



Division of Hydro-Thermal Corporation PROVIDING SOLUTIONS WORLDWIDE

WIZARD DRUM TOOL CO.

WIZ-Kid®

ELECTRIC DRUM OPENER OPERATING and SERVICE MANUAL

Low Volume Drum Usage



Serial No. _____



Wiz-Kid Electric Drum Opener Operating and Service Manual; Version 3.0, Rev C

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GENERAL WARNINGS AND PRECAUTIONS**ATTENTION**

This section must be read thoroughly before operating any equipment supplied by WIZARD Drum Tool Co. Failure to do so may result in damage to equipment and/or severe injury to personnel.

- When using the unit, make sure you are wearing all personal safety equipment such as gloves, safety glasses, and steel toe boots.



1. To avoid serious injury or death from electrical shock, make certain the unit is properly grounded.
2. Do not operate any of the electrical units in wet areas.
3. Always use the correct voltage supply as indicated on the unit motor nameplate.
4. Do not use power cord if damaged or frayed. To prevent damage to the power cord, always keep the cord away from the cutting mechanism. If the power cord becomes damaged or frayed, replace before attempting to operate the unit.



1. In the event of a temporary power loss, there is the potential that the unit may be restarted automatically if the power switch is left in the "ON" position!
2. Keep all body parts away from the cutter wheel and roller whenever the power is on!
3. If the unit stalls due to blockage between the cutter wheel and the roller, always turn the unit off before attempting to dislodge any debris!
4. The chime of a cut drum may be sharp! Caution should be used when attempting to remove the lid from the drum. It is recommended that PSE (personal safety equipment) be worn when handling cut chimes.
5. Disconnect the power supply (electrical or air) before performing any maintenance on the unit!
6. Do not operate unit on flooring that is not level. The drum may tip over during operation.

The following applies to units purchased for use in non-explosive environments:



1. Do not use any of the units to remove the lids off drums which may contain explosive materials.
2. THE UNITS ARE NOT TO BE OPERATED IN EXPLOSIVE ENVIRONMENTS!
3. Extreme care must be taken so that the unit is not operated in any manner to potentially ignite the drum contents and/or any explosive material.

SECTION 1 -- GENERAL INFORMATION

PRODUCT DESCRIPTION

The WIZ-Kid® Electric drum opener is a lightweight, electrically powered tool designed to cut the tops and/or bottoms off standard 55 and 30 gallon steel drums up to 16 gauges thick.

The unit requires minimal setup. The cutting mechanism is designed to cut through most dents, eliminating the need to form the chime to its original contour. The cutting wheel is designed to fit between the drum chime and bung fitting. This eliminates the need to flatten the bung prior to cutting. Also, there is only one simple adjustment for height making it easy to use for all operators.

The unit is designed for quick and easy repair using standard tools. Maintenance is minimized by keeping the total number of parts in the design to a minimum.

This unit is powered by a low speed, high torque, totally enclosed, fan-cooled gear motor. 1 PH/ .09 HP, 115 or 220 Volt AC, 50/60 Hz. Includes coiled retractable cord, and on/off switch for ease of use. UL/CSA/CE Compliant.

SECTION 2 -- HOW TO USE YOUR WIZ-Kid™

SET-UP

CAUTION

The WIZ-Kid is designed to cut a lid open in a minimum of 3 laps around the drum. Opening a drum in less than three laps indicates that the unit is being operated beyond its designed capabilities and is being over-stressed. This will eventually lead to premature damage to the motor, cutting edge, or other components.

1. Although the WIZ-Kid™ is designed to ride over most dented chimes, it may be necessary to straighten some dents with a WIZARD® Dekinker or to hammer them into their original contour.
2. Turn the T-bar handle counterclockwise to open the cutting wheel away from the drive roller to give the unit proper clearance to mount on the drum.

CAUTION

Damage may result from the unit falling off the drum by attempting to cut severely dented drums.

PLACING THE UNIT ON THE DRUM

1. Place the unit on the drum. Rest the chime rollers on the drum chime. Be certain the cutting wheel is to the inside of the drum, at least 1/8" above the lid. The chime should be between the washers on the guide rollers. The guide rollers should support the unit on the drum shell (see Fig. 1).
2. **Very Important: Check the unit for the proper cutting height position. The height is factory set, however your drums may require adjustments to the unit. Refer to section 3 before continuing.**
3. Turn the T-bar handle clockwise until the cutting wheel touches the chime (be careful not to over-tighten). Turn the handle another complete turn to begin to engage the cut.

STARTING THE UNIT

1. Make sure the unit's power switch is in the "OFF" position.
2. Plug the unit's coiled power cord into an extension cord. Keep the cord out of the cutting motion by supporting the cord up and away from the drum and drum opener.
3. Turn the power switch to the "ON" position.

SECTION 3 -- CUTTING WHEEL POSITIONING

To get the best performance from your WIZ-Kid™ drum opener, accurate positioning of the cutting wheel on the drum chime is critical. Please read section 3 carefully and check periodically for proper cutting wheel positioning.

LOCATION OF CUTTING POSITION

If the cutting wheel is positioned on the top radius of the chime (too high), the cutting wheel may rise and eventually lift the unit off the drum. If the cutting wheel is positioned on the lower radius (too low), the wheel tends to bury itself in the drum lid and potentially stall the unit.

HEIGHT OF CUT ADJUSTMENT

The shaft collar controls the height of the cut. Refer to Figure 1 for proper position and Figure 2 to set the height. Set the height as follows:

1. Place the unit on the drum as described in section 2.
2. Loosen the shaft collar screw using a 5/32 inch Allen wrench.
3. Push the unit towards the drum and slide the cutting wheel up or down to position the cutting edge as described above.
4. Let the weight of the unit hold the cutting wheel in position, and close the unit on the drum chime by turning the T-bar handle.
5. With the cutting wheel held in place by the clamping force of the unit, turn the shaft collar clockwise down the cutting wheel shaft until it is snug against the front housing thrust washer.
6. Tighten the shaft collar screw to keep the collar from turning on the shaft (over tightening may cause the screw to strip).
7. Observe the unit and the cutting wheel as it moves around the drum.

The cutting wheel should not rise up as the unit cuts. The unit is tilted down slightly to ensure that the cutting wheel stays down as the unit cuts the drum.

If the cutting wheel rises, it is possible that cutting may occur on a slanted or curved part of the chime. This will have a tendency to push the cutting wheel up on the face of the drum chime. Re-adjust the cutting height as necessary.

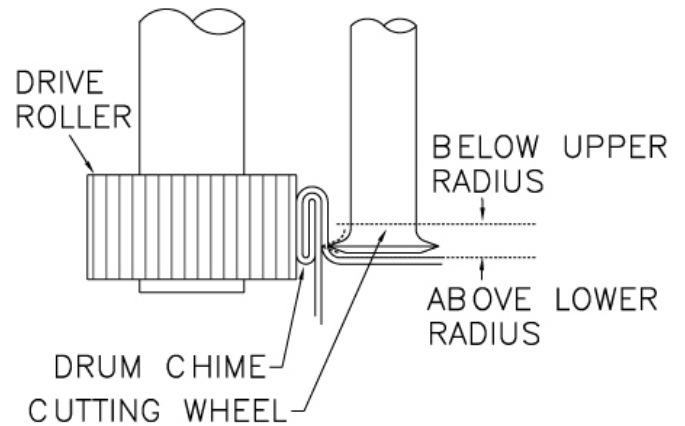


Figure 1: Proper positioning of cutting wheel.

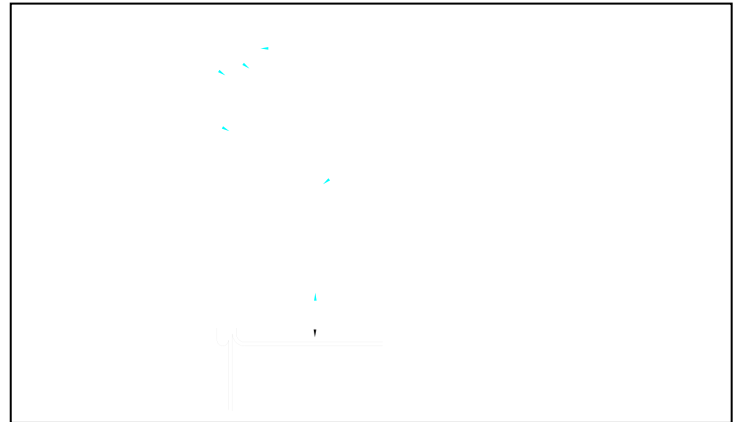


Figure 2: Setting the cutting position.

CUTTING THE DRUM**WARNING**

Keep all body parts away from the cutter wheel and roller whenever the power is "ON". If the cutter wheel and roller experience blockage and hang up, always turn the power "OFF" before attempting to dislodge any debris.

WARNING

The cut lid is sharp. Caution should be used when attempting to remove the lid from the drum. Leather work gloves are recommended.

1. Without stopping the unit, turn the adjusting T-bar handle 1/2 turn clockwise after each lap around the drum.

CAUTION

Do not over-tighten the T-bar handle. Over-tightening may damage the T-Bar handle or rear housing.

2. If the unit stalls, turn the T-bar handle counterclockwise until the unit is able to move.
3. Continue cutting until the unit has cut through the first layer of steel in the lid. Usually a complete cut is detectable by a cracking sound as the metal splits.
4. It is always best to have the power cord over one shoulder to prevent tangles.
5. After the unit has cut through the first layer of the drum lid, turn the power switch to the "OFF" position. Unplug the unit.
6. Open the unit by turning the T-bar handle counterclockwise. If the unit does not open because the cutting wheel becomes wedged in the lid, tap the T-bar handle inward to dislodge the cutting wheel.
7. Remove the unit from the drum.
8. Tap one end of the lid with a rubber mallet until it either flips or falls to the bottom.

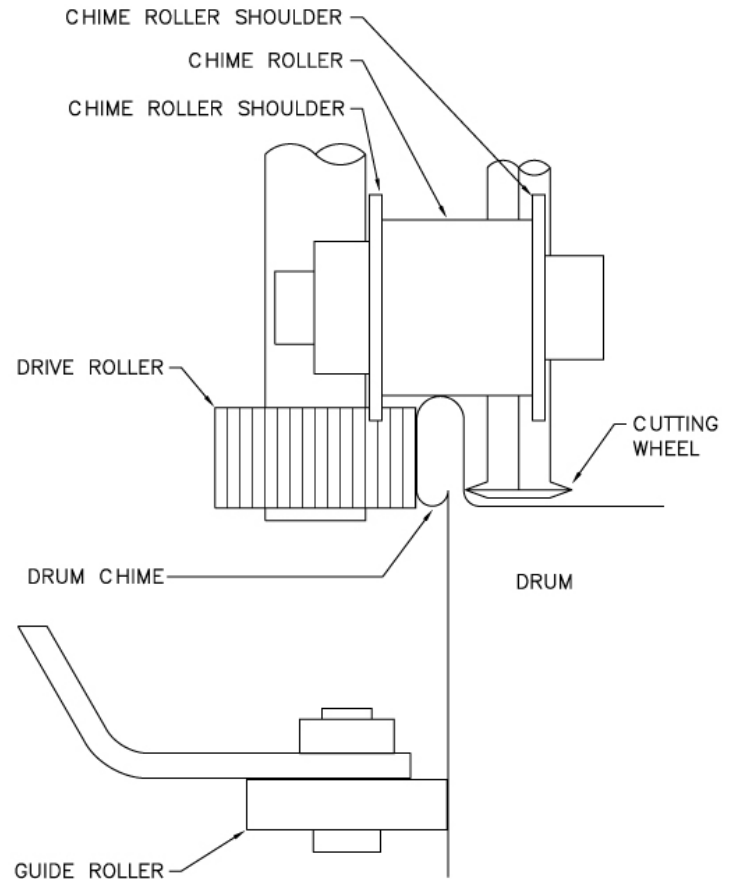


Figure 3: Wiz-Kid™ setup

SECTION 4 -- PROPER USE AND CARE

With proper use and care, your WIZ-Kid™ Drum opener will give you long and dependable service.

1. Lubricate the unit properly. The bearings should be cleaned, checked, and repacked with food grade grease every time the cutter wheel is changed (earlier, depending on the working environment). Failure to service the bearings may result in reduced bearing life.
2. Do not drop the drum opener. If the unit falls resulting in excessive damage or operational failure, call the factory for assistance.
3. Be certain your electrical connections are correct and safe. Make sure there is no damage to either the motor or power cord.
4. Do not over tighten the T-bar handle which will over-stress the motor and may jam the tee handle into the rear housing.
5. Occasionally check that all nuts and bolts are tight.
6. Occasionally wire brush the drive roller serrations.
7. When placing the unit on a drum, take care to protect the blade edge of the cutting wheel from any impact with the drum which could chip the blade.

SECTION 5 --GENERAL MAINTENANCE AND REPAIR

WIZARD® drum openers are designed for long life, maximum reliability and simplified maintenance. Replacement parts are readily accessible and the been kept to a minimum for quick and easy maintenance.

TOOLS NEEDED FOR SERVICE

- (1) Snap (retaining) ring pliers
- (1) 9/16 inch Crescent wrench
- (1) 3/4 inch Crescent wrench
- (2) 15/16 inch Ratchet or crescent wrench
- (1) 5/32 inch Allen wrench (included with unit)
- (1) 3/16 inch Long Allen wrench
- (1) 1/4 inch Allen wrench
- (1) 5/16 inch Allen wrench
- (1) Vice

CUTTING WHEEL REPLACEMENT

1. Refer to Figure 4.
2. Disconnect the power supply from the unit.
3. Loosen the shaft collar screw.
4. Remove the shaft collar by unthreading it from the cutting wheel. Remove the thrust washer
5. Slide the cutting wheel out of the housing.
6. Clean, check, and repack the bearings with food grade grease.
7. Slide the new cutting wheel back into the housing in the same orientation. Replace the shaft collar and thrust washer.

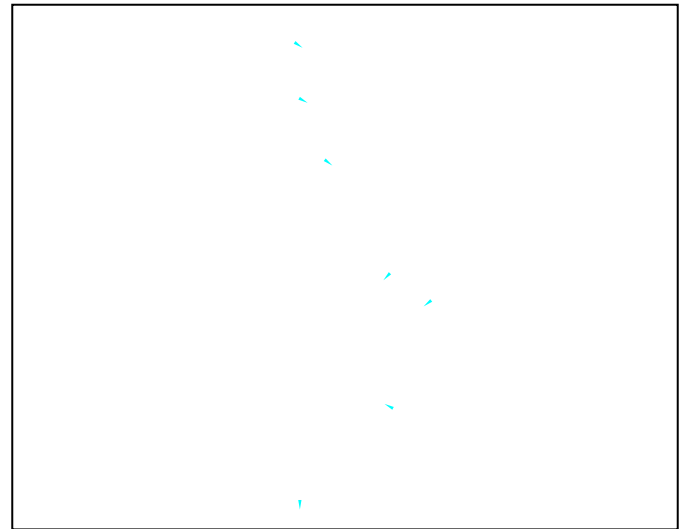


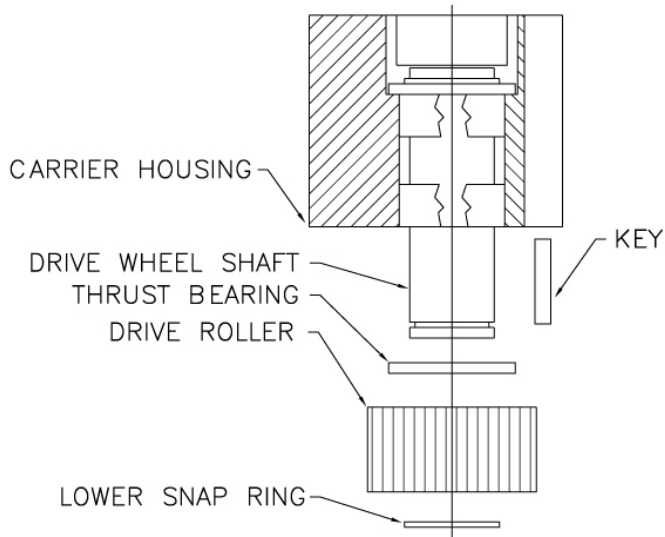
Figure 4: Cutting Wheel Replacement

WARNING

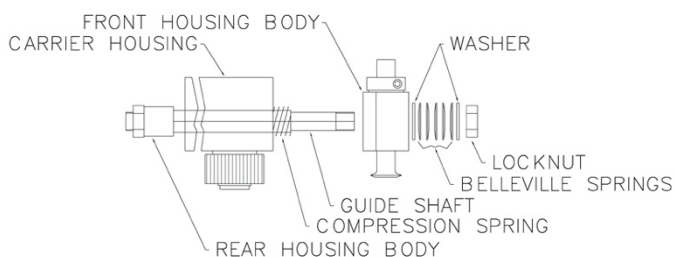
For proper operation, the height of the cutting wheel must be correctly adjusted for each unique drum type. **Failure to adjust the cutting wheel height for each drum type will impair the operation of this unit and may cause permanent damage.** Keep a 5/32" Allen Wrench (which is included with the unit) on hand to make quick adjustments to the cutting wheel height.

DRIVE ROLLER REPLACEMENT

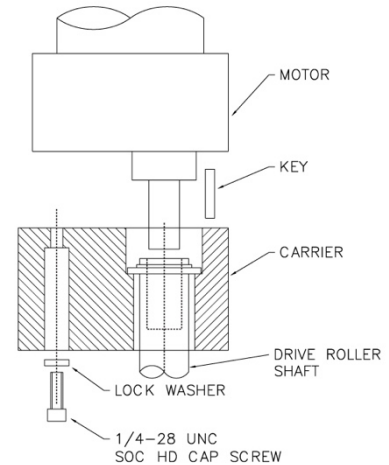
1. Refer to Figure 5.
2. Disconnect the power supply from the unit.
3. Using a snap ring pliers, remove the lower snap ring located at the bottom of the drive roller shaft.
4. Slide the drive roller off the drive roller shaft.
5. Slide the new drive roller on the drive roller shaft with its key and thrust bearing in place.
6. Hold the drive roller in place and replace the snap ring.

**Figure 5: Replacing the drive roller.****HOUSING BODY REMOVAL**

1. Refer to Figure 7.
2. Disconnect the power supply from the unit.
3. Use two 15/16 ratchet wrenches and remove the nylon insert locknuts at one end of the guide shafts.
4. Slide the front housing from the guide shafts.
5. Slide the guide shafts out of the carrier housing.
6. If you need to remove the rear housing, place the guide shafts in a vice making sure to protect them by putting cardboard between the vice and the shaft. Remove the locknuts and slide the shafts out.

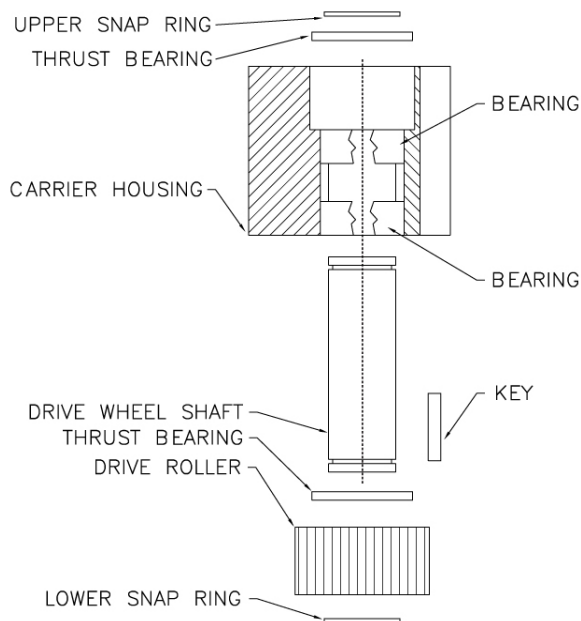
**Figure 7: Removing the housing bodies.****MOTOR REMOVAL**

1. Refer to Figure 6.
2. Disconnect the power supply from the unit.
3. Follow the instructions for removing the front housing body.
4. Using a 3/16 inch Allen wrench, remove the four socket head cap screws and four lock washers from the motor, inside the carrier housing.
5. Pull the motor from the carrier and slide the motor shaft from the drive roller shaft.

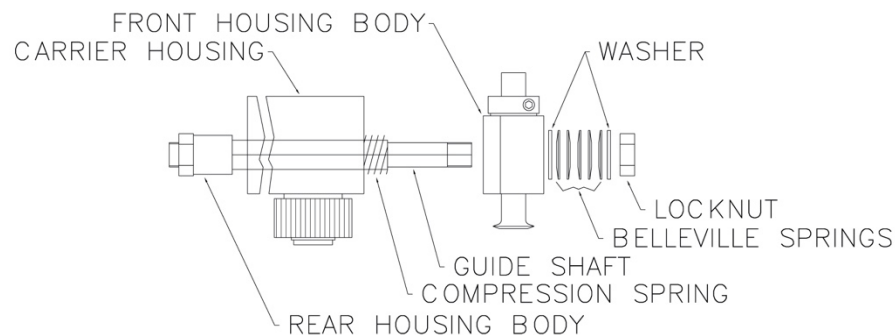
**Figure 6: Motor Removal**

DRIVE ROLLER SHAFT REPLACEMENT

1. Refer to Figure 8.
2. Follow the instructions for removing the motor.
3. Using a snap ring pliers, remove the top snap ring from the drive roller shaft.
4. Slide the drive roller shaft out of the carrier.
5. Remove the drive roller, thrust bearings, key and snap ring from the drive roller shaft.
6. Clean, check, and repack the bearings with a heavy weight grease.
7. Slide the snap ring on the lower end the end with the outside keyway and shaft plug of the new drive roller shaft.
8. Slide the drive roller, with its key, over the snap ring.
9. Slide a thrust bearing over the drive roller. Insert the shaft assembly into the carrier.
10. Hold the shaft assembly against the bottom of the carrier with one hand and slide the other thrust bearing over the top of the drive roller shaft and tightly against the top of the carrier.
11. Replace the top snap ring with snap ring pliers.
12. Replace the motor by sliding the motor shaft and key into the open side of the drive roller shaft. Replace the four lock washers, cap screws and tighten.

**Figure 8: Drive roller replacement****HOUSING BODY REASSEMBLY**

1. Refer to Figure 9.
2. Disconnect the power supply from the unit.
3. Slide the short shoulder ends of the guide shafts (8) into the rear housing body. Finger tighten a 5/8 nylon insert locknut on each end.
4. Slide both guide shafts into the back end side with guide roller bracket of the carrier. This is **important** because it will align the guide shafts with the carrier bearings which will allow the carrier to ride smoothly over the guide shafts.
5. Place the compression springs over the guide shafts and into the counterbore in the carrier.
6. Place the front housing over the long shoulder end of the guide shafts. The slot in the front housing shoulder face the carrier and the brackets should be down.
7. Slide a 5/8 flat washer over each long shoulder end of the guide shafts and against the front housing.
8. Slide five Belleville washers over each long shoulder end of the guide shafts and against the 5/8 flat washer. Place the Belleville washers on the guide shafts accordion style (face to face-rear to rear).
9. Slide another 5/8 flat washer on the guide shafts and against the Belleville washers.
10. Finger tighten a 5/8 nylon insert locknut over the long shoulder end of each guide shaft.
11. Using two 15/16 crescent or ratchet wrenches, tighten each 5/8 nylon insert locknut at each end of the guide shafts. Make sure the locknuts are tight and bottomed out on the guide shafts.

**Figure 9: Housing Body Reassembly**

SECTION 6 – TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	REMEDY
Unit does not turn on.	Faulty power connection.	Check / Replace line cord.
	Loose power connection.	Make connection tighter.
	Damaged motor.	Replace motor.
Unit stalls or does not start.	Excessive cutting force.	Back off T-bar handle.
	Drive roller slips.	Clean serrations in drive roller.
	Cutting too low (at lower chime radius).	Refer to section 3. Cut higher, on flat portion of the chime.
Cutting wheel rides up.	Cutting too high (at upper chime radius).	Refer to section 3. Cut lower, on flat portion of the chime.
Does not cut drums.	Cutting wheel dull or chipped.	Replace cutting wheel.
	Not enough passes around drum.	Allow more passes.
	Not enough cutting force.	Tighten T-bar handle
Unstable- wobbles going around drum.	Drum chime kinked.	Straighten using dekinker.
	Drum shell dented.	Guide unit past dented area. USE CAUTION.
Drum head can't be removed.	Outer chime layer not cut completely through.	Tighten T-bar handle. Allow more passes.
	Cutting wheel not penetrating metal.	Replace dull or chipped cutting wheel.
Does not run or cut.	Defective motor.	Replace motor.
	Key missing from drive wheel or motor.	Inspect parts. Replace key. Clean serrations.
	Drive roller slips.	Possibly cutting too low (at lower chime radius). Cut higher on chime

NOTE: Contact Factory for Repair Authorization before Returning Unit.

SECTION 7 -- FACTORY SERVICING

Send units requiring major service to the factory. WIZARD® will make a repair estimate, and perform the repair only after your authorization.

NOTE: Contact Factory for Repair Authorization before Returning Unit.

SHIPPING INSTRUCTIONS

1. Get a return authorization number from the factory.
2. Clean all exterior and accessible parts.
3. Ship PREPAID to:

WIZARD Drum Tool Company
400 Pilot Ct.
Waukesha, WI 53188

COD shipments are not accepted.



Figure 10: Name Plate

SECTION 8 – LIMITED WARRANTY**Limited Warranty**

Wizard® Drum Tool Company guarantees the materials, components, and workmanship in its drum tool products to be of the highest quality and to be free from defects in material and workmanship for a period of 90 days from the delivery date. Any defective component or parts will be exchanged at our factory with replacement parts, shipped to you prepaid, if found to be defective from other than overload, abuse, careless or negligent use, or failure to maintain the unit as recommended by company operating and service manuals. The company's liability does not extend to damage or malfunction resulting from alterations from original design of the equipment or failure to follow normal operating procedures.

There are no warranties, either express or implied, of fitness for a particular purpose which should extend beyond the warranty period of one (1) year from the date of delivery. No responsibility is assumed from an incidental or consequential damages except for those allowed under state law.

The company reserves the right under its product improvement policy to change construction or design details and furnish equipment when so modified without reference to illustrations or specifications.

SECTION 9 - EXPLODED VIEW DRAWING AND BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	10010	CARRIER	1
2	10003	OILITE BEARING 1.00" ID	2
3	10002	OILITE BEARING 0.75" ID	5
4	10033	LOCK WASHER 0.25" DIA	4
5	3062	HARDENED STEEL PLUG	1
6	10020	ROLLER GUIDE BRACKET	1
7	2167	SHCS, 0.25-20x0.75, ZINC	8
8	12458	T-BAR ASSEMBLY	1
8.1	3201	T-BAR HANDLE	1
8.2	3203	THREADED T-BAR ROD	1
8.3	5313	JAM HEX NUT 0.50-13, ZINC	1
8.4	6630	HEAT SHRINK TUBING 0.50" DIA.	1
9	10014	GUIDE SHAFT	2
10	10009	REAR HOUSING	1
11	10006	COMPRESSION SPRING	2
12	10013	CHIME ROLL BRACKET ASSY	1
12.1	10011	FRONT HOUSING	1
12.2	10012	FRONT HOUSING WING	2
13	10092	WASHER, FLAT, 0.63, BRASS	1
14	10005	THREADED SHAFT COLLAR	1
15	10046	WASHER, FLAT, 0.625, ZINC	4
16	10007	SPRING WASHER 0.64" ID	10
17	10068	JAM LOCK NUT, 0.625-11 NYLON	4
18	10019	CHIME ROLLER	2
19	10022	CHIME ROLLER WASHER	4
20	10027	SHCS, 0.63-11x1.50, 18-8SS	2
21	10001	NEEDLE BEARING 0.625" ID	2
22	10017	CUTTER WHEEL	1
23	3200	GUIDE ROLLER	2
24	5601	WASHER, FLAT, .31, SS ZINC PL	2
25	3210	SHCS, 0.50-13x0.50, 18-8SS	2
26	11682	JAM LOCK NUT, 0.375-16 NYLON	2
27	10000	NEEDLE BEARING, 1.00" ID	2
28	10023	DRIVE SHAFT SPACER	1
29	10026	EXT. RETAINING RING, 1.00" ID	2
30	10034	KEY, 0.1875" SQ x 1.00" LG	1
31	26410	DRIVE WHEEL SHAFT	1
32	10016	DRIVE WHEEL	1
33	12627	LABEL "DO NOT OVER-TIGHT..."	1
34	10132	WIZKID ELECTRIC NAMEPLATE	1
35	10134	LABEL "WIZKID ELECTRIC UNIT"	1
38	11672	LABEL "ELECTRIC SHOCK"	1
39	2222	SELF TAP SCREW, 6-32x0.25 LG	4
40	30898	MOTOR 115V	1
N/A	12158	ALLEN WRENCH, 5/32"	1

