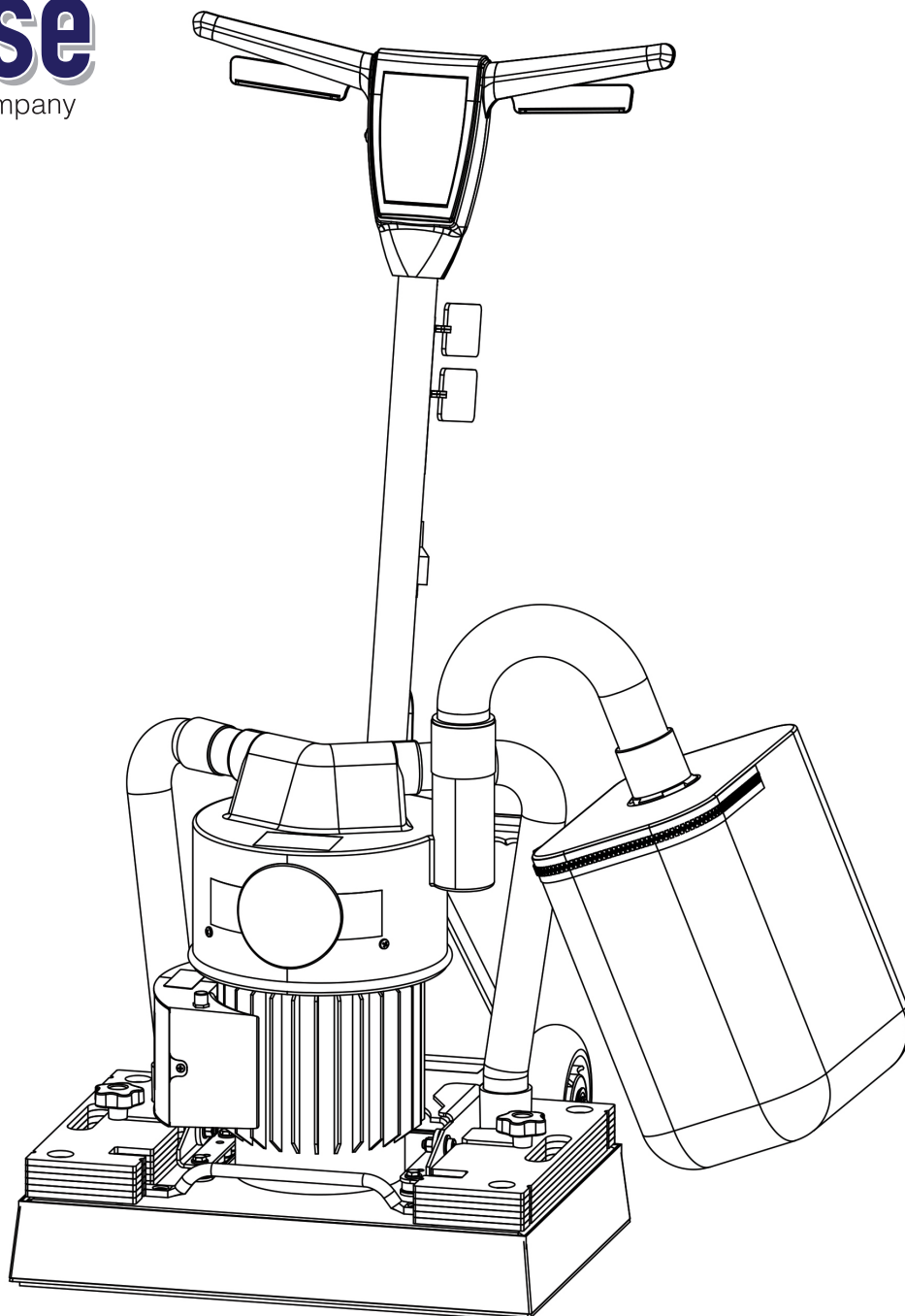




Orbital Floor Machine
255FPO1420
Operator's Manual

READ THIS BOOK

This book has important information for the use and safe operation of this machine. Failure to read this book prior to operating or attempting any service or maintenance procedure to your Amano Pioneer Eclipse machine could result in injury to you or to other personnel; damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it. If your operator(s) cannot read this manual, have it explained fully before attempting to operate this machine.

All directions given in this book are as seen from the operator's position at the rear of the machine.

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WARNING!

The Products sold with this Manual contain or may contain chemicals that are known to certain governments (such as the State of California, as identified in its Proposition 65 Regulatory Warning Law) to cause cancer, birth defects or other reproductive harm. In certain locations (including the State of California) purchasers of these Products that place them in service at an employment job site or a publicly accessible space are required by regulation to make certain notices, warnings or disclosures regarding the chemicals that are or may be contained in the Products at or about such work sites. It is the purchaser's responsibility to know the content of, and to comply with, any laws and regulations relating to the use of these Products in such environments. The Manufacturer disclaims any responsibility to advise purchasers of any specific requirements that may be applicable to the use of the Products in such environments.

This product is intended for commercial use only

Operator Safety Instructions

In this Operation Manual you will find three statements that you must read and observe to ensure safe operation of this machine.

DANGER means: Severe bodily injury or death can occur to you or other personnel if the **DANGER** statements found on this machine or in this Operation Manual are ignored or are not adhered to. Read and observe all **DANGER** statements found in this Operation Manual and on your machine.

WARNING means: Injury can occur to you or to other personnel if the **WARNING** statements found on your machine or in the Operation Manual are ignored or are not adhered to. Read and observe all **WARNING** statements found in this Operation Manual and on your machine.

CAUTION means: Damage can occur to the machine or to other property if the **CAUTION** statements found on your machine or in this Operation Manual are ignored or are not adhered to. Read and observe all **CAUTION** statements found in this Operation Manual and on your machine.



DANGER:

Failure to read the Owner's Manual prior to operating or servicing your Amano Pioneer Eclipse machine could result in injury to you or to other personnel; damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it. If you or your operator(s) cannot read English, have this manual explained fully before attempting to operate this machine.



DANGER:

A. Do not operate this machine around solvents, thinners, alcohol, fuels, floor finishes, wood dust or any other flammable materials. Cigarette lighters, pilot lights, electrical sparks and all other sources of ignition should be extinguished or avoided. Keep work area well ventilated.

B. Dust generated from sanding wood floors can spontaneously ignite or explode. Promptly dispose of any sanding dust in a metal container clear of any combustibles. Do not dispose in a fire.



DANGER:

A. Electrocution could occur if the machine is being serviced while the machine is connected to a power source. Disconnect the power supply before servicing.

B. Electrocution or fire could occur if the machine is being operated with a damaged power cord. Keep the power cord clear of the pad. Always lift the cord over the machine. Do not move the machine by the power cord.

C.Shock hazard. Do not use the machine if it has been rained on or sprayed with water.



DANGER:

To avoid injury keep hands, feet, and loose clothing away from all moving parts on the machine. Disconnect the power cord before replacing the pad, changing the abrasive, or when servicing. Do not operate the machine unless all guards are in place. Never leave the machine unattended while connected to a power source.



WARNING:

Injury can occur if protective clothing or equipment is not used while sanding. Always wear safety goggles, protective clothing, and dust mask while sanding.



WARNING:

This machine is not to be used on pressure treated wood. Some pressure treated woods contain arsenic and sanding pressure treated wood produces hazardous dust. Inhaling hazardous dust from pressure treated wood can cause serious injury or death. Sanding pressure treated wood decks or uneven surfaces can damage the sander which is not covered under warranty or damage waiver.



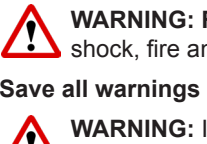
WARNING:

Any alterations or modifications of this machine could result in damage to the machine or injury to the operator or other bystanders. Alterations or modifications not authorized by the manufacturer voids any and all warranties and liabilities.



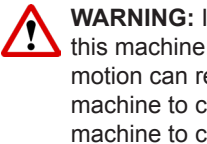
WARNING:

Risk of explosion. Floor sanding can result in an explosive mixture of fine dust and air. Use floor sanding machine only in a well-ventilated area free from any flame or match.



WARNING: Read all safety warnings and instructions. Failure to follow warnings and instructions may result in electric shock, fire and or serious injury.

Save all warnings and instructions for future use.



WARNING: Injury to operator or bystanders could occur if an abrupt change in floor surface texture is encountered when using this machine. Abrupt change in floor surface texture can cause a sudden pulling motion by this machine. This sudden pulling motion can result in loss of control of the machine which could injure the operator or bystanders. Avoid motions that could cause machine to cross from a smooth floor surface to a carpeted or rough texture floor surface Avoid motions that could allow the machine to come in contact with low obstacles, such as floor electrical outlets, door stops or entry molding, etc.



CAUTION: The machine is heavy. Get assistance before attempting to transport or move it.

Introduction

The 255FPO1420 can be used on a variety of surfaces. It is an ideal tool for deep scrubbing, stripping, and wood floor restoration work. It is also suitable for cleaning hard surfaces such as tile, terrazzo, marble and concrete.

Machine Specifications

Model	255FPO1420	255FPO1420E
Voltage / Frequency	120V / 60Hz	230V / 50Hz
Amperage (A)	8.5	5
Motor	1 hp 750 Watts	1 hp 750 Watts
Pad Size	14" X 20" (356mm X 508mm)	14" X 20" (356mm X 508mm)
Orbits Per Minute	3600	2850
Orbit Diameter	1/4" (6.4mm)	1/4" (6.4mm)
Shipping Weight	160 lbs (73 kg)	160 lbs (73 kg)
Noise (dBA)	69	69
Vibration (mm/s2)	< 2.5	< 2.5
Tank Capacity (optional)	2.5 Gallon (9,5 L)	2.5 Gallon (9,5 L)

Machine Transportation

To transport the machine, follow this procedure:

1. Unplug machine cord from the wall outlet and wrap the cord around the handle.
2. Raise and lock the handle in the upright position. To lock the handle, pull up on the Handle Release Compression Lever (see *Figure 1*).
3. Remove weights by loosening knobs and sliding weights off frame.
4. Grasp the machine at the lift points (see *Figure 2*) and place in cargo area.

WARNING: The machine is heavy (145 lbs / 66 kg). To avoid injury or damage to the machine use a firm grip and proper lifting technique. Get assistance if necessary.

5. Secure machine to prevent movement in cargo area and reinstall weights.

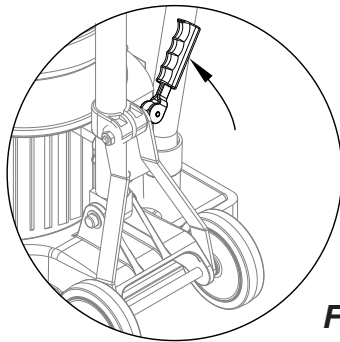


Figure 1

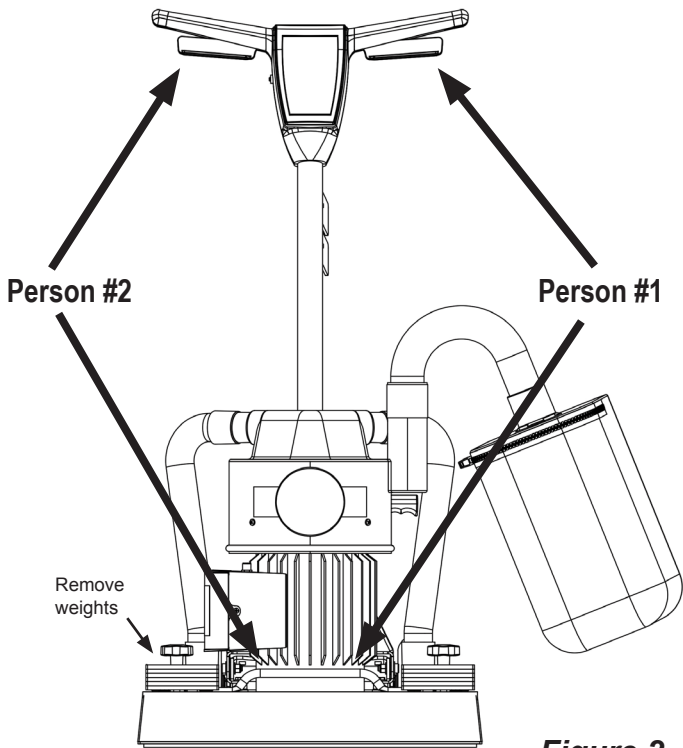


Figure 2

Machine Setup

To prepare the machine for use follow this procedure:

1. Familiarize yourself with the machine. Read all danger, warning, and caution statements and the Operation and Parts Manual before operating the machine. If you or the operator are unable to read English, have this manual fully explained before attempting to operate this machine.
2. Install or replace pad. The pad should be replaced if it has become matted down to a thickness of 3/8" (9,5 mm) or less. To install or replace the pad, follow these instructions:
 - A. Lock handle in the upright position.
 - B. Tilt the machine back until it fully rests on the handle.
 - C. Standing over the machine, remove existing pad then center new pad over grip face.
 - D. Press pad against grip face until the hooks in the driver have set in the pad (see *Figure 3*).
 - E. Return machine to the upright position.



Figure 3

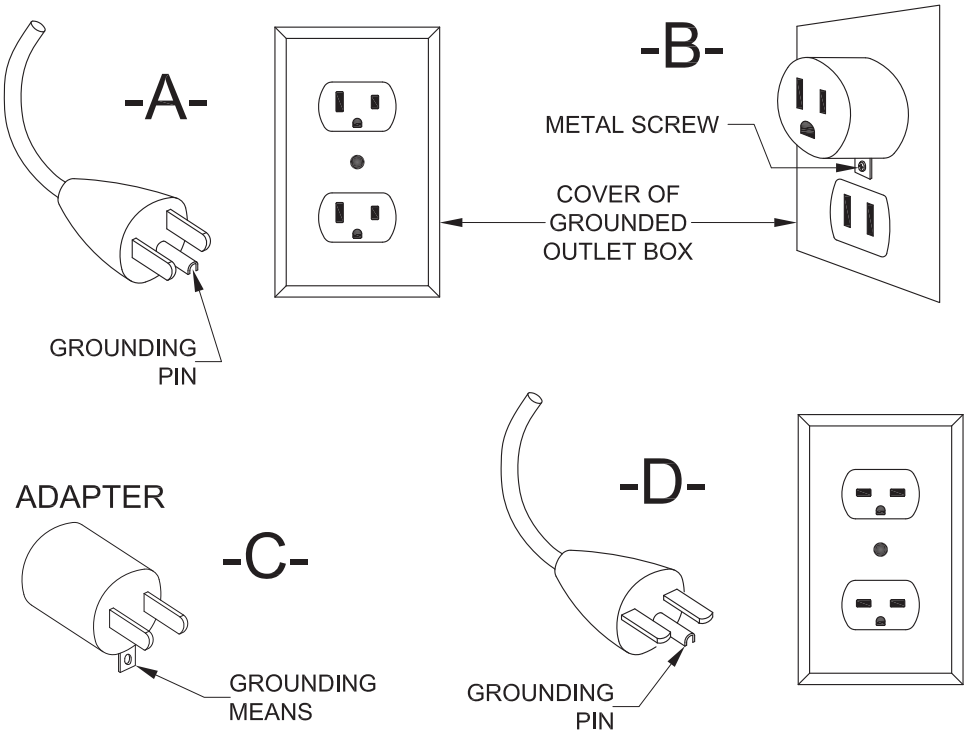
WARNING: Never put yourself or let others be in a position to get injured if the machine should tip or fall, while replacing the pad or changing abrasive.

CAUTION: Damage to the grip face will occur if the machine is operated without a pad or with a pad that is 3/8" (9,5 mm) or thinner

Safety Instructions

This floor-finishing machine shall be grounded while in use to protect the operator from electrical shock. The machine is provided with a three-conductor cord and a three contact grounding attachment plug to fit the proper grounding type receptacle. The green (or green and yellow) conductor in the cord is the grounding wire. Never connect this wire to other than the grounding pin of the attachment plug.

This machine is for use on a nominal 120 volt circuit and has a grounding plug that resembles the plug illustrated as (A) in the sketch. Make sure that the machine is connected to an outlet having the same configuration as the plug. No adapter should be used with this machine.



Instructions for Connection to the Power Supply (230V)

CAUTION: This machine will operate only on the AC frequency and electrical voltage shown on the nameplate. Make sure you have the correct frequency and voltage before connecting the power cord to an outlet.

This machine must be connected to the electrical ground to protect the operator from electric shock. The machine has a power cord with two main conductors and one earthing conductor. Connect the plug to the type of receptacle shown in Figure 5. The green and yellow conductor cord is the ground wire. Never connect this wire to any terminal other than the ground terminal.

WARNING: Always use this machine with an AC three-conductor electrical system connected to the electrical ground. Replace any worn, cut, or damaged cords. Replace any damaged plugs, receptacles, or connector bodies. Do not move the machine over an electrical cord. Always lift the cord over the machine.

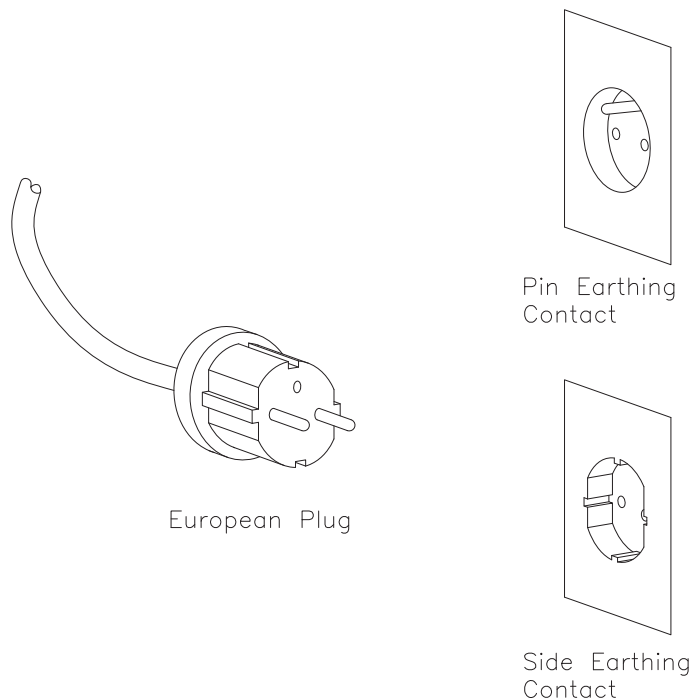


Figure 5

Extension Cords (230V)

Use only an approved extension cord with two main conductors and one earthing conductor.

WARNING: If you use an extension cord, use an extension cord with minimum wire size 1.5 mm2. Do not use an extension cord longer than 15 meters. Do not join two extension cords.

WARNING: Do not cut, remove, or break the ground terminal. Do not try to fit a three-terminal plug into a receptacle or connector body that does not fit the plug. If the receptacle or connector body does not fit the plug, see your Authorized person to make the connection.

Operating Instructions - Sanding

To operate the machine follow these procedures:

1. Move machine to work location. Decide the best approach to sanding the desired area. When sanding the area, work so that you are moving away from the power supply. This will help to avoid entanglement with the power cord and reduce the need to move the power cord as frequently.
2. Install the abrasive (see *Sanding Cuts & Sandpaper*). Use the same procedure outlined in “*MACHINE SETUP*” for installing the pad, to install the abrasive. Peel the film off the back of the abrasive; center the abrasive over the pad and press it against the pad. The adhesive on the abrasive will hold it to the pad.

NOTE: When using a screen abrasive, set the screen on the floor then move the machine over the screen. Lower the machine until the pad comes to rest on the screen. Make sure the screen is centered on the pad.

WARNING: Injury can occur if the machine is connected to a power source while installing the pad or abrasive. Disconnect the machine before installing the pad/abrasive.

3. Connect the machine to an appropriately fused and grounded circuit.
4. Release the handle by pressing up on the locking lever. Bring the handle to a comfortable position.
5. Push the interlock button (1), and apply pressure to the levers (2). To stop the machine, release the levers (2) (see *Figure 6*).

CAUTION: To prevent damage to the flooring and to reduce swirling, keep the machine in motion while the motor is running.

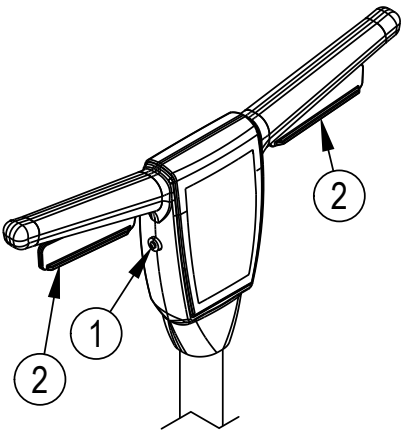


Figure 6

Operating Instructions - Polishing, Scrubbing or Stripping

To operate the machine as a polisher follow this procedure:

WARNING: Injury can occur if the machine is connected to a power source while installing the pad or abrasive. Disconnect the machine before installing the pad/abrasive.

1. Connect the machine to an appropriately fused and grounded circuit.
2. Release the handle by pressing up on the locking lever. Bring the handle to a comfortable position.
3. Push the interlock button (1), and apply pressure to the levers (2). To stop the machine, release the levers (2) (see *Figure 6*).

CAUTION: To prevent damage to the flooring and to reduce swirling, keep the machine in motion while the motor is running.

4. Pull up on the solution tank valve lever to dispense water. Release the lever to stop dispensing water.

Sanding Cuts & Sandpaper

Initial Cut:

The purpose of the initial cut is to remove old finish and gross imperfections on the floor surface. Use a course (20-36 grit) grain abrasive.

Final Cuts:

The purpose of a finishing cut is to remove the scratches produced during the initial cut. Use a fine (60-80 grit) grain abrasive. If the surface remains rough after a finishing cut, it may be necessary to use an even finer grain of abrasive (80-100 grit). Care should be taken in selecting the grit size of the abrasive. A very fine grain will close the pores on a wood floor making admission of a stain difficult. If glazing or burning should occur the abrasive has dulled and must be replaced.

Troubleshooting

Problem	Possible Cause	Action
Motor will not start.	No Power.	Check power supply and connection.
	Interlock not depressed.	Depress interlock before activating control lever.
	Defective switch / bad connection.	Contact an authorized Amano Pioneer Eclipse Dealer.
Motor fails to start / runs sluggish.	Low voltage from excessive length or undersized extension cord.	Use a 12 Ga. extension cord for 120V and 1.5mm ² for 230V. Do not exceed 50 feet (15m) length.
	Defective start capacitor.	Contact an authorized Amano Pioneer Eclipse Dealer.
	Defective start switch.	Contact an authorized Amano Pioneer Eclipse Dealer.
	Defective run capacitor.	Contact an authorized Amano Pioneer Eclipse Dealer.
	Defective motor.	Contact an authorized Amano Pioneer Eclipse Dealer.
Fuse / circuit breaker repeatedly trips.	Low voltage.	Eliminate extension cord.
		Locate power source closer to work site.
		Have voltage checked by a qualified electrician.
	Bad connection.	Contact an authorized Amano Pioneer Eclipse Dealer.
	Defective motor.	Contact an authorized Amano Pioneer Eclipse Dealer.

255FPO1420

Orbital Floor Machine

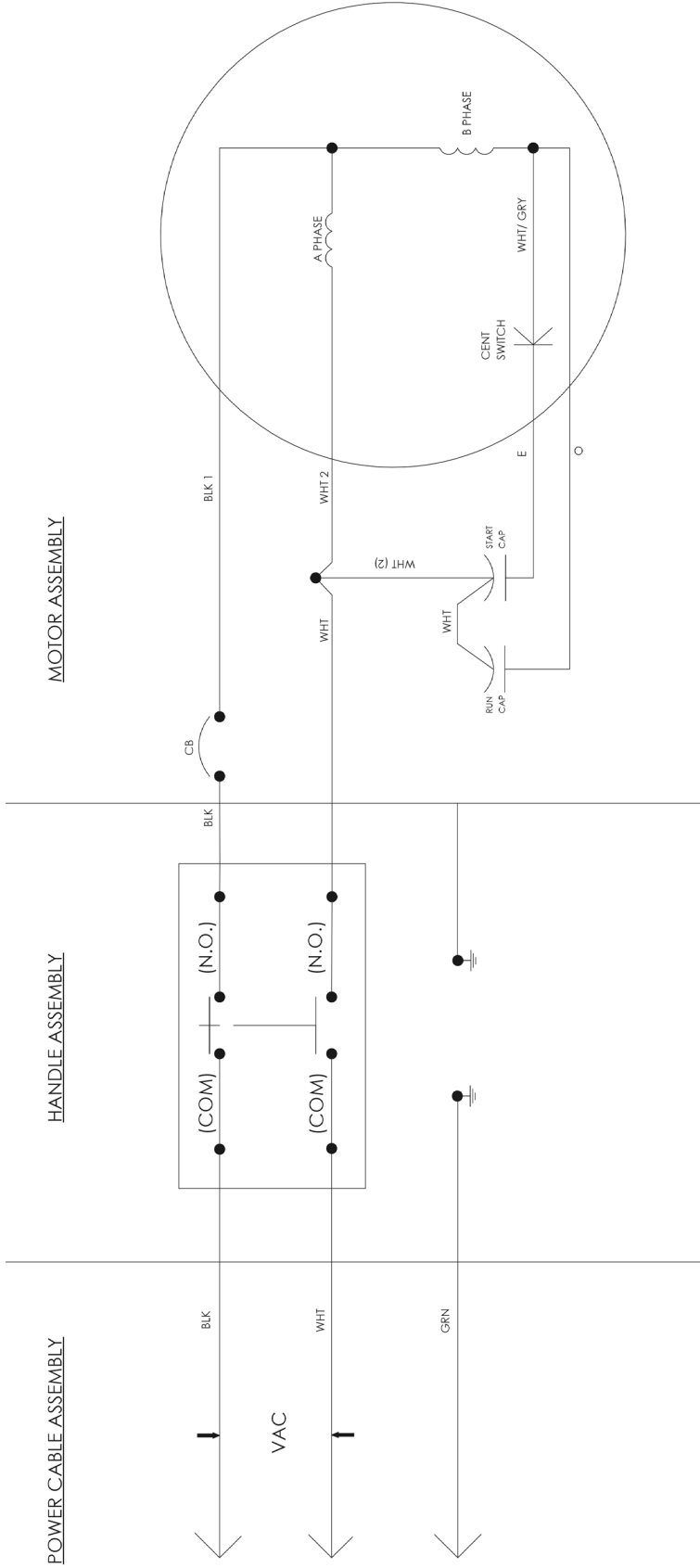
Parts Manual

Notes:

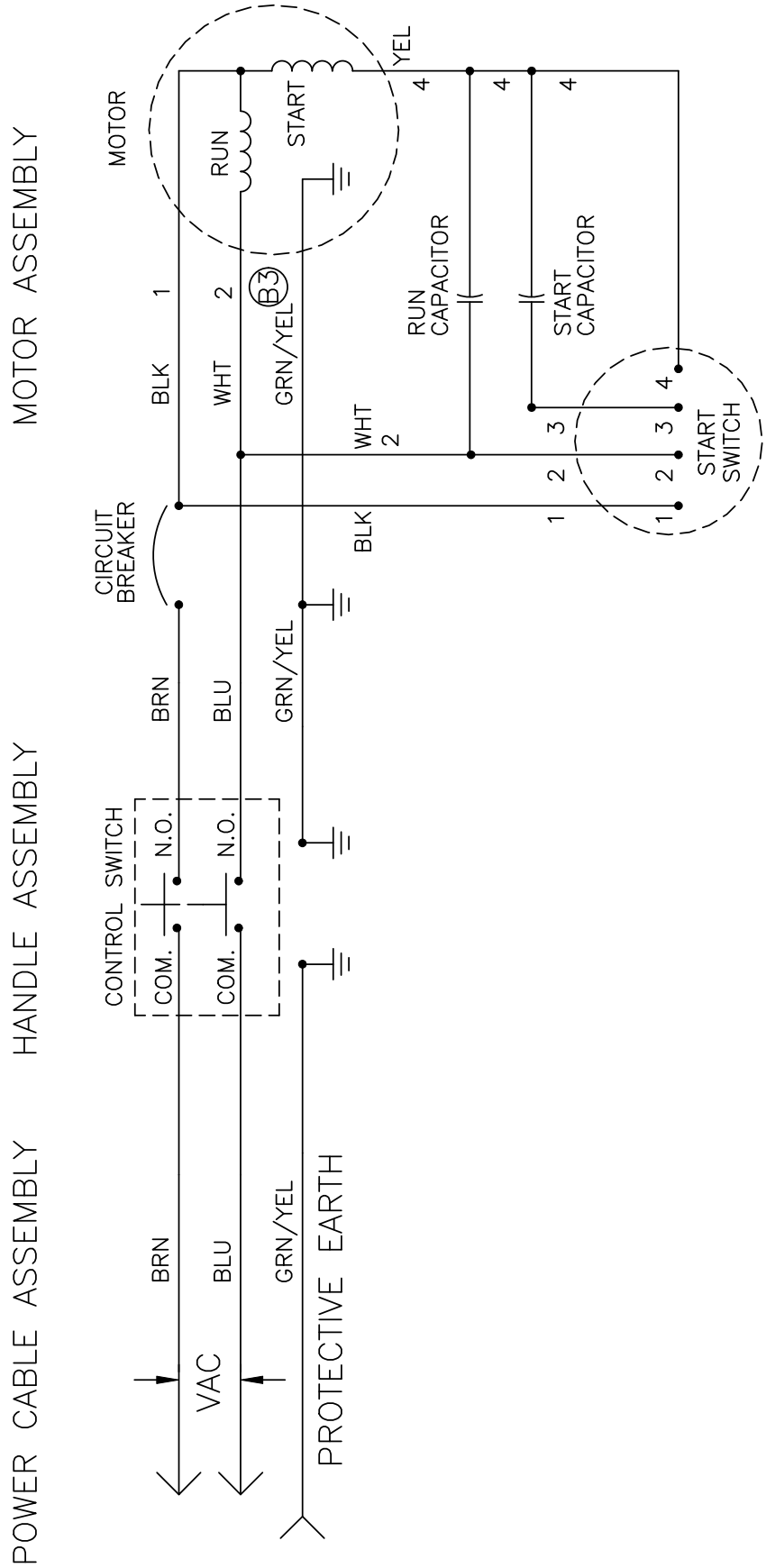
Pioneer Eclipse

An **AMANO** Company

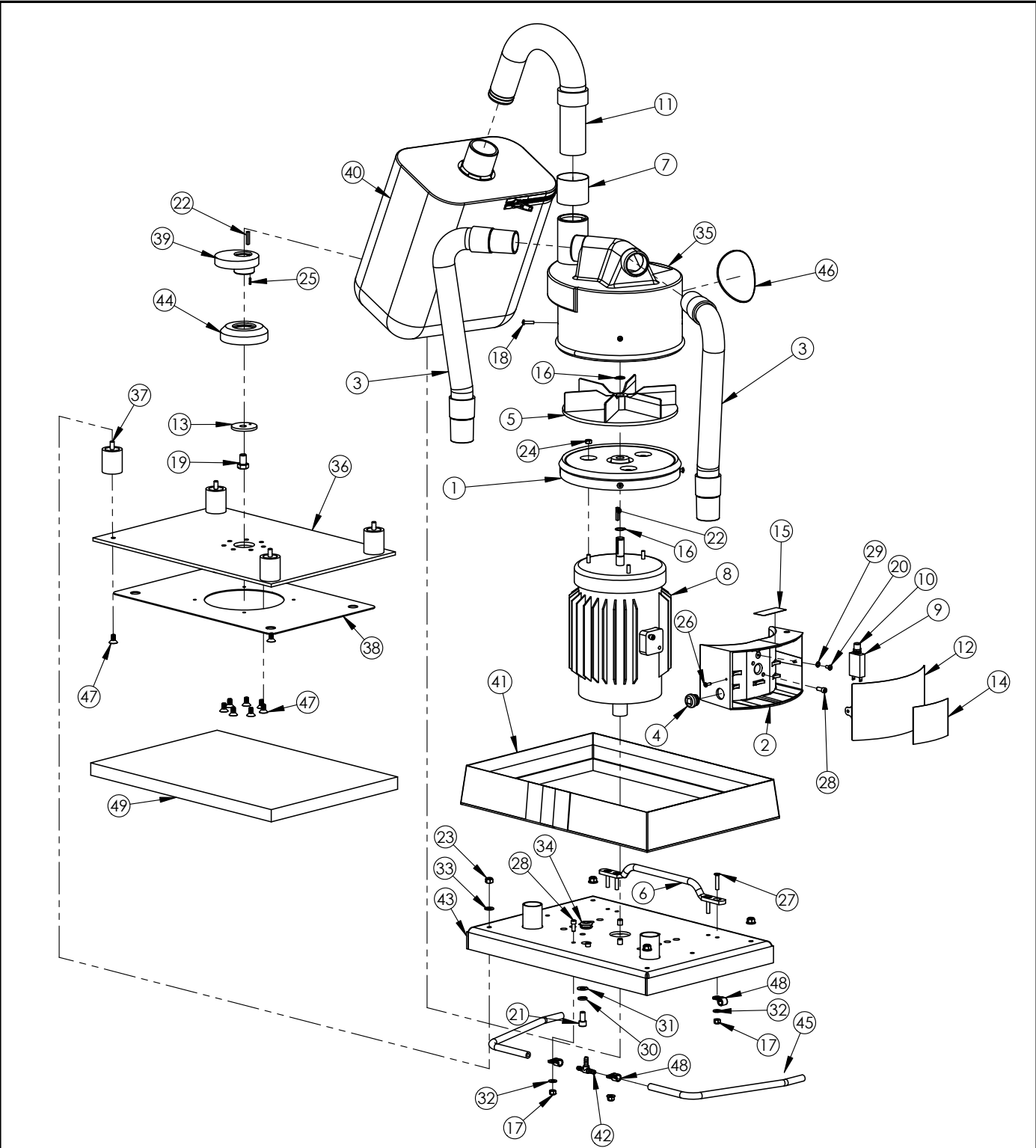
Electrical Schematic (115V - 60Hz)



Electrical Schematic (230V - 50Hz)



Base Assembly



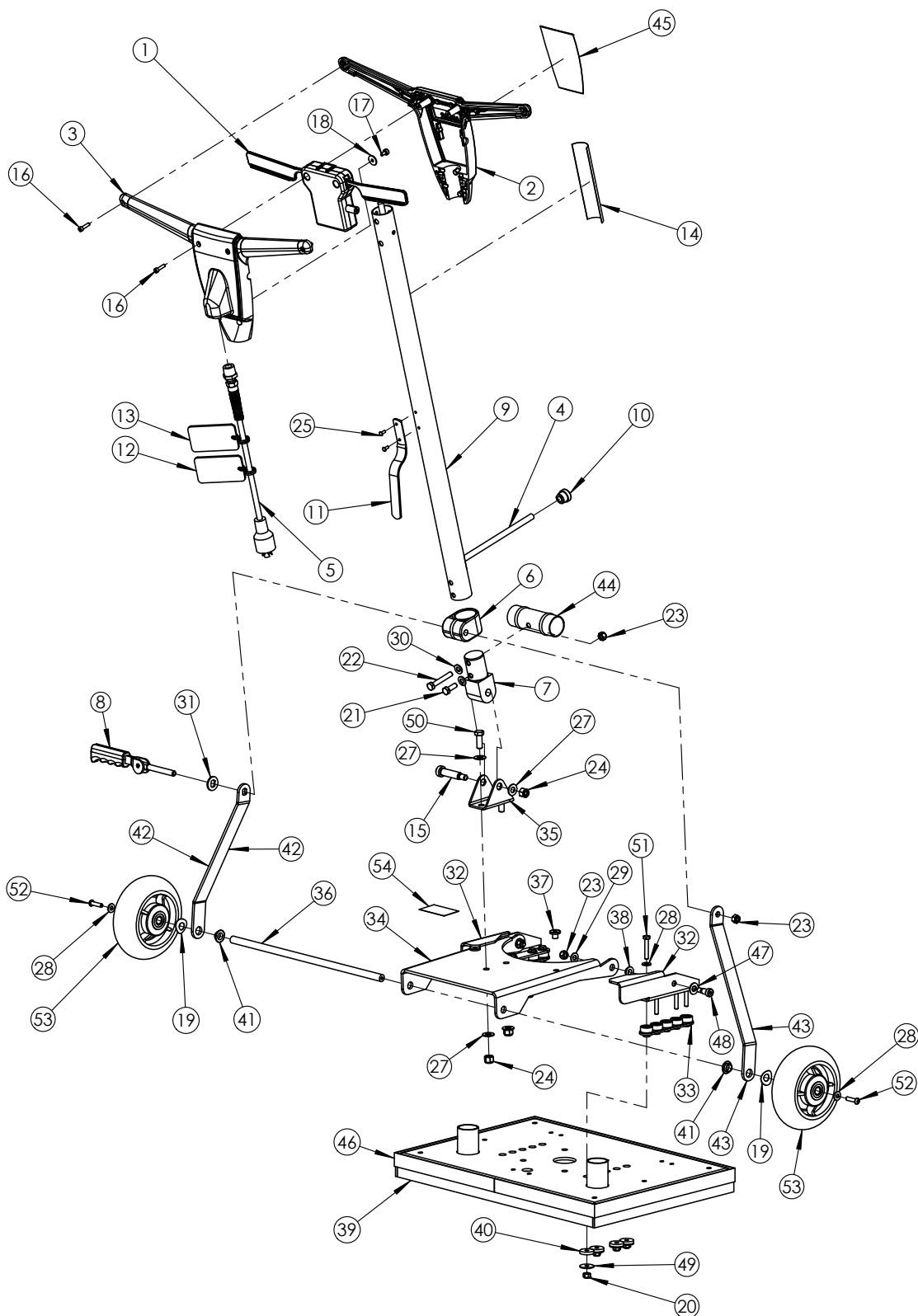
255FPO1420, BASE ASSEMBLY

Base Assembly (continued)

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	10478A	ASM. BLOWER HOUSING COVER
2	1	22906B	ENCLOSURE, OBS, MODIFIED
3	2	30407B	HOSE, SQUEEGEE, 1.5"
4	1	51523A	BUSHING, STRAIN RELIEF
5	1	54765A	IMPELLER
6	1	54930A	HANDLE, LIFT
7	1	56380336	SEAL, DUST PIPE
8	1	56382885	MOTOR 1HP 115V/60HZ OBS-18DC
9	1	56454538	CIRCUIT BREAKER, 15 AMP
10	1	56459367	BOOT RESET BUTTON E00585
11	1	61833A	TUBE, DUST EXHAUST WLDMT
12	1	62667A	COVER, ENCLOSURE
13	1	66982A	RETAINER, ECCENTRIC
14	1	77195A	DECAL-UL WARNING
15	1	77234A	LABEL, WARNING, HEAVY OBJECT
16	2	797301	RING, SNAP-5/8 EXT.
17	6	81102A	NUT, NYLOCK, 1/4-20
18	4	85383A	SCREW,PAN, PH, #10-32 X 3/4, ZN
19	1	85718A	BOLT, HEX, 1/2-13 X 3/4, ZN
20	1	85833A	SCREW, PAN, #10-32 X 3/8, ZN
21	4	86112A	SCREW, SHC, 3/8-16 X 3/4
22	2	915044	KEY 3/16 X 3/16 X 1
23	4	920110	NUT, NYLOCK, 5/16"-18
24	3	920208	NUT, HEX, 1/4-20, ZN
25	1	925589	PIN, ROLL, SPLIT, 1/8 X 1/2

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
26	2	962727	SCREW, PAN, PH, #8-32 X 1/2, TP23
27	4	962819	SCREW, FLAT, PH, 1/4-20 X 1-1/4
28	4	962983	SCREW, SHC, 1/4-20 x 5/8, ZN
29	1	980603	WASHER, LOCK, #10, EXT
30	4	980638	WASHER, LOCK, SPLIT, 3/8
31	4	980645	WASHER, FLAT, SAE,3/8", ZN
32	6	980646	WASHER, FLAT, 1/4 SAE
33	4	980651	WASHER, FLAT, 5/16, SAE
34	1	AS040900	GROMMET, 1/2 ID X 3/16W X .94
35	1	AS106402	HOUSING, BLOWER, BLANK
36	1	AS130320	PLATE, 14 X 20 ORBITAL
37	4	AS130700	ISOLATOR, 40X46-.313-18MF
38	1	AS130820	GRIP FACE, 14X20
39	1	AS131010	ECCENTRIC 255FPO1420
40	1	AS137200	BAG, DUST, 255FPO
41	1	AS139500	ASSY., SKIRT, 14 X 20, FABRIC
42	1	AS141400	TEE, 1/4 HOSE BARB, BRASS
43	1	AS142111	WLDMNT, FRAME, 255FPO, SHT
44	1	AS143200	ASSY., BEARING, ORBITAL
45	2	MP473900	TUBE, VINYL, 1/4 ID. X 3/8 OD
46	1	MP555700	DECAL, PE LENS, 4.3"
47	11	NB055600	SCREW, SHF, 5/16-18 X 5/8, SS
48	4	NB088200	CLAMP, CABLE, 3/8, VINYL
49	1	PD3LLC1420	PAD, RED, LIGHT CLEAN, 14X20

Handle Assembly - 115V



ASSY., 255FPO1420 HANDLE

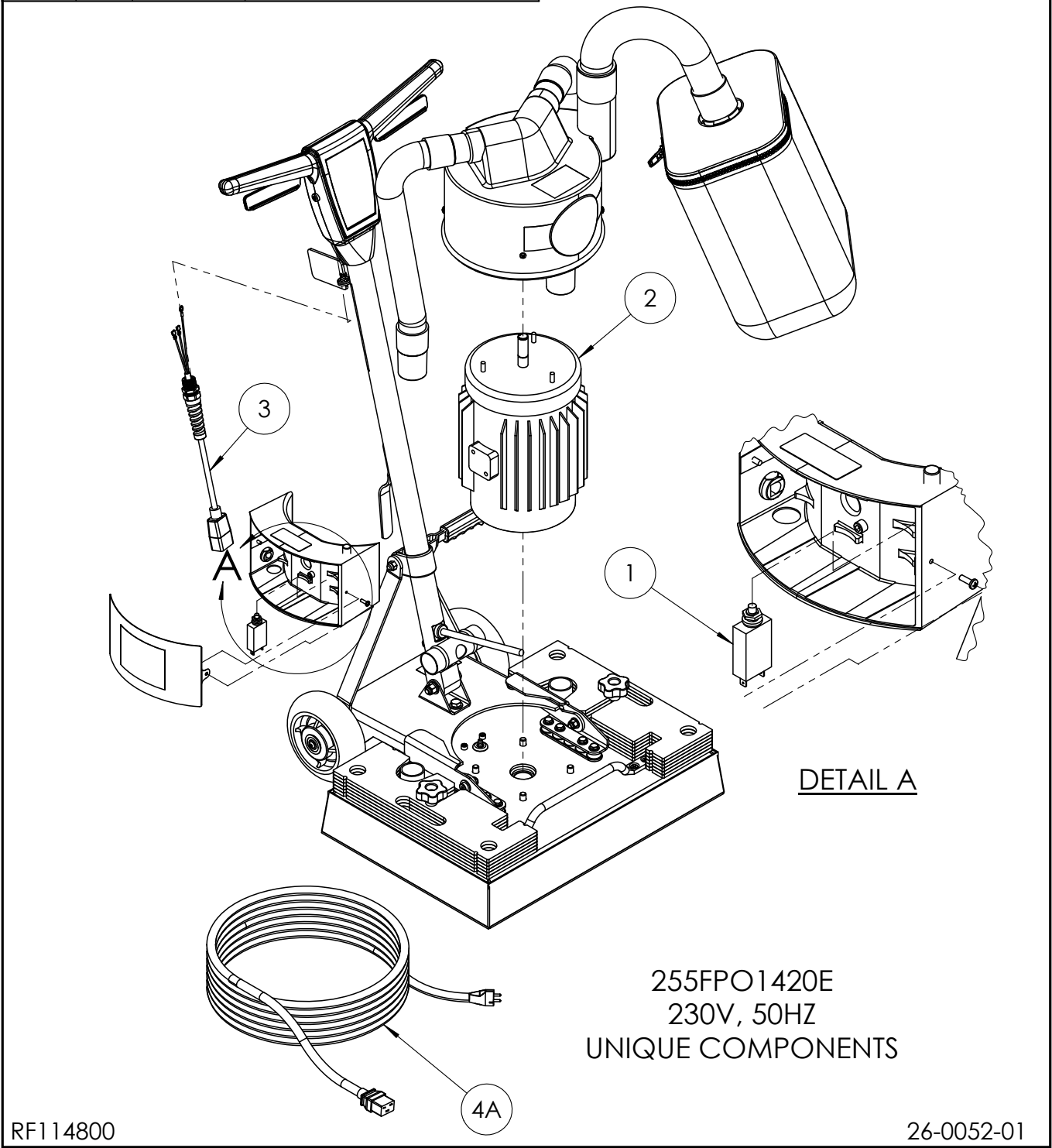
Handle Assembly - 115V (continued)

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	10687A	INTERLOCK ASSY
2	1	21074A	HANDLE, FRONT - CFP
3	1	21075A	HANDLE, REAR - CFP
4	1	40522A	CORD, INTERCONNECT
5	1	40931A	CORD ADAPTER
6	1	442001	CLAMP - HANDLE TUBE
7	1	509240	TONGUE, HANDLE TUBE
8	1	56109699	ASSY, CAM, HANDLE, W/ GRIP
9	1	61825A	TUBE, HANDLE
10	1	627561_GR	STRAIN RELIEF
11	1	64325A	HOOK CORD 20-BURNISHER
12	1	70175A-FR	TAG WARNING ENG-FRN
13	1	70175A	TAG WARNING ENG-SPN
14	1	71347A	LABEL CCA WARNING
15	1	80047A	SCREW, SHLDR, 1/2X1 3/4, 3/8-16
16	6	80284A	SCREW, SHC, #10-32 X 3/4
17	1	80290A	SCREW, SHF, HEX, 10-32 X 3/8, ZN
18	1	80291A	WASHER, FLAT, #10
19	2	80295A	WASHER BOWED .516ID X 1.06OD
20	10	81102A	NUT, NYLOCK, 1/4-20
21	1	85812A	BOLT, HEX, 5/16-18 X 7/8", ZN
22	1	85817A	BOLT, HEX, 5/16-18 X 2, ZN
23	4	920110	NUT, NYLOCK, 5/16"-18
24	3	920342	NUT, NYLOCK, 3/8-16
25	2	930005	RIVET, POP, 5/32 X 3/8. STEEL
26	2	962983	SCREW, SHC, 1/4-20 x 5/8, ZN
27	5	980645	WASHER, FLAT, SAE, 3/8", ZN
28	12	980646	WASHER, FLAT, SAE, 1/4, ZN

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
29	2	980651	WASHER, FLAT, 5/16, SAE
30	2	980652	WASHER, LOCK, 5/16
31	1	AS087800	WASHER, WEAR, CAM, SS
32	2	AS130221	BRACKET, 250ST, PIVOT, R, SHT
33	2	AS130600	MOUNT, ISOLATION, OBS HANDLE
34	1	AS131111	BRACKET, PIVOT BASE, SHT
35	1	AS131211	BRACKET, HANDLE, PIVOT, SHT
36	1	AS131600	AXLE, 1/2"OD X 15"L, OBS
37	2	AS136000	BUMPER, 3/4 OD X 1/8
38	2	AS136100	BUSHING, FLANGE, 3/8ID X 1/4L
39	1	AS142111	WLDMNT, FRAME, 255FPO, SHT
40	8	MP373100	WASHER, RUBBER, 1"ODX.281"ID
41	2	MP528002	BUSHING, IGUS, JFI-0809-04
42	1	MP560700	LINK, HANDLE, LEFT
43	1	MP560800	LINK, HANDLE, RIGHT
44	1	MP576400	CONNECTOR, 1.5 DIA. HOSE, HOLE
45	1	MP576900	DECAL, HANDLE, 255FPO
46	68"	MP8300	VELCRO, HOOK, 1" W/ADHESIVE
47	2	NB025200	WASHER, FLAT, SAE, 3/8, SS
48	2	NB026200	SCREW,SHLDR,3/8X1 1/2,5/16-18,SS
49	8	NB035000	WASHER, FLAT, 1/4, 1"OD, SS
50	2	NB6042	BOLT,HEX,3/8-16X1,ZN
51	8	NB9000	BOLT,HEX,1/4-20 X 1 1/2,ZN
52	2	NB9308	SCREW, BH, 1/4-20 X 1
53	2	RV009600	WHEEL, PERFORMA, 6" GREY
54	1	SN023500	TAG, SERIAL, 255FPO1420

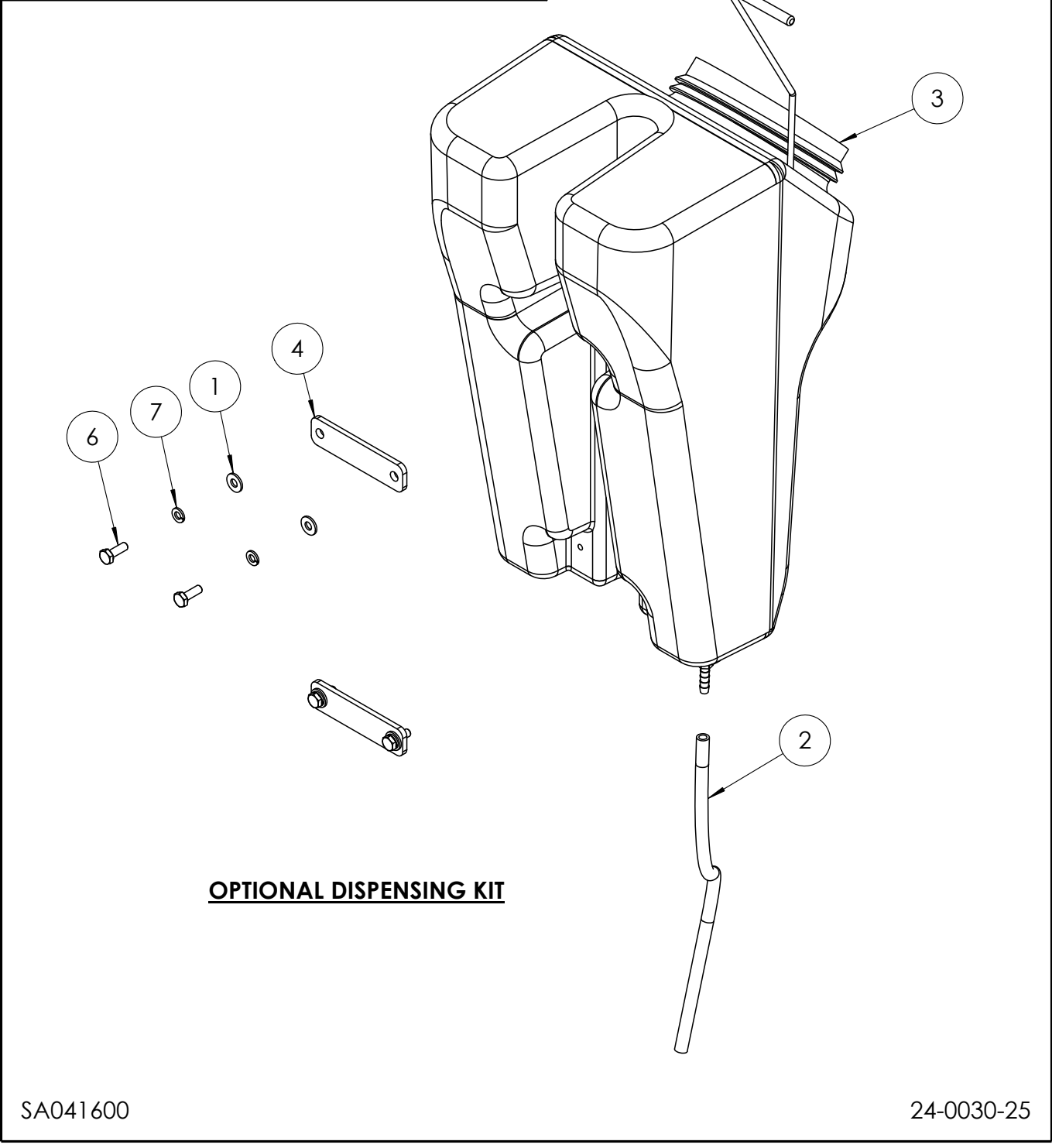
230V Unique Components

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	41418C	BREAKER, CIRCUIT, 10A
2	1	44673A	MOTOR, 1HP 230V/50HZ
3	1	MP512000	CORD, PIGTAIL, HANDLE, EXPORT, IEC
4A	1	MP513000	CORD, POWER SUPPLY, CE, IEC, RED
4B	1	MP514000	CORD, POWER SUPPLY, AUSTRALIAN, IEC
4C	1	MP539500	CORD, UK13, C19



Options

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	4	980646	WASHER, FLAT, 1/4 SAE
2	17"	MP473900	TUBE, VINYL, 1/4 ID. X 3/8 OD
3	1	MP484900	TANK ASSEMBLY, 2.5 GAL
4	2	MP486401	BRACKET, TANK MOUNTING, PP
5	1	MP487700	CAP, 6", TANK
6	4	NB019100	BOLT, HEX, 1/4-20 X 3/4, ZN
7	4	NB6110	WASHER, LOCK, SPLIT, 1/4, ZN

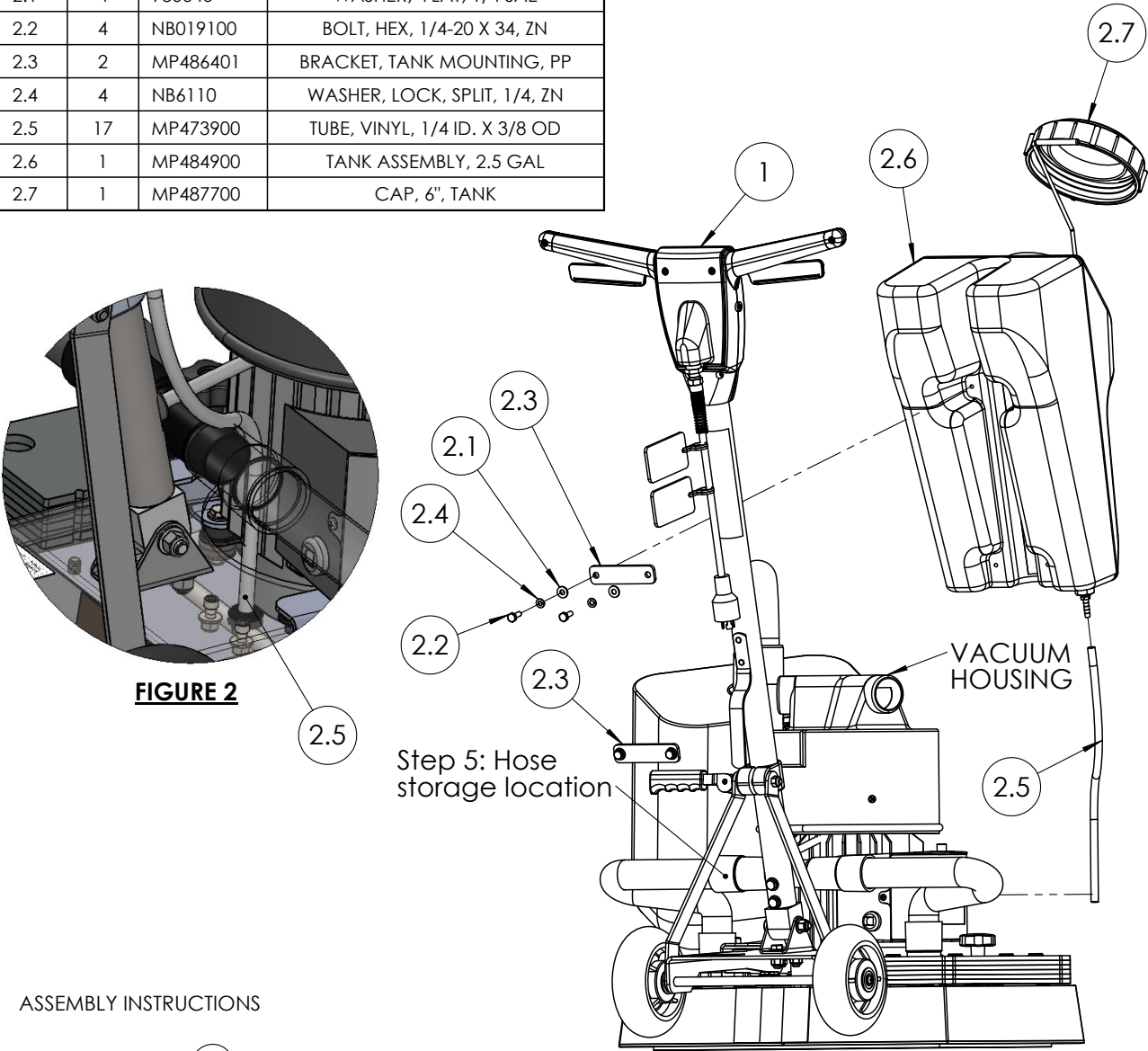


Options

SOLUTION TANK INSTALLATION INSTRUCTIONS

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	255FPO	255FPO1420 MACHINE
2	1	SA041600	KIT, DISPENSING, 255FPO1420
2.1	4	980646	WASHER, FLAT, 1/4 SAE
2.2	4	NB019100	BOLT, HEX, 1/4-20 X 3/4, ZN
2.3	2	MP486401	BRACKET, TANK MOUNTING, PP
2.4	4	NB6110	WASHER, LOCK, SPLIT, 1/4, ZN
2.5	17	MP473900	TUBE, VINYL, 1/4 ID. X 3/8 OD
2.6	1	MP484900	TANK ASSEMBLY, 2.5 GAL
2.7	1	MP487700	CAP, 6", TANK

- REQUIRED TOOLS:
- 1. 7/16" SOCKET AND RATCHET
 - 2. OPTIONAL: 4" EXTENSION



ASSEMBLY INSTRUCTIONS

- 1. Place tank (2.6) onto handle.
- 2. Install upper tank bracket (2.3) by hand tightening fasteners in sequence shown above.
- 3. Evenly tighten fasteners using 7/16" socket.
- 4. Repeat step 3 for lower bracket and fasteners.
- 5. Remove hose connections from Vacuum Housing and connect to storage tube.
- 6. Install tube (2.5) over hose barb until it bottoms inside barb grommet. (Figure 2)

FIGURE 1



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