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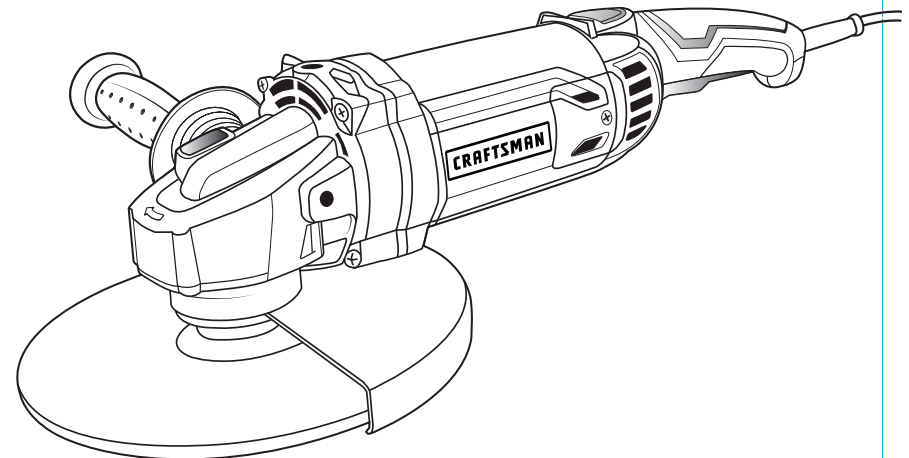
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Owner's Manual

**CRAFTSMAN®**

# 15 Amp Angle Grinder

Model No.  
172.417760



Intertek  
3025736

Double  
Insulated



**CAUTION:** Read, understand and follow  
all Safety Rules and Operating Instructions  
in this manual before using this product.

Sears Brands Management Corporation,  
Hoffman Estates, IL 60179 U.S.A.  
[www.craftsman.com](http://www.craftsman.com)

- WARRANTY
- SAFETY
- ASSEMBLY
- OPERATION
- MAINTENANCE
- PARTS LIST
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### CRAFTSMAN LIMITED WARRANTY

FOR ONE YEAR from the date of sale this product is warranted against defects in material or workmanship.

WITH PROOF OF SALE a defective product will be replaced free of charge.

For warranty coverage details to obtain free replacement, visit the web page: [www.craftsman.com/warranty](http://www.craftsman.com/warranty)

This warranty does not cover discs, which are expendable parts that can wear out from normal use within the warranty period.

This ONE YEAR warranty is void if this product is ever used while providing commercial services or if rented to another person. For 90 DAY commercial and rental use terms, see the Craftsman warranty web page.

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

Sears Brands Management Corporation, Hoffman Estates, IL 60179

## SAVE THESE INSTRUCTIONS! READ ALL INSTRUCTIONS!

**⚠ 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 chemical: 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.

**⚠ WARNING:** This product maybe contains lead, phthalate or other chemicals known to the State of California to cause cancer, birth defects and other reproductive harm. Please wash your hands after use.

## SAFETY SYMBOLS

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols and the explanations with them deserve your careful attention and understanding. The symbol warnings do not, by themselves, eliminate any danger. The instructions and warnings they give are no substitutes for proper accident prevention measures.

**⚠ WARNING:** Be sure to read and understand all safety instructions in this manual, including all safety alert symbols such as “**DANGER**,” “**WARNING**,” and “**CAUTION**” before using this buffer/polisher. Failure to follow all instructions listed in this manual may result in electric shock, fire and/or serious personal injury.

### SYMBOL SIGNAL MEANING

**⚠ SAFETY ALERT SYMBOL:** Indicates **DANGER, WARNING, OR CAUTION.** May be used in conjunction with other symbols or pictographs.

**⚠ DANGER:** Indicates a hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.

**⚠ WARNING:** Indicates a hazardous situation which, if not avoided, could result in death or serious injury. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.

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

### Damage Prevention and Information Messages

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

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



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

**⚠ WARNING:** The operation of any power tools can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shield and a full face shield when needed. We recommend a Wide

Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always use eye protection which is marked to comply with ANSI Z87.1 shields.

## GENERAL POWER TOOL SAFETY WARNINGS

**⚠ WARNING:** Read all safety warnings and 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 electric (corded) power tool or battery-operated (cordless) power tool.

### WORK AREA SAFETY

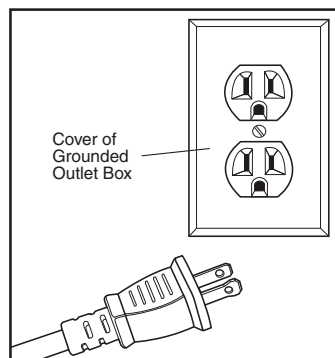
1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep children and bystanders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

### ELECTRICAL SAFETY

1. **Power tool plugs must match the outlet. Never modify the plug in any way.** Do not use any adapter plugs with grounded power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
2. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
3. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
4. **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.
5. **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.
6. **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.

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

**⚠ WARNING:** Do not permit fingers to touch the terminals of plug when installing or removing the plug from the outlet.



## GENERAL POWER TOOL SAFETY WARNINGS cont.

### PERSONAL SAFETY

1. **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.
2. **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.
3. **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.
4. **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.
5. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
6. **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.
7. **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.

### POWER TOOL USE AND CARE

1. **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.
2. **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.
3. **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.
4. **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.
5. **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.
6. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
7. **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 situation.

## GENERAL POWER TOOL SAFETY WARNINGS cont.

### 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.

### SAFETY INSTRUCTIONS FOR ALL OPERATIONS

#### Safety Warnings Common for Grinding Operations:

1. **This power tool is intended to function as a grinding tool. 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.
2. **Operations such as sanding, wire brushing or polishing are not recommended to be performed with this power tool.** Operations for which the power tool was not designed may create a hazard and cause personal injury.
3. **Do not use accessories which are not specifically designed and recommended by the tool manufacturer.** Just because the accessory can be attached to your power tool, it does not assure safe operation.
4. **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.
5. **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.
6. **Threaded mounting of accessories must match the GRINDER spindle thread. For accessories mounted by FLANGES, the arbor hole of the accessory must fit the locating diameter of the FLANGE.** Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
7. **Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute.** Damaged accessories will normally break apart during this test time.
8. **Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop 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 filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
9. **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 accessory may fly away and cause injury beyond immediate area of operation.
10. **Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

## GENERAL POWER TOOL SAFETY WARNINGS cont.

### SAFETY INSTRUCTIONS FOR ALL OPERATIONS cont.

11. **Position the cord clear of the spinning accessory.** If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.
12. **Never lay the power tool down until the accessory has come to a complete stop.** The spinning accessory may grab the surface and pull the power tool out of your control.
13. **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.
14. **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.
15. **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
16. **Do not use accessories that require liquid coolants.** Using water or other liquid coolants may result in electrocution or shock.

### KICKBACK AND RELATED WARNINGS

Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory'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 entering 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 direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions.

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

1. **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.
2. **Never place your hand near the rotating accessory.** Accessory may kickback over your hand.
3. **Do not position your body in the area where power tool will move if kickback occurs.** Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.
4. **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.
5. **Do not attach a saw chain woodcarving blade or toothed saw blade.** Such blades create frequent kickback and loss of control.

**GENERAL POWER TOOL SAFETY WARNINGS cont.**

**SAFETY INSTRUCTIONS FOR GRINDING OPERATIONS**





**Safety Warnings Specific for Grinding Operations:**

1. **Use only disc types that are recommended for your grinder and the specific guard designed for the selected disc.** Discs for which the grinder was not designed for cannot be adequately guarded and are unsafe.
2. **The grinding surface of center depressed discs must be mounted below the plane of the guard lip.** An improperly mounted disc that projects through the plane of the guard lip cannot be adequately protected.
3. **The guard must be securely attached to the grinder and positioned for maximum safety, so the least amount of disc is exposed towards the operator.**  
The guard helps to protect the operator from broken disc fragments, accidental contact with disc and sparks that could ignite clothing.
4. **Grinding discs must be used only for recommended applications.**
5. **Always use undamaged wheel flanges that are of correct size and shape for your selected discs.** Proper disc flanges support the disc thus reducing the possibility of disc breakage.
6. **Do not use worn down discs from larger grinders.** A disc intended for a larger grinder is not suitable for the higher speed of a smaller grinder and may burst.

**GENERAL POWER TOOL SAFETY WARNINGS cont.**

**SAFETY SYMBOLS FOR YOUR TOOL**

The label on your tool may include the following symbols.

- V.....Volts
- A.....Amps
- Hz.....Hertz
- W.....Watts
- min.....Minutes
- ~.....Alternating current
- .....Direct current
- no.....No-load speed
- .....Class II construction, Double Insulated
- RPM.....Revolutions per minute
- SPM.....Strokes per minute
- OPM.....Orbits per minute
- ⚠.....Indicates danger, warning or caution.  
It means attention! Your safety is involved.
- .....To reduce the risk of injury, user must read instruction manual
- .....Wear ear protection
- .....Wear eye protection
- .....Wear dust mask

## UNPACKING / DESCRIPTION

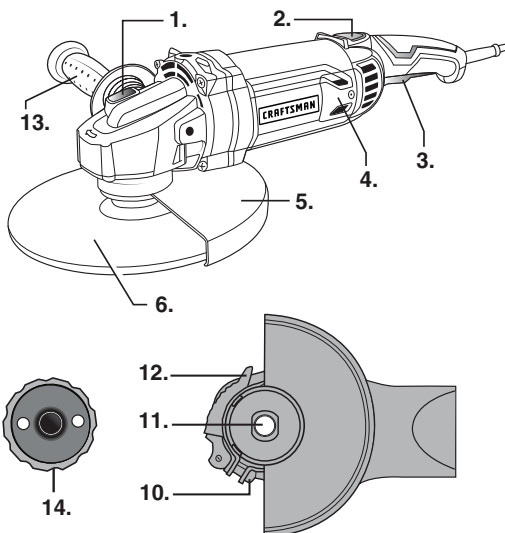
**⚠ WARNING:** Your tool should NEVER be connected to the power source when you are assembling parts, making adjustments, installing or removing grinder discs, cleaning or when it is not in use. Disconnecting the tool will prevent accidental starting, which could cause serious personal injury.

1. Remove the grinder from the carton and inspect it carefully to make sure that no breakage or damage has occurred during shipping.
2. Do not discard any of the packing materials until all parts are accounted for.
3. Two Grinding Discs are included.
4. If any of the parts are damaged or missing (refer to PARTS LIST below), return the grinder for replacement to the retailer from which it was purchased.

## PARTS LIST (Fig. 1)

**NOTE:** Always refer back to these PARTS LIST numbers for product call-outs and operation reference.

1. Spindle lock button
2. Handle rotation button
3. Lock-off switch
4. Brush cover
5. Grinding disc guard
6. Grinding Disc
7. Spanner
8. Standard outer flange
9. Inner flange
10. Clamp adjustment screw
11. Spindle
12. Guard clamping lever
13. Anti-vibration auxiliary handle
14. Tool-less outer flange



**IMPORTANT:** This product comes with 2 Outer Flanges: Tool-less and Standard, for operator's preference. **DO NOT USE** both flanges during operation.

## INCLUDED ACCESSORIES

- Anti-vibration auxiliary handle
- Spanner
- (2) Grinding discs
- Grinding disc guard
- Tool-less outer flange

## TECHNICAL DATA

Rated Voltage	120 V ~ 60 Hz
Rated power input	15 A
No load speed	6500/min
Diameter of grinding discs	230mm
Disc size	9"
Disc bore	7/8"
Spindle thread	5/8"- 11
Machinery weight	9.7 lb / 4.4 kg
Protection degree	□ / II
Cord length	10 ft

## OPERATION

**⚠ WARNING:** This tool is equipped with a disc guard that is ONLY safe for grinding operation. The guard is NOT safe for cutting operation. Using this tool for cutting operation will create a hazard that can result in serious personal injury.

## VIBRATION HAZARD

**⚠ WARNING:** This tool produces vibration during operation which may cause numbness or other injury to the hands of some users.

To be accurate, an estimation of vibration exposure level in the actual conditions of use should also take account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle but not actually doing the job.

This may significantly reduce the exposure level over the total working period.

### Help minimize your vibration risk exposure:

Maintain this tool in accordance with these instructions and keep well lubricated (where appropriate).

If the tool is to be used regularly then invest in anti vibration accessories.

Avoid using tools in temperatures of 10°C or less.

Plan your work schedule to spread any high vibration tool use across a number of days.

## OPERATION cont.

### INSTALLING AND ADJUSTING THE DISC GUARD (See Figs. 2A, 2B, 2C)

Make sure the grinder is unplugged before making any adjustments.  
For work with grinding discs, the disc guard must be mounted.

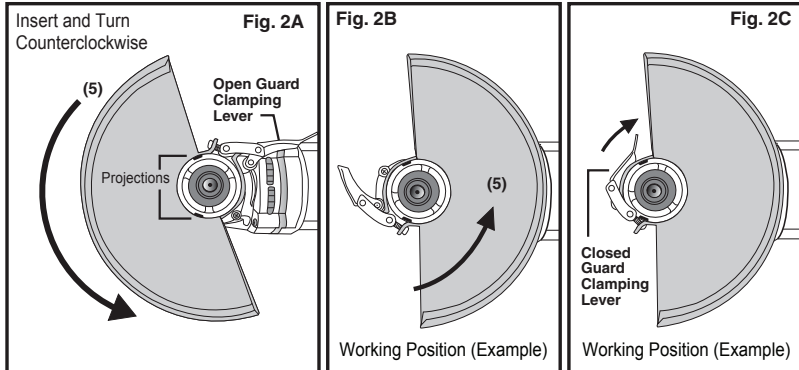
The projections on the disc guard (5) ensure that only a guard that fits this angle grinder can be mounted. Raise the **Guard Clamping Lever** (See Fig. 2A).

To install the guard align the guard projections with the matching grooves on the spindle housing (See Fig. 2A). Push the guard down as far as it will go.

Rotate the guard to a working position (See Fig. 2B example).

**NOTE:** Working position is with the closed side of the guard toward the operator and open side pointing directly away from the operator to provide maximum protection against sparks and flying debris.

Close the Clamping Lever to tighten (See Fig. 2C).



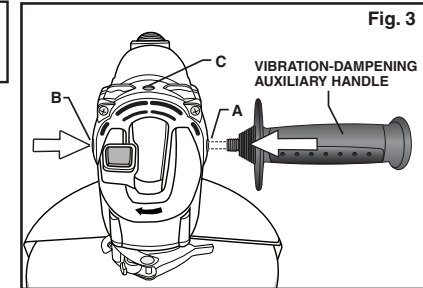
## OPERATION cont.

### INSTALLING AND ADJUSTING AUXILIARY HANDLE (See Figure 3)

**NOTE:** This handle should be used at all times to maintain complete control of the tool.

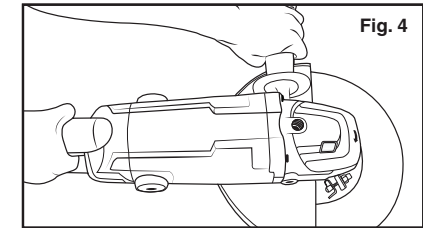
An auxiliary handle is supplied and can be fixed into any of the three positions on the gearcase. If you are right handed fit the handle as shown in (A).

If you are left handed fit the handle the other way round (B).



### VIBRATION-DAMPENING AUXILIARY HANDLE

The vibration-dampening auxiliary handle reduces vibration, making operation more comfortable and secure.



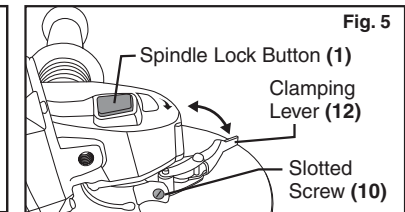
### ADJUSTING DISC GUARD (See Figure 5)

For work with grinding discs, the disc guard must be mounted. The closed side of the disc guard must always point to the operator.

#### Disc Guard Adjustment

To move the guard you must raise the clamping lever (12). Then rotate the guard to the position that will provide maximum protection against sparks and debris for the work you are doing. Finally, close the clamping lever (12) until it touches the spindle housing.

**NOTE:** If the clamping lever (12) does not touch the spindle housing when closed, the lever needs to be adjusted. Raise the clamping lever and adjust the clamp adjusting screw (10) so that the guard is securely clamped when the lever is closed.



### SPINDLE LOCK BUTTON (See Figure 5)

Clean the grinder spindle and all parts to be mounted.

**WARNING:** Actuate the spindle lock button only when the grinder disc is at a stand still.

## OPERATION cont.

### INSTALLING THE DISCS (See Figures 6A, 6B, 6C, 6D)

Clean the spindle, disc and inner and outer flange before installing disc.

The spindle **MUST BE LOCKED** into stationary position by means of the spindle lock button when clamping or loosening discs and outer flange. Lock the grinder spindle with the spindle lock button pushed down (see Fig. 6B).

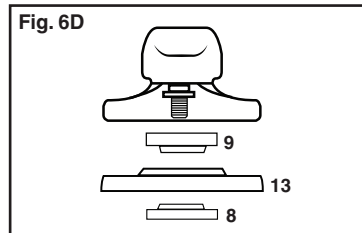
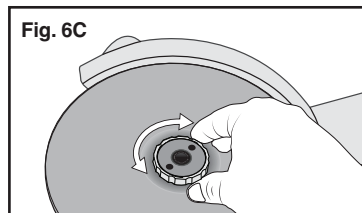
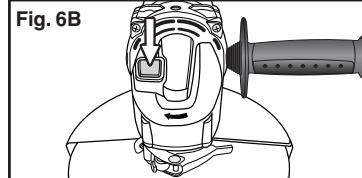
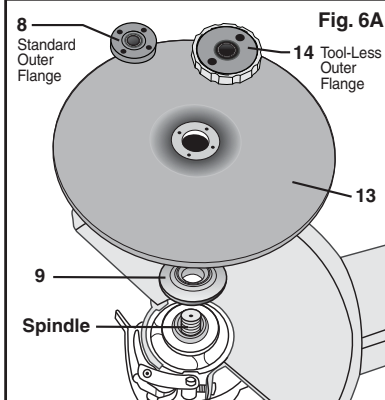
Place the inner flange (9) onto the tool spindle. Ensure it is located on the two flats of the spindle. Then place the disc (13) on the tool spindle and inner flange (see Fig. 6A).

**IMPORTANT: This product comes with 2 Outer Flanges:** Tool-less and Standard, for operator's preference. **DO NOT USE** both flanges during operation.

**Using Tool-Less Outer Flange (14):** To tighten the tool-less outer flange, push the spindle lock button down (see Fig. 6B) and turn the flange clockwise by hand until tightened onto the disc (see Fig. 6C). A properly attached, undamaged tool-less flange can be loosened by hand when turning the knurled ring in counterclockwise direction. Never loosen a tight tool-less flange with pliers. After a long time of use, if the tool-less flange becomes hard to release by hand, use spanner to loosen it.

**Using standard Outer Flange (8):** Place the standard outer flange onto the spindle with the raised portion facing up or down depending on the type of disc being used (see Figs. 6D). Press in the spindle lock button and rotate spindle by hand until it is locked. Keeping the lock button pressed in, use the provided spanner (7) to tighten the outer flange onto the surface of the disc.

**NOTE:** After installing disc and before turning tool on, check that the disc is securely installed and that it turns freely. Make sure that the disc does not graze against the guard or other tool parts.



### For USE with standard outer flange ONLY:

For grinding discs, the outer flange is installed with the raised portion facing towards the disc (See Fig. 6D), and the side with the two spanner pin insertion holes facing away from the disc (See Fig. 6C).

13

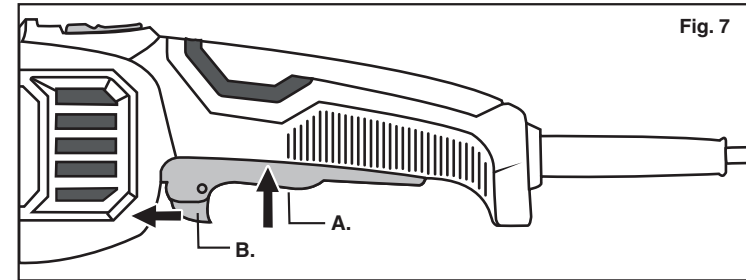
## OPERATION cont.

### SAFETY ON/OFF SWITCH (See Figure 7)

The On/Off switch is locked in the Off position to prevent accidental starting.

While squeezing the On/Off switch (A) with your hand, use your finger to push forward and then release lever (B). The tool will begin to run.

To switch tool off just release your hand pressure from the On/Off switch.



### SOFT START

Internal electronic components allow the motor speed to increase slowly, which reduces the "twisting" effect on your wrists due to the high power motor.

### TO USE THE GRINDER (See Figure 8)

**⚠ ATTENTION: Do not switch the grinder on while the disc is in contact with the workpiece. Allow the disc to reach full speed before starting to grind.**

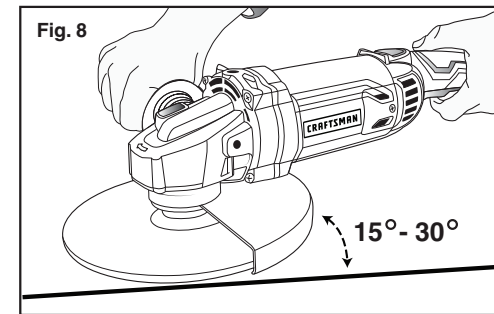
Hold your angle grinder with one hand on the main handle and other hand firmly around the auxiliary handle.

Always position the guard so that the exposed blade is positioned away from you. Be prepared for a stream of sparks when the disc touches the metal.

For best tool control, material removal and minimum overloading, maintain an angle between the disc and work surface of approximately 15° - 30° when grinding.

Use caution when working into corners as contact with the intersecting surface may cause the grinder to jump or twist.

When grinding is complete allow the workpiece to cool. Do not touch the hot surface.



14



## OPERATION cont.

### HANDLE ROTATION (See Figure 9)

To best suit the different working positions, your angle grinder is equipped with a turnable handle.

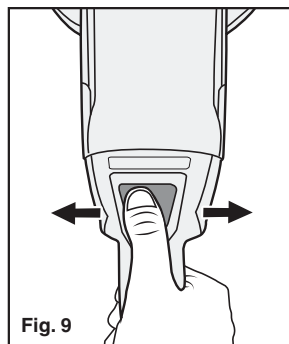
Turn the grinder off. Press the handle rotation button (2) to unlock handle position.

Turn handle 90° to the left or right.

Then release the button to lock handle into position. A click will be heard when the handle is locked in place.

**⚠ WARNING:** Make sure the handle is in the locked position before starting the angle grinder.

**DO NOT** rotate the handle when the grinder is running. Rotate handle only with grinder in switched off condition.



### OVERLOAD

Overloading will cause damage to the motor of your angle grinder.

This can happen if your angle grinder is subjected to heavy use for prolonged periods of time.

Do not in any circumstances, attempt to exert too much pressure on your angle grinder to speed up your work.

**If your angle grinder becomes too hot, run the angle grinder under no load for 2-3 minutes until it has cooled to normal operation temperature.**

### WORKING HINTS FOR YOUR ANGLE GRINDER

1. Always start at no load to achieve maximum speed then start working.
2. Do not force the disc to work faster, reducing the disc's moving speed means longer working time.
3. Always work with a 15-30 angle between disc and workpiece.  
Larger angles will cut ridges into the workpiece and affect the surface finish.  
Move the angle grinder across and back and forth over the workpiece.
4. Always ensure the workpiece is firmly held or clamped to prevent movement.

## MAINTENANCE

**⚠ WARNING: ALWAYS** remove the plug from the socket before carrying out any adjustment, servicing or maintenance.

- There are no user serviceable parts in your power tool.
- Never use water or chemical cleaners to clean your power tool.
- Wipe clean with a dry cloth. Always store your power tool in a dry place.
- Keep the motor ventilation slots clean. Keep all working controls free of dust.
- Occasionally you may see sparks through the ventilation slots.
- This is normal and will not damage your power tool.

**⚠ WARNING:** If supply cord is damaged it must be replaced before further tool use in order to avoid electrical shock hazard. Take tool to a qualified service dealer for identical part cord replacement.

### TO REPLACE BRUSHES (See Figure 10)

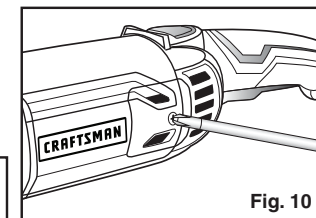
**⚠ WARNING:** Before working on the grinder to replace brushes, unplug the cord from the outlet.

A noticeable decrease in tool power or on/off switch problems may indicate the need to replace the carbon brushes in the tool.

Replace brushes as follows:

1. Unplug the cord from the power source.
2. Remove the screw from the motor brush cover (**See Fig. 10**).  
Gently lift off the cover and set aside.
3. Use a small flat blade screwdriver to pry the brush spade connector free from the electric terminal.
4. Use the screwdriver to pull back the spring coil from the brush.  
Remove the old brush and spade connector from the brush holder, making sure to keep the coil pulled back after the brush is removed.
5. Insert new brush into brush holder.  
Release the coil back into position against the new brush.
6. Reconnect the new brush spade connector to the electric terminal.
7. Replace motor brush cover.

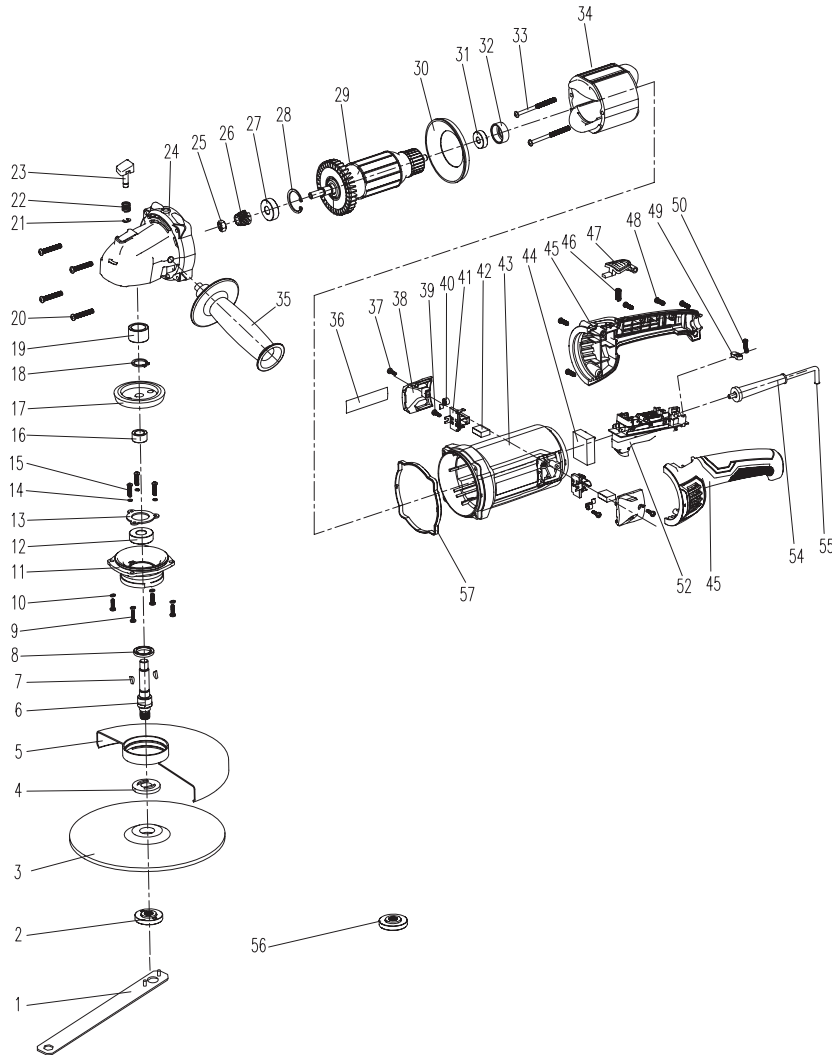
**NOTE:** There is a brush on each side of the tool. Always replace both brushes at the same time.



## PARTS LIST

### 15 Amp Angle Grinder MODEL NUMBER 172.417760

The model number will be found on the nameplate of the grinder. Always mention the model number when ordering parts for this tool. To order parts, call 1-888-331-4569



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## PARTS LIST

### 15 Amp Angle Grinder MODEL NUMBER 172.417760

The model number will be found on the nameplate of the grinder. Always mention the model number when ordering parts for this tool. To order parts, call 1-888-331-4569

Position No.	Part Number	Part Description	Qty.
1	PGA230SU-1	Special Spanner	1
2	PGA230SU-2	Standard Outer Flange	1
3	PGA230SU-3	Grinding Disc	2
4	PGA230SU-4	Inner Flange	1
5	PGA230SU-5	Grinding Disc Guard	1
6	PGA230SU-6	Main Spindle	1
7	PGA230SU-7	Woodruff Key 4x13	2
8	PGA230SU-8	Dustproof Cover	1
9	PGA230SU-9	Screw M5x16	4
10	PGA230SU-10	Spring Washer 5	4
11	PGA230SU-11	Bearing Block	1
12	PGA230SU-12	6202 Bearing	1
13	PGA230SU-13	Press Ring	1
14	PGA230SU-14	Spring Washer 4	3
15	PGA230SU-15	Screw M4x10	3
16	PGA230SU-16	Steel Pipe	1
17	PGA230SU-17	Large Bevel Gear	1
18	PGA230SU-18	Check Ring 14	1
19	PGA230SU-19	Copper Bush	1
20	PGA230SU-20	Self Tapping Screw ST4.8x35	4
21	PGA230SU-21	Check Ring 6	1
22	PGA230SU-22	Compression Spring	1
23	PGA230SU-23	Lock Pin	1
24	PGA230SU-24	Gear Box	1
25	PGA230SU-25	Nut M8	1
26	PGA230SU-26	Small Bevel Gear	1
27	PGA230SU-27	6201 Bearing	1
28	PGA230SU-28	Check Ring 34	1
29	PGA230SU-29	Rotor Set	1
30	PGA230SU-30	Wind Screen	1
31	PGA230SU-31	629 Bearing	1
32	PGA230SU-32	Bearing Sheath	1
33	PGA230SU-33	Screw ST4.8x75	2
34	PGA230SU-34	Stator Set	1
35	PGA230SU-35	Side Handle	1
36	PGA230SU-36	Rated Label	1
37	PGA230SU-37	Self Tapping Screw ST4.2x14	2
38	PGA230SU-38	Brush Cover	2
39	PGA230SU-39	Self Tapping Screw ST4.2x12	2
40	PGA230SU-40	Whorl Spring	2
41	PGA230SU-41	Brush Holder	2
42	PGA230SU-42	Carbon Brush (pair)	1
43	PGA230SU-43	Housing	1
44	PGA230SU-44	Soft Start	1
45	PGA230SU-45	Left/Right Handle	1
46	PGA230SU-46	Compression Spring	1
47	PGA230SU-47	Pushbutton	1
48	PGA230SU-48	Self tapping Screw ST4.2x18	5
49	PGA230SU-49	Cable Clip	1
50	PGA230SU-50	Self tapping Screw ST4.2x16	1
52	PGA230SU-52	Switch	1
54	PGA230SU-54	Cord Protector	1
55	PGA230SU-55	Power Cord	1
56	PGA230SU-56	Tool-less Outer Flange	1
57	PGA230SU-57	Rubber Ring	1

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