

Definitions: Safety Guidelines

The definitions below describe the level of severity for each signal word. Please read the manual and pay attention to these symbols.

⚠DANGER: Indicates an imminently hazardous situation which, if not avoided, **will** result in **death or serious injury**.

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

⚠CAUTION: Indicates a potentially hazardous situation which, if not avoided, **may** result in **minor or moderate injury**.

NOTICE: Indicates a practice **not related to personal injury** which, if not avoided, **may** result in **property damage**.

IF YOU HAVE ANY QUESTIONS OR COMMENTS ABOUT THIS OR ANY DEWALT TOOL, CALL US TOLL FREE AT: **1-800-4-DEWALT (1-800-433-9258)**.



WARNING: To reduce the risk of injury, read the instruction manual.

General Power Tool Safety Warnings



WARNING! Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1) WORK AREA SAFETY

- a) **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2) ELECTRICAL SAFETY

- a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- f) **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of a GFCI reduces the risk of electric shock.

3) PERSONAL SAFETY

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- b) **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c) **Prevent unintentional starting. Ensure the switch is in the off position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
- d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f) **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.
- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

4) POWER TOOL USE AND CARE

- a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.

- b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c) **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) **Use the power tool, accessories and tool bits, etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

5) BATTERY TOOL USE AND CARE

- a) **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- b) **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.

- c) **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws, or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
 - d) **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.
- 6) **SERVICE**
- a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Safety Instructions for All Saws

- a) **⚠DANGER: Keep hands away from cutting area and the blade. Keep your second hand on auxiliary handle, or motor housing.** If both hands are holding the saw, they cannot be cut by the blade.
- b) **Do not reach underneath the workpiece.** The guard cannot protect you from the blade below the workpiece.
- c) **Adjust the cutting depth to the thickness of the workpiece.** Less than a full tooth of the blade teeth should be visible below the workpiece.
- d) **Never hold piece being cut in your hands or across your leg. Secure the workpiece to a stable platform.** It is important to support the work properly to minimize body exposure, blade binding, or loss of control.
- e) **Hold power tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring.** Contact with a "live" wire will also

make exposed metal parts of the power tool "live" and shock the operator.

- f) **When ripping always use a rip fence or straight edge guide.** This improves the accuracy of cut and reduces the chance of blade binding.
- g) **Always use blades with correct size and shape (diamond versus round) of arbor holes.** Blades that do not match the mounting hardware of the saw will run eccentrically, causing loss of control.
- h) **Never use damaged or incorrect blade washers or bolt.** The blade washers and bolt were specially designed for your saw, for optimum performance and safety of operation.

Further Safety Instructions for All Saws

CAUSES AND OPERATOR PREVENTION OF KICKBACK:

- Kickback is a sudden reaction to a pinched, bound or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator;
- When the blade is pinched or bound tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator;
- If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator.

Kickback is the result of saw misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:

- a) **Maintain a firm grip with both hands on the saw and position your arms to resist kickback forces. Position your body to either side of the blade, but not in line with the blade.** Kickback could cause the saw to jump backwards,

but kickback forces can be controlled by the operator, if proper precautions are taken.

- b) **When blade is binding, or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or kickback may occur.** Investigate and take corrective actions to eliminate the cause of blade binding.
- c) **When restarting a saw in the workpiece, center the saw blade in the kerf and check that saw teeth are not engaged into the material.** If saw blade is binding, it may walk up or kickback from the workpiece as the saw is restarted.
- d) **Support large panels to minimize the risk of blade pinching and kickback.** Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.
- e) **Do not use dull or damaged blades.** Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.
- f) **Blade depth and bevel adjusting locking levers must be tight and secure before making cut.** If blade adjustment shifts while cutting, it may cause binding and kickback.
- g) **Use extra caution when sawing into existing walls or other blind areas.** The protruding blade may cut objects that can cause kickback.

LOWER GUARD SAFETY INSTRUCTIONS

- a) **Check lower guard for proper closing before each use. Do not operate the saw if lower guard does not move freely and close instantly. Never clamp or tie the lower guard into the open position.** If saw is accidentally dropped, lower guard may be bent. Raise the lower guard with the retracting

handle and make sure it moves freely and does not touch the blade or any other part, in all angles and depths of cut.

- b) **Check the operation of the lower guard spring. If the guard and the spring are not operating properly, they must be serviced before use.** Lower guard may operate sluggishly due to damaged parts, gummy deposits, or a build-up of debris.
- c) **Lower guard should be retracted manually only for special cuts such as "plunge cuts" and "compound cuts."** Raise lower guard by retracting handle and as soon as blade enters the material, the lower guard must be released. For all other sawing, the lower guard should operate automatically.
- d) **Always observe that the lower guard is covering the blade before placing saw down on bench or floor.** An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after switch is released.

NOTE: Although the above information references wood, this saw is only to be used to cut metal. Kickback can occur when cutting metal.

Additional Specific Safety Instructions for Circular Saws

⚠ WARNING: Do not use abrasive wheels or blades.

⚠ WARNING: Do not use water feed attachments.

⚠ CAUTION: Do not attempt to cut stainless steel, rebar, hardened or heat-treated steel, cast iron, masonry or unknown materials

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

- **Keep your body positioned to either side of the blade, but not in line with the saw blade.** KICKBACK could cause the saw to jump backwards (see **Causes and Operator Prevention of Kickback and KICKBACK**).

- **Air vents often cover moving parts and should be avoided.** Loose clothes, jewelry or long hair can be caught in moving parts.

⚠ **WARNING: ALWAYS** use safety glasses. Everyday eyeglasses are NOT safety glasses. Also use face or dust mask if cutting operation is dusty. ALWAYS WEAR CERTIFIED SAFETY EQUIPMENT:

- ANSI Z87.1 eye protection (CAN/CSA Z94.3),
- ANSI S12.6 (S3.19) hearing protection,
- NIOSH/OSHA/MSHA respiratory protection.

⚠ **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 and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and 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, eyes, or lay on the skin may promote absorption of harmful chemicals.

⚠ **WARNING:** Use of this tool can generate and/or disperse dust, which may cause serious and permanent respiratory or other

injury. Always use NIOSH/OSHA approved respiratory protection appropriate for the dust exposure. Direct particles away from face and body.

⚠ **WARNING: Always wear proper personal hearing protection that conforms to ANSI S12.6 (S3.19) during use.** Under some conditions and duration of use, noise from this product may contribute to hearing loss.

⚠ **CAUTION: When not in use, place circular saw on a stable surface, shoe side down, where it will not cause a tripping or falling hazard.** Some tools with large battery packs will stand upright on the battery pack but may be easily knocked over.

- The label on your tool may include the following symbols. The symbols and their definitions are as follows:

V.....	volts	A.....	amperes
Hz.....	hertz	W.....	watts
min	minutes	~ or AC.....	alternating current
— or DC...	direct current	⎓ or AC/DC...	alternating or direct current
⚡.....	Class I Construction (grounded)	⎓ or AC/DC...	alternating or direct current
□.....	Class II Construction (double insulated)	n ₀	no load speed
.../min	per minute	n.....	rated speed
BPM.....	beats per minute	n.....	rated speed
IPM.....	impacts per minute	⊕.....	earthing terminal
RPM.....	revolutions per minute	⚠.....	safety alert symbol
sfpm	surface feet per minute		
SPM	strokes per minute		

Important Safety Instructions for All Battery Packs

When ordering replacement battery packs, be sure to include the catalog number and voltage. Consult the chart at the end of this manual for compatibility of chargers and battery packs.

The battery pack is not fully charged out of the carton. Before using the battery pack and charger, read the safety instructions below and then follow charging procedures outlined.

READ ALL INSTRUCTIONS

- **Do not charge or use the battery pack in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Inserting or removing the battery pack from the charger may ignite the dust or fumes.
- **NEVER force the battery pack into the charger. DO NOT modify the battery pack in any way to fit into a non-compatible charger as battery pack may rupture causing serious personal injury.** Consult the chart at the end of this manual for compatibility of batteries and chargers.
- Charge the battery packs only in designated DEWALT chargers.
- **DO NOT** splash or immerse in water or other liquids.
- **Do not store or use the tool and battery pack in locations where the temperature may reach or exceed 105 °F (40 °C) (such as outside sheds or metal buildings in summer).** For best life store battery packs in a cool, dry location.

NOTE: Do not store the battery packs in a tool with the trigger switch locked on. Never tape the trigger switch in the ON position.

⚠WARNING: Fire hazard. Never attempt to open the battery pack for any reason. If the battery pack case is cracked or damaged, do not insert into the charger. Do not crush, drop or damage the battery pack. Do not use a battery pack or charger that has received a sharp

blow, been dropped, run over or damaged in any way (e.g., pierced with a nail, hit with a hammer, stepped on). Damaged battery packs should be returned to the service center for recycling.

⚠WARNING: Fire hazard. Do not store or carry the battery pack so that metal objects can contact exposed battery terminals. For example, do not place the battery pack in aprons, pockets, tool boxes, product kit boxes, drawers, etc., with loose nails, screws, keys, etc. **Transporting batteries can possibly cause fires if the battery terminals inadvertently come in contact with conductive materials such as keys, coins, hand tools and the like.** The US Department of Transportation Hazardous Material Regulations (HMR) actually prohibit transporting batteries in commerce or on airplanes (e.g., packed in suitcases and carry-on luggage) UNLESS they are properly protected from short circuits. So when transporting individual battery packs, make sure that the battery terminals are protected and well insulated from materials that could contact them and cause a short circuit.

SPECIFIC SAFETY INSTRUCTIONS FOR LITHIUM ION (Li-Ion)

- **Do not incinerate the battery pack even if it is severely damaged or is completely worn out.** The battery pack can explode in a fire. Toxic fumes and materials are created when lithium ion battery packs are burned.
- **If battery contents come into contact with the skin, immediately wash area with mild soap and water.** If battery liquid gets into the eye, rinse water over the open eye for 15 minutes or until irritation ceases. If medical attention is needed, the battery electrolyte is composed of a mixture of liquid organic carbonates and lithium salts.
- **Contents of opened battery cells may cause respiratory irritation.** Provide fresh air. If symptoms persist, seek medical attention.

⚠WARNING: Burn hazard. Battery liquid may be flammable if exposed to spark or flame.

The RBRC™ Seal

The RBRC™ (Rechargeable Battery Recycling Corporation) Seal on the nickel cadmium, nickel metal hydride or lithium ion batteries (or battery packs) indicate that the costs to recycle these batteries (or battery packs) at the end of their useful life have already been paid by DEWALT. In some areas, it is illegal to place spent nickel cadmium, nickel metal hydride or lithium ion batteries in the trash or municipal solid waste stream and the RBRC program provides an environmentally conscious alternative.



RBRC™, in cooperation with DEWALT and other battery users, has established programs in the United States and Canada to facilitate the collection of spent nickel cadmium, nickel metal hydride or lithium ion batteries. Help protect our environment and conserve natural resources by returning the spent nickel cadmium, nickel metal hydride or lithium ion batteries to an authorized DEWALT service center or to your local retailer for recycling. You may also contact your local recycling center for information on where to drop off the spent battery. RBRC™ is a registered trademark of the Rechargeable Battery Recycling Corporation.

Important Safety Instructions for All Battery Chargers

SAVE THESE INSTRUCTIONS: This manual contains important safety and operating instructions for battery chargers.

- Before using the charger, read all instructions and cautionary markings on the charger, battery pack and product using the battery pack.

⚠ WARNING: Shock hazard. Do not allow any liquid to get inside the charger. Electric shock may result.

⚠ CAUTION: Burn hazard. To reduce the risk of injury, charge only DEWALT rechargeable battery packs. Other types of batteries may overheat and burst resulting in personal injury and property damage.

NOTICE: Under certain conditions, with the charger plugged into the power supply, the charger can be shorted by foreign material. Foreign materials of a conductive nature, such as, but not limited to, grinding dust, metal chips, steel wool, aluminum foil or any buildup of metallic particles should be kept away from the charger cavities. Always unplug the charger from the power supply when there is no battery pack in the cavity. Unplug the charger before attempting to clean.

- **DO NOT attempt to charge the battery pack with any chargers other than the ones in this manual.** The charger and battery pack are specifically designed to work together.
- **These chargers are not intended for any uses other than charging DEWALT rechargeable batteries.** Any other uses may result in risk of fire, electric shock or electrocution.
- **Do not expose the charger to rain or snow.**
- **Pull by the plug rather than the cord when disconnecting the charger.** This will reduce the risk of damage to the electric plug and cord.
- **Make sure that the cord is located so that it will not be stepped on, tripped over or otherwise subjected to damage or stress.**
- **Do not use an extension cord unless it is absolutely necessary.** Use of improper extension cord could result in risk of fire, electric shock or electrocution.
- **When operating a charger outdoors, always provide a dry location and use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- **An extension cord must have adequate wire size (AWG or American Wire Gauge) for safety.** The smaller the gauge number of the wire, the greater the capacity of the cable, that is, 16 gauge has more capacity than 18 gauge. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. When using more than one extension to make up the total length, be sure

each individual extension contains at least the minimum wire size. The following table shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The lower the gauge number, the heavier the cord.

		Minimum Gauge for Cord Sets				
Ampere Rating		Volts	Total Length of Cord in Feet (meters)			
		120V	25 (7.6)	50 (15.2)	100 (30.5)	150 (45.7)
		240V	50 (15.2)	100 (30.5)	200 (61.0)	300 (91.4)
More Than	Not More Than	AWG				
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

- **Do not place any object on top of the charger or place the charger on a soft surface that might block the ventilation slots and result in excessive internal heat.** Place the charger in a position away from any heat source. The charger is ventilated through slots in the top and the bottom of the housing.
- **Do not operate the charger with a damaged cord or plug.**
- **Do not operate the charger if it has received a sharp blow, been dropped or otherwise damaged in any way.** Take it to an authorized service center.
- **Do not disassemble the charger; take it to an authorized service center when service or repair is required.** Incorrect reassembly may result in a risk of electric shock, electrocution or fire.

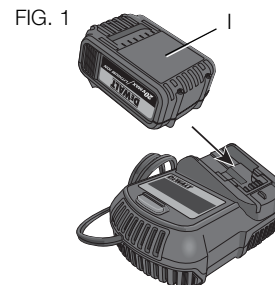
- **Disconnect the charger from the outlet before attempting any cleaning. This will reduce the risk of electric shock.** Removing the battery pack will not reduce this risk.
- **NEVER** attempt to connect two chargers together.
- **The charger is designed to operate on standard 120 volt household electrical power. Do not attempt to use it on any other voltage.** This does not apply to the vehicular charger.

Chargers






Your tool uses a DEWALT charger. Be sure to read all safety instructions before using your charger. Consult the chart at the end of this manual for compatibility of chargers and battery packs.

Charging Procedure (Fig. 1)

1. Plug the charger into an appropriate outlet before inserting the battery pack.
2. Insert the battery pack (I) into the charger, as shown in Figure 1, making sure the pack is fully seated in charger. The red (charging) light will blink continuously, indicating that the charging process has started.
3. The completion of charge will be indicated by the red light remaining ON continuously. The pack is fully charged and may be used at this time or left in the charger.



Indicator Light Operation

	PACK CHARGING	— — — — —
	PACK CHARGED	—————
	HOT/COLD DELAY	— • — • — • — •
	PROBLEM PACK OR CHARGER	• • • • • • • •
	PROBLEM POWERLINE	• • • • • • • •

Charge Indicators

This charger is designed to detect certain problems that can arise. Problems are indicated by the red light flashing at a fast rate. If this occurs, re-insert the battery pack into the charger. If the problem persists, try a different battery pack to determine if the charger is working properly. If the new pack charges correctly, then the original pack is defective and should be returned to a service center or other collection site for recycling. If the new battery pack elicits the same trouble indication as the original, have the charger and the battery pack tested at an authorized service center.

HOT/COLD DELAY

This charger has a hot/cold delay feature: when the charger detects a battery that is hot, it automatically starts a delay, suspending charging until the battery has cooled. After the battery has cooled, the charger automatically switches to the pack charging mode. This feature ensures maximum battery life. The red light flashes long, then short while in the hot/cold delay mode.

LEAVING THE BATTERY PACK IN THE CHARGER

The charger and battery pack can be left connected with the charge indicator showing Pack Charged.

WEAK BATTERY PACKS: Weak batteries will continue to function but should not be expected to perform as much work.

FAULTY BATTERY PACKS: This charger will not charge a faulty battery pack. The charger will indicate faulty battery pack by refusing to light or by displaying problem pack or charger.

NOTE: This could also mean a problem with a charger.

PROBLEM POWER LINE

Some chargers have a Problem Powerline indicator. When the charger is used with some portable power sources such as generators or sources that convert DC to AC, the charger may temporarily suspend operation, flashing the red light with two fast blinks followed by a pause. This indicates the power source is out of limits.

Important Charging Notes

1. Longest life and best performance can be obtained if the battery pack is charged when the air temperature is between 65 °F and 75 °F (18°–24 °C). DO NOT charge the battery pack in an air temperature below +40 °F (+4.5 °C), or above +105 °F (+40.5 °C). This is important and will prevent serious damage to the battery pack.
2. The charger and battery pack may become warm to the touch while charging. This is a normal condition, and does not indicate a problem. To facilitate the cooling of the battery pack after use, avoid placing the charger or battery pack in a warm environment such as in a metal shed or an uninsulated trailer.
3. A cold battery pack will charge at about half the rate of a warm battery pack. The battery pack will charge at that slower rate throughout the entire charging cycle and will not return to maximum charge rate even if the battery pack warms.

4. If the battery pack does not charge properly:
 - a. Check operation of receptacle by plugging in a lamp or other appliance;
 - b. Check to see if receptacle is connected to a light switch which turns power off when you turn out the lights;
 - c. Move the charger and battery pack to a location where the surrounding air temperature is approximately 65 °F–75 °F (18 °–24 °C);
 - d. If charging problems persist, take the tool, battery pack and charger to your local service center.
5. The battery pack should be recharged when it fails to produce sufficient power on jobs which were easily done previously. **DO NOT CONTINUE** to use under these conditions. Follow the charging procedure. You may also charge a partially used pack whenever you desire with no adverse effect on the battery pack.
6. Foreign materials of a conductive nature such as, but not limited to, grinding dust, metal chips, steel wool, aluminum foil, or any buildup of metallic particles should be kept away from charger cavities. Always unplug the charger from the power supply when there is no battery pack in the cavity. Unplug the charger before attempting to clean.
7. Do not freeze or immerse the charger in water or any other liquid.

⚠ WARNING: Shock hazard. Don't allow any liquid to get inside the charger. Electric shock may result.

⚠ WARNING: Burn hazard. Do not submerge the battery pack in any liquid or allow any liquid to enter the battery pack. Never attempt to open the battery pack for any reason. If the plastic housing of the battery pack breaks or cracks, return to a service center for recycling.

Storage Recommendations

1. The best storage place is one that is cool and dry, away from direct sunlight and excess heat or cold.

2. For long storage, it is recommended to store a fully charged battery pack in a cool dry place out of the charger for optimal results.

NOTE: Battery packs should not be stored completely depleted of charge. The battery pack will need to be recharged before use.

SAVE THESE INSTRUCTIONS FOR FUTURE USE

COMPONENTS (Fig. 2)

⚠ WARNING: Never modify the power tool or any part of it. Damage or personal injury could result.

- | | |
|-----------------------------------|---------------------------------|
| A. Trigger switch | H. Lower guard retracting lever |
| B. Trigger switch lock-off button | I. Battery pack |
| C. Depth adjustment lever | J. Sight window |
| D. Blade lock button | K. Shoe |
| E. Kerf indicator | L. Blade wrench |
| F. Blade clamping screw | M. Battery release buttons |
| G. Lower guard | |

INTENDED USE

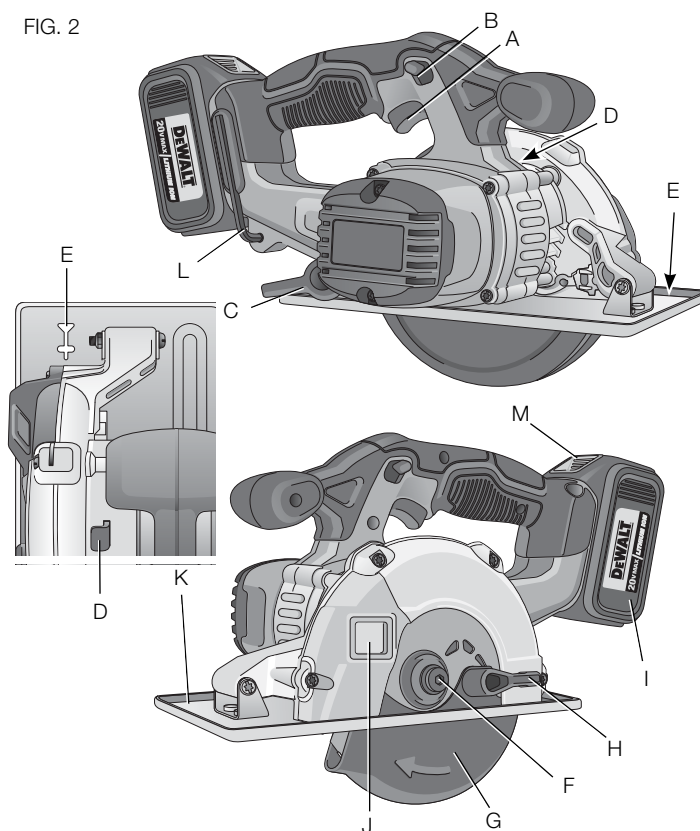
This metal-cutting circular saw is intended for use by professionals for cutting light gauge metals and small metal structural shapes.

DO NOT use under wet conditions or in presence of flammable liquids or gases.

This metal-cutting circular saw is a professional power tool. **DO NOT** let children come into contact with the tool. Supervision is required when inexperienced operators use this tool.

⚠ WARNING: Do not plunge cut or pocket cut with this saw.

FIG. 2



Window (Fig. 2)

⚠ WARNING: Do not operate the saw with a damaged or missing sight window. If window is damaged or missing, have the saw serviced at an authorized service center. If saw is operated without the window, metal chips could fly through the guard and cause personal injury.

⚠ CAUTION: Do not use oil or cutting fluids with the metal-cutting saw. Do not use cleaning fluids to clean window. Cleaning fluids, cutting fluids or oils could harm the plastic in the window, interfering with the safe operation of the saw.

The saw is equipped with a sight window (J) on the side of the upper guard. This window allows the user to see a cutting line on the material to be cut.

Saw Shoe (Fig. 2)

The front of the saw shoe (K) has a kerf indicator (E) that allows the operator to glide the saw along cutting lines. Aligning the cutting line with the notch on the front of the shoe and centering it using the modified V-shaped kerf indicator allows the operator to keep the blade in line with the cutting line. If the cutting line is visible through the narrowest part of the kerf indicator, the blade will pass directly over the cutting line.

Worklight

The saw is equipped with a worklight that is activated when the trigger switch is depressed. The light will automatically turn off 20 seconds after the trigger switch is released. If the trigger switch remains depressed, the worklight will remain on.

NOTE: The worklight is for lighting the immediate work surface and is not intended to be used as a flashlight.

OPERATION

⚠ WARNING: To reduce the risk of injury, turn unit off and disconnect it from power source before installing and removing accessories, before adjusting or when making repairs. An accidental start-up can cause injury.

Installing and Removing the Battery Pack (Fig. 3)

NOTE: For best results, make sure your battery pack is fully charged.

To install the battery pack (I) into the tool handle, align the battery pack with the rails inside the tool's handle and slide it into the handle until the battery pack is firmly seated in the tool and ensure that it does not disengage.

To remove the battery pack from the tool, press the release button (M) and firmly pull the battery pack out of the tool handle. Insert it into the charger as described in the charger section of this manual.

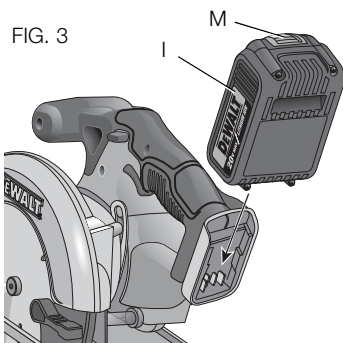
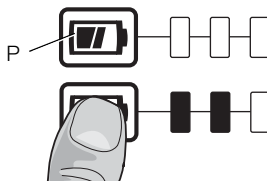


FIG. 3

FIG. 3A



FUEL GAUGE BATTERY PACKS (FIG. 3A)

Some DEWALT battery packs include a fuel gauge which consists of three green LED lights that indicate the level of charge remaining in the battery pack.

To actuate the fuel gauge, press and hold the fuel gauge button (P). A combination of the three green LED lights will illuminate designating the level of charge left. When the level of charge in the battery is below the usable limit, the fuel gauge will not illuminate and the battery will need to be recharged.

NOTE: The fuel gauge is only an indication of the charge left on the battery pack. It does not indicate tool functionality and is subject to variation based on product components, temperature and end-user application.

For more information regarding fuel gauge battery packs, please call 1-800-4-DEWALT (1-800-433-9258) or visit our website www.dewalt.com.

Switch (Fig. 2)

The saw is controlled by a trigger switch (A) and lock off button (B). The lock off button must be pressed before the trigger switch will turn the saw on. Releasing the trigger turns the saw off.

NOTE: This tool has no provision to lock the switch on. The saw should never be locked on by any means.

Changing Blades (Fig. 1, 4-6)

⚠ WARNING: To reduce the risk of injury, turn unit off and disconnect it from power source before installing and removing accessories, before adjusting or when making repairs. An accidental start-up can cause injury.

TO INSTALL THE BLADE

1. Place inner clamp washer (N) on saw spindle with the large flat surface facing out toward the blade (Fig. 4, 5).
2. Retract the lower blade guard (G) and place blade on saw spindle against the inner clamp washer (N), making sure that the blade will rotate in the proper direction (the direction of the rotation arrow on the saw blade and the teeth must point in the same direction as the direction of rotation arrow on the saw). Do not assume that the printing on the blade will always be facing you when properly installed. When retracting the lower blade guard to install the blade, check the condition and operation of the lower blade guard to assure that it is working properly. Make sure it moves freely and does not touch the blade or any other part, in all angles and depths of cut.
3. Place outer clamp washer (O) on saw spindle with the large flat surface against the blade with beveled side facing out.

FIG. 4

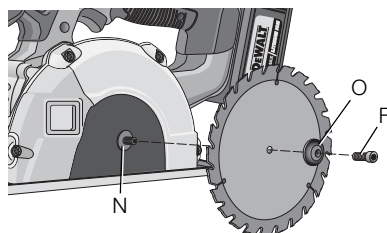
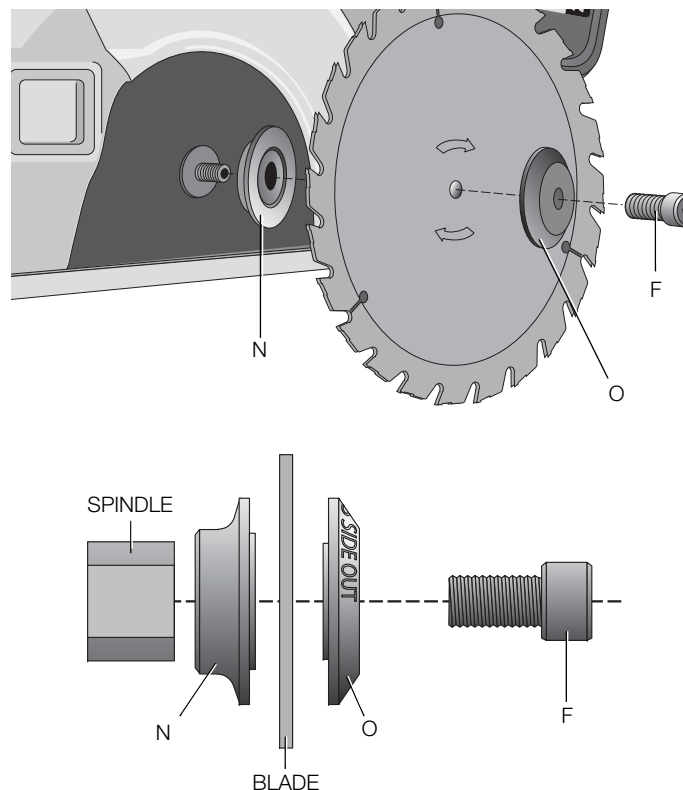
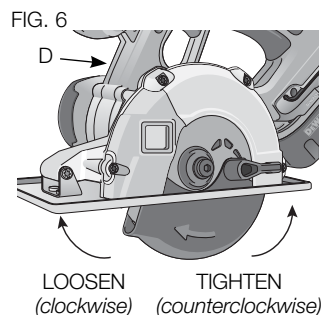


FIG. 5



English

4. Thread blade clamping screw (F) into saw spindle by hand (screw has left-hand threads and must be turned counterclockwise to tighten) (Fig. 6).
5. Depress the blade lock button (D) while turning the saw spindle with the blade wrench (L, Fig. 1) until the blade lock engages and the blade stops rotating.
6. Tighten the blade clamping screw firmly with the blade wrench.



NOTICE: Never engage the blade lock while saw is running, or engage in an effort to stop the tool. Never turn the saw on while the blade lock is engaged. Serious damage to your saw will result.

TO REPLACE THE BLADE

1. To loosen the blade clamping screw (F), depress the blade lock button (D) and turn the saw spindle with the blade wrench until the blade lock engages and the blade stops rotating. With the blade lock engaged, turn the blade clamping screw clockwise with the blade wrench (screw has left-hand threads and must be turned clockwise to loosen).
2. Remove the blade clamping screw (F) and outer clamp washer (O) only. Remove old blade.
3. Clean any metal chips/shavings that may have accumulated in the guard or clamp washer area and check the condition and operation of the lower blade guard as previously outlined. Do not lubricate this area.
4. Select the proper blade for the application (see **Blades**). Always use blades that are the correct size (diameter) with the proper size

and shape center hole for mounting on the saw spindle. Always assure that the maximum recommended speed (rpm) on the saw blade meets or exceeds the speed (rpm) of the saw.

5. Follow steps 2 through 6 under **To Install the Blade**, making sure that the blade will rotate in the proper direction.

LOWER BLADE GUARD

⚠ WARNING: The lower blade guard is a safety feature which reduces the risk of serious personal injury. Never use the saw if the lower guard is missing, damaged, misassembled or not working properly. Do not rely on the lower blade guard to protect you under all circumstances. Your safety depends on following all warnings and precautions as well as proper operation of the saw. Check lower guard for proper closing before each use as outlined in Additional Safety Rules for Circular Saws. If the lower blade guard is missing or not working properly, have the saw serviced before using. To assure product safety and reliability, repair, maintenance and adjustment should be performed by an authorized service center or other qualified service organization, always using identical replacement parts.

⚠ WARNING: Under certain conditions of use, metal chips may become imbedded in the surfaces of the lower guard, causing the lower guard to rub against the upper guard. Check the operation of the lower guard before each use and remove any imbedded chips.

Blades

⚠ WARNING: To minimize the risk of eye injury, always use eye protection. Carbide is a hard but brittle material. Foreign objects in the workpiece such as wire or nails can cause tips to crack or break. Only operate saw when proper saw blade guard is in place. Mount blade securely in proper rotation before using, and always use a clean, sharp blade.

<i>Blade</i>	<i>Diameter</i>	<i>Teeth</i>	<i>Application</i>
DWA7770	5-1/2" (140 mm)	30	General purpose ferrous metal cutting

If you need assistance regarding blades, please call 1-800-4-DEWALT (1-800-433-9258).

KICKBACK

Kickback is a sudden reaction to a pinched, bound or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator. When the blade is pinched or bound tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator. If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the material causing the blade to climb out of the kerf and jump back toward the operator.

Kickback is more likely to occur when any of the following conditions exists.

1. IMPROPER WORKPIECE SUPPORT

- Sagging or improper lifting of the cut off piece can cause pinching of the blade and lead to kickback (Fig. 9).
- Cutting through material supported at the outer ends only can cause kickback. As the material weakens it sags, closing down the kerf and pinching the blade (Fig. 9).
- Cutting off a cantilevered or overhanging piece of material from the bottom up in a vertical direction can cause kickback. The falling cut off piece can pinch the blade.
- Cutting off long narrow strips can cause kickback. The cut off strip can sag or twist closing the kerf and pinching the blade.
- Snagging the lower guard on a surface below the material being cut momentarily reduces operator control. The saw can lift partially out of the cut increasing the chance of blade twist.

2. IMPROPER DEPTH OF CUT SETTING ON SAW

To make the most efficient cut, the blade should protrude only far enough to expose a tooth as shown in Figure 8. This allows the shoe to support the blade and minimizes twisting and pinching in the material. See the section titled **Cutting Depth Adjustment**.

3. BLADE TWISTING (MISALIGNMENT IN CUT)

- Pushing harder to cut can cause the blade to twist.
- Trying to turn the saw in the cut (trying to get back on the marked line) can cause blade twist.
- Overreaching or operating the saw with poor body control (out of balance), can result in twisting the blade.
- Changing hand grip or body position while cutting can result in blade twist.
- Backing up the saw to clear blade can lead to twist.

4. USE OF DULL OR DIRTY BLADES

Dull blades cause increased loading of the saw. To compensate, an operator will usually push harder which further loads the unit and promotes twisting of the blade in the kerf. Worn blades may also have insufficient body clearance which increases the chance of binding and increased loading.

5. RESTARTING A CUT WITH THE BLADE TEETH JAMMED AGAINST THE MATERIAL

The saw should be brought up to full operating speed before starting a cut or restarting a cut after the unit has been stopped with the blade in the kerf. Failure to do so can cause stalling and kickback.

Any other conditions which could result in pinching, binding, twisting, or misalignment of the blade could cause kickback. Refer to the sections **Further Safety Instructions for All Saws** and **Blades** for procedures and techniques that will minimize the occurrence of kickback.

Depth Adjustment (Fig. 7, 8)

⚠ WARNING: To reduce the risk of injury, turn unit off and disconnect it from power source before installing and removing accessories, before adjusting or when making repairs. An accidental start-up can cause injury.

The metal-cutting saw is equipped with a pivoting shoe that allows the operator to set the depth of cut. For the most efficient cutting action, set the depth adjustment so that one tooth of the blade projects below the material to be cut. This distance is from the tip of the tooth to the bottom of the gullet in front of the tooth. This keeps blade friction at a minimum, removes metal chips from the cut, results in cooler, faster sawing and reduces the chance of kickback.

FIG. 7

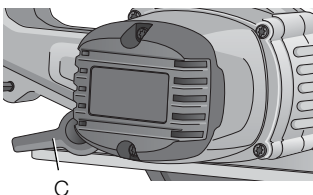
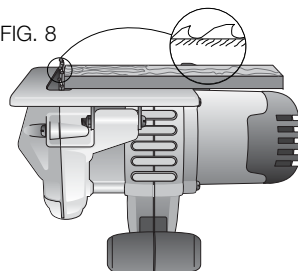


FIG. 8



TO SET THE DEPTH OF CUT

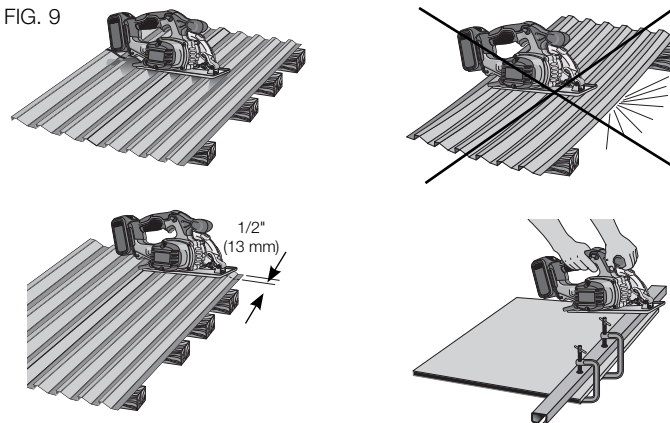
1. Lay the piece of material you plan to cut along the blade as shown.
2. Note how much tooth projects beyond the material.
3. Loosen the depth adjustment lever (C) and move the shoe to change the depth of cut.
4. Retighten the depth adjustment lever securely.

Workpiece Support (Fig. 9)

CUTTING SHEETS OF METAL

Figure 9 shows the correct and incorrect way to support a large sheet. To avoid kickback, support material near the cut. Do not support it away from the cut. If material is supported away from the cut, it will bind the blade and cause kickback. When cutting thin strips, keep the blade at least 1/2" (approximately 13 mm) from the edge of the material. Thin strips may bind, causing kickback and increasing the risk of personal injury.

FIG. 9



CUTTING RECTANGULAR METAL STOCK

Clamp the material you plan to cut to a workbench or other work surface as shown above.

Cutting (Fig. 10, 11)

1. Hold the saw securely using both hands. Figure 10 shows appropriate hand position. Keep your body to one side of the line along which you are cutting. This will protect you from injury related to kickback.
2. When cutting ends off of rectangular metal stock, place the widest part of the shoe on the part of the material that is clamped to the workbench or other support, not on the part of the material that will fall when the cut is made.
3. Depress the trigger switch and allow the saw to reach full speed before the blade contacts the material to be cut (Fig. 11).

FIG. 10

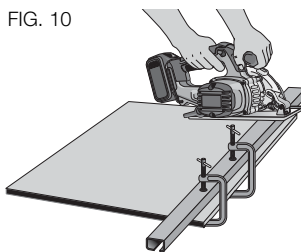
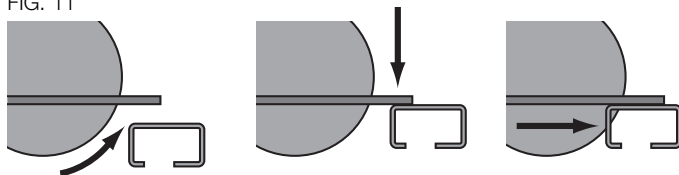


FIG. 11



4. Push the saw forward at a speed that allows the blade to cut without laboring.
5. As you finish a cut, release the trigger and allow the blade to stop before lifting the saw from the work. As you lift the saw, the guard will automatically close under the blade.

CORRECTING A CUT

Should your cut begin to leave the cutting line, don't try to force it back on. Forcing a correction can stall the saw and cause kickback. Instead, release the switch and allow the blade to come to a complete

stop. Then, back the saw out of the cut. Restart the saw and re-enter the cut, following the desired cutting line.

⚠ WARNING: Do not stack materials for cutting. Do not cut through bolts with the saw. Do not touch the blade, workpiece or metal chips with your bare hand immediately after cutting—they are extremely hot and may burn your skin.

Maximizing Blade Life

To extend blade life, follow these practices:

- Do not force the blade through the metal. The saw must cut at its own pace and at a constant rate.
- Change blades when it is no longer easy to push the saw through the cut, when the motor is straining, or when excessive heat is built up in the blade.
- Keep base of the saw firmly against metal you are cutting.
- If the metal you are cutting is vibrating or shaking, clamp the material as close to the cut as possible and slow down the cutting rate.

MAINTENANCE

⚠ WARNING: To reduce the risk of injury, turn unit off and disconnect it from power source before installing and removing accessories, before adjusting or when making repairs. An accidental start-up can cause injury.

Replacing Sight Window (Fig. 1)

⚠ WARNING: Do not operate the saw with a damaged or missing sight window. If window is damaged or missing, have the saw serviced at an authorized service center. If the saw is operated without the window, metal chips could fly through the guard and cause personal injury.

The sight window (J) must be replaced by an authorized DEWALT service center.

Cleaning

⚠ WARNING: Blow dirt and dust out of all air vents with clean, dry air at least once a week. To minimize the risk of eye injury, always wear ANSI Z87.1 approved eye protection when performing this.

⚠ WARNING: Never use solvents or other harsh chemicals for cleaning the non-metallic parts of the tool. These chemicals may weaken the plastic materials used in these parts. Use a cloth dampened only with water and mild soap. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.

⚠ CAUTION: Do not use any cleaning fluids on the sight window to avoid clouding it and compromising the safe operation of the saw. Use compressed air to remove accumulated dust from the inside of the sight window. Wear safety glasses when performing this.

CHARGER CLEANING INSTRUCTIONS

⚠ WARNING: Shock hazard. Disconnect the charger from the AC outlet before cleaning. Dirt and grease may be removed from the exterior of the charger using a cloth or soft non-metallic brush. Do not use water or any cleaning solutions.

Lubrication

Self lubricating ball and roller bearings are used in the tool and relubrication is not required. However, it is recommended that, once a year, you take or send the tool to a certified service center for a thorough cleaning, inspection, and lubrication of the gear case.

Accessories

⚠ WARNING: Since accessories, other than those offered by DEWALT, have not been tested with this product, use of such accessories with this tool could be hazardous. To reduce the risk of injury, only DEWALT recommended accessories should be used with this product.

Use only 5-1/2" (140 mm) DEWALT metal-cutting blades with a 20 mm arbor.

Recommended accessories for use with your tool are available at extra cost from your local dealer or authorized service center. If you need assistance in locating any accessory, please contact DEWALT Industrial Tool Co., 701 East Joppa Road, Baltimore, MD 21286, call 1-800-4-DEWALT (1-800-433-9258) or visit our website: www.dewalt.com.

Repairs

The charger and battery pack are not serviceable.

To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustment (including brush inspection and replacement) should be performed by a DEWALT factory service center, a DEWALT authorized service center or other qualified service personnel. Always use identical replacement parts.

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- **FOR YOUR SAFETY:** Registering your product will allow us to contact you in the unlikely event a safety notification is required under the Federal Consumer Safety Act.

Register online at www.dewalt.com/register.

Three Year Limited Warranty

DEWALT will repair, without charge, any defects due to faulty materials or workmanship for three years from the date of purchase. This warranty does not cover part failure due to normal wear or tool abuse. For further detail of warranty coverage and warranty repair information,