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Professional Tool & Equipment News

The Independent Tool Authority

Top Ten Tools: A collision repair

tech shares his list. page 46

OMEGA 3-TON Service Jack **By Shinn-Fu Corporation**

Details on the cover products, and other new tools page 10

Tool Briefing: A guide to selecting the

optimal tool for diagnosing a vehicle oxygen sensor issue. page 48

Tool Reviews: Technician feedback on products from OTC and Matco Tools page 52

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FEATURED NEW PRODUCTS

Check out new tools from Shinn Fu Corporation, Assenmacher Specialty Tools, Chicago Pneumatic and OEM Automotive Tools. Then, read about all the other new products, beginning on page 11.

TOP 10 TOOLS Automotive collision technician Josh Annis, of Prestige Auto Works in Milwaukee, Wis. provides his list of top tools for the body shop. Tool manufacturers on his list include Milwaukee, Snapon, Craftsman, GearWrench, Steck Manufacturing, Astro Pneumatic, Hutchins and H&S Auto Shot.

For this month's

article, we take a unique approach of comparing a number of different tools to use with the same diagnosis. When comparing a scan tool, digital multimeter, waveform viewer and lab scope, find out which works best for diagnosing a vehicle oxygen sensor issue.

TOOL REVIEW Technicians give

their takes on tools. This month:

• OTC Locking Collar Wrench



Technicians give their takes on diagnostic scan tools. This month:

• Matco Tools MaxME











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B EDITOR'S NOTE

Many shops purchase their tools and equipment primarily from mobile tool dealers. Why?

54 CATEGORY SPOTLIGHT

This month's section features product information and user tips on lifting equipment, jacks and stands. In addition to product details, this section features links to product video demos, tech tips and more.

57 MARKETPLACE

58 BIG-TIME BOXES

Owner: Zebulon "Zeb" McNichol Shop: Centre Acres Garage/S&C Operations Inc. Location: Bellefonte, Pa.



for this year's PTEN Innovation Awards.



Omega Lift 3-ton service jack from Shinn Fu Corporation





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- 2,000-lb capacity for truck and bus transmissions

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SHUNTING PLIERS

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The Dent Fix Shunting Pliers, DF-SP360, allow non-conductive coated metals, like an E-Coat, to accept squeeze-type resistance spot welding. To read, visit: VehicleServicePros.com/12181646



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Video



Here is a demonstration of the Ken-Tool Tire Valve Installer on an allov wheel to install a rubber valve stem. To watch, visit: VehicleServicePros.com/12185853













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Tube



Ask the Expert

Current traditional methods per engine side are about an hour per stud/bolt, with some taking more, and some less, so that's an average. What is the average time it takes to repair a broken exhaust manifold stud? To read the full article, visit: VehicleServicePros.com/12175331



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The ultimate customer service

Many shops primarily purchase tools and equipment from tool dealers. Why?

By Erica Schueller, Editor Erica@VehicleServicePros.com

hile we continue to move toward a more technologically-focused society and e-commerce sites push a dominating presence on the general consumer, repair shops do things a bit differently. There's something to be said about seeing the "tool guy" show up at the shop during your week.

When I talk with shop owners and ask them where they purchase tools, nearly every one mentions their tool dealer.

According to the 2016 *PTEN* purchasing study, more than three quarters (78 percent) of technicians and shop owners purchase their tools and equipment from mobile tool dealers. While commendable, online outlets such as Amazon, eBay or a manufacturer's website, trailed far behind with just over half of respondents (56 percent) purchasing from these types of retailers.

So, why do shops buy tools from a mobile tool distributor? The short answer: service. But there's really more to it than that.

While there may be one distinct feature that you appreciate from your favorite tool dealer, I'm betting there are a number of factors that make him (or her) your go-to for tool purchases.

IT STARTS WITH SERVICE

Many online outlets are stepping up their game when it comes to spending your hardearned dollars with a company. While these companies continue to improve customer communication, that still can't replace the relationship that a successful tool dealer has with his or her customers, especially when he shows up in person.

Successful dealers are on top of commu-

nication with their customers, whether it's in person during weekly stops, by phone, text, Facebook, etc. I bet you can call or text your tool dealer right now with a question or a product request, and he'd get back to you within hours, if not minutes.

What about other criteria? All of these fall under service, but think about:

Warranties. Let's take service a step further: what do you do when you have a broken tool?

I've ridden with distributors who have helped customers through issues they're having with a tool. These distributors are at the ready to inspect and figure out the issue. If there's no resolution, the dealer is quick to provide a replacement tool, or send the product back. No questions asked. No additional cost to the customer.

Reliability. When you have a reliable tool guy who shows up on the same day and same time each week, you don't have to worry about running to a store or ordering a tool online. You can count on the store coming right to you.

Payment options. Where else can you owe a guy based on your good name and promise to pay back? Sure, for larger purchases you may take out a line of credit, but I bet your tool dealer allows you to put most purchases on your tab. These guys are fronting you money to make purchases to help your business succeed.

When you look at a well-rounded tool dealer, what do all of these criteria total? Exceptional service. Are there any other reasons you think your distributor is top notch? Please share, I'd love to hear your thoughts. **PTEN**



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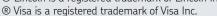
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icking off the New Products section each month, our Featured New Products page includes brand new products showcased on the cover that are available to the automotive market.

Only one pump to load fast lift technology

The Omega 3-ton Low-Profile Service Jack, No. 29033, from Shinn-Fu Corporation features a low, 3-1/2" pick height, a generous 20-1/2" maximum height, one pump to load fast lift technology, a foam-padded handle and a U-joint release for metered control while lowering the vehicle. The 29033 weighs 91 lbs and also meets or exceeds all of the ASME/PASE 2014 safety requirements. Shinn-Fu Corporation covers this jack with a one-year manufacturer warranty and customer support.



Compact size allows access to restricted areas

The Chicago Pneumatic Series of Ratchets, Nos. CP7829 and CP7829H, come with two socket size options - 3/8" and 1/2" - and are designed for a range of applications including heavy duty transmission and suspension jobs, lighter engine repair, dashboard work and general maintenance. These ratchets

offer a breakaway torque of 70 ft/ lbs, a rundown of 225 rpm, an advanced motor and a full caged gear, and weigh 2.6 lbs each. The compact size allows access to restricted areas. The ratchets are safe and easy to operate with a progressive teasing throttle and ergonomic composite grip which insulates the operator's hand from the cold. The side exhaust avoids blowing dirt and dust at the user. The CP7829 and CP7829H ratchets are made in Japan. **Circle 21 on card, or enter at "e-inquiry" on VehicleServicePros.com**

Works with 3/8" drive tools

The Assenmacher Double-Sided Oil Filter Socket Wrench, No. 23236, has six flat sides and works with 3/8" drive tools. This 32mm and 36mm doublesided wrench can be used on 2011 to 2016 Volkswagen TDI and 2009 to 2016 Touareg and VR6 motors; 2015 to 2016 Audi Q3 and S3 with 2.0T gas motors, 2007 to 2010 Q7

and 2014 to 2016 A6 3.0T motors; 2009 to 2011 BMW 335d, X5 35d and 1994 to 2005 BMW six- and eightcylinder engines;



2007 to 2014 Volvo models; 2007 to 2014 Chevy Cobalt, Impala and Malibu with 2.2L and 2.4L engines; and 2009 to 2016 Porsche models. This tool weighs 11 oz and is made in Taiwan.

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Cools up to 750 sq. ft.

OMEGALIF

The **OEM Automotive Tools Hessaire 2200 CFM 2 Speed Evaporative Cooler**, No. HESMC37A, constructed with three media panels, is able to cool up to 750 sq.

ft. on a 10.3-gal tank. The high-density media provides 80 percent more evaporation surface compared to regular density media, according to the company, which means higher evaporation efficiency and cooler temperatures. The cooler offers a three-speed variable motor



with energy-efficient electronic timer. Weighing in at only 45 lbs and resting on four large, durable casters, the HESMC37A was designed for small shops or for cooling single bays. The USB charge port allows users to charge small electronic devices such as phones and tablets.

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Solves the overstuffedpocket problem

The **Runnur Mobile Tech Gear Hands Free Mobile Organizer**, designed to solve the overstuffed-pocket problem, offers a sleek cross body pack similar to a bandolier. This organizer holds two smartphones, identification, keys, money, credit

> cards, writing tools, a bottle of water and it also has an extra pouch for miscellaneous items. With the addition of the Tool Bag Accessory, users can carry a walkie talkie, flashlight and an array of work tools. The organizer regular adjustable fits sizes S to XL and tall adjustable fits sizes XL to 5X.

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Four light modes

The **Power Probe Flashlight**, Nos. PPFL103CS and PPFL101CS, offers four modes activated through a tactical switch

(High 800 lm, Medium 400 lm, Low 40 lm and Flashing) in an IPX7 waterproof body. The flashlight, 5.4" long by 1" wide, features an XM-L2 Cree LED up to 800 lm with up to four hours of run-time, 400 lm with up to seven hours of run-time, 40 lm with up to 50 hours of run-time and 8hz flashing for up to

25 hours of run-time. The Flashlight offers a direct plug to recharge and change cells, a four-mode electronic tail switch and a beam distance of up to 820'. The circuit protection prevents the battery from overcharging or overdischarging, and it offers an IPX7 waterproof rating. This flashlight is available in black (No. PPFL103CS) and red (No. PPFL101CS). **Circle 25 on card, or enter at "e-inquiry" on VehicleServicePros.com**

Ergonomic grip absorbs vibration

The **JET Tools R8 series of Impact Wrenches** have a twin-hammer impact mechanism that delivers balanced power, and an ergonomically designed grip that absorbs vibration and reduces hand fatigue, according to the company. With a lightweight, aluminum construction, the impact offers an adjustable, threeposition forward power setting. The wrenches are available in 3/8" (No. JAT-101), 1/2" (No. JAT-104) and 3/4" (No. JAT-105), offering 400 ft/lbs, 900 ft/lbs and 1,500 ft/lbs, respectively.

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Battery/alternator test functionality

The **Quick Cable Rescue LiFePO4 portable power pack** is designed to be a safe unit that offers battery/alternator test functionality and 600 peak amps and 400 cranking amps consecutively in five-second intervals. A microprocessor board controls multiple



protection features, including overload, reverse polarity, short circuit, overheat, backfeed/backward current, over-charge/discharge, low voltage and low temperature

protections. Also, a 1" by 2" LCD screen was added for clear code recognition. If an error occurs, the microprocessor will display the corresponding protection code. The LiFePO4's clamps and 8 AWG

tin-plated cables allow for heavier current flow through both jaws, rated up to 200 degrees C. The Rescue LiFePO4 portable power pack uses a lithium iron phosphate battery. **Circle 27 on card, or enter at "e-inquiry" on VehicleServicePros.com**

Delivers up to 1,200 ft/lbs

The **SP Air 3/4**" **Heavy Duty Impact Wrench**, No. SP-1158, is made to handle tasks like spring work, pinion nut and truck pad removal and engine teardowns. The single-dog clutch mechanism delivers up to 1,200 ft/lbs of torque. The specially designed regulator system allows users to adjust power output in one direction, while maintaining full power in the opposite direction. The handle air exhaust directs air flow away from work and reduces noise level.

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Delivers 82 scfm at 145 psi

The **DV Systems Dene Airsystem**, No. D20, is part of the company's D Series of rotary screw air compressors. The heavy duty, highefficiency compressor operates at a 100-percent duty cycle. Its component integration provides a compact, quiet air system that offers high-capacity air delivery and stable system pressure with minimal installation space. Capable of continuous-use applications, the compressor has an integrated air after-cooler and the CSC300 Controller, the company's microprocessor control solution. The 20hp compressor delivers 82 scfm at 145 psi and operates at 71 dba. With both a variable speed and fix



speed belt drive, the compressor comes with a five-year limited warranty. Circle 29 on card, or enter at "e-inquiry" on VehicleServicePros.com





LEDs do not require warm-up time

The **Craftsman 30 Watt Portable LED Work Light**, No. 1736, offers versatility with a patented push-button release to assist setup, a compact design and its compatibility with the company's 52" tripod (No. 17358). The rainproof light does not require warm-up time for the LEDs to function. The 12' cord also has a SJTW rating, allowing for outdoor use. The COB LED uses less energy with 30 watts than standard 50 watt LEDs, according to the company, while delivering 2,400 lumens.

Its reflector provides an even, wide field of view projection. Users can swivel the steel handle independently of the light to adjust light settings and use the handle to carry the light to the work area. It comes with a one-year warranty. **Circle 30 on card, or enter at "e-inquiry" on VehicleServicePros.com**

Includes additional heavy duty coverage

The **CanDo Diagnostics HD Pro II** offers technicians an upgrade from the original model with a highly intuitive interface, a color screen and increased ease-of-use. The HD Pro II features commercial transportation and agricultural/industrial machinery and equipment to its already broad Class 4 to 8 heavy duty coverage. This tool also offers newly added lines including Bluebird, Sterling, Komatsu, Doosan and John Deere.



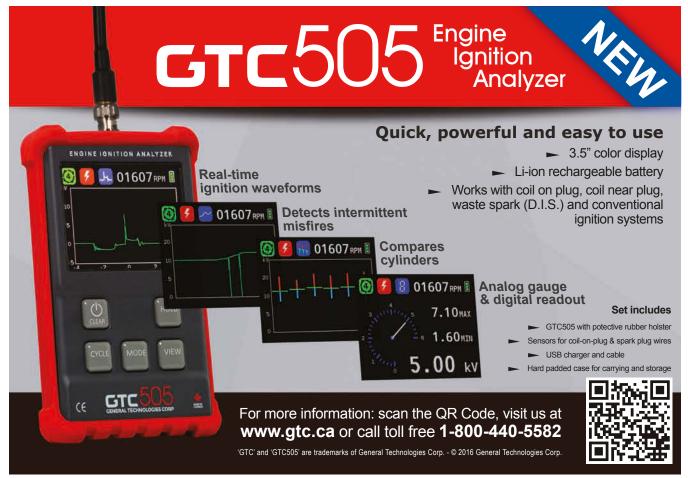
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1/2" drive hog ring anvil

The Mac Tools 1/2" Drive 20V MAX High Torque Impact Kit, No. BWP151-M2, includes an impact, two 20V MAX Li-ion R-spec 4.0Ah battery packs, a charger and a tool bag. The impact, which is also available as a bare tool (No. BWP151), features a 1/2" drive hog ring anvil, a glass-filled nylon body that withstands automotive fluids, a variable-speed trigger and a forward handle design with rubber overmold. It has anti-marring bumpers to protect the tool and work surfaces. The 7.2-lb impact, with a brushless motor, provides 1,200 ft/ lbs of breakaway torque and offers up to 1,900 rpm of free speed rpm.

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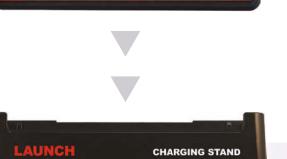
J-Box 2 The new J-Box 2 sets the standard for Pass-Thru Devices. It is compatible with both SAE J2534-1 and J2534-2 reprogramming standards!





TSAP-1

The new Launch **TSAP-1** Tire Sensor Activation / Programming tool is a rugged universal activation and sensor programming device that offers functionality and flexibility.







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LAUNCH TECH USA 1820 S. Milliken Ave • Ontario, CA 91761 ph: 1-877-528-6249 www.launchtechusa.com



An ozone-resistant cover for protection from extreme weather

The BluBird rubber air hose provides an ozoneresistant cover for protection from extreme weather, abrasion and kinks and a high-strength polyester, braided reinforcement. This hose offers flexibility in extreme conditions from -50 degrees F to 190 degrees F and a four-finger grip bend restrictor for increased ergonomics. The hose is available with 1/4", 3/8", 1/2"



and 3/4" inner diameters and overall length options of 25', 50', 75' and 100'. This hose has a maximum working pressure of 300 psi and comes with a 10-year warranty. Circle 35 on card, or enter at "e-inquiry" on VehicleServicePros.com



The Homak 56" H2Pro Series 7 Drawer features a HMC highsecurity tubular locking system, replaceable ball-bearing drawer slides, full-length aluminum drawer pulls and full-extension gas struts. This toolbox features seven drawers of varying sizes and is available in blue (No. BL02056071), black (No. BK02056071) and red (No. RD02056071). Homak offers an eight-year limited warranty.

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80 ft/lbs of torque

The Florida Pneumatic AIRCAT High Performance 3/8" Ratchet, No. 806, provides 80 ft/lbs of torque at a free speed of 200 rpm. The ratchet features a variable speed throttle and a soft-touch handle coating. The tool features needle bearing construction and a ratchet head cover, as well as a 360-degree rotational exhaust diffuser that allows the operator to direct the exhaust air in any direction.

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Secures parts for controlled painting

The Dent Fix Magnetic Flex Clamp, No. DF-FC205, secures parts for controlled painting. The flexible neck allows the part to be moved without being touched. Circle 38 on card, or enter at "e-inquirv" on

VehicleServicePros.com

Made of black powdercoated stainless steel

The Taylor Brands Schrade Moe Demolition Tool, No. SCHPB2BK, constructed from a black powdercoated 1055 high-carbon stainless steel offers a paracord-wrapped handle and lanvard hole. The tool features dual blades for scraping and chopping, a nail pull, a pull hook, a hammer pommel, an oxygen tank wrench and a prybar. The multi-tool measures 16.8" overall and weighs 3 lbs. The blade is 6.19" long and the handle is 6.68".

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Engineered for high performance, efficiency and reliability, BendPak's Hush-Quiet RS7580H-603 rotary screw air compressor can meet the compressed air demands of high volume tire shops, general maintenance and fleet shops, vehicle body and paint facilities or busy automotive dealerships. Our exclusive Hush-Quiet technology makes it the perfect compressor to install in noise conscious service areas.

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"We use BendPak lifts because they allow us to safely maintain and keep our cars the fastest on the street along with all of our customer's cars." - Big Chief & Murder Nova, Midwest Street Cars & TV's "Street Outlaws"



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For use when welding all types of metals

The Associated Equipment Portable Welding Fume Extractor, No. AF20195, effective for welding on all types of metals including steel, chromium and aluminum, removes hazardous smoke and particulate from welders' breathing zones. The AF20195 offers a 113/226 cfm high vacuum fume extraction and filter capacity and accomodates nine different filtering combinations for maximum flexibility in all types of applications. This extractor offers a built-in spark trap, LED filter status light, a 10' extraction hose with flexible nozzle assembly, a magnetic support base and more. This fume extractor weighs 58 lbs and has dimensions of 24" long by 17" height by 12" wide. The AF20195 is made in the U.S.A.

Circle 43 on card, or enter at "e-inquiry" on VehicleServicePros.com Lifts loads of 200 lbs up to 37"

The Lift'n Buddy 2-Wheel Hand Truck with Powered Lift, No. LNB-2, combines the vertical lifting capabilities of a small powered stacker with a conventional two-wheel hand truck. The LNB-2's powered, adjustable height platform positions loads at a comfortable height to eliminate bending and stretching when loading, unloading or moving items from one level to another. Built on a lightweight, durable aluminum frame with powdercoat paint finish, the LNB-2 is maneuverable and can lift loads of 200 lbs up

to 37". The lift mechanism utilizes a quiet timing belt drive and two 12V rechargeable batteries, raising loads as fast as 4" per second. **Circle 44 on card, or enter at "e-inquiry" on VehicleServicePros.com**

Many colors and sizes available

The **Red Kap Motorsports Shirt** features a straight hem and TouchTex technology, which provides technicians with breathable comfort, strong colors and stain resistance. The Motorsports Shirt comes in a striped design and a non-striped design. Both designs feature a pencil stall pocket to keep small tools on hand and color blocking to hide common stains. The striped design provides covered snaps to prevent scratching a vehicle's paint job. These shirts come in an array of colors and sizes.

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APRIL 2016
PROFESSIONAL TOOL & EQUIPMENT NEWS 17





Increased wheel capacities from previous models

The Bosch Traditional Tilting Back Tire Changer, No. TCE4475EHC, is capable of safely and efficiently handling virtually any wheel combination for both passenger vehicles and light trucks. The TCE4475EHC features increased capabilities for larger wheel and tire combinations, up to 28" external and 30" internal clamping. A standard two-speed turntable allows the operator to maintain optimum torque while breaking and setting tough beads. The enhanced control over the tire changing process helps users avoid damage to expensive wheel and tire combinations. The tire changer runs on 110V power and comes with a three-year parts and labor warranty. This tire changer is available with a helper assembly, or helper assembly and ergonomic bead breaker. Circle 47 on card, or enter at "e-inquiry" on VehicleServicePros.com

Automotive antifreeze coolant and brake moisture test kit

The Acustrip Acutest 2 automotive antifreeze coolant and brake moisture tests, available in one easy-to-use kit, allow service providers to show customers the condition of these two vital fluids, or have their customers evaluate the condition of their fluids themselves bring-



ing them in for service consultation. These tests allow users to measure the corrosion protection as well as the boil-over and freeze-protection condition of the antifreeze coolant, and the condition of the brake fluid when measured regularly. These kits are customizable. Tests comply with ASTM, AMRA/MAP, SAE and are ETV/EPA performance-verified. Circle 49 on card, or enter at "e-inquiry" on VehicleServicePros.com



Includes four lighting options

The Klein Tools Illumination Line features four lighting products. The line's Headlamp (No. 56220) features an antislip silicone strap that comes pre-adjusted to fit a hard hat. The lamp has a 45-degree tilt, and it can be used in spotlight mode or floodlight mode. It is impact- and waterresistant. The Slide Focus Flashlight (No. 56223) offers an aluminum body with cushion grip handle and rubberized power button. The Penlight (No. 56222) has a soft-on feature for quick reference lighting, and it clicks to stay on for extended use. The Clip Light (No. 56221) as a magnetized pocket clip for hands-free options, among other features.

Circle 50 on card, or enter at "e-inquiry" on VehicleServicePros.com

High-grade shock-resistant ABS plastic

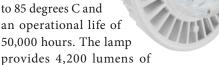


The Monster 12V Start Booster, No. MST8822, is designed of the highest-grade shock-resistant ABS plastic and offers pure copper cables and components. The 4 AWG cables ensure ample power flow and include an LED on the negative cable. The company assures the industrial grade clamps and fuses provide users a safe connection. The MST8822 includes a 22 amp hour-rated battery capable of delivering 2,200 peak amps at 12V. This unit features an LED display for the battery charge state and also has an alternator output control.

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Fits into E39 sockets

The Larson Electronics 43-Watt High Output LED Lamp, No. LEDSB-BT56-E39, can replace metal halide and high-pressure sodium lamps. Designed to fit into E39 sockets, the lamp has an operating temperature range of -20 to 85 degrees C and an operational life of 50,000 hours. The lamp



1

light, and the solid state design resists impacts and vibrations. The lamp has the same base and width as a standard BT56 light bulb.

Circle 51 on card, or enter at "e-inquirv" on VehicleServicePros.com

Construction-grade aluminum housing

The Cat[®] Lights Dual Beam Tactical Light, No. CT3410, provides 275 lumens of light on top beam and 200 lumens on flood panel. With its construction-grade aluminum housing and weather-resistant switch, there's nothing this light can't handle, according to the company. The CT3410 features a magnetic base and pocket clip, making it ideal for hands-free use. The CT3410 runs on three AAA batteries and is 4.5" long.

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Displays engine rpm up to 20,000

The Electronic Specialties Small Engine Tach/Hour Meter, No. 329, is a multifunction instrument capable of displaying engine rpm up to 20,000 and the engine run-time in hours. It can be used for engine tuning and service, or it can be mounted on the vehicle. The IP68 dustproof and waterproof tool includes velcro strips and two-sided tape for mounting. There are two choices for the display update rate: twice per second or once per second. The meter has three hour-meter modes built in. These modes can be used to track engine run-time, engine service intervals or job working time. The unit comes with a one-year warranty. Circle 53 on card, or enter at "e-inquiry" on VehicleServicePros.com

Recharge station for flashlight batteries

The Streamlight Charger Kit, No. 18650, features a charging cradle and 18650 Li-ion batteries, found in a number of Streamlight flashlights. Users can charge batteries one or two at a time in the dual input charging cradle, using either USB or "traditional" AC/DC power sources,

> for a wide variety of battery charging options. Rechargeable up to 500 times, the 18650 kit provides a charge time of 3.5 hours

while using one bay to charge one battery; or 3.5 hours for the left bay and 6.5 hours for the right bay while charging two batteries simultaneously. Individual bay LEDs provide battery charge status. Use this charger kit with Streamlight products that accept 18650 batteries, including the ProTac HL USB and ProTac HL 4. Circle 54 on card, or enter at "e-inquiry" on

VehicleServicePros.com

Remove flower-design lug nuts

The Beta Tools Impact Sockets, No. 720MRC, are 1/2" drive and have a polymer sleeve for non-marring performance when removing lug nuts with the flower-design found on Mercedes Benz vehicles. The



sockets are forged from high-strength alloy steel, and they come with a lifetime warranty. The tools are designed for Mercedes Benz models, including C-Class and GLK-Class, E-Class, SKL-Class, ML-Class, CL-Class and S-Class.

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With ultra-slim locking flex heads, these multi-function ratchets really do give you instant access. Heads measure less than 3/4 inches across, compared to about an inch for standard 1/4" drive ratchets. Now you can go over, under, and around components you used to have to remove to get at those hardest-to-reach fasteners. Two more ways GearWrench helps you GET IT DONE™ faster!

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TWO POST LIFTS 7,000 through 30,000 lb. capacities. Inquiry #10



STORAGE LIFTS 10,000 through 18,000 lb. capa<u>cities for</u> storage and vehicle service. Inquiry #11



MOBILE COLUMN LIFTS

electric-hydraulic available in 2,4. 6, or 8 post configurations. Inquiry #12

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LIFTS 19,000 through 120,000 lb. capacity models give complete under vehicle access. Inquiry #13

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Ultra-wide circular beam

The Coast Wide Angle Headlamp, No. FL60, can illuminate large areas with it's ultra-wide circular beam. A conveniently located button on the front of the headlamp allows the user to swiftly change between high, medium and low light outputs. The headlamp, which offers up to 300 lumens of light and as much as 22 hours of run-time, comes with an IPX4 weatherproof rating and safety reflective strap. With a hinged beam, this hard hat-compatible light is also impact- and weather-resistant, offers a beam distance of up to 95' (29m) and comes with the company's lifetime warranty. It is tested and rated to ANSI/ FL1 standards. The 3.3 oz headlamp includes three AAA batteries.

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Light features three brightness settings

The Nightstick by Bayco Rechargeable Intrinsically Safe Permissible Multi-Function Dual-Light Angle Light w/ Multi-Angle Magnetic Base, No. XPR-5572RM, is cULus and MSHA certified Intrinsically Safe Permissible. The flashlight setting offers three user-selectable brightness settings of 60, 100 and 200 lumens, in addition to a a strobe feature with a 267m beam distance. The "Survival Mode" of 20 lumens pro-TISTICA vides just enough light in an emergency situation with a run-time of 3-1/2days. The XPR-5572RM is powered by a recharge-

able Li-ion battery pack. The XPR-5572RM is IP-X7 waterproof and meets requirements of NFPA-1971-8.6 (2013). Circle 59 on card, or enter at "e-inquiry" on VehicleServicePros.com

Available for multiple applications

The John Bean line of Video Wheel Balancers are available for many applications. Designed for techs who require a pro-

fessional balancer but have a small area available in the shop, the B200S Video Wheel Balancer offers users simple data entry via the 2D SAPE and Smart Sonar. The B200S features a one-spin balance and the Virtual Plane Imaging (VPI) measuring system. The B400L Video Balancer is belt-driven and provides the easyWeight pinpoint indicator to position weights on the wheel during balancing. The VPI measuring system, easy spoke input and a 4.5-second one-spin balance is also included. The B600P and B600L are high-volume models that have a touchscreen user interface as well as an electromechanical clamping system in addition to other standard features.

Circle 60 on card, or enter at "e-inquiry" on VehicleServicePros.com



Find and permanently stop A/C leaks

The UView LeakGuard OneShot, No. 480500, is an A/C supplement that leverages the company's LeakGuard technology to find and permanently stop A/C leaks as they form. An included dose of A/C ExtenDye fluoresces leaks and includes an additive package that protects and extends the life of the compressor, its components and the oil. Also, 2 oz of R-134a refrigerant tops up the system with refrigerant lost to leaks. This product will not harm the A/C system or recovery equipment.

Circle 61 on card, or enter at "e-inquiry" on VehicleServicePros.com

MP-Series mobile lifts



For smartphones and tablets

The Strategic Tools and Equipment Intermittent Fault Finder, No. AIOBD13, works on smartphones and tablets. This



fault finder plugs into the OBD-II port and records up to 300 hours of driving history. This tool allows users to select up to 100 different parameters, including OBD and enhanced fault codes. This free app, with free updates, helps

save technicians time and avoid hunting for elusive intermittent faults.

Circle 62 on card, or enter at "e-inquiry" on VehicleServicePros.com



Memory foam footbed

The **Rocky Boots Retraction collection** can be worn indoors or outdoors, and feature full-grain leather uppers, a Rocky EnergyBed footbed with memory foam and a rubber-lugged outsole that is fully oil- and slip-resistant. The boots are also Guaranteed Rocky Waterproof and

include a mesh moisture management interior lining. This collection is available in 6" or 8" heights and with or without a steel toe.

Circle 63 on card, or enter at "e-inquiry" on VehicleServicePros.com

Includes 644-pc set of tools

The **Sonic Tools S14 Toolbox** comes complete with a 644-pc set of tools. The box offers a total of 18 100-percent retractable drawers—16 shallow drawers and two deep options— with a drawer blocking system as protection against tipping over, and a drawer release system with no mechanism in the handle. The S14 is powdercoated and provides a wooden top blade, folding key, two can holders, a paper



towel holder, auto return ball bearing slides and four extra-large wheels. The box has an overall weight of 510 lbs and a static load capacity of 1,323 lbs. **Circle 64 on card, or enter at "e-inquiry" on VehicleServicePros.com**



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Improved brake stops wheel faster

The DeWalt 4-1/2" Small Angle Grinders, Nos. DWE4222N, DWE4222, DWE4224, offer a brake that stops the wheel faster then previous models and the company's Lanyard Ready connection that allows users to tether the tool to rigid structures. The E-Clutch activates in less than a tenth of a second when a wheel pinch/stall event is detected. The Dust Ejection System filters debris from the air, allowing mostly clean air to pass across the motor, leading to long motor life. The One-Touch guard allows for the guard to be adjusted in a single, fluid motion. At 4.6 lbs and a circumference of 194mm, the body is slim and ergonomic. Circle 66 on card, or enter at "e-inquiry" on VehicleServicePros.com



Expanded Ferrari/ Maserati coverage

The AutoEnginuity Giotto Version 14.1 scan tool for the Windows platform offers expanded Ferrari/Maserati coverage to include several new models, add dozens of new controllers and improve existing coverage. New model support for BMW/ MINI, including 7 series, Z4 and X5/X6 support, as well as CLA model and GLA model support for Mercedes Benz is also included. AutoEnginuity is also releasing Giotto on the iOS platform later in 2016. Circle 67 on card, or enter at "e-inquiry" on VehicleServicePros.com

Capable of charging all battery types

The **ATEC Smart Battery Chargers**, capable of charging all battery types, including AGM and gel, come in three 6/12V smart charger models, Nos. 3055A, 3075A and 3100A. All three models feature automatic bad battery detection, engine start and an LED digital display indicating charging voltage, amperage, charge time and countdown for start function.



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Includes EVA foam drawer liners

The Homak 41" RS Series Tool Box helps its users work more efficiently and safely by ensuring tools are kept well-organized and easily accessible. The box includes full-length aluminum drawer pulls with black plastic end caps, features removable 390mm ball bearing glides in every drawer, includes EVA foam drawer liners and is available in five colors (lime green, orange, black, blue and yellow). These boxes come with a five-year warranty.

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Simultaneously charge three batteries

The **Snap-on High-Current Charger**, No. CTC123, is a one-charger solution for keeping spare batteries ready for use. Equipped to simultaneously charge three 18V batteries, three 14.4V batteries or three of any combination of the two battery types, this device features a 1A USB charger for small electronic devices and phones. The CTC123 is an industrialgrade charger featuring a high-flow fan and advanced battery pack protection. Snap-on's 14.4V MicroLithium (No. CTB8172) and 18V MonsterLithium (No. CTB8185) batteries have standard charging times of 55 minutes on this charger.

With dual-textured sides

The **Muck Daddy Scrubbing Wipes** offer dual-textured sides, with a scrubby side and a smooth side. This product easily

removes oil, grease and grime, and leaves skin feeling soft and smooth, rather than dry and rough. These wipes can also be used to remove grease and oil from surfaces or tools and it will not leave a slippery or sandy residue. They can

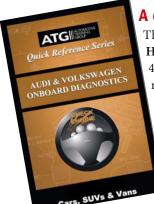


also be used to clean

brake dust from wheels, permanent marker from skin and tar off any surface, according to the company.

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A quick-reference handbook

The Automotive Training Group Audi and VW OBD Handbook for Car, CUV and SUV models 2008 to 2015, a 418-page handbook full of Audi and Volkswagen OBD quickreference information for cars and SUVs, is divided into 13 sections. Section 1 covers how to use Audi and Volkswagen OBD information to diagnose a trouble code and "run" a particular OBD monitor. These instructions include graphics that explain how to drive a vehicle after a repair to verify the MIL will not come back on. Sections 2 through 13 include trouble code descriptions, code conditions and list possible causes. This handbook allows technicians to look up a code and quickly find out what most likely caused it to set.

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Accepts wheel diameters from 39.4" to 78.78"

The **Chicago Pneumatic 1.2 Ton Dolly**, No. CP87120, has two handles for fast and easy maneuvering, and the width is adjustable to accept wheel diameters from 39.4" to 78.78" (1,000mm to 2,200mm). The dolly includes a turnable wheel attachment to ensure the wheels are balanced safely, as well as eight large rollers with automatically adjustable angles to ease the handling of tires with deep treads. The dolly offers four large swivel wheels with brakes to assist in moving the equipment into position. The dolly is EC and ASME certified, and it includes a double action hydraulic piston positioned on the side to enable easy access to the operating area.



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A faster and more intuitive experience

The **Cojali USA Jaltest 16.1 software update** for commercial vehicles adds important improvements for a more intuitive and faster diagnostics experience, such as: 120 vehicle models, 2,155 systems, 1,675 bi-directional tests and more than 1,350 systems with diagrams. The Jaltest Info Online Module offers more than 2,000 troubleshooting guides by fault code, and troubleshooting by symptoms has increased in 7,770 new guides. Technical releases and TSBs have been added in this subscription-based module. The Vehicle System Scan feature provides basic live data and the Mack/Volvo HD-OBD Vehicle System Scan detection times have been reduced.

This tool also features important coverage improvements in light and medium duty vehicles. The 16.1 Download Manager allows the user to update the software without having to log into the client's area.

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Approved for all flammable materials

The **Fire Service Plus FireAde** is a UL162approved foam liquid concentrate. The 16-oz fire extinguisher is environmentally formulated and contains zero hazardous

chemicals. FireAde is approved for all flammable materials, and it can be used as a coolant for metals, valves and pipes found in garages and other places tools are used. The singlepiece spray can construction operates at higher pressure from a safer distance.



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Airtight tape

The **S.U.R.&R. Ultra Tough Tape**, No. UT15, made of high-performance self-fusing silicone, is designed to be a quick fix for underhood repairs. This tape can be used to repair leaky hoses, tubing, wiring harnesses, connections and general purpose repairs. This airtight tape has no adhesive and resists UV, salt, oil and chemicals. The Ultra Tough Tape provides a waterproof seal, can be used for tempteratures of -65 degrees F to 500 degrees F and stretches up to 300 percent.

Circle 76 on card, or enter at "e-inquiry" on VehicleServicePros.com



Aluminum housing for lightweight user comfort

Zip Air Tool offers a Line of Angle Grinders made with aluminum alloy housings to provide a lightweight option for maximum operator comfort. The spiral bevel gearing in the angle head provides extended life and smooth, low vibration. To increase maneuverability, the tool also offers a removable side handle. These grinders are available in a 5" option (No. ZAG5110BC), which offers 10,900 rpm and a 5/8" by 11" spindle, and a 7" option (No. ZAG7UMR), which offers 7,600 rpm.

Circle 77 on card, or enter at "e-inquiry" on VehicleServicePros.com





360-degree rotating magnetic clip

The **Dent Fix 6.5" Mini Magnetic COB LED Work Lamp**, No. DF-LED450, provides up to 10 hours of light. The worklight has an eight-watt, COB LED that offers a max luminance of 450 Lux. The 360-degree rotating magnetic clip allows the light to be placed under the hood or on a shirt pocket. Three AAA batteries come included with this light.

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Install with symmetric or asymmetric column configuration

The Monster 2-Post Lift, No. MSTM10, a 10,000-lb capacity, ETL/ALI certified above-ground, commercial-grade two-post lift, can be installed with either symmetric or asymmetric column configuration. The overall height is 11' 7-7/8" or 11' 3-7/8" depending on symmetric or asymmetric installation. The MSTM10 includes a two-year warranty on material and workmanship. Circle 79 on card, or enter at "e-inquiry" on VehicleServicePros.com



With added utility and convenience features

The Clore Automotive Jump-N-Carry 12V Jump Starter and Power Supply, No. JNC770, combines jump starting power with utility and convenience features, including 68" cable leads, a built-in 3 amp charging system, a seven-segment battery status display, new PowerJAWTM clamps, USB outlets to power small electronics and an LED task light. With 1700 peak amps and 425 cranking amps of starting power, it can tackle a wide variety of starting tasks in numerous application environments, including automotive, marine, light truck, agricultural, industrial and fleet starting. Plus, the JNC770 is packed with premium features that deliver exceptional usefulness and convenience. Circle 80 on card, or enter at "e-inquiry" on

Fircle 80 on card, or enter at "e-inquiry" on VehicleServicePros.com



The truly portable QuickJack[™] is convenient to use and lightning fast allowing technicians to easily move the lift wherever it's needed. The QuickJack eliminates the need to bend over, kneel or squat when working on vehicles. A lowered height of just 3' means it goes where other jacks don't and an optional 12-volt power supply allows you to use it practically anywhere. Sturdy lock bars, a remote pendant control and adjustable rubber contact pads make it the perfect lifting system. Available in 3,500-lb. / 5,000-lb. or 7,000-lb. capacity. **Visit us at www.quickjack.com**



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2

KEEP 'EM STRAIGHT



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ADVANCE IMAGING TECHNOLOGY THAT DELIVERS **FAST AND ACCURATE ALIGNMENTS**

The model 3DP4100 Target 3DPro[™] is the fastest, most accurate wheel alignment system in the industry thanks to advanced imaging technology that delivers fast and accurate alignments. It streamlines the entire alignment process delivering critical readings in less than two minutes. With minimal investment and reduced training, the Ranger Target 3DPro aligner expands your service potential and sends more profit to your bottom line. Circle 83 on card, or enter at "e-inquiry" on VehicleServicePros.com

Call 1-800-253-2363 or Visit bend.pk/Target-3D-Pro

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Keeps tools easily accessible

The **Mayhew Tools Countertop Displays** feature premium quality product and turn driven assortments designed for an array of selling environments. These displays are designed to keep the tools easily accessible. Each base consists of an outer plastic shell with a foam core that holds each tool tightly for upright display. The company offers a wide variety of sets from the 102-pc Punch and Chisel display, to more individualized displays such as displays for the company's screw extractors or inspection tools.

Circle 84 on card, or enter at "e-inquiry" on VehicleServicePros.com



Help eliminate heat damage and discoloration

The Alvin Products Heat-Block heat **absorbing compound** is formulated to eliminate and protect metal against heat damage during brazing, soldering, welding and other procedures. Heat-Block protects metal from heat damage and prevents heat from traveling through the metal surface, which can discolor parts and cause damage such as buckling, cracking and warping. To use, apply the heat absorbing paste directly from the container onto the metal and it will absorb and dissipate heat. Heat-Block is a water-based compound and is reusable. Available in pint, quart, 1-gal and 5-gal sizes, this compound cleans up with soap and water.

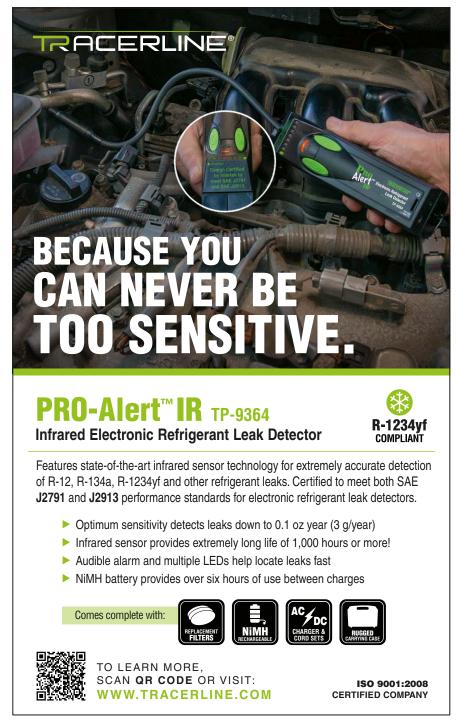
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Drop-point blade

The **Snap-on Relay knife** from **CRKT** offers a compact size with a 3.16" drop point blade and a satin

finish. This knife, designed by Ken Onion, also offers a liner lock and an IKBS ball bearing system that deploys the blade smoothly and effortlessly. A textured glass-filled nylon handle with tire tread grip has a universal design to accommodate various hand shapes. This knife is available in gray (No. SEK80MNKK) or black (No. SEK80MINSK).

Circle 86 on card, or enter at "e-inquiry" on VehicleServicePros.com



Circle 87 on card, or enter at "e-inquiry" on VehicleServicePros.com



Prevents incorrect power displacement

The Goodall Start-All with Active Sensor Technology (AST) automatically prevents power from being deployed when a user mistakenly selects the wrong voltage, attempts to power up the jump starter when the clamps are not connected properly or

when the unit is connected in reverse polarity. This model also offers reverse current shutdown protection. The Start-All is available in both 12V and 12/24V configurations. This unit weighs 365 lbs and can be used in both indoor and outdoor/work truck applications.

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– Tools Designed With Your Hand in Mind

Opening and closing Click Clamps does not require special skill; it requires a special tool. KNIPEX has again designed a specialized pliers to perform this specific function—quickly and effectively. And these pliers will not harm the clamps they're compressing, allowing them to be reused over and over again.

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



Combines comfort and performance

The Wolverine Edge work boot fuses Wolverine's technologies for combination of comfort and performance; its CarbonMAX toe-cap is lightweight, thin and ASTM approved, while the multi-layer construction of EPX technology conserves and returns energy. The Edge features the Waterproof Plus breathable membrane and hi-vis reflective accents for additional comfort and safety. The boot combines a waterproof nubuck leather upper with moisture-managing mesh lining to keep water out and feet dry. This boot uses nanotechnology to create a lightweight and comfortable safety toe that is up to 50 percent lighter than standard steel-toe cap, according to the company The Wolverine Edge boot is available in men's and women's styles.

Circle 89 on card, or enter at "e-inquiry" on VehicleServicePros.com

With a corded OBD-II connection

The Autel MaxiSYS, No. MS906, a diagnostic tool with Android-based software, covers Asian, European and domestic vehicle manufacturers and retrieves

module information for body, chassis, powertrain, information and communication. The MS906 instantlv retrieves VIN. make, model and year. Via a corded OBD-II connection,



users can quickly detect and display fault and trouble codes. This scan tool offers features such as four-mode live data viewing, oil service reset, TPMS sensor relearn, EPB, ABS/SRS, SAS, full-screen waveform graphing analysis, an 8 mega pixel camera, an 8" full-color LED screen display and more. The MS906 offers up to six hours of continuous-use battery life, one year of software updates and one year of warranty. Circle 90 on card, or enter at "e-inquiry" on VehicleServicePros.com

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LED runway light kit

The Rotary Lift Line Light 4 Kit, No. FA5700, an LED runway light kit for heavy duty vehicles, helps eliminate bulky access obstructions to vehicle components when lifts are raised. The Line Light 4 kit includes four long LED light wands that unobtrusively attach to the lift itself, freeing up the technician's hands. The Line Light 4 Kit uses more than 600 LEDs producing more than 4,000 total lumens. The FA5700 works with Rotary Lift's HDC Series, parallelogram, SM30 and AR18 heavy duty lifts, and can be retrofitted to most runway-style lifts. The kit's four LED wands range from 50.5" to 56" long and can be connected in series to enable all lights to be controlled by a single switch. Circle 92 on card, or enter at "e-inquiry" on VehicleServicePros.com

Impact-resistant with anti-slip palm

The Magid Glove T-REX Anti-Slip Palm Impact Glove, No. TRX647, delivers impact protection, while also

addressing the need for strong oil grip and all-day comfort. The TRX647 features ANSI level 4 cut resistance, ANSI level 5 abrasion resistance and ANSI level 5 puncture resistance; an anti-slip palm for enhanced grip in oily conditions; Kevlar

stitching on the palm for durability; full TPR coverage for back-of-the-hand impact protection; precurved fingers for all day comfort without fatigue; and abrasion and a tear-resistant Keprotec-reinforced thumb saddle. **Gircle 93 on card, or enter at "e-inquiry" on VehicleServicePros.com**

Hammer clutch reduces reaction force

The **OEM Automotive Tools 3/8" Drive Super Duty Air Impact Ratchet Wrench**, No. 24416, is equipped with a hammer clutch to reduce reaction force, 700 rpm and max torque of 50 ft/lbs. It features a rear air exhaust that is adjustable 360 degrees. Its compact size, only 6.5" in length and 1.32 lbs, make it great for working in tight spaces, says the company. The sealed ratchet housing helps to extend the life of the head. This is also available in a 1/4" drive option (No. 24415).

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Soft abrasive wheel for spot repair

The **Motor Guard Magna Stripper**, No. E-6080S, for auto body spot repair, is a soft, abrasive wheel that quickly strips clear coats, base coats, primer coats, or all three, without damaging the body panel. It can be used on both steel and aluminum body panels. The soft, resilient compound is impregnated with abrasive; absorbing the heat and leaving the metal like new. The Magna Stripper also can be used to remove surface rust from steel; quickly stripping the most

rusted parts to bare, bright metal. The Magna-Stripper ships with universal hardware to fit most air and electric tools and is made in the U.S.A.

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To service truck bushings, springs, king pins and more

The Astro Pneumatic Shank Super Duty Air Hammer/Riveter, No. 4980, a maximum power air hammer for heavy duty off-road and automotive applications, can be used to service truck bushings, springs, king pins and more. The 4980 offers a 1/4" air inlet, a speed of 1,800 bpm, a 3/4" bore and weighs 4.8 lbs.

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For nylon and steel fuel lines

The AGS Fuel Line Repair Master Kit, No. FLRK-15, contains all the connectors, compression unions, adapters and nylon fuel line needed to repair and make quick and cost-effective 1/4", 5/16" and 3/8" fuel replacement lines. The pushbutton thumb release makes connections fast and easy, according to the company, and the nylon lines hold up to 200 psi. The complete kit contains components for both nylon and steel lines for both domestic and import applications.

B

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Fits on square drive of 1/2" impact tools

The **Ingersoll Rand PowerSocket** provides the torque to loosen hard-to-remove fasteners, bolts and lug nuts, without the

need for additional tools. The PowerSocket fits directly on the square drive of a 1/2" impact tool and provides more torque than standard impact sockets,



the company says. The PowerSocket is available in 17mm, 19mm, 21mm, 26mm and 27mm sizes to meet the standard bolt and lug nut variations from a variety of car and tire manufacturers.

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Available in 8-pc and 4-pc sets

A dozen product numbers have been added to the GearWrench line of Hooks and Picks. Delivering speed, strength and access, eight of these tools utilize the same handles offered by GearWrench, but with longer shanks for improved access. Four other hooks and picks have larger 4.6" handles with extra-long, largediameter shanks. An 8-pc Long Set (No. 84010) includes the company's Full Hook, 90-Degree Pick, 45-Degree Pick, Double Angle Pick, Complex Pick, Angle Hook Pick, Combination Pick and Straight Pick. Also available is a 4-pc Heavy Duty Set (No. 84020) that includes the company's Full Hook, Straight Pick, 90-Degree Pick and Combination Pick.

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For hand and power tool use

The Snap-on Industrial Williams Flextensions, built for technicians who work extensively with engine and heavy equipment, feature an integrated (nonremovable) drive extension and socket design. The Williams Flextensions help increase productivity by allowing reliable, continuous workflow without concern for the socket disconnecting from the extension. Available in a wide variety of both SAE and metric socket sizes and extension lengths, in both 1/2" and 3/8" square drives, most are available in "Tension" and "Non-Tension" models. These tools offer a black oxide finish, lobular openings for increased turning power, up to a 30-degree angle offset and more. The Williams Flextensions are designed for hand and power tool use, but not for impact tool use.



Removes carbon deposits from GDI engines

The Valvoline EasyGDI Fuel System Service removes carbon deposits from hard-to-reach intake valves, piston tops, cylinder heads and fuel injectors in gasoline direct injection (GDI) engines. The service features an intake cleaner, fuel rail cleaner and a complete fuel system treatment. The system's technology allows 10 detergents to melt away carbon deposits and circulate to clean a GDI fuel system without having to dismantle the engine and fuel system. The results can include improved injector flow, improved fuel economy and power, and elimination of rough idle, hesitation and knocking. Circle 102 on card, or enter at "e-inquiry" on VehicleŚervicePros.com



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With a self-adjustable speed system

The **Hofmann monty tire changer**, No. 8100S, features a self-adjustable speed system, smartSpeed, that maximizes rota-

tion speed in line with required torque, giving users the highest possible speed for maximum efficiency without damaging the wheel. The finger trigger bead breaker combines the performance of a traditional on-side bead breaker with effortless operation. The monty 8100S offers a conven-

tional mounting head and tire lever, as well as mount and de-mount assist arms, to avoid wheel and tire damage making for safer use. The wheel lift has an enhanced ergonomic design to assist technicians in positioning heavy tires on the machine and the tire lifting tool supports the demounting process.

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Engineered for concrete foundations

The Stertil-Koni Diamond Lift - Frame Version is engineered for concrete foundations and is ALI certified. The lift uses less than five gallons of biodegradable fluid per piston, and features a corrosion-free aluminum trench cover system with full drive-over load capacity. The Diamond Lift - Frame Version is available in either a two- or three-piston configuration with a total lifting capacity of 64,000 lbs and 96,000 lbs, respectively.

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Handheld digital inspection camera

The Ridge Tool Co. Ridgid micro CA-25 is a compact, handheld digital inspection camera with a waterproof imager head for basic and short-range inspection jobs. Powered by four AA batteries, the micro CA-25 features a 17mm aluminum imager head with four ultra-bright LEDs. The camera has a 2.4" color LCD screen, and it also features video out for transferring live images to external devices and 180-degree digital image rotation for getting upright images. Also included is a hard-shell plastic case, a hook, a magnet, a mirror and a 3' RCA cable. Circle 107 on card, or enter at "e-inquiry" on VehicleServicePros.com

Magnesium alloy and aluminum housing options

The **Mighty-Seven 1/2" Air Impact Wrench,** No. NC-4255Q, at only 3.74 lbs, provides users with 1,200 ft/lbs of maximum reverse

torque in five seconds. This impact wrench

is made of a heavy duty composite body with front and rear housing made of magnesium alloy. The tool features a twin-hammer mechanism for long oper-

ating cycles, a grease fitting on the front housing for easy maintenance and 85 dBA to meet OSHA sound safety standards. This impact is also available in a 3/4" version (No. NC-6255Q) and a 1/2" aluminum housing version (No. NC-4256Q). **Circle 108 on card, or enter at "e-inquiry" on VehicleServicePros.com**

Three ratchet designs available

The **Craftsman Industrial** line features a Premium Grade Ratchet, which offers 84 teeth and provides a 4.3 degree ratcheting arc, an extended handle which enables 15 percent more torque than the Craftsman standard ratchet, a thicker beam, and is available in a 1/4" Drive Model (No. 9801), a 3/8" Drive Model (No. 9802) and a 1/2" Drive Model (No. 9803). The Round Head Ratchet offers a smooth round handle with knurled end, 45 fine-teeth for an eight degree ratcheting arc, a high torque design and more. The Round Head Ratchets are available in a 1/4" Drive Model (No. 9804), a 3/8" Drive Model (No. 9805) and a 1/2" Drive Model (No. 9806). The Quick-Release Teardrop Ratchet features 38 teeth for a 10-degree ratcheting arc, a round handle with finger notch for increased user control and a one-hand, quick-release button and reversing level that provides speed without sacrificing precision. This style is available in satin, chrome or black oxide finish and in a 1/4" Drive Model (No. 9807), a 3/8" Drive Model (No. 9808) and a 1/2" Drive Model (No. 9810).

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Over 44,000 easy-to-read OEM level fault code descriptions

The Noregon Systems JPRO Professional is an extensive multi-brand tool providing total vehicle view on a single screen in under one minute. Bi-directional testing, over 44,000 easy to read OEM level fault code descriptions and extended service and engine repair information with Next Step make JPRO Professional a powerful diagnostic tool, according to the company. The tool is designed to help users both decrease repair time and increase uptime. **Circle 110 on card, or enter at "e-inquiry" on VehicleServicePros.com**



High Performance Tools For The Professional

Take Control of Your Power and Speed

Introducing: Heavy Duty 20V Li-ion Cordless Tools

Compact, Lightweight TPR Molded Bodies Reduce Shock and Fatigue

Fast Charging 20 Volt Li-Ion Batteries with Extreme Runtimes and Premium Performance

1/2" Drive Compact Drill

- 2 Speed Transmission with 0-600 RPM and 0-2000 RPM
- Variable Speed Trigger to Control Speed
- Quick Change One-Handed Forward and
- **Reverse Switch**
- 21 +1 Torque Clutch to Optimize Your Power
 Kouless, leache® Chuck for Superior Crip and
- Keyless Jacobs[®] Chuck for Superior Grip and Quality Performance
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- Removable Belt Hook Keeps Your Tool In Reach
- Replaceable 20 Volt 2 Ah Lithium-Ion Battery Charges in 1 Hour

1/2" Drive Compact Impact Wrench

- 1/2" Anvil with Ball Detent System for Easy Socket Attachment and Removal
- Rubber Boot Reduces Shock and Protects
 Work Surfaces
- 300 Ft./Lbs. of Nut Busting Torque
- Variable Speed Trigger to Control Speed
- Quick Change One-Handed Forward and Reverse Switch
- Replaceable 20 Volt 4 Ah Lithium-Ion Battery Charges in 2 Hours

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2 Speed Transmission



LED Work Light Clutch: 21 + 1 Torque Clutch Setting



20V Battery Strength Indicator Lights



Variable Speed Trigger, Ball Detent System and Rubber Boot



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VMRI tech tips

Diagnosing OBD2 vehicle problems today can be confusing and time consuming. It can take hours just to go through the steps to figure out which vehicle systems are working properly and which are not. Sometimes you may not even know where to begin to diagnose a car problem. This limits how many car repair jobs you can complete (get paid for) each day.

VehicleMRI decreases diagnostic time by eliminating what is right, so you can focus on what's wrong

VehicleMRI quickly runs through hundreds of OBD2 tests that would typically take an automotive technician 1-hour + to run. VehicleMRI knows which car computer and parameters to scan to determine which vehicle systems or components are functioning correctly and which are not. Within minutes, you will know where to start so you can quickly focus on the car problems.





PICKUP ANY 6.8 V10 (S) GAS



Report Summary		Vehicle Information		Other Summary	
Report Name	VehicleMRI Complete+	VIN	1FDWF36S4XEE60208	Items Checked	233
Report Number	659	Year	1999	Duration	04:49 (Min:Sec)
Report Time	03/20/2012 5:40 PM	Mako	FORD	Device	EVI-6
Performed By	Root Root	Model	F-350 SUPER DUTY	Firmware Version	EV16_00
Company ID	55		PICKUP	Script Version	1
		Engine	6.8 V10 (S)	Applet Version	1.0.0.15
		Odometer	0	Database Version	3/19/2012
		Vehicle ID	DC5896J	Parate Persion	

Category	Overall	Key On	Engine Running	
Report Preconditions	Ø PASS	O PASS	II N/A	
R Vehicle Information	N/A	NOT SUPPORTED	N/A	
MIL/DTC/IM/Dash Lights	X FAIL	X FAIL	🖾 N/A	
Battery	O PASS	O PASS	O PASS	
9 Powertrain Misc.	PASS	PASS	Ø PASS	
Cxygen Sensors	X FAIL	O PASS	X FAIL	
Evaporative System	NOT SUPPORTED	S NOT SUPPORTED	NOT SUPPORTED	
Temperatures	Ø PASS	O PASS	O PASS	
Fuel Trim	Ø PASS	PASS	Ø PASS	
Fuel/Pressure & Rates	O PASS	O PASS	I NOT SUPPORTED	
1 Load/Torque	NOT GRADED	NOT GRADED	NOT GRADED	
Throttle/Accelerator	O PASS	O PASS	N/A	
Misfire / Injectors	II N/A	NOT SUPPORTED	N/A	
Transmission	X FAIL	X FAIL	NOT GRADED	
ABS / Airbag	N/A	NOT SUPPORTED	10 N/A	
Body Misc.	N/A	N/A	N/A	
		Report Provided By		
		demo Vehicle Research Center, Building 2 187 Commerce Drive Scott Township, PA 18447 1(570)241-0769		

VehicleMRI LLC, Vehicle Research Center Bidg. 2, 187 Commerce Dr. Scott Township, PA 18447 Toll Free: 855-2MRI-NOW (855-267-4689) Phone: 570-241-0769 Fax: 855-221-5620 Support: 570-351-137







Easily add a profit center by providing OBD2 vehicle inspections and inspection reports

You can easily add another revenue generating car service to your repair shop by offering OBD2 vehicle inspections to your customers for the vehicles they own or are considering purchasing. VehicleMRI is easy to setup and within minutes it can perform hundreds of specific OBD2 tests on a vehicle. It uses these results to grade the current health of a vehicle and to create a professional, detailed report.

Use VehicleMRI to promote more business and convert more estimates into jobs

Do your customers complain when you list a diagnostic charge on their invoice? VehicleMRI users have fewer complaints when they give their customers a VehicleMRI report to show the results of the diagnostic charge. After seeing the VehicleMRI inspection report, they'll bring in their other cars to be tested.

A customer may be hesitant to give you the ok to repair their vehicle after you give them a repair estimate. They may even have one of those generic scanners that they think tells them what is wrong with their car and how much the repair cost should be. If you show them a VehicleMRI report that supports your diagnosis, you have independent verification to support your estimate.

Does VehicleMRI replace a scan tool for automotive repair?

No, VehicleMRI does not replace a scantool or any other automotive diagnostic tool. It should be considered as another vehicle diagnostic tool that you will use for the initial diagnostic inspection, post-repair validation and all the other benefits listed above.

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VehicleMRI is a quick, online tool that examines a vehicle's internal electronic system to assess the current health of the vehicle by using proprietary algorithms to reveal and forecast problems that other vehicle inspection methods cannot. Great for auto repair shops, fleet managers, car dealerships, and auction buyers.

Perform hundreds of standard and dealer-level tests on multiple systems that would take hours for a technician.

Easy to read reports flag out-of-range parameters, failed test reports and items close to failing.

Effective alert system since a vehicle could have a serious problem and no dash warning lights displayed.

The first vehicle inspection system to analyze both OBD2 generic and enhanced data.

Checks if a vehicle's on-board computer needs a software update.

Try a 30-day subscription to VehicleMRI for FREE by using coupon code: TRYMRI. Requires an OBD2 vehicle interface.



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Bartec USA

part of the global Bartec Group of Companies

Bartec USA, has a reputation for delivering market first innovation to the automotive service industry. Bartec customers can service more vehicles and be more profitable doing it. Bartec has served the North American market since 2004, and manages Automotive Assembly Plants, OE Dealers and the entire Aftermarket. Our TPMS tool solutions range from simple activation tools to complex automated antenna systems.

Make more money servicing TPMS!

Bartec USA has the TPMS tool solutions to do just that! Bartec tools assist the preinspection step Test Before Touch whereby you can determine why the TPMS light or MIL is on before work begins. Eliminate the guesswork when you use our tools to retrieve TPMS fault codes [DTC's].

High Powered TPMS Service

The Tech400Pro is the industry's finest TPMS Diagnostic tool. While the "free



tool" manufacturers throw around the word "diagnostic," Bartec makes TPMS diagnostics a reality! The Tech400Pro can detect TPMS fault codes, interpret them, program

replacement sensors, walk you through completing the TPMS relearn, and when you're done, print an audit report.



But there's more!

It doesn't stop there by the way. With the Tech400Pro, you can adjust the TPMS placard level, check passive entry and keyless ignition systems, and



you can update the Tech400Pro via a wireless internet connection!

Try all THAT with a free tool!

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Lisle 29350 Combination Disc Brake Tool Kit



his dual-application tool helps make installing new brake pads on front and rear brakes quick and easy while using only one tool. This patent pending design combines two of the best-selling Lisle brake tools (24300 Speedy Brake Pad Spreader and 25000 Rear Wheel Disc Brake Tool).

Tool is designed to work on single piston rear disc brakes that require the piston to be rotated back into the caliper as well as pistons that are pushed. Includes two, doublesided, two pin adapters along with a pinless pushing adapter. Since there are no threads, the inner shaft can be freely rotated clockwise or counter-clockwise depending on the vehicle application.

Turn the shaft with 9/16" wrench or socket while squeezing the handle to advance the tool to compress the piston. Packaged in a blow molded case with additional space for other 3/8" square drive wind back adapters, like the larger adapters in the Lisle 25000 set.

- Adapter 1A 1-1/2" (narrow pins) -Most Hondas, Mazdas, Dodge, Mitsubishi and some GM
- Adapter 1B 1-1/2" (wide pins) -Most Fords, Toyotas and some Pontiac
- Adapter 2A 1-5/8" (wide pins) -Most Nissans/Datsuns and Subarus
- Adapter 2B 1-5/8" (narrow pins) Mazda 3, some Jaguar and some Mini Cooper
- Pinless Adapter Front brakes that do not require the piston to be rotated back into the caliper

For more information visit www.lislecorp.com or our YouTube channel LisleCorporation to view the tool in-use.

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29350 COMBINATION DISC BRAKE KIT One tool makes installing pads on front and rear brakes quick and easy. For single piston disc brakes that require the piston to be rotated back into the caliper & pistons that are pushed. Includes 2 double-sided 2 pin adapters along with a pushing adapter. Shaft rotates both directions. Use 9/16" wrench or socket.



27100 ADHESIVE HEAT SHRINK TUBING ASSORTMENT Adhesive coating provides water-resistent seal for insulating & protecting soldered connections & connectors. ROHS compliant Polyolefin. 60 4" long tubes with 5 diameters. Halogen free and UL & CSA certified at 600v@125°C. Shrinks at 194° - 248°F (90° - 125°C) with a radial shrink ratio of 3:1.



82400 MORTORQ® SUPER SOCKET SET, 5PC. For removing and installing MORTORQ® fasteners on Chrysler, GM, Jeep and more. Used on bell housings, interior components, door frames, body components and more. Sockets are heat-treated alloy steel. Includes MTS-0, MTS-1, MTS-2, MTS-3 and MTS-4



28870 TRUCK ANCHOR PIN BUSHING DRIVER Removes and installs truck and trailer 1-3/8" anchor pin bushings and stuck anchor pins. 7-3/4" extension allows bushings to be driven straight without removing the hub. Drive the bushing out with the small cone. Larger cone installs bushing to the proper depth. Also removes truck leaf spring bushings.

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51410 SPARK PLUG WIRE REMOVAL PLIERS Used to remove stubborn spark plug wires on GM 3.1L, 3.4L, 3.8L

and other engines. The 5/8" opening of the pliers properly fits spark plug wire boots to prevent damage to spark plug wires. Tool is 7 long with offset tip to fit in tight spots.



19342 MULTI-APPLICATION OIL FUNNEL

Helps eliminate oil spills when refilling crankcases, especially those with baffles. 1.6 ot. translucent funnel comes with seven color coded adapters and a 45° elbow to work on many applications. Use spout only as a standard funnel. Tethered lid and cap keep the funnel clean



61980 STRIPPED SCREW EXTRACTOR SET, 10PC. Ten sizes of extractors fit Torx® and Torx Plus® sizes T-10 to T-55; internal hex sizes 7/64" to 3/8" and 3mm to 10mm. Also works on other internal drive screw heads. Drive the extractor into the fastener with a hammer for maximum torque. To remove broken bolts, drill a pilot hole.



61420 HEAUY-DUTY RADIATOR CAP WRENCH Works on most ISX Cummins, Paccar, Peterbilt, Kenworth, Freightliner and Many Other Class 8 truck radiators. The wrench is double ended to work on 3 and 4 slot radiator caps. The tool is designed with multiple cap slots for use in tight spaces. Can be used to loosen caps on radiators and reservoirs. © 2016 Lisle Cornoration

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Increase Profits and Safety with INDUCTION HEATING

Releasing rusted, corroded or thread locked nuts and other parts, often found in inaccessible areas, takes up a lot of time. Not only is it frustrating, but it's inefficient. If you're using an oxy-acetylene torch, the process is potentially hazardous and you run the risk of damaging the area around the part you're trying to remove, which can be costly.



The Mini-Ductor[®] handheld induction heating tool, from Induction Innovations,

leverages Invisible Heat to remove adhesives bonded to metal quickly, easily and safely. The tool comes with 3 bendable coils, ideal for hardto-reach areas and thin enough to wrap round the nut and heat it in seconds for easy removal. As the heat is localized on the part, there's less risk of damaging the area around it.



One user says, "It offers such a change from the extra safety steps required when using a torch, which can add up to a lot of time and effort before you even start the job! The Mini-Ductor is as simple as plugging it in, ensuring you have the correct coil, giving it a few seconds to heat up and off you go. It's easy to tell when the bolt is overheating because the coil leaves visibility, whereas an open flame is guesswork because you have such a bright light in your face!" Rob Cooper, Commercial Motors.

Cost saving - insurance premiums are often lower if oxy-acetylene is not stored on the premises and fewer parts are damaged. The quick, efficient heating process saves valuable time, which equals increased profits.

Visit www.theinductor.com for information, videos and step-by-step guides. Circle 118 on card, or enter at "e-inquiry" on VehicleServicePros.com



MINI-DUCTOR® II

Invisible Heat[®] releases frozen parts faster and more safely than a torch. Induction Innovations' high performance induction heat systems help technicians work more efficiently, saves time, are energy efficient, and safe to use.

Available through your local tool professional.

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TTD – Professional Tire Tread Depth Gauge

A ccording to NHTSA, proper tire tread depth has many impacts on vehicle performance including SAFETY, fuel economy, vehicle handling and tire life expectancy. The CFR regulation for tread depth considers tires unsafe if a tread depth is "less than 2/32 of an inch measured in two major tread grooves at three locations... of the tire." (RCW 46.37.425 - wa.gov)

A tire tread depth reading is defined by the vertical measurement between the top of the tread rubber to the bottom of the tire's deepest grooves. In some states, tire tread depth readings have become a necessary activity for tire inspection with a tread depth tool calibrated in 32nds of an inch in

the event the tires do not have tread wear indicators. ATEQ's TTD (Tire Tread Depth gauge) allows technicians to manage and communicate tire conditions to the consumer about their current tire conditions.

With the ATEQ VT56 TPMS Tool and the TTD, technicians can provide a complete tire and TPMS sensor check during routine maintenance. The TTD quickly captures inner, center and outer tire measurements with precise accuracy (+/- 1% or 0.0012 inches). The results are displayed on the VT56 screen with green, yellow and red color codes to indicate wear against the threshold. The collected data can be transferred to a PC, stored or printed directly from the VT56. No charging or Bluetooth



TPMS Solutions

OFF !

We turn this

ATEQ

connection is necessary, just connect it to the VT56 to measure and record tire tread conditions and manage TPMS activities.

For more information, visit ateqtpm.com/TTD

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Gray Manufacturing Company, Inc., a proud American Manufacturer



The long and successful history of Gray Manufacturing's professional service equipment can be traced back to the early 1920s. That is when J.H. Gray established a line of repair equipment for the replacement automotive tire market. Mr. Gray's first application for a jack patent was 1921.

Eventually, the company was formally incorporated in 1952, and by 1953 Gray had introduced the first pneumatic portable vehicle end lift, the first of what would soon evolve into the most comprehensive line of high-quality professional service equipment in the world. Today, we continue working to meet the needs of the professional service technician. Our time-proven name has meant long product life, excellence in engineering, design, quality, workmanship and service after the sale.

Gray Manufacturing is headquartered in the heartland of the United States. Our 160,000 square foot factory, located in St. Joseph, Mo, is a state of the art, world class manufacturing facility. Gray maintains a commitment to a vertical integrated manufacturing philosophy. While a lot of American manufacturing has been sourced overseas, we stay committed to maintain and expand our manufacturing capabilities. This practice gives us complete control over our quality, delivery time and puts us in a better position to care for our customers.



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The Original Wireless Portable Lift System

Improve productivity and flexibility:

Wireless feature enables technicians to:

- Get set-up FASTER ...
- Get the vehicle up **FASTER...**
- Get the job done **FASTER...**



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U.S. Patents 6,634,461•7,014,012•7,219,770 Canadian Patent 2,406,340

Hansen Global ToolHANGER



No More Searching for Your Tools in a Giant Toolbox!

ansen Global's newest storage system, the ToolHANGER, is a plastic organization system offering technicians an efficient way to display, locate, organize, and account for tools quickly and easily. According to Julie Thielbar, Executive Vice President of Hansen Global, Inc., "The ToolHANGER's features and benefits are endless! In fact, it can be used to organize almost anything."

- 11.5" x 18" boards can be hung horizontally or vertically to maximize space.
- Six unique hangers allow for the organization of sockets, wrenches, power drills, screwdrivers, more!
- ToolHANGER's interlocking design allows for unlimited assembly of sizes and layouts
- Lifetime Warranty

Like all of Hansen Global's products, the ToolHANGER is proudly made in the USA



out of high-grade polypropylene and is built to last; "it will not break, warp, bend or rot," said Thielbar. Its durable, patented twist-and-lock hangers are made of glass-filled nylon, which securely fasten tools and equipment to the board making them a breeze to locate. The ToolHANGER is easy to install on all surfaces and can create any number of unlimited layouts—it can even span entire walls!

For more information, please visit our website, www.HansenGlobalinc.com, or call us toll-free at 877-793-5213.

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SFA Companies

Industry leader in portable hydraulic lifting.



We became the leader through innovative engineering, unparalleled customer service, and a dedication to safety. When we introduce a new lifting product it will not only meet our stringent standards for safety and performance, but also exceed the expectations of our customers for convenience and dependability. With that in mind we are proud to introduce the OmegaLift 29033.

OMEGALIFT

cians have certain requirements in a service jack. The 29033 addresses all of these needs with a 3.5 inch pick height, a 20.5 inch maximum height, a 3 ton capacity, a U-joint release and SFA's quick lift system. The 29033 even protects customer vehicles from damage with a padded handle and saddle. The most important features on any jack are the safety features and we take those features seriously. The 29033 meets or exceeds all ASME-PASE 2014 safety standards, so you know that this product meets

Professional techni-

all of the most current standards. If you do ever have an issue with one of our products you will find that our customer service after the sale is second to none, we have experienced hydraulics professionals answering our phones in Kansas City, Mo and have repair parts on hand.

In summary the OmegaLift 29033 has the features that today's professional technicians demand, backed by the best customer service and support in the lifting industry, and all at a very competitive price. They are available from your local SFA distributor today.

For more information visit us at <u>www.shinnfuamerica.com</u>

Circle 126 on card, or enter at "e-inquiry" on VehicleServicePros.com



"VISIT US AT SFACOMPANIES.COM OR SAVEPHACE.COM FOR MORE INFORMATION"

Reelcraft's spring retractable reels for up to 100' of cord

Relcraft's new Series L 70000 cord reels are designed to accommodate up to 100 feet of 12 gauge cord. The heavy duty base design, all steel construction and a baked-on powder coat finish combine to produce a rugged, corrosionresistant product. A newly re-designed latching mechanism provides longer service life of the latch components. The containerized drive spring offers safer and easier handling during maintenance. Two sealed ball bearings produce a smoother spool rotation and easier operation. The guide arm adjusts to seven positions for various mounting locations and applications. All Series L 70000 cord reels are UL listed and will be available in June 2016.

- Compact design Reels are 25% smaller than our heavy duty Series 80000 reels.
- Guide rollers The one piece design and stainless steel pins offer greater strength and easier serviceability.
- All-steel electrical enclosure Offers a stronger, more durable protective cover of electrical components.
- UL listed All models UL listed from 10 20 Amps.
- Versatile Eight different styles of cord endings available.



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Rely on Reelcraft



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LT1350 Lug Ripper II

The Lug Ripper II[™] is a state of the art tool that removes seized or frozen lug nuts off of the rim of a vehicle in a matter of minutes. This highly designed tool offers technicians a solution to the never ending problem of removing rusted, seized or frozen lug nuts from a vehicle.

This "one of a kind" tool is a specialized drill bit that is so strong it can cut into four inches of steel up to 200 times. The Lug Ripper II™ is designed to remove lug nuts without damaging the tire rim of a vehicle. The Lug Ripper II™ will save you time and money and will become every technicians "go-to" tool when an immobile lug nut needs to be removed. The name says it all... The Lug Ripper II™, You Strip'em, We Rip'em! The Lug Ripper II[™] is designed for 17mm, 19mm, 21mm & 23mm lug nuts. It is made out of carbide metal strong enough to remove lug nuts multiple times. The cutting head or threads are designed for cutting out

the inside of the lug nut only. The center of the shaft is hollow to allow the stud to go inside during the drilling process. The stud will be reduced in size during this process and will need to be replaced. The

mounting end has a round shaft that will be inserted into a standard low rpm 1/2" air drill. The Lug Ripper II™ must be used with one of our specially designed guides. We offer 17mm, 19mm, 21mm & 23mm guides for these size lug nuts. The Lug Ripper II™ is a Patented and Trademarked Product. 3 months limited warranty. ■





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This is a game changer in evaporator coolers



O EMTOOLS[®] and Hessaire[™] Products Inc. have teamed up to bring the newest innovation in Evaporator Coolers to the Automotive Aftermarket. OEMTOOLS, one of the largest US distributors of specialty tools and equipment and Hessaire, US manufacturing experts in airmovement solutions, are introducing a line of efficient and affordable portable evaporator coolers just in time to beat the heat.

Benefits of Evaporator Coolers

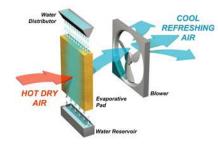
Evaporative coolers provide a natural and energy-efficient means of cooling when refrigerated air cooling is not an option. The temperature of dry air can be dropped significantly through the transition of liquid water to water vapor (evaporation), which can cool air using much less energy than refrigeration.

Evaporation can extract the most heat when the air is dry. So in the dry arid climates like the Southwest, evaporative coolers can drop the temperature by 25F degrees. Even in the hot humid Southeast, evaporative cooling can drop the air temperature by 5 to 10F. By spot cooling, where evaporated cool air is blowing directly on the person, the air will feel 10 to 15 degrees cooler.

The savings of using an evaporative cooler verses a refrigerated air conditioning system can be substantial. That's why they are especially popular with shop owners and technicians, but traditional swamp coolers are bulky, heavy and can be expensive to purchase. Hessaire's newest portable coolers deliver the same cooling power of traditional coolers but at half the cost.



How EVAPORATIVE COOLING works



A More Affordable and Efficient Option

Hessaire Portable Coolers optimal performance is achieved through expanding airintake areas to the hi-density rigid media. These coolers have 3 media panels instead of a single panel found on most mobile coolers. Three panels allow more air-intake and reduce pre-rotation of the air to the prop, which translates into lower static pressure and more efficient air delivery. This provides 80% more evaporation surface compared to regular density media. The patented wing prop is energy efficient and throws cool air farther. The unique wing prop is designed to deliver a hi-velocity of air to you quietly.

The Hessaire 2200 CFM 2 Speed Evaporative Cooler cools 750 square feet. The unit is molded with a polypropylene resin, creating a strong, yet lightweight design. Four casters and only 43 pounds fully loaded lets you move it easily. A direct connect to hose feature gives you the option of constant water supply so you don't have to always fill the water tank. The unit also features a top shelf to hold your tools and drinks and a USB charging station for charging your portable devises while you work.

OEMTOOLS offers three sizes of Hessaire portable coolers. All units are priced under a thousand dollars at substantially lower prices than traditional swamp coolers. Summer is coming. It's going to get hot. Doesn't an affordable solution just make since?

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Collision Repair Tools

This auto collision technician shares his key tools for fixing damage.

By Josh Smith, Assistant Editor

TECHNICIAN: Josh Annis LOCATION: Milwaukee, Wis. SHOP: Prestige Auto Works

Josh Annis has been a collision technician for 10 years, including four years at his current shop in Milwaukee, Wis. Annis works on nearly every make and model of vehicle, including both imports and domestics.



Want to show off YOUR Top 10 Tools? For more information, email Josh@VehicleServicePros.com. Annis uses the previous model of this impact (No. 2450-20). He says this tool, complete with a variable speed trigger and LED on the front to illuminate the work area, produces plenty of torque to loosen fasteners. He also likes the quick-release end for quick bit changes and the impact's 850 in/lbs of torque. "Also this tool features a battery gauge on the side," Annis says. "I have owned this tool four years now, and it still works as good as the day I bought it." **Circle 133 on card, or enter at "e-inguiry" on VehicleServicePros.com**



2 "This tool also features the LED light to illuminate the work area and it's cordless so there is no air hose to fight with," Annis says, noting the ratchet's compact head gets into tight spaces while supplying 30 ft/lbs of torque. **Circle 134 on card, or enter at "e-inquiry" on VehicleServicePros.com**

The 68 LEDs in this cordless, rechargeable worklight are very bright, according to Annis. He likes the rubber grip handle as well as the hook on the end, which allows it to hang conveniently while he is working. **Circle 135 on card, or enter at "e-inquiry" on VehicleServicePros.com**

4 "This tool has a small head that easily get under plastic clips," Annis says. "Works great to get under clips in weather strips on doors." **Circle 136 on card, or enter at "e-inquiry" on VehicleServicePros.com**

5 "This tool works great to remove clips that require the center to be removed or lifted first," Annis says. "I also use this tool to squeeze wiring connectors to be able to unplug them."

Circle 137 on card, or enter at "e-inquiry" on VehicleServicePros.com

6 Annis calls this "go-to" the body hammer he uses most often. "This hammer is well balanced and works great for bumping dents in sheet metal," he adds. Circle 138 on card, or enter at "e-inquiry" on VehicleServicePros.com

Annis appreciates that his tool doesn't leave marring marks or scratches on painted surfaces from prying. He says it's "good for getting under trim panels and prying them away from the panel. When the end of the tool gets a little beat up you can just grind it down to resurface it."

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8 "This tool quickly grinds welds and gets into hard-to-reach areas," Annis notes. Additionally, he says belts are easy to attach and remove and various belt grits are available for this tool. "Also, the head can be adjusted for different angles." **Circle 140 on card, or enter at "e-inquiry" on VehicleServicePros.com**

9 "I prefer this sander because of the smooth sanding," Annis remarks. "It offers very little pad wobble and is easy to control." **Circle 141 on card, or enter at "e-inquiry" on VehicleServicePros.com**

10 "This tool works great to pull up to 11 studs at the same time," Annis states, noting it prevents having to weld on plates and pull. "One side is narrower than the other and allows you to pull with five studs. I use this tool along with the frame rack to pull slight pressure on the panel so I can relieve the stress in the panel I'm working on."

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TOOL COMPARISON: When to use which tool

A guide to selecting the optimal tool for diagnosing a vehicle oxygen sensor issue.

For this Tool Briefing, we take a unique approach of comparing a number of different tools to use with the same diagnosis.

By Barry Hoyland, Contributing Editor

e all know that it is sometimes difficult to be both accurate and efficient. One of the primary needs of being accurate is to either possess or know where to obtain the knowledge to diagnose issues. Also essential is having the correct tools.

To become efficient, it is necessary to choose the correct tools, be able to sift through information quickly and rely on your experience to recognize patterns. You also must be aware that it is impossible to be efficient without being accurate.



▲ Code reader. For more information on the OTC PocketScan Code Reader (No. 3108N), visit: VehicleServicePros.com/12065933

Circle 143 on card, or enter at "e-inquiry" on VehicleServicePros.com In this month's article, we will discuss how to improve both accuracy and efficiency by providing you with information on when and why to choose specific tools to perform a task. Since a common issue is an illuminated "check engine" light and observing oxygen sensor values during your diagnostic process, we will discuss the value of various tools to expedite an accurate analysis.

The diagnostic process and tool choices will be relatively consistent for most vehicles, but for this example we will use a 2004 Jeep Liberty with a "check engine" light illuminated, to perform our tests.

USE A CODE READER

I have used a code reader as my "first grab" tool for quite some time. The reason we use a code reader is that it is fast and there is enough information provided by the tool to make an informed decision on which direction to proceed with your diagnosis.

Most code readers will provide codes and let you know if the monitors have run. Codes are great, but knowing if any monitor has not completed can some-



▲ Repair information. For details on ALLDATA repair information, visit: VehicleServicePros.com/11319826

Circle 144 on card, or enter at "e-inquiry" on VehicleServicePros.com times be a shortcut in determining what's wrong with the vehicle, as well as understanding why a code you would expect to be present is not there.

For example, if driveability symptoms are consistent with a lean condition but there are no lean codes, it would make sense that there is not a lean code after knowing that the oxygen sensor monitor has not completed.

We also use the code reader to determine if we are able to use one of our aftermarket scan tools, or need a factory tool. The aftermarket tools in most cases are much faster than a factory tool, but in some instances may not be as efficient if there are OE-specific codes or if a significant amount of bi-directional testing will be required to test the system.

Using the code reader, we found a P0131 code and that all the monitors were complete.



Scan tool. For more information on the Snapon Diagnostics VERUS Edge scan tool, visit: VehicleServicePros.com/12120614

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- Repair information
- Scan tool
- Digital multimeter (DMM)
- Waveform viewer
- Lab scope

OBTAIN VEHICLE-SPECIFIC INFORMATION

Using ALLDATA and inspecting the vehicle, we determined there is one upstream oxygen sensor on each bank. The P0131 code is for bank 1. A code P0131 means that the PCM has detected low voltage (below 250mV) for 10 seconds.

Due to only one bank of cylinders being affected, we can assume that the issue is not system related, but specific to bank 1. Making early assumptions is easy to do, but not advised. Just to make sure we did not overlook basic engine needs, we installed a fuel pressure tester to verify the vehicle meets the specification and checked battery voltage to make sure it was sufficient. In many cases, it is a good idea to interview the customer to see if any additional driveability concerns were noticed. In the case of this Jeep, no additional information was gained from the customer.

INSTALL SCAN TOOL

Use your scan tool to first verify communication with all modules throughout the CAN bus. If any modules are not communicating, it may be necessary to repair them prior to beginning any other diagnosis. The reason you should do this is in some cases faults can be due to lack of communication, or a code that could be useful in the diagnosis may not set if modules are not communicating.

After you check for module communication, verify the code(s) you found with your code reader and record freeze frame data related to that code. I also recommend checking for pending codes to make sure there are no additional issues later on.

The operating voltage of a normal oxygen sensor will be between 100mV for low voltage (lean) and up to 900mV for \bigcirc



 Digital multimeter. For more information on the Electronic Specialties Deluxe DMM, visit: VehicleServicePros.com/ 12062324

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 Additional diagnosis with the scan tool, such as the Snap-on VERUS Edge.
 Circle 147 on card, or enter at

"e-inquiry" on VehicleServicePros.com

 For Step 4, we need to determine which tool works best for this diagnosis among the product categories displayed here.



▲ Lab scope. For more information on the Pico Technology PicoScope Advanced Automotive Kit, visit: VehicleServicePros.com/12062840

Circle 148 on card, or enter at "e-inquiry" on VehicleServicePros.com



 Waveform viewer. For more details on the Hickok Waveform Viewer, visit: VehicleServicePros.com/12081953
 Circle 149 on card, or enter at "e-inguiry" on VehicleServicePros.com

VEHICLE ISSUE: Pulls oxygen sensor values

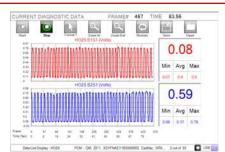
VEHICLE AFFECTED:

All vehicles



 Digital multimeter. Using the min/max feature on our DMM, we observed a minimum voltage of 177mV (left) and a maximum of 912mV (right). On the surface that seems normal, but we have no reference to time.





Scan tool. Monitoring just the bank 1 and bank 2 oxygen sensor PIDs we can see very close to the same data as the DMM, but we can also see the sensors changing data quickly. Graphing the two sensors we can get a better picture of not only the voltage and how quickly they switch, but also see both sensors are relatively the same.

high voltage (rich). During enrichment testing the sensor should go from rich (above 800mV) to lean (below 200mV) in less than 100 milliseconds (ms). In order for the vehicle to maintain fuel control and have the ability to store oxygen for proper catalytic converter operation, the sensor must be able to switch from full lean to full rich in less than 100 ms.

Current scan data shows the oxygen sensor is working normally.



Since we will be observing oxygen sensor values to determine if there is a current issue with the vehicle, let's discuss the benefits of various tools

to get information. Since we are observing voltage, a DMM could be used. You would be able to connect the meter directly to the sensor or the PCM to read voltage. Using the min/max function of your meter you would be able to see both the lowest and highest voltage the sensor produced. The drawback with a DMM is that it cannot measure how quickly or slowly the sensor switches.

Using your scan tool can be a relatively effective way to observe sensor operation. One thing that is critical to remember is that your scan tool has a specific baud, or communication update rate. The more parameters, or PIDs, that are displayed on your tool, the slower the tool will show changes. This pertains to observing PIDs as well as using the graphing capabilities of the scan tool. If you are attempting to catch a "glitch" or an intermittent issue this is even more important to remember.

Most of the newer versions of scan tools have graphing capabilities. There are some cases where it is valuable to look at graphs with your scan tool, but since the graphs are not displayed in real time, some glitches in the vehicle system may not show up. Additionally, the ability of your scan tool to observe and store data for long periods of time may be limited. Storing large amounts of data can be useful for finding intermittent issues. Another drawback with a scan tool is there may be a loss of data while cranking and during initial start-up.

Using a waveform viewer also can be useful. But like a scan tool, the update rate and the storage ability may be limited.

A lab scope gives you the ability to observe voltages and other signals in a user-defined timeframe. Finding intermittent faults and having the ability to compare values of multiple sensors or actuators at the same time are just a few of the benefits of a scope.

Many technicians are hesitant to purchase a lab scope due to the cost and not having enough experience with the tool to use it effectively. However, the cost of lab scopes with multiple channels have decreased. Most now have extensive libraries built into the scopes and have "known good patterns" as well as enough information on how to connect and adjust the settings for most common components. Once you are familiar with using a lab scope, it can be very difficult to work efficiently and accurately without it.

5 SELECT THE APPROPRIATE TOOL FOR THIS DIAGNOSIS

Let's look at each tool in turn with our Jeep.

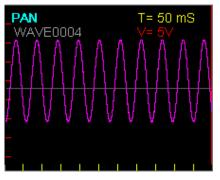
DMM – Using the min/max feature we observed a minimum voltage of 177mV and a maximum of 912mV. On the surface that seems normal, but we have no reference to time. In this case, the DMM is not that useful. You may want to keep the meter out just in case it is necessary to perform voltage or resistance tests later in the diagnosis.

Scan tool – Monitoring just the bank 1 and bank 2 oxygen sensor PIDs, we can see very close to the same data as the DMM, but we also can see the sensors changing data quickly. Graphing the two sensors can get a better picture of not only the voltage and how quickly they switch, but also see both sensors are relatively the same.

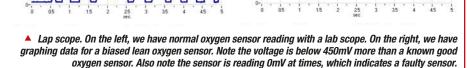
Waveform viewer – We are able to read one sensor at a time. Even though the screen is smaller than the scan tool, we can see data in closer to real time.

Lab scope – Since we have a multichannel lab scope, we can see both oxygen sensors over a long period of time. We also have the ability to start the vehicle and get data instantly, allow-





Waveform viewer. With a waveform viewer. we are able to read one sensor at a time. Even though the screen is smaller than the scan tool, we can see data in closer to real time.



ing us to see things while the engine is cranking as well as when it first starts.

In this instance, we selected the lab scope. On this vehicle, having the ability to see data while cranking and immediately upon start-up showed that intermittently we would have an extended period of time when the voltage on the bank 1 oxygen sensor was below 200mV.

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03-

There are times when it is appropriate to rely on a single tool, and other times when it is necessary to use a progression of tools to provide the data you need. Choosing the right tool for any job allows you to increase both your accuracy and efficiency. You would not choose to use an open-end wrench as your only tool to remove an engine any more than you would choose to only use any one of the tools we discussed in this article for diagnosing an issue. PTEN



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OTC Locking Collar Wrench

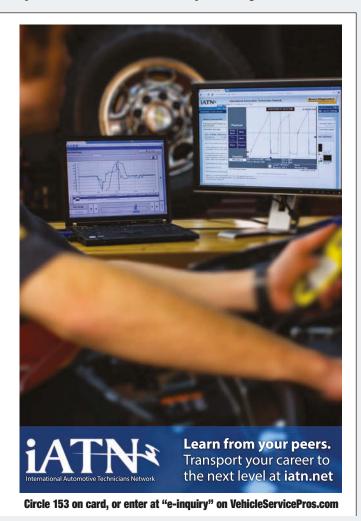
The reviewer was able to use this tool to expedite alignment jobs.

by Josh Smith, Assistant Editor

he split collar design of the OTC Locking Collar Wrench proved useful to Eric Moore, owner of DeMary Truck in Columbus, Ohio. The feature expedited alignment jobs, something that he and his technicians perform repeatedly on a daily basis.

"We found the OTC Locking Collar Wrench was a great addition to our alignment equipment," Moore says. "It was useful when adjusting tie rods and saved time over repeatedly positioning a pipe wrench."

Moore's favorite feature is the design. He notes the tool is split at both ends to assist with repositioning.



PRODUCT DESCRIPTION:

The **OTC 7485 Locking Collar Wrench** creates a better way to move steering rack components without disassembly. The wrench features an eccentric cam design and split-circle, which opens to wrap around and securely close on steering components. The 1/2" square-drive cam automatically adjusts the lobe to the diameter of the bar, creating maximum leverage and a secure grip to position and maneuver components during vehicle service. The Locking Collar Wrench can be used on steering linkage, small-diameter exhaust and other pipes that need to be adjusted or repositioned.

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"I have used a similar tool, which did not have a split collar design like the OTC Locking Collar Wrench. It functioned the same, but was much bulkier and clunky to use," he says. "Having the split collar design really made this tool stand out and easy to install, use and remove. Repositioning was easy since both ends of the collar are split and pinned."

Moore performed alignment work on an array of vehicles from "a 2011 F-150 all the way through a Freightliner Coronado and lots in between," he says. "As long as the components weren't too sticky, it worked fabulously."

There wasn't any special setup required. No instruction manual was included, but Moore says the tool's simple design made it very intuitive to use. However, the vinyl pouch the Locking Collar Wrench came packaged in did not last long for storing tool.

While there were many uses for the Locking Collar Wrench, he says a more heavy duty version, with a slightly larger opening, would make this tool "essential for heavy duty alignments."

"Our applications for use, really call for a little more stout construction. We were able to use the tool quite frequently doing alignments. However, if the component were even remotely stiff, we had to use the standby pipe wrench," Moore explains.

Overall, Moore and his technicians got a lot of use out of this tool and were pleased with its performance.

"The OTC Locking Collar Wrench was very well-received and used in our shop, since almost every single tech performs alignments or replaces front-end components," he says. PTEN



Matco Tools maxME

The reviewer says this scan tool is a great add-on for a specialty shop or a single technician.

by Mattie Gorman, Associate Editor

arry Hoyland, owner of Vehicle Service Solutions of California, says the Matco Tools maxME has a quick boot-up, which allows for fast access to information.

In his shop, Hoyland services all types of vehicles, but for this review, he used the maxME for general scan diagnostics, oxygen sensor graphing and more. Specifically, he used this scan tool to perform multiple bi-directional controls on a 2011 Cadillac SRX to determine the bi-directional control functionality, "or to see the capability of the tool," he says. "I put it through its paces to see what information I could get out. For example, if I wanted to operate a window, I command the scan tool to open and close the window."

He also used this scan tool on a Dodge pickup truck with a Cummins diesel engine to diagnose an emission failure. "The helpful part was that it had enough PIDs available to get to the root of the problem."

The maxME is subscriptionbased, and to use, Hoyland says you need to download the subscription for the specific vehicle platform you choose to work on. "The tool offers global OBD-II embedded in the tool. If you want enhanced capabilities, then you subscribe to the individual manufacturers that you choose, either annually, or per month."

An advantage of the tool is that you're not paying for things that you don't need, Hoyland says, but you have the ability to obtain that information if and when necessary. "This makes this tool a great add-on for a specialty shop or a single technician. Purchasing software on an asneeded basis could save quite a bit of money annually."

The maxME comes packaged in a leather protective pouch and includes an onboard battery, a USB charger and the VCI. There was no manual included, and because Hoyland experienced dif-

PRODUCT DESCRIPTION:

The **Matco Tools maxME** bi-directional scan tool features a patented, pay-as-yougo software subscription service. Designed to be both affordable and customizable, the maxME allows users to only pay for the car makes they work on. Subscriptions start as low as \$20 a month and are offered by car make, region (Asian, European or domestic) or one that covers everything. At any time, users can add, delete or update makes, right from the tablet's screen. In addition to being an advanced diagnostic tool, it's also a full-featured, personal tablet. Troubleshoot engine codes, stream music and play apps — all from one tool.

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ficulty finding recorded screenshots, he suggests a quick-start guide would be helpful for users unfamiliar with using Android products.

Hoyland says that once you learn the navigation features of the tool, it is relatively easy to use. He likes that the functionality is similar to other Android products by this manufacturer, which also improves ease-of-use. He also liked the Bluetooth adapter, which allows wireless connection to the vehicle. Overall, Hoyland says this tool provides users with "good data coverage and bi-directional ability for the vehicles tested." **PTEN**



n addition to product details on a specific category, this section now features a number of different resources on this subject. Use the key below to determine what type of content you're reading.





VARIOUS AVAILABLE CAPACITIES

The **MAXIMA ML4030 heavy duty mobile column lift** can be used indoors and/or outdoors on truck, bus and RV applications. Each column lift is easily moved by one individual from job to job. The ML4030 offers adjustable wheel supports for all sizes of wheels, a remote control handle with a 16' cable and an LCD screen that shows the exact operating status and conditions of the lift. This lift guarantees user safety with the hydraulic flow control and mechanical locks. Various lifting capacities are available depending on the application. ISO9001 and CE approved. **Circle 101 on card, or enter at "e-inquiry" on VehicleServicePros.com**

HOW DO I GET TO WORK ON THE BRAKES WHEN THE VEHICLE HAS BEEN RAISED ON A MOBILE LIFT?

As a mobile lift engages the vehicle by the tire, this typically means the tire is supported on and obstructed by the column. If you need to work on the tire, you have two options. The first is to position a jack stand under the corner you wish to lower, and lower the individual column so that it is free from the load and can be removed for wheel



free access. The other option is to raise the vehicle by a crossbeam, which straddles the opposite columns and engages the chassis. This provides immediate wheel free access. Information provided by: SEFAC, Inc.

THREE-SPRING DESIGN

The **ESCO 22 Ton Air Hydraulic** -**Service Jack**, No. 10390, is fully pneumatic and the three-spring design allows for air-controlled cylinder rise and descent. The three-spring design also better stabilizes the cylinder, which prevents unnecessary cylinder movement while lifting the vehicle. The cylinder and cylinder casing have been redesigned to decrease debris damage to the jack. The maximum lifting height is 21.35".

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STOP SEAL AND O-RING LEAKS IN JACKS

The Bar's Leaks Jack Oil with Stop Leak, No. HJ12, is designed

to stop seal and O-ring leaks in jacks and other hydraulic shop equipment caused by normal wear and age. The product also works to stop leaks in other hydraulic shop equipment, including transmission jacks and engine lifts, as well as snow plows. It is noncorrosive, non-clogging and non-foaming. Available in case packs of six 12 oz bottles. Made in the U.S.A.

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LIFT CAPACITY OF 10,000 LBS

The **BossLifts by Herkules VLA06 lift** is designed to leverage the airbag technology of the company's T200 (now VLA03) lift to offer a straight vertical lift with a raised height of up to 29" by using two platforms, each 31" by 67.5", placed on each side of the quick lube pit. The VLA06 has a lift capacity of 10,000 lbs, and a lowered height of only 4.25".

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VIDEO: DEMONSTRATION HIGHLIGHTING THE FEATURES OF FOWARD LIFT'S FCH MOBILE COLUMNS



To watch a video demo of this product, go to: VehicleServicePros.com/12111433





WHY DO TECHS NEED JACK STANDS IF THEY ALREADY HAVE LIFTS INSTALLED IN THEIR SERVICE BAYS?

By Ron Lainhart

The removal of heavy components, like transmissions and differentials, can cause a shift in a vehicle's center of gravity. This can make the vehicle unstable when it is raised on a two-post or inground lift. In order to protect the vehicle and the technicians working under it, it is best to position at least one supplemental stand at the vehicle's front and one at its rear during the removal and installation of heavy parts. It is important that the stands have enough

capacity to support the vehicle if it shifts out of place while in the air. With 4,000 lbs of capacity each, Rotary Lift's RS4 jack stands are an ideal solution for most shops. Two RS4 jack stands can support a vehicle weighing up to 8,000 lbs, which includes most vehicles on the road. To reach nearly any raised vehicle, each RS4 jack stand can be raised to a maximum height of 7' and locked into place with a simple pin. A screw-up adapter at the top of the column provides a fine adjustment range of 5.5". Information provided by: Rotary Lift

HYDRAULIC LIFTING WITH MECHANICAL LOCKING STANDS

The **Safe T Jack** combines the features of a floor jack and jack stand into one unit. To use, the Safe T Jack and stand are wheeled under the vehicle to place the stand under the lift point. A hydraulic lift arm raises the mechanical stand and vehicle

to the desired height, the stand then locks automatically into position. The lift arm is then lowered and the jack is pulled back to leave the stand in place. Stands can be retrieved by reversing this procedure. The power unit automatically converts into a conventional jack. The handle folds down flat for easy storage. The Safe T Jack is available in 2-ton and 3-ton models. **Circle 158 on card, or enter at "e-inquiry" on**

VehicleServicePros.com

HEAVY DUTY TRUCK JACK WITH AIR RETURN

The **Sunex Tools 22 Ton Truck Jack w/ Air Return**, No. 6722, lifts trucks and trailers with ease from 8.9" up to 21.7". An update to the company's 22 Ton Jack (No. 6622), the 6722 sports an updated body. The spring-less design eliminates weathering, rusting and damage of springs and spring retainers. Saddle speed is improved by 35 percent, compared to the previous model, as downward resistance from springs is no longer a factor. It features jumbo 9" tires that can effortlessly traverse over

gravel, fasteners, and air hoses on the shop floor. This Truck Jack features full air actuation, three handle positions and three adapters.

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FOR HI-LIFT JACKS The Safe Jack Stabilizer, No. 51M-

SJS, designed for the hi-lift type jack, helps make this jack safer to use and allows the jack to be used in ways that were previously impossible, according to the company. The stabilizer attaches in seconds to virtually any jack of this type and it does not limit jack operation. The 8" by 18" base plate is six times the base size of the jack, which helps reduce ground loading. The stabilizer is available for 48" and 60" jacks. **Circle 160 on card, or enter at "e-inquiry" on VehicleServicePros.com** VIDEO: DEMONSTRATION ON HOW TO ASSEMBLE AND USE THE BENDPAK/ RANGER TRANSJAK, NO. RTJ-1



To watch a video demo of this product, go to: VehicleServicePros.com/12104280

LIFTING RANGE FROM 3.5" TO 21"

The **Carlyle by NAPA 3.5-Ton Professional Jack**, No. 791-6440, has a low-profile, longreach chassis design with a lifting range from 3.5" to 21". The jack is versatile enough to work under low-ground clearance vehicles and is ideal for trucks and SUVs. The rapid rise dualpump piston design makes for quicker saddle lifting to load, and high-performance seals and superior-grade hydraulic fluid lead to better reliability and longer jack life. The product is backed by a two-year warranty.

> Circle 161 on card, or enter at "e-inquiry" on VehicleServicePros.com

MULTIPLE STANDARD WIDTHS

The **Torin Commercial Equipment 10,000lb two-post lift** offers 3-pc front and 3-pc rear arms. The front arm has a full 180 degrees articulating capability, multiple widths standard, no exposed hydraulic hoses or cables and a single-point lock release that is very smooth and easy to operate, according to the company. This lift

comes with a twoyear parts and labor warranty, stackable height adapters included and an optional 2' height kit for additional clearance, if needed.

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11 ADJUSTMENT POSITIONS

The OTC 5372 3-ton jack stands feature a formed and welded steel base for strength and a self-locking ratchet handle that cannot be released when under load. A durable enamel finish resists corrosion and welded foot pads prevent the stands from sinking into asphalt, gravel or other soft ground. A height range of 12" to 17-11/16" and 11 adjustment positions provides plenty of space while allowing

> technicians to safely work underneath a vehicle. Every OTC jack stand is ANSI / PALD tested prior to leaving the factory.

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OUICK LIFT ACTION The Blackhawk Platinum Transmission Jack, No. BPM407, from Shinn-Fu Corporation features a dual-pedal pump design for quick lift action and fine tuning. The jack also offers a deep, easily adjustable ratcheting saddle and a 3/4 ton capacity. Additional features of the jack include the chrome-plated and polished rams, high-grade U-cup seals, military spec. hydraulic fluid and a five-year warranty. Circle 167 on card, or enter at "e-inquiry" on VehicleServicePros.com



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LIFTING CAPACITY OF 1,543 LBS

The Chicago Pneumatic Twin-Wheel Dolly, No. CP8770, has a lifting capacity of 1,543 lbs (700 kg), which is suitable for maintenance of wheel diameters 21.4" to 50.5" (545mm to 1,280mm). It features a chain attachment to provide safe wheel balancing during removal and transport. The dolly includes a turnable wheel attachment to ensure the wheels are balanced safely, as well as eight large rollers with automatically adjustable angles to ease the handling of tires with deep treads. The dolly offers four large swivel wheels with brakes to assist in moving the equipment into position. The dolly is EC and ASME certified, and includes a double action hydraulic piston positioned on the side to enable easy access to the operating area. Circle 172 on card, or enter at "e-inquiry" on VehicleServicePros.com



HOW CAN A LIFT ACT AS A VEHICLE DIAGNOSTIC AND INCREASE SHOP REVENUE?

By Steve Perlstein

The use of a weight gauge acting as a scale on the lift can help diagnose vehicle problems and raise revenue per vehicle to upsell parts such as load levelers versus shock absorbers, better brake pads versus less expensive, or better quality tires versus a lower ply tire.

By example, if your customer with a Ford Crown Victoria complains of poor mileage after a tune up or poor drivability after an alignment, yet your lift shows this particular Crown Vic weighs 6,000 lbs, you can recommend that the customer remove the added weight that may be in the trunk of the car (a Crown Vic weighs 3,500 lbs). By recommending this, you can visually show your customer that his or her vehicle weighs much more than it should and provide a solution to why the handling and/or mileage isn't what he or she expected.

Information provided by: Mohawk Lifts

EASILY AFFIXES TO A BROAD RANGE OF METAL SURFACES

The **Stertil-Koni Palm Light**, a portable, magnetic, highintensity LED, is designed to affix easily to a broad range of metal surfaces commonly found in vehicle maintenance shops, including the company's vehicle lifting systems. The Palm Light provides up to 800 lumens of directed light and is contained in a die-cast aluminum housing to increase durability in the shop environment. The 10 watt Palm LED is powered with a Li-ion 11.1V 2200 mAh battery, is IP65 dust- and water-resistant and comes standard with a 12.6V 0.8A charger with a magnetic charging base.



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Big-Time Boxes Readers offer a proud look at their awesome tool storage systems.



CUNER: Zeb McNichol Centre Acres Garage/ S&C Operations Inc. Bellefonte, Pa.

n automotive and diesel technician for Centre Acres Garage and S&C Operations Inc. in Bellefonte, Pa., Zebulon (Zeb) McNichol works on light duty vehicles, medium and heavy duty vehicles, heavy duty trucks and trailers, and farm machinery. His shop also performs Pennsylvania safety inspection and emissions in this two-man shop.

"There is not a job too big or too small. We work on small gas engines, automobiles, semi-truck motors, heavy truck motors, transmissions, farm equipment, etc.," says McNichol.

McNichol has been a technician for over 18 years, but only recently purchased his Mac Tools Macsimizer box in an attempt to keep up with his expansive tool collection. At 19.5' long, he says it's very big with a lot space, however that space is almost completely filled with specialty tools, wrenches,

A quality-built box

By Mattie Gorman, Associate Editor

screwdrivers and hammers, and more. "The box handles the wide variety of tools very well with ease."

He chose a Mac Tools toolbox because of the quality. "The main toolboxes we have are Mac because they are very well made. They take a beating and keep on asking for more."

His favorite part of the toolbox is the end hutch and the work space. "It's nice



McNichol uses the work top to write out bills, keep laptops and for "little jobs with little parts that can get lost easily."

to have the lights inside (the hutch). The work top is convenient for writing out bills, putting our laptops in, and even for little jobs with little parts that can get lost easily."

McNichol's favorite tool in his toolbox is his Bosch heavy duty scan tool because of the versatility the tool allows. "You can do so many different things and applications with it." He adds the scan tool saves money and a lot of time on troubleshooting, rather than taking the vehicle to a dealership. "It helps us get our own equipment back on the road quickly as well as fixing our customer's equipment with minimal downtime." **PTEN**

Want to see more photos of Zeb's box? Go to: VehicleServicePros.com/12166298



Want to show off YOUR Big-Time Box? For more information, email Mattie@VehicleServicePros.com.

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