

**OPERATOR'S MANUAL** 



Cat. No. M18 COS230

# M18 FUEL™ 230MM (9") CUT-OFF SAW W/ ONE-KEY

WARNING To reduce the risk of injury, user must read and understand operator's manual.



#### GENERAL POWER TOOL SAFETY WARNINGS

AWARNING Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below 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.

# WORK AREA SAFETY

- •Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- •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.
- •Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

# **ELECTRICAL SAFETY**

- •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.
- •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.
- •Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- •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.
- •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.
- **-If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of a RCD reduces the risk of electric shock.

# PERSONAL SAFETY

- •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.
- •Use personal protective equipment. Always wear eye protection. Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- •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 energising power tools that have the switch on invites accidents.

- •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.
- •Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- •Dress properly. Do not wear loose clothing or jewelry. Keep your hair and clothing away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- •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.
- •Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.

# POWER TOOL USE AND CARE

- •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.
- •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.
- •Disconnect the plug from the power source and/ or remove the battery pack, if detachable, 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.
- •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.
- •Maintain power tools and accessories. 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.
- •Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- •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.
- •Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

# BATTERY TOOL USE AND CARE

- •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.
- •Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.

- •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.
- 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.
- Do not use a battery pack or tool that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
- •Do not expose a battery pack or tool to fire or excessive temperature. Exposure to fire or temperature above 130°C (265°F) may cause explosion.
- Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions. Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

#### SERVICE

- •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.
- •Never service damaged battery packs. Service of battery packs should only be performed by the manufacturer or authorised service providers.

#### SPECIFIC SAFETY RULES FOR CUT-OFF MACHINE

- •The guard provided with the tool must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator. Position yourself and bystanders away from the plane of the rotating wheel. The guard helps to protect operator from broken wheel fragments and accidental contact with wheel.
- Use only bonded reinforced or diamond cut-off wheels for your power tool. Just because an accessory can be attached to your power tool, it does not assure safe operation.
- •The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their rated speed can break and fly apart.
- •Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel. Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.
- Always use undamaged wheel flanges that are of correct diameter for your selected wheel. Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage.
- •Do not use worn down reinforced wheels from larger power tools. Wheels intended for a larger power tool are not suitable for the higher speed of a smaller tool and may burst.
- •The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately guarded or controlled.

- •The arbour size of wheels and flanges must properly fit the spindle of the power tool. Wheels and flanges with arbour holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- •Do not use damaged wheels. Before each use, inspect the wheels for chips and cracks. If power tool or wheel is dropped, inspect for damage or install an undamaged wheel. After inspecting and installing the wheel, position yourself and bystanders away from the plane of the rotating wheel and run the power tool at maximum no load speed for one minute. Damaged wheels will normally break apart during this test time.
- •Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and shop apron capable of stopping small abrasive or workpiece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
- •Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken wheel may fly away and cause injury beyond immediate area of operation.
- Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring. Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- •Never lay the power tool down until the accessory has come to a complete stop. The spinning wheel may grab the surface and pull the power tool out of your control.
- •Do not run the power tool while carrying it at your side. Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
- •Regularly clean the power tool's air vents. The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
- •Do not operate the power tool near flammable materials. Sparks could ignite these materials.

#### Kickback causes and related warnings

Kickback is a sudden reaction to a pinched or snagged rotating wheel. Pinching or snagging causes rapid stalling of the rotating wheel which in turn causes the uncontrolled power tool to be forced in the direction opposite of the wheel's rotation at the point of the binding. For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entered into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on the direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions.

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

- •Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reactions or kickback forces, if proper precautions are taken.
- •Never place your hand near the rotating accessory. Accessory may kickback over your hand.
- Do not position your body in line with the rotating wheel. Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.
- Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
- Do not attach a saw chain, woodcarving blade, segmented diamond wheel with a peripheral gap greater than 10 mm or toothed saw blade. Such blades create frequent kickback and loss of control.
- •Do not "jam" the wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut. Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.
- •When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the wheel from the cut while the wheel is in motion otherwise kickback may occur. Investigate and take corrective action to eliminate the cause of wheel binding.
- •Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut. The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.
- Support panels or any oversized workpiece to minimise the risk of wheel pinching and kickback. Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.
- Use extra caution when making a "pocket cut" into existing walls or other blind areas. The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.
- •Use only a single wheel. Multiple wheels can wear unevenly, resulting in kickback and could break and fly apart causing personal injury.
- WARNING When working in dusty situations, wear appropriate respiratory protection or use an OSHA compliant dust extraction solution.
- •Always use common sense and be cautious when using tools. It is not possible to anticipate every situation that could result in a dangerous outcome. Do not use this tool if you do not understand these operating instructions or you feel the work is beyond your capability; contact *MILWAUKEE*<sup>®</sup> Tool or a trained professional for additional information or training.
- Maintain labels and nameplates. These carry important information. If unreadable or missing, contact a MILWAUKEE<sup>®</sup> service facility for a replacement.

AWARNING Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- ·lead from lead-based paint
- •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.

# ADDITIONAL BATTERY SAFETY RULES

AWARNING To reduce the risk of fire, personal injury, and product damage due to a short circuit, never immerse your tool, battery pack or charger in fluid or allow a fluid to flow inside them. Corrosive or conductive fluids, such as seawater, certain industrial chemicals, and bleach or bleach-containing products, etc., can cause a short circuit.

## SYMBOLOGY

Volts

# Direct Current

n<sub>o</sub> XXXX min<sup>-1</sup> No Load Revolutions per Minute (RPM)



Read operator's manual

Always wear eye protection. Use appropriate hearing and respiratory protection.



Regulatory Compliance Mark (RCM). This product meets applicable regulatory requirements.

Do not dispose of electric tools together with household waste material. Electric tools and electronic equipment that have reached the end their life must be collected of separately and returned to an environmentally compatible recycling facility.

#### SPECIFICATIONS

Cat. No.	M18 COS230
Volts	18V DC
Battery Type	M18™
Charger Type	M18™
Recommended Ambient	
Operating Temperature	
No Load RPM	6600
Wheel Arbor Hole Size	
Maximum Wheel Size	
Minimum Wheel Rating	
Wheel TypeDiamond or bor	ided reinforced
Max Cutting Depth	
Weight	4.7kg
Water Supply Inlet	90 psi (max)

# FUNCTIONAL DESCRIPTION



- ONE-KEY™ indicator
- 8. Bail handle
- 2. Water supply valve
- Scrench storage
- Rear handle
- Trigger
- Battery door
- 9. Water supply tube
- 10. Wheel guard handle 3. Quick connect fitting 11. Spindle lock access
  - hole
  - Battery door button
  - 13. Load indicator light
  - 14. Hex wrench storage

## ASSEMBLY

AWARNING Recharge only with the charger specified for the battery. For specific charging instructions, read the operator's manual supplied with your charger and battery.

## Removing/Inserting the Battery

To remove the battery, press the battery door button and open the battery door. Push in the release buttons and pull the battery pack away from the tool.

AWARNING Always remove battery pack before changing or removing accessories.

To insert the battery, press the battery door button and open the battery door. Slide the pack into the body of the tool. Make sure it latches securely into place. Close battery door.

AWARNING Only use accessories specifically recommended for this tool. Others may be hazardous.

# Adjusting the Guard

This tool is shipped with a guard. Always use a guard when operating this tool.

To adjust the guard, push the wheel guard handle forward or pull it back to move the guard to the desired location. WARNING! Always adjust the guard to provide the operator with maximum protection while operating

Installing/Removing Cut-Off Wheels AWARNING To reduce the risk of injury, the operator should be instructed in the use, care and protection of cut-off wheels. Use only the proper wheel made for this tool. DO NOT USE ANY TYPE OF SAW BLADE, USE ONLY TYPE "1" ABRASIVE and Diamond WHEELS.

- 1. To install the cut-off wheel, remove the battery pack and place the tool on a firm surface.
- 2. Slide the inner flange, cut-off wheel and outer flange over the spindle.



While holding the spindle in place with the hex wrench (1), install and tighten the spindle bolt securely with the scrench (2).



- 4. To **remove** the cut-off wheel, hold the spindle lock in place with the hex wrench and loosen the spindle bolt with the scrench.
- 5. Remove the spindle bolt, outer flange and cut-off wheel.

#### **ONE-KEY™**

To learn more about the ONE-KEY<sup>™</sup> function-ality for this tool, please reference the Quick Start guide included with this product or go to milwaukeetool.com.au/ONE-KEY. To download the ONE-KEY <sup>™</sup> app, visit the App Store or Google Play from your smart device.

ONE-KEY™ Indicator		
Solid Blue	Wireless mode is active and ready to be configured via the ONE-KEY <sup>™</sup> app.	
Blinking Blue	Tool is actively communicating with the ONE-KEY <sup>™</sup> app.	
Blinking Red	Tool is in security lockout and can be unlocked by the owner via the ONE-KEY™ app.	

## OPERATION

AWARNING To reduce the risk of injury, always wear proper eye protection marked to comply with ANSI Z87.1.

When working in dusty situations, wear appropriate respiratory protection or use an OSHA compliant dust extraction solution.

#### Starting/Stopping the Tool

To **start** the tool, grasp the bail and rear handles firmly. Push the lock-off button on the trigger forward and squeeze the trigger.

To **stop** the tool, release the trigger. Make sure the tool comes to a complete stop before laying down the tool.

## Wheel Selection

AWARNING use "Type 1" abrasive and diamond cutting wheels with at least 1.9mm (0.075") thickness which is rated with a maximum safe operating speed at least 6600 RPM. Read safety information supplied with cut-off wheel. Always wear proper safety equipment, including a dust mask.

Cutting Surface	Wheel Type
Non-Metallic	Silicone carbide abrasive
Materials	cut-off wheel
Metallic	Aluminum oxide abrasive
Materials	cut-off wheel
Masonry Materials	Diamond wheel with water supply or silicone cardbide abrasive cut-off wheel

#### Connecting to a Hose

A water connection is available on the tool to cool the wheel and reduce the formation of dust. The water connection should be used on all concrete cutting applications.

To **connect** the water, attach the end of a hose to the tool using the quick connect fitting.

To **use** the water, open the water supply valve by turning it in line with the water supply tube. Turn on the water supply and allow the water to run.

**NOTE:** For best results, allow the water to coat the entire cutting wheel before operation.

#### Making a Cut

- 1. If performing a wet cut, connect the hose to the tool.
- 2. Insert the battery pack.
- 3. Start the tool. Allow the tool to reach full speed and then slowly lower the wheel into the workpiece.

WARNING! If the wheel pushes too hard into the workpiece, the load indicator light will turn on. If this occurs, lighten the pressure of the wheel into the workpiece. NOTE: While cutting, maintain a firm grip. Do not force the cut-off machine through the workpiece. Forcing a cut-off machine can cause kickback. Frequently clean dust from air vents and guards.



4. When the cut is finished, always allow the wheel to come to a complete stop. Never remove the cut-off machine from a cut while the wheel is moving.

#### **Electric Brake**

The brake engages when the trigger is released, causing the wheel to stop and allowing you to proceed with your work. Generally, the wheel stops within three seconds, depending on the size of the wheel. If the braking time significantly increases, or begins missing completely, the tool needs servicing by an authorised *MILWAUKEE*<sup>®</sup> service facility. The brake is not a substitue for the guard, and you must always wait for the wheel to stop completely before laying down the tool.

## MAINTENANCE

**AWARNING** To reduce the risk of injury, always unplug the charger and remove the battery pack from the charger or tool before performing any maintenance. Never disassemble the tool, battery pack or charger. Contact a *MILWAUKEE*<sup>®</sup> service facility for ALL repairs.

#### Maintaining Tool

Keep your tool, battery pack and charger in good repair by adopting a regular maintenance program. Inspect your tool for issues such as undue noise, misalignment or binding of moving parts, breakage of parts, or any other condition that may affect the tool operation. Return the tool, battery pack, and charger to a *MILWAUKEE*<sup>®</sup> service facility for repair. After six months to one year, depending on use, return the tool, battery pack and charger to a *MILWAUKEE*<sup>®</sup> service facility for inspection.

If the tool does not start or operate at full power with a fully charged battery pack, clean the contacts on the battery pack. If the tool still does not work properly, return the tool, charger and battery pack, to a MILWAUKEE® service facility for repairs.

#### **ONE-KEY™**

AWARNING Chemical Burn Hazard. This device contains a



ternal burns and lead to death in as little as 2 hours if swallowed or enters the body. Always secure the battery cover. If it does not close securely, stop using the device, remove the batteries, and keep it away from children. If you think batteries may have been swallowed or entered the body, seek immediate medical attention.

#### Internal Batterv

An internal battery is used to facilitate full ONE-KEY™ functionality. The internal battery is located inside of the battery door.

**NOTE:** Make sure the tool is dry before replacing the battery.

- To replace the battery:
- Remove the battery pack.
- 2. Remove the screw(s) and open the battery door.
- 3. Remove the old battery, keep it away from children, and dispose of it properly.
- Insert the new battery (3V CR2032), with the positive side facing up.
- 5. Close the battery door and tighten the screw securely.

AWARNING To reduce the risk of personal in-jury and damage, never immerse your tool, battery pack or charger in liquid or allow a liquid to flow inside them.

#### Cleaning

Clean dust and debris from vents. Keep handles clean, dry and free of oil or grease. Use only mild soap and a damp cloth to clean, since certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include gasoline, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia and household detergents containing ammonia. Never use flammable or combustible solvents around tools.

#### Repairs

For repairs, return the tool, battery pack and charger to the nearest service centre.

## ACCESSORIES

AWARNING Use only recommended accesso-ries. Others may be hazardous.

For a complete listing of accessories, go online to milwaukeetool.com.au/milwaukeetool.co.nz or contact a distributor.

# WARRANTY - AUSTRALIA and NEW ZEALAND

Please refer to Australian and New Zealand warranty supplied with tool. This warranty applies only to product sold in Australia and New Zealand.

# SERVICE - AUSTRALIA and NEW ZEALAND

*MILWAUKEE*<sup>®</sup> prides itself in producing a premium quality product that is Nothing But Heavy Duty<sup>®</sup>. Your satisfaction with our products is very important to us! If you encounter any problems with the operation of this tool, please contact your authorised *MILWAUKEE*<sup>®</sup> dealer.

For a list of *MILWAUKEE*<sup>®</sup> dealers, guarantee or service agents please contact *MILWAUKEE*<sup>®</sup> Customer Service or visit our website.

(Australia Toll Free Telephone Number 1300 645 928) (New Zealand Toll Free Telephone Number 0800 645 928) or visit milwaukeetool.com.au/milwaukeetool.co.nz.

> Milwaukee Electric Tool Corporation 13135 West Lisbon Road, Brookfield, Wisconsin U.S.A. 53005

## Milwaukee Tool (Australia)

21 Kelletts Road, Rowville, VIC 3178 Melbourne, Australia

## Milwaukee Tool (New Zealand)

274 Church Street, Penrose, Auckland, 1061, New Zealand

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