

241-1406

TOOL SHOP[®]

6 INCH BENCH GRINDER

INSTRUCTION MANUAL



E154499
LISTED

IMPORTANT: READ BEFORE USING

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TECHNICAL DATA

6" BENCH GRINDER

MODEL NUMBER: 241-1406

MOTOR / ELECTRICAL: 110-120V, AC, 1 PHASE

HORSE POWER: 1/2

AMPERAGE: 3.5

RPM: 3,450

POWER CORD: 4', 18AWG, UL-listed

NOTE: If using an extension cord, observe the minimum gauge requirements on the chart below. Use only UL listed extension cords. Always inspect power cords and extension cords for damage before use.

GAUGE	TOTAL EXTENSION CORD LENGTH IN FEET
16	25', 50'
14	25', 50', 75'
12	25', 50', 100', 125', 150'

SAFETY RULES

1. **KNOW YOUR POWER TOOL**
Read the owner's manual carefully to learn applications and limitations, and the specific potential hazards peculiar to this tool.
2. **GROUND ALL TOOLS**
This machine must be grounded while in use to protect the operator from electric shock. If adapter is used to accommodate two-prong receptacle, the adapter wire must be attached to a known ground. Never remove third prong. If you are not sure that your outlet is properly grounded, have it checked by a qualified electrician.
3. **KEEP GUARDS IN PLACE**
Do not remove safety guards.
4. **REMOVE ADJUSTING KEYS AND WRENCHES**
Always check to see the keys and adjusting wrenches are removed from tool before turning on power .
5. **KEEP WORK AREA CLEAN**
Cluttered areas and benches invite accidents.
6. **AVOID DANGEROUS ENVIRONMENT**
Do not use power tools in damp or wet locations. Use the bench grinder in a well lit area and on a level surface.
7. **KEEP CHILDREN AWAY**
All children should be kept a safe distance away from work area. Disconnect the power when the machine is not in operation.
8. **USE RIGHT TOOL**
Do not force tool or attachment to do a job it was not designed for.
9. **WEAR PROPER APPAREL**
Do not wear loose clothing, gloves, neckties, rings or jewelry. Non-slip footwear is recommended.
10. **ALWAYS USE SAFETY GOGGLES**
Common eyeglasses only have impact resistant lenses. They are not safety glasses.
11. **DO NOT OVERREACH**
Keep proper footing and balance at all times.
12. **KEEP TOOLS IN GOOD WORKING CONDITION**
Keep tools sharp and clean for safe performance. Follow instructions for changing accessories.
13. **DISCONNECT TOOLS**
Always disconnect power before maintaining or adjusting the bench grinder.
14. **DO NOT OPERATE THIS MACHINE WHILE UNDER THE INFLUENCE OF ALCOHOL, DRUGS OR PRESCRIPTION MEDICINES.**

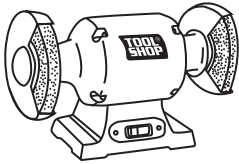
UNPACKING AND CHECKING CONTENTS

WARNING

1. To avoid injury from unexpected starting or electrical shock, do not plug the power cord into a source of power. This cord must remain unplugged whenever you are servicing and assembling the grinder.
2. When unpacking and checking contents, separate all "loose parts" from packaging materials and check each item with "Table of loose parts" to make sure all items are accounted for before discarding any packing material. If any parts are missing, do not attempt to assemble grinder, plug in the power cord or turn the switch on until missing parts are obtained and are installed correctly.

TABLE OF CONTENTS IN BOX

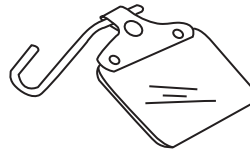
A. Main body assembly----1



B. Tool rests-----2



C. Eye shields-----2



LOOSE PARTS IN BAG

A. Mounting brackets-----2



B. Large screws---2



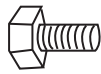
C. Knobs-----2



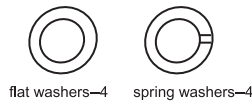
D. Spark guards-----2



E. Hex bolts-----4



F. Large washers---8



flat washers-4 spring washers-4

G. Small washers----- 4



flat washers-2 spring washers-2

H. Spare part
Screw and washer-----1



TOOL NEEDED FOR ASSEMBLY

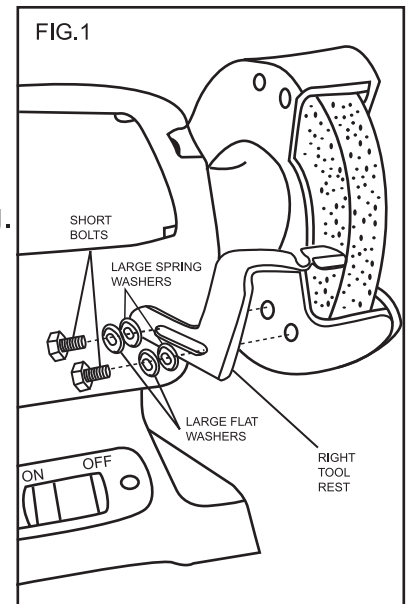
6" Adjustable wrench



ASSEMBLY

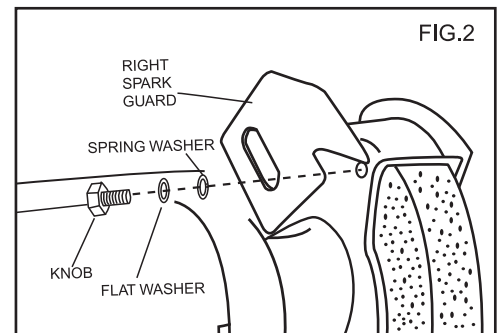
INSTALLING TOOL RESTS

1. Locate main body assembly and two tool rests.
2. Place main body assembly on the level table or bench.
3. Locate four hex bolts (E) and four large flat washers (F) and four large spring washers (F) among loose parts in bag.
4. Align the slot of the tool rest to the holes on inside of the wheel guards (figure-1).
5. Install the tool rests to wheel guards with hex bolts, ensure there is at least 1/16" gap between the tool rests and grinding wheels.
6. Tighten with adjustable wrench.



INSTALLING SPARK GUARDS

1. Locate two spark guards (D), two knobs (C) and two small flat washers (G) and two small spring washers (G) among loose parts in bag.
2. Install the spark guards to the wheel guards with knobs (figure-2).
3. Adjust the spark guards up and down to set the guards at 1/16" from the grinding wheels.
4. Tighten the knobs.

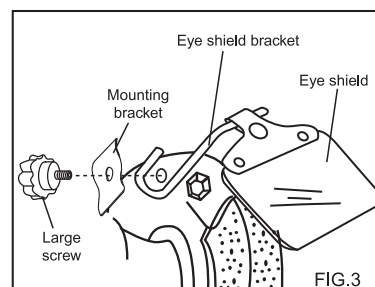


NOTE: There is a left and right spark guard, please ensure that you install them correctly.

INSTALLING EYE SHIELDS

1. Locate two large screws (B), two mounting brackets (A) among loose parts in bag.
2. Locate two eye shield assemblies.
3. Install the mounting bracket to the wheel guard with bracket of eye shield assembly (figure-3).
4. Tighten with large screw.

NOTE: Please ensure that you install the eye shields correctly.



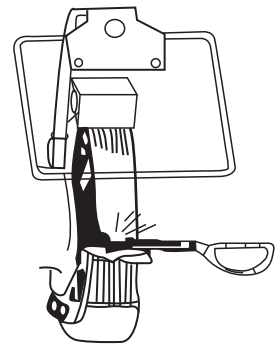
OPERATIONS

WARNING: Always wear safety goggles and dust mask when using the grinder. Before each use check the grinding wheels. If a cracked wheel is found, replace it immediately.

Always keep a steady moderate pressure on the work piece and keep it moving at an even pace for smooth grinding. Pressing too hard will over heat the motor and prematurely wear down the grinding wheels. Note the original bevel angle on the work piece to be sharpened and try to maintain the shape. The grinding wheel should rotate into the work piece being sharpened. Keep a tray filled with water and dip your work piece into it regularly to prevent overheating.

Sharpening scissors:

If possible, take the scissor 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 (see figure).



Sharpening knives:

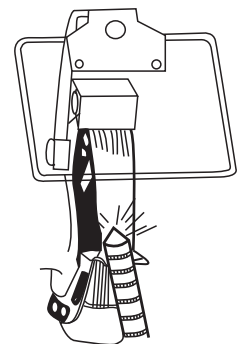
Remove metal from both faces of most knives, working from the heavy end of the blade toward the tip.

Sharpening screwdriver:

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 interesting faces perpendicular. Hold each face of the screwdriver against the wheel to true it up, then ease the end straight into the stone to grind it true.

Twist drill bits:

Drill bits are best sharpened on a sharpening jig, but can be "dressed up" on your grinder. Begin one side of the point at the existing angle, then twist the bit while maintaining a constant angle with grinding surface, sharpen only the dip. 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 correct angle for most drill bits (see figure).



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. Unbalance 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.

OPERATION AND MAINTENANCE

MOUNTING THE GRINDER

Your grinder must be securely fastened by two base holes to a level bench or table with heavy duty fasteners. This will prevent the grinder from sliding or walking during operation.

MAINTENANCE:

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

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, new wheels sometimes require dressing to make them round.

Wheel replacement:

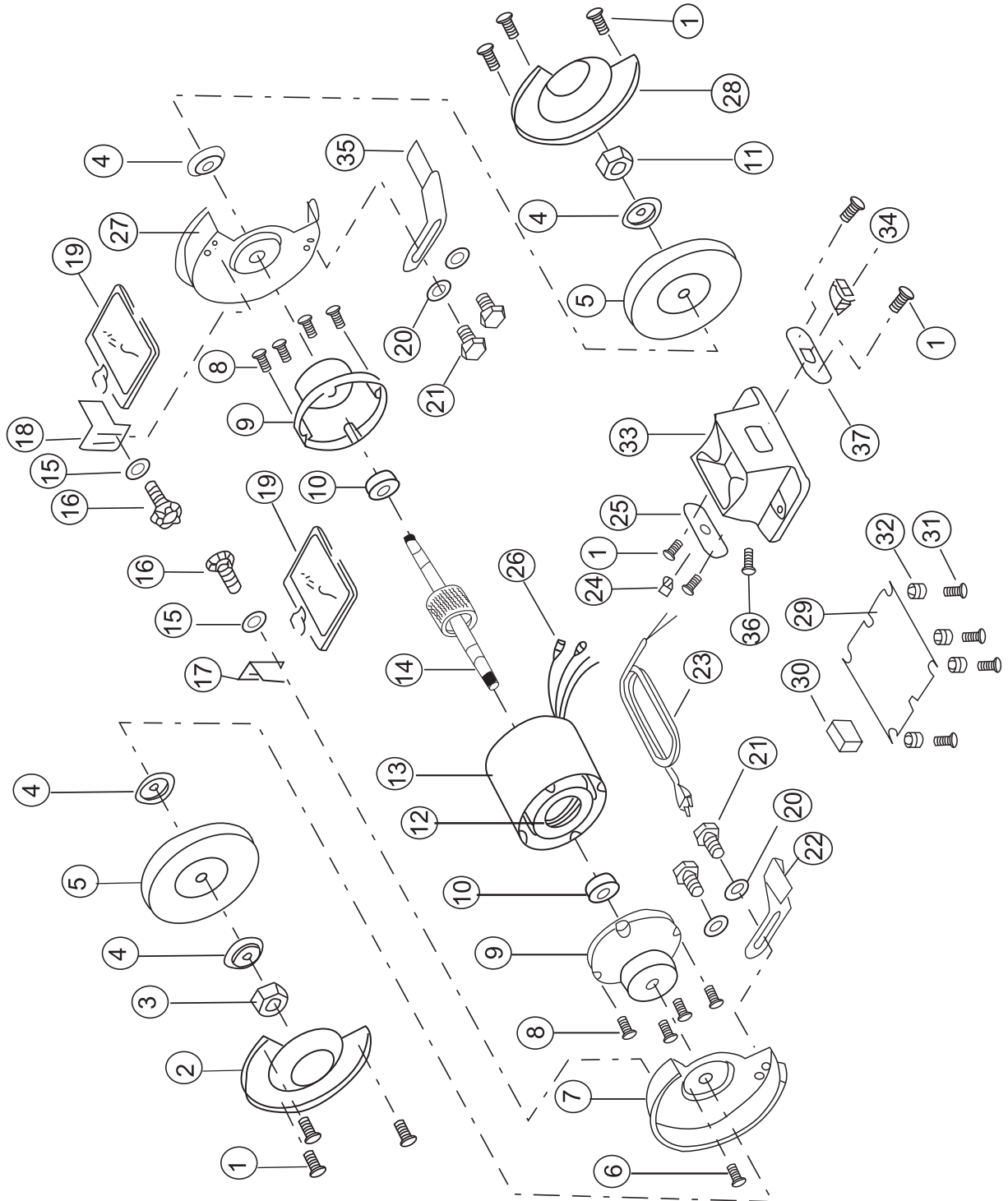
If you must replace a wheel, be sure to obtain one with a safe rated speed at least as high as the no load speed, 3,450 RPM and with 1/2" center hole, 6" diameter and 3/4" width. Test new wheels for cracks and maintain the existing sequence of retaining hardware. The grinder also accepts most 6" wire and buffing wheels.

- 1) Disconnect the power cord.
- 2) Remove the eye shield, tool rest and outside cover.
- 3) Hold the grinding wheel firmly and remove the nut and flange from the shaft with adjustable wrench.
- 4) Remove the old wheel and replace it with the new wheel.
- 5) Reassemble the flange, nut and outside cover, tool rest and eye shield.
- 6) Allow the grinder to run for one minute to ensure the grinding wheel is not out of the balance before commencing any work.

Installing wire wheel:

Most of the wire wheels come with thin (small than 3/4") center plate. You must use washers or o-rings between each side of nut and flange to keep wire wheel in the center.

KEY NO.	PART NO.	PART NO.
1	39500 CS-1	Screw
2	39500 CS-2	Cover
3	39500 CS-3	Nut
4	39500 CS-4	Flange
5	39500 CS-5	Grinder wheel
6	39500 CS-6	Screw
7	39500 CS-7	Wheel guard
8	39500 CS-8	Screw
9	39500 CS-9	Motor and ball
10	39500 CS-10	Ball bearing
11	39500 CS-11	Nut
12	39500 CS-12	Motor
13	39500 CS-13	Motor case
14	39500 CS-14	Motor rotor
15	39500 CS-15	Washer
16	39500 CS-16	Knob
17	39500 CS-17	Spark breaker
18	39500 CS-18	Spark breaker
19	39500 CS-19	Eye shield
20	39500 CS-20	Large Washer
21	39500 CS-21	Bolt
22	39500 CS-22	Adjustable rest
23	39500 CS-23	Wire
24	39500 CS-24	Strain roller
25	39500 CS-25	Plate
26	39500 CS-26	Terminals
27	39500 CS-27	Wheel guard
28	39500 CS-28	Cover
29	39500 CS-29	Base plate
30	39500 CS-30	Capacitor
31	39500 CS-31	Screw
32	39500 CS-32	Pad
33	39500 CS-33	Base
34	39500 CS-34	Switch
35	39500 CS-35	Adjustable rest
36	39500 CS-36	Screw
37	39500 CS-37	Mounting plate
38	39500 CS-38	Owners manual



**BENCH GRINDER
MODEL: 241-1406
PARTS LIST**

TOOL SHOP® (BENCH GRINDER) WARRANTY

1-YEAR LIMITED WARRANTY:

This TOOL SHOP® brand power tool carries a 1-Year Limited Warranty to the original purchaser. If the tool fails within one (1) year from the date of purchase, simply bring this tool with your original sales receipt back to your nearest MENARDS® retail store. At its discretion, TOOL SHOP® agrees to have the tool replaced with the same or similar TOOL SHOP® product free of charge, within the stated warranty period, when returned by the original purchaser with original sales receipt. Notwithstanding the foregoing, this limited warranty does not cover any damage that has resulted from abuse or misuse of the Merchandise. This warranty: (1) excludes expendable parts including but not limited to blades, belts, bits, light bulbs, and/or batteries; (2) shall be void if this tool is used for commercial and/or rental purposes; and (3) does not cover any losses, injuries to persons/property or costs. This warranty does give you specific legal rights and you may have other rights, which vary from state to state. Be careful, tools are dangerous if improperly used or maintained. Seller's employees are not qualified to advise you on the use of this Merchandise. Any oral representation(s) made will not be binding on seller or its employees. The rights under this limited warranty are to the original purchaser of the Merchandise and may not be transferred to any subsequent owner. This limited warranty is in lieu of all warranties, expressed or implied including warranties or merchantability and fitness for a particular purpose. Seller shall not be liable for any special, incidental, or consequential damages. The sole exclusive remedy against the seller will be for the replacement of any defects as provided herein, as long as the seller is willing or able to replace this product or is willing to refund the purchase price as provided above. For insurance purposes, seller is not allowed to demonstrate any of these power tools for you.

**For questions / comments, technical assistance or repair parts -
Please call toll free at: 1-888-287-8808(M-F8am-6pm).
SAVE YOUR RECEIPTS. THIS WARRANTY IS VOID WITHOUT THEM.**