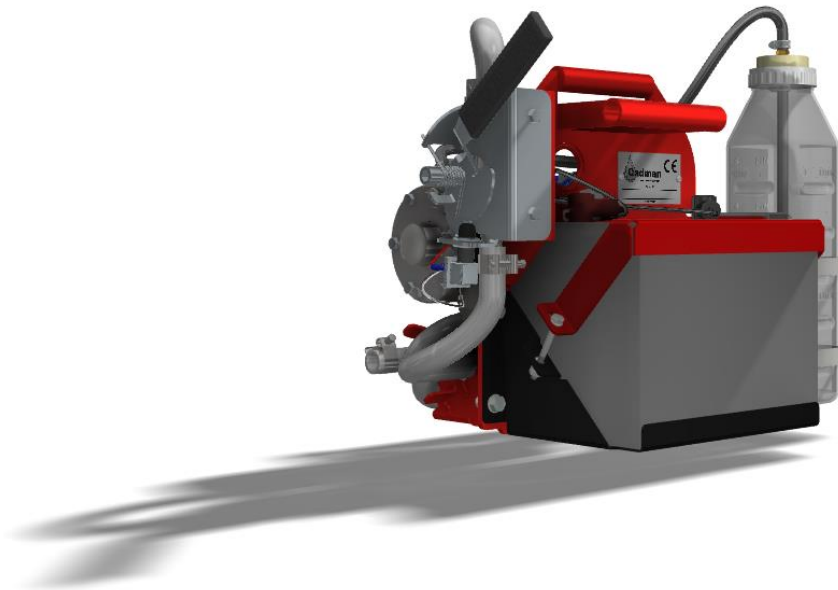




PORTABLE POWER PRIMER



OPERATOR'S and MAINTENANCE MANUAL 2015 Edition

IR-MAN-PMR



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Portable Power Primer

We would like to thank you for purchasing your new **Cadman Portable Power Primer (shown with optional oiling system)**. You have purchased a product of superior quality that will serve your needs for a long time as long as you follow this manual and safety procedures.

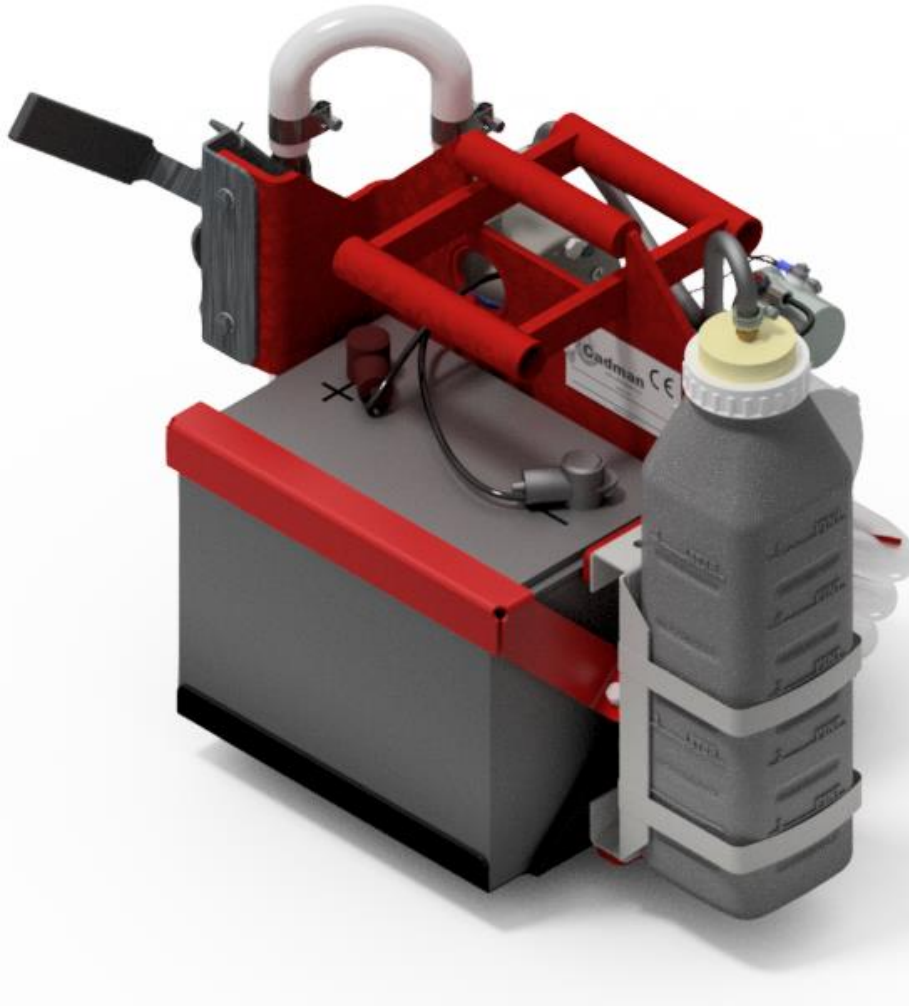


Figure 1 – Cadman Portable Power Primer

img-01179

BEFORE operating your new **Cadman Portable Power Primer**, inspect the machine for any damage or parts that may have come loose during shipping. **REPORT ANY DAMAGE TO CADMAN POWER EQUIPMENT LIMITED OR YOUR LOCAL DEALER IMMEDIATELY**



Warranty Policy

CADMAN POWER EQUIPMENT LIMITED warrants that each machine it manufactures shall be free from defects in materials and workmanship. The terms of this warranty are as follows:

- All components manufactured by **CADMAN POWER EQUIPMENT LIMITED** shall be warranted for a period of one (1) year from the date of delivery, except the frame and hose drum structures which shall be warranted for a period of three (3) years.
- **CADMAN POWER EQUIPMENT LIMITED** makes no warranty whatsoever in regard to tires, engines, and other trade accessories used on its equipment. The customer shall rely solely on the warranties offered (if any) by the respective manufacturer of these trade accessories.

The sole obligation to **CADMAN POWER EQUIPMENT LIMITED** under this warranty is limited to the repair or replacement of any part it manufactured, which, in the judgment of **CADMAN POWER EQUIPMENT LIMITED**, failed under normal and proper use and maintenance due to defective materials or workmanship. All freight charges incurred shall be the sole responsibility of the customer.

CADMAN POWER EQUIPMENT LIMITED and its dealers (**who are neither authorized nor qualified to undertake any obligations on behalf of CADMAN POWER EQUIPMENT LIMITED**) **DO NOT**, under any circumstances, accept any responsibility for any losses or costs incurred due to parts failure and/or delays during the parts replacement process.

This warranty will be considered void if any alterations or modifications have been made to the machine without the express written consent of **CADMAN POWER EQUIPMENT LIMITED** outlining the nature and the extent of such modifications. **CADMAN POWER EQUIPMENT LIMITED** will not provide any warranty express or implied to any overdue accounts.

CADMAN POWER EQUIPMENT LIMITED, whose policy is one of continuous improvement, reserves the right to change specifications and designs without notice or incurring obligation.

The warranties expressed herein are non-transferable and replace any other warranties, either written or verbal, which may have been given or implied.

Safety Precautions

Please take the time to read and understand this manual to avoid errors and unnecessary risks. If you have any questions or concerns, please contact **CADMAN POWER EQUIPMENT LIMITED** or your local dealer/distributor.

FAILURE TO FOLLOW ALL SAFETY INSTRUCTIONS CAN RESULT IN DEATH OR SERIOUS INJURY FOR YOU AND/OR ANY SPECTATORS.

- **DO NOT** move or operate this machine until you have read and understand these instructions in this manual.
- **NEVER** allow untrained persons to operate this machine.
- **DO NOT** attempt to service this machine while it is in operation.
- **MAKE SURE** electrical connections are disconnected as well as all mechanical and hydraulic tension being released from the Power Primer before attempting any service on the machine.
- **CHECK** all fasteners (nuts and bolts) regularly for tightness.
- **PERFORM REQUIRED MAINTENANCE** as prescribed or as necessary to keep this machine in safe operating condition.
- **KEEP ALL SPECTATORS** at a safe distance.
- **CHECK** all connections before starting the power primer to make sure that they will remain secure during operating conditions
- **DO NOT** remove or alter any shielding on this machine.
- **KEEP CLEAR** of all moving parts.
- **REGULAR INSPECTION** of your pipe/hose couplings, tubing and gaskets must be a part of your regular set-up routine. Any defective parts **MUST** be replaced or repaired before the machine is put into service.

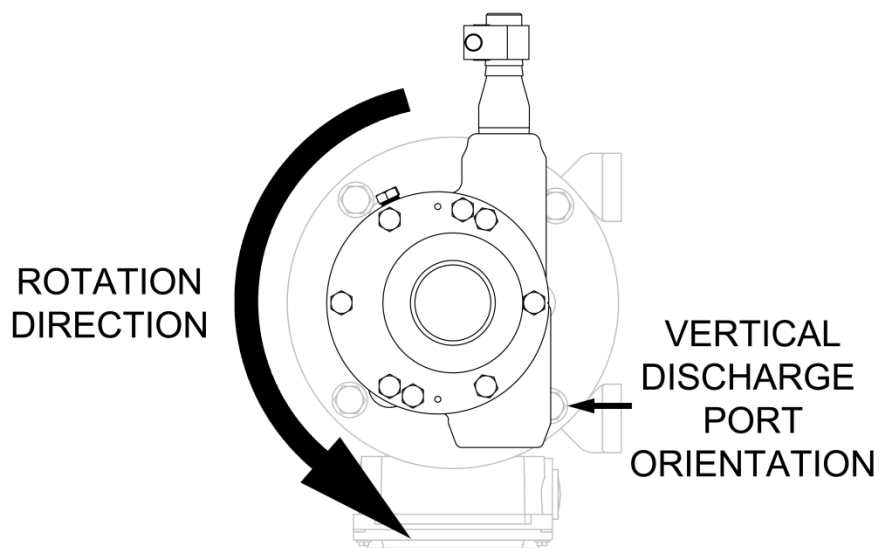
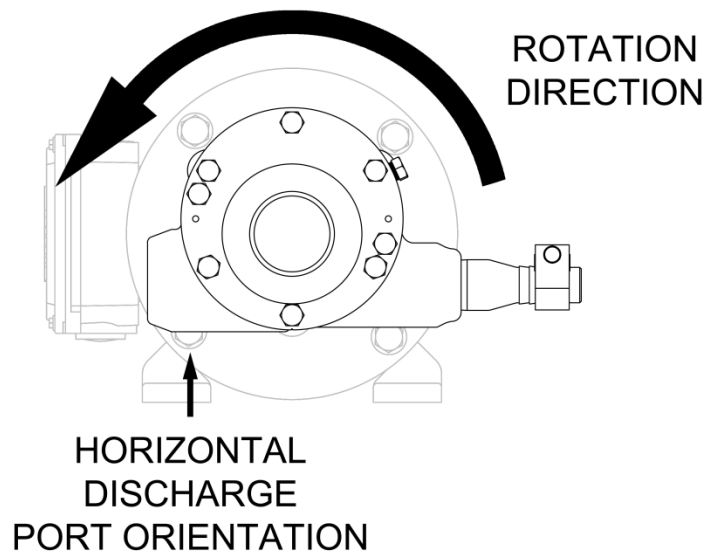


This symbol, the safety-alert symbol, indicates a hazard. When you come across the safety-alert symbol in this manual, make sure you fully understand and abide by the given instructions or warnings.

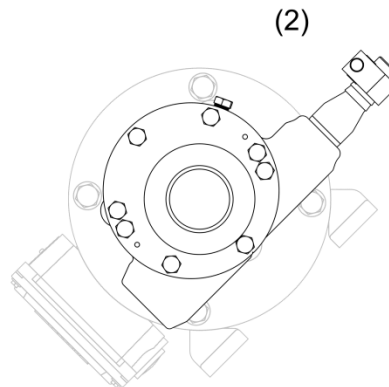
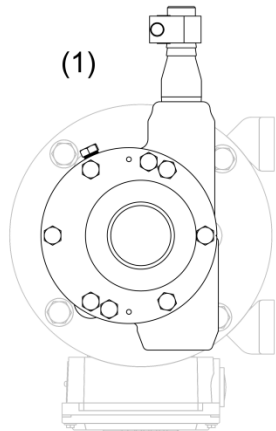
Using your Cadman Portable Power Primer

Power Primer orientation

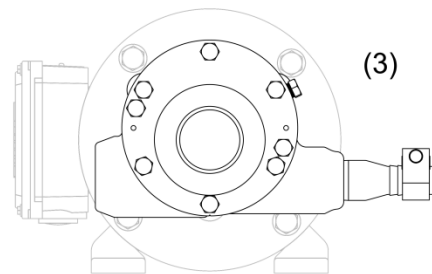
Orient your power primer so that the discharge port is facing downward so that it will drain correctly.



Power primer orientation



DISCHARGE PORT
FACING
DOWNARDS
FOR
VERTICAL MOUNTING (1)
ANGLED MOUNTING (2)
HORIZONTAL MOUNTING (3)

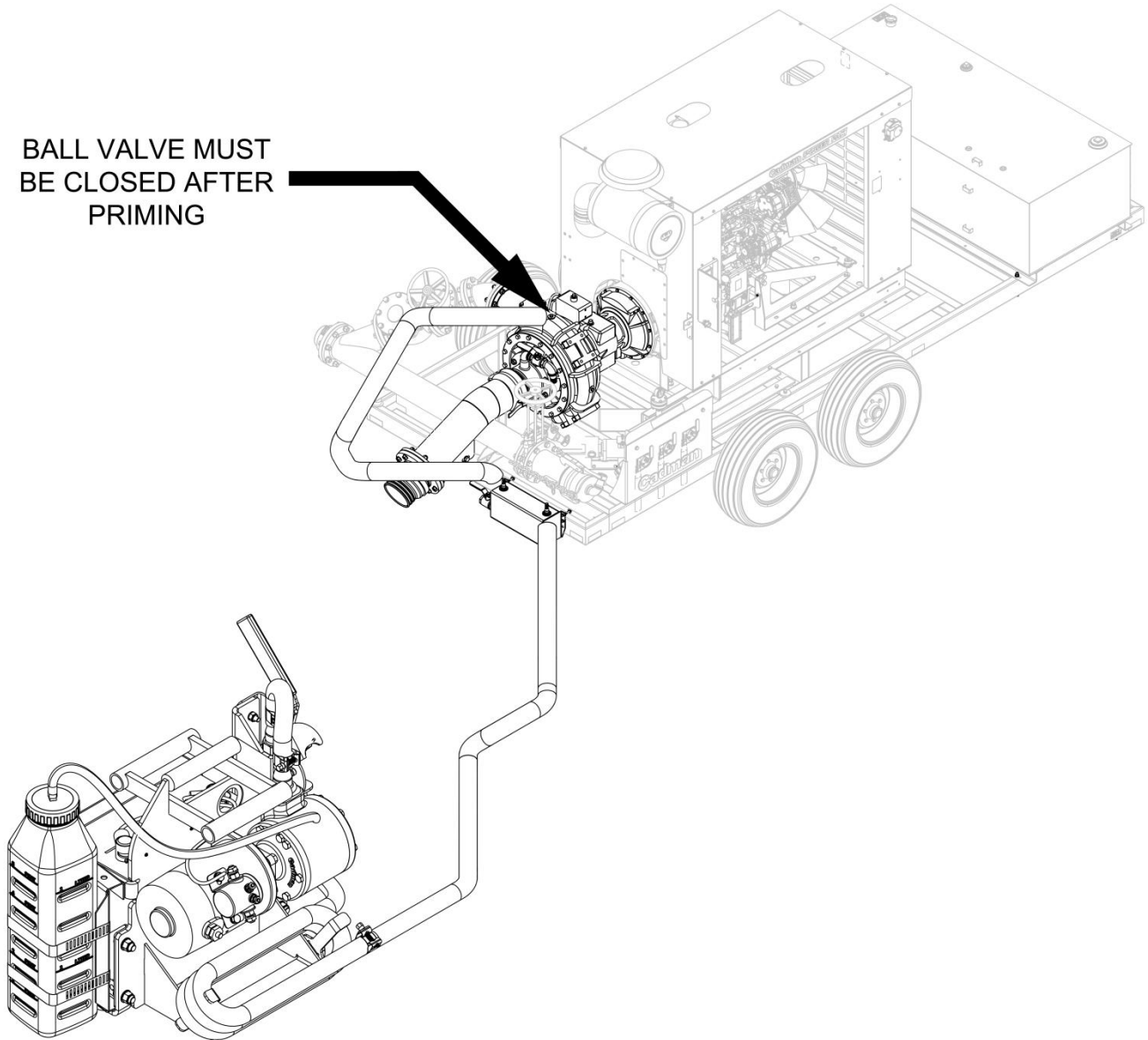


Do not mount your power primer with the discharge port facing upwards. This will prevent your power primer from self draining after it is used.

Failing to do so will result in your power primer becoming damaged.

Hose orientation using moisture trap

**BALL VALVE MUST
BE CLOSED AFTER
PRIMING**



Any connections that are made while using the Cadman Portable Power Primer must be firmly secured. Failing to do so will result in loose connections that will not hold under pressure.



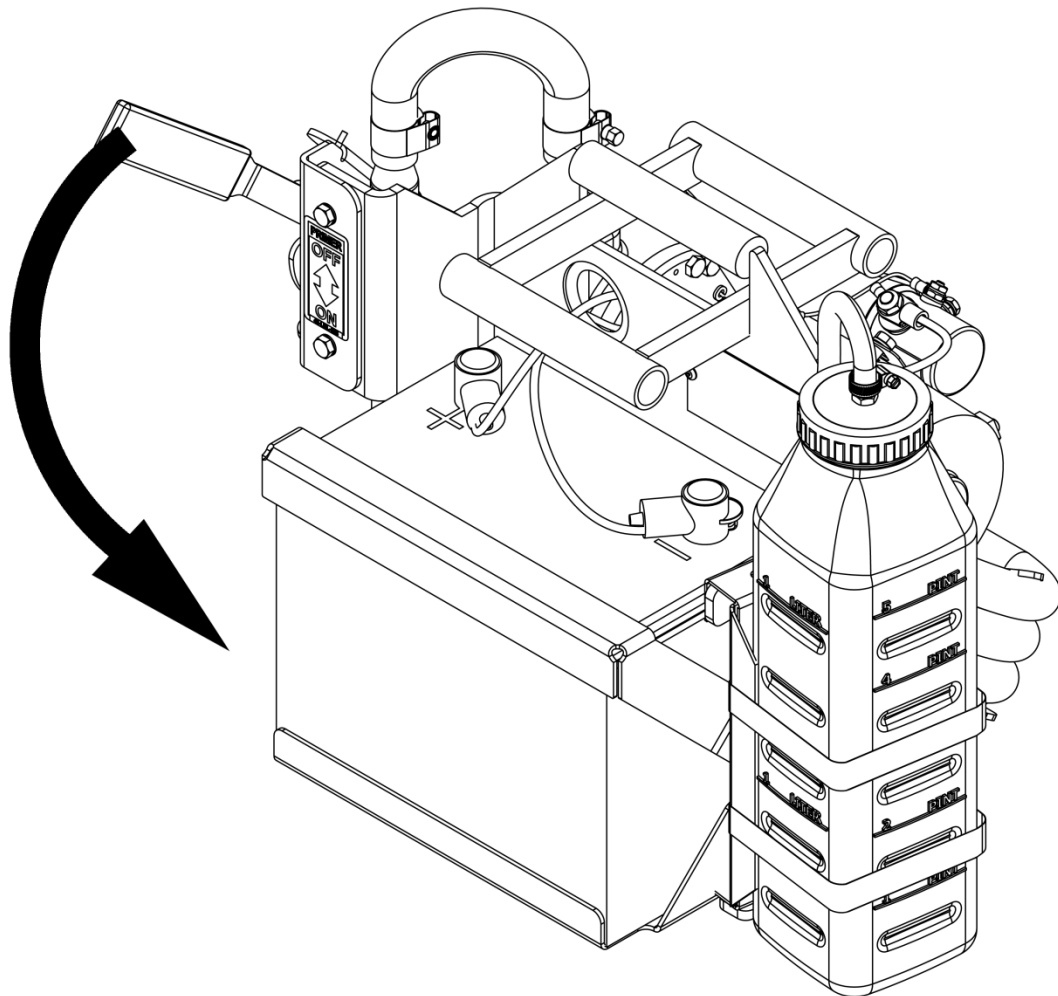
The high pressure spray resulting from a broken connection may result in injury to operators and spectators. This high pressure spray may also damage any equipment connected to the Cadman Portable Power Primer.

Turn on the power primer by pulling down on the on/off switch and holding it in the on position. Power primer is shown with optional oiling system.



Your Cadman Portable Power Primer was designed to run continuously for 45 to 60 seconds a cycle. Allow enough time for the Cadman Portable Power Primer to cool down between uses.

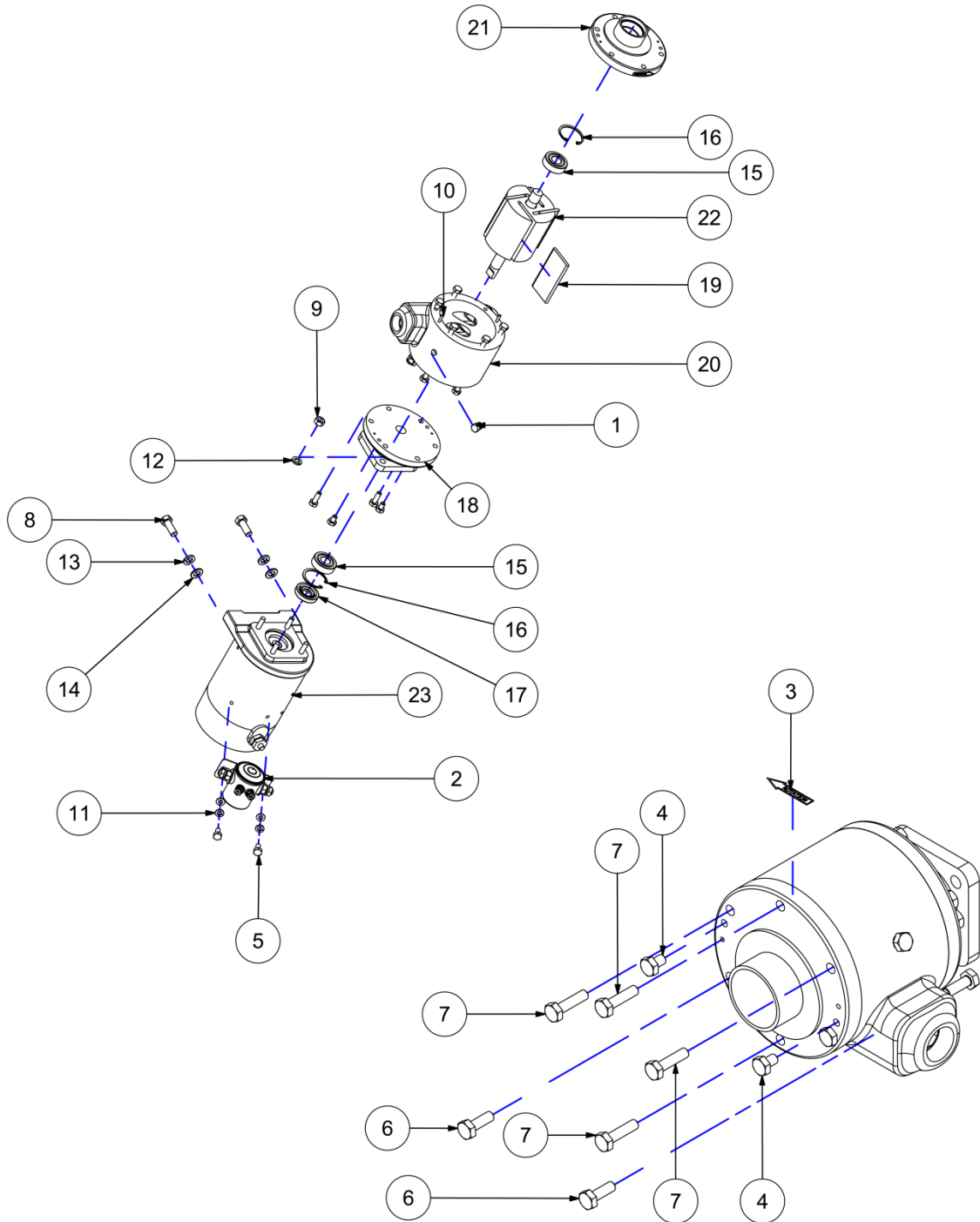
Failing to do so will result in overheating which will damage the unit and may result in an inoperative power primer





Parts Section

Power Primer Assembly 1 of 4

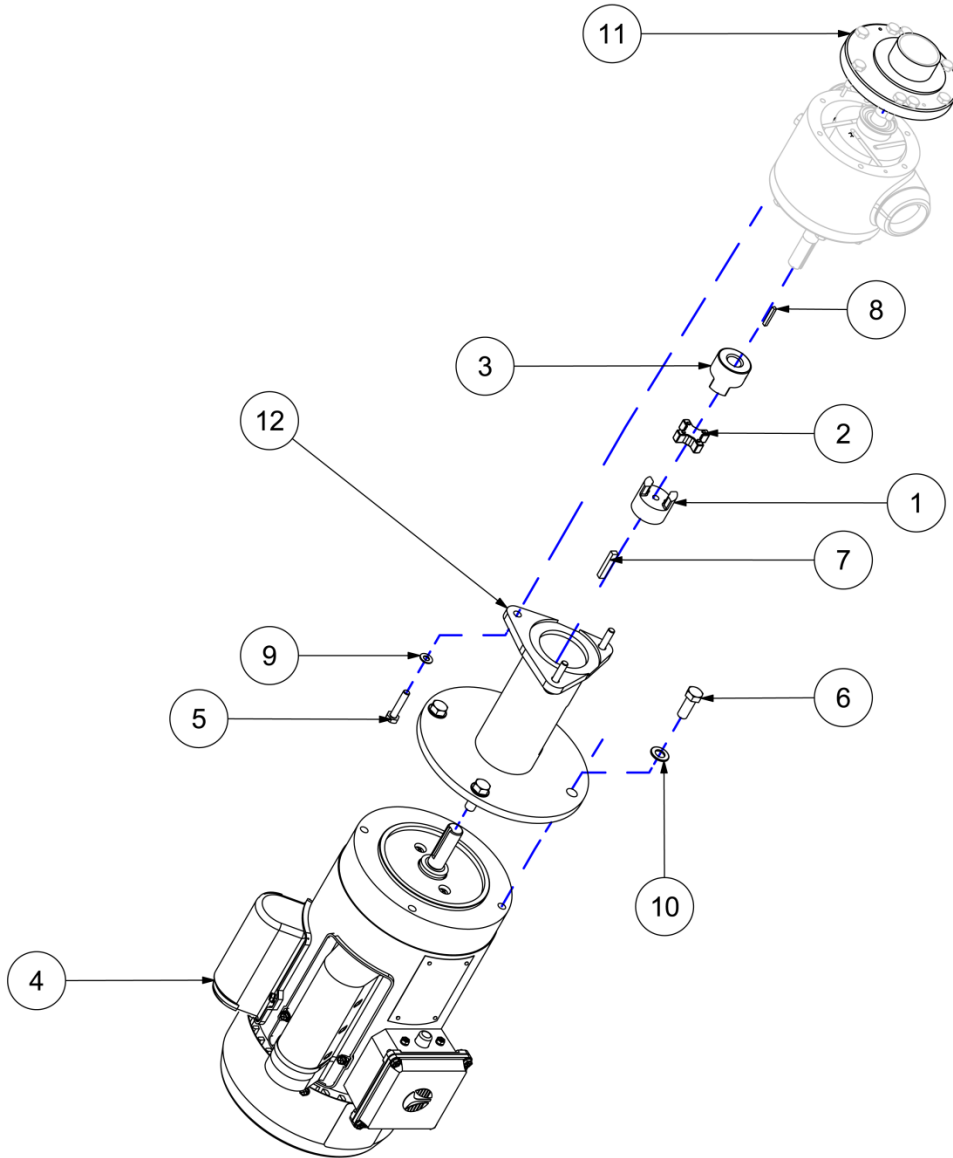


Power Primer Assembly 1 of 4

ITEM	DESCRIPTION	PART NUMBER	QTY
1	1/8 NPT BRASS PLUG	25-WHD-3152X2	1
2	SOLENOID	40-337	1
3	ROTATION DIRECTION LABEL	42-LBL-082	1
4	BOLT - 1/4-20 X 3/8" LONG	90-BLT-02520X038	4
5	BOLT - 1/4-20 X 1/2" LONG	90-BLT-02520X050	2
6	BOLT - 1/4-20 X 3/4" LONG	90-BLT-02520X075	4
7	BOLT - 1/4-20 X 1" LONG	90-BLT-02520X100	8
8	BOLT - 3/8-16 X 1" LONG	90-BLT-03816X100	2
9	HEX NUT - 5/16-18	90-NUT-HEX031-18	4
10	TAPERED PIN #4	90-PIN-TP4	2
11	LOCK WASHER - Ø 1/4"	90-WSR-LOC025	2
12	LOCK WASHER - Ø 5/16"	90-WSR-LOC031	4
13	LOCK WASHER - Ø 3/8"	90-WSR-LOC038	2
14	SAE WASHER - Ø 3/8"	90-WSR-SAE038	2
15	6202 15X35X7 BALL BEARING	IR-PMR-0030014	2
16	INTERNAL RETAINING RING FOR 6202 BEARING	IR-PMR-0030015	2
17	BEARING SEAL	IR-PMR-0030027	2
18	PRIMER DRIVE PLATE	IR-PMR-C001-A	1
19	PRIMER VANE	IR-PMR-C027	4
20	PRIMER HOUSING	IR-PMR-C003-A	1
21	PRIMER END PLATE	IR-PMR-C004	1
22	ROTOR	IR-PMR-C007	1
23	CADMAN DRY/WET POWER PRIMER MOTOR	IR-PMR-C008	1

For 12 volt DC Power Primers

Power Primer Assembly 2 of 4

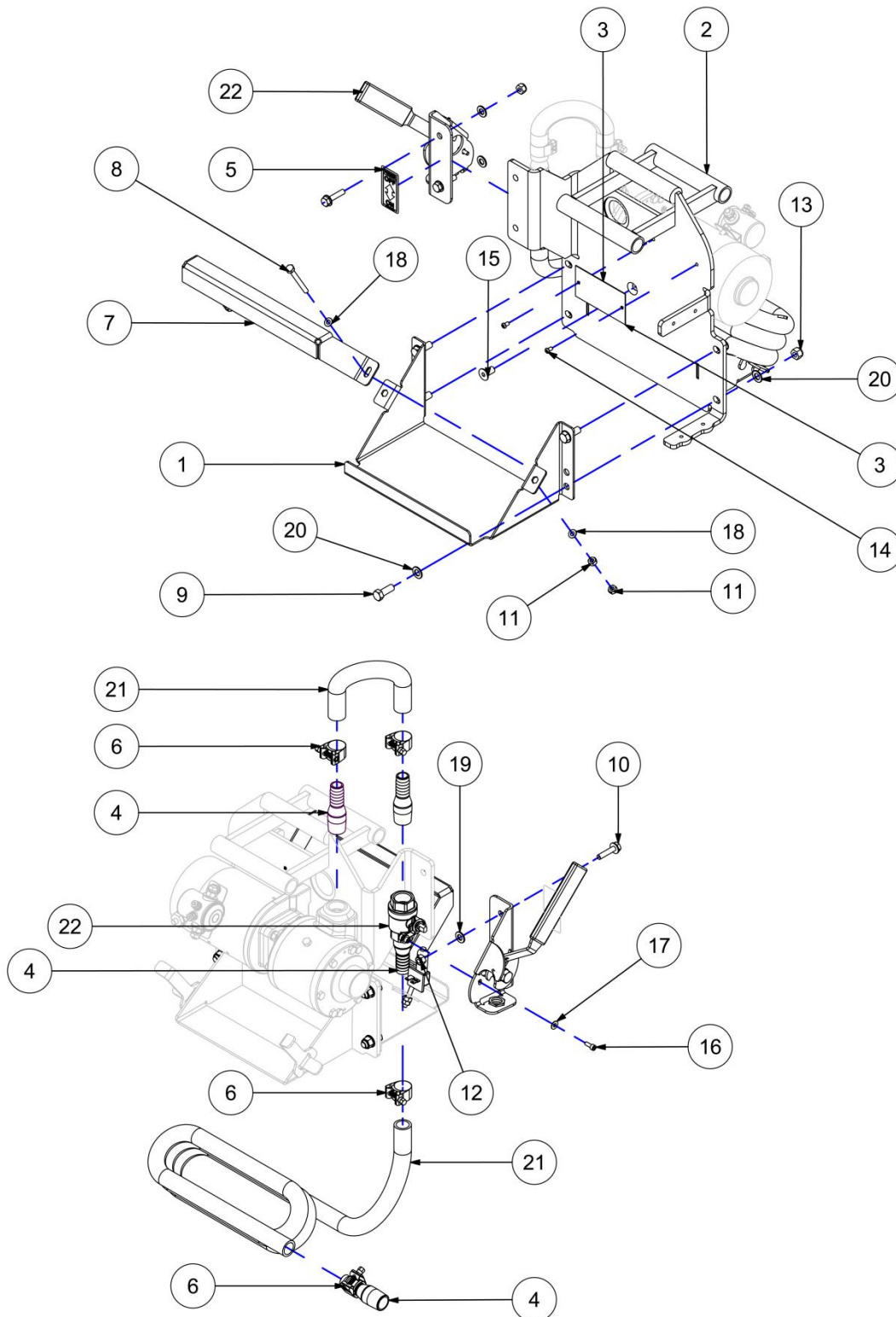


Power Primer Assembly 2 of 4

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	LOVEJOY L070 Ø5/8" BORE HUB	42-673	1	
2	LOVEJOY L070 Ø5/8" BORE INSERT	42-674	1	
3	LOVEJOY L070 Ø9/16" BORE HUB	42-684	1	
4	1.5 HP 3600 RPM 115/208-230V	42-ELC-074	1	110 V – 230 V
	1.5 HP 3600 RPM 575V 56C TEFC AL	42-ELC-127	1	460 V - 575 V
5	BOLT - 1/4-20 X 1 1/4	90-BLT-02520X125	3	
6	BOLT - 3/8-16 X 1" LONG	90-BLT-03816X100	4	
7	KEY - 3/16 X 1/4 X 1 1/4" LONG	90-KEY-019X025X125	1	
8	KEY - 1/8" SQUARE X 7/8" LONG	90-KEY-SQ013X088	1	
9	SAE WASHER - Ø1/4"	90-WSR-SAE025	3	
10	SAE WASHER - Ø3/8"	90-WSR-SAE038	4	
11	PRIMER END PLATE	IR-PMR-C004	2	
12	PRIMER TO MOTOR MOUNT	IR-PMR-C014-A	1	

For 110 volt - 230 volt and
460 volt - 575 volt
Power Primers

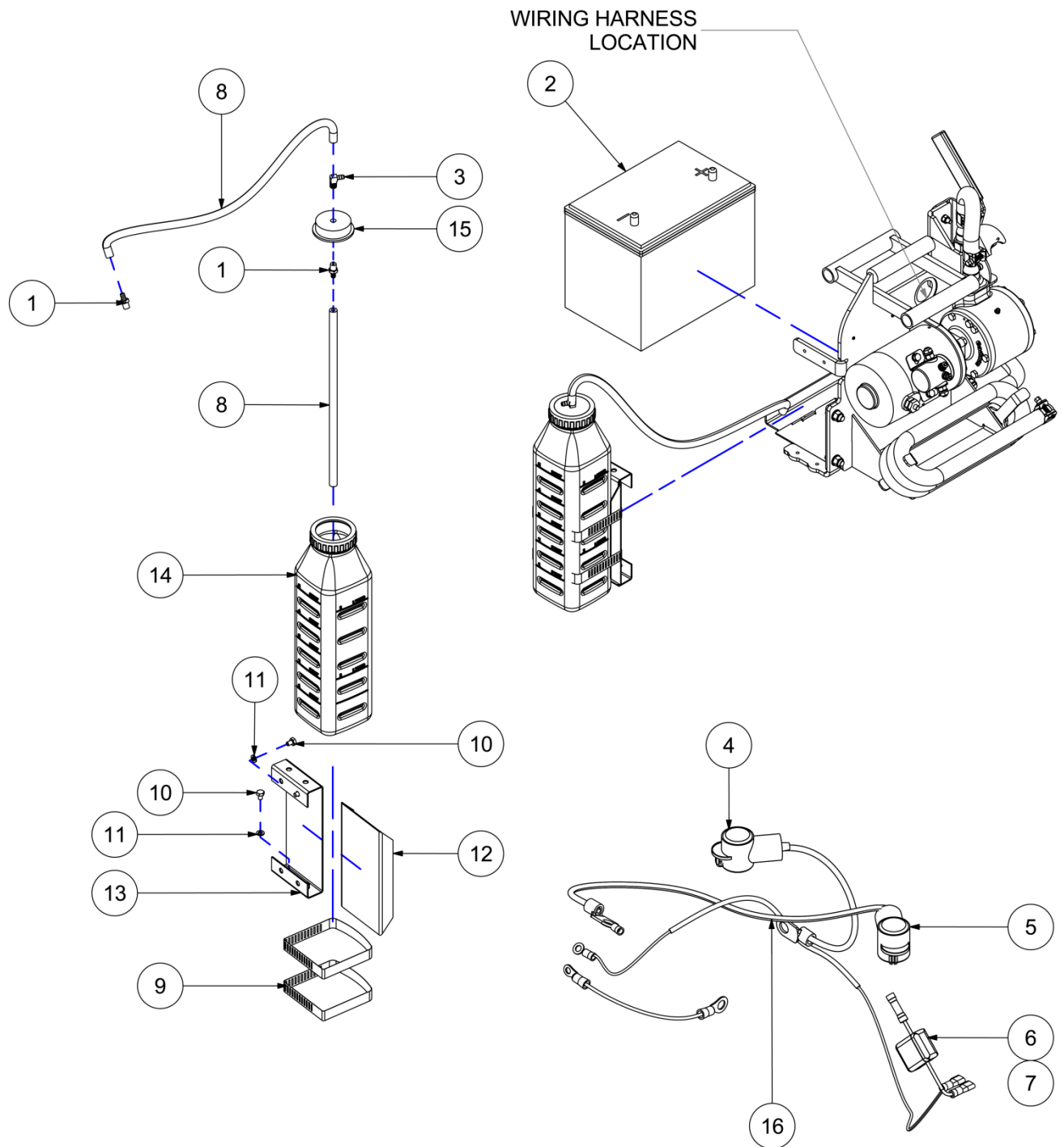
Power Primer Assembly 3 of 4



Power Primer Assembly 3 of 4

ITEM	DESCRIPTION	PART NUMBER	QTY
1	BATTERY BOX	09-644-A	1
2	PORTABLE PRIMER WELDMENT	18-818-A	1
3	CADMAN SERIAL NUMBER TAG	40-238-B	1
4	HOSE BARB - 3/4" X 3/4" NPT GALV.	40-NPT-BRB075G	4
5	LABEL - PRIMER VALVE SWITCH	42-LBL-068	1
6	Ø3/4" HD HOSE CLAMP	50-060	4
7	BATTERY HOLD DOWN	60-458	1
8	BOLT - 1/4-20 X 2 1/2" LONG	90-BLT-02520X250	2
9	BOLT - 3/8-16 X 1" LONG	90-BLT-03816X100	5
10	FLANGE HEAD BOLT - 5/16-18 X 3/4" LONG	90-BLT-F03118X125	2
11	HEX NUT - 1/4-20	90-NUT-HEX025-20	4
12	LOCK NUT - 5/16-18	90-NUT-LOC031-18	2
13	LOCK NUT - 3/8-16	90-NUT-LOC038-16	4
14	RIVET - 3/16" X 5/16" LONG	90-RIV-019X031	2
15	FLAT HEAD SCREW - 3/8" X 3/4" LONG	90-SCR-FH03816X075	1
16	SOCKET CAP SCREW - #10-24 X 1/2" LONG	90-SCR-SH01024X050	1
17	SAE WASHER - #10	90-WSR-SAE010	1
18	SAE WASHER - Ø1/4"	90-WSR-SAE025	4
19	SAE WASHER - Ø5/16"	90-WSR-SAE031	2
20	SAE WASHER - Ø3/8"	90-WSR-SAE038	9
21	Ø 3/4" SUCTION HOSE	IR-HOZ-SUC075HD	2
22	PRIMER HANDLE/SWITCH	IR-PMR-100	1

Power Primer Assembly 4 of 4

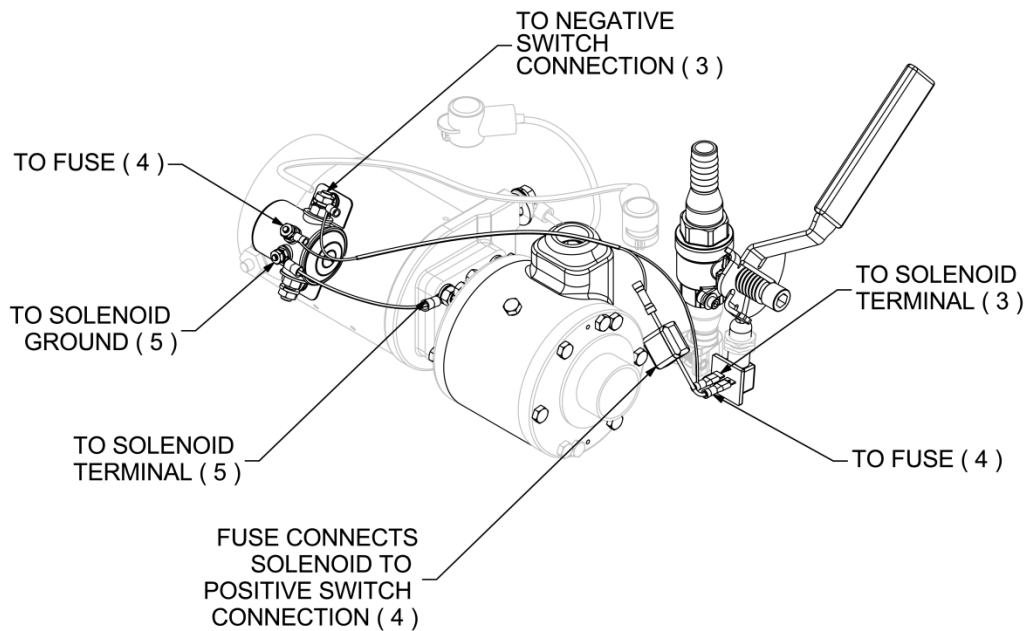
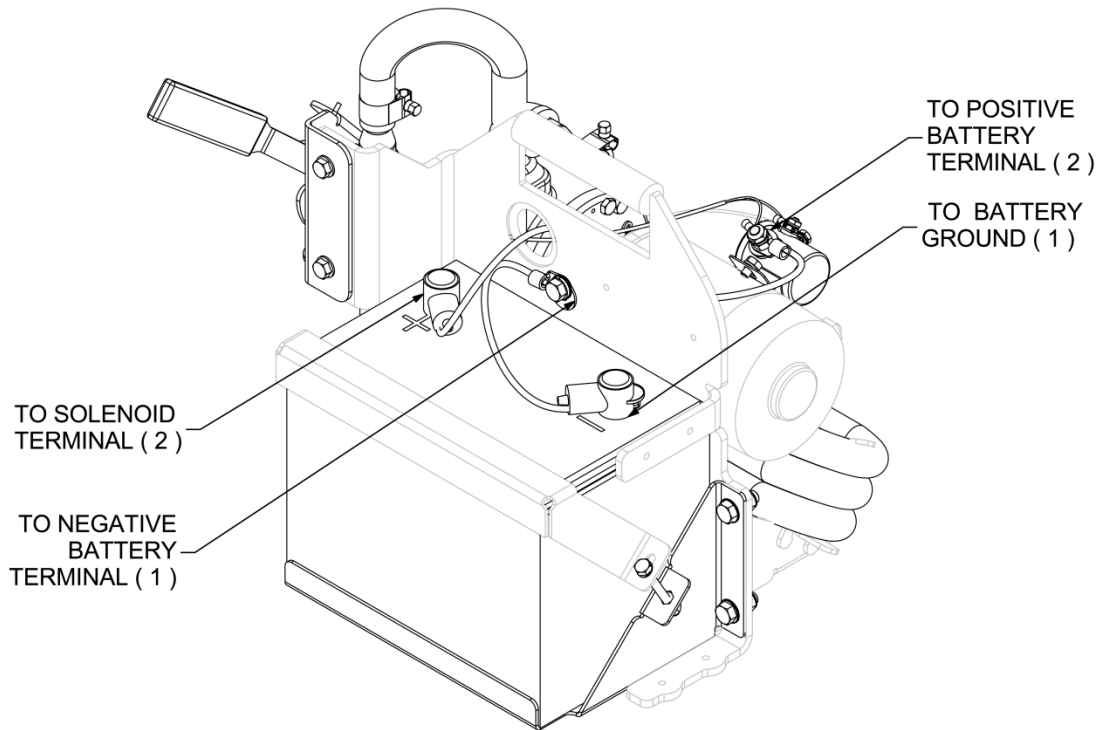


Power Primer Assembly 4 of 4

ITEM	DESCRIPTION	PART NUMBER	QTY	STD/OPTION
1	1/8" NPT x 1/4" HOSE BARB	25-WHD-125-4A	2	OPTION
2	BATTERY	40-880	1	OPTION
3	#2 MNPT X #4 BARB X 90° ELBOW	41-BFF-013X025X90	1	OPTION
4	BATTERY BOOT - BLACK 18-10G	42-315	1	STD
5	BATTERY BOOT - RED 18-10G	42-316	1	STD
6	WIRE - 14GA BLADE FUSE HOLDER	42-700	1	STD
7	30 AMP ATM FUSE	42-ELC-143	1	STD
8	Ø1/4" PUSH-ON HOSE	50-059	2	OPTION
9	GEAR CLAMP FOR PRIMER RESERVOIR	50-145	2	OPTION
10	BOLT - 1/4-20 X 3/8" LONG	90-BLT-02520X038	4	OPTION
11	LOCK WASHER - Ø1/4"	90-WSR-LOC025	4	OPTION
12	TANK HOLDER	IR-PMR-001	1	OPTION
13	TAK HOLDER BRACKET	IR-PMR-002	1	OPTION
14	OIL RESERVOIR WITH CAP	IR-PMR-0030023	1	OPTION
15	OIL RESERVOIR TAPPED CAP	IR-PMR-C019	1	OPTION
16	PRIMER WIRING HARNESS	IR-PMR-C023	1	STD

Power Primer oiling system is
Optional and does not
Come with standard
Power Primer unit

Electrical Connections



Required Maintenance

Prevention of mechanical failure is the goal of any good maintenance schedule. To make sure your Portable Power Primer performs as intended it is important to follow the maintenance schedule in this manual.



Maintenance must be done only when the Power Primer is shut down and is in a non-loaded condition. This means that all electrical connections are disconnected as well as all mechanical and hydraulic tension being released from the Power Primer.

When required

Your power primer will need new primer vanes periodically, and will require oil refills if equipped with the optional oiling system. No other maintenance is needed.

Troubleshooting

PROBLEM	RESOLUTION
Power primer won't start	Check electrical connections
	Check pump for foreign material
Power primer won't create suction	Check hoses and connections
	Damaged vanes, replace as needed

Vane Replacement

Step 1

Remove all 1/4" bolts from end plate. Then use bolts in sacking holes to remove end plate.

Step 2

Clean the housing interior and remove any debris. Once the housing interior is clean, remove the old rotor vanes and inspect the rotor to make sure it is clean as well.

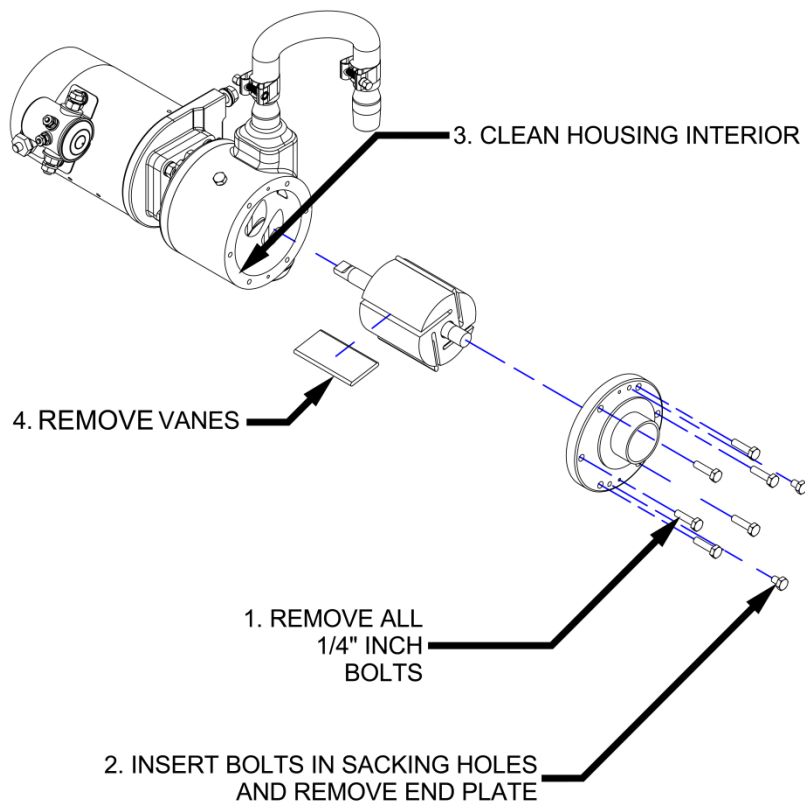


Figure 2 – Vane Replacement Reference 1

img-01180

Step 3

Apply silicone on the pump housing face after cleaning out pump housing and removing any old silicone. Make sure that silicone is on the outside of the pump housing edge to avoid debris inside the housing from dried silicone after assembly.

5. APPLY 1/16"
SILICONE BEAD
CLOSE TO OUTER
EDGE OF
PUMP HOUSING

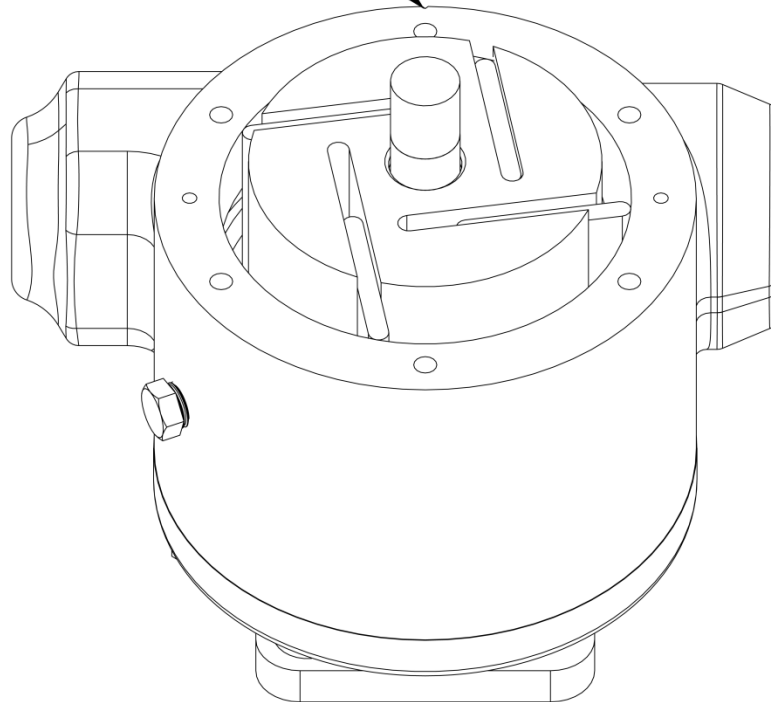


Figure 3 – Vane Replacement Reference 2

img-01181

Step 4

Insert new primer vanes into the rotor. Then line up dowels on end plate with matching holes on pump housing before bolting the end plate onto the pump housing.

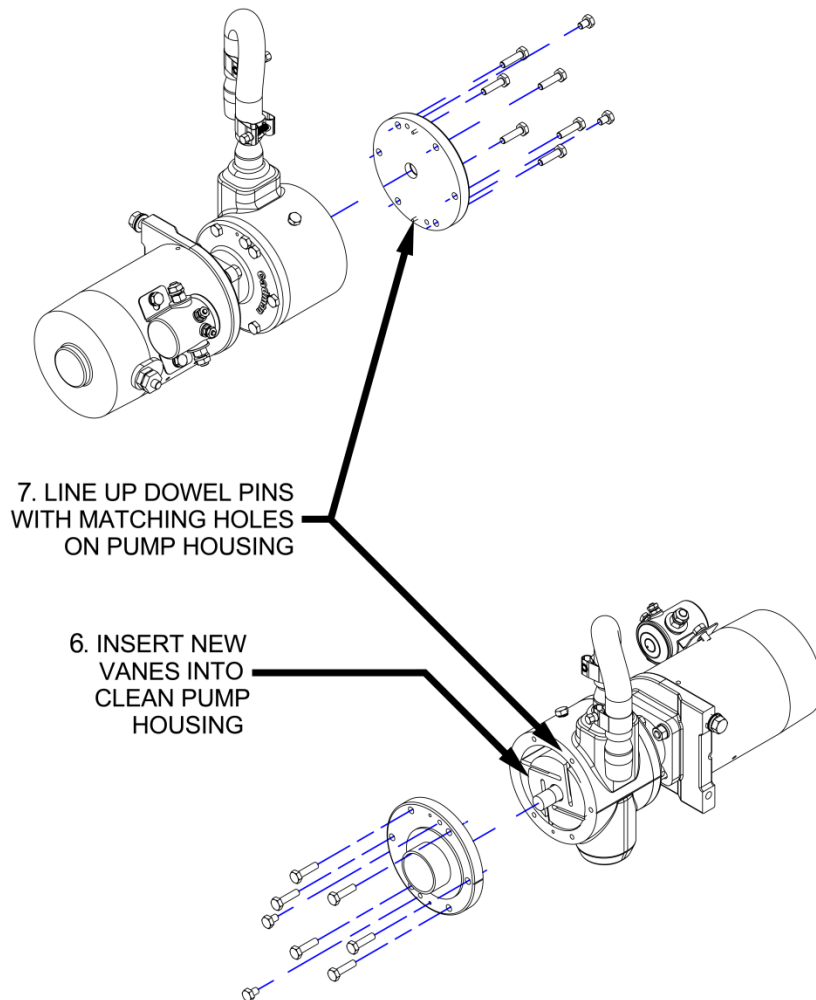


Figure 4 – Vane Replacement Reference 3

img-01182



Useful Information

LENGTH

1 FOOT	= 12 = 0.3048	Inches Meter	1 METER	= 39.37 = 3.2808	Inches Feet
1 ROD	= 198 = 16.5 = 5.5 = 5.029	Inches Feet Yards Meters	1 MILE	= 5280 = 1760 = 320 = 1609	Feet Yards Rods Meters

AREA

1 SQUARE FOOT	= 144 = 0.0929	Square Inches Square Meters
1 SQUARE YARD	= 1296 = 0.8361	Square Inches Square Meters
1 SQUARE METER	= 1550 = 10.764	Square Inches Square Feet
1 ACRE	= 43560 = 4047 = 0.4047	Square Feet Square Meters Hectare
1 HECTARE	= 107639 = 10000 = 2.47105	Square Feet Square Meters Acres
1 SQUARE MILE	= 640 = 259	Acres Hectares

VOLUME

1 GALLON (US)	= 0.8327 = 231 = 0.1337 = 8.345	Imperial Gallons Cubic Inches Cubic Feet Pounds
1 CUBIC FOOT	= 1728 = 7.48 = 62.4 = 28.32	Cubic Inches Gallons (US) Pounds Liters
1 ACRE INCH	= 27154 = 254	Gallons (US) Cubic Meters / Hectare
AREA OF A CIRCLE		= Diameter x Diameter x 0.7854
CYLINDER VOLUME (US GAL.)		= Diameter (ft.) x Diameter (ft.) x Length (ft.) x 5.8752