

## Extension Cords

Double insulated tools have two wire cords and can be used with two wire or three wire extension cords. Only round jacketed extension cords should be used, and we recommend that they be listed by Underwriters Laboratories (U.L.) (C.S.A. in Canada) if the extension will be used outside, the cord must be suitable for outdoor use. Any cord marked as outdoor can also be used for indoor work. The letters "WA" on the cord jacket indicate that the cord is suitable for outdoor use.

An extension cord must have adequate wire size (AWG or American Wire Gauge) for safety, and to prevent loss of power and overheating. The smaller the gauge number of the wire, the greater the capacity of the cable, that is 16 gauge has more capacity than 18 gauge. When using more than one extension cord to make up the total length, be sure each individual extension contains at least the minimum wire size.

To determine the minimum wire size required, refer to the chart below:

CHART FOR MINIMUM WIRE SIZE (AWG) OF EXTENSION CORDS								
NAMEPLATE RATING - AMPS	25	50	75	100	125	150	175	200
0-10.0	18	18	16	16	14	14	12	12
10.1 - 13.0	16	16	14	14	14	12	12	12
13.1 - 15.0	14	14	12	12	12	12	12	—

Before using an extension cord, inspect it for loose or exposed wires, damaged insulation, and defective fittings. Make any needed repairs or replace the cord if necessary. Black & Decker has extension cords available that are U.L. (C.S.A. in Canada) listed for outdoor use.

## Important

To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustment, (including brush inspection and replacement) should be performed by Black & Decker Service Centers or other qualified service organizations, always using Black & Decker replacement parts.

## Warranty

Black & Decker warrants this product for one year from date of purchase. We will repair without charge any defects due to faulty material or workmanship. Please return the complete unit, transportation prepaid, to any Black & Decker Service Center or Authorized Service Station listed under "Tools Electric" in the yellow pages. This warranty does not apply to accessories or damage caused where repairs have been made or attempted by others.

Every Black & Decker tool is of the highest quality. If you wish to contact us regarding this product, please call toll free between 8:00 a.m. and 5:00 p.m. EST, Monday through Friday. 1-800-762-6672

Like most Black & Decker products, your tool is listed by Underwriters Laboratories to ensure that it meets stringent safety requirements.

This symbol on the nameplate means the product is listed by Underwriter's Laboratories, Inc.



See 'Tools-Electric' —Yellow Pages— for Service & Sales



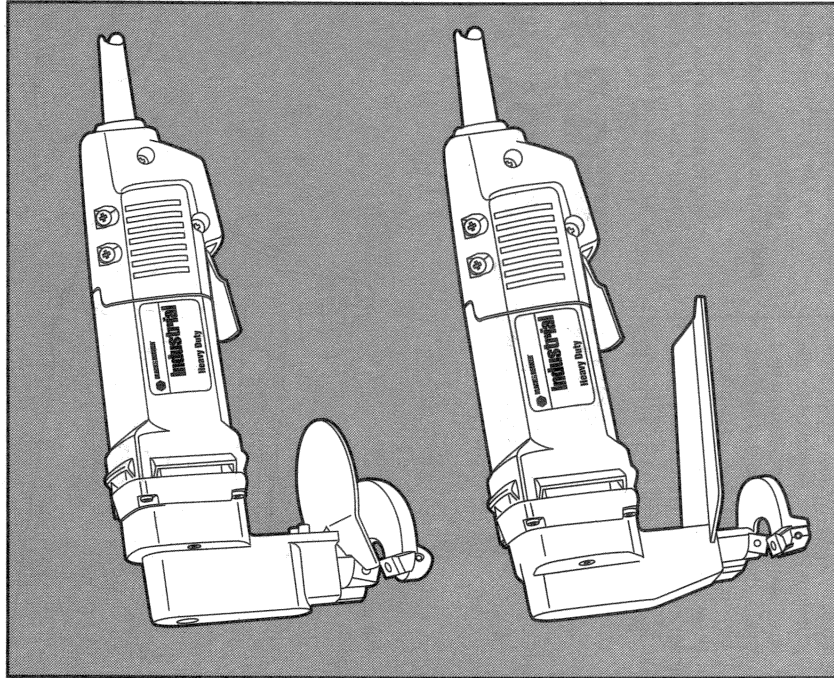
3212 / 3216

Black & Decker (U.S.) INC., U.S. Power Tools Group, 701 E. Joppa Road, Towson, MD 21286

Form No. 158788-01  
(AUG92-CD-1)

Copyright © 1992 Printed in U.S.A.

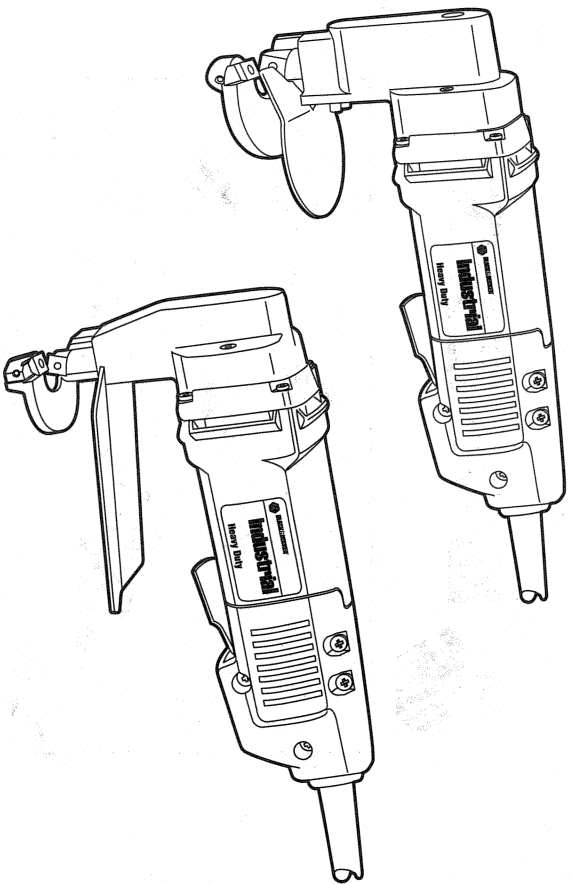
# BLACK & DECKER®



# Instruction Manual

## 3212 12 Gauge Shear

## 3216 16 Gauge Shear



## Thank You for Selecting a Black & Decker Shear

If you already own a Black & Decker power tool, you know the satisfaction of working with a quality power tool.

Your new shear cuts straight and curved sections from a variety of sheet metals. Built to Black & Decker's rigid quality standards, it will give you years of trouble-free service and dependability.

Small and compact, it is designed for ease of handling and long life. The paddle switch adds a further dimension of control.

Please take the time to read this instruction manual and pay particular attention to the safety rules we've provided for your protection. The manual also contains helpful information on use and adjustment. Only with a complete understanding of your Shear will you be able to get the best performance from it.

Don't forget to send in the owner's registration card.

Thanks for buying a Black & Decker power tool.



## IMPORTANT SAFETY INSTRUCTIONS (For All Tools)

**WARNING:** When using Electric Tools, basic safety precautions should always be followed to reduce risk of fire, electric shock, and personal injury, including the following:

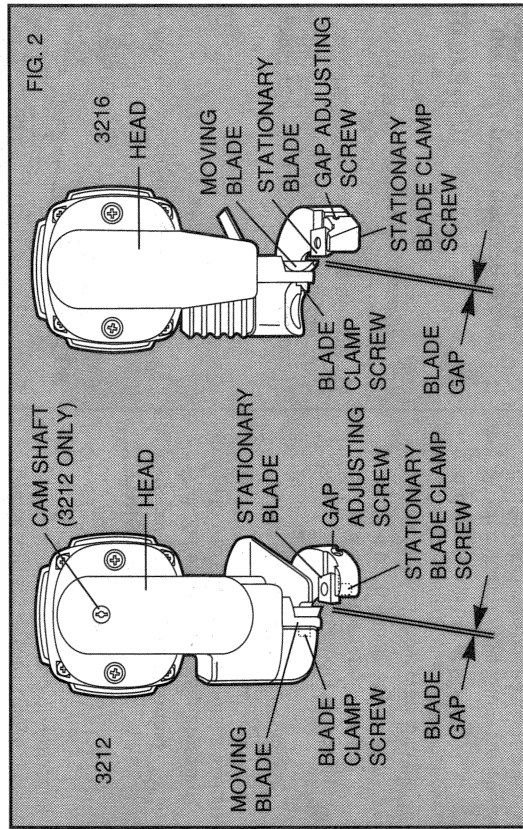
### READ ALL INSTRUCTIONS

- KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
- CONSIDER WORK AREA ENVIRONMENT.** Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep work area well lit.
- GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges, refrigerator enclosures.
- KEEP CHILDREN AWAY.** All visitors should be kept away from work area. Do not let visitors contact tool or extension cord.
- STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place - out of reach of children.
- DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
- USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended, for example, don't use circular saw for cutting tree limbs or logs.
- DRESS PROPERLY.** Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
- USE SAFETY GLASSES.** Also use face or dustmask if cutting operation is dusty.
- DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
- SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
- DON'T OVERREACH.** Keep proper footing and balance at all times.
- MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safe performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.
- DISCONNECT TOOLS.** When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.
- REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
- AVOID UNINTENTIONAL STARTING.** Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugging in.
- OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked. More detailed extension cord information can be found on page 8.
- STAY ALERT.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
- CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is defective should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Do not use tool if switch does not turn it on and off.
- DO NOT OPERATE.** portable electric tools near flammable liquids or in gaseous or explosive atmospheres. Motors in these tools normally spark, and the sparks might ignite furnes.

**SAVE THESE INSTRUCTIONS FOR FUTURE USE**

To adjust the blade gap, loosen the bottom blade clamp screw. Turn the gap adjusting screw in or out to obtain proper clearance. Check gap with feeler gauge. Tighten bottom blade clamp screw. Recheck gap with feeler gauge. Check all screws for loosening.

FOR # 3212, LOWER MOVING BLADE BY PLACING A FLAT BLADE SCREW-DRIVER IN THE CAM SHAFT SLOT AND TURNING SHAFT UNTIL BLADE IS FULLY DOWN. SEE FIGURE 2.  
FOR # 3216, LOWER MOVING BLADE BY TEASING THE SWITCH. **UNPLUG TOOL BEFORE MAKING ANY ADJUSTMENTS.**



## Maintenance

Unplug tool before performing any maintenance or adjustments. Check that the blades are sharp. Do not cut with dull blades. See Operation Section page 5.

Keep tool clean. Blow off periodically. Never use solvents or other harsh chemicals for cleaning non-metallic parts of the tool. Use clean, dry rag only. This is a precision tool. Use it carefully and store it in a protective place.

## Lubrication

Black & Decker tools are properly lubricated at the factory and are ready for use. Tools should be relubricated regularly every sixty days to six months,

depending on usage. (Tools used constantly on production or heavy-duty jobs and tools exposed to heat may require more frequent lubrication.) This lubrication should only be attempted by trained power tool repair persons such as those at Black & Decker Service Centers or in other qualified service organizations.

## Motor Brushes

Your tool is equipped with the Black & Decker Checkpoint™ brush system. When the brushes become worn out, the tool will automatically stop and prevent damage to the motor. Brush replacement should be performed by Black & Decker service centers or other qualified service organizations.

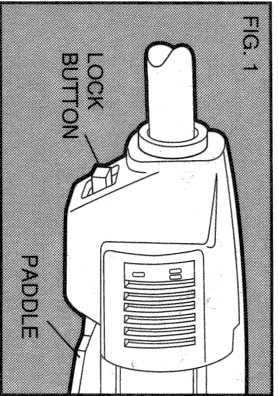
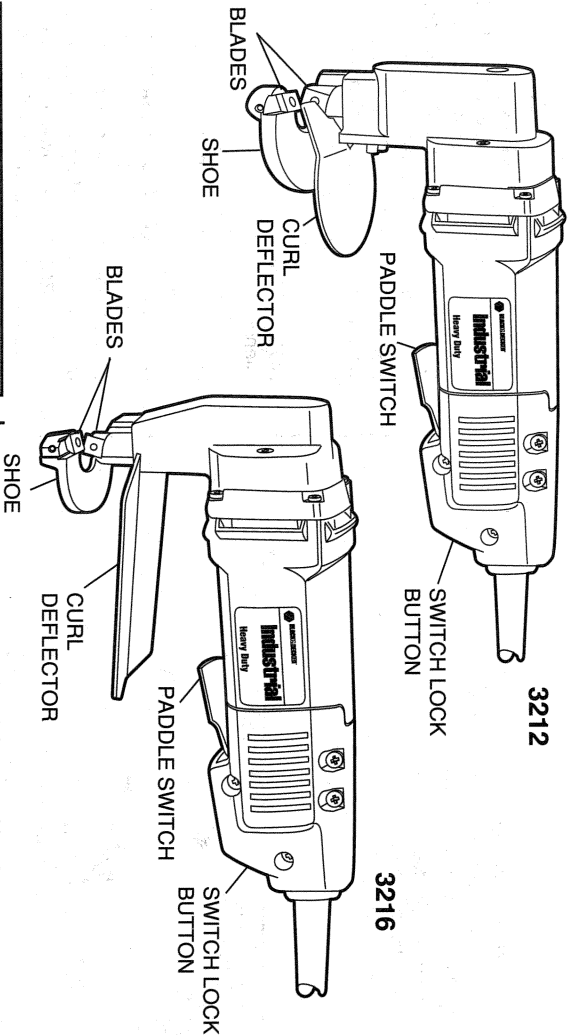
## Additional Operating Rules for Shears

### Rules for Shears

1. Always wear safety glasses and protective gloves.
2. **ALWAYS USE TOOL WITH CURL DEFLECTOR.**
3. Wear safety shoes to protect your feet from sharp metal debris on floor.
4. Always start tool before engaging material to be cut.
5. Don't cut material thicker than rated capacity. Remember, material thickness increases as gauge number decreases (14 gauge is thicker than 16 gauge).
6. Keep all screws tight. Periodically check them for loosening.
7. If possible, cut material so scrap curl is to the right. This direction will move curl down and out of the way.
8. Unplug tool before making any adjustments
9. Do not put anything into a motor housing opening.
10. Keep tool clean. Blow off any metal debris and dirt from tool.
11. Use Shears upright. If tool is upside down, metal curl may turn toward you.
12. Firmly secure the piece of metal to be cut to prevent movement during cutting.

## Switch Operation Paddle Switch (Fig. 1)

To start the tool depress the paddle by squeezing. To turn the tool off, release the paddle. The switch can be locked on by engaging the lock button located near the rear of the tool while holding the paddle depressed. Always be sure that the tool is not locked on before plugging it in. To turn the tool off when it is locked on, squeeze and release the paddle once.



## Double Insulation

DOUBLE-INSULATED tools are constructed throughout with TWO separate "layers" of electrical insulation or one DOUBLE thickness of insulation between you and the tool's electrical system.

Tools built with this insulation system are not intended to be grounded. As a result, your tool is equipped with a two-prong plug which permits you to use extension cords without concern for maintaining a ground connection. See page 8 for additional extension cord information.

**NOTE: DOUBLE INSULATION does not take the place of normal safety precautions when operating this tool.** The insulation system is for added protection

## Operation

### UNPLUG TOOL BEFORE MAKING ANY REPAIRS OR ADJUSTMENTS.

Always wear safety glasses and protective gloves. Never use shear without the curl deflector.

Most blade wear (dulling of edges) is on the back edge. Some symptoms of wear are:

- Harder to cut; have to push with more force on Shear.
  - Cut edge is more ragged. (This is also a symptom of incorrect gap).
  - Heavier burr.
  - Increased vibration while cutting.
- Your Shear is equipped with two identical blades with four cutting edges each blade.

The moving blade wears faster than the stationary blade. However, it is advisable to rotate both blades to a fresh edges at the same time.

To rotate the blades, remove the two blade clamp screws. Rotate each blade to a fresh edge. Replace screws exactly as they were removed. Note that the stationary blade clamp screw is longer and will cause damage to the tool if it is used to secure the moving blade. See Figure 2.

Stationary blade must be snug against the gap adjusting screw.

Check and adjust blade gap if necessary. See following section on Adjusting the Blade Gap.

Tighten all screws.

### CUTTING TIPS:

- Proper blade gap is important.
- Dull blades increase user pressure on tool to cut and could result in damage to tool.
- Always start tool before engaging material.
- Keep metal surface dry. Otherwise, Shear will tend to rebound (slide back) at each cutting stroke.
- Cut material so that scrap is to the right. This cutting direction will move curl down and out of the way.
- When cutting a radius, turn the Shear counterclockwise for easier maneuvering.
- Best cutting (least effort) is when back of tool is lowered 5°-10°.

## Adjusting the Blade Gap

(See Figure 2)

Clean tool of any dirt and metal chips.

Blade gap settings:

Cold rolled steel	20% of material thickness
Hard stainless steel	20% of material thickness
Soft stainless steel	10% of material thickness
Aluminum	10% of material thickness

Blade gap is factory adjusted for rated capacity in cold rolled steel.