



# ATD-10546

## 6" BENCH GRINDER

### INSTRUCTION MANUAL

#### READ ALL INSTRUCTIONS BEFORE OPERATING

#### SAVE THESE INSTRUCTIONS

Thank you for purchasing your ATD-10546 6" bench grinder with lights. Before attempting to operate your new bench grinder please read these instructions thoroughly. You will need these instructions for the safety warnings, precautions, assembly, operation, maintenance procedures, parts list and diagrams. Keep your receipt with these instructions. Keep the instructions and receipt in a safe, dry place for future reference.

**WARNING:** The warnings, cautions and instructions discussed in this manual cannot cover all possible conditions or situations that could 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.

**WARNING:** This product contains chemicals, including lead, known to the state of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling.

#### TABLE OF CONTENTS

<u>Description</u>	<u>Page #</u>
Specifications.....	2
Safety Rules.....	2
Before Each Use.....	3
Electrical Requirements.....	4
Extension Cords.....	5
Assembly Instructions.....	6-7
Operation.....	7-9
Maintenance.....	9
Parts List and Diagram.....	10-11

## SPECIFICATIONS


Motor . . . . . 120V – 60Hz – 3.2Amp – 1/2HP

Motor Speed . . . 3450 RPM

Weight . . . . . 26 lbs

Arbor . . . . . 1/2"

Wheel . . . . . 6"

UL Listed . . . . . 

## SAFETY RULES

1. Know your machine. Read this manual carefully. Learn the machine's applications and limitations, as well as specific potential hazards peculiar to it.
2. When installing or moving the bench grinder, be sure to inspect it for damage. To be certain the grinding wheels have not been damaged in shipment, inspect carefully. If you suspect a wheel of being fractured, replace it immediately. Fractured wheels may shatter causing serious injury.
3. Put bench grinder on a firm level surface where there is plenty of room for handling and properly supporting the work piece.
4. Avoid a dangerous environment. Use a grinder in a dry, indoor place protected from rain. Keep work area well lighted.
5. Disconnect tools before servicing or when changing accessories such as grinding wheels.
6. Plan ahead to protect yourself. Avoid injury from accidental contact with moving parts.
7. Keep guards in place and in working order.
8. Avoid accidental starting. Make sure switch is in OFF position before plugging in.
9. Use the right tool. Don't force a tool or attachment to do a job for which it was not designed.
10. Use recommended accessories. Consult the operating manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
11. Never stand on tool. Serious injury could occur if the tool is tipped or if the cutting surface is unintentionally contacted.
12. Wear proper apparel. Don't wear loose clothing or jewelry that could get caught in moving parts. Rubber soled footwear is recommended for best footing.
13. Wear gloves when grinding work piece. Object may become very sharp and can cause injury.

14. Use safety glasses. The operation of any power tool can result in foreign objects being thrown into the eyes which can result in severe eye damage. Also use face or dust mask if grinding operation is dusty.
15. Replace a cracked wheel immediately.
16. Always use guards and eye shields.
17. Do not over tighten wheel nut.
18. Use only wheel flanges furnished with this grinder.
19. Adjust distance between wheel and work rest to maintain 1/8" or less separation as the diameter of the wheel decreases with use.

## **BEFORE EACH USE**

1. Check for damaged parts. Before further use of the tool, a guard or other part that is damaged should be carefully checked to assure that it will operate properly and perform its intended function. Check for misalignment or binding of moving parts, breakage of parts, mounting, or any other conditions that may affect its operation. A guard or other part that is damaged should be properly replaced.
2. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from tool area before turning it on.
3. Maintain grinder with care. Keep the grinder clean for best and safest performance.
4. Before using your grinder, watch the grinder while it turns. If it makes an unfamiliar noise or vibrates a lot, stop immediately. Turn the grinder off and unplug it. Do not restart until problem corrected.
5. Keep children away. Keep all visitors a safe distance from the bench grinder. Make sure bystanders are clear of the grinder and work piece.
6. Plan the way you hold the work piece. Avoid awkward operations and hand positions where a sudden slip could cause fingers or hand to move into grinding surface. Keep fingers a safe distance from grinder wheel.
7. Don't overreach. Keep proper footing and balance at all times.
8. Feed work into grinding wheel against the direction of rotation of wheel.
9. Avoid injury from jams, slips or thrown pieces.
10. Make sure all clamps and locks are tight and no parts have excessive play.
11. Keep work area clean. Cluttered areas and benches invite accidents. If small pieces get trapped inside guard, before retrieving material turn switch to OFF. Unplug grinder and wait for all moving parts to stop.
12. Never leave tool running unattended. Always turn power off. Don't leave tool until it comes to a complete stop.
13. Make the workshop childproof. Lock the shop. Disconnect master switches. Store tools always from children and others not qualified to use the tools.

## ELECTRICAL REQUIREMENTS

Connecting tool to power source outlet: This machine's power source must be grounded while in use to protect the operator from electric shock.

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electrical current to reduce the risk of electric shock. This tool is equipped with an electric cord that has an equipment grounding conductor that is properly installed and grounded in accordance with all local codes and ordinances.

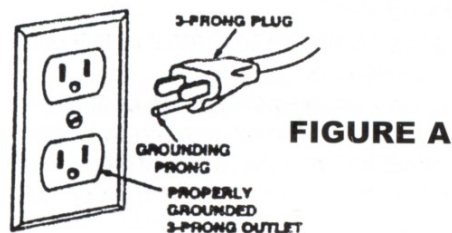
Improper connection of the equipment grounding conductor can result in a risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment grounding conductor to a live terminal.

Plug power cord into a 110-120V properly grounded type outlet protected by a 14 amp time delay, Circuit Saver fuse or circuit breaker.

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

**WARNING:** If not properly grounded, this power tool can incur the potential hazard of electric shock; particularly when used in damp locations or in close proximity to plumbing. If an electric shock occurs, there is the potential of a secondary hazard – such as your hands contacting the grinding wheel.

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Figure A. The tool has a grounding plug that also looks like the one shown in Figure A.



Do not modify the plug provided if it will not fit the outlet. Have the proper outlet installed by a qualified electrician.

## EXTENSION CORDS

1. Use only 3-wire extension cords which have 3 prong grounding type plugs and 3 prong receptacles which accept the tool's plug. Replace or repair damaged or worn cords immediately.
2. Only UL listed extension cords should be used with this product.
3. Improper use of extension cords may cause inefficient operation of your tool which can result in overheating. Be sure your extension cord is rated to allow sufficient current flow to the motor. For the proper gauge for your tool, see chart.

<b>Name Plate AMPS</b>	<b>Cord Length in Feet</b>			
	<b>25</b>	<b>50</b>	<b>100</b>	<b>150</b>
0 - 3	18	18	18	18
3 - 6	18	18	16	16
6 - 8	18	16	16	16
8 - 10	18	16	14	12
10 - 12	16	14	14	12

## ASSEMBLY INSTRUCTIONS

Your Bench Grinder comes with two grinding wheels and a package of loose parts which include the following:

2 Tool Rests	4 Bolts
2 Mounting Brackets	4 Large Flat Washers
2 Eye shields	4 Medium Flat Washers
2 Spark Guards	4 Screws
2 Light Bulbs	4 Nuts
2 Knobs	4 Large Lock Washers
2 Internal Tooth Lock Washers	4 Small Lock Washers
	4 Small Flat Washers

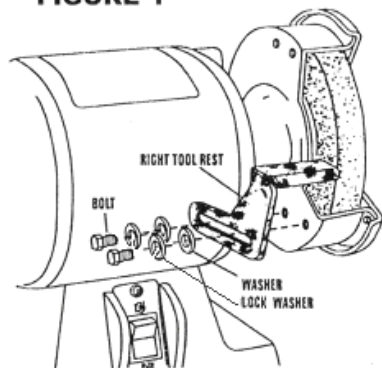
### Installing Tool Rests

**MAKE CERTAIN THAT THE BENCH GRINDER IS TURNED OFF AND UNPLUGGED**

Remove the tool rests from top portion of the polyfoam carton liner and install them to the wheel guards as shown in Figure 1. Use the bolts and washers you removed from the bag to secure them in place, as shown in the figure.

NOTE: There is a left and right tool rest. Refer to Figure 1 to ensure that you install them correctly. When in actual use, the tool rests should be adjusted to within 1/8" (3.2mm) of the grinding wheel or other accessory being used.

**FIGURE 1**

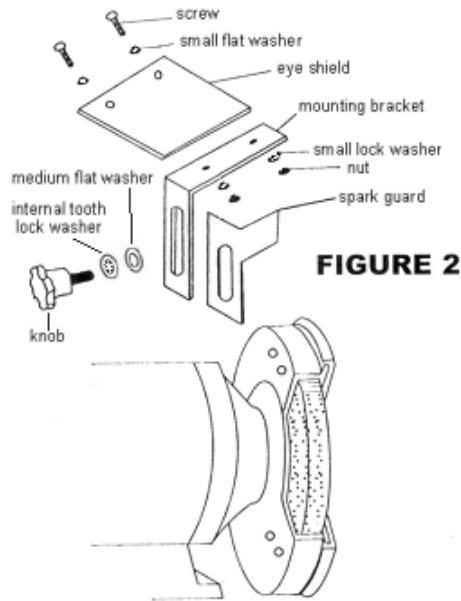


### Installing Spark Guards and Eye Shields

**MAKE CERTAIN THAT THE BENCH GRINDER IS TURNED OFF AND UNPLUGGED**

The eye shields are packed in the plastic bag shipped with your grinder.

Carefully examine Figure 2 for assembly of eye shields and spark guards. You can align up one eye shield, mounting bracket, one spark guard, two screws and two hex nuts.



### Installing the Lights

**MAKE CERTAIN THAT THE BENCH GRINDER IS TURNED OFF AND UNPLUGGED**

Locate the 2 15 watt light bulbs (included) and install them into the sockets at the end of each flexible light arm. Turn bulb clockwise until it is secure.

### Changing Accessories

**MAKE CERTAIN THAT THE BENCH GRINDER IS TURNED OFF AND UNPLUGGED**

USE ONLY GRINDING WHEELS THAT MEASURE 6 INCHES IN DIAMETER. THIS TOOL HAS 1/2 INCH ARBORS ON BOTH SIDES.

Follow the steps presented below to remove and replace any accessory.

1. Raise the eye shield up, out of the way.
2. Loosen and pull the tool rest out as far as possible. Do not remove it.
3. Remove the screws from the side of the wheel cover and remove cover.

## OPERATION

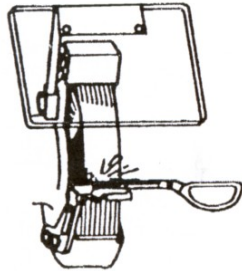
**ALWAYS WEAR EYE PROTECTION WHEN USING THE GRINDER.**

Keep a steady, moderate pressure on the work piece and keep it moving at an even pace for smooth grinding. Pressing too hard overheats the motor and prematurely wears down the grinding wheels, so take your time. Note the original bevel angle on the item to be sharpened and try to maintain this shape. The grinding wheel should rotate into the object being sharpened. Keep a tray filled with water and dip your work into it regularly to prevent overheating. Overheating can weaken metals.

### SCISSORS

If possible, take the scissors apart to make the sharpening operation easier and safer.

Remove material only from the outside surface and work from the heavy end of the blade toward the tip.



### **KNIVES**

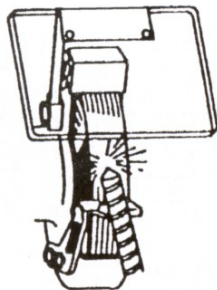
Remove metal from both faces of most knives, working from the heavy end of the blade toward the tip.

### **SCREWDRIVERS**

The end of a properly sharpened screwdriver will be a perfect rectangle, absolutely flat and perpendicular to the center line of the shank. The two sides and two faces will taper outward from the edge of the shoulder or shank. They should be flat with intersecting faces perpendicular. Hold each face of the screwdriver against the wheel to true it up, and then ease the end straight into the stone to grind it true.

### **TWIST DRILL BITS**

Drill bits are best sharpened on a sharpening jig, available at most hardware stores, but can be “dressed up” on your bench grinder. Begin on one side of the point at the existing angle, and then twist the bit while maintaining a constant angle with grinding surface. Sharpen only the tip. This technique requires considerable practice, so take your time and make a few “dry runs” first with the grinder off. Be sure to maintain the original cutting edge angle as this is important to the efficiency of your bits. One tool rest has a V-groove that is correctly angled for most drill bits.



### **LAWN MOWER BLADES**

Lawn mower blades are usually sharpened on only one side and dressed up slightly on



the other. After sharpening, be sure to balance the blade by removing additional material from the heavy end. There are a number of inexpensive cone balances on the market for this purpose. Unbalanced blades can cause serious crank shaft damage to your lawn mower. Always remove spark plug wires from the mower before servicing the blades to prevent accidental starting.

## **MAINTENANCE**

**WARNING:** For your own safety, turn switch OFF and remove plug from power source outlet before adjusting and maintaining your bench grinder. If power cord is worn, cut, or damaged in any way, have it replaced immediately.

### **CARE OF GRINDING WHEELS**

In normal use, grinding wheels may become cracked, grooved, rounded at the edges, chipped, out of true or loaded with foreign material. **CRACKED WHEELS SHOULD BE REPLACED IMMEDIATELY**, while any of the other conditions can be remedied with a dressing tool (available at most hardware stores). New wheels sometimes require dressing to make them round.

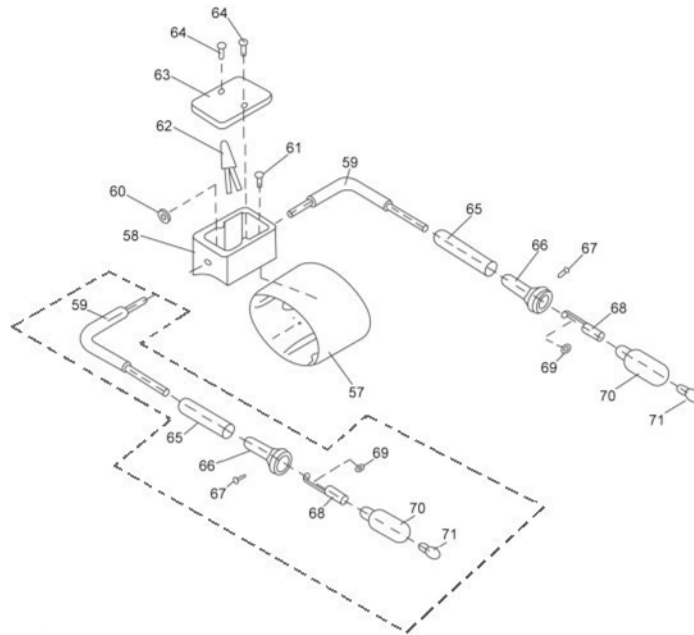
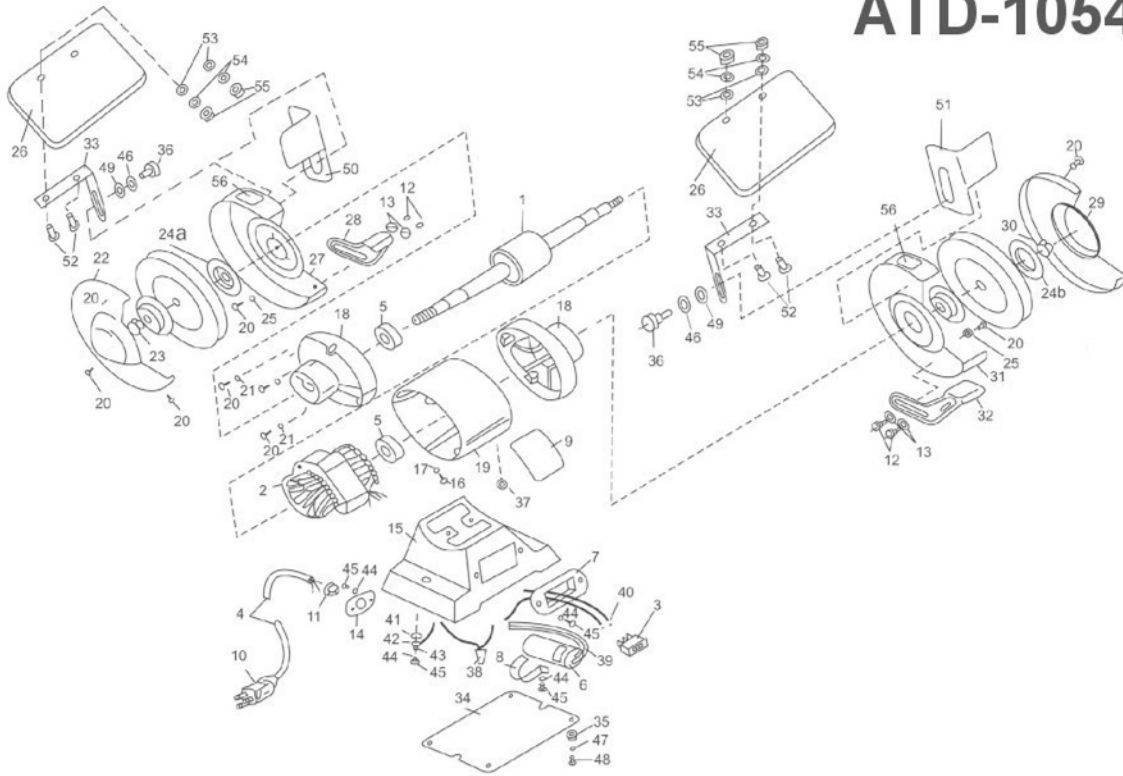
### **WHEEL REPLACEMENT**

If you must replace a wheel be sure to obtain one with a safe rated speed at least as high as the 'NO LOAD' RPM marked on your grinder's nameplate and with a 1/2" center hole. 6" diameter wheel should be a maximum of 3/4" wide. Test new wheels for cracks and maintain the existing sequence of retaining hardware. Be sure the tool is unplugged before attempting repairs.

Your bench grinder will accept most polishing and buffing wheels available at dealers and hardware stores.

**WARNING:** The use of any other accessories is not recommended and may result in serious injury.

## ATD-10546





# ATD-10546

ORDERING PART#	ITEM#	PART DESCRIPTION
PRT10546-01	1	Rotor
PRT10546-02	2	Stator
PRT10546-03	3	Switch
PRT10546-04	4	Cord & Plug
PRT10546-05	5	Bearing
PRT10546-06	6	Capacitor
PRT10546-07	7	Switch Plate
PRT10546-08	8	Capacitor Clip
PRT10546-09	9	Name Plate
PRT10546-10	10	Attachment Plug
PRT10546-11	11	Cord Bushing
PRT10546-12	12	Screw
PRT10546-13	13	Washer
PRT10546-14	14	Cord Bushing Plate
PRT10546-15	15	Base
PRT10546-16	16	Screw
PRT10546-17	17	Lockwasher
PRT10546-18	18	End Bell
PRT10546-19	19	Stator Housing
PRT10546-20	20	Screw
PRT10546-21	21	Lockwasher
PRT10546-22	22	Left Wheel Cover
PRT10546-23	23	Left Clamp Nut
PRT10546-24A	24A	Inner Clamp Washer
PRT10546-24B	24B	Outer Clamp Washer
PRT10546-25	25	Screw Lockwasher
PRT10546-26	26	Eyeshield
PRT10546-27	27	Left Wheel Guard
PRT10546-28	28	Left Tool Rest
PRT10546-29	29	Right Wheel Cover
PRT10546-30	30	Right Clamp Nut
PRT10546-31	31	Right Wheel Guard
PRT10546-32	32	Right Tool Rest
PRT10546-33	33	Eyeshield Mount
PRT10546-34	34	Base Plate
PRT10546-35	35	Rubber Foot
PRT10546-36	36	Screw
PRT10546-37	37	Bushing
PRT10546-38	38	Wire Nut
PRT10546-39	39	Terminal Capacitor
PRT10546-40	40	Terminal Switch
PRT10546-41	41	Ground Clamp
PRT10546-42	42	Ground Terminal
PRT10546-43	43	Flat Washer
PRT10546-44	44	Lockwasher
PRT10546-45	45	Screw
PRT10546-46	46	Washer
PRT10546-47	47	Flat Washer
PRT10546-48	48	Screw
PRT10546-49	49	Flat Washer
PRT10546-50	50	Left Spark Guard
PRT10546-51	51	Right Spark Guard
PRT10546-52	52	Screw
PRT10546-53	53	Lockwasher
PRT10546-54	54	Screw Lockwasher
PRT10546-55	55	Nut
PRT10546-56	56	Rotation Label
PRT10546-58	58	Light Base
PRT10546-59-71	59	Bent Pipe
	60	Nut
	61	Screw
	62	Sleeve
	63	Base Cover
	64	Screw
	65	Plastic Pipe
	66	Fixed Base
	67	Screw
	68	Light Head
	69	Nut
	70	Light Guard
	71	Bulb
	PRT10546-71	71

ATD-10541 6" Grinding Wheel (Med) 1/2" Arbor x 3/4" width  
 ATD-10542 6" Grinding Wheel (Coarse) 1/2" Arbor x 3/4" width