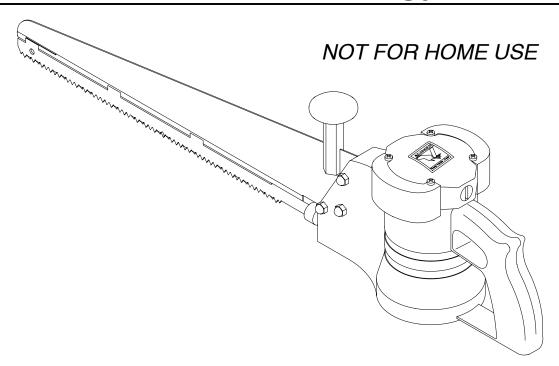


## **Model 404 Wellsaw** Air Powered Reciprocating Saw



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### SAFETY MESSAGES TO EMPLOYER AND SAFETY DIRECTOR

**AVOID INJURY** 

- 1. Ensure that employees wear eye protection in accordance with OSHA's eye and face protection requirements (29 CFR 1910.133) at all times.
- 2. Follow our installation and maintenance instructions for proper installation and care of the tool.
- **3.** Enclosed are four (4) copies of "NOTICE TO OPERATORS, MAINTENANCE AND CLEAN-UP PERSONNEL." Post one copy on the employees' bulletin board; give one copy to operator(s); give one copy to the maintenance foreman; and give one copy to the sub-contract cleanup / internal cleanup foreman. Additional copies will be provided upon request.
- **4.** The tool is designed and intended to be powerful. That fact should be obvious to your employees, but you must emphasize it to them.
- 5. Always disconnect the tool from its power supply when it is not in use.
- **6. Ensure** that all employees who use this tool are trained in the proper use of this tool and are aware of the dangers that may arise if they do not follow the procedures outlined in this brochure.
- 7. Hand/Wrist/Arm injury and other Cumulative Trauma Disorders may result from repetitive work, motion or vibration. You must make your employees aware of hazards, symptoms of injury and appropriate prevention. See OSHA's "Ergonomics Program Management Guidelines for Meat Packing Plants."
- **8. Remove** and **repair** any tool that malfunctions. **All** personnel must be instructed to remove any malfunctioning equipment.
- 9. Never make modifications or alterations to the tool. Replace any missing or illegible labels.
- **10. Avoid** injury. Do not permit the tool to be misused.
- 11. If you resell or distribute a Jarvis product, you must provide the purchaser with the appropriate safety sheets and tool brochure. Additional copies of safety sheets and tool brochures will be provided upon request.



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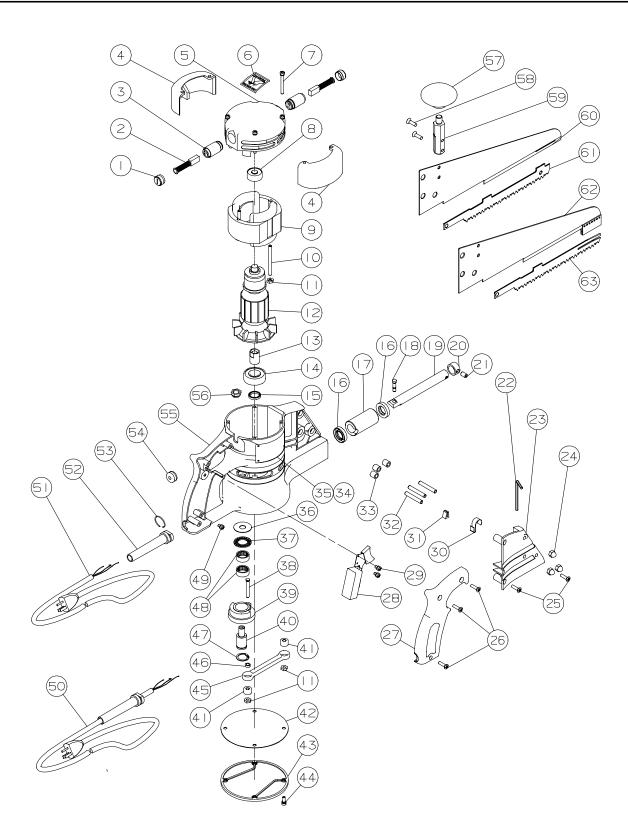


# SAFETY MESSAGES TO OPERATORS, MAINTENANCE AND CLEANUP PERSONNEL

### REMOVE ANY MALFUNCTIONING TOOL FROM SERVICE REPORT ANY PROBLEMS TO YOUR SUPERVISOR

- **1. Disconnect** the power supply in accordance with OSHA's lockout/tagout procedures (29 CFR 1910.147) before changing the blade.
- **2. Disconnect** the power supply in accordance with OSHA's lockout/tagout procedures (29 CFR 1910.147) before performing any repair or maintenance.
- **3. Disconnect** the power supply or have the power supply disconnected in accordance with OSHA's lockout/tagout procedures (29 CFR 1910.147) before performing any cleanup.
- **4. Disconnect** the power supply when the tool is not in use.
- **5. Always** wear eye protection in accordance with OSHA's eye and face protection requirements (29 CFR 1910.133), and when needed, a dust mask.
- **6. Do not** operate near flammable liquids or in gaseous atmospheres.
- 7. Do not operate in outdoor locations or in damp or wet locations.
- **8. Do not** overreach; keep proper footing and balance when using the tool.
- **9. Never** put fingers, hands or other parts of the body on the cutting edge of the blade or in the cutting path.
- 10. Always use both hands when starting and operating the tool to avoid the risk of possible "kick back" or "recoil." Continue holding the tool with both hands until the saw blade comes to a complete stop.
- 11. **Test** the tool prior to use or daily. **Depress** the trigger and the tool <u>should</u> start. **Release** the trigger and the tool <u>should</u> stop. *If the tool malfunctions, remove it from service and report or repair it immediately.*
- 12. Never depress the trigger unless you are going to use or test the tool.
- 13. Never make any alterations to the tool. <u>Report or replace</u> any missing or illegible labels.







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	JARVIS	OLD		
ITEM	PART NO.	PART NO.	PART NAME	QTY
1	1063112	501022-005		2
2	1063111	501022-004	Brush and Spring	
3	1063110		Brush Holder	2
4	1015006	501174	Deflector	2 2 2
5	1002191	501002	Тор Сар	l 1
6	1017083		Danger Label	1
7	1055428	100101-004	Screw, Flat Head	4
8	1021215	100403-003	Ball Bearing	l 1
9	1063119		Stator, 115Ŭ	1
	1063120		Stator, 230V	l 1
10	1027040	501021	Stator Stud	2
11	1007164	100105-001		4
12	1063117	501224-001	Armature, 115V	1
	1063118	501224-002	Armature, 230V	1
13	1026072	501225	Pinion Gear	1
14	1021227	100422-004	Ball Bearing	1
15	1035193	501120-001	Seal	1
16	1035192	501103	Seal	2
17	1036116	501171	Bushing	1
18	1027041	501046	Rod Stud	1
19	3065010	501172	Push Rod and Stud	1
20	1012050	501350	Clamp Ring	1
21	1055422	100034-038	Set Screw, 1/4 inch	1
22	8030031	100099-001		1
23	1002206	501003-001	Blade Support Cover	1
24	1007162	100022-006		6
25	1055439	100102-002		3
26	1054076	501380	Screw, Coated	3
27	1002203	501004	Handle Cover	1
28	1005038	100739-001		1
29	1073190		Screw, Round Head	2
30	1012046	501042	"S" Clip	1
31	1012047	501043	"U" Clip (rubber)	1
32	1027048	501272	Stud	3
33	1036120	501273	Insert Bushing	3
34	1017033	501187	Info Label 115V, Eng.	1
	1017034	501179	Info Label 230V, Eng.	
	1017054		Info Label 115V, French	
ا م	1017234		Info Label 230V, French	
35	1045013	100406 001	Label Retaining Rivet	4   1
36 37		100426-001	Thrust Bearing Race Needle Thrust Bearing	
38	1027043	1501081	Drive Stud	Ι¦
39	3026024	1501081	Gear and Stud (32)	Ι¦
40	1	501223	Gear Shaft	Ιί
41	1020133	301377	Needle Bearing	2
42	1035191	501008	Gasket	1
43	1002193	501005	Bottom Plate	
44	1055426	100101-001	Screw (set of 12)	4
45	3028030	501053	Connecting Rod & Brg	1
46	1029185	501033	Spacer	
47	1013310	100069-013	Snap Ring	
48	1021216	100424-001	Needle Bearing	2
49	1055454		Screw, Round Head	1
50	3001008	501006	Cord, Plug & Molded	Ι'
"			Strain Relief, 115V	
	3001010	501089	Cord, Plug & Molded	
			Strain Relief, 230V	
51	3001011	501337	Cord w/o Strain Relief	1
52	1063125	501294	Strain Relief	1

	JARVIS	OLD		
ITEM	PART NO.	PART NO.	PART NAME	QTY
53	1013137	501295	Clamp Ring	1
54	1063109	100647	Grommet	1
55	1016199	501001-006		1
56	1007166	501376	Gear Stud Nut	1
57	1006021	501066	Knob	1
58	1055429	100102-003	Screw, Oval Head Phil	2
59	1027042	501065	Handle Stud	1

### blades, blade supports and accessories

ITEM	JARVIS PART NO.	OLD PART NO.	PART NAME	QTY
60	1058071	501175T	Blade Support 8" End Cut	1
	1058070	501128T	Blade Sup. 16" End Cut	
61	1023122		Blade 8" End Cutting	1
	1023121	501247	Blade 16" End Cutting	
62	1058075	502077T	Blade Sup. 8" Heavy Duty	1
	1058074	502076T	Blade Sup. 16" Heavy Duty	
63	1023123	501319	Blade 8" Heavy Duty	1
	1023124	501320	Blade 16" Heavy Duty	
	1062003		Gear Grease, 1 Lb Can	1

### replacement kits

IT.	JARVIS	OLD	DARTMANE
<u> </u>	PART NO.	PART NO.	PART NAME
	3063010	501351-001	Armature and Bearing
			(no pinion gear) 115V
	3063011	501351-002	Armature and Bearing
			(no pinion gear) 230V
	3063007	501235-001	Armature, Bearing
			and Pinion Gear, 115V
	3063008	501235-002	Armature, Bearing
			and Pinion Gear, 230V
	3063013	501232	Armature and Pinion,115V
	3063014	501233	Armature and Pinion,230V
	3026023	501088	Gear & Bearing Assembly
	3016119	501169-001	Hsg, Seals & Bushing Assy
	3061152		Service Kit (items 11, 13,
			27, 33, 38 and 42)



#### **SPECIFICATIONS**

Motor Power	1 hp	745 W
Operating Volt/Amp	230V/3.5A, 1 ph	ase, 50/60 Hz
	115V/7A, 1 ph	ase, 50/60 Hz
Stroke	1.13 in	29 mm
Blade Speed	8000	strokes / min
Control Handle	Single Trigger	Electric
Blade Length	8 in	203 mm
	16 in	406 mm
Overall Length (w/16	in blade) 32 in	813 mm
Weight (w/o blade)	9.8 lbs	4.5 kg

#### INSTALLATION INSTRUCTIONS

These instructions have been prepared to assure you of satisfactory operation through proper use of your **Jarvis** Wellsaw.

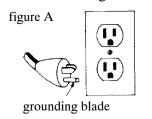
Read them carefully and keep them for future reference.

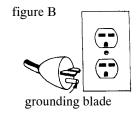
#### POWER SUPPLY

Your **Jarvis** Wellsaw operates on 50 or 60 Hz., single phase alternating current. Its voltage rating is indicated on the name plate (either 115 or 230 Volt). If an extension cord is to be used, be sure that the wire size is adequate to maintain full line voltage to the tool.

#### GROUNDING

Your **Jarvis** Wellsaw should be grounded to prevent the user from electric shock or *electrocution*. The **Jarvis** Wellsaw is equipped with an approved three conductor cord and three prong grounding-type plug to fit the proper grounding-type receptacle. The green conductor in the cord is the grounding wire. Never connect the green wire to a live terminal. If your **Jarvis** Wellsaw is the 115 volt model, it has a plug that looks like figure "A". If your **Jarvis** Wellsaw is the 230 volt model, it has a plug that looks like figure "B".







## Do not use any adapters with the **Jarvis** Wellsaw EXTENSION CORDS

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 **Jarvis** Wellsaw will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The table below shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

#### Minimum Wire Gage for Extension Cords

Volts	Total Length of Cord in Feet			
120	0-25	26-50	51-100	101-150
240	0-50	51-100	101-200	201-300

Amp Ratin	ıg	Wire Size (AWG)		
0-6	18	16	16	14
6-10	18	16	14	12

When tool is used outdoors, use only extension cords labeled for outdoor use.

#### **OPERATION INSTRUCTIONS**

Before starting regular operation of the **Jarvis** Wellsaw, we recommend that you make a few cuts with a fine pitch blade to acquaint yourself with the operation of the tool before using any of the coarser blades.

#### A. AVERAGE CUTTING AND RIPPING:

- 1. Place your work piece on a solid support at a convenient working height.
- 2. Adjust the material so that the line of cut will be close to the support. Secure it firmly.
- 3. To prevent starting torque of the motor from pulling the saw away from line of cut, the operator should make a few short strokes until the blade has cut into the material about 1/4 inch before squeezing trigger switch.

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- 4. Both hands should be on the saw at all times while cutting. Continue holding the tool with both hands until the saw blade comes to a complete stop.
- 5. The saw should be kept at a 90 degree angle to the work piece while cutting material that is thicker than 1 inch.
- 6. The saw should be pushed firmly into the material while cutting.
- 7. Do not allow the saw blade or the blade support to leave the work piece while cutting.
- 8. Never allow the saw blade to float into the material while cutting.
- 9. Never permit any part of the saw, except the blade and the blade support, to contact the work piece during the cut.

#### **B. LARGE CROSS SECTIONS:**

1. Rocking the saw in the cut will speed up the cutting action.

## C. SINKING THE BLADE THROUGH A SURFACE:

- 1. Your power hand saw is <u>not designed</u> for regular use in starting its own hole by sinking blades through a surface, commonly called "plunge cutting". If attempted, the operator must:
  - a. Keep the saw blade as parallel to the work as possible.
  - b. Immediately, as the blade makes contact with the work piece, start to draw the saw back slowly from the starting point.
  - c. Repeat the operation outlined in "b", if necessary.
  - d. Have room to draw the saw at least 4-6 inches before cutting through a 1 inch thickness.
  - e. Do not force the saw blade, but keep it moving slowly on the draw back from the starting point. After a break through cut has been made and the end of the blade support extends through the material at least 1-1/2 inches, the saw may be tipped to a

normal cutting angle.

#### D. NOT FOR CUTTING SMALL RADII:

## E. ALWAYS KEEP A SHARP BLADE ON THE SAW:

- Cutting with a dull or badly worn blade can overload the saw and cause damage from overheating.
- 2. New blades can be purchased from **Jarvis**.

#### **MAINTENANCE INSTRUCTIONS**

Always disconnect the saw from its power supply before performing any maintenance.

Item numbers: refer to the parts diagram on page 4.

#### A. LUBRICATION:

1. The gear case should be kept 1/3 full of grease. To check the grease level, remove the bottom plate (item 43) and its gasket (item 42). It should be checked every thirty days for saws that are used moderately and every two weeks for saws that are used daily. If replacement grease is required it should be obtained from **Jarvis**.

#### B. BLADE SUPPORT INSTALLATION:

- 1. Tap (3) inserts (item 33) gently into the bores on blade support cover (item 23).
- 2. Align the blade support cover (item 23) onto saw housing (item 55), making sure the inserts stay in place.
- 3. Assemble (3) studs (item 32) with cap nuts (item 24) and place them through the saw housing and the blade support cover.
- 4. Draw down all (3) cap nuts (item 24) evenly until the inserts are bottomed out into the saw housing.
- 5. Remove the cap nuts (item 24) and the blade support cover (item 23). (The inserts should now be properly set into the saw housing).
- 6. Assemble blade support (item 60 or 62) over the inserts on the saw housing. Place the blade support cover (item 23) on the saw housing and fasten it with the studs (item 32), the cap nuts (item 24) and the oval head screws (item 25).



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7. Install handle stud (item 59) using two larger oval head screws (item 58).

#### C. BLADE REMOVAL:

NOTE: Your **Jarvis** Wellsaw is equipped with a hex key (item 22) for removing the blade. This wrench is located in the housing directly behind the blade support knob (item 57).

- 1. Insert the hex key through the hole in the outer end of blade (item 61 or 63) and pull the blade to the outer end of stroke.
- 2. Loosen the blade holding set screw (item 21) about 1/2 turn.
- 3. Reinsert the hex key in the hole at the outer end of the blade and pull the blade out.

#### D. BLADE INSTALLATION:

- 1. Insert hex key (item 22) into set screw (item 21).
- 2. Thread the set screw (item 21) into the hole in the end of push rod (item 19). Do not tighten.
- 3. STANDARD BLADE SUPPORT (End Cutting):
  - a. Align blade (item 61) with blade support (item 60). The blade should extend approximately three inches from the end of the blade support.
  - b. <u>Slide</u> the blade onto the blade support until the crimp in the blade is touching the end of the blade support.
  - c. Use a rubber hammer and tap the end of the blade towards the body of the saw until the crimp in the blade slides into the slot in the blade support.

#### HEAVY DUTY BLADE SUPPORT (Heavy Duty):

- a. Place the grooved end of blade (item 63) into the guide in the blade support (item 62).
- b. <u>Slide</u> the blade over the blade support towards the body of the saw. *Make sure that the tabs on the blade extend over each side of the blade support.*
- 4. Slide the blade into the push rod as far as it will go.
- 5. Tighten the set screw with the hex key.

#### E. GENERAL DISASSEMBLY:

- 1. Remove blade (item 61 or 63) and blade support (item 60 or 62).
- 2. Remove handle cover (item 27).
- 3. Remove switch (item 28). Remove the two wires from the stator (item 9) and the two wires from the cord (item 51).
- 4. Remove brush cap (item 1) and brushes (item 2).
- 5. Remove deflectors (item 4).
- 6. Slide off top cap (item 5) stator (item 9) will be attached.
- 7. Remove armature (item 12). Hold the armature in one hand and tap housing (item 55) with a rubber hammer with the other hand to loosen the armature. (Pinion gear item 13 on the armature has a left hand thread).
- 8. Remove bottom plate (item 43) and gasket (item 42).
- 9. Insert a small block of wood between the connecting rod (item 45) and the housing (item 55) to stop the rotation of the connecting rod. Remove lock nuts (item 11). Remove the connecting rod and bearings (item 45) and spacer (item 46).
- 10. Using a 5/16 inch hex key, loosen gear shaft (item 40) *left hand thread*. Be sure not to spin gear stud nut (item 56). Remove items 36-40, 47 and 48.
- 11. Remove the push rod and stud (item 19) through the center of the housing.
- 12. Clean the gear housing cavity to remove any contaminated lubricant.
- 13. Remove and replace any faulty parts and reassemble by reversing these steps.

#### NOTE (when reassembling):

- a. Step 10: Use *Loctite 271* on gear stud nut (item 56) before fastening gear shaft (item 40).
- b. Step 7: Reassemble armature (item 12) in housing (item 55) by using a center punch to tap the armature until its bearing is fully seated.



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