



1645 Lemonwood Dr.
Santa Paula, CA 93060 USA
Toll Free +1.800.253.2363
Tel: +1.805.933.9970
Fax: +1.805.933.9160
www.rangerproducts.com

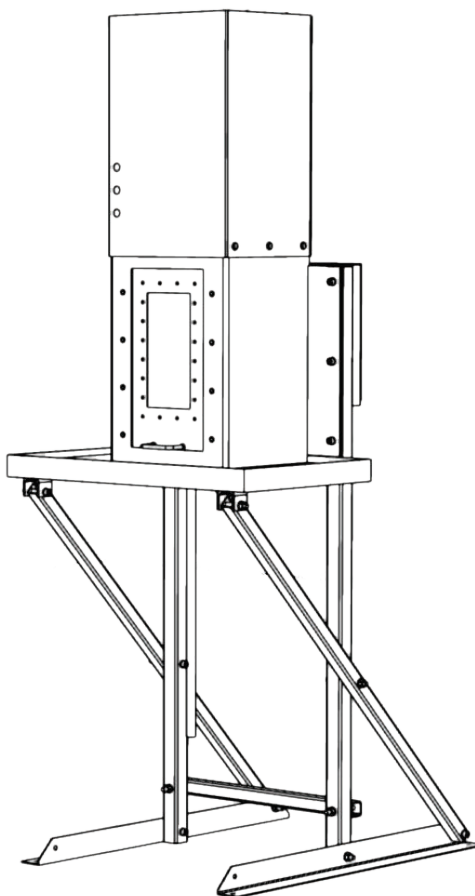
High-Speed Oil Filter Crusher

Installation and Operation Manual

Revision B — March 2017 — Manual P/N 5900392

Model:

- RP-50FC



Always operate this equipment as directed; failure to do so may cause injury or death. Read the entire contents of this manual prior to installation or operation. Make sure all other operators also read this manual. By proceeding with setup and operation, you agree that you fully understand the contents of this manual.

Manual. High-Speed Oil Filter Crusher, *Installation and Operation Manual*, P/N 5900392, Rev. B, March 2017. Designed and engineered by BendPak Inc. in the USA. Made in China.

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Limitations. Every effort has been made to ensure complete and accurate instructions are included in this manual. However, product updates, revisions, and/or changes may have occurred since this manual was published. BendPak Ranger reserves the right to change any information in this manual without incurring any obligation for equipment previously or subsequently sold. BendPak Ranger is not responsible for typographical errors in this manual.

Warranty. The BendPak Ranger warranty is more than a commitment to you: it is also a commitment to the value of your new product. For full warranty details and to register your new BendPak Ranger product, contact your nearest BendPak Ranger dealer or visit www.bendpak.com/support/warranty.

Safety. Your new product was designed and manufactured with safety in mind. Your safety also depends on proper training and thoughtful operation. Do not set up, operate, maintain, or repair the unit without reading and understanding this manual and the labels on the unit.

Owner Responsibility. In order to maintain your product properly and to ensure operator safety, it is the responsibility of the product owner to read and follow these instructions:

- Follow all setup, operation, and maintenance instructions.
- Make sure product setup conforms to all applicable local, state, and federal codes, rules, and regulations, such as state and federal OSHA regulations and electrical codes.
- Read and follow all safety instructions. Keep them readily available for operators.
- Make sure all operators are properly trained, know how to safely operate the unit, and are properly supervised.
- Do not operate the product until you are certain that all parts are in place and operating correctly.
- Carefully inspect the product on a regular basis and perform all maintenance as required.
- Service and maintain the unit only with approved replacement parts.
- Keep all instructions permanently with the product and make sure all labels are clean and visible.

Unit Information. Enter the Model Number, Serial Number, and the Manufactured on date from the label on your unit. This information is required for part or warranty issues.

Model: _____

Serial: _____

Manufactured on: _____

		Santa Paula, CA USA www.rangerproducts.com	
MODEL NUMBER			
SERIAL NUMBER			
VOLTAGE			
DESCRIPTION			
DATE OF MFG.			
		DANGER! Disconnect Power Before Servicing	
WARRANTY VOID IF DATA PLATE IS REMOVED		CE EAC	
PN 5905279			

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Introduction

This manual describes the RP-50FC high-speed oil filter crusher from Ranger Products, which applies up to 25 tons of electric hydraulic pressing power to flatten just about any used oil filter to approximately 20 percent of its size while removing up to 95 percent of the residual oil.

More information about the full line of Ranger Products is available at www.rangerproducts.com.

This manual is mandatory reading for all users of the RP-50FC, including anyone who sets it up, operates it, maintains it, or repairs it.

 **DANGER** Be very careful when setting up, operating, maintaining, or repairing this equipment; failure to do so could result in property damage, product damage, injury, or (in very rare cases) death. Make sure only authorized personnel operate this equipment. All repairs must be performed by an authorized technician. Do not make modifications to the unit; this voids the warranty and increases the chances of injury or property damage. Make sure to read and follow the instructions on the labels on the unit.

Keep this manual on or near the equipment so that anyone who uses or services it can read it.

Technical support and service for your RP-50FC is available directly from your distributor or by calling the **Ranger Products Technical Support Hotline at +1.805.933.9970**. You may also contact the Hotline for consultation on parts replacement (please have the serial number and model number of your unit available).

Shipping Information

Your equipment was carefully checked before shipping. Nevertheless, you should thoroughly inspect the shipment **before** you sign to acknowledge that you received it.

When you sign the bill of lading, it tells the carrier that the items on the invoice were received in good condition. *To protect yourself, do not sign the bill of lading until **after** you have inspected the*

shipment. If any of the items listed on the bill of lading are missing or are damaged, do not accept the shipment until the carrier makes a notation on the bill of lading that lists the missing and/or damaged goods.

If you discover missing or damaged goods **after** you receive the shipment and have signed the bill of lading, notify the carrier at once and request the carrier to make an inspection. If the carrier will not make an inspection, prepare a signed statement to the effect that you have notified the carrier (on a specific date) and that the carrier has failed to comply with your request.

It is difficult to collect for loss or damage after you have given the carrier a signed bill of lading. If this happens to you, file a claim with the carrier promptly. Support your claim with copies of the bill of lading, freight bill, invoice, and photographs, if available. Our willingness to assist in helping you process your claim does not make us responsible for collection of claims or replacement of lost or damaged materials.

Safety Considerations

Read this manual carefully before using your new product. Do not set up or operate the product until you are familiar with all operating instructions and warnings. Do not allow anyone else to operate the product until they are also familiar with all operating instructions and warnings.

Safety Information

Please note the following:

- The product is a high-speed oil filter crusher. **Use it only for its intended purpose.**
- The product should only be operated by authorized personnel. Keep children and untrained personnel away from the product.
- Do not crush aerosol cans, cylinders of compressed gas, fuel filters, or containers of flammable liquids or solvents.
- Do not open the door while the unit is operating; always wait for the end of the automatic cycle.
- When using the product, wear appropriate work clothes and ANSI-approved safety goggles. Do not wear loose clothing or jewelry. Keep hair and clothing away from moving parts.
- When the product is in use, keep all body parts away from it.
- Do not use the product while tired or under the influence of drugs, alcohol, or medication.
- Do not use the product in the presence of cigarette smoke, dust, or flammable liquids or gases.
- Only use the product indoors in a well-ventilated area.
- Do not make any modifications to the product.
- Secure the unit to a dry, clean, flat concrete surface; do not install it on asphalt or wood.
- Make sure all operators read and understand the *Installation and Operation Manual*. Keep the manual near the device at all times.
- Avoid using an extension cord; they can overheat. If you must use an extension cord, make sure it is No. 14 AWG **minimum**.
- Make a visual inspection of the product before using it. Do not use the product if you find any missing or damaged parts. Instead, contact an authorized repair facility, your distributor, or the Ranger Products Technical Support Hotline at +1.805.933.9970.
- BendPak Ranger recommends making a **thorough** inspection of the product at least once a year. Replace any damaged or severely worn parts, decals, or warning labels.

Hazard Symbols

Following are the hazard symbols used in this manual:



DANGER

Calls attention to an immediate hazard that **will** result in death or severe injury.



WARNING

Calls attention to a hazard or unsafe practice that **could** result in death or severe personal injury.



CAUTION

Calls attention to a hazard or unsafe practice that could result in minor personal injury, product, or property damage.

Liability Information

BendPak Ranger assumes **no** liability for damages resulting from:

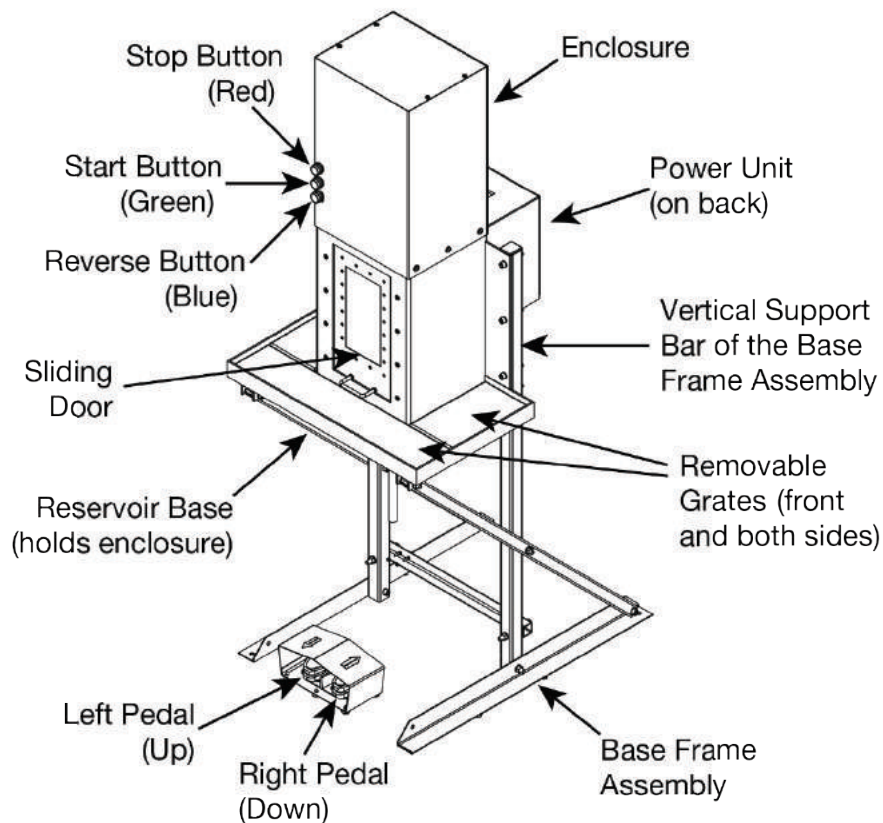
- Use of the equipment for purposes other than those described in this manual.
- Modifications to the equipment without prior, written permission from BendPak Ranger.
- Damage to the equipment from external influences.
- Incorrect operation of the equipment.

Specifications

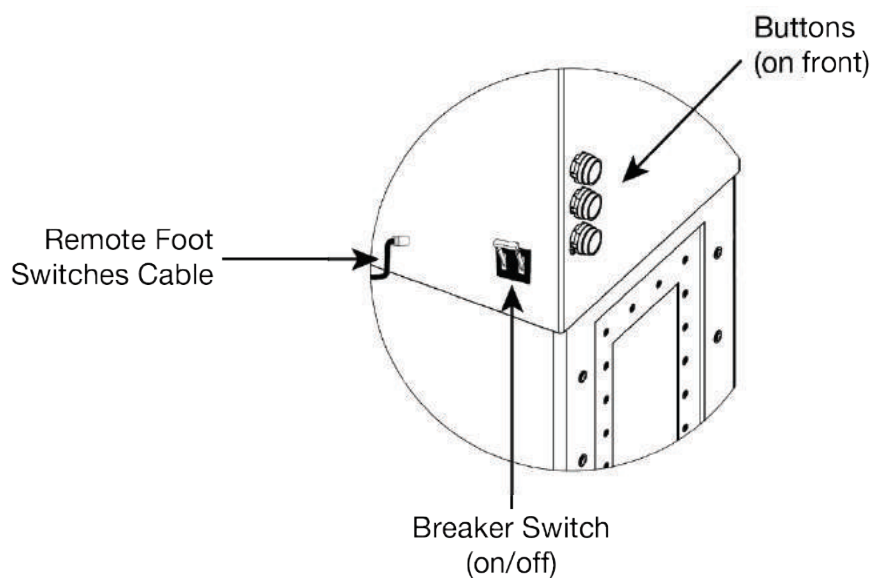
Height	90.5" / 2,299 mm
Width	32.5" / 826 mm
Depth	31.5" / 800 mm
Chamber opening height	16" / 406 mm
Chamber opening width	9.8" / 249 mm
Chamber opening depth	11.5" / 292 mm
Average cycle time	8 to 15 seconds
Weight	415 lbs / 188 kg
Power unit	208–230 V, 60 Hz, 1Ph

Components

The following figure shows many of the components of the RP-50FC.



There are also components on the left side of the enclosure.



Setup

This section describes how to get your RP-50FC up and running.

Tools and Supplies

You need to provide the following:

- Wrenches and screwdrivers appropriate for assembling the unit.
- A drill and concrete drill bit to mount the unit to the floor, if desired.
- A plug to connect to the power unit's electrical cord.

Unpacking

Use caution when unpacking the RP-50-FC components from their shipping containers.



Tip

Consider unpacking the RP-50FC components in the area where you are going to assemble the unit.

Screws

Assembling the unit requires the use of several different types of screws:

- Socket head cap screws (14), M12 by 1.75 by 80, referred to as Screw A
- Socket head cap screw (4), M12 by 1.75 by 120, referred to as Screw B
- HHB MM 8 by 35 (4), referred to as Screw C

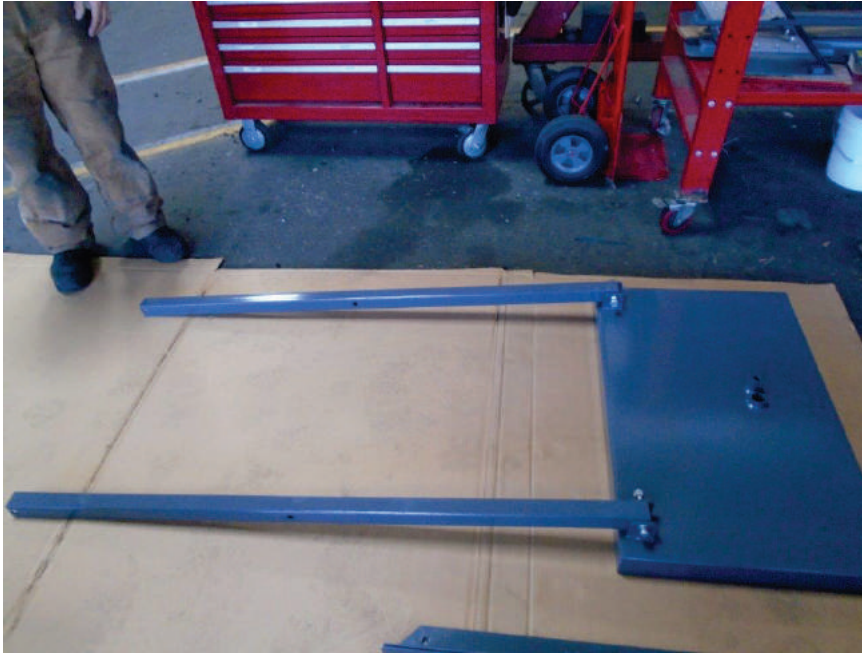
Assembly

Your RP-50FC comes disassembled (to protect the components during shipping).

The assembly process happens in multiple phases. Perform them in the order shown.

Assembling the base frame:

1. Connect the left and right base frame support bars to the reservoir base. Use Screw A with washer and nut.



2. Bolt the base frame vertical support bars to the reservoir base. Use Screw A with washer and nut.



-
3. Bolt the base frame support bars to the vertical support bars. Use Screw B with washer and nut.



4. Bolt the base frame legs to the vertical support bars. Use Screw A with washer and nut.



-
5. Stand up the base frame assembly and the reservoir base.



The base frame assembly and reservoir base are now assembled.

Mounting the enclosure to the base frame:

1. Remove the top of the enclosure, exposing the eye hitch.
2. Use the eye hitch to lift the enclosure onto the reservoir base.



Eye Hitch

3. Bolt the enclosure onto the base frame and reservoir.



-
4. Bolt the enclosure to the vertical support bars on both sides. Use Screw A with one flat washer, two ridged washers, and one nut.



The enclosure is now mounted to the base frame.

Connecting the equipment:

1. Remove the rear panel of the enclosure.





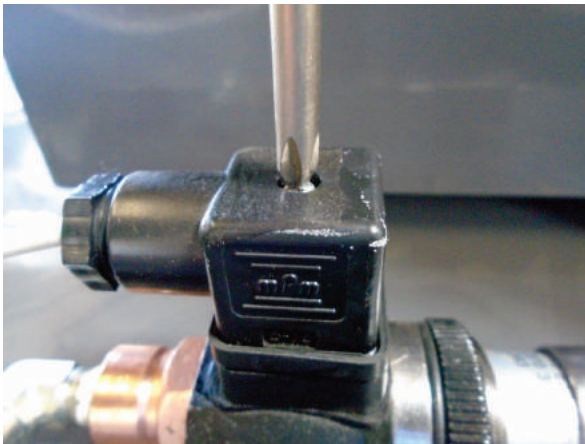
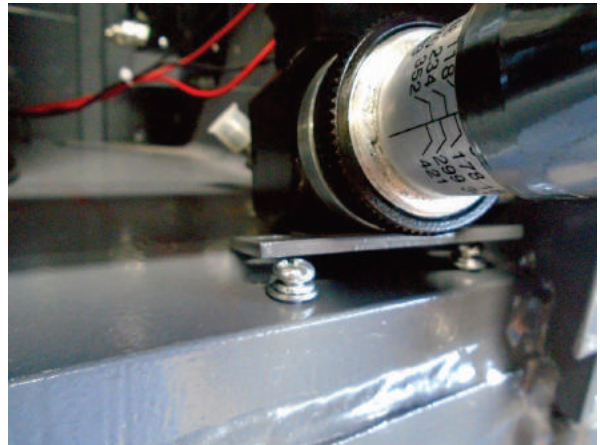
2. Connect the cylinder hose to the pressure switch. Tighten the hose to the cylinder at the top.



**Tip**

Remove the top connector on the pressure switch, allowing it to be move around, thus making it easier to connect the cylinder hose.

3. Screw down the pressure switch.



4. Connect the **anti-vibration pad and the motor at the same time** to the back of the enclosure.

Use Screw C and two washers per screw to attach the anti-vibration pad.

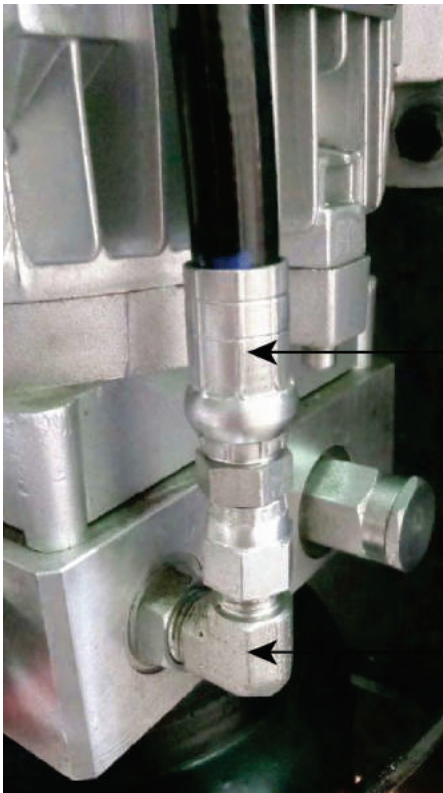


5. Attach the hydraulic fitting to the left and right sides of the motor.

6. Attach the 664 mm hose (on the left below) to the hydraulic fitting on the left side of the motor.



7. Attach the 758 mm hose (on the left above) to the hydraulic fitting on the right side of the motor.



Long (758 mm) hose

*Attach short (644 mm)
hose to hydraulic fitting
on left side of motor*

Hydraulic fitting

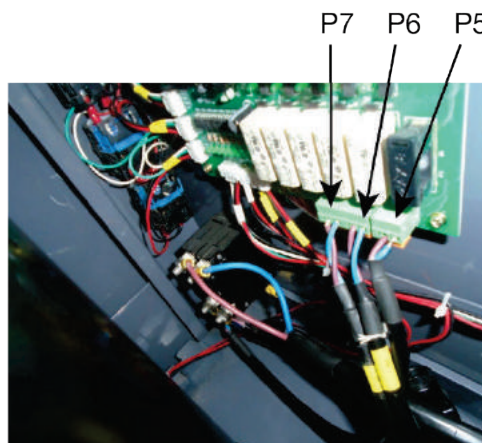
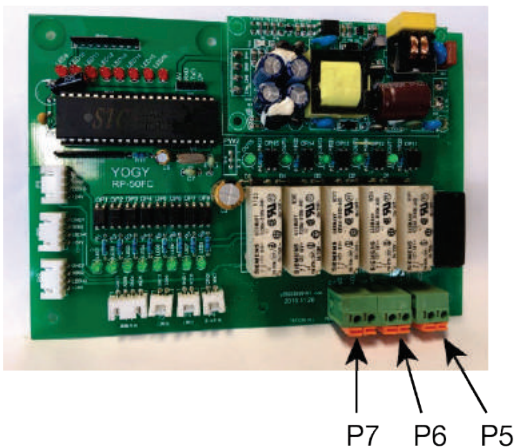
Right side of motor

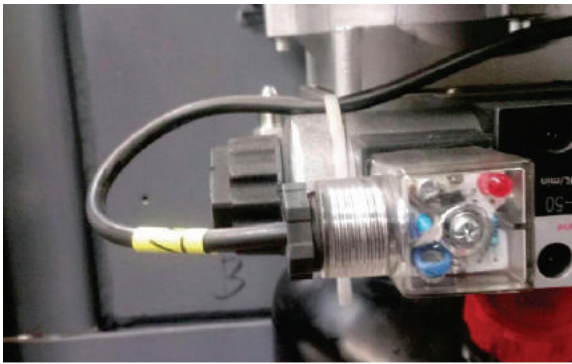
8. Add hydraulic oil to the motor.



Attaching the wiring:

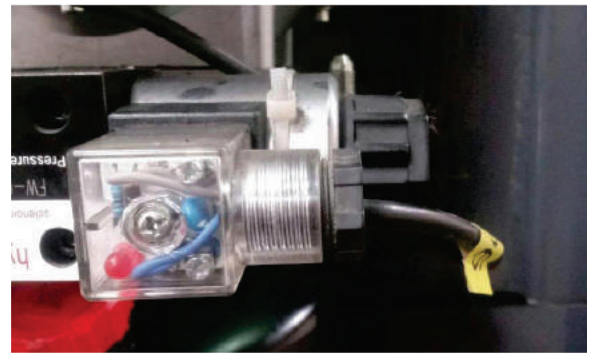
1. Wires labeled P6 and P7 connect to the control board and to terminals on the motor.





Left side of motor

Connect one end of P7 to the control board, the other end to the left terminal shown above.

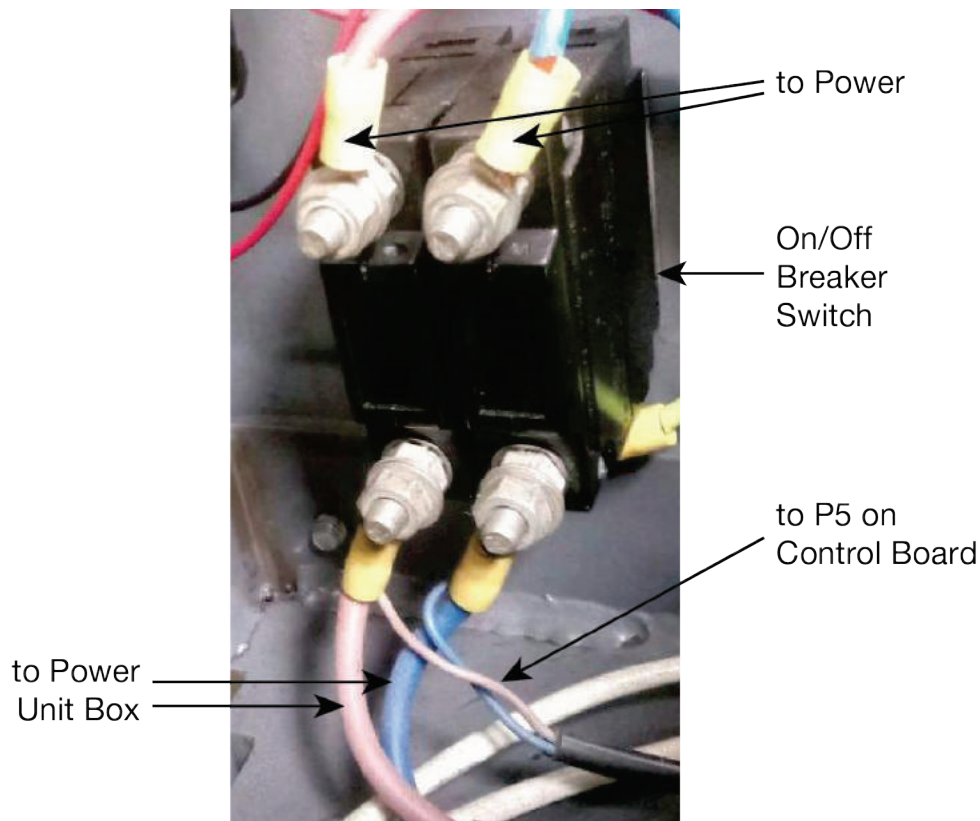


Right side of motor

Connect one end of P6 to control board, the other end to the right terminal shown above.

2. The P5 wire attaches differently than P6 and P7.

Connect P5 first to ***the bottom of the on/off breaker switch***.



The shorter two wires connect to P5 on the control board (see image of control board above). The longer red and blue wires connect to the power unit box on the power unit.

Note: You have to remove the screws on the power unit box to connect the P5 wire.

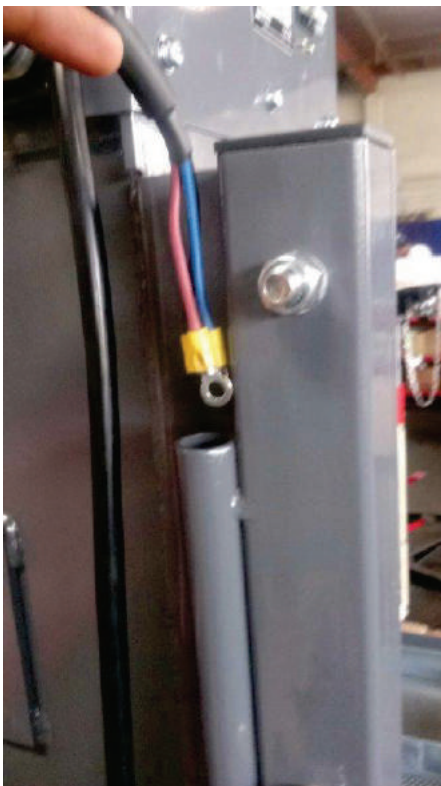


P5 wire,
from On/Off
Breaker Switch

*Cut and remove
green wire, unscrew
and remove white
and black wires*

Power Unit Box
cover removed

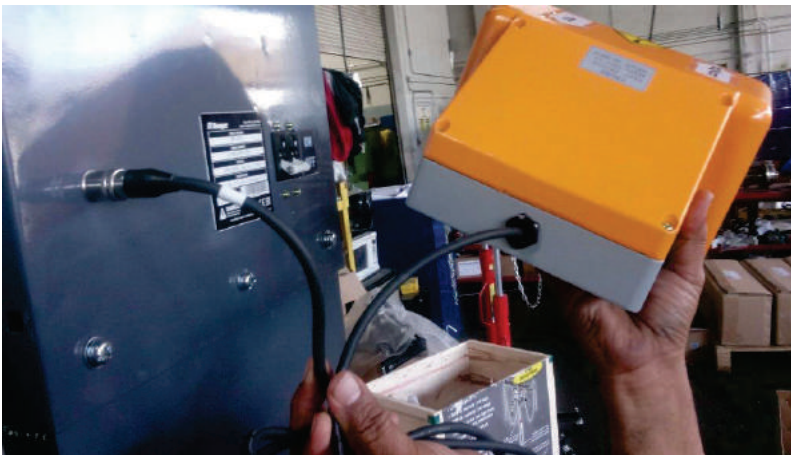
3. Connect one end of the power cord to ***the top of the on/off breaker switch*** (see above), including the ground wire.
4. Slide the other end of the power cord through the top of the tube on the vertical support bar (part of the frame) all the way through to the bottom, then connect it to an appropriate plug.



-
5. Attach the plug on the end of the power unit cord to an appropriate power source.



6. Connect the foot pedal to the remote foot switches cable on the left side of the unit.



7. Install the left, right, and center grates into the reservoir base.
The unit is now ready for operation.



Operation

The correct way to press any of the control buttons is to firmly press and then release. Pressing *and holding* the control buttons can cause damage to the unit.

There are three control buttons on the RP-50FC:

- **Start button, green.** Activates the automatic pressing cycle. When pressed, the press ram moves down until it contacts the item you are crushing. The press ram automatically stops when it reaches maximum crushing pressure, after which it automatically retracts until it returns to the starting position.
- **Stop button, red.** Stops all movement of the press ram if it is in use. This is your emergency stop.
- **Reverse button, blue.** Returns the press ram to its original starting position. Do not hold it in when retracting the press ram.

 **WARNING** Avoid off-center loads. If the press ram seems to be laboring more than usual or the filter/can is unusually hard to press, stop operation. Do not operate the press ram if the filter/can tilts or binds during the downward movement of the press head.

To operate the CB-30:

1. Place an approved waste oil container under the oil drain.
2. Lift the sliding door firmly and place an empty filter or paint can in the center of chamber, open end down.

 **WARNING** Grip the sliding door firmly at all times when placing or retrieving filters in the chamber. Never attempt to operate the crusher with the door open.

3. Close the sliding door.

Important: You cannot crush an item until the sliding door is fully closed.

4. Press and release the green button; an automatic cycle begins.

Once the automatic cycle starts, step away from the unit.

The press ram will extend downwards, crush the item, then automatically retract to the original starting position and shut off.

5. To remove the crushed filter/can, open the sliding door and pull out the crushed item.

Do not get distracted. Be very careful not to scratch, cut or puncture your skin on the filter's sharp edges.

 **WARNING** Do not attempt to remove a stuck filter or paint can until you stop the automatic pressing cycle using the Red button.

6. Put the breaker switch (on the top left side of the unit) to the Off (down) position when the unit is not in use.

Using the Foot Pedals

The foot pedals operate differently than the control buttons.

To manually operate the RP-50FC using the foot pedals:

1. Make sure the foot pedals cable is connected to the left bottom side of the control box.
2. Press and hold the right pedal to move the press ram downwards.
If you stop pressing the right pedal, the press ram stops moving downwards. You must hold it down to continue the press ram moving downwards.
3. Press and hold the left pedal to move the press ram back up towards the starting position
If you stop pressing the left pedal, the press ram stops moving upwards.
4. Either foot switch can also serve as an emergency stop. Press on a pedal and then stop pressing; the press ram stops moving.

Maintenance

 **WARNING:** Unplug the unit from its power source ***before performing any maintenance!***

To maintain the RP-50FC:

- If you need work done on your power unit, you ***must*** use a qualified electrician.
- Make sure to keep the press clean and free of debris and dirt. These can cause failure in the hydraulic system.
- All exposed machine surfaces of the press should be brushed clean and wiped with a lubricant, such as WD-40®, on a regular basis.
- Regularly clean the press chamber to remove any accumulated sludge, metal particles, or other debris that could affect press operation.
- Keep the breather hole and oil drain free of accumulation of debris; remove any materials that may be clogging the drain.
- Inspect for leaks and drain the approved waste oil container in accordance with all local, state, and federal regulations.
- Lubricate the sliding door on a regular basis to prevent the door from binding.
- Keep the red emergency button clean and in working order.
- Change or replace the hydraulic oil with SAE-10W or 20W non-foaming hydraulic oil every 5000 cycles (or about once each year), depending on the degree of usage and the cleanliness of the work environment. Verify that the ram is completely retracted during oil change service.
- During oil change service, remove the oil reservoir and clean away any dirt or other abrasive materials around the filler cap. With the oil reservoir removed, clean away dirt or other abrasive materials that have accumulated on the oil suction tube filter.
- Cycle the pump and ram without building pressure. Retract the ram and check the oil level in the pump reservoir. Fill reservoir until the oil level is one inch from the bottom of the fill port.

Troubleshooting

Issue	Action to Take
Ram does not move when buttons or foot pedals are pressed.	Check the connections to the power source. Make sure all equipment connections are wiring are set up correctly. Make sure the sliding door is fully closed. If the sliding door is not fully closed, the safety switch does not activate, which prevents the ram from crushing. Make sure the breaker on the left side of the unit (when looking at the front) is in the up/on position.
Ram moves sluggishly.	Check to see if air is trapped in the hydraulic system. If there is air, loosen the hose fittings at the ram and run the pump until you see a steady flow of oil that is free of air bubbles escaping from the loosened fittings. Retighten the hose fittings.
Cycle stops before completing.	Press the red Stop button to end the cycle. Check to see if the item being crushed is stuck; if so, remove the item and start again. Check to see if the item being crushed is off center. If so, balance the load and start again.
The green Start button works, but the right Down pedal does not.	Make sure the foot pedals are connected to the remote foot switches cable on the left side of the unit.

Warranty

The BendPak Ranger warranty is more than a commitment to you; it is also a commitment to the value of your new product.

For full warranty details and to register your new product, contact your nearest BendPak Ranger dealer or visit www.bendpak.com/support/warranty and select the **Ranger Warranty** option.

Parts Diagrams

REV

DESCRIPTION

REVISION

A

PRODUCTION RELEASE

01/22/2015

TM

00667

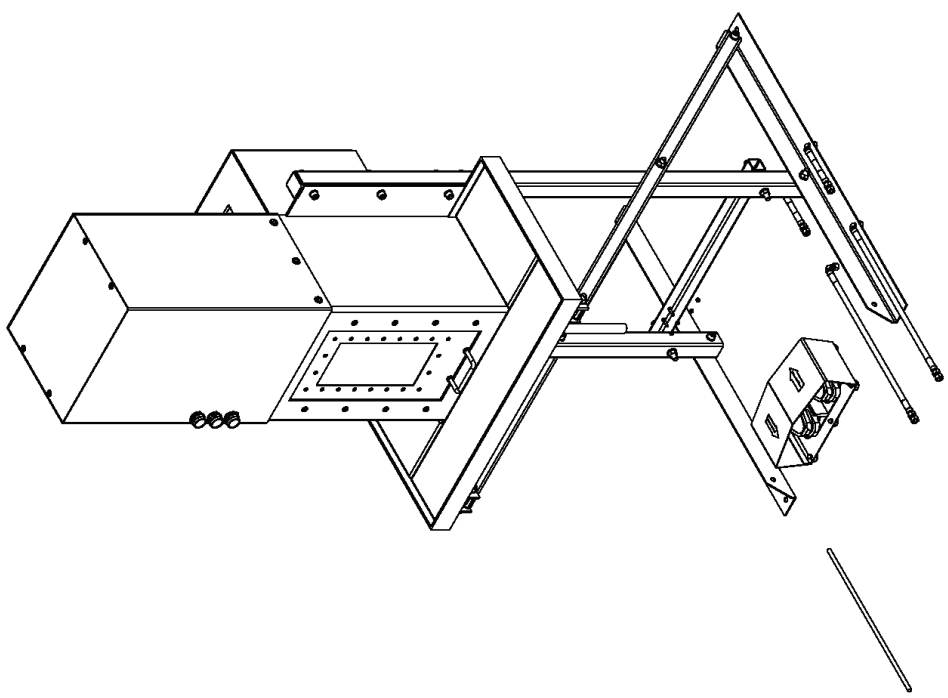
B

REMOVED 571 5019, 5523401, 5530013, AND 5535995, UPDATED BOM REVISIONS

02/19/2016

TM

00751



ITEM NO

PART NUMBER

DESCRIPTION

QTY

REV

1	5523404	RP-50FC PARTS BOX	1	A
2	5523383	RP-50FC BASE FRAME ASSEMBLY	1	A
3	5523396	RP-50FC ENCLOSURE WELDMENT	1	B
4	5523376	RP-50FC TOP ENCLOSURE WELDMENT	1	B
5	5523377	RP-50FC SLIDING DOOR ASSEMBLY	1	B
6	5523400	RP-50FC STOP COLLAR ASSEMBLY	1	A
7	5523398	RP-50FC STOP SWITCH MOUNTING ASSEMBLY	1	A
8	5502002	Ø3.5 x 14.8 CYLINDER ASSEMBLY	1	A
9	5523356	RP-50FC SIDE GRATE, L.H.	1	A
10	5523357	RP-50FC SIDE GRATE, R.H.	1	A
11	5523355	RP-50FC GRATE, FRONT	1	A
12	5523367	RP-50FC MOTOR COVER	1	A
13	5523365	RP-50FC MOTOR COVER CLOSEOUT	1	A
14	5523364	RP-50FC DRAIN PIPE FITTING	1	A
15	5523362	RP-50FC CRUSHER PUSH PLATE	1	A
16	5523369	RP-50FC TOP ENCLOSURE TOP	1	A
17	5523371	RP-50FC TOP ENCLOSURE REAR CLOSEOUT	1	A
18	5523386	RP-50FC SLIDING DOOR RAIL, R.H.	1	A
19	5523384	RP-50FC SLIDING DOOR RAIL, L.H.	1	A
20	5523351	RP-50FC CYLINDER LOCK RING	1	A
21	5545201	WASHER, M12 SPRING LOCK	6	-
22	5545347	WASHER, M12 FLAT WASHER	6	-
23	5530125	SHCS M12 x 1.75 x 80	6	-
24	553012	NUT M12x1.75 NL	6	-
25	5545034	WASHER M5 x Ø15 FLAT	28	-
26	5530257	BHP'S M5 x 0.8 x 16	28	-
27	5535142	NUT M5 x 0.8 NL	28	-
28	5545021	WASHER M8 x Ø20 FLAT	6	-
29	5715018	RP-50FC PLASTIC COVER BLOCK 56 x 50	2	A
30	5535001	NUT M8 x 1.25 NL	6	-
31	5530160	BHP'S M8 x 1.25 x 20	6	-
32	5530774	SHCS M6x1x16mm	2	-
33	5523405	RP-50FC DOOR SWITCH MOUNT	1	A
34	5545024	WASHER M3 x 9mm	3	-
35	5535030	NUT M3 x 0.5	3	-
36	5530268	PHPS M3 x 0.5 x 10	3	-
37	5545226	WASHER M5 x 9.2mm SL	2	-
38	5405101	SHCS M5 x 0.8 x 20	2	-
39	5520018	PC BOARD SNAP-IN RAIL GUIDE	2	-

DO NOT SCALE DRAWING

DRAWN

CHECKED

NAME

DATE

TM

01/22/2015

1645 LEMONWOOD DR.
SANTA PAULA, CA 93060



THIRD ANGLE PROJECTION



SMILEY FACE

THIRD ANGLE PROJECTION

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RP-50FC OIL FILTER CRUSHER ASSEMBLY

SIZE DWG. NO. A 5150086

REV B

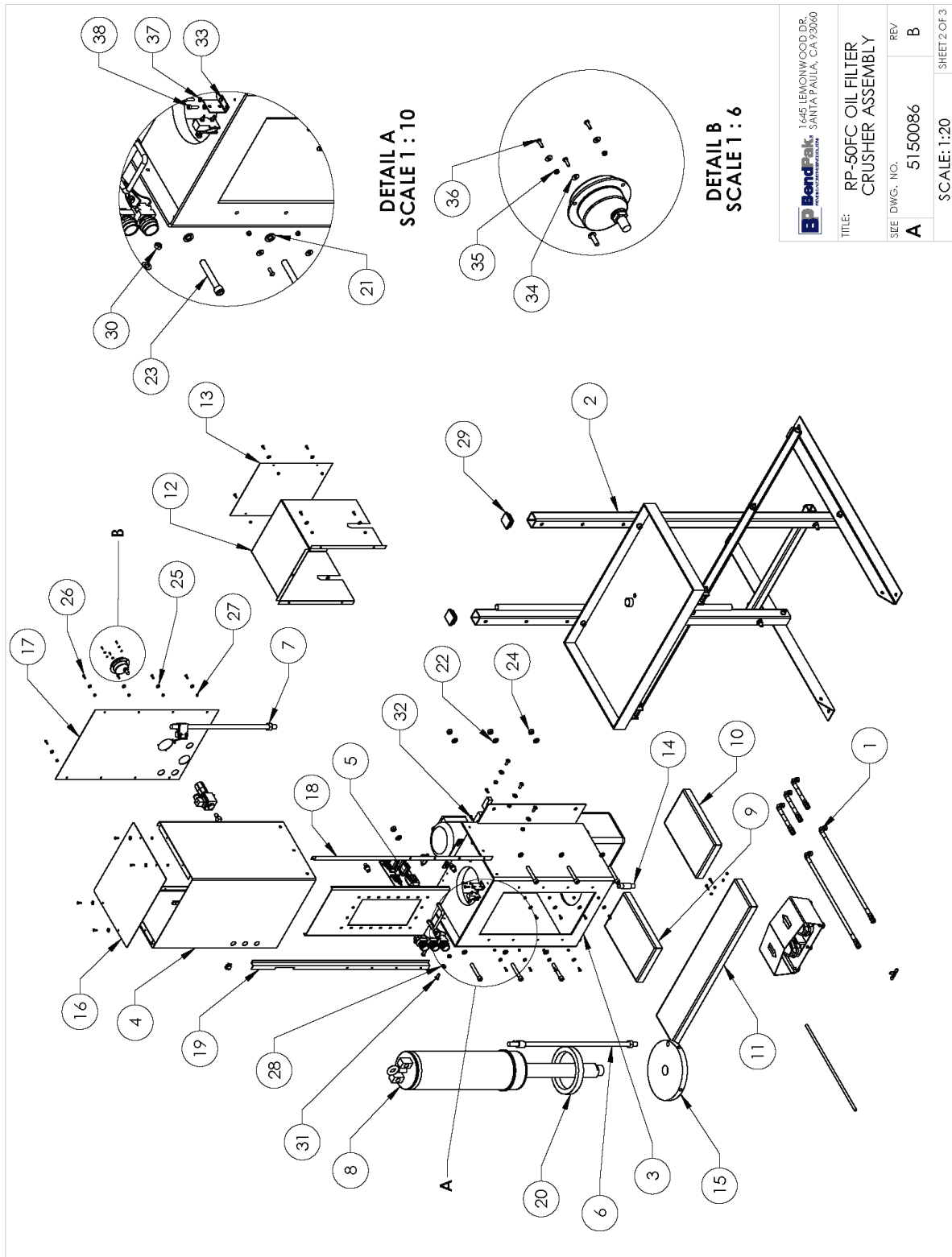
SCALE: 1:15

SHEET 1 OF 3

NOTE: UNLESS OTHERWISE SPECIFIED.

1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING

2. ASSEMBLE ITEMS AS SHOWN



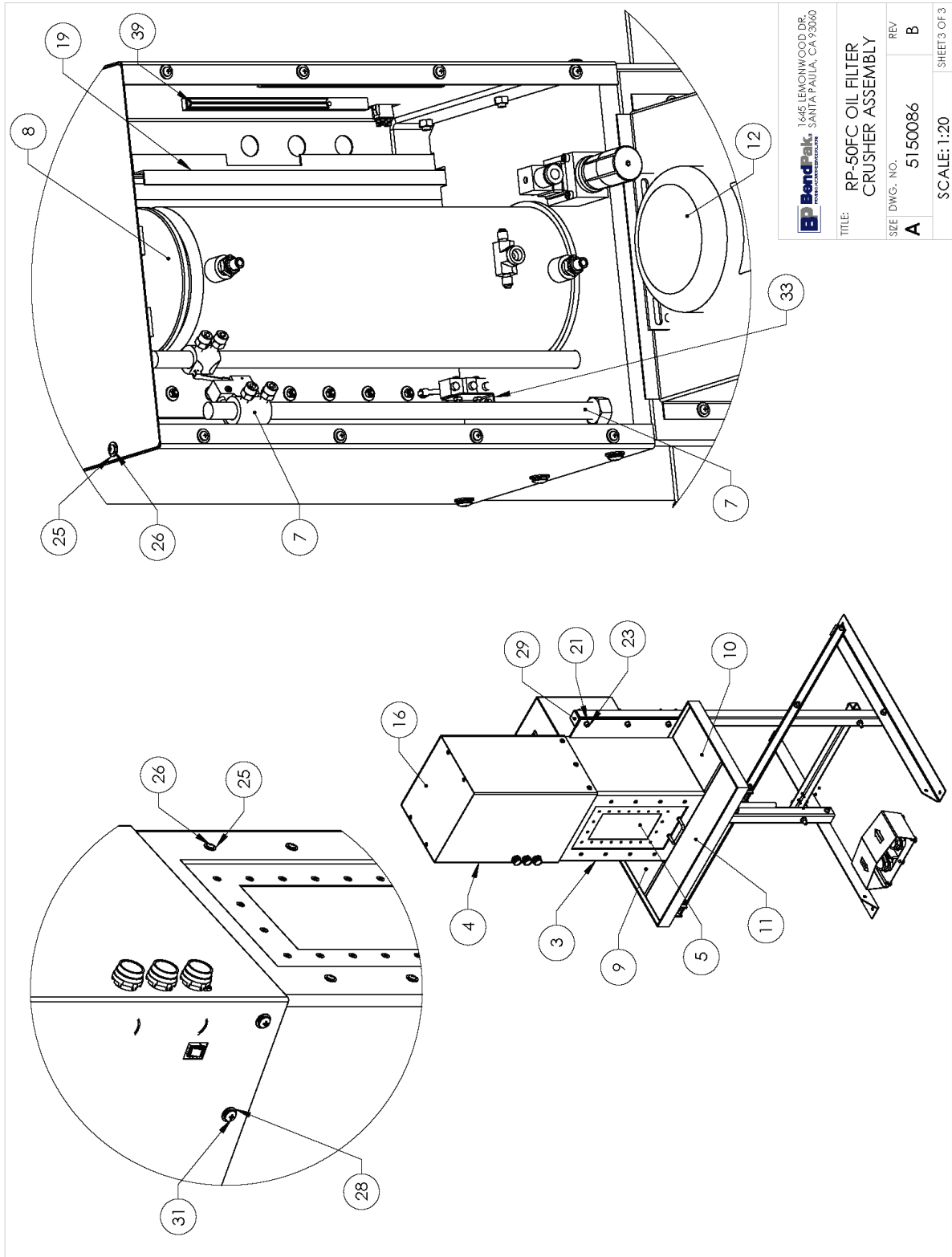
BendPak 1455 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: RP-50FC OIL FILTER
CRUSHER ASSEMBLY

SIZE DWG. NO. REV

A 5150086 B

SCALE: 1:20 SHEET 2 OF 3



BendPak
1445 LEMONWOOD DR.
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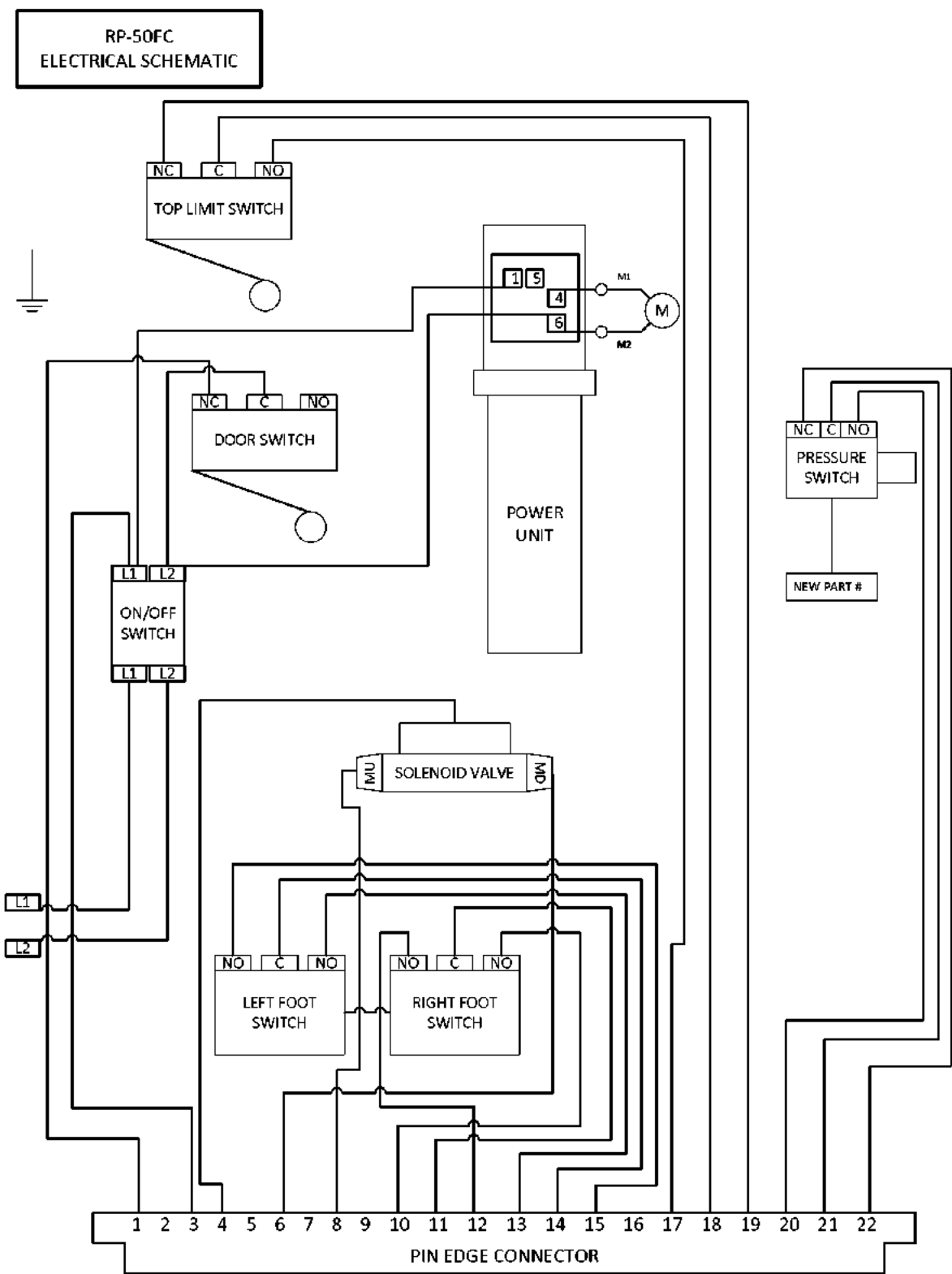
TITLE: RP-50FC OIL FILTER
CRUSHER ASSEMBLY

SIZE DWG. NO. A 5150086

REV B

SCALE: 1:20 SHEET 3 OF 3

Wiring Diagram



Maintenance Log

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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Santa Paula, CA 93060 USA