

Impact Sockets

IM382CD 3/4" Drive 6-Point Metric 30 mm Flank Drive® Shallow Impact Socket

- Applications include Assault Breacher Vehicle; Utility Truck (Tamen: D00347K); Abrams M-1 Tank; Bridge Launcher Carrier; M1A2 Heavy Assault Bridge (hab)/Wolverine, 5420-01-430-4227; Armored Vehicle Launch Bridge (M60A1 and M48A5); Combat Tank, Ft, 120 mm gun (M1A1)



IM382CD

IMFDL242 3/4" Drive 12-Point SAE 3/4" Flank Drive® Deep Thin Wall Impact Socket

- Designed to remove the head bolts on Caterpillar® C12, C15, C16 and 3406E where the front two and back two head bolts are positioned under the valve covers
- Applications on certain Caterpillar® head bolts require a thin walled socket of a certain length
- Additional applications include Detroit Diesel® main bearing cap bolts and 19 mm head bolts on Mercedes-Benz® MBE904/MBE906 EGR engines (2007-later)



IMFDL242

IMSLE242A 3/4" Drive E24 Inverted TORX® Impact Socket

- Applications include removal and installation of head bolts on MaxxFORCE® 11 and 13 engines found on D15 International® (2010-current)



IMSLE242A

IPRD20 1/2" Drive 12-Point SAE 5/8" Low Profile Swivel Impact Socket

- Snap-on® impact sockets are heat-treated to optimize impact service life with a lower hardness than hand sockets and are able to withstand repeated cycling loads of impact wrenches
- Flank Drive® wrenching system delivers up to 20% more turning power without slipping or rounding, while exceeding ANSI® performance standards
- 30° uninterrupted swivel action for greater accessibility in tight quarters, allowing for easier and faster removal of stubborn fasteners
- Used on starter bolts on Cummins®, Caterpillar®, Detroit Diesel® and International® engines where housing is in the way when backing out the fastener using a standard-length impact socket



IPRD20

S6116 1/2" Drive 6-Point Metric 16 mm Impact Socket

- Socket is 4" long for easier access to head bolts
- Manufactured from special steel with a high higher alloy content
- Industrial finish helps protect against corrosion



S6116

S6126 1/2" Drive Double Hex 3/4" Driveline Socket

- Socket is 6" long to easily reach driveshaft bolts
- Manufactured from special steel with a higher alloy content
- Industrial finish helps protect against corrosion



S6126

S6213 1/2" Drive 12-Point Metric 13 mm U-Joint Strap Bolt Impact Socket

- Used for removal of 13 mm U-joint strap bolts found on Volvo®, Mack® and other heavy-duty applications
- 8" long



S6213

S6220 C15 Impact Socket for Caterpillar® Engines

- Used on Caterpillar® C15 engine rocker stud bolts where the length and broach depth of the socket are critical for the application
- 1/2" drive, 6-point, 11/16", 3-1/4" long



S6220

S6221 Fuel Injector Adaptor Impact Socket

- Used for the removal and installation of the fuel injector adaptor from the high-pressure rail and for servicing the O-rings on Navistar® DT466/570, HT570 (DT9 and 10) engines
- Similar to the Navistar® OEM tool part number ZTSE4725
- 1/2" drive, 1-1/16" hex



S6221



- Do not use chrome or industrial finish hand tools with power drivers or impact drivers.
- Check lug nut tightness with a torque wrench.
- Read Safety Precautions on pages W1-W4

HEAVY-DUTY TRUCK SERVICE TOOLS



SIMML180

Extra-Deep, mm

SIMML180 1/2" Drive 6-Point Metric 18 mm Flank Drive® Extra-Deep Impact Socket

- Applications include the removal and installation of the fuel tank hold down strap on International® 4400 chassis
- The fuel tank must be removed to replace the fuel sending unit
- 5" long to reach through the frame to access the fastener without the need of an extension



S6224



S6314



S6412



S6413



S6624



SIM462TW

Impact Sockets

S6224 1/2" Drive 6-Point SAE 3/4" 30/30 Air Brake Chamber Impact Socket

- Extra-long design allows for quick and safe removal of long-threaded brake release stud assemblies

S6314 Extra-Long Impact Socket

- 3-1/4" overall length

S6412 Drive Train Bolt Socket

- Removes drive train bolts on Ford® vehicles, Hino® 268 Box trucks, International® 4200 VT365 box trucks and 2007 Freightliner® M2 trucks

S6413 1/2" Drive 12-Point 13 mm Heavy-Duty Driveline Socket

- Designed to service heavy-duty diesel truck drivelines
- 1/2" drive, 12-point, 13 mm, 4-1/8" long

S6624 3/4" Drive 12-Point 24 mm Main Cap Bolt Socket

- For the removal and installation of the main cap bolts on 2007-later Detroit Diesel® DD13 and 15 engines
- Overall length (5-3/4") and square drive (3/4") of this socket are critical due to the torque rating for this application

SIM462TW 3/4" Drive 6-Point 1-7/16" SAE Deep Thin-Wall Impact Socket

- Designed to remove the lug nuts from Caterpillar® Model 793 mining trucks
- Thin-wall design accommodates easy removal of the 72 lug nuts spaced only 6 mm apart on each wheel



SIMDM212

Deep, mm

SIMDM212 3/4" Drive 12-Point Metric 21 mm Flank Drive® Deep Impact Socket

- Applications include flywheel bolts on Cummins® ISX engines

Impact Sockets

205RIPF 5 pc 3/8" Drive 6-Point SAE Low Profile Swivel Impact Socket Set

- Includes RIPF14C–RIPF20C and RIPF24C (7/16–5/8 and 3/4")
- Low-profile of swivel-end provides increased access to cramped front-end fasteners
- Sockets using the Flank Drive® wrenching system grip the fastener on the flanks/flats, delivering 15–25% more turning power
- Pin collar eliminated with new proprietary pin-welding process
- Laser-welded pivot pin reinforces socket wall and allows 30° of smooth, uninterrupted action for efficient power transfer at any angle and greater accessibility in tight quarters
- Designed to withstand today's high-torque impact guns for removing stubborn fasteners



205RIPF

RIPF12C 3/8" Drive 6-Point SAE 3/8" Low Profile Swivel Impact Socket

RIPF14C 3/8" Drive 6-Point SAE 7/16" Low Profile Swivel Impact Socket

RIPF16C 3/8" Drive 6-Point SAE 1/2" Low Profile Swivel Impact Socket

RIPF18C 3/8" Drive 6-Point SAE 9/16" Low Profile Swivel Impact Socket

RIPF20C 3/8" Drive 6-Point SAE 5/8" Low Profile Swivel Impact Socket

RIPF22C 3/8" Drive 6-Point SAE 11/16" Low Profile Swivel Impact Socket

RIPF24C 3/8" Drive 6-Point SAE 3/4" Low Profile Swivel Impact Socket



RIPF18C

Impact Sockets

S6240 3/4" Drive 6-Point SAE 1-1/4" Single Hex Deep Impact Socket

- Heavy-duty socket to service Blue Bird® busses and Hendrickson® type suspension U-Bolts



S6240

Slack Adjusters

BSA916[†] Slack Adjuster Wrench

- For brake service and slack adjuster installation on heavy-duty trucks equipped with Bendix® automatic slack adjusters
- Used to turn the manual adjuster hex
- Extra-deep 9/16" hex allows reach to recessed adjusters
- 14-1/2" overall length helps to overcome the anti-reverse mechanism
- Turn over to reverse
- Includes a protective vinyl boot

HSA716[†] Slack Adjuster Wrench

- For brake service and slack adjuster installation on heavy-duty trucks equipped with Haldex® automatic slack adjusters
- Used to turn the manual adjuster hex
- Extra-deep 7/16" hex allows reach to recessed adjusters
- 14-5/8" overall length helps to overcome the anti-reverse mechanism
- Turn over to reverse
- Protective vinyl boot helps to keep contaminants out of the ratchet mechanism for extended tool life



BSA916



HSA716

Special Application Sockets

IPSTML8 1/4" Drive 6-Point 8 mm Metric Deep-Flex Impact Socket

- Removes and installs glow plugs
- Designed with a retention O-ring that holds the glow plug in the socket while being installed or removed
- Removes and installs glow plugs on following vehicles: Ford® 2011–2012 F250®/F350® Super Duty® 6.7 L Power Stroke® Diesel 2011–2014 F450®/F550® Super Duty® 6.7 L Power Stroke® Diesel Dodge® 2007–2009 Dodge® Sprinter® Van; Jeep® 2007–2009 Grand Cherokee® Freightliner® 2007–2011 3.0 L V6 Diesel Sprinter® Van; Mercedes® 2007–2009 E320 3.0 L V6 Diesel, 2011 3.0 L V6 Diesel Sprinter® Van



IPSTML8



†These products can expose you to chemicals which are known to the state of California to cause cancer and reproductive harm. See pages P1–P2 for details.
• Read Safety Precautions on pages W1–W4



FRDH81



GSRM430



PAR1820



S7102



SRD35



SRDM624

Torque Adaptor

FRDH81 3/8" Drive 12-Point SAE 1/4" Torque Adaptor

- 176 in-lb working torque
- Precision-crafted from special alloy steel and heat-treated for optimum strength and durability
- Nickel-chrome finish helps protect against corrosion and makes it easy to wipe clean
- Double hex (12-point) configuration allows socket to engage single hex fastener every 30° rather than every 60°, allowing for better access in restricted areas
- Design features radius edges which will resist damage/nicks
- Center-to-center length on adaptor for easy torque calculations
- Larger sizes feature thicker construction for strength

GSRM430 1/2" Drive 6-Point Metric 30 mm Standard Torque Adaptor

- Design features radius edges which will resist damage/nicks
- Center-to-center length on adaptor for easy torque calculations
- Larger sizes feature thicker construction for strength

PAR1820[±] 46 mm Pitman Torque Adaptor

- Used to service and replace pitman arms on 2010 and later Ford®, GM®, Dodge® and other full sized trucks
- Adaptor is specially designed to clear the steering box housing and other obstacles
- Works on both factory pitman arms as well as aftermarket drop-style pitman arms that are installed on trucks with lift kits
- Proper torque specs with equation included on insert card

S7102 3/8" Square Drive Metric 30 mm Torque Adaptor

- Unique design allows fuel pressure regulator on 6.7 L Ford® diesel engines to be removed by clearing fuel rail with no interference from steering column

SRD35 3/4" Drive Diesel Head Bolt Torque Adaptor

- Eliminates the need to remove the truck/van cab from the chassis to access the rear head bolts, saving the technician time and preventing damage to the rear heat shield
- When coupled with an SM18, 18 mm socket, can access all of the head bolts, eliminating the need to change tools or remove the adaptor during the job
- Use of 3/4" drive ratchet/torque wrench transmits the high-torque necessary to loosen and tighten head bolts, with less strain on the technician
- Eliminates the need to remove the evaporator housing, saving two hours of time and the additional cost of refrigerant added during air conditioning recharging
- 3/4" square drive, 3-1/2" center-to-center length, 4-7/8" overall length

SRDM624 1/2" Drive 12-Point Metric 24 mm Torque Adaptor

- Services the rear brake caliper mounting bracket assembly on 2007 Ford® F-450®/F-550® trucks
- Tool fits between the bracket bolt and frame to allow the use of a torque wrench to properly torque the bracket bolts
- 1/2" square drive, 12-point, 24 mm, 6" center-to-center length, 7-7/32" long

Valve Adjusters

S6205[±] Valve Adjuster Socket

- See-through window in the 14 mm socket allows the technician to see the position of the 5 mm hex blade
- Faster valve adjustment time
- Sized for low clearance
- Soft grip handle
- Applications include 2002-later Mercedes-Benz® 900 series diesel engines and 2002-later trucks and buses

VAT930[±] Diesel Valve Adjustment Tool 15 mm/7 mm

- Two-in-one tool features a window in the socket allowing the technician to see the position of the nut driver holding the adjustment screw as the jam nut is tightened
- Unique handle pivots from one side to the other so the window is always visible
- Made from heat-treated 4140 steel, the tool is strong enough to handle the high breaking torque required after long service intervals
- Multi-functional design frees up one hand for feeler gauge operation

VAT940[±] Diesel Valve Adjustment Tool 15 mm/Flat

- Two-in-one tool features a window in the socket allowing the technician to see the position of the screwdriver blade holding the adjustment screw as it is tightened
- Unique handle pivots from one side to the other so the window is always visible
- Made from heat-treated 4140 steel, the tool is strong enough to handle the high breaking torque required after long service intervals
- Multi-functional tool design frees up one hand for feeler gauge operation

YA8880-3[±] Wire Handle with Grip

- Handle with slip cover—clips into the tool and pivots from one side to the other so the socket "window" is always visible



S6205



VAT930



VAT940



YA8880-3

Hand Sockets

- Essential for removing motorcycle front wheels
- Use torque wrench for axle torque specs
- Use breaker bar to remove difficult fasteners

HXD22 1/2" Drive External Hex

22 mm Socket

- Applications: 2002 and later Kawasaki® motorcycles; 2002 and later Honda® motorcycles; 2002 and later Triumph® motorcycles

HXD24 1/2" Drive External Hex

24 mm Socket

- Applications: Suzuki® motorcycles (1300GSXR and 1000GSXR); Hayabusa® motorcycles (various models)

SAM12LE 1/2" Drive Metric 12 mm Long Hex Bit Socket Driver

- Essential for removal or installation of bolt found on the lower forks of 2006 and newer Harley-Davidson® Dyna® series
- Used when servicing the internal parts of the fork

TUA6E 1/4" Drive 3/16" Stubby Flex Hex Bit Socket

- Precision machined and heat-treated for optimum strength and durability
- Replacement Bit – TMAXS6E2


HXD22
HXD24

TUA6E

SAM12LE

Special Application

- Spark plug extends through the socket for access in tight quarters
- Patented tapered hex design securely retains the spark plug in the socket without a rubber insert or magnet
- Patented diamond wedge design with six wedges equally aligns the spark plug in the center to avoid damage to the porcelain
- Spark plug is easily disengaged from the socket by applying gentle side pressure to break the contact
- 5/8" offset spark plug socket for limited-access situations
- Side through-hole for secure extension retention
- Spark plug socket is cold formed for extended tool life
- Low-profile socket easily reaches spark plugs without interference from custom exhausts or chassis

S9704RHS 3/8" Drive 6-Point SAE 13/16" Flank Drive® Low-Profile Spark Plug Socket

- Knurled surface for finger tightening and removal

S9724RHS 3/8" Drive 6-Point SAE 5/8" Flank Drive® Low-Profile Spark Plug Socket


S9704RHS

S9724RHS

Motorcycle Service Equipment

EEPV503[‡] Motorcycle Compression Gauge Set

- Tests motorcycles and recreational vehicles with hard-to-access spark plug ports
- Gauge assembly includes a 2-3/4" dia. gauge and 18" flexible hose with a quick coupler
- Includes EEPV5G10L, EEPV5G12L and EEPV5G14L


EEPV503

Fuel Tank Cover

KAC1224TCA Motorcycle Gas Tank Cover

- Fits Harley-Davidson® Dyna®, Softail® and Touring models
- Fits various models of Yamaha®, Victory®, Triumph® and Kawasaki® motorcycles, plus many more
- Non-marring cover uses a non-abrasive inner liner that will not slide off


KAC1224TCA


- Read and follow safety messages in Instructions.
- Do not use chrome or industrial finish hand tools with power drivers or impact drivers.
- [‡]These products can expose you to chemicals which are known to the state of California to cause cancer and reproductive harm. See pages P1-P2 for details.
- Read Safety Precautions on pages W1-W4

MOTORCYCLE SERVICE TOOLS



HDM1236

Adjusting Tools

HDM1236 Axle Nut Torque Adaptor for Harley-Davidson® Motorcycles

- Allows adjustment of the drive belt on certain Harley-Davidson® models without removing the saddlebags, exhaust pipes, or other parts and accessories
- 1/2" square drive, 36 mm wrench
- Center-to-center length is stamped on the adaptor for easy torque calculation



HD6529

HD6529[†] Ratcheting Hex Wrench (Blue-Point®)

- Reversible ratchet lever is conveniently located for one-hand operation
- 3/16" hex bit is easily replaced if damaged
- Low-profile design for extra clearance between the frame and engine
- Comfortable rubber grip will not scratch chrome
- 9-3/4" overall length for additional reach
- 1/4" hex drive, 3/16" hex bit for Harley-Davidson® Evolution® motor rocker box cover bolts



OFHD

Funnels/Spouts

OFHD Oil Filler for Harley-Davidson® Motorcycles

- Allows access to the fuel filter and pump as the lock ring is connected to the pump
- Oil filler for 1999–2006 Harley-Davidson® Touring Motorcycles with the Push-in Style oil caps
- Prevents any unwanted mess; fastens and seals onto filler neck
- ABS plastic
- Smooth surface will not scratch painted surface



SGSR104AR

General Service Tools

SGSR104AR 4 pc Instinct® Soft Grip Seal Removal Tool Set

- For use on transmissions, heater and vacuum hoses, oil pump drive shaft seals, injectors and fuel rail O-rings, inner tie-rod rack boot and CV boot removal, fork seals, and caliper dust boot assemblies on Harley-Davidson® and other motorcycles, and steering racks and pumps
- SGSR1AR–SGSR4AR (4 pc) in a storage tray



YA173B



ADD SUFFIX TO STOCK NUMBER FOR SPECIAL COLORS.

YA173B[†] Clip-On-Style Angled Air Chuck (Blue-Point®)

- 1/4"-18 female NPT
- Spring-loaded, trigger-operated valve stem clip
- Maximum operating pressure is 200 PSI
- For use with air lines only—do not use on inflators



TPCLRA

TPCLRA[†] Right Angle Air Chuck

- Low-profile right-angle design easily accesses hard-to-reach valve stems
- Ideal for motorcycles and ATV tires
- Closed chuck for use on live air lines
- 175 PSI maximum working pressure
- Durable brass body with a plated finish
- 1/4" FNPT

General Service Tools
A15A 1/2" Drive 1-3/16" Blade Width Drag Link Socket

- Applications include usage on the engine oil drain plug and rear differential drain plug on Kawasaki® UN1500, UN1600 and UN2000 motorcycles

CPT110A 3/8" Drive 6-Point Metric 17 mm VW® Transmission Drain Plug Socket

- For use on VW® transmission drain plugs
- Additional applications include removing the front wheels on Triumph® Daytona® and America motorcycles

GF22 3/8" Drive 11/16" Blade Width Drag Link Socket

- Applications include use on the engine oil fill cap on Kawasaki® UN1500, UN1600 and UN2000 motorcycles

MT125A Self-Powered Timing Light (Blue-Point®)

- Self-powered timing light features a single 6' inductive pick-up
- Quick attachment to spark plug wires on motorcycles, marine motors, snowmobiles, jet skis, small engines and other equipment that do not have easy access to a battery power source
- Can be used for automotive applications
- On/Off switch is located within thumb's reach
- Maximum 2,000 RPM

S7100 1/2" Drive 1-3/4" Compensator Holder Harley-Davidson®

- Use with 1/2" breaker bar to hold Harley-Davidson® compensator sprocket for removing or installing center bolt
- Single person operation when utilizing tool as described
- Tool allows for proper torque application during installation, and impacting during removal of center bolt
- 1-3/4" single hex, 1/2" square drive

TA358[†] 3/8" Square Drive Torque Angle Gauge

- Determines angle controlled torque tightening
- Allows user to follow manufacturer's specifications
- Used on automotive, diesel and industrial equipment, plus head bolts and rod bolts on motorcycles
- 1/4" FNPT

VT1B[†] Valve Stem Puller

- Vinyl spacer protects rims
- Simplifies inserting any tubeless tire valve
- Swivel head screws onto the cap thread of the tire valve
- Handle is used as a lever to pull the tire valve into the rim hole


A15A

CPT110A

MT125A

TA358

S7100

VT1B
Service Set
CYCLESET 33 pc Motorcycle Tool Set

- Services most US-manufactured motorcycles from battery service, cable and clutch adjustments, to gas tank and seat removal—covers roadside maintenance and emergency repairs
- Includes (1) gap gauge, (1) 3/8" drive 6-point SAE 13/16" shallow spark plug socket, (1) 1/4" internal drive x 3/8" external drive adaptor, (1) 1/4" drive 4" knurled extension, (6) 1/4" drive 6-point SAE shallow sockets (9/16, 1/4, 5/16, 3/8, 7/16 and 1/2"), (1) 1/4" drive sliding T-handle, (1) 12-point metric 10 mm short combination wrench, (2) 1/4" hex flat tip power bits, (1) 1/4" hex PHILLIPS® #2 power bit, (5) 1/4" hex TORX® power bits (T15, T20, T25 and T30), (2) 5/16" TORX® insert bits (T40 and T45), (5) 1/4" hex SAE power bits (1/8, 5/32, 3/16, 7/32 and 1/4"), (2) 5/16" hex SAE power bits (5/16 and 3/8"), (1) 1/4" drive magnetic bit socket, (1) 3/8" drive 6-point SAE 5/8" standard retention spark plug socket, (1) 8" adjustable wrench and (1) 1/4" drive standard ratchet
- Includes a kit bag


CYCLESET

- Do not use chrome or industrial finish hand tools with power drivers or impact drivers.
- Wear safety goggles (user and bystanders).
- Read and follow safety messages in the Instructions.
- Do not use in environment with explosive vapor.
- † These products can expose you to chemicals which are known to the state of California to cause cancer and reproductive harm. See pages P1-P2 for details.
- Read Safety Precautions on pages W1-W4



AVIATION SAFETY WIRING



Wire Twisters
Cushion throat wire twisters feature a polyurethane filler that is bonded into the tool's cutter head to help prevent flying wire bits. A special undercut design helps maintain cutting edges and increases tool durability. Ideal for assembly line applications.



Wire Twister/Cutters

Stock No.	Description (Chart)	Overall Length, inches	Wire Capacity, inches	Wire Retainer
GA311C [‡]	Wide range of applications	10-1/2	.060	No
PR311 [‡]	Similar to GA311C, but not spring loaded. Right-hand only with manual return.	10-1/2	.060	No
WTR1A [‡]	Reversible Wire Twister/Cutters	8-3/4	.041	No
WTS6 [‡]	Reversible Wire Twister	8-3/4	.041	Yes
WTRW6A [‡]	Reversible Wire Twister/Cutters	8-3/4	.041	Yes
WTG8A	Reversible Wire Twister	8	.015-.031	Yes
WTRW9 [‡]	Reversible Cushion Throat Wire Twister/Cutter	11	.02-.06	Yes
WTG10A	Reversible Wire Twister	10-1/2	.031-.039	Yes
WT11D [‡]	Small size for use in tight quarters	8-1/2	.041	No



WT105-2004



WT105-2016

Safety Wire

Stock No.	Wire Size, inches (mm)	Wire Length, feet (meters)	Container
WT105-2004 [‡]	.020 (.51)	230 (70)	1/4 lb Spool
WT105-2016 [‡]	.020 (.51)	937 (286)	1 lb Canister
WT105-2516 [‡]	.025 (.64)	599 (183)	1 lb Canister
WT105-3204 [‡]	.032 (.81)	90 (27)	1/4 lb Spool
WT105-3216 [‡]	.032 (.81)	366 (112)	1 lb Canister
WT105-4116 [‡]	.041 (1)	223 (68)	1 lb Canister
WT105-4204 [‡]	.041 (1)	55 (17)	1/4 lb Spool
WT105-5116 [‡]	.051 (1.3)	144 (44)	1 lb Canister

AVIATION: SPECIALTY SERVICE TOOLS



AOC01



AOFW2

Aircraft Oil Filter Wrenches

AOC01[‡] FOD Oil Can Opener

- Testing by Saybolt[®] laboratory proves this can opener eliminates a cause of FOD, eliminating costly downtime and repairs
- Using a screwdriver to open an oil can may leave metal debris in the oil, causing FOD to turbines
- Can opener is made of reinforced high-quality plastic designed to open a quart can of oil
- Durable, ergonomic, non-slip design is pocket size and can be attached to a key ring

AOFW2[‡] Aviation Oil Filter Wrench

- Oil filter wrench can be used for the installation and removal of oil filters on all standard general aviation aircraft with 1" hex oil filters
- Compact size allows for reach in restricted areas
- 3/8" drive torque wrench
- Refer to the Snap-on[®] SS306G Torque Chart for formula to obtain the correct applied torque



AFPW38



AVPW716

Aircraft Vacuum/Fuel Pump Wrenches

AFPW38 Aircraft Fuel Pump Wrench

- Small crowfoot for removal and installation of the fuel primer/injector line on Continental[®] and Lycoming[®] engines
- Can be used with a 1/4" drive extension and will easily fit into tight areas

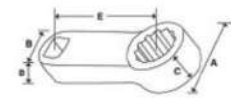
AVPW716 Aircraft Vacuum Pump Wrench

- Removes and replaces vacuum pump flange nuts on aviation and experimental aircraft
- Use with any 1/4" drive extension

- Easily fits into tight areas between the pump and nearby accessories
- Cut-down head design adds greater flexibility than a wrench with a bent shank
- Applications include: Cessna[®]: Skyhawk[®], Skylane[®], Stationair[®] Piper[®]: Cub[®], Warrior[®], Archer[®], Seminole[®], Aztec, Navaho, Chieftain Mooney[®]: M[®] 20 series, M[®] 200 series, Ovation, Acclaim Beechcraft[®]: Bonanza[®], Duchess, Baron[®] Cirrus[®]: SR20 and SR22 aircraft

Torque Adaptors, mm (1/4" Drive)

- Manufactured from special alloy steel
- Precision forged and heat-treated for optimum strength and durability
- 12-point double hex allows the socket to engage single hex fastener every 30° rather than every 60°, allowing for better access in restricted areas
- 1" center-to-center length on adaptor for easy torque calculations
- Design features radius edges that resist damage/nicks



TRDHM6

- TRDHM6 1/4" Drive 12-Point Metric 6 mm Torque Adaptor**
- TRDHM7 1/4" Drive 12-Point Metric 7 mm Torque Adaptor**
- TRDHM8 1/4" Drive 12-Point Metric 8 mm Torque Adaptor**

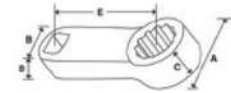
mm	Stock No.	Pin	Pin	Pin	Pin	Pin
6	TRDHM6***	9.5	11.9	6.6	6.6	25.4
7	TRDHM7**	9.5	11.9	6.6	6.6	25.4
8	TRDHM8**	9.5	11.9	6.6	6.6	25.4

*For applications involving AS350/355 Airbus® helicopters (formerly Eurocopter) known as A-star® and Twin-Star helicopters in North America

**Used attached to a torque wrench on a hard-to-reach fastener

Torque Adaptors, SAE (1/4" Drive)

- Manufactured from special alloy steel
- Precision forged and heat-treated for optimum strength and durability
- Double hex (12 point) allows socket to engage single hex fastener every 30° rather than every 60°, allowing for better access in restricted areas
- Center-to-center length on adaptor for easy torque calculations



TRDHL121

Pin	Stock No.	Pin	Pin	Pin	Pin	Pin
5/16	TRDHLP101	1/2 (12.7)	15/32 (11.91)	1/8 (3.18)	17/64 (6.75)	2 (50.8)
5/16	TRDHL101	1/2 (12.7)	15/32 (11.91)	17/64 (6.75)	17/64 (6.75)	2 (50.8)
3/8	TRDHL121	37/64 (14.68)	15/32 (11.91)	17/64 (6.75)	17/64 (6.75)	2 (50.8)
7/16	TRDHL141	43/64 (17.1)	15/32 (11.91)	17/64 (6.75)	17/64 (6.75)	2 (50.8)
1/4	TRDHL81	13/32 (10.32)	15/32 (11.91)	17/64 (6.75)	17/64 (6.75)	2 (50.8)

Torque Adaptor

FTA35 3/8" Drive Female/Male Torque Adaptor

- Used with a socket and torque wrench to reach and properly torque fasteners in hard-to-access areas
- 3-1/2" length measured center to center

STA35 1/2" Drive Female/Male Torque Adaptor

TTA35 1/4" Drive Female/Male Torque Adaptor



FTA35



STA35



TTA35

Hose Clamp Socket

AHCS1 Aircraft Hose Clamp Socket

- Use on hose clamps found on Lycoming®, TCM (Continental®) and other engines found on Cessna®, Piper® and Beechcraft® aircraft
- Slotted socket is for removing and installing the three different size thumb knobs found on aircraft hose clamps

- Competitive sockets only work on one size and have a rubber O-ring that can cause an FOD issue
- 1/4" square drive



AHCS1

Fan Bolt Impact Socket

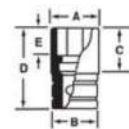
Pin	Stock No.	A	B	C	D	E
3/4	IMTSX29	1-3/8	1-5/8	1	2	9/16

IMTSX29 External Mortorq® Impact Socket

- Used on fan bolts found on Rolls Royce® engines used on Airbus® A380® jets



IMTSX29



- Do not use chrome or industrial finish hand tools with power drivers or impact drivers.
- Wear safety goggles.
- Do not use on live electrical circuits.
- These products can expose you to chemicals which are known to the state of California to cause cancer and reproductive harm. See pages P1-P2 for details.
- Read Safety Precautions on pages W1-W4



Deep Throw Speeder

N8323 1/2" Drive 32-7/8" Deep Throw Speeder Drive Handle

- Used on military aircraft to manually fold wings and lower landing gear



LH100

Aircraft Landing Gear Tools

- 1/2" driver deep throw speeder with pinned universal and ratchet adaptor
- LH100 and 755121 are required to be on board a C-130® aircraft before it can leave the ground

LH100 Ratchet Spline Boxsocket Assembly

- Extended-reach 1/2" drive ratchet with a pinned spline socket on one end and a box end spline wrench on the other

755121-1 1/2" Drive 23-7/8" Ratchet Adaptor Deep Throw Speeder

- 1/2" driver deep throw speeder with pinned universal and ratchet adaptor



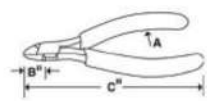
755121-1

LGSW125 Landing Gear Socket Wrench

- Used to remove and replace the landing gear harness through-bolt on Embraer® 190 aircraft
- 1-1/4" deep well socket with 1/4" slit cut allows the speed cable to pass through
- 3/8" square drive allows the torque wrench to torque the nut to 80 in-lb
- Flex-head and overall length is 11-1/2"



LGSW125



Cushion-Throat Cutters

- Urethane insert in jaws captures clipped material, reducing the likelihood of work environment contamination
- Retention of wire clippings enhances worker safety by preventing projectile material from being scattered throughout the worksite
- Handles are designed for comfort and deliver the leverage needed to tackle the most demanding jobs
- Quality forged steel ensures tools will provide years of service
- Fluorescent urethane formula helps reduce the potential of leaving the tool behind—just shine a UV light on the head of the cutter to activate its illuminating effect



84CFCTA

86ACFCT

Stock No.	Description	SP	SW	SD
84CFCTA	Cushion Throat Diagonal Cutter	Bowed	3/8	4-3/4
86ACFCT	Cushion Throat Diagonal Cutter	Bowed	3/4	6-5/16
P87150ACT	Cushion Throat 5" Oval Cutter—True Flush Cut	Bowed	17/32	5-3/16
388ACFCT	8" High-Leverage Cushion Throat Diagonal Cutter	Bowed	1-1/16	8-5/16



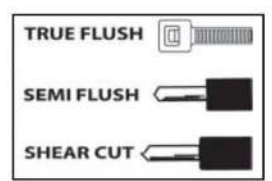
P87150ACT

388ACFCT

True Flush: Blades cut stranded wire ends and zip tie ends flat, allowing protruding ends to be trimmed flush

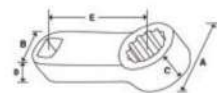
Semi-Flush: Ground blades cut slightly pointed wire ends and can be used where an exact flush cut is not required

Shear Cut: Ground blades (on standard cutters) are designed for general cutting with less hand pressure and extended blade life



Spline, Low-Profile, inches

- Precision crafted from special alloy steel and heat treated for optimum strength and durability
- Nickel-chrome finish helps protect against corrosion and makes it easy to wipe clean
- Unique spline wrenching configuration can be used on ordinary 6- and 12-point fasteners
- Ideal for use with torque wrenches
- Will save time and avoid clearance issues when working on propeller assemblies
- Works on a wide variety of Lycoming® and Continental® engines used in Piper®, Cessna® and Mooney® aircraft



Stock No.	A	B	C	D	E
7/16 FRESL14	3/4 (19.05)	3/4 (19.05)	3/16 (4.76)	7/16 (11.11)	2 (50.8)
1/2 FRESL16	25/32 (19.84)	3/4 (19.05)	3/16 (4.76)	7/16 (11.11)	2 (50.8)
9/16 FRESL18	13/16 (20.64)	3/4 (19.05)	3/16 (4.76)	7/16 (11.11)	2 (50.8)
5/8 FRESL20	29/32 (22.8)	47/64 (18.8)	3/16 (4.7)	7/16 (10.9)	2 (50.8)
11/16 FRESL22	1 (25.1)	47/64 (18.8)	3/16 (4.7)	7/16 (10.9)	2 (50.8)
3/4 FRESL24	1-5/64 (50.2)	3/4 (19.05)	7/16 (11.11)	3/16 (4.76)	2 (50.8)
7/8 FRESL28	1-1/4 (31.75)	3/4 (19.05)	7/16 (11.11)	3/16 (4.76)	2 (50.8)
15/16 FRESL30	1-5/16 (33.9)	47/64 (18.8)	3/16 (4.7)	7/16 (10.9)	2 (50.8)



FRESL14



FRESL20

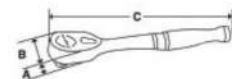


FRESL30

HI-LOK® Fastener Ratchets

Stock No.	Square Drive, inches	Gear Teeth	Swing Arc	A	B	C
FCY72	3/8	72	5	7/16	15/16	4-5/8
TFY72	1/4	72	5	7/16	15/16	6-1/4
TY72	1/4	72	5	7/16	15/16	4-5/8

ASME®/ANSI® B107.10



FCY72



TFY72



TY72

OIL AND GAS SERVICE TOOLS



APW10VLV



ATSK3621



GADW8VLV



GADW10VLV

Specialty Service Tools

APW10VLV Valve Persuader Wrench

- Refinery wrench used in oil and gas downstream facilities
- Great universal multi-tool for numerous daily applications, including 4 and 6" quick turns to open and close the valves

ATSK3621 Hex-to-Square Adaptor

- Used with the B2192 Impact Pentagon Socket to remove and tighten special bolts used by electrical utilities on pad-mounted and sub-surface underground facilities
- 7/16" hex, 1/2" square adaptor
- 3" long

GADW8VLV 8-1/2" Adjustable Valve Persuader Wrench

- Two tools combined into one convenient operator's tool that can be used wherever valves are adjusted for flow and pressure
- 8-1/2" overall length supplies leverage enough to be easily carried
- Adjustable wrench has large, 1-1/2" capacity
- 3/4" valve wheel wrench opening
- Precision hardened and anti-corrosion treated
- Easy-to-read size measurement scale: SAE on one side, metric on the other

GADW10VLV 10" Adjustable Valve Persuader Wrench

- 10" overall length supplies leverage while compact size allows for easy carrying
- Adjustable wrench has large, 1-3/4" capacity

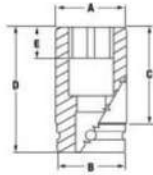


- Plastic coated handle does not protect against electric shock.
- Frequently inspect, clean, and lubricate all non-sealed ratchet mechanisms with light oil
- Do not use chrome or industrial finish hand tools with power drivers or impact drivers.
- These products can expose you to chemicals which are known to the state of California to cause cancer and reproductive harm. See pages P1-P2 for details.
- Read Safety Precautions on pages W1-W4

OIL AND GAS SERVICE TOOLS



IM632BC1.5



Shallow, Single Square Impact Sockets, inches

• This “end effector” socket is used in the manufacturing of subsea and surface wellhead equipment in the oil and gas industries

	Stock No.	Square Drive, inches	A	B	C	D	E
1	IM632BC1.5	3/4	2-1/8	1-3/4	—	2-1/4	3/4
1	IM732BC1.5	1	2-1/8	2-1/8	—	2-3/4	3/4
1-1/2	IM748BC1.5	1	2-7/8	2-3/8	1-5/8	3-1/2	7/8
1.66	IM753.1BC1.5	1	1-15/16	2-3/8	—	3-1/2	1-1/16



OG2824



OG2828

Generator Engine Sockets

- Socket is used in the oil and gas industries to adjust valves on large generator engines
- Removes cover bolts and adjusts valves on Waukesha® VHP® Series engines
- Sockets are used with a XO2830 7/8–15/16" standard-length deep 60° offset wrench
- The offset on the wrench protects the user’s hand during valve adjustment
- Retaining Ring holds the socket onto the 7/8" part of the XO2830 wrench, as the sockets have a 7/8" male hex

		External Hex, inches	Style
3/4	OG2824	7/8	12-Point
7/8	OG2828	7/8	12-Point

RAILROAD SERVICE TOOLS



N8842



N8741

Track Bolt and Frog Bolt Sockets, inches

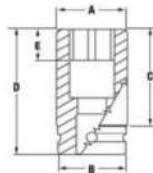
	Stock No.	Drive Size, inches
1-11/16	N8834	1
1-13/16	N8835	1
1-5/8	N8842	1
1-7/16	SIM746NT	1
2-3/16	N8741	1

N8741 Frog Bolt Socket

- 1" drive socket is used primarily for Frog bolt applications



N8913



Side Bearing Cage Socket

	Stock No.	Drive Size, inches	A	B	C	D	E
E20	N8913	3/4	1-5/32	1-5/8	3/4	1-3/4	1/2

N8913 3/4" Drive E20 TORX® Side Bearing Cage Socket

- 3/4" drive E20 TORX® socket services the break-off portion of the side bearing cage bolt
- Used for installation of shear type E20 bolt during alignment of suspensions on Hendrickson® trailers

Railroad Wrenches

Stock No.	B	D	E	
13/16-7/8"	GVO2628TH.20	1-11/16-1-13/16	7/32	10

GVO2628TH.20 Open-End 1-11/16-1-13/16" Railroad Wrench

- Used on railroad auxiliary generator coupler nuts (EMD locomotives)

M4431B Car Yard Inspector Wrench

- Tightens air brake external nuts and cover screws
- Incorporates (4) 12-point sockets (3/4", 7/8", 15/16" and 1") plus a 9/16" open wrench all in one tool
- Box end portion of the wrench is 10-3/8" long
- Open end portion of the wrench is 6-1/4" long


Railroad Torque Socket

Stock No.	A	B	C	D	E	
3/4"	SIMDTSA402	2	1-21/32	3-1/2	5-7/16	13/16

SIMDTSA402 Railroad Torque Socket

- Allows operators to use angle torque to obtain proper torque on AH traction motor gearcase bolts when applying to new gearcases or replacing broken gearcase bolts


Lag Screw Sockets, inches

Stock No.	A	B	C	D	E	
1-1/8 x 7/8	5703747UPA	1-7/8	2-1/8	1-3/4	3-1/2	7/8
1	IM728NT	1-3/4	2-1/8	31/32	2-1/8	13/16
1-1/8	IM736NT	1-13/16	2-1/4	1-3/32	2-1/4	3/4

5703747UPA Rectangular Head Lag Socket

- For use on special rectangular head lag screws
- Rectangular head timber screw spikes are used to secure the rail anchor or rail clip
- The screw spikes are used by all railroads to varying degrees, but mainly the North American freight railroads (BNSF®, NS®, CSX®, UP®RR, KCS, CP Rail System® and CN® Rail)
- The opening is 1-1/8 x 7/8" with a 1" square drive and can be used on an impact wrench

IM728NT Lag Screw Socket

- 1" drive, 1" square

IM736NT Lag Screw Socket

- 1" drive, 1-1/8" square


Manual Nut Splitter

Stock No.	Description
NC52	Manual Nut Splitter
NC52-3	Extra Cutter
NC52-4A	Anvil

NC52 Manual Nut Splitter

- Used for splitting nuts up to 3/4" across the flats
- Bar acts as a handle to hold the tool securely



- Do not use chrome or industrial finish hand tools with power drivers or impact drivers.
- Read Safety Precautions on pages W1-W4