

Owner's Manual

CRAFTSMAN®

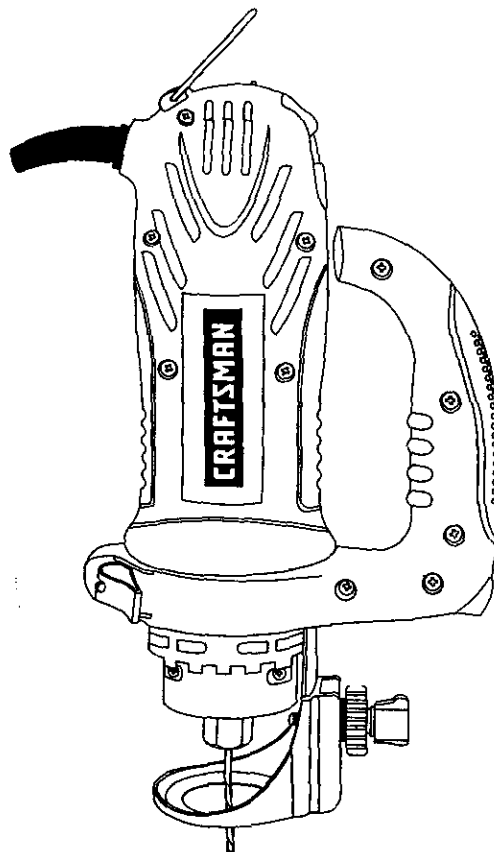
ALL-IN-ONE CUTTING TOOL

**Model No.
183.172540**

Important Safety Notice

⚠ WARNING

Always have one hand firmly placed on the tool body while operating. Never operate the tool by holding only the tool handle.



CAUTION:
Before using this Cutting Tool, read this manual and follow all its Safety Rules and Operating Instructions.

- Safety Instructions
- Accessories
- Assembly
- Operation
- Maintenance
- Parts List
- Espanol

Sears, Roebuck and Co., Hoffman Estates, IL 60179 USA
Part. No. 183172540001 Rev. 0 07/21/03

Safety and Assembly Instructions

CRAFTSMAN®

FLEX SHAFT for ALL-IN-ONE CUTTING TOOL

Model No.
183.287660

WARNING

ALWAYS WEAR EYE PROTECTION. Any power tool can throw foreign objects into your eyes which could cause permanent eye damage. **ALWAYS wear safety goggles (not glasses) that comply with ANSI safety standard Z87.1.** Everyday glasses have only impact resistant lenses. They **ARE NOT** safety glasses. Safety goggles are available at most hardware stores.



Glasses or goggles not in compliance with ANSI Z87.1 could cause serious injury when they break.

USE FACE OR DUST MASK along with safety goggles if cutting or routing operation is dusty. Make sure work area is well ventilated.

NEVER PLACE HANDS IN THE PATH OF THE CUTTER or under the workpiece.

USE HEARING PROTECTION, particularly during extended periods of operation.

ALWAYS RE-TIGHTEN COLLET before starting the tool after a cutting bit or accessory has been changed. Loose bits and accessories can cause unexpected shifting of the tool, resulting in loss of control and injury from the bit or cutting tool being thrown.

NEVER TOUCH THE CUTTING BIT IMMEDIATELY AFTER USE. The bit will be too hot to be handled with bare hands and will burn your fingers.

ASSEMBLY INSTRUCTIONS

1. Turn cutting tool motor switch OFF and remove plug from the power source.
2. Lock main shaft (3) by rotating the collet nut (1) while pressing on the spindle lock button (4) until the spindle lock prevents shaft from rotating (see Fig. 1).
3. Use cutting tool flat wrench (5) to loosen the collet nut by turning it counter clockwise. Remove collet (2) from inside main shaft of cutting tool.

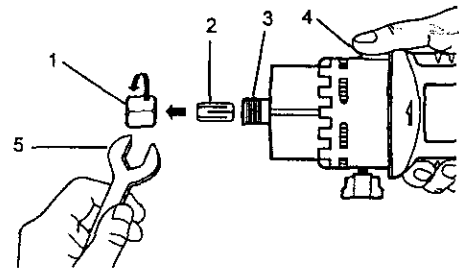


Fig. 1

4. Insert collet with square hole (6) into main shaft (3) and re-install the collet nut (1) onto the main shaft (see Fig. 2).
NOTE: Collet with square hole is packed with the flex shaft package.
5. Use cutting tool flat wrench (5) to tighten the collet nut firmly onto the main shaft while spindle lock is engaged into the main shaft. Turn nut clockwise to tighten.

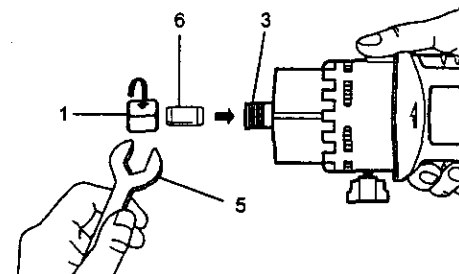


Fig. 2

Sears, Roebuck and Co., Hoffman Estates, IL 60179 USA

Part. No. 183287660003 Rev. 3 07/29/02

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WARRANTY

FULL ONE YEAR WARRANTY

If this Cutting Tool fails due to a defect in material or workmanship within one year of date of purchase, Sears will at its option repair or replace it free of charge.

Return this Cutting Tool to a Sears Service Center for repair, or to place of purchase for replacement.

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

Sears, Roebuck and Co., Dept. 817 WA, Hoffman Estates, IL 60179

WARNING

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

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

Your risk from these exposures varies, depending 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.

PRODUCT SPECIFICATIONS

Motor Rating	120 V, 60 Hz, AC	Motor Horsepower	$\frac{3}{4}$ HP (Maximum Developed)
Amperes	5.0 A	Weight	3 lb. 12 oz. (1.7 kg)
Two Speeds (no load)	20,000 & 30,000 RPM	Maximum Disc Size	4" Diameter

WARNING

To avoid electrical hazards, fire hazards or damage to the tool, use proper circuit protection.

This power tool is wired at the factory for 110-120 V operation. It must be connected to a 110-120 V / 15 A time delayed fuse or circuit breaker. To avoid shock or fire, replace power cord immediately if it is worn, cut or damaged in any way.

Before using your cutting tool, it is critical that you read and understand these safety rules. Failure to follow these rules could result in serious injury to you or damage to the cutting tool.

Safety and Assembly Instructions

ASSEMBLY INSTRUCTIONS – cont'd

- Align the flex shaft connector cap (6) with the cutting tool motor housing (8) (see Fig. 3).

NOTES:

- Carefully align the square end of the flex shaft center core so it will engage into the square hole in the collet.
- Make sure the keyway (7) in the inside of the connector cap aligns with the matching key (8) on the motor housing.
- Occasionally the flex shaft inner core may slide out of the outer casing during handling. If this should happen, simply reinsert the inner core into the outer casing from the connector cap end of the flex shaft. Rotate the inner core to ensure the square end is properly engaged in the collet assembly.

- When shaft center core and connector cap are properly aligned, slide the connector cap fully onto the motor housing. Lock connector cap into place by pressing on the quick connect lever (9).

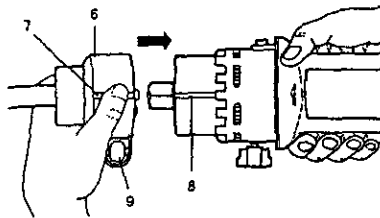


Fig. 3

- To insert an accessory into the flex shaft collet, rotate collet nut (12) until hole in shaft aligns with hole in flex shaft collar (11) (see Fig. 4). Insert Allen key (10) into aligned holes and use the small flat wrench supplied (13) to turn collet nut counter clockwise.
- When collet is loose, insert accessory and turn collet clockwise to tighten, making sure the accessory is centered in the collet. Use the small flat wrench to tighten clockwise.
- Remove Allen key and rotate the collet by hand to ensure accessory does not wobble.

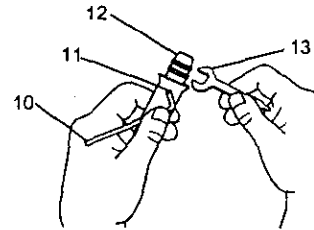


Fig. 4

To Change Collet Size

The flex shaft comes with two different collets. One is for 1/8" shank bits and the other is for 3/32" shank bits.

- Loosen collet nut on end of shaft as outlined in step #8 above.
- Remove collet nut (12) and remove collet (13) from end of shaft (14) (see Fig. 5).
- Insert correct collet in the end of the shaft.
- Reinstall collet nut on shaft.

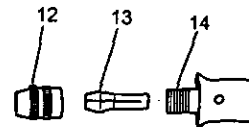


Fig. 5

CAUTION

Do not store or operate flex shaft with a bend radius of less than 6" (150mm) (see Fig. 6).

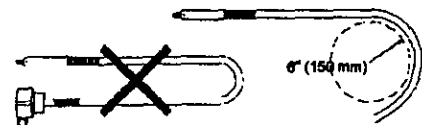


Fig. 6

POWER TOOL SAFETY

▲ WARNING

Before using your cutting tool, it is critical that you read and understand these safety rules. Failure to follow these rules could result in serious injury to you or damage to the cutting tool.

Good safety practices are a combination of common sense, staying alert and understanding how to use your power tool. To avoid mistakes that could cause serious injury, do not plug in your cutting tool until you have read and understood the following safety rules:

READ and become familiar with this entire Owner's Manual. **LEARN** the tool's applications, limitations and possible hazards.

▲ WARNING

Look for this symbol that identifies important safety precautions. It means **CAUTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

GENERAL SAFETY RULES

KEEP GUARDS IN PLACE and in working order.

ALWAYS WEAR EYE PROTECTION. Any power tool can throw foreign objects into your eyes which could cause permanent eye damage. **ALWAYS** wear safety goggles (not glasses) that comply with ANSI safety standard Z87.1. Everyday glasses have only impact resistant lenses. They **ARE NOT** safety glasses. Safety goggles are available at Sears.



▲ WARNING

Glasses or goggles not in compliance with ANSI Z87.1 could cause serious injury when they break.

WORK AREA

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

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

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

PERSONAL SAFETY

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

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

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

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

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

Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat or hearing protection must be used for appropriate conditions.

TOOL USE AND CARE

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

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

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

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

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

Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

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

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

SAVE THESE INSTRUCTIONS FOR REFERENCE

CUTTING TOOL & ACCESSORY SAFETY

SERVICE

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

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

SPECIFIC SAFETY RULES

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

Always make sure the work surface is free from nails and other foreign objects. Cutting into a nail can cause the bit and the tool to jump and damage the bit.

Never hold the workpiece in one hand and the tool in the other hand when in use. Never place the hands near or below the cutting surface. Clamping the material and guiding the tool with both hands is much safer.

Never lay workpiece on hard surfaces like concrete, stone, etc. Protruding cutting bit may cause tool to jump.

Always wear safety goggles, hearing protection and dust mask. Use only in well ventilated area. Using personal safety devices and working in a safe environment reduces risk of injury.

After changing the bits or making adjustments, make sure the collet nut and any other adjustment devices are securely tightened. Loose adjustment devices will be violently thrown.

Never use dull or damaged bits. Sharp bits must be handled with care. Damaged bits can snap during use. Dull bits require more force to push the tool, possibly causing the bit to break.

Never touch the bit during or immediately after use. After use the bit is too hot to be touched by bare hands.

ANGLE GRINDER ATTACHMENT SAFETY

WARNING

Always wear safety goggles with side shields or a face mask when using the angle grinder attachment. High speed grinding and sanding will throw hot sparks and dust particles that could cause serious injury to your eyes.

Always wear hearing protection when using the angle grinder attachment.

Always use appropriate dust mask when using the angle grinder attachment.

Use ONLY grinding wheels and sanding discs rated for speeds greater than 18,000 RPM, as the angle grinder attachment runs at speeds from 12,000 – 18,000 RPM.

Inspect the grinding wheel before each use to make sure it is tightly fastened and free from cracks or any other damages.

Rotate the guard to a position where it will protect the operator from sparks and dust. The guard should be positioned immediately in front of the side handle to protect the operator's hand.

Do not over tighten the nut holding the grinding wheel in place. Excessive tightening may cause the grinding wheel to crack and possibly shatter during operation.

Do not clamp the angle grinder attachment in a vice or use as a fixed grinder.

Hold the angle grinder attachment securely with two hands at all times while it is running.

Never turn the motor switch ON with the grinding wheel or sanding disc touching the work surface.

FLEXIBLE SHAFT SAFETY

When using the flexible shaft accessory, always hang the motor unit on a hook using the hanging loop at the top of the motor housing.

Always use safety glasses, hearing protection and a dust mask.

Never hold the workpiece with your hand while using a cutting bit. Clamp the workpiece in a vice or to a workbench to permit using two hands on the flex shaft.

Never place hands in the path of the cutter or under the workpiece.

Do not store or operate the flex shaft with a bend radius of less than 6" (150 mm).

SAVE THESE INSTRUCTIONS FOR REFERENCE

ELECTRICAL REQUIREMENTS & SAFETY

DOUBLE INSULATION

This cutting tool is double insulated to protect you from electrical shock.

▲ WARNING

Double Insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit into a polarized outlet only one way. If the plug does not fit fully into the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not alter the plug in any way. Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.

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.

Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

Do not abuse the cord. Never use the cord to carry the tool or pull the plug from the outlet. Keep cord away from heat, oil, sharp edges and moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.

When operating a power tool outdoors, use an outdoor extension cord marked "W-A" or "W". These cords are rated for outdoor use and reduce the risk of electric shock.

▲ WARNING

Always make sure the receptacle is polarized. If you are not sure, have a qualified electrician check the receptacle.

GUIDELINES FOR EXTENSION CORDS

Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current the tool will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The table below shows the correct size to use according to cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number the heavier the cord.

Be sure your extension cord is properly wired and in good condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it. Protect your extension cord from sharp objects, excessive heat and damp or wet areas.

Use a separate electrical circuit for your power tools. This circuit must not be less than 14 gauge wire and should be protected with either a 15 Ampere time delay fuse or circuit breaker. Before connecting the power tool to the power source, make sure the switch is in the OFF position and the power source is the same as indicated on the nameplate. Running at lower voltage will damage the motor.

▲ WARNING

Repair or replace damaged or worn extension cords immediately.

Select the appropriate extension cord gauge and length using the chart below.

MINIMUM GAUGE (AWG) EXTENSION CORDS (120 Volt use only)					
Ampere Rating		Total length in feet			
More Than	Not More Than	25'	50'	100'	150'
0	6	18	16	16	14
6	10	18	16	14	12
10	12	16	16	14	12
12	16	14	12	Not Applicable	


▲ WARNING

Keep the extension cord clear of the working area. Position the cord so it will not get caught on the workpiece, tools or any other obstructions while you are working with the power tool.

CUTTING TOOL SYMBOLS















WARNING

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

V	volts
A	amperes
Hz	hertz
W	watt
kW	kilowatts
μ F	microfarads
l	liters
kg	kilograms
N/cm ²	newtons per square centimeter
Pa	pascals
h	hours
min	minutes
s	seconds
	alternating current



This symbol designates that this tool is listed with U.S. requirements by Underwriters Laboratories.

	three-phase alternating current
	three-phase alternating current with neutral
	direct current
	no load speed
	alternating or direct current
	class II construction
	splash proof construction
	watertight construction
	protective earthing at earthing terminal, Class I tools
	.../min
	Diameter
	Off position
	Arrow
	Warning symbol

ACCESSORIES

AVAILABLE ACCESSORIES

▲ WARNING

Use only accessories recommended for this cutting tool. Follow instructions that accompany accessories. Use of improper accessories may cause injury to the operator or damage to the Cutting Tool.

Visit your **Sears Hardware Department** or see the **Sears Power and Hand Tool Catalog** for an assortment of accessories recommended for use with this cutting tool:

- 1/8" Cutting Bits
- 1/8" & 3/32" Hobby Rotary Tool Accessories
 - > Cutters
 - > Polishers
 - > Sanders
 - > Grinders
- Most 1/2" Shank Router Bits
- 3 1/2" Grinding Disks
- 4" Sanding Disks

CARTON CONTENTS

UNPACKING AND CHECKING CARTON CONTENTS

▲ WARNING

If any part is missing or damaged, do not plug the Cutting Tool into the power source until the missing or damaged part is replaced and assembly is complete.

Carefully unpack the Cutting Tool and all its components. Compare against the "Cutting Tool Components" chart. **NOTE:** See Page 8 & 9 for illustration of components.

▲ WARNING

To avoid fire or toxic reaction, never use gasoline, naphtha, acetone, lacquer thinner or similar highly volatile solvents to clean the cutting tool.

LATERAL STYLE DRYWALL CUTTING BIT

This cutting bit has a **fine spiral** for removing high volumes of fine particles when cutting (see right).

Use this cutter for cutting drywall.

GENERAL PURPOSE CUTTING BIT

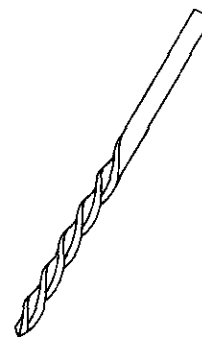
This cutting bit has a **coarse spiral** for removing particles when being used for general cutting (see right).

Use this general purpose cutter for cutting materials such as wood, plastic and fiberglass.

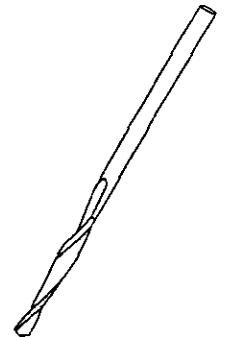
CARTON CONTENTS

CUTTING TOOL COMPONENTS

KEY	DESCRIPTION	QTY	
Inside Carrying Case			
A	Angle Grinder Attachment Kit		
	• Metal cutting disc	1	
	• Masonry cutting disc	1	
	• 36 grit (coarse) sanding disc	1	
	• 50 grit (medium) sanding disc	1	
	• 120 grit (fine) polishing pad	1	
	• Sanding disc backing pad	1	
B	Flexible Shaft	1	
C	Circle Cutting Guide	1	
D	Beveling Plunge Router Attachment	1	
E	Angle Grinder Attachment Side Handle	1	
F	Cutting Tool	1	
G	Freehand Cutting Guide	1	
H	Removable Handle with Sole Plate	1	
I	Angle Grinder Attachment	1	
J	Angle Grinder Attachment Side Handle Collar	1	
K	Rip Fence	1	
L	Carrying Case	1	
	Owner's Manual	1	
Front Lid Storage Compartment			
M	• Drive Shaft for Angle Grinder Attachment	1	
	• 1/8" Wall Tile Bit	1	
	• 1/8" Drywall Bit	5	
	• 1/8" All Purpose Bit	2	
	• 1/4" All Purpose Bit	1	
	Flexible Shaft Accessories		
	• 1/8" Collet	1	
	• 3/32" Collet (in flexible shaft)	1	
	• Square collet	1	
	• Collet wrench	1	
	• L-key		
	Cutting Tool Accessories		
	• 1/8" Collet	1	
	• 1/4" Collet (in cutting tool)	1	
			1

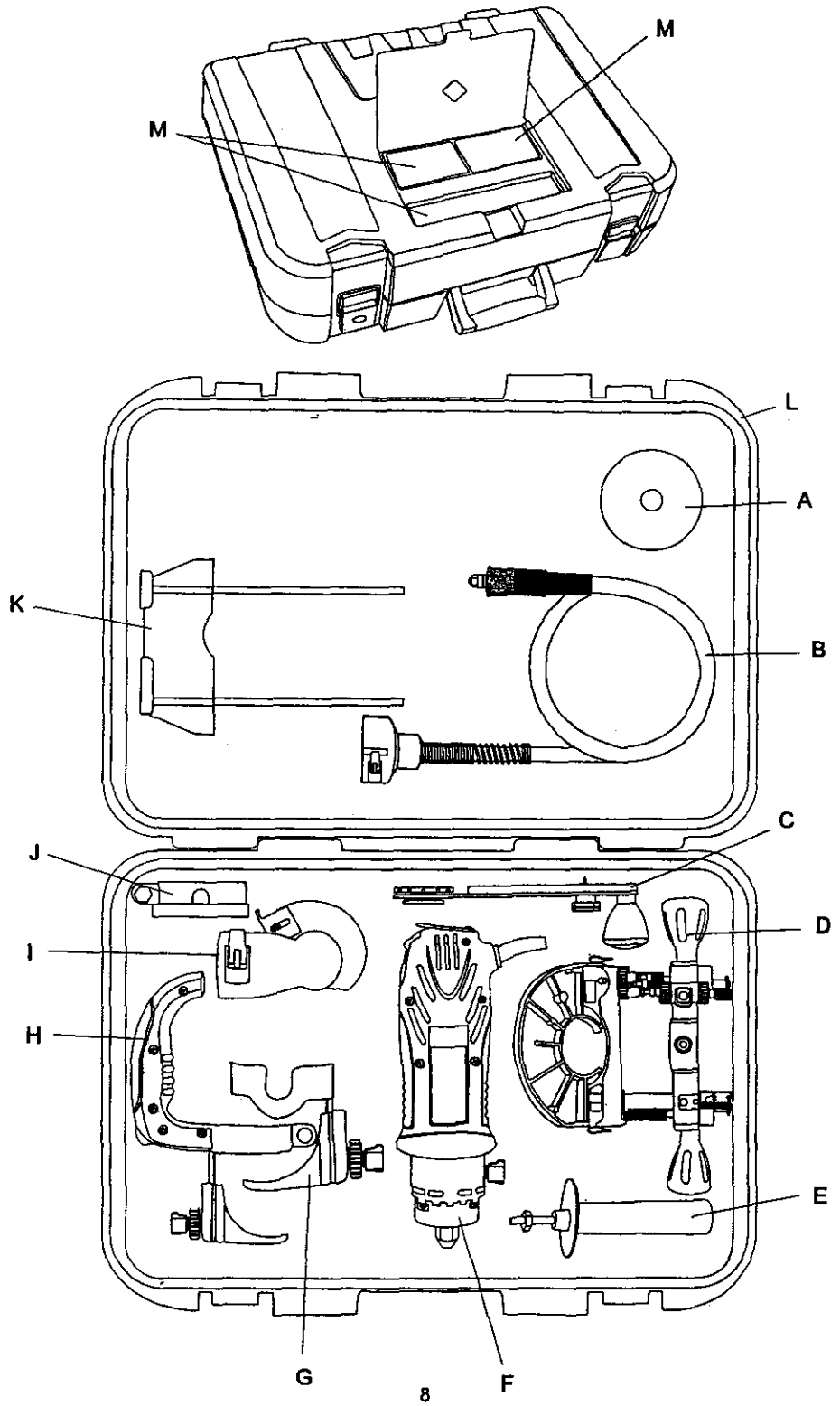


Drywall Bit

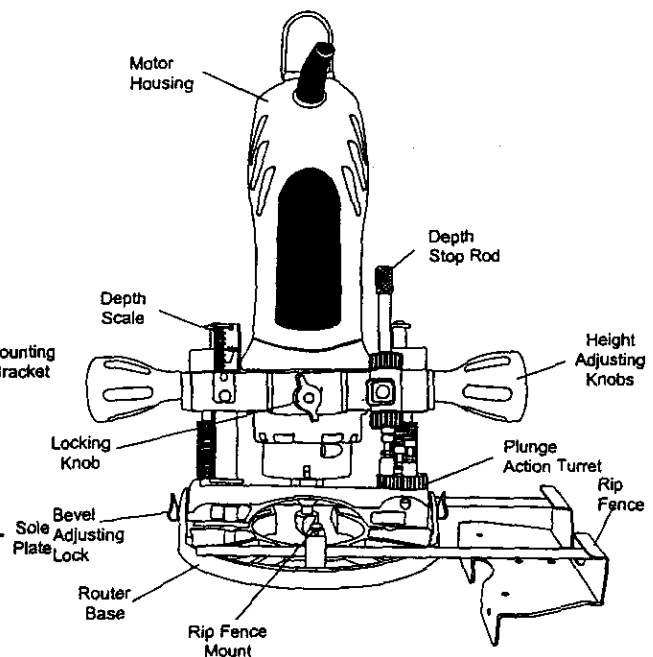
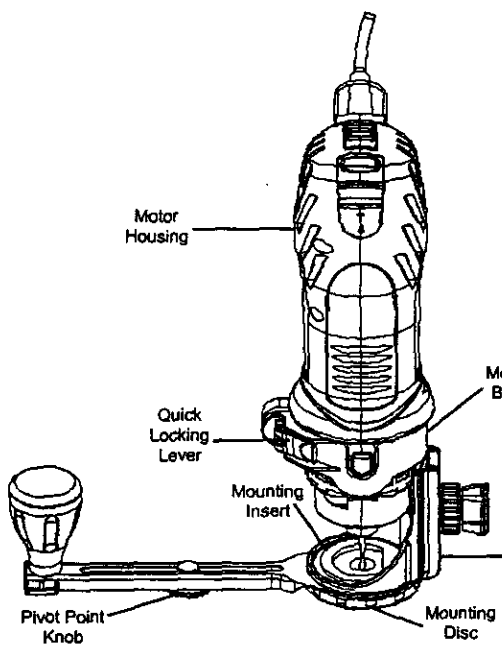
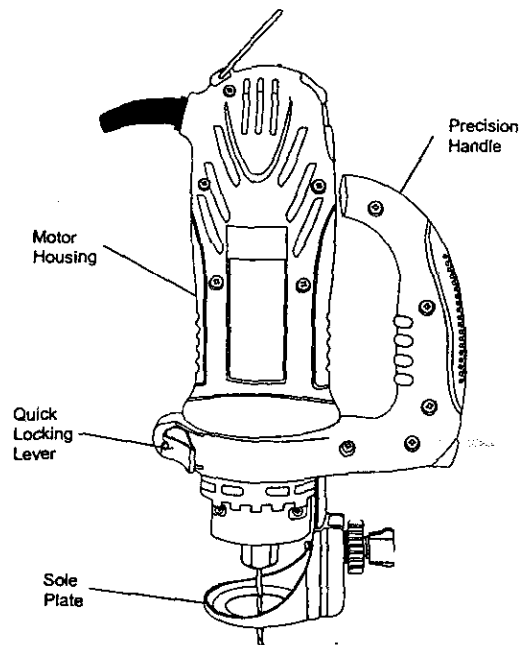
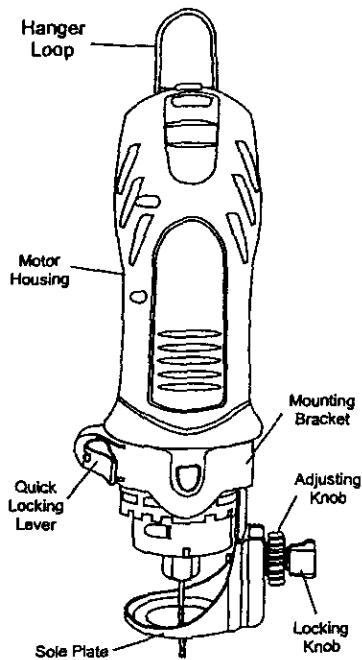


General Purpose Bit

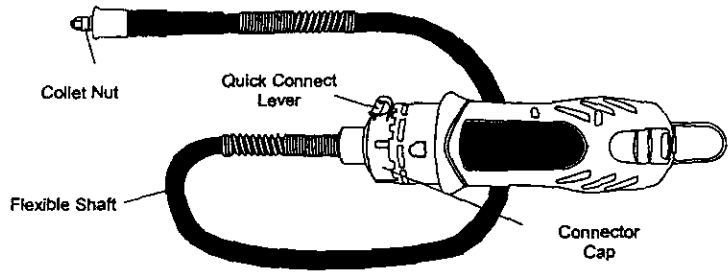
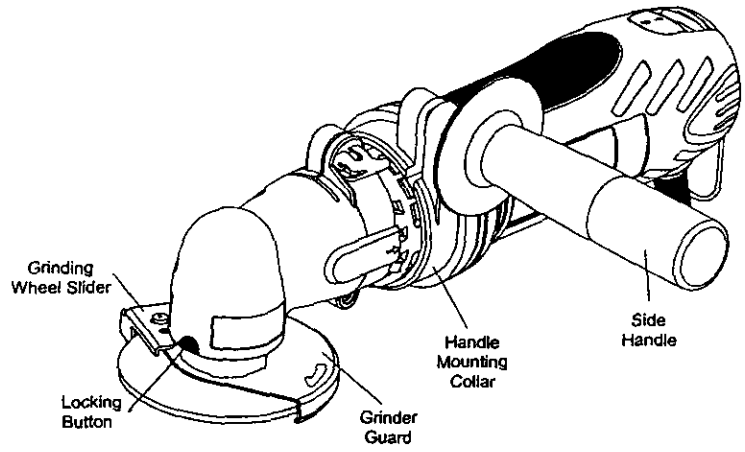
CARTON CONTENTS



KNOW YOUR CUTTING TOOL



KNOW YOUR CUTTING TOOL



ASSEMBLY & OPERATION

⚠ WARNING

Remove the plug from the power source before assembly, changing accessories or cutters and making adjustments. This safety action will help prevent accidental starting of the tool which could result in serious injury.

ON / OFF & SPEED CONTROL SWITCHES

This Cutting Tool is equipped with a sliding ON / OFF switch (1) located on the side of the tool and a two speed control switch (2) located on top of the tool (see Fig. 1).

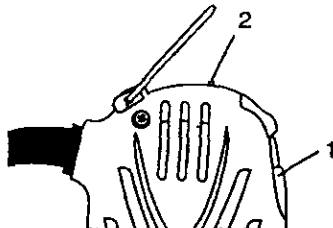


Fig. 1

1. To turn the tool ON, slide the switch (1) upward.
2. To turn the tool OFF, slide the switch downward.
3. To set speed to high speed, slide the speed control switch (2) away from the ON / OFF switch.
4. To set the speed control switch to low speed, slide the speed control switch (2) toward from the ON / OFF switch.

INSTALLING CUTTING BITS

⚠ WARNING

Cutting bit and router bit cutting surfaces are extremely sharp. Handle with caution.

To insert a cutting bit, use the collet wrench.

1. Depress the shaft locking button (1) and rotate the collet lock nut (2) clockwise with the other hand until the locking button drops into place, preventing the shaft from turning (see Fig. 2).
2. While continuing to hold the shaft locking button IN, use the collet wrench (3) to turn the collet nut counter clockwise. Loosen the collet nut two or three turns.
3. Remove bit if one is already installed in the tool.

INSTALLING CUTTING BITS – Cont'd

4. Insert new cutting bit (4) into the collet.

⚠ WARNING

Insert the bit all the way into the collet and then pull it back between $\frac{1}{16}$ " and $\frac{1}{8}$ ". This creates an air space between the motor shaft and the bit to help prevent overheating the bit.

Before tightening the collet on the bit, make sure the flutes (spiral portion) of the bit are completely visible outside the collet. Clamping the collet on the bit flutes will result in broken bits and possible injury.

5. When bit is properly placed in the collet, depress the shaft locking button and turn the collet nut clockwise by hand as far as possible.
6. Securely tighten collet nut using the wrench:

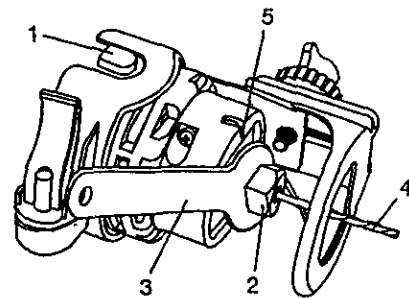


Fig. 2

WORK LIGHTS

The motor unit has two built-in work lights (5) (see Fig. 2). These work lights automatically light up when the motor switch is turned ON. Patterns or drawings in the immediate vicinity of the bit will be illuminated for better visibility and improved cutting accuracy.

SELECT APPROPRIATE MOTOR SPEED

Selecting the appropriate motor speed will ensure smoother, more efficient cutting action. Choose LOW speed for grinding, cutting plastics, polishing and when using wire or bristle brushes. Choose HIGH speed when cutting wood, using the angle grinder attachment, using cut-off wheels and to reduce "chatter" that may develop when cutting some materials at LOW speed.

ASSEMBLY & OPERATION

CHANGING COLLET INSERT

The cutting bits for this tool are locked into place with a collet nut (1) and collet (see Fig. 3). The $\frac{1}{8}$ " collet (2) is used for holding hobby tool accessory bits. The $\frac{1}{4}$ " collet (3) is supplied for holding SMALL router bits with a $\frac{1}{4}$ " shank.

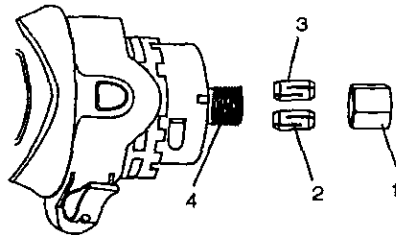


Fig. 3

To change from one collet size to the other:

1. Remove bit from the tool.
2. Continue turning the collet nut counter clockwise until it can be removed from the motor shaft (4).
3. Pull the collet out of the motor shaft and replace it with the other one.
NOTE: Each collet is the same on both ends, so either end can be inserted into the motor shaft.
4. Re-install the collet nut and slightly tighten it by hand.
5. Install the new bit as outlined in INSTALLING CUTTING BITS on Page 11.

NOTE: Tightening the collet nut without a bit in the collet will cause the collet hole to become smaller and make installing bits difficult. When storing the tool with no bit installed, leave collet nut loose.

FREEHAND CUTTING GUIDE

INSTALLING FREEHAND CUTTING GUIDE

The freehand cutting guide is designed for basic freehand cutting with the cutting bit. It is ideally suited for cutting electrical outlet holes in drywall.

⚠ WARNING

Do NOT use the freehand cutting guide with router bits. Limited control with this accessory could cause you to lose control and increase the chance of serious injury.

INSTALLING FREEHAND CUTTING GUIDE – cont'd

1. Slide freehand cutting guide mounting bracket (1) onto the bottom of motor housing (2) until the slot in the bracket (3) lines up with the shaft locking button (4) in the motor housing (see Fig. 4).
NOTE: The mounting bracket must be pushed onto the motor housing as far as it will go.
2. Lock the cutting guide to the motor housing by snapping the quick locking lever (5) firmly against the mounting bracket.

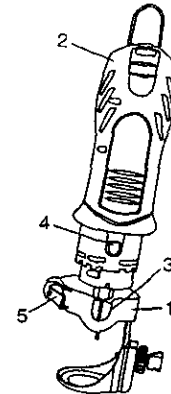


Fig. 4

ADJUSTING FREEHAND CUTTING GUIDE

1. Adjust freehand cutting guide depth by loosening the depth gauge locking knob (6) and rotating the adjusting knob (7) to move the cutting guide in or out as required (see Fig. 5).
NOTE: Set the depth gauge so the cutting bit protrudes beyond the cutting guide $\frac{1}{8}$ " more than the thickness of the material being cut. For example, if you are cutting $\frac{3}{4}$ " drywall, the bit should protrude $\frac{3}{8}$ " beyond the cutting guide.
2. Securely tighten depth gauge knob.
3. Before starting to cut you should re-check bit depth. Make sure cutting guide is at right angles to the bit and securely tightened. Re-check the collet to make sure the bit is securely fastened.

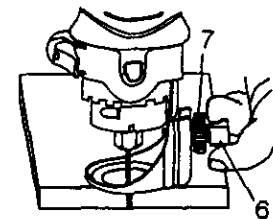


Fig. 5

ASSEMBLY & OPERATION

⚠ WARNING

Have you read "POWER TOOL SAFETY", "CUTTING TOOL SAFETY", "ELECTRICAL REQUIREMENTS & SAFETY" AND "CUTTING TOOL SYMBOLS" on pages 3, 4, 5 and 6 of this manual? If not, please do it now before you operate this Cutting Tool. Your safety depends on it!

Every time you use the Cutting Tool you should verify the following:

1. Cutting Tool cord is not damaged.
2. Bit is correct type for the material being cut.
3. Bit is sharp, in good condition, properly installed and securely tightened.
4. Safety glasses and dust mask are being worn.

Failure to adhere to these safety rules can greatly increase your chances of injury.

PRACTICE CUTS USING FREEHAND CUTTING GUIDE

Before attempting to work on an actual project, take the time to make a few practice cuts with your Cutting Tool. Use some scraps of material that are the same material as used in your actual project.

1. Draw a pattern similar to your first project on a scrap piece of material.
2. Install freehand cutting guide as shown in Fig. 4.
3. Install cutting bit in the collet as shown in Fig. 2.
4. Adjust depth of freehand cutting guide as shown in Fig. 5.
5. Rest the edge of the cutting guide on the workpiece with the bit at an angle of about 45° (see Fig. 6).
NOTE: DO NOT let the bit contact the workpiece until switch is turned ON and the tool is up to full speed.

⚠ WARNING

Before turning the tool switch ON, make sure you hold the tool firmly with both hands. Starting torque will cause the tool to twist.

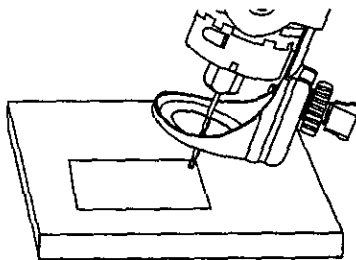


Fig. 6

PRACTICE CUTS USING FREEHAND CUTTING GUIDE -- cont'd

6. Set the speed control switch to the appropriate speed.
7. Turn the switch ON.
8. When the motor is up to full speed, slowly tip the tool to an upright position, letting the bit cut into the workpiece (see Fig. 7). Once the tool has reached the upright position and the bit has cut through the workpiece, slowly move the tool in a clockwise direction using slow steady pressure to make the cut. NOTE: Except for cutting around outlet boxes in drywall, always cut in a clockwise direction.
9. When cut is complete, turn the tool OFF, wait until it comes to a complete stop and remove it from the workpiece.

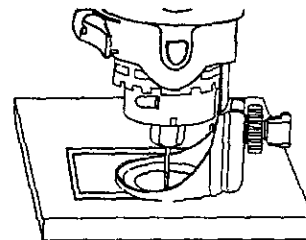


Fig. 7

⚠ DANGER

Do not attempt cutting around outlet boxes in drywall until:

1. All electricity in the vicinity of electric wires has been disconnected by either turning the breaker OFF or removing the fuses.
2. You have read the instructions on the following page entitled "CUTTING OUTLET OPENINGS IN DRYWALL".

CUTTING TIPS

The rotating cutting action of the bit will cause a slight pull to the left when cutting. Natural variations in the structure of wood will cause the bit to "wander". This tendency will be magnified when applying too much pressure to the bit. Slower cutting gives you better control. Excessive pressure or fast cutting will increase bit temperature and shorten the life of the bit.

When cutting a hole in a vertical surface, avoid ending the cut at the bottom of the hole. Always start and end the cut at the "top" so the cut-out part will not drop onto the rotating bit. Always turn the tool OFF before removing it from the workpiece.

ASSEMBLY & OPERATION

CUTTING OUTLET OPENINGS IN DRYWALL

▲ DANGER

Do not attempt to use this tool to make cut-outs around any fixture or opening which has live electrical wires or on any wall which may have electrical wiring behind it. If a live wire is contacted, the bit could conduct the electric current to the tool, creating an electrocution hazard for the operator. Turn OFF breakers or remove fuses to disconnect the electric circuit in the area of work. Always hold the tool by its insulated housing when working in areas where there is a possibility of contacting electric wires. Always wear eye protection when operating this tool.

1. Before installing drywall, push the electrical wires to the back of the box as far as possible so they will not be cut by the bit when cutting the opening.
2. Before fastening the drywall sheet over the electrical box, mark the sheet as close as possible to the centre of the box opening. Mark should be on the side of the drywall facing you.
3. When fastening the drywall in place, do not place nails or screws closer than 12" from the box. This will prevent the drywall from becoming deformed under pressure.
4. Install cutting bit and freehand cutting guide as outlined on Pages 11 & 12 of this owner's manual. Adjust depth of cut so the bit will protrude $\frac{1}{8}$ " beyond the thickness of the drywall.
5. Hold the tool firmly with both hands and turn it ON. Plunge the bit through the drywall at the mark indicating the centre of the box. See Fig. 8 for cutting pattern.

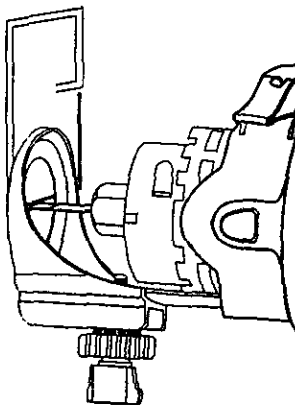


Fig. 8

CUTTING OUTLET OPENINGS IN DRYWALL – cont'd

6. Move the bit slowly to the right until you feel and hear the bit contacting the inside of the box.
7. Pull the bit out far enough to slip it over the edge of the box. Once the bit is outside the box, push it back to full depth beside the outside edge of the box.
8. Move the tool upward while applying slight pressure toward the centre of the box. When you feel the bit reach the top right hand corner of the box, move the tool to the left while applying slight pressure downward toward the centre of the box.
9. Continue moving the tool around the box in a counter clockwise direction while maintaining slight pressure toward the centre of the box. When the box cut-out is complete, turn the tool OFF and remove it from the cut-out.
10. Completed electrical box cut-out will be accurately and neatly cut (see Fig. 9).

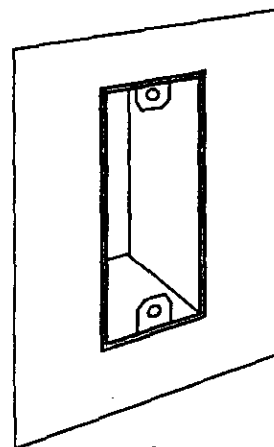


Fig. 9

NOTE: Always move the cutting bit in a counter-clockwise direction around the outlet box. The natural tendency of the cutting bit to move to the left will make it easier to cut close to the box.

ASSEMBLY & OPERATION

REMOVABLE HANDLE

INSTALLING REMOVABLE HANDLE

The removable handle is designed for use when precision control over the tool movement is desired. The comfortable handle can be used with either the right or left hand.

1. Slide removable handle mounting bracket (1) onto the bottom of motor housing (2) until the slot under the handle (3) lines up with the shaft locking button (4) in the motor housing (see Fig. 10).
NOTES:
a) The mounting bracket must be pushed onto the motor housing as far as it will go.
b) The shaft locking button (5) can now be activated by your thumb while holding on to the handle
2. Lock the removable handle to the motor housing by snapping the quick locking lever (6) firmly against the mounting bracket.

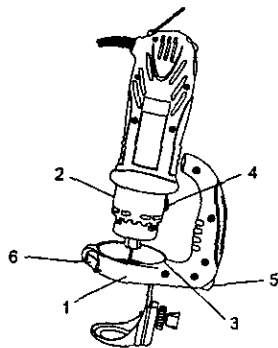


Fig. 10

ADJUSTING FREEHAND CUTTING GUIDE

1. Adjust removable handle cutting guide depth by loosening the depth gauge locking knob (7) and rotating the adjusting knob (8) to move the cutting guide (9) in or out as required (see Fig. 11).
NOTE: Set the depth gauge so the cutting bit protrudes beyond the sole plate $\frac{1}{8}$ " more than the thickness of the material being cut. For example, if you are cutting $\frac{3}{4}$ " pine, the bit should protrude $\frac{7}{8}$ " beyond the cutting guide.
2. Securely tighten depth gauge knob.
3. Before starting to cut you should re-check bit depth, make sure cutting guide plate is at right angles to the bit and securely tightened. Re-check the collet to make sure the bit is securely fastened.

ADJUSTING FREEHAND CUTTING GUIDE – Cont'd

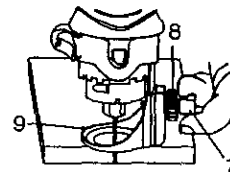


Fig. 11

CIRCLE CUTTING GUIDE

INSTALLING CIRCLE CUTTING GUIDE

The circle cutting guide accessory is ideal for precision cutting of circles. This circle cutting guide can be attached to either the freehand cutting guide or the removable handle cutting guide. For purposes of illustration, the circle cutter is shown with the freehand cutting guide.

1. Install freehand cutting guide on the tool as illustrated on Page 12 of this owner's manual.
2. Insert the externally threaded circle cutting guide mounting insert (1) into the bottom of the freehand cutting guide (2) (see Fig. 12).
NOTE: Make sure the molded "D" in the mounting insert is inserted into the matching "D" in the cutting guide.
3. Place circle cutting guide mounting hole (3) over the externally threaded circle cutting guide mounting insert.
NOTE: Make sure pointed pivot pin (4) is pointing away from the tool.
4. Screw the internally threaded circle cutting guide mounting disc (6) onto the externally threaded circle cutting guide mounting insert and hand tighten.
NOTE: Do not over tighten the circle cutting guide mounting plastic parts. Hand tighten only.
5. Adjust the circle cutting guide radius by loosening pivot point knob (5), sliding it to the correct circle radius and re-tightening in the desired location.
NOTE: Check circle cutting guide radius setting by measuring from the pivot point to the outside of the cutting bit.

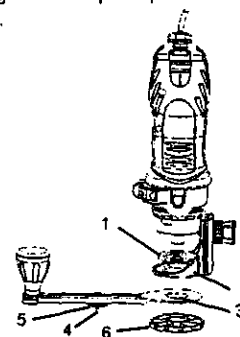


Fig. 12

ASSEMBLY & OPERATION

CIRCLE CUTTING GUIDE

CIRCLE CUTTING GUIDE OPERATION

⚠ WARNING

Unplug the tool from the power source before changing accessories, changing bits and making adjustments.

Before turning the tool ON, check to make sure bit and all accessory fasteners are securely tightened.

1. Mark the centre of the circle you wish to cut on the workpiece and drill a 6 mm or $\frac{15}{64}$ " pilot hole.
2. Adjust cutting bit depth to $\frac{1}{8}$ " longer than the thickness of the material being cut (see Fig. 5).
3. Adjust the circle cutting guide radius by loosening pivot point knob, sliding it to the correct circle radius and re-tightening in the desired location.
NOTE: Check circle cutting guide radius setting by measuring from the pivot point to the outside of the spiral bit.
4. Rest the edge of the freehand cutting guide on the workpiece with the bit at an angle of about 45° (see Fig. 13). Insert the circle cutting guide pivot point into the pilot hole drilled at the centre of the circle.
NOTE: DO NOT let the bit contact the workpiece before switch is turned ON and the tool is up to full speed.

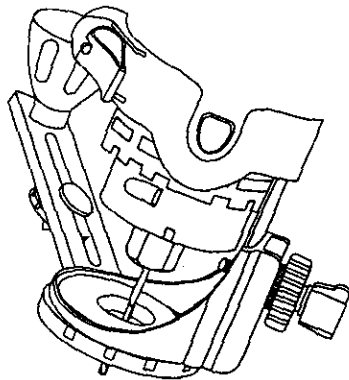


Fig. 13

CIRCLE CUTTING GUIDE OPERATION – cont'd

5. Turn the switch ON.
6. When the motor is up to full speed, slowly tip the tool and circle cutting guide assembly to an upright position, letting the bit cut into the workpiece (see Fig 14). Be careful to keep the pivot point located at the centre of the circle to be cut. Once the tool has reached the upright position and the bit has cut through the workpiece, slowly move the tool in a clockwise direction using slow steady pressure to make the cut. Continue to cut the circle, keeping the tool upright and rotating around the circle cutting guide pivot point.
7. When cut is complete, turn the tool OFF, wait until it comes to a complete stop and remove it from the workpiece.

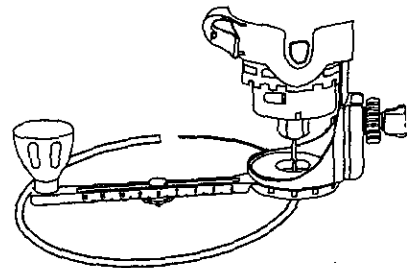


Fig. 14

ASSEMBLY & OPERATION

PLUNGE ROUTER BASE

The router accessory converts your Cutting Tool into a small hobby plunge router that is capable of handling small 1/4" shank router bits as well as the spiral cutting bit. The tilting base is ideal for bevel cutting. The plunge feature allows you to pre-set up to three different cutting depths.

⚠ WARNING

Unplug the tool from the power source before changing accessories, changing bits and making adjustments.

Before turning the tool ON, check to make sure the bit and all accessory fasteners are securely tightened.

ROUTER ACCESSORY INSTALLATION

1. Remove any accessory already installed on the tool.
2. Slide router accessory mounting bracket (1) onto the bottom of motor housing (2) until the mounting hole (3) lines up with the hole in the mounting bracket (see Fig. 15).
NOTE: The raised hole in the mounting bracket will slide over the motor shaft locking button.
3. Re-insert accessory locking knob (4) into the motor housing and securely tighten.

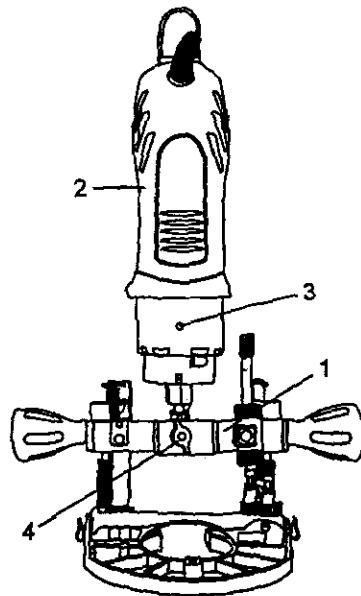


Fig. 15

SETTING ROUTER DEPTH FOR SINGLE DEPTH ONLY

Depth of cutting is controlled by sliding the router base up and down on the guide rods and locking it in place.

1. Raise plunge router depth stop rod by turning the lower depth stop lock nut (1) counter-clockwise until it is positioned at the bottom of the depth stop rod (2) (see Fig. 16). Push depth stop quick release button (3) and raise the depth stop rod to its maximum height and then release the button.
2. Rotate plunge action turret (4) until the shortest stop screw is under the depth stop rod (2).
3. Loosen both height adjusting knobs (5) by turning them counter-clockwise.
NOTE: Only loosen height adjusting knobs enough to release the tension on the guide rods (6).
4. Slide router base (7) up or down to obtain the desired depth of cut.
5. Re-tighten both height adjusting knobs when the desired cut depth is reached.

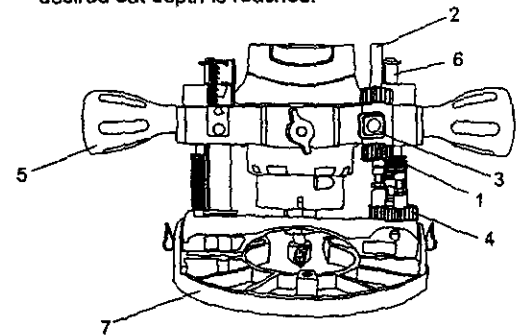


Fig. 16

SETTING PLUNGE DEPTH

Up to three different plunge depths can be pre-set by using the depth stop rod and plunge action turret. This provides for quick changes between depth settings.

1. Turn lower depth stop lock nut (1) to the bottom of depth stop rod and upper depth stop lock nut (2) to the top of depth stop rod (3) (see Fig. 17).
2. Push depth stop quick release button (4) and raise the depth stop rod to its maximum height and then release the button.
3. Rotate plunge action turret (5) until the shortest stop screw is under the depth stop rod.

ASSEMBLY & OPERATION

PLUNGE ROUTER BASE – cont'd

SETTING PLUNGE DEPTH – cont'd

- Loosen both height adjusting knobs (6) by turning them counter-clockwise.
NOTE: Only loosen height adjusting knobs enough to release the tension on the guide rods (7).
- Slide router base (8) up or down to obtain the desired depth of cut.
- Re-tighten height adjusting knobs when the desired cut depth is reached.
- Push the depth stop quick release button and lower depth stop rod until it contacts the turret stop screw (9). After releasing the quick release button, finer adjustments can be made by turning the depth stop rod.
- Lock both the lower (1) and upper (2) depth stop lock nuts against the router body to lock the depth stop rod in place.
NOTE: Do not use pliers to tighten lock nuts. Turn lock nuts by hand only.
- Lock shortest turret stop screw by tightening lock nut (10).
NOTE: Do not over tighten lock nut.
- Loosen both height adjusting knobs just enough to allow router to freely slide up and down on the guide rods.
- Two additional depths can be pre-set in a similar way setting the other two turret stop screws to the desired depth.
NOTE: To select pre-set plunge depth, simply rotate the turret until the correct turret stop screw is aligned under the depth stop rod.

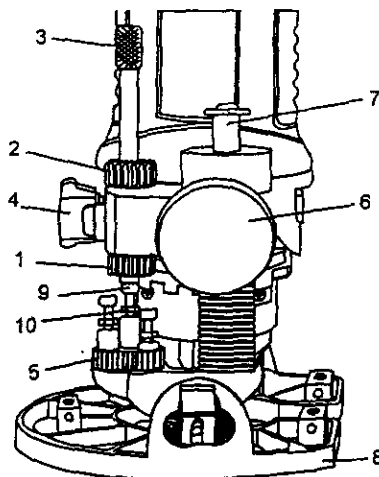


Fig. 17

SETTING ROUTER BASE BEVEL

Bevel cutting with the cutting bit can be done with the router base tilted to the desired angle.

- Loosen both bevel adjusting locks (1) by pulling them outward from the router base (2) (see Fig. 18).
- Tilt router base to the desired angle.
NOTE: There are detents for locking the router base at 0°, 15°, 30° and 45°. These are the four most common angles for bevel cutting.
- Lock both bevel adjusting locks by pushing them firmly back into position against the router base.
- Check bevel angle between router base and router bit to ensure they are at correct angle.
- Check router depth of cut and re-set the depth if required.
NOTE: Depth of cut will usually have to be increased after tilting the router base for bevel cutting.

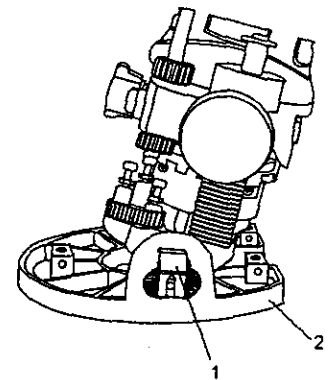


Fig. 18

ASSEMBLY & OPERATION

PLUNGE ROUTER BASE

FREEHAND CUTTING AND ROUTING

When the router base accessory is installed on the Cutting Tool, it will function as a small router to be used for freehand cutting of irregular shaped patterns. You can cut patterns out of the workpiece with the cutting bit or route patterns into the workpiece with small router bits.

FREEHAND CUTTING

1. Adjust the cutting bit depth to $\frac{1}{8}$ " longer than the thickness of the material being cut.
2. Turn the switch ON while firmly holding the tool.
3. When starting the cut inside the workpiece, place the bit at an angle to allow the bit to cut its way into the workpiece (see Fig. 6).
4. Use the two height adjusting knobs to guide the bit through the workpiece.

FREEHAND ROUTING

Use the router base with small router bits to perform various freehand routing projects (see Fig. 19).

1. Remove $\frac{1}{8}$ " collet and insert $\frac{1}{4}$ " collet (see Fig. 3).
2. Install router bit and securely tighten.
3. Adjust router base height to the correct routing depth.
4. Turn the switch ON making sure the router bit is not touching anything.
5. Holding the tool by the two height adjusting knobs, carefully lower the bit onto the workpiece and guide the bit around the desired pattern.

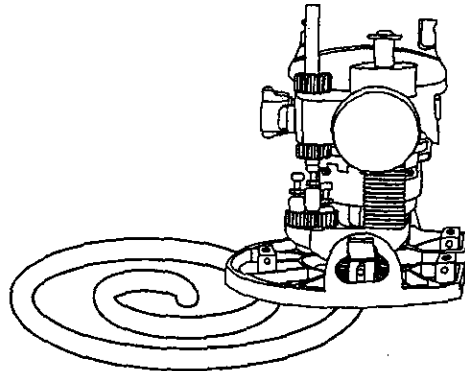


Fig. 19

CUTTING STRAIGHT LINE WITH STRAIGHT EDGE

To cut a straight line, you can use a straight edge template to guide the router base.

1. Draw a line on the workpiece where you wish to make the cut (see Fig. 20).
2. Draw a parallel second line approximately $2\frac{1}{8}$ " back into the workpiece (away from the cutting line).
3. Clamp the straight edge onto the larger portion of the workpiece that is to be clamped while cutting.
4. Place the flat side of the router base against the straight edge with the bit near the start of the cutting line.
NOTE: Check bit location to ensure cut will be made in the correct location.
5. Turn the switch ON while firmly holding the tool.
6. Slide the router plate against the straight edge while making the cut.

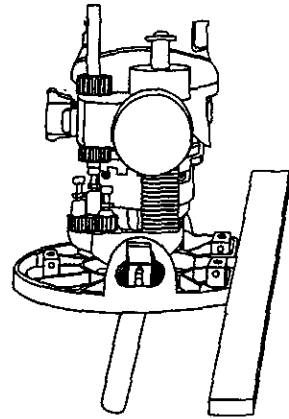


Fig. 20

ASSEMBLY & OPERATION

PLUNGE ROUTER BASE

CUTTING CURVED LINE WITH A TEMPLATE

To cut a curved line, you can use a curved template to guide the router base.

1. Make a template from hardboard or other similar material to the shape you require (see Fig. 21).
NOTE: Radius of curve must be greater than $2\frac{1}{4}$ " for router base to properly follow the curved template.
2. Mark the location of the cut to be made.
3. Mark the workpiece approximately $2\frac{7}{16}$ " back into the workpiece (away from the cutting line).
4. Clamp the template onto the larger portion of the workpiece that is to be clamped while cutting.
5. Place the curved portion of the router base against the template with the bit near the start of the cutting line.
NOTE: Check bit location to ensure cut will be made in the correct location.
6. Turn the switch ON while firmly holding the tool.
7. Slide the router plate against the template while making the cut.

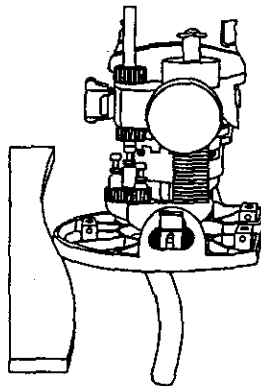


Fig. 21

RIP FENCE

INSTALLING RIP FENCE TO ROUTER BASE

1. Loosen all three cap screws (1) in the router base using a 7 mm wrench (see Fig. 22).
NOTE: Loosen cap screws so they do not extend into the rip fence mounting holes.
2. Insert the rip fence guide rods (2) into the mounting holes (3).
3. Set the inner edge of the rip fence (4) at the desired distance from the edge of the cutter.
4. Tighten all three cap screws to lock the rip fence in the desired position.

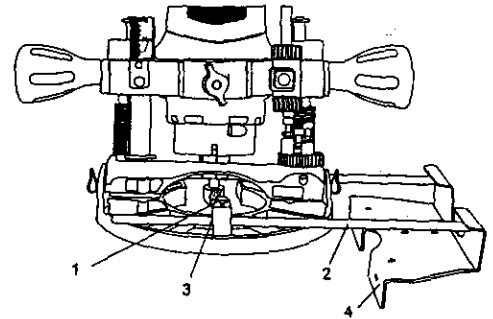


Fig. 22

CUTTING WHILE USING THE RIP FENCE

NOTE: After setting the rip fence to the desired position, make a test cut on a scrap piece of material to verify you have the correct setting.

1. Clamp the workpiece to hold it securely while cutting.
NOTE: Make sure there is adequate clearance under the workpiece for the bit to travel and the edge is clear for the rip fence to move freely.
2. Place the router base on the workpiece with the rip fence against the edge to be ripped.
NOTE: Make sure the bit does NOT touch the workpiece until the motor is up to full speed.
3. Turn the switch ON while firmly holding the tool.
4. Slide the router base along the workpiece while making sure the rip fence is firmly contacting the workpiece at all times.

ASSEMBLY & OPERATION

ANGLE GRINDER ATTACHMENT

INSTALL FLEX SHAFT ADAPTER

1. Remove collet nut (1) from the motor shaft (2) and remove existing collet (see Fig 23).
2. Insert short end of flex shaft adaptor (3) into motor shaft.
3. Slide collet nut over flex shaft adaptor and fasten onto motor shaft by turning clockwise. Tighten collet nut using collet wrench supplied.
NOTE: Press locking button (4) on motor housing to lock motor shaft while tightening the collet nut.

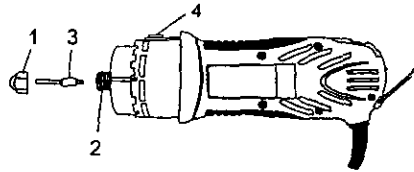


Fig. 23

INSTALL ANGLE GRINDER ATTACHMENT SIDE HANDLE

1. Loosen angle grinder attachment side handle (1) by turning it counter-clockwise (see Fig. 24).
2. Slide mounting collar (2) over motor housing (3).
NOTES:
a) Make sure one of the eight slots (4) in mounting collar slides over shaft locking button (5).
b) Collar can be rotated and positioned in eight different positions for operator convenience.
3. When mounting collar is pushed fully onto the motor housing, lock it in place by turning the handle clockwise.

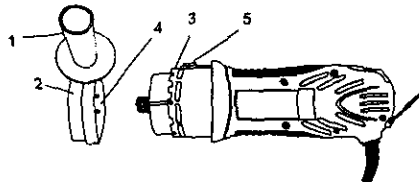


Fig. 24

INSTALL ANGLE GRINDER ATTACHMENT

1. Release locking lever (1) on angle grinder attachment housing (see Fig. 25).

2. Match up key (2) on motor housing and slot (3) in angle grinder attachment. There are also arrows on the motor housing and angle grinder attachment housing. Slide angle grinder attachment onto the motor housing.
NOTE: While sliding angle grinder attachment onto motor housing, rotate the angle grinder attachment spindle (4) until flex shaft adaptor engages into the angle grinder attachment.
3. When flex shaft adaptor is engaged into the angle grinder attachment, slide angle grinder attachment fully onto the motor housing as far as it will go.
4. Lock angle grinder attachment in place by pushing locking lever until it snaps into place against the angle grinder attachment housing.
5. Rotate angle grinder attachment guard (5) back toward the motor so it will protect both your fingers and the motor when grinding.

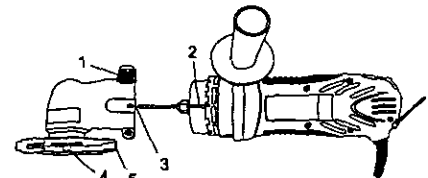


Fig. 25

INSTALLING GRINDING DISC

1. Press angle grinder attachment locking button (1) and rotate flanged spindle nut (2) until the lock engages the shaft (see Fig. 26).
2. Remove the flanged spindle nut (if installed) by turning it counter-clockwise with the collet wrench.
3. Place the grinding disc (3) over the spindle (4).
NOTE: Loosen the slider screw (5) and adjust the slider (6) if necessary to allow the grinding disc to fit into the slot (7).
4. Re-install the flanged spindle nut on the spindle and tighten in place.
NOTE: Do NOT over tighten the flanged nut. This may cause the grinding disc to crack and shatter when the angle grinder attachment is turned ON.
5. Re-tighten the slider screw so it holds the guide in the correct position.
NOTE: Make sure the grinding disc does NOT touch the guide when it turns.

ASSEMBLY & OPERATION

ANGLE GRINDER ATTACHMENT—cont'd

INSTALLING GRINDING DISC – cont'd

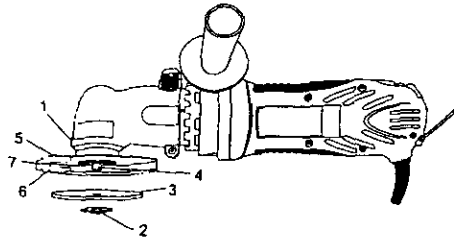


Fig. 26

INSTALLING SANDING BACKING FLANGE & DISC

1. Press angle grinder attachment locking button (1) and rotate spindle (2) until the lock engages the shaft (see Fig. 27).
2. Remove the flanged spindle nut (if installed) by turning it counter-clockwise with the collet wrench.
3. Install backing flange (3) onto spindle by turning it clockwise.
- NOTE: Only hand-tighten backing flange.
4. Place appropriate sanding disc (4) on the face of the backing flange and lock into place by pressing the centre into the backing flange and turning it clockwise.
NOTE: Make sure sanding disc hub securely locks into the backing flange receptacle.

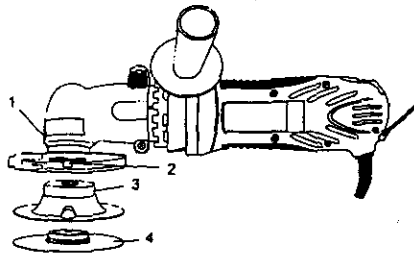


Fig. 27

SAFETY EQUIPMENT FOR ANGLE GRINDER ATTACHMENT

⚠ WARNING

Your angle grinder attachment is a high speed tool that will throw hot sparks and metal dust when grinding. It will also throw particles and dust when sanding. It is critical that you use proper safety goggles, dust mask and hearing protection at all times while operating this tool.

PLACEMENT OF GUARD

Guard must always be rotated toward the rear of the unit so it protects your hand on the side handle and also to prevent dust from entering the motor as you operate the tool.

To reposition the guard, simply rotate it to the correct position.

OPERATION OF ANGLE GRINDER ATTACHMENT

⚠ WARNING

Never stand in line with the disc while operating the angle grinder.

1. Install appropriate grinding disc or sanding disc.
NOTE: Check to make sure grinding disc or sanding disc is not cracked or damaged in any way.
2. Firmly grasp Cutting Tool with both hands and turn switch ON. Make sure grinding disc or sanding disc is NOT touching the workpiece when turning switch ON.
3. Wait until motor reaches full speed before grinding or sanding.
4. Carefully allow front or right hand side of the disc to contact the workpiece in the area to be worked.

NOTES:

a) Do NOT apply heavy pressure to the grinding disc or sanding disc. This will slow the motor down causing it to overheat and possibly damage the motor.

b) Replace damaged or worn grinding discs and sanding discs. The new abrasive will cut much faster and leave a smoother finish.

ASSEMBLY & OPERATION

FLEXIBLE SHAFT

WARNING

ALWAYS WEAR EYE PROTECTION. Any power tool can throw foreign objects into your eyes which could cause permanent eye damage. **ALWAYS** wear safety goggles (not glasses) that comply with ANSI safety standard Z87.1. Everyday glasses have only impact resistant lenses. They **ARE NOT** safety glasses. Safety goggles are available at Sears.



Glasses or goggles not in compliance with ANSI Z87.1 could cause serious injury when they break.

WARNING

Never bend the flexible shaft with a radius of less than 6" when operating. Please store the flexible shaft in the designated compartment of the tool box when not in use.

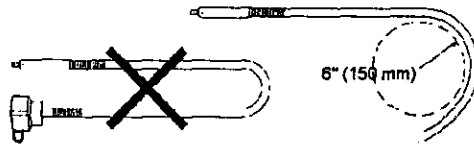


Fig. 28

NOTES: The head of the flexible shaft should not be excessively bent. If excessive heating is observed, stop using the flexible shaft immediately. Remove the cable from the flexible shaft body and inspect it for a permanent bend or other damage. Replace damaged cable.

INSTALLATION INSTRUCTIONS

1. Turn Cutting Tool motor switch OFF and remove plug from the power source.
2. Lock main shaft (3) by rotating the collet nut (1) while pressing on the spindle lock button (4) until the spindle lock prevents shaft from rotating (see Fig. 29).
3. Remove the collet nut by turning it counter-clockwise. Remove the collet (2) from inside main shaft of Cutting Tool.

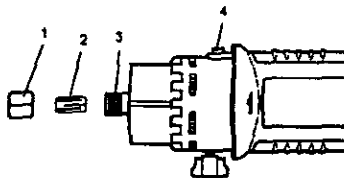


Fig. 29

4. Insert collet with square hole (5) into main shaft (3) and re-install the collet nut onto the main shaft (see Fig. 30).
NOTE: Collet with square hole is packed in Polybag #2.
5. Use Cutting Tool wrench to tighten the collet nut firmly onto the main shaft while spindle lock is engaged into the main shaft.

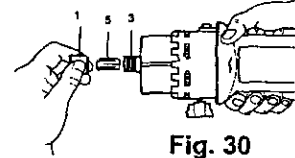


Fig. 30

6. Align the flexible shaft connector cap (6) with the Cutting Tool motor housing (8) (see Fig. 31).
NOTES:
a) Carefully align the square flex shaft centre core so it will engage into the square hole in the collet.
b) Make sure the groove (7) in the connector cap aligns with the matching key (8) on the motor housing.
7. When shaft centre core and connector cap are properly aligned, slide the connector cap fully onto the motor housing. Lock connector cap into place by pressing on the quick connect lever (9).

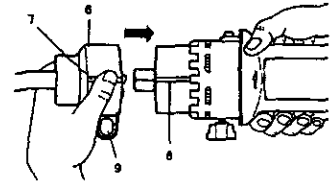


Fig. 31

8. To insert an accessory into the flexible shaft collet, rotate collet nut (12) until hole in shaft aligns with hole in flexible shaft collar (11) (see Fig. 32). Insert L-key (10) into aligned holes and use flat wrench to turn collet nut counter clockwise.
9. When collet is loose, insert accessory and turn collet clockwise to tighten, making sure the accessory is centered in the collet. Use the flat wrench to tighten.
10. Remove locking pin and rotate the collet by hand to ensure accessory does not wobble.

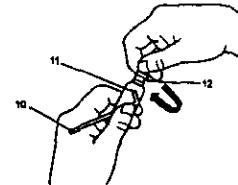


Fig. 32

MAINTENANCE

⚠ DANGER

For your own safety, turn the switch OFF and remove the plug from the power source before maintaining your Cutting Tool.

When servicing, use only identical parts. Use of any other part may create a hazard or cause product damage.

EXTERNAL CLEANING

⚠ WARNING

DO NOT use solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloth to remove dirt, dust, oil, grease, etc.

Do not at any time allow brake fluids, gasoline, petroleum-based products, penetrating oils, etc. to come in contact with plastic parts. They contain chemicals that can damage, weaken or destroy plastic.

INTERNAL CLEANING

It has been found that electric tools are subjected to accelerated wear and possible premature failure when they are used on fibreglass boats and sports cars, wallboard, spackling compounds or plaster. The chips and grindings from these materials are highly abrasive to electric tool parts such as bearings, brushes, commutators, etc. During any use on these materials it is extremely important that the tool is cleaned frequently by blowing out with a compressed air jet.

⚠ DANGER

It is critical that you wear safety goggles or safety glasses with side shields and a dust mask while blowing dust out of the Cutting Tool with a compressed air jet. Failure to take these safety precautions could result in permanent eye or lung damage.

POWER CORD MAINTENANCE

⚠ WARNING

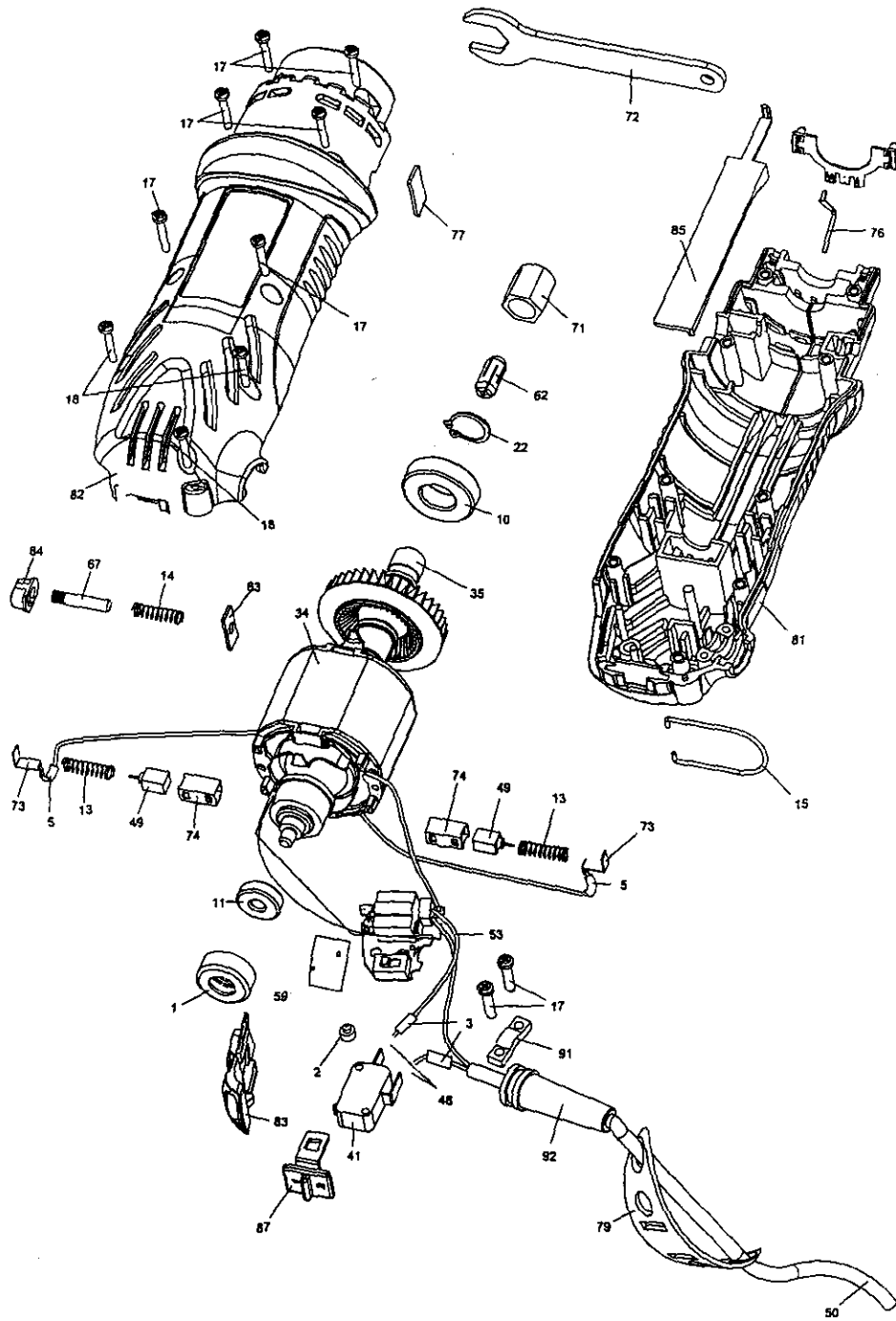
To avoid shock or fire hazard, replace the cord immediately if it is worn or damaged in any way.

LUBRICATION

All of the bearings in this Cutting Tool are lubricated with a sufficient amount of high-grade lubricant for the life of the unit under normal conditions. Therefore, no further lubrication is required.

PARTS DIAGRAM – MODEL 183.172540

Main Unit



PARTS LIST – MODEL 183.172540

⚠ WARNING

When servicing use only CRAFTSMAN® replacement parts. Use of any other parts may create a HAZARD or cause damage to your Spin Saw.

Any attempt to repair or replace electrical parts on this Cutting Tool may create a hazard unless repair is performed by a qualified technician.

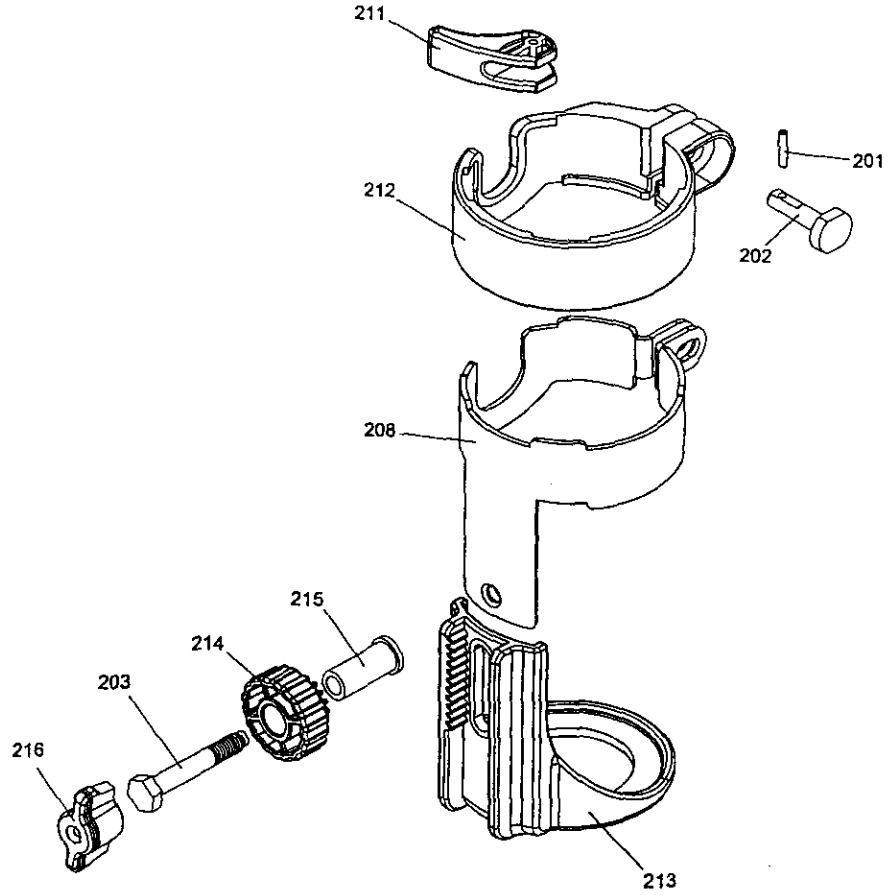
Always order by PART NUMBER, not by key number.

Main Unit

Key #	Part #	Part Name	Qty	Key #	Part #	Part Name	Qty
1	01AR-000032-00	Bearing Sleeve	1	44	03AT-000033-00	Terminal block	1
2	01AR-000035-00	Switch presser	1	48	03AT-000040-00	Terminal (female)	2
3	01AT-000014-A0	Bushing tube	2	49	03AT-000046-00	Carbon brush	2
5	01AT-000031-00	Bushing tube	2	50	03AW-000131-00	Power cord	1
10	02AE-000060-00	Front bearing	1	53	03AY-000020-00	Wire	1
11	02AE-000061-00	Rear bearing	1	55	03AY-000073-00	Wire	2
12	02AK-000022-00	Rivet	4	56	03AY-000074-00	Wire	2
13	02AH-000088-00	Brush spring	2	59	04AP-000068-00	Fibra	1
14	02AH-000089-00	Spindle spring	1	62	2203-MA0003-00	1/4" collet	1
15	02AH-000112-00	Hanger	1	62	2203-MA0004-00	1/8" collet	1
17	02AS-000199-A0	Case screw	8	63	2203-MA0007-00	Lock plate	1
18	02AS-000201-A0	Screw	3	67	2207-MA0003-00	Spindle lock	1
22	02AW-000055-00	Retaining ring	1	70	2213-MA0002-00	Conductor	2
23	03AA-000279-00	Transformer	1	71	2213-MA0005-00	Chuck cap	1
24	03AC-000011-F0	Capacity	1	72	2213-MA0006-00	Spanner	1
25	03AC-000043-00	Capacity	1	*	2213-SAM001-00	Brush assembly	2
28	03AD-000009-A0	Diode	4	73	2213-MA0011-00	Metal conductor	2
29	03AD-000040-00	Diac	1	74	2213-MA0012-00	Brush case	2
30	03AD-000074-00	LED	2	76	2213-MA0014-00	Wire cover	1
31	03AD-000075-00	Triac	1	77	2213-MA0015-00	Stop plate	1
34	03AM-000104-00	Stator	1	79	2203-PA0008-00	Spanner belt	1
35	03AM-000105-00	Rotor	1	81	2213-PA0022-00	Bottom cabinet	1
36	03AP-000073-00	PCB	1	82	2213-PA0023-00	Top cabinet	1
37	03AP-000076-00	PCB	1	83	2213-PA0024-00	Switch cover	1
38	03AR-000013-A0	Resistor	1	84	2213-PA0025-00	Lock button	1
39	03AR-000015-D0	Resistor	1	85	2213-PA0026-00	Cover	1
40	03AR-000109-A0	Resistor	3	87	2213-PA0028-00	2P-Switch	1
41	03AS-000135-00	Micro switch	1	91	9866-PA0004-00	Press plate	1
42	03AS-000140-00	Switch	1	92	9920-PA0011-00	Cord Sleeve	1

PARTS – MODEL 183.172540

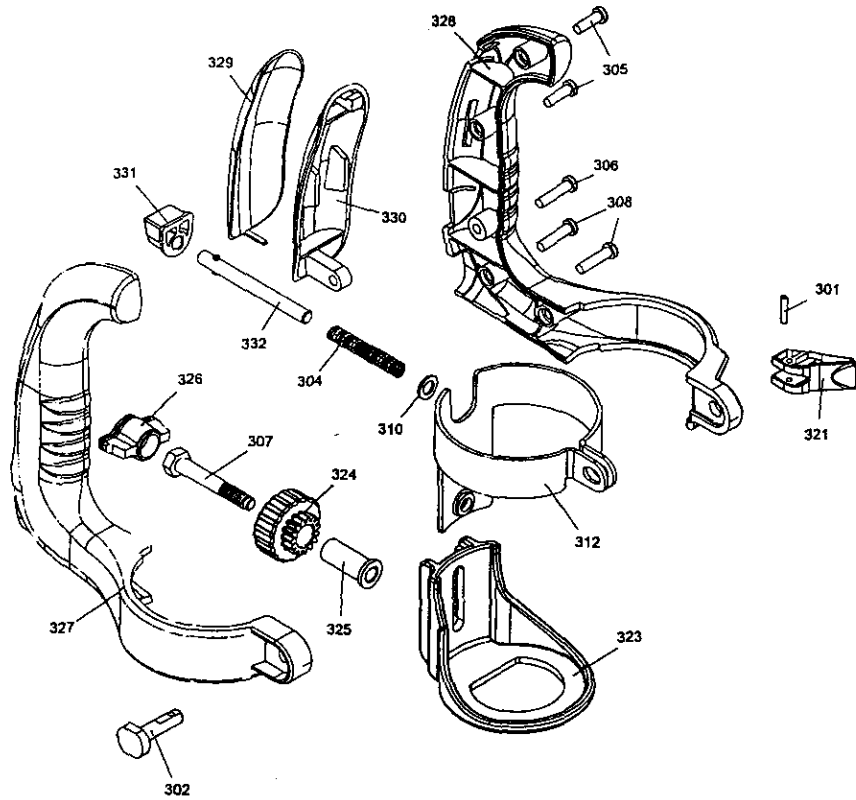
Freehand Cutting Guide Assembly



Key #	Part #	Part Name	Qty
201	02AF-000041-10	Fixing shaft	1
	02AF-000076-00	Release lock pin	1
202	2218-MA0001-00	Release lock pin	1
	2218-MA0001-01	Release lock pin	1
203	02AS-000287-00	Screw	1
208	2213-MA0010-00	Freecut metal round guide	1
211	2213-PA0010-00	Lock	1
	2213-PA0010-01	Lock	1
212	2213-PA0011-00	Fixbase	1
	2213-PA0011-01	Fixbase	1
213	2213-PA0012-00	Plastic guide base	1
214	2213-PA0013-00	Adjustment Gear 15T	1
215	2213-PA0014-00	Sleeve	1
216	2213-PA0015-00	Screw lock F	1

PARTS – MODEL 183.172540

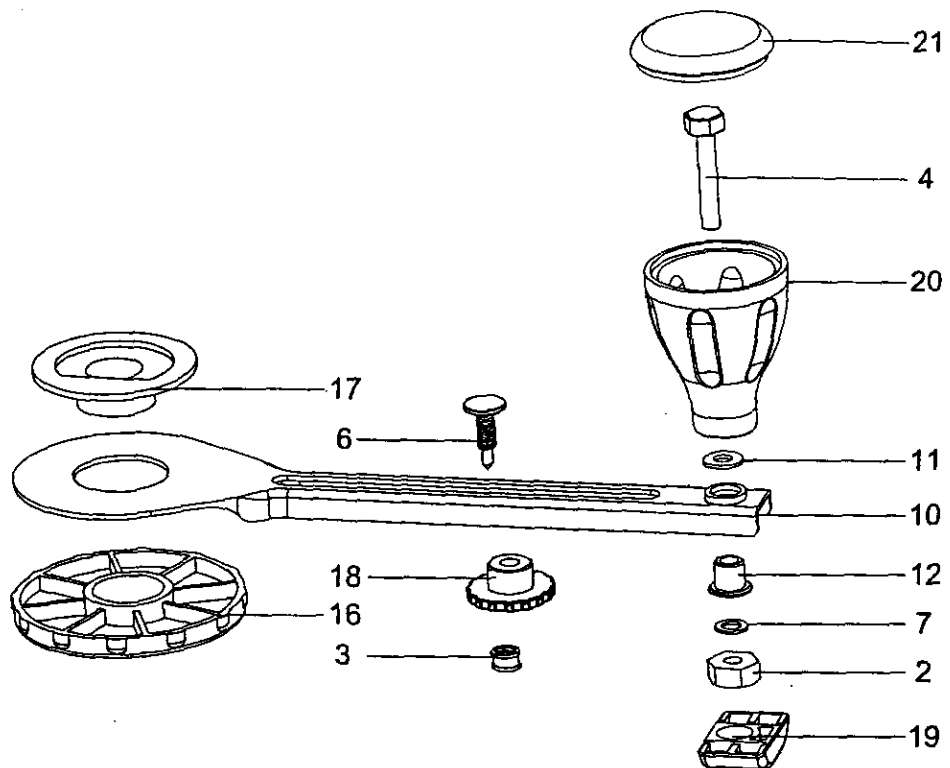
Handle Assembly



Key #	Part #	Part Name	Qty	Key #	Part #	Part Name	Qty
301	02AF-000041-10	Fixing shaft	1	312	2213-MA0013-00	S-round guide holder	1
302	02AF-000076-00	Release lock pin	1	321	2213-PA0010-00	Lock	1
	2218-MA0001-00	Release lock pin	1		2213-PA0010-01	Lock	1
	2218-MA0001-01	Release lock pin	1		323	2213-PA0012-00	Plastic guide base
304	02AH-000106-00	Compressive spring	1	324	2213-PA0013-00	Adjustment Gear 15T	1
	02AH-000106-01	Compressive spring	1	325	2213-PA0014-00	Sleeve	1
	02AH-000106-11	Compressive spring	1	326	2213-PA0015-00	Screw lock F	1
305	02AS-000148-00	Screw	2	327	2213-PA0016-00	Anx right handle	1
	02AS-000148-10	Screw	2		2213-PA0017-00	Anx left handle	1
306	02AS-000199-A0	Case screw	1	328	2213-PA0017-01	Anx left handle	1
	02AS-000199-00	Case screw	1		329	2213-PA0018-00	Anx handle softgrip (outside)
307	02AS-000287-00	Screw	1	330	2213-PA0019-00	Anx handle softgrip (inside)	1
308	02AS-000288-00	Screw	2	331	2213-PA0020-00	Spindle lock	1
	02AS-000288-10	Screw	2	332	2213-PA0021-00	Shaft F5-5	1
310	02AW-000067-00	Washer	1				

PARTS – MODEL 183.172540

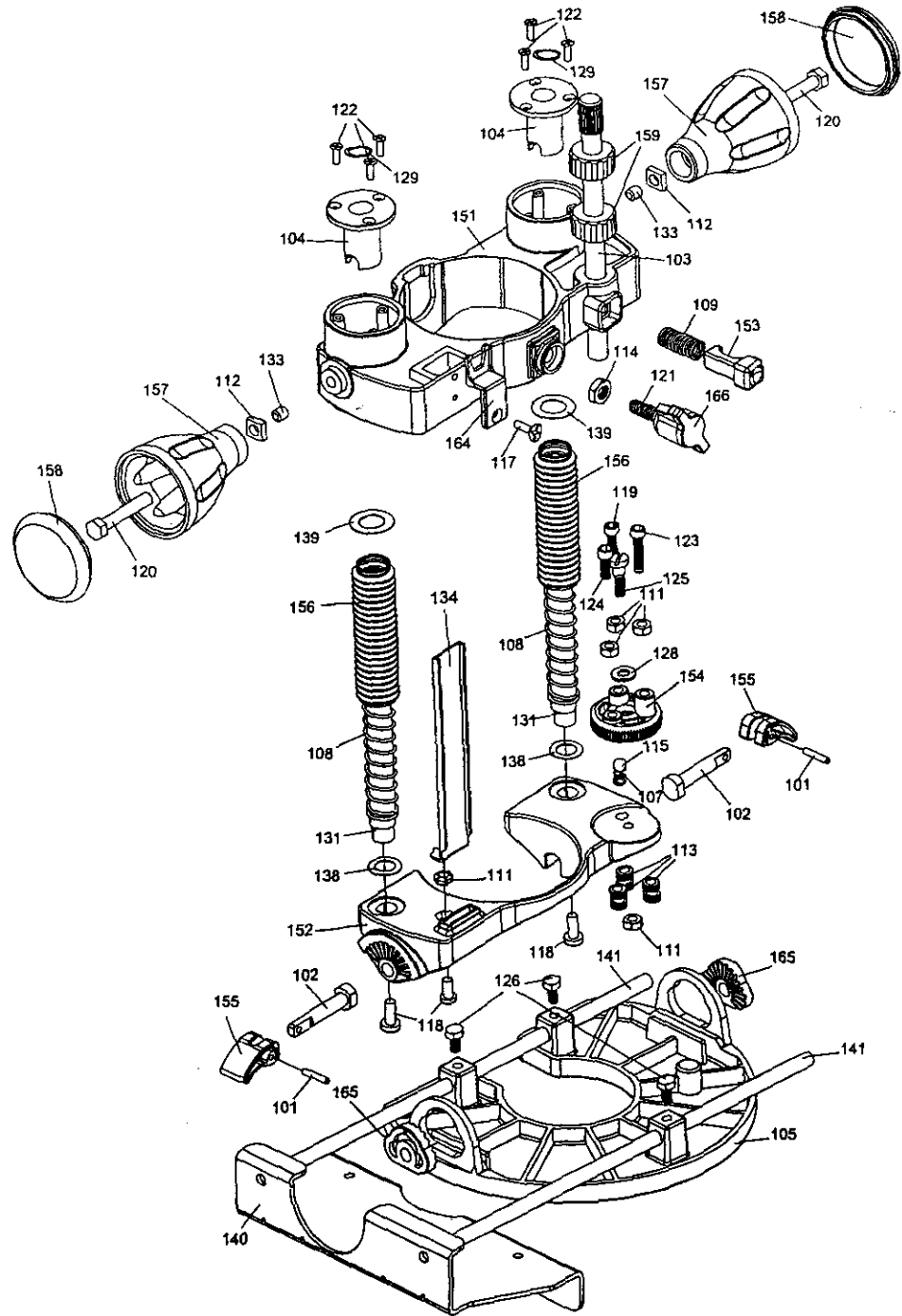
Circle Cutting Guide Assembly



Key #	Part #	Part Name	Qty
2	02AN-000018-00	Hexagon thin nut	1
	02AN-000018-10	Hexagon thin nut	1
3	02AN-000028-00	Fixing nut	1
4	02AS-000258-00	Machine screw	1
	02AS-000258-10	Machine screw	1
6	02AS-000319-00	Screw	1
7	02AW-000022-B0	Spring washer	1
10	2206-MA0001-00	Circular arm (metric)	1
	2206-MA0005-00	Circular arm (inch)	1
11	2206-MA0002-00	Washer	1
12	2206-MA0003-00	Handle bush	1
16	2206-PA0003-00	Locking base	1
17	2206-PA0004-00	Round guide mount	1
18	2206-PA0005-00	Screw knob	1
19	2206-PA0006-00	Slide shoe	1
20	2213-PA0007-00	Handle cup-like base	1
21	2213-PA0008-00	Handle cup-like cover	1

PARTS DIAGRAM – MODEL 183.172540

Router Assembly



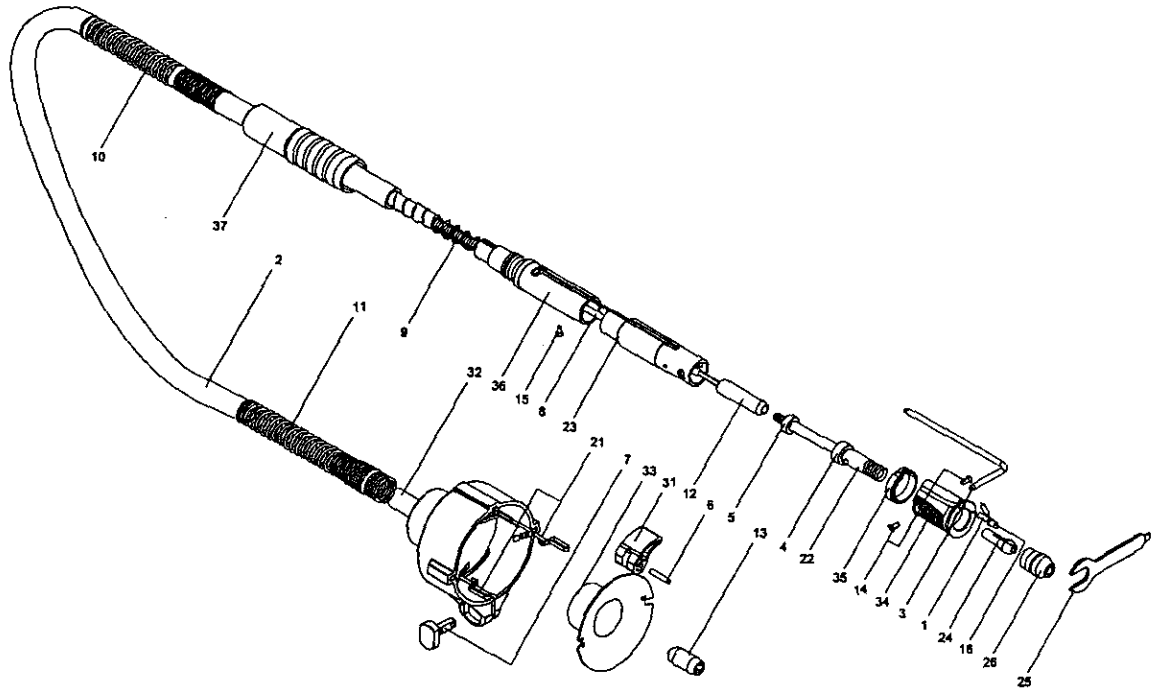
PARTS LIST – MODEL 183.172540

Router Assembly

Key #	Part #	Part Name	Qty	Key #	Part #	Part Name	Qty
101	02AF-000041-10	Fixing shaft	2	125	02AS-000292-00	Screw	1
102	02AF-000077-00	Base release lock pin	2		02AS-000292-10	Screw	1
103	02AF-000078-00	Height rod	1	126	02AS-000308-00	Screw	3
104	02AG-000145-00	Guide bush	2	128	02AW-000068-00	Wave washer	1
105	02AJ-000017-00	Router tile base	1	129	02AW-000070-00	External retaining rings	2
107	02AH-000107-00	Spring	1		02AW-000070-10	External retaining rings	2
108	02AH-000108-00	Spring	2	131	2213-MA0001-00	Guide rod	2
	02AH-000108-01	Spring	2	133	2213-MA0003-00	Knock head	2
	02AH-000108-11	Spring	2	134	2213-MA0004-00	Index guide	1
109	02AH-000109-00	Spring	1		2213-MA0004-01	Index guide	1
111	02AN-000001-A0	Screw nut	5	138	2213-MA0007-00	Washer plate 1	2
112	02AN-000013-00	Square nut	2	139	2213-MA0008-00	Washer plate 2	2
113	02AN-000019-00	M4 fixing nut	3	140	2213-MA0017-00	Edge guide	1
114	02AN-000024-00	Hexagon thin nut	1	141	2213-MA0018-00	Edge guide rod	2
115	02AQ-000001-A0	Steel ball	1	151	2213-PA0001-00	Router fix base	1
117	02AS-000020-A0	Screw	1	152	2213-PA0002-00	Router movable base	1
118	02AS-000048-A0	Machine screw	3	153	2213-PA0003-00	Router quick height lock	1
119	02AS-000238-00	Screw	1	154	2213-PA0004-00	Memory post dial	1
	02AS-000238-10	Screw	1		155	2213-PA0005-00	Lock
120	02AS-000258-00	Machine screw	2	2213-PA0005-01		Lock	2
	02AS-000258-10	Machine screw	2	156	2213-PA0006-00	Bellow	2
121	02AS-000260-00	Machine screw	1	157	2213-PA0007-00	Handle cup-like base	2
	02AS-000260-10	Machine screw	1		158	2213-PA0008-00	Handle cup-like cover
122	02AS-000276-00	Base screw	6	159	2213-PA0009-00	Height adjust knob	2
	02AS-000276-10	Base screw	6		164	2205-PA0004-00	Lens
123	02AS-000290-00	Screw	1	2205-PA0004-01		Lens	1
	02AS-000290-10	Screw	1	165	2205-PA0007-00	Locking disc	2
124	02AS-000291-00	Screw	1	166	2207-PA0007-00	Screw lock B	1
	02AS-000291-10	Screw	1				

PARTS DIAGRAM – MODEL 183.172540

Flex Shaft Assembly



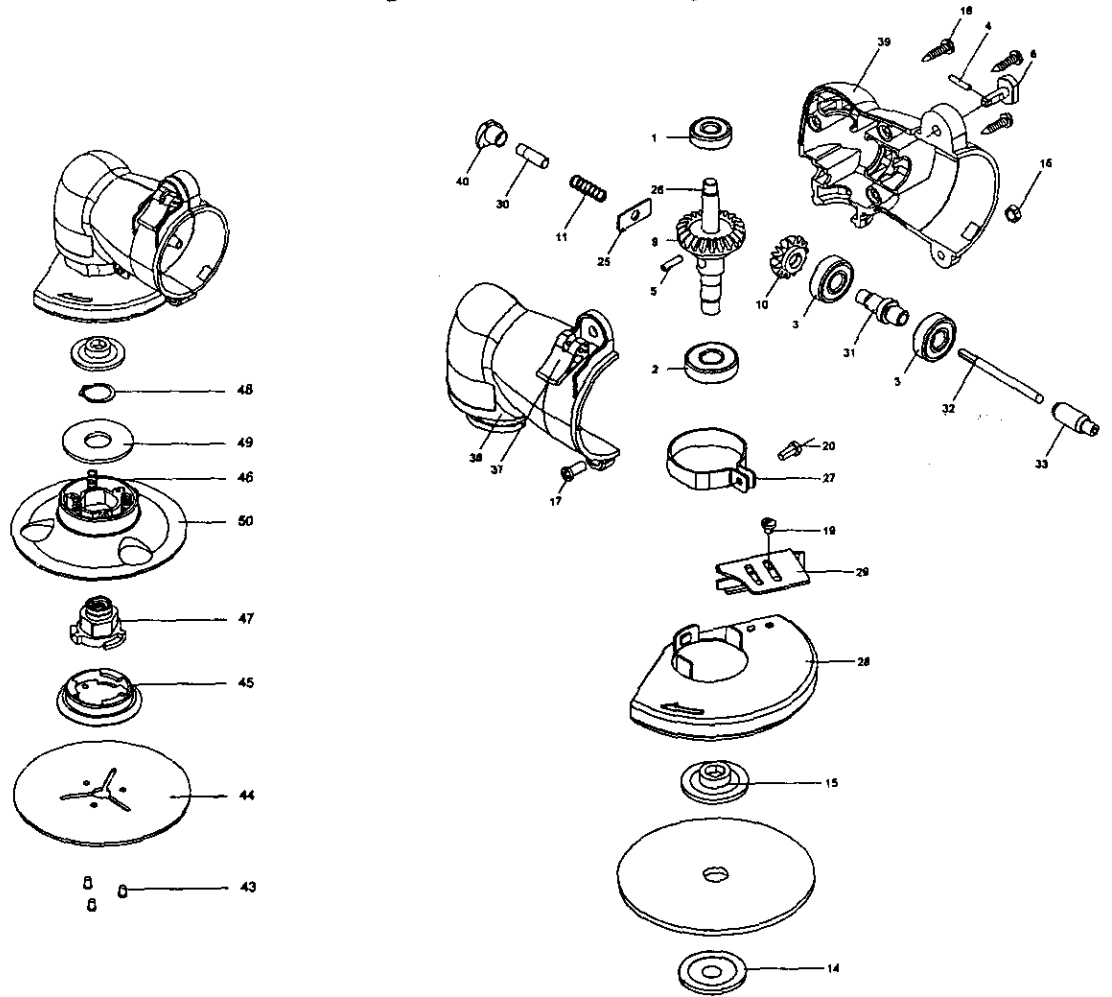
PARTS LIST – MODEL 183.172540

Flex Shaft Assembly

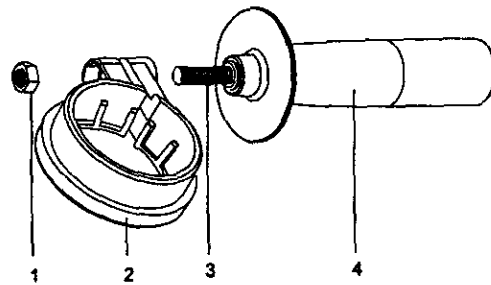
Key #	Part #	Part Name	Qty	Key #	Part #	Part Name	Qty
1	01AT-000034-00	Bushing tube	2	21	2213-MA0019-00	Electrode	2
2	01AT-000038-00	Flexible hose	1	22	2213-MA0020-00	Rotor shaft	1
	01AT-000039-00	Spring+hose	1	23	2213-MA0021-00	Pen front	1
4	02AE-000045-30	Bearing	1	24	9710-MA0003-00	3/32" collet (on tool)	1
	02AH-000073-10	Driving core	1		9710-MA0008-02	1/8" collet	1
8		Driving core(after worked)	1	25	9920-MA0001-00	Mini wrench	1
		2220-MA0002-00	1				
9	02AH-000074-00	Coil spring bush	1	26	9920-MA0003-00	Cap	1
10	02AH-000118-00	Spring	1		9920-MA0003-01	Cap	1
11	02AH-000119-00	Spring	1	31	2213-PA0005-01	Lock	1
	02AH-000119-01	Spring	1	32	2213-PA0029-00	Front cap adaptor	1
12	02AL-000028-01	Driving core adaptor	1	33	2213-PA0030-00	Protect cover	1
	02AL-000028-02	Driving core adaptor	1	34	2213-PA0031-00	Adaptor front	1
13	02AL-000046-00	Flexible shaft adaptor	1	35	2213-PA0032-00	Adaptor end	1
	02AL-000046-01	Flexible shaft adaptor	1	36	2213-PA0033-00	Pen back	1
14	02AS-000304-00	Screw	2	37	2213-PA0034-00	Rubber grip	1
15	02AS-000316-00	Screw	1				
16	03AD-000074-00	LED	1				

PARTS DIAGRAM – MODEL 183.172540

Angle Grinder Assembly



Angle Grinder Handle Assembly



PARTS LIST – MODEL 183.172540

Angle Grinder Assembly

Key #	Part #	Part Name	Qty	Key #	Part #	Part Name	Qty
1	02AE-000037-00	Bearing	1	32	02AH-000127-00	Flex shaft	1
2	02AE-000049-00	Bearing	1		2221-MA0006-00	Flex shaft	1
3	02AE-000067-00	Bearing	2	33	2221-MA0009-00	Flex shaft adapter	1
4	02AF-000041-10	Fixing shaft	1	37	2213-PA0005-01	Lock	1
5	02AF-000025-10	Anvil lock pin	1	38	2221-PA0001-00	Bottom cab	1
6	02AF-000083-00	Release lock pin	1	39	2221-PA0002-00	Top cab	1
	2221-MA0010-00	Release lock pin	1	40	2221-PA0003-00	Lock bottom	1
9	02AG-000153-00	23T Gear	1	*	2221-SAM005-00	Sanding disc assembly	1
10	02AG-000154-00	14T Gear	1		2221-SAM006-00	Sanding disc assembly	1
11	02AH-000120-00	Spring	1		2221-SAM007-00	Polishing pad assembly	1
14	02AL-000047-00	Fixing flange	1		2221-SAM008-00	Grinding wheel assembly	1
15	02AL-000048-00	Backing flange	1		2221-SAM009-00	Grinding wheel assembly	1
16	02AN-000001-00	Nut	1	43	02AR-000032-00	Rivet	3
17	02AS-000060-A0	Screw	1		02AR-000033-00	Rivet	3
18	02AS-000288-00	Screw	3	44	04AM-000051-00	Sanding disc 36 grit	1
	02AS-000288-10	Screw	3		04AM-000052-00	Sanding disc 50 grit	1
19	02AS-000315-00	Screw	1		04AM-000053-00	Polishing pad	1
20	02AS-000317-00	Screw	1		04AM-000055-10	Metal cutting disc	1
25	2203-MA0007-00	Lock plate	1		04AM-000056-10	Masonry cutting disc	1
26	2221-MA0001-00	Spindle	1	45	2221-PA0004-00	Disk mount	1
*	2221-SAM001-00	Guard assembly	1	46	02AH-000089-00	Spring	3
27	2221-MA0002-00	Clip	1	47	02AL-000049-00	Hub support	1
28	2221-MA0003-00	Guard	1	48	02AW-000055-00	Ring	1
29	2221-MA0004-00	Slider	1		02AW-000055-10	Ring	1
30	2221-MA0005-00	Lock pin	1	49	2221-MA0007-00	Cover plate	1
31	2221-MA0008-00	Driving shaft	1	50	2221-PA0005-00	Sanding backing pad	1
*	2221-SAM002-00	Flex shaft assembly	1				

Angle Grinder Handle Assembly

Key #	Part #	Part Name	Qty
1	02AN-000011-00	Nut	1
2	2221-PA0006-00	Auxiliary handle clip	1
3	02AS-000251-00	Screw	1
4	9960-PA0005-00	Auxiliary handle	1