



**BALE
PROCESSOR**

2957

OPERATORS MANUAL



WARNING

**READ AND UNDERSTAND THIS MANUAL
BEFORE OPERATING THIS EQUIPMENT.
UNSAFE OPERATION OR MAINTENANCE
OF THIS EQUIPMENT CAN RESULT IN
SERIOUS INJURY OR DEATH.**

Revision #01

Starting Serial #R2760E0174

HSMFG0420

Part #87629

H&S MANUFACTURING CO., INC.

**MARSHFIELD, WISCONSIN 54449
(715) 387-3414 FAX (715) 384-5463**

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H&S WARRANTY

H&S Manufacturing Co., Inc. ("H&S") warrants this product to be free from defect in material and workmanship. Except as noted below, this warranty term is twelve (12) months on labor, and twenty-four (24) months on parts from the date of delivery of the product to the original purchaser by an authorized H&S dealer. Under this warranty, H&S will repair or replace, at its option, any covered part which is found to be defective in material or workmanship during the applicable warranty term. In no case will the covered repair cost of a part or parts exceed the replacement cost of that part. Warranty service must be performed by H&S or a dealer authorized by H&S to sell and/or service the product involved, which will use only new or remanufactured parts or components furnished by H&S. This warranty includes approved parts and labor to fix the product but does not include, and the purchaser is responsible for, any service call and/or transportation of the product to and from the dealer's place of business, for any premium charged for overtime labor requested by the purchaser, and for any service work not directly related to any defect covered under this warranty. This warranty includes only those components of the product manufactured by H&S. Warranty for any component not manufactured by H&S including, but not limited to, engines, batteries, tires, rims, hydraulic motors, pumps, etc. are covered by the warranty, if any, provided separately by their respective manufacturers.

This warranty in all its parts, is extended solely to the original purchaser of the product, is terminated upon any subsequent transfer or sale from or by the original purchaser and extends no third party benefits or rights whatsoever.

The warranty term for any product used in any commercial, custom, for hire or rental application, is limited to six (6) months from the date of delivery of the product to the original purchaser or the first day of service, whichever comes first, by an authorized H&S dealer.

For commercial, custom for hire, or rental application, warranty is limited to 6 months from the date of delivery to the original purchaser, or the first day in service, whichever is earlier.

This warranty does not include: (1) Any product that has been altered or modified in ways not approved by H&S; (2) Depreciation or damage caused by normal wear, use for which the product was not designed, misuse, improper or insufficient maintenance, improper operation, accident or failure to follow the product Operator's Manual recommendations and product decal recommendations; (3) Normal maintenance parts and service; (4) Repairs made with parts other than those available from H&S or performed by anyone other than H&S or a dealer authorized by H&S to sell and/or service the product involved.

To secure warranty service the purchaser must report the product defect to a dealer authorized by H&S to sell and/or service the product involved within the applicable warranty term together with evidence of the warranty start date and make the product available to that dealer within a reasonable period of time.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS WARRANTY. H&S and the companies affiliated with it makes no warranties, representations, or promises, express or implied, as to the performance or freedom from defect of its products other than those set forth above and **NO IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS OR FITNESS FOR A PARTICULAR PURPOSE IS MADE. IN NO EVENT WILL THE DEALER, H&S OR ANY COMPANY AFFILIATED WITH H&S BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.** The **ONLY REMEDY** the purchaser has in connection with the breach of performance of any warranty on H&S products are those set forth above.

The selling dealer has no authority to make any representation or promise on behalf of H&S, or to modify the terms or limitations of this warranty in any way.

11/14/18

WARRANTY REGISTRATION

- ❖ Date of Purchase: _____
- ❖ Purchaser Name: _____
- ❖ Street Address: _____
- ❖ City: _____
- ❖ State: _____ Zip: _____
- ❖ Phone Number: _____
- E-mail Address: _____
- ❖ Product: _____
- ❖ Model Number: _____
- ❖ Serial Number: _____
- ❖ You have received the Operators Manual for this product. Yes _____ No _____

Interested in receiving the H&S Newsletter? Yes _____ No _____

- ❖ Dealer Name: _____
- ❖ Street Address: _____
- ❖ City: _____
- ❖ State: _____ Zip: _____
- ❖ Signature: _____

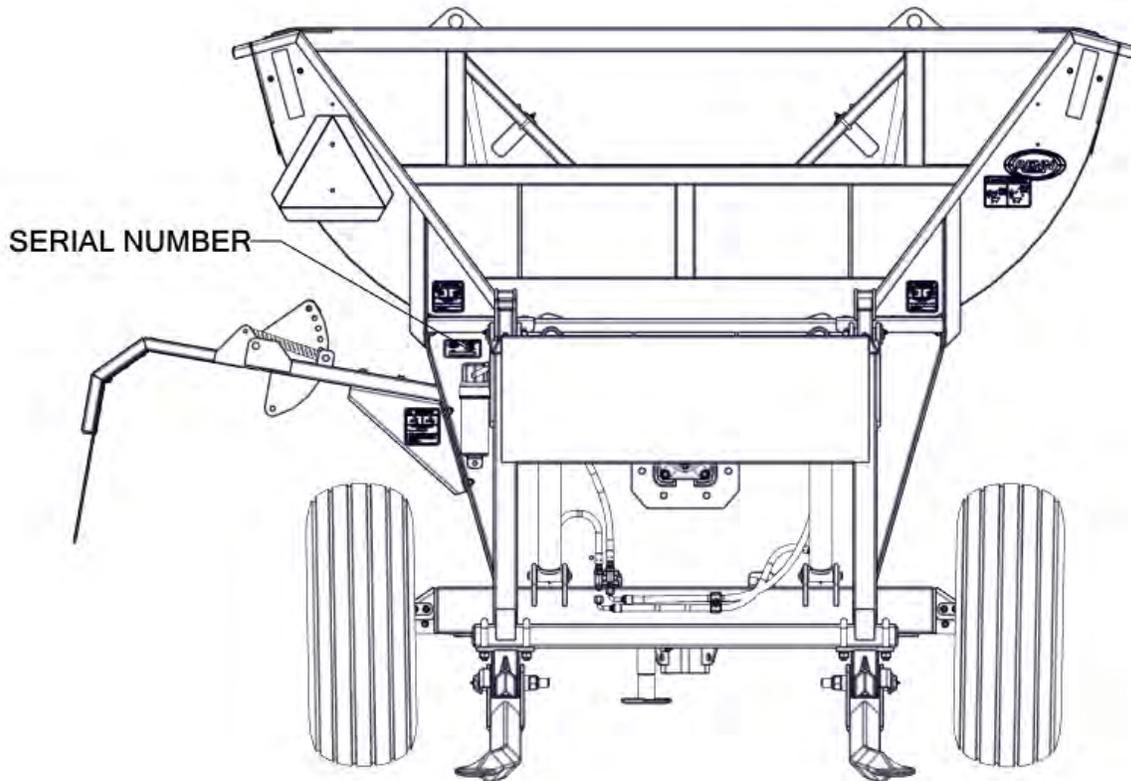
- ❖ *All fields must be filled out to insure prompt notification of product and/or warranty updates.*

Please mail the completed WARRANTY REGISTRATION FORM to:

H&S Manufacturing Co., Inc.
2608 S. Hume Ave.
Marshfield, WI 54449

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SERIAL NUMBER LOCATION



Always give your dealer the serial number of your H&S Bale Processor when ordering parts or requesting service or other information.

The serial number plate is located where indicated. **Please record the number in the space below for easy reference.**

MODEL NUMBER _____

SERIAL NUMBER _____

The serial number plate is located on the back end of the Bale Processor, just above the manual canister, on the left side of the processor (viewed from the back).

IMPORTANT: For fast, correct service when ordering parts, supply your local H&S dealer with:

- 1) The model number
- 2) The serial number

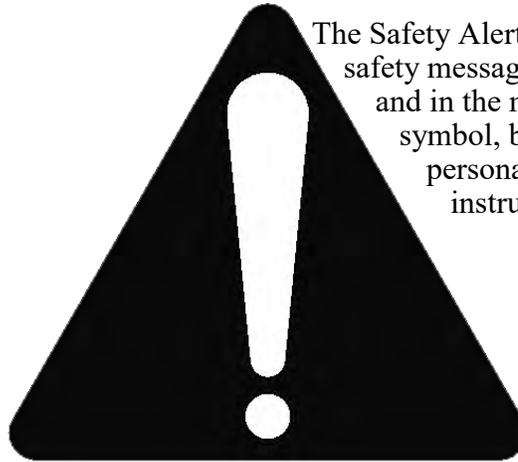
This information is essential when ordering parts for your H&S Bale Processor.

2 Safety

Safety Alert Symbol

This Safety Alert symbol means

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



The Safety Alert symbol identifies important safety messages on the Bale Processor and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

Accidents Disable and Kill

3 Big Reasons

Accidents Cost

Accidents Can Be Avoided

SIGNAL WORDS:

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

DANGER -

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

WARNING -

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

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.



2 Safety Continued

YOU are responsible for the SAFE operation and maintenance of your H&S Bale Processor. **YOU** must ensure that you and anyone else who is going to operate, maintain or work around the Bale Processor 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 working practices a part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Bale Processor owners must give operating instructions to operators or employees before allowing them to operate the machine, and ensure that they are reviewed annually thereafter.
- The most important safety device on this equipment is a SAFE operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow them. All accidents can be avoided.
- H&S feels that a person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes themselves and bystanders to possible serious injury or death.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- **Think SAFETY! Work SAFELY!**



2 Safety Continued

2.1 General Safety

1. Read and understand the Operator's Manual and all safety signs before operating, servicing, maintaining, adjusting or unplugging the Bale Processor.
2. Only trained, competent persons shall operate the Bale Processor. An untrained operator is not qualified to operate the machine.
3. Have a first-aid kit available for use should the need arise and know how to use it.
4. Provide a fire extinguisher for use in case of a fire. Store in a highly visible place.
5. Do not allow riders.
6. Wear appropriate protective gear. This list includes but is not limited to:
 - A hard hat
 - Protective shoes with slip resistant soles
 - Protective goggles
 - Heavy gloves
 - Hearing protection
7. Place all controls in neutral, stop the engine, disengage the PTO, set the parking brake, remove the ignition key and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.
8. Wear appropriate hearing protection when operating for long periods of time.
9. Know where overhead electrical lines are located and stay away from them. Electrocutation can occur without direct contact.
10. Review safety related items annually with all personnel who will be operating or maintaining the Bale Processor.

2.2 Operating Safety

1. Read and understand the Operator's Manual and all safety signs before using.
2. Place all controls in neutral, stop the engine, set the parking brake, remove the ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. Do not open discharge door unless rotor has stopped turning. Keep others out.
4. Do not operate when any guards are damaged or removed. Install and secure guards before starting.
5. Keep hands, feet, clothing and hair away from all moving and/or rotating parts.
6. Do not allow riders on the Bale Processor or tractor during operation or transport.
7. Clear the area of all bystanders, especially small children, before starting.
8. Attach securely to the tractor using a retainer on the drawbar pin and a safety chain.
9. Do not point discharge opening towards people, animals, or buildings when operating.
10. Stay away from discharge path. Keep others away.
11. Stay away from bale tines when raising or lowering lift frame. Keep others away.
12. Clean reflectors, Slow Moving Vehicle signs, and lights before transporting.
13. Use hazard flashers on tractor when transporting.
14. Install lift frame lock pin before transportation.
15. Before pressurizing the hydraulic system, make sure all components are tight and that steel lines, hoses, and couplings are in good condition.
16. Review safety instructions with all personnel annually.



2 Safety Continued

2.3 Maintenance Safety

1. Place all controls in neutral, stop the engine, set the parking brake, remove the ignition key, wait for all moving parts to stop and disengage the PTO before servicing, adjusting, repairing or unplugging.
2. Perform a lock out tag out (LOTO) procedure if required.
3. Relieve pressure from hydraulic circuit before servicing or disconnecting from tractor.
4. Place stands or blocks under the frame before working beneath the machine or when changing tires.
5. Use only tools, jacks and hoists of sufficient capacity for the job.
6. Install and secure all guards and shields before resuming operation.

2.4 Hydraulic Safety

Follow standard Hydraulic Safety Procedures when dealing with Hydraulic Systems.

2.5 Storage Safety

1. Store unit in an area away from human activity.
2. Do not permit children to play on or around the stored Bale Processor.

2.6 Safety Signs

1. Keep safety signs clean and legible at all times.
2. Replace safety signs that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should include a safety sign.
4. Safety signs are available through your authorized H&S Dealer.



2 Safety Continued

2.7 Sign-off Form

H&S follows stringent safety practices and encourages anyone who will be operating and/or maintaining the Bale Processor do the same. Read and understand ALL the Safety, Operating and Maintenance information presented in this manual.

Do not operate or allow anyone else to operate this equipment until such information has been reviewed. Annually review this information with all personnel.

Make these periodic reviews of SAFETY and OPERATION information a standard practice for all of your equipment. We feel that an untrained operator is unqualified to operate this machine.

A sign-off sheet is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand the information in the Operator's Manual and have been instructed in the operation of the equipment.

Sign-off Form

<i>DATE</i>	<i>EMPLOYEE SIGNATURE</i>	<i>EMPLOYER SIGNATURE</i>



3 DECALS

3.1 Safety Decal Locations

The types of safety decals and locations on the equipment are shown in the illustrations below. Good safety requires that you familiarize yourself with the various safety decals, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.

- THINK SAFETY!!, WORK SAFELY!!



RN148900-0044



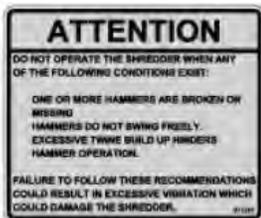
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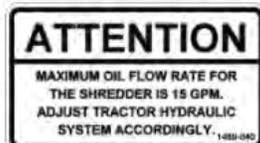
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RN148900-0046



RN148900-0045



RN148900-0040



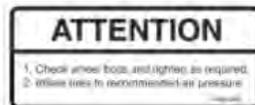
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RN148900-0047



RN148900-0083



RN148900-0048



RN147000-0004



RN147000-0002 (YELLOW)

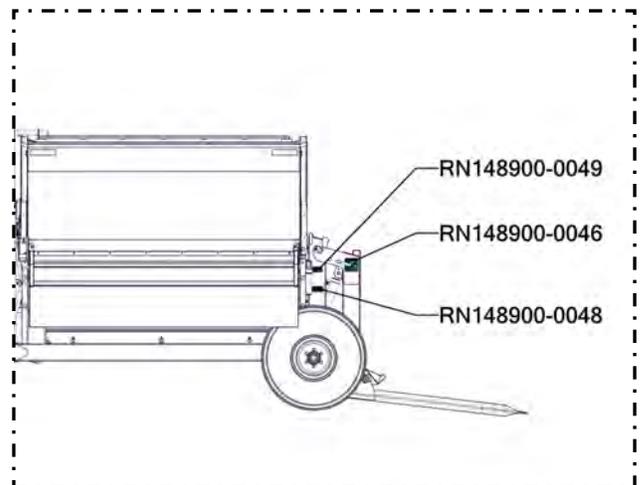
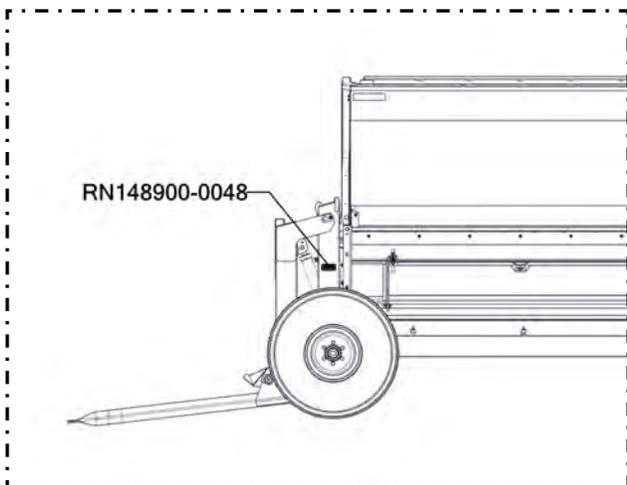
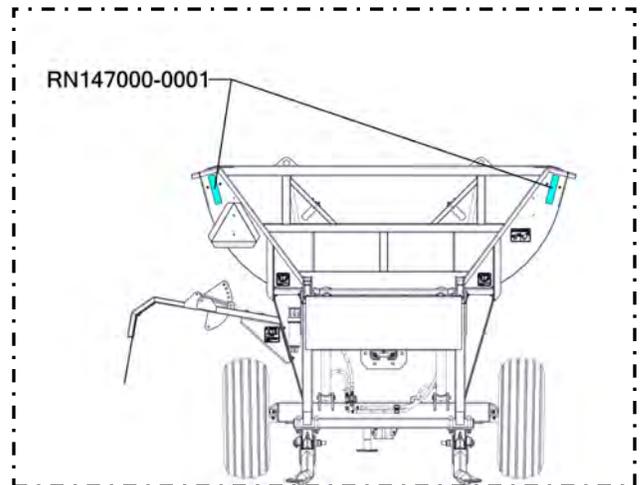
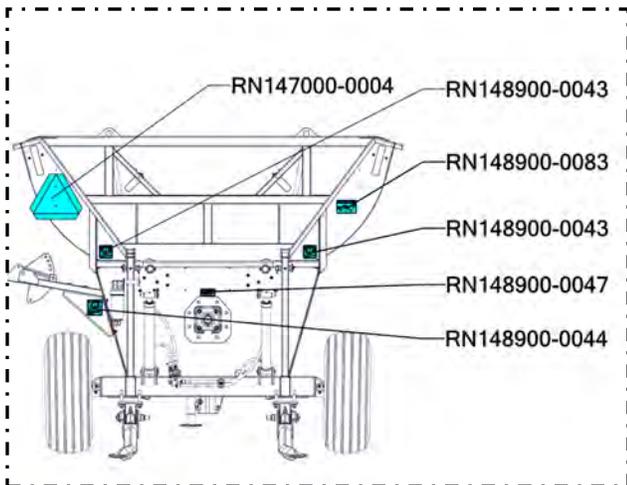
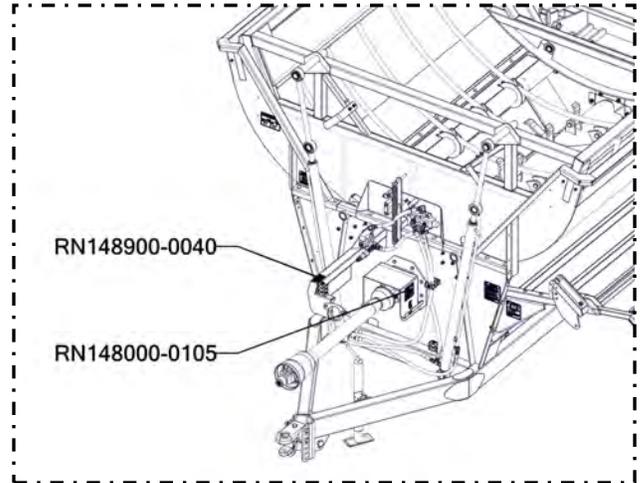
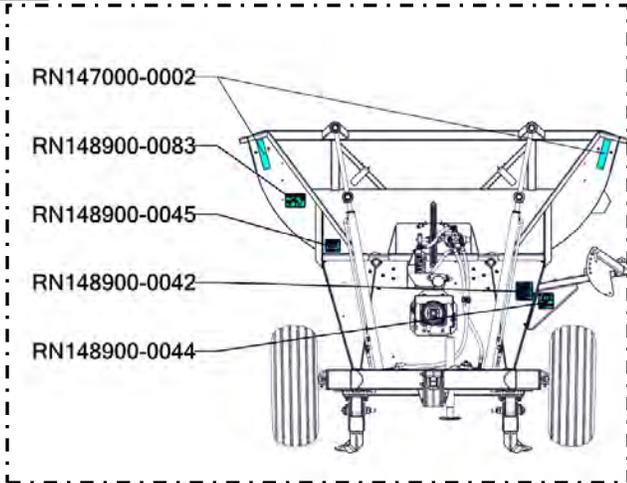


RN147000-0001 (RED)

REMEMBER - If safety decals have been damaged, removed, become illegible or parts have been replaced without the necessary safety decals, new ones must be applied. New safety decals are available from your authorized dealer.

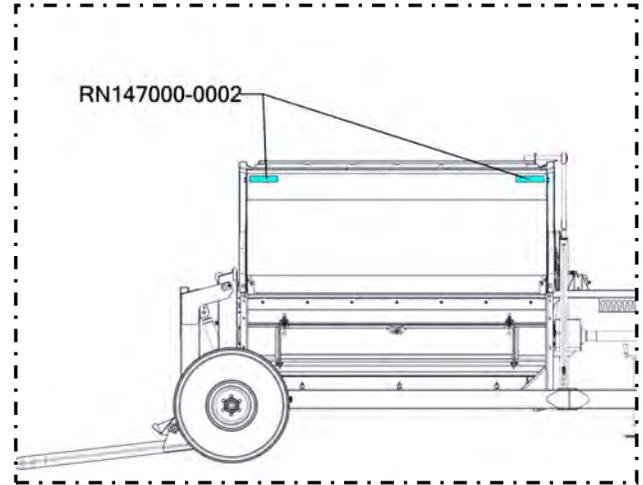
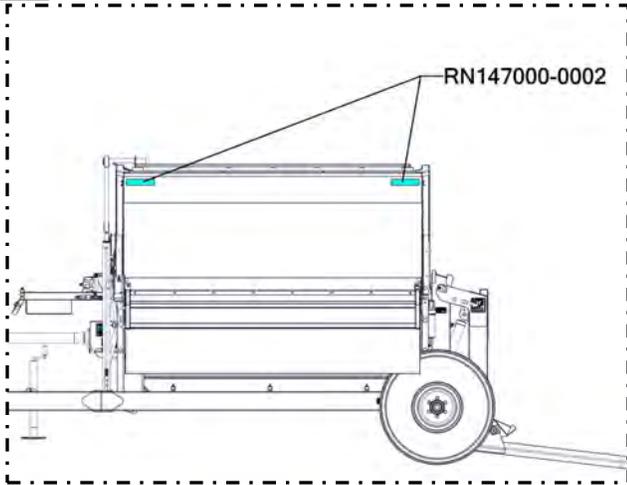


3 Safety Decal Locations





3 Safety Decal Locations



3 DECAL

3.2 Information Decal Locations

The types of informational and operational decals on this machine and their locations are shown in the following illustrations.



RN148900-0251



RN148100-0101



RN148900-0250



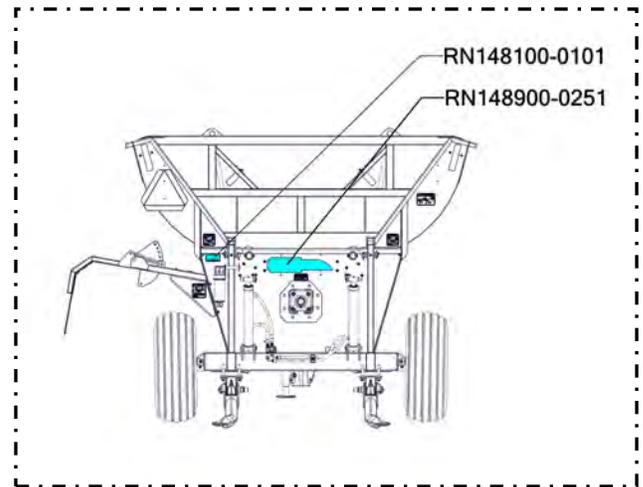
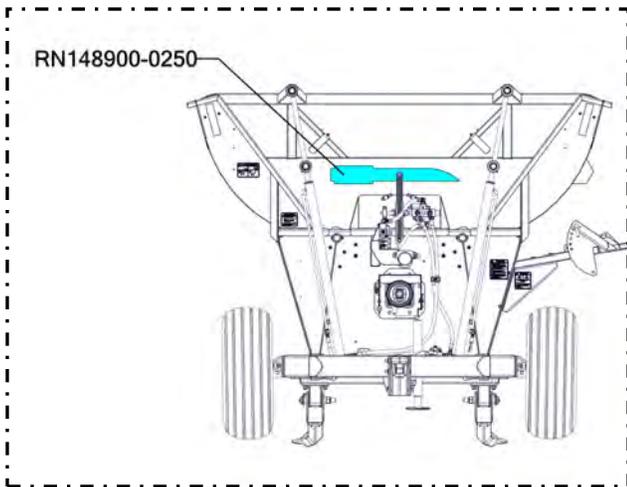
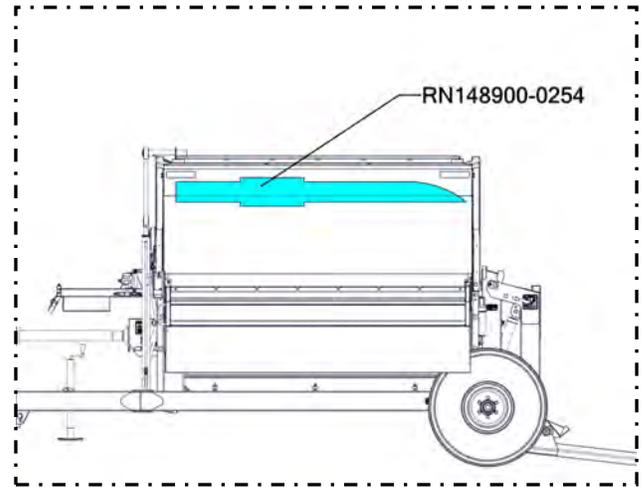
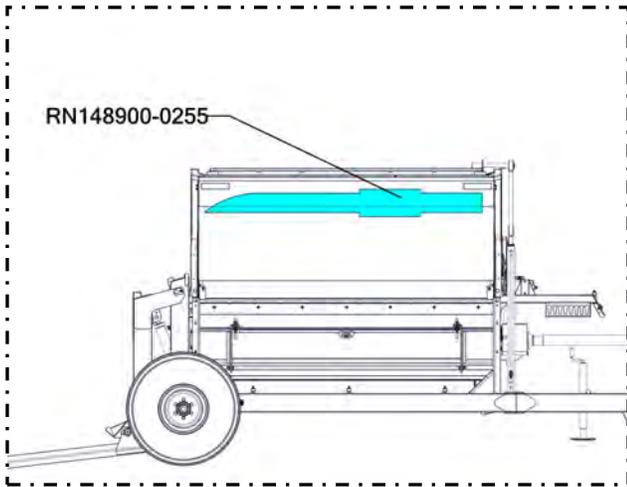
RN148900-0254



RN148900-0255

REMEMBER - If safety signs have been damaged, removed, become illegible or parts have been replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.

3.2 Information Decal Locations



4 Operation

4.1 To The New Owner or Operator

The H&S Bale Processor is designed to process round or square bales and place the material in a row or spread it over the ground. Be familiar with all operating and safety procedures before starting.

It is the responsibility of the owner and operator to read this manual and to train all other operators before they start working with the machine. Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the worksite. Untrained operators are not qualified to operate the machine.

Many features incorporated into this machine are the result of suggestions made by customers like yourself. Read this manual carefully to learn how to operate the machine safely and how to set it to provide maximum efficiency. By following the operating instructions, in conjunction with a good maintenance program, your Bale Processor will provide you with many years of trouble-free service.

The machine is designed with a PTO powered swinging-flail rotor that processes large or small round or square bales for feeding or bedding as appropriate. The hydraulically activated tines on the rear of the frame are used to lift bales and load them into the bale cradle of the processor.

A hydraulically powered cradle in the frame moves the bales over the rotor that extends along the bottom of the machine. The rotor is equipped with swinging flails that process the bale and expel it out the right side discharge opening.

The discharge deflector can be set in several different positions to allow for placing the material in a row for feeding or for the spreading out of bedding. An optional electric actuator or hydraulic cylinder kit can be used to position the discharge deflector.

A side access door, on the opposite side of the body to the discharge, enables the operator to access the rotor for cleanout and maintenance.

4.2 Pre-Operational Checklist

1. Lubricate the machine following the schedule outlined in section 5.
2. Only use a tractor with adequate power to operate machine (see section 7).
3. Ensure that the machine is properly attached to the tractor. Be sure that a retainer is installed in the drawbar pin and the safety chain is attached.
4. Inspect the hydraulic system. Ensure that the hydraulic reservoir on the tractor is filled to required specifications.
5. Inspect all hydraulic lines, hoses, and fittings. Clean fittings with a clean rag before connecting to the tractor.
6. Check the tires to be sure they are inflated to the specified pressure.
7. Check the cradle and tilt system. Be sure it can move freely. Remove any entangled material.
8. Check that the rotor turns easily and that the flails swing freely. Remove all twine, wrap, and other materials that may be entangled.
9. Check that the PTO driveline is connected to the tractor PTO output shaft.
10. Close and secure all guards.

4.3 Break-In

Although there are no operational restrictions on the Bale Processor when used for the first time, it is recommended that the following mechanical items be checked.

A. Before First Start Up:

1. Attach the Bale Processor to the tractor.
2. Cycle the lift frame and the bale cradle several times to fully charge the hydraulic cylinders with oil.
3. Top up the tractor oil reservoir if required.
4. Check the gearbox for any signs of leakage and check the gearbox oil level (Should be visible at the top of the oil plug).

B. After operating for 1/2 hour:

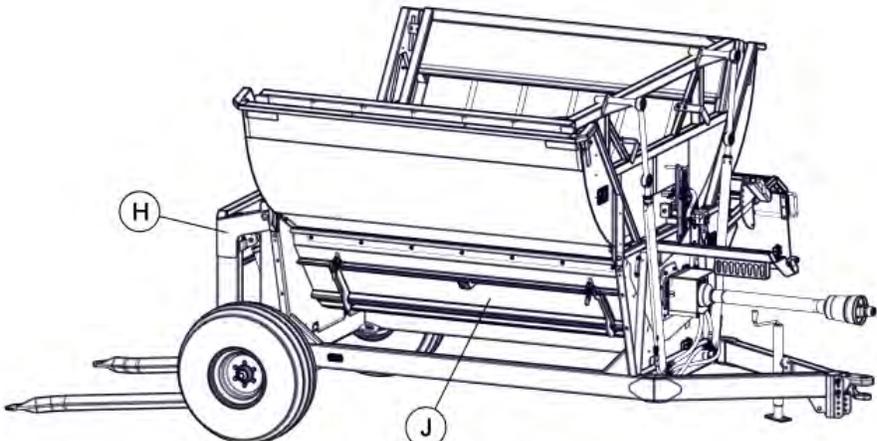
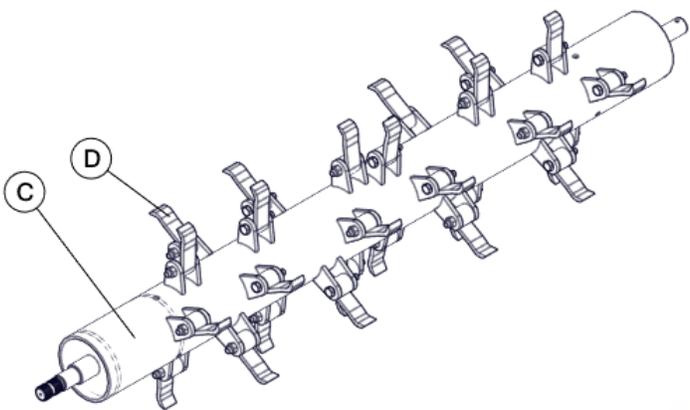
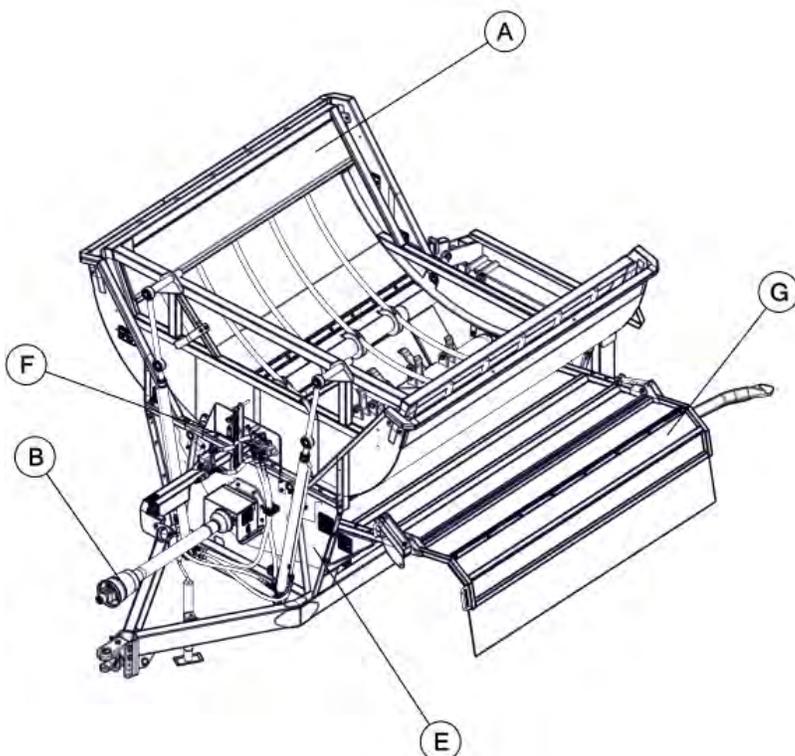
1. Re-torque all wheel bolts.
2. Re-torque all other fasteners and hardware.
3. Disconnect the PTO driveline and turn the rotor by hand. Be sure that it turns freely.
4. Check the rotor and flails. Remove all entangled material.
5. Check that no hoses are pinched, rubbing, bent, or crimped. Re-align as required.
6. Check for oil leaks. Repair or stop any leaks before continuing.
7. Lubricate all grease fittings.
8. Check gearbox for signs of leakage or wear.

C. After operating for 5 hours and 10 hours:

1. Re-torque all wheel bolts, fasteners, and hardware.
2. Check hydraulic hose routing.
3. Check that rotor turns freely.
4. Check that all flails move freely. Remove all entangled material.
5. Check the gearbox for signs of leakage or wear.
6. Follow the normal servicing and maintenance schedule as defined in section 5.

4.4 Machine Components

- A) Bale Cradle
- B) PTO Driveline
- C) Rotor
- D) Flail
- E) Body
- F) Cradle Valve
- G) Deflector
- H) Lift Frame
- I) Cradle Guides
- J) Side Access Door



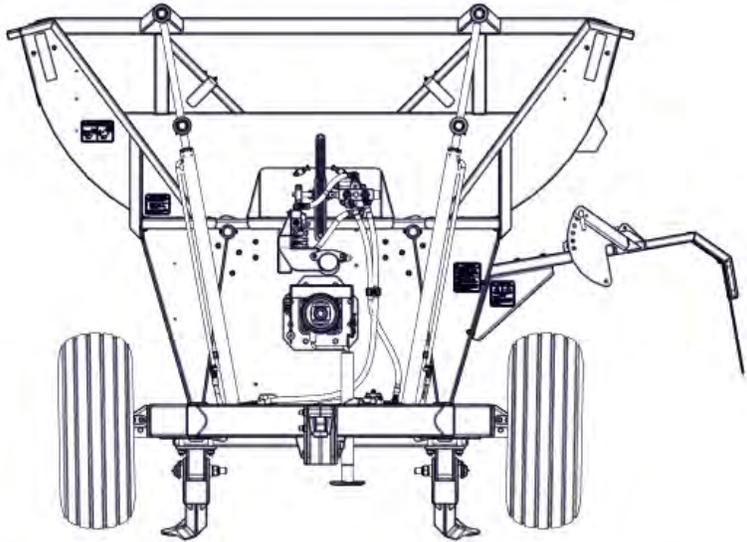
4.5 Controls

1. Deflector:

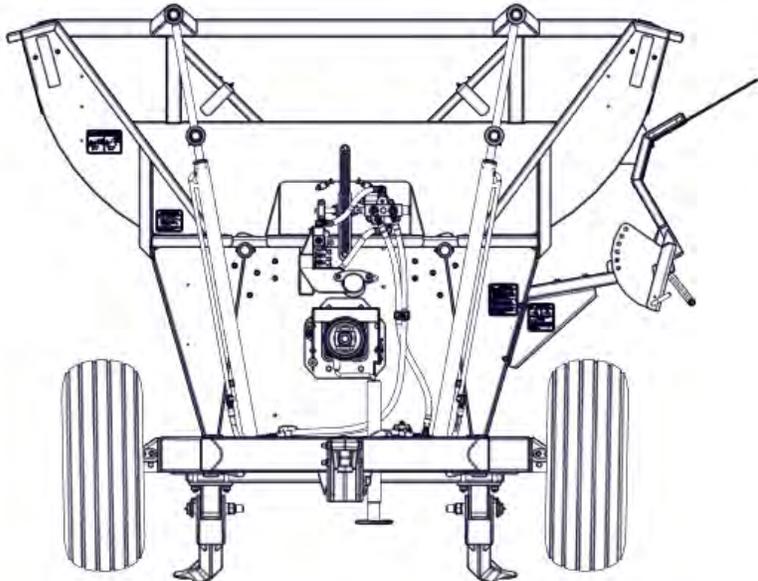
The discharge deflector is equipped with a lock pin system to set the deflector position. Retract the lock pin and move the discharge deflector to its desired position. Secure by inserting the lock pin into the frame anchor hole.

An optional hydraulic or electric position kit is available to position the deflector from inside the cab. Contact your dealer for more information.

Windrowing Position



Spreading Position



4.5 Controls Continued

2.Cradle Tilt System:

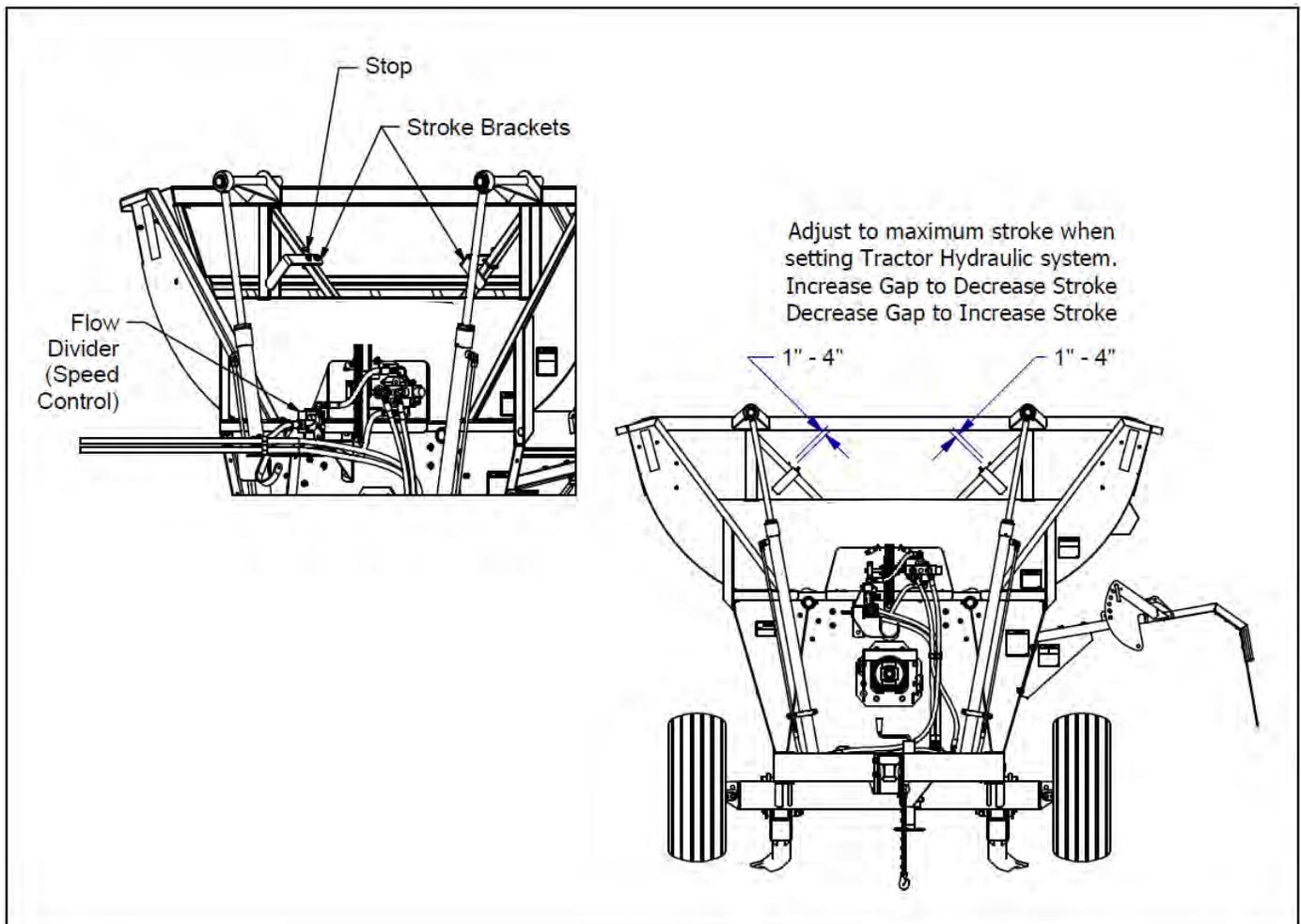
The Processor is designed with a cradle inside the frame that tilts or rocks from side to side and moves the bale across the flails/rotor to prevent bridging. It is a simple self-actuating system that is adjustable for speed and stroke to accommodate any type of bale or material.

a. Speed:

The system is designed with a standard flow divider to change and set the system speed. Set at 5 for maximum speed. Move toward 0 to decrease the speed. Normally it should take 10 to 12 seconds to complete one cycle of the cradle.

b. Stroke:

Use the sliding brackets on the cradle frame to set the range of the stroke.



4.6 Attaching/Unhooking

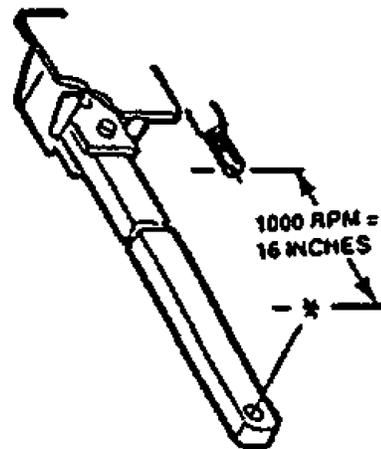
The drawbar of the Bale Processor is equipped with a two piece clevis style hitch. If the tractor is equipped with a clevis hitch, the clevis portion of the Bale Processor must be removed to prevent binding when operating on uneven terrain.

Check hitch and clevis bolts on a weekly basis to make sure that they are properly tightened.

The machine should always be parked on a level, dry area that is free of debris and foreign objects.

Follow this procedure when attaching processor to tractor:

1. Clear the area of bystanders and remove foreign objects from the machine and working area.
2. Adjust the length of the drawbar to give the appropriate dimensions between the PTO shaft and the drawbar pin hole (Refer to Tractor Operator's Manual).
3. Use the jack to raise or lower the hitch to align with the drawbar.
4. Make sure there is enough room to back the tractor up to the hitch.
5. Start the tractor and slowly back it up to the hitch.
6. Stop the tractor engine, place all controls in neutral, set the parking brake and remove the ignition key before dismounting.
7. Install a drawbar pin with provisions for a mechanical retainer such as a Klick pin. Install the retainer.
8. Attach the safety chain between the machine and the tractor drawbar cage.



4.6 Attaching/Unhooking Continued

9. Connect the PTO shaft:

- a. Check that the PTO driveline telescopes easily and that the shield rotates freely.
- b. Attach the driveline to the tractor by retracting the locking sleeve, slide the yoke over the shaft and push on the yoke until the lock sleeve clicks into position. Pull on the yoke to be sure the driveline is locked on the shaft.

10. Connect the hydraulics:

a. Use a clean cloth or paper towel to clean the couplers on the ends of the hoses. Also clean the area around the couplers on the tractor.

b. Remove the plastic plugs from the couplers and isolate the hoses for the lift arm circuit from the hoses for the cradle tilt circuit.

c. Match the appropriate hoses with the desired control lever in the tractor. Insert the male ends of the hoses into the female couplers on the tractor.

11. Route the hoses along the hitch and secure in position to prevent entanglement with any moving parts.

12. Lower the hitch jack and rotate it 90° to place in its stowed position.

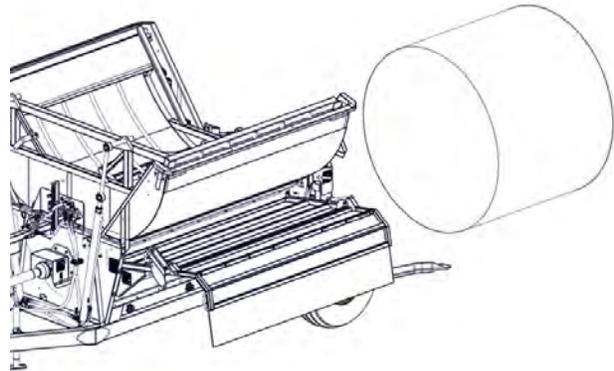
13. When unhooking from the tractor, reverse the above procedure. Use a plank under the jack if ground conditions are soft.



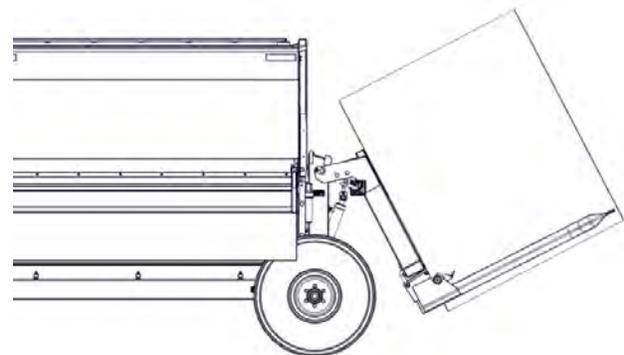
4.7 Field Operation

4.7.1 Loading and Processing

- 1) Lower bale tines to ground.
- 2) Back processor up with the bale tines sliding under the bale.

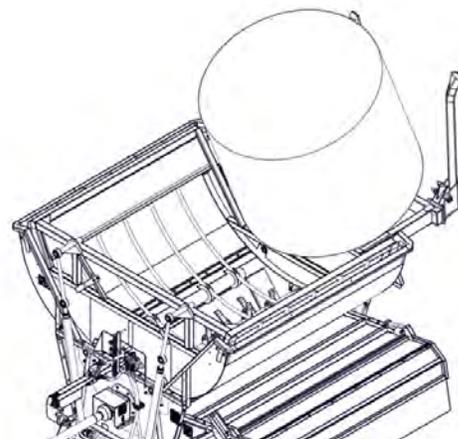


- 3) Slowly raise the tines until the bale clears the ground.
- 4) Remove strings, twine, or wrapping from the bale.



***** STOP CRADLE WHEN LOADING BALES INTO PROCESSOR *****

- 5) Raise the bale tines up and tip the bale into the bale cradle.



***** STOP CRADLE WHEN LOADING BALES INTO PROCESSOR *****

4.7.1 Loading and Processing

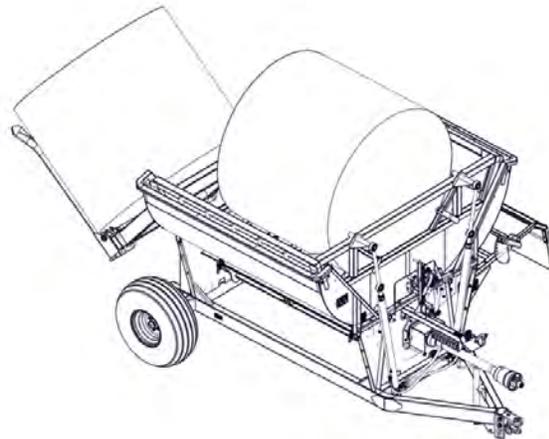
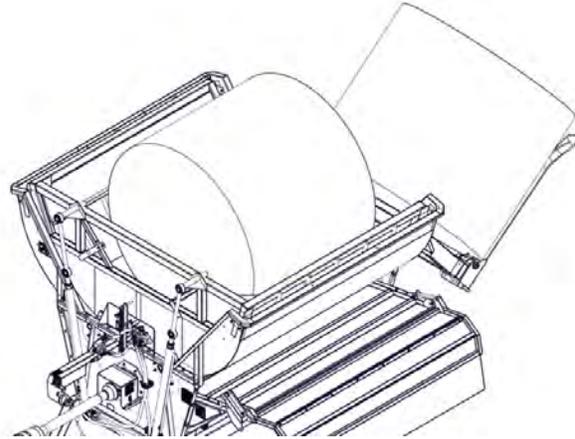
- 6) At this time a second bale can be picked up on the forks and brought along to the feeding area if desired.

Important: When the second bale is loaded on the bale tines, make sure that the loaded bale does not interfere with the cradle operation. Interference can cause damage to the cradle.

- 7) Processing:
 - a. Set the discharge deflector to the desired position.
 - b. Start the tractor and run on idle.
 - c. Drive to the desired unloading location.
 - d. With the tractor on idle, slowly engage PTO.
 - e. Increase engine RPM to rated PTO speed.
 - f. Engage rocking bale cradle hydraulic circuit.

IMPORTANT

The processor is equipped with an 80° constant velocity drive line. When operating the Bale Processor, keep the PTO drive line as straight as possible to have the universal joint angles as small as possible during operation. Avoid sharp turns with the PTO engaged. If a sharp turn is unavoidable, disengage the PTO for the turn and then re-engage when appropriate to do so. Operating at more than 80° will damage the CV joint and will void warranty.



4.7 Field Operation Continued

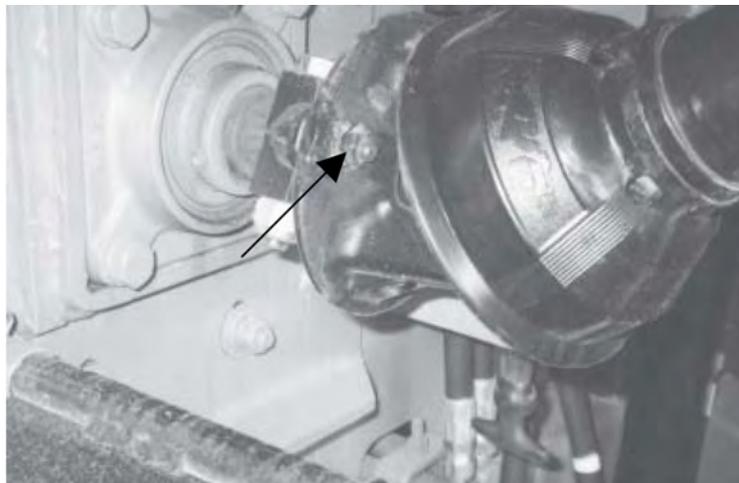
8. Stopping:

- a. Disengage cradle tilt hydraulic circuit.
- b. Allow rotor to run until no more material comes out of discharge opening.
- c. Slowly decrease engine RPM to idle.
- d. Disengage PTO drive and wait for rotor to stop turning.

IMPORTANT

Disengage PTO clutch and wait until rotor stops turning before pushing the PTO clutch lever into its off position. If the PTO drive system on your tractor is designed with a brake that will stop the PTO shaft in less than one revolution, avoid using this feature. Stopping the rotor too quickly will break the PTO shear pin.

Each input drive line is designed with a shear bolt to protect the machine from shock impact loads. If the shear bolt breaks, remove the broken pieces and replace with genuine H&S replacement parts. Remove all material from the processor before restarting the machine.



4.7 Field Operation Continued

9. Rotor Cleaning:

The string or twine from the bales does get tangled around the rotor as the bales are processed. Check every few bales to make sure there is nothing entangled in the rotor and remove and clean as required. Twine can prevent the flails from swinging and affect function or rotor balance. Access the rotor through the side access door on the side opposite to the discharge opening. Always stop the engine and remove the ignition key before cleaning the rotor.



10. Cradle Tilt:

The machine is designed with a cradle inside the frame that moves the material from side-to-side across the rotating flails. It is designed to tilt the bale to one side until it is just ready to roll and then it tilts to the other side.

The best results are obtained when a full cycle takes 10 to 12 seconds to complete. Use the flow dividers on the tractor and on the front of the Bale Processor to set the speed of the cradle. Refer to the Maintenance section for the detailed setting procedure.

4.7 Field Operation Continued

11. Flail Backslap:

The rotor is designed with swinging flails that process the material as the cradle moves the bale across the rotor. Each flail is held in the extended position by the centrifugal force from the rotor rotation. Each flail must be free to swing as the material moves across the rotor. If you hear the flails backslapping against the rotor:

- a. Repair or replace any damaged or broken parts.
- b. Slow the cradle tilt speed. Backslap can occur if the material is being moved into the rotor too fast. Slowing the tilt speed moves less material into the flail and they will not have to swing back out of the way.
- c. Clean the rotor. Entangled material can affect how the flails swing and contribute to backslap.

12. Bale Tines:

It is recommended that the bale tines be raised into the vertical position when operating in and around livestock to prevent inadvertent injury to the animals.

13. Operating Tips:

- a. Keep the PTO driveline as straight as possible to minimize universal joint angles.
- b. Disengage PTO when making sharp turns. Never exceed a universal joint angle of 80°.
- c. Always try to remove the twine, string or wrapping from the bale before tipping into the machine to reduce rotor wrapping.
- d. Do not store bales or other material in the machine overnight in cold weather. Material can freeze to the frame cradle and jam the rotor.
- e. Always stop the engine, remove the ignition key, disconnect hydraulic lines and remove the PTO shaft before working on the machine.
- f. Do not point the discharge at people, animals or buildings. Material can be thrown out fast enough to injure someone.
- g. Slowly raise the arms to tilt the bale into the machine. The machine will hold an entire round bale. Large square bales may have to be broken in pieces. Be sure to remove strings, twine or wrapping before loading.
- h. Engage the cradle tilt circuit after the rotor has been brought to full or rated speed. This will move the material across the rotor for even feeding and processing.

4.8 Transporting

1. Be sure that the unit is hitched positively to the towing vehicle. Always use a retainer in the drawbar pin and a safety chain between the machine and the tow vehicle.

NOTE: Use two safety chains when using a truck to transport the processor and cross them under the hitch when connecting (As shown in picture below).

2. Install lift frame lock pin before transporting.
3. If transporting with a tractor, install an SMV emblem in the location provided.
4. Always use hazard warning flashers on the tractor when transporting unless prohibited by law.
5. Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.
6. Keep to the right and yield the right-of-way to allow faster traffic to pass.
7. Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transportation authorities are in place, are clean and can be seen clearly by all overtaking and oncoming traffic.
8. Make sure you are in compliance with all local regulations regarding transporting equipment on public roads and highways.



4.9 Storage

At the end of the season, the machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary down time at the start of the next season.

Follow this procedure:

1. Wash the entire machine thoroughly using a water hose or pressure washer to remove all dirt, mud, debris or residue.
2. Inspect all drives and moving parts. Remove any string, twine or other material that has become entangled in the rotor, flails, cradle components or shafts. Be sure all components are clean and can move freely.
3. Inspect all hydraulic hoses, fittings, lines, couplers and valves. Tighten any loose fittings. Replace any hose that is badly cut, nicked or abraded or is separating from the crimped end of the fitting.
4. Inspect rotor and flails for damaged or broken components. Repair or replace components as required.
5. Lubricate all grease points. Make sure all grease cavities have been filled with grease to remove any water residue from the washing.
6. Raise lift arms to their fully up position and install lock pin.
7. Apply "never seize" or grease to PTO input shaft and cylinder rams.
8. Touch up all paint nicks and scratches to prevent rusting.
9. Move the machine to its storage location.
10. Select an area that is dry, level and free of debris.
11. Place planks under the jack for added support if required.
12. Unhook the machine from the tractor (Refer to Section 4.6).
13. Cover the machine with a tarp if the machine is not stored inside.

5 Service and Maintenance

5.1 Servicing Record

1. Grease: Use an SAE multi-purpose high temperature grease with extreme pressure (EP) characteristics. Also acceptable is an SAE multipurpose lithium based grease.

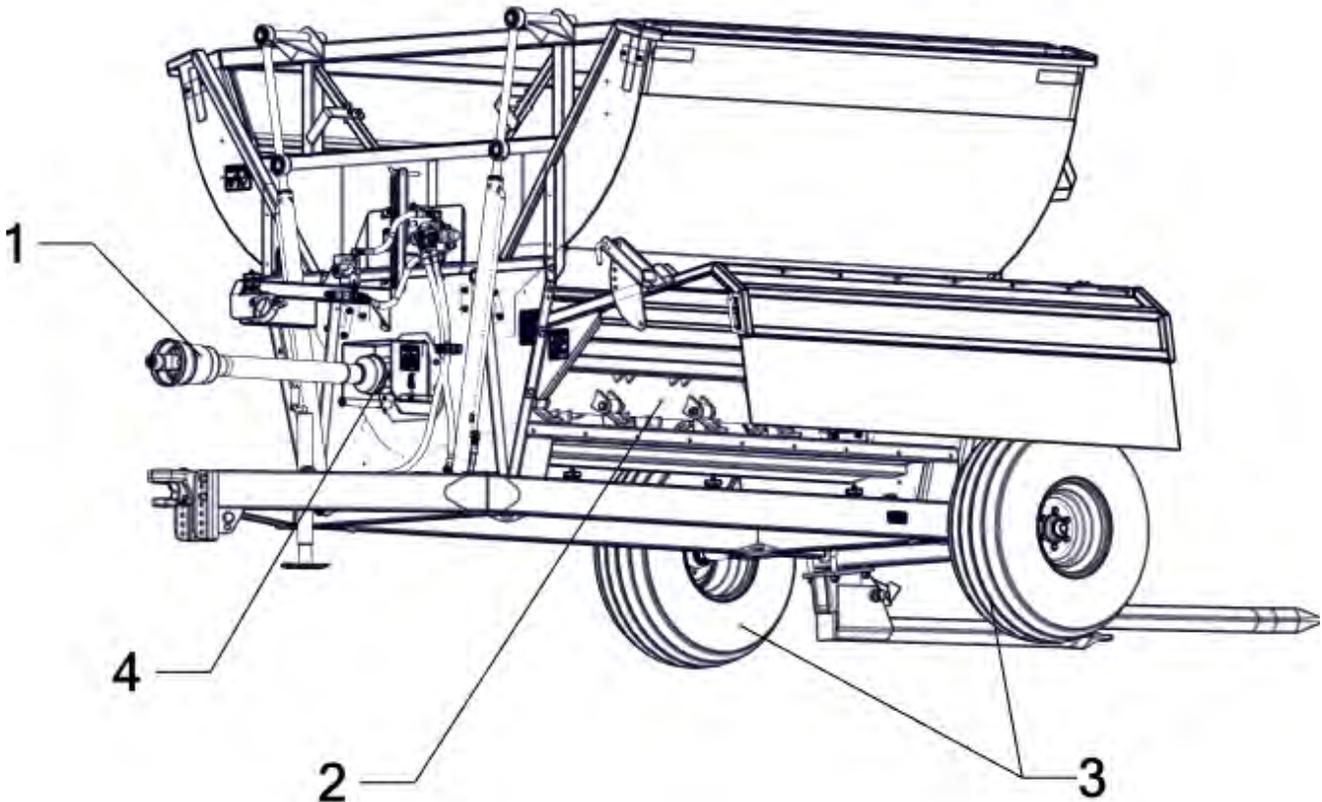
2. Lubricants: Your unit can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants. Gearbox on Model 2958 takes 300ml of SAE 80W-90 Gear Oil.

MAINTENANCE	Hours Serviced By																		
		8 Hours, Daily or 10 Bales																	
L	PTO Shaft (8)																		
I	Rotor and Flails																		
I	Wheel Bearings																		
I	Shear Bolts																		
I	Gearbox Seals																		
Weekly or 50 Bales																			
G	Bale Cradle Bushings (4)																		
G	Bale Lift Bushing Bushings (8)																		
G	Rotor/Roller Bearings (6)																		
Annually or 3000 Bales																			
G	Wheel Bearings																		
L	Gearbox—Change Oil																		
W	Machine																		

Action Code: L = Lubricate G = Grease W = Wash I = Inspect

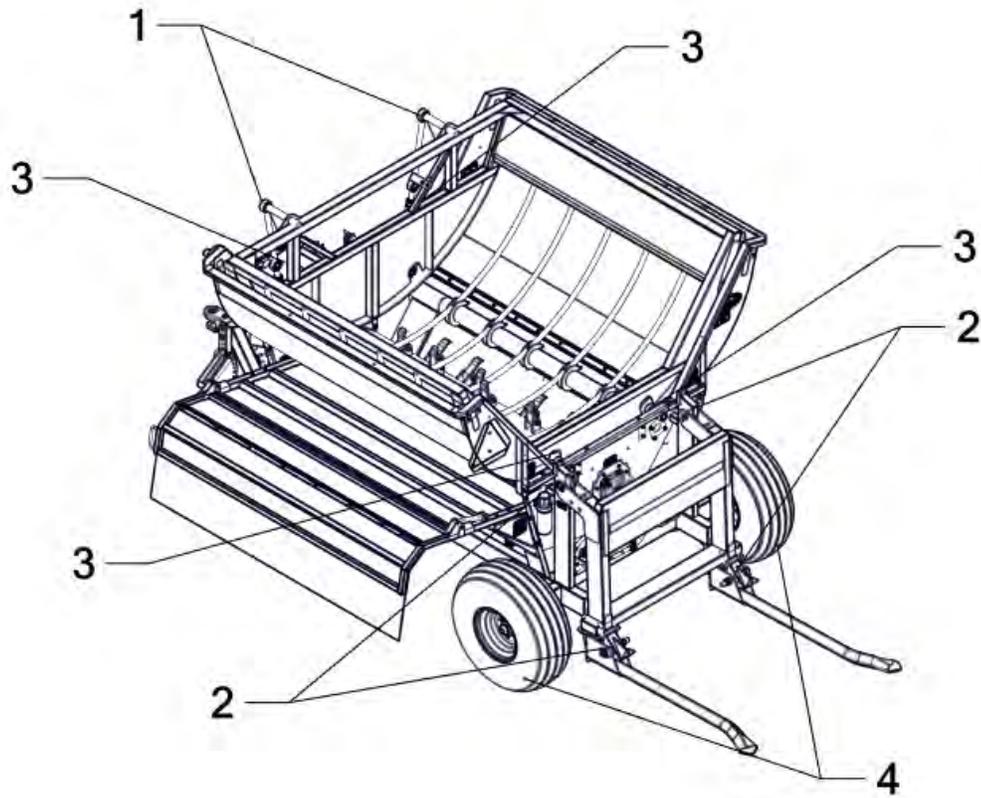
5.2 SERVICING INTERVALS

1. Use a hand-held grease gun for all greasing.
2. Wipe grease fitting with a clean cloth before greasing to avoid injecting dirt and grit.
3. Replace and repair broken fittings immediately.
4. If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.



5.2.1 8 Hours, Daily or Every 10 Bales:

1. Lubricate the PTO shaft (eight locations). See Lubrication Procedure from Weasler (page 5.5). Follow **Standard Interval Schedule**.
2. Check the conditions of the rotor and flails. Remove all entangled material. Repair damaged components. Replace broken components.
3. Check wheel bearings. Remove twine or other entangled material.
4. Check shear bolt. Tighten if loose. Replace if broken or damaged.



5.2.2 Weekly or Every 50 Bales:

1. Grease the bale cradle bushings (four locations).
2. Grease the bale lift system bushings (eight locations).
3. Grease roller and rotor bearing (six locations).
 - a. Rollers
 - b. Rotor

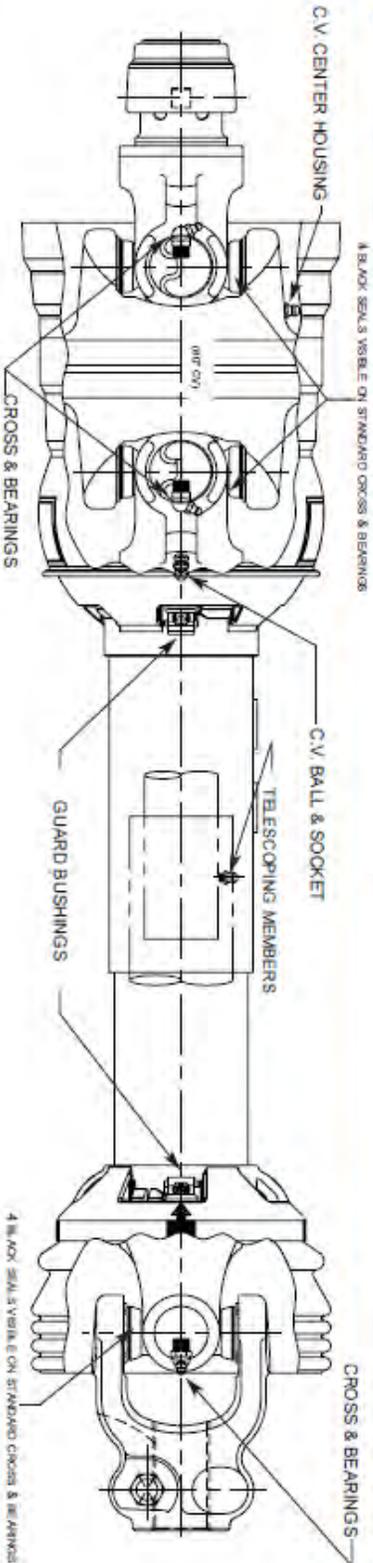
5.2.3 Annually Or Every 3000 Bales:

4. Repack wheel bearings.
5. Wash and clean machine.



Weasler®

**RECOMMENDED CUSTOMER LUBRICATION PROCEDURE
FOR 80° CV DRIVELINES**



LUBRICATE ALL FITTINGS WITH A GOOD QUALITY LITHIUM SOAP COMPATIBLE E.P. GREASE MEETING THE N.L.G.I. #2 SPECIFICATIONS AND CONTAINING NO MORE THAN 1% MOLYBDENUM DISULFIDE.

AN E.P. GREASE MEETING THE N.L.G.I. #2 SPECIFICATIONS AND CONTAINING 3% MOLYBDENUM DISULFIDE MAY BE SUBSTITUTED IN THE TELESCOPING MEMBERS ONLY.

LOCATION	STANDARD INTERVAL	EXTENDED LUBE INTERVAL	LEVER ACTION PUMPS
CROSS & BEARINGS	*8 HRS.	50 HRS.	2-3
TELESCOPING MEMBERS	8 HRS.	50 HRS.	8-10
CV BALL & SOCKET	*8 HRS.	50 HRS.	4-6
CV CENTER HOUSING	24 HRS.	50 HRS.	12-15
CE & NON-ROTATING GUARD BUSHINGS (1000 RPM MAX.)	8 HRS.	50 HRS.	2

ROTATING GUARD BUSHINGS SHOULD BE LUBRICATED UPON REPLACEMENT

*CONSTANT ANGLE APPLICATIONS MAY REQUIRE A LUBE INTERVAL OF 4 HOURS

CAUTION!!! REPLACEMENT PARTS ARE NOT LUBRICATED

REPLACEMENT PARTS MUST BE LUBRICATED AT TIME OF ASSEMBLY AND DURING USE PER THE LUBE RECOMMENDATIONS

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5.5 Maintenance & Adjustments

5.5.1 Rocking Bale Cradle System

The Processor is designed with a system that automatically reverses the cradle direction during operation to evenly move the bale over the rotor for efficient processing. When maintaining the cradle system, follow this procedure:

5.5.1.1 Stroke:

The cradle is designed to tilt from side to side during operation to prevent bridging over the rotor and flails. Its objective is to tilt to one side until the bale is almost ready to roll and then tilt to the other side.

- Move the stroke stops on the bale cradle to set the stroke.
- Move the stop up to increase the stroke and down to decrease stroke.
- The stroke stops have their own stop tabs to prevent them from being set too high. The factory setting will provide the best performance and is set at 1-1/2" from the stop tabs.

NOTE: In general, soft, wet bales require more stroke than hard, well formed bales. The type of material being processed will also affect the adjustment of the total stroke.

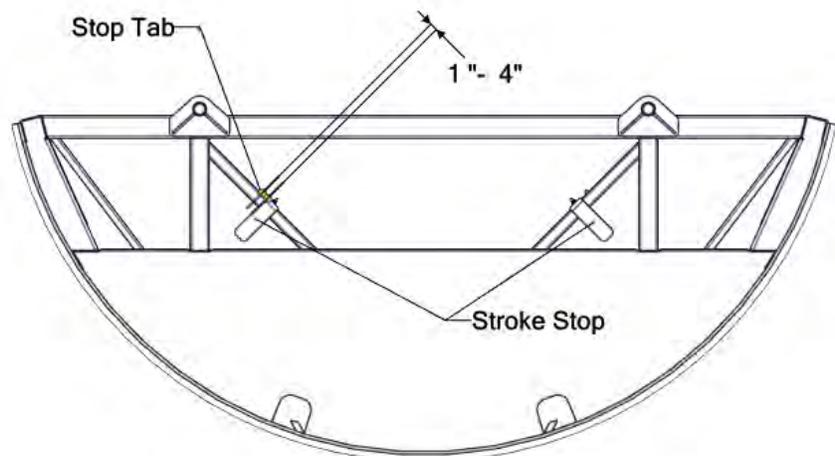
5.5.1.2 Speed:

Use the tractor hydraulic system and cradle flow divider to set the tilting speed.

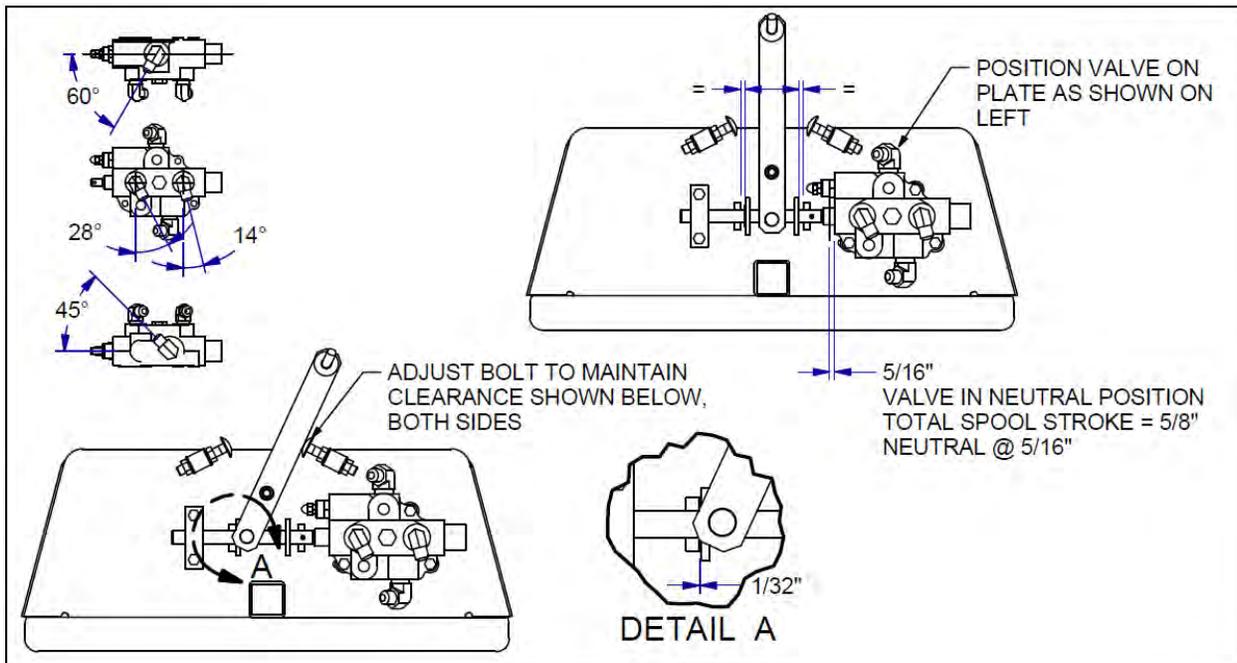
- Set the cradle frame actuator arms to provide maximum stroke.
- Set the tractor hydraulic system flow control to its 1/4 flow position.
- Set the processor flow at maximum (7 on scale).
- Start engine and engage cradle tilt circuit.
- Time a full cycle. It should not be less than 8 seconds.
- Use the tractor flow divider to set the cycle speed.
- Use the Processor flow control to set the speed if the tractor is not equipped with a flow control.

NOTE: The best results are obtained when it takes 10 to 12 seconds to go through one complete cycle.

Adjust to maximum stroke (no gap) when setting the tractor hydraulic system.



5.5 Maintenance & Adjustments Continued



5.5.1.3 Cradle Shifting Valve:

The cradle shifting valve mechanism has been adjusted at the factory and should not require adjustment during normal use of the machine. If, however, the valve or other components need to be serviced, the following guidelines should be used to position the valve properly on its mounting plate:

- Assemble the shift spool to the valve body.
- Position valve on the mounting plate and install mounting bolts. Finger tighten bolts to allow moving if required.
- Slide the valve spool to its neutral position (5/16" extended).
- Slide the valve assembly until it is centered between stops. Tighten mounting bolts to their specified torque.
- Adjust the stop bolt so that when the valve shift lever is touching the stop bolt there is approximately 1/32 inch clearance between the shift spool flange and the stop welded to the valve plate.
- Move the shift lever to the other side and adjust the other stop bolt in the same manner.
- Check that the shifting action is smooth and that no binding occurs.
- Install spring and reconnect hoses.

5.5.2 Flail Backslap:

Regardless of the type of bale, persistent hammer backslap is detrimental to processor operation. Hammer backslap at start-up is normal and disappears once the rotor is up to speed. If your processor experiences frequent hammer backslap, the cause should be investigated and rectified. In most cases reducing the cradle speed will correct the problem.

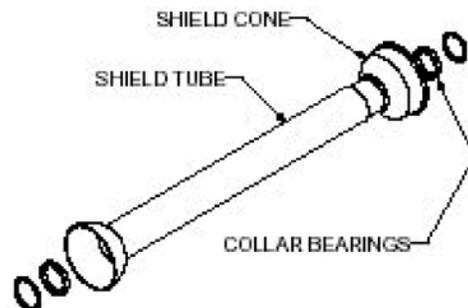
5.5.3 Rotor Maintenance:

1. Place all controls in neutral, stop the engine, set the parking brake, remove the ignition key, disconnect the PTO shaft and remove the hydraulic hoses.
2. Use a knife, shears, or some other cutting device to remove string, twine or other entangled material. Be sure to remove everything by the flail mounting bolts to allow them to swing freely. You can access the rotor from the side access door, on the side opposite to the discharge opening.
3. Keep flails in good condition. Replace if chipped, bent or damaged in any way. Always use a locking nut or jam nut on the flail bolt to prevent it from coming apart.

5.5.4 PTO Safety Shield:

It is important that the shield components rotate freely over the PTO shaft. Lubricating both the shield bearings and cleaning periodically will ensure the safe operation of the rotating shields.

1. Press the cone down and release the collar catches with a screw driver.
2. Spread the collar bearing and remove from the tube.
3. Clean the collar and the yoke bearing groove. After cleaning thoroughly, apply a good coating of grease to the bearing groove.
4. Fit the collar bearing into the groove and the tube ensuring that the collar catches are centered over the matching holes. The tube and bearing must rotate freely in the bearing groove.
5. Fasten the cone by lining up the cone grease fitting over the grease filling hole on the collar bearing. Make sure that all catches are fastened and that the shield turns freely over the shaft.



Safety Shield Components

5.5.5 Shear Bolt:

Each PTO driveline is equipped with a shear bolt on the implement end of the driveline. It is used to protect the Processor from jamming, plugging or overloading. Replace the shear bolt as needed. Be sure to use the appropriate shear bolt when replacing. Using the wrong shear bolt can result in damage to the machine.

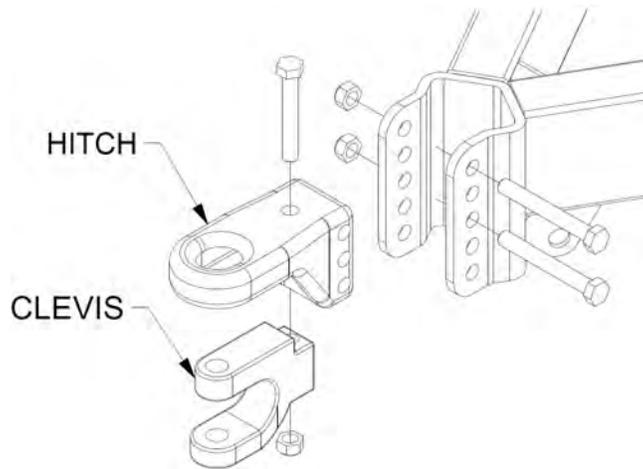
Refer to Machine Specifications for proper shear bolt sizing (Section 7).

5.5.6 Hitch:

The Bale Processor is equipped with an adjustable clevis style hitch. It is a two piece design and is to be installed as shown. Do not use the hitch with the clevis on top as it does not have sufficient strength to support the vertical loads imposed by the Processor. Do not remove the clevis section unless the tractor drawbar is equipped with a clevis. The clevis is required to counter the uplifting forces that can be encountered under some circumstances. Adjust the height of the hitch so that the Processor is level when connected to the tractor.

On tractors equipped with a clevis style drawbar, the clevis on the Processor must be removed to prevent binding when turning or on uneven terrain.

Check hitch and clevis bolts on a weekly basis to make sure they are properly tightened.



6 Troubleshooting

The Bale Processor is designed to pick up bales and load them in the cradle where they are moved into a high speed rotor for processing. It is a simple and reliable system that requires minimum maintenance.

In the following section we have listed potential problems, causes and solutions to the problems you may encounter.

If you encounter a problem that is difficult to solve, even after having read through this troubleshooting section, please call your dealer or distributor. Before you call, please have this Operator's Manual and the serial number from your machine ready.

PROBLEM	CAUSE	SOLUTION
Machine Vibrates	Rotor out of balance	Check rotor; remove entangled material; be sure all flails swing freely.
		Check rotor; replace bent, broken, or missing flails.
Lift Frame Lifts Slowly	Insufficient oil flow	Increase oil flow at tractor or flow divider.
	Cold temperatures	Warm machine before operating.
		Check hydraulic oil type in tractor.
Shear Bolt Failure	Rotor does not turn freely	Determine and correct the cause of hard turning. The rotor must turn freely.
		Remove entangled material from rotor, flails shafts, and bearings.
		Replace shear bolts.
	PTO engaged too quickly	Engage the PTO slowly (see tractor's operating manual).
	PTO Disengaged at high RPM	Reduce tractor speed to idle before disengaging PTO.
Check to see if the PTO brake (if equipped) is not engaged prior to stopping the rotor.		
Poor Processing Performance	Improper cradle alignment	Check cradle rollers - gaps larger than 3/16" will cause cradle lift. Adjust roller gap to 3/16".
Low Throwing Distance	Improper cradle alignment	Check cradle rollers - gaps larger than 3/16" will cause cradle lift. Adjust roller gap to 3/16".
	Low RPM	Ensure PTO runs at 1000 RPM.
Uneven Cradle Movement Speeds	Improper valve positioning	Adjust the position of cradle rocking valve and shifter spool.

7 SPECIFICATIONS

7.1 General Specifications

Minimum Tractor Horsepower.....	100 hp
Weight.....	6545 lbs
Drawbar Weight.....	1725 lbs
PTO.....	1-3/8" 21 spline 1000RPMCV
Tub Length.....	83"
No. of Hammer.....	32
Hammer Size.....	1/2" x 2" x 5-3/4"
Rotor Swing Diameter.....	25-1/8"
Discharge Direction.....	Left

7.2 Tire Specifications

Tire Size.....	14L x 16.1SL x 12rim
Tire Pressure.....	Check Tire for Info

7.3 Bolt Torque Specifications

<i>PTO Shear bolt</i>	<i>2" x 3/8" NC Gr 8</i>
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All other bolts refer to Bolt Torque Chart on next page.

7.3 Bolt Torque

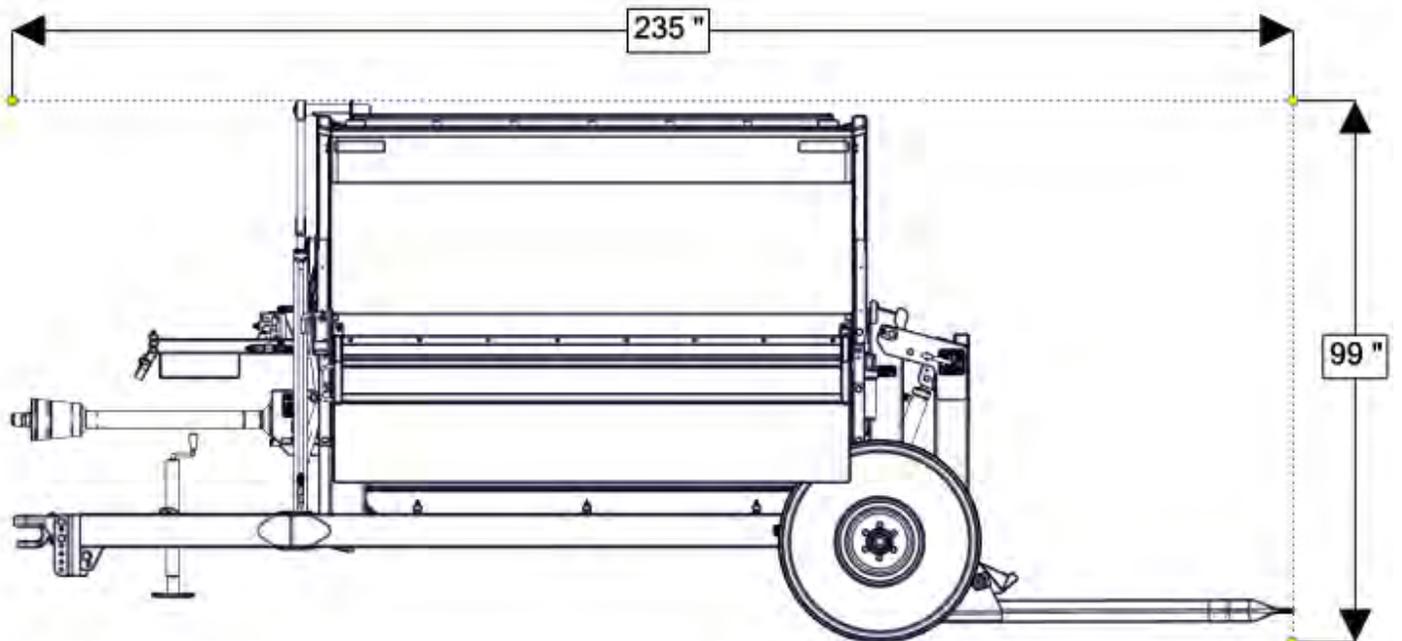
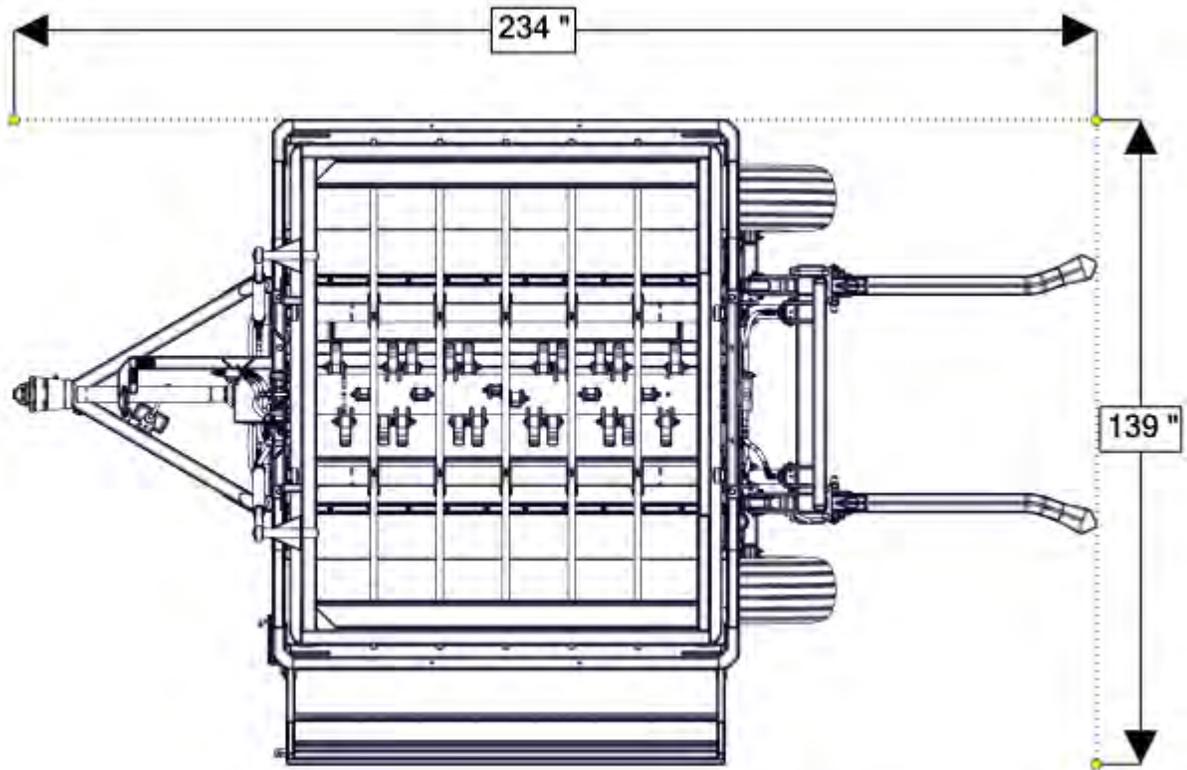
BOLT TORQUE CHART

SIZE	 SAE GRADE 2		 SAE GRADE 5		 SAE GRADE 8		 L9
	ASSEMBLY TORQUE DRY	LUBRICATED	ASSEMBLY TORQUE DRY	LUBRICATED	ASSEMBLY TORQUE DRY	LUBRICATED	ASSEMBLY TORQUE LUBRICATED
1/4-20	66*	49*	8	75*	12	9	11
1/4-28	76*	56*	10	86*	14	10	13
5/16-18	11	8	17	13	20	18	21
5/16-24	12	9	19	14	25	20	23
3/8-16	20	15	30	23	45	30	33
3/8-24	23	17	35	25	50	35	38
7/16-14	30	24	50	35	70	55	60
7/16-20	35	25	55	40	80	60	65
1/2-13	50	35	75	55	110	80	95
1/2-20	55	40	90	65	120	90	105
9/16-12	65	50	110	80	150	110	140
9/16-18	75	55	120	90	170	130	150
5/8-11	90	70	150	110	220	170	185
5/8-18	100	80	180	130	240	180	205
3/4-10	160	120	260	200	380	280	290
3/4-16	180	140	300	220	420	320	355
7/8-9	190	140	400	300	600	460	505
7/8-14	210	155	440	320	660	500	585
1-8	220	160	580	440	900	680	775
1-14	240	170	640	480	1000	740	900
1 1/8-7	300	220	800	600	1280	960	1150
1 1/8-12	340	260	880	660	1440	1080	1325
1 1/4-7	420	320	1120	840	1820	1360	1600
1 1/4-12	460	360	1240	920	2000	1500	1750
1 3/8-6	560	420	1460	1100	2380	1780	—
1 3/8-12	640	460	1680	1260	2720	2040	—
1 1/2-6	740	560	1940	1460	3160	2360	3250
1 1/2-12	840	620	2200	1640	3560	2660	3650

ITEMS WITH * = INCH POUNDS
ALL OTHERS = FOOT POUNDS

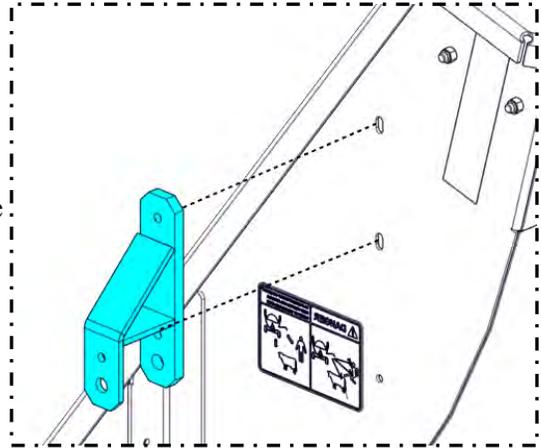
"LUBRICATED"
INCLUDES LUBRICANTS, LUBRIZING, PLATING, AND HARDENED WASHERS

7.4 Overall Dimensions



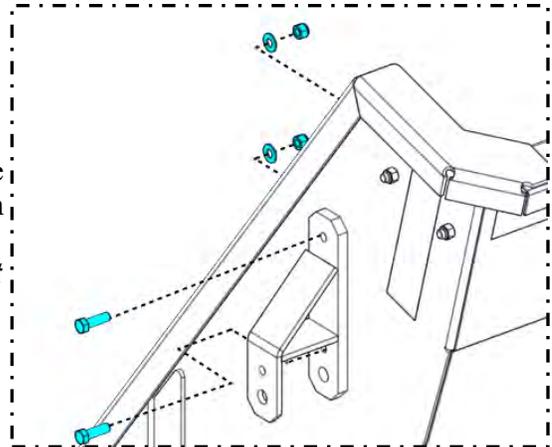
8.1 Hydraulic Deflector Kit Installation

- 1) Install the deflector kit cylinder mount into the slotted holes on the shroud.

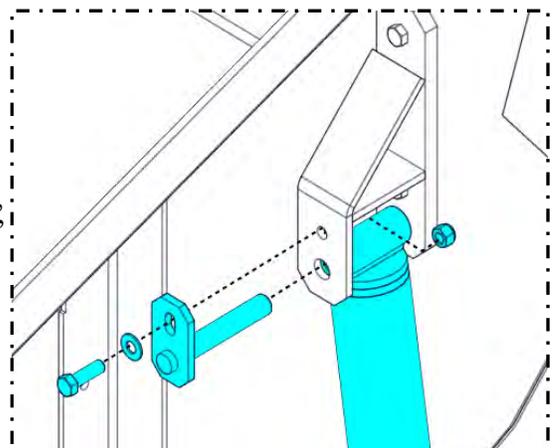


- 2) Use the provided 3/8" bolts, nuts, and washers to secure the mount to the shroud. Tighten the bolts with the cylinder mount pushed up as high as the slotted holes will allow.

Note: *To prevent damage it is important the mount sit as high as possible.*

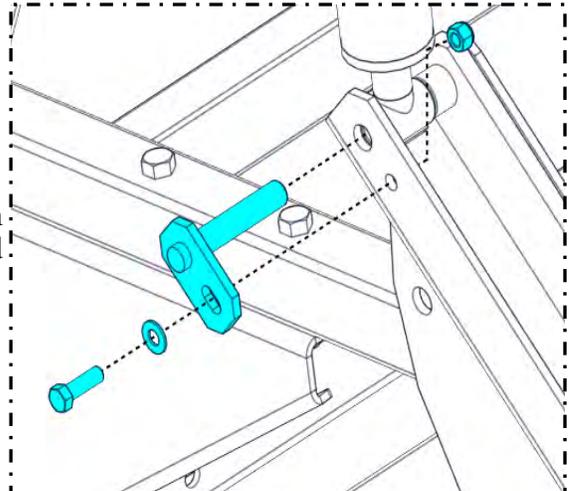


- 3) Install the cylinder into the cylinder mount, secure with the mounting pin (3-11/16"), 3/8" bolt, flat washer, and lock nut.

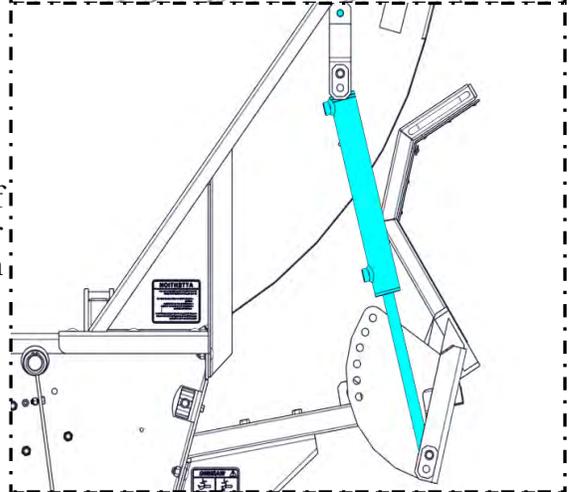


8.1 Hydraulic Deflector Kit Installation

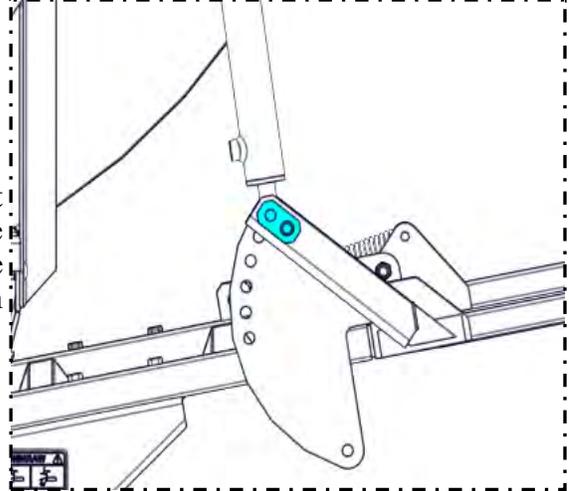
- 4) Install the second cylinder mounting pin (3-1/4"), secure with 3/8" bolt, washer, and lock nut.



- 5) Extend the cylinder to its maximum point of extension, making sure that the deflector shield does not come closer than 1" away from contacting the bale shroud.



- 6) After making sure the deflector shield is free to move without hitting the bale shroud, retract the cylinder until it is closed. Watch to make sure that cylinder does not put excessive pressure upwards on the deflector shield in this position.

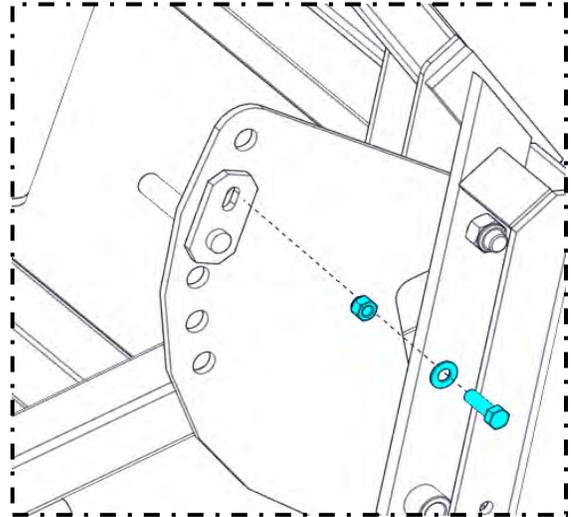


If there is excessive pressure on the deflector shield, loosen the bolts holding the top cylinder mount, and adjust its position down slightly within the slotted holes. After adjusting the top cylinder mount, recheck that the deflector does not come closer than 1" away from contacting the bale shroud. Further adjustment is available by positioning the table and support brackets as necessary.

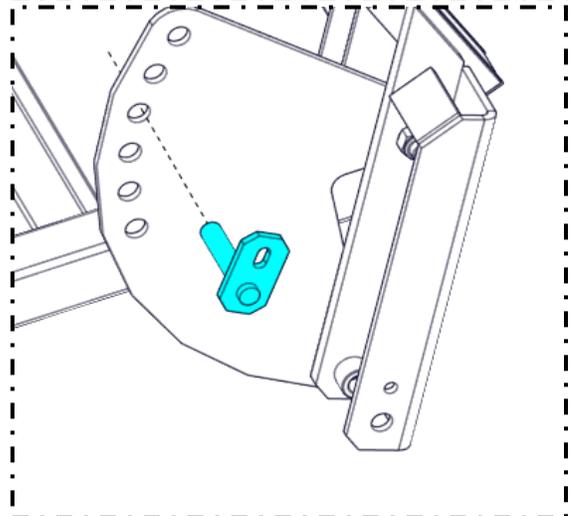
9 PDI (Setup)

As part of the shipping process, your Bale Processor (If equipped with a hydraulic deflector kit) will require some setup. Please follow the steps below to get your Bale Processor set up for use.

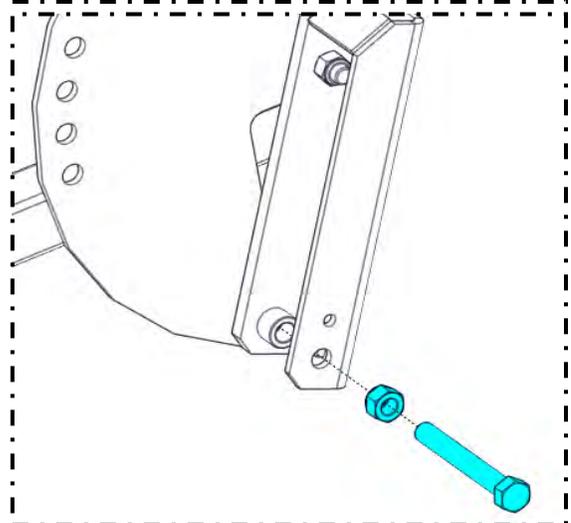
1. Remove cylinder mounting pin from the deflector lock plate by removing the 3/8" bolt/nut. **DO NOT DISCARD.**



2. Remove the Cylinder Mounting Pin.

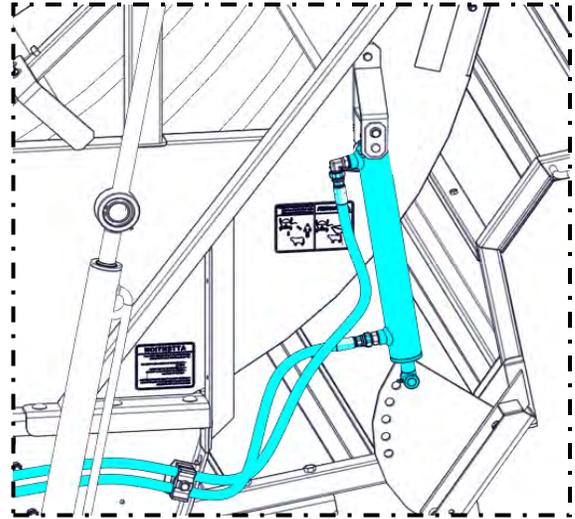


3. Remove and discard the 5/8" bolt holding the deflector shield in the vertical position.

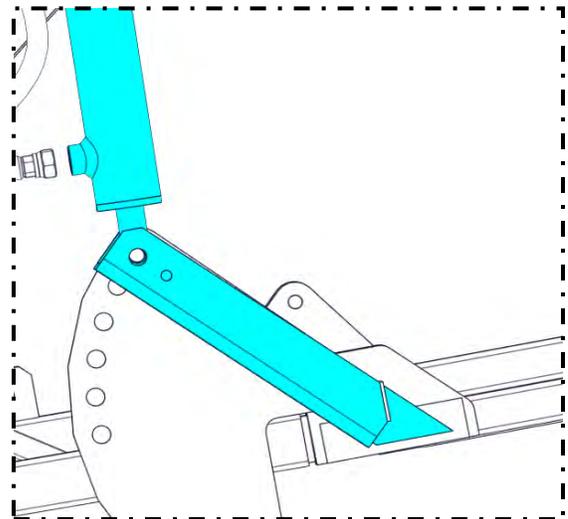


9 PDI (Setup)

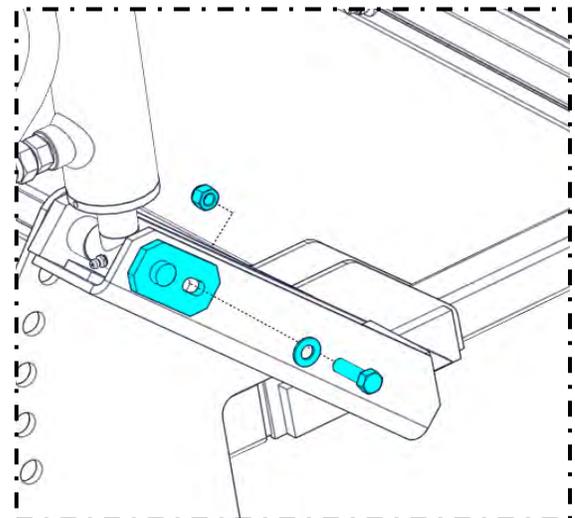
- 4) Cut the ties holding the hydraulic cylinder and hoses to the Bale Processor body. Allow it to swing freely.



- 5) Rotate the Deflector Shield and the Hydraulic Cylinder until the mounting holes align.



- 6) Install the Cylinder Mounting Pin removed in step 2. Secure in place using the 3/8" bolt, flat washer, and Nyloc nut removed in step 1.



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