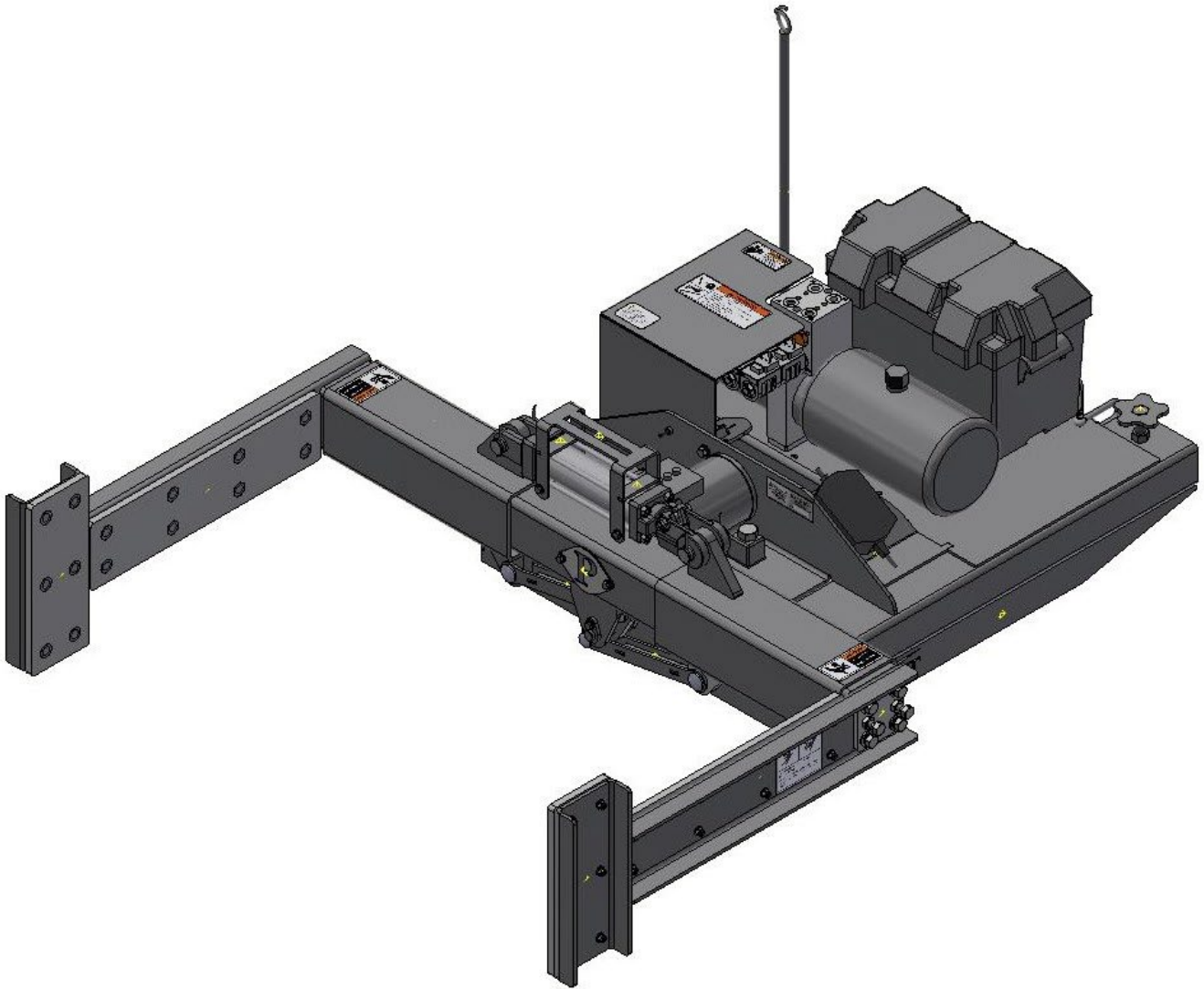


# PATRIOT™



## **PATRIOT BOX FLIPPER**

**Owner's Manual**

**Manufactured by  
Minden Machine Shop Inc.  
1302 K Road  
Minden NE 68959  
1-308-832-0220**

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## INTRODUCTION

Thank you for purchasing a Patriot Equipment Box Flipper! We hope you will get many years of productive use from it. The Box Flipper has been designed to perform a certain function. All product users must read and understand this manual prior to equipment operation. This manual is considered part of your machine and should remain with the machine at all times. Do not allow anyone to operate or maintain this equipment if they have not fully read and comprehended this manual. Failure to follow the recommended procedures may result in personal injury or death or equipment damage.

Information in this manual is designed to help owners and operators to obtain the best results and safe operation from their investment. The life of any machine depends largely on the care it is given and we suggest that the manual should be read and understood and referred to frequently. If for any reason you do not understand the instructions and safety requirements, please contact your authorized dealer. The intent of this manual is to provide guidelines to cover general use and to assist in avoiding accidents and injuries.

There may be times when circumstances occur that are not covered in the manual. At those times it is best to use common sense and contact your authorized dealer or our factory.

The requirements of safety cannot be emphasized enough in this publication. We urge you to make safety your top priority when using and maintaining the equipment. We strongly advise that anyone allowed to operate the Box Flipper be thoroughly trained and tested, to prove they understand the fundamentals of safe operation.

Some photographs, diagrams or illustrations in this manual may show guards and shields opened or removed to aid in clarity and understanding of a particular procedure. All guards, shields and safety devices must be in their proper position prior to operation.

# SAFETY AND OPERATION RULES

## General Safety Statements

Safety precautions are essential when the use of any mechanical equipment is involved. These precautions are necessary when using, storing, and servicing mechanical equipment. Using the Box Flipper with the respect and caution demanded will considerably lessen the possibilities of personal injury. If safety precautions are overlooked or ignored, personal injury or property damage may occur.

The Box Flipper was designed for a specific application. It should not be modified and/or used for any application other than which it was designed. If there are any questions regarding its application, please write or call. Do not use this unit until you have been advised. For more information contact:

Patriot Equipment  
1302 K Rd  
Minden, NE 68959  
308-832-0220

Read this entire manual carefully. Know your equipment. Consider the application, limitations, and the potential hazards specific to your unit. Operator and bystander safety is of prime concern to us. This manual was written with the safety of the operator and others who come in contact with the equipment. This manual was written to help you understand the safe operating procedures of the Box Flipper. We want you as our partner in safety. A copy of this manual should be available to all persons who may operate this machine.

It is your responsibility as an owner, operator, or supervisor to know what specific requirements, precautions, and work hazards exist and to make these known to all other personnel working with the equipment or in the area, so that they too may take any necessary safety precautions that may be required. Avoid any alterations of the equipment. Such alterations may create a dangerous situation where serious injury or death may occur and will void warranty.

Why is SAFETY important? Three reasons:

1. Accidents disable and kill
2. Accidents cost money
3. Accidents can be avoided

Note the use of the signal words **DANGER**, **WARNING**, and **CAUTION** with safety messages. The appropriate signal word for each message has been selected using the following guidelines:

**DANGER:** An immediate and specific hazard which will result in severe personal injury or death if proper precautions are not taken.

**WARNING:** A specific hazard or unsafe practice which could result in severe personal injury or death if proper precautions are not taken.

**CAUTION:** Unsafe practices which could result in personal injury if proper precautions are not taken or a reminder of good safety practices.

## Safety Alert Symbol



**BE ALERT! YOUR SAFETY IS INVOLVED!**

The symbol shown above is used to call your attention to instructions concerning your personal safety. Watch for this symbol – It points out important safety precautions. The symbol means: ATTENTION! BECOME ALERT! YOUR PERSONAL SAFETY IS INVOLVED! Read the message that follows and be alert to the possibility of personal injury or death.

Read this manual before operating or working around the equipment! This manual must be delivered with the equipment to its owner and operator. Failure to read this manual and its safety instructions is a misuse of equipment.

## Safety Equipment

Please, remember safety equipment provides important protection for persons around a machine that is in operation. Be sure ALL safety shields and protective devices are installed and properly maintained. If you find any shields or guards damaged or missing, contact Patriot Equipment for the correct items.

## Safety Procedures



1. Use only the correct equipment with the proper capacity when installing or removing the machine.
2. Equipment with too little capacity may tip towards the front where the lifted weight is.
3. Do not operate unit without safety shields or guards in place.
4. **IMPORTANT:** Use caution when transporting. Be alert of the transport unit's overall width when approaching obstacles, such as post sign and poles, along the travel path. Check the transport width of the unit to ensure clearance before entering.
5. Comply with all safety warnings and cautions in this manual as well as the operator's manuals of any vehicles that may be used with the Box Flipper.
6. Do not allow any riders on the machine when in use.
7. In case of any defect or awareness of potential danger, please contact Patriot Equipment at 1-308-832-0220 immediately.

## Operator Qualifications



Operation of the Box Flipper shall be limited to competent and experienced persons. In addition anyone who will operate or work around the machine must use good common sense. In order to be qualified, they must also know and meet all other requirements, such as:

1. Some regulations specify that no one under the age of 18 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation.
2. Current Occupational Safety Health Administration regulations state in part: "At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee or user in the safe operation and servicing of all equipment with which the employee or user is, or will be involved."
3. Unqualified persons are to stay out of the work area.
4. A person who has not read and understood all operating and safety instruction is not qualified to operate the machine.

## Safety Overview

YOU are responsible for SAFE operation and maintenance of the Box Flipper. YOU must ensure that you and anyone who is going to operate and maintain or work around the Box Flipper must be familiar with the operating, maintenance, and safety information contained in the manual.

Remember YOU are the key to safety. GOOD PRACTICES protect not only you but also the people around you. Make these practices a working part of your safety program. Be certain EVERYONE operating this machine is familiar with the procedures recommended and follows safety precautions. Remember, all accidents can be prevented. Do not risk injury or death by ignoring any information addressed.

Machine owners must give operating instructions to operators before allowing them to operate the Box Flipper. They must be reviewed at least annually thereafter per OSHA regulation 1928.57.

The most important safety device on the equipment is a SAFE OPERATOR. It is the operator's responsibility to read and understand ALL instructions in the manual and to follow them. All accidents can be avoided!

Any person who has not read and understood all operation and safety instructions is not qualified to operate the Box Flipper. An untrained operator exposes himself and bystanders to possible serious injury or death.

Do not modify the equipment in any way. Unauthorized modifications may impair the functions and/or safety and could affect the life of the equipment.

## Safety Affirmation

1. I have read and understand the operator's manual and all safety signs before operation, maintenance, adjusting the Box Flipper.
2. I will allow only trained persons to operate the Box Flipper. \*An untrained operator is not qualified to operate this equipment.
3. I have access to a fire extinguisher.
4. I have all guards in place and will not operate the machine without them.
5. I will not allow riders on the machine.
6. I understand the danger of moving parts (rotating parts, hydraulics, and pinch points) and will stop engine before servicing.
7. I recognize the danger of the machine coming in contact with power lines.
8. I have the safety lock up pins and know and understand where and when to use them.
9. I understand that any accidents that occur with the Box Flipper are my responsibilities.
10. I understand that Patriot Equipment will not be held responsible for any accidents that involve the Box Flipper.

## Sign Off Sheet

(This sheet should be signed annually as part of your safety program)

As a requirement of OSHA, it is necessary for the owner/employer to train the employee in the safe operation and safety procedures with the Box Flipper. We include this sign off sheet for your convenience and personal record keeping.

DATE	EMPLOYER SIGNATURE	EMPLOYEE SIGNATURE

## **Machine Inspection**

After delivery of your new Box Flipper and/or completion of assembly, and before each use, inspection of the Box Flipper is mandatory. This inspection should include, but not be limited to:

1. Check to see that all guards are in place, secured and functional.
2. That all fasteners are tight.
3. That all Hydraulic lines are free from leaks and defects.
4. That all electronics are working properly and wires are in good condition.

## **Serial Number**

To ensure efficient and prompt service, please furnish us with the model and serial number of the Box Flipper in all correspondence or other contact. The serial number is located on a visible location of the machine.

## **Safety Decals**

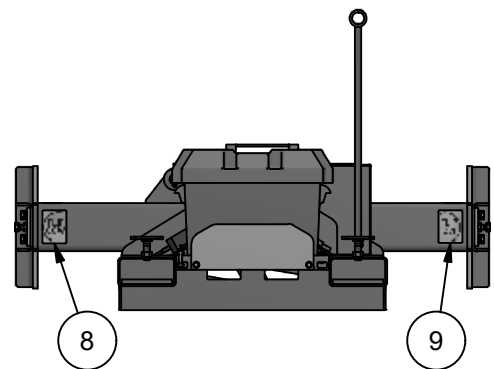
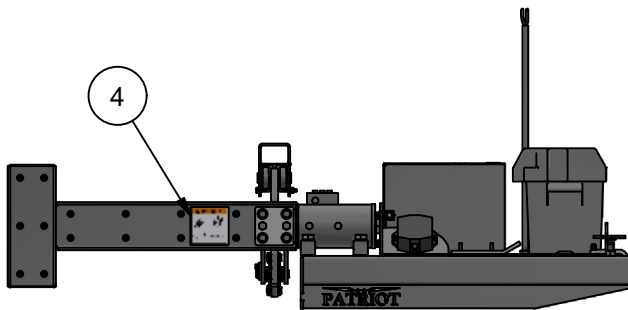
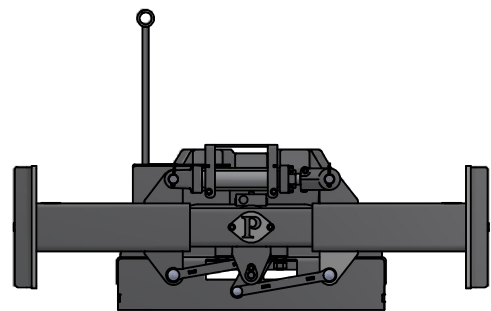
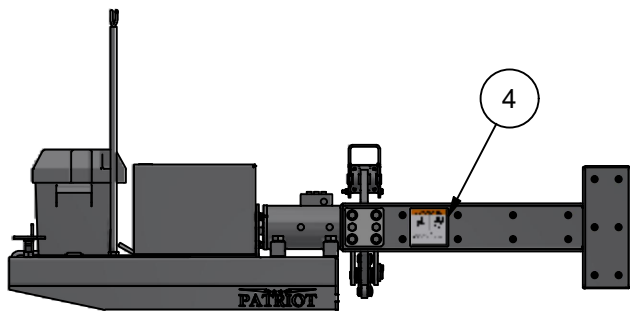
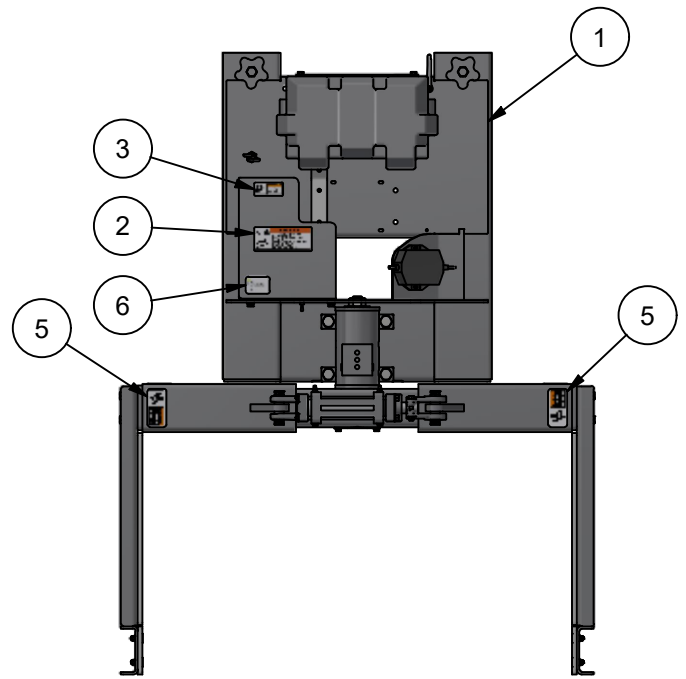
1. Keep safety decals clear and legible at all times.
2. Replace decals and signs that are missing or have become unreadable.
3. Safety signs are available from your Dealer or the Manufacturer.

## **How to install Safety Decals**

1. Be sure that the installation area is clean and dry.
2. Decide on the exact position before you remove the backing paper.
3. Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
4. Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
5. Small air pockets can be pierced with a pin and smoothed out using a piece of decal backing paper.



# BOX FLIPPER DECAL LOCATIONS

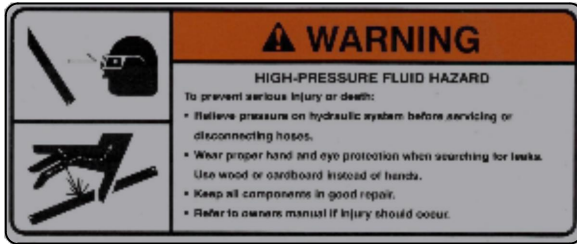


## Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PBF-100	Box Flipper Model 100 Assembly
2	1	BC2515	Hydraulic Oil Warning
3	1	TS2017	Read Manual Before Use
4	2	TS2013	Machine Operating Warning
5	2	TS2012	Single Pinch Point
6	1	TS2018	P65 California Warning
7	1	TS2003	Serial Number Decal
8	1	BF3000	COUNTER CLOCKWISE DECAL
9	1	BF3001	CLOCKWISE DECAL

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# BOX FLIPPER DECALS



BC2515



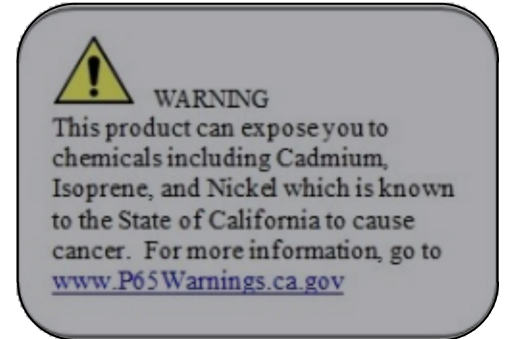
TS2017



TS2013



TS2012



TS2018



BF3000



BF3001



TS2003

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## Torque Data for Standard Nuts, Bolts, and Capscrews

Tighten all bolts to torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt chart as guide. Replace hardware with same grade bolt.

Note: Unless otherwise specified, high-strength Grade 5 hex bolts are used throughout assembly of equipment.

### Bolt Torque for Standard Bolts

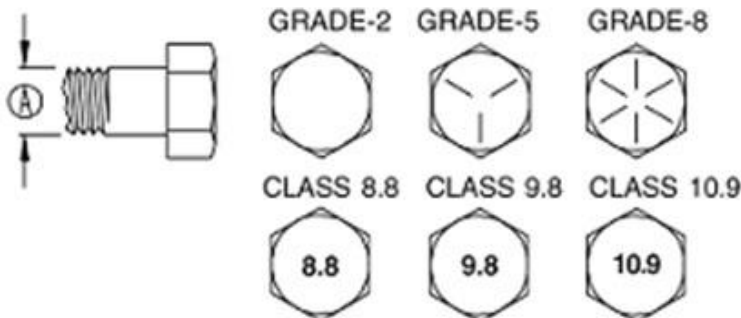
Bolt Size A	Grade 2		Grade 5		Grade 8	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
1/4"	6	8	9	12	12	16
5/16"	10	13	18	25	25	35
3/8"	20	27	30	40	45	60
7/16"	30	40	50	70	80	110
1/2"	45	60	75	100	115	155
9/16"	70	95	115	155	165	220
5/8"	95	130	150	200	225	300
3/4"	165	225	290	390	400	540
7/8"	170	230	420	570	650	880
1"	225	300	630	850	970	1310

Torque figures indicated are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

### Bolt Torque for Metric Bolts

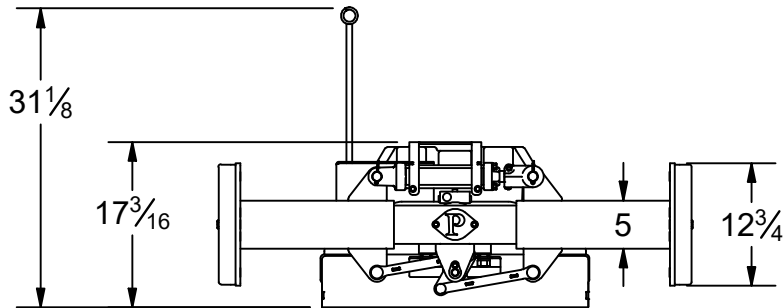
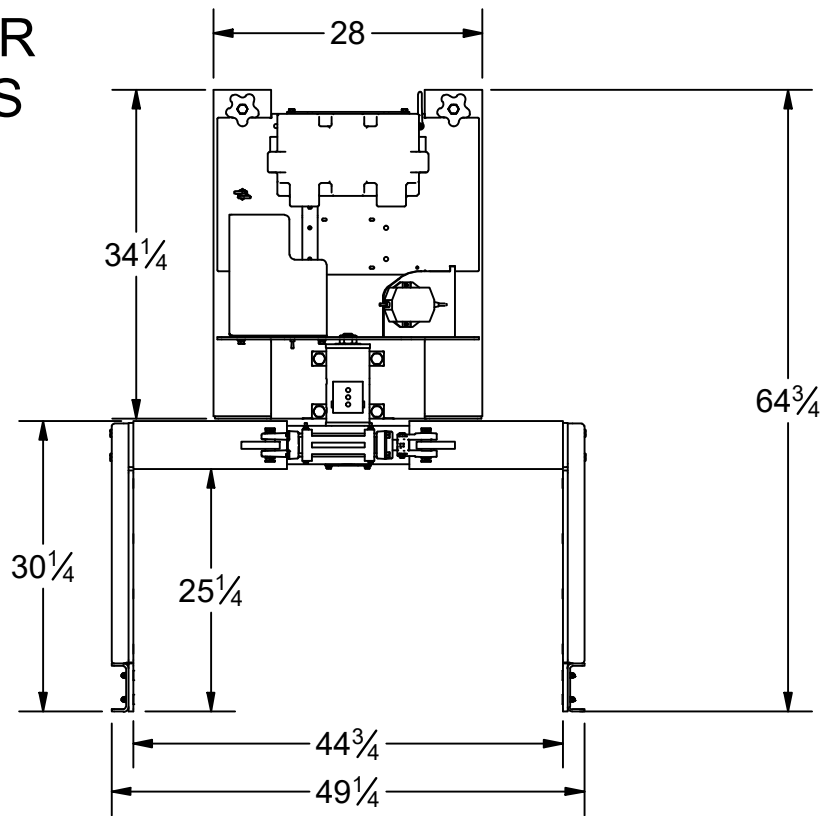
Bolt Size A	Class 8.8		Class 9.8		Class 10.9	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
6	9	13	10	14	13	17
7	15	21	18	24	21	29
8	23	31	25	34	31	42
10	45	61	50	68	61	83
12	78	106	88	118	106	144
14	125	169	140	189	170	230
16	194	263	216	293	263	357
18	268	363	..	..	364	493
20	378	513	..	..	515	689
22	516	699	..	..	702	952
24	654	886	..	..	890	1206

Grade or Class value for bolts and capscrews are identified by their head markings.

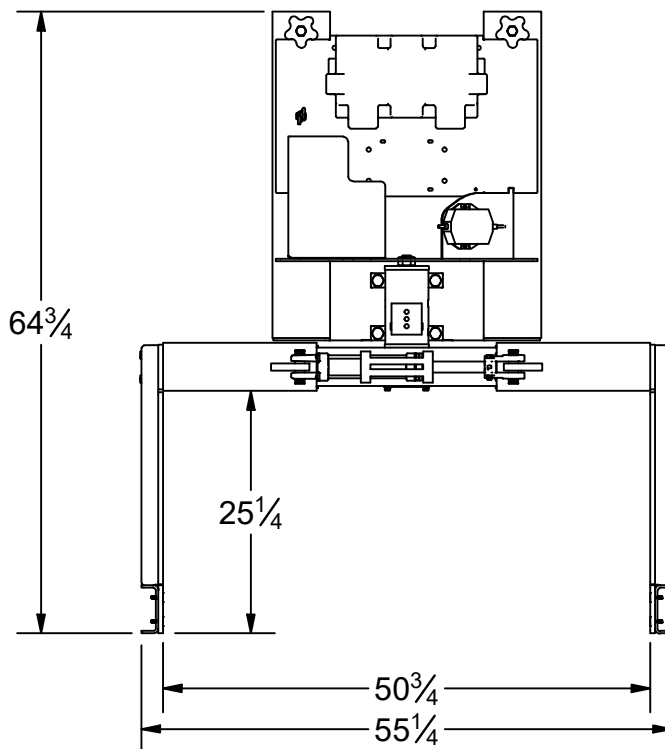


# BOX FLIPPER DIMENSIONS

BOX FLIPPER  
CLOSED  
DIMENSIONS



BOX FLIPPER  
OPEN DIMENSIONS



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## REMOTE CONTROL OPERATION AND PROGRAMMING

### **OPERATION:**

Press and hold the power button on the transmitter until both LEDs turn on, then release. The green LED will flash rapidly when communication has been established with the receiver. The LED flashes slowly if the receiver is off or there is no communication between the transmitter and receiver. Turn the receiver on and press the corresponding buttons on the transmitter keypad to turn on and off each of the outputs.

### **RECHARGING:**

Plug the charging connector into the port at the top of the transmitter. Observe orientation and do not use force. A solid red LED indicates battery is charging. Once the internal battery is fully charged, the red LED will turn off and the green LED will turn on. A fully discharged unit will take up to 3 hours to recharge. Use only approved chargers.

### **INDICATOR LIGHTS:**

The transmitter has two LED indicators, the red BATTERY/DIAGNOSTIC indicator and the green TRANSMIT indicator.

The green TRANSMIT indicator flashes rapidly whenever there is communication between the transmitter and the receiver.

The red BATTERY/DIAGNOSTIC indicator starts blinking once every second when the battery voltage is low and requires charging. It also blinks when there is a problem with the system in the form of an error code. Refer to the ERROR CODE CHART tables for more information.

Note: To check for low battery, turn the receiver off and leave the transmitter on. If the transmitter red LED continues to blink, the battery is low and requires charging. If the red LED blinks only when the receiver is on, count the number of blinks and refer to the ERROR CODE CHART tables for additional information.

Note: The red LED will stay on while charging and when the charge is completed the green LED will stay on.

Note: It will take longer to charge if the transmitter is on during charging.

### **TEACH ID CODE:**

To synchronize a new transmitter and receiver together, use the following procedure:

1. Turn both transmitter and receiver off.
2. To get the transmitter into TEACH ID mode, press and hold the POWER button for 10 seconds. Both LEDs start blinking
3. Turn on the receiver.
  - a. On older models, place a jumper across the TEACH ID jumper inside the receiver. The green LED will go from blinking to steady. Remove the jumper and store it on one pin.
4. Teach complete.

NOTE: The programming controller is different than the operator controller. Please contact your local dealer or Patriot Equipment at 308-832-0220.

#### **OUTPUT CONFIGURATION PROGRAMMING:**

1. Turn the receiver off. Turn the transmitter on (press and hold POWER until both LEDs turn on, then release)
2. Press and hold 1, 4, and 8 and release. Red LED should be blinking on the transmitter
3. Turn the receiver on. Be sure all outputs are connected to a load and that there are no error codes present (NOTE: outputs may cycle on and off while programming)
4. Are any outputs to be latched (push on/push off)? If yes, continue. If no, skip to step 6
5. One at a time, press and hold each button 1-8 corresponding to output 1-8 that is to be latched, until the green LED goes on, then off
6. Press POWER briefly. The receiver red LED should blink 4 times, indicating acceptance
7. Are any outputs to be disabled (no output and no error code)? If yes, continue, if no, skip to step 9
8. One at a time, press and hold each button 1-8 corresponding to output 1-8 that is to be disabled, until the green LED goes on, then off
9. Press POWER briefly. The receiver red LED should blink 4 times, indicating acceptance
10. Is it desired to use the pump or e-stop functionality (see descriptions below)? If yes, continue, if no, skip to step 15
10. To engage the pump functionality, press button 1 until the green LED goes on, then off. Alternatively, to engage the e-stop functionality, press button 2 until the green LED goes on, then off
11. Press POWER briefly. The receiver red LED should blink 4 times, indicating acceptance
12. If e-stop functionality was chosen, skip to step 16. If pump functionality was chosen, continue
13. One at a time, press and hold each button 1-7 corresponding to output 1-7 that is to be associated with the pump output, until the green LED goes on, then off
14. Press POWER briefly. The receiver red LED should blink 4 times, indicating acceptance
15. Turn receiver off, then on again. Programming complete

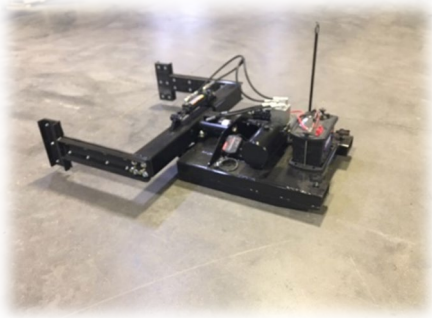
#### **NOTES**

1. When using Pump or E-Stop functionality, do not disable output 8
2. Pump functionality: output 8 will turn on with any outputs that have been associated with it
3. E-stop functionality: output 8 will be on as long as the transmitter is on. If the transmitter is turned off, POWER is pressed, or it goes out of range, output 8 will go off along with all latched outputs. Turn the transmitter back on and re-engage outputs to continue
4. If pump or e-stop functionality is chosen, output 8 will be used for this. Button 8 on the transmitter will then have no function. A maximum of 7 outputs can be controlled with the transmitter buttons
5. If 4 blinks after each sequence is not seen as described above, the programming was not accepted for that section. Start from the beginning and go slowly. Keep a distance of 2-3 feet from the receiver when programming

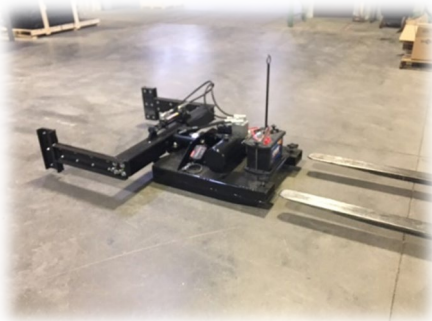


Current controller for the Box Flipper.

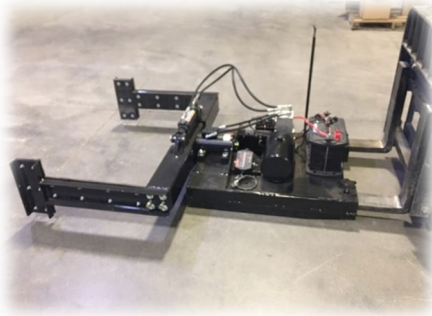
## BOX FLIPPER SET-UP INSTRUCTIONS



1. PLACE THE BOX FLIPPER ON A FLAT SURFACE IN ORDER TO ATTACH THE MACHINE TO THE FORKLIFT.



2. ALIGN THE FORKLIFT FORKS IN ORDER THAT YOUR FORKS WILL SLIDE INTO THE BOX FLIPPER FORK POCKETS.



3. INSERT THE FORKLIFT FORKS COMPLETELY INTO THE BOX FLIPPER FORK POCKETS.



**DANGER!**

**WARNING!**

**CAUTION!**





4. RAISE THE BOX FLIPPER TO A HEIGHT THAT THE OPERATOR CAN MAKE ADJUSTMENTS TO THE MACHINE.



DANGER!  
WARNING!  
CAUTION!



5. THE OPERATOR MUST PHYSICALLY INSPECT THAT THE BOX FLIPPER IS COMPLETELY ALL THE WAY INTO THE BOX FLIPPER FORK POCKETS.



6. TIGHTEN THE SET BOLTS ON BOTH OF THE FORKS TO SECURE THE BOX FLIPPER TO THE FORKLIFT FORKS. SECURE THE BOX FLIPPER TO THE FORKLIFT MAST WITH THE SAFETY CHAIN.



DANGER!  
WARNING!  
CAUTION!

7. REVIEW THE REMOTE CONTROL AND BE SURE THE OPERATOR UNDERSTANDS EACH OF THE BUTTONS AND THE CORRESPONDING ACTION ON THE BOX FLIPPER.

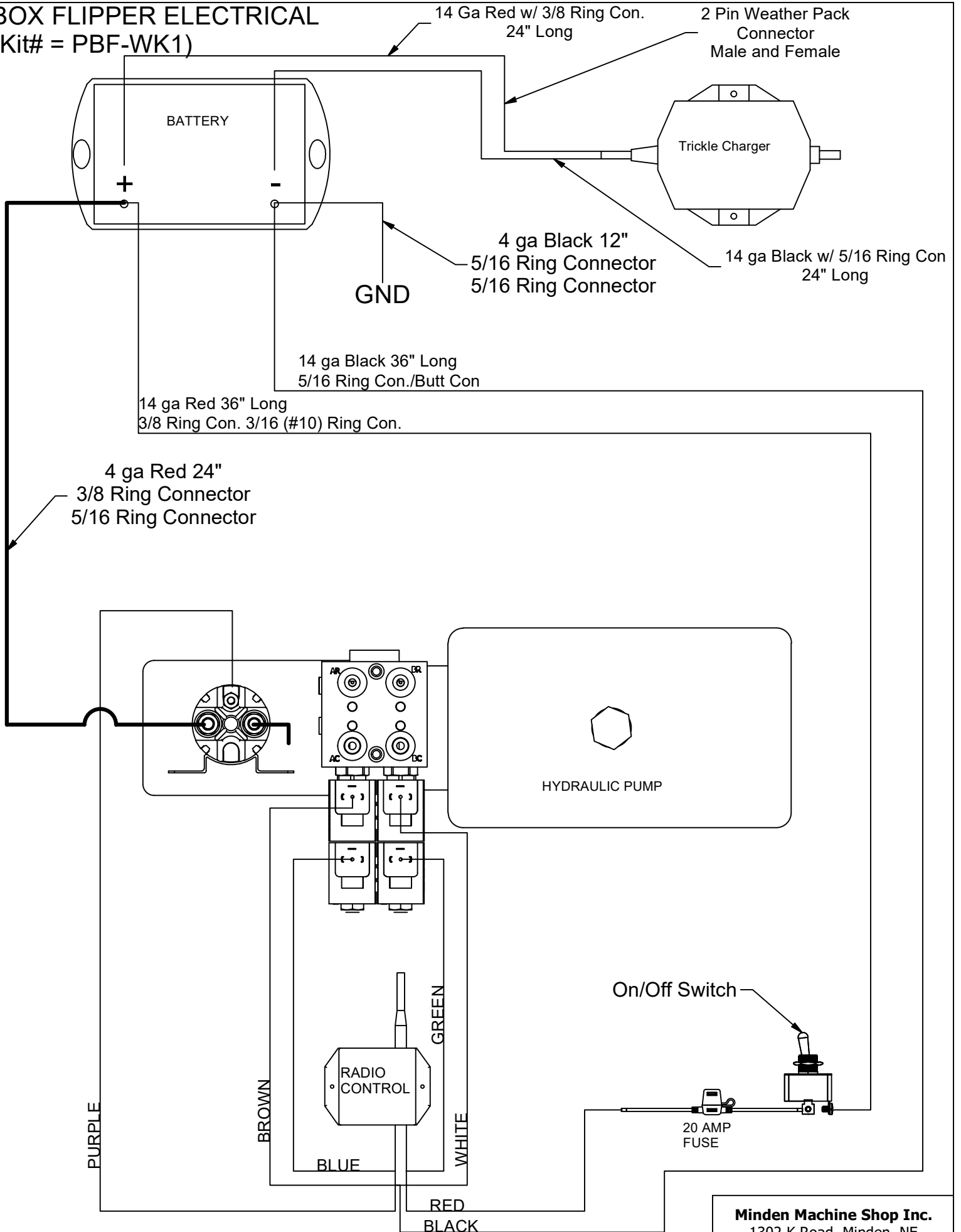


8. RAISE THE BOX FLIPPER SO THAT AS THE FLIPPER IS TESTED, IT WILL NOT ENGAGE THE FLOOR. THE OPERATOR WILL NEED TO BE IN THE FORKLIFT OPERATOR SEAT AND THEN SHOULD PERFORM ALL FOUR OPERATIONS OF THE BOX FLIPPER USING THE REMOTE CONTROL (FLIP CLOCKWISE, FLIP COUNTER-CLOCKWISE, CLAMP, AND UNCLAMP) TO GET FAMILIAR WITH THE OPERATION OF THE BOX FLIPPER.
9. ALL OPERATORS SHOULD BE FAMILIAR WITH THE OPERATION OF THE BOX FLIPPER.
10. PROCEED TO UTILIZE THE BOX FLIPPER. ALWAYS OPERATE THE BOX FLIPPER IN A SAFE MANNER.
11. ONLY THE OPERATOR IS ALLOWED IN THE WORK AREA. ALL OTHER EMPLOYEES SHOULD BE CLEAR OF THE ESTABLISHED WORK AREA TO PREVENT ANY ACCIDENTS.

BOX FLIPPER  
TROUBLESHOOTING

PROBLEM	POSSIBLE SOLUTIONS
NO POWER	<p>INSPECT THE FUSE.</p> <p>IS THE MAIN POWER SWITCH ON?</p> <p>EXTERNAL POWER SOURCE CONNECTED CORRECTLY?</p> <p>IS THE BATTERY CHARGED FULLY?</p> <p>IS THE BATTERY CORRECTLY CONNECTED TO THE PUMP?</p>
HYD. PUMP WILL NOT OPERATE	<p>IS THE MAIN POWER SWITCH ON?</p> <p>IS THE POWER ON TO THE REMOTE CONTROL?</p> <p>INSPECT THE BATTERIES FOR THE REMOTE CONTROL.</p> <p>IS THE REMOTE CONTROL CHARGED SUFFICIENTLY?</p> <p>INSPECT THE FUSE?</p> <p>IS THE BATTERY PROPERLY CONNECTED?</p> <p>EXTERNAL POWER SOURCE CONNECTED CORRECTLY?</p> <p>IS THE BATTERY FULLY CHARGED?</p> <p>INSPECT ALL ELECTRICAL CONNECTIONS TO THE PUMP.</p>
HYDRAULIC PUMP RUNS BUT NO HYDRAULIC OIL FLOW	<p>INSPECT THE CONNECTIONS TO THE FLOW CONTROL VALVES?</p> <p style="text-align: center;">POWER PRESENT WHEN ACTIVATED BY REMOTE?</p> <p>IS THE REMOTE CONTROL TURNED ON?</p> <p>DOES THE REMOTE CONTROL HAVE POWER?</p> <p style="text-align: center;">INSPECT BATTERIES.</p> <p style="text-align: center;">CHARGE THE REMOTE.</p> <p>IS THE HYDRAULIC OIL RESERVOIR FULL?</p>
ARMS NOT FULLY CONTACTING SEED BOX	<p>ADJUST THE ARMS OF THE BOX FLIPPER USING THE ADJUSTMENT BOLTS.</p>
ACTUATOR NOT RESPONDING	<p>INSPECT POWER FOR REMOTE CONTROL.</p> <p>INSPECT FOR POWER TO THE HYDRAULIC CONTROL VALVE WHEN USING THE REMOTE CONTROL.</p> <p>HYDRAULIC OIL RESERVOIR FULL?</p> <p>DOES THE ACTUATOR NEED TO TURN THE OTHER WAY?</p> <p>INSPECT HYDRAULIC HOSE CONNECTIONS.</p> <p>ARE THE ACTUATOR BOLTS LOOSE?</p> <p>IS THE HYDRAULIC PUMP RUNNING WHEN ACTIVATED?</p> <p style="text-align: center;">INSPECT REMOTE CONTROL.</p> <p style="text-align: center;">INSPECT WIRE CONNECTIONS FROM REMOTE RECEIVER TO THE HYDRAULIC PUMP AND VALVES.</p>
HYD. CYLINDER NOT WORKING	<p>INSPECT REMOTE CONTROL FOR POWER.</p> <p>INSPECT HYD. VALVES FOR POWER WHEN REMOTE ACTIVATED.</p> <p>CHECK GROUND CONNECTION TO HYD. PUMP.</p> <p>INSPECT POWER SOURCE, IS HYD. PUMP OPERATING?</p>

# BOX FLIPPER ELECTRICAL (Kit# = PBF-WK1)



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# BOX FLIPPER REMOTE CONTROL BUTTON NUMBERS



BUTTON 1 - WHITE WIRE - FLIP CLOCKWISE

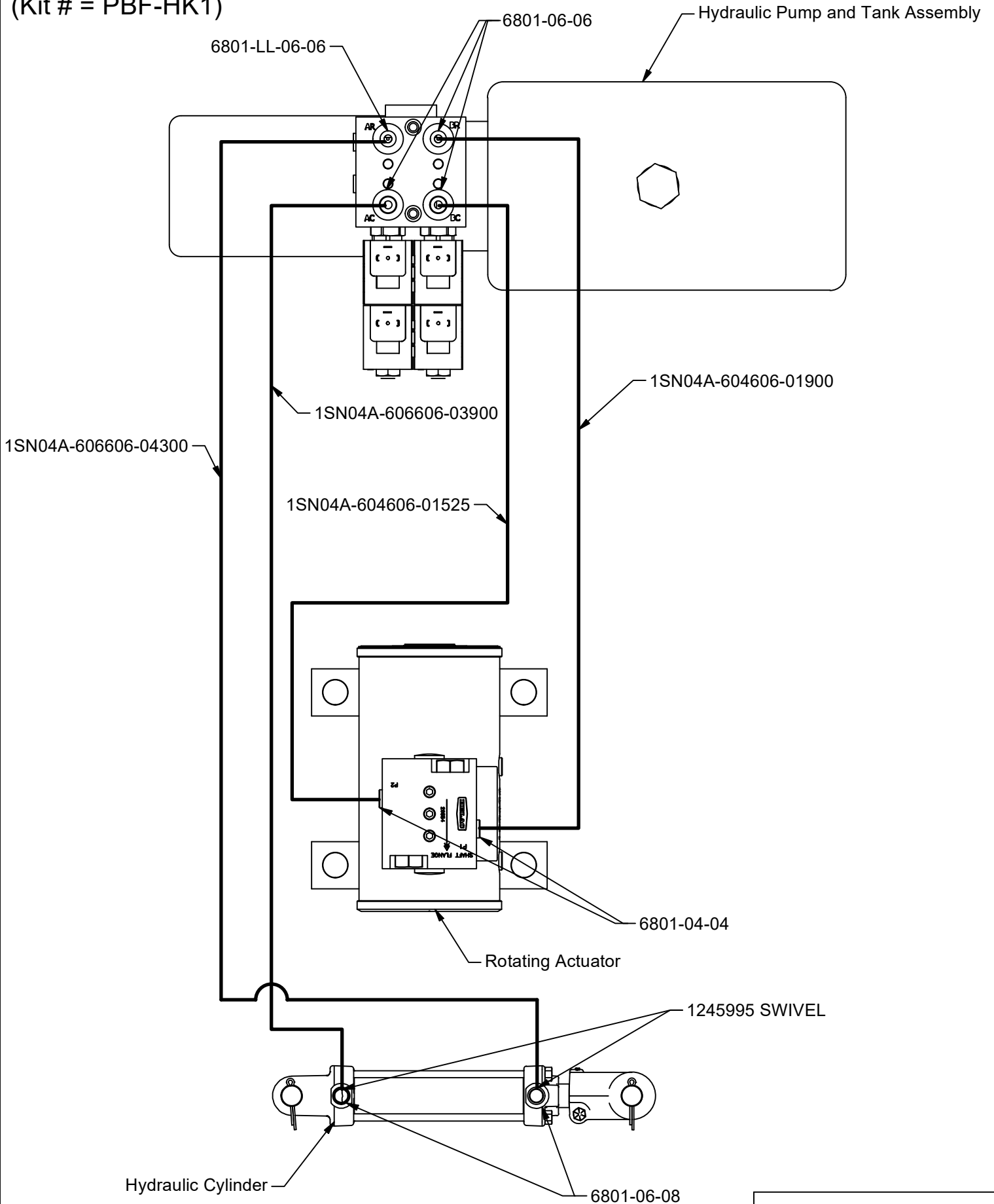
BUTTON 2 - GREEN WIRE - FLIP COUNTERCLOCKWISE

BUTTON 3 - BLUE WIRE - UNCLAMP

BUTTON 4 - BROWN WIRE - CLAMP

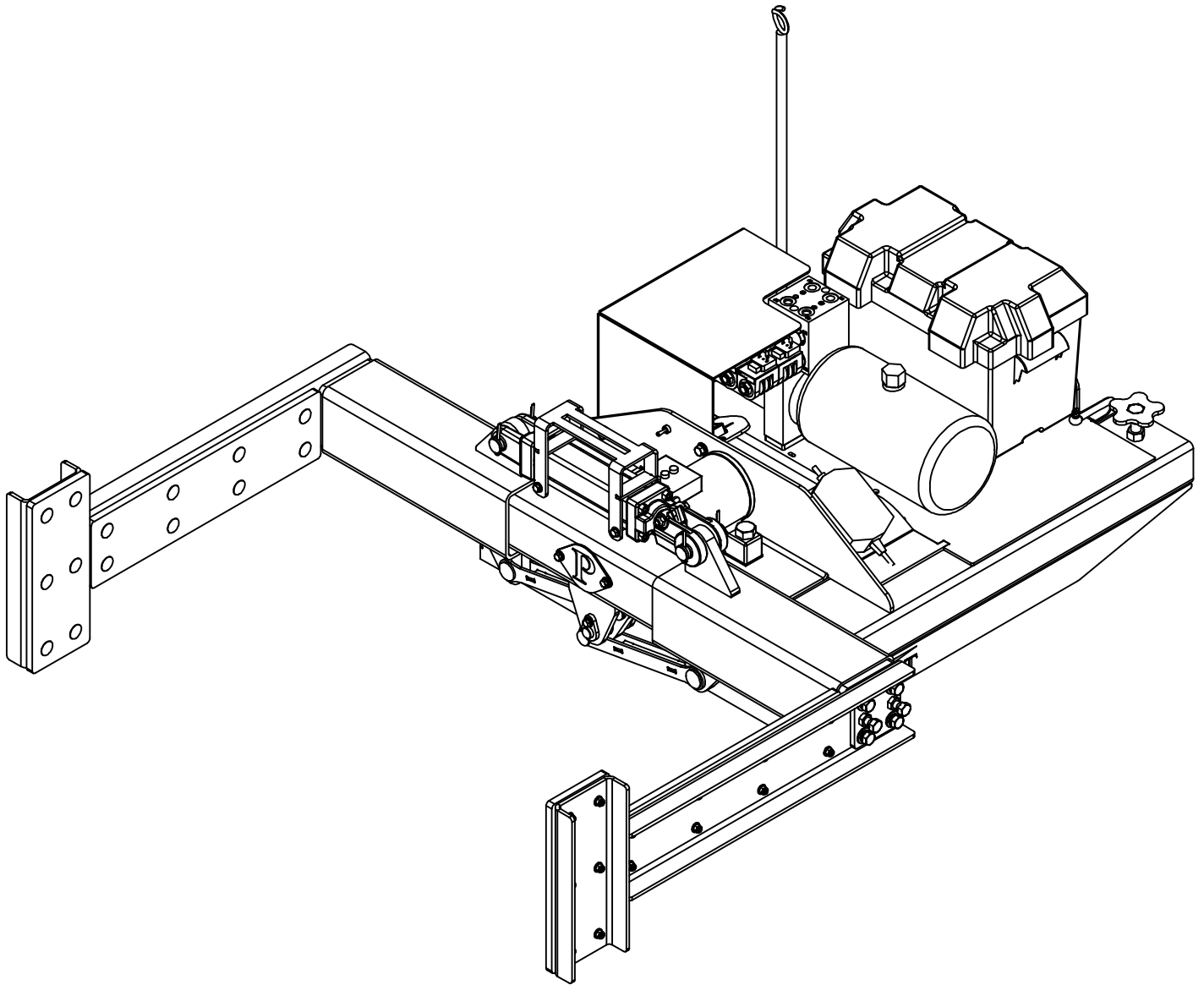
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# BOX FLIPPER HYDRAULICS (Kit # = PBF-HK1)



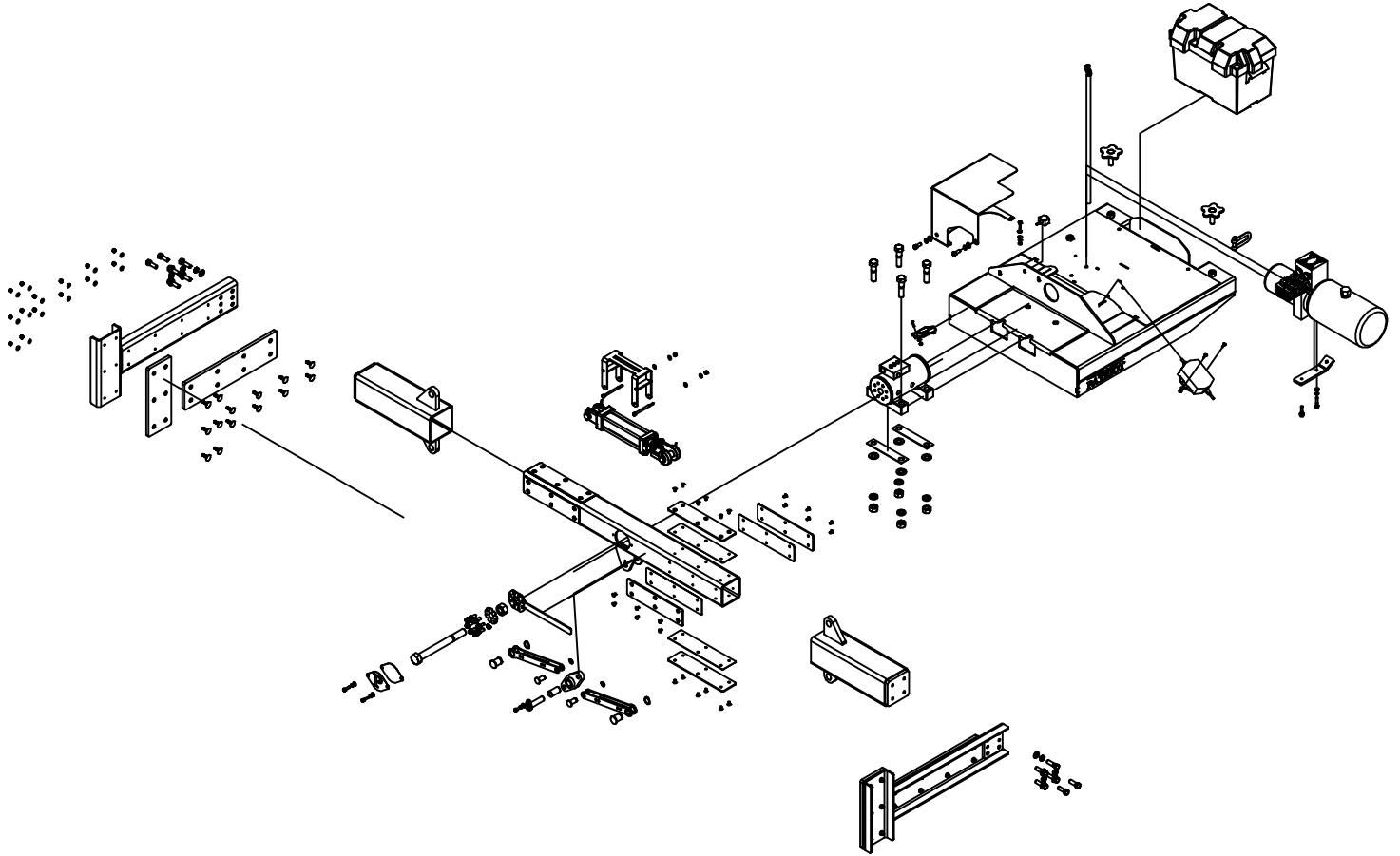
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# BOX FLIPPER ASSEMBLY



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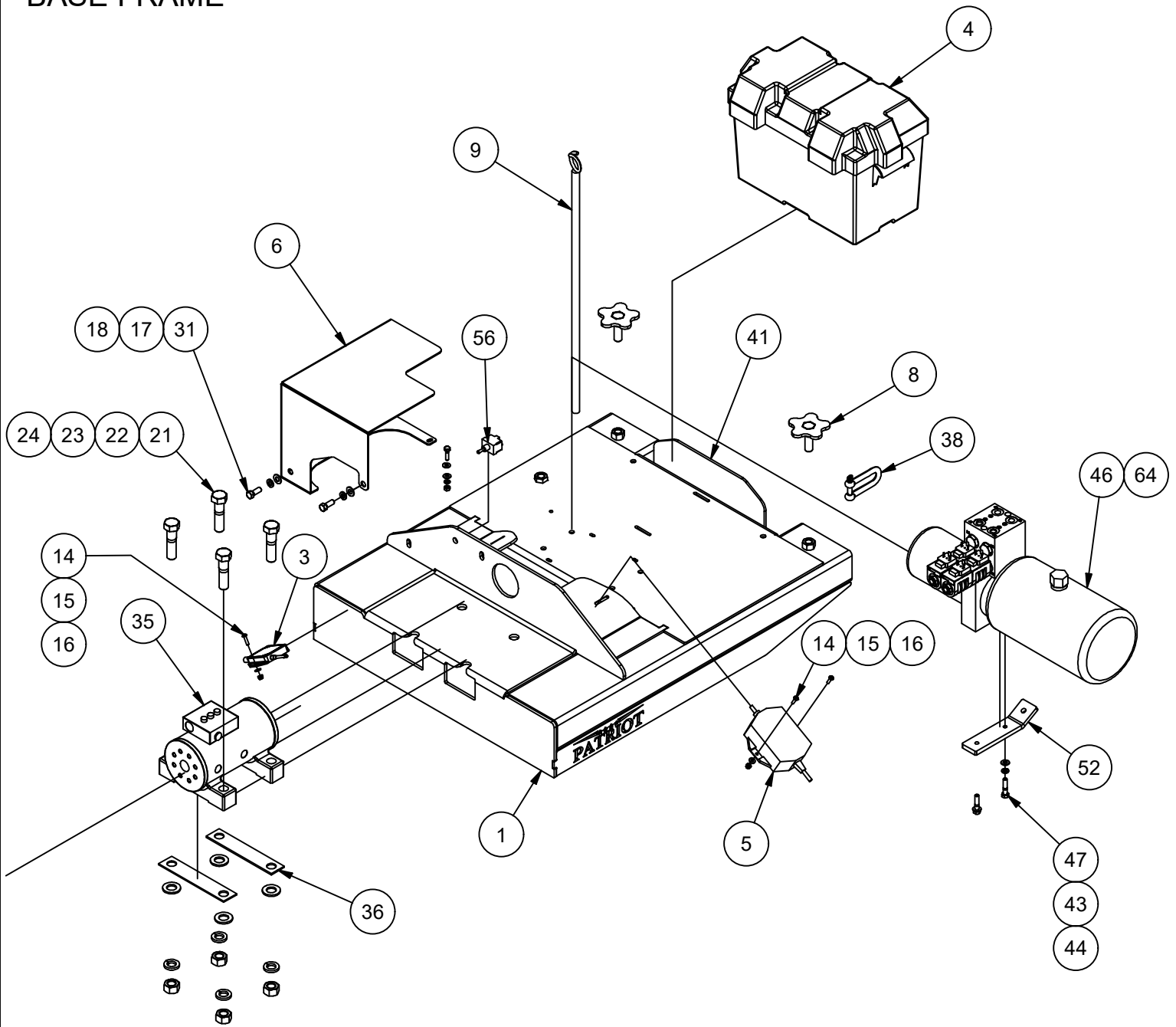
# BOX FLIPPER MASTER EXPLODED VIEW



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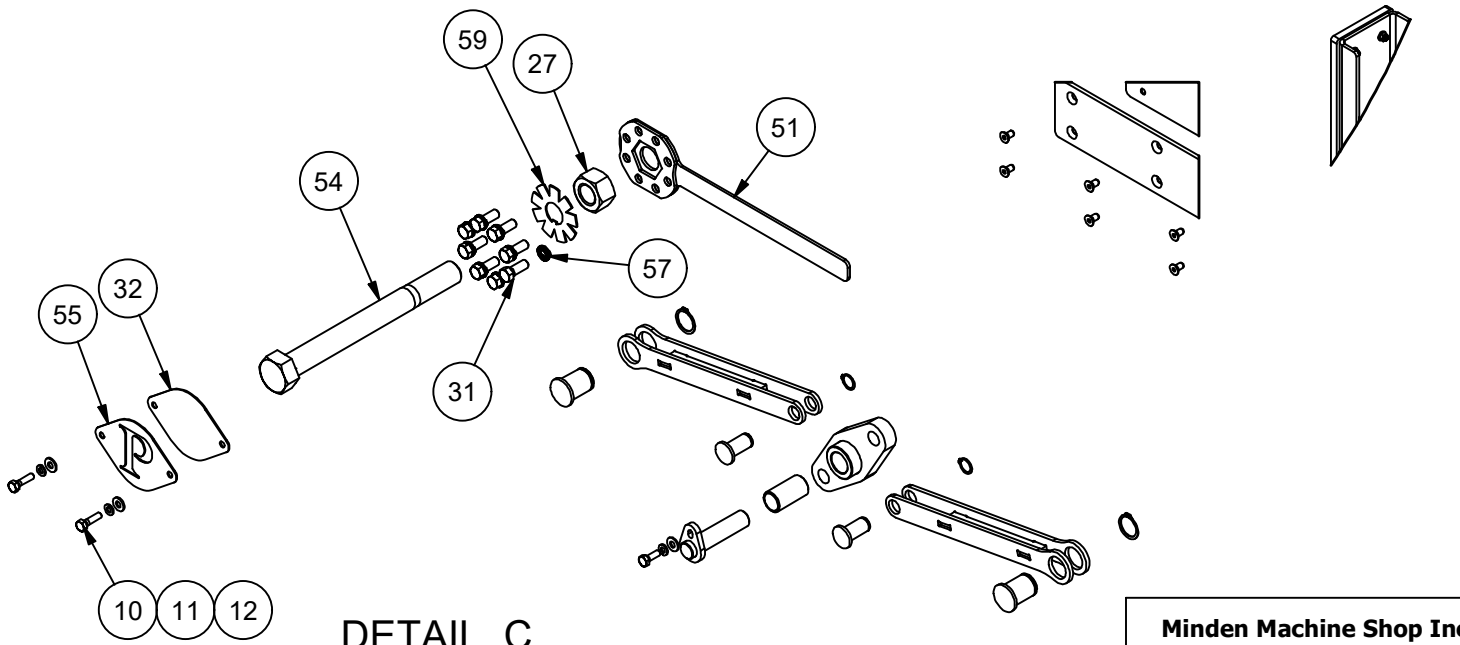
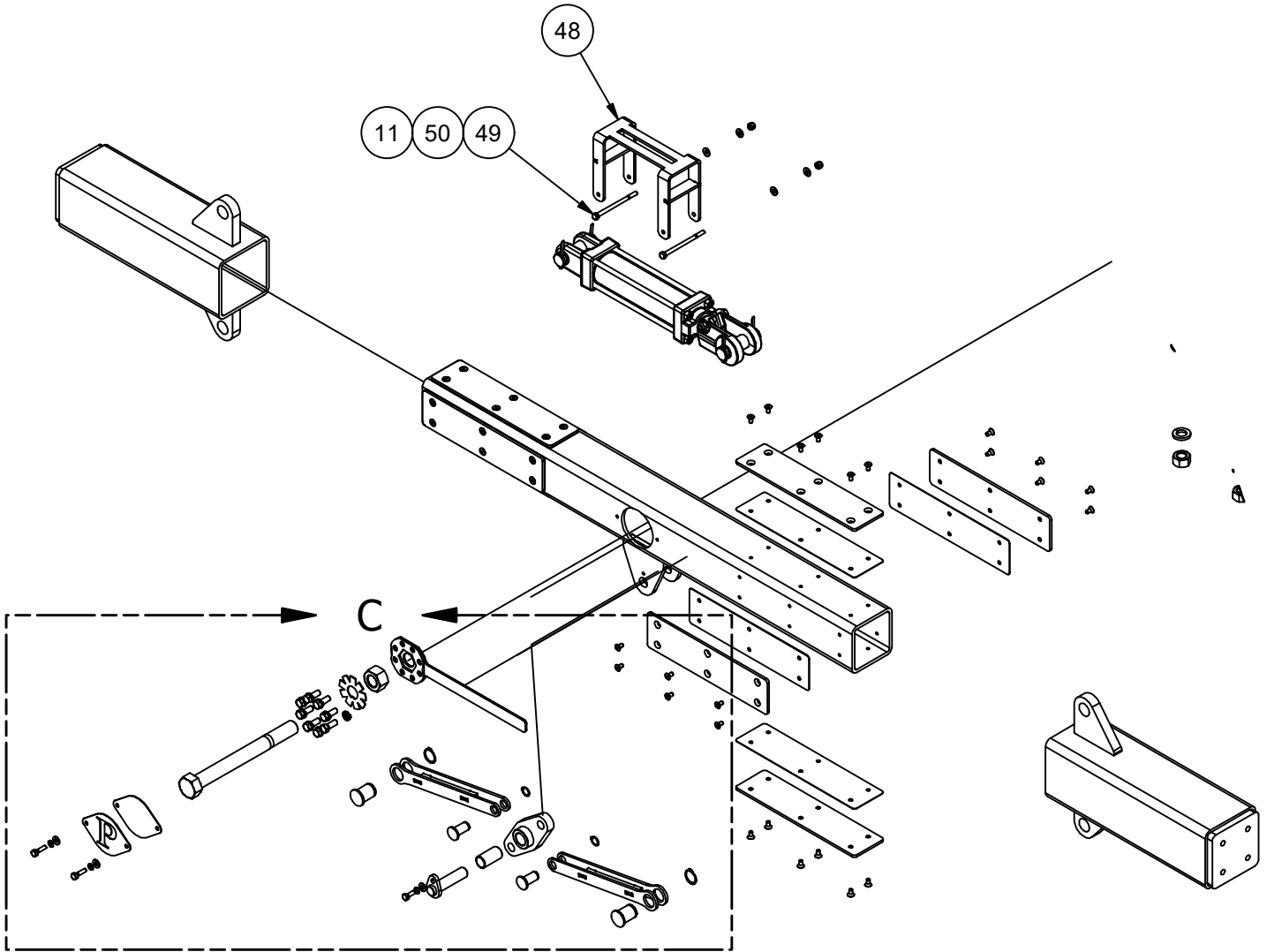


# BOX FLIPPEER BASE FRAME



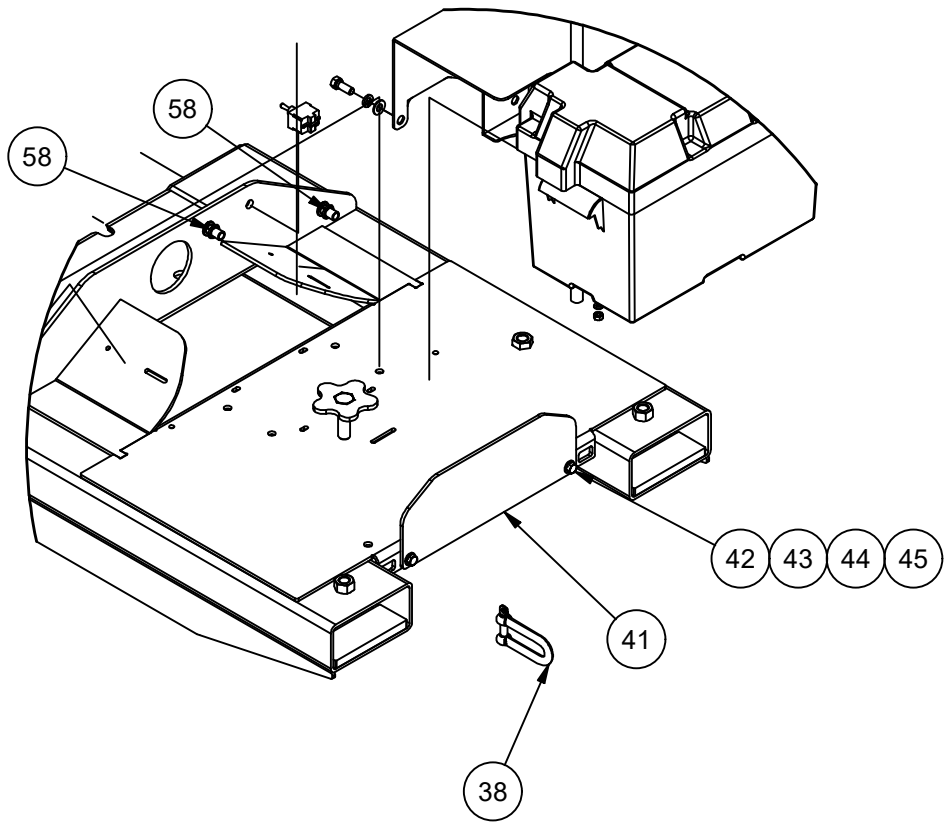
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# BOX FLIPPER ROTATING ARM BAR



DETAIL C

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# BOX FLIPPER PARTS LIST

BOX FLIPPER PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PBF-100-A002	Base Frame Weldment
3	1	PBF-100-203	Wireless Remote
4	1	PBF-100-204	BATTERY BOX
5	1	PBF-100-206	BATTERY CHARGER 1.5 AMP 12 VOLTS
6	1	PBF-100-A012	Shield Weldment
8	2	PBF-100-A011	Forklift Tensioner Handle Weldment
9	1	PBF-100-A013	Cable Manager Weldment
32	1	PBF-100-P026	Cover Plate
35	1	PBF-37120	Helac Rotary Actuator
36	2	PBF-100-P044	Isolator Strip
38	1	PBF-SHACKLE1	Chain Shackle
41	1	PBF-100-P036	Rear Retainer Plate
46	1	PBF-P111	Hydraulic Motor and Pump
48	1	PBF-100-A015	Hydraulic Cyl. Cover Weldment
51	1	PBF-100-A016	Inner Tube Lock Plate Weldment
52	1	PBF-100-P039	Grounding Plate
54	1	PBF-100-P040	Main Bolt
55	1	PBF-100-P041	Cover Emblem
56	1	S4508	ON/OFF Toggle Switch For Old System
59	1	PBF-100-P043	Tabbed Washer for 1-8 Threads
60	1	PBF-10319	Chain 4'
61	1	PBF-31MHD	Battery
62	1	PBF-SNAP1	3/8 Snap Length Spring Snap Link
63	1	PBF-100-203-1	Kar-Tech Remote
64	1	PBF-PFGAW32	Food Grade Hydraulic Oil 146 oz
65	1	PBF-HK1	Hydraulic Hose Kit
66	1	PBF-WK1	Wiring Kit

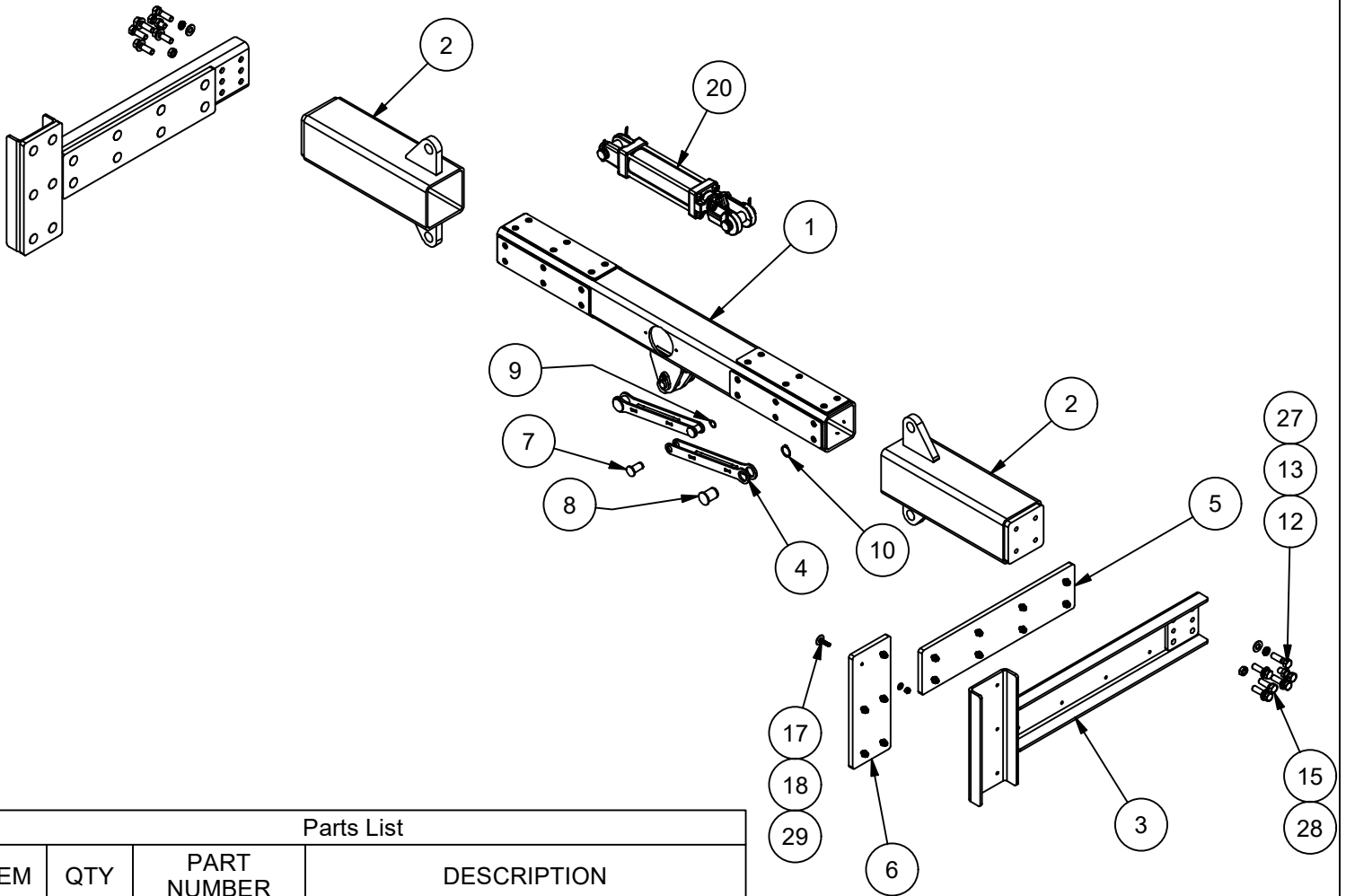
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# BOX FLIPPER FASTENER LIST

BOX FLIPPER PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
10	3	B1/4X1.0	Hex Bolt
11	8	W1/4F	Plain Washer
12	3	W1/4L	Lock Washer
13	1	N1/4N	Hex Nut
14	4	S10-24X0.75PHS	10-24 X 0.75" Pan Head Screw
15	4	W#10F	#10 Flat Washer
16	4	N#10NYL	#10 Nylock Nut
17	2	W3/8F	Plain Washer
18	2	W3/8L	Lock Washer
21	4	B3/4X3.0	Hex Bolt
22	4	W3/4F	Plain Washer
23	4	W3/4L	Lock Washer
24	4	N3/4N	Hex Nut
27	1	N1DL	Dimple Lock Hex Nut
31	10	B3/8X1.0	Hex Bolt
42	2	B5/16X1.0	Hex Bolt
43	6	W5/16F	Plain Washer
44	4	W5/16L	Lock Washer
45	2	N5/16N	Hex Nut
47	2	B5/16X1.5	Hex Bolt
49	2	B1/4X4.0	Hex Bolt
50	2	N1/4NYL	1/4 Std NC Nylock Nut
57	8	W3/8NL	3/8" Nordlock Washer
58	2	S37-115 3_8-16 Riv Nut	Rivet Nut

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# BOX FLIPPER PBF-100-A001 PARTS DETAIL

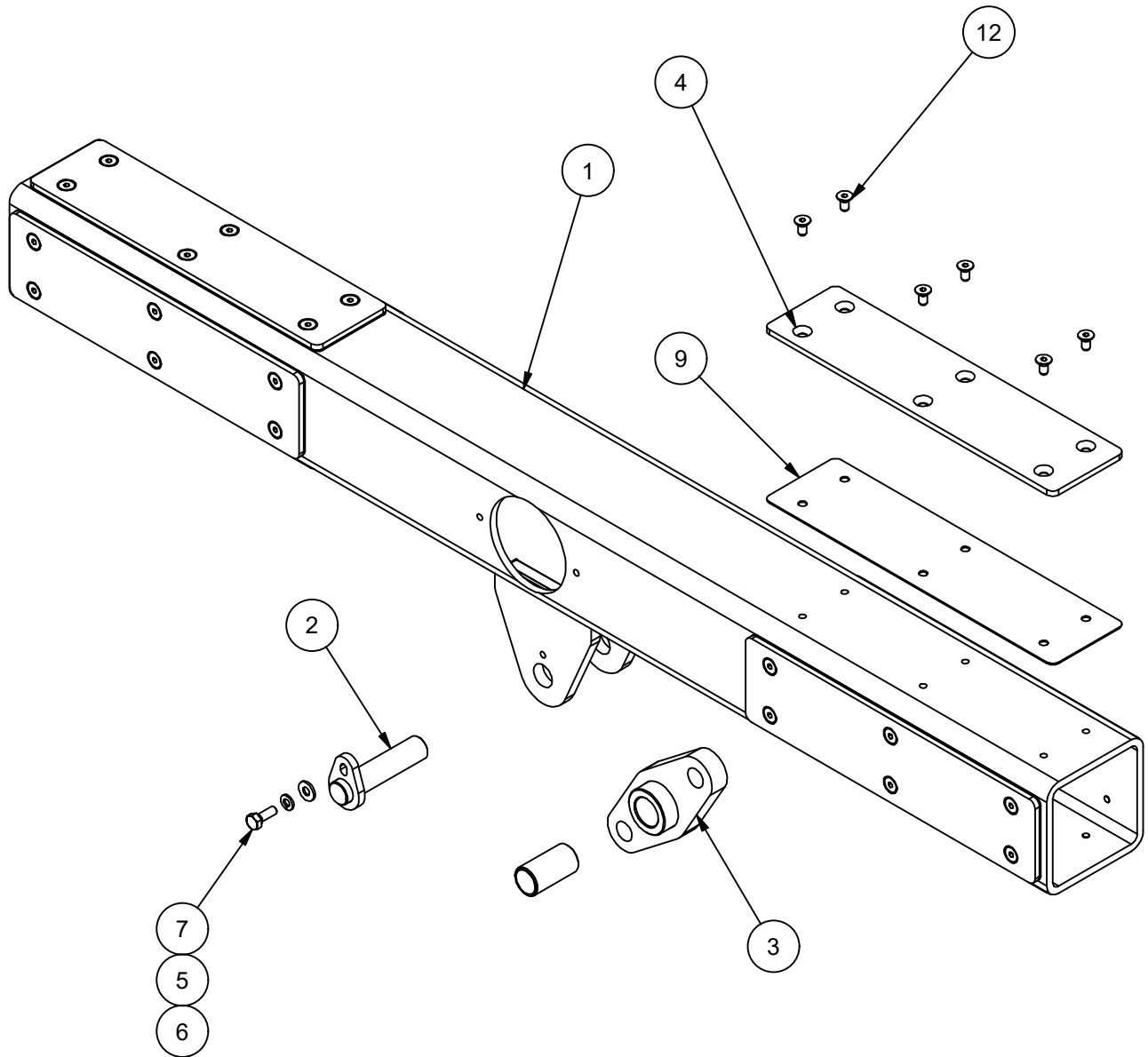


Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PBF-100-A004	Stationary Tube Assembly
2	2	PBF-100-A005	Slide Arm Weldment
3	2	PBF-100-A009	Grab Arm Weldment
4	2	PBF-100-A010	Connecting Link Weldment
5	2	PBF-100-P017	Arm Horizontal Wear Plate
6	2	PBF-100-P018	Arm Vertical Wear Plate
7	2	PBF-100-125	Pin
8	2	PBF-100-145	Pin
9	2	BRR 58	5/8" External Retaining Ring
10	2	BRR 1.0	1" External Retaining Ring
12	8	B1/2X1.75	Hex Bolt
13	8	W1/2F	Plain Washer
15	4	B1/2X1.5	Hex Bolt
17	28	W1/4F	Plain Washer
18	28	N1/4NYL	1/4 Std NC Nylock Nut
20	1	BC25015	Hyd. Cylinder 6" Stroke
27	8	W1/2NL	1/2" Nordlock Washer
28	4	N1/2J	Hex Jam Nut
29	28	B1_4X1.25EB	1/4-20 X 1-1/4" Elevator Bolt

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# BOX FLIPPER PBF-100-A004 PARTS LIST

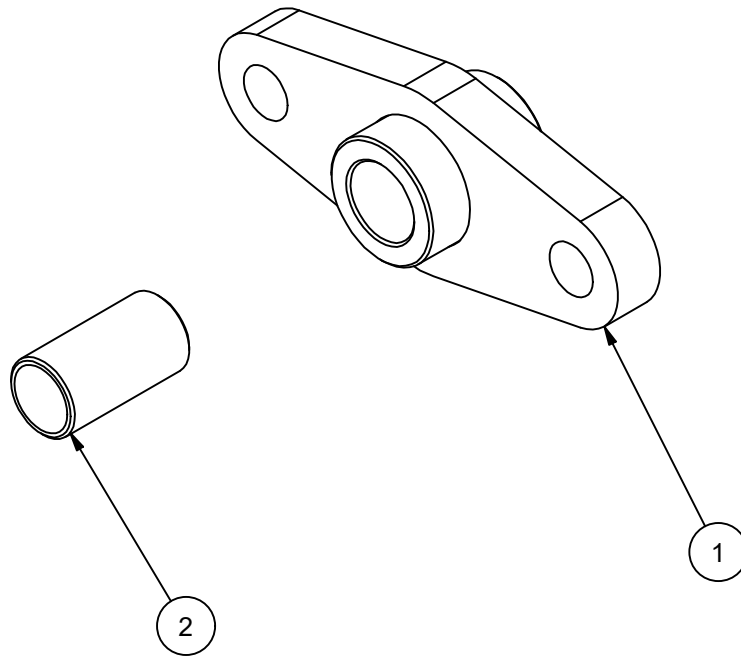


Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PBF-100-A003	Stationary Tube Weldment
2	1	PBF-100-A015	Linkage Connector Pivot Pin Weldment
3	1	PBF-100-A007	Linkage Connector Assembly
4	8	PBF-100-P030	Stationary Tube Wear Plate
5	1	W1/4F	Plain Washer
6	1	W1/4L	Lock Washer
7	1	B1/4X0.75	Hex Bolt
9	8	PBF-100-P037	Stationary Tube Spacer Plate
12	48	B1/4X.50CSH	1/4X1/2 Bolt Counter Sunk Hex Head Bolt

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# BOX FLIPPER PBF-100-A007 PARTS LIST



Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PBF-100-A006	Linkage Connector Weldment
2	1	PBF-100-138	Brass Bushing

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## California Proposition 65

The Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65, commonly known as Prop 65) applies to companies doing business in the State of California. The regulation is administered by the Office of Environmental Health Hazard Assessment (OEHHA) and mandates that no person in the course of doing business shall knowingly expose any individual to a chemical known to the State of California to cause cancer and/or reproductive toxicity without first giving clear and reasonable warning to individuals. If the business can prove that the exposure level poses no significant risk to the end consumer no warning is necessary.

Minden Machine Shop, Inc. is providing the information below to educate about the chemicals that are or could be found in the products that Minden Machine Shop, Inc. produces or uses in their products.

Material	Chemical	CAS #	Cancer, Reproductive Harm or Both?
Cast Iron	Nickel	7440-02-0	Cancer
	Arsenic	7440-38-2	Both
	Cobalt	7440-48-4	Cancer
	Lead	7439-92-1	Both
Steel	Nickel	7440-02-0	Cancer
Stainless Steel	Nickel	7440-02-0	Cancer
Paint Finishes	Carbon Black	1333-86-4	Cancer
	Toluene	108-88-3	Reproductive Harm
	Lead	7439-92-1	Both
Rubber Compounds	Acrylonitrile	107-13-1	Cancer
	Butadiene	106-99-0	Both
	DEHP	117-81-7	Both
EPDM	Carbon Black	1333-86-4	Cancer
Petroleum	Cadmium	-----	Both
Petroleum	Isoprene	78-79-5	Cancer

Additional information on Proposition 65 can be obtained by visiting the State of California’s Proposition 65 website:

<https://oehha.ca.gov/proposition-65/about-proposition-65>

Summary of Proposition 65 requirements:

<https://oehha.ca.gov/proposition-65/general-info/proposition-65-plain-language>

Clear and reasonable notice requirements:

<https://oehha.ca.gov/proposition-65/crn/notice-adoption-article-6-clear-and-reasonable-warnings>

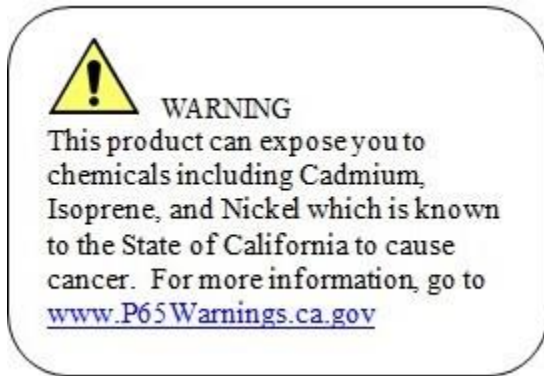
Chemicals and substances regulated by Proposition 65:

<https://oehha.ca.gov/proposition-65/proposition-65-list>

Proposition 65 Laws and Regulations:

<https://oehha.ca.gov/proposition-65/law/proposition-65-law-and-regulations>

Minden Machine Shop, Inc. has placed this decal on our products to alert the user to the possible exposures.



# Minden Machine Shop Inc

## **LIMITED WARRANTY**

Minden Machine Shop Inc warrants all products manufactured by it to be free of defect in material and workmanship for a period of one (1) year from the date of purchase.

This Minden Machine Shop Inc. warranty does not cover:

1. Parts and accessories supplied by Minden Machine Shop Inc. but manufactured by others. Minden Machine Shop Inc. will facilitate the other manufacturer warranty for the benefit of the purchaser but will not be bound thereby (example: augers, motors, trailers, tanks, etc.).
2. Products that have been altered by anyone other than a Minden Machine Shop Inc. employee or are used by the purchaser, for purposes other than what was intended at time of manufacture or used in excess of the “built specifications”.
3. Products that are custom manufactured by Minden Machine Shop Inc. utilizing the purchaser’s design which deviates from Minden Machine Shop Inc. normal production line manufactured or customized features of the products.
4. Malfunctions or damages to the product from misuse, negligence, customer alteration, accidents or product abuse due to incoming material or poor material flow ability or lack of required performance or required maintenance (e.g., poor material flow ability caused by incoming wet fertilizer or hot soybean meal, etc).
5. Loss of time, inconvenience, loss of material, down time or any other consequential damage.
6. Product use for a function that is different than designed intent (e.g., storing soybean meal in grain bin, unacceptable material in the bin such as hot bean meal when product originally designed for other application, etc).
7. Minden Machine Shop Inc is not responsible for any equipment that this product is attached to or mounted on.

To activate this warranty, the purchaser must make contact in writing with Minden Machine Shop Inc. within one (1) year of date of purchase. After contact, Minden Machine Shop Inc. has the right to determine the cause and qualify the legitimacy of the claim. Minden Machine Shop Inc., upon acceptance of a warranty claim, shall have a reasonable time to plan any repair or replacement and may affect repair or replacement out of its factory or through contract with a local repair service. If a purchaser after warranty notice is made, chooses to make the repair itself, Minden Machine Shop Inc. must approve any expenses before they are incurred to be responsible for customer reimbursement. Minden Machine Shop Inc. shall be liable on a warranty claim for repair or replacement of any defective products and this is the purchaser’s sole and exclusive remedy. Minden Machine Shop Inc. will not be liable for any other or further remedy including claims for personal injury, property damage or consequential damage. The law of the State of Nebraska shall govern and any such claim and any issues with regard to the same shall be resolved in the Nebraska District Court for the county of Kearney.

### **RETURN OF MERCHANDISE**

Merchandise may not be returned without written approval from the factory. All returns must have a return authorization number. Obtain this number before the return and show it on all return items. A 15% restocking charge is made on merchandise returned. Returned merchandise must be shipped pre-paid.

### **RECEIVING MERCHANDISE AND FILING CLAIMS**

When receiving merchandise it is important to check both the number of parts and their description with packing slip. The consignee must make all claims for freight damage or shortage within 10 days from the date of delivery.

When the material leaves the factory it becomes the property of the consignee. It is the responsibility of the consignee to file a claim on any possible damage or loss. Please list your preferred routing on purchase orders.

### **MODIFICATIONS**

It is the policy of Minden Machine Shop Inc. to improve its products whenever possible and practical to do so. We reserve the right to make changes, improvements and modifications at any time without incurring the obligation to make such changes, improvements and modifications on any equipment sold previously.

# WARRANTY REGISTRATION

To register equipment, or file a claim, copy and paste the words on this page into an email or word document, fill out the appropriate information completely, and email it to [larry@mindenmachine.com](mailto:larry@mindenmachine.com) with the subject as EQUIPMENT WARRANTY, or fill it out and fax it to 308-832-1340.

**Dealer Information:** Not Applicable, check here: [  ]

Dealer Name:

Address:

City:

State:

Zip Code:

Phone #:

Email:

**End User Information:**

Purchaser:

Address:

City:

State:

Zip Code:

Phone #:

Email:

Equipment:

Serial #:

Date Of Purchase:     /     /