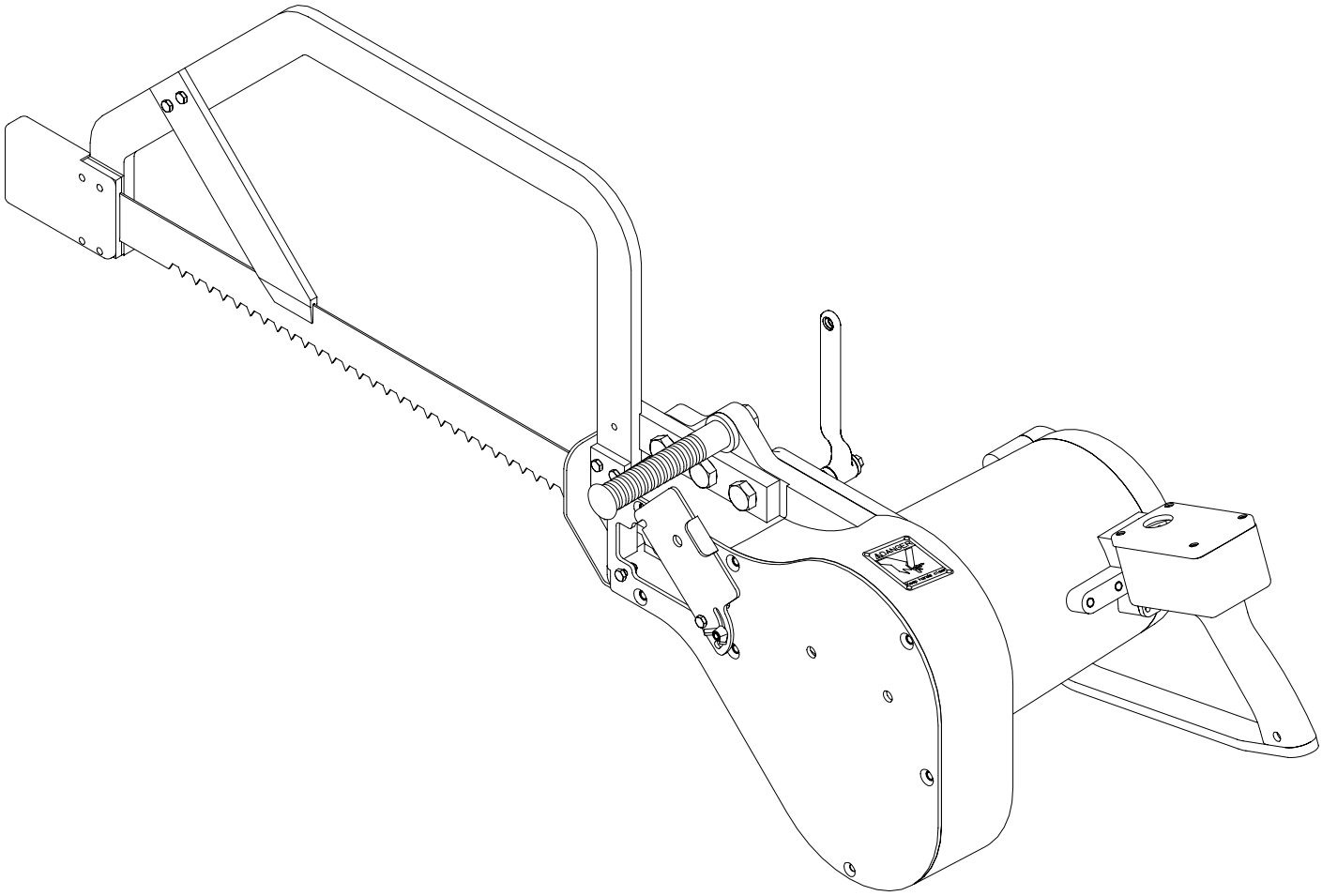
Model ERS-1
Electric Reciprocating Saw



EQUIPMENT SELECTION . . . . . Ordering No.

Models ERS-1

- 42 V, 3 phase, 50 Hz 4005106
- 380/220 V, 3 phase, 60 Hz . . . 4005108
- 400/230 V, 3 phase, 50 Hz . . . 4005107
- 460/230 V, 3 phase, 60 Hz . . . 4005109

Blades

- Coarse (32 Teeth) 1023573
- Fine (64 Teeth) 1023574

Balancer (for all models) . . . 4042051

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NOTICE TO EMPLOYER AND SAFETY DIRECTOR

AVOID INJURY

1. **Remove** and **repair** any tool that malfunctions. **All** personnel must be instructed to remove any malfunctioning equipment.
2. **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 procedures outlined in this brochure.
3. **Enclosed** are four (4) copies of **"NOTICE TO OPERATORS, MAINTENANCE AND CLEANUP PERSONNEL."** Post one copy on the employees' bulletin board; give one copy to the 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. This fact should be obvious to your employees, but you must emphasize it to them.
5. **Never** make modifications or alterations to the tool. *Replace any missing or illegible labels.*
6. **Ensure** that proper procedures are established in accordance with OSHA's lockout/tagout procedures (29 CFR 1910.147) to prevent accidental startup or release of stored energy.
7. **Ensure** that employees wear eye protection in accordance with OSHA's eye and face protection requirements (29 CFR 1910.133) at all times.
8. **Hand/Wrist/Arm** injury and other Cumulative Trauma Disorders may result from repetitive work, motion or vibration. You must make your employee's aware of hazards, symptoms of injury and appropriate prevention. See OSHA's "Ergonomic Program Management Guidelines for Meatpacking Plants."
9. **Follow** our installation and maintenance instructions for proper installation and care of the tool.
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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NOTICE 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 procedure (29 CFR 1910.147) before making any blade changes.
2. **Disconnect** the power supply in accordance with OSHA's lockout/tagout procedure (29 CFR 1910.147) before performing any repair or maintenance.
3. **Disconnect** the power supply – or have the power shut off – in accordance with OSHA's lockout/tagout procedure (29 CFR 1910.147) before performing any cleanup.
4. **Disconnect** the power supply when the tool is not in use.
5. **Never** put fingers, hands or other parts of the body on the blade or within the cutting path of the tool when it is connected to the power supply.
6. **Always** wear eye protection in accordance with OSHA's eye and face protection requirements (29 CFR 1910.133).
7. **Always** wear cut protective gloves when handling the blade.
8. **Test** the tool prior to use or daily. **Depress** the trigger and the tool should start. **Release** the trigger and the tool should stop. *If the tool malfunctions, remove it from service and report or repair it immediately.*
9. **Never** depress the trigger unless you want to use or test the tool.
10. **Never** make modifications or alterations to the tool. *Report or replace any missing or illegible labels.*
11. **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.

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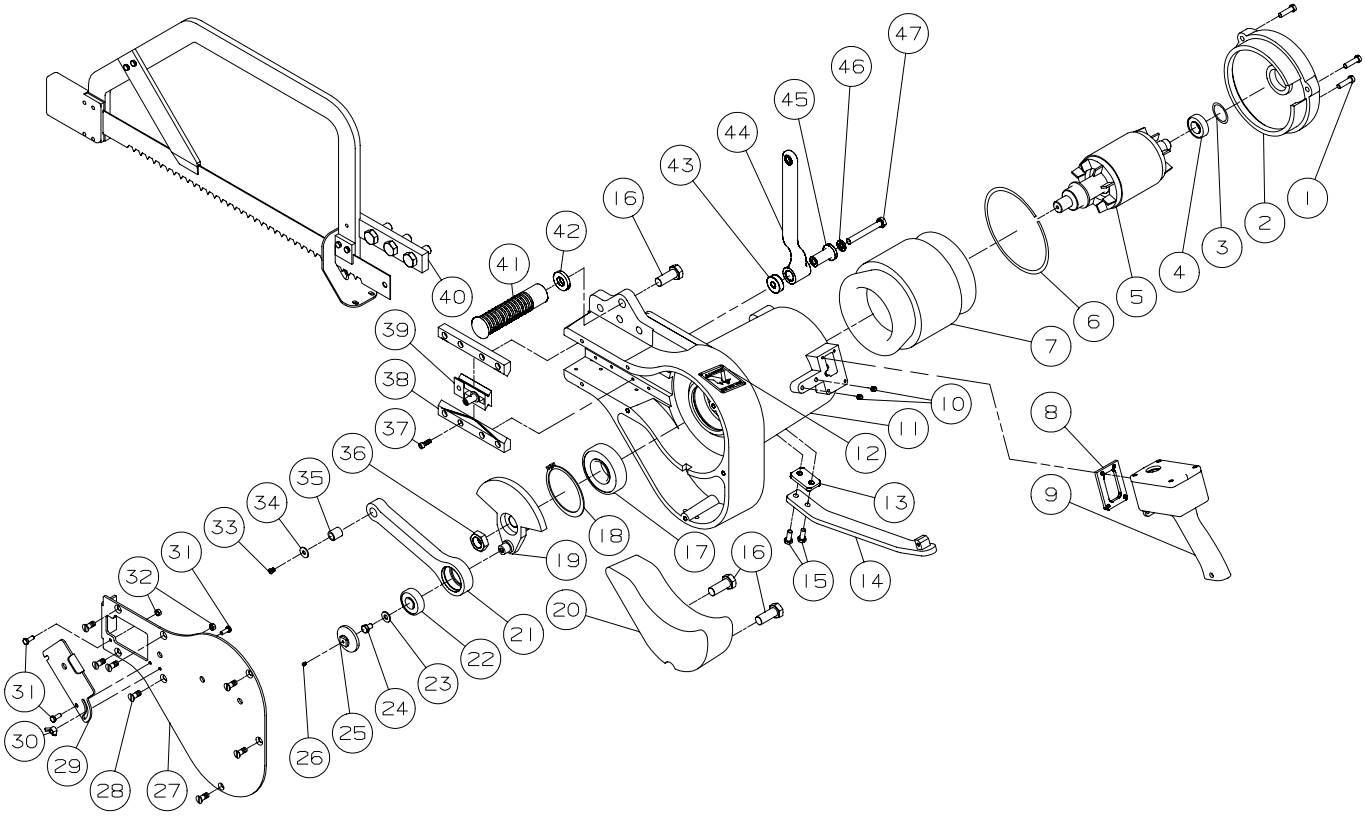
Figure A

Motor and Crank Housing Assembly



ITEM	PART NO.	PART NAME	QTY
1	1055610	Cheese Head Screw	3
2	1002523	End Cap	1
3	1014109	Wave Spring	1
4	1021464	Ball Bearing	1
5	1064054	Rotor	1
6	1014195	Wave Spring	1
7	1072003	Stator, 42 V	1
	1072005	Stator, 380/220 V, 60Hz	1
	1072006	Stator, 400/230 V, 50 Hz	1
	1072008	Stator, 460/230 V, 60 Hz	1
8	1032693	Insulating Plate	1
9	page 5	Rear Handle	1
10	1073039	Socket Set Screw, Cup Pt.	2
11	1016659	Motor and Crank Housing	1
12	1017081	Danger Label	1
13	1032692	Insulating Plate	1
14	1042557	Bracket	1
15	1055802	Hex Head Screw	2
16	1055203	Hex Head Screw	3
17	1021476	Ball Bearing	1
18	1013298	Internal Retaining Ring	1
19	1043025	Crank	1
20	1071064	Weight	1
21	1028137	Connecting Rod	1
22	1021475	Ball Bearing	1

ITEM	PART NO.	PART NAME	QTY
23	1004427	Washer	1
24	1055047	Hex Head Screw	1
25	1002522	Threaded Cap	1
26	1038022	Grease Fitting	1
27	1002521	Crankcase Cover	1
28	1073038	Flat Head Slotted Screw	7
29	1032648	Door	1
30	1007391	Wing Nut	1
31	1055604	Hex Head Screw	3
32	1007274	Hex Nut	2
33	1038011	Grease Fitting	1
34	1004419	Washer	1
35	1036331	Bushing	1
36	1007411	Hex Jam Nut	1
37	1055316	Cheese Head Screw	8
38	1058189	Guide	2
39	1065079	Ram	1
40	page 5	Guard and Guide Frame	1
41	1019245	Front Handle	1
42	1004455	Insulating Washer	1
43	1029444	Spacer	1
44	1042586	Hanger	1
45	1036342	Hanger Bushing	1
46	1004337	Washer	1
47	1055994	Hex Head Screw	1

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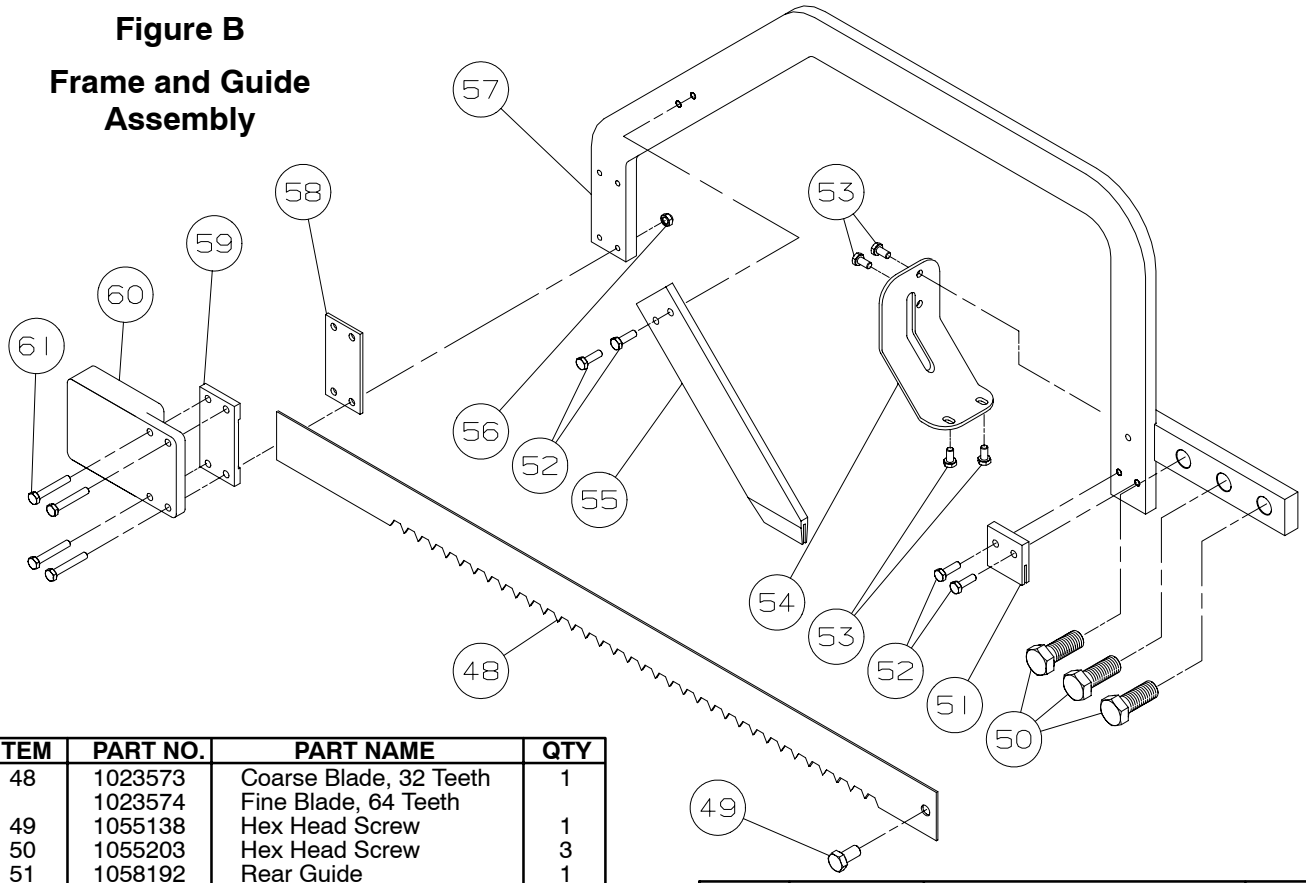
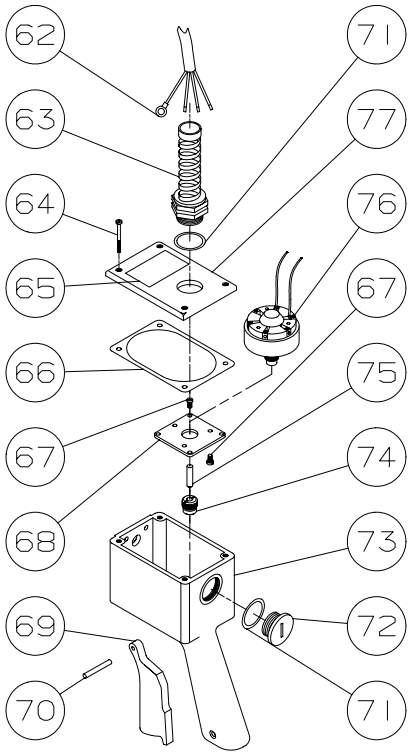
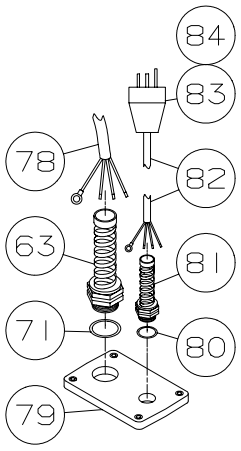
Figure B

Frame and Guide Assembly



ITEM	PART NO.	PART NAME	QTY
48	1023573	Coarse Blade, 32 Teeth	1
	1023574	Fine Blade, 64 Teeth	
49	1055138	Hex Head Screw	1
50	1055203	Hex Head Screw	3
51	1058192	Rear Guide	1
52	1055613	Hex Head Screw	4





42V Only

Figure C

Handle Assemblies

ITEM	PART NO.	PART NAME	QTY
53	1055945	Hex Head Screw	4
54	1024280	Guard	1
55	1058191	Center Guide	1
56	1007302	Hex Lock Nut	4
57	1046079	Frame	1
58	1032647	Side Wear Plate	1
59	1058190	Front Guide	1
60	1024279	Guard	1
61	1055752	Hex Head Screw	4
62	1001157	Electric Cord	1
63	1011328	Cord Connector	1
64	1055108	Cheese Head Screw	4
65	1017085	Danger Label, Shock	1
66	1035614	Gasket	1
67	1055915	Cheese Head Screw	7
68	1032529	Switch Mounting Plate	1
69	1018153	Trigger Lever	1
70	1010456	Dowel Pin	1
71	1004394	Sealing Washer	2
72	1061954	Hole Plug	1
73	1019220	Rear Handle	1
74	1036184	Trigger Bushing	1
75	1010457	Dowel Pin	1
76	1005143	Push Button Switch	1
77	1002465	Cover	1
		PARTS FOR 42V ONLY:	
78	1001111	Power Cord to Transformer	20 ft
79	1002605	Cover	1
80	1004407	Sealing Washer	1
81	1011279	Cord Connector	1
82	1001045	Signal Cord to Control Box	20 ft
83	1063209	Electric Plug	1
84	1063623	Rubber Grommet for item 83	1

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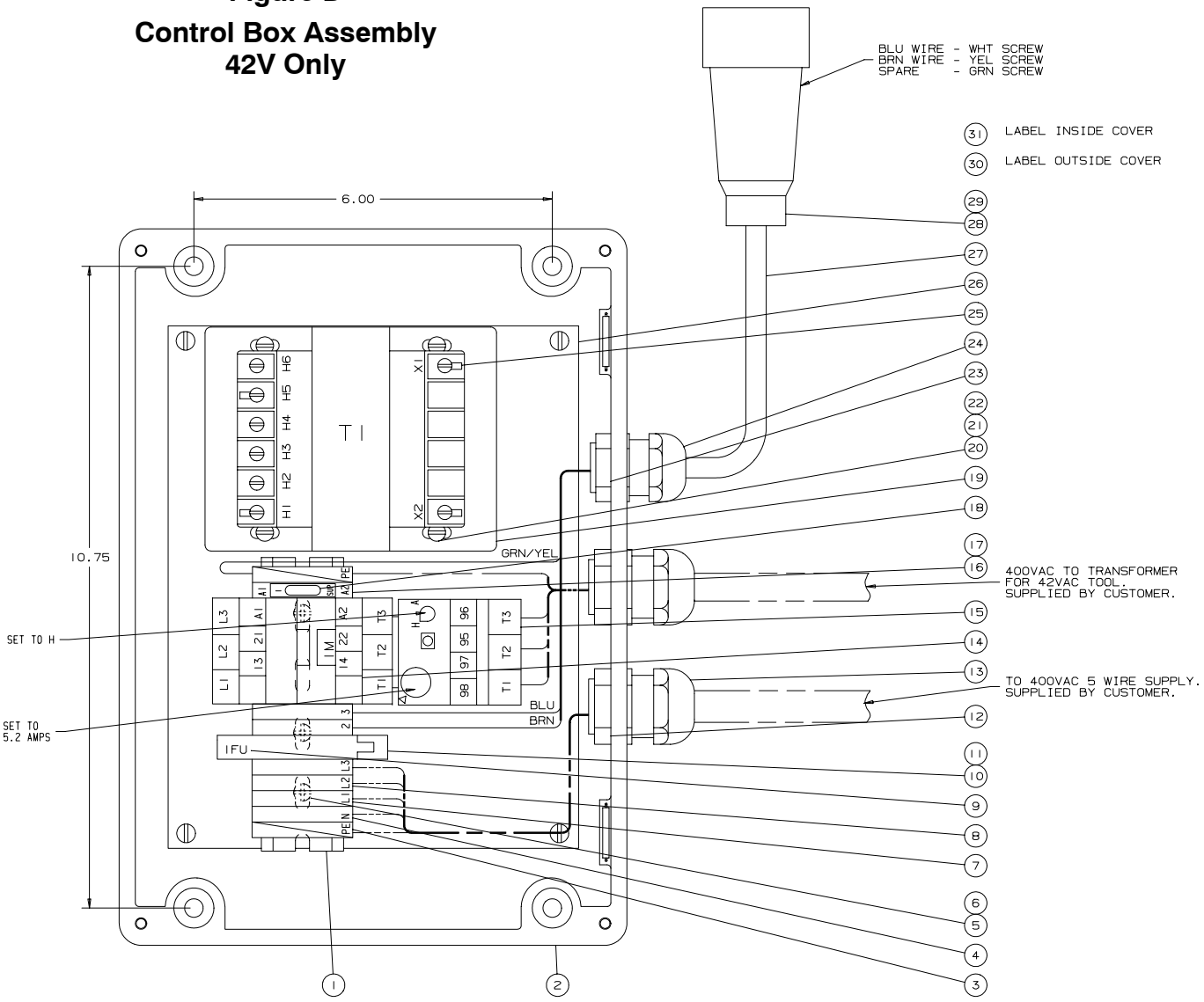
Figure D

Control Box Assembly
42V Only



ITEM	PART NO.	PART NAME	QTY
1	1063554	Terminal Rail	1
2	1016796	Electrical Enclosure	1
3	1063496	Green/Yellow Terminal Block	2
4	1063495	Blue Terminal Block	1
5	1055803	Pan Head Screw	3
6	1004247	External Tooth Lock Washer	3
7	1063494	Grey Terminal Block	5
8	1063363	Terminal Marker	12
9	1063825	Terminal Marker	1
10	1063390	Fuse Terminal Block	1
11	1063762	Fuse, 3.15 amp	1
12	1007256	Locking Nut	2
13	1011249	Cord Connector	2
14	1072284	Contactor	1
15	1072117	Overload Relay	1
16	1063822	Terminal Block Base	1

ITEM	PART NO.	PART NAME	QTY
17	1063823	Terminal Block Plug	1
18	1063815	Transient Suppressor	1
19	1072283	Transformer	1
20	1055974	Pan Head Screw	4
21	1004230	Lock Washer	4
22	1004361	Washer	4
23	1007249	Locking Nut	1
24	1011248	Cord Connector	1
25	1063502	Wire Terminal Fork	4
26	1032807	Mounting Plate	1
27	1001045	Cord	3 ft
28	1063208	Outlet	1
29	1063623	Black Grommet	1
30	1017085	Danger Label	1
31	1017459	Connection Diagram	1
	3063454	Control Box Assembly	

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SPECIFICATIONS

Model ERS-1

Motor Power	3 hp	2237 W
Operating Voltage	460/380/230/220 V, 3 ph, 60 Hz 400/230/42 V, 3 ph, 50 Hz	
Capacity	50 per hour	
Control Handle	Single Trigger / Dual Handle	
Blade Length between guides	23 in	584 mm
Blade Length	31.5 in	800 mm
Overall Length	54 in	1372 mm
Weight	135.5 lb	61.5 kg

INSTALLATION INSTRUCTIONS

Refer to Figures A, B and C on pages 4 and 5 for referenced items.

IMPORTANT: ALWAYS DISCONNECT THE ELECTRIC POWER SUPPLY IN ACCORDANCE WITH OSHA'S LOCKOUT/TAGOUT PROCEDURES (29 CFR 1910.147) BEFORE PERFORMING ANY MAINTENANCE OR REPAIRS.

ALL WIRING MUST BE DONE IN ACCORDANCE WITH NATIONAL, STATE AND LOCAL ELECTRICAL CODES.

1 Install the Model ERS-1 saw above the work station from a balancer. **Jarvis** part number 4042051 is available.

1.1 The ERS-1 should have sufficient travel to allow the operator to reach the entire work area.

2 Position power cord for either top exit or rear exit as desired.

2.1 Unplug the tool.

2.2 Remove (4) cheese head screws (item 64), cover (item 77 or 79) and gasket (item 66).

2.3 Disconnect power cord (item 62 or 78) from switch (item 76).

2.4 Remove cord connector (item 63) and hole plug (item 72).

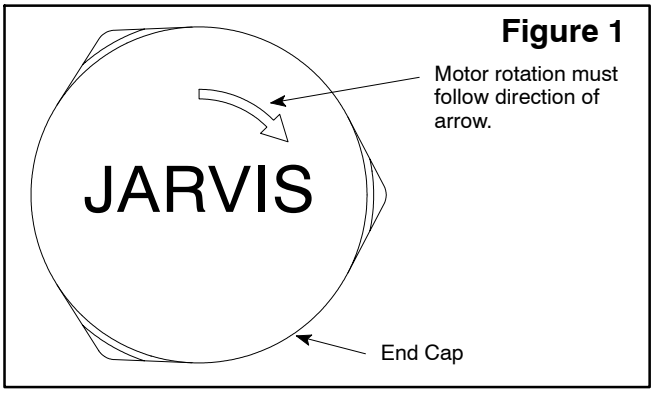
2.5 Swap positions of cord connector and plug.

2.6 Reconnect power cord (item 62 or 78) to switch (item 76).

2.7 Check motor rotation. Motor rotation must follow direction of arrow shown in *Figure 1.*

Crank (item 19) will unscrew if motor direction is wrong.

Figure 1



2.8 Reinstall gasket (item 66), cover (item 77 or 79) and four (4) cheese head screws (items 64).

3 Connect the tool to the appropriately fused electric outlet.

OPERATION INSTRUCTIONS

1 Turn on the power.

2 **Test** the tool prior to use or daily. **Depress** the trigger and the tool should start. **Release** the trigger and the tool should stop. *If the tool malfunctions, remove it from service and report the problem to your supervisor immediately.* **Always use both hands when starting and operating the tool. Continue holding the tool firmly with both hands until the saw blade comes to a complete stop.**

3 Make sure that the ERS-1 moves freely on its balancer.

4 Making the cut.

4.1 Mark the center of the backbone of the carcass with a knife. (This step is only necessary during the operators' learning period).

4.2 Depress the trigger to start the ERS-1. **Always use both hands when starting and operating the tool. Continue holding the tool firmly with both hands until the saw blade comes to a complete stop.**

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4.3 Saw through the tail bone (use the knife mark as a guide).

4.3.1 The front end of the ERS-1 should be pointing upward while sawing through the tail bone.

4.4 When the tail bone hits the housing of the ERS-1, saw until the tail bone breaks apart and the ERS-1 is allowed to continue its path down the back bone of the carcass.

4.4.1 The motor end of the ERS-1 can be lower than the front end or in a horizontal position while sawing through the back bone.

4.5 After the tail and aitch bones have been split, saw through the loin area.

4.5.1 The ERS-1 should be in a horizontal position during this cut.

4.6 Saw through the shoulder and neck of the carcass.

4.6.1 The front end of the ERS-1 should be pointing downward while sawing through the shoulder and neck.

MAINTENANCE INSTRUCTIONS

Refer to Figures A, B and C on pages 4 and 5 for referenced items.

IMPORTANT: ALWAYS DISCONNECT THE ELECTRIC POWER SUPPLY IN ACCORDANCE WITH OSHA'S LOCKOUT/TAGOUT PROCEDURES (29 CFR 1910.147) BEFORE INSTALLING OR REMOVING A BLADE. ALWAYS DISCONNECT THE ELECTRIC POWER SUPPLY IN ACCORDANCE WITH OSHA'S LOCKOUT/TAGOUT PROCEDURES (29 CFR 1910.147) BEFORE PERFORMING ANY MAINTENANCE OR REPAIRS.

1 PRIOR TO USE OR DAILY:

1.1 Make sure the control trigger is working correctly. **Depress** the trigger and the tool should start. **Release** the trigger and the tool should stop. *If the tool malfunctions, repair or remove it from service immediately.*

The electric power supply must be connected to perform the above operation only. Always use two hands when starting and stopping the tool. Continue holding the tool firmly with both hands until the saw blade comes to a complete stop.

1.2 Apply **Jarvis** *1315 White Grease* to grease fittings (items 26 and 33). The fittings can be reached by inserting a grease gun through two of the three access holes in crankcase cover (item 27) when the blade is in either the extreme forward or back position.

1.3 Check all electrical plugs and cords (over their entire lengths) for cuts and abrasions. Replace if necessary.

2 MONTHLY:

2.1 Inspect for wear on blade guides (items 38, 51, 55 and 59), ram (item 39) and side wear plate (item 58). Replace if necessary.

2.2 Tighten all fasteners.

3 BLADE REMOVAL:

Wear cut protective gloves when changing blade.

3.1 Loosen wing nut (item 30) and raise door (item 29) to remove hex head screw (item 49).

3.2 Slide blade out through front guide (item 59).

3.3 Inspect for wear. Sharpen or replace as necessary.

4 BLADE INSTALLATION:

4.1 Reverse steps and procedures outlined in section 3.

5 CRANK DISASSEMBLY:

5.1 Remove (7) flat head screws (item 28) and crankcase cover (item 27).

5.2 Remove blade (item 48). *Refer to steps and procedures outlined in section 3.*

5.3 Wedge a hard wood block between crank (item 19) and motor and crank housing (item 11) to prevent crank from rotating.

5.4 Remove threaded cap (item 25), hex head screw item (24), washer (item 23) and connecting rod assembly (items 21, 22 and 33-35).

5.5 Remove (3) cheese head screws (item 1) and end cap (item 2) to access hex socket in end of rotor (item 5).

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5.6 Remove hex jam nut (item 36) and un-thread crank (item 19) from rotor (item 5) while holding rotor from turning with a 12 mm hex wrench.

Note: Hex jam nut (item 36) is secured by a thread locking compound. Heat maybe required for removal.

5.7 Inspect all parts for wear and replace if necessary.

6 CRANK ASSEMBLY:

6.1 Reverse steps and procedures outlined in section 5.

6.1.1 After completing assembly, make sure connecting rod (item 21) and ram (item 39) move freely without any obstructions.

6.1.2 If removed or replaced, bushing (item 35) and ball bearing (item 22) must be carefully pressed into connecting rod (item 21).

6.1.3 If removed or replaced, grease fitting (item 26) must be carefully pressed into threaded cap (item 25).

6.1.4 Apply either *Loctite 271* or *Loctite 262* thread locking compound to crank (item 19) and hex jam nut (item 36).

7 MOTOR DISASSEMBLY:

7.1 Disassemble crank as described in section 5.

7.2 Remove stator leads in rear handle as outlined in section 9, steps 9.1-9.2.

7.3 Remove (3) cheese head screws (item 1) and end cap (item 2). *Be careful to remove wave springs (item 3 and 6).*

7.4 Remove rotor (item 5).

7.5 Loosen (2) socket set screws (item 10) and remove stator (item 7) from motor and crank housing (item 11).

7.6 Remove internal retaining ring (item 18) and ball bearing (item 17).

8 MOTOR ASSEMBLY:

8.1 Reverse steps and procedures outlined in section 7.

8.2 Remember to install wave springs (item 3 and 6).

8.3 Check direction of motor rotation. *Refer to Installation Instructions, Figure 1 on page 7.*

9 REAR HANDLE DISASSEMBLY:

9.1 Remove (4) cheese head screws (item 64), cover (item 77 or 79) and gasket (item 66).

9.2 Disconnect stator and power leads from push button switch (item 76).

9.3 Remove (4) cheese head screws (item 67) and push button switch (item 76).

9.4 Remove dowel pin (item 70) and trigger lever (item 69).

9.5 Remove trigger bushing (item 74) and dowel pin (item 75).

9.6 Inspect all parts for wear and replace if necessary.

10 REAR HANDLE ASSEMBLY:

10.1 Reverse steps and procedures outlined in section 9.

10.2 Check direction of motor rotation. *Refer to Installation Instructions, Figure 1 on page 7.*

11 FRAME AND GUIDE DISASSEMBLY:

11.1 Remove blade as outlined in section 3.

11.2 Remove (3) hex head screws (item 50) and (2) hex head screws (item (53) securing guard (item 54) to motor and crank housing (item 11).

11.3 Place frame and guide assembly on a bench.

11.4 Remove (2) hex head screws (item 52) and rear guide (item 51).

11.5 Remove (2) hex head screws (item 53) and center guide (item 55).

11.6 Remove (4) hex head screws (item 61), guard (item 60), front guide (item 59) and side wear plate (item 58).

11.7 Inspect all parts for wear and replace if necessary.

12 FRAME AND GUIDE ASSEMBLY:

12.1 Reverse steps and procedures outlined in section 11.

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