket. For some shops, it may make the most sense to own largely OE scan tools, while for many others, owning a scan tool with the ability to diagnose multiple vehicles is a better fit. In fact, in 2021's Aftermarket Profile study — found in the April issues of *PTEN* and *Professional Distributor* — 76 percent of shops stated they own aftermarket scan tools.

This year's Scan Tool Spec Guide provides information from 23 scan tool manufacturers. The tools fall into three categories: Global OBD-II, Professional Diagnostic, and Heavy Duty Diagnostic.

Every year, the technology of the scan tools in each of these categories continues to grow in proportion to the technology being introduced and improved upon in vehicles. Whether it's add-ons for a vehicle's infotainment center, more ADAS sensors placed around the vehicle, or the high-tech components found within hybrid and fully electric vehicles, technicians need tools that will keep up with that technology. Scan tools are the answer.

Regardless of whether your shop is buying its very first scan tool or what seems to be its hundredth, buying a scan tool is a big deal, and your decision should not be made lightly. While searching for the perfect scan tool to fit your shop, we hope this guide can serve as your go-to reference before making this very important decision.





X-431 ADAS PRO ADAS Calibration



X-431 ADAS Mobile **ADAS Calibration**



X-PROG 3 Key Programming



Battery Tester



X-431 TSGUN Complete TPMS Service



VSP600



02-1 Osciloscope

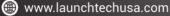


S2-2 Sensorbox

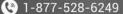
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OBD-II DIAGNOSTIC

COMPANY	ALLDATA	Autel	AutoEnginuity	Automotive Test Solutions, Inc.	Bosch	CalPro ADAS Solutions	
PRODUCT NAME	ALLDATA Mobile	MaxiCheck MX808	Giotto	eSCAN ELITE	OBD 1350 Pro Grade OBD-II Scan Tool	ADAS identiScan	
Price							
\$0-\$100							
\$101-\$200			•				
\$201-\$300							
\$301-\$400					•		
\$401-\$500							
\$501-\$2,000		•		•			
(OR) Subsription (monthly cost)	\$39	\$124.50 Annually				\$79-\$109	
Additional cost per update							
Scanning Functions (1996 to Present)							
Reads generic data and monitors (Mode 1)	•	•	•	•	•		
Displays freeze frame data (Mode 2)	•	•	•	•	•		
Reads DTCs (Mode 3)	•	•	•	•	•		
Clears all DTCs for all systems (Mode 4)	•	•	•	•	•		
Reads test results for oxygen sensors (Mode 5)	•	•	•	•	•		
Reads test results for other component/system monitoring (Mode 6)	•	•	•	•	•		
IF YES ABOVE: Provides test result definitions or raw hexidecimal data?		•	•	•	Definitions		
Reads pending DTCs (Mode 7)	•	•	•	•	•		
Bi-directional control (actuator tests) (Mode 8)	•	•	•		•		
Vehicle information - VIN # - (Mode 9)	•	•	•	•	•	•	
Reads permanent DTCs (Mode OA)	•	•	•	•	•		
Unit Features							
Unit type (PC-based, separate tablet/smartphone, standalone tablet)	User Defined (PC/ Tablet/Phone)	Standalone Tablet	PC / Tablet / Smartphone	PC-based	Handheld Scan Tool	Smartphone	
Requires separate laptop or PC (Y or N)	Y	N	Y	Υ	N	N	
Operating system (Windows, Android, iOS)	Windows 10, Android 6 & above, iOS 13 & above	Android	Windows / iOS / Android	Windows	Proprietary	iOS / Android	
Multilingual - on screen definitions in English/Spanish/French		•	English / Spanish	English	•	English	
Internal battery included		•			Optional		
Length of time to fully charge unit		120 minutes					
Length of time unit runs on one charge (in hours)		4.5 hours					
Unit boot-up time (from "on" button to useable screen)	15 seconds	30 seconds			20 seconds		

2021 SCAN TOOL SPEC GUIDE



	Cojali USA Inc.	FCAR TECH USA	LAUNCH TECH USA	Matco Tools	THINKCAR	TOPDON	XToolUSA	Zurich
	Jaltest Data-Link	HDC code+ V	Millennium Master	MaxLite	THINKSCAN 660	ArtiDiag 800BT	Nitro LT	ZR15 OBD2 Code Reader with Active Test/FixAssist
					•			•
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				On-demand software				
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	•	•	•	•	•	•	•	Definitions
	•	•	•	•	•	•	•	•
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	•	•	•	•	•	•	•	•
	PC-based	Standalone Handheld	Standalone Tablet	Standalone Tablet	Handheld	Standalone Tablet	Standalone Tablet	Handheld
_	Y	N	N	N	N	N	N	For updates
	Windows	Android	Android	Android 7.1	ARM	Android	Android	Proprietary
	•	•	•	•	•	•	•	•
	PC-dependent		•	•		•	•	•
	PC-dependent		180 minutes	60 minutes		180 minutes	60 minutes	
	PC-dependent		6 hours	2 hours, powers from vehicle		10 hours	10 hours	
	30 seconds	10 seconds	20 seconds	35 seconds	20 seconds	35 seconds	17 seconds	5 seconds

OBD-II DIAGNOSTIC

COMPANY	ALLDATA	Autel	AutoEnginuity	Automotive Test Solutions, Inc.	Bosch	CalPro ADAS Solutions	
PRODUCT NAME	ALLDATA Mobile	MaxiCheck MX808	Giotto	eSCAN ELITE	OBD 1350 Pro Grade OBD-II Scan Tool	ADAS identiScan	
High-resolution color screen		•		•	•		
Touchscreen interface	•	•		User defined			
Screen size (in inches)	Tablets 7" and above, phones 6" and above	7"		User defined	3.5"		
Print diagnostic report via (cable, Wi-Fi, PC, app)		PC	•	•	PC	•	
USB port		•		•	•		
VGA port							
HDMI port							
VCI - unit-to-car capabilities (wired or wireless)	•	•	•	•			
Internet (Wi-Fi, ethernet, both)	•	•		•		Wi-Fi	
Software, Website, Support & Service Features							
Manufacturer's warranty (length of time, in years)	3 years for hardware	1 year	1 year	1 year	1 year		
Date range of vehicles covered (Pre-OBD-II, OBD-II, or Both)	OBD-II	OBD-II	Both	OBD-II	OBD-II	OBD-II	
Call-in support (provide U.S. phone number)	800-859-3282	855-288-3587	400-827-T00L (8665)	505-265-5077	855-267-2483	844-422-5776	
Remote support for device	•	•		•			
Remote diagnostics & repair support	•	•		As needed			
In-person field/rep support	•	•			•		Г
Support cost (Included, per use, subscription-based)	Included	Included	Included	Included		Included	
Updatable via the Internet	•	•	•	•	•	•	
Updates subscription based (Y or N)		Υ	Υ	N	N	N	
Updates: Optional or mandatory		Optional	Optional	Optional	Optional	Mandatory	
Optional repair solution database (list all that apply)	•	•			CodeConnect		
Supplemental repair instructions/videos	•	•		•			
Includes the following repair information services - e.g. Identifix, Mitchell 1, etc. (list all that apply)	ALLDATA	MaxiFix					
Interfaces with the following shop management systems (list all that apply)							
Most Important Feature	Seemless integra- tion with ALLDATA Repair & Collision	Diagnostics, services in Android platform	OE-level coverage for 58 carmakers	Drivability tool that makes you money	Enhanced powertrain and ABS datastream coverage	Quickly identifies ADAS features & re- quired calibrations	

2021 SCAN TOOL SPEC GUIDE



Cojali USA Inc.	FCAR TECH USA	LAUNCH TECH USA	Matco Tools	THINKCAR	TOPDON	XToolUSA	Zurich
Jaltest Data-Link	HDC code+ V	Millennium Master	MaxLite	THINKSCAN 660	ArtiDiag 800BT	Nitro LT	ZR15 OBD2 Code Reader with Active Test/FixAssist
PC-dependent	•	•	•	•	•	•	
PC-dependent	•	•	•		•	•	
Auto adjust to screen	5"	5"	5"	3.5"	6"	8"	3.5"
PC	•	•	•	•	•	•	App - Repair Solution 2
•	•			•	•	•	•
PC-dependent						•	
PC-dependent						•	
•	Wired	Wired	Wired to car	Wired	Wireless	Wired	Wired
•	•	Wi-Fi	Wi-Fi		Wi-Fi	Wi-Fi	
1 year	2 years	1 years	2 years	1 year	1 year	1 year	1 year
Both	Both	Both	OBD-II	OBD-II	OBD-II	Both	OBD-II
800-975-7651	844-322-7872	877-528-6249	877-853-3738	833-692-2766	833-629-4832	888-416-6950	888-866-5797
•	•	•	•		•	•	
•	•		With subscription			•	
•	•	•	•	•	•	•	
Included	Included	Included	Included		Included	Subscription based	
•	•	•	•	•	•	•	•
Y	Y	Y	Basic mode free updates, on-demand software per manu- facture	Included	Y	Υ	N
Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Jaltest INFO Online			MaxFix, Codeassist	DTC Database			
•			•	•	•	•	
Jaltest INFO Online / Jaltest University			MaxFix, Codeassist Optional				Repair Solution 2 (app, internet required)
All-makes, all-systems diagnostics for heavy duty vehicles	Reads codes for most OEMs	Reads codes for most OEMs	Advanced and powerful code reader	Reads codes for most OEMs	28 maintenance functions and access to most modules	Programs keys and has bidirectional capabilities	All system code scan



EVERYTHING YOUR SHOP NEEDS.

PROGRAMMING & KEY MAKING SIMPLIFIED.



For more information visit Vehicle Service Pres com/2111/2018

THE PERFECT ACCESSORIES FOR YOUR SCAN TOOL.

CONTACT YOUR DISTRIBUTOR TO UPGRADE YOUR SHOP OR VISIT XTOOLUSA.COM/KEYMAKINGSYSTEM TO LEARN MORE

MATCO'S MOST POWERFUL SCAN TOOL YET!



MDMAX4CL/MDMAX4CLHD/MDMAX4HD

MAXIMUS 4.0 TABLET SCAN TOOL

Maximus 4.0 is the complete diagnostic package. Includes 4-Channel Oscilloscope, battery analyzer and access to the MaxFix repair database.



- 13.3" screen
- · Android 9.0 OS
- · 8GB memory/256GB storage
- Dual-band Wifi
- 8-megapixel front camera
- · 13-megapixel back camera
- · Up to 8 hours of battery life
- Includes 8 new background colors
- Security Gateway & Can FD
- 6-Pin & 9-Pin connectors included in all models
- Kickstand
- Steering wheel mount
- Handle

For more information visit VehicleServicePros.com/10095267

For more information talk to your Matco Tools Distributor or visit www.matcodiagnostics.com



PROFESSIONAL DIAGNOSTIC

COMPANY	ALLDATA	AUTEL	AutoEnginuity	Autoland Scientech	Bosch	CanDo Diagnostics	Continental Automotive Systems	
PRODUCT NAME	ALLDATA Diagnostics	MaxiSYS MS909	Giotto ProLine	iSCAN SF	ADS 625X	CPro	Autodiagnos Pro	
Price								
Under \$500	•							
\$501-\$1,000						•		
\$1,001-\$3,000			•				•	
\$3,001-\$5,000		•		•	•			
\$5,001-\$7,000								
\$7,001-\$9,000								
\$9,001 to \$10,000								
More than \$10,000								
(OR) Subsription (monthly cost)	\$239	\$1,295 Annually						
Additional cost per update			\$450	\$799	\$750	\$499	\$699 Annually	
Scanning Functions (1996 to Present)								
Fully supports all 10 modes of OBD-II scan tool operation (Mode 1 through Mode 0A)	•	•	•	•	•	•	•	
Other Functions								
Supports service functions and relearns needed for factory service	•	•	•	•	•	•	•	
Inspection/reset light function	•	•	•	•	•	•	•	
J2534 reflash and pass-thru diagnostic capability		•		•	•			
Is an OEM subscription required to access J2534 reflash and pass-thru diagnostic capabilities? Y/N	N	Y (Mercedes and BMW included)	N	Υ	Y	N	N	
Does the tool come with its own J2534 interface? Y/N	N	Υ	N	Y	Υ	N	N	
J2534 reflash completed by technician? Y/N	N	Υ	N	Y	Υ	N	N	
J2534 reflash completed as a remote service? Y/N	N	Υ	N	Y	N	N	N	
Record and play back data	•	•	•	•	•	•	•	
Graphs live data on screen	•	•	•	•	•	•	•	
Graphs multiple PIDs on screen simultaneously (list how many)	25	3	8	12	8	4	No limit	
Has ability to graph-merge PIDS		•	•		•	•	•	
User-selectable units (SAE, metric)	•	•	•	•	•	•	•	
Pre- and Post-scan reports	•	•	•	•	•	•	•	
Remote diagnostic support		•		•		•		
Security-based module programming support? Y/N	N	Υ	N	Y	N	N	N	
Specific System Coverage Data and Bi-Direction ADAS calibration (Indicate number of manufacturers for each.)	onal Controls							
Domestic	20	10 w/optional software and frame purchase	10	3	3		12	
European	26	12 w/optional software and frame purchase	8	8	8		2	
Asian	15	10 w/optional software and frame purchase	11	7	7		12	
Body control module (Indicate number of manufacturers for each								
Domestic	20	10	17	3	3	12	13	
European	26	38	13	21	8	27	3	
Asian	15	26	14	14	7	17	11	

2021 SCAN TOOL SPEC GUIDE



FORR TICH Mylectronic TECH USA Miles Tools Opus IVS Snap.on TEXA USA THINKCAR TOPON XTOOUSA Zurbh											
Horner H	FCAR TECH USA	Injectronic		Matco Tools	Opus IVS	Snap-on	TEXA USA	THINKCAR	TOPDON	XToolUSA	Zurich
S1,000 S350 S599 1299 S595 Amusely S299 S495 S500 S499,99 S1,000 S350 S599 1299 S595 Amusely S299 S495 S500 S499,99 N N N Y Y N N N Y Y N Y N N Y N N N N		CJ8K	X431 THROTTLE III	MDMAX4CL	DrivePro ES	ZEUS			Phoenix Plus	Nitro GT	Professional Automotive
S1,000 S350 S599 1299 S595 Amusely S299 S495 S500 S499,99 S1,000 S350 S599 1299 S595 Amusely S299 S495 S500 S499,99 N N N Y Y N N N Y Y N Y N N Y N N N N											
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	\$1,000	\$350	\$999	1299			\$595 Annually	\$299	\$495	\$600	\$499.99
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13 12 ALL 16 13 5 18 23 10 10 3 8 8 8 ALL 17 12 10 10 13 9 8 35 20 20 ALL 12 22 8 44 33 23			9	10	ALL	10	10	10	9	13	
10 3 8 8 ALL 17 12 10 10 13 9 8 35 20 20 ALL 12 22 8 44 33 23			17	18	ALL	12	18	8	18	33	
8 35 20 20 ALL 12 22 8 44 33 23			13	12	ALL	16	13	5	18	23	
8 35 20 20 ALL 12 22 8 44 33 23											





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BT608 —

AUTEL MAXIBAS BATTERY & ELECTRICAL SYSTEM ANALYZER





BMS RESET Functionality



SYSTEM Detection









THE BT608 & BT609 ARE ALSO COMPATIBLE WITH MAXISYS TABLETS

BATTERY & ELECTRICAL SYSTEM DIAGNOSTICS

- 5.5" TOUCHSCREEN / ANDROID 9.0 / WI-FI SOFTWARE UPDATES
- ◆ TEST 6 & 12 VOLT BATTERIES: 100 3000 CCA
- TEST 12 & 24 VOLT CRANKING / CHARGING SYSTEMS

FASTER VEHICLE ID: AUTOVIN & VINSCAN

- BATTERY SPECIFIC SYSTEM & LOCATION CONFIRMATION
- TEST BATTERY / CHARGING SYSTEM FOR PROPER FUNCTION
- ELECTRICAL SYSTEM RESET



MAXISYS MS919

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



RYSIXAM POPRM

- 9.7" SCREEN / ANDROID 7
- INTELLIGENT DIAGNOSTICS
- NEW PROTOCOLS

INTELLIGENT DIAGNOSTICS

REPAIR ASSIST
GUIDED DIAGNOSTICS

TABLETS FEATURE TOPOLOGY MODULE MAP

ALL SYSTEM STATUS SCREEN
COLOR CODED FAULTS

POWERFUL HARDWARE

OCTA-CORE PROCESSOR
MEMORY: 128GB (MS909/MS919)
256GB (ULTRA)

For more information visit VehicleServicePros.com/ 10095724







PROFESSIONAL DIAGNOSTIC

COMPANY	ALLDATA	AUTEL	AutoEnginuity	Autoland Scientech	Bosch	CanDo Diagnostics	Continental Automotive Systems	
PRODUCT NAME	ALLDATA Diagnostics	MaxiSYS MS909	Giotto ProLine	iscan sf	ADS 625X	CPro	Autodiagnos Pro	
Chassis/braking system control (Indicate number of manufactu	rers for each.)							
Domestic	20	10	17	3	3	12	12	
European	26	38	13	21	8	27	2	
Asian	15	26	14	14	7	17	8	
Powertrain control module (Indicate number of manufacturers f	or each.)							
Domestic	20	10	17	3	3	12	15	
European	26	38	13	21	8	27	3	
Asian	15	26	14	14	7	17	13	
SRS coverage (Indicate number of manufacturers for each.)								
Domestic	20	10	17	3	3	12	15	
European	26	38	13	21	8	27	3	
Asian	15	26	14	14	7	17	13	
HVAC/climate control (Indicate number of manufacturers for ea	ch.)							
Domestic	20	10	17	3	3	12	15	
European	26	38	13	21	8	27	3	
Asian	15	26	14	14	7	17	13	
Exotic European Coverage (Indicate number of manufacturers f	or each.)							
Domestic	20		10					
European	26	7	12	5		4		
Asian	15	1	11	1				
Unit Features								
Unit type (PC-based, separate tablet/smartphone, standalone tablet)	User defined (PC/ Tablet/Phone)	Standalone Tablet	PC / Tablet / Smartphone	Standalone Tablet	Standalone Tablet	Standalone Tablet	PC-based / Stand- alone Tablet	
Requires separate laptop or PC (Y or N)	Υ	N	Y	N	N	N	Y	
Operating system (Windows, Android, iOS)	Windows 10, Android 6 & above, iOS 13 & above	Android	Windows / iOS / Android	Android	Android	Android	Windows	
Storage (in GB)		128GB		Unlimited (External USB)	32GB	32GB	128GB	
Expandable storage		32GB		•	512GB	Expandable to 128GB	MicroSDXC card reader	
Multilingual - on screen definitions in English/Spanish/French		•	English / Spanish	•	•	English / Spanish		
Internal battery included		•			•	•	•	
Length of time to fully charge unit		180 minutes			180 minutes	60 minutes		
Length of time unit runs on one charge		8 Hours			14 hours	12 hours	9 hours	
Unit boot-up time (from "on" button to usable screen)	15 seconds	20 seconds		Less than 30 seconds	45 seconds	30 seconds		
High-resolution color screen		•		•	•	•	•	
Touchscreen interface	•	•		•	•	•	•	
Screen size (in inches)	Tablets 7" and above, phones 6" and above	9.7"		8"	10"	8"	10"	
Print diagnostic report via (cable, Wi-Fi, PC, app)		•	•	•	•	•	Wi-Fi, app	



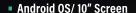
	FCAR TECH USA	Injectronic	LAUNCH TECH USA	Matco Tools	Opus IVS	Snap-on	TEXA USA	THINKCAR	TOPDON	XToolUSA	Zurich
	HDC Pad VII Pro	CJ8K	X431 THROTTLE III	MDMAX4CL	DrivePro ES	ZEUS	TEXA IDC5 CAR	Platinum S10	Phoenix Plus	Nitro GT	ZR-PRO 8" Professional Automotive Scanner
	40	2		0	ALL	40	40	40	40	40	0
	10	3 35	20	8 20	ALL	18 12	12	10	10	33	9 23
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		02	10	10	ALL	13	17		12	23	10
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	5	62	16	16	ALL	16	14	5	72	23	18
	'		1					1			
	10	3	8	8	ALL	18	12	10	10	13	9
	8	35	20	20	ALL	12	22	8	44	33	23
	5	62	16	16	ALL	15	14	5	72	23	18
	T		T				1	T			
	10	3	8	8	ALL	16	12	10	10	13	9
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	5	62	16	16	ALL	13	14	5	72	23	18
	10	3	1	1			3	10	•		
	8	35	9	9	2		12	8	•	8	11
	5	62	J J	J			12	5	•		11
		-							_		
	Standalone Tablet										
	N	N	N	N	N	N	N	N	N	N	N
	Android	Android	Android 9.0	Android 9.0	Windows 10	Windows	Windows 10	Android 10.0	Android	Android	Android
	20GB	32GB	256GB	8GB	256GB	64GB	256GB	64GB	64GB	8GB	16GB
	32GB	•	256GB	256GB		•	•			64GB	
	•	•	•	•	•	•	•	•	•	•	•
	•	•	•	•	•		•	•	•	•	•
	180 minutes	180 minutes	160 minutes	60 minutes	150 minutes	300 minutes	120 minutes	120 minutes	5.5 hours	60 minutes	180 minutes
	8 hours	8 hours	6 hours	6-8 hours	6 hours	5 hours	8 hours	8 hours	10 hours	8 hours	4 hours
	20 seconds	30 seconds	26 seconds	22 seconds	Less than 60 seconds	30 seconds	45 seconds	30 seconds	44 seconds	17 seconds	45 seconds
	•	•	•	•	•	•	•	•	•	•	•
	•	•	•	•	•	•	•	•	•	•	•
	10"	8"	13.3"	13.3"	10.1"	10"	12"	10.1"	10"	10.1"	8"
Ī	•	•	Wi-Fi	•	•	•	•	•	•	WiFi	Wi-Fi

Take control of ADAS

Keep ADAS work in-house with Hunter ADASLink[™] and DAS 3000.



TOPDON



Quickly identify module/ CAN BUS issues



SINGLE SCREEN MODULE STATUS LIST



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OPDON USA SUPPORT

PROFESSIONAL DIAGNOSTIC

COMPANY	ALLDATA	AUTEL	AutoEnginuity	Autoland Scientech	Bosch	CanDo Diagnostics	Continental Automotive Systems	
PRODUCT NAME	ALLDATA Diagnostics	MaxiSYS MS909	Giotto ProLine	iscan sf	ADS 625X	CPro	Autodiagnos Pro	
USB port		•		•	•	•	•	
VGA port								
HDMI port		•				•		
VCI - unit-to-car capabilities (wired or wireless)	•	•	•	Wired	Wireless	•	•	
Internet (Wi-Fi, ethernet, both)	•	•		•	Wi-Fi	•	Wi-Fi	
Available Tool Add-Ons								
5-gas analyzer								
TPMS resets/relearns	•	•	•		•	•		
TPMS programming		•	•		•	•		
Labscope capability		•						
Multimeter		•						
Complete multimeter functions, including amperage								
Software, Website, Support & Service Features								
Manufacturer's warranty (length of time, in years)	3 years for hardware	1 year	1 year	2 years	Lifetime	1 year	1 year	
Date range of vehicles covered (Pre-OBD-II, OBD-II, or Both)	OBD-II	OBD-II	Both	Both	Both	Both	OBD-II	
Call-in support (provide U.S. phone number)	800-859-3282	855-288-3587	480-827-T00L (8665)	888-472-2644	855-267-2483	909-Cando11	800-265-1818	
Remote support for device	•	•		•	•	•	•	
Remote diagnostics & repair support	•	•		•		•		
Create support ticket on device		•		•	Coming 2H 2021			
In-person field/rep support		•		•	•	•		
Support cost (Included, per use, subscription-based)	Included	Included		Per use	Included		Included	
Updatable via the Internet	•	•	•	•	•	•	•	
Updates subscription based (Y or N)	Y	Y	Y	Y	Y	Υ	Y	
Updates: Optional or mandatory	Optional	Optional	Optional	Optional	Optional	Optional	Mandatory	
Optional repair solution database (list all that apply)	•	•			Repair-Source, Identifix	Motor		
Supplemental repair instructions/videos	•	•		•	•	•		
Includes the following repair information services - e.g. Next- Step, Mitchell 1, Identifix, ALLDATA, etc. (list all that apply)	ALLDATA	Intelligent Diag- nostics, MaxiFix			Repair-Source, Identifix	Motor		
Interfaces with the following shop management systems (list all that apply)					Shopware			
Most Important Feature	Seemless integration with ALLDATA Repair & Collision	Expansive coverage, active test,coding & adaptations	OE-level coverage for 58 carmakers	See the complex turn simple with iSCAN	Complete coverage, repair information, and ADAS ready.	Fully-loaded, bidirectional & wireless for under \$1,000	OEM data, fast, intuitive, module autodetect feature	



FCAR TECH USA	Injectronic	LAUNCH TECH USA	Matco Tools	Opus IVS	Snap-on	TEXA USA	THINKCAR	TOPDON	XToolUSA	Zurich
HDC Pad VII Pro	CJ8K	X431 THROTTLE III	MDMAX4CL	DrivePro ES	ZEUS	TEXA IDC5 CAR	Platinum S10	Phoenix Plus	Nitro GT	ZR-PRO 8" Professiona Automotive Scanner
•	•	•	•	•	•	•	•	•	•	•
•					•	•			•	
•	•	•	•		•	•			•	
•	Wireless	Wireless	Wireless	Wired	•	•	•	•	Wireless	Wireless
•	Wi-Fi	Wi-Fi	Wi-Fi	•	•	•	•	Wi-Fi	Wi-Fi	Wi-Fi
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	•		Optional		•					
2 years	1 year	1 year	2 years	Covered while subscribed	2 years	1 year	2 years	1 year	1 year	1 year
Both	Both	Both	Both	OBD-II	Both	Both	Both	OBD-II	Both	OBD-II
844-322-7872	915-208-5451	877-528-6249	877-853-3738	877-945-6442	800-424-7227	855-200-8392	833-692-2766	833-629-4832	888-416-6950	877-987-424
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Included	Included	Included	Included	Subscription based	Included	•	Included	Included	Subscription based	Included
Y	Y	Y	Y	Y	Optional	Y	Y	Y	Y	Y
Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Motor, Alldata, Mitchell1	•	Identifix,ALL DATA	MaxFix included	•	•	TEXA	Ориони	Optional	Optional	Browser base
	•	•	•	•	•	•	•	•	•	•
Optional		Identifix	MaxFix, Code Assist, Pro Assist	IVS 360 live brand-specifc support, plus shortcut icon links to Diag- nostic Network, AllData, Mitchell, Motologic, ShopKey	Mitchell 1	TEX@info				Browser based
Bidirectional capabilities for most OEMs	Multiple scan tools in one	Bidirectional capabilities for most OEMs	The fastest and strongest member of the Maximus family	Live brand-spe- cific repair support and remote program- ming services.	Fast-track intelligent diagnostics	Quality solution for ADAS and regular diagnostics	Bidirectional capabilities for most OEMs	View all mod- ules by Topology or AutoScan	Programs keys and has J2534 capabilities	Affordable, comprehensiv & bidirections

PRODUCTS

WORKS ON MOST VEHICLES INCLUDING EXOTICS

The XToolUSA Nitro XT Scan Tool is a 10.1" professional bidirectional scan tool featuring Smart Key programming, a military grade aluminum housing, pre- and post-scan reports, automatic vehicle ID, a special functions page, weekly updates, and remote diagnostics. The scan tool uses an open Android system to download third party applications. It comes with a wireless Bluetooth connector and has a four core processor, 4G of ram, and 64G of flash memory. The scan tool works on domestic, Asian, and European vehicles including exotics. It comes in a plastic case with a full array of connectors and cables.

For more information visit VehicleServicePros.com/21123808





- Based on OEM platform used in dealerships worldwide
- USA designed, developed, manufactured and supported

Learn more: www.AutodiagnosPro.com

PROVIDES ADVANCED DIAGNOSTICS **FOR 75 BRANDS**

The Motorscan MemoBike 6050 Diagnostic Scan Tool Kit. No. MS6050R17. from Ansed Diagnostic Solutions is a handheld instrument designed to allow technicians to perform factory service procedures. The scan tool displays ECU data, reads and erases stored faults, resets service lights, allows injection adjustment, identifies valve positions, programs new keys, ABS air purge testing, and more. The user-friendly device provides advanced diagnostics for 75 brands, over 5,000 models, and more than 15,000 applications. The kit comes with the MemoBike 6050 Scan Tool and unlimited software, as well as the master, universal, battery, and USB cables and all in a durable hard plastic carrying case.

> For more information visit VehicleServicePros.com/21139242



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

boschdiagnostics.com/ads-x

For more information visit VehicleServicePros.com/10122252

PRODUCTS

TECHNICAL SPECIFICATIONS FOR VEHICLE REPAIRS

Topdon ArtiPAD PRO Quick-Fix powered by MOTOR features technical specifications for vehicle repairs and software for wiring diagrams, chassis diagrams, wheel alignment procedures, and brake repair information and instructions. Quick-Fix includes maintenance schedules that allow technicians to estimate maintenance and service schedules as well as expenses with repair time estimates for labor operations. Quick-Fix service procedures provide standard OEM maintenance and repair information that lets the technician complete the repair with step-by-step instructions and access the data via an app within the ArtiPAD interface. Illustrations in the software educate technicians on part locations, electrical problems, and troubleshoot the repair.

For more information visit VehicleServicePros.com/21112779



INCLUDES ACCESS TO INNOVA'S **KNOWLEDGE BASE**

The Innova 5610 CarScan

Pro is a scan tool designed to help technicians find and fix problems more efficiently. More than a standalone tool, it includes access to Innova's RepairSolutions2 knowledge base of over 60 million verified



fixes. With 5610, users receive vehicle-specific inspection reports with fixes, guided diagnostics, and troubleshooting information. Advanced features include oil life, brake pad life, battery voltage, TPMS status, and live data. Fixes for body and chassis codes and full network scan results are available for supported vehicles. Factory and NHTSA recalls, TSBs, service maintenance, and predictive diagnostics help shops alert customers of potential issues.

For more information visit VehicleServicePros.com/21164504





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HEAVY DUTY DIAGNOSTIC

COMPANY NAME	Autel	Bosch	CanDo Diagnostics	Cojali USA Inc.
PRODUCT NAME	MaxiSYS MS906CV	ESI Truck	HD Pro Tab	Jaltest CV
Price				
Under \$500				
\$501-\$1,000				
\$1,001-\$3,000	•			
\$3,001-\$5,000				
\$5,001-\$7,000			•	•
\$7,001-\$9,000				
\$9,001 to \$10,000		•		
More than \$10,000				
(OR) Subsription (monthly cost)	\$795 Annually			
Additional cost per update		\$1,200	\$1,000	\$995
Enhanced/Proprietary Coverage				
Engine Modules - Heavy Duty				
Caterpillar	•	•	•	•
Cummins	•	•	•	•
Detroit Diesel	•	•	•	•
International/Navistar	•	•	•	•
Kenworth/Peterbilt (PACCAR)	•	•	•	•
Mack/Volvo	•	•	•	•
Engine Modules - Medium Duty				
Chrysler	•	•	•	•
Cummins	•	•	•	•
Ford	•	•	•	•
GM	•	•	•	•
Hino	•	•	•	•
Isuzu	•	•	•	•
International/Navistar	•	•	•	•
Mitsubishi Fuso Truck of America	•	•	•	•
Kenworth/ Peterbilt (PACCAR)	•	•	•	•
Brakes				
Bendix	•	•	•	•
Haldex	•	•	•	•
Wabco	•	•	•	•
Transmission				
Allison	•	•	•	•
Eaton	•	•	•	•

2021 SCAN TOOL SPEC GUIDE



FCAR TECH USA	LAUNCH TECH USA	Matco Tools	NEXIQ	Noregon	TEXA USA	THINKCAR
F7SN Pro	X431 AutoHD	MDMAX4HD	PRO-LINK Edge	JPRO Professional	TEXA IDC5 TRUCK	Platinum HD
					•	
				Software		•
•			Basic Starter Kit	Software + Adapter Kit		
	•		Enhanced with 2 software titles	Complete Kit (incl. laptop)	•	
		•	Enhanced with 3-5 software titles		•	
			Enhanced with most common software			
			Master Kit Fully Loaded			
				Monthly payment options available		
\$1,000	\$1,196		\$300 to \$600 average	Free for active subscribers	\$795 per year	\$499
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HEAVY DUTY DIAGNOSTIC

COMPANY NAME	Autel	Bosch	CanDo Diagnostics	Cojali USA Inc.	Ш
PRODUCT NAME	MaxiSYS MS906CV	ESI Truck	HD Pro Tab	Jaltest CV	
Scanning Functions					
Reads trouble codes	•	•	•	•	
Displays vehicle information/VIN #	•	•	•	•	
Displays heavy duty standard codes	•	•	•	•	
Displays heavy duty proprietary codes	•	•	•	•	
Enhanced Bi-directional Controls					
Anti-lock brake system (ABS)	•	•	•	•	
Automatic transmissions	•	•	•	•	
Injector cutout	•	•	•	•	
Injector programming	•	•	•	•	
Manual/forced regeneration	•	•	•	•	
Replace DPF/ash reset	•	•	•	•	
SCR/DEF controls	•	•	•	•	
Trailer brakes (ABS/EBS)	•	•	•	•	
Calibrations for variable vane turbo (Choose all that apply: Cummins, Detroit Diesel, International/Navistar, PACCAR, Mack/Volvo) or ALL	ALL	ALL	ALL	ALL	
Live Data Stream - Digital					
Data logging	•	•	•	•	
Guided diagnostics	•	•	•	•	
Graphs live data on screen	•	•	•	•	
Graphs multiple values on screen simultaneously (list how many)	3	6	8	16	
Auto identification by VIN #	•	•	•	•	
Provides NOX values for diagnosis of emissions related failures	•	•		•	
Unit Features					
Unit type (PC-based, separate tablet/smartphone, standalone tablet)	Standalone Tablet	Standalone Tablet / PC-based	Standalone Tablet	PC-based	
Requires separate laptop or PC (Y or N)	N	N	N	Υ	
Operating system (Windows, Android, iOS)	Android	Windows 10	Android	Windows	
Storage (in GB)	32GB	128GB	32GB	10GB	
Expandable storage	32GB	•	Expandable to 128GB	PC-dependent	
Multilingual - on screen definitions in English/Spanish/French	•	•	•	•	
Internal battery included	•	•	•	PC-dependent	
Length of time to fully charge unit	180 minutes	30 minutes	90 minutes	PC-dependent	
Length of time unit runs on one charge	8-10 hours	4 hours	8-10 hours	PC-dependent	
Unit powers off vehicle		•	•	•	
Unit boot-up time (from "on" button to usable screen)	20 seconds	40 seconds	5 seconds	30 seconds	
High-resolution color screen	•	•	•	PC-dependent	
Touchscreen interface	•	•	•	PC-dependent	
Screen size (in inches)	7.9"	10"	10.1"	Auto adjust to screen	
Print diagnostic report via (cable, Wi-Fi, PC, app)	•	Wi-Fi	Wi-Fi	PC-dependent	

2021 SCAN TOOL SPEC GUIDE



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	FCAR TECH USA	LAUNCH TECH USA	Matco Tools	NEXIQ	Noregon	TEXA USA	THINKCAR
	F7SN Pro	X431 AutoHD	MDMAX4HD	PRO-LINK Edge	JPRO Professional	TEXA IDC5 TRUCK	Platinum HD
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	ALL	All	All	All	Cummins	ALL	ALL
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	•	•	•	With Repair>Connect	•	•	•
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	7	16	16	10	7+ across multiple ECUs	8	4
	•	•	•	•	•	•	•
	•	•	•	•	•	•	•
	Standalone Tablet	Standalone Tablet	Standalone Tablet	Handheld	PC or Tablet	Standalone Tablet	Standalone Tablet
	N	N	N	N	N	N	N
	Android	Android 9.0	Android 9.0	Windows Mobile	Windows 10	Windows 10	Android 10
	64GB	64GB	8GB	8GB	64GB	256GB	64GB
	•	128GB	256GB	•	•	•	N/A
	•	•	•	English	•	•	•
	•	•	•	•	•	•	•
	90 minutes	300 minutes	60 minutes	90 minutes	90 minutes	120 minutes	120 minutes
	8 hours	15 hours	6-8 hours	10 hours	7 hours	8 hours	8 hours
	•	•		•	•	•	•
	20 seconds	23 Seconds	22 seconds	15 seconds	35 seconds	45 seconds	30 seconds
	•	•	•	•	•	•	•
	•	•	•	•	•	•	•
	10"	10.1"	13.3"	10.1"	9"	12"	10.1"
	Wi-Fi / app	Wi-Fi	•	Wi-Fi, cable	Wi-Fi	•	•

HEAVY DUTY DIAGNOSTIC

COMPANY NAME	Autel	Bosch	CanDo Diagnostics	Cojali USA Inc.
PRODUCT NAME	MaxiSYS MS906CV	ESI Truck	HD Pro Tab	Jaltest CV
USB port	•	•	•	•
VGA port			•	PC-dependent
HDMI port	•	•	•	PC-dependent
VCI - unit-to-car capabilities (wired or wireless)	Wired	•	Wireless	•
Internet (Wi-Fi, ethernet, both)	Wi-Fi	•	•	PC-dependent
Remote diagnostic support	•	•	•	•
Available Tool Add-Ons and Cables				
3-pin Deutsch		Add-on	•	•
6-pin Deutsch	•	•	•	•
9-pin Deutsch (J1939 type 2)	•	•	•	•
9-pin CAT Deutsch		•	•	•
8-pin Volvo		Add-on	•	•
14-pin Volvo		Add-on	•	•
Automotive 16-pin J1962	•	•	•	•
Mack/Volvo 16-pin J1962	•	•	•	•
Labscope capability	•			•
Multimeter				•
ADAS capability		•	•	•
OBD-II	•	•	•	•
Software, Website, Support & Service Features				
Manufacturer's warranty (length of time, in years)	1 year	1 year	2 years	1 year
Date range of vehicles covered (Pre-OBD-II, OBD-II, or Both)	OBD-II	Both	Both	Both
Call-in support (provide U.S. phone number)	855-288-3587	855-267-2483	909-Cando11	800-975-7651
Remote support for device	•	•	•	•
Remote diagnostics & repair support	•		•	•
Create support ticket on device	•	•	•	•
In-person field/rep support	•	•	•	•
Support cost (Included, per use, subscription-based)	Included	Included		Included
Updatable via the Internet	•	•	•	•
Updates subscription based (Y or N)	Y	Y	Υ	Y
Updates: Optional or mandatory	Optional	Optional	Optional	Optional
Optional repair solution database (list all that apply)	•	•	•	Jaltest INFO Online
Supplemental repair instructions/videos	•	•	•	•
Includes the following repair information services - e.g. NextStep, Mitchell 1, etc. (list all that apply)	MaxiFix	Optional - Bosch Troubleshooting	Motor FleetCross	Jaltest INFO Online/ Jaltest University
Most Important Feature	Advanced diagnostics & services for heavy duty vehicles	Advanced diagnostics for trucks and off-highway vehicles	Class 4-8 and off-highway in one tool	One click full system scan

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F7SN Pro	X431 AutoHD	MDMAX4HD	PRO-LINK Edge	JPRO Professional	TEXA IDC5 TRUCK	Platinum HD
•	•	•	•	•	•	•
				•	•	
•		•	•	•	•	
Wireless	Wireless	Wireless	Wired	Wired	•	•
•	Wi-Fi	Wi-Fi	Wi-Fi	•	•	•
•	•		•	•	•	•
•	•	Optional	•	•	•	•
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•	•	Optional	•	•	•	•
		•		•		
		Optional				
	•	Optional		•	•	•
•	•	HD-OBD	•	•	•	•
2 years	1 year	2 years	1 year	Laptop 3 years, adapter 1 year	1 year	2 years
Both	Both	Both	Both	Both	Both	Both
844-322-7872	877-528-6249	877-853-3738	800-311-5452	855-889-5776	855-200-8392	833-692-2766
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Υ	Y	Y	N	Y	Y	Υ
Optional	Optional	Optional	Optional	Mandatory	Optional	Optional
Motor, Mitchell1, Alldata	Identifix,ALL DATA	Optional	Mitchell 1 Repair Connect	Fault Guidance (Included in JPRO) NextStep Repair (Additional subscription)	TEX@INFO	•
	•	Optional		•	•	•
Optional	Identifix	Optional	Mitchell 1	NextStep Repair	TEX@INFO	
Bidrectional control with most HD OEMs	Bidrectional control with most HD OEMs	The fastest and strongest member of the Maximus family	Comprehensive handheld	User-friendly diagnostics w/ pro-level functionality	Tough hardware, remote regenerations, off-highway/ car coverage available	Bidrectional control w

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noregon.com

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Snap-on Diagnostics

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