

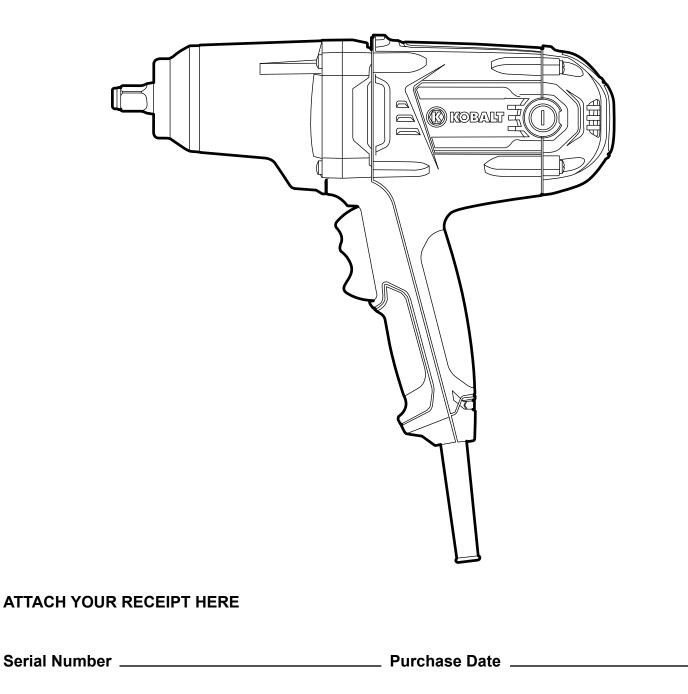
# KOBALT<sub>®</sub> 8 AMP IMPACT WRENCH

MODEL #6904

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**Questions, problems, missing parts?** Before returning to your retailer, call our customer service department at 1-888-3KOBALT (1-888-356-2258), 8 a.m. - 8 p.m., EST, Monday - Friday.

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# **PRODUCT SPECIFICATIONS**

COMPONENT	SPECIFICATIONS
Motor:	120V, 60 Hz , 8A
No-load Speed:	2100 RPM
Impacts per minute	2700 IPM
Anvil Size	1/2" (12.7 mm)
Maximum fastening torque	350 ft. lbs.
Capacity (Standard bolt)	M12 - M20 (1/2" - 3/4") (12.7mm - 19.1 mm)
Capacity (High-tensile bolt)	M12 - M16 (1/2" - 5/8") (12.7mm - 15.9 mm)
7-pc socket set	11/16", 3/4", 13/16", 7/8", 17mm, 19mm, 21mm

# KNOW THE TOOL

To operate this tool, carefully read this manual and all labels affixed to the impact wrench before using. Keep this manual available for future reference.

# IMPORTANT

This tool should only be serviced by a qualified service technician.

# READ ALL INSTRUCTIONS THOROUGHLY

# **GENERAL SAFETY RULES FOR ALL POWER TOOLS**

**A** WARNING: Some dust created by using power tools contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

**A** WARNING: Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

# **Safety Symbols**

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols and the explanations that accompany them deserve your careful attention and understanding. The safety warnings DO NOT, by themselves, eliminate any danger. They are not substitutes for proper accident-prevention measures.

**A** DANGER: Indicates a hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.

**A** WARNING: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

**A** CAUTION: Indicates a hazardous situation which, if not avoided, will result in minor or moderate injury.

# **Damage Prevention and Information Messages**

These inform the user of important information and/or instructions that could lead to equipment or other property damage if they are not followed. Each message is preceded by the word "NOTICE," as in the example below:

**NOTICE:** Equipment and/or property damage may result if these instructions are not followed.

# SAVE THESE INSTRUCTIONS

#### WORK AREA

Keep your work area clean and well-lit. Cluttered benches and dark areas invite accidents.

Do not operate power tools in explosive environments, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks that may ignite the dust or fumes.

Keep bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

Make the workshop child-proof with padlocks, master switches, or by removing starter keys.

Use the right tool. Don't force a tool or attachment to do a job for which it was not designed.

# ELECTRICAL SAFETY

**Double-insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way.** If the plug does not fit in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet.

**Do not change the plug in any way.** Double insulation eliminates the need for a three-wire, grounded power cord and grounded power-supply system.

Avoid contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded while using the tool.

**Do not expose power tools to rain or wet conditions.** A wet power tool will increase the risk of electric shock.

**Do not abuse the cord.** Never use the cord to carry the tool or to pull the plug from an outlet. Keep the cord away from heat, oil, sharp edges, or moving parts.

Replace damaged cords immediately. Damaged cords increase the risk of electric shock.

When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W". These cords are rated for outdoor use and reduce the risk of electric shock. The following table shows the correct size to use, depending on cord length and nameplate amperage rating of the tool. When in doubt, use the next heavier gauge. Always use UL and CSA listed extension cords.

#### **Recommended sizes of extension cords**

	VOLTS	TOTAL LENGTH OF CORD IN FEET			N FEET
AMPERE RATING		25 ft.	50 ft.	100 ft.	150 ft.
		A. W. G.			
0~6	120 V~	18	16	16	14
6~10		18	16	14	12
10~12		16	16	14	12
12~16		14	12	not recom	mended

# SAVE THESE INSTRUCTIONS

Some of the following symbols may be used on this tool. Please study them and their meaning. Proper interpretation of these symbols will allow you to operate the tool better and more safely.

V	 Volts
А	 Amps
Hz	 Hertz
W	 Watts
min	 Minutes
$\sim$	 Alternating Current
	 Direct Current
no	 No-load Speed
	 Class II construction
/min	 Revolutions or Strokes per minute
	 Indicates danger, warning caution. It means attention! Your safety is involved.

# PERSONAL SAFETY

▲ WARNING: The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power-tool operation, always wear safety goggles or safety glasses with side shields and a full-face shield, when needed. We recommend using a wide vision safety mask over eyeglasses or standard safety glasses with shields. Always use eye protection, which is marked to comply with ANSI Z87.1

Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use the tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.

Avoid accidental starting. Be sure the switch is off before plugging in the tool. Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.

**Remove adjusting keys or wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

**Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.

**Use safety equipment.** A dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Before connecting the tool to a power source (receptacle, outlet, etc.), be sure that the voltage supplied is the same as that specified on the nameplate of the tool. A power source with voltage greater than that specified for the tool can result in serious injury to the user as well as damage to the tool.

#### **TOOL USE AND CARE**

Use clamps or another practical way to support and secure the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.

**Do not force the tool.** Use the correct tool for your application. The correct tool will do the job better and more safely at the rate for which it is designed.

**Do not use tool if the switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.

**Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.

Store idle tools out of the reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.

Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.

Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool may become hazardous when used on another tool.

**Do not alter or misuse tool.** These tools are precision built. Any alteration or modification not specified is misuse and may result in a dangerous condition.

# SERVICE

**Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.

When servicing a tool, use only identical replacement parts. Follow instructions in the maintenance section of this manual. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

# SPECIFIC SAFETY RULES FOR IMPACT WRENCH

Hold the tool by the insulated gripping surfaces when performing an operation where the tool may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of tool "live" and shock the operator.

Check the socket carefully for wear, cracks or damage before installing it on the impact wrench.

#### Hold the tool firmly with both hands.

Always be sure that you have a firm footing. Be sure that no one is below you when using the tool in elevated locations.

**Check the torque required with a torque wrench.** The proper fastening torque may vary depending on the type or size of the bolt.

Use of accessories that are not recommended for use with this tool may create hazardous conditions.

▲ WARNING: Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

#### SOME EXAMPLES OF THESE CHEMICALS ARE:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement, and other masonry products.
- Arsenic and chromium from chemically treated lumber.

#### Your risk from these exposures varies, depending upon how often you do this type of work. To reduce your exposure to these chemicals:

- Work in a well-ventilated area.
- Work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water.

# Allowing dust to get into your mouth or eyes or to lie on the skin may promote absorption of harmful chemicals.

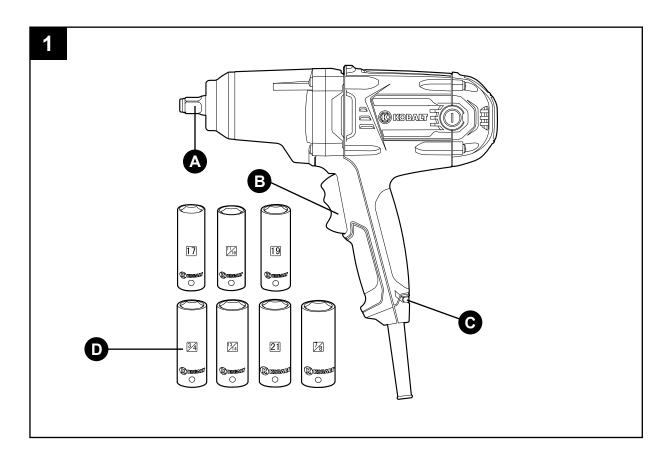
# PACKAGE CONTENTS

Impact wrench, 7-pc socket set, holder, instruction manual

#### KNOW YOUR IMPACT WRENCH (Fig. 1)

Before attempting to use this impact wrench, become familiar with all of its operating features and safety requirements. For optimum performance and safety, read the following operating instructions carefully before using the impact wrench.

**A WARNING:** Do not allow familiarity with your impact wrench to make you careless. Remember that a careless fraction of a second is sufficient to cause severe injury.



PART	DESCRIPTION	QUANTITY
A	Anvil	1
В	Forward/reverse switch	1
С	Live-circut indicator	1
D	Socket set	1

**A** WARNING: Remove the impact wrench from the package and examine it carefully. Do not discard the carton or any packaging material until all parts have been examined.

**A** WARNING: If any part of the impact wrench is missing or damaged, do not plug the tool in or use it until the part has been repaired or replaced. Failure to heed this warning could result in serious injury.

# SELECTING THE CORRECT SOCKET

**A** CAUTION: Always verify that the tool is switched off and unplugged before installing any accessories on the tool.

Always use the correct size socket for bolts and nuts. An incorrect socket will result in inaccurate and inconsistent fastening torque and/or damage to the bolt or nut.

# **OPERATING INSTRUCTIONS**

# INSTALLING AND REMOVING THE SOCKET (Fig. 2)

To install the socket, push it onto the anvil of the tool until it locks into place.

To remove the socket, simply pull it off.

# **TURNING THE IMPACT WRENCH ON (Fig. 3)**

- 1. Note that the trigger switch on the impact wrench is marked with R for Reverse and F for Forward.
- 2. Connect the power cord of your impact wrench to a standard household power outlet.
- 3. Depress the lower part of the switch marked F to run the tool in the forward direction (clockwise rotation).
- 4. Depress the upper part of the switch marked R to reverse the direction (counter-clockwise rotation).
- 5. Release the switch to stop the tool.

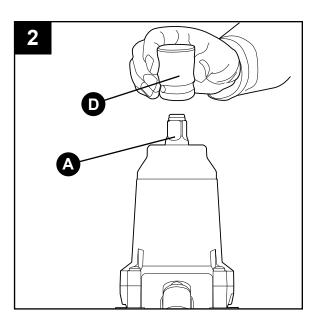
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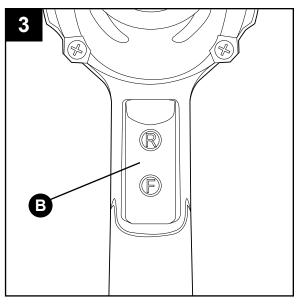
# **IMPACTING TECHNIQUES**

# Tightening fasteners with the impact Wrench

The proper fastening torque may differ depending on the type or size of the bolt, the material of the workpiece to be fastened, etc. Before starting your job, always perform a test operation to determine the proper fastening time for your bolt or nut.

1. Hold the tool firmly and place the socket over the bolt or nut.





- 2. Turn the tool on, and fasten the bolt or nut to the proper torque.
- 3. After fastening, always check the torque with a torque wrench.

NOTE: Hold the tool straight along the axis of the bolt or nut.

**NOTE:** Excessive fastening torque may damage the bolt/nut or socket.

Practice with various fasteners, noting the length of time required to reach the desired torque. Check the tightness with a torque wrench. If the fasteners are too tight, reduce the impacting time. If they are not tight enough, increase the impacting time.

The fastening torque is affected by a wide variety of factors, including the following:

Voltage

A voltage reduction will cause a reduction in the fastening torque.

Socket

Failure to use the correct size socket will cause a reduction in the fastening torque.

A worn socket (wear on the hex end or square end) will cause a reduction in the fastening torque.

• Bolt

Although the torque coefficient and the class of bolt may be the same, the proper fastening torque will differ according to the diameter of the bolt.

Although the diameters of bolts may be the same, the proper fastening torque will differ according to the torque coefficient, the class of bolt and the bolt length.

- The use of a universal joint or an extension bar (both available separately) will reduce the fastening force of the impact wrench somewhat. Compensate by fastening for a longer period of time.
- The manner of holding the tool or the material to be fastened will affect the torque.

#### Loosening fasteners with the Impact Wrench

The torque that is required to loosen a fastener averages 75% to 80% of the tightening torque, depending on the condition of the contacting surfaces. However, if rust or corrosion causes seizing, more torque may be required.

#### CARE AND MAINTENANCE

**A** WARNING: To ensure safety and reliability, all repairs should be performed by a qualified service technician.

**A** WARNING: When servicing, use only identical replacement parts. The use of any other parts may create a hazard or cause damage to the product.

**A** WARNING: Unplug the impact wrench from the power source before cleaning or performing any maintenance.

Before each use:

- Inspect the impact wrench, the switch, and the cord for damage.
- Check for damaged, missing, or worn parts.
- Check for loose screws, misalignment or binding of moving parts, or any other condition that may affect the operation.

• If abnormal vibration or noise occurs, turn the impact wrench off immediately, and have the problem corrected before further use.

Using compressed air may be the most effective cleaning method. Always wear safety goggles when cleaning tools with compressed air.

**WARNING:** Do not allow brake fluids, gasoline, petroleum-based products, penetrating oil, etc. to come into contact with plastic parts. These substances contain chemicals that can damage, weaken, or destroy plastic.

#### TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION	
The tool does not work	Plugs have not been fully connected	Verify that plugs are fully connected	
	Incorrect voltage	Check that the power source voltage is 120V	
Fasteners cannot be loosened	The torque exceeded the tool's capacity	Use a more powerful wrench	

#### 5-YEAR HASSLE-FREE WARRANTY

This impact wrench is warranted to the original purchaser from the original purchase date for five (5) years subject to the warranty coverage described herein.

This impact wrench is warranted for the original user to be free from defects in material and workmanship.

If you believe that the impact wrench is defective at any time during the specified warranty period, simply return the impact wrench along with proof of purchase to the place of purchase for a free replacement or refund, or call 1-888-3KOBALT for warranty service.

This warranty is void if: defects in materials or workmanship or damages result from repairs or alterations which have been made or attempted by others or the unauthorized use of nonconforming parts; the damage is due to normal wear, damage is due to abuse (including overloading of the tool beyond capacity), improper maintenance, neglect or accident; or the damage is due to the use of the tool after partial failure or use with improper accessories or unauthorized repair or alteration.

This warranty excludes blades, bits, bulbs and accessories.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.