HAND & SPECIALTY TOOLS

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GUIDE TO PRODUCTS essential to vehicle maintenance and repair

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Hand tools to improve shop efficiency and safety

Considerations for selecting the products essential to vehicle repair and maintenance.

by David Brierley, Managing Editor

A first blush, hand tools are relatively straightforward. As we learned in high school physics class, they are simple machines used to apply force to an object. An automotive technician knows, however, that there is more to it than that.

Hand tools come in many forms and are designed for different jobs. Therefore, when choosing a hand tool for a certain task, there are several factors that need to be taken into consideration.

- Does operating this tool require that I use personal protective equipment (PPE)? Trick question; the answer is "yes." Safety gear should always be used to help avoid unnecessary injuries.
- Was the tool designed with this specific task in mind? Or, will I be pushing it beyond its limits, risking breaking the tool and/or putting myself and those around me at risk for injury? All tools are designed for certain tasks, and they all have limits to which they can be safely used. If a pry bar doesn't effectively loosen a component, for example, adding length to gain more leverage increases the chance that the tool will slip or break, which puts the technician at risk for injury and damage to the tool or the component.
- Will this tool help me get the job done most efficiently? Specialty hand tools are typically designed for one specific task. On the other hand, many non-specialty hand tools are designed for more than one purpose so the same tool can be used for more than one job. That could allow the technician to continue

working on a project without breaking concentration to find another tool.

HAND TOOL SAFETY

Safety must always come first when working in a shop environment, and using hand tools is no exception. There is always a risk for injury, so PPE such as safety glasses are always recommended. Specific safety recommendations will vary depending on the environment and the task at hand, so be sure to check tool manufacturer labels and warnings, any posted signs and placards, and your shop's safety manual for safety instructions.

As the vehicle service landscape changes, hand tool safety requirements change with it. Hybrid and full battery electric vehicles (BEVs) are becoming a more common sight on the road and in the service bay. Specific hand tools and PPE are required when servicing any vehicle with an electric or hybrid powertrain. High voltage is no joke, and it is vital that technicians follow these requirements for their safety and the safety of those around them.

CHOOSING THE RIGHT PRODUCTS

When it comes to purchasing hand tools, technicians will want to look at a few factors. It is important to balance cost and quality, while also ensuring the tool meets the proper specifications required for the tasks it will be used to perform.

Choosing the right hand tool can be challenging because there are so many options available in varied price ranges. If it will only be used once or twice, it stands to reason that a top-of-the-line tool may not be necessary. On the other hand, technicians will want a quality tool if they will be using it again and again. This can be especially true for more common tools such as screwdrivers, wrenches, and ratchets.

It may also make sense to purchase a high quality product when it comes to precision measurement tools, such as torque wrenches. When performing tasks such as tightening lug nuts, a precise tool is important for the safety of the technician and the driver of the vehicle.

Hand tools evolve to allow technicians to work more safely, comfortably, and efficiently. From basic features like no-pinch plier handles to new tools specifically designed to meet a need that was formerly going unmet, manufacturers continually strive to improve their products. This ongoing process not only benefits the technicians who use the tools, but the safety and efficiency of the entire shop. \mathbf{O}

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Specialty hand tools: The problem solvers

Specialty hand tools play the role of 'problem solver' and are designed to tackle specific applications.

by Tyler Fussner, Assistant Editor

very technician has been in a situation where they don't have the right tool for the job at hand. But the work must get done, so oftentimes a tool is used in an application it is not designed for. Specialty hand tools have risen throughout the industry as the 'problem solvers,' developed to ease pain points technicians are experiencing.

Whether a redevelopment of an existing tool or something innovative and new created for a particular task, specialty hand tools play a big role in saving time, preventing damage to parts and/or tools, and getting the job done right.

A FRESH TAKE

KNIPEX released the Super Knips cutting pliers, No. 7803125, designed for applications in the electronics market such as cutting fine components off circuit boards. With the electronics market not being as prevalent in the U.S. as it is elsewhere in the world, the tool was used otherwise.

"What was happening was people were starting to adapt this tool to a lot of other applications. The number one application for this tool [in automotive servicing] is to cut off cable ties, also known as zip ties," says Peter Grable, product manager, KNIPEX. "Most technicians will use a pair of diagonal cutters, alignment pliers, needle nose, [or] whatever cutting tool they have in their hand. Does it do the job? Yes, absolutely. It will cut off the cable tie. But it does not cut it flush."

The problem was that using various

cutting tools resulted in partially cut ties that would leave sharp edges and pieces of the tie behind. Should a technician reach their hand or arm into the area of service, they could get cut or scratched by the poorly cut ties. Furthermore, partially cut ties can rub against the cables and wires that they are securing, resulting in damage and yielding more issues to be dealt with.

KNIPEX took this information into consideration after speaking with those using the tool, understanding the shortcomings in this newfound application, and redeveloped a second iteration of the Super Knips.

"We made [the new Super Knips] about a half-inch longer," Grable says. "We made the blade a little longer, and we made the material toward the cutting head a little bit thicker."

This resulted in the KNIPEX Super Knips, No. 7803140.

"Technicians find a way to use just about anything [to get the job done]," says Eddie Lisle, sales manager, Lisle Corporation. "Specialty tools present an opportunity for us to make a tool specifically for that purpose. Specialty tools have always been our niche ... We want to come out with those 'problem solvers' for people. Everyone's time is valuable, so if we can come up with a tool that solves that problem and saves people time, that's what we want to do."

Lisle recently launched two specialty tools: the Long Reach Hose Clamp Pliers, No. 17000, and the 35–Degree Long Reach Universal Hose Clamp Pliers, No. 17370.

Photo from Knipex

The 17000 pliers were launched first, designed to make hose clamp removal easier. Since many hose clamps can be deep within the service area and may be hard to reach, Lisle designed the tool to be 17" long. The tips have a cross-cut pattern to provide a secure grip on different styles of clamps, and the pliers are able to be locked in place with pressure applied to the clamp. This allows the technician to open the hose clamp and have two free hands available to continue servicing the vehicle instead of having to hold the clamp open with one hand and try to work with the other.

After the 17000 was launched, Lisle received positive feedback from users, but some technicians mentioned it would be handy if the tips of the pliers were angled for clamps that are tucked around a corner or are inaccessible from a straight angle. Lisle went back to work and developed the 17370 model, which has a 35–degree angle at the tip of the pliers.

A NEW TOOL

When brake line comes into the shop, it is normally in a roll or coil and a technician will need to straighten it out by hand before it can be installed in a vehicle. This process can be inaccurate, and the line



will never be perfectly straight.

To help resolve this issue, Mueller Kueps developed the Brake Line Straightener, No. 462040, which is designed to take the coiled brake line and make it straight. The line is fed through one side, and the 16 internal ball-bearings and wheels straighten it as it comes out the other end.

Once the line is straightened and ready to be cut, the Mueller Kueps Brake Line Cutter, No. 462002, a specialty hand tool designed to cut brake lines, can be used. What makes this brake line cutter stand out is the self-adjusting blade mechanism.

"When you wanted to cut brake line before this tool, you'd go around the brake line and then have to tighten the cutter and go around again," says Andre van Lagen, national sales manager, North America, Mueller Kueps. "[The 462002] is self-adjusting. You don't have to do anything but ratchet around the brake line and it cuts."

CONCLUSION

Specialty tools are important to the automotive service industry, and their development is largely a result of the relationship between tool manufacturers and technicians. The communication of pain points, suggestions for alterations, and expressions of needs from end-users to manufacturers resonate throughout the industry and result in the continued development of specialty tools. As the vehicles being serviced change, so too will the tools used to work on them, and at the forefront of that progression will be specialty hand tools.







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Time to multitask

Multifunctional tools offer technicians a variety of benefits, from saving money to improving safety, and everything in between.

by Emily Markham, Assistant Editor

A technician uses a variety of tools to complete each job. For some jobs more tools are used, and for others fewer, but overall the number of tools a technician is using comes down to what tools they have in their toolboxes and what those tools can do. If a technician owns a variety of products that have the ability to be used for a multitude of applications, that technician may be able to use fewer tools on each job they perform and even increase productivity.

Multiuse tools provide technicians not only the chance to use fewer tools on the job, but they tend to be more cost–effi– cient, safer, and can help save time. It is in a technician's best interest to keep at least a few multiuse tools around, such as pry bars, screwdrivers, sockets, and wrenches in order to be as efficient as possible.

WHY USE MULTIUSE TOOLS?

When working a variety of jobs, it makes sense to have a variety of tools. But what if only a few tools were needed to finish a job instead of a whole toolbox? Multiuse tools can provide several benefits to technicians.

Cost efficiency

Can one tool do the job of three? If so, why buy those other three tools? Buying those other tools would not only be redundant, but it could also get pricy. Another factor to keep in mind is, would the redundant tool even get used or would it sit in the technician's toolbox?

"You're not buying a [multiuse] tool

for a specific application," says Max Knoell, senior vice president of Lang Tools. "So, if there [are] fifty things this tool can work on, you don't have to buy fifty separate tools."

Safety

Safety is an important factor for every technician. No one wants to see someone get hurt on the job, so any tool or protective gear that could help keep technicians safe should be utilized. Multiuse tools can improve safety by allowing the user to focus on the task at hand without having to pause to switch tools.

"Depending on the type of repair being done, it could be safer for the technician not to have to stop in the middle of what they are doing [and] instead simply utilize the tool they already have in hand," says Eric Mills, vice president of sales and marketing for Mayhew Tools.

Value

The value a tool brings to a technician depends on what that tool can do for them. The more frequently a technician can use that tool, the more valuable it is to have in their toolbox.

"Tools are expensive, so finding one tool that can help a technician make money on multiple jobs greatly increases that tool's value," explains Justin Fisette, senior product specialist for Bosch. "Multiuse tools also can help a technician pay for that tool faster, completing more jobs in a shorter period of time because of the versatility of the tool."

Photo from Mavhew Tools

Time efficiency

Time is money. The more time a technician spends on one job, the less jobs they'll be able to complete in a day. Multiuse tools can cut down on wasted time while performing a repair because the technician may not need to search for an additional tool if a multiuse tool can be utilized instead.

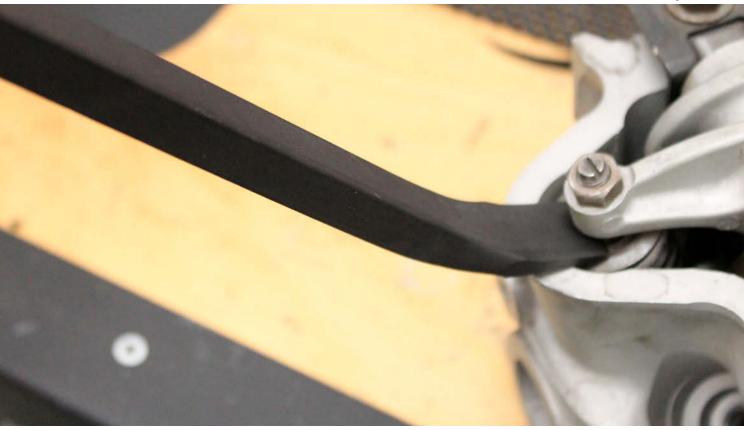
WHAT TO KEEP IN YOUR TOOLBOX

There are certain items every technician keeps in their toolbox, and when it comes to multiuse tools there are a variety for technicians to choose from. From pry bars to wrenches and everything in between, it can be difficult to know what's worthwhile.

For example, pry bars are a common



Photo from Lang Tools



and essential multifunctional tool. With their ability to pry, lift, and manipulate the components of a vehicle, pry bars offer a wide array of uses for many repair jobs.

OTC offers a Heavy Duty Indexable, Extending Pry Bar, No. 7177.

"The bar extends from 34" to 53" in 31 different preset lengths to get the most leverage possible in heavy duty prying applications," says Bosch's Fisette. "Technicians can use this bar to push, pull, move, separate, lift, or otherwise manipulate parts of a vehicle as needed to complete a job."

Mayhew Tools also offers pry bars, but with a little bit of a twist. The curved end of Mayhew's Dominator 3-piece Curved Pry Bar Set provides additional leverage while its chiseled tip helps reduce slippage, explains Mayhew Tools' Mills.

Aside from the pry bar, Fisette also lists a c-frame, a universal 2/3 jaw puller,

and slide hammers as multiuse tools worthy of a spot in the toolbox.

"A good c-frame can be used as a ball joint press, U-joint press, wheel stud removal and installation tool, and more," Fisette says. "Universal 2/3 jaw pullers can pull gears, hubs, bearings, and more. Different sized slide hammers can also pull hubs, bearings, axles, gears, pilot bearings, and even dents with the right adapters."

TOOL TRENDS

As the new decade begins, we see some trends in tools that will never change, like a technician's constant search for the highest quality products. But we also see new trends emerge. Versatility and adaptability are becoming more important in a tool's design. Technicians are looking for tools they can do more with, and the ability to do more with the tools they already have.

"A multiuse tool is great and made

Pry bars, such as this one from Lang Tools, offer a wide variety of uses for many repair jobs.

even better when it works in conjunction with what a technician already owns," Fisette says. "A slide hammer is a great tool, made even better when the company making it has accessories with the same threads, so technicians can expand the tool's use beyond their initial purchase."

Additional trends include tools with more ergonomic designs and tools being made from sturdier, more reliable materials. Regardless, as the trends come and go, technicians will still be looking for the same features in tools – durability, quality, and value.

Many multiuse tools possess those qualities, as well as the ability to be used for more than one purpose, making them that much more essential for technicians to own. It's not about the tools a technician has, it's about what the technicians can do with those tools.



Get a hold on hand tool safety

Hand tools are just as much of a concern as any other tool in the shop when it comes to safety.

by Kayla Oschmann, Assistant Editor

Photo from Assured Auto Works



and tools continue to be vital instruments for technicians. From basic hand tools (wrenches, screwdrivers, pliers, ratchets) to specialty hand tools (oil filter wrenches, wheel weight pliers, O-ring removers, clip lifters), there are hundreds available for technicians to choose from and all are designed to make their jobs easier.

As common as hand tools are in dayto-day jobs for technicians, they can still pose hazards in a busy work environment. As with any type of tool or piece of equipment, there is a need for safety awareness and training. It is important to be aware of potential hand tool dangers to prevent incidents from happening and utilize best practices to keep yourself – and everyone else in the shop – safe.

DON'T DO THIS...

There are two main causes for hand tool accidents and injuries: using a tool

incorrectly, and improper maintenance.

As straightforward as most hand tools may seem, it is essential for technicians to learn how to properly operate each one before first using it on a job. According to the Occupational Safety and Health Administration (OSHA), employees should be trained in the proper use of all tools, and hand tools are to be operated according to the manufacturer's instructions.

"We have been told as technicians our entire career not to use a screwdriver as a pry bar, yet a large percentage of technicians do," says Brin Kline, owner of Assured Auto Works in Melbourne, Florida. "It's a no-no. The blade on the screwdriver can chip and that can fly into your eye or someone else's."

Unfortunately, there are many incidents where technicians use tools in unsafe situations.

"Nobody wants to see anyone get hurt," says Chuck Loparo, director of sales and marketing at Midwest Tool, a hand tool manufacturer. Loparo is also an active member of the Hand Tool Institute (HTI), a trade association comprised of members from North American manufacturers of non-powered hand tools. "A large part of HTI's mission is that we want people to use [hand] tools properly so there is a lot less risk of injury."

Loparo shares three common scenarios in which he has experienced technicians using hand tools incorrectly.

- Adding extension to a tool to get more leverage, such as putting a pipe wrench on the end of a tool. This puts the tool in a situation to fail, which then can cause harm to the technician.
- Using any tool as a striking tool.
- Exposing a tool to heat, which then damages the tool's durability. For example, a technician uses a hand tool as a method to hold an object when using a torch to heat up seized bolts. That exposure undoes the manufacturer's heat treating, causing the tool to become brittle. The tool can then shed and eventually break.

Repetitive use and damage to tools can cause serious injury. When not properly cared for, hand tools pose a hazard. Dull knives, splinters in wooden handles, and cracked tips are all examples that can be easily addressed if tools are kept well maintained and stored appropriately.

DO THIS...

Safety is everyone's responsibility. It is up to shop owners and technicians to work together to establish best practices for hand tool use within their shops. Creating an environment where safety is at the forefront and is encouraged reduces the risk of injuries, which then increases shop productivity. It's a win-win for everyone.

Reminding technicians about common hand tool safety is a great start. Shop owners can use visual reminders such as posters, brochures, or videos around the shop or in the break room, as well as discuss safety during staff meetings.

OSHA adds these reminders when it



comes to using hand tools.

- Do not use tools for jobs they are not intended to do.
- Do not apply excessive force or pressure on tools.
- Do not cut towards yourself when using cutting tools.
- Do not wear bulky gloves to operate hand tools.
- Do not use tools for electrical work unless they are designed for electrical work.

Assured Auto Works' Kline says a best practice is to "always be mindful of what you are doing." For example, when using a pry bar, make sure it is in a position where it won't slip. The same goes for using a wrench; be aware of what would happen if it were to slide off, he notes.

"There was one time where the oil filter was super tight, and I was using oil filter pliers to loosen it," Kline says. "It slipped and my hand was cut fairly badly

TOOLS

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by something under the car. So, consider what could happen if a tool slips. You don't want to bust your knuckles."

To reach newer and younger technicians, HTI plans to build an online video library in 2020 comprised of proper hand tool use categorized by type of tool such as wrenches, pliers, hammers, cutting tools, etc. The video library will be hosted on the HTI website, hti.org, and be available to all members to utilize.

When it comes to tool maintenance and safety, it is equally important to care for hand tools to ensure longevity and durability. One best practice is to keep hand tools well maintained and stored appropriately to safeguard the tools' condition.

This means not leaving tools out in the environment or around water to prevent corrosion, as well as examining each tool before each use for signs of damage.

Also, wiping down tools at the end of

each use or shift can prevent incidents from happening the next time they are used. For example, remove any grease from handles to avoid slippage.

As tempting and as simple as it may seem to pick up a hand tool and get to work, remember that there are safety reminders and training in place for a reason. No job or deadline is worth the risk of getting injured. Proper hand tool use and care keeps everyone safe. \bigcirc

Contributors to this article:



Brin Kline

Owner of Assured Auto Works



Chuck Loparo

Director of Sales and Marketing at Midwest Tool, Active member of the Hand Tool Institute

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Electric vehicle tool set

It is important to use properly rated tools and personal protective equipment when servicing electric vehicles.

by Barry Hoyland, Contributing Editor

hen servicing any hybrid electric vehicle (HEV) or battery electric vehicle (BEV), safety must be the top priority. Not only is it imperative to use the correct tools and personal protective equipment (PPE), but also to take precautions that other technicians in the shop are protected as well.

There is a full line of hand tools that are necessary to use while repairing high voltage systems. Hand tools that are tested and certified for high voltage work are all readily identified by both their color – a mix of orange and yellow – and a label that uses a symbol of two stacked tri– angles and "1000V" printed on the tool, as shown on the KNIPEX wrench below.

These tools are fully insulated and can provide protection up to 1,000V. A

visual inspection is necessary to make sure there is no missing, broken, or worn insulation prior to each use. If there is even the slightest damage to the insulation, it may allow high voltage to contact the user, creating a very hazardous situation.

H IL II

Another critical tool is a digital multimeter (DMM) that is built to a category III, 1,000V standard. This tool, along with category III test leads and ends must be used when testing high voltage systems. These electrical test tools allow the user to test and monitor high voltages safely and have the voltage ranges necessary to test HEVs and BEVs. It is imperative to visually inspect the test leads, connector ends, and the meter for any cracks or other wear, and stop using the tools if any flaws are detected. One of the most important pieces of PPE a technician will use is a pair of Class 0 insulated rubber safety gloves, rated to 1,000V. Insulated gloves are to be worn anytime a technician is working on the vehicle's battery or the inverter/convert– er. This includes when disconnecting or connecting the battery service plug and when using insulated tools.

Wiha Tools

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Case, No. 32800

Keeping others safe is as simple as placing warning notices or caution tape around the vehicle in order to communicate there is a potential risk of electrical shock. Warning signs and hazard tapes are available through many online sources and brick-and-mortar stores.

It is important to remember that using the correct tools will make working on electric vehicles safer as long as they are used and inspected correctly.



X TOOL REVIEW

Cal-Van C-Frame Socket Press

The reviewer appreciated being able to use his own sockets.

Tool reviewer Randy Kaiser likes every-

thing the Cal-Van C-Frame Socket Press has to offer: its strength, the fact he can use sockets he already owns, and the included adapters that hold the sockets in place to keep them from falling to the floor.

Kaiser is a service manager and partial owner at Rost Motor, Inc. in Manson, Iowa. He says the tool is very easy to use and the idea behind it is "ingenious."

"We've probably all [dragged] the driveshaft to the bench vise, found the right size sockets, and used the vise to push the U-joint out and a new one in," Kaiser says. "This [C-Frame Socket Press] has adapters that hold the sockets in place so that they don't fall on the floor every time something shifts. You



can line everything up, hit it with the impact wrench, and problem solved."

The tool saves the technician time in a few different ways. It is designed to use sockets the technicians already owns as the forcing and receiving portion of the tool. Since virtually everyone has sockets readily available, this saves time looking for the correct forcing cone, Kaiser says.

PRODUCT DESCRIPTION: The Cal-Van Tools

C-Frame Socket Press, No. 201, utilizes a 2.5-ton capacity C-frame and is designed for removal and installation on driveline and non-driveline applications. With eight adapters and the many combinations one can create with various 1/4" to 1/2" drive impact sockets, the tool can be used on various applications such as cars, trucks, ATVs, UTVs, farm machinery, and even medium to heavy duty trucks. The press set can be used at the vehicle or mounted into a vise for added stability and assistance.

-Kayla Oschmann, Assistant Editor

To read the full review, visit: VehicleServicePros.com/21120338

imes tool review

KNIPEX Pipe Wrench S-Type

The quick adjustment and guard were features this reviewer enjoyed.

Time is of the essence for

technicians, so when a tool has an easy, quick-change mechanism it can instantly become a preferred tool in the shop. The reviewer of the KNIPEX Pipe Wrench S-Type, No. 83 61 015, found this feature to be a plus and said it offers many time-saving

opportunities. "The quick–change mechanism design of the wrench allows for split second resizing of the pliers," says Lou Fort, lead technician at

K.A.R.S Inc. in Huntingburg, Indiana. Fort used the pipe wrench on a variety of jobs, from adjusting steering wheel centering on a late model Dodge Ram to grabbing a rear toe buckle on a Buick Lacrosse that didn't want to move, to holding a lower threaded



portion of a cab mount on a 2000 F–250. He said the cab mount was just over three inches in diameter, outside the working range for pliers, but by using the pipe wrench he was able to secure a great grip.

Noting the KNIPEX 83 61 015 is the easiest pipe wrench he has used. Fort said he liked being able to change from a 2-1/4° grip to a 1° grip quickly and safely.

"Outside of alignments I don't see much of a call for pipe wrenches in my day-to-day challenges," Fort says. "I am confident that when I do [see a need], reaching for this S-type pipe wrench won't leave me wanting more."

PRODUCT DESCRIPTION: The KNIPEX Tools Pipe Wrench S-Type, No. 83 61 015, offers a push-button fast-adjust feature to make finding the precise adjustment position quick and easy, directly on the workpiece. The push-button adjustment stays locked in position for repetitive work. The S-type head style provides three points of contact that securely grip and hold round, square, hex, and flat workpieces without slipping. The pushbutton design is ideal for tight confined areas as the handles do not open outward. It also features a guard to prevent the operator's fingers from being pinched. The pipe wrench is forged from chrome vanadium electric steel.

-Kayla Oschmann, Assistant Editor

To read the full review, visit: VehicleServicePros.com/21119713



Milwaukee 1/2" Drive 46-pc Ratchet and Socket Set

The reviewer enjoyed the non-traditional shape of the sockets, saying their new design saved him time and energy on everyday jobs.



tive shops are constantly evolving and changing. Though some tools seem like they'll never change, there's always room for improvement. According to Randy Kaiser, a technician with Rost Motor in Manson, Iowa, the Milwaukee 1/2" Drive 46–pc Ratchet and Socket Set has made a change for the better.

"The sockets in this set aren't the traditional cylindrical shape," Kaiser explains. "The bottom portion that goes over the nut or bolt head is round, but that tapers off to a square shape on the other end."



Kaiser says this new design gives him the ability to easily turn the sockets by hand, saving him time and energy on everyday jobs.

One feature of this set that Kaiser found useful was the knurled shafts on the two included extensions. He notes this feature made the extension easier to hang onto and turn with your fingers.

The set arrived in a sturdy, suitcase–style carrying case, which made portability a breeze. The tool tray within the case is removable, making it simple to switch from storing the tools in the case to storing them in a toolbox.

PRODUCT DESCRIPTION: The Milwaukee 1/2" Drive 46-pc Ratchet and Socket Set - SAE and Metric, No. 48-22-9010, includes a 90-tooth ratchet, two extensions, and standard and deep sockets in SAE and metric. The ratchet offers a 4-degree arc swing and a slim profile design, allowing the user to work in tighter spaces. The socket set features a wrench-compatible socket design with four flat sides to help prevent rolling, and the design helps reduce bolt rounding and stripping. The set includes a removable inner tray designed to be stored long-term in a steel storage chest and a durable carrying case for portability.

-Emily Markham, Assistant Editor

To read the full review, visit: VehicleServicePros.com/21120387

X TOOL REVIEW

Wurth ZEBRA T-Handle Ratchet Screwdriver Set

The reviewer values this tool's job-in-mind design.

Hand tools come in all shapes and sizes.

What makes uniquely designed tools memorable, however, is not a distinct shape or size on its own. It's when a new design creates a better tool and offers more versatility in the application that such a tool stands out from the rest. Lou Fort, lead technician at K.A.R.S Inc. in Huntingburg, Indiana, says the Wurth ZEBRA T-Handle Ratchet Screwdriver offers a design that changes the dynamic of ratcheting drive hand tools.

The Wurth ZEBRA T-Handle Ratchet Screwdriver Set with 11 Piece Bits, No. 061363040, comes as a kit with a range of interchangeable bits to accommodate different applications. Included is a bit strip that



will store 10 bits at a time, with a legend along the side to indicate bit size. Some of Fort's favorite features revolve around the bits and the bit strip itself.

"I hadn't ever really given it a thought before, but seeing most of the bits having a splash of color on them is nice," he says. "I also like that I can push or pull a bit directly from the [strip]."

Perhaps more importantly, Fort enjoyed the driver.

"My favorite thing about this bit driver is how smooth it spins," he says. "The 'T' handle is comfortable in the hand. Having it be a 'T' handle over a [typical] screwdriver style is huge. I can apply more force with less effort."

PRODUCT DESCRIPTION: The Wurth ZEBRA T-Handle Ratchet Screwdriver Set with 11 Piece Bits, No. 061363040, features a three-position

adjustment wheel for an easy, one-handed change of direction while working. The tool's rugged design provides the user with a combination of comfort and power, and the 45 teeth give a maximum torque of up to 29.5 ft-lbs. Included is a 10-pc bit strip plus a PH2 bit, making the T-Handle Ratchet Screwdriver Set with 11 Piece Bits a multifunction use tool. The tool is backed by a limited lifetime warranty.

-Tyler Fussner, Assistant Editor

To read the full review, visit: VehicleServicePros.com/21120340

X TOOL REVIEW

Mayhew Tools 6-pc Non-Turning Pneumatic Tool Set

"These tools are a unique new approach to an age-old tool," the reviewer says.

Technician Randy Kaiser of Rost Motor in Manson, Iowa, has been using air hammer chisels and cutters for years, but the Mayhew 6-pc Non-Turning Pneumatic Tool Set, No. 32200, "is the first [set] designed not to turn when using them," he says.

For Kaiser, the non-turning design feature of the tool set saved him time on jobs.

"The chisels and cutters stay lined up with what you are trying to cut, instead of turning and cutting into the wrong area," he says.

When the Mayhew tool set arrived, Kaiser says it was packaged in a heavy duty roll pouch. In the pouch, each tool has its own slot to keep them all organized and separated, but together in one place. Additionally, when



the tools are not in use, the pouch can be rolled up and held shut with the Velcro strip.

The non-turning pneumatic tools were put to good use cutting off rusted bolts and removing bushings. While using the tools, Kaiser notes they appear to be well made and very durable.

PRODUCT DESCRIPTION:

The Mayhew Tools 6-pc **Non-Turning Pneumatic** Tool Set, No. 32200, is designed for cutting bolts, breaking welds, scraping off undercoating, and cutting heads off bolts or rivets. Featuring a .401 Parker Shank, each of the tools also consists of four grooves that lock into the retaining balls of a quickrelease chuck to provide back and forth motion on the same plane while the c-axis remains locked. The tools include a cold chisel, slotted panel cutter, scraper, double-cut body ripper, panel cutter, and pipe cutoff.

-Emily Markham, Assistant Editor

To read the full review, visit: VehicleServicePros.com/21119010

X TOOL REVIEW

Lisle 7-pc Offset Filter Wrench Set

This tool set hit the sweet spot for the reviewer, who was impressed by its simple usability and convenient storage case.

When performing an oil change on a vehicle with a cartridge-style oil filter, a specialty socket or wrench is required to remove the oil filter cover and gain access to the filter itself. When that cover is tucked away in an area of the engine that is difficult to reach, however, the process becomes more challenging. The Lisle 7-pc Offset Filter Wrench Set was designed to eliminate that challenge.

"On certain cars, it's a lifesaver," says Matt Fanslow, shop manager at Riverside Automotive in Red Wing, Minnesota. "[The Lisle Offset Filter Wrench Set] saves a tremendous amount of time."

Fanslow says the technicians at Riverside were skeptical when they first received the set, not knowing if they would find it useful. But after performing oil changes on several Mini Coopers, notorious for their difficultto-reach oil filter position, they were sold.

"We've got a shared toolbox the shop owns, and all the stuff inside it is specialty tools," Fanslow says. "This is in the top drawer because they use it a lot. We have other kits that have a couple of the offset wrenches, but the [Riverside technicians] grab [the Lisle set]. They're not grabbing the other ones."

The offset filter wrench set comes in a blow molded case with a nice latch to hold it closed, Fanslow notes, adding that both the wrenches and the slots in the case are marked with sizes so each one has a designated spot. The outside of the case features a picture of what the wrenches are used for, as well as a list of vehicles they can be used on.

"It's little stuff like that that we probably take for granted, but every little bit saves a little bit of time and keeps things organized," he says.

PRODUCT DESCRIPTION:

The Lisle 7-pc Offset Filter Wrench Set, No. 40600, is designed for use on oil and fuel filter canisters when replacing the element. The set features a low profile, six-point wrench with an offset 3/8" square drive for clearance in hard-to-reach spaces. The size is laser marked on each wrench and the set comes in a blow molded case for storage.

-David Brierley, Managing Editor

To read the full review, visit: VehicleServicePros.com/21122828



Hand & Specialty Tools

This section features recently introduced automotive hand and specialty tools. See the latest offerings from GEARWRENCH, Klein Tools, Mueller-Kueps, and more.

DESIGNED FOR DETROIT DIESEL ENGINES

The **OTC Injector Cup Removal/ Installation Tool**, No. 5877, is a two-tool set that provides technicians with removal and installation of screw-in stainless steel injector cups. The 5877 is designed for use on Detroit Diesel Series 60, MBE 900, and MBE 4000 engines.

For more information visit VehicleServicePros.com/21116149



OFFERS ACCURATE RESULTS OF +/- 4 PERCENT

The **Ascot Flex Hinge Torque Wrench** offers quality professional use even in tough working conditions with accurate results of +/- 4 percent. It features adjustable torque settings and a dual scale. Superior control of the mechanism gives a controlled break which will not throw the operator off balance, the company says. It includes a durable and convenient case, complete with extra room for accessories such as sockets, to protect and safely transport in any environment. It includes two adapters, 3/4" to 1" and 3/4" to 3/4".

For more information visit VehicleServicePros.com/21119705





OFFERS FOUR DEGREE SWING ARC FOR TIGHT SPACES

The **GEARWRENCH 90-Tooth Ratchet Line** features a four degree swing arc for greater access in tight spaces. The high-strength pawl gives increased durability, helping the ratchets achieve ASME torque performance requirements. The line offers a full polish version that is easy to clean and ergonomic, as well as a solvent-resistant cushion grip that is comfortable, yet tough. The 90-tooth ratchet line includes 13 individual tools (standard and flex head ratchets) with six options for various sets.

> For more information visit VehicleServicePros.com/21114063

FLEXIBLE HEAD TO REACH CONFINED SPACES

The SP Tools USA Flex-Head Torque Angle Pro, Nos. SP35256 and SP35358, features a reversible ratchet head, torque target alarm, digital display, and a flexible head to reach confined spaces. The digital torque wrenches are available in two sizes: 3/8" (No. SP35256) and 1/2" (No. SP35358). The SP35256 offers 4 to 99 ft-lbs, and the SP35258 offers 12 to 250 ft-lbs. Both have a +/- 2 percent accuracy, a quickrelease mechanism, and feature three functions: torque, angle, and torque+angle. The tools are calibrated for both clockwise and counter-clockwise use with a warning LED and an audible alarm that sounds within 10 percent of the target value.

For more information visit VehicleServicePros.com/21115317

FEATURES A SPEED-FIT BUTTON

The OEMTOOLS Pro Three-Piece Speed-

Fit Pliers Set, No.22646, feature a rapid adjustment mechanism to quickly resize and engage a range of fasteners and other applications. There is no need to remove the pliers from the work area to readjust, simply position the jaws over the fastener and press the speed-fit button to adjust the jaw capacity to fit the application. The set includes three sizes (8", 10", and 12") made with a slim head to fit into hard-to-reach spaces, hardened teeth for a sure grip and wear resistance, and an electro-plated finish to resist rust and corrosion.

> For more information visit VehicleServicePros.com/21109919



ALUMINUM KNURLED HANDLE OFFERS A NONSLIP HOLD

SATA Tools' 1/2" Drive Adjustable Torque Wrench delivers the correct amount of torque required to meet standards safely. The wrench comes with a storage case that allows for hassle-free transportation, features all-steel construction, and is backed by a lifetime warranty. An aluminum knurled handle offers a nonslip hold. The wrench is available with ranges of 14.75-73.75 ft-lbs (No. T96311SC) and 29.5-147.5 ft-lbs (No. ST96312SC).

For more information visit VehicleServicePros.com/21119568





AUTOMATICALLY SELF-ADJUSTS

The S & G Tool Aid Corp. Wire Stripper, Cutter, and Terminal Crimper offers

three tools in one. The hand tool automatically self-adjusts to strip solid or stranded 26-10 AWG wires and removes insulation without damaging the conductor. Features include adjustable stripping tension, crimping insulated and non-insulated terminals, and steel construction with insulated plastic



handles. The tool is easy to use with one hand and cuts wire fast, clean, and smooth, the company says.

> For more information visit VehicleServicePros.com/21112672

LOCKING FUNCTION TO PREVENT UNWANTED SWITCH

The Hazet HiPer Fine-Tooth 1/2" Reversible Ratchet, No. 916HPL, features a length of 16" and has a maximum torque of 737.56 ft-lbs. It has a small operating angle of four degrees to enable use in tight spaces and has a locking function to prevent an unwanted switch. The 916HPL features 50,000 load changes at 188 ft-lbs. It is easy to clean and corrosion-resistant. With an integrated hanging option in the handle, the tool can be stored away quickly after use.

> For more information visit VehicleServicePros.com/21109238



INCLUDES SINGLE- AND DOUBLE-ENDED BLADES

The Klein Tools 8-in-1 Interchangeable Insulated Screwdriver Set, No. 32288, features five single- and double-ended, interchangeable blades with a slim tip to fit tight terminal blocks. The set includes the following tip sizes: two #2 Phillips, two 1/4" slotted, one #1 Phillips, one #1 square, one #2 square, and one 3/16" slotted. The screwdriver securely and easily releases the blade with a quick twist of the lock collar. Both the handle and blades have a 1,000V insulation rating and meet ASTM F1505 standard for insulation. A layer of orange impact and flame resistant insulation protects the user from electric shock. The set includes a protective roll pouch to keep the items organized and protected.

For more information visit VehicleServicePros.com/21109581

MADE WITH HIGH CARBON U.S. STEEL

The Channellock 7" Diagonal Cutter, No.

4371, is designed to withstand the harshest conditions with its high carbon U.S. steel. The diagonal cutters feature laser heat-treated cutting edges to last longer, and lap joint construction for strength and durability. The insulated grip is rated for 1,000V when working on live parts. The cutters are made in the U.S.A. **For more information visit VehicleServicePros.**

com/21092252

FEATURES AN EXTRA SLIM UNIVERSAL DESIGN

The **CTA Brake Caliper File**, No. 5077, features an extra slim design to remove brake dust, rust, and dirt from the caliper. The file's tip can be used for scraping crude residue surfaces in and around the caliper components. The file width is 10mm and offers a universal design but is especially helpful on Asian vehicles, the company says. **For more information visit**

VehicleServicePros.com/21122743

FLEXIBLE HEAD ALLOWS WORK AT ANY ANGLE

The **SK Hand Tools LP90 Low Profile Ratchet Series** includes extended length handles and flexible heads in 1/4", 3/8", and 1/2" drive sizes to offer professional technicians greater access to get the job done. The series features a 90-tooth count design and a four degree arc swing. The flexible head allows work at any angle, and the extended handles provide reach and comfort of the SK patented ergonomic handle. The quickchange lever allows technicians to change drive direction and the sealed head reduces potential for internal contaminants. Made in the U.S.A. with a lifetime warranty.

For more information visit VehicleServicePros.com/21120737





FEATURES A HIGH GEAR RATIO OF 1:10

The **Gedore Plier Wrench**, No. SB 183, combines two spanner sets (metric and inch) and a ratchet wrench, making it an adjustable, universal tool for bolting, bending, holding, pressing, and gripping. The tool has a high pressing and clamping force with the jaws allowing a ten-fold increase of hand force onto the workpiece. The smooth and paralleled jaws leave no marks on the materials and synthetic materials, glass, and chromed parts remain undamaged, the company says. The plier wrench also features a sliding mechanism for quick and easy adjustments from zero to two inches, as well as ergonomically shaped handles.

For more information visit VehicleServicePros.com/21118292

FOR MULTI-ANGLE GRIPPING

The Mueller-Kueps Hose Clamp Plier Kit, No. 500 035, features a new head design for multi-angle gripping. The waffle head allows users to grip the hose clamp from almost any direction. A ratchet lock keeps the clamp open for handsfree operation. Two styles allow the user to reach most hose clamps that need to be removed. The

pliers are constructed from steel and have a cushioned hand grip.

For more information visit VehicleServicePros.com/21116809

REMOVES DIESEL INJECTORS

The **SP Tools Cummins Common Rail Injector Pulle**r, No. 17200, removes diesel injectors from 2003 and later 5.9L to 6.7L engines using the common rail fuel system. The 17200 removes the diesel injectors quickly by slipping the puller cup on the injector, levering it out against a mid cover bolt.

For more information visit VehicleServicePros.com/21115892





For more information visit VehicleServicePros.com/10094372



LEGACY MATTERS: 7 SIZES 23 PRODUCTS 4 HANDLE TYPES 36 YEARS OF PUSH-BUTTON EXPERIENCE

KNIPEX – Tools Designed With Your Hand in Mind

Here's something you won't find in competitive push-button pliers today–quality and breadth of line. With 23 different products in seven sizes, KNIPEX delivers push-button perfection for nearly every application.

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Lock into the legacy—KNIPEX locking push-button pliers. See a video of this tool: https://goo.gl/wia8MN





For more information visit VehicleServicePros.com/10094019

AVAILABLE IN SEVEN SIZES



KNIPEX Quality – Made in Germany