

701 East Joppa Road, Baltimore, MD 21286 • 20 Fletcher Road, Mooroolbark, VIC 3138 Australia (APR04) Form No. 624424-00 DC410-XE Copyright © 2004

The following are trademarks for one or more DEWALT power tools: the yellow and black color scheme; the "D" shaped air intake grill; the array of pyramids on the handgrip; the kit box configuration; and the array of lozenge-shaped humps on the surface of the tool.

# SAFETY INSTRUCTIONS FOR POWER TOOLS

When using power tools, always observe the safety regulations applicable in your country to reduce the risk of fire, electric shock and personal injury. Read the following safety instructions before attempting to operate this product. Keep these instructions in a safe place.

# General Safety Rules

A WARNING! Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term "power tool" in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool

# SAVE THESE INSTRUCTIONS

# 1. WORK AREA

- a. Keep work area clean and well lit. Cluttered and 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
- 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.

- 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 safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c. Avoid accidental starting. Ensure the switch is in the off position before plugging in. Carrying power tools with your finger on the switch or plugging in 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
- f. Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery 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 con**nected and properly used.** Use of these devices can reduce dust related hazards.

# 4. POWER TOOL USE AND CARE

in unexpected situations.

- 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 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 tools 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

g. Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, 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 situa-

#### 5. BATTERY TOOL USE AND CARE

- a. Ensure the switch is in the off position before inserting battery pack. Inserting the battery pack into power tools that have the switch on invites accidents.
- b. 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.
- c. Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- d. 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.
- e. 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.

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.

## Electrical Safety

The electric motor has been designed for one voltage only. Always check that the power supply corresponds to the voltage on the rating plate. 240 V AC means your saw will operate on alternating current. As little as 10% lower voltage can cause loss of power and can result in overheating. All DEWALT tools are factory tested; if this tool does not operate, check the power supply. Your DEWALT tool is double insulated, therefore no earth wire is required.

- . Young children and the infirm. This appliance (Cut-Off Tool) is not intended for use by young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with this appli-
- Replacement of the supply cord. If the supply cord is damaged, it must be replaced by the manufacturer or an authorised DEWALT Service Centre in order to avoid a hazard.

#### Extension Cords

**ACAUTION:** Use only extension cords that are approved by the country's Electrical Authority. Before using extension cords, inspect them for loose or exposed wires, damaged insulation and defective fittings. Replace the cord if necessary.

#### Additional Safety Instructions for Cut-Off Tools

- Always use proper guard with grinding wheel. A guard protects operator from broken wheel fragments and wheel
- Accessories must be rated for at least the speed recommended on the tool warning label. Wheels and other accessories running over their rated speed can fly apart and cause injury. Accessory ratings must always be above tool speed as shown on tool nameplate
- · Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
- Do not use Type 11 (flaring cup) wheels on this tool. Using inappropriate accessories can result in injury
- · Before using, inspect recommended accessory for cracks or flaws. If such a crack or flaw is evident, discard the accessory. The accessory should also be inspected whenever you think the tool may have been dropped. Flaws may cause wheel breakage.
- When starting the tool with a new or replacement wheel, or a new or replacement wire brush installed, hold the tool in a well protected area and let it run for one minute. If the wheel has an undetected crack or flaw, it should burst in less than one minute. If the wire brush has loose wires, they will be detected. Never start the tool with a person in line with the wheel. This includes the operator.
- · Avoid bouncing the wheel or giving it rough treatment. If this occurs, stop the tool and inspect the wheel for cracks
- Direct sparks away from operator, bystanders or flammable materials. Sparks may be produced while using a sander or grinder. Sparks may cause burns or start fires.
- Always use side handle. Tighten the handle securely. The side handle should always be used to maintain control of the tool at all times.
- · Clean out your tool often, especially after heavy use. Dust and grit containing metal particles often accumulate on interior

A CAUTION: When not in use, place tool on its side on a stable surface 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

**ACAUTION:** Use extra care when working into a corner or edge because a sudden, sharp movement of the tool may be experienced when the wheel or other accessory contacts a secondary surface or a surface edge ACAUTION: Wear appropriate personal hearing protection during use. Under some conditions and duration of use,

noise from this product may contribute to hearing loss. **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 paints.
- · crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber (CCA).

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.

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. A WARNING: Use of this tool can generate and/or disburse dust, which may cause serious and permanent respiratory or

Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities.

other injury. Always use NIOSH/OSHA approved respiratory protection appropriate for the dust exposure. Direct particles

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

Vvolts	Aamperes
Hzhertz	Wwatts
minminutes	$\sim$ alternating current
====direct current	n <sub>0</sub> no load speed
☐Class II Construction	earthing terminal
Asafetv alert symbol	/minrevolutions per minute

# Important Safety Instructions for Battery Packs

Your tool uses either a 12, 14.4 or 18 Volt DEWALT battery pack. When ordering replacement battery packs, be sure to packs.

NOTE: Your tool will accept either standard or Extended Run Time battery packs. However, be sure to select proper voltage. Batteries slowly lose their charge when they are not on the charger, the best place to keep your battery is on the charger at all

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

# READ ALL INSTRUCTIONS

- . Do not incinerate the battery pack even if it is severely damaged or is completely worn out. The battery pack
- · A small leakage of liquid from the battery pack cells may occur under extreme usage or temperature conditions. This does not indicate a failure. However, if the outer seal is broken and this leakage gets on your skin:
  - a. Wash guickly with soap and water.
  - b. Neutralize with a mild acid such as lemon juice or vinegar.
  - c. If battery liquid gets into your eyes, flush them with clean water for a minimum of 10 minutes and seek immediate medical attention. (Medical note: The liquid is 25–35% solution of potassium hydroxide.)
- Charge the battery packs only in DeWALT chargers.
- DO NOT splash or immerse in water or other liquids.

NOTE: Your tool uses a 18 Volt DeWALT battery pack. When ordering DeWALT replacement battery packs, be sure to include catalog number and voltage

 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).

A DANGER: Never attempt to open the battery pack for any reason. If battery pack case is cracked or damaged, do not insert into charger. Electric shock or electrocution may result. Damaged battery packs should be returned to service center

NOTE: Battery storage and carrying caps are provided for use whenever the battery is out of the tool or charger. Remove cap before placing battery in charger or tool.

A WARNING: Do not store or carry battery so that metal objects can contact exposed battery terminals. For example, do not place battery in aprons, pockets, tool boxes, product kit boxes, drawers, etc. with loose nails, screws, keys, etc. without battery cap. Without cap in place, battery could short circuit causing fire or burns or damage to battery.



#### The RBRC™ Seal

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

RBRC™ in cooperation with DEWALT and other battery users, has established programs in the United States to facilitate the collection of spent nickel-cadmium batteries. Help protect our environment and conserve natural resources by returning the spent nickel-cadmium battery 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



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

· Before using charger, read all instructions and cautionary markings on charger, battery pack, and product using

A DANGER: 240 volts are present at charging terminals. Do not probe with conductive objects. Electric shock or electrocution may result

A WARNING: Do not allow any liquid to get inside charger. Electric shock may result.

**ACAUTION:** To reduce the risk of injury, charge only DEWALT nickel cadmium rechargeable batteries. Other types of batteries may burst causing personal injury and damage.

**ACAUTION:** Under certain conditions, with the charger plugged in to the power supply, the exposed charging contacts inside the charger can be shorted by foreign material. Foreign materials of a conductive nature such as, but not limited to, 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 charger before attempting

- 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 charger to rain or snow.
- · Pull by plug rather than cord when disconnecting charger. This will reduce risk of damage to electric plug and cord.
- Make sure that 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.
- 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. When using more than one extension to make up the total length, be sure each individual extension contains at least the minimum wire size.

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		necommend	icu iviiiiiiiiiuiii vv	HE SIZE IUI EXIE	lisiuli Gulus		
Total Len	gth of Cord						
25 ft.	50 ft.	75 ft.	100 ft.	125 ft.	150 ft.	175 ft.	
7.6 m	15.2 m	22.9 m	30.5 m	38.1 m	45.7 m	53.3 m	
Wire Size	: AWG						
18	18	16	16	14	14	12	
• Do not nic	ann any ahiaat a	n ton of oborgo	r or place the c	harger on a coff	curface that min	ht block the venti	10

- tion 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 charger with damaged cord or plug have them replaced immediately.
- · Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way. Take
- Do not disassemble 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 2 chargers together.
- . The charger is designed to operate on standard household electrical power (240 Volts). Do not attempt to use it on any other voltage. This does not apply to the vehicular charger.

## Using Automatic Tune-Up™ Mode

The Automatic Tune-Up™ Mode equalizes or balances the individual cells in the battery pack allowing it to function at peak capacity. Battery packs should be tuned up weekly or after 10 charge/discharge cycles or whenever the pack no longer delivers the same amount of work. To use the Automatic Tune-Up™, place the battery pack in the charger and leave it for at least 8 hours. The charger will cycle through the following modes.

- 1. The red light will blink continuously indicating that the 1-hour charge cycle has started.
- 2. When the 1-hour charge cycle is complete, the light will stay on continuously and will no longer blink. This indicates that the pack is fully charged and can be used at this time.
- 3. Whenever the pack is left in the charger after the initial 1-hour charge, the charger will begin the Automatic Tune-Up™ Mode. This mode continues up to 8 hours or until the individual cells in the battery pack are equalized. The battery pack is ready for use and can be removed at any time during the Tune-Up™ Mode.
- 4. Once the Automatic Tune-Up™ Mode is complete the charger will transition to a maintenance charge; the indicator light shuts off when the automatic Tune-Up™ Mode is complete.

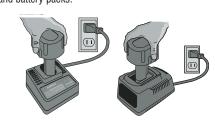
# SAVE THESE INSTRUCTIONS FOR FUTURE USE

# Chargers

Your tool uses a 12.0, 14.4, or 18.0 Volt DeWALT Charger. Your battery can be charged in DeWALT 1 Hour Chargers, 15 Minute Chargers or Vehicular 12 volt charger. Be sure to read all safety instructions before using your charger. Consult the chart on the back cover of this manual for compatibility of chargers and battery packs.

# Charging Procedure (Fig. 1)

- 1. Plug the charger into an appropriate outlet.
- 2. Insert the battery pack into the 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



ACAUTION: 240 volts present at charging terminals. Do not probe with conductive objects. Danger of electric shock or electrocution. Keep battery door closed and latched at all times.

# Indicator Light Operation



# Charge Indicators

Some chargers are designed to detect certain problems that can arise with battery packs. Problems are indicated by the red light flashing at a fast rate. If this occurs, reinsert battery pack into the charger. If the problem persists, try a different battery pack to determine if the charger is OK. 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 tested at an authorized service center.

# **HOT/COLD PACK DELAY**

Some chargers have a Hot/Cold Pack Delay feature: when the charger detects a battery that is hot, it automatically starts a Hot Pack 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 Pack Delay mode.

Some chargers have a Problem Power Line 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.

# LEAVING THE BATTERY PACK IN THE CHARGER

The charger and battery pack can be left connected with the red light glowing indefinitely. The charger will keep the battery pack fresh and fully charged.

NOTE: A battery pack will slowly lose its charge when kept out of the charger. If the battery pack has not been kept on maintenance charge, it may need to be recharged before use. A battery pack may also slowly lose its charge if left in a charger that is not plugged into an appropriate AC source.

WEAK BATTERY PACKS: Chargers can also detect a weak battery. Such batteries are still usable but should not be expected to perform as much work. In such cases, about 10 seconds after battery insertion, the charger will beep rapidly 8 times to indicate a weak battery condition. The charger will then go on to charge the battery to the highest capacity possible.

## 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  $(+4.5^{\circ}\text{C})$ , or above  $+105^{\circ}\text{F}$   $(+40.5^{\circ}\text{C})$ . This is important and will prevent serious damage to the battery pack.
- 2. The charger and battery pack may become warm to touch while charging. This is a normal condition, and does not indicate a problem.
- 3. If the battery pack does not charge properly:
  - a. Check current at 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 charger and battery pack to a location where the surrounding air temperature is approximately 65°F 75°F
  - d. If charging problems persist, take the tool, battery pack and charger to your local service center.
- 4. 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 affect on the battery pack.
- 5. Under certain conditions, with the charger plugged into the power supply, the exposed charging contacts inside the charger can be shorted by foreign material. Foreign materials of a conductive nature such as, but not limited to, 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 charger before attempting to clean.
- 6. Do not freeze or immerse charger in water or any other liquid.

A WARNING: Don't allow any liquid to get inside charger. Electric shock may result. 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 unin-

**ACAUTION:** 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

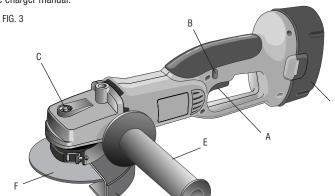
FIG. 2

# Installing and Removing the Battery Pack (Fig. 2)

NOTE: Make sure your battery pack is fully charged.

To install the battery pack into the tool handle, align the base of the tool with the notch inside the tool's handle and slide the battery pack firmly into the handle until you hear the lock snap into place.

To remove the battery pack from the tool, press the release buttons and firmly pull the battery pack out of the tool handle. Insert it into the charger as described in the charger manual.



#### **COMPONENTS (FIG. 3)**

- A. Trigger Switch B. Lock-Off Button
- C. Spindle Lock Button
- D. Spindle (not shown)
- E. Side Handle
- Abrasive Wheel Unthreaded Backing Flange (not shown)
- H. Threaded Clamp Nut (not shown)
- Guard (Type 1, Type 27)
- Batterv

# **ASSEMBLY AND ADJUSTMENTS**

# Attaching Side Handle

The side handle can be fitted to either side of the gear case in the threaded holes. Before using the tool, check that the handle is tightened securely.

To improve user comfort, the gear case will rotate 90° for cutting operations.

# Rotating the Gear Case

**ACAUTION:** Turn off tool and remove battery before making any adjustments or removing or installing attachments or accessories.

- 1. Remove the four corner screws attaching the gear case to motor housing
- 2. Without separating the gear case from motor housing, rotate the gear case head to desired position.

**NOTE:** If the gear case and motor housing become separated by more than 3.31mm (1/8"), the tool must be serviced and reassembled by a DEWALT service center. Failure to have the tool serviced may cause brush, motor and bearing failure.

3. Re-install screws to attach the gear case to the motor housing. Tighten screws to 88.96 NM (20 in-lbs.) torque. Overtightening could cause screws to strip.

# **ACCESSORIES**

It is important to choose the correct guards, backing pads and flanges to use with grinder accessories. See page 3 for information on choosing the correct accessories.

ACAUTION: Accessories must be rated for at least the speed recommended on the tool warning label. Wheels and other accessories running over their rated accessory speed may fly apart and cause injury. Threaded accessories must have a 14mm x 2 (5/8"-11) hub. Every unthreaded accessory must have a 22mm (7/8") arbor hole. If it does not, it may have been designed for a circular saw. Use only the accessories shown on page 3 of this manual. Accessory ratings must always be above tool speed as shown on tool nameplate.

# Mounting Guard

# **MOUNTING AND REMOVING GUARD**

 $\hat{m A}$  CAUTION: Turn off tool and remove battery before making any adjustments or removing or installing attachments or accessories.

A CAUTION: Guards must be used with all grinding wheels, sanding flap discs, wire brushes, and wire wheels. The tool may be used without a guard only when sanding with conventional sanding discs. DEWALT model DC410 is provided with a guard intended for use with depressed center wheels (Type 27) and hubbed grinding wheels (Type 27). The same guard is designed for use with sanding flap discs (Type 27 and 29) and wire cup brushes. Grinding and cutting with wheels other than Type 27 and 29 require different accessory guards included with tool. A Type 1 guard is provided for use with a Type 1 wheel. Mounting instructions for these accessory guards are included in the accessory package.

- 1. Open the guard latch (J), and align the arrow on the guard (K) with the arrow on the hub (L). This will align the lugs on the guard with the slots on the gear case cover.
- 2. Push the guard down until the guard lugs engage and rotate freely in the groove on the gear
- 3. With the guard latch open, rotate the guard (I) into the desired working position. The guard body should be positioned between the spindle and the operator to provide maximum oper-
- 4. Close the guard latch to secure the guard on the gear case. You should not be able to rotate the guard by hand when the latch is closed. Do not operate the grinder with a loose guard or the clamp lever in open position.
- 5. To remove the guard, open the guard latch, rotate the guard so that the arrows are aligned and pull up on the guard. NOTE: The guard is pre-adjusted to the diameter of the gear case hub at the factory. If, after

a period of time, the guard becomes loose, tighten the adjusting screw (M) with clamp lever in the closed position with guard installed on the tool.

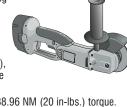
**ACAUTION:** Do not tighten the adjusting screw with the clamp lever in the open position. Undetectable damage to the guard or the mounting hub may result. **ACAUTION:** If the guard cannot be tightened by the adjusting clamp, do not use the tool and take the tool and guard to

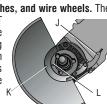
a service center to repair or replace the guard. NOTE: Edge grinding and cutting can be performed with Type 27 wheels designed and specified for this purpose; 6.35mm

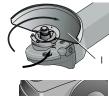
(1/4") thick wheels are designed for surface grinding while 3.31mm (1/8") wheels are designed for edge grinding. Cutting can also be performed by using a Type 1 wheel and a Type 1 guard.

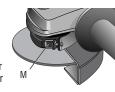




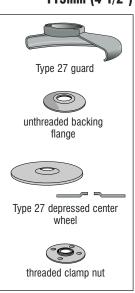


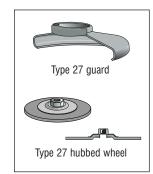


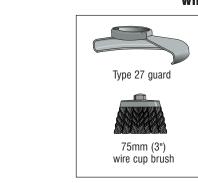


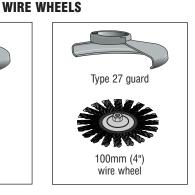


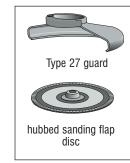
#### 115mm (4 1/2") GRINDING WHEELS

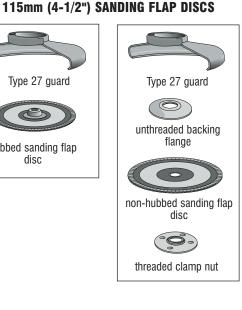




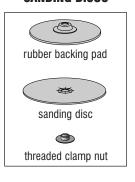


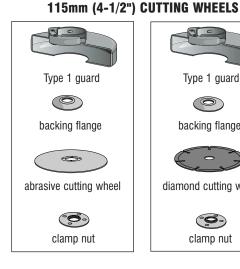




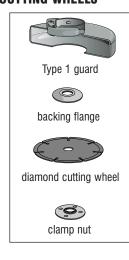


#### **SANDING DISCS**





UNLOCKED



# **OPERATION**

#### Switch (Fig. 4)

#### **LOCK-OFF BUTTON AND TRIGGER SWITCH**

Your cut-off tool is equipped with a lock-off button (B).

To lock the trigger switch, press the lock-off button as shown in Figure 3. When the lock-off button is depressed to the lock icon, the unit is locked.

Always lock the trigger switch when carrying or storing the tool to eliminate unintentional starting.

To unlock the trigger switch, press the lock-off button. When the lock-off button is depressed to the unlock icon, the unit is unlocked. The lock-off button is colored red to indicate when the switch is in its unlocked position.

Pull the trigger switch (A) to turn the motor ON. Releasing the trigger switch turns the motor OFF.

NOTE: This tool has no provision to lock the switch in the ON position, and should never be locked ON by any other

A CAUTION: Hold the side handle and body of the tool firmly to maintain control of the tool at start up and during use and until the wheel or accessory stops rotating. Make sure the wheel has come to a complete stop before laying the tool down. ACAUTION: Allow the tool to reach full speed before touching tool to the work surface. Lift the tool from the work surface before turning the tool off.

FIG. 4

## SPINDLE LOCK

The spindle lock pin is provided to prevent the spindle from rotating when installing or removing wheels. Operate the spindle lock pin only when the tool is turned off, the battery is removed, and the wheel has come to a complete stop.

ACAUTION: Do not engage the spindle lock while the tool is operating. Damage to the tool will result and attached accessory may spin off possibly resulting in injury.

To engage the lock, depress the spindle lock button and rotate the spindle until you are unable to rotate the spindle further.

#### Mounting and Using Depressed Center Grinding Wheels and Sanding Flap Discs MOUNTING AND REMOVING HUBBED WHEELS

ACAUTION: Turn off tool and remove battery before making any adjustments or removing or installing attachments or accessories

Hubbed wheels install directly on the 14mm x 2 (5/8"-11) threaded spindle.

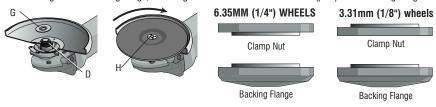
- 1. Thread the wheel on the spindle by hand.
- 2. Depress the spindle lock button and use a wrench to tighten the hub of the wheel.
- 3. Reverse the above procedure to remove the wheel

**ACAUTION:** Failure to properly seat the wheel before turning the tool on may result in damage to the tool or the wheel. MOUNTING NON-HUBBED WHEELS

A CAUTION: Turn off tool and remove battery before making any adjustments or removing or installing attachments or accessories

Depressed center Type 27 grinding wheels must be used with included flanges. See 2 of this manual for more infor-

- 1. Install the unthreaded backing flange (G) on spindle (D) with the raised section (pilot) against the wheel.
- 2. Place wheel against the backing flange, centering the wheel on the raised section (pilot) of the backing flange.



- 3. While depressing the spindle lock button, thread the clamp nut (H) on spindle. If the wheel you are installing is more than 3.31mm (1/8") thick, place the threaded clamp nut on the spindle so that the raised section (pilot) fits into the center of the wheel. If the wheel you are installing is 3.31mm (1/8") thick or less, place the threaded clamp nut on the spindle so that the raised section (pilot) is not against the wheel.
- 4. While depressing the spindle lock button, tighten the clamp nut with a wrench.
- 5. To remove the wheel, depress the spindle lock button and loosen the threaded clamp nut with a wrench.

NOTE: If the wheel spins after the clamp nut is tightened, check the orientation of the threaded clamp nut. If a thin wheel is installed with the pilot on the clamp nut against the wheel, it will spin because the height of the pilot prevents the clamp nut from holding the wheel.

# Surface Grinding with Grinding Wheels

- 1. Allow the tool to reach full speed before touching the tool to the work surface.
- 2. Apply minimum pressure to the work surface, allowing the tool to operate at high speed. Grinding rate is greatest when the tool operates at high speed.
- 3. Maintain a 20° to 30° angle between the tool and work surface.
- 4. Continuously move the tool in a forward and back motion to avoid creating gouges in the work surface.
- before laying it down.

# 5. Remove the tool from work surface before turning tool off. Allow the tool to stop rotating

# **Edge Grinding with Grinding Wheels**

**A CAUTION:** Wheels used for cutting and edge grinding may break or kick back if they bend or twist while the tool is being used to do cut-off work or deep grinding. To reduce the risk of serious injury, limit the use of these wheels with a standard Type 27 guard to shallow cutting and notching [less than 12.7mm (1/2") in depth]. The open side of the guard must be positioned away from the operator. For deeper cutting with a Type 1 cut-off wheel, use a closed Type 1 guard. See page 3 for more information.

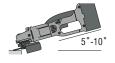
- 1. Allow the tool to reach full speed before touching the tool to the work surface.
- 2. Apply minimum pressure to the work surface, allowing the tool to operate at high speed. Grinding rate is greatest when the tool operates at high speed.
- 3. Position yourself so that the open-underside of the wheel is facing away from you

- 4. Once a cut is begun and a notch is established in the workpiece, do not change the angle of the cut. Changing the andle will cause the wheel to bend and may cause wheel breakage. Edge grinding wheels are not designed to withstand side pressures caused by bending.
- 5. Remove the tool from the work surface before turning the tool off. Allow the tool to stop rotating before laying it

A WARNING: Do not use edge grinding/cutting wheels for surface grinding applications because these wheels are not designed for side pressures encountered with surface grinding. Wheel breakage and injury may result.

# Surface Finishing with Sanding Flap Discs

- 1. Allow the tool to reach full speed before touching the tool to the work surface.
- 2. Apply minimum pressure to work surface, allowing the tool to operate at high speed. Sanding rate is greatest when the tool operates at high speed.
- 3. Maintain a 5° to 10° angle between the tool and work surface.
- 4. Continuously move the tool in a forward and back motion to avoid creating gouges in
- 5. Remove the tool from work surface before turning tool off. Allow the tool to stop rotating before laying it down.



#### Mounting Sanding Backing Pads

A CAUTION: Turn off tool and remove battery before making any adjustments or removing or installing attachments or accessories.

NOTE: Guard may be removed when using sanding backing pads

A CAUTION: Proper guard must be reinstalled for grinding wheel, sanding flap disc, wire brush or wire wheel applications after sanding applications are complete.

- 1. Place or appropriately thread backing pad (N) on the spindle.
- 2. Place the sanding disc (0) on the backing pad (N).
- 3. While depressing spindle lock, thread clamp nut (P) on spindle, piloting the raised hub on the clamp nut into the center of sanding disc and backing pad.
- 4. Tighten the clamp nut by hand. Then depress the spindle lock button while turning the sanding disc until the sanding disc and clamp nut are snug.
- 5. To remove the wheel, grasp and turn the backing pad and sanding pad while depressing the spindle lock button.

# **Using Sanding Backing pads**

Choose the proper grit sanding discs for your application. Sanding discs are available in various grits. Coarse grits yield faster material removal rates and a rougher finish. Finer grits yield slower material removal and a smoother finish. Begin with coarse grit discs for fast, rough material removal. Move to a medium grit paper and finish with a fine grit disc for optimal finish.

> Coarse ......16 - 30 grit Medium ......36 - 80 grit Fine Finishing ......100 - 120 grit

- Very Fine Finishing .... 150 180 grit 1. Allow the tool to reach full speed before touching tool to the work surface.
- 2. Apply minimum pressure to work surface, allowing the tool to operate at high speed. Sanding rate is greatest when the tool operates at high speed.
- 3. Maintain a 5° to 15° angle between the tool and work surface. The sanding disc should contact approximately one inch of work surface.
- 4. Move the tool constantly in a straight line to prevent burning and swirling of work surface. Allowing the tool to rest on the work surface without moving, or moving the tool in a circular motion causes burning and swirling marks on the work surface.
- 5. Remove the tool from work surface before turning tool off. Allow the tool to stop rotating before laying it down.

# Precautions To Take When Sanding Paint

- 1. Sanding of lead based paint is NOT RECOMMENDED due to the difficulty of controlling the contaminated dust. The greatest danger of lead poisoning is to children and pregnant women.
  - 2. Since it is difficult to identify whether or not a paint contains lead without a chemical analysis, we recommend the following precautions when sanding any paint:

# PERSONAL SAFFTY

is completed.

- 1. No children or pregnant women should enter the work area where the paint sanding is being done until all clean up
- 2. A dust mask or respirator should be worn by all persons entering the work area. The filter should be replaced daily or whenever the wearer has difficulty breathing.
- NOTE: Only those dust masks suitable for working with lead paint dust and fumes should be used. Ordinary painting masks do not offer this protection. See your local hardware dealer for the proper N.I.O.S.H. approved mask.
- 3. NO EATING, DRINKING or SMOKING should be done in the work area to prevent ingesting contaminated paint particles. Workers should wash and clean up BEFORE eating, drinking or smoking. Articles of food, drink, or smoking should not be left in the work area where dust would settle on them.

# **ENVIRONMENTAL SAFETY**

- 1. Paint should be removed in such a manner as to minimize the amount of dust generated.
- 2. Areas where paint removal is occurring should be sealed with plastic sheeting of 4 mils thickness.
- 3. Sanding should be done in a manner to reduce tracking of paint dust outside the work area.

# **CLEANING AND DISPOSAL**

- 1. All surfaces in the work area should be vacuumed and thoroughly cleaned daily for the duration of the sanding project. Vacuum filter bags should be changed frequently.
- 2. Plastic drop cloths should be gathered up and disposed of along with any dust chips or other removal debris. They should be placed in sealed refuse receptacles and disposed of through regular trash pick-up procedures. During clean up, children and pregnant women should be kept away from the immediate work area.
- 3. All toys, washable furniture and utensils used by children should be washed thoroughly before being used again.

# Mounting and Using Wire Brushes and Wire Wheels

Wire cup brushes or wire wheels screw directly on the grinder spindle without the use of flanges. Use only wire brushes or wheels provided with a  $14 \text{mm} \times 2$  (5/8" -11) threaded hub. A Type 27 guard is required when using wire brushes and wheels.

A CAUTION: Wear work gloves when handling wire brushes and wheels. They can become sharp.

**ACAUTION:** Wheel or brush must not touch guard when mounted or while in use. Undetectable damage could occur to the accessory, causing wires to fragment from accessory wheel or cup.

#### Mounting Wire Cup Brushes and Wire Wheels

 $\hat{\mathbf{A}}$  CAUTION: Turn off tool and remove battery before making any adjustments or removing or installing attachments or accessories.

- 1. Thread the wheel on the spindle by hand.
- 2. Depress spindle lock button and use a wrench on the hub of the wire wheel or brush to tighten the wheel.
- 3. To remove the wheel, reverse the above procedure.

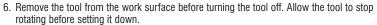
**ACAUTION:** Failure to properly seat the wheel hub before turning the tool on may result in damage to tool or wheel.

# Using Wire Cup Brushes and Wire Wheels

Wire wheels and brushes can be used for removing rust, scale and paint, and for smoothing irregular surfaces.

**NOTE:** The same precautions should be taken when wire brushing paint as when sanding paint (see page 3).

- 1. Allow the tool to reach full speed before touching the tool to the work surface.
- Apply minimum pressure to work surface, allowing the tool to operate at high speed. Material removal rate is greatest when the tool operates at high speed.
- 3. Maintain a 5° to 10° angle between the tool and work surface for wire cup brushes.
- 4. Maintain contact between the edge of the wheel and the work surface with wire wheels.
- Continuously move the tool in a forward and back motion to avoid creating gouges in the work surface. Allowing the tool to rest on the work surface without moving, or moving the tool in a circular motion causes burning and swirling marks on the work surface.



**ACAUTION:** Use extra care when working over an edge, as a sudden sharp movement of grinder may be experienced.

#### Mounting and Using Cutting (Type 1) Wheels

Cutting wheels include diamond wheels and abrasive discs. Abrasive cutting wheels for metal and concrete use are available. Diamond blades for concrete cutting can also be used.

**AWARNING:** A closed, 2-sided cutting wheel guard is included with this tool and is required when using cutting wheels. Failure to use proper flange and guard can result in injury resulting from wheel breakage and wheel contact. See page 3 for more information.

#### Mounting Closed (Type 1) guard

**A CAUTION:** Turn off tool and remove battery before making any adjustments or removing or installing attachments or accessories.

 Open the guard latch (J), and align the arrow on the guard (K) with the arrow on the hub (L). This will align the lugs with slots on the gear case cover. Position the guard facing backward.



- 2. Push the guard down until the guard lug engages and rotates freely in the groove on the gear case hub.
- 3. Rotate guard (I) into desired working position. The guard body should be positioned between the spindle and the operator to provide maximum operator protection.
- 4. Close the guard latch to secure the guard on the gear case cover. You should be unable to rotate the guard by hand when the latch is in closed position. Do not operate grinder with a loose guard or clamp lever in open position.
- 5. To remove the guard, open the guard latch, rotate the guard so that the arrows are aligned and pull up on the guard.

**NOTE:** The guard is pre-adjusted to the diameter of the gear case hub at the factory. If, after a period of time, the guard becomes loose, tighten the adjusting screw (M) with the clamp lever in the closed position with guard installed on the tool.

**A CAUTION:** Do not tighten adjusting screw with clamp lever in open position. Undetectable damage to guard or mounting hub may result.

# Mounting Cutting Wheels

 $\hat{\mathbf{A}}$  CAUTION: Turn off tool and remove battery before making any adjustments or removing or installing attachments or accessories.

**ACAUTION:** Matching diameter threaded backing flange and clamp nut (included with tool) must be used for cutting wheels.

- Place the unthreaded backing flange on spindle with the raised section (pilot) facing up. The raised section (pilot) on the backing flange will be against the wheel when the wheel is installed.
- Place the wheel on the backing flange, centering the wheel on the raised section (pilot).
- 3. Install the threaded clamp nut with the raised section (pilot) facing away from the wheel.
- 4. Depress the spindle lock button and tighten clamp nut with a wrench.
- 5. To remove the wheel, grasp and turn while depressing the spindle lock button.

#### **Using Cutting Wheels**

AWARNING: Do not use edge grinding/cutting wheels for surface grinding applications because these wheels are not designed for side pressures encountered with surface grinding. Wheel breakage and injury may result.

1. Allow tool to reach full speed before touching tool to work surface.

- Apply minimum pressure to work surface, allowing tool to operate at high speed. Cutting rate is greatest when the tool operates at high speed.
- 3. Once a cut is begun and a notch is established in the workpiece, do not change the angle of the cut. Changing the angle will cause the wheel to bend and may cause wheel breakage.
- 4. Remove the tool from work surface before turning tool off. Allow the tool to stop rotating before setting it down.

#### **MAINTENANCE**

## Cleaning

**AWARNING:** Blow dust and grit out of the motor housing regularly using clean, dry compressed air. Dust and grit containing metal particles often accumulate on interior surfaces and could create a fire hazard if not frequently cleaned out. ALWAYS WEAR SAFETY GLASSES.

**ACAUTION:** Never use solvents or other harsh chemicals for cleaning the non-metallic parts of the tool. Use a clean, dry cloth only.

#### Lubrication

DEWALT tools are properly lubricated at the factory and are ready for use.

#### Repairs

To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustments should be performed by authorized service centers or other qualified service personnel. Always use identical replacement parts.

#### **ACCESSORIES**

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 for your tool, contact: DEWALT Industrial Tool Co., 701 East Joppa Road. Baltimore. MD 21286.

**ACAUTION:** The use of any other accessory not recommended for use with this tool could be hazardous.

#### Guarantee

Applicable to hand help Power Tools, Lasers and Nailers.

#### 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. Please return the complete unit, transportation prepaid, to any DEWALT Service Centre, or any authorised service station.

For warranty repair information, call 1800 654 155.

This warranty does not apply to

- Accessories
- Damage caused where repairs have been made or attempted by others.
- Damage due to misuse, neglect, wear and tear, alteration or modification.

This warranty gives you specific legal rights and you may have other rights under the provisions of the Consumer Guarantee Act 1993 (New Zealand only), Trade Practices Act 1974 and State Legislation (Australia only).

In addition to the warranty, DeWALT tools are covered by our:

#### FREE ONE YEAR SERVICE CONTRACT

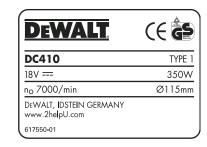
DEWALT will also maintain the tool for free at any time during the first year of purchase. This includes labour, parts and lubrication required to restore the product to sound mechanical and/or electrical condition. Normal wear parts are not covered in this service. Carbon brushes worn more then 50% will be replaced.

**NOTE:** 3 Year Warranty is not applicable to items deemed as consumables. Radial arm saws are covered by a one (1) year warranty only. DEWALT Reserves the right to review its warranty policy prior to launch of any new business development products.

#### 30 DAY NO SATISFACTION GUARANTEE

If you are dissatisfied with any DEWALT power tool, laser or nailer, for any reason, simply return it to the point of purchase with your sales receipt within 30 days for a replacement unit or a full refund.

FREE WARNING LABEL REPLACEMENT: If your warning labels become illegible or are missing, call 1800-654-155 for a free replacement.



DeWALT Battery and Charger Systems																		
Battery	Ou	tput		Chargers/Charge Time														
'	Nor	ninal	240 Volts								12 Volts							
Cat. Number	Voltage	Amp Hour	97014	98014	DW9106	DW9107	DW9108	DW9115	DW9116	DW9117	DW9118	DE9116	DE9118	DW911	DC011	DW0245	DE2046	DW9109
DW0242	24	2.0	Х	Х	Х	Χ	Х	Х	Х	Х	Χ	Х	Х	Х	Х	60	60	Х
DE0240-XJ	24	2.0	Х	Х	Х	Χ	Х	Х	Х	Х	Χ	Х	Х	Х	Х	60	60	X
DW0240	24	1.7	Х	X	Χ	Χ	Χ	Х	X	Х	Χ	Х	Χ	Х	Χ	60	60	60
DW9096	18	2.4	Х	Х	Χ	Χ	60	Х	60	20	Χ	60	Χ	60	60	Х	Χ	60
DE9095-XJ	18	2.0	Х	Х	Х	Χ	60	Х	60	20	Χ	60	Х	60	60	Х	Х	60
DE9091-XJ	14.4	2.0	45	45	45	45	45	15	45	15	90	45	90	45	45	Х	Х	45
DW9091	14.4	1.7	45	45	45	45	45	15	45	15	90	45	90	45	45	Х	Х	45
DE9074-XJ	12	1.25	45	45	45	30	30	15	30	12	60	30	60	30	30	Х	Х	30
DW9072	12	1.2	45	45	45	30	30	15	30	12	60	30	60	30	30	Х	Х	30
DE9071-XJ	12	2.0	60	60	60	45	45	15	45	15	90	45	90	45	45	Х	Х	45
DW9071	12	1.7	60	60	60	45	45	15	45	15	90	45	90	45	45	Х	X	45
DW9050	12	1.3	40	40	40	Х	Х	15	X	Х	X	Х	Х	Х	X	Х	Х	Х
DW9063	9.6	1.25	45	45	45	30	30	15	30	12	60	30	60	30	30	Х	X	30
DW9062	9.6	1.3	45	45	45	30	30	15	30	12	90	30	60	30	30	Х	X	30
DW9061	9.6	1.7	60	60	60	45	45	15	45	15	X	45	90	45	45	Х	X	45
DW9048	9.6	1.3	40	40	40	X	Х	15	X	Х	Χ	Х	X	Х	Х	Х	X	X
DW9057	7.2	1.25	45	45	45	30	30	15	30	12	60	30	60	30	30	Х	X	30
DW9046	7.2	1.3	40	40	40	X	X	15	X	Х	X	X	X	X	Χ	Х	X	X

 $\boldsymbol{X}$   $\,$  Indicates that the battery pack is not compatible with that specific charger.

All charge times are approximate. Actual charge time may vary.

Read the instruction manual for more specific information.

The battery voltage is nominal, it can measure above or below depending on the state of charge.