

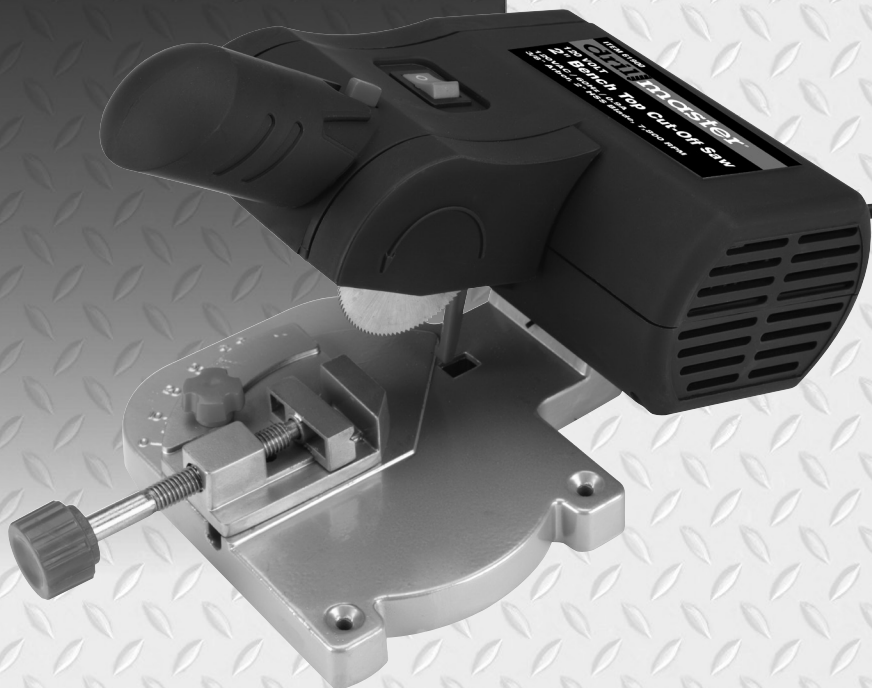
# Owner's Manual & Safety Instructions

**Save This Manual** Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

# drillmaster®

**ITEM 61900**

## 120 VOLT 2" Bench Top Cut-Off Saw



Visit our website at: <http://www.harborfreight.com>  
Email our technical support at: [productsupport@harborfreight.com](mailto:productsupport@harborfreight.com)

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

### **⚠ WARNING**

Copyright© 2013 by Harbor Freight Tools®. All rights reserved.  
No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

**Read this material before using this product.  
Failure to do so can result in serious injury.  
SAVE THIS MANUAL.**

## SAVE THIS MANUAL

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

## IMPORTANT SAFETY INFORMATION

In this manual, on the labeling, and all other information provided with this product:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.



**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.



**CAUTION**, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



**NOTICE** is used to address practices not related to personal injury.



**CAUTION**, without the safety alert symbol, is used to address practices not related to personal injury.

## General Tool Safety Warnings



**WARNING** Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. Save all warnings and instructions for future reference.

- KEEP GUARDS IN PLACE and in working order.
- REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
- KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
- DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
- KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
- MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.
- DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.
- USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.

### RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS (120 VOLT)

NAMEPLATE AMPERES (at full load)	EXTENSION CORD LENGTH			
	25'	50'	100'	150'
0 – 6	18	16	16	14
6.1 – 10	18	16	14	12
10.1 – 12	16	16	14	12
12.1 – 16	14	12	Do not use.	

**TABLE A**

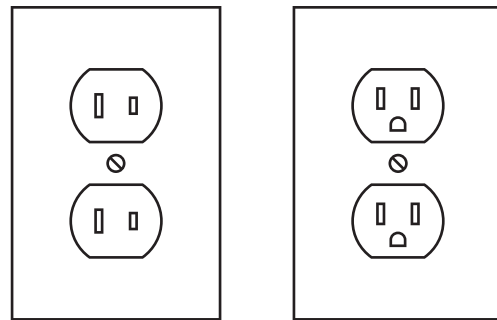
9. **USE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table A shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
10. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
11. **ALWAYS USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
12. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
13. **DON'T OVERREACH.** Keep proper footing and balance at all times.
14. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
15. **DISCONNECT TOOLS** before servicing; when changing accessories, such as blades, bits, cutters, and the like.
16. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in off position before plugging in.
17. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
18. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
19. **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 damaged should be properly repaired or replaced.
20. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
21. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.

## GROUNDING INSTRUCTIONS

**⚠ WARNING** TO PREVENT ELECTRIC SHOCK AND DEATH FROM INCORRECT GROUNDING WIRE CONNECTION READ AND FOLLOW THESE INSTRUCTIONS:



### 110-120 V~ Double Insulated Tools: Tools with Two Prong Plugs



**Outlets for 2-Prong Plug**

1. To reduce the risk of electric shock, double insulated equipment has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.
2. Double insulated tools may be used in either of the 120 volt outlets shown in the preceding illustration. **(See Outlets for 2-Prong Plug.)**

## Miter Saw Safety Warnings

### **For Your Own Safety Read Instruction Manual Before Operating Miter Saw**

1. Wear eye protection.
2. Keep hands out of path of saw blade.
3. Do not operate saw without guards in place.
4. Do not perform any operation freehand.
5. Never reach around saw blade.
6. Turn off tool and wait for saw blade to stop before moving workpiece or changing settings.
7. Disconnect power before changing blade or servicing.
8. Return all guards to original position if any are moved during blade replacement. Check all guards for proper operation after service.
9. **DO NOT OPERATE WITH ANY GUARD DISABLED, DAMAGED, OR REMOVED. Moving guards must move freely and close instantly.**
10. The use of accessories or attachments not recommended by the manufacturer may result in a risk of injury to persons.
11. When servicing use only identical replacement parts.
12. Only use safety equipment that has been approved by an appropriate standards agency. Unapproved safety equipment may not provide adequate protection. Eye protection must be ANSI-approved and breathing protection must be NIOSH-approved for the specific hazards in the work area.
13. Industrial applications must follow OSHA guidelines.
14. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
15. Avoid unintentional starting. Prepare to begin work before turning on the tool.
16. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.
17. **WARNING:** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contains chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
  - Lead from lead-based paints
  - Crystalline silica from bricks and cement or other masonry products
  - Arsenic and chromium from chemically treated lumberYour 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. (California Health & Safety Code § 25249.5, *et seq.*)
18. **WARNING:** Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, *et seq.*)
19. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

## **Vibration Safety**

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any medical or physical symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
3. Wear suitable gloves to reduce the vibration effects on the user.
4. Use tools with the lowest vibration when there is a choice between different processes.
5. Include vibration-free periods each day of work.
6. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
7. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.

## **SPECIFICATIONS**

Arbor	3/8"
Blade	2" HSS
Power Source	120VAC / 60 Hz / 0.9A
Max. RPM	10,600
Cutting Depth	1/2"
Miter Gauge	0° - 45°
Mounting Hardware	2x1/8" Bolts and Nuts (sold separately)



**SAVE THESE  
INSTRUCTIONS.**

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## COMPONENTS AND CONTROLS

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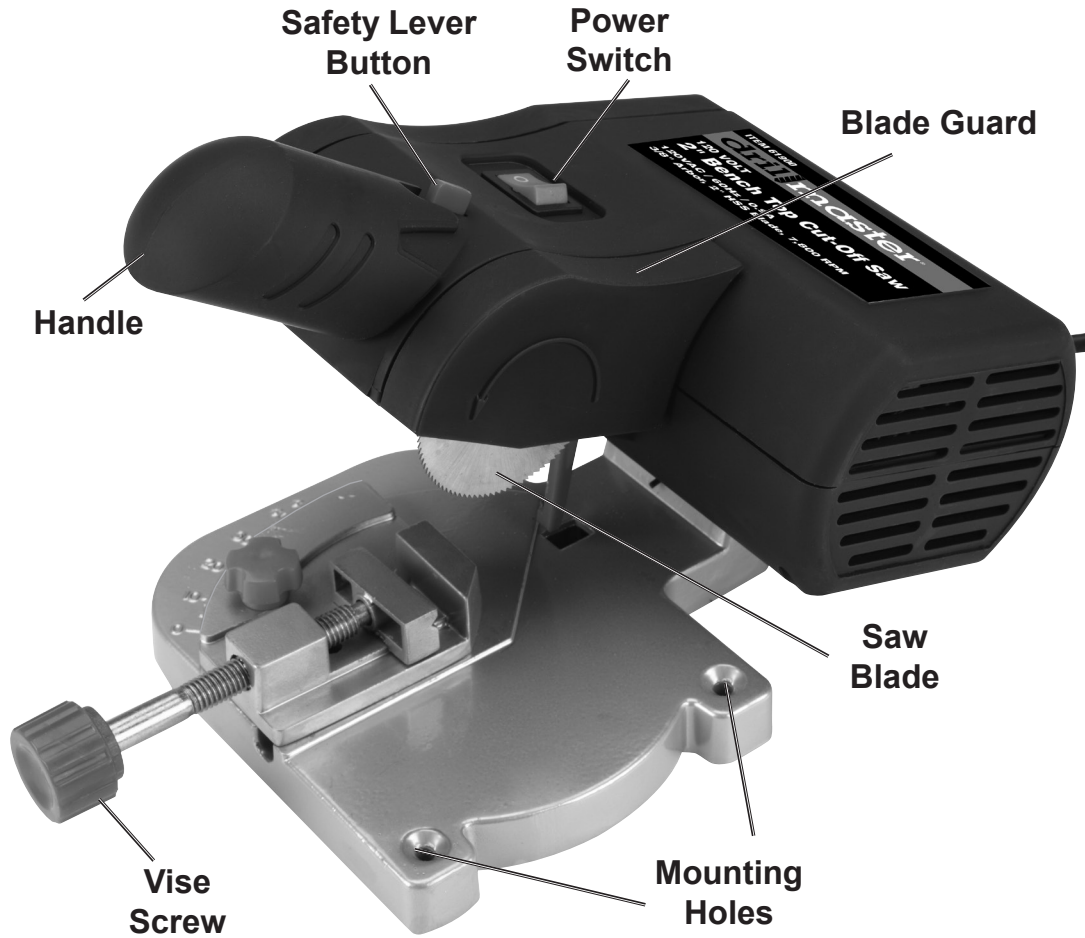


Figure A

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## ASSEMBLY

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### Mounting

**CAUTION!** Choose a mounting surface that is capable of supporting the weight of the Saw and the workpiece.

1. Using the Base as a template, mark locations of mounting holes.
2. Drill holes appropriate for the proper hardware (sold separately), described under Specifications on page 5, at the marked locations.
3. Align mounting holes with pilot holes, then secure the Base with the hardware.

### Installing the Saw Blade

**WARNING!**

Wear heavy-duty work gloves during blade installation.

Mount the blade so that its arrow matches the arrow on the Blade Guard.

1. With the Saw OFF and unplugged, slide the Blade Guard up and off of the Saw.
2. Place the Saw Blade onto the Arbor (16). Slide on the Washer (18), then secure with Screw (19).
3. Slide the Blade Guard back on.

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## OPERATION

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**WARNING!**

Wear ANSI-approved safety goggles during use.

### Setting the Angle

1. Loosen the Angle Adjusting Knob, then move the Vice Screw until the angle arrow aligns with the correct angle. Tighten Angle Adjusting Knob.
2. Place the workpiece between the Jaws, then rotate the Vice Screw clockwise to tighten the Moveable Jaw until the workpiece is secure.

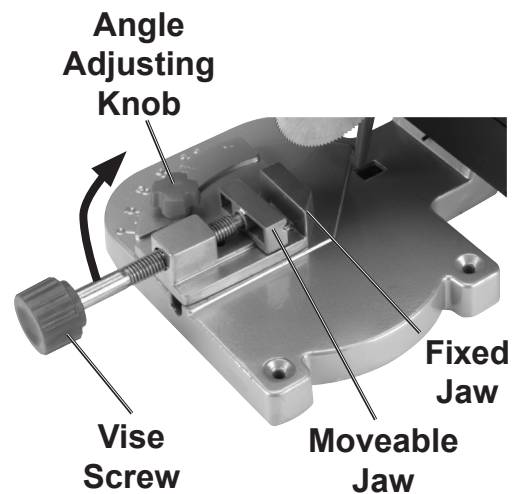


Figure B

### Cutting

1. Plug in the Saw and turn the Power Switch to its ON (I) position.
2. Allow the Saw Blade to reach maximum speed.
3. Push down on the Safety Lever Button to release the Safety Lever, then pull down the Handle to begin cutting.
4. When the cut is complete, pull the Handle up until the Safety Lever engages.
5. Turn the Saw to its OFF (O) position.

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## MAINTENANCE AND SERVICING

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Procedures not specifically explained in this manual must be performed only by a qualified technician.

### **⚠️ WARNING** TO PREVENT SERIOUS INJURY

#### FROM ACCIDENTAL OPERATION:

Turn the Power Switch of the tool to its “OFF” position and unplug the tool from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

#### TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:

Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

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## Cleaning, Maintenance, and Lubrication

1. **BEFORE EACH USE**, inspect the general condition of the tool. Check for loose hardware, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation.
2. **AFTER USE**: Remove all sawdust that has accumulated around the Blade Guard, Motor and Motor Housing. Regularly clean the work surface with a vacuum cleaner or a dry brush. At the end of every work session remove sawdust from the motor vents. Prevent wood, dust and debris from accumulating in the working area. Keep the Saw Blade clean and sharp. A sharp blade will minimize stalling and kickback.

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## Replacing the Drive Belt

1. Slide the Belt Cover (7) up and remove it. This will expose the Drive Belt (5) and Pulleys (4 and 12).
2. Remove the Drive Belt.
3. Slide one end of the new Drive Belt over one of the Pulleys. Then, slide the other end over the other Pulley.
4. Make certain that the Drive Belt is centered on both Pulleys. Replace the Belt Cover by sliding it back down into place.

**⚠️ WARNING!** If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.

**PLEASE READ THE FOLLOWING CAREFULLY**

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

## PARTS LIST

Part	Description	Qty.
1	Motor	1
2	Washer	4
3	Lock Ring	2
4	Pulley	1
5	Drive Belt	1
6	Switch	1
7	Belt Cover	1
8	Handle	1
9	Vise with Fixed Jaw	1
10	Base	1
11	Vise Screw	1
12	Pulley	1
13	Screw	4
14	Bearing	2
15	Spindle	1
16	Arbor	1
17	2" HSS Blade	1
18	Washer	1
19	Screw	1
20	Blade Guard	1
21	Angle Adjusting Knob	1

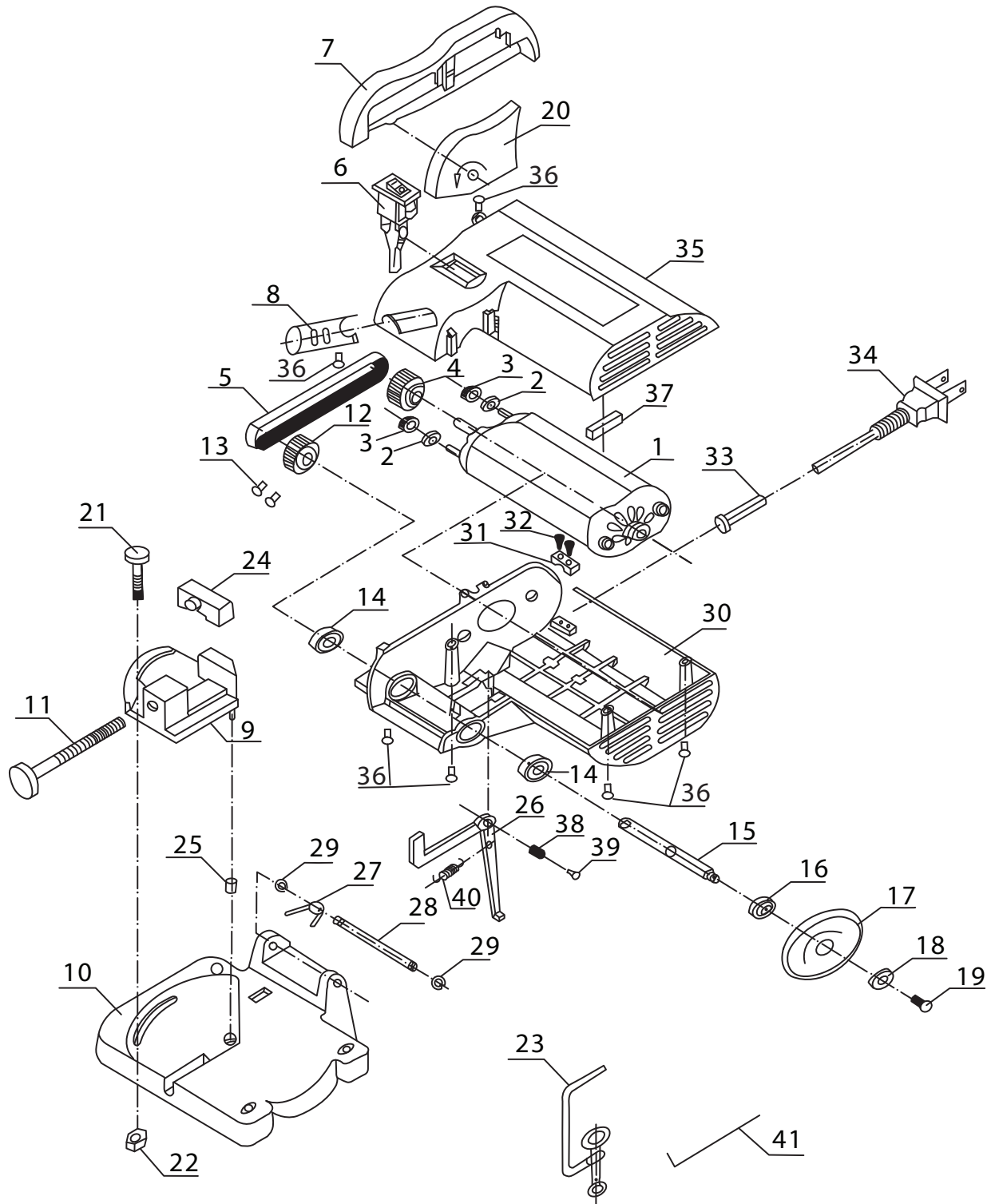
Part	Description	Qty.
22	Nut	1
23	Clamp	1
24	Moveable Jaw	1
25	Spacer	1
26	Safety Lever	1
27	Torsion Spring	1
28	Pin	1
29	Ring	2
30	Motor Housing A	1
31	Cord Clamp	1
32	Screw	2
33	Cord Cover	1
34	Power Cord	1
35	Motor housing B	1
36	Screw	6
37	Vibration Absorber	1
38	Bushing	1
39	Screw	1
40	Spring	1
41	Hex wrench	1

**Record Product's Serial Number Here:** \_\_\_\_\_

**Note:** If product has no serial number, record month and year of purchase instead.

**Note:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

# ASSEMBLY DIAGRAM



## Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

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