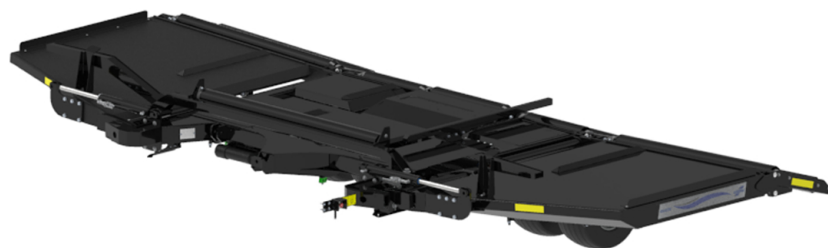
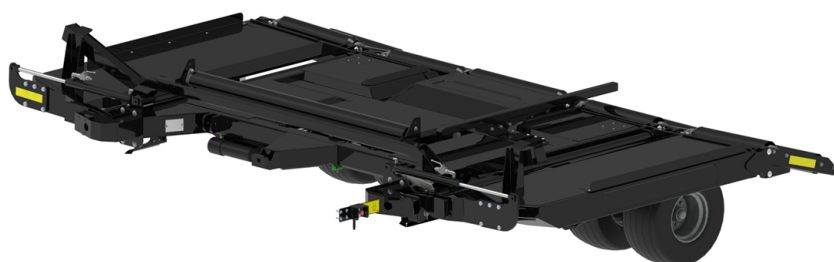


# PhiBer Big Bale Accumulator



**Models: AC5130, AC5150**

## Limitation of Liability

PhiBer® Manufacturing Inc. shall not be liable for special, incidental, or consequential damages arising out of the use of, the misuse of, or the inability to use any product sold by PhiBer® Manufacturing Inc. including, but without limitation: damages or loss of other property or equipment, personal injury, loss of life, loss of profits or revenue, or claims of purchaser for any such damage or loss.

## Warranty

PhiBer® Manufacturing Inc. warrants its products to be free from defect in factory workmanship and material under normal use and service when set-up and operated according to factory instructions. Warranty should be handled through PhiBer® or an authorized selling dealer. Warranty is subject to the following conditions:

**Warranty Claims:** Must be completed within 30 days of replacement of part(s). Claim must include the serial number of the accumulator, date of delivery, explanation of problem and all other necessary particulars.

**Warranty Parts:** Must be kept for PhiBer's® inspection unless otherwise specified.

**Warranty Labor:** PhiBer® must authorize any labor subject to warranty. PhiBer® Manufacturing Inc. reserves the right to set the labor rate and time required to complete a warranty repair.

**Warranty Limitations:** Warranty will not be granted on any accumulator that has been misused, altered, or modified in any way. Diagnostic and service calls are not covered by warranty. Warranty covers only the cost of repair and parts; it does not include shop supplies, mileage, and freight costs.

**Government Legislation:** Warranty terms and conditions are subject to provincial or state legislation and laws.

Warranty on cylinders, hydraulic components, electronic components, and other trade accessories are limited to the warranties made by the respective manufacturers and not by PhiBer® Manufacturing Inc.

The following table shows the available warranty:

Item	Time from Purchase
Frame and other structural components	One (1) Year
Electronic components	One (1) Year
Hydraulic components	One (1) Year
Hydraulic cylinders	One (1) Year



# Table of Contents

<i>LIMITATION OF LIABILITY</i> .....	<i>I</i>
<i>WARRANTY</i> .....	<i>I</i>
<b>TABLE OF CONTENTS</b> .....	<b>III</b>
<b>INTRODUCTION</b> .....	<b>1</b>
<b>DESCRIPTION OF THE MACHINE</b> .....	<b>2</b>
<i>BALE PACKAGING MODES</i> .....	<i>3</i>
<b>ILLUSTRATION OF THE MACHINE</b> .....	<b>3</b>
<i>LARGE SQUARE BALE FOLDING ACCUMULATOR ASSEMBLY</i> .....	<i>3</i>
<i>SERIAL NUMBER LOCATION</i> .....	<i>1</i>
<b>SAFETY</b> .....	<b>2</b>
<b>SAFETY ALERT SYMBOLS</b> .....	<b>2</b>
<b>SIGNAL WORDS</b> .....	<b>2</b>
<b>OPERATOR RESPONSIBILITY</b> .....	<b>3</b>
<b>GENERAL SAFETY PRACTICES</b> .....	<b>3</b>
<b>MAINTENANCE SAFETY</b> .....	<b>5</b>
<b>HYDRAULIC SAFETY</b> .....	<b>6</b>
<b>INSTALLATION SAFETY</b> .....	<b>6</b>
<b>TRANSPORT SAFETY</b> .....	<b>7</b>
<b>STORAGE SAFETY</b> .....	<b>8</b>
<b>TIRE SAFETY</b> .....	<b>8</b>
<b>SAFETY SIGNS</b> .....	<b>9</b>
<i>SAFETY SIGN LOCATION</i> .....	<i>9</i>
<i>SAFETY SIGN EXPLANATION</i> .....	<i>9</i>
<i>ROAD SAFETY SIGN LOCATION</i> .....	<i>11</i>
<i>ROAD SAFETY SIGN EXPLANATION</i> .....	<i>11</i>
<i>SAFETY SIGN MAINTENANCE</i> .....	<i>12</i>
<i>EMERGENCY STOP</i> .....	<i>13</i>
<b>SPECIFICATIONS</b> .....	<b>14</b>
<b>BALE ACCUMULATOR</b> .....	<b>14</b>
<b>TRACTOR REQUIREMENTS</b> .....	<b>14</b>
<b>HARDWARE TORQUE</b> .....	<b>15</b>
<b>OPERATION</b> .....	<b>16</b>
<b>HYDRAULIC SET-UP</b> .....	<b>16</b>
<b>COMPONENT CYCLE TIMES</b> .....	<b>16</b>
<b>CYCLE INITIATION</b> .....	<b>16</b>
<b>CYCLE MODE SELECTION</b> .....	<b>17</b>
<i>HYDRAULIC TIME-OUT</i> .....	<i>18</i>
<b>START-UP PROCEDURE</b> .....	<b>18</b>



<b>FIELD OPERATION.....</b>	<b>19</b>
.....	<b>19</b>
<i>AUTOMATIC BALE EJECTION.....</i>	19
<i>MANUAL BALE EJECTION.....</i>	19
<i>SOLID BALES REQUIRED.....</i>	19
<i>HOLD MODE.....</i>	19
<i>ISOBUS SOFTWARE.....</i>	20
<i>ICON GUIDE.....</i>	20
<i>START-UP.....</i>	21
<i>HOME PAGE.....</i>	21
<i>SETTINGS PAGE.....</i>	22
<i>SCALE PAGE.....</i>	22
<i>ACCUMULATOR SETUP PAGE.....</i>	22
<i>BALE MODE PAGE.....</i>	23
<i>GPS PAGE.....</i>	23
<i>DIAGNOSTIC PAGE.....</i>	23
<i>MANUAL MODE HOME PAGE.....</i>	24
<b>PHIBER ACCUMULATOR APP.....</b>	<b>24</b>
<i>PLANNING MODE.....</i>	24
<i>HOW THE ZONES WORK.....</i>	25
<i>BALE EJECT MODE.....</i>	25
<i>BLUETOOTH AND WI-FI CONNECTION.....</i>	26
<i>REMOTE CONTROL.....</i>	26
<i>MANUAL EJECT.....</i>	26
<i>UPDATING ACCUMULATOR SOFTWARE THROUGH APP.....</i>	27
<i>DOWNLOADING AND SENDING LOG FILES.....</i>	27
<b>TRANSPORTING.....</b>	<b>27</b>
<b>STORAGE.....</b>	<b>28</b>
<b>RECOMMENDED SETTINGS.....</b>	<b>29</b>
<i>BALE TRIGGER ADJUSTMENT.....</i>	29
<b>MAINTENANCE.....</b>	<b>30</b>
<i>LIMIT SWITCHES.....</i>	30
<i>WHEEL LUG NUTS.....</i>	31
<i>WHEEL BEARINGS.....</i>	31
<i>ROLLER BEARINGS.....</i>	31
<i>HITCH PIVOT.....</i>	31
<i>BALE TRIGGER VERTICAL ADJUSTMENT.....</i>	31
<i>BALE TRIGGER HORIZONTAL ADJUSTMENT.....</i>	32
<i>BALE TRIGGER SPRING TENSION.....</i>	32
<i>CASTER PIVOT.....</i>	32
<i>BRAKE PAD.....</i>	32
<i>WING PIVOT.....</i>	32
<i>HYDRAULIC CYLINDER REPLACEMENT.....</i>	33
<b>MANIFOLD ASSEMBLY.....</b>	<b>34</b>

<b>HYDRAULIC SCHEMATIC .....</b>	<b>35</b>
<b>ELECTRICAL SCHEMATIC .....</b>	<b>36</b>
<b>LIGHTS.....</b>	<b>39</b>
<b>TROUBLESHOOTING.....</b>	<b>40</b>
<b>INSTALLATION .....</b>	<b>42</b>
<b>LIFTING POINTS .....</b>	<b>42</b>
<b>HITCH KIT MOUNTING GUIDELINES .....</b>	<b>42</b>
<i>PREPARE TRACTOR AND BALER.....</i>	<i>42</i>
<i>GENERAL INSTALLATION TIPS .....</i>	<i>43</i>
<b>INDEX .....</b>	<b>44</b>

# Introduction

---

Congratulations on your purchase of the PhiBer® Large Square Bale Folding Accumulator. The PhiBer® Bale Accumulator offers the agricultural industry a machine for uniformly arranging bales into a desired package that can be handled more efficiently.

All persons authorized to operate this equipment should read and understand the contents of this Operator's Manual, especially the *Safety* section. The owner or operator should seek assistance from the dealer, distributor or PhiBer® for any information not fully understood regarding the safe operation, adjustment, maintenance, or repair of this equipment.

Keep this Operator's Manual in a clean, dry place that is easily accessible for reference when more detailed information is required to perform tasks related to the operation, adjustment, maintenance, or repair of this equipment. It is further recommended that the contents of this Operator's Manual be reviewed at least annually by persons operating, adjusting, maintaining, or repairing this PhiBer® Bale Accumulator and any time a new person is assigned to any of the above-mentioned tasks.

Any information in this Operator's Manual that is not fully understood should be clarified by contacting the dealer, distributor, or manufacturer.

The contents of this Operator's Manual are accurate up to the time of printing.

PhiBer® reserves the right to make design changes without prior notice to the end user.

## Description of the Machine

The operator can choose from seven different automatic discharge patterns or manually eject the bales. With the PhiBer® Large Square Bale Folding Accumulator you can select the desired bale packaging mode that will compliment the preferred method of bale handling in the field.

There are two options of control: automatic unloading and manual unloading. Automatic unloading is recommended. Choose manual or automatic in the setup page on the monitor.

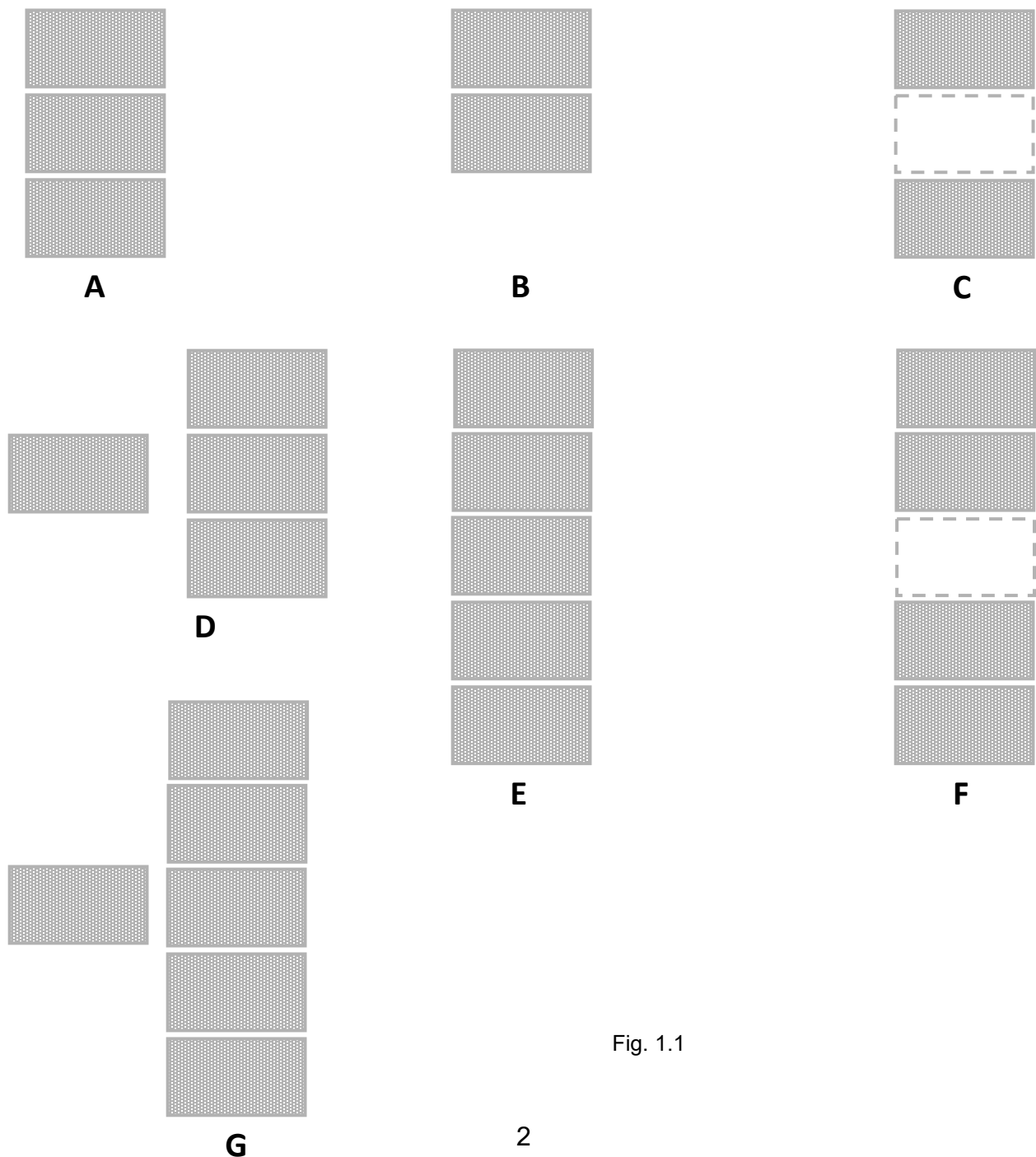


Fig. 1.1

## Bale Packaging Modes\* (Figure 1.1)

\*shown from top view

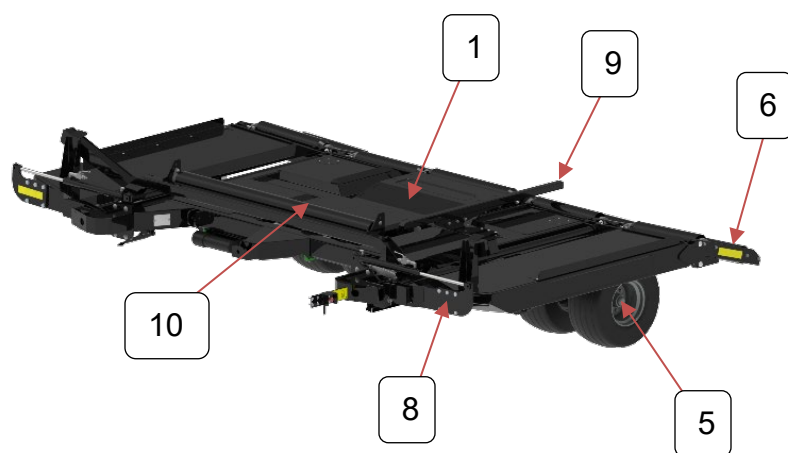
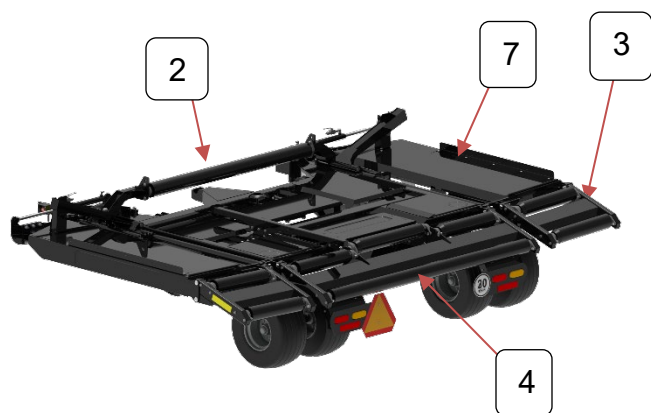
	5130	5150
A. Three (3) Bales (side-by-side)	X	X
B. Two (2) Bales (side-by-side)	X	X
C. Two (2) Bales (with gap)	X	X
D. One (1) + Three (3) Bales (hold mode)	X	X
E. Five (5) Bales (side-by-side)	32in (0.81m) bale	X
F. Four (4) Bales (with gap)	32in (0.81m) bale	X
G. One (1) + Five (5) Bales (hold mode)	32in (0.81m) bale	X

## Illustration of the Machine

**IMPORTANT!** All references to “LEFT” and “RIGHT”, as used throughout this Operator’s Manual, are determined by facing the direction of forward travel when in use.

## Large Square Bale Folding Accumulator Assembly

1. Scale Deck Assembly
2. Center Push-off Assembly
3. RH Tail Piece Assembly
4. Center Tail Piece Assembly
5. Caster Assembly
6. LH Tail Piece Assembly
7. RH Wing assembly
8. LH Wing Assembly
9. Side-shift Assembly
10. Bale Trigger Button



## Virtual Terminal

This accumulator uses a standard ISOBUS (ISO11783) terminal.

## Serial Number Location

The serial number plate (Figure 1.2) is located on the front of the frame, on the inside.

Record the machine Model and Serial Number in the spaces provided below. Use these numbers when contacting the dealer for repair parts or service assistance.

**Model Number:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_

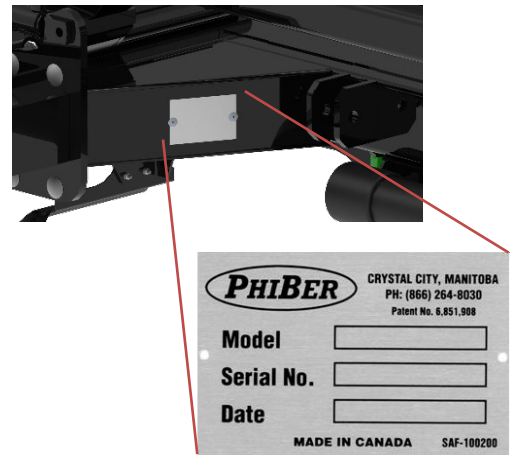


Fig. 1.2

# Safety

---

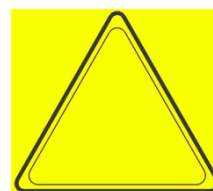
## Safety Alert Symbols

Safety Alert Symbols are intended to draw attention of the machine operator to important safety information both published in the Operator's Manual and applied to the machine. Whenever a Safety Alert Symbol is seen, it means that associated information is provided for recognizing, responding appropriately to, and avoiding potentially hazardous situations.

An equilateral triangle surrounding an exclamation point or a double line equilateral triangle surrounding symbols or graphics indicates a potentially hazardous situation. Information included on a safety sign or printed in the Operator's Manual describes the hazardous situation and indicates appropriate response and/or avoidance procedures.

Remember:

**ACCIDENTS DISABLE AND KILL  
ACCIDENTS ARE COSTLY  
ACCIDENTS CAN BE AVOIDED**



## Signal Words

### **DANGER**

Indicates an imminently hazardous situation that, if not avoided, **WILL** result in death or serious injury if proper precautions are not taken.



### **WARNING**

Indicates a potentially hazardous situation that, if not avoided, **COULD** result in death or serious injury if proper precautions are not taken.



### **CAUTION**

Indicates a potentially hazardous situation that, if not avoided, **MAY** result in minor or moderate injury if proper precautions are not taken, or it serves as a reminder to follow appropriate safety practices.



## **Operator Responsibility**

Remember, YOU, the operator, are responsible for the safe operation, adjustment, maintenance, and repair of this PhiBer® Large Square Bale Folding Accumulator. It is the responsibility of the owner, or authorized person in charge, to ensure that all persons who operate, adjust, maintain and/or repair this implement are familiar with the information provided in this Operator's Manual.

A safe operator is the key to safety. Good safety practices not only protect you, but also persons who may be in the vicinity of the accumulator. Make good safety practices a part of your farming operation. Ensure that all persons operating, adjusting, maintaining and/or repairing this equipment are familiar with the procedures recommended in this Operator's Manual.

Always heed safety warnings and follow recommended safety precautions to avoid hazardous situations. Do not risk personal injury or death by ignoring safety warnings and safety precautions.

### **Key Safety Reminders:**

- The most important safety device is a safe and qualified operator.
- A safe operator is one who has read and understood the contents of this Operator's Manual prior to performing any tasks related to the machine.
- Owners have a responsibility to provide training to persons who may operate, adjust, maintain and/or repair the equipment prior to performing any of these tasks.
- Do not perform any unauthorized modifications to the accumulator or use the accumulator for any purpose other than what is described in the contents of this Operator's Manual.
- Plan tasks and work schedules to reduce exposure to unnecessary stress and fatigue.
- Observe all workplace safety and health requirements.

## **General Safety Practices**

- Read and understand the contents of this Operator's Manual prior to operating, adjusting, maintaining and/or repairing the bale accumulator.



- Locate, read, and understand all safety signs applied to the accumulator before performing any tasks.
- Review the contents of this Operator's Manual at least annually, and any time a new person is assigned to perform any task with the accumulator.
- Press the emergency stop button and ensure that all bystanders, especially small children, are kept at a safe distance while performing any tasks with the accumulator.
- Do not allow riders on any part of the accumulator.
- Ensure all guards and shields are intact and in place prior to operating the accumulator.
- Keep hands, feet, hair, and loose clothing away from moving and/or rotating parts.
- Stop the engine, lower the equipment, set the parking brake, remove the ignition key, and allow time for moving parts to stop prior to adjusting, maintaining, or repairing the equipment.
- Ensure that all equipment lighting and marking is intact, clean, and operating properly prior to traveling on public roads. Check with local highway authorities to confirm that the accumulator is properly equipped for highway travel.
- Provide a fully stocked First-Aid kit in a highly visible and easily accessible location.
- Keep a fully charged fire extinguisher in a highly visible and easily accessible location.
- Ensure that the accumulator is securely blocked and supported prior to working underneath (if it needs to be raised for repair).
- Ensure that all persons operating, adjusting, maintaining and/or repairing the accumulator know how to seek or summon medical assistance should an injury occur.

## Maintenance Safety

- Read and understand all the information provided in this Operator's Manual covering the operation, adjustment, maintenance, and repair prior to performing any of these tasks.
- Ensure proper tools, equipment and personal protective equipment is available prior to working on the accumulator.
- Wear appropriate clothing when performing tasks around the accumulator. Ill-fitting and/or frayed clothing as well as loose or dangling items should not be worn when working near the equipment.
- Stop the engine, lower the equipment, set the parking brake, remove the ignition key, and allow time for moving parts to stop prior to adjusting, maintaining, or repairing the equipment.
- Ensure that all moving parts have come to a complete stop before performing adjustments, maintenance, or repairs.
- Securely block main frame if adjustment, maintenance, or repair is required for wheels and tires.
- Securely block or chain wings if maintenance or repair is performed with wings raised
- Prior to operating equipment, ensure that all guards and shields are intact and in place after performing adjustment, maintenance, or repairs.
- Check for bushing wear and weldment fatigue on moving parts.
- Store flammable fluids in approved containers and store out of access by unauthorized persons, especially children.
- Wear personal protective equipment, such as gloves, eye protection, etc. when inspecting hydraulic system for leaks. Use a small piece of cardboard or wood to detect leaks.
- Ensure that hydraulic oil pressure in hoses, lines and components is fully relieved prior to performing maintenance or repairs to the hydraulic system.
- 
- Parts may move due to imbalance when servicing wings/push-off assembly.

## Hydraulic Safety

- Ensure that all hydraulic system components are kept clean and in proper working condition.
- Periodically inspect condition of hydraulic hoses, lines, and components. Remove and replace any parts showing damage or deterioration.
- Use only repair or replacement parts specified by the manufacturer.
- Follow instructions provided by the manufacturer when making repairs.
- Wear appropriate personal protective equipment when unsure if residual pressure may exist in hydraulic components during troubleshooting and/or making repairs.
- Use a piece of cardboard or wood to check for hydraulic leaks. Hydraulic fluid under pressure can penetrate human skin.
- Ensure all fittings, couplings and other hydraulic connections are intact and properly tightened before operating hydraulics.
- Store flammable fluids in approved containers and store out of reach by unauthorized persons, especially children.
- Ensure that hydraulic oil pressure in hoses, lines and components is fully relieved prior to performing maintenance or repairs to the hydraulic system.
- Ensure that all persons operating, adjusting, maintaining and/or repairing the accumulator know how to seek or summon medical assistance should an injury occur.

## Installation Safety

- Read, review, and understand all bale accumulator installation instructions before attempting to attach accumulator to baler.
- Ensure the baler is properly hitched to the tractor and that the baler is lowered fully to the ground.

- Ensure that tractor engine is shut off, key is removed from the ignition and the parking brake is set and/or wheels blocked.
- Block bale accumulator tires and support the front end of the bale accumulator frame until the accumulator is securely attached to the baler.

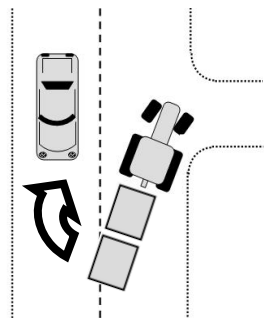
## Transport Safety

- Ensure that the accumulator is attached to the baler properly.
- Ensure the drawbar hitch pin retainer for baler is in place and engaged properly.
- Ensure the safety tow chain is securely attached between baler and tractor.
- Ensure all lighting and implement marking devices are intact and visible.
- Ensure equipment is properly marked according to local road regulations and heed all local traffic regulations.
- The accumulator adds length to baler and covers a wide path when making turns.
- Ensure the accumulator is fully unloaded before road travel.
- Ensure the accumulator wings are up and travel valves are closed before road travel.
- Do not exceed 20 mph (32 km/h).
- Reduce travel speed on rough roads and surfaces.
- Do not allow riders on the accumulator at any time.



**NOTE:** Avoid travelling across steep inclines, particularly when accumulator is partially loaded.

- This accumulator makes wide turns.
- Come on and off approaches or roads slowly.



## **Storage Safety**

- Store the accumulator away from areas of human activity.
- Do not allow children to play on or around accumulator.

## **Tire Safety**

- Ensure tire inflation pressure is maintained per specifications.
- Follow proper procedures for tire repairs, especially when mounting tire to rim.
- Seek assistance from a trained person for tire repairs or mounting, especially if special equipment is required.

# Safety Signs

## Safety Sign Location

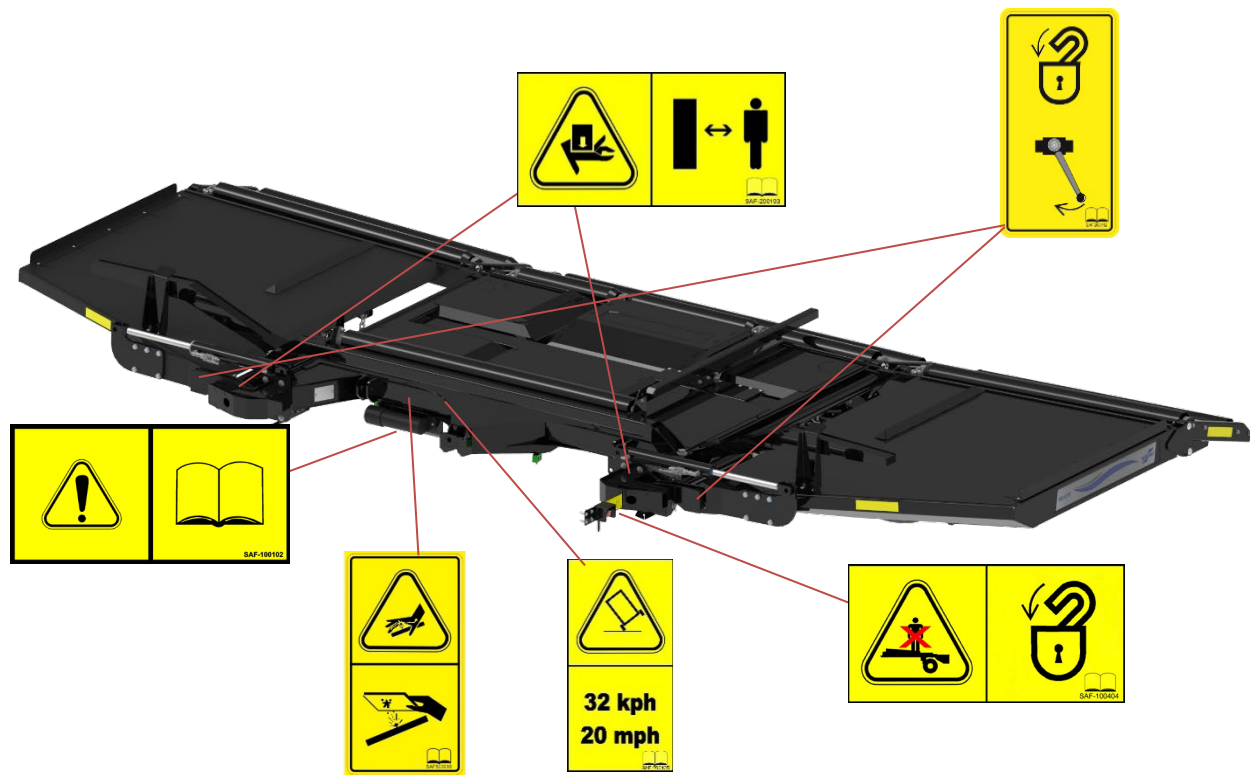


Fig. 2.1

## Safety Sign Explanation

Read the Operator's Manual (Figure 2.2)

**WARNING!** Read and understand the contents of this Operator's Manual before performing any tasks related to the operation, adjustment, maintenance, or repair of the machine.



Fig. 2.2

Pinch Point Hazard (Figure 2.3)

**WARNING!** MOVING PART HAZARD. Keep head and all body parts, particularly hands and feet, away from area around push off, side shift, and wings when machine is operating.



Fig. 2.3

#### HYDRAULIC LOCK OUT (Figure 2.4)

**⚠ WARNING!** This machine has been equipped with a hydraulic lock out. In the event of its use, it immediately disables the machine wing's hydraulics.



Fig. 2.4

#### EMERGENCY STOP (Figure 2.5)

**⚠ WARNING!** This machine has been equipped with an emergency stop button. In the event of its use, it immediately disables the machine.



Fig. 2.5

#### LOSS OF CONTROL HAZARD (Figure 2.6)

**⚠ WARNING!** LOSS OF CONTROL HAZARD. Travelling at speeds over 20 mph, (32 km/h) may cause the accumulator to sway and cause loss of control of whole unit.



Fig. 2.6

#### HYDRAULIC HOSE LEAK (Figure 2.7)

**⚠ CAUTION!** HYDRAULIC HOSE LEAK. Check hoses for leak using piece of paper or cardboard, not hands.



Fig. 2.7

## Road Safety Sign Location

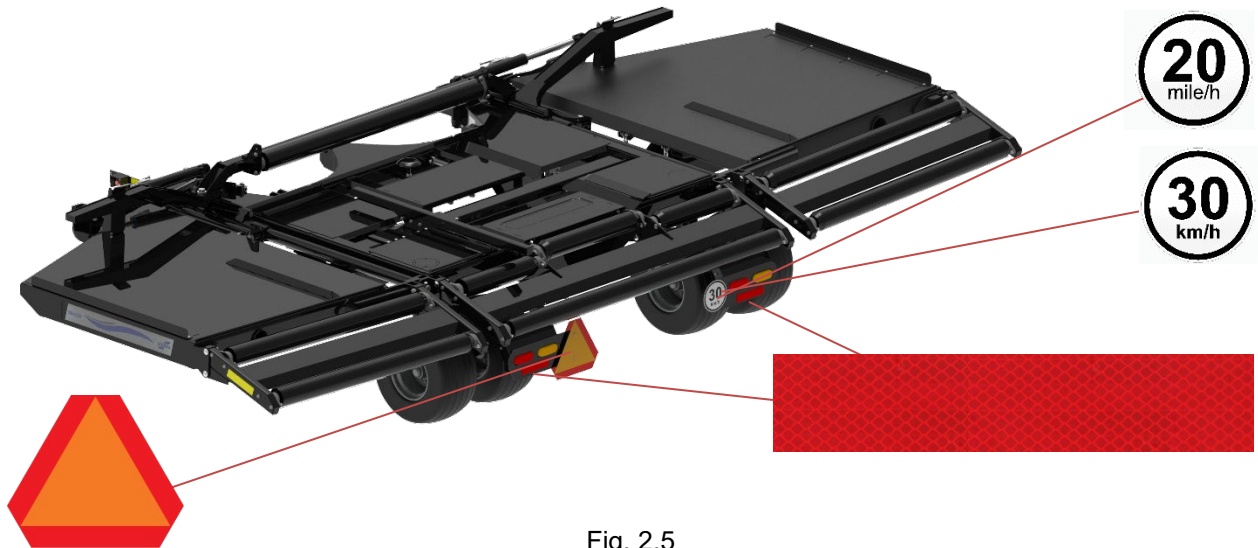


Fig. 2.5

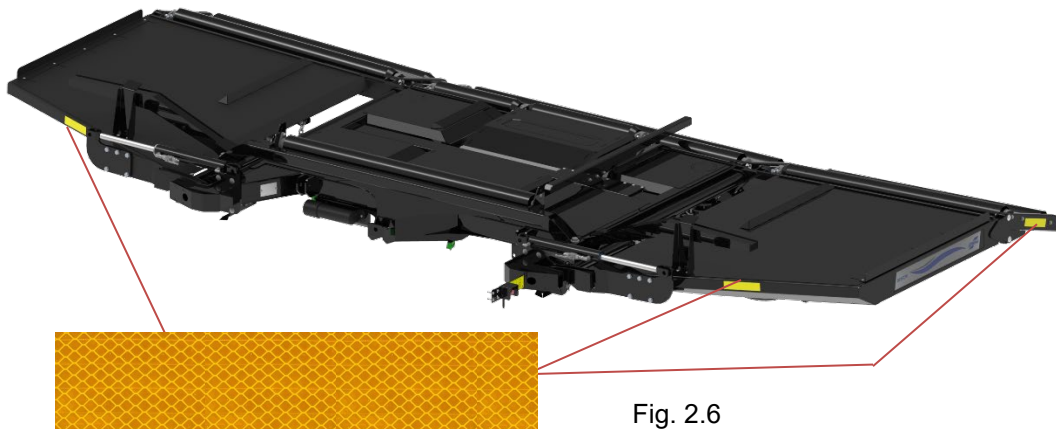


Fig. 2.6

## Road Safety Sign Explanation

RED/AMBER CONSPICUITY TAPE (Figure 2.7)

Tape serves as reflectors to render vehicle visible in low light or dark driving conditions.



Fig. 2.7



### SLOW-MOVING VEHICLE SIGN (Figure 2.8)

A slow-moving vehicle (SMV) sign warns other road users that the vehicle is moving at 40km/h (25mph) or less.



Figure 2.8

### SPEED IDENTIFICATION SIGN (Figure 2.9)

A speed identification sign (SIS) warns other road users the maximum speed the equipment can be operated at.



Figure 2.9

## Safety Sign Maintenance

### Safety Sign Legibility

All safety signs applied to the accumulator must be visible and legible. Keep dust and dirt cleared from safety signs and ensure that visibility is not obscured.

### Damaged or Deteriorated Safety Signs

Remove and replace any safety signs that have been damaged or show signs of deterioration.

### Safety Sign Replacement

Replacement safety signs may be ordered through your dealer or distributor. Contact PhiBer® if you are unable to obtain replacement safety signs from a dealer or distributor.

### Safety Signs on Replacement Parts

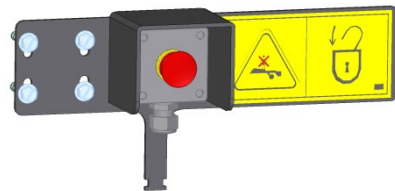
Ensure that replaced parts or components on the accumulator, that had a safety sign attached originally, include a safety sign when they are shipped to you.


## Affixing Safety Signs to Machine

1. Ensure proper position and orientation before installing.
2. Ensure installation area is clean and dry.
3. Ensure ambient temperature is above 50° F (10° C).
4. Remove backing material to expose label adhesive.
5. Place one edge of label to machine surface.
6. Slowly press the label onto the surface.
7. Ensure no air pockets exist under surface of the label.

## Emergency Stop

An emergency stop button has been supplied with this machine. Please mount in a convenient place on the back of the baler, with easy access. In the event of use, it cuts all electrical power to the hydraulic valve immediately stopping any movement. If it is necessary to climb onto the deck of the machine, be sure the emergency stop button has been pressed. To resume motion, twist button.



 **DANGER!** DO NOT CLIMB ON MACHINE while it is running.

# Specifications

---

## Bale Accumulator

	<b><u>AC 5130</u></b>	<b><u>AC 5150</u></b>
Bale Capacity	5 with 32in (0.81m) bale 3 with 48in (1.22m) bale	5 with 48in (1.22m) bale
Bale Size	32 in (0.81 m) 48 in (1.22 m)	48 in (1.22 m)
Total Bale Weight	Max. 9000 lb (4090 kg)	Max. 8250lb (3750 kg)
Bale Ejection	Manual or Automatic	Manual or Automatic
Unfolded Width	171 in (4.35 m)	251 in (6.38 m)
Folded Width	128 in (3.25 m)	118 in (3.00 m)
Length	117 in (2.97 m)	117 in (2.97 m)
Height	47.8 in (1.21 m)	48.1 in (1.22 m)
Tire Size	4 - 26x12.00-12NHS	4 - 26x12.00-12NHS
Weight	3,750 lbs. (1,700 kg)	5,000 lbs. (2,290 kg)
Electrical Power Supply	12 V	12 V
Hydraulics	15 US gal/min (56.8 L/min) continuous flow	15 US gal/min (56.8 L/min) continuous flow
Bale Length (range)	6 - 9 ft (1.83 - 2.74 m)	6 - 9 ft (1.83 - 2.74 m)
Silage Bale Handling Baleage Option Length	Yes (with Baleage option) 4.5 – 8 ft (1.37 – 2.44 m)	Yes (with Baleage option) 4.5 – 8 ft (1.37 – 2.44 m)

## Tractor Requirements

Hydraulics	
# of circuits required	1
hydraulic flow	12 - 15 US gal/min (45.4 – 56.8 L/min)
Electrical Power Supply	12 V @ 5 amps
ISOBUS	ISO Compatible Tractor or Baler

# Hardware Torque

## SAE

Bolt Diameter	Bolt Torque		
inches	SAE 2 N·m (lb-ft)	SAE 5 N·m (lb-ft)	SAE 8 N·m (lb-ft)
1/4	8 (6)	12 (9)	19 (12)
5/16	13 (10)	25 (19)	36 (27)
3/8	27 (20)	45 (33)	63 (45)
7/16	41 (30)	72 (53)	100 (75)
1/2	61 (45)	110 (80)	155 (115)
9/16	95 (70)	155 (115)	220 (165)
5/8	128 (95)	215 (160)	305 (220)
3/4	225 (165)	390 (290)	540 (400)
7/8	230 (170)	570 (420)	880 (650)
1	345 (225)	850 (630)	1320 (970)

## Metric

Bolt Diameter	Bolt Torque	
mm	8.8 N·m (lb-ft)	10.9 N·m (lb-ft)
M3	0.5 (0.4)	1.8 (1.3)
M4	3 (2.2)	4.5 (3.3)
M5	6 (4)	9 (7)
M6	10 (7)	15 (11)
M8	25 (18)	35 (26)
M10	50 (37)	70 (52)
M12	90 (66)	125 (92)
M14	140 (103)	200 (148)
M16	225 (166)	310 (229)
M20	435 (324)	610 (450)
M24	750 (555)	1050 (774)
M30	1495 (1103)	2100 (1550)
M36	2600 (1917)	3675 (2710)

## Flare-Type Tube Fittings

Tube Size OD	Nut Size across flats	Torque	Recommended # Turns (after finger tightening)
in	in	N·m (lb-ft)	turns (flats)
3/16	7/16	8 (6)	1/6 (1)
1/4	9/16	12 (9)	1/6 (1)
5/16	5/8	16 (12)	1/6 (1)
3/8	11/16	24 (18)	1/6 (1)
1/2	7/8	46 (34)	1/6 (1)
5/8	1	62 (46)	1/6 (1)
3/4	1-1/4	102 (75)	1/8 (0.75)
7/8	1-3/8	122 (90)	1/8 (0.75)

**NOTE:** Torque values listed are based on lubricated connections in reassembly.

# Operation

---

## Hydraulic Set-up

Proper set-up of tractor hydraulics ensures optimum operation of the PhiBer® Large Square Bale Accumulator and will greatly increase system reliability. The hydraulic system on your accumulator is designed to function with open-center, closed-center, and closed-center load-sensing tractor hydraulic systems. For tractors configured with closed-center hydraulic systems, some adaptation may be required to achieve optimum performance. Contact your dealer or PhiBer® for assistance.

There are two crucial elements that must be heeded to ensure optimum Bale Accumulator performance:

1. Tractor hydraulic output flow must be set between 12 - 15 US gal/min (45.4 - 56.8 L/min) and be in a continuous operating mode.

**NOTE:** Hydraulic oil flow more than 15 US gal/min (56.8 L/min) may cause hydraulic lock up of the system. Flow rates below 12 US gal/min (45.4 L/min) will cause lower cycle times and can impede productivity.

2. The low-pressure tank return line must discharge directly into the tractor hydraulic reservoir with negligible system back pressure.

**NOTE:**

This accumulator is sent with a non-locking Pioneer tip that can be plugged into the remote when hose kit option is ordered.

## Component Cycle Times

Component / Action	5130 (sec.)	5150 (sec.)
15 US gal/min (56.8 L/min) flow rate		
Side Truck: RH side to LH side	4	5
Side Truck: LH side to RH side	3	4
Push off Truck: Extend and retract	8 (5 ext. / 3 ret)	8 (5 ext. / 3 ret)

## Cycle Initiation

This start-up or cycle initiation procedure ensures that both the bale eject, and bale side shift trucks are in their respective “home” positions and hydraulic cylinders are fully retracted before operating the Bale Accumulator in the field.



## **WARNING!**

**MOVING PART HAZARD.** Ensure that the deck of the accumulator is clear of any foreign objects and that all bystanders are at a safe distance before starting the tractor, baler, and the Bale Accumulator. Distances to be given: 21 ft (6.4 m) back and 12 ft (3.7m) to the sides.

1. Start tractor engine and activate tractor hydraulic system.
2. Is machine safe? Yes or no.
3. Allow 10 seconds to elapse before using the Bale Accumulator to ensure both the push off and side shift trucks have returned to their “home” positions.

## **Cycle Mode Selection**

The PhiBer® Large Square Bale Accumulator allows the operator to select one of five bale ejection modes

(Figure 4.1):

- A. Three (3) Bales (side-by-side)
- B. Two (2) Bales (side-by-side)
- C. Two (2) Bales (with gap)
- D. One (1) + Three (3) Bales (hold mode)
- E. Five (5) Bales (side-by-side)
- F. Four (4) Bales (with gap)
- G. One (1) + Five (5) Bales (hold mode)

To select bale ejection mode, refer to the settings screen on the monitor. The hold mode may be enabled to each of the five modes and can be enabled right from the accumulator home screen.

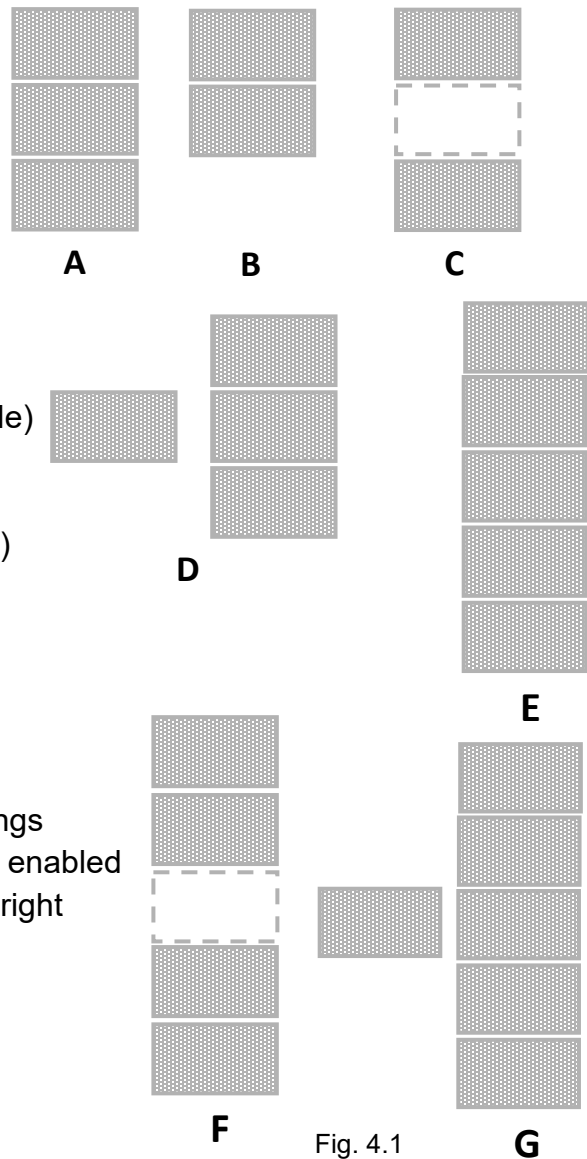


Fig. 4.1

## Hydraulic Time-out

A hydraulic time-out safety is provided to prevent damage to the machine in case of a machine error. The hydraulic time-out will be activated if function is not completed within a pre-set time; an error will appear. The hydraulic time-out safety will prevent any further automatic operations.



### **WARNING Stop baler immediately**

**In case of a hydraulic time-out, baling must be stopped immediately.**

#### **Proceed as Follows.**

1. Stop tractor and baler.
2. Locate problem.
3. Use manual mode to clear accumulator if necessary.
4. Engage hydraulics to accumulator.
5. Use manual control to eject bales as needed to free trapped material.

## Start-up Procedure

The *Start-up Procedure* ensures that there are no bales in the accumulator, and that the push off mechanism, side shift, and wings are in their respective “home” positions before operating the PhiBer® Large Square Bale Accumulator in the field. During the start-up procedure any remaining bales in the accumulator will be ejected.



### **WARNING! MOVING PART HAZARD.**

**BALES MAY EJECT.** Ensure the accumulator is clear of any foreign objects and all bystanders are at a safe distance before starting the tractor, baler, and the Bale Accumulator. Distances to be given: 21 ft (6.4 m) back and 12 ft (3.7m) to the sides.

Is the Accumulator Safe?	✓
	✗



### **WARNING! MOVING PART HAZARD.**

**WINGS WILL LOWER.** Ensure the accumulator is clear of any foreign objects and all bystanders are at a safe distance before starting the tractor, baler, and the Bale Accumulator. Distances to be given: 21 ft (6.4 m) back and 12 ft (3.7m) to the sides.

## Field Operation



### **WARNING!** WIDE TURNING PATH

#### **Automatic Bale Ejection.**

Once the Bale Accumulator has been started, cycle and bale ejection mode selected, the accumulator will function automatically. If the chamber on the baler is empty at the beginning of the baling process, stop the accumulator. As soon as a solidly formed bale has formed in the chamber, re-enable automatic operation. The bale ejection mode can be modified by the operator at any time on the Home Page of your monitor.

#### **Manual Bale Ejection**

##### **Windrow Formation**

The operator can form rows of bale packages at any desired place in the field by pressing the *eject bales* button at the desired drop location. The Bale Accumulator will unload all finished bales on the deck at this point. Automatic accumulation will resume after the *eject bales* button is pressed.

##### **Bales Ejected at Headlands**

Bales can be placed at the ends of a field by pressing the *eject bales* button before or after turning at headlands. Do not eject while turning. The *hold mode* can be used when gathering bales at headlands. In this mode the Bale Accumulator will fill up but not eject immediately. What can happen is the fourth, or sixth, bale coming out will eventually push the third, or fifth, bale on the deck, off the accumulator. If *eject bales* has not been pressed by the time the fourth, or sixth, bale completely lands on deck, the accumulator will eject all bales and return to the home position. This mode may conveniently be used in irrigated fields, where gathering bales at headlands is critical. The hold mode gives operators more time to carry bales before they automatically eject at headlands or desired location.

#### **Solid Bales Required**

Solid bales are required for proper operation of accumulator. Allow soft or deformed bales to clear accumulator deck before starting the accumulator in automatic mode.

#### **Hold Mode**

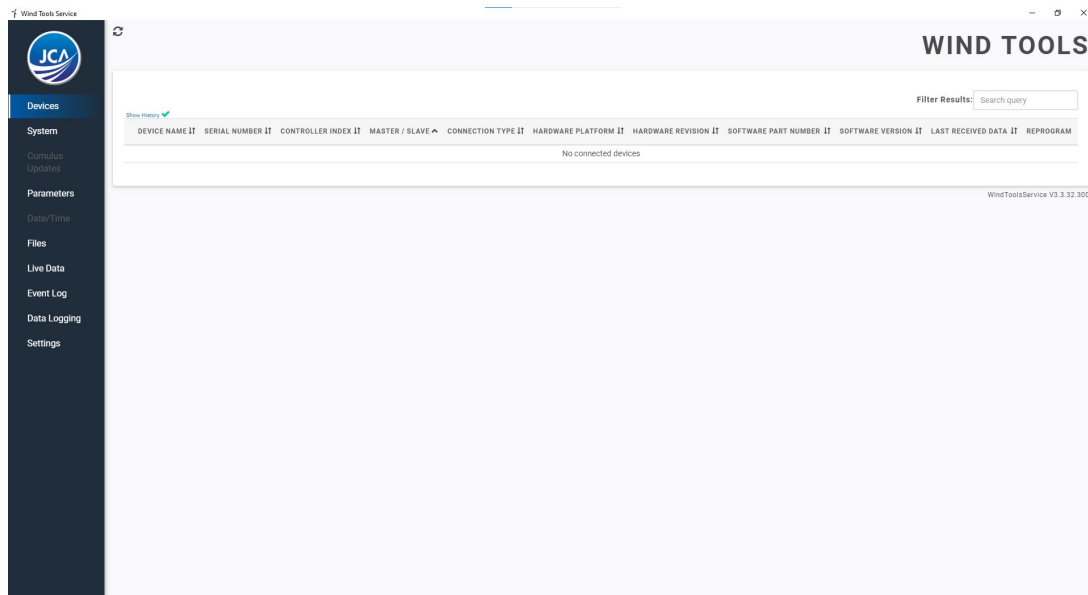
If hold mode is enabled, the accumulator will not eject a full deck until the operator presses manual eject or the accumulator detects the next incoming bale.



## ISOBUS Software

### Updating Software and Advanced Configuration

Each machine is shipped with a USB cable located in the Operator's Manual holder on the machine. There is an application for windows computers available from PhiBer® that is used for machine software updated and advanced configuration of the accumulators. User instructions are provided with the software application.



### Icon Guide

## Flat Icon Guide

### STANDARD ICONS

- |  |                                    |  |                  |
|--|------------------------------------|--|------------------|
|  | Start Operation                    |  | Scale Setup      |
|  | Do Not Start Operation             |  | Zero Weight      |
|  | Change to/re-enable Automatic Mode |  | More Options     |
|  | Change to/re-enable Manual Mode    |  | Back to Previous |
|  | Stop Machine                       |  | Save & Exit      |
|  | Calibration/Setup                  |  | Exit             |
|  | Diagnostics                        |  | Home Screen      |
|  | Reset Current Job                  |  | Emergency Stop   |
|  | GPS                                |  | On               |
|  | Flow Estimate                      |  | Off              |

### ACCUMULATOR ICONS

- |  |                        |
|--|------------------------|
|  | Eject Bales            |
|  | Push-Off Bar Return    |
|  | Side-Shift Truck Left  |
|  | Side-Shift Truck Right |
|  | Hold Mode              |
|  | Bale Wait Time         |

### 5130/50 ICONS

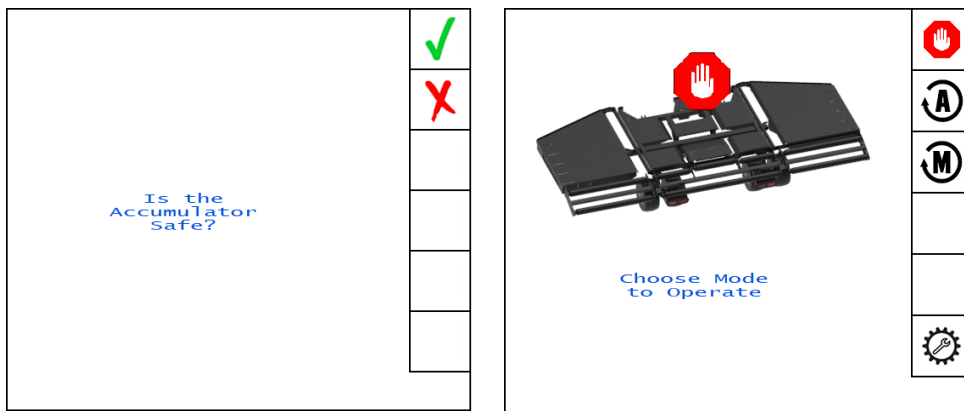
- |  |                 |
|--|-----------------|
|  | Fold Wings Down |
|  | Fold Wings Up   |



[www.PhiBerU.com](http://www.PhiBerU.com)

## Start-up

Upon startup, the PhiBer Bale Accumulator will always ask “Is the accumulator safe?”. Ensure no one is near the machine and it is safe to begin operation. Before pressing *Start Operation* (the green check mark icon), make sure the accumulator has hydraulic pressure supplied. The accumulator will then go through the startup procedure.

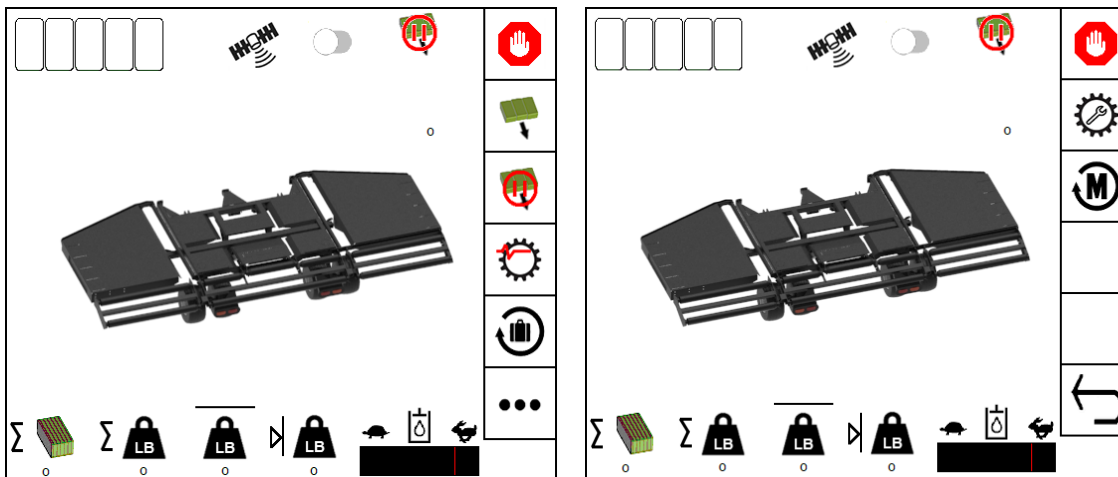


Selecting the Red X brings the operator to this *Stop All Screen* offering Automatic or Manual operation modes. To change settings press *Calibration/Setup*.

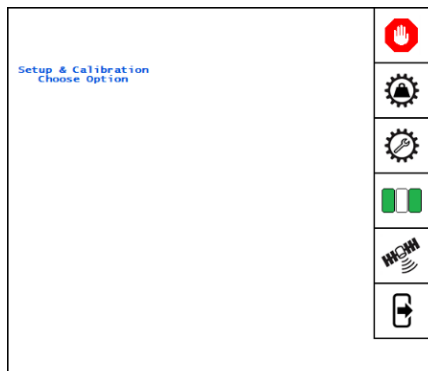
**⚠ WARNING! MOVING PART HAZARD.**  
**WINGS WILL LOWER.** Ensure the accumulator is clear of any foreign objects and all bystanders are at a safe distance before starting the tractor, baler, and the Bale Accumulator. Distances to be given: 21 ft (6.4 m) back and 12 ft (3.7m) to the sides.

## Home Page

After selecting *Start Operation*, the home page in automatic mode will be displayed. From here the operator can see how many bales are on the accumulator, be able to eject bales and access other features of the software. These other features can be viewed by selecting the three dots icon, this will display the next screen as shown. To change the Bale Mode setting press *Calibration/Setup*.

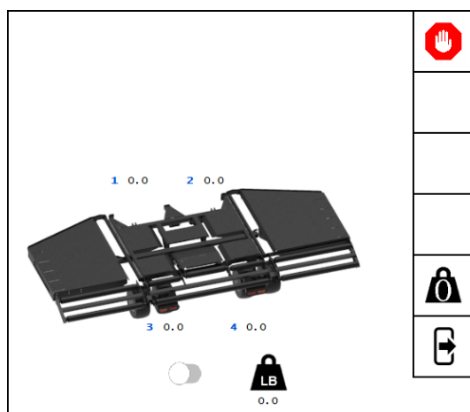


## Settings Page



There are several various function setups on this page. Press *Scale Set Up* to enter the Scale screen. Press *Calibration/Setup* to enter the Accumulator Setup screen. Press *Bale Mode* to choose a bale ejection mode. Press *GPS* to choose a Bale Ejection Plan.

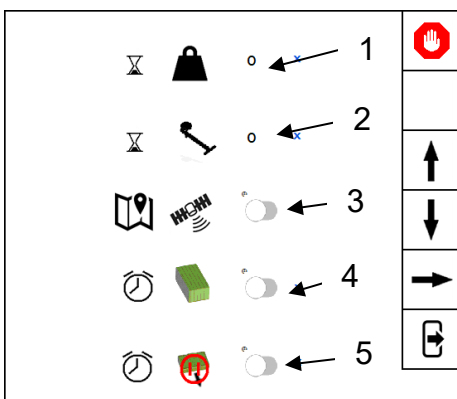
## Scale Page



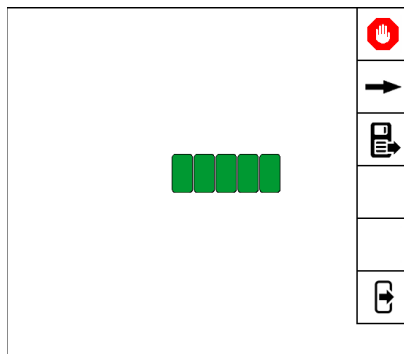
This page shows the information for the scale. The scale should be zeroed out periodically using the *Zero Weight* button.

## Accumulator Setup Page

There are several various function setups on this page. The Weight Hold Time (1) is the time the scale needs to accurately weigh a bale if the accumulator is equipped with a scale. The Bale Wait Delay (2) is there to prevent false hits on the incoming bale hitting the bale button when going through steep ditches. Increase the time if the operator is getting false hits. Also on this page are the settings to enable the Wi-Fi (3) to control the accumulator with a Wi-Fi device and a Map Eject can be enabled to help row the ejected bales. New Bale Alarm (4) will indicate when ever a new bale enters the accumulator. Hold Mode Alarm (5) will alarm when Hold Mode is active, and the accumulator is full.

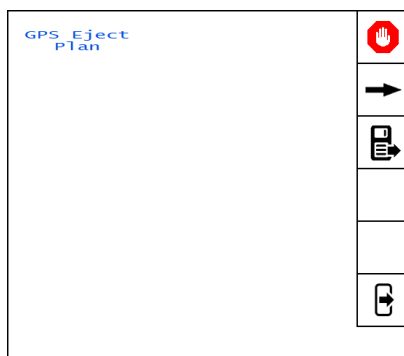


## Bale Mode Page



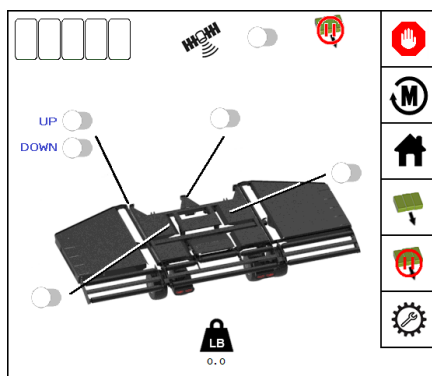
Use arrow to cycle through available bale modes, press *Save and Close* when desired bale mode is selected.

## GPS Page



Use arrow to cycle through available ejection plans, press *Save and Close* when desired ejection plan is selected. Use in conjunction with PhiBer App.

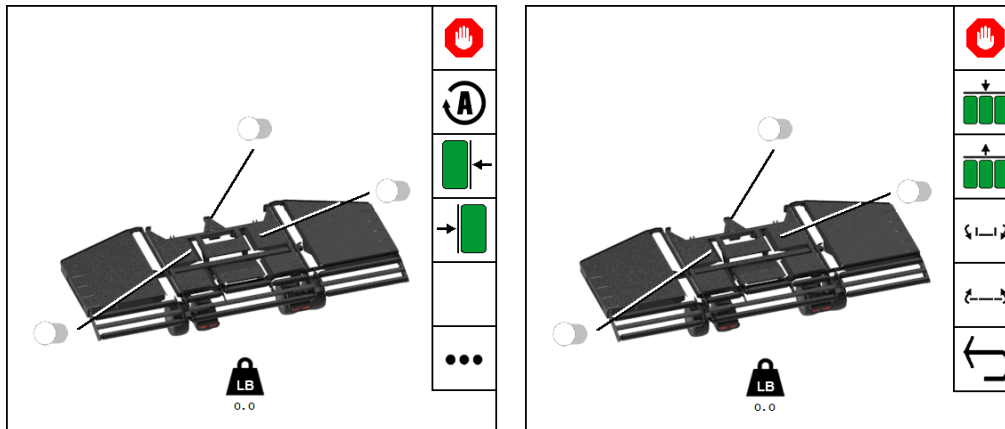
## Diagnostic Page



In the automatic mode operators can see what is happening during operation. The operator can see the status of all inputs and outputs.

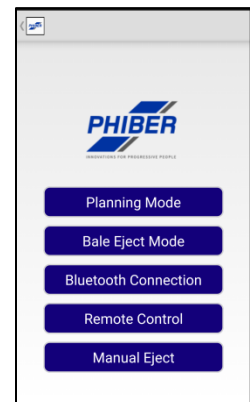
## Manual Mode Home Page

In manual mode the operator can move any hydraulic functions manually. This is mostly used for testing purposes or to manually move bales on the deck or to move wings.




## PhiBer Accumulator App

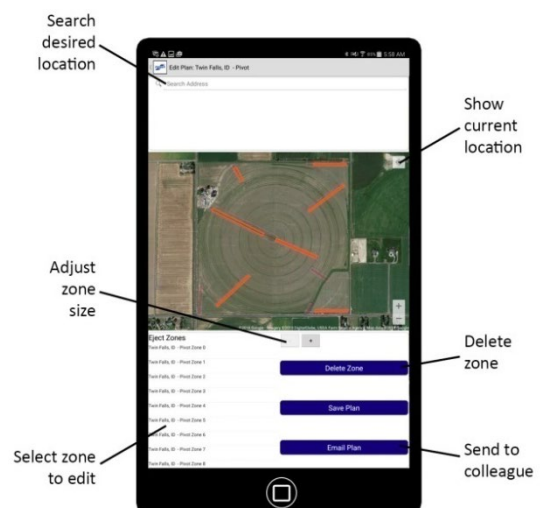
PhiBer® has created an app for a phone or tablet to help maximize efficiency when handling large square bales. With this app the operator can plan where to eject the bales and then to automatically drop them in those locations during baling. The App is called *PhiBer Accumulator*.



### Planning Mode.

The operator has two planning options; choose from *Create New Plan* or edit a plan in *Existing Plans*. To create new, choose the *Planning Mode* button, name the plan, and then tap *Create New Plan*. PhiBer is utilizing Google satellite images to view the field. To find the field there are two options.

- A. With GPS enabled click the GPS icon  in the top right-hand corner of the map and it will show the current location.
- B. In the search bar, type in desired location.

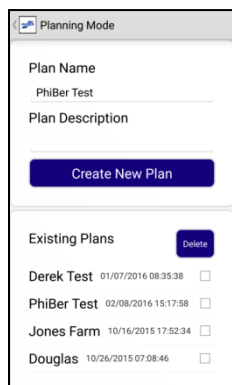


Once the desired field can be viewed on the map, create the eject zones. A zone is created between two dropped pins. To drop a pin, press and hold in the desired location

and a pin will appear. On the other end of the zone press and hold to drop a second pin, your zone will immediately appear as a green line. A zone has now been created between the two pins. To change the size of the zones, use the plus and minus buttons above the *Delete Zone* button.

Note: The plus and minus buttons located on the map are used for zooming in and out, these do not change the size of the zone.

**Tip:** The closer you zoom in on your screen, the more accurate your pins will be.



To add more zones, repeat the process of dropping pins in desired locations. If more than one zone has been created, only the active zone will appear green, all others will be pink. All zones created are listed in the bottom left corner of the screen, tap chosen zone to make it active. To delete a zone, select zone and press *Delete Zone*. When field is complete, tap *Save Plan*. Plan can be emailed to colleagues by tapping *Email Plan*, it will then prompt to default email program.

**Tip:** Create zones in such a way that you are never leaving a zone

## How the Zones Work

As the handheld device enters a zone, it will send a signal to the accumulator to eject the bales. If the accumulator is not full it will wait to eject bales. The purpose of this is to maximize the number of bales in the desired package. A second eject signal is sent from the device when leaving the zone, forcing an immediate eject if possible.

**Tip:** Create small zones if location is important (i.e., flood irrigation). Create larger zones if bale grouping is important for faster handling (i.e., dry land or pivot irrigation).

Note: Data connectivity is required when planning fields. While the map is running, connectivity is not required; the App saves the GPS coordinates and will eject based on coordinates.

## Bale Eject Mode.

To run the automatic-eject mode, the handheld device must be paired with the accumulator. See *Bluetooth Connection*. Select *Bale Eject Mode*, then choose from the list of existing plans, enable automatic eject.



## Bluetooth and Wi-Fi Connection

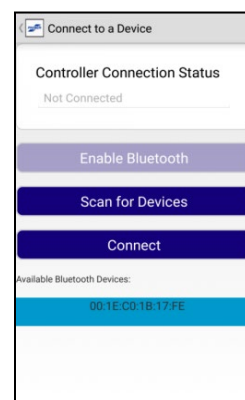
**Identifying Connection Type:** Your machine will be Wi-Fi enabled if it has a Wi-Fi decal on the front of the frame.

**Connecting to Wi-Fi:** Open your devices Wi-Fi configuration page and select the PhiBer network, enter password 12345678. Then open app.



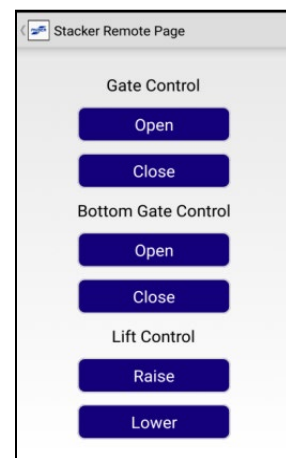
**Connecting to Bluetooth:** Tap *Connection Settings*, *Switch to Bluetooth* and then scan for devices (in the App). If Bluetooth is not already enabled on the device, tap *Enable Bluetooth*. It will list all available Bluetooth devices, select desired accumulator and tap *Connect*.

Note: The pairing to Bluetooth is done through the App, not through the device Bluetooth configuration



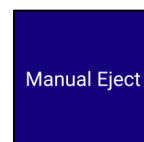
## Remote Control

To run the *Remote-Control Mode*, the device must be paired with the accumulator. Once paired, operators can manually override any hydraulic function. In the remote-control mode, the VT Terminal will be locked out so that only one operator has access to this feature for safety reasons.



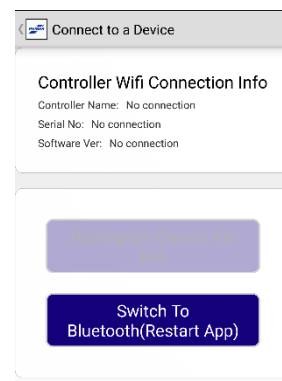
## Manual Eject

Tap *Manual Eject* to unload current bales on accumulator.



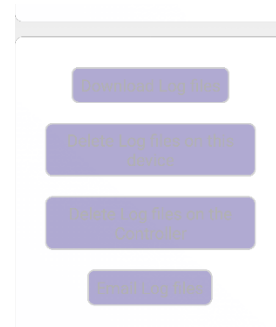
## Updating Accumulator Software Through App

Tap *Connection Settings*, and then tap *Reprogram Device Via Wi-Fi*



## Downloading and Sending Log Files

Log files allow the manufacturer to better help diagnosis service calls. Tap *Connection Settings*, and then tap *Download Log Files*. To send files first disconnect from Wi-Fi, then tap *Email Log Files*.



## Transporting



**WARNING!** Unload all bales from accumulator deck before traveling on public roads.



**WARNING!** WIDE TURNING PATH

Ensure that all oncoming and/or overtaking traffic is clear before making turns on public roads. Slow down and look for both oncoming and overtaking traffic before making turns.

Allow oncoming and overtaking traffic to clear before making turns when traveling on public roads (Figure 4.3).

Always travel on public roads with the Bale Accumulator within the lane of travel (Figure 4.4).

Ensure the accumulator wings are up and travel valves are closed before road travel.

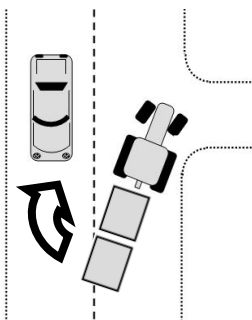


Fig. 4.3

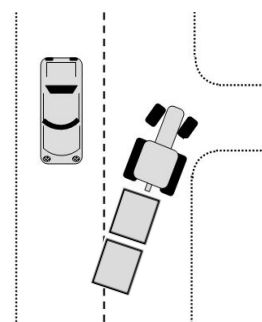


Fig. 4.4



## Storage



**WARNING!** Store Bale Accumulator away from human activity. DO NOT allow children to play on the Bale Accumulator at any time.

To ensure optimum operation of the Bale Accumulator for the next season:

1. Clean all crop material and dirt from Bale Accumulator frame and deck.
2. Retract hydraulic cylinders fully.
3. Lubricate casters to prevent rusting.
4. Lubricate bearings in rollers.

# Recommended Settings

---

Below is a chart to use as reference for proper flow settings. The cycle times below should be achieved if the flow on the tractor going to the accumulator is set at 15 gpm.

Model	Action	Proper Cycle Time
5130	Side shift: Right side to Left side	4 sec.
5130	Side shift: Left side to Right side	3 sec.
5130/5150	Push off & Retract	8 sec. (5 sec. push/3 sec. retract)
5150	Side shift: Right side to Left side	5 sec.
5150	Side shift: Left side to Right side	4 sec.

- **Hitch Height:** Set a straight edge along the bottom of bale chamber and set hitch height so that the top of the front roller is 1" higher than the straight edge line (interference). If the baler is too high to achieve interference or the front of the accumulator is higher than the back, the hitch height must be lowered to keep bales from sliding off.
- **Push-off Roller** can be raised in lieu of raising hitch.
- **Silage Bales:** PhiBer recommends an extra deck roller in the center of the accumulator (Silage Kit).
- **Hills:** If bales are sliding off on hills, the front hitch can be lowered by 1 hole in the center hitch.

**CAUTION:** Lowering the front too much causes the casters to run on one wheel when making turns.

## Bale Trigger Adjustment

The bale trigger mechanism senses a bale entering the accumulator deck from the baler and activates the side shift truck function. The side shift truck may cycle prematurely if the bale trigger spring tension is set too loose, the bale trigger button is set too high, or the bale trigger button is set too close to the baler. See Maintenance for instructions.

# Maintenance

Proper maintenance of the accumulator will result in more reliable performance. Please refer to the chart below for recommended maintenance information:

Key			Maintenance Record											
✓	check	hours												
●	lubricate	by												
◇	clean	date												
▲	change													
12 ⌘														
✓	Limit Switches													
✓	Wheel Lug Nuts													
50 ⌘														
●	Roller Bearings													
●	Hitch Pivot													
✓	Bale Trigger Spring Tension													
●	Caster Pivot													
✓	Brake Pad													
●	Wing Pivot													
1000 ⌘														
✓	Wheel Lug Nuts													
●	Wheel Bearings													

## Limit Switches

Check the limit switches (Figure 6.1) daily to ensure they are clear of accumulation of foreign material.



Fig. 6.1

## Wheel Lug Nuts

Check wheel lug nut tightness (#1 Figure 6.2) after the first two (2) hours of operation, again after the first ten (10) hours, then periodically.

Torque: 93 ft-lb (126 Nm)

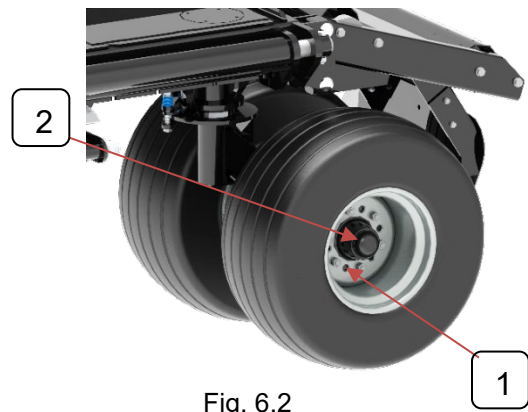


Fig. 6.2

## Wheel Bearings

Remove, clean and re-pack wheel bearings (#2 Figure 6.2) every 1000 hours or annually.

## Roller Bearings

Grease roller bearings (Figure 6.3) every 50 hours or monthly (18 fittings plus 2 additional fittings if Silage Kit is installed).

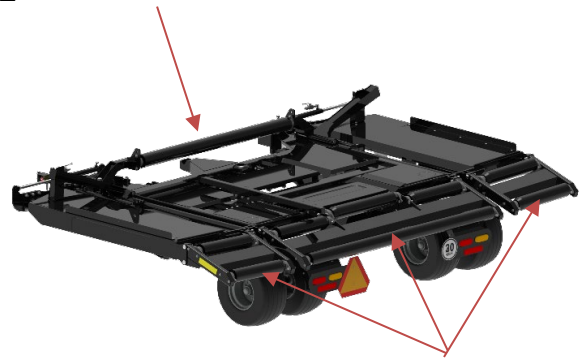


Fig. 6.3

## Hitch Pivot

Grease hitch pivot (Figure 6.4) every 50 hours or weekly.

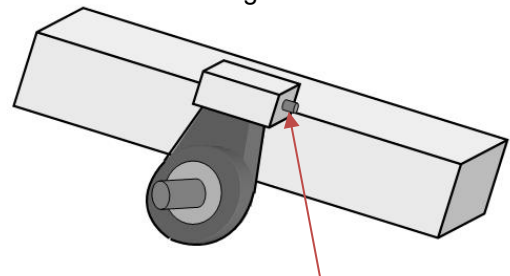


Fig. 6.4

## Bale Trigger Vertical Adjustment

1. Loosen nuts, 1 (Figure 6.5) on threaded rod.
2. Adjust nuts on threaded rod until reaching desired vertical position.
3. Tighten nuts on threaded rod.

## Bale Trigger Horizontal Adjustment

1. Remove bottom nut, (#1 Figure 4.2) off threaded rod.
2. Place bale button, (#2 Figure 4.2) into desired hole
3. Reinstall bottom nut and tighten nuts.

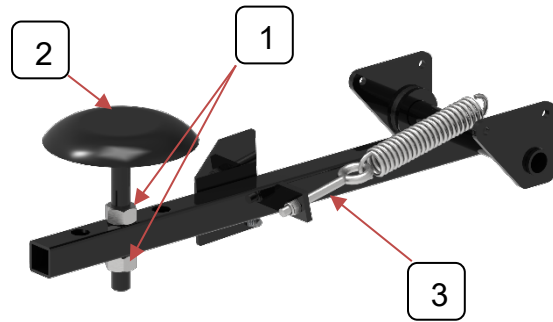


Fig. 6.5

**NOTE:** Loosely packed or silage bales may sag and contact bale trigger button causing the side shift truck to cycle prematurely.

## Bale Trigger Spring Tension

Check bale trigger spring tension (#3 Figure 6.5) every 50 hours or weekly. Adjust, if necessary.

## Caster Pivot

Grease caster pivot (#1 Figure 6.6) every 50 hours or weekly.

## Brake Pad

Check Brake Pads (#2 Figure 6.6) every 50 hours or weekly. Adjust or replace as needed.

Tighten bolts until springs are compressed to .75 to .81 in (19 to 20.6mm)

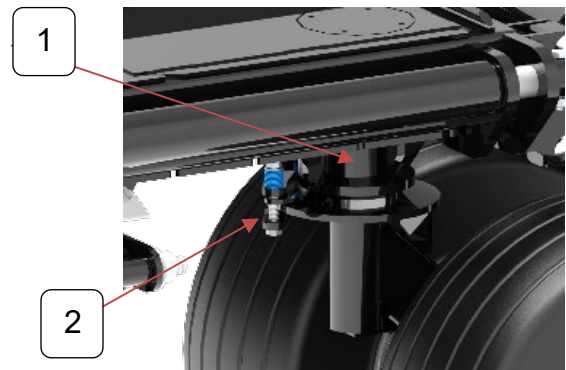
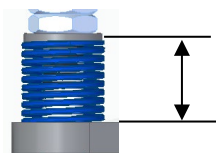


Fig. 6.6



## Wing Pivot

Grease wing pivot (Figure 6.7) every 50 hours or weekly.

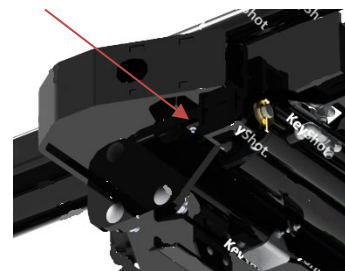


Fig. 6.7

## Hydraulic Cylinder Replacement



**NOTE:** The following procedure must be followed to remove air from the hydraulic system if a hydraulic cylinder is ever removed and replaced.



### **WARNING!**

UNEXPECTED MOTION HAZARD. Ensure all bystanders are clear of the deck and tracks during this air removal procedure.

1. Disconnect rear pin from push-off cylinders and support cylinders away from push-off slider.
2. Activate hydraulic control valve to allow oil to flow.
3. Enable accumulator in manual mode.
4. Press extend hold on monitor until both cylinders are at full stroke.
5. Retract cylinders. Repeat step 4 until cylinders extend and retract evenly.
6. Retract to home position and turn power off.
7. Connect cylinders to push-off slider.

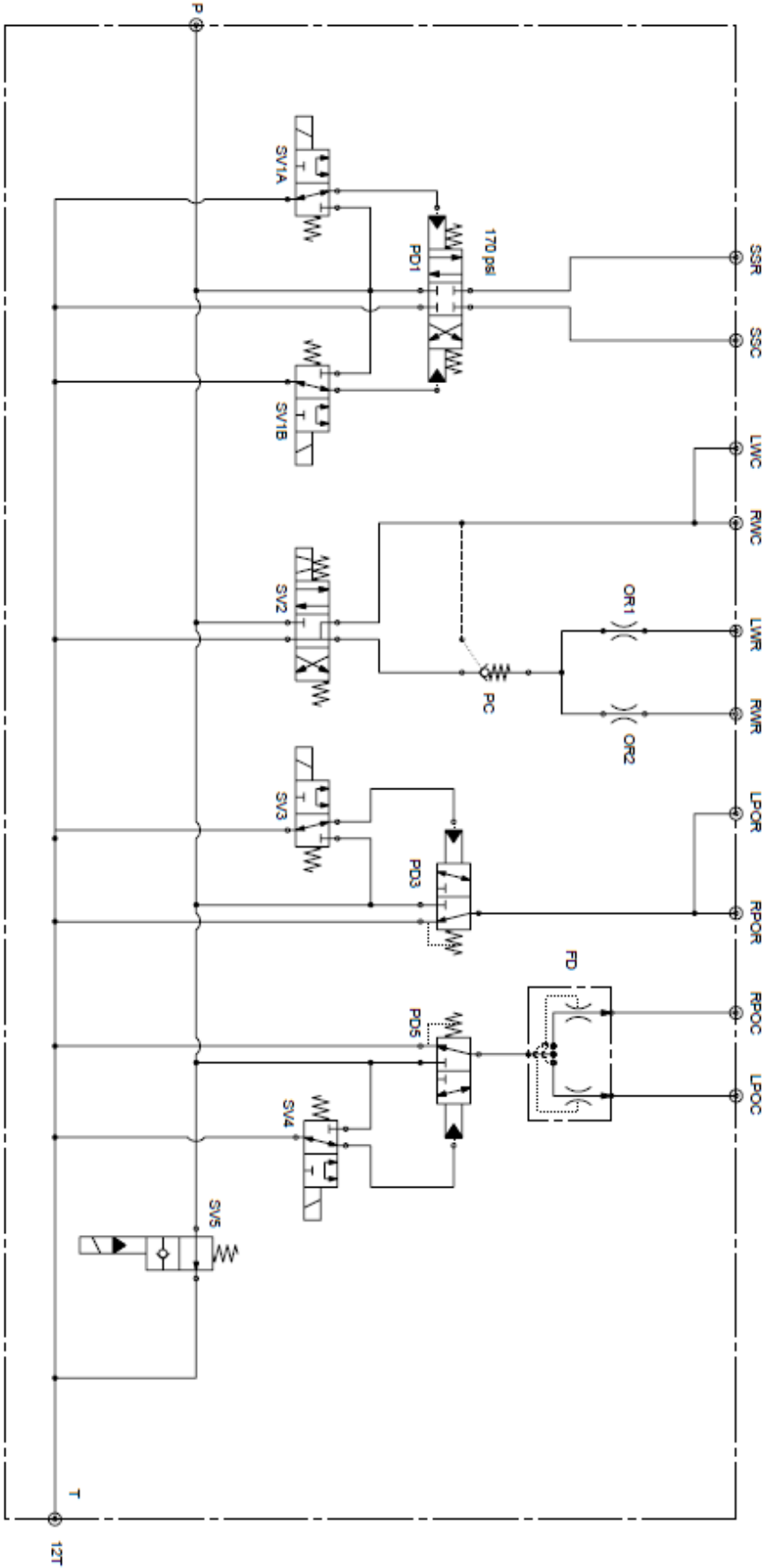


### **WARNING!**

UNEXPECTED MOTION HAZARD. Ensure power is off before re-attaching hydraulic cylinder.

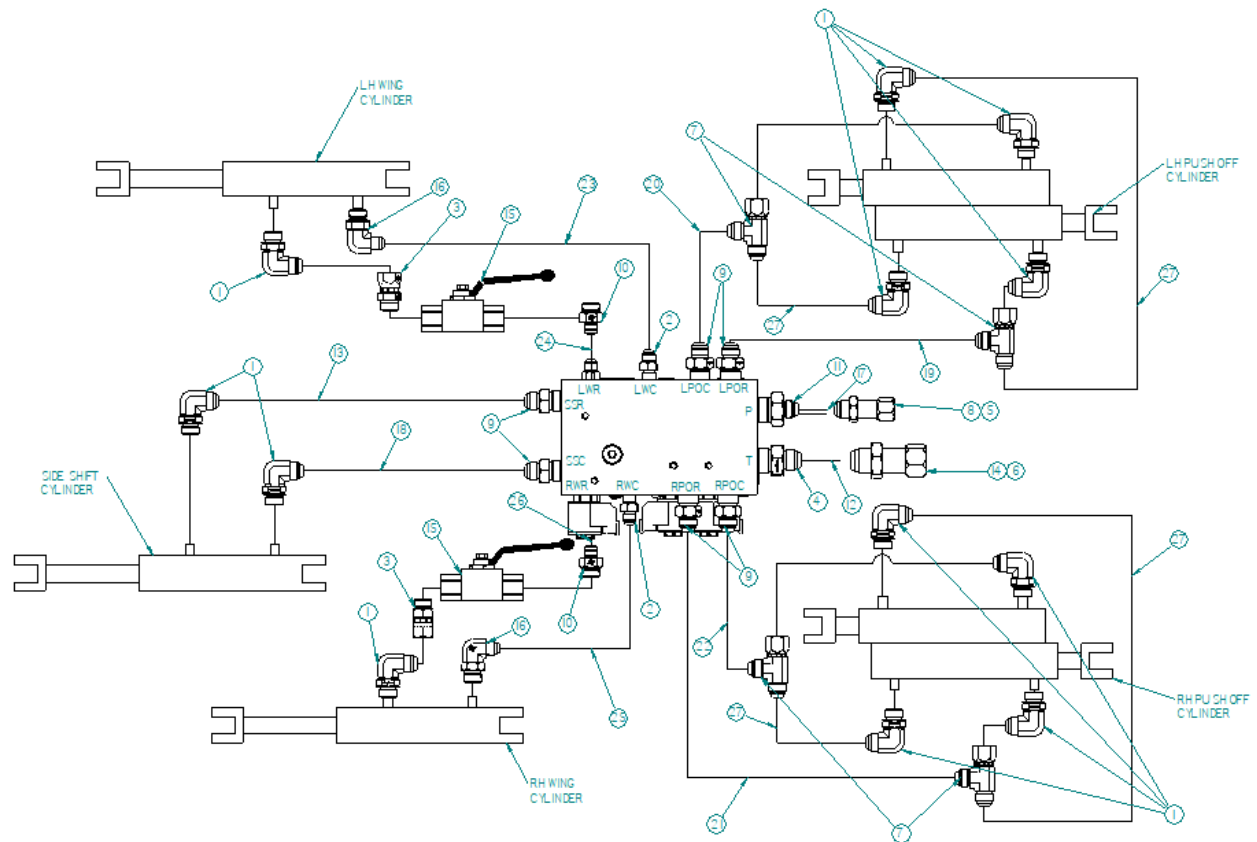
8. Replace push-off cylinder rear pins connecting them to the push-off slider.

Manifold Assembly



# Hydraulic Schematic

Item	Part NO.	Description	QTY
1	HYDI00337	6801-08-08 ELBOW 90°, MORB to MJIC	12
2	HYDI00338	ADAPTER 06 MJIC X 06 MORB	2
3	HYDI00365	6402-08-08 SWIVEL ADAPTER MORB TO FJIC	2
4	HYDI00389	ADAPTER 10 MJIC X 12 MORB	1
5	HYDI00392	BULKHEAD 08 MJIC X 08 MJIC	1
6	HYDI00393	BULKHEAD 12 MJIC X 12 MJIC	1
7	HYDI00464	TEE 08 MJIC X 08 FJIC X 08 MJIC	4
8	HYDI00530	CAP 08 FJIC	1
9	HYDI00534	ADAPTER 08 MJIC X 10 MORB	6
10	HYDI00563	6400-06-08 ADAPTER MALE JIC to MALE ORB	2
11	HYDI00578	6400-08-12 ADAPTER MALE JIC to MALE ORB	1
12	HYDI00581	AC3106 / 4106 RETURN HOSE	1
13	HYDI00590	AC4106 SIDE SHIFT HOSE ROD END	1
14	HYDI00594	CAP 12 FJIC	1
15	HYDI00825	-08 ORB BALL VALVE	2
16	HYDI00946	ELBOW ST -08 MORB X -06 MJIC	2
17	HYDI00950	AC5130/5150 MAIN PRESSURE HOSE	1
18	HYDI00951	AC4106 SIDE SHIFT HOSE CAP END	1
19	HYDI00952	AC51 LH PUSH OFF HOSE ROD END	1
20	HYDI00953	AC51 LH PUSH OFF HOSE CAP END	1
21	HYDI00954	AC51 RH PUSH OFF HOSE ROD END	1
22	HYDI00955	AC51 RH PUSH OFF HOSE CAP END	1
23	HYDI00956	AC51 LH WING HOSE CAP END	1
24	HYDI00957	AC51 LH WING HOSE ROD END	1
25	HYDI00958	AC51 RH WING HOSE CAP END	1
26	HYDI00959	AC51 RH WING HOSE ROD END	1
27	HYDI00960	AC51 PUSH OFF CROSS HOSE	4





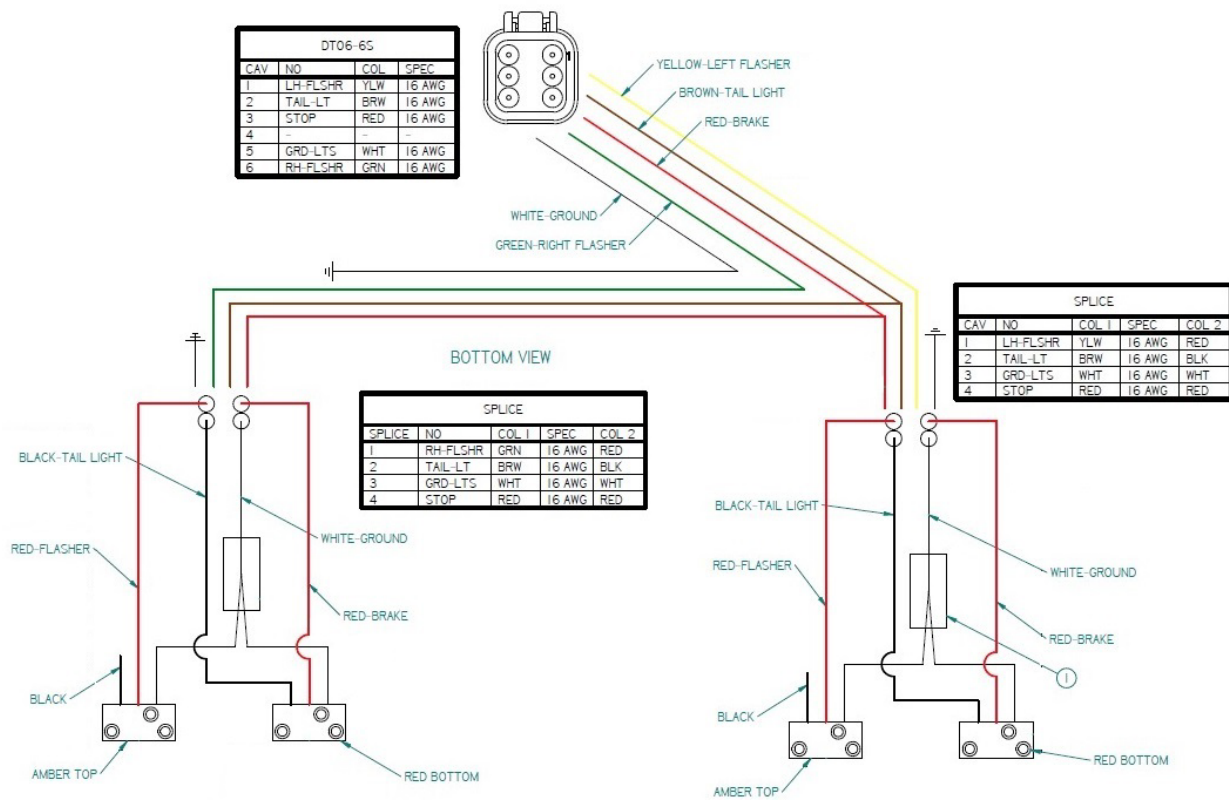
## Electrical Schematic

# FROM-TO WIRE LIST

Index	Wire No.	Spec	Col	From	Cav.	Connector 1	Terminal PN 1	Wire seal PN	To	Cav.	Connector 2	Terminal PN 2	Wire seal PN	Wire note
1	LF-SLD-SEN	18AWG	BLU	ARM SLIDER SENSOR	1	DTM06-2S	0462-005-20141		FLCN-D	2	DT06-12SD-P012	0462-201-16141		
2	LY-1	18AWG	BLK	CAN TERMINATOR CAP	A	12124107								
3	CAN1-H1	18AWG	YEL	CAN1	E	12124107	12045773	15324973	SP-CANH1	R				J1939
4	CAN1-L1	18AWG	GRN	CAN1	F	12124107	12045773	15324973	SP-CANLO1	R	SP-ULTRASONIC			J1939
5	TBC-GND1	18AWG	BLK	CAN1	D	12124107	12045773	15324973	SP-TBCGND1	R	SP-ULTRASONIC			
6	TBC-PWR1	18AWG	RED	CAN1	B	12124107	12045773	15324973	SP-TBCPWR1	R	SP-ULTRASONIC			
7	BATT-4	16AWG	RED	E-STOP	C	DT04-3P	0460-202-16141		SP-4	R	SP-ULTRASONIC			
8	DWN-WING-OP	16AWG	RED	FLCN-A	5	DT06-12SA-P012	0462-201-16141		DWN-WING-OP	1	DT06-2S	0462-201-16141		
9	PUSH-OP-1	16AWG	RED	FLCN-A	11	DT06-12SA-P012	0462-201-16141		SP-6	R	SP-ULTRASONIC			
10	LF-SLD-OP-1	16AWG	RED	FLCN-A	6	DT06-12SA-P012	0462-201-16141		SP-7	R	SP-ULTRASONIC			
11	UP-WING-OP	16AWG	RED	FLCN-A	3	DT06-12SA-P012	0462-201-16141		UP-WING-OP	1	DT06-2S	0462-201-16141		
12	DWN-WING-SEN	18AWG	BLU	FLCN-B	11	DT06-12SB-P012	0462-201-16141		DWN-WING-SEN	1	DTM06-2S	0462-005-20141		
13	PULL-SEN	18AWG	BLU	FLCN-B	9	DT06-12SB-P012	0462-201-16141		PULL-SEN	1	DTM06-2S	0462-005-20141		
14	PUSH-SEN	18AWG	BLU	FLCN-B	8	DT06-12SB-P012	0462-201-16141		PUSH-SEN	1	DTM06-2S	0462-005-20141		
15	WING-ID	18AWG	BLU	FLCN-B	7	DT06-12SB-P012	0462-201-16141		SP-4	L	SP-ULTRASONIC			
16	UP-WING-SEN	18AWG	BLU	FLCN-B	10	DT06-12SB-P012	0462-201-16141		UP-WING-SEN	1	DTM06-2S	0462-005-20141		
17	IGN	18AWG	ORG	FLCN-C	5	DT06-12SC-P012	0462-201-16141		SP-4	L	SP-ULTRASONIC			
18	BATT-1	16AWG	RED	FLCN-C	9	DT06-12SC-P012	0462-201-16141		SP-4	L	SP-ULTRASONIC			
19	BATT-2	16AWG	RED	FLCN-C	10	DT06-12SC-P012	0462-201-16141		SP-4	L	SP-ULTRASONIC			
20	USB-PWR	18AWG	RED	FLCN-C	1	DT06-12SC-P012	0462-201-16141		USB	1	DT06-4S	0462-201-16141		
21	USB-D+	18AWG	GRN	FLCN-C	2	DT06-12SC-P012	0462-201-16141		USB	3	DT06-4S	0462-201-16141		
22	USB-DUSB-	18AWG	WHT	FLCN-C	3	DT06-12SC-P012	0462-201-16141		USB	2	DT06-4S	0462-201-16141		
23	GND	18AWG	BLK	FLCN-C	4	DT06-12SC-P012	0462-201-16141		USB	4	DT06-4S	0462-201-16141		
24	ESTOP-1	18AWG	BLU	FLCN-D	4	DT06-12SD-P012	0462-201-16141		SP-2	L	SP-ULTRASONIC			
25	B-PASS-SOL	16AWG	RED	HYD-BYPASS-SOL	1	DT06-2S	0462-201-16141		FLCN-A	1	DT06-12SA-P012	0462-201-16141		
26	PULL-OP	16AWG	RED	HYD-EJECT-PULL	1	DT06-2S	0462-201-16141		FLCN-A	12	DT06-12SA-P012	0462-201-16141		
27	PUSH-OP-2	16AWG	RED	HYD-EJECT-PUSH	1	DT06-2S	0462-201-16141		SP-6	L	SP-ULTRASONIC			
28	PUSH-OP-3	16AWG	RED	HYD-EJECT-PUSH 2	1	DT06-2S	0462-201-16141		SP-6	L	SP-ULTRASONIC			
29	LF-SLD-OP-2	16AWG	RED	HYD-LEFT-SLIDE	1	DT06-2S	0462-201-16141		SP-7	L	SP-ULTRASONIC			
30	LF-SLD-OP-3	16AWG	RED	HYD-LEFT-SLIDE2	1	DT06-2S	0462-201-16141		SP-7	L	SP-ULTRASONIC			
31	RT-SLIDE-OP	16AWG	RED	HYD-RIGHT-SLIDE	1	DT06-2S	0462-201-16141		FLCN-A	10	DT06-12SA-P012	0462-201-16141		
32	BATT-3	18AWG	RED	MRLN-A	8	DTM06-12SA	0462-201-20141		SP-4	R	SP-ULTRASONIC			
33	CAN1-H2	18AWG	YEL	MRLN-A	9	DTM06-12SA	0462-201-20141		SP-CANH1	L				J1939
34	CAN1-L2	18AWG	GRN	MRLN-A	10	DTM06-12SA	0462-201-20141		SP-CANLO1	L	SP-ULTRASONIC			J1939
35	NEW-B-SEN	18AWG	BLU	NEW-B-SEN	1	DTM06-2S	0462-005-20141		FLCN-D	1	DT06-12SD-P012	0462-201-16141		
36	GND	14AWG	BLK	POWER	2	DT06-2S	0462-209-16141		SP-3	R	SP-ULTRASONIC			
37	PWR	14AWG	RED	POWER	1	DT06-2S	0462-209-16141		SP-4	R	SP-ULTRASONIC			
38	RT-SLD-SEN	18AWG	BLU	RT-SLD-SEN	1	DTM06-2S	0462-005-20141		FLCN-D	3	DT06-12SD-P012	0462-201-16141		
39	ESTOP-11	16AWG	BLU	SP-1	L	SP-ULTRASONIC			DWN-WING-OP	2	DT06-2S	0462-201-16141		
40	ESTOP-2	16AWG	BLU	SP-1	L	SP-ULTRASONIC			HYD-BYPASS-SOL	2	DT06-2S	0462-201-16141		

41	ESTOP-6	16AWG	BLU	SP-1	L	SP- ULTRASONIC			HYD-EJECT-PULL	2	DT06-2S	0462-201- 16141		
42	ESTOP-5	16AWG	BLU	SP-1	L	SP- ULTRASONIC			HYD-EJECT-PUSH	2	DT06-2S	0462-201- 16141		
43	ESTOP-3	16AWG	BLU	SP-1	L	SP- ULTRASONIC			HYD-LEFT-SLIDE	2	DT06-2S	0462-201- 16141		
44	ESTOP-4	16AWG	BLU	SP-1	L	SP- ULTRASONIC			HYD-RIGHT-SLIDE	2	DT06-2S	0462-201- 16141		
45	ESTOP-8	16AWG	BLU	SP-1	R	SP- ULTRASONIC			SP-2	L	SP- ULTRASONIC			
46	ESTOP-12	16AWG	BLU	SP-1	L	SP- ULTRASONIC			UP-WING-OP	2	DT06-2S	0462-201- 16141		
47	ESTOP-7	16AWG	BLU	SP-2	R	SP- ULTRASONIC			E-STOP	A	DT04-3P	0460-202- 16141		
48	ESTOP-9	16AWG	BLU	SP-2	L	SP- ULTRASONIC			HYD-EJECT-PUSH 2	2	DT06-2S	0462-201- 16141		
49	ESTOP-10	16AWG	BLU	SP-2	L	SP- ULTRASONIC			HYD-LEFT-SLIDE2	2	DT06-2S	0462-201- 16141		
50	GND-4	16AWG	BLK	SP-3	R	SP- ULTRASONIC			E-STOP	B	DT04-3P	0460-202- 16141		
51	GND-1	16AWG	BLK	SP-3	L	SP- ULTRASONIC			FLCN-C	11	DT06-12SC- P012	0462-201- 16141		
52	GND-2	16AWG	BLK	SP-3	L	SP- ULTRASONIC			FLCN-C	12	DT06-12SC- P012	0462-201- 16141		
53	GND-6	18AWG	BLK	SP-3	L	SP- ULTRASONIC			GPS-CONN	2	DTM06-08SA	0462-201- 20141		
54	GND-3	18AWG	BLK	SP-3	R	SP- ULTRASONIC			MRLN-A	7	DTM06-12SA	0462-201- 20141		
55	BATT-5	18AWG	RED	SP-4	L	SP- ULTRASONIC			GPS-CONN	1	DTM06-08SA	0462-201- 20141		
56	5VREF1-3	18AWG	RED	SP-5	R	SP- ULTRASONIC			DWN-WING-SEN	2	DTM06-2S	0462-005- 20141		
57	5VREF1	18AWG	RED	SP-5	L	SP- ULTRASONIC			FLCN-D	9	DT06-12SD- P012	0462-201- 16141		
58	5VREF1-2	18AWG	RED	SP-5	R	SP- ULTRASONIC			PULL-SEN	2	DTM06-2S	0462-005- 20141		
59	5VREF1-1	18AWG	RED	SP-5	R	SP- ULTRASONIC			PUSH-SEN	2	DTM06-2S	0462-005- 20141		
60	5VREF1-4	18AWG	RED	SP-5	R	SP- ULTRASONIC			UP-WING-SEN	2	DTM06-2S	0462-005- 20141		
61	5VREF2-1	18AWG	RED	SP-8	R	SP- ULTRASONIC			ARM SLIDER SENSOR	2	DTM06-2S	0462-005- 20141		
62	5VREF2	18AWG	RED	SP-8	L	SP- ULTRASONIC			FLCN-D	10	DT06-12SD- P012	0462-201- 16141		
63	5VREF2-2	18AWG	RED	SP-8	R	SP- ULTRASONIC			NEW-B-SEN	2	DTM06-2S	0462-005- 20141		
64	5VREF2-3	18AWG	RED	SP-8	R	SP- ULTRASONIC			RT-SLD-SEN	2	DTM06-2S	0462-005- 20141		
65	CAN1-H3	18AWG	YEL	SP-CANH1	L				SP-CANH2	R	SP- ULTRASONIC			J1939
66	CAN1-H4	18AWG	YEL	SP-CANH2	L	SP- ULTRASONIC			GPS-CONN	3	DTM06-08SA	0462-201- 20141		J1939
67	CAN1-H5	18AWG	YEL	SP-CANH2	L	SP- ULTRASONIC			SP-CANH3	L	SP- ULTRASONIC			J1939
68	CAN1-H7	18AWG	YEL	SP-CANH3	L	SP- ULTRASONIC			CAN1 TERMINATOR	E	12052848-B	12048074	15324973	J1939
69	CAN1-H6	18AWG	YEL	SP-CANH3	R	SP- ULTRASONIC			FLCN-C	7	DT06-12SC- P012	0462-201- 16141		J1939
70	CAN1-L3	18AWG	GRN	SP-CANL01	L	SP- ULTRASONIC			SP-CANL02	R	SP- ULTRASONIC			J1939
71	CAN1-L4	18AWG	GRN	SP-CANL02	L	SP- ULTRASONIC			GPS-CONN	4	DTM06-08SA	0462-201- 20141		J1939
72	CAN1-L5	18AWG	GRN	SP-CANL02	L	SP- ULTRASONIC			SP-CANL03	L	SP- ULTRASONIC			J1939
73	CAN1-L7	18AWG	GRN	SP-CANL03	L	SP- ULTRASONIC			CAN1 TERMINATOR	F	12052848-B	12048074	15324973	J1939
74	CAN1-L6	18AWG	GRN	SP-CANL03	R	SP- ULTRASONIC			FLCN-C	8	DT06-12SC- P012	0462-201- 16141		J1939
75	TBC-GND3	18AWG	BLK	SP-TBCGND1	L	SP- ULTRASONIC			SP-TBCGND2	R	SP- ULTRASONIC			
76	TBC-GND5	18AWG	BLK	SP-TBCGND2	L	SP- ULTRASONIC			SP-TBCGND3	L	SP- ULTRASONIC			
77	TBC-GND7	18AWG	BLK	SP-TBCGND3	L	SP- ULTRASONIC			CAN1 TERMINATOR	D	12052848-B			
78	TBC-PWR3	18AWG	RED	SP-TBCPWR1	L	SP- ULTRASONIC			SP-TBCPWR2	R	SP- ULTRASONIC			
79	TBC-PWR5	18AWG	RED	SP-TBCPWR2	L	SP- ULTRASONIC			SP-TBCPWR3	L	SP- ULTRASONIC			
80	TBC-PWR7	18AWG	RED	SP-TBCPWR3	L	SP- ULTRASONIC			CAN1 TERMINATOR	B	12052848-B			

# Lights



**NOTE:** Wiring harness wire colors may vary depending on make and model of baler.

# Troubleshooting

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Accumulator does not work.	Emergency Stop Switch pushed in	Turn clockwise to reset.
Side shift and push off trucks do not move when tractor hydraulic lever actuated.	Hydraulic hose connections reversed.  Poor electrical connection.  Fuse blown.  Improper limit switch setting.  Electronic monitor malfunction.	Change hose connections at tractor hydraulic quick couplers.  Inspect the wiring harness coupling and clean, if necessary.  Remove and replace 7 A fuse on monitor in tractor cab.  Check settings on limit switches for side shift and push off modes. Adjust, if necessary.  Toggle power switch to "OFF", then press and hold "EJECT" button for 3 seconds to clear and reset memory. Indicator lights will strobe when power is resumed to indicate proper operation.
Side shift operates prematurely.	Bale trigger bounces on rough terrain.  Bales sag as they leave the chamber on the baler.	Tighten spring on bale trigger.  Adjust bale trigger downward to make less sensitive.  Adjust bale trigger forward for haylage bales.  Raise front of accumulator.
Push off truck moves slightly after resetting accumulator even if other tractor hydraulics appear to be functioning properly.	Hydraulic lock.	Place tractor hydraulic control lever in float position or disconnect return hydraulic hose coupler to drain off excessive oil. Push center pins of main valve until all pins move freely. Re-connect hydraulic hose coupler.  Ensure that return oil is discharging into tractor hydraulic reservoir.  Reduce tractor hydraulic flow to accumulator to 12 gal-US/min (45.4 L/min) or less.

<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>	<b>SOLUTION</b>
Bale trigger does not activate side shift truck.	Gap between proximity switch and trigger plate is too large.	Measure gap between proximity switch and trigger plate. Adjust gap, if necessary. Proper gap setting is between 3/16 - 1/8" (1.5 - 3 mm).
Tractor hydraulic oil overheating.	<p>Tractor hydraulic oil flow set too high.</p> <p>Low pressure return oil flow is not discharging into tank properly.</p>	<p>Reduce tractor hydraulic oil flow setting.</p> <p>Ensure that low pressure return flow is discharging directly into the tractor hydraulic reservoir. Newer tractor hydraulic systems have provisions for setting oil flow return directly into the tractor reservoir. With older model tractors, it may be necessary to plumb return flow to a port or fitting to allow direct discharge into the reservoir.</p> <p>Remove and inspect check valve. Clean out any debris and replace check valve.</p> <p>Inspect quick coupler tips for proper action and/or blockage.</p>
Fuse	Blown fuse on power cord	Check fuse.
Machine Function Halted	<p>Hydraulic flow not turned on.</p> <p>Hydraulic time out due to sensor failure</p>	<p>Enable remote on tractor.</p> <p>Check all sensors on diagnostics page.</p>
Push off bar not moving in sync	<p>Hydraulic flow is too low.</p> <p>Air in hydraulic system</p>	<p>Increase hydraulic flow.</p> <p>Perform hydraulic cylinder replacement procedure to remove air from system</p>

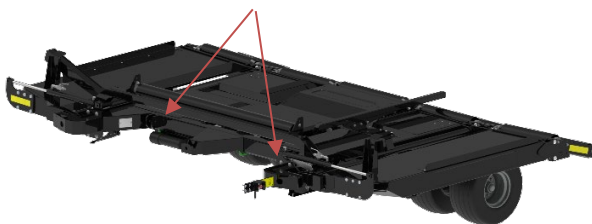
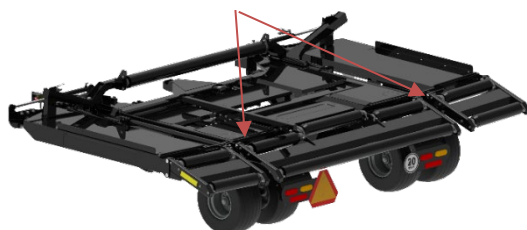
# Installation

---

## Lifting Points



To lift the accumulator, attach a shackle or a bolt to the outermost tailpiece mounts on the main frame and the link arm mounts on the front of the accumulator.



## Hitch Kit Mounting Guidelines

All PhiBer® Bale Accumulator hitch kits are similar in design, but each specific baler make, and model require certain specific hitch parts. All hitch kits consist of three main sets of components:

1. Center mount hitch assembly that carries the weight of the accumulator.
2. Pair of link arms with associated hardware for towing the accumulator.
3. Bale support system that supports oncoming bales during bale ejection.

**NOTE:** All PhiBer® Bale Accumulator hitch kits are shipped with a complete set of installation instructions. Refer to the provided install instructions first. The information provided here are some guidelines for preparing the baler for installation of the Bale Accumulator.

Read, understand and follow all installation instructions prior to installing the Bale Accumulator onto the baler. Failure to follow these instructions may result in improper Bale Accumulator installation and the Bale Accumulator may not perform as intended.

## Prepare Tractor and Baler

1. Hitch baler to tractor per instructions found in baler Operator's Manual.
2. Park tractor and baler on firm, level surface.
3. Shut tractor engine off and remove key from ignition.
4. Set tractor parking brake.
5. Support bale chute securely and remove retaining hardware.
6. Carefully lower bale chute to the ground and move it away from the baler.

## Attach Tail Piece Assemblies

1. Using four 5/8" x 4" carriage bolts attach each wing tail piece to the wings. Coned rollers towards the center.
2. Using four 5/8" x 4" carriage bolts and four 5/8" x 2" carriage bolts attach the center tail piece to the main frame
3. Attach the light harness on the tail piece to the harness on the main frame



## General Installation Tips

### Accumulator Placement

Ensure that the Bale Accumulator, 1, is mounted squarely to the rear of the baler 2 (Figure 8.1). Begin installation procedures with Bale Accumulator set on a firm, level surface behind the baler. The deck should be evenly spaced behind the baler.

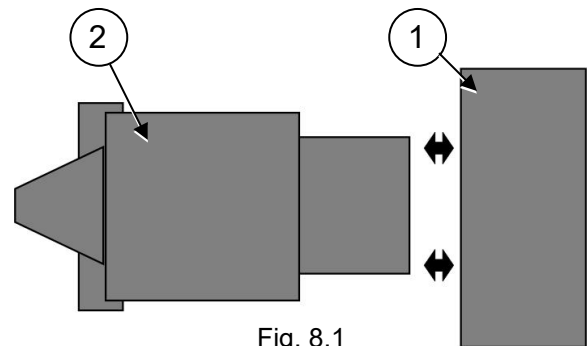


Fig. 8.1

### After-Market Baler Attachments

Check for potential interference with any after-market baler attachments such as bale ejectors, preservative tanks, etc. Contact PhiBer® if any modifications are necessary.

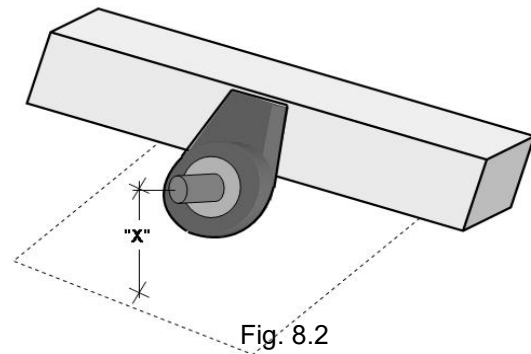


Fig. 8.2



## Optimum Hitch Height

The optimum hitch height is 25 in (635 mm) from the ground (Figure 8.2). This is important so that the leaf springs, 1, (Figure 8.3) do not become over stressed as indicated by the dashed line.

**NOTE:** Hitch height may range from 22 in (559 mm) to 29 in (737 mm) to allow for differences in baler makes and models. Balers are equipped with 26x12x12 tires.

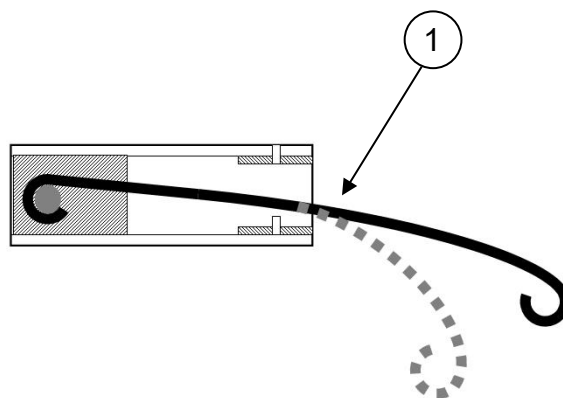


Fig. 8.3

## Index

Accumulator Phone App		
Bale Eject Mode .....	25	
Bluetooth and WiFi Connection .....	26	
Downloading and Sending Log Files .....	27	
Remote Control .....	26	
Updating Accumulator Software Through App .....	27	
Zone Planning .....	24	
Assembly Illustration .....	3	
Bale Eject		
Automatic .....	19	
Manual .....	19, 26	
Bale Hold Mode.....	19	
Bale Length Settings .....	14	
Bale Packaging Modes .....	3	
Bale Trigger Adjustment.....	29	
Bale Zones-Planning/ Pinning .....	25	
Bluetooth Connection.....	26	
Closed Center Hydraulic .....	16	
Component Cycle Times .....	16, 29	
Cycle Mode Selection .....	17	
GPS Turn On/Off.....	24	
Hitch Kit		
Accumulator Placement .....	43	
After-Market Baler Attachments .....	43	
Hitch Height.....	43	
Installation .....	42	
Preparing Tractor and Baler .....	42	
Hydraulic Flow.....	16	
Hydraulic Set-up.....	16	
Hydraulic Time-out.....	18	
Icon Guide.....	20	
ISOBUS		
Software .....	20	
Virtual Terminal .....	1	
Lifting Points.....	42	
Maintenance		
Bale Trigger Spring Tension.....	32	
Brake Pad.....	32	
Hitch Pivot .....	31	
Hourly Record .....	30	
Hydraulic Cylinder Replacement .....	33	
Limit Switch .....	30	
Roller Bearings.....	31	
Wheel Bearings .....	31, 32	
Wheel Lug Nuts.....	31	
Wing Pivot .....	32	
Monitor		
Bale Mode Page.....	23	
Diagnostics Page .....	23	
GPS Page .....	23	
Home Page .....	21	
Manual Mode Page .....	24	
Scale Page.....	22	
Settings Page.....	22	
Setup Page.....	22, 23	
Start-up Page .....	21	
Open Center Hydraulic.....	16	
Operation .....	16	
Cycle Mode Selection.....	17	
Field .....	19	
Hold Mode.....	19	
Making Solid Bales.....	19	
Safety .....	2	
Start-up Procedure .....	18	
PhiBer Accumulator App See Accumulator Phone App		
Safety		
Alert Symbols .....	2	
General Safety Practices.....	3	
Hydraulic Safety .....	6	
Installation Safety .....	6	
Maintenance Safety.....	5	
Operator Responsibility .....	3	

Safety Sign Maintenance .....	12
Signs .....	9
Storage Safety .....	8
Tire Safety .....	8
Transport Safety .....	7
Schematic	
Electric .....	36
Hydraulic .....	35
Lights .....	39
Manifold .....	34
Serial Number Plate .....	1

Specifications .....	14
Storage .....	28
Torque Specifications	
General .....	15
Wheel .....	31
Tractor Requirements .....	14
Transporting .....	27
Troubleshooting .....	40
Warranty .....	i
WiFi Connection .....	26



PhiBer Manufacturing Inc.  
Box 58 Crystal City, MB  
Canada R0K 0N0