

# **Tube-Line Accumul8/+2/+4**

**Operator's Manual**



## TO THE OWNER

This manual contains information concerning the adjustment, assembly and maintenance of your Tube-Line Accumulator. You have purchased a dependable machine, but only by proper care and operation can you expect to receive the performance and long life built into the Tube-Line Accelerator.

Please have all operators read this manual carefully and keep it available for ready reference.

Your authorized dealer will instruct you in the general operation of your Tube-Line Accelerator. (Refer to the "delivery report" at the back of this manual.) Your dealer's staff of factory-trained service technicians will be glad to answer any questions that may arise regarding the operation of your Tube-line Accumulator.

Model : \_\_\_\_\_  
Product Serial Number : \_\_\_\_\_



### WARNING



**This safety alert symbol indicates important safety messages in this manual. When you see this symbol, carefully read the message that follows and be alert to the possibility of personal injury or death.**



### WARNING



**Pictures in this manual may show protective shielding open or removed to better illustrate a particular feature or adjustment. Be certain, however, to close or replace all shielding before operating the machine**

## **Improvements**

Tube-Line Manufacturing Inc. is continually striving to improve its products. We reserve the right to make improvements or changes when it becomes practical and possible to do so, without incurring any obligation to make changes or additions to the equipment sold previously.

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# Precautionary Statements

## Personal Safety

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Throughout this manual and on machine decals you will find precautionary statements (“DANGER”, “WARNING”, and “CAUTION”) followed by specific instructions. These precautions are intended for the personal safety of you and those working with you. Please take time to read them.



This word “DANGER” indicates an immediate hazardous situation that, if not avoided, will result in death or serious injury.



This word “WARNING” indicates a Potentially Hazardous situation that, if not avoided, could result in death or serious injury.



This word “CAUTION” indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. Failure to follow the danger warning and caution instructions may result in serious bodily injury or death.

## MACHINE SAFETY

The precautionary statement (“important”) is followed by specific instructions. This statement is intended for machine safety.

**IMPORTANT:** The word “*IMPORTANT*” is used to inform the reader of something he needs to know to prevent minor machine damage if a certain procedure is not followed.

## Safety

### Precautionary Statements

A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. To help prevent accidents read the following precautions before operating this equipment. Equipment should be operated only by those who are responsible and instructed to do so.

Carefully review the procedures given in this manual with all operators. It is important that all operators be familiar with and follow safety precautions.

1. When transporting the machine on public roads, make sure the machine is in compliance with all local road regulation.
2. Before operating the unit be sure that it is assembled correctly and in good operating condition.
3. If machine maintenance work, repairs or adjustments must be done in the field, they should be done at a spot where the ground is firm and level. Turn off the tractor and apply the parking brake. Use the proper tools and wear suitable protection (safety goggles, work gloves, etc.).
4. If any maintenance work, repairs or adjustments are done which require disassembly, always make sure that everything is reassembled or retightened as it has been prior to making repairs or adjustments.
5. Follow the schedule provided for maintenance. By following these suggestions, it will be possible to keep the machine operating safely and efficiently, to the benefit of the user.
6. General checking of bolts, security pins and split pins must be carried out initially after the first 8 hours of use. Subsequently, check every 50 hours and whenever the machine is laid up for extended periods.
7. Before applying pressure to the system, be sure all connections are tight and that hoses and connections are not damaged.
8. Fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Always protect the skin and eyes from escaping fluid under pressure. If injured by escaping fluid, obtain medical assistance at once. Serious infection or reaction can develop if medical treatment is not administered immediately.
9. Do not weld on wheels. Welding on wheels may cause high stress and a wheel failure.
10. Do not weld on wheels with a mounted tire. Welding on wheels with a mounted tire may cause the tire to burst, causing serious injury or death.
11. Before leaving the cab, engage the parking brake, shut down engine, and wait for all moving parts to stop.
12. Always keep bystanders away from machine during operation, Rotating elements may cause serious bodily injury.

## General Safety

YOU are responsible for the safe operation and maintenance of your Tube-line Accelerator. You must ensure that you and anyone else who is going to operate, maintain or work around the Accelerator be familiar with the operating and maintenance procedures and related safety information contained in this manual.

Remember, YOU are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

Review the operating instructions for this header at least once a year per OSHA regulations 1928.57. Know the meaning and location of each decal before operating the Accelerator.

Watch for this symbol in this manual and on the Accelerator:



1. Keep a first aid kit in the cab for emergencies and know how to use it.
2. Do not allow any one to ride on the Accelerator while it is in motion.
3. Clear the area of bystanders, especially small children before starting the Bale Feeder.
4. Do not allow anyone to operate the Accelerator who has not been instructed in how to use the machine.
5. All operators should familiarize themselves with the safety section in the operator's manual.
6. Some pictures or illustrations may not show protective shields in place. Make certain that all protective shields are in place before operating the machines.

## Operating and Maintenance safety

1. DANGER, DO NOT stand around or near the Discharge or bed area. Objects thrown from the beaters may cause death or serious injury
2. Hydraulic leaks can penetrate the skin causing serious injuries. Small leaks can be invisible and are the most dangerous. Use some object, like cardboard, to find the leak. Do not use your hand.
3. Ensure that all the pressure is released from the hydraulic lines before repairing. Replace or repair damaged hoses immediately.
4. DO NOT remove side guard until all moving parts have stopped, rollers and chain inside the side panel are free wheeling and may be still spinning, failure to comply could result in death or serious injury.

## Welding Safety

DO NOT weld on or near rotating parts. Welding close to rotating parts will cause warping and will challenge the structural integrity.

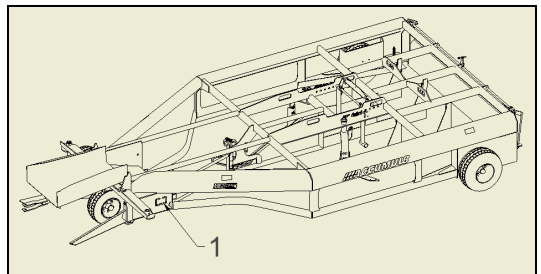
DO NOT weld on or near rotating parts. Welding close to rotating parts may cause warping thus creating high stress loads for moving or rotating parts.

DO NOT weld on wheels. Welding on wheels may cause high stress and wheel failure.

DO NOT weld on wheels with a mounted tire, Welding on wheels with a mounted tire may cause tire to burst, causing serious injury or death.

## Product Identification

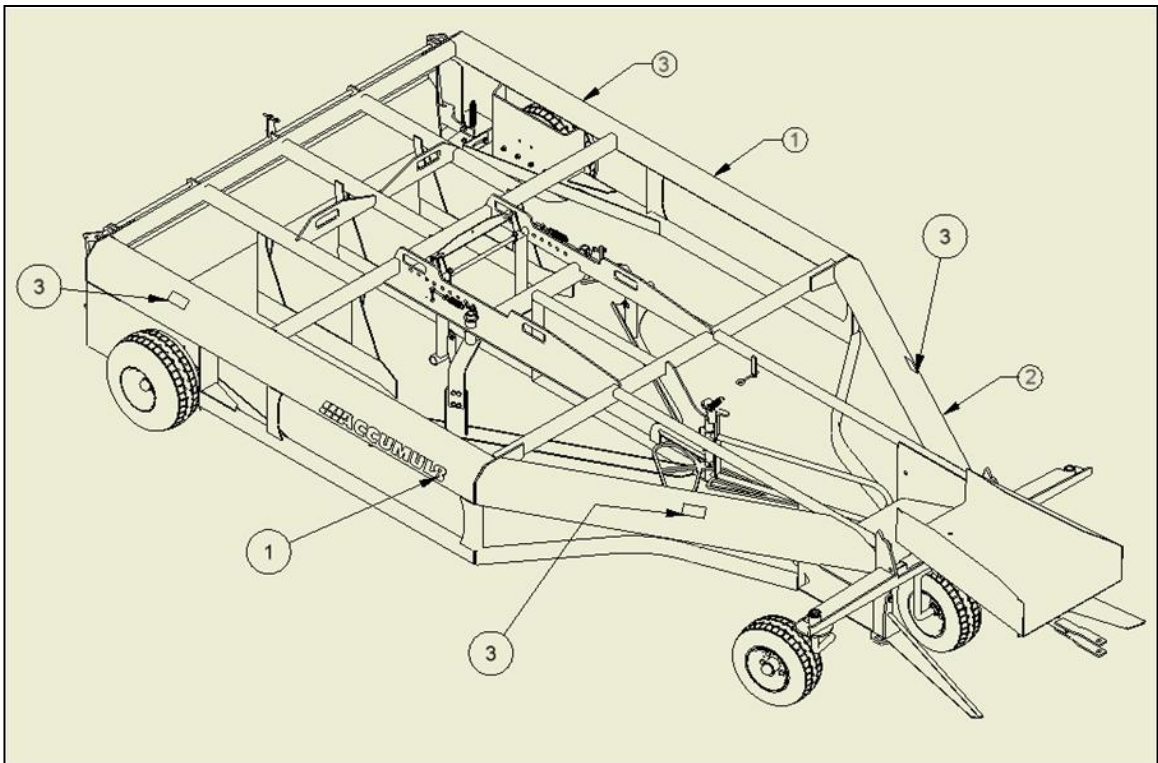
The P.S.N stamped on the metal tag(1), is located on the front of the Tube-line Accumulator.





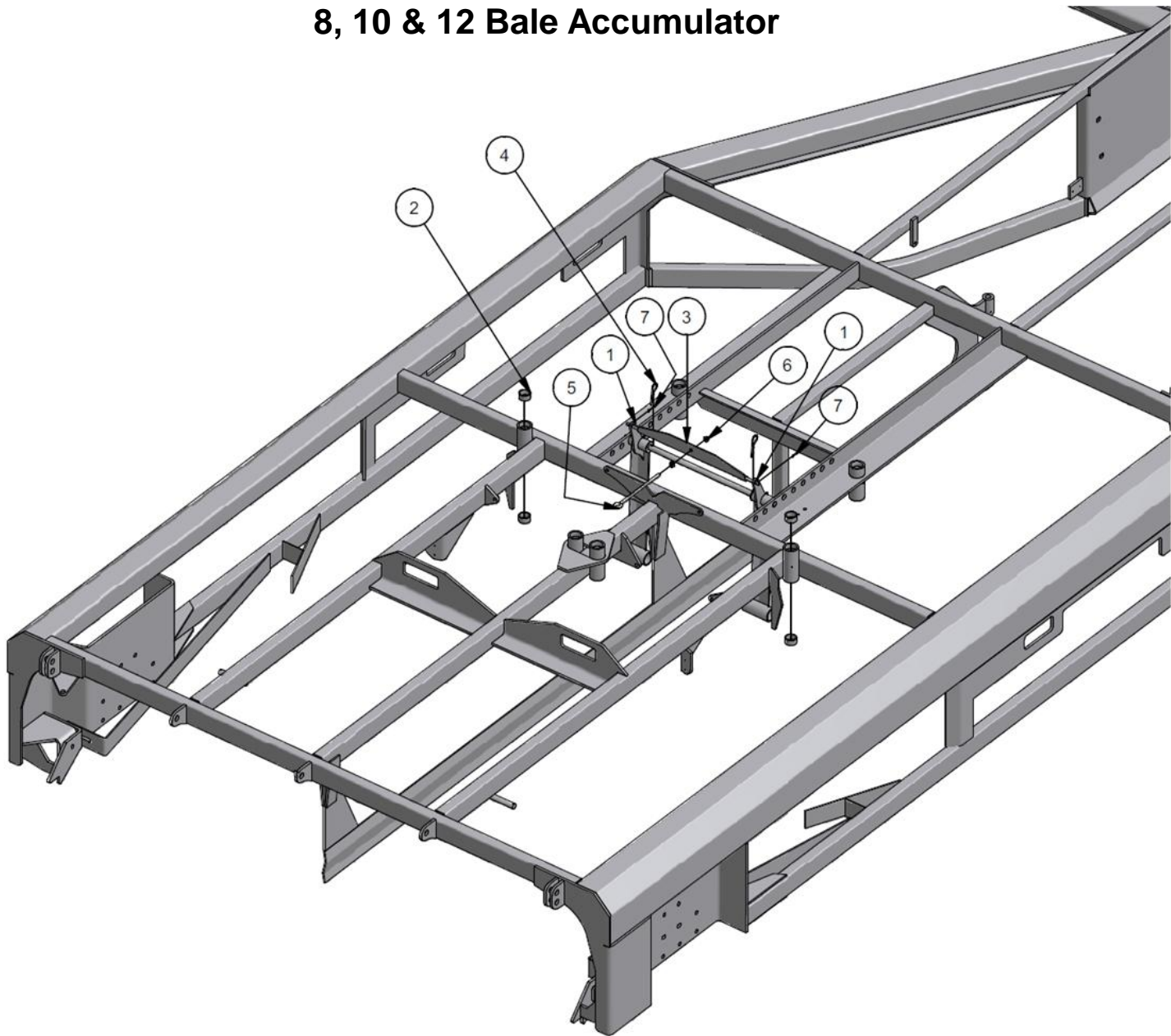
## Decals

The following safety decals have been placed on your machine in the areas indicated. They are intended for personal safety and or those working with you. Please take this manual and walk around your machine to note the content and location of these warning signs. Review these warning signs and the operating instruction detailed in this manual with your machine operators. Keep the decals legible, if they are not, obtain replacements from your authorized dealer. The decal replacement numbers are listed with each decal.



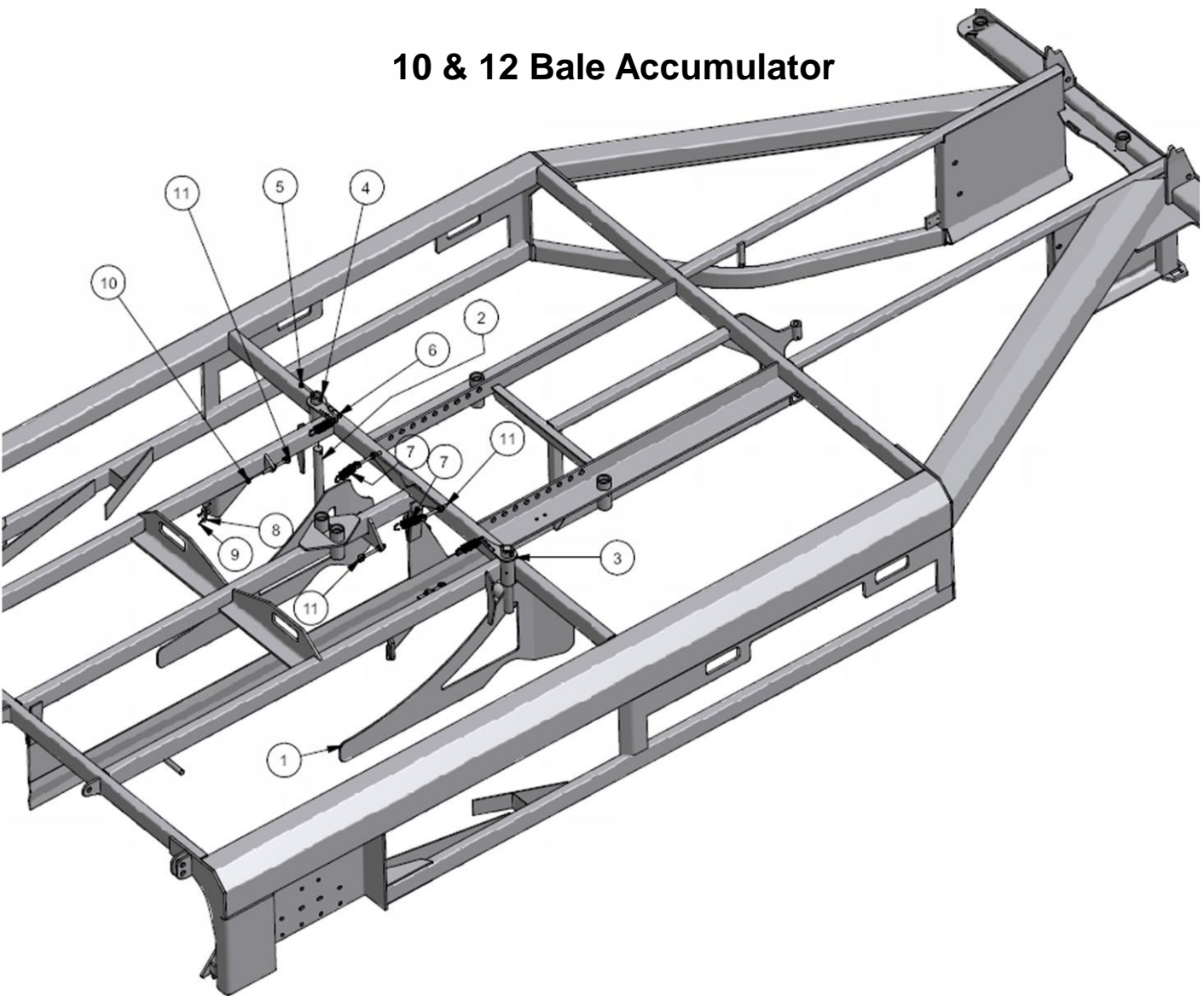
Item	Qty	Part #	Description
1	3	AC-A-069	Accumul8 Decal
1	3	AC-A-128	Accumul8+2Decal
3	4	PP-00875	Fail/Slip Hazard

## 8, 10 & 12 Bale Accumulator



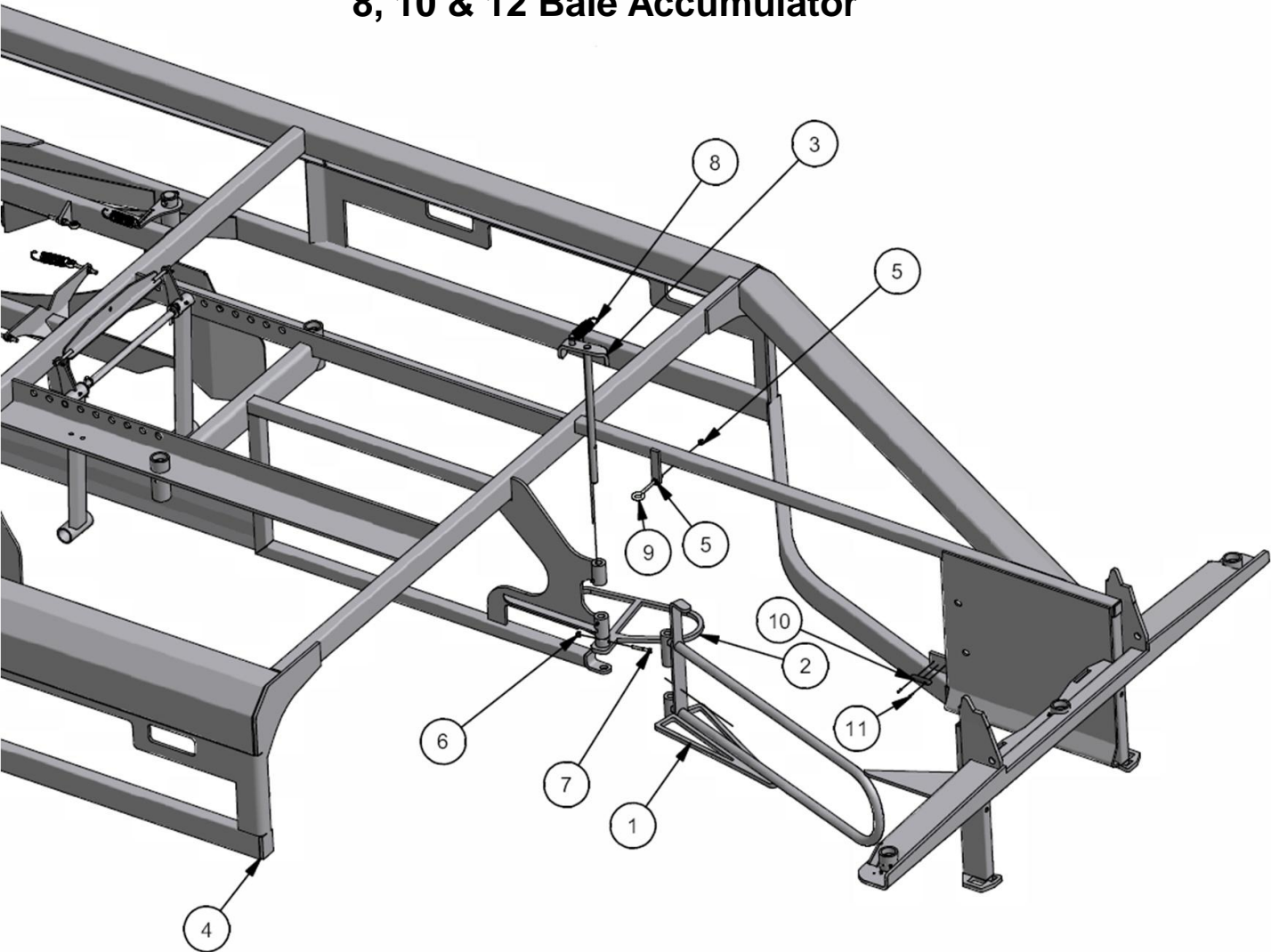
Item	Qty	Part #	Description
1	2	AC-A-06	Bale Trip Assembly
2	4	AC-A-126	Bushing
3	1	AC-A.28	Trip Channel
4	2	Obtain Locally	Hitch Pin Clip (.15 dia)
5	1	PP-00681	Eye Bolt 3/8 x 8
6	3	Obtain Locally	3/8 Hex Nut
7	2	Obtain Locally	1/8 x 1 Cotter Pin

## 10 & 12 Bale Accumulator



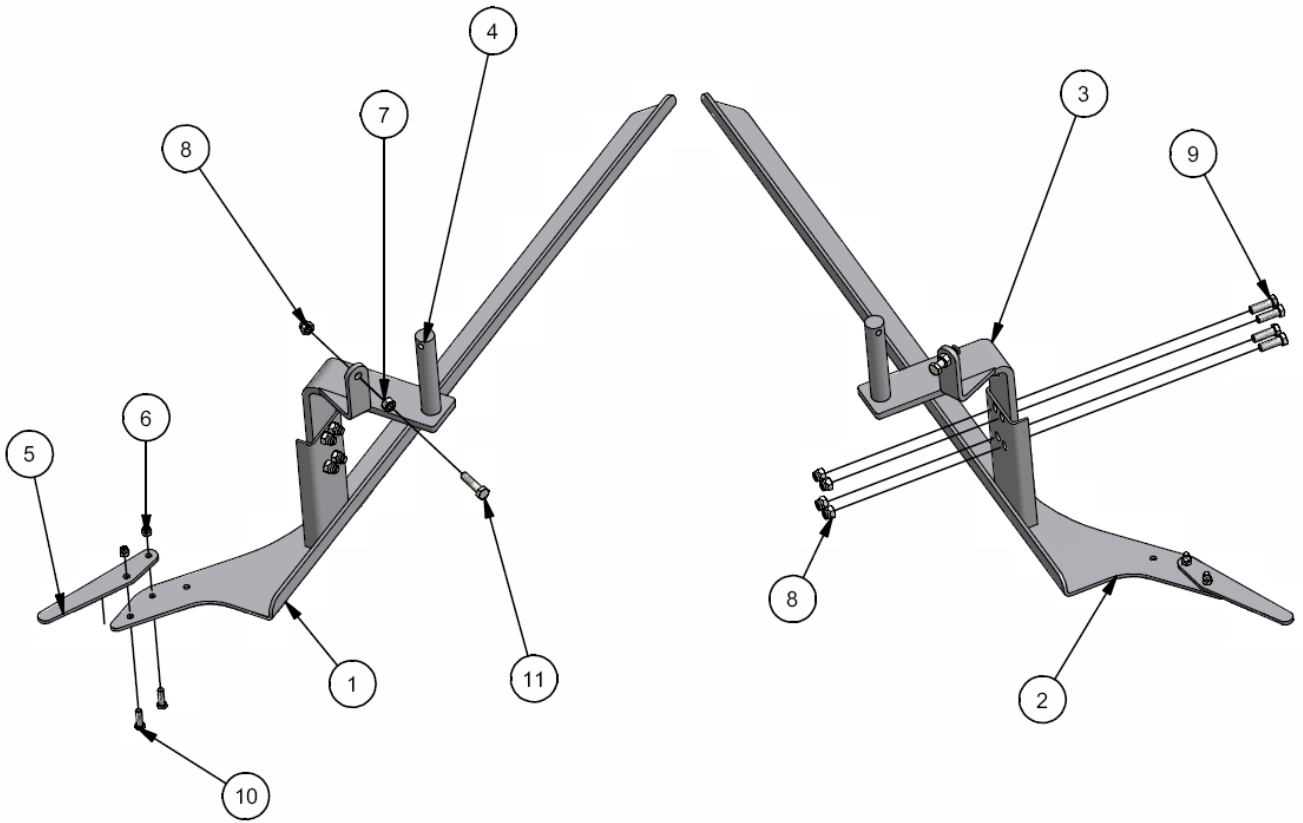
Item	Qty	Part #	Description
1	1	AC-A-25	Side Guide
2	1	AC-A-25_MIR	Side Guide
3	1	AC-A-26	Spring Handle
4	1	AC-A-27	Right Spring Handle
5	2	Obtain Locally	3/8 Lock Nut
6	2	Obtain Locally	3/8 x 1.25 Hex Bolt
7	4	PP-00679	Spring .135 x .1 x 7.5
8	2	PP-00685	Rubber Stop
9	4	PP-00686	Wood Screw #6 x 5/8 Roberts End
10	12	Obtain Locally	3/8 Hex Nut
11	6	PP-00962	Eye Bolt 3/8 x 3.5

## 8, 10 & 12 Bale Accumulator



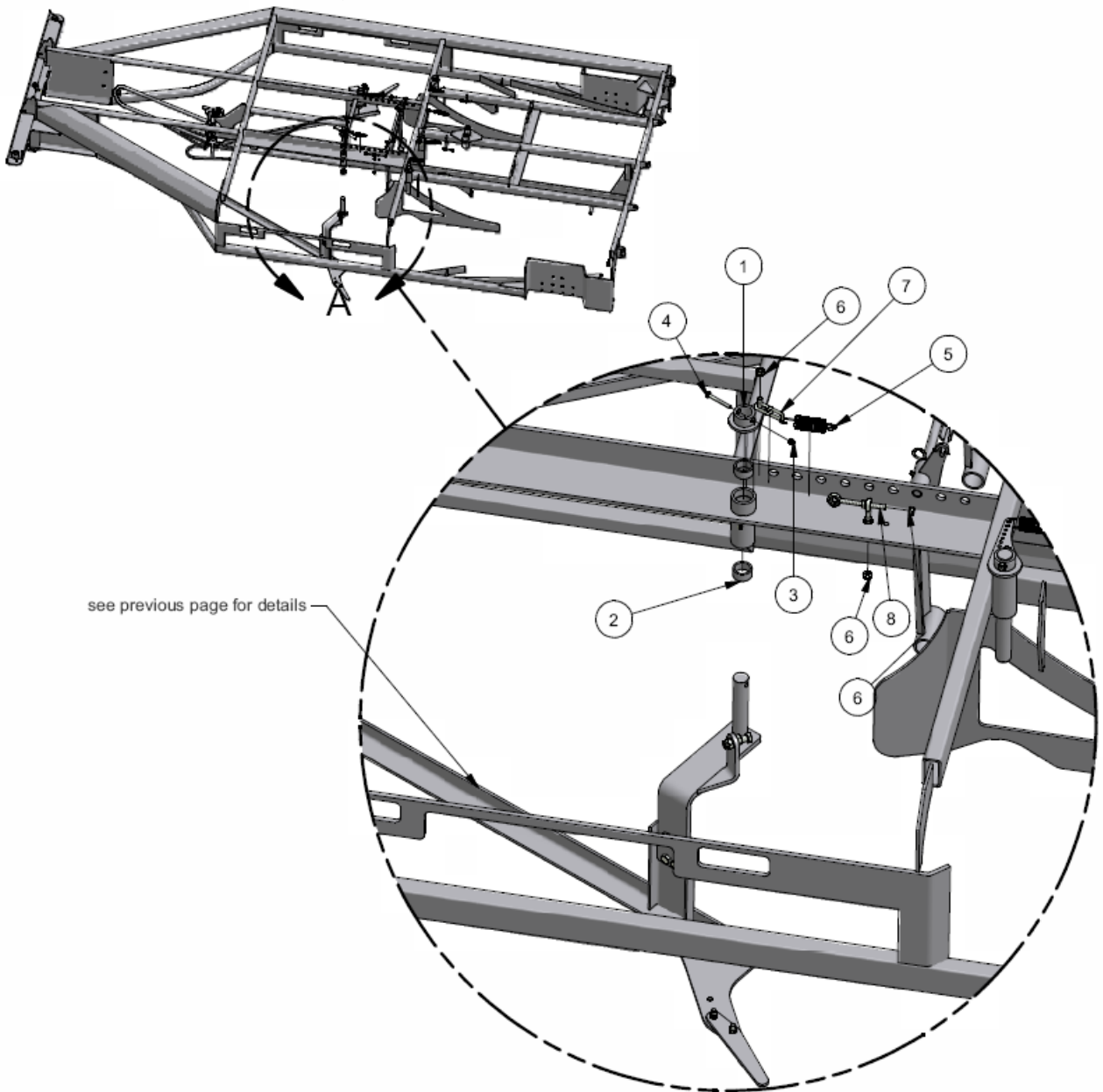
Item	Qty	Part #	Description
1	1	AC-A-02	Gate Assembly
2	1	AC-A-03	Gate Trip Assembly
3	1	AC-A-05	Gate Pivot Pin Assembly
4	1	AC-A12-01	Frame Assembly
5	2	Obtain Locally	5/16 Hex Nut
6	1	Obtain Locally	5/16 Lock Nut
7	1	Obtain Locally	5/16 x 2 Hex Bolt
8	1	PP-00679	.135 x .1 x 7.5 Spring
9	1	PP-00682	Eye Bolt 5/16 x 4
10	2	PP-00685	Rubber Stop
11	4	PP-00686	Wood Screw #6 x 5/8 Roberts End

# Front Guide Arm Assembly



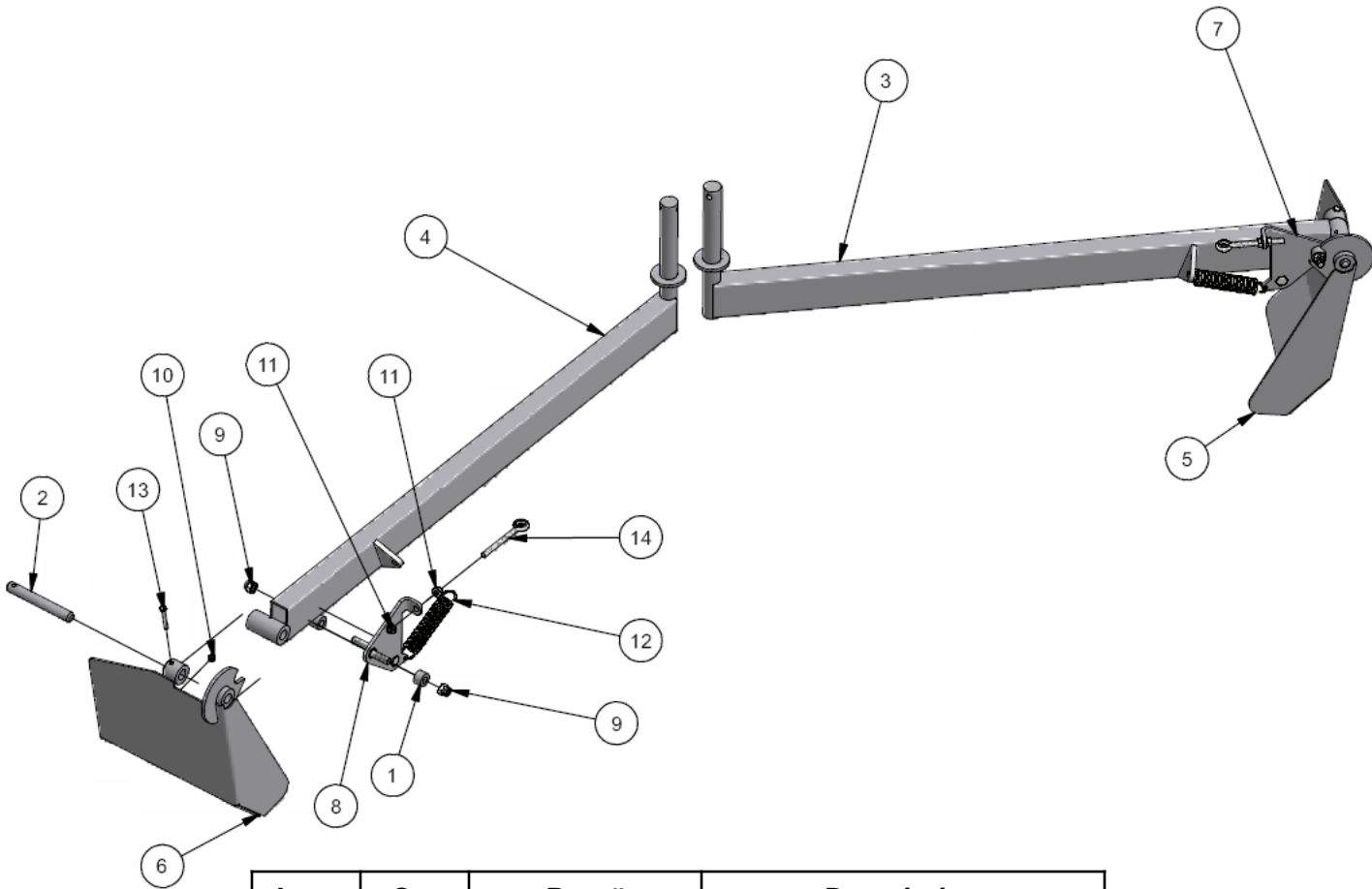
Item	Qty	Part #	Description
1	1	AC-A-04	Front Arm Assembly
2	1	AC-A-04_MIR	Front Arm Assembly
3	1	AC-A-13	Arm Mount Assembly
4	1	AC-A-13_MIR	Arm Mount Assembly
5	2	AC-A-175	Arm Tab
6	4	Obtain Locally	3/8 Lock Nut
7	2	Obtain Locally	1/2 Hex Nut
8	10	Obtain Locally	1/2 Lock Nut
9	8	Obtain Locally	1/2 x 1.5 Hex Bolt
10	4	Obtain Locally	3/8 x 1.25 Hex Bolt
11	2	Obtain Locally	1/2 x 2 Hex Bolt

## 8, 10 & 12 Bale Accumulator



Item	Qty	Part #	Description
1	2	AC-A-01	Arm Spring Assembly
2	4	AC-A-126	Bushing
3	2	Obtain Locally	1/4 Lock Nut
4	2	Obtain Locally	1/4 x 2.25 Hex Bolt
5	2	PP-00679	Spring .135 x .1 x 7.5
6	8	Obtain Locally	3/8 Flange Nut
7	2	PP-00694	G3 .25 x 1.375 Chain
8	2	PP-00962	Eye Bolt 3/8 x 3.5

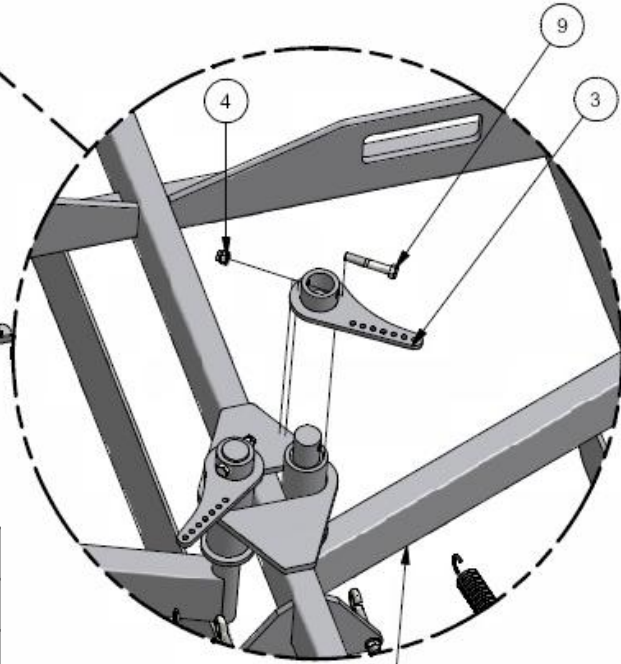
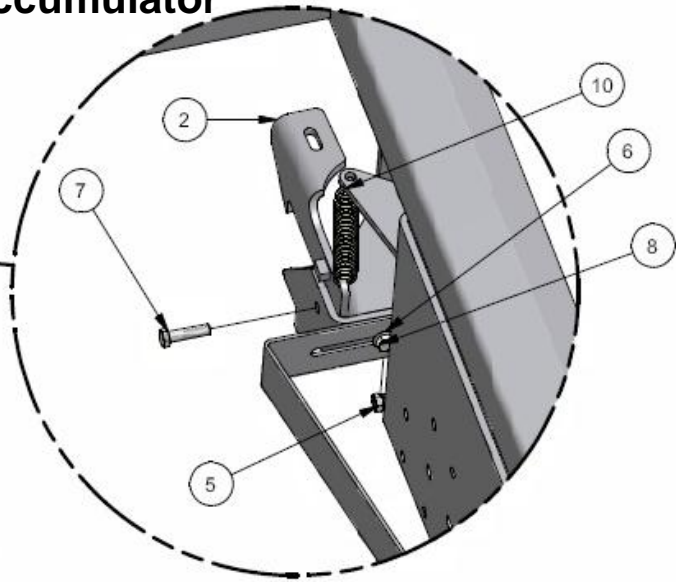
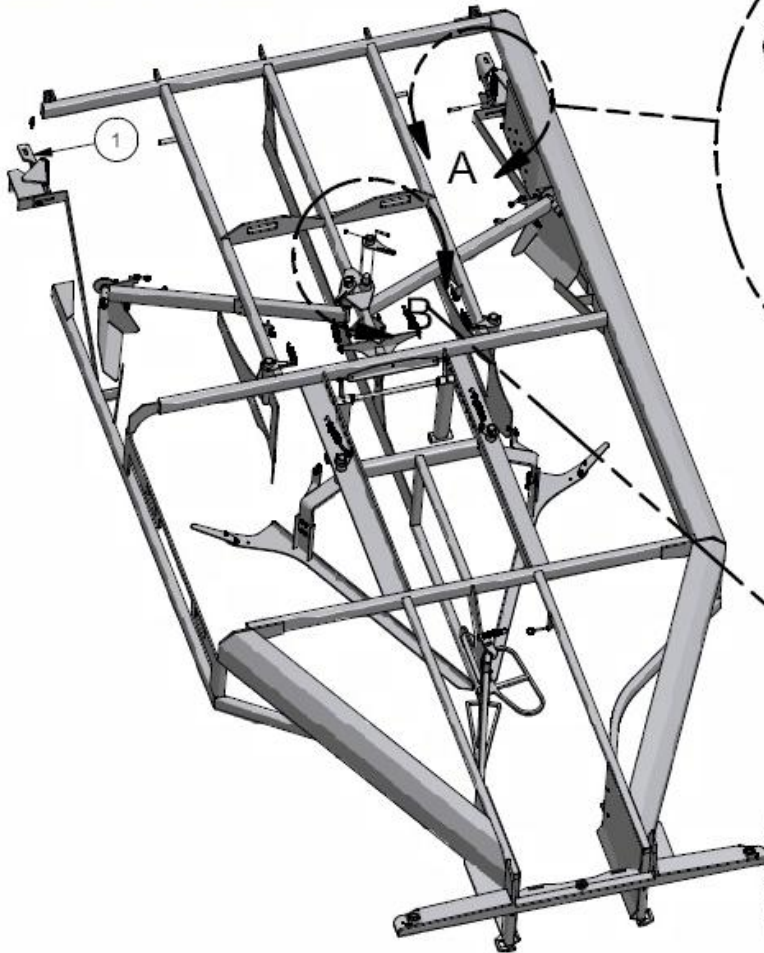
# 10 Bale Accumulator



Item	Qty	Part #	Description
1	2	AC-A-048	Bearing
2	2	AC-A-049	Catch Pin
3	1	AC-A-15	10 Bale Swing Arm
4	1	AC-A-15_MIR	10 Bale Swing Arm
5	1	AC-A-29	Bale Catch Assembly
6	1	AC-A-29_MIR	Bale Catch Assembly
7	1	AC-A-30	Spring Latch Assembly
8	1	AC-A-30_MIR	Spring Latch Assembly
9	4	Obtain Locally	1/2 Lock Nut
10	2	Obtain Locally	1/4 Lock Nut
11	4	Obtain Locally	3/8 Hex Nut
12	2	PP-00695	.13 x 1.11 x 5.5 Spring
13	2	Obtain Locally	1/4 x 2 Hex Bolt
14	2	PP-00962	Eye Bolt 3/8 x 3.5

# 8 & 10 Bale Accumulator

SOME PARTS NOT SHOWN FOR CLARITY

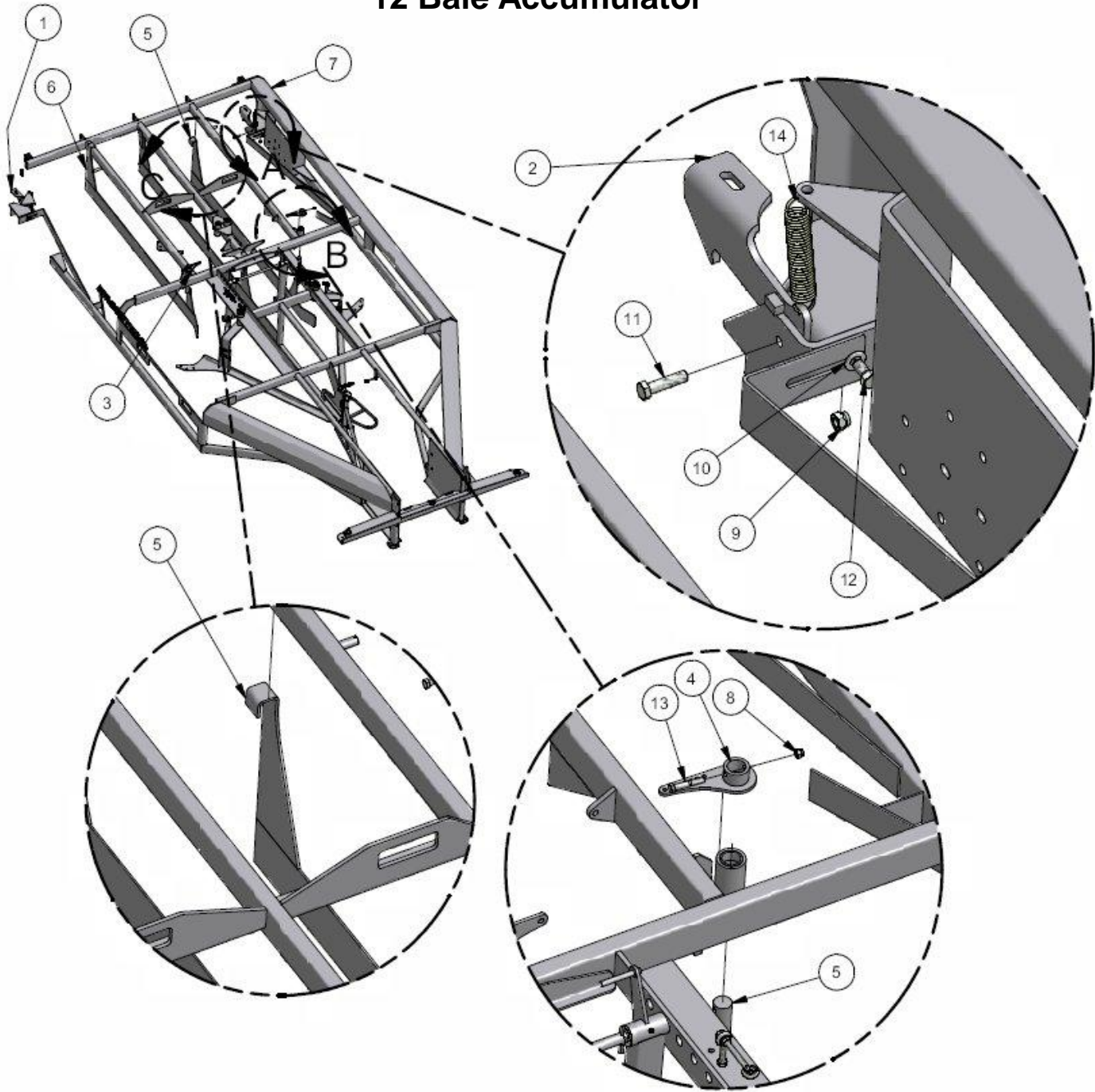


see previous page for details

Item	Qty	Part #	Description
1	1	AC-A-16	Drop Door Latch
2	1	AC-A-16_MIR	Drop Door Latch
3	2	AC-A-27	Right Spring Handle
4	8	Obtain Locally	3/8 Lock Nut
5	16	Obtain Locally	1/2 Lock Nut
6	2	Obtain Locally	1/2 Flat Washer
7	4	Obtain Locally	1/2 x 2 Hex Bolt
8	2	Obtain Locally	1/2 x 1 Hex Bolt
9	4	Obtain Locally	3/8 x 1.25 Hex Bolt
10	4	PP-00695	.13 x 1.11 x 5.5 Spring

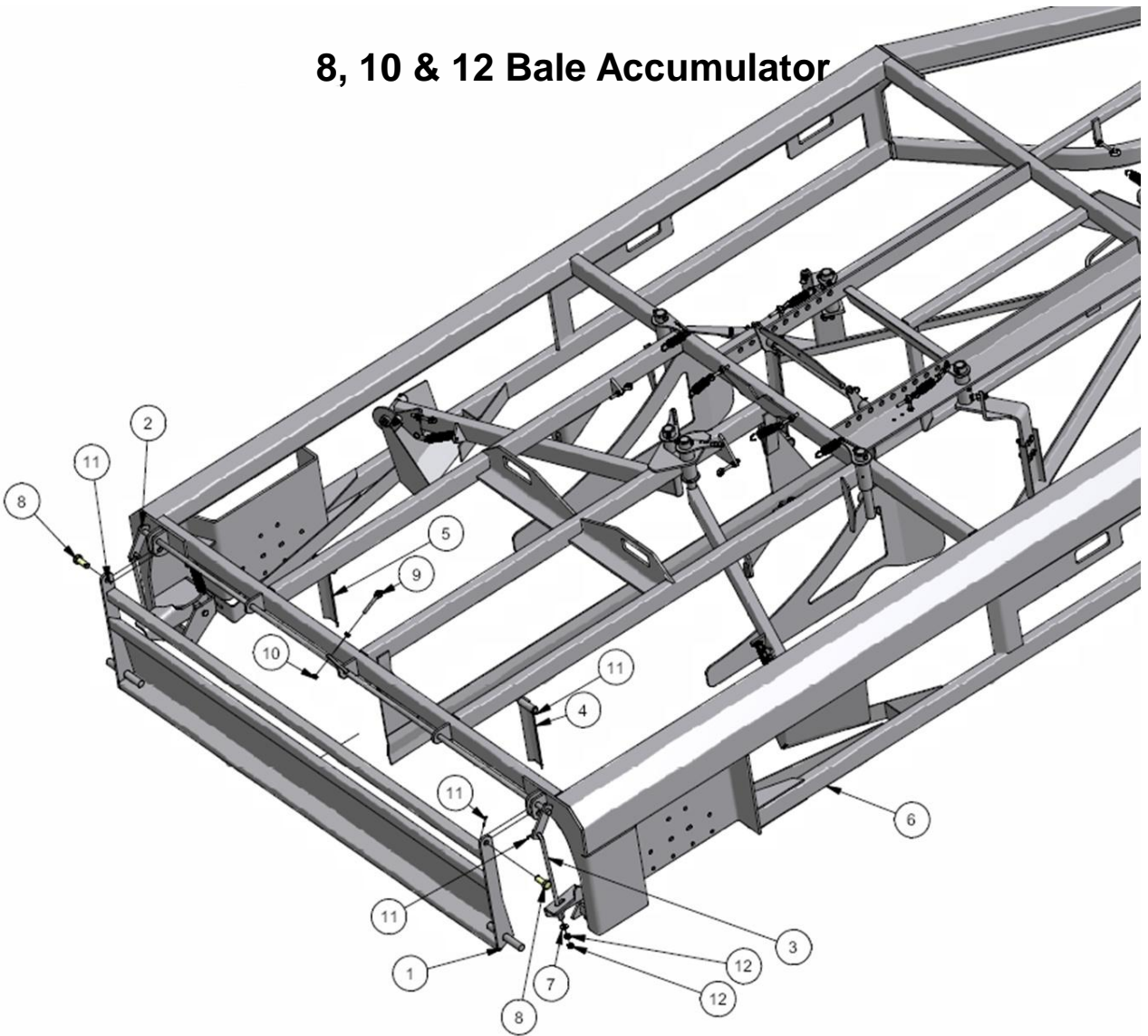


# 12 Bale Accumulator



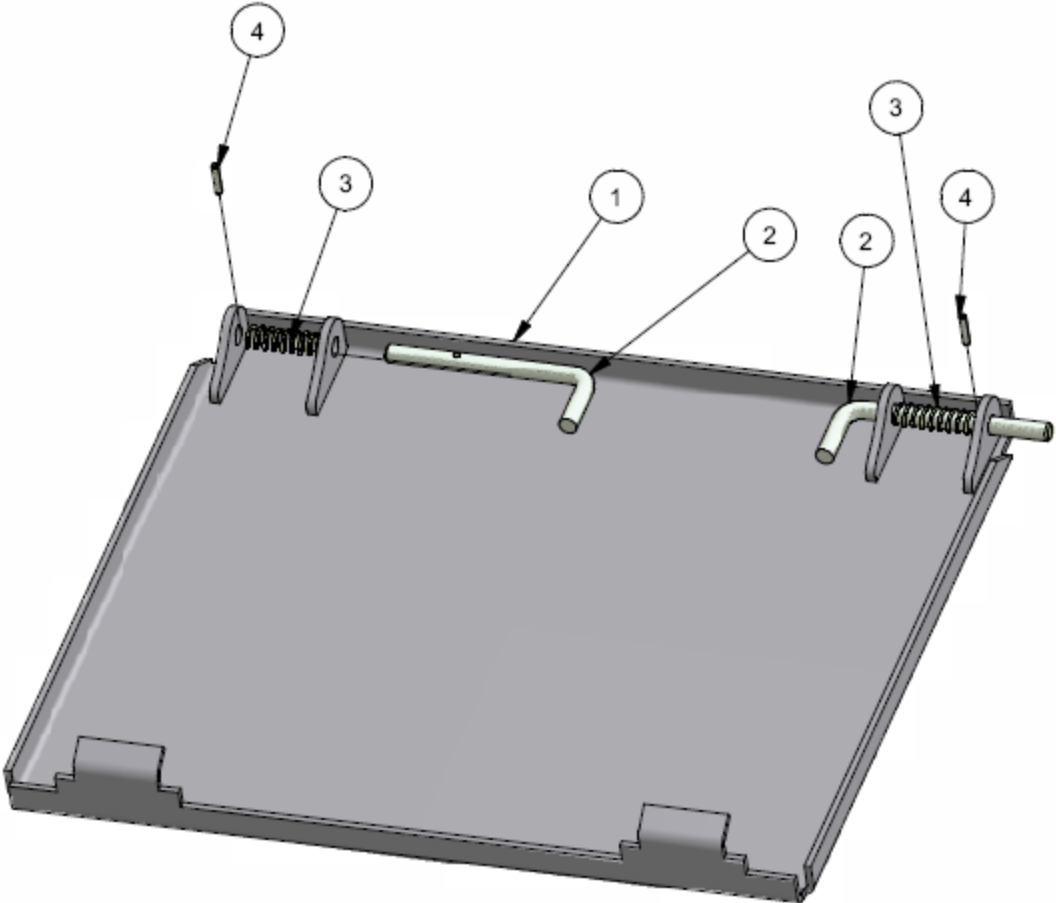
Item	Qty	Part #	Description	Item	Qty	Part #	Description
1	1	AC-A-16	Drop Door Latch	8	2	Obtain Locally	3/8 Lock Nut
2	1	AC-A-16_MIR	Drop door Latch	9	12	Obtain Locally	1/2 Lock Nut
3	1	AC-A-26	Spring Handle	10	2	Obtain Locally	1/2 Flat Washer
4	1	AC-A-27	Right Spring Handle	11	4	Obtain Locally	1/2 x 2 Hex Bolt
5	1	AC-A-32	Bale Guide	12	2	Obtain Locally	1/2 x 1 Hex Bolt
6	1	AC-A-32_MIR	Bale Guide	13	2	Obtain Locally	3/8 x 1.25 Hex Bolt
7	1	AC-A12-01	Frame Assembly	14	2	PP-00695	.13 x 1.11 x 5.5 Spring

## 8, 10 & 12 Bale Accumulator



Item	Qty	Part #	Description
1	1	AC-A-10	Drop Door Assembly
2	1	AC-A-11	Trip Pivot Assembly
3	2	AC-A-121	Latch Trip Rod
4	1	AC-A-31	Tumbler Arm
5	1	AC-A-31_MIR	Tumbler Arm
6	1	AC-A12-01	Frame Assembly
7	2	PP-00016	1/2 Flat Washer
8	2	PP-00676	1.61 x .75 Pin
9	1	PP-00680	Eye Bolt 3/8 x 2.5
10	2	PP-00687	3/8 Hex Nut
11	4	PP-00691	1/8 x 1 Cotter Pin
12	4	PP-00693	1/2 Hex Jam Nut

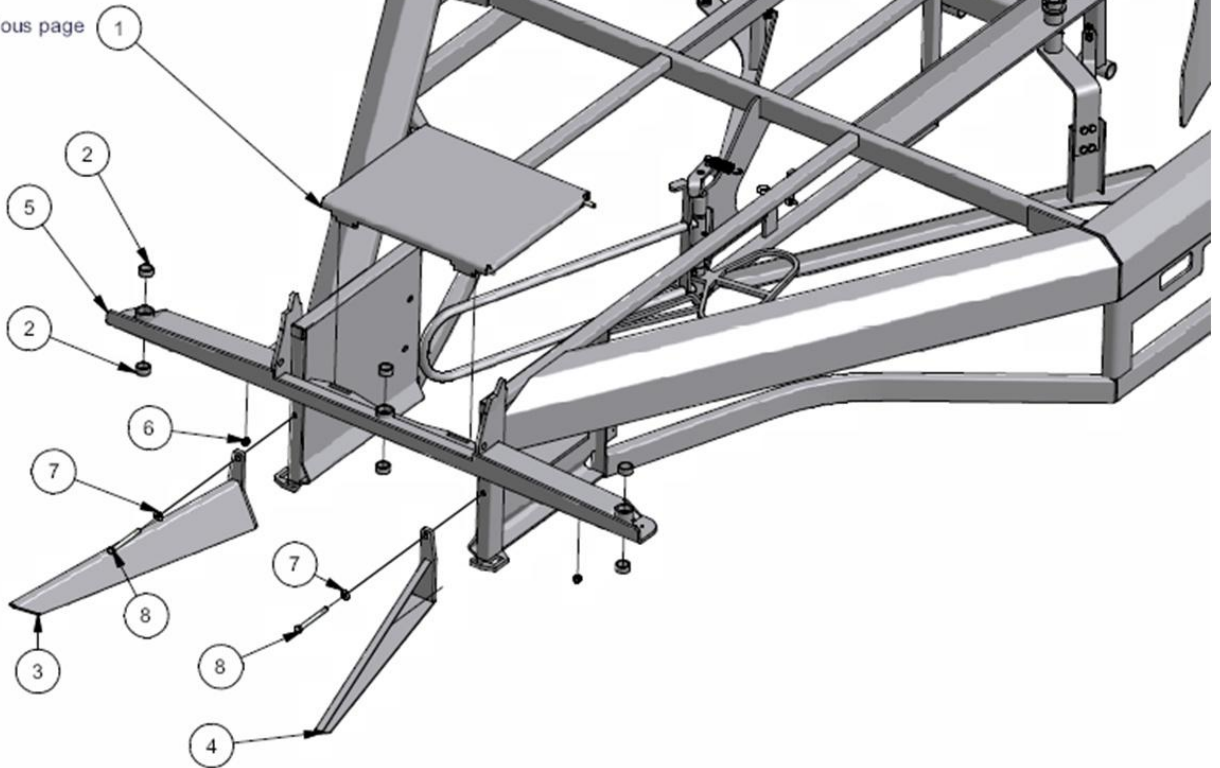
# Bale Slide Accumulator



Item	Qty	Part #	Description
1	1	AC-A-08	Bale Slide Assembly
2	2	AC-A-125	Bale Shute Set Pin
3	2	PP-00677	.8 x .708 x 2.982 Spring
4	2	PP-00678	Roll Pin 3/16 x 1

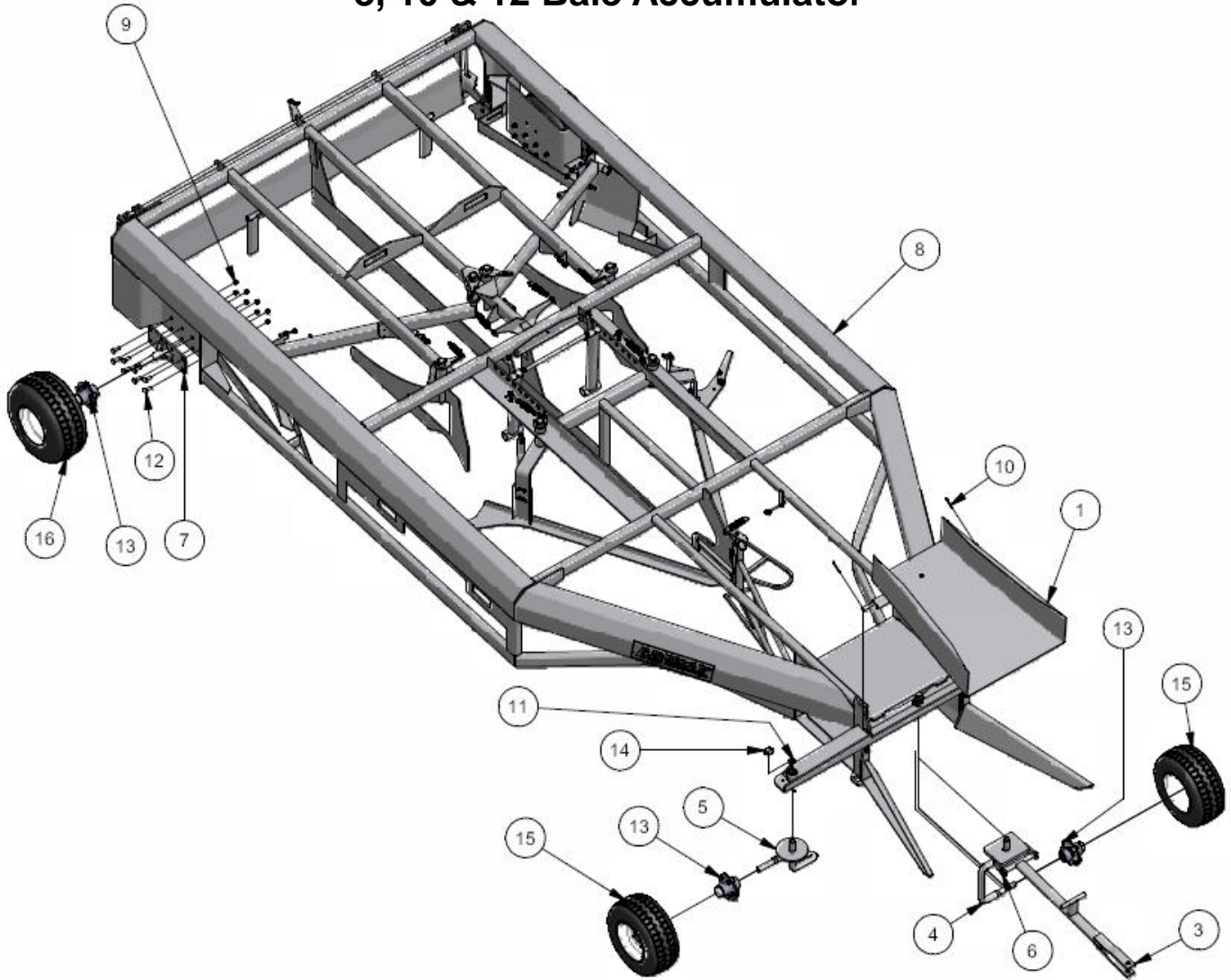
## 8, 10 & 12 Bale Accumulator

see previous page



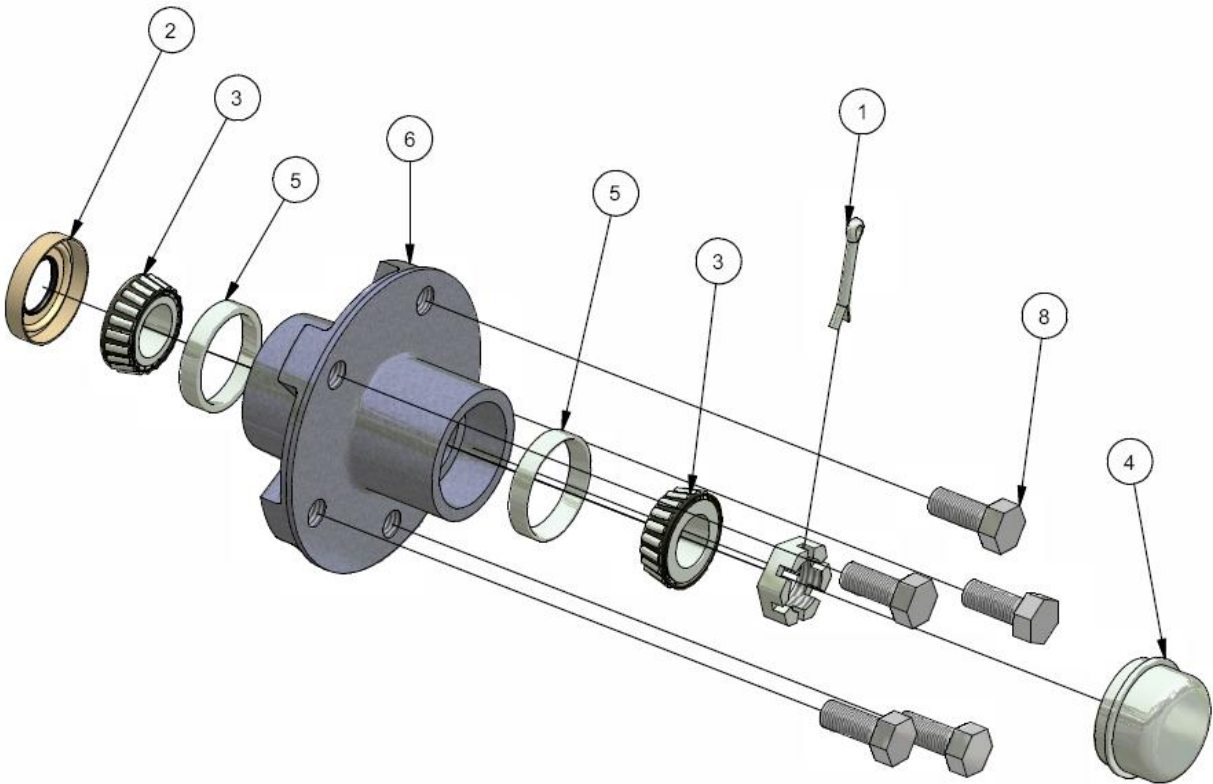
Item	Qty	Part #	Description
1	1	AC-A-08	Bale Slider Assembly
2	6	AC-A-126	Bushing
3	1	AC-A-17	Flare Assembly
4	1	AC-A-17_MIR	Right Bale Guide
5	1	AC-A12-01	Frame Assembly
6	2	Obtain Locally	1/2 Lock Nut
7	4	Obtain Locally	1/2 Flat Washer
8	2	Obtain Locally	1/2 x 5 Hex Bolt

## 8, 10 & 12 Bale Accumulator



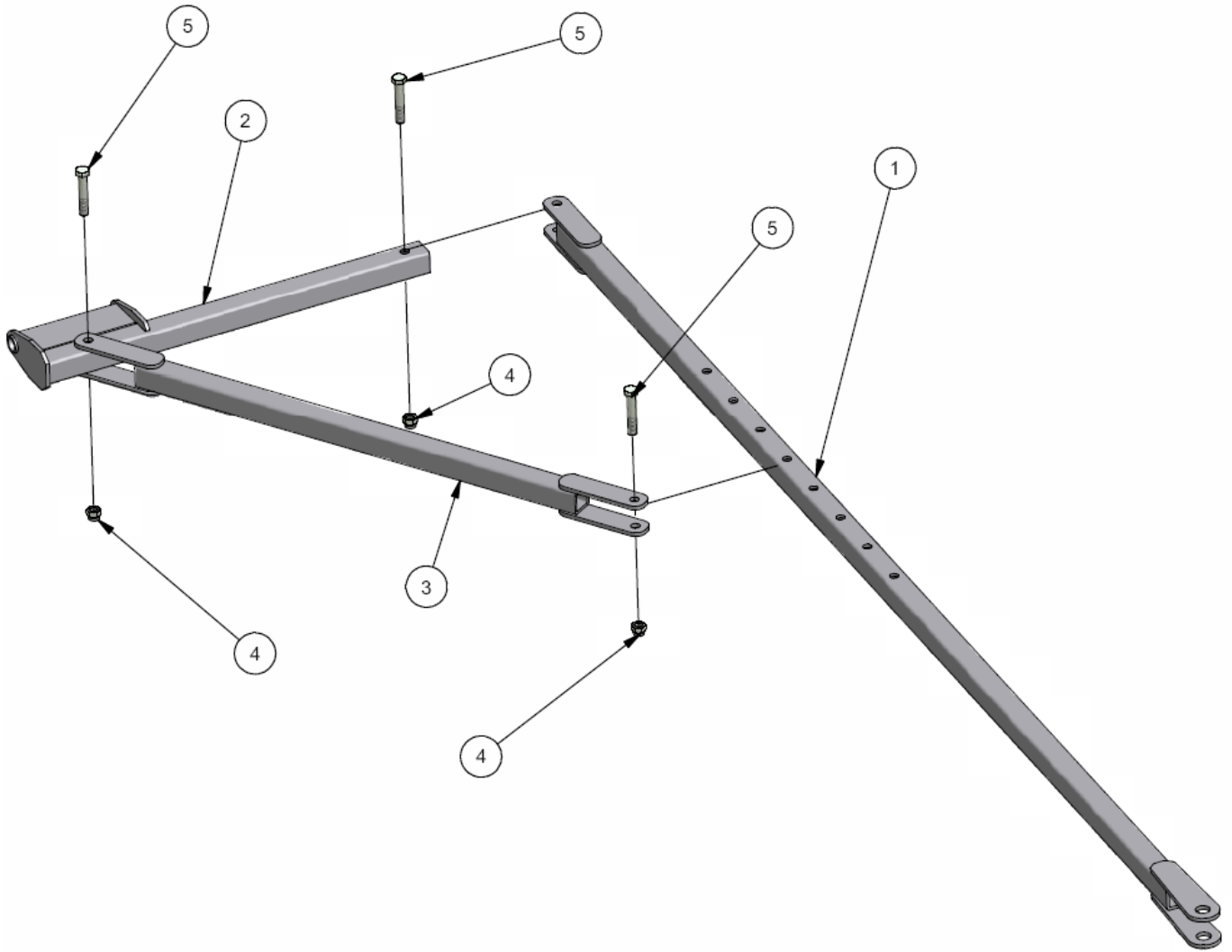
Item	Qty	Part #	Description	Item	Qty	Part #	Description
1	1	AC-A-07	Bale Shute	9	16	Obtain Locally	½ Lock Nut
2	1	AC-A-08	Bale Slide	10	2	Obtain Locally	3/16 x 2 Cotter Pin
3	1	AC-A-09	Hitch	11	4	PP-00192	
4	1	AC-A-12	Center Dolly	12	16	PP-00324	PP-00324
5	1	AC-A-14	Dolly	13	4	PP-00665	1000lb Hub
6	1	AC-A-22	Hitch Pin	14	2	PP-00689	Lynch Pin
7	2	AC-A-24	Rear Wheel Assembly	15	2	PP-00825	Tire and Rim 16.5 x 6.5-8 Sport Trail
8	1	AC-A12-01	Frame	16	2	PP-00829	Tire and Rim 18.5 x 8.5-8 Sport Trail

# 1000lb Hub Assembly



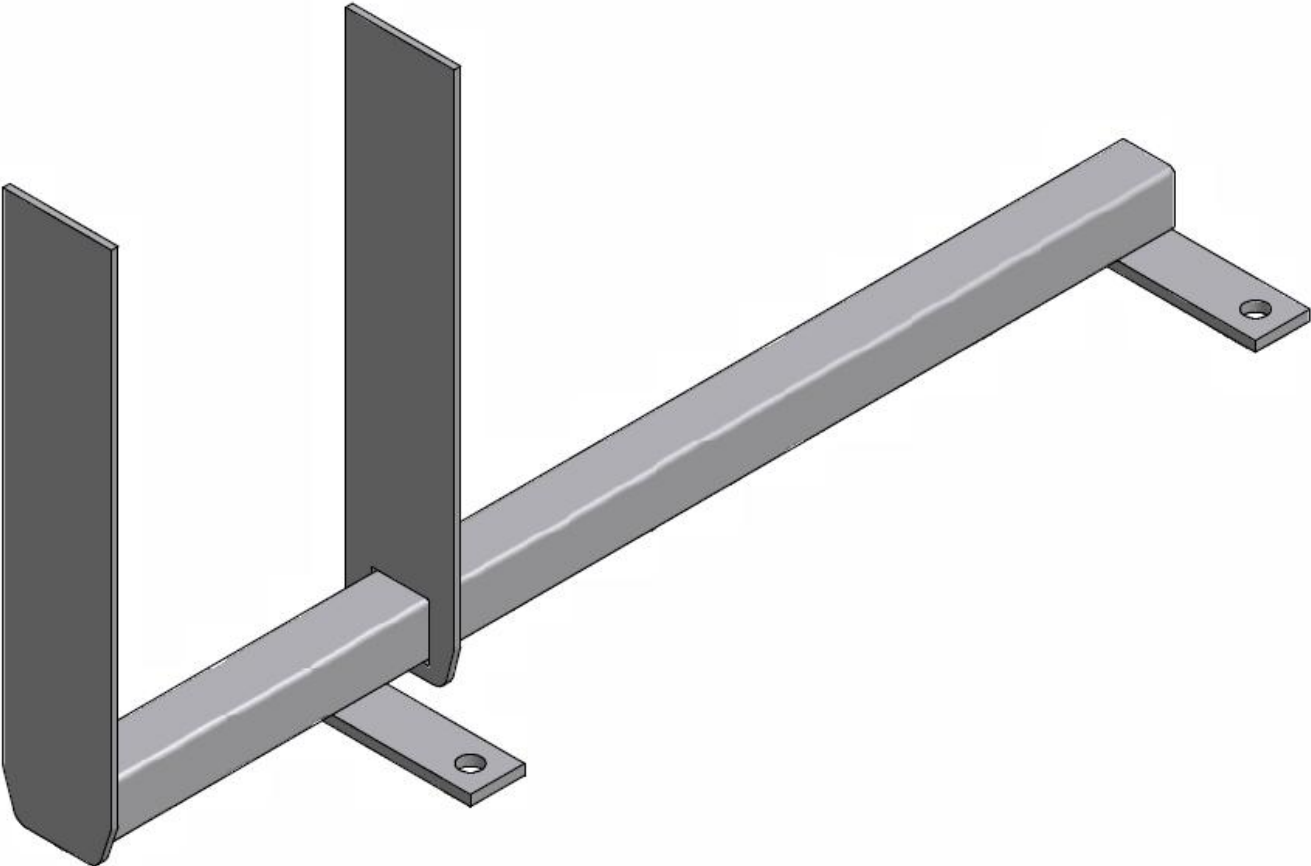
Item	Qty	Part #	Description
1	1	PP-00356	Cotter Pin .188 x 1.5
2	1	PP-00666	2" Oil Seal CR523696
3	2	PP-00667	Bearing L44643
4	1	PP-00668	Dust Cap D-1000
5	2	PP-00669	Cup 44610
6	1	PP-00670	1000lb Hub
7	1	PP-00671	1-14 UNF x .5 Castle Nut
8	5	PP-00672	Wheel Stud 9/16-18 x 1.75 UNF

# Offset Hitch Assembly



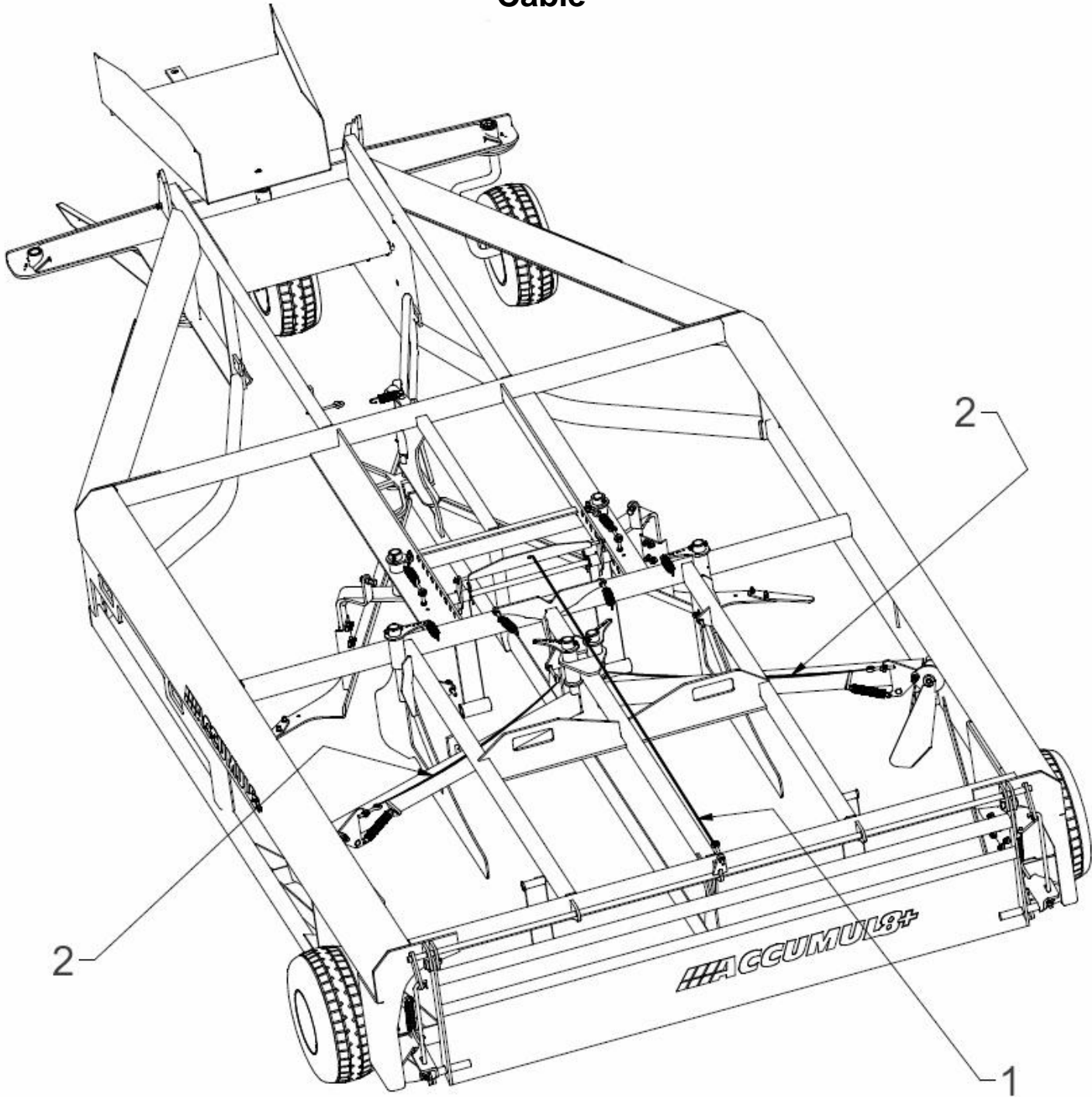
Item	Qty	Part #	Description
1	1	AC-A-19	Hitch Tube
2	1	AC-A-20	Hitch Offset
3	1	AC-A-21	Hitch Tube Brace
4	3	Obtain Locally	1/2 Lock Nut
5	3	Obtain Locally	1/2 x 2.75 Hex Bolt

# Bale Hitch Assembly





## Cable



Item	Qty	Part #	Description
1	1	AC-08000-54	8 Bale Accumul8 > Cable 54"
1	1	AC-08000-785	10 + 12 Bale Accumul8+2 > Cable 78.5"
2	2	AC-08000-395	10 Bale Accumul8+2 > Cable 39.5"

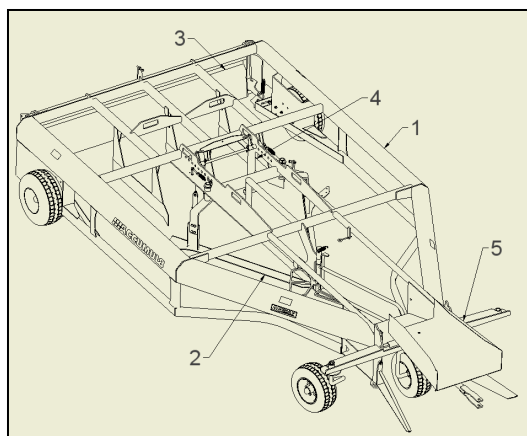
## SECTION 2 GENERAL INFORMATION

### Accumulator

The Tube-line Accumulator consists of these main components listed below. The Accumulator is a towed vehicle that is pulled behind a baler, or when the offset hitch is used, it can be towed, behind an ATV or truck. The Tube-line Accumulator is completely mechanical, and has no hydraulics. The Tube-line Accumulator directs bales into a plot of 8, 10, and 12 bales, depending which model and releases them out the back gate.

### Principle components

1. Frame
2. Front Guide Arm
3. Back Gate
4. Bale Trip Lever
5. Bale Shute



### Accumulator Terminology

Front – as seen in picture

Rear - as seen in picture

Rear gate

Bale gate

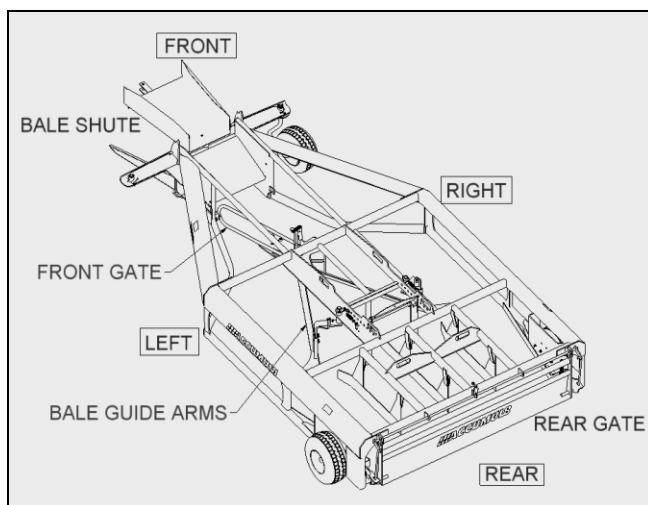
Bale shute

Front guide arms

Front gate

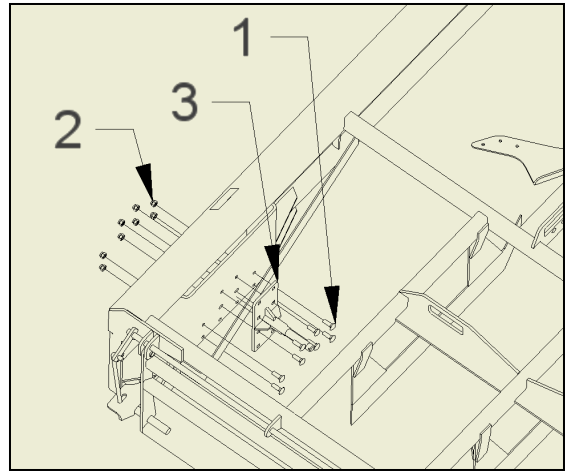
Left side – as seen in picture

Right side – as seen in picture



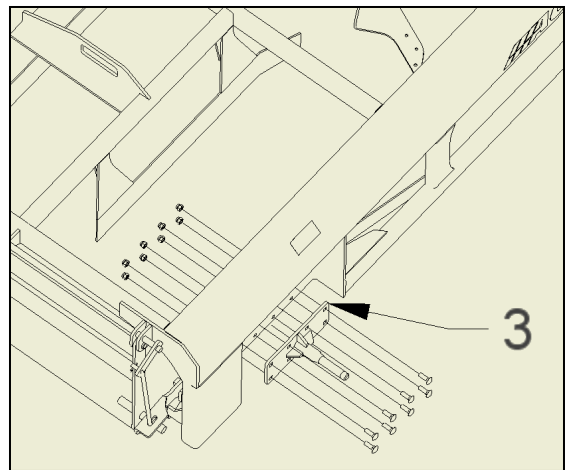
## Initial Setup

Assembly is required when receive the Accumu8. You will need to assemble the rear wheels, cable, and you will need to setup your accumulator, the be either towed behind a baler, or behind a truck or ATV.



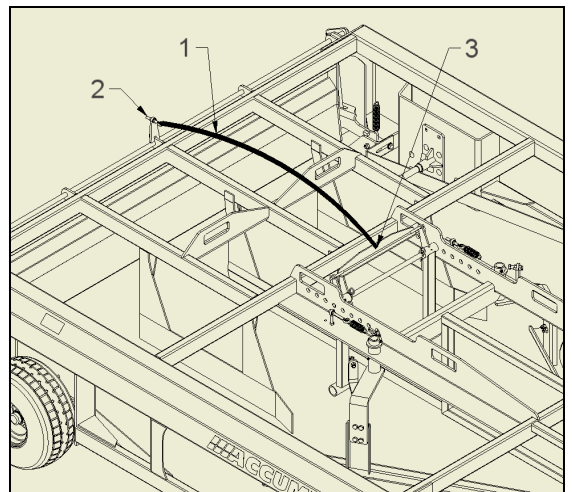
## Rear wheels

1. Loosen and take out  $\frac{1}{2}$ -13 carriage bolts(1), and  $\frac{1}{2}$ -13 lock nut(2), and remove wheel assembly
2. Replace wheel assembly(3), on opposite side, and retighten.



## Cable

1. Attach the cable(1), to the back gate(2), and to the trip arms(3).



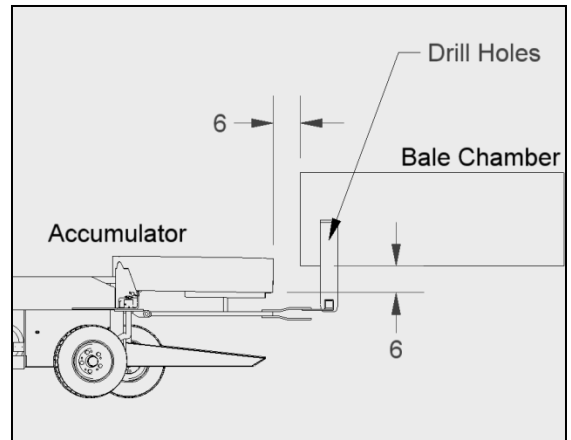
## Attaching the baler hitch assembly to the baler

**NOTE:** some balers may have a hitch at the back of the baler, however some may not, this procedure is for those that do not.

1. Take the baler hitch assembly, (which is also shown on pg 24) and drill four  $\frac{1}{2}$  holes into the baler hitch.

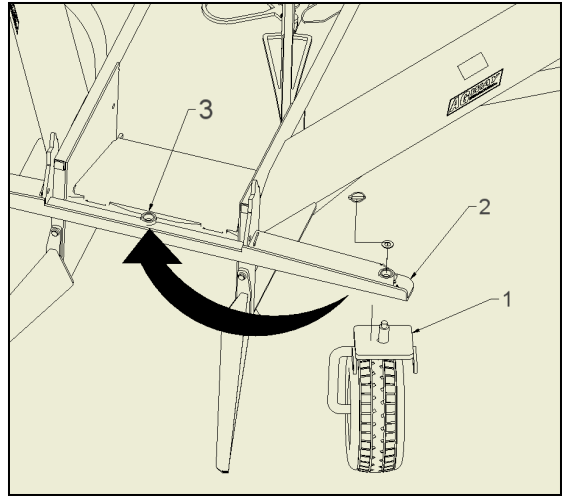
**NOTE:** make sure the baler shute is 6" back and 6" down from the baler's chamber. > > > > > > >

2. With the Accumulator set in the correct position drill the appropriate holes, secure with  $\frac{1}{2}$ -13 bolts, and  $\frac{1}{2}$ -13 lock nuts

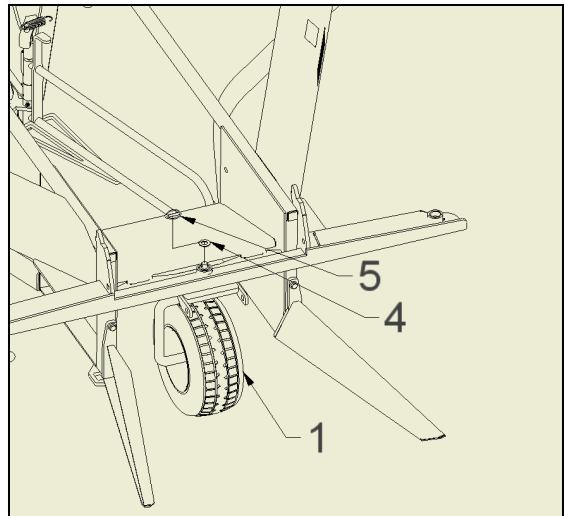


## Towing the Tube-line Accumulator behind a baler.

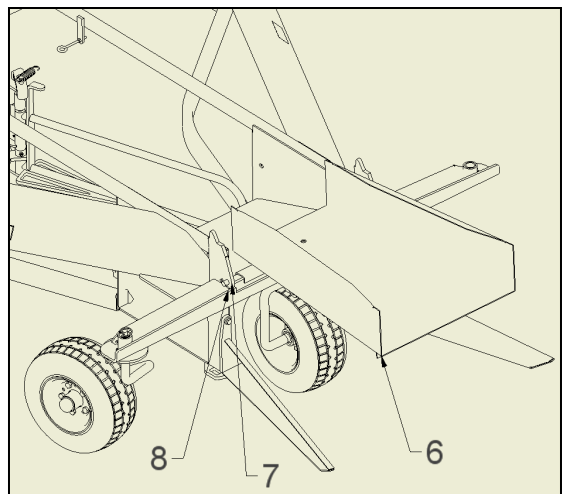
1. Remove center dolly(1), from outer dolly position(2), and insert into center dolly position(3).



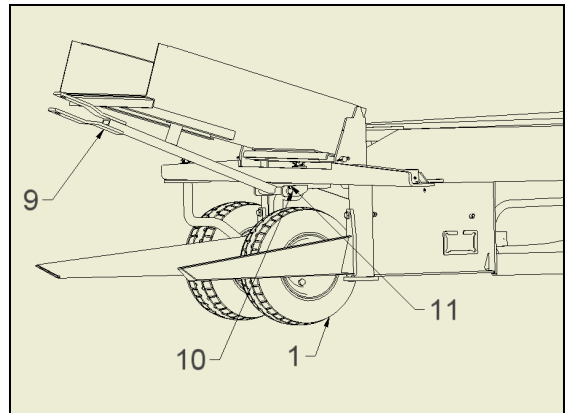
2. Secure center dolly(1), with  $\frac{3}{4}$ " washer(4), and lynch pin(5).



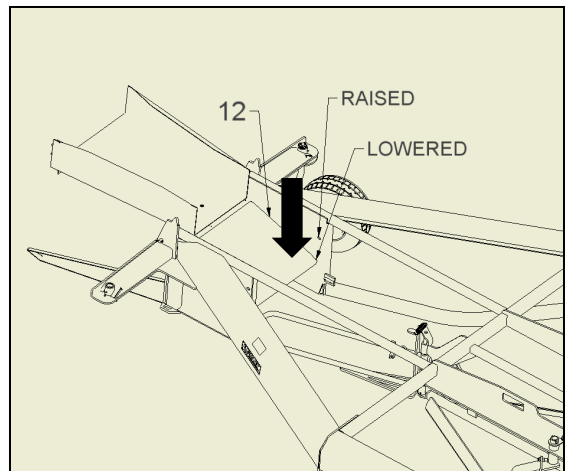
3. Attach bale chute(6), into Accumulator holes(7), and secure with  $\frac{3}{16}$ " cotter pins(8).



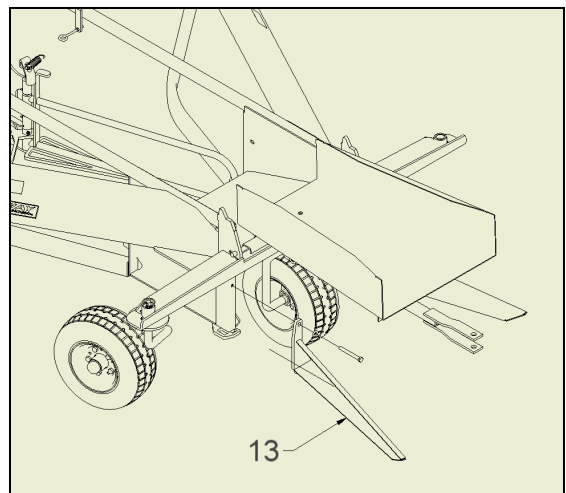
4. Attach hitch(9), to center dolly(1), with hitch pin(10), and secure with 3/16" cotter pin.



5. Set baler slide(12), in it's lowered position on the Accumulator.

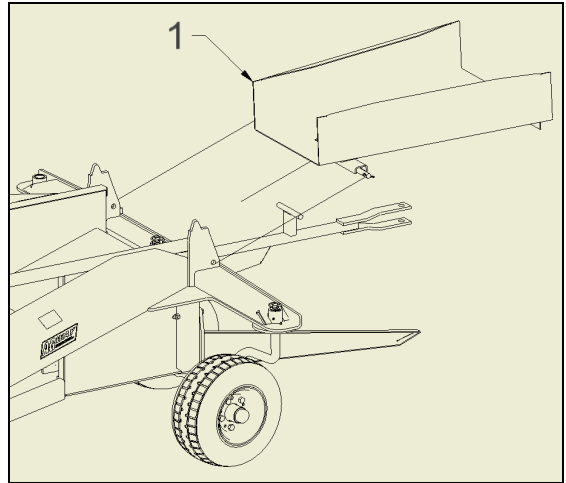


6. Remove flares(13).

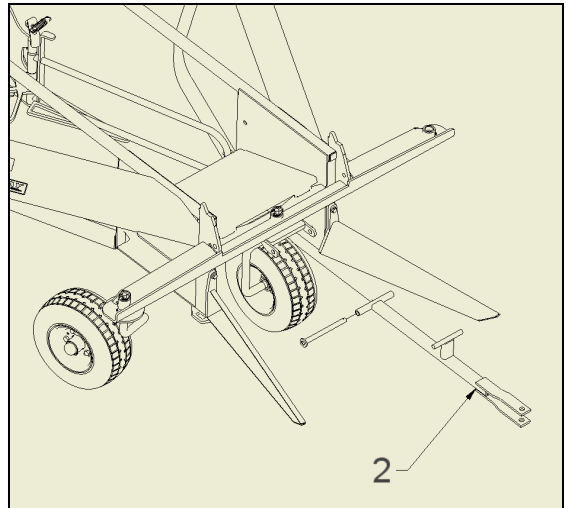


## Towing behind a truck or ATV

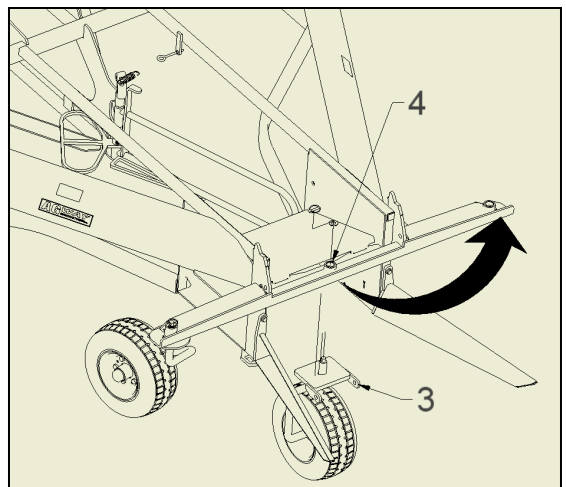
1. Remove shute(1).



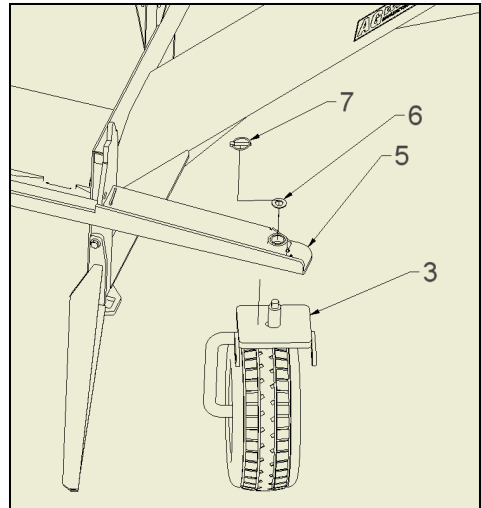
2. Remove hitch(2).



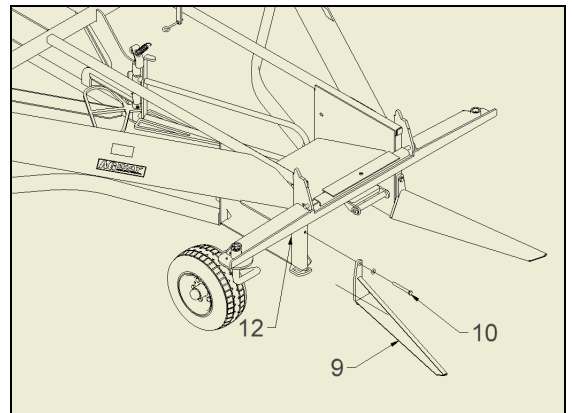
3. Remove center dolly(3),  
from center position.



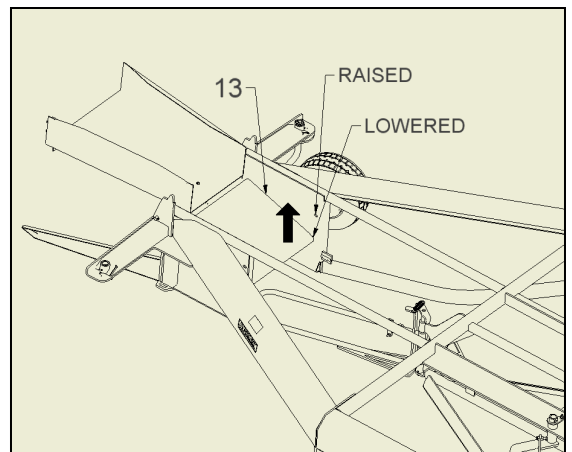
4. Insert center dolly(3), into outer dolly position(5), and contain with washer (6), and lynch pin(7).



5. Insert flare(9),into slot and secure with bolt(10), and lock nut (12).



6. Set bale slide (13), to it's raised position.





## Installing your 10 or 12 bale kit

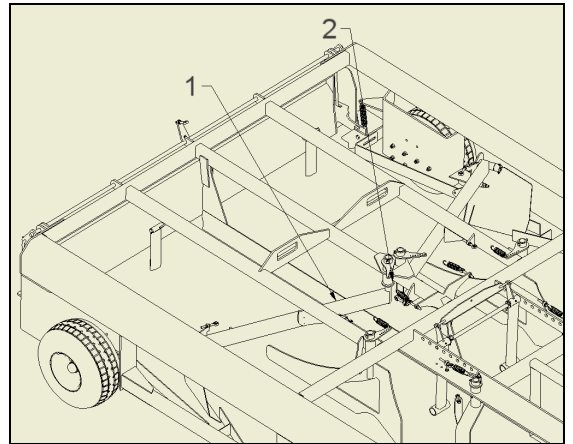
The Tube-line Accumulator+ has the ability to accumulate 10 or 12 bale packs depending on which kit you have installed.

### Installing your 10 bale kit

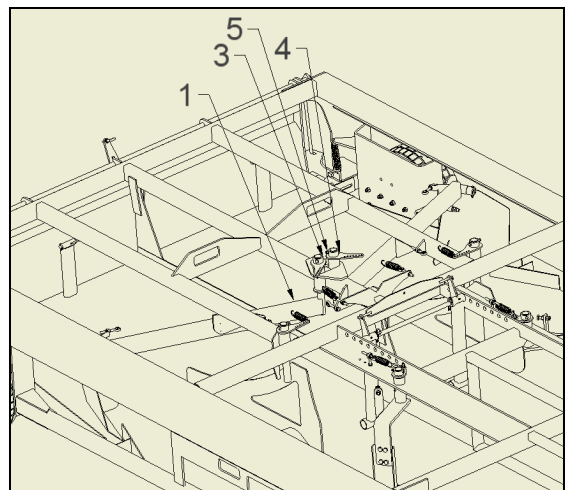
**NOTE:** installing a 10 bale kit will only work if you have an Accumul8+, it will not work if you have an Accumul8.

**NOTE:** setup assumes no kit has been installed.

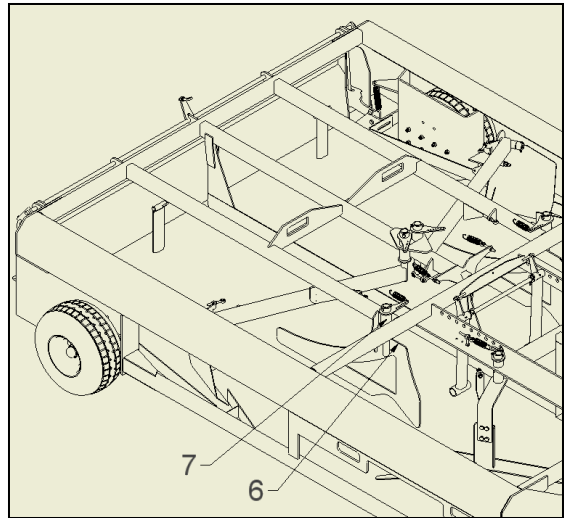
1. Insert the 10 bale swing arms(1) into the holes indicated(2).



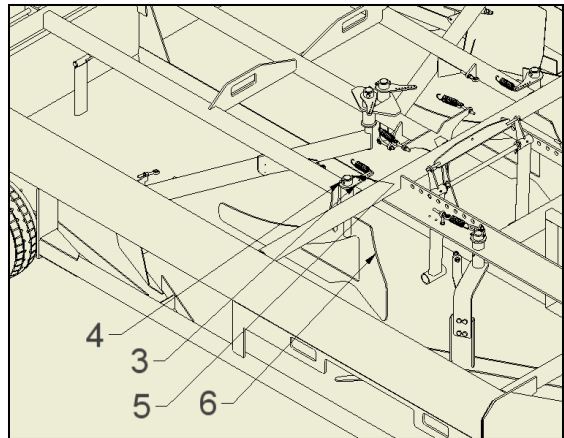
2. Retain the 10 bale swing arms(1), with spring handle(3) and secure with 3/8-16 bolt (4) and 3/8-16 lock nut(5).



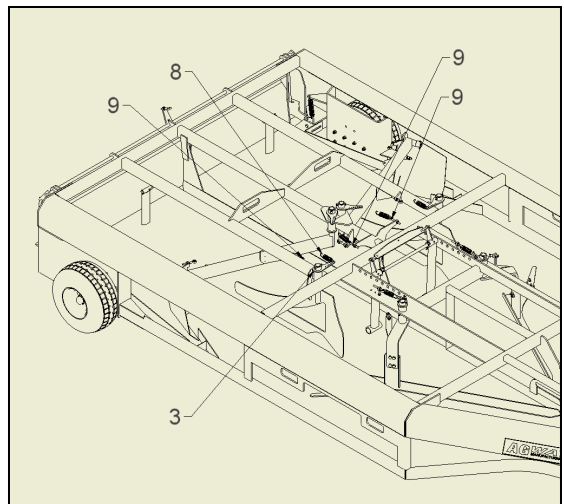
3. Insert side guide(6), in hole location(7).



4. Retain side guide(6), with spring handle(3), and secure with 3/8-16 bolt (4), and 3/8-16 nut(5).



5. Connect 7 1/2" spring(8), into eyebolt(9), and spring handle(3), at four locations.

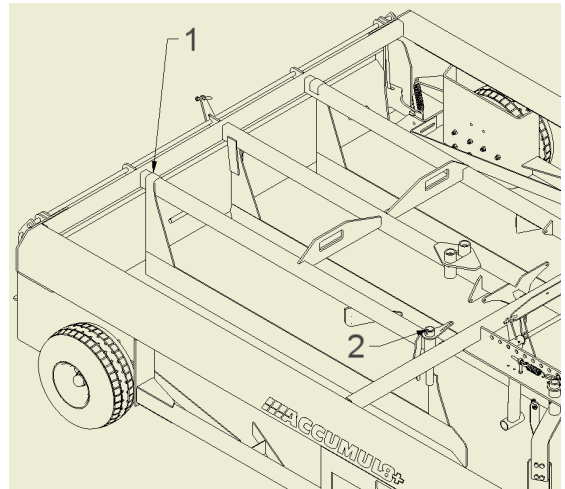


## Installing your 12 bale kit.

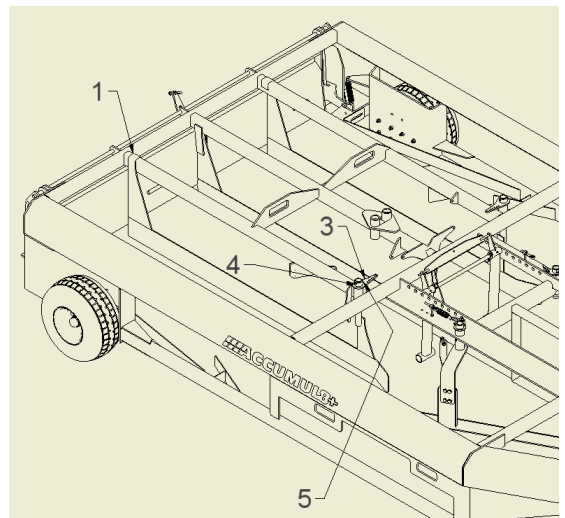
**NOTE:** installing a 12 bale kit will only work if you have a an Accumul8+, it will not work if you have an Accumul8.

**NOTE:** setup assumes no kit has been installed.

1. Insert bale guide(1), into location (2), on the Accumulator.



2. Retain bale guide(1), with spring handle(3) and secure with 3/8-16 bolt(4) and 3/8-16 lock nut(5).



## Before Transporting

1. Make sure the hitch is in the center location of the accumulator and not on the outside positions.
2. Make sure the outside dolly wheel is flipped right side up.

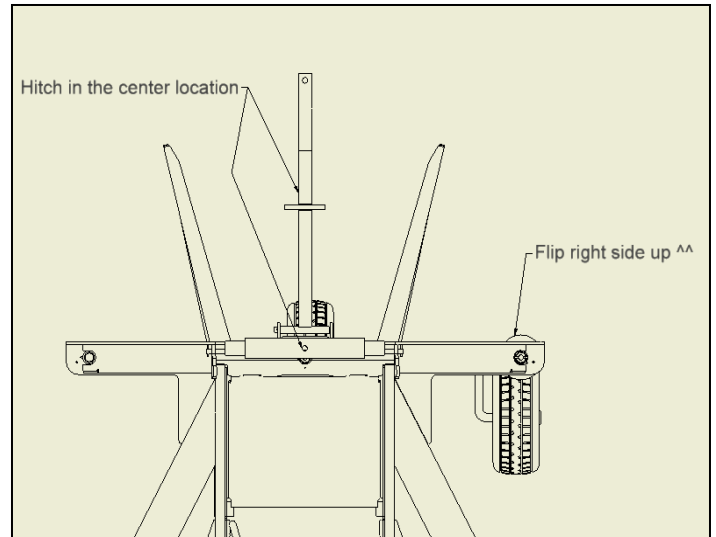


**WARNING**



**Failing to heed the above precautions will result in an unstable and possibly a dangerous situation.**

3. Do a complete walk around and visual check to be sure there are no loose parts or components.



## Transport Safety

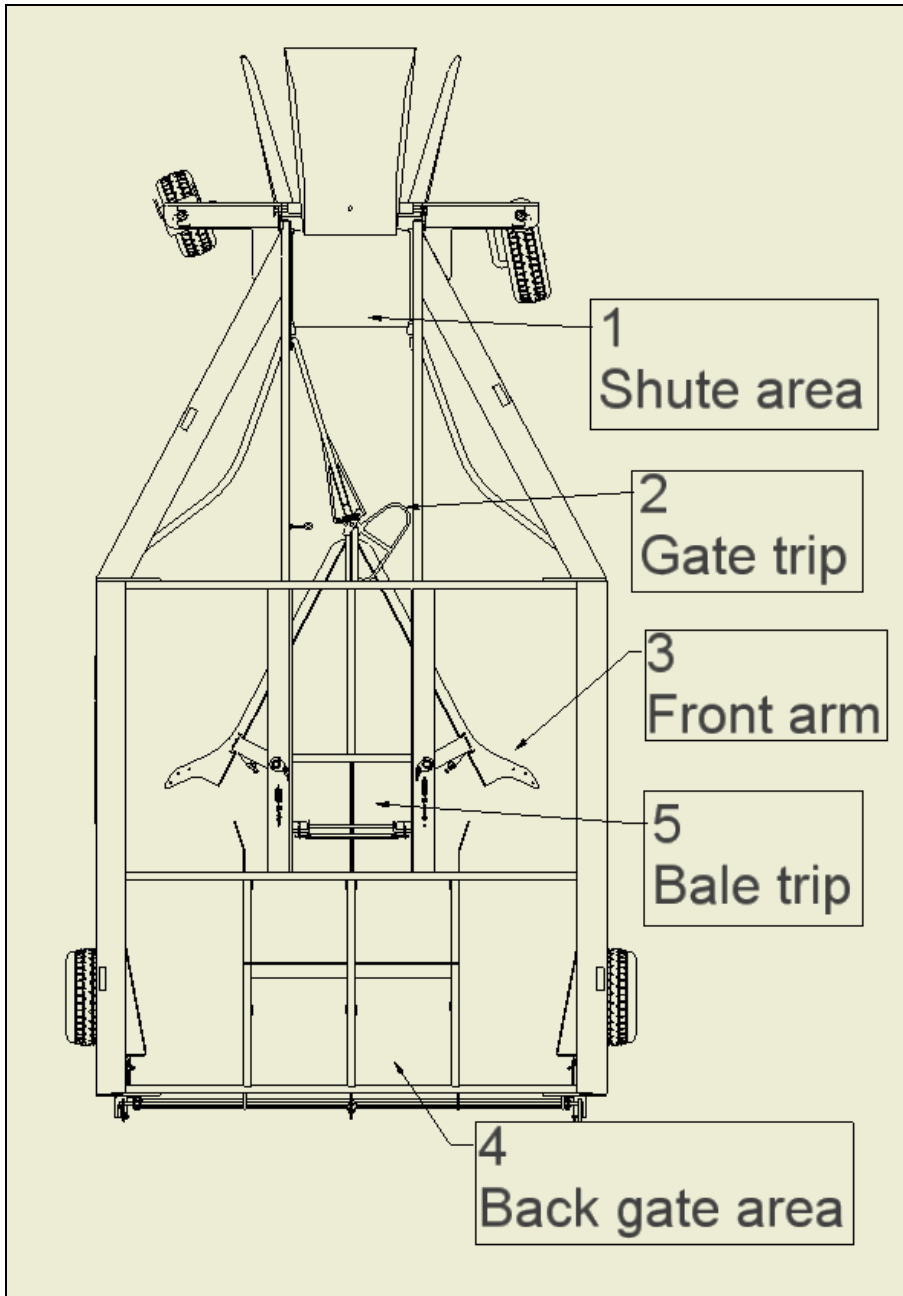
1. Transport the Tube-line Accumulator with an SMV(Slow Moving Vehicle) sign, displayed at the rear of the Accumulator and use your hazard lights if the law permits. Check local road laws before transporting.
2. When transporting the Accumulator on the road be aware of the width, and length of the Accumulator.
3. Do not transport the machine, at night, at dawn, or at dusk.
4. Do not exceed 32kph (20mph) during transport.

## Transporting Checks

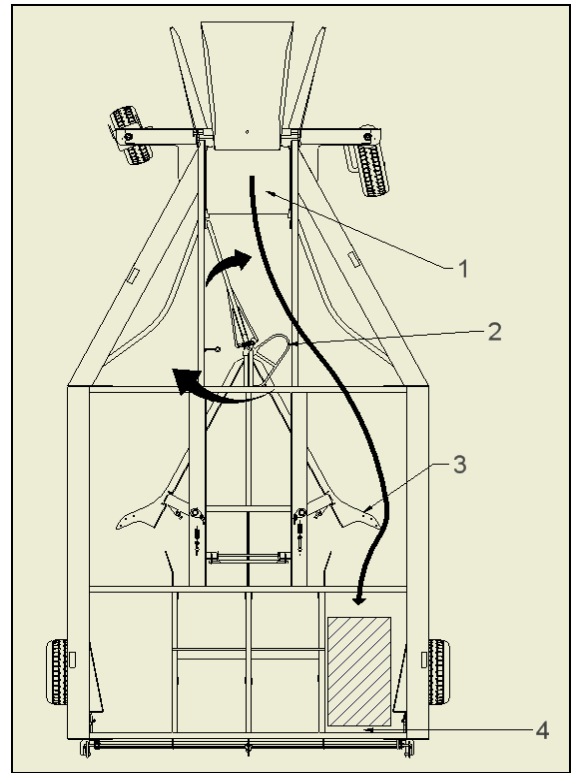
1. Check the hitch pins and safety chain periodically to make sure they are secure.

## SECTION 3 OPERATION

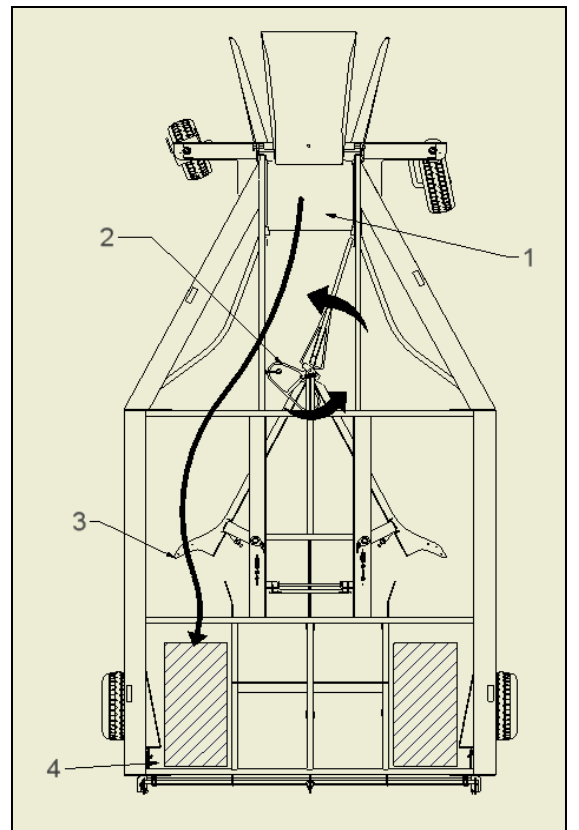
The Accumulator, is a mechanically run machine, and does not use any hydraulics. The Accumulator, has a series of gates, arms and trips, activated by the passing bales, entering into the Accumulator, which cause it to function. The following is a basic rundown on the function of the Tube-line Accumulator.



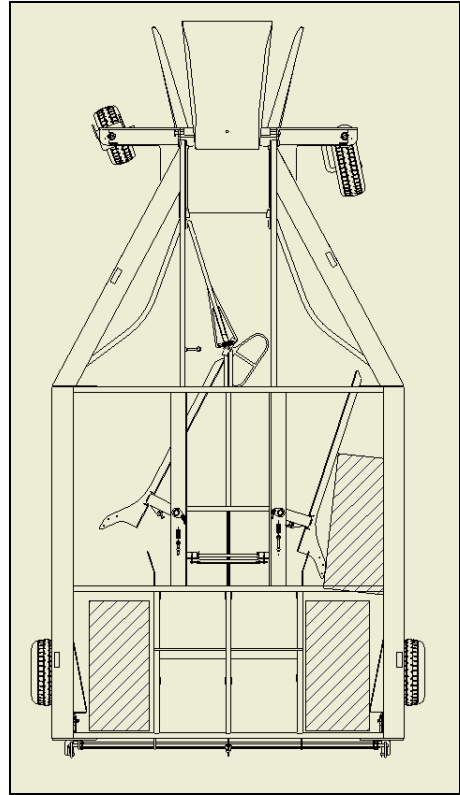
1. Bale 1# enters the Accumulator in the shute area(1), and proceeds past the front gate, and trips the gate trip in area(2), causing the front gate to close behind it. The bale then than proceeds, past the front arm area(3), and stops against the back gate in area(4)



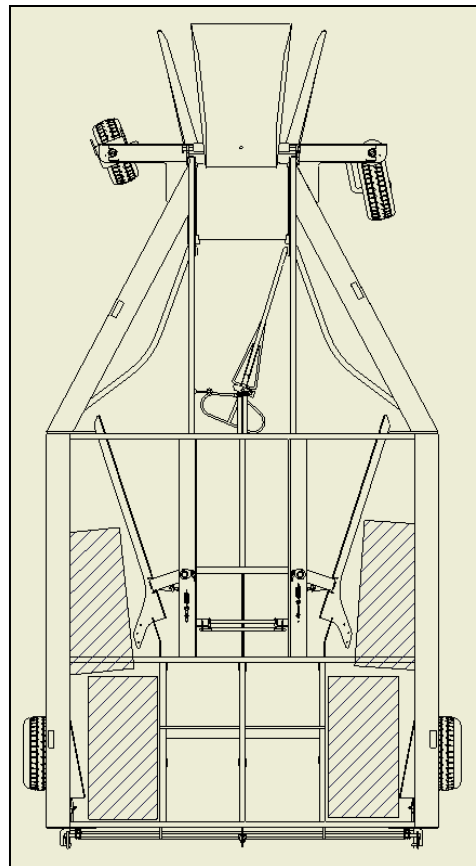
2. Bale 2# follows the same procedure as bale1# except on the opposite side.



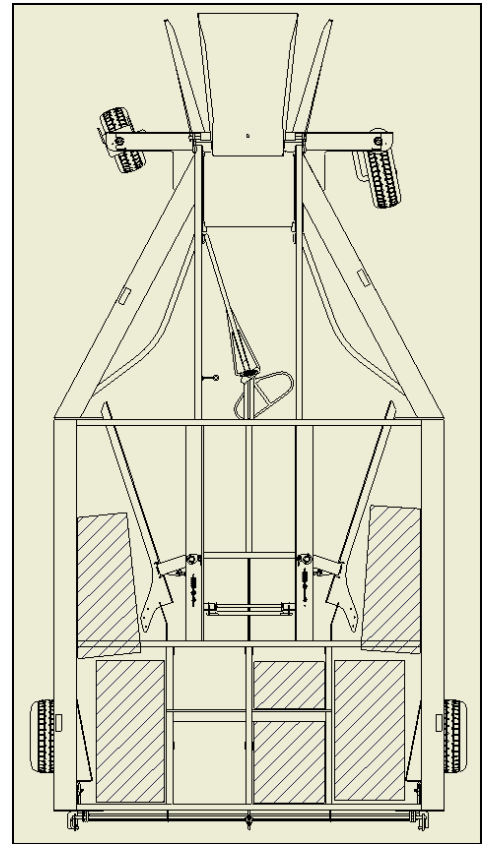
3. Bale 3# follows the same procedure as bale 1# but continues to trip the front arm in area(3).



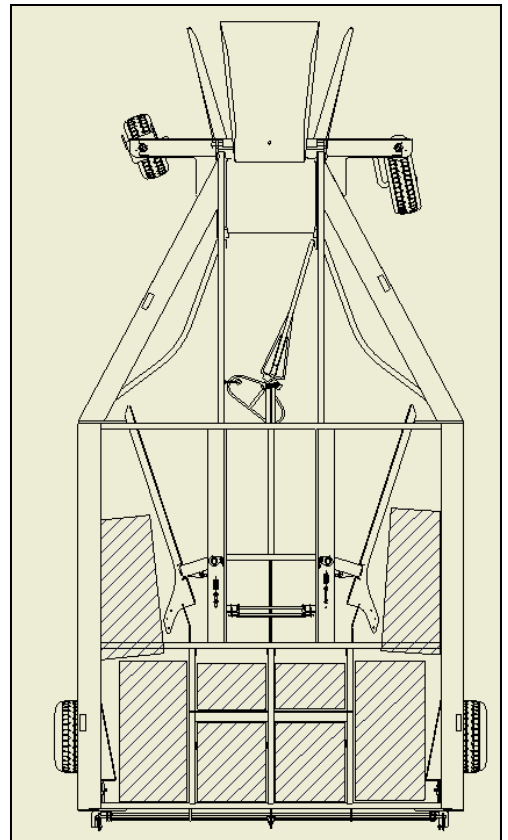
4. Bale4# follow the same the same procedure as bale 3# but on the opposite side.



5. Bale 5# follows the same procedure as bale 3# but follows through the middle of portion of the Accumul8 because of the tripped front arms caused by bales 3# and 4#.

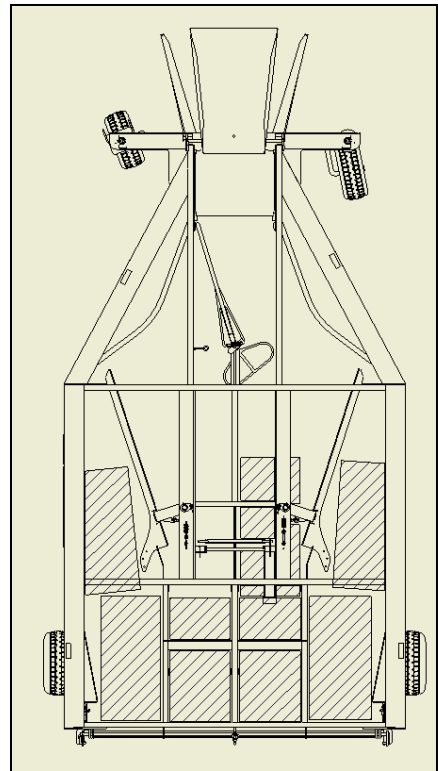


6. Bale 6# follows the same procedure as bale 5# except on the other side.

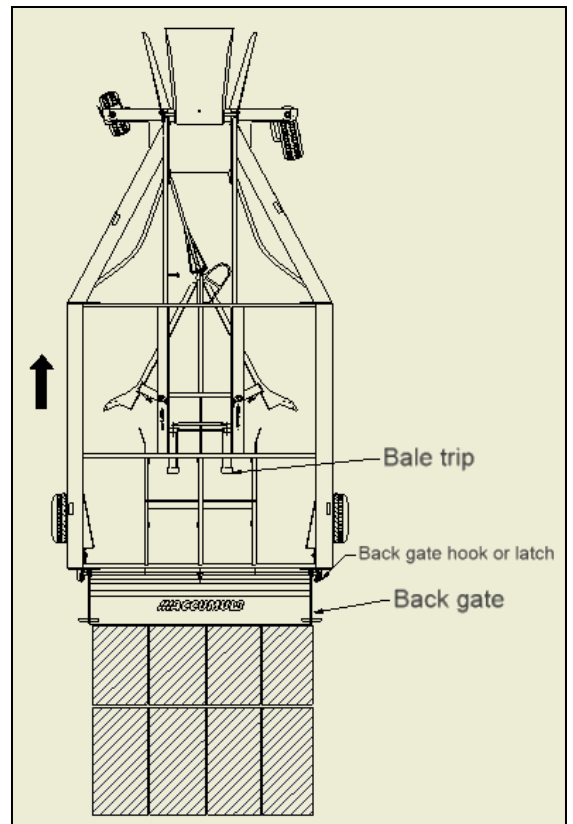




7. Bale 7# follows the same procedure as bale 5# .



8. The last bale8# follows the same procedure as bale 6# but trips the bale trip lever in area(5) which releases the back bales out the back gate.



## Hooking up your Accumulator to your baler

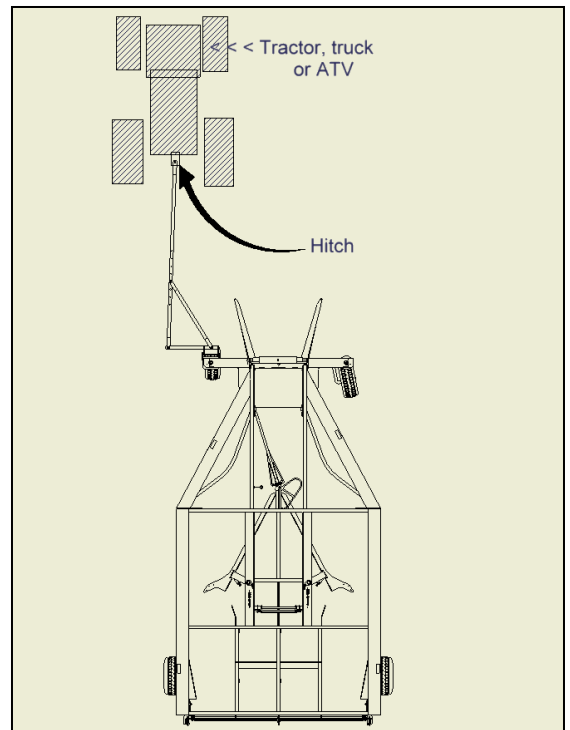
- Reverse the baler to the Tube-line Accumulator or pull the Accumulator to the back hitch of the baler and insert hitch pin through the baler and the Accumulator.

**NOTE:** some balers do not have a hook up in the back of the baler, if this is the case, attach the baler hitch assembly, shown on pg\*\*

## Hooking up your Accumulator to an ATV or truck

**NOTE:** to tow the Accumulator behind an ATV or truck you must have the Accumulator setup in the offset hitch mode see pg 1-15 & 2-3.

- Reverse your ATV, or truck, up to the Accumulator, and secure with a hitch pin.



## Using your offset hitch

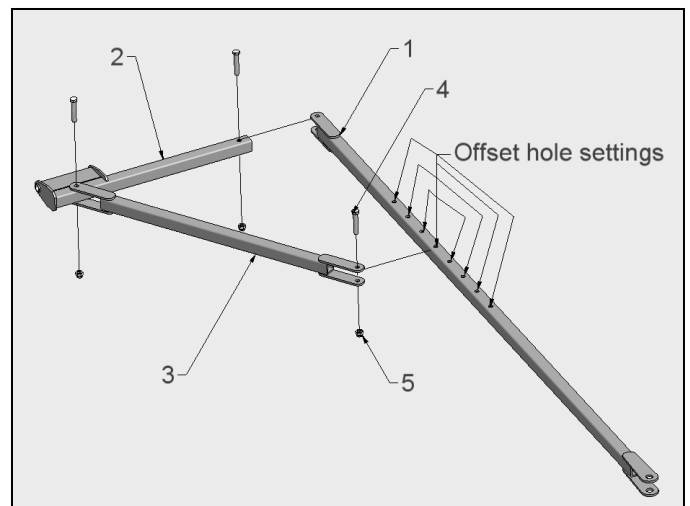
The offset hitch is used when the Accumulator is being pulled behind an ATV or truck. Below you will find an outline of its functions.

The offset hitch consists of 3 main components

1. Hitch tube assembly
2. Hitch offset assembly
3. Hitch tube brace

The offset hitch gives the operator the ability to set the distance, or offset the Accumulator to the right, or to the left.

- Loosen  $\frac{1}{2}$ -13 bolt(4), and nut(5), and set hitch tube brace(3), in desired hole location on the hitch tube(1), and reinsert bolt(4), and nut(5).



## Adjusting the Tube-line Accumulator for best performance

The Tube-line Accumulator has several adjustments, that can be adjusted according to your bale size, texture and density, as well as the terrain on which you will be traveling on.

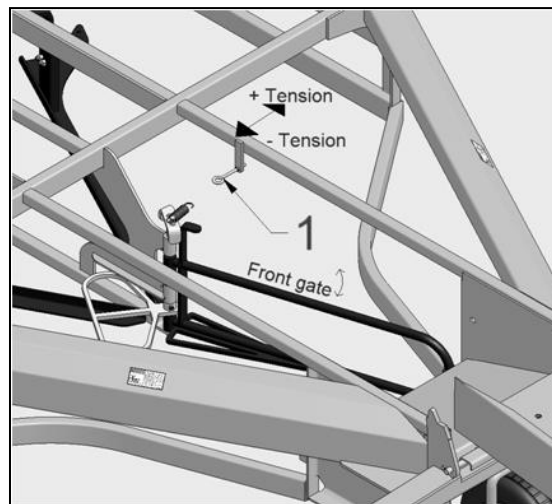
### 8 and 12 bale adjustments

1. Front gate
2. Bale guide arms
3. Bale trip arm
4. Back gate hooks
5. Bale exiting tension

1. Front gate

The front gate divides the bales after they come into the chute, adjust the tension eyebolt(1), to set the front gate tension, or it's responsiveness.

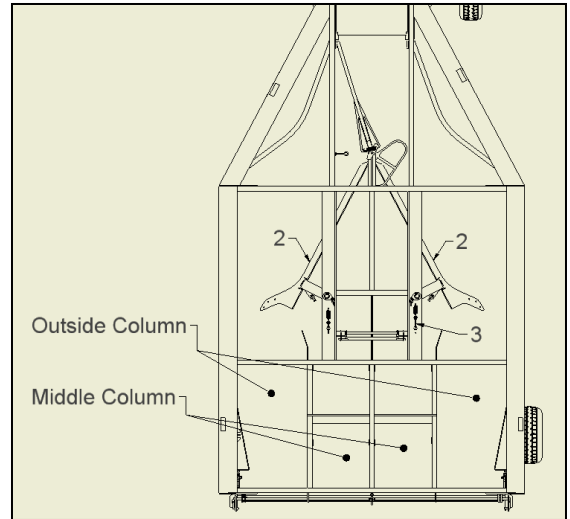
**NOTE:** adjusting the tension to high will cause the bales to jam, adjusting the tension too loose then the gate will not swing over before the next bale



## 2. Bale guide arms

The bale guide arms(2), allow the Tube-line Accumulator to divide the bales in between the center columns, and the outside columns. Adjust the tension eyebolts(3), for more or less tension.

**NOTE:** too much tension and the bales will get hung up, not enough and the arms will not travel back in the closed position

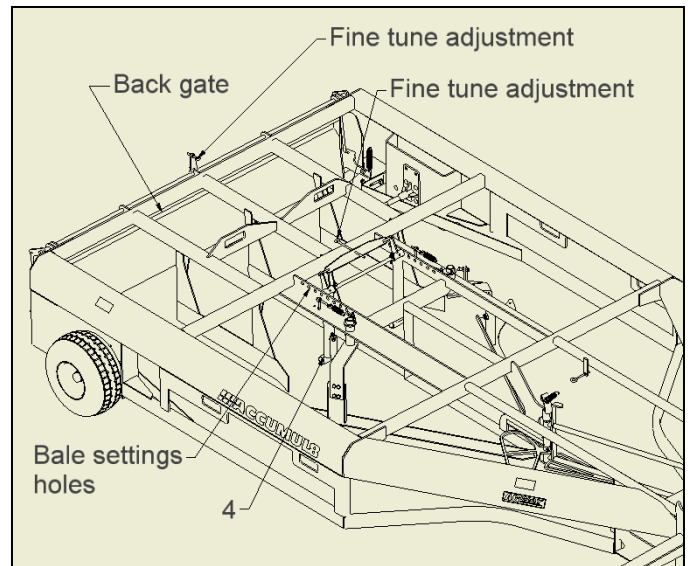


## 3. Bale trip arms

The bale trip arms have two settings, the holes on the side and the threaded rod on top. The holes on the side are used for different bale lengths, and the threaded rod is used for fine tune adjustment.

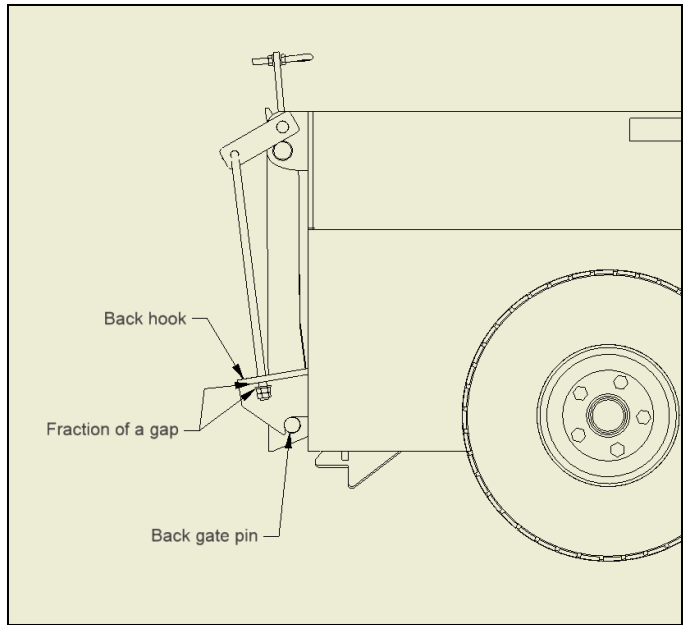
**NOTE:** setting the trip arms too far ahead on the Accumul8 and the bale will trip too soon, and you will not get a tight pack, too far back and it won't trip the back gate at all.

**NOTE:** use the threaded rod the fine tune adjust when the back gate opens, not enough tension and the back gate won't open, too much and it will trip too soon, and you won't have a tight pack.

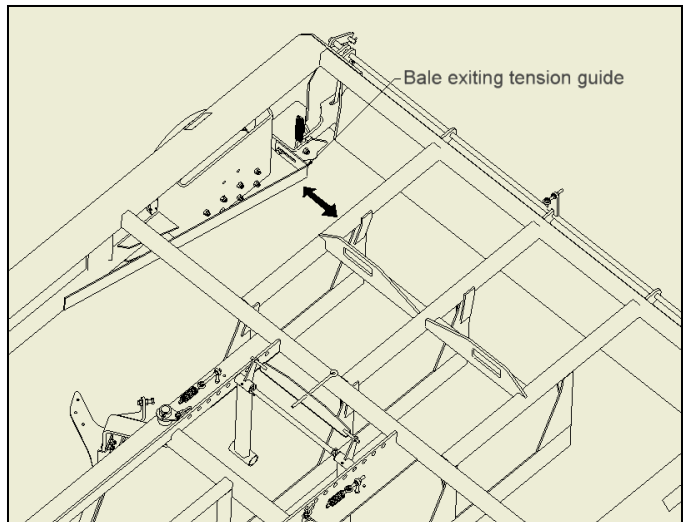


4. The back gate hooks, release the back gate, to allow the bales to exit the Tube-line Accumulator.

**NOTE:** the two jam nut should be set so that the hooks are resting on the gate a  $1/32''$  .



5. The bale exiting tension can be set to encourage a tighter pack.



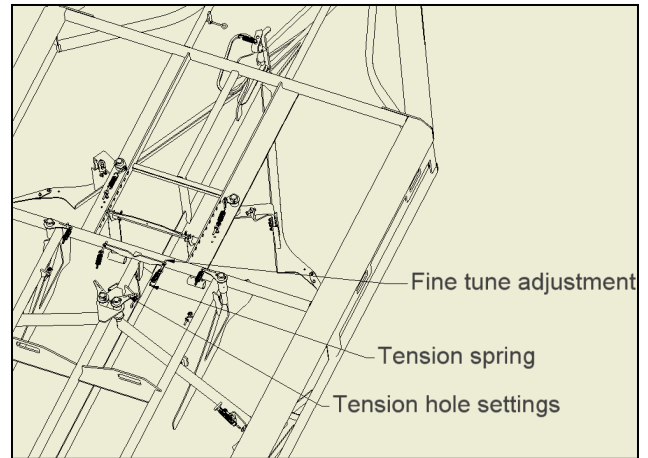
## 10 bale adjustments

**NOTE:** all settings are the same on the 10 bale Accumulator as the 8 & 12 bale accumulators.

1. 10 bale swing arm
  2. Spring latch
- 1) 10 bale swing arm

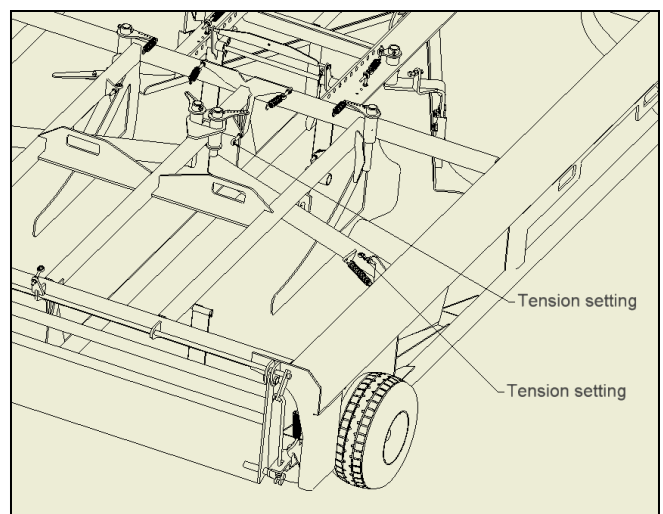
The swing arm, rotates the first two initial bales, a quarter turn, before letting them rest against the back gate. Place the spring into one of the holes to set the tension of the arms.

**NOTE:** with too much tension the incoming bale will not be able to push the arm back, not enough and the arm will not travel back to its home position.



2. Spring latch
- The spring latch setting, sets when the bale will be released from the swing arms.

**NOTE:** too much tension and the bale will not have fully rotated before it is released, not enough and the bale might not be released at all.



# SECTION 4

## LUBRICATION

### Introduction

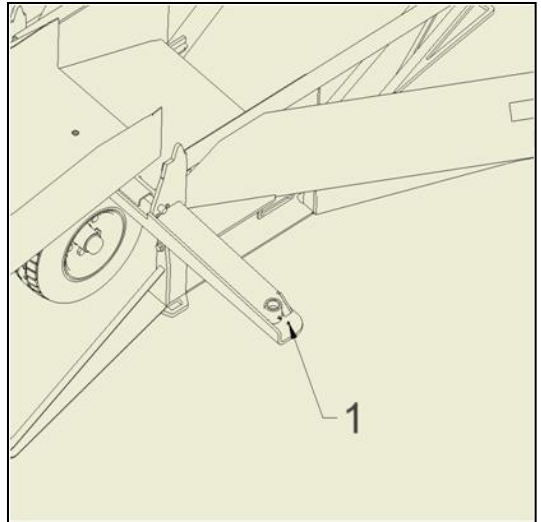
This section gives full details of the procedures necessary to maintain the Tube-line Accumulator at peak efficiency. Complete all checks and services in this section at the hour interval shown.

*Important:* Failure to complete the required maintenance at the intervals shown can cause unnecessary downtime.

The recommended lubrication intervals are for average condition. Perform lubrication more often when operating under adverse conditions.

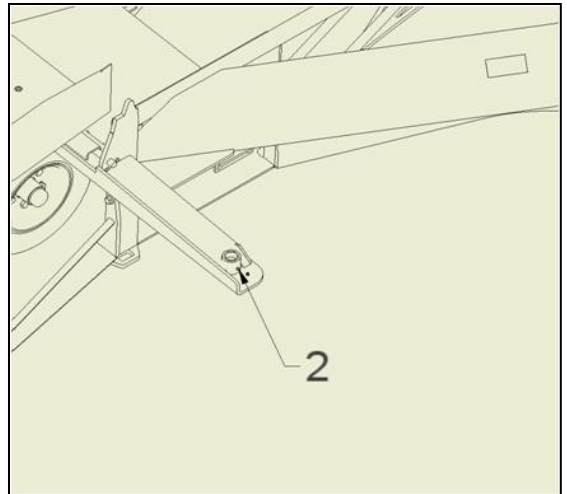
Caster greaser (1)

Apply 4 strokes at point (1) daily.



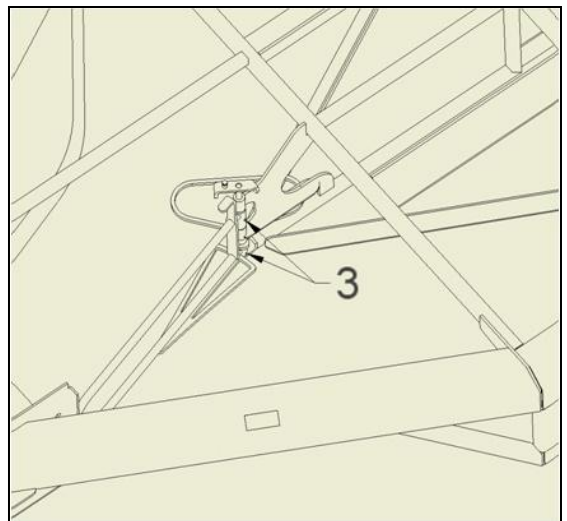
Caster spindle (2)

Apply 4 strokes of grease at point (2) daily.



Gate pivot (3)

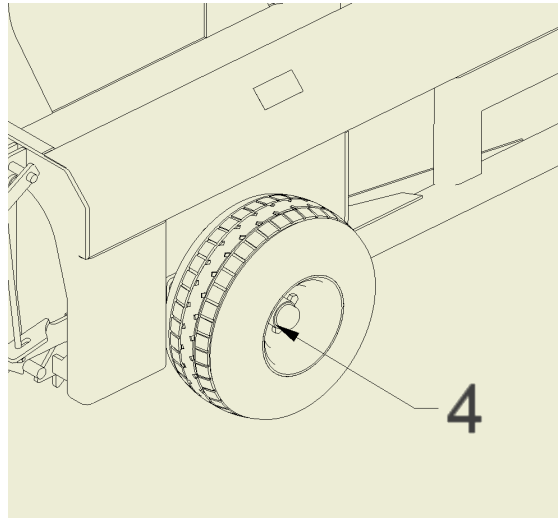
Apply 4 strokes of grease at point (3) daily.





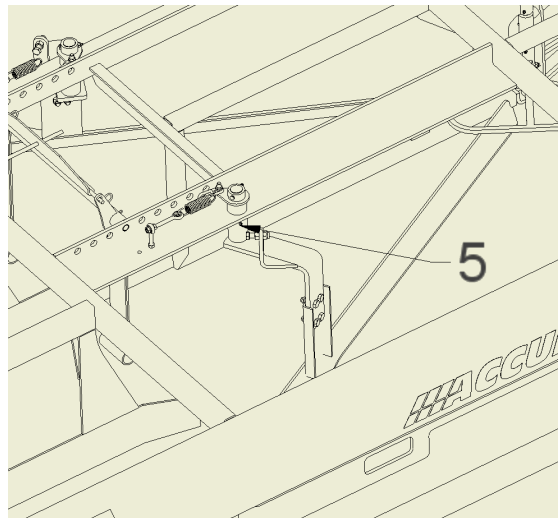
### Hub (4)

Apply 1 stroke of grease at point (4) every 1000hrs.



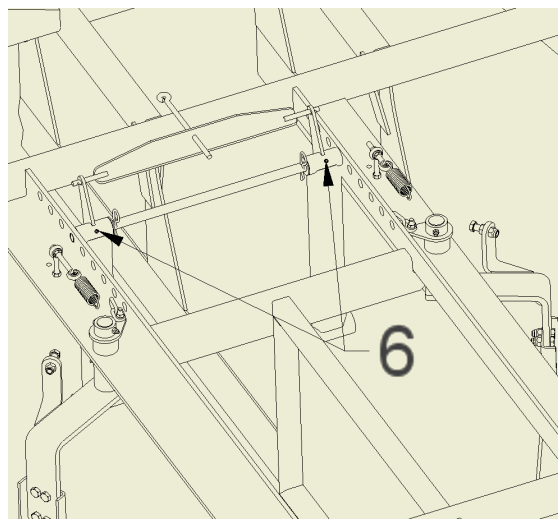
### Front arm pivot (5)

Apply 4 strokes of grease at point (5) daily.



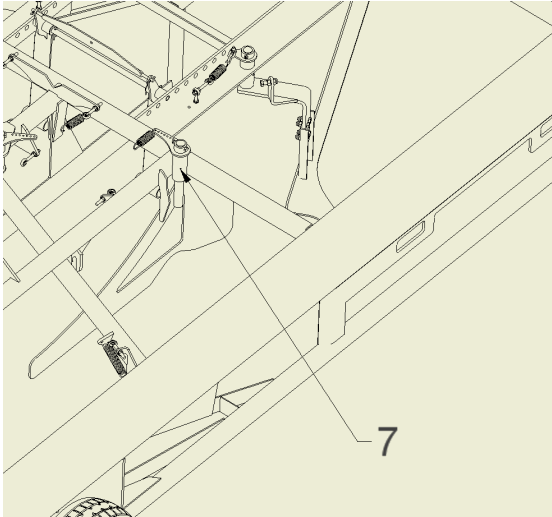
### Bale trip (6)

Apply 4 strokes of grease at point (6) daily.



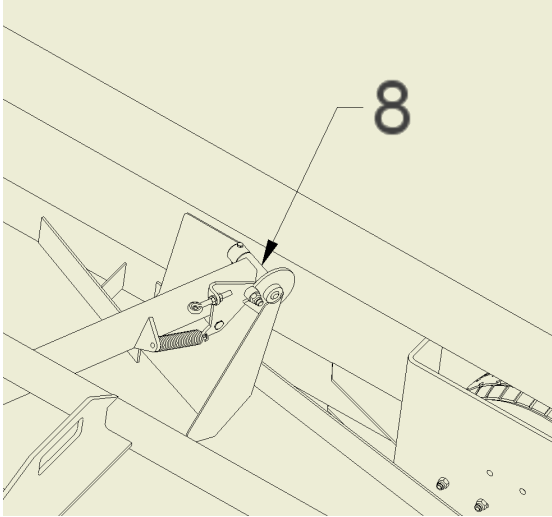
**Bale guide (7)**

Apply 4 strokes of grease to point (7) daily.



**Bale latch (8)**

Apply 4 strokes of grease to point (8) daily.



## **SECTION 5**

### **MAINTENANCE**

Complete all checks and services in this section at the hour interval shown.

**IMPORTANT** : Failure to complete the required maintenance at intervals shown can cause unnecessary downtime. The recommended intervals are for average conditions. Perform maintenance more often when operating the Tube-line Accumulator under adverse conditions.

## **Daily Maintenance**

Careful inspection, and service of the Accumulator, prior to operation each day, will prevent needless breakdowns, and delays in the field.

Make the following checks and adjustments.

1. Be alert for loose hardware and tighten or replace as required.
2. Lubricate the Accumulator according the instructions in the “Lubrication” section of this manual. Under adverse conditions, shorten the lubrication intervals.

## **Preseason Service**

Prior to beginning the harvest after offseason storage, take the following steps to be certain the Tube-line Accumulator is in good condition.

1. Lubricate the Accumulator according to the “Lubrication” section of this manual.
2. Tighten or replace any damaged or missing fasteners.

## **End of Season Service**

Prior to storing the Accumulator, during the off season, follow these steps to ensure easier preparation, for the next season, and longer life.

1. Pack all grease points with grease(see the “Lubrication” section for grease points location).
2. Remove all crop material from the Tube-line Accumulator.

## SECTION 6

# TROUBLE SHOOTING

**Problem:** Finished pack periodically has 1 bale missing when ejected.

Cause #1: center gate did not switch sides and two bales entered on some side before switching over to the other side causing the machine to lose it's timing.

Cause #2: bales are too long, not allowing trip lever to clear bale on second last row.

**Suggested remedy #1:** check center pivot pin, to ensure it is free.

**NOTE:** very important to keep gate pivot greased well.

**Suggested remedy #2:** Adjust trip lever pin towards front of machine, and or, readjust cable and rear hook thread rods.

**Problem:** Bale does not pass though side swing arms, causing the machine to jam up.

Cause #1: spring tension on swing arms too tight.

Cause #2: stop bolt on swing arm not set correctly.

**Suggested remedy #1:** Loosen spring tension or remove side swing arm and clean up pivot pin.

**Suggested remedy #2:** Adjust stop bolt so bale has enough clearance to pass through.

**Problem:** Pack does not eject when last bale enters.

Cause #1: thread rods on trip levers not adjusted properly or thread rods on rear gate hooks not adjusted properly.

**Suggested remedy #1:** Adjust thread rods.

**Problem:** Finished pack is not neat, last bale is not moved in far enough to line up with other bales in the same row.

Cause #1: trip lever pin not positioned properly for length of bale.

**Suggested remedy #1:** move trip lever pin one hole to the rear of the machine adjust thread rods and repeat if necessary.



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