MacDon

Model 1000
Bale Carrier

OPERATOR'S &
PARTS MANUAL

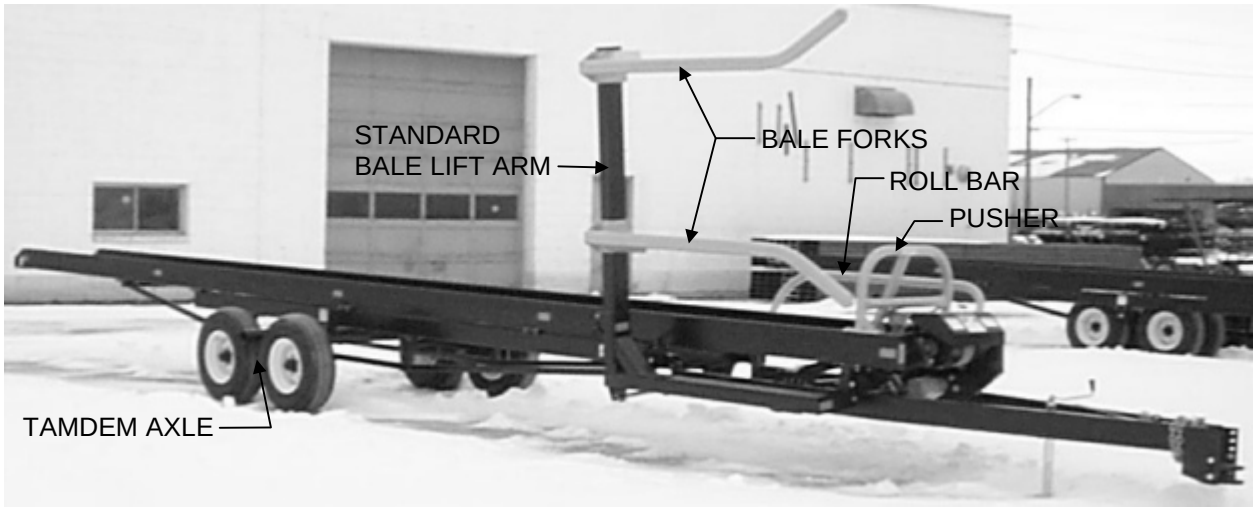
INTRODUCTION

Your new bale carrier is designed to retrieve and transport a wide range of round bales. Sizes that can be accommodated range from 4’ (1.2 m) diameter to 6’ (1.8 m) diameter in a variety of hay crops as well as small grain and flax straw.

This manual contains useful information regarding operation, safety, and maintenance. Keep this manual handy for reference and to pass on to new operators or owners.

Call your bale carrier dealer if you need assistance, information, or additional copies of the manual.

NOTE: Right and Left designations are determined from the operator's position, facing forward.



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SAFETY

SAFETY ALERT SYMBOL

This safety alert symbol indicates important safety messages in this manual and on safety signs on the bale carrier.

This symbol means:

ATTENTION !
BECOME ALERT !
YOUR SAFETY IS INVOLVED !

Carefully read and follow the safety message accompanying this symbol.

Why is SAFETY important to you? THREE BIG REASONS:

- **!** ACCIDENTS DISABLE AND KILL
- **!** ACCIDENTS COST
- **!** ACCIDENTS CAN BE AVOIDED

SIGNAL WORDS

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

DANGER

Indicates an imminently hazardous situation that, if not avoided, WILL result in death or serious injury. This signal word is 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

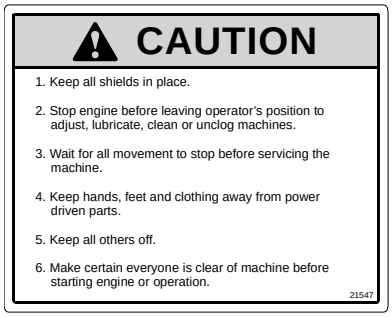
Indicates a potentially hazardous situation that, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.

SAFETY SIGNS

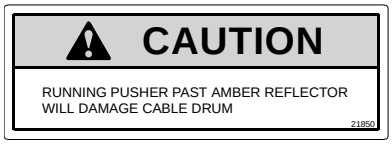
The safety signs reproduced below appear on the bale carrier at the locations listed. Make sure all safety signs are clearly legible. Signs that have become illegible should be replaced. New signs can be purchased from your dealer or directly from the manufacturer. If new parts are installed, make sure that the appropriate signs are in place, if applicable.

To install safety signs:

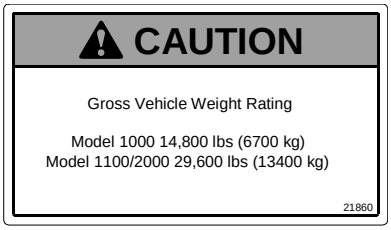
1. Be sure the installation area is clean and dry.
2. Decide on the exact location before you remove the decal backing paper.
3. Remove the smaller portion of the split backing paper.
4. Place the sign in position and slowly peel back the remaining paper, smoothing the sign as it is applied.
5. Small air pockets can be smoothed out or pricked with a pin.



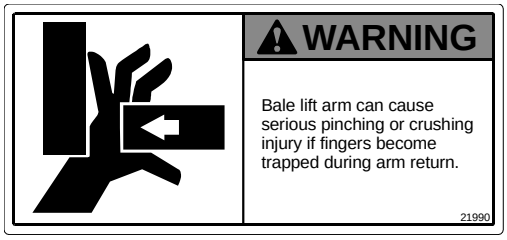
CABLE DRUM GUARD



PUSHER



LEFT OUTSIDE CARRIER BEAM (front)



SUBFRAME

CABLE DRUM GUARD

ROLL BAR

CHAIN GUARD

BALE LIFT ARM

SUBFRAME

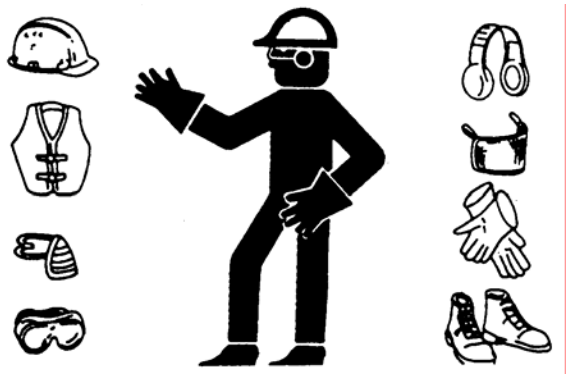
GENERAL SAFETY

The following are general farm safety precautions that should be part of your operating procedure for all types of machinery.

1. **Protect yourself.**

   When assembling, operating and servicing machinery, wear all the protective clothing and personal safety devices that COULD be necessary for the job at hand. Don't take chances.

   You may need:
   - **a hard hat.**
   - **protective shoes with slip resistant soles.**
   - **protective glasses or goggles.**
   - **heavy gloves.**
   - **wet weather gear.**
   - **respirator or filter mask.**
   - **hearing protection. Be aware that prolonged exposure to loud noise can cause impairment or loss of hearing. Wearing a suitable hearing protective device such as ear muffs (A) or ear plugs (B) protects against objectionable or loud noises.**



PROTECT YOURSELF

PROTECT AGAINST NOISE

2. **Provide a first-aid kit for use in case of emergencies.**

3. **Keep a fire extinguisher with the machine. Be sure the extinguisher is properly maintained and be familiar with its proper use.**

4. **Keep young children away from machinery at all times.**

5. **Be aware that accidents often happen when the operator is tired or in a hurry to get finished. Take the time to consider the safest way. Never ignore warning signs of fatigue.**

BE PREPARED FOR EMERGENCIES

6. **Wear close-fitting clothing and cover long hair. Never wear dangling items such as scarves or bracelets.**

7. **Keep hands, feet, clothing and hair away from moving parts. Never attempt to clear obstructions or objects from a machine while the engine is running.**

8. **Keep all shields in place. Never alter or remove safety equipment.**

9. **Use only service and repair parts made or approved by the equipment manufacturer. Substituted parts may not meet strength, design, or safety requirements.**

10. **Do not modify the machine. Unauthorized modifications may impair the function and/or safety and affect machine life.**

11. **Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.**

12. **Keep the area used for servicing machinery clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Be sure all electrical outlets and tools are properly grounded.**

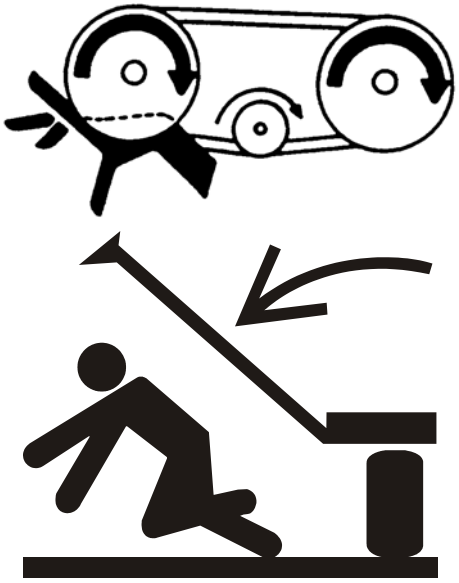
13. **Use adequate light for the job at hand.**

14. **Keep machinery clean. Straw and chaff on a hot engine are a fire hazard. Do not allow oil or grease to accumulate on service platforms, ladders or controls. Clean machines before storage.**

15. **Never use gasoline, naphtha or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.**

16. **When storing machinery, cover sharp or extending components to prevent injury from accidental contact.**

NEVER WEAR LOOSE
OR DANGLING CLOTHES



KEEP AWAY FROM HAZARDS

KEEP SERVICE AREA CLEAN AND DRY

SPECIFICATIONS

DIMENSIONS:

Length: 43’ (13.1 m)
Deck Length: 36’ (11.0 m)
Width: 8’ 6” (2.6 m)
Weight (empty): 4,400 lbs (1,995 kg)

CAPACITY:

GVW: 14,800 lbs (6,713 kg)
8 – 4’ bales
7 – 5’ bales

TIRES:

11L x 15 - 6 ply, rib implement, load range D (max. load 3,744 lbs at 60 psi for speeds less than 25 mph)
6 bolt hubs with twine guards
Heavy duty wheels

CONTROL HANDLE:

Power: 12v
Fuse: 10 amp

HYDRAULICS:

Two double acting auxiliary circuits required

LIFT CYLINDER: 3” bore x 16” stroke – 24” closed center with restrictor
TILT CYLINDER: 3” bore x 16” stroke – 24” closed center with restrictor

TRACTOR:

60 hp (45 kW) minimum

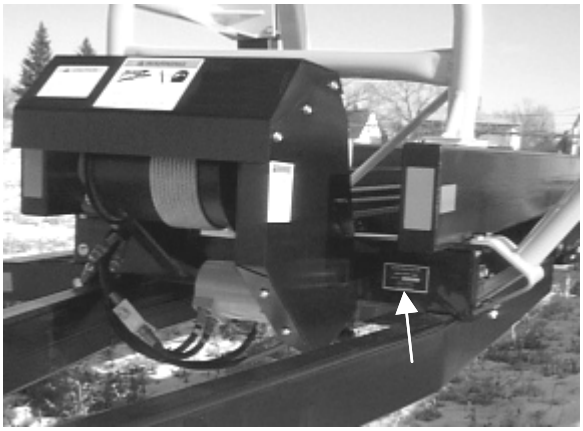
HITCH WEIGHTS:

Frame assembled (no fork): 520 lbs (236 kg)
Frame assembled (with standard pick up arm): 665 lbs (302 kg)
Frame assembled (with rotating pick up unit): 930 lbs (422 kg)

SERIAL NUMBER LOCATION

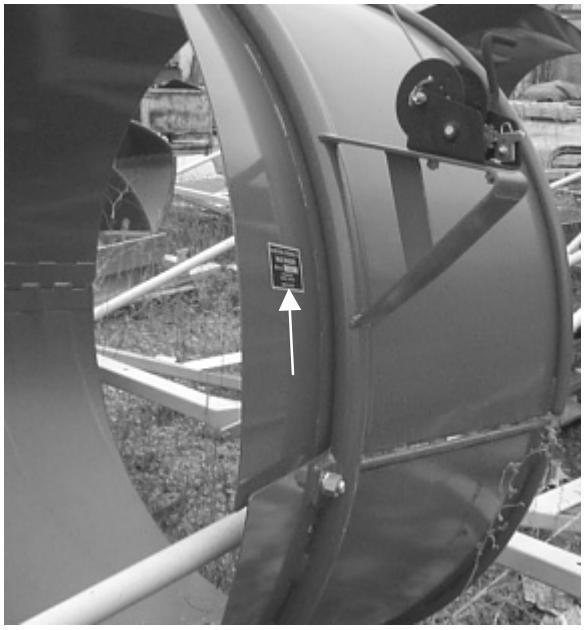
The serial number plate is located on the left side of the FRONT CROSSMEMBER. Please record the serial number in the space provided.

1000 Bale Carrier:_____



BALE CARRIER SERIAL PLATE LOCATION

Silage Bagger (optional):_____



BAGGER SERIAL PLATE LOCATION

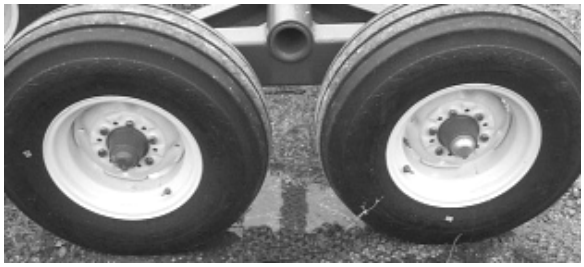
ASSEMBLY INSTRUCTIONS

The bale carrier is usually shipped fully assembled from the manufacturing plant. However, some components may have been dismantled to reduce shipping costs and it is normally the dealer's responsibility to complete assembly.

If your unit requires assembly please follow the assembly instructions outlined below.

CAUTION: Make sure area is clear of obstructions, well lit, and has sufficient room for safe assembly.

1. Install wheels onto each TANDEM AXLE (NOTE: The valves should be facing away from the HUBS). HUB BOLTS should be torqued to 125 ft-lbs (use of a thread locking compound such as Locktite 271 is recommended).



BOLT WHEELS TO TANDEM AXLE

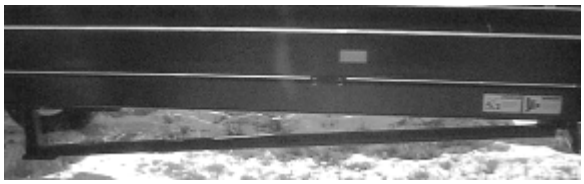
2. Slide a TANDEM AXLE together with a TANDEM AXLE LOCATOR onto AXLE BEAM. Position TANDEM AXLE as close as possible to the bolt plate and lock LOCATOR in place by tightening its set screw. Slide the other TANDEM AXLE and TANDEM AXLE LOCATOR onto opposite end of AXLE BEAM, position it as close as possible to the bolt plate and lock LOCATOR in place.

TANDEM AXLES ON AXLE BEAM

3. Bolt AXLE BEAM to the second (from the rear) bolt plate on the underside of SUBFRAME using 1/2" x 1-3/4" grade 5 bolts. NOTE: the longest side of the BEAM must be placed to the right of the SUBFRAME and the reflectors on the TANDEM AXLES must face rearward.

BOLT AXLE BEAM TO FRAME

4. Bolt FRONT BRACES to the underside of SUBFRAME using 1/2” x 1-1/2” grade 5 bolts.



BOLT FRONT BRACES TO SUBFRAME

5. Bolt REAR BRACES to the underside of SUBFRAME and REAR CROSSMEMBER using 1/2” x 1-1/2” grade 5 bolts.

BOLT REAR BRACES TO SUBRFRAME AND REAR CROSSMEMBER

6. Bolt CENTER BRACES to FRONT & REAR BRACES using 1/2” x 3-1/2” grade 5 bolts with flat washers on top of CENTER BRACES.

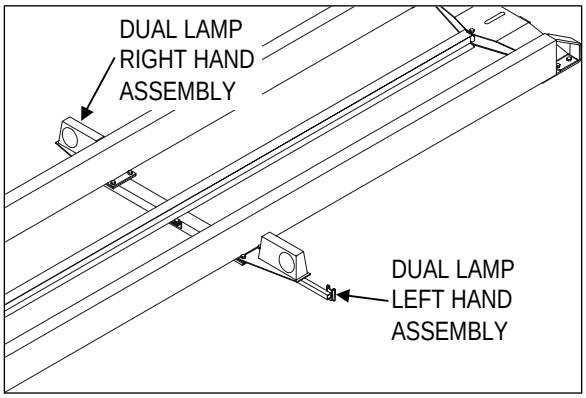
BOLT CENTER BRACE TO FRONT & REAR BRACE

7. Bolt ROLL BAR to left side of FRONT CROSSMEMBER and SUBFRAME using 1/2” x 1-1/2” bolts.

BOLT ROLL BAR TO SUBFRAME & FRONT CROSSMEMBER

8. Bolt DUAL LAMP LEFT HAND ASSEMBLY to the *topside* of the left side of REAR CROSSMEMBER, NOTE: The red lamp is to be visible from the rear. Connect HARNESS coupler to CROSSMEMBER HARNESS.

9. Bolt DUAL LAMP RIGHT HAND ASSEMBLY to the *topside* of the right side of REAR CROSSMEMBER, NOTE: Red lamp to be visible from rear. Connect HARNESS coupler to CROSSMEMBER HARNESS.



INSTALL LAMP ASSEMBLIES

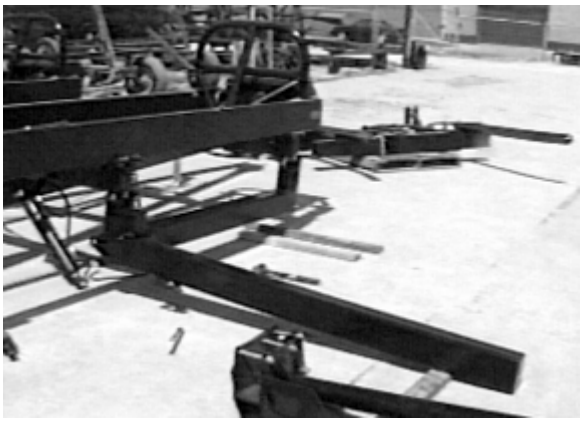
LOADING ARM ASSEMBLY

Model 1000 Bale Carriers can be equipped with either a “Fixed Loading arm” or the fully hydraulic “Rotating Pick Up arm” (RPU).

FIXED ARM

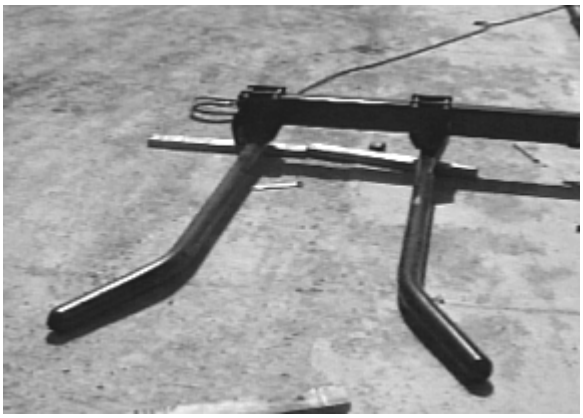
NOTE: The “Fixed Loading arm” may also be equipped with the optional 1/4 turn bale deflector.

1. Connect RIGHT BALE LIFT ARM to right side of FRONT CROSSMEMBER and SUBFRAME using LIFT ARM PIN and secure with 3/8” x 2-1/2” bolt. Use SHORT CYLINDER PIN to attach rod end of LIFT CYLINDER to BALE LIFT ARM (secure with 3/8” x 2” bolt).



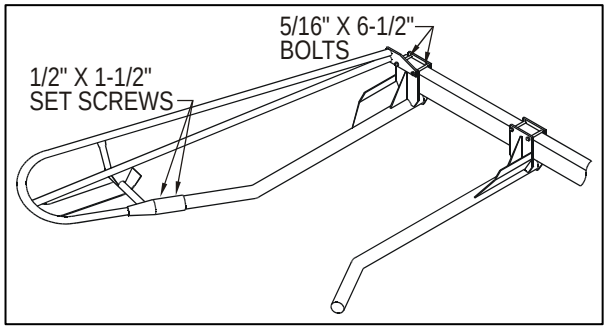
STANDARD BALE LIFT ARM

2. Slide a LEFT and RIGHT BALE FORK onto BALE LIFT ARM and secure with 5/8” x 6” bolts with the heads forward. Position FORKS to suit bale. It is recommended that the outside BALE FORK be positioned at the end of BALE LIFT ARM and the inner BALE FORK about 36” (91 cm) from the end.



BALE FORKS

3. 1/4 Turn Deflector assembly: Attach the RIGHT BALE DEFLECTOR to the outside BALE FORK with 5/16” x 6-1/2” bolts (heads forward) and 1/2” x 1-1/2” set screws.

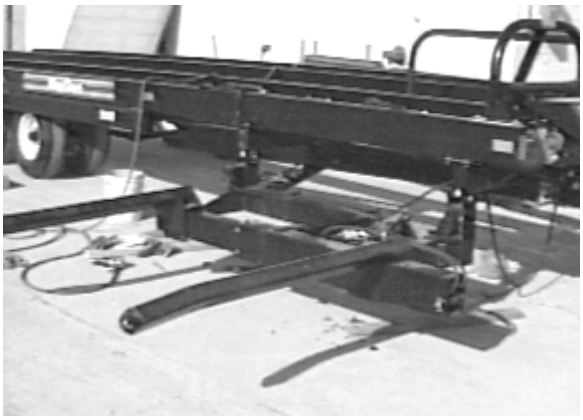


INSTALL BALE DEFLECTOR

ROTATING PICK UP ARM (RPU)

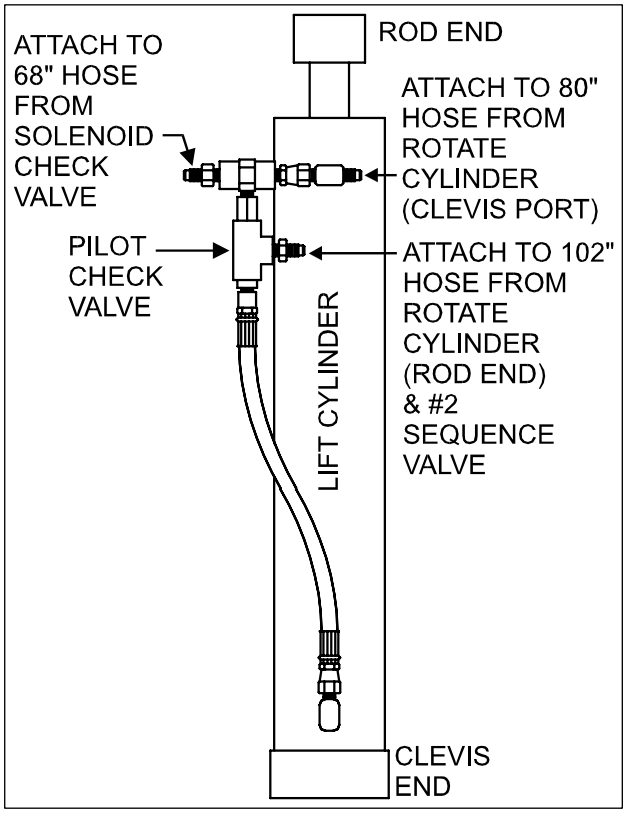
The Rotating Pick Up arm is designed to automatically pick up the bale, rotate it 90° and load it onto the carrier. This allows the operator to follow the baler around the field.

1. Remove the RPU from its shipping pallet and connect ROTATING BALE LIFT ARM to front and second crossmembers using LIFT ARM PIN supplied. Secure with 3/8” x 2-1/2” bolt. Use SHORT CYLINDER PIN to attach rod end of LIFT CYLINDER to BALE LIFT ARM (secure with 3/8” x 2” bolt).



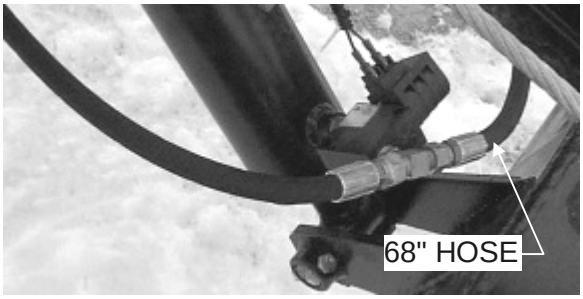
ROTATING PICKUP UNIT

2. Detach hoses from the couplings installed on the LIFT CYLINDER. Remove elbow fitting from <u>rod end</u> port and install a male tee. Install pilot check valve assembly (the hose end should connect to elbow in the <u>clevis end</u> port and the female swivel to tee fitting).



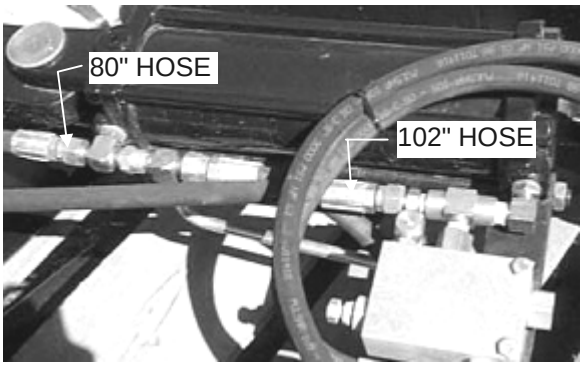
PILOT CHECK VALVE ASSEMBLY

3. Connect 68” hose from tee on SOLENOID CHECK VALVE to male connector on pilot check valve assembly.



SOLENOID CHECK VALVE

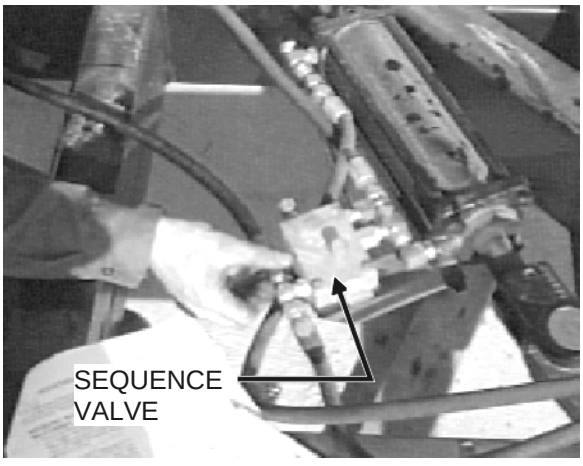
4. Connect 102” hose from <u>rod end</u> port of the ROTATE CYLINDER and #2 port of the sequence valve to straight male adapter on the pilot check valve. Remove 80” hose from elbow fitting in port #2 of the SOLENOID VALVE. Connect one end of 80” hose to <u>clevis end</u> of the ROTATE CYLINDER and the opposite end to tee fitting on LIFT CYLINDER. NOTE: Make sure both hoses are inserted through hose loops along the top of the BALE LIFT ARM.



ROTATE CYLINDER HYDRAULICS

5. Connect 60” hose to elbow fitting in port #2 of the solenoid valve. Connect opposite end to male tee in port #1 of sequence valve.

SOLENOID VALVE



ATTACH HOSE TO SEQUENCE VALVE

CONVERTING FIXED ARM TO RPU

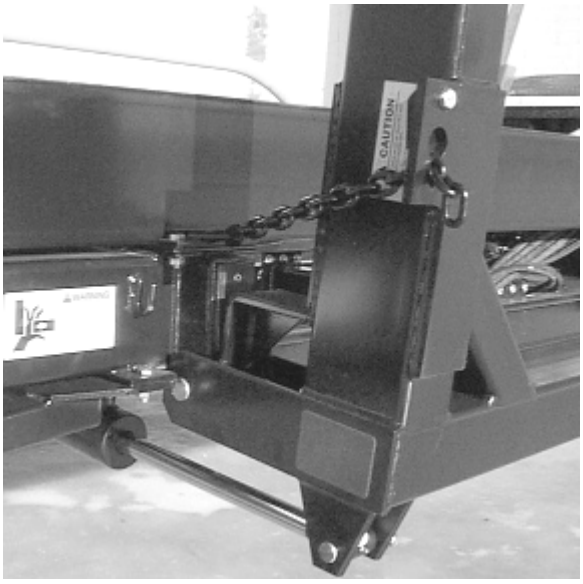
1. Remove existing Fixed Loading arm. Remove the RPU from its shipping pallet and connect ROTATING BALE LIFT ARM to front and second crossmembers using LIFT ARM PIN supplied. Secure with 3/8" x 2-1/2" bolt. Use SHORT CYLINDER PIN to attach rod end of LIFT CYLINDER to BALE LIFT ARM (secure with 3/8" x 2" bolt).

Follow steps 2 to 5 in the previous section ("Rotating Pick Up Arm").

Contact your dealer or the manufacturer if there are any assembly details not clearly understood.

FIXED LOADING ARM (RAISED POSITION)

CAUTION: Use the SAFETY LOCK BRACKET to secure the BALE LIFT ARM in the raised position <u>FOR TRANSPORT</u>. Make sure the CHAIN LATCH (on Fixed Loading arm) is in



SAFETY LOCK BRACKET

OPERATION

YOUR RESPONSIBILITIES AS AN OWNER/OPERATOR

CAUTION:

1. It is your responsibility to read and understand this manual completely before operating the bale carrier. Contact your dealer if an instruction is not clear to you.

2. Follow all safety messages in the manual and on safety signs on the machine.

3. Remember that **YOU** are the key to safety. Good safety practices protect you and the people around you.

4. Before allowing anyone to operate the machine, for however short a time or distance, make sure they have been instructed in its safe and proper use.

5. Review the manual and all safety related items with all operators annually.

6. Be alert for other operators not using recommended procedures or not following safety precautions. Correct these mistakes immediately, before an accident occurs.

7. Maintain the bale carrier correctly. Be sure all controls are functioning properly before use.

8. Do not modify or remove shields. Unauthorized modifications may impair the function and/or safety and affect machine life.

9. The safety information given in this manual does not replace safety codes, insurance needs, or laws governing your area. Be sure your machine meets the standards set by these regulations.

READ THE OPERATOR'S MANUAL

FOLLOW SAFETY RULES

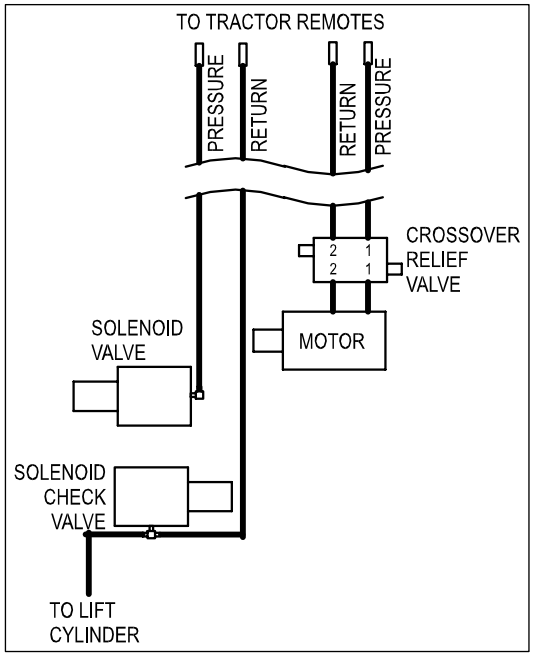
TO THE NEW OPERATOR

It's natural for an operator to be anxious to get started with a new machine. Please take the time to familiarize yourself with the bale carrier by reading this manual and all safety signs before attempting operation. Study the operating procedures so you will know what to expect.

HYDRAULIC/ELECTRICAL CONTROL

- Two remote hydraulic outlets are required to operate the bale carrier. One outlet controls the MOTOR and the second outlet controls the LOADING ARM / BED TILT functions.

- The loading arm and the bed tilt (bale unloading) functions share a common oil supply but are controlled by means of the hydraulic lever and an electric switch mounted to the hydraulic lever.

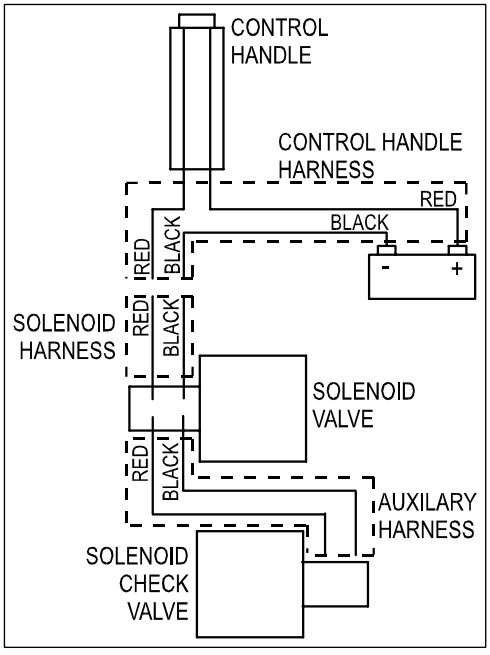


HYDRAULIC HOOK-UP

- Mount CONTROL HANDLE to the tractor hydraulic lever that will be used to operate carrier hydraulic system (LOAD / TILT and PUSH systems).

- Connect control handle wiring harness to the SOLENOID HARNESS. Connect SOLENOID HARNESS to SOLENOID VALVE.

- Battery connections
  Attach the red and black wires (from the control handle) to the battery or main tractor power posts:
  Red to positive terminal
  Black to negative



CONTROL HANDLE WIRING

ATTACHING BALE CARRIER TO TRACTOR

CAUTION: Shut off tractor, engage parking brake and remove key before working around hitch.

CAUTION: Never attach bale carrier to rear axle or three point hitch arms. Use only the drawbar. Make sure tractor size is adequate (60 hp or greater) and drawbar is capable of supporting the torque whether empty or loaded.

1. HITCH CLEVIS adjustment: With the bale carrier on level ground the BALE FORKS should be about 2” (5 cm) above the ground when the BALE LIFT ARMS are level and fully lowered to the ground.

2. Using the tongue jack, raise tongue to align with hitch pin. Position tractor and secure with locking type drawbar pin (not supplied). Use an approved hitch pin with mechanical retainer.

3. Route SAFETY CHAIN around the HITCH CLEVIS, around drawbar support and back hook. IMPORTANT: Adjust CHAIN length to remove all slack except what is needed for turns.

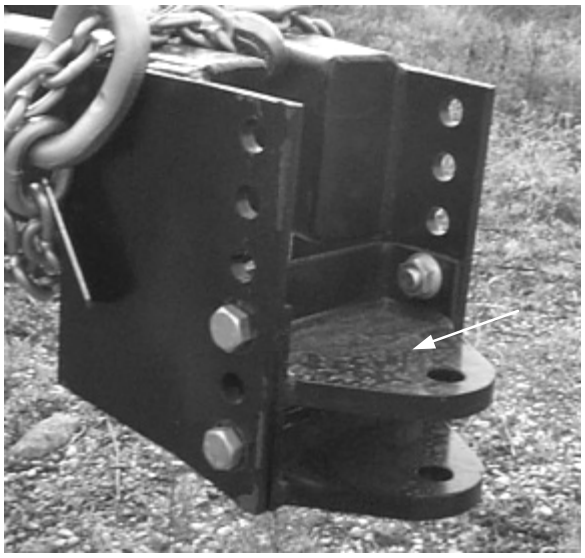
4. Do not use intermediate support on drawbar as attaching point.

5. Store SAFETY CHAIN off the ground when not in use. If safety chain is damaged in any way, contact your dealer for a replacement.

6. If tractor is equipped with adjustable flow control, set flow to CYLINDERS to about 10 gpm.

7. NOTE: Connect quick couplers to tractor remote hydraulic outlets so that tractor graphics correspond with cylinder movement.

8. Connect lighting coupler.



HITCH CLEVIS

ADJUSTING RIGHT WHEELS

The wheels on the right side of the carrier can be adjusted to prevent the FRAME from lifting when loading heavy bales.

The right TANDEM AXLE should be positioned close to its outermost limit only when loading the heaviest hay bales. For lighter hay and straw bales, keep it as close as possible to its innermost position.

Any excess AXLE BEAM can be cut off to make it easier to go through gates. If AXLE BEAM is cut, the inner pipe must be re-welded.

CABLE TENSION

Correct cable tension is <u>critical</u> to the service life of the pusher cable.
A loose CABLE will not track true and may result in cable damage.

It is normal for a new cable to stretch during initial operation. CHECK tension after each load for the first six loads.

CORRECT TENSION: With the machine unloaded and bale pusher at the forward position adjust cable tension until LOWER CABLE just clears the CROSSMEMBERS.

After initial break-in check CABLE tension frequently.

Cable damage due to neglect is <u>not</u> covered by warranty.

CHAIN TENSION

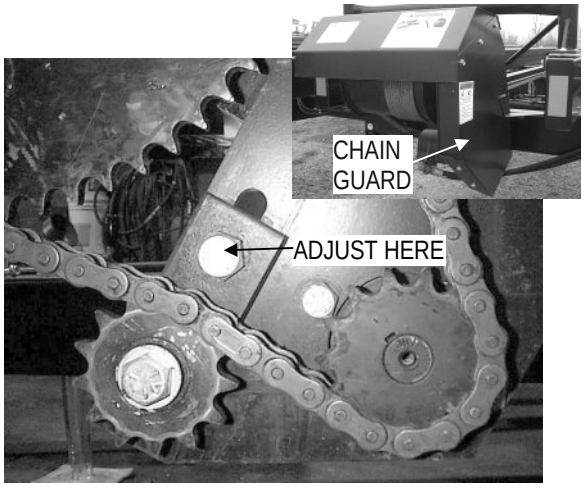
Check for proper CHAIN tension and sprocket alignment every eight hours for the first 24 hours of operation. Check weekly thereafter.

Adjust CHAIN TIGHTENER SPROCKET assembly to remove any slack from the CHAIN.

NOTE: The CHAIN is accessed by removing the CHAIN GUARD. Ensure that GUARD is in place before operating the bale carrier.

RIGHT TANDEM AXLE

CABLE TENSION ADJUSTMENT



ADJUST CHAIN TENSION

CARRIER OPERATION

WARNING: When transporting on public roadways use amber flashers day or night. Do not tow over 20 mph (32 km/h) when loaded.

CARRIER CONTROLS

The control handle (attached to the top of the tractor's hydraulic lever) is fitted with one (1) button type switch. Depressing the button, while operating the hydraulic lever, results in the tilting or raising of the bale deck.

The control grip is connected to the solenoid valve mounted on the tilt cylinder of the bale carrier.

CONTROL HANDLE

PRE-START CHECKLIST

Check the following areas daily before operating the bale carrier. This should ensure that the bale carrier functions properly and avoid breakdowns and accidents.

1. Check that all component and assemblies are complete and that all shields are in place.
2. Check for missing fasteners and replace if necessary (it is normally not necessary to retighten fasteners on a daily basis).
3. Tighten loose wheel bolts, especially if tire has been removed recently (wheel bolts do not normally require daily inspection).
4. Clean bale carrier of any foreign material that may have accumulated from previous runs.
5. Lubricate all points requiring daily lubrication.
6. Check and maintain proper tire pressure.
7. Check CABLE tension and adjust if necessary.
8. Ensure chain is disengaged from SAFETY LOCK BRACKET before lowering BALE LIFT ARM.

LOADING BALES

DANGER: Make sure area is clear before lowering BALE LIFT ARMS. Failure to do so could result in serious injury or death.

The bale lift arm is used to load bales onto the right side of the carrier.

NOTE: Before loading bale the PUSHER must be positioned at the FRONT of the carrier deck.

Driving direction and position, relative to the bale depends on which type of loading arm is used,

1. **Standard Pick Up** arm requires the operator to drive at 90° to the baling direction. The bales are loaded “End on” (the bale is loaded onto the carrier deck by operating the hydraulic lever until the bale rolls off pick up arm and onto CARRIER BEAMS).

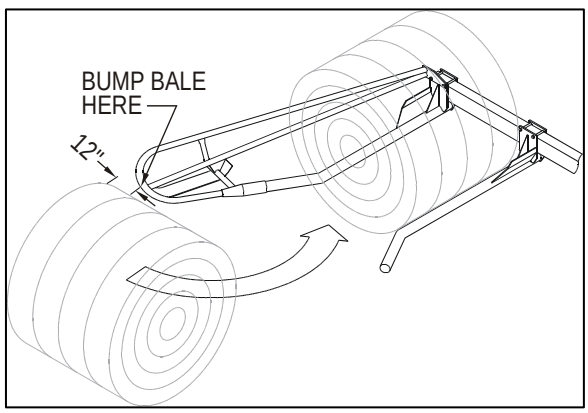
2. **Bale deflector** attached to standard pick up arm.
   Allows the bales to be picked up from either “End on” or “Side on” (same direction as baler traveled).

   When picking up bales in **“Side on”** direction, the bale deflector rotates the bale 90° before it is lifted up onto the carrier. Forward travel is used to rotate the bale.

   Approach the bale so that the outer end of the bale rides up on the bale deflector as the loading arm moves under the bale. NOTE: The bale should be contacted about 12” (30 cm) from its outer end. Contacting the bale further to the inside may result in damage to the deflector and/or bale lift arm.

STANDARD PICKUP ARM LOADING

BALE DEFLECTOR



LOADING BALE “SIDE ON”

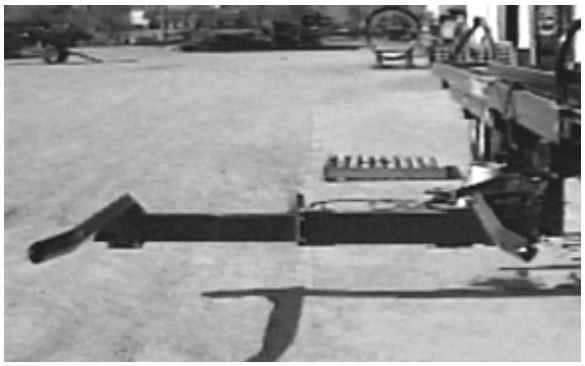
To pick up bales that are placed **"End on"**, drive so that the inner arm of the loading fork is against the inner edge of the bale. The bale will then be loaded onto the carrier in the same direction as it was picked up.

3. **Rotating pick up arm (hydraulic)**
   The carrier travels in the same direction as the baler. Bales are approached "Side on".

ROTATING PICK UP UNIT

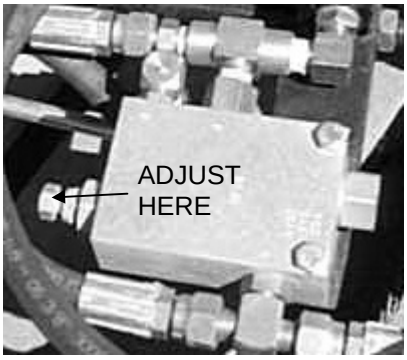
ROTATING PICK UP ARM OPERATION

The ADJUSTABLE FORK on the SLIDING ARM should be set so the distance between the forks with the squeeze cylinder fully extended is about 6" (15 cm) wider than the width of the bales you are loading.



FULLY EXTENDED SLIDING ARM

The sequence valve attached to the rotate cylinder is preset to open at 1800 psi. If the bale falls out of the forks before rotating and lifting operations are completed, either reduce the space between the forks by moving the ADJUSTABLE FORK in or increase the opening pressure of the sequence valve. This can be done by removing the cap and turning the screw in. Be sure to replace the cap.



SEQUENCE VALVE ADJUSTMENT

Lower BALE LIFT ARM. Drive forward until FORKS are positioned around ends of bale with the inside stationary fork as close as possible to bale. Engage hydraulics. This will start an automatic sequence. First oil flows to the squeeze cylinder. When the squeeze pressure reaches 1800 psi, the line to the rotate and lift cylinder opens and the bale is rotated and lifted into position.

Reverse the oil flow and the squeeze cylinder opens dropping the bale onto the carrier. The LIFT ARM then returns to the lowered position ready to pick up the next bale. With a little practice an operator can pick and load bales "on the go".

BALE PUSHER OPERATION

Start PUSHER and move bale far enough to the rear to provide room to load another bale (NOTE: lower Loading Arm before operating PUSHER).

Return PUSHER all the way to the front.

The PUSHER is activated by operating the separate hydraulic lever.

NOTE: There is a hydraulic bypass valve that provides protection for the system when the pusher hits the front stop.

AVOID OVER-BALANCING THE LOAD. DO NOT MOVE BALES TO REAR UNTIL READY TO LOAD THE NEXT BALE.

The bale carrier is designed to handle the majority of dry round bales but the specified GVW of 14,800 pounds (6,713 kg) **must not be exceeded**.

Heavy, wet or sticky bales may require hydraulic pressures higher than some tractors can deliver. Contact your dealer for possible solutions.

UNLOADING

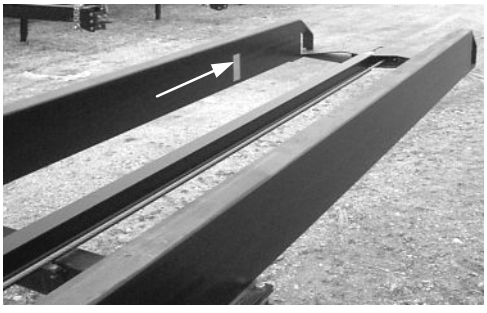
DANGER: Make sure area is clear before unloading. Failure to do so could result in serious injury or death.

1. Tilt carrier bed up by pressing the button and operating the hydraulic lever.

2. Push bales off with PUSHER by operating the separate hydraulic lever.

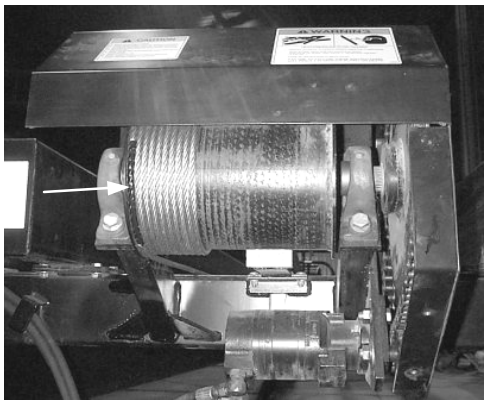
3. Once rear bale has been pushed off the carrier, driving slowly forward at the same time as pushing the bales back (unloading) will keep the bales in a neat row.

4. When amber reflector on inside of CARRIER BEAM becomes visible (and the rear limit marker on the CABLE is visible on the CABLE DRUM) the PUSHER is 26” (66 cm) from end of CARRIER BEAM. Stop PUSHER and drive forward. The last bale will fall off and the PUSHER can be returned to the forward position ready for another load.



AMBER REFLECTOR LOCATION

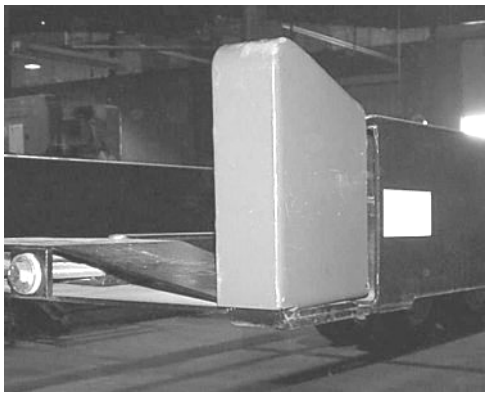
DO NOT RUN PUSHER ALL THE WAY TO THE END, THE RESULTING SHOCK LOAD MAY CAUSE DAMAGE TO DRIVESHAFT OF THE CABLE DRUM AND CABLE.



REAR LIMIT CABLE MARKER

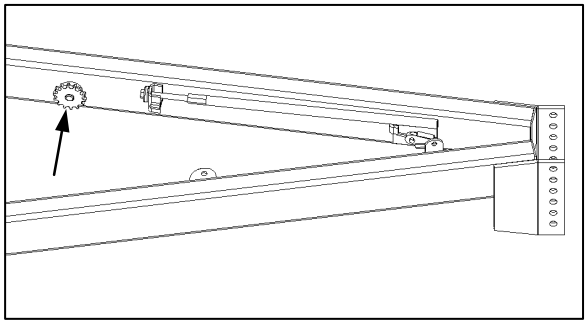
If PUSHER requires excessive force to unload bales we recommend that the top of the CARRIER BEAMS and GUIDE RAIL be painted with a graphite paint such as Slip Paint™.

The BALE RETAINERS attached to the rear of the CARRIER BEAMS are designed to prevent the rear bale from sliding off during transport. Removing the retainers will slightly reduce the amount of force needed to unload the bales.

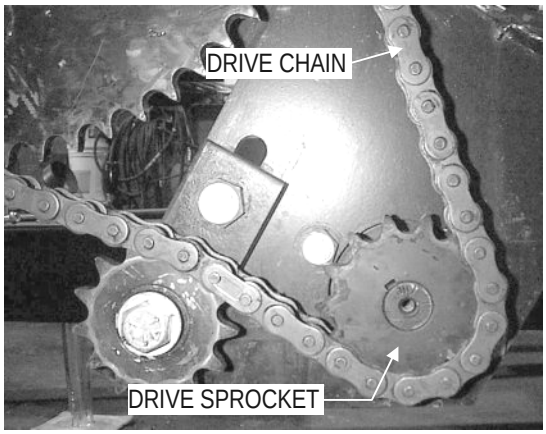


BALE RETAINER

Additional torque may be obtained by replacing the 14 tooth DRIVE SPROCKET with the 11 tooth #60 – 1" bore sprocket provided (the 11 tooth sprocket is stored on the LEFT HITCH BEAM). This will provide approximately 20% greater torque to CABLE DRUM and may be necessary if tractor pressure is low. NOTE: To install the 11 tooth sprocket it will be necessary to remove a "off set" chain link from the pusher drive chain.



SPROCKET STORAGE



INSTALL DRIVE SPROCKET

TRANSPORTING CARRIER

1. A tractor with a minimum of 60 hp (45 kW) and adequate braking capacity to safely control 14,800 lbs. (6,713 kg) GVW trailer load is required to tow the carrier.

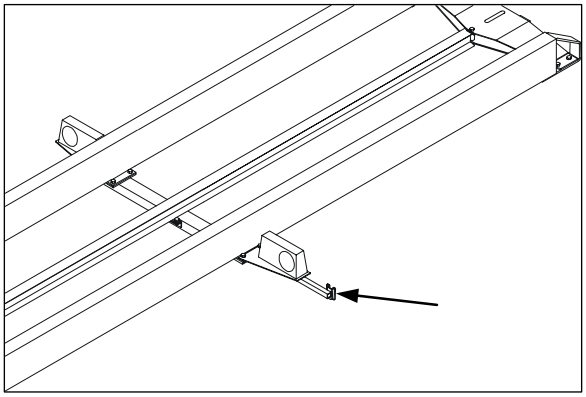
WARNING:

2. **Do not tow over 20 mph (32 kph) when loaded.**

3. **Turn on flashing lights when transporting on public roadways.**

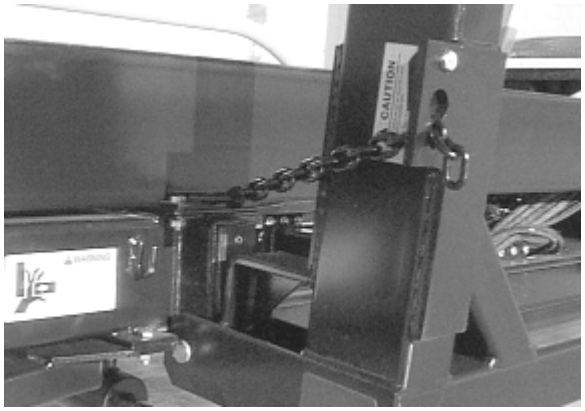
4. **Obey local regulations regarding road transport.**

5. **Install removable SMV sign (not supplied) on LIGHT/SMV BRACKET.**



LIGHT/SMV BRACKET

6. **Raise BALE LIFT ARM and use the SAFETY LOCK BRACKET before transporting. Make sure the CHAIN LATCH (on Fixed Loading arm) is in place to prevent CHAIN from dislodging.**



SAFETY LOCK BRACKET

MAINTENANCE

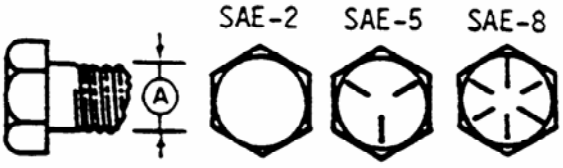
WARNING: Place all controls in neutral, stop engine, set parking brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting or repairing bale carrier.

The following sections detail regular inspections and adjustments. IMPORTANT: Service intervals should be increased when operating in extreme or difficult conditions.

FASTENERS

The tables below list the correct torque values for various bolts and capscrews used on the bale carrier. Tighten **all** bolts to specified values unless otherwise noted.

BOLT DIAMETER "A"	BOLT TORQUE					
	SAE 2		SAE 5		SAE 8	
	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m
1/4"	6	8	9	12	12	17
5/16"	10	13	19	25	27	36
3/8"	20	27	33	45	45	63
7/16"	30	41	53	72	75	100
1/2"	45	61	80	110	115	155
9/16"	70	95	115	155	165	220
5/8"	95	123	160	215	220	298
3/4"	155	225	290	390	400	540
7/8"	170	230	420	570	650	880
1"	225	305	630	850	970	1320



LOCATION	lb-ft	N.m
WHEEL HUB BOLTS	125	170

1. Check all bolts for tightness after the first 10 hours of operation and every 50 hours thereafter.

2. Periodically inspect for broken or missing fasteners. Replace with fasteners of similar size and grade when necessary.

HYDRAULIC SYSTEM

WARNING: To prevent serious injury or death from high-pressure fluid:

- **Relieve pressure on system before repairing, adjusting or disconnecting hydraulic components.**
- **Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.**
- **Seek immediate medical attention if injured by hydraulic fluid piercing the skin.**

1. Keep the hydraulic components clean to prevent contaminants from entering the system.

2. Regularly check the fluid level in the tractor reservoir and follow the maintenance procedures in the tractor Operator's Manual.

3. Regularly inspect cylinders, hoses and fittings for leaks, crimps and abrasions or other signs of wear and tear or impending failure.

4. Replace cut, worn or crimped hoses.

5. Check that all components are in good working condition. Tighten any loose components.

6. Avoid makeshift repairs to the hydraulic system such as clamping or taping fittings or hoses. The system operates at high pressure and failure of such repairs can happen suddenly and without warning resulting in unsafe or hazardous conditions.

7. Hydraulic lines and cylinders must be free of air to function correctly. Air can be bled from the hydraulic system by parking the bale carrier in the field position on a level surface with the tractor engine running and cycling the system.

CHAIN/SPROCKETS

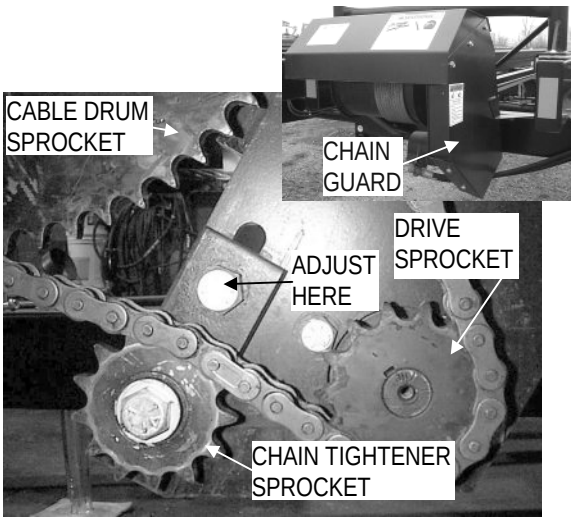
1. Check for proper CHAIN tension and sprocket alignment every eight hours for the first 24 hours of operation.

2. Check weekly thereafter.

3. Adjust CHAIN TIGHTENER SPROCKET assembly to remove any slack from the CHAIN.

4. Apply a SAE light machine oil (or equivalent) with a brush to CHAIN occasionally during the season and especially before out of season storage.

NOTE: The CHAIN and sprockets are accessed by removing the CHAIN GUARD. Ensure that GUARD is in place before operating the bale carrier.



ADJUST CHAIN TENSION

5. If the CHAIN and/or sprockets are removed, ensure that they are reinstalled correctly (the sprockets should all be aligned and the CHAIN must ride *on top* of the CHAIN TIGHTENER SPROCKET).

6. Repaint top of CARRIER BEAMS regularly with Slip Plate™ (available from your dealer) to reduce friction, especially when handling heavier bales.

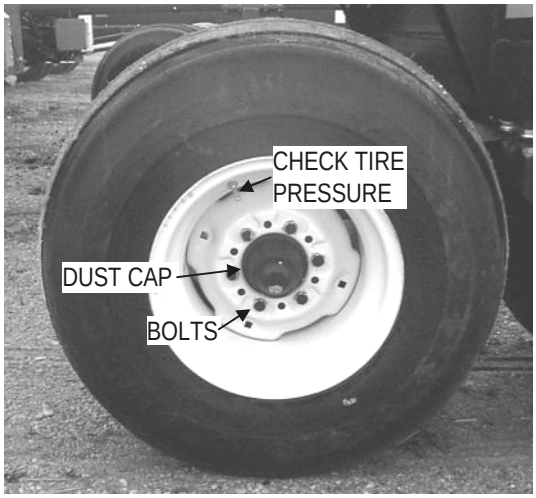
WHEELS/TIRES

Check HUB BOLTS regularly for tightness.

1. Ensure that DUST CAPS are firmly in place.

2. Check tire pressure regularly: 60 psi (414 kPa).

3. The wheel bearings should be inspected and re-packed annually with a SAE multi purpose type grease. When reinstalling the wheels, the HUB BOLTS should be torqued to 125 ft-lbs. (NOTE: The valves should be facing away from the HUBS). A thread locking compound such as Locktite 271 is recommended for the HUB BOLTS.

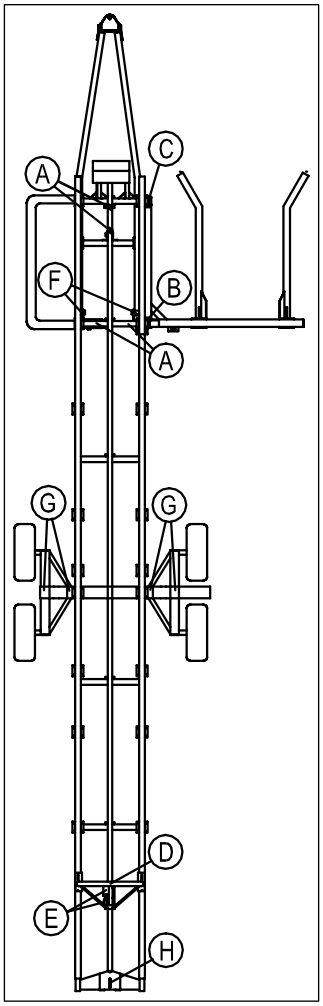


WHEELS AND TIRES

LUBRICATION

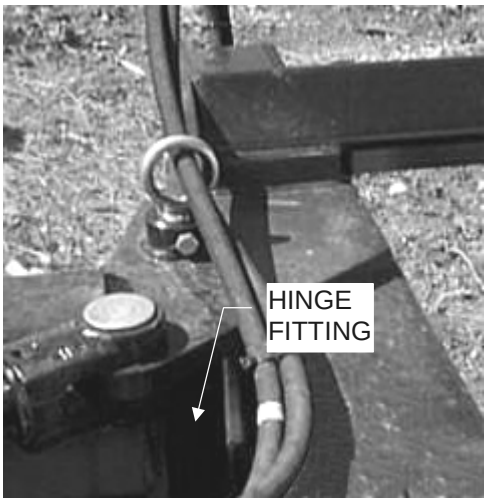
All grease fittings should be lubricated before operating the bale carrier at the start of the season and daily during the season. Use a SAE multi purpose lubricant or equivalent. There are 14 fittings to lubricate on the bale carrier:

- At both ends of each HYDRAULIC CYLINDER - 4 fittings (A).
- Bushing at right end at front of SUBFRAME - 1 fitting (B).
- Bushing at right end of FRONT CROSSMEMBER - 1 fitting (C).
- On PUSHER - 1 fitting (D), and 1 oil fitting on each 4" pulley (E).
- At FRAME end of both HITCH BEAMS - 2 fittings (F).
- On TANDEM AXLES - 4 fittings (G).
- In PULLEY HOLDER at rear of machine - 1 fitting (H).



GREASE FITTING LOCATIONS

Bale Carriers equipped with a Rotating Pick Up arm have one additional grease fitting located at the hinge point.



HINGE POINT GREASE FITTING

NOTE: The CABLE DRUM bearings are sealed and normally do not require greasing.

CABLE

1. Inspect CABLE and PULLEY at the start of each season. Replace frayed or worn CABLES. The CABLE should be cleaned and lubricated with a dry type wire rope lubricant.

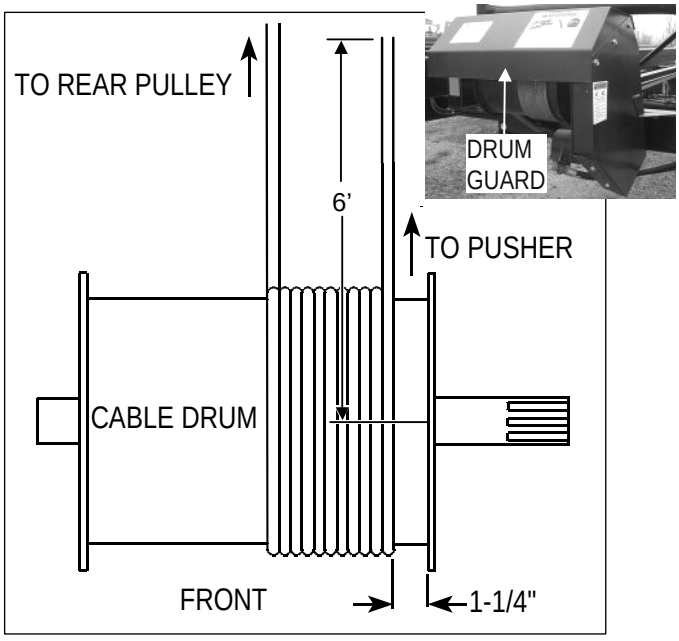
2. Replace PULLEY HOLDER WITH PULLEY if there is excessive wobble in the pulley.

CABLE REPLACEMENT

Replacement CABLES must have a minimum ultimate breaking strength of 14,400 lbs. Follow the installation instructions outlined below.

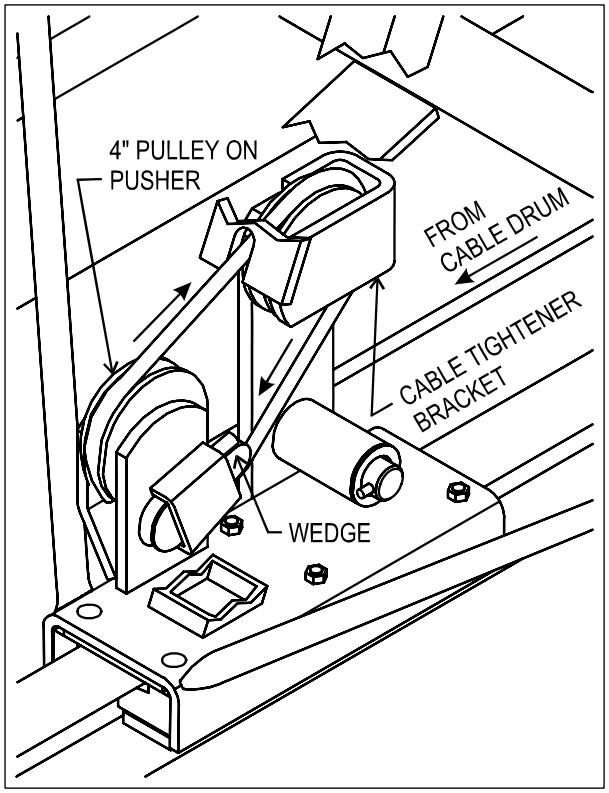
1. Position PUSHER about 18” (46 cm) from front of GUIDE RAIL and prevent PUSHER from sliding forward.

2. Remove DRUM GUARD and wrap CABLE 9-1/2 times around CABLE DRUM starting from non-sprocket bottom side. Bring a 6’ (183 cm) section of cable off the top of the CABLE DRUM 1-1/4” (3 cm) from sprocket side flange.



CABLE DRUM

3. Insert the CABLE and (coming from the TOP of the DRUM underneath the bottom of the 4” pulley on the PUSHER) pull CABLE around to the top of the pulley, then insert CABLE at top of pulley on CABLE TIGHTENER BRACKET and pull it around to the bottom of this pulley. Form loose end of CABLE into a U-shape, insert through narrow end of holder on PUSHER and secure with WEDGE.

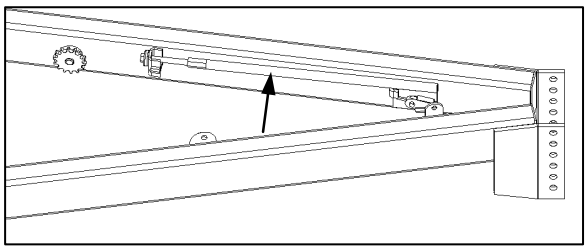


CABLE INSTALLATION (PUSHER FRAME)

4. Position the rear pulley holder to the front of its slot. This is achieved by unscrewing both the rear facing 5/8” bolts on the pulley mount.

5. Pull CABLE tight. Check that rear PULLEY HOLDER WITH PULLEY is in its maximum forward position and wrap long end of CABLE around this pulley.

6. Remove CABLE INSTALLATION TOOL from its storage position on the LEFT HITCH BEAM and place its bracket on front of CABLE TIGHTENER BRACKET. Pass CABLE through holder on the other end of the TOOL and secure with WEDGE. Tighten CABLE by screwing in bolt on end of TOOL.



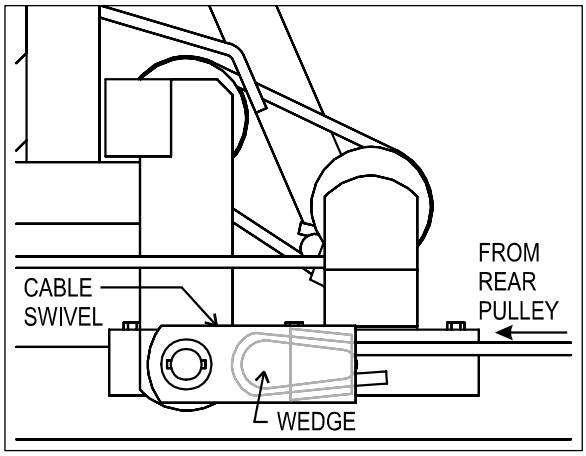
CABLE INSTALLATION TOOL STORAGE

INSTALL CABLE WITH CABLE INSTALLATION TOOL

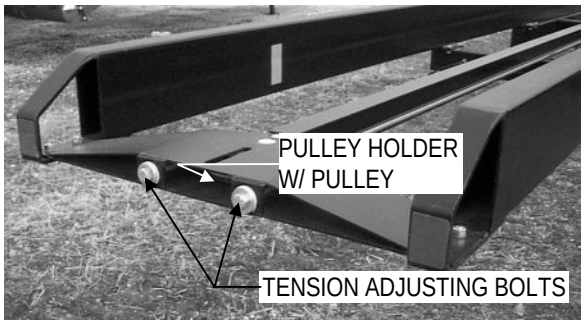
7. Form loose end of CABLE in U-shape and insert cable end through holder in CABLE SWIVEL. Secure with WEDGE. NOTE: The free end of the CABLE must be at the bottom of the CABLE SWIVEL with WEDGE and HOLDER to the inside.

8. Using CABLE INSTALLATION TOOL pull on CABLE until CABLE SWIVEL slips onto pin on CABLE TIGHTENER BRACKET. Secure CABLE SWIVEL with flatwasher and cotter pin. Remove CABLE INSTALLATION TOOL and place it back in its storage position.

9. Check that rear PULLEY clears GUIDE RAIL and adjust tension until CABLE just clears CROSS MEMBERS.



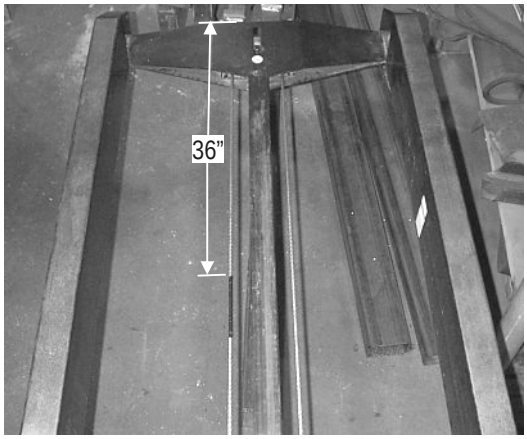
CABLE SWIVEL



CABLE TENSION ADJUSTMENT

10. Reinstall DRUM GUARD.

11. Move the PUSHER to its *maximum forward* position. Apply a highly visible paint to a 7" (18 cm) section of CABLE 36" (91 cm) from the rear of the PULLEY BRACKET. This rear limit cable marker alerts the operator to the position of the PUSHER (the marker is visible on the CABLE DRUM when the PUSHER has reached its rear limit).



REAR LIMIT CABLE MARKER

CABLE tension is <u>CRITICAL</u>. A loose CABLE will not track true and may destruct.

On a new CABLE, check tension after each load for the first six loads. With the machine unloaded and bale pusher at the forward position adjust cable tension until LOWER CABLE just clears the CROSSMEMBERS. After initial break-in check CABLE tension frequently.

STORAGE

END OF SEASON

1. Check for worn or damaged parts and replace, if necessary. To avoid costly delays, please contact your dealer for replacement parts long before the start of the next season.

2. Store the bale carrier in a clean, dry, sheltered area.

3. Replace all missing or broken bolts with bolts of similar size and grade.

4. Clean the bale carrier thoroughly. Dirt draws moisture that rusts metal.

5. Repaint chipped or worn areas. Paint is available from your dealer.

6. Clean CHAIN and brush with SAE light machine oil (or equivalent) to prevent rust.

7. Repaint the top of the CARRIER BEAMS with a graphite paint such as Slip Plate™ to prevent rust.

START OF SEASON

1. Clean and inspect the bale carrier when taking it out of storage. Ensuring that the bale carrier is in optimum condition at the start of the season reduces the chances of a costly breakdown during the season.

2. Clean and inspect CHAIN for excessive wear or stiffness. Check for proper adjustment and alignment.

3. Lubricate entire bale carrier. Ensure that all grease fittings are in place and taking grease properly.

4. Inspect and repack wheel bearings with a SAE multi purpose type grease.

5. Check that tires are properly inflated.

6. Check all bolts for tightness. Replace lost or worn bolts.

7. Inspect CABLE and PULLEY. Replaced frayed or worn CABLES. Replace PULLEY HOLDER WITH PULLEY if there is excessive wobble in the pulley.

8. Clean and lubricate CABLE with a dry type wire rope lubricant.

9. Replace and secure safety shields. Review safety regulations.

10. Operate the bale carrier for a short time. Check that all moving parts are operating freely. Check for hydraulic leaks.

11. Review the Operator's Manual.

DURING THE SEASON

1. At the end of each day of operation park the bale carrier in a clean, dry, sheltered area.

2. Lubricate areas requiring daily lubrication.

3. Remove any build up of hay or straw.

BALE STORAGE

1. Bale rows should be placed in an open, flat and well-drained area. If possible, place the bales with their ends parallel to the prevailing wind (this means that the wind will travel in the same direction as the twine wraps). The area should have safe and easy access for bale handling and transportation equipment.

WARNING: Take all necessary steps to prevent children or unauthorized personnel from entering storage area. Keep a fire extinguisher handy because of the flammable nature of the baled material.

2. Use caution when retrieving or stacking bales. Do not stack bales carelessly off-center or position them where they may tip or roll over. Do not extend bale-lifting equipment beyond its capacity or move more bales than the equipment is designed for.

SILAGE BAGGER (OPTIONAL)

OVERVIEW

The success or failure of making baled silage depends primarily on the management skills of the operator of this equipment. The appendix to this manual is taken from Manitoba Department of Agriculture recommendations and is printed for your consideration.

The silage bagger is designed to work with Model 1000 and 1100 series bale carriers. There are three basic methods of operation:

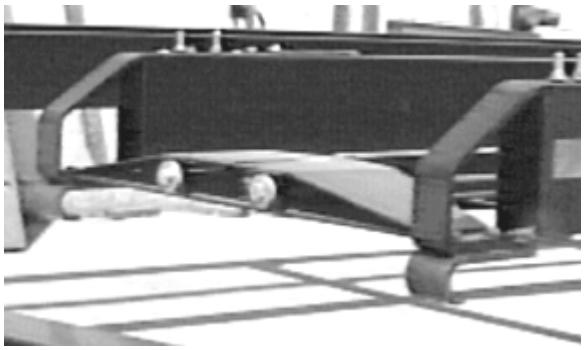
1. With the bagger locked in place, you can load in the field and place each load individually. This method allows that each load of five to seven bales is sealed and when bales are removed for feeding, only a few bales are exposed to the air at a time (a consideration for warm weather feeding).

2. With the bagger locked in place, use a front end loader to place bales on the bale carrier and push through into the bag. Long bags up to 150 feet can be filled. This saves plastic but allows entry of fresh air each time the bag is opened for feeding.

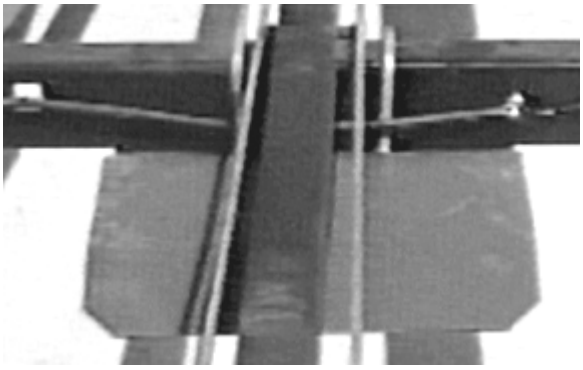
3. The bagger is not locked but is left behind whenever the bale carrier returns to the field for another load. With this method, bags up to 150 feet may be filled. The bale carrier is used to transport the bagger from one location to another.

INSTALLATION

To prepare your bale carrier to receive the bagger, release cable tension and attach the two SKID HOOKS using 1/2” x 1-1/4” bolts. Attach the LOCKING PLATE to the rear crossmember using U CLAMPS. Also install the special SLIDE RAILS (optional) on the bale carrier to reduce friction from damp bales.

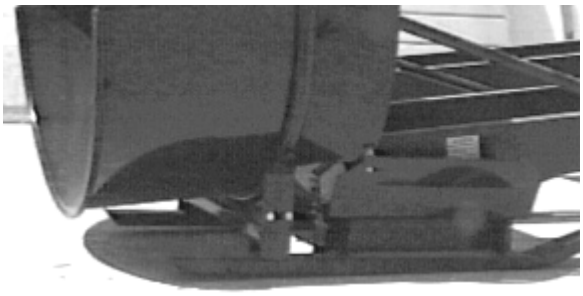


SKID HOOKS



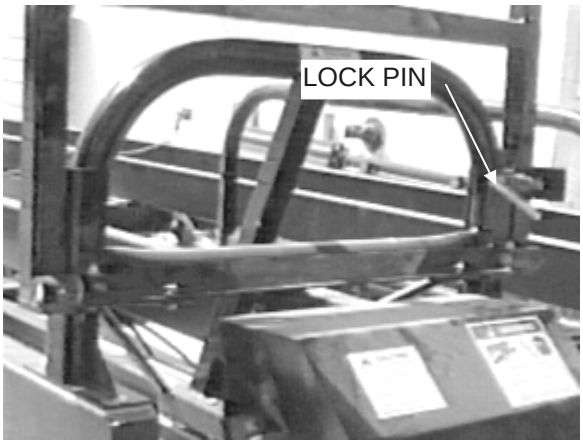
LOCK PLATE

If method one or two is used, attach SKID and BAG DRUM assembly to bale carrier. Back up the unit and lower the rear end of the carrier, engage the SKID HOOKS, drive forward and install SKID LOCK PIN at the LOCKING PLATE. LOCKING PLATE should be centered so that holes for the LOCK PIN will be in line.



CARRIER ENGAGING SKID

Install PUSHER EXTENSION assembly over the existing pusher on the bale carrier and lock in place with the PUSHER LOCK PLATE which is attached to the PUSHER EXTENSION SWIVEL. Put PUSHER EXTENSION in the upright position making sure that the spring loaded LOCK PIN is engaged.



INSTALL PUSHER EXTENSION

If you choose either method one or two, the bagger remains attached to the bale carrier. First, lower the upper sections of the BAG DRUM by using the hand winch. Carefully install the specially folded plastic tube on the holding drum. Be sure it is neatly placed. We recommend that the inside layer only extend two inches past the end of the holding drum. This will protect the plastic tube from injury as it is played out during the filling process. Expand the holding drum with the hand winch until plastic is snug. Over tightening could damage the moveable section of the drum.

INSTALLED PLASTIC TUBE

SETTING YOUR BALER

Remember, the moisture range of the bale should be 40 to 55 percent.

The bale diameter must be carefully controlled to maximize efficiency of the system. On the one hand, you want to make bales as large as possible yet not so large that they will not go through the BAG DRUM and/or the plastic tube itself.

When using the standard 58 inch diameter tube, bale diameter must be limited to something less than 58 inches.

The best size may be determined by setting the bales for approximately 54 inch diameter, try one or two bales and adjust the bale size as needed. A more accurate way is to measure the circumference rather than the diameter. For example: 58" x 3.1416 = 182" circumference. A 54 inch bale would be approximately 169 inches. Depending on weather and bale conditions, it may be possible to process bales with a circumference of 175 inches.

The collapsible drum will accommodate plastic tubes varying slightly from the full 58 inch diameter. A 56 inch tube may work well; however, bale size must be adjusted accordingly. A small change in the tube size has a significant impact on volume. For example, reducing the tube diameter from 58 inches to 56 inches reduces a theoretical 62 inch long bale by a volume of 6.5 cubic feet.

OPERATION

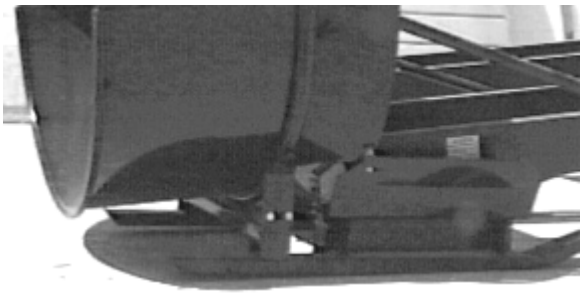
METHOD 1:
Pick bales in the usual manner, do not overload. At 50 percent moisture, a bale will likely weigh approximately 2000 pounds. Seven bales of this weight would be overloading. Better feed quality and greater dry matter payloads are obtained if moisture levels are in the 40 percent range.

The storage area should be well drained and reasonably level and free of sharp stubble or other debris that might puncture the plastic tube. Grass free areas away from other feed storage is recommended to discourage mice that may damage plastic. Tie off the tube and carefully unload. Plastic is very slippery and bales will tend to slide inside the tube when starting a new row; therefore, tractor ground speed must be synchronized with unloading speed to prevent damage to the tube. When the main pusher is about one foot from the rear limit, bring pusher forward a few feet and release PUSHER EXTENSION LOCK PIN. The PUSHER EXTENSION should drop into position and the last bale can be pushed through the BAG DRUM.

PUSHER EXTENSION IN DOWN POSITION

METHOD 2:
Method two is similar to one except that instead of hauling directly from the field, bales are loaded on the bale carrier with a front end loader. This method has a tendency to stretch bales out of shape, especially if a spear type loader attachment is used. Insure that bale size is carefully controlled.

METHOD 3:
The bagger is left at the storage site while the bale carrier is used to haul bales directly from the field. Once at the site, carefully back up the load to the bagger, making sure the unit is properly positioned, lower the rear end of the bale carrier, keep backing up until SKID HOOKS can be engaged. As you unload, the bagger is pulled along as required. To release, back up a few inches, lower the bale carrier and drive away.



CARRIER ENGAGING SKID

Since the success of baled silage depends so much on conditions beyond our control, warranties are limited to the materials and workmanship related to mechanical components of the bale carrier and silage bagging equipment.

APPENDIX – TIPS FOR SUCCESSFUL SILAGE*

Baling:
1. Between 40 to 50 percent moisture.
2. Reduce ground speed, make tight bales, use hard core baler.
3. Pickup and bag, when possible, within 12 hours.
4. Do not stand behind bales when unloading.

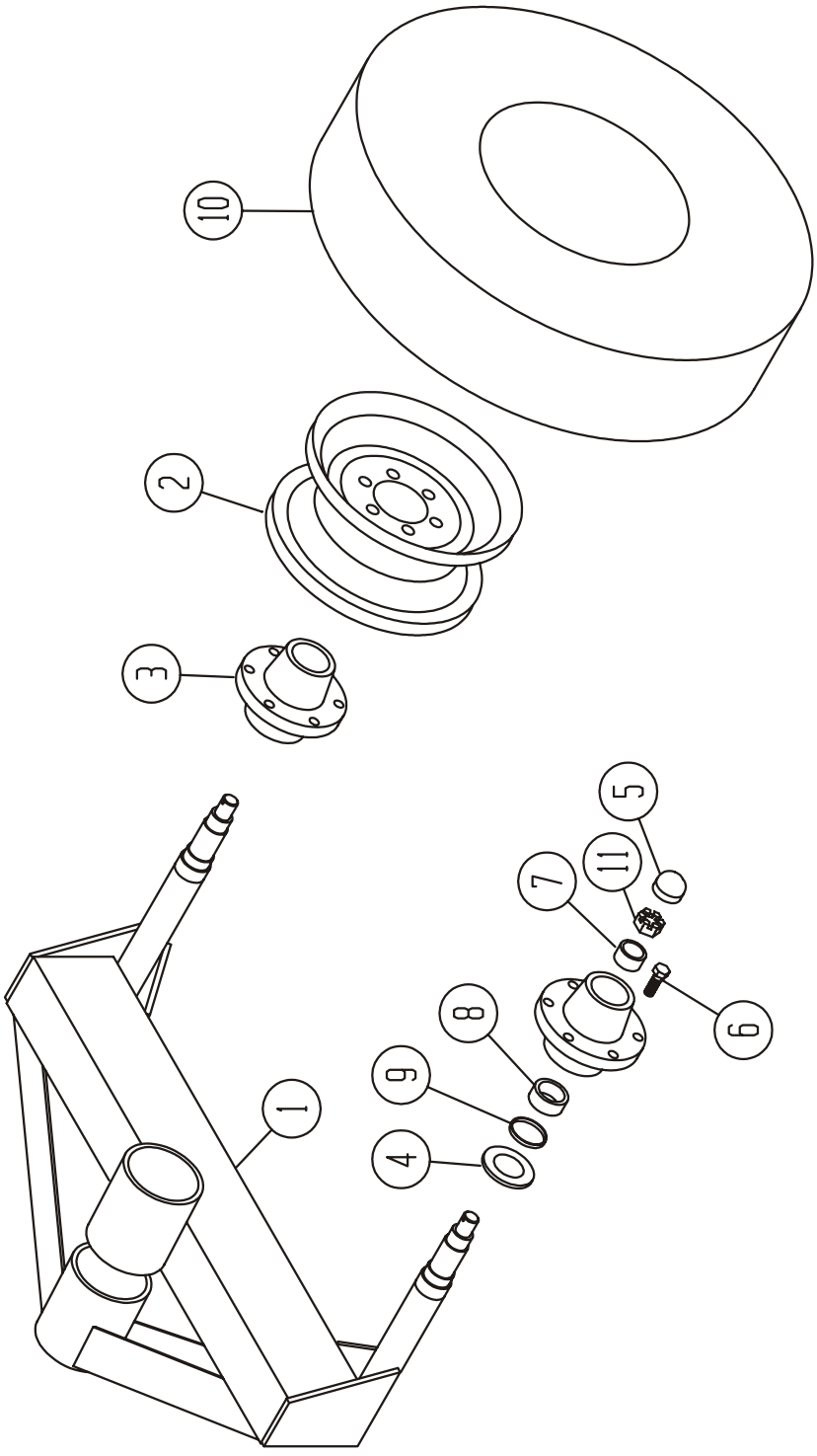
Storage:
1. Well drained, level, grass free area preferred.
2. Place rows north to south.
3. Tie bags securely.
4. Use proper tape for repairs or tying bags.
5. Check bags every day for the first week, and weekly thereafter.
6. When bags are full blown first two days, release the gas and reseal.
7. Use rodent control to prevent damage.

Feeding
1. Remove enough feed for two days maximum and reseal.
2. Wintertime feeding when temperature is below -30°C (-22°F): more than two days supply may be removed at one time.
3. Plan to feed dryer silage in the coldest months.

* For more information on round bale silage, contact Manitoba Department of Agriculture (204) 268-6014. Ask for publication entitled "Round Bale Silage for Quality Forage" by Fraser Stewart.

PARTS

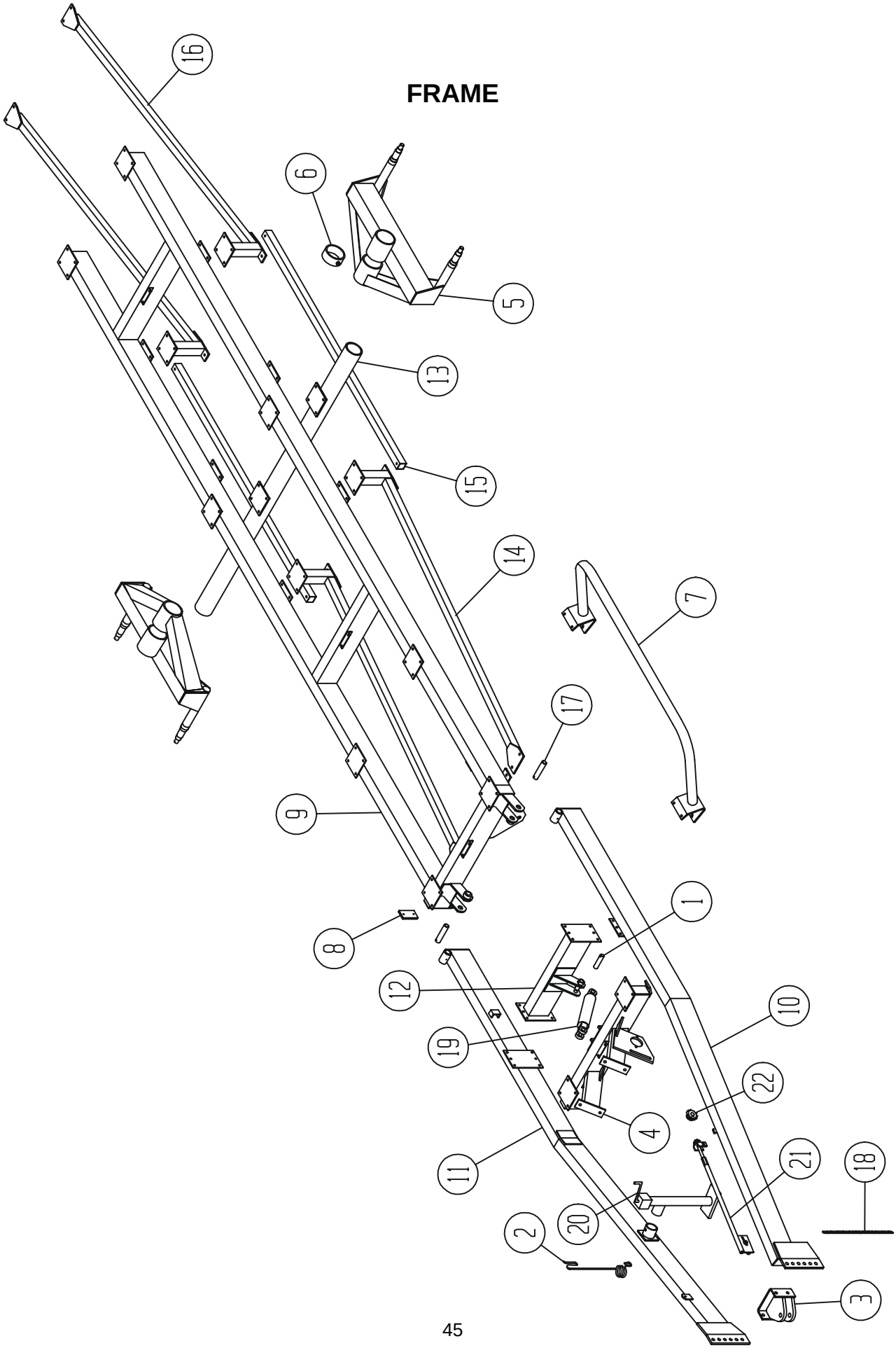
TANDEM AXLE



TANDEM AXLE

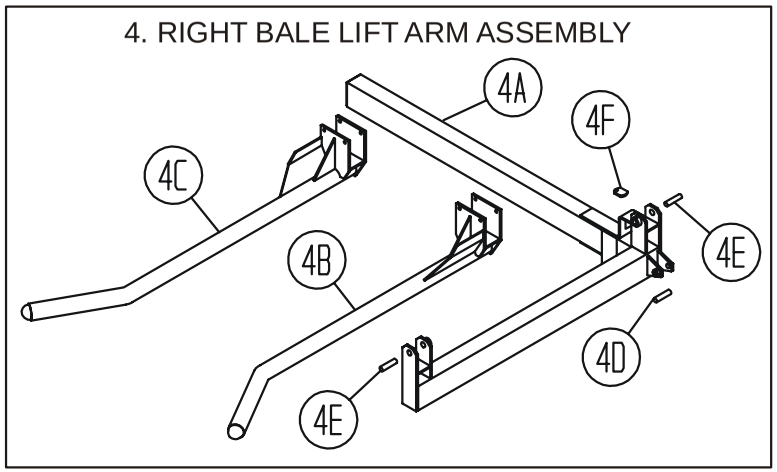
REF	PART NUMBER	DESCRIPTION	QTY
1	53051	TANDEM AXLE	2
2	53004	15 x 8 - 6 BOLT RIM 85 PSI	4
3	53005	6 BOLT WHEEL HUB	4
4	53006	SHIELD	4
5	53027	HUB CAP	4
6	18916	9/16" WHEEL BOLT	24
7	53007	OUTER BEARING	4
8	30702	INNER BEARING	4
9	53008	OIL SEAL	4
10	53187	11L x 15 TIRE	4
11	53618	HEX NUT SUPPLIED WITH SPINDLE	4

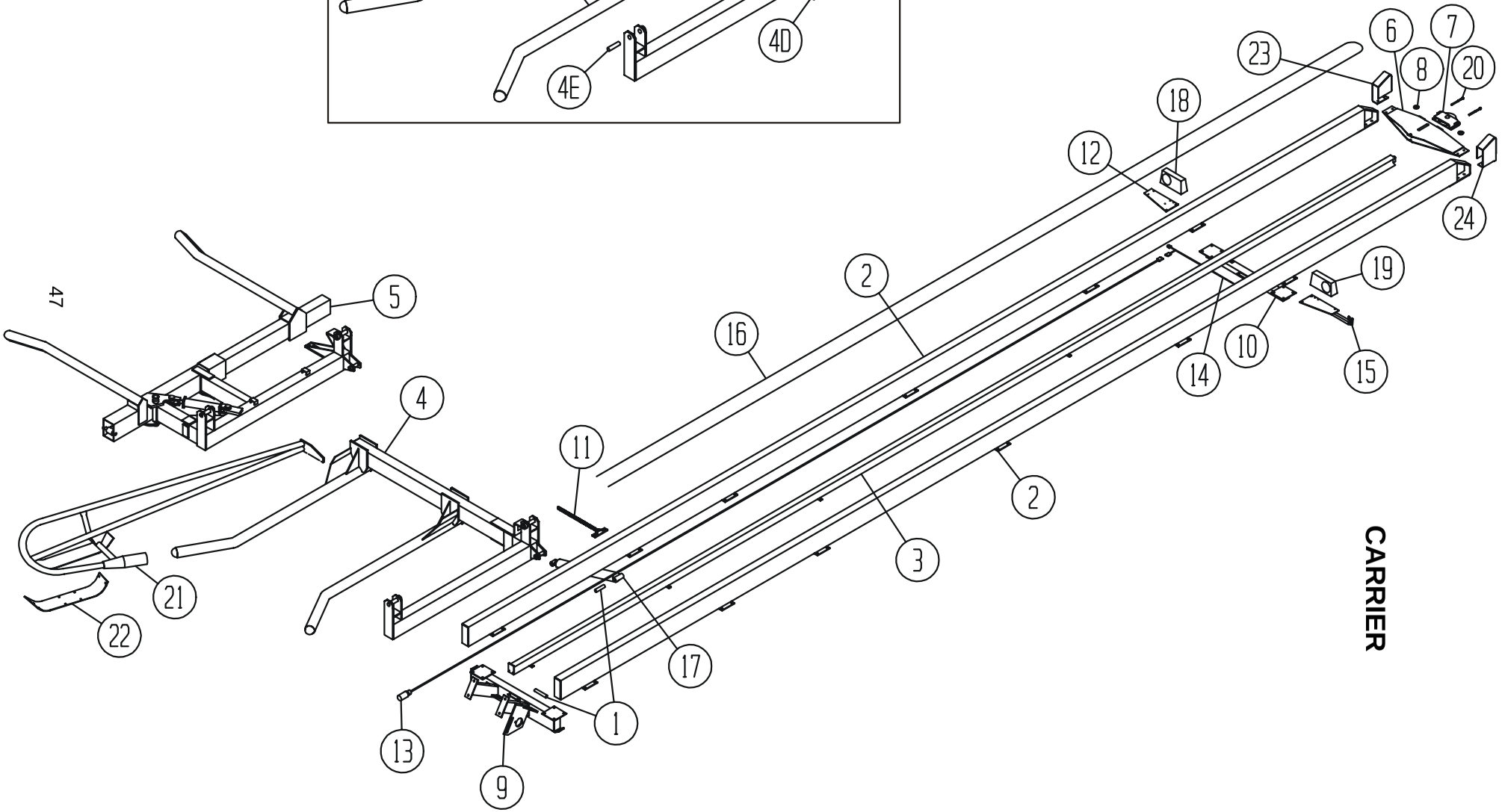
FRAME



FRAME

REF	PART NUMBER	DESCRIPTION	QTY
1	53122	SHORT CYLINDER PIN	1
2	53105	HOSE HOLDER	1
3	53062	HITCH	1
4	53063	FRONT CROSSMEMBER	1
5	53051	TANDEM AXLE	2
6	53106	TANDEM AXLE LOCATOR	2
7	53052	ROLLBAR	1
8	53110	ARM CUSHION	1
9	53053	SUBFRAME	1
10	53054	LEFT HITCH BEAM	1
11	53055	RIGHT HITCH BEAM	1
12	53056	HITCH CROSSMEMBER	1
13	53057	AXLE BEAM	1
14	53058	FRONT BRACE	2
15	53059	CENTER BRACE	2
16	53060	REAR BRACE	2
17	53123	LIFT ARM PIN	2
18	53333	SAFETY CHAIN (20000 lbs)	1
19	53016	3 x 10" HYDRAULIC CYLINDER	1
20	53023	CROWN JACK 7TM - 10-0	1
21	53196	CABLE INSTALLATION TOOL	1
22	53660	DRIVE SPROCKET (#60 – 11 TEETH)	1


4. RIGHT BALE LIFT ARM ASSEMBLY
4A
4F
4C
4E
4B
4D
4E


6
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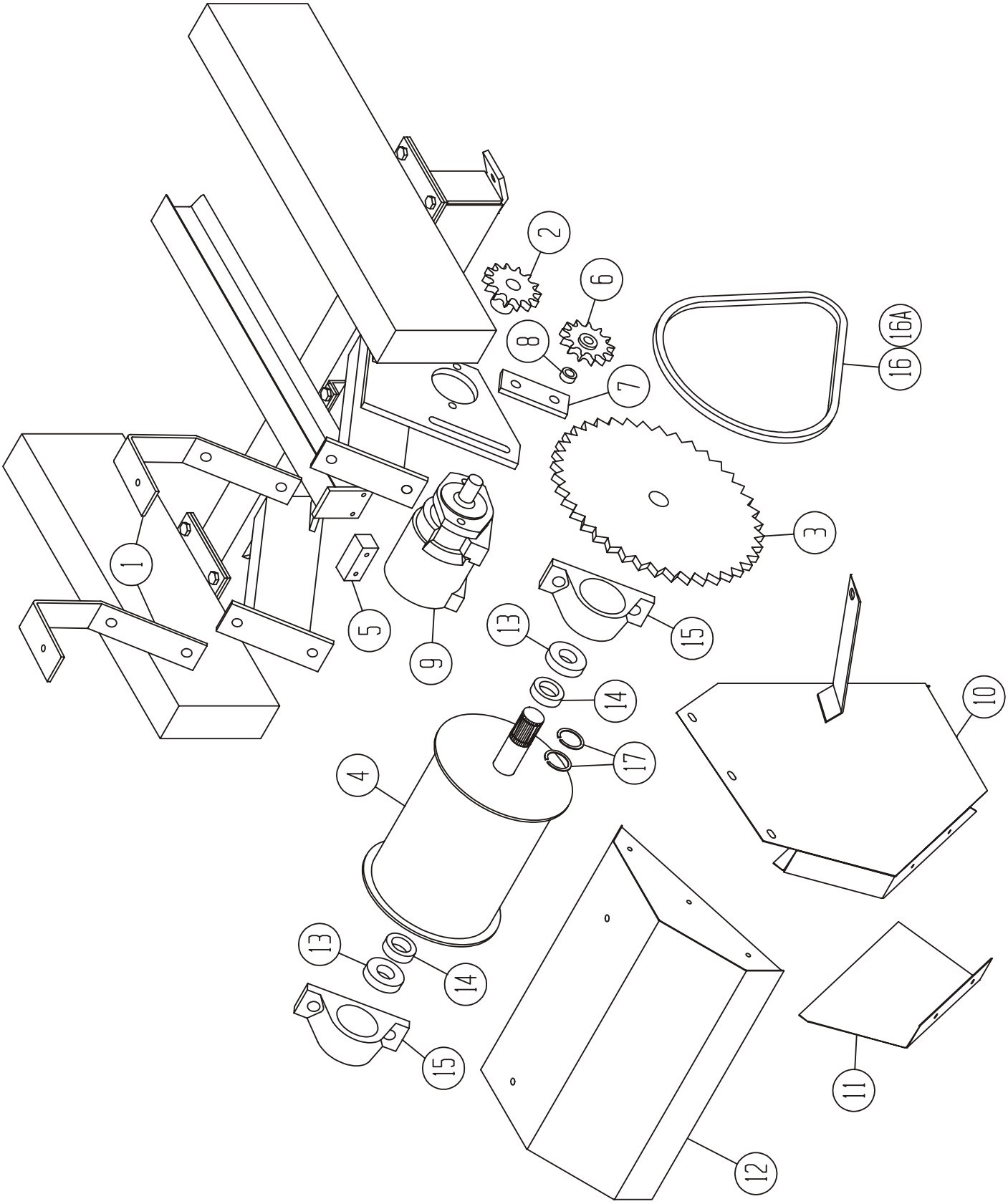
9

CARRIER

CARRIER

REF	PART NUMBER	DESCRIPTION	QTY
1	53121	AXLE PIN	2
2	53064	OUTSIDE BEAM	2
3	53065	GUIDE RAIL	1
4		RIGHT BALE LIFT ARM ASSEMBLY	1
4A	53067	RIGHT BALE LIFT ARM	1
4B	53068	LEFT BALE FORK	1
4C	53069	RIGHT BALE FORK	1
4D	53122	SHORT CYLINDER PIN	1
4E	53123	LIFT ARM PIN	2
4F	53321	SAFETY LATCH	1
5		RIGHT ROTATING PICKUP UNIT (see pages 54-57)	1
6	53070	PULLEY BRACKET	1
7	53071	PULLEY HOLDER WITH PULLEY	1
8	53107	THRUST WASHER	2
	7151	11/16 x 1-3/4" FLATWASHER	2
9	53063	FRONT CROSSMEMBER	1
10	53072	REAR CROSSMEMBER	1
11	53320	SAFETY LOCK BRACKET	1
12	53322	LIGHT BRACKET	1
13	53323	MAIN HARNESS	1
14	53324	CROSSMEMBER HARNESS	1
15	53334	SMV/LIGHT BRACKET	1
16	53009	3/8 x 99'8" CABLE	1
17	53015	3 x 16" HYDRAULIC CYLINDER	1
18	53325	DUAL LAMP	1
19	53326	DUAL LAMP	1
20	53120	5/8 x 7" HEX BOLT	2
21	53661	RIGHT BALE DEFLECTOR COMPLETE (optional)	1
22	53662	RIGHT SKID COVER ONLY (optional)	1
23	53663	RIGHT BALE RETAINER	1
24	53664	LEFT BALE RETAINER	1
	53665	SLIP PLATE - 1 QT. CAN (not supplied)	

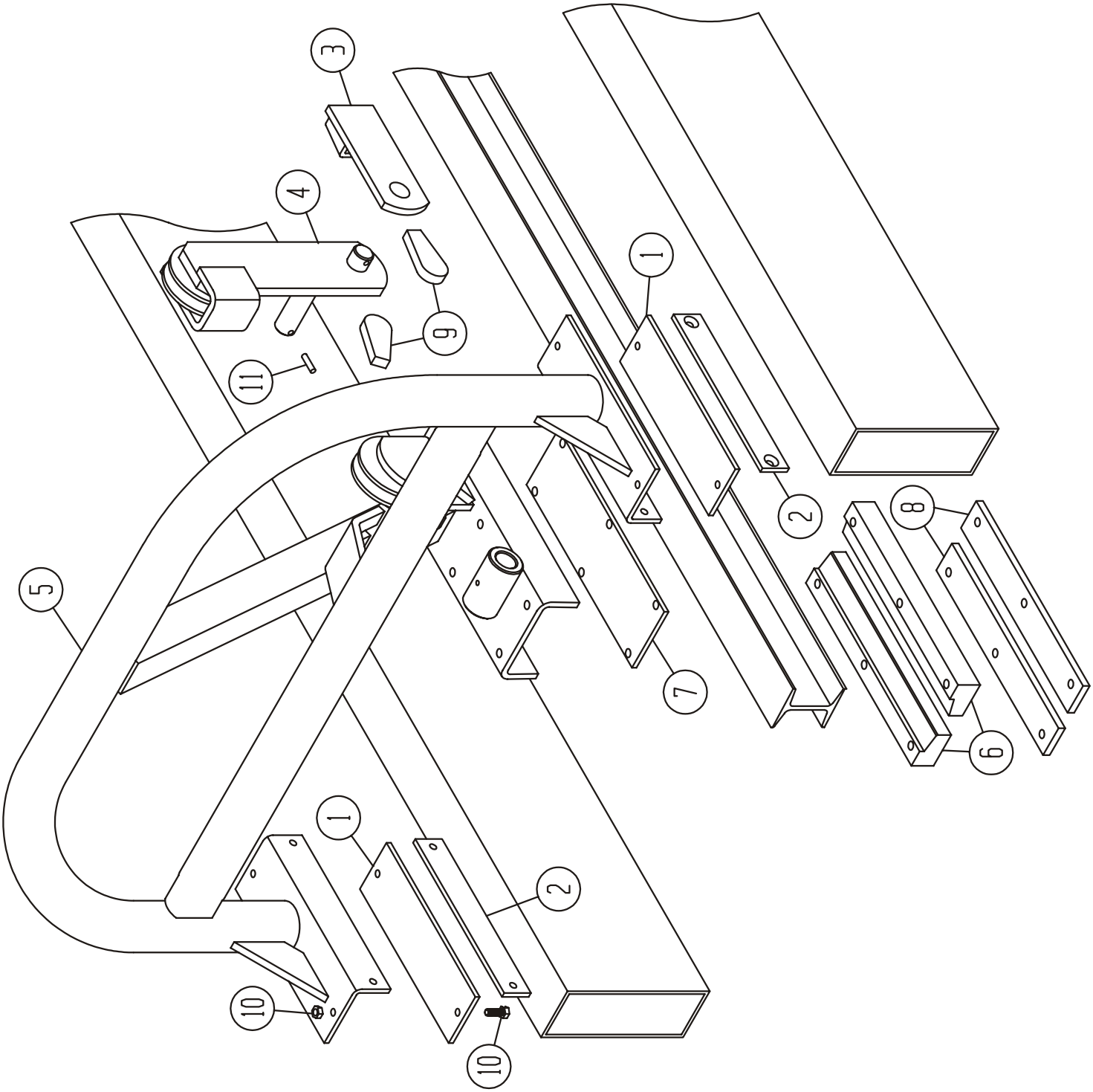
DRIVE ASSEMBLY



DRIVE ASSEMBLY

REF	PART NUMBER	DESCRIPTION	QTY
1	53077	DRUM GUARD BRACKET	2
2	53112	DRIVE SPROCKET (#60 - 14 TEETH)	1
3	53111	CABLE DRUM SPROCKET (#60 - 60 TEETH)	1
4	53079	CABLE DRUM	1
5	53080	CABLE SPACER	1
6	53113	CHAIN TIGHTENER SPROCKET (#60 - 13 TEETH)	1
7	53081	CHAIN TIGHTENER SPROCKET PLATE	1
8	53109	CHAIN TIGHTENER SPROCKET SPACER	1
9	53030	HYDRAULIC MOTOR	1
10	53327	CHAIN GUARD	1
11	53329	INSIDE CHAIN GUARD	1
12	53337	CABLE DRUM GUARD	1
13	53002	1-1/2" BORE BALL BEARING	2
14		LOCKING COLLAR	2
15	53003	BEARING HOUSING	2
16	53670	#60 x 74 LINK CHAIN (W/ CONNECTOR LINK & 2 OFFSET LINKS)	1
16A	6637	#60 CHAIN OFFSET LINK ONLY	2
17	53025	SNAP RING	2

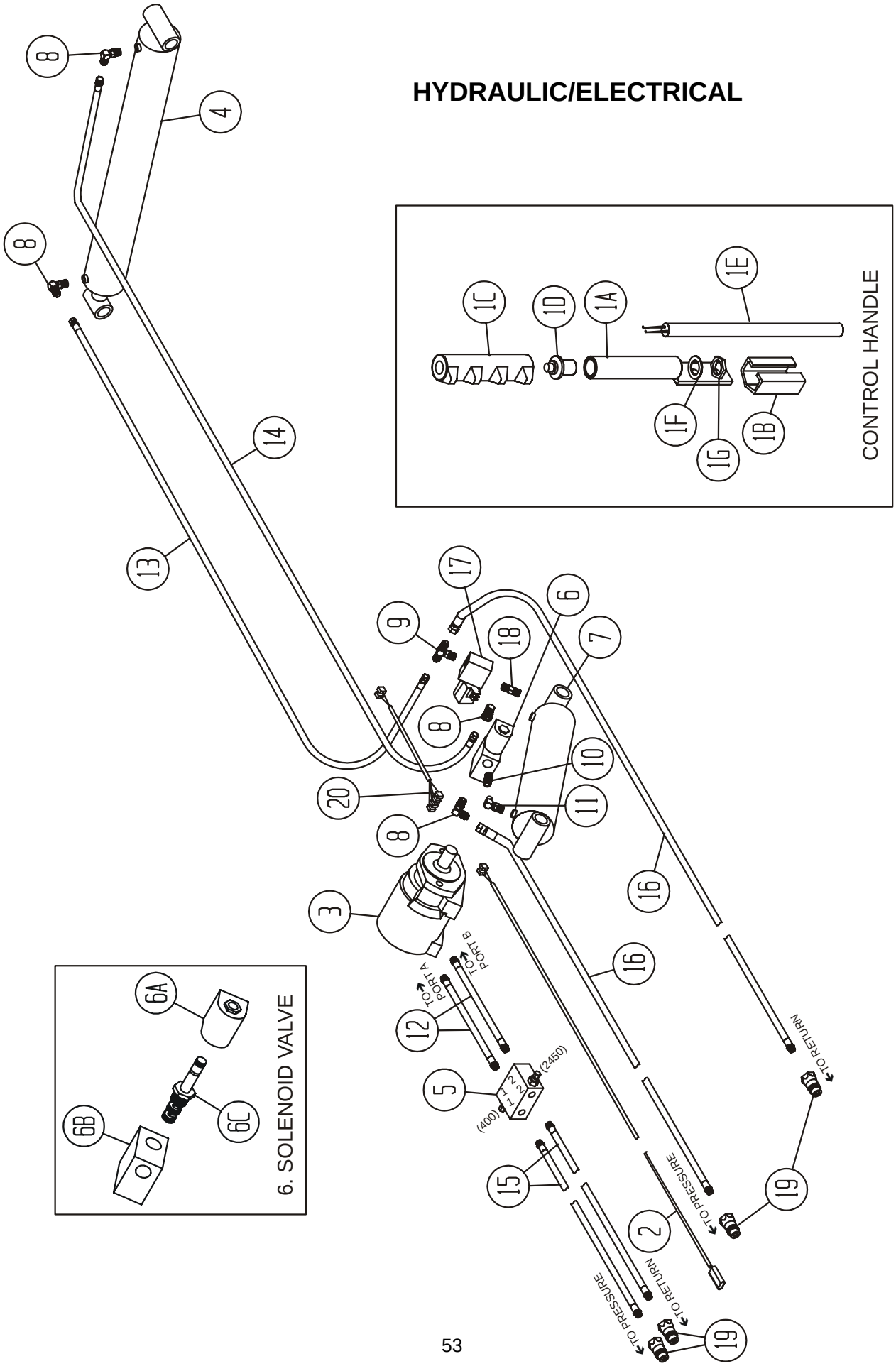
PUSHER ASSEMBLY



PUSHER ASSEMBLY

REF	PART NUMBER	DESCRIPTION	QTY
1	53115	TOP SLIDER	2
2	53116	SIDE SLIDER	2
3	53082	CABLE SWIVEL	1
4	53083	CABLE TIGHTENER BRACKET	1
5	53084	PUSHER	1
6	53117	BEAM SLIDER	2
7	53118	FRONT TOP SLIDER	1
8	53119	SLIDER BACKUP	2
9	53012	WEDGE	2
10	53459	M8 x 20 MACHINE SCREW BRASS	8
	53460	M8 HEX NUT BRASS	8
11	2146	1/4" ROLL PIN	1

HYDRAULIC/ELECTRICAL



HYDRAULIC/ELECTRICAL

REF	PART NUMBER	DESCRIPTION	QTY
	53085	ONE BUTTON CONTROL HANDLE COMPLETE	1
1A	53666	ONE BUTTON CONTROL HANDLE BASE	1
1B	53086	CLAMP BRACKET	1
1C	53087	CONTROL HANDLE COVER	1
1D	53020	PUSHBUTTON SWITCH	1
1E	53019	CONTROL HANDLE HARNESS	1
1F	53343	WASHER	1
1G	53344	NUT	1
2	53021	SOLENOID HARNESS	1
3	53030	HYDRAULIC MOTOR	1
4	53015	LIFT CYLINDER	1
5	53018	CROSSOVER RELIEF VALVE	1
6	53017	SOLENOID VALVE	1
6A	53035	COIL	1
6B	53036	BODY	1
6C	53037	CARTRIDGE	1
7	53016	TILT CYLINDER	1
8	30282	#6 ORB x JIC MALE ELBOW ADAPTER	4
9	30874	#6 ORB x JIC MALE TEE	1
10	16957	1/4 NPT x #6 ORB STRAIGHT ADAPTER	1
11	17104	90 ELBOW #6 ORB x 1/4 NPT FEMALE	1
12	53045	3/8 x 10" HYDRAULIC HOSE	2
13	53043	3/8 x 68" HYDRAULIC HOSE	1
14	53044	3/8 x 80" HYDRAULIC HOSE	1
15	53046	3/8 x 108" HYDRAULIC HOSE	2
16	53042	3/8 x 138" HYDRAULIC HOSE	2
17	53330	SOLENOID CHECK VALVE	1
18	53331	O BOSS CONNECTOR	1
19	53029	PIONEER COUPLING	4
20	53332	AUXILARY HARNESS	1

DECALS

1.

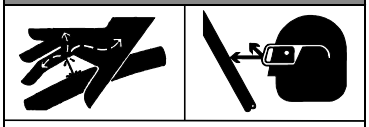
CAUTION

1. Keep all shields in place.
2. Stop engine before leaving operator's position to adjust, lubricate, clean or unclog machines.
3. Wait for all movement to stop before servicing the machine.
4. Keep hands, feet and clothing away from power driven parts.
5. Keep all others off.
6. Make certain everyone is clear of machine before starting engine or operation.

21547

2.

WARNING



HIGH PRESSURE FLUID HAZARD

- Relieve pressure on system before repairing or adjusting.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.

FAILURE TO FOLLOW THESE INSTRUCTIONS WILL RESULT IN SERIOUS INJURY OR DEATH

21592

3.

WARNING

HIGH PRESSURE FLUID HAZARD

- Relieve pressure on system before repairing or adjusting.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.

FAILURE TO FOLLOW THESE INSTRUCTIONS WILL RESULT IN SERIOUS INJURY OR DEATH

21845

4.

IMPORTANT

MAXIMUM RECOMMENDED TIRE INFLATION

PRESSURE
60 P.S.I.
6 PLY TIRE 11L x 15 FI
LOAD RANGE D.

TIRES & RIMS IF REPLACED MUST MEET EXISTING SPECIFICATIONS.

21858

5.

CAUTION

Gross Vehicle Weight Rating

Model 1000 14,800 lbs (6700 kg)
Model 1100/2000 29,600 lbs (13400 kg)

21860

6.

IMPORTANT

CABLE TENSION IS CRITICAL. IMPROPER USE WILL DESTROY THE CABLES.

ON A NEW CABLE, CHECK THE TENSION AFTER EACH LOAD FOR FIRST 6 LOADS. WITH THE MACHINE UNLOADED, ADJUST TENSION UNTIL THE LOWER CABLE CLEARS THE CROSS MEMBERS. IF NEGLECTED, CABLE WILL NOT TRACK TRUE AND MAY DESTRUCT.

AFTER INITIAL BREAK IN, CHECK TENSION FREQUENTLY AND ADJUST AS REQUIRED.

CABLE DAMAGE DUE TO NEGLECT IS NOT COVERED UNDER WARRANTY.

21861

7.

CAUTION

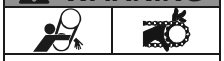
SAFETY CHAIN MUST BE SECURED AND LOCKED FOR TRANSPORT.

RELEASE ONLY FOR FIELD WORK.

21877

8.

WARNING



MOVING PART HAZARD

To prevent serious injury or death from moving parts:

- Close and secure guards and shields before starting.
- Keep hand, feet, hair and clothing away from moving parts.
- Disconnect and lockout power source before adjusting or servicing.
- Do not stand or climb on machine when operating.

21878

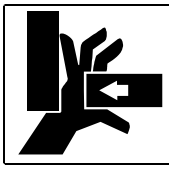
9.

CAUTION

RUNNING PUSHER PAST AMBER REFLECTOR WILL DAMAGE CABLE DRUM

21856

10.



WARNING

Bale lift arm can cause serious pinching or crushing injury if fingers become trapped during arm return.

21990

11.

DANGER

Bale lift arm can cause serious injury or death if person becomes trapped during arm return.

21991

12.

IMPORTANT

CHECK CHAIN TENSION WEEKLY

21896

13.

MacDon

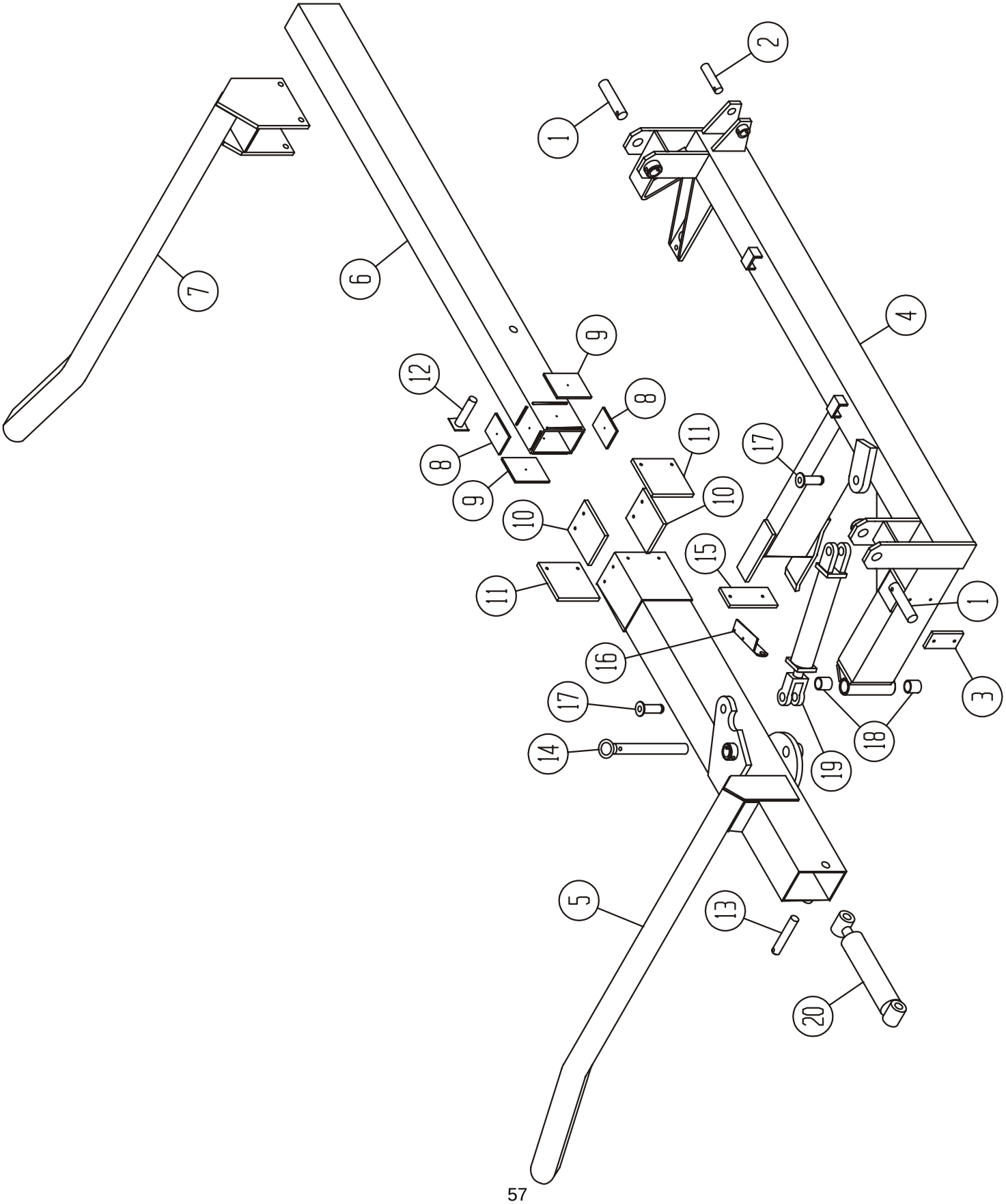
14.

1000 BALE CARRIER

DECALS

REF	PART NUMBER	DESCRIPTION	QTY
1	53189	CAUTION DECAL	1
2	53190	HIGH PRESSURE FLUID HAZARD DECAL	1
3	53192	HYDRAULIC OIL SAFETY DECAL	1
4	53193	TIRE INFLATION DECAL	2
5	53194	GROSS WEIGHT DECAL	1
6	53195	IMPORTANT CABLE DECAL	2
7	53335	SAFETY CHAIN DECAL	1
8	53336	MOVING PART HAZARD DECAL	1
9	53338	CAUTION CABLE DECAL	1
10	53667	WARNING LIFT ARM PINCHING HAZARD DECAL	1
11	53668	DANGER LIFT ARM CRUSHING HAZARD DECAL	1
12	53669	IMPORTANT CHECK CHAIN TENSION WEEKLY DECAL	1
	53573	LUBRICATION DAILY DECAL	14
13	103872	MACDON RAINBOW DECAL	2
14	115238	MACDON 1000 BALE CARRIER DECAL	2
	115146	AMBER REFLECTIVE DECAL 2 x 9"	12
	115147	RED REFLECTIVE DECAL 2 x 9"	2
	115145	RED/ORANGE FLUORESCENT DECAL 2 x 9"	2

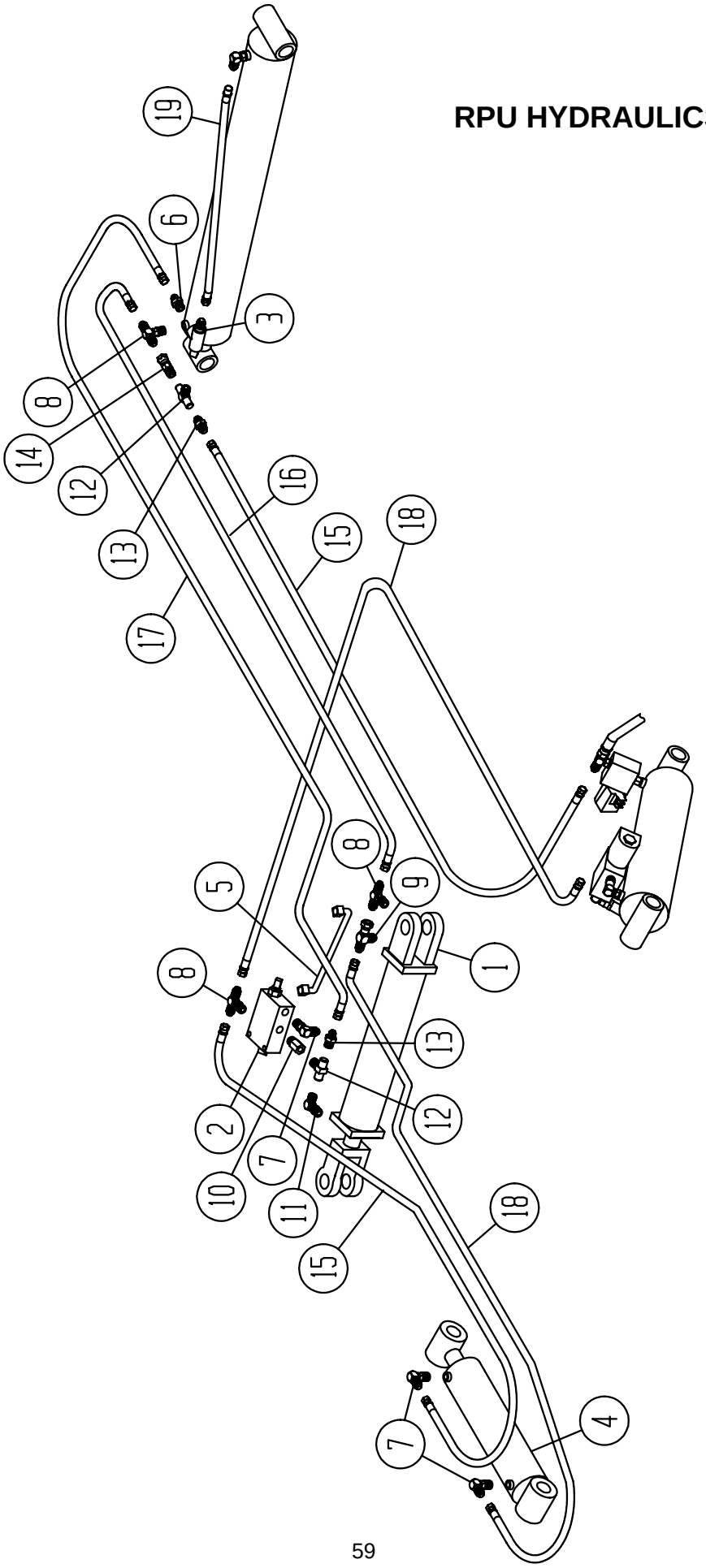
RPU



RPU

REF	PART NUMBER	DESCRIPTION	QTY
1	53123	LIFT ARM PIN	2
2	53122	SHORT CYLINDER PIN	1
3	53110	ARM CUSHION	1
4	53131	RIGHT LIFT ARM	1
5	53132	RIGHT STATIONARY ARM	1
6	53133	SLIDING ARM	1
7	53134	RIGHT ADJUSTABLE FORK	1
8	53139	SLIDING ARM TOP PAD	2
9	53140	SLIDING ARM SIDE PAD	2
10	53141	STATIONARY ARM TOP PAD	2
11	53142	STATIONARY ARM SIDE PAD	2
12	53126	SQUEEZE CYLINDER ROD PIN	1
13	53127	SQUEEZE CYLINDER CLEVIS PIN	1
14	53128	HINGE PIN	1
15	53152	STATIONARY ARM CUSHION	1
16	53138	SEQUENCE VALVE HOLDER	1
17	53129	ROTATE CYLINDER PIN	2
18	53143	HINGE PIN BUSHING	2
19	53146	ROTATE CYLINDER	1
20	53147	SQUEEZE CYLINDER	1

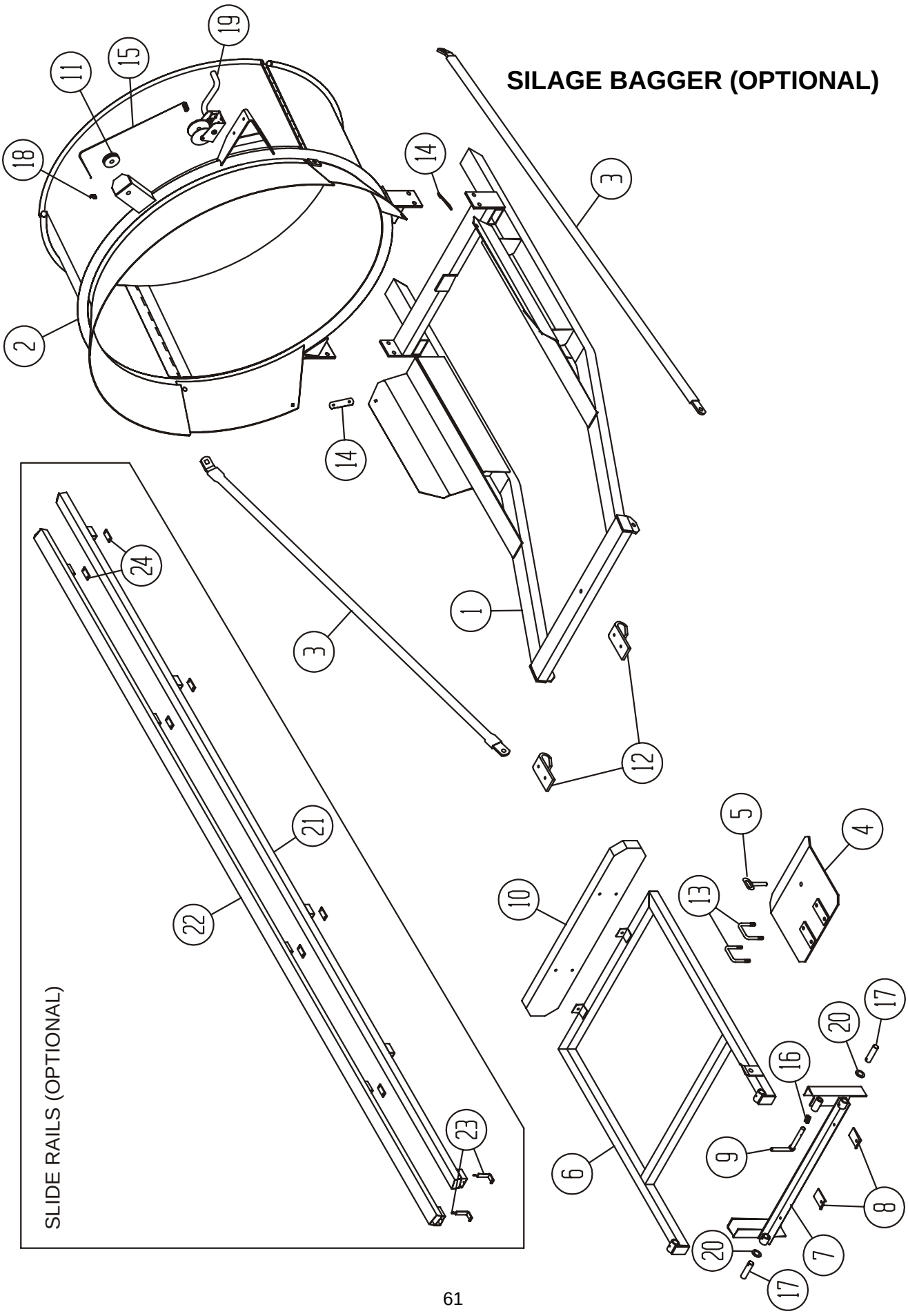
RPU HYDRAULICS



RPU HYDRAULICS

REF	PART NUMBER	DESCRIPTION	QTY
1	53146	ROTATE CYLINDER	1
2	53149	SEQUENCE VALVE	1
3	53151	PILOT CHECK VALVE	1
4	53147	SQUEEZE CYLINDER	1
5	53145	SEQUENCE VALVE VENT LINE	1
6	18880	3/8 JIC x 3/8 NPT STRAIGHT MALE ADAPTER	1
7	30282	#6 ORB x JIC MALE ELBOW ADAPTER	3
8	30874	#6 ORB x JIC MALE TEE	2
9	30873	SWIVEL RUN TEE	1
10	53157	#6 ORB x 1/4 FEMALE NPT STRAIGHT ADAPTER	1
11	53158	#6 ORB x 1/4 NPT MALE ELBOW ADAPTER	1
12	53156	1/4 NPT x MALE RUN TEE	2
13	6732	MALE CONNECTOR	2
14	53159	STRAIGHT SWIVEL ADAPTER	1
15	53043	3/8 x 68" HYDRAULIC HOSE	2
16	53044	3/8 x 80" HYDRAULIC HOSE	1
17	53153	3/8 x 102" HYDRAULIC HOSE	1
18	53154	3/8 x 60" HYDRAULIC HOSE	2
19	53155	3/8 x 14" HYDRAULIC HOSE	1

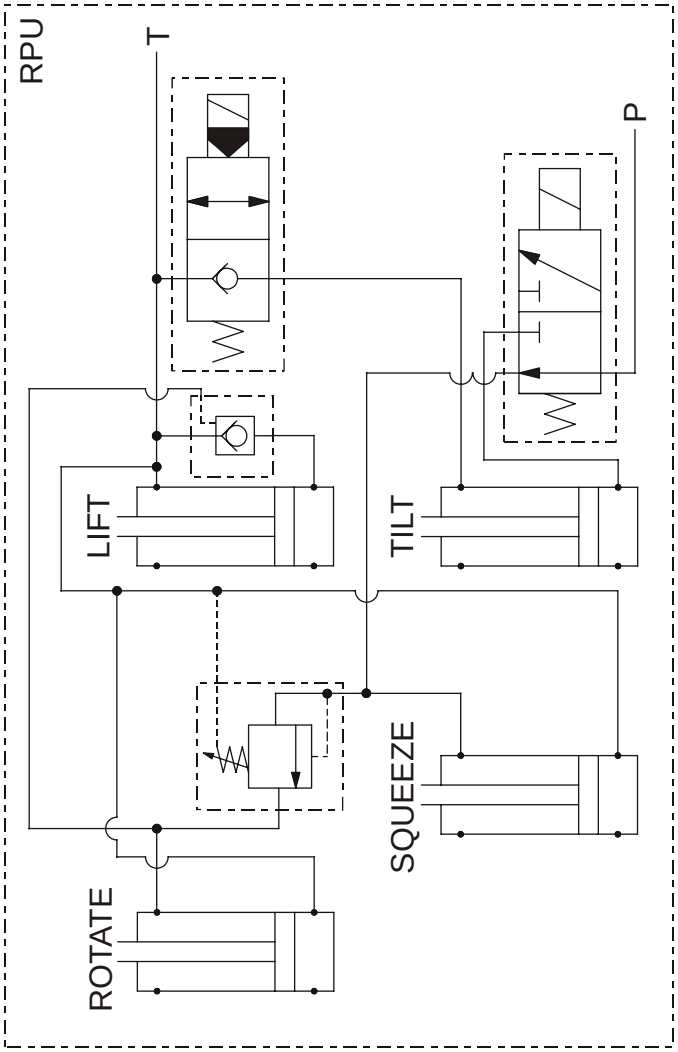
SILAGE BAGGER (OPTIONAL)

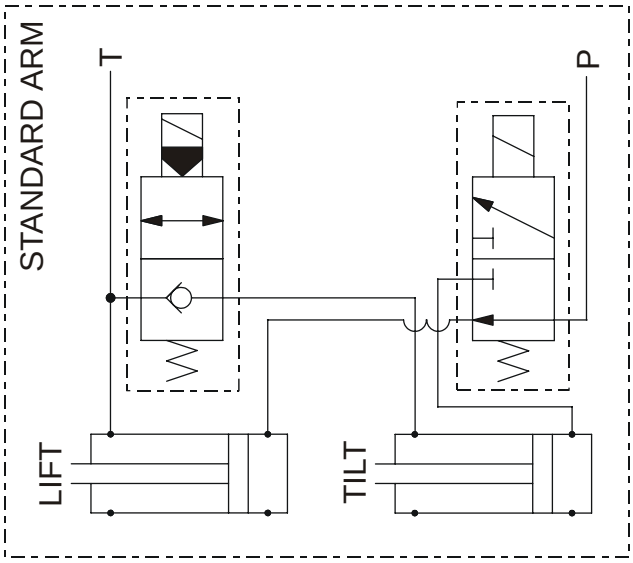


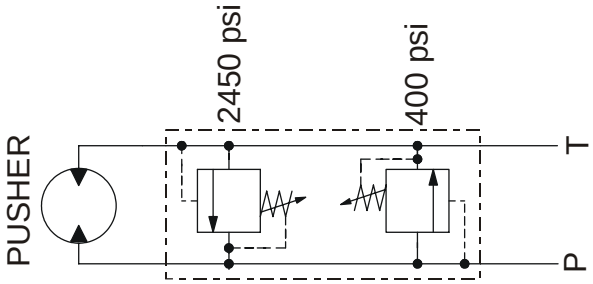
SILAGE BAGGER (OPTIONAL)

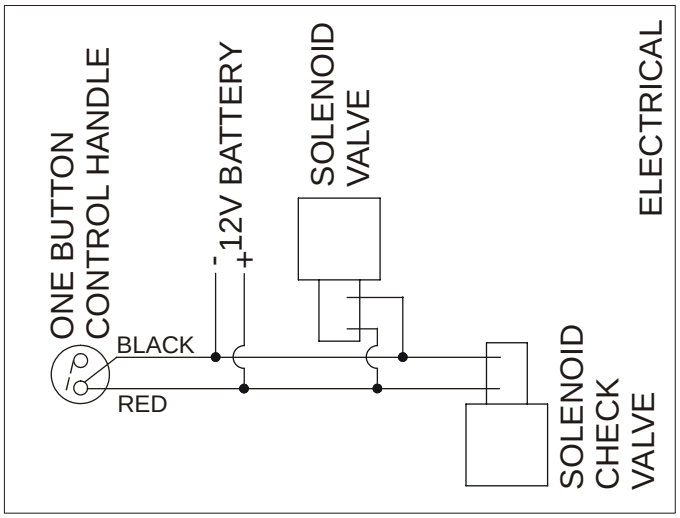
REF	PART NUMBER	DESCRIPTION	QTY
1	53160	SKID	1
2	53161	BAG DRUM	1
3	53162	BRACE	2
4	53163	LOCKING PLATE	1
5	53165	SKID LOCK PIN	1
6	53166	PUSHER EXTENSION	1
7	53167	PUSHER EXTENSION SWIVEL	1
8	53168	PUSHER LOCK PLATE	2
9	53169	LOCK PIN	1
10	53170	WOOD EXTENSION GUIDE	1
11	53171	CABLE PULLEY	1
12	53172	SKID HOOK	2
13	53173	U – CLAMP	2
14	53175	CONNECTING PLATE	2
15	53176	PULLEY CABLE	1
16	53177	COMPRESSION SPRING	1
17	53178	BALE SHIFTER PIN	2
18	53014	3/16" CABLE CLAMP GALV.	1
19	53179	WINCH	1
20	53180	FLATWASHER	2
21	53181	LEFT SLIDE RAIL	1
22	53182	RIGHT SLIDE RAIL	1
23	53183	J – CLAMP	2
24	53184	RAIL BOLT PLATE	7

SCHEMATICS


RPU
T
P
LIFT
TILT
SQUEEZE
ROTATE


STANDARD ARM
T
P
LIFT
TILT


2450 psi
400 psi
PUSHER
T
P


ELECTRICAL
ONE BUTTON
CONTROL HANDLE
BLACK
RED
-
+12V BATTERY
SOLENOID
VALVE
SOLENOID
CHECK
VALVE

INDEX