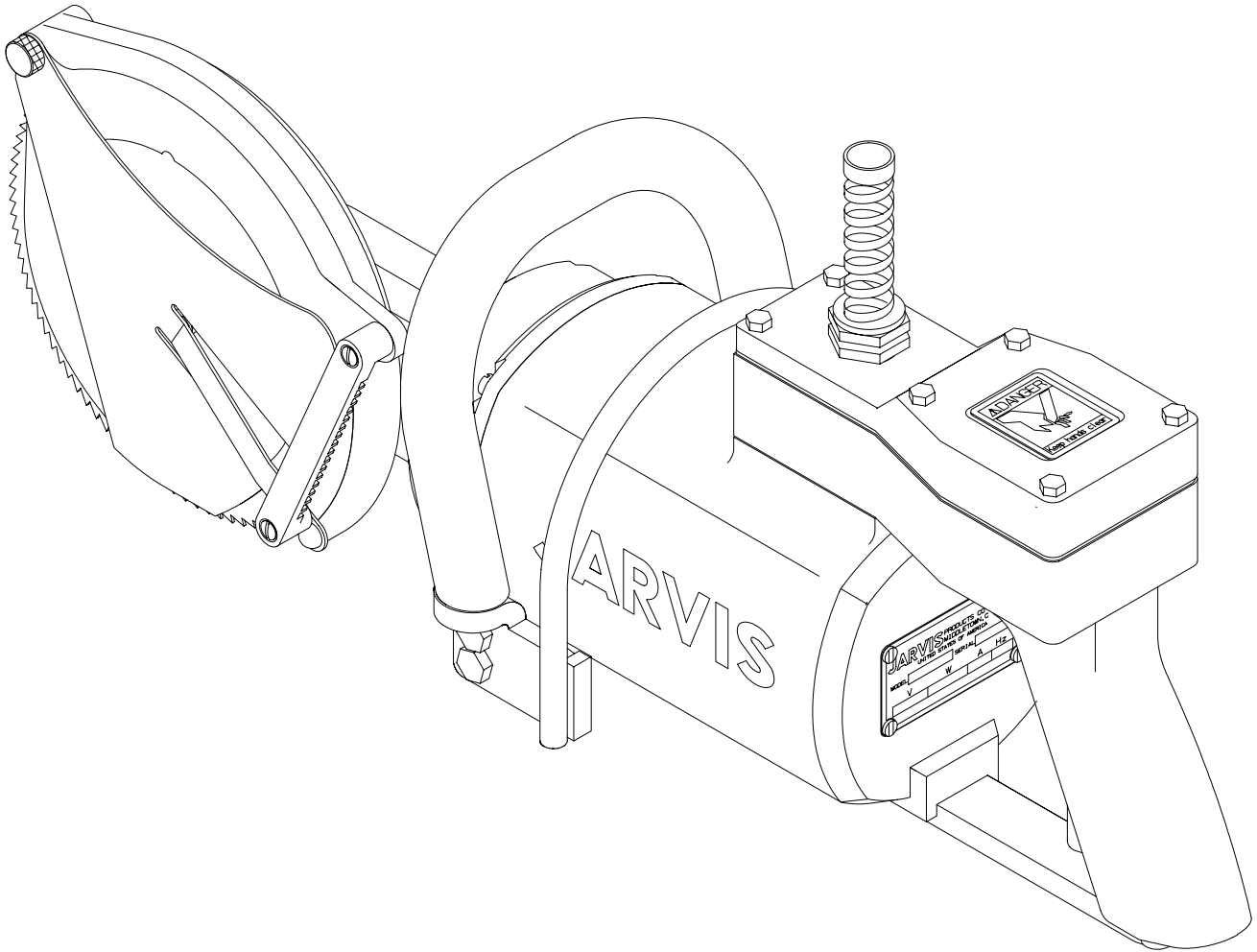


JARVIS

Model SEC 180-3 Circular Breaking Saw



EQUIPMENT SELECTION Ordering No.	TABLE OF CONTENTS Page
Models SEC 180-3 415V, 3 Phase, 50 HZ 4004227 380V, 3 Phase, 60 HZ 4004198 380V, 3 Phase, 50 HZ 4004196 230V, 3 Phase, 60 HZ 4004197 220V, 3 Phase, 50 HZ 4004203 other voltages available	<ul style="list-style-type: none"> • Notice to Employer and Safety Director 2 • Notice to Operators, Maintenance and Cleanup Personnel 3 • Parts Diagram and List 4 • Wiring Diagrams 6 • Special Tools 6 • Specifications 7 • Installation Instructions 7 • Operation Instructions 7 • Maintenance Instructions 8
Blade (180 mm) Standard, 98 Teeth 1023439 Skip tooth, 48 Teeth 1023440 Balancer 4042037	

JARVIS®

6204014:

PRODUCTS CORPORATION

33 ANDERSON ROAD, MIDDLETOWN, CONNECTICUT 06457-4926
 UNITED STATES OF AMERICA E-MAIL. jarvis.products.corp@snet.net
 TEL. 860-347-7271 FAX. 860-347-6978 WWW. jarvisproducts.com



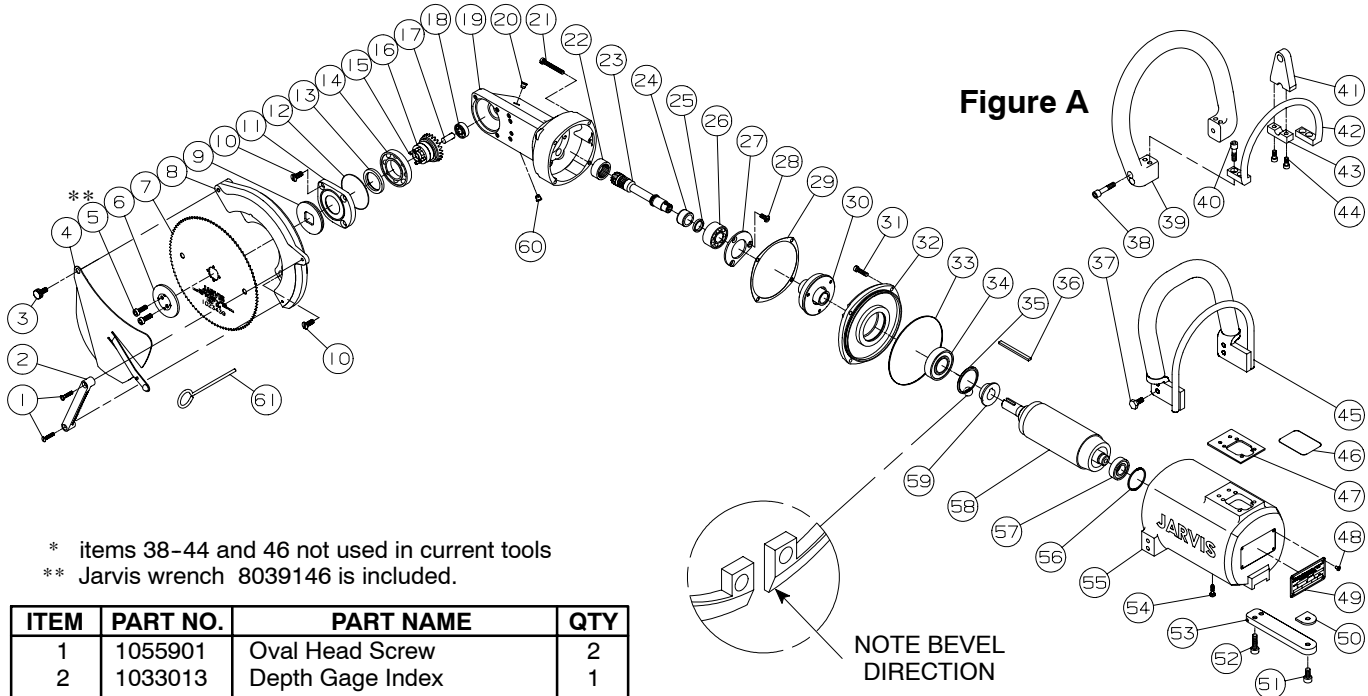
NOTICE TO EMPLOYER AND SAFETY DIRECTOR
AVOID INJURY

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. **Ensure** that all employees are instructed not to walk in front of the tool during its use.
4. **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.*
5. The tool is designed and intended to be powerful. This fact should be obvious to your employees, but you must emphasize it to them.
6. **Ensure** that eye protection is worn in accordance with OSHA’s eye and face protection requirements (29 CFR 1910.133) when operating the tool.
7. **Never** make modifications or alterations to the tool. *Replace any missing or illegible labels.*
8. **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.
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.*



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 procedures (29 CFR 1910.147) before making any blade changes.
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 being used.
5. **Always** wear eye protection in accordance with OSHA's eye and face protection requirements (29 CFR 1910.133) when operating the tool.
6. **Never** put fingers, hands or other parts of the body on the cutting edge or within the cutting path of the tool.
7. **Never** allow people to walk in front of the tool during its use.
8. **Never** allow people to hold / restrain the carcass while operating the tool.
9. **Test** the tool prior to use or daily. **Depress** the trigger and the tool should start. **Release** the trigger and the tool should stop within 2.5 seconds. *If the tool malfunctions, remove it from service and report or repair it immediately.*
10. **Never** depress the trigger unless you want to use or test the tool.
11. **Never** make modifications or alterations to the tool. *Report or replace any missing or illegible labels.*
12. **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.

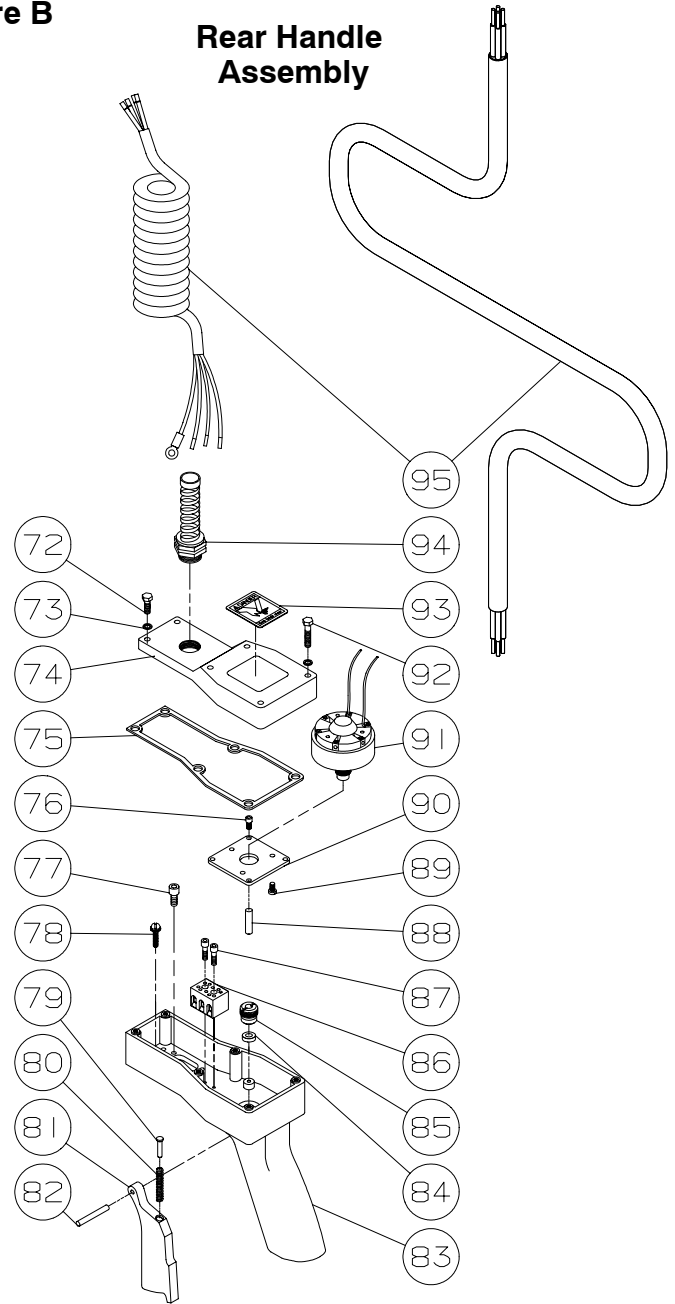
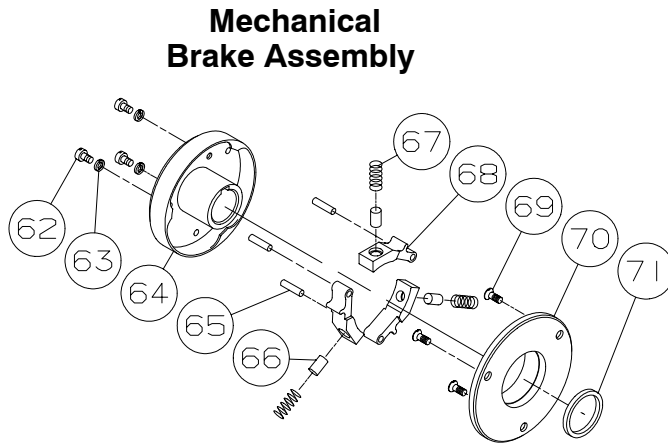


* items 38-44 and 46 not used in current tools
 ** Jarvis wrench 8039146 is included.

ITEM	PART NO.	PART NAME	QTY
1	1055901	Oval Head Screw	2
2	1033013	Depth Gage Index	1
3	1054172	Thumb Screw	1
4	3025020	Depth Gage	1
5	1055964**	Socket Head Cap Screw	2
6	1004317	Blade Retaining Washer	1
7	1023439	Standard Blade, 98 teeth	1
	1023440	Skip Tooth Blade, 48 teeth	
8	1024169	Blade Guard	1
9	1004258	Slinger	1
10	1055835	Flat Head Slotted Screw	5
11	1002327	Gear Housing Cover	1
12	1035416	O-ring	1
13	1035460	Shaft Seal	1
14	1021359	Ball Bearing	1
15	1010452	Dowel Pin	4
16	1026197	Crown Gear	1
		(includes items 15 and 17)	
17	1020355	Bevel Gear Shaft	1
18	1021351	Ball Bearing	1
19	3016431	Right Angle Gear Housing	1
		(incls. items 20, 22 and 60)	
20	1038006	Grease Fitting	1
21	1055074	Cheese Head Screw	4
22	1021360	Needle Bearing	1
23	1026157	Pinion gear	1
24	1021361	Needle Bearing Race	1
25	1029310	Spacer	1
26	1021155	Ball Bearing	1
27	1004255	Bearing Retaining Washer	1
28	1055781	Oval Head Screw	3
29	1035468	Gear Housing Gasket	1
30	Page 5	Mechanical Brake Assy.	1
31	1055833	Cheese Head Screw	4
32	1002422	Motor Front Cover	1
33	1035371	O-ring	1
34	1021513	Ball Bearing	1
35	1013309	Internal Retaining Ring	1
36	1030052	Square Key	1

ITEM	PART NO.	PART NAME	QTY
37	1055604	Hex Head Screw	4
38	1055830*	Socket Head Cap Screw	3
39	1019165*	Front Handle	1
40	1055746*	Socket Head Cap Screw	2
41	1042389*	Hanger Bracket Half	1
42	1042295*	Hanger Bracket	1
43	1042390*	Hanger Bracket Half	1
44	1055612*	Socket Head Cap Screw	2
45	1019244	Front Handle	1
46	1035439*	O-ring	1
47	1035595	Top Handle Gasket	1
48	1055590	Pan Head Screw	4
49	1017188	Name and Info Label	1
50	1035596	Bottom Handle Gasket	1
51	1055020	Socket Head Cap Screw	1
52	1055894	Socket Head Cap Screw	2
53	1042412	Rear Handle Bracket	1
54	1055828	Oval Head Screw	1
55	3016367	Housing & Stator, 415V/50Hz	1
	3016366	Housing & Stator, 380V/60Hz	
	3016365	Housing & Stator, 380V/50Hz	
	3016364	Housing & Stator, 230V/60Hz	
	3016363	Housing & Stator, 220V/50Hz	
56	1035296	O-ring	1
57	1021306	Ball Bearing	1
58	1064046	Rotor	1
59	1011355	Shaft Coupling	1
60	1061811	Plug	1
61	8039099	Blade Locking Pin	1
	8039146**	Wrench (for item 5)	
	3016428	Housing and Gear Assy.	
		(includes items 5, 6, 9-20,	
		22-28 and 60)	
	3024036	Guard and Gage Assy (incls.	
		items 1-4 and 8)	

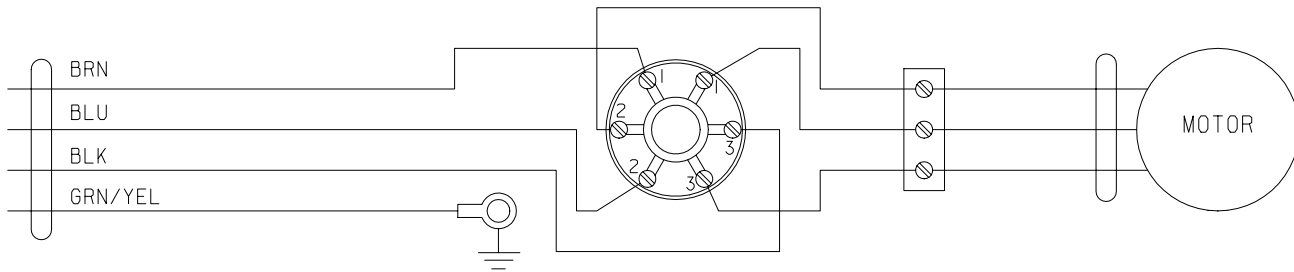
Figure B



ITEM	PART NO.	PART NAME	QTY
62	1055616	Cheese Head Screw	3
63	1004360	Split Lock Washer	3
64	1031031	Brake Hub	1
65	1010455	Dowel Pin	3
66	1010454	Dowel Pin	3
67	1014066	Compression Spring, 50Hz	3
	1014171	Compression Spring, 60Hz	3
68	1061800	Brake Shoe	3
69	1055918	Flat Head Screw	3
70	1061801	Brake Drum	1
71	1035486	Oil Seal	1
72	1055872	Hex Head Screw	2
73	1004361	Plain Washer	6
74	1002415	Handle Cover with Item 93	1
75	1035563	Handle Cover Gasket	1
76	1055960	Socket Head Cap Screw	4
77	1055617	Socket Head Cap Screw	6
78	1055150	Pan Hd Screw, Lock Washer	1
79	1039077	Spring Plunger	1
80	1014208	Spring	1
81	1018153	Trigger Lever	1
82	1010456	Dowel Pin	1
83	1019195	Rear Handle	1
84	1035395	U-cup Seal	1
85	1036260	Trigger Bushing	1
86	1063860	Terminal Block	1
87	1055744	Socket Head Cap Screw	2
88	1010457	Dowel Pin	1
89	1055915	Cheese Head Screw	3
90	1032529	Switch Mounting Plate	1
91	1005143	Push Button Switch	1
92	1055055	Hex Head Screw	4
93	1017083	Danger Label	1
94	1011260	Strain Relief Connector	1

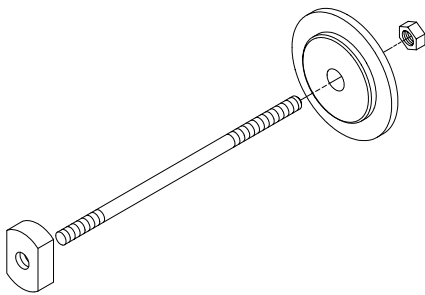
ITEM	PART NO.	PART NAME	QTY
95	1001095	Coiled Electric Cord (std)	1
	1001156	Straight Electric Cord (opt)	
	3061286	Brake Assembly, 50 Hz	
	3061287	Brake Assembly, 60 Hz	
		(includes items 62-71)	
	3019219	Rear Handle Assembly	
		(includes items 72-76, and 79-93)	

Wiring Diagram

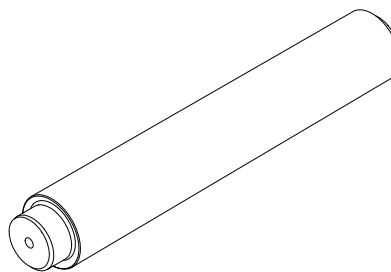


Special Tools

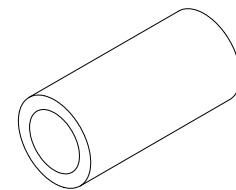
THE FOLLOWING TOOLS ARE RECOMMENDED FOR PROPER AND EFFECTIVE ASSEMBLY AND DISASSEMBLY OF THE JARVIS SEC 180-3 CIRCULAR BREAKING SAW.



BEARING EXTRACTION
TOOL 8039111



BEARING INSERTION
TOOL 8039170



ROTOR AND MOTOR COVER
ASSEMBLY TOOL 8039089

SPECIFICATIONS

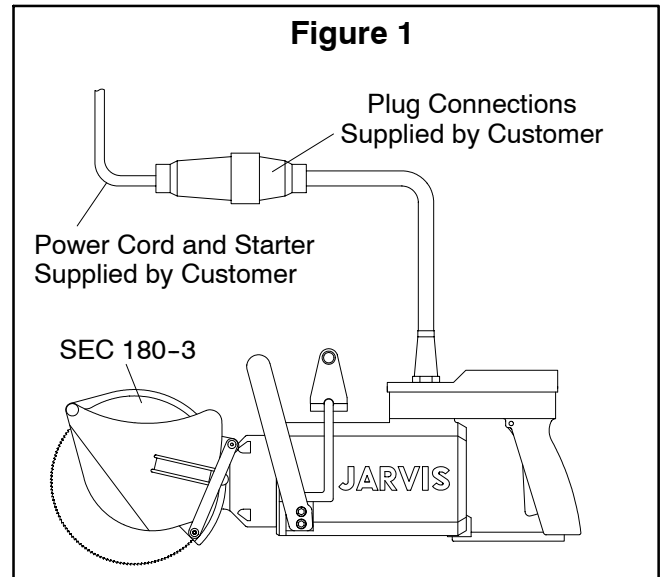
Motor Power	1.9 hp	1400 W
Operating Voltages	415, 380, 220V, 3 Phase, 50 Hz 380, 230V, 3 Phase, 60 Hz other voltages available	
Blade Speed	1375 rpm at 50 Hz 1650 rpm at 60 Hz	
Control Handle	Electric	
Brake	Mechanical	
Blade Diameter	7.1 in	180 mm
Cutting Depth (max.)	2.6 in	66 mm
Overall Length	24 in	610 mm
Weight	30 lbs	13.6 kg
Vibration	less than (<) 108 dB	< 0.25 m/sec ²
Noise (one meter from tool)	< 80 dB	

INSTALLATION INSTRUCTIONS

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

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

- 1 Install a balancer above the work station on a trolley. **Jarvis** part number 4042037 is available.
 - 1.1 The trolley should have sufficient travel to allow the operator to reach the entire work area.
- 2 Suspend the tool from the balancer.
 - 2.1 Adjust the balancer to the operator's preference.
- 3 Wire electrical cord (item 95) to appropriately rated power supply. *Refer to Wiring Diagram on page 6 as a guide. Note: plug connections and starter are supplied by customer.*
- 4 Plug the tool into power supply outlet. *Refer to Figure 1 as a guide.*



OPERATION INSTRUCTIONS

- 1 Plug in the tool.
- 2 *Each day*, before you begin operation, perform the following:
 - 2.1 Make sure that tool moves freely on its balancer.
 - 2.2 Make sure that the saw is working correctly. **Depress** the rear trigger lever and the tool should start. **Release** the trigger lever and the blade should stop within 2.5 seconds. *If the tool malfunctions, remove it from service and report the problem to your supervisor immediately.*
- 3 Make the cut:
 - 3.1 Position the saw.
 - 3.2 **Depress** the rear trigger lever and make the cut. **Always use two hands when starting and stopping the tool. Continue holding the tool with two hands until the saw blade comes to a complete stop.**
 - 3.3 When the desired length of cut is reached, release the trigger lever. This will stop the blade from rotating. **Continue holding the tool with two hands until the saw blade comes to a complete stop.**
 - 3.4 Withdraw the saw from the carcass.
- 4 Unplug the tool.

MAINTENANCE INSTRUCTIONS

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

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

1 PRIOR TO USE OR DAILY:

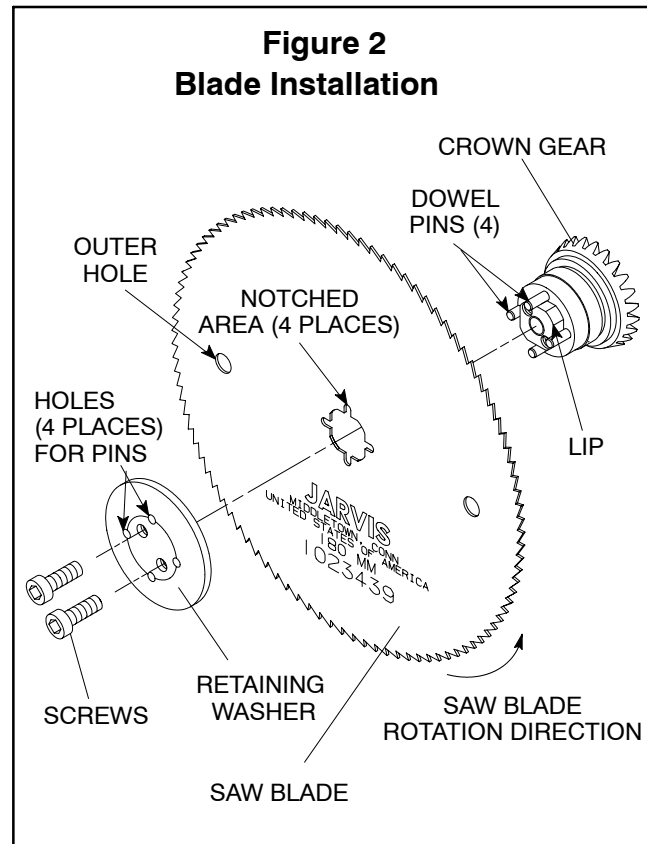
- 1.1 Add **Jarvis 1315 White Grease** to grease fitting (item 20) on the right angle gear housing (item 19).
- 1.2 Make sure that the saw is working correctly. **Depress** the rear trigger lever and the tool should start. **Release** the trigger lever and the tool should stop within 2.5 seconds. *If the tool malfunctions, repair or remove it from service immediately.*
- 1.3 Check all electrical plugs and cords (over their entire lengths) for cuts and abrasions and replace if necessary.

2 CIRCULAR BLADE REMOVAL:

- 2.1 Loosen thumb screw (item 3) and rotate depth gage (item 4) out of the way to access blade retaining screws and washer (items 5 and 6).
- 2.2 Remove blade retaining screws (item 5) using **Jarvis** wrench 8039146. *Prevent blade from turning by inserting blade locking pin (item 61) through one of the outer holes in blade.*
- 2.3 Remove blade retaining washer (item 6).
- 2.4 Remove circular blade (item 7).
- 2.5 Inspect all parts for wear and replace if necessary.
 - 2.5.1 Inspect blade for wear and sharpen or replace as necessary.

3 CIRCULAR BLADE INSTALLATION:

- 3.1 Reverse steps and procedures outlined in section 2. *See notes below. Refer to Figure 2 below as a guide.*
 - 3.1.1 To ensure proper fit and safe operation, the notches on the saw blade (item 7) must align with dowel pins (item 15) and the center hole of the blade must fit securely on the lip of the crown gear (item 16).
 - 3.1.2 The holes in retaining washer (item 6) must align with the dowel pins (item 15) on the crown gear (item 16).
 - 3.1.3 The teeth at the bottom of the blade should point toward the operator and rotate counter-clockwise. *See Figure 2 below for blade rotation direction.*
 - 3.1.4 Tighten blade retaining screws with **Jarvis** wrench 8039146. *Prevent blade from turning by inserting blade locking pin (item 61) through one of the outer holes in blade.*



4 RIGHT ANGLE GEAR HOUSING DISASSEMBLY:

- 4.1 Remove blade as described in section 2.
- 4.2 Remove (2) flat head screws (item 10) and remove guard and gage assembly from right angle gear housing (item 19).
- 4.3 Remove cheese head screws (item 21) and separate right angle gear housing assembly from motor assembly.
 - 4.3.1 Remove brake hub assembly (items 62-68) from pinion gear shaft if applicable. *Note: when separating gear housing assembly from motor housing, the brake hub assembly may slide off with motor housing assembly and already be removed from pinion gear shaft.*
- 4.4 Remove (3) flat head screws (item 10) and remove gear housing cover (item 11), o-ring (item 12) and shaft seal (item 13) from right angle gear housing (item 19).
- 4.5 Lightly tap gear housing in guard mounting area with a nylon mallet until crown gear and bearing assembly (items 14-18) slides out of gear housing.
 - 4.5.1 Never use a metal hammer on the gear housing or place it in a vise. The mounting faces are precisely machined and must not be damaged.
- 4.6 Place crown gear (item 16) in arbor press and remove bearing (item 14). Using a 7 mm pin, press bevel gear shaft and bearing (items 17 and 18) from crown gear (item 16).
- 4.7 Remove oval head screws (item 28) and bearing retaining washer (item 27).
- 4.8 Lightly tap end of right angle gear housing (item 19) with a nylon mallet until pinion gear assembly (items 23-26) slides out of gear housing.
- 4.9 Place pinion gear (item 23) in arbor press and remove bearing (item 26) and spacer (item 25). If necessary also remove needle bearing race (item 24).

4.10 Remove needle bearing (item 22) from right angle gear housing (item 19). Bearing extraction tool 8039111 is available. *See special tools on page 6.*

4.11 Inspect all parts for wear and replace if necessary.

5 RIGHT ANGLE GEAR HOUSING ASSEMBLY:

- 5.1 Reverse steps and procedures outlined in section 4. *See special note below.*
 - 5.1.1 Bearing insertion tool 8039170 is available for installing needle bearing (item 22). *See special tools on page 6.*
 - 5.1.2 **Always** press on the lip that carries the manufacturer's marking. This lip is hardened and will resist being damaged by the assembly tool. *Note: pressing on the opposite unmarked (and unhardened) lip will deform and damage the needle bearing.*

6 MOTOR DISASSEMBLY:

- 6.1 Remove blade as described in section 2.
- 6.2 Separate right angle gear housing from motor housing as described in section 4, steps 4.3 and 4.4.
 - 6.2.1 Remove brake hub assembly (items 62-68) from motor assembly if applicable. *Note: when separating right angle gear housing assembly from motor housing assembly, the brake hub assembly may slide off with right angle gear housing assembly and already be removed from motor housing.*
- 6.3 Remove cheese head screws (item 31) and remove motor front cover (item 32), o-ring (item 33), brake drum (item 70) and rotor assembly (items 34-36 and 57-59) together as a complete unit from motor housing (item 55).
- 6.4 Remove flat head screws (item 69) and brake drum (item 70) from motor front cover (item 32).
- 6.5 Place motor front cover and rotor assembly in arbor press and press rotor (item 58) and shaft coupling (item 59) from motor front cover (item 32).

- 6.6 Remove internal retaining ring (item 35).
- 6.7 Press ball bearing (item 34) from motor front cover (item 32).
- 6.8 Place rotor (item 58) in arbor press and press shaft coupling (item 59) and square key (item 36) from rotor.
- 6.9 Turn rotor around and press bearing (item 57) from rotor (item 58).
- 6.10 Inspect all parts for wear and replace if necessary.

7 MOTOR ASSEMBLY:

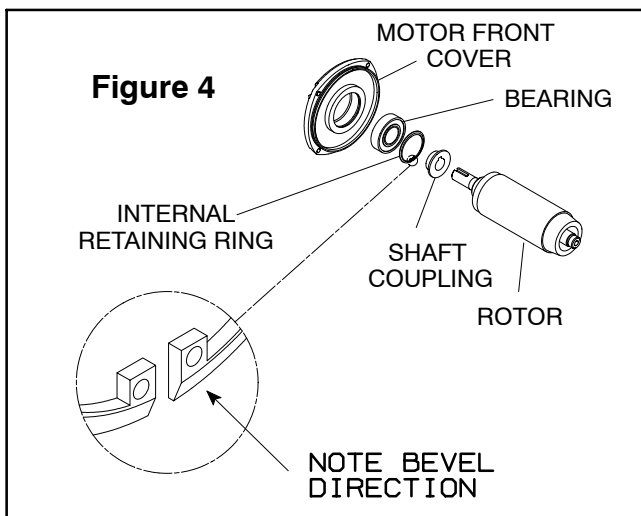
- 7.1 Reverse steps and procedures outline in section 6. *See special notes below.*
 - 7.1.1 Rotor and motor cover assembly tool 8039089 is available to assemble rotor and shaft coupling (items 58 and 59) into motor front cover and bearing (items 32 and 34). *See special tools on page 6.*
 - 7.1.2 Make sure the bevel end of internal retaining ring (item 35) is facing toward rotor and shaft coupling (items 58 and 59) when installing into motor front cover (item 32). *See Figure 4 below.*

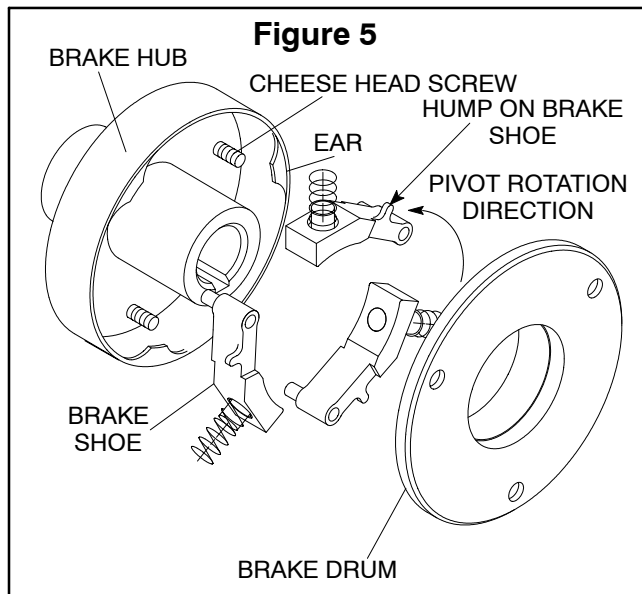
8 MECHANICAL BRAKE DISASSEMBLY:

- 8.1 Separate gear housing from motor housing as described in section 4, step 4.3.
- 8.2 Remove brake hub assembly (items 62-68).
- 8.3 Remove flat head screws (item 69) and brake drum (item 70) from motor front cover (item 32).
- 8.4 Loosen cheese head screws (item 62) in brake hub assembly until brake shoes (item 68) and compression springs (item 67) drop onto the brake hub (item 64) shoulder.
- 8.5 Lift compression springs (item 67) and brake shoes (item 68) as an assembly from dowel pins (item 65).
- 8.6 Remove compression springs (item 67) from brake shoes (item 68).
- 8.7 Remove shaft seal (item 71).
- 8.8 Inspect all parts for wear and replace if necessary.

9 MECHANICAL BRAKE ASSEMBLY:

- 9.1 Reverse steps and procedures outline in section 8. *See special notes below.*
 - 9.1.1 Make sure that the hump on the outer side of brake shoes (item 68) is captured behind the ear on the brake hub (item 64).
 - 9.1.2 Lift the brake shoe (item 68) off the brake hub (item 64) shoulder by compressing spring (item 67) until the cheese head screw (item 62) and lock washer (item 63) can be tightened against the brake hub (item 64). The cheese head screw acts as a stop and prevents the brake shoe and spring from falling out of the brake hub. *Refer to Figure 5 below as a guide.*





10 REAR HANDLE DISASSEMBLY:

- 10.1 Remove hex head screws (items 72 and 92) and washers (item 73).
- 10.2 Remove rear handle cover (item 74) and gasket (item 75).
- 10.3 Disconnect wiring from terminal block (item 86). *Make note of wiring connection locations for re-assembly.*

10.4 Disconnect input wiring from terminals on push button switch (item 91) and disconnect ground wire from pan head screw (item 78) on rear handle (item 83). *Make note of wiring connection locations for re-assembly.*

10.5 Remove socket head cap screws (item 76) and switch mounting plate (item 90).

10.6 Remove cheese head screws (item 89) and push button switch (item 91) from switch mounting plate (item 90).

10.7 Remove socket head cap screws (item 77) and rear handle (item 83).

10.8 Remove dowel pin (item 88), trigger bushing (item 85) and u-cup seal (item 84) from rear handle.

10.9 Press dowel pin (item 82) from handle and remove trigger lever (item 81, spring (item 80) and spring plunger (item 79).

10.10 Inspect all parts for wear and replace if necessary.

11 REAR HANDLE ASSEMBLY:

11.1 Reverse steps and procedures outlined in section 10. *Connect wiring to noted locations from steps 10.3 and 10.4.*

JARVIS

PRODUCTS CORPORATION

JARVIS®

6204014:

PRODUCTS CORPORATION

33 ANDERSON ROAD, MIDDLETOWN, CONNECTICUT 06457-4926
UNITED STATES OF AMERICA E-MAIL. jarvis.products.corp@snet.net
TEL. 860-347-7271 FAX. 860-347-6978 WWW. jarvisproducts.com