Form No.
907520
Replaces
907143

1475/1875

Variable Chamber Round Balers

OPERATOR'S MANUAL

GEHL® AGRICULTURE

CHAPTER 3
CHECKLISTS

PRE-DELIVERY

After the Baler has been completely set up, the following inspections MUST be made before delivering it to the Customer. Check off each item after prescribed action is taken.

Check that:

- ❑ NO parts of the unit have been damaged in shipment. Check for such things as dents and loose or missing parts; correct or replace components as required.
- ❑ All Grease Fittings have been properly lubricated and the Gearbox is filled to the proper level; see Lubrication chapter of this manual.
- ❑ All Guards, Shields and Decals are in place and securely attached.
- ❑ All fasteners and Wheel Lug Nuts are properly secured.
- ❑ All Adjustments are made to comply with settings given in the Adjustments chapter of this manual.
- ❑ Model and Serial Numbers for the Baler and Quick Wrap (if so equipped) are recorded in the spaces provided on this page and page 2.

The following items are furnished attached to the Baler or in the Baler Twinebox:

- ❑ Bale Ramps & Mounting Hardware; Reversing Wrench; Hitchjack,; (4) Drive Line Shear Bolts; Hitch Pin and Washers, Nut and Hairpin Cotterpin; 72″ Belt Lacing Cable; Operator's Manual; Baler Control Box & Cable; Front PTO half; Hose & Cable Support.

Hook the Baler onto the appropriate RPM tractor and test run the unit while checking that proper operation is exhibited by all components.

Check that:

- ❑ The Telescoping PTO Drive turns freely inside the Drive Shield Tubes.
- ❑ Hydraulic Hoses and all connections do NOT leak under pressure.
- ❑ Tailgate opens and closes without binding.
- ❑ Drives, Rollers and Belts are rotating smoothly and operating properly and Belts are tracking properly.
- ❑ TDC Reservoir pressure is at least 150 PSI (1050 kPa) and Reservoir oil is at proper fill level.

I acknowledge that the pre-delivery procedures were performed on this unit as outlined.

_____
Dealership's Name

_____
Dealer Representative's Name

_____
Date Checklist Filled out

_____ _____
Baler Model Number Serial Number

_____ _____
Quick Wrap Model Number Serial Number

DELIVERY

The following Checklist is an important reminder of valuable information that MUST be passed on to the Customer at the time the unit is delivered. Check off each item as you explain it to the Customer.

- ❑ Give the Customer his Operator's Manual. Instruct him to be sure to read and completely understand its contents BEFORE operating the unit.
- ❑ Direct the Customer on how to use the Index of this manual as a quick page number locating guide.
- ❑ Explain and review with Customer the Safety and Controls & Safety Equipment chapters of this manual.
- ❑ Explain that regular lubrication is required for continued proper operation and long life. Review with him the Lubrication chapter of this manual.
- ❑ Explain and review the Service chapter of this manual with the customer.
- ❑ Explain and review with the customer the bale tying and/or wrapping system that the Baler is equipped with.
- ❑ Explain the function and adjustment of the Total Density Control (TDC) system.
- ❑ Demonstrate the proper use of the spring-loaded PTO Locking Device, Shuttle Locks, Rear Gate Cylinder Locks, Reversing Wrench and Hitchjack.
- ❑ Explain and review both the Operation and Preparing for Field Operation chapters of this manual.
- ❑ Completely fill out the Owner's Registration, including Customer's signature, and return it to the Gehl Company.

I acknowledge that the above points were reviewed with me at the time of delivery.

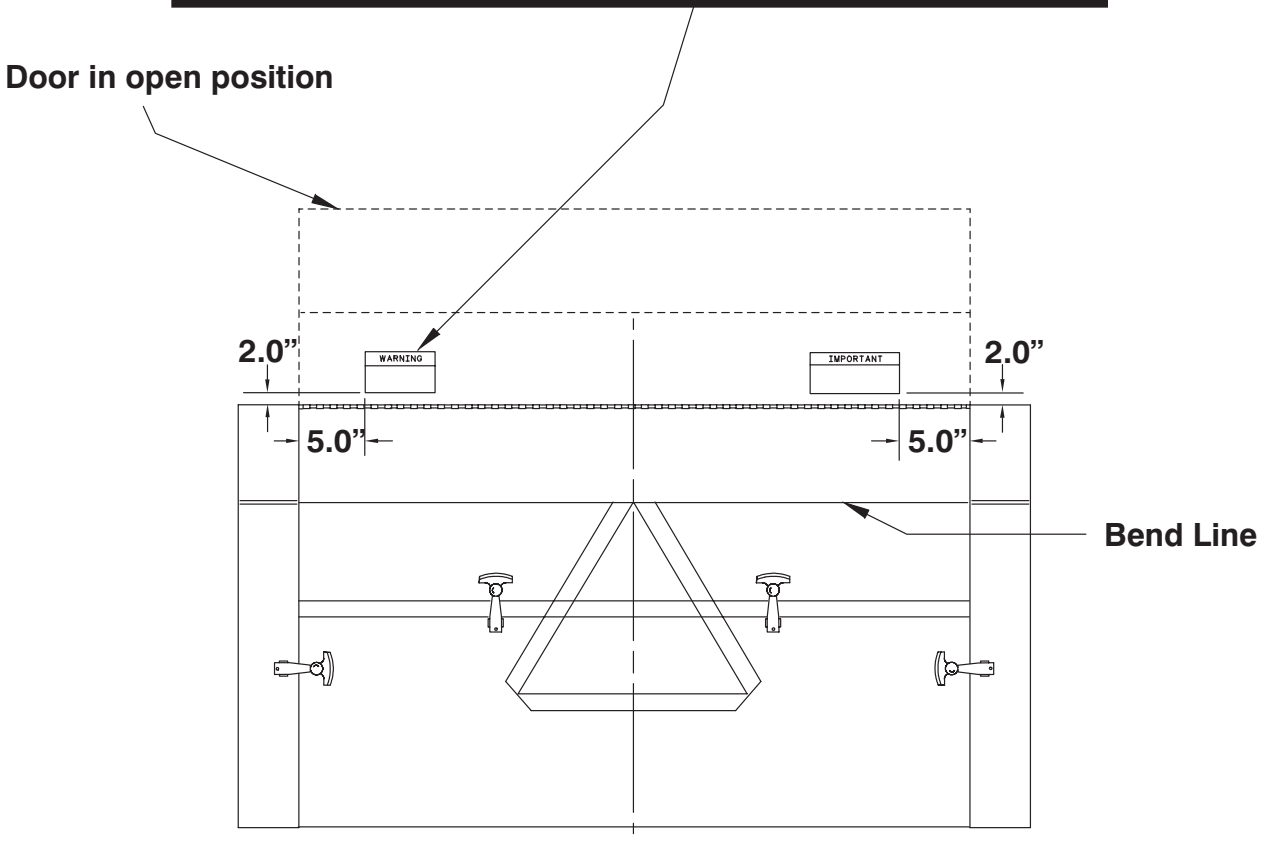
_____
Customer's Signature

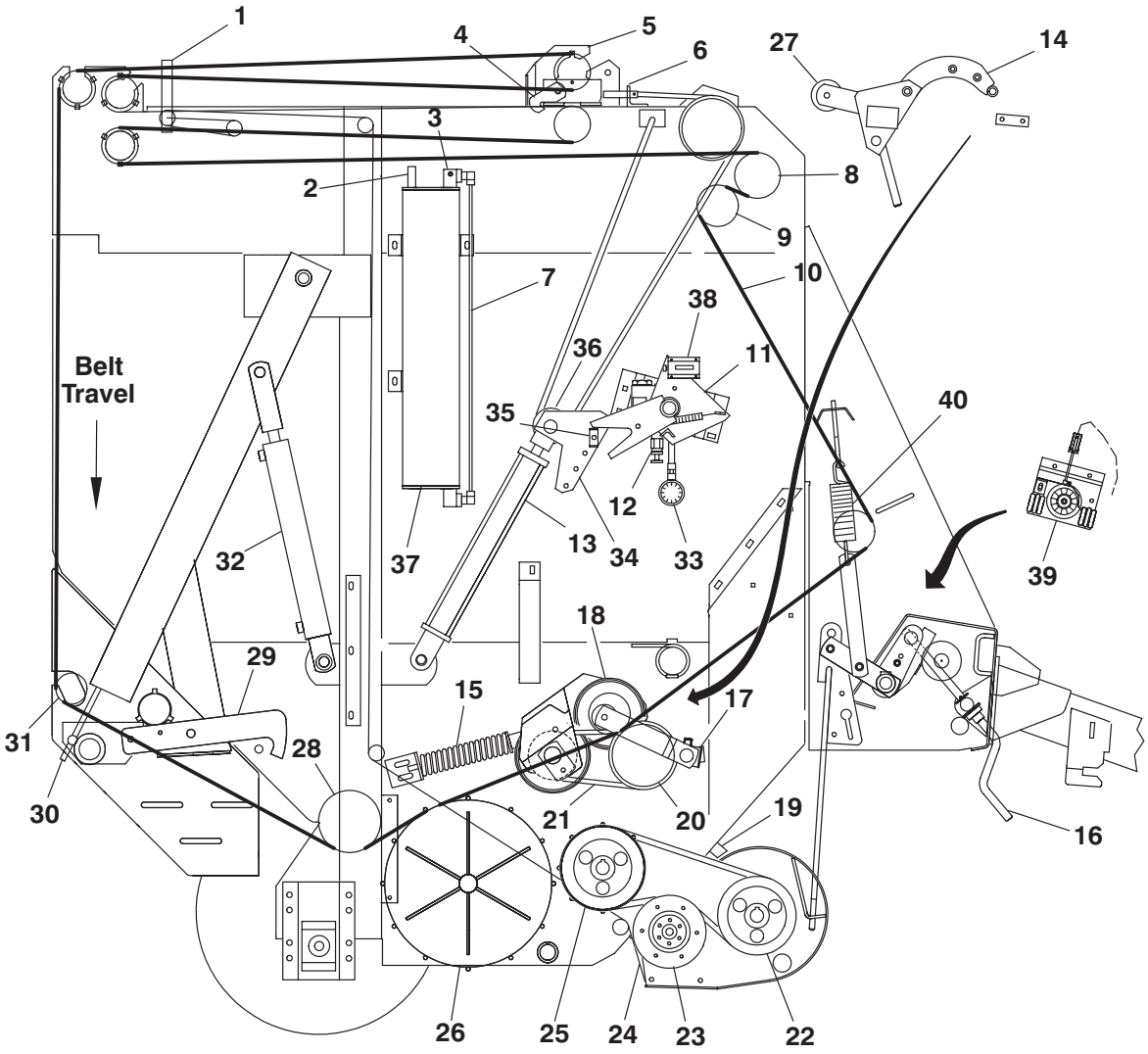
_____
Date Delivered

(Pages 7 & 8 Have Been Removed at Perforation)

SAFETY
(Continued)

Quick Wrap System Models Only





1 – Overfill Clutch Actuator
2 – Excessive Pressure Relief & Adapter
3 – Valve Stem
4 – Shuttle Lock (Engaged)
5 – Shuttle
6 – Shuttle Stop
7 – TDC Reservoir Sight Tube
8 – Belt Drive Roller
9 – Re-wrap Roller
10 – Belts
11 – Valve Trip Mechanism
12 – Adjustable Relief Valve
13 – Density Cylinder
14 – Bale Starter
15 – Packing Roll Compression Spring
16 – Pickup Height Adjustment Crank
17 – Idler Assembly Pivot
18 – Scraper Roller
19 – Pickup Stop
20 – Packing Roller
21 – Packing Roller Drive Chain
22 – Pickup Driven Sheave
23 – Pickup Idler Pulley
24 – Cable From Overfill Clutch to Stop Pickup
25 – 8″ Lower Roller
26 – 16″ Lower Roller
27 – Bale Starter Roller
28 – Adjustable Gate End Roller
29 – Gate Latch
30 – Adjustable Gate Latch Lift Rod
31 – Belt Tracking Roller
32 – Gate Cylinder
33 – Pressure Gauge (TDC Reservoir)
34 – Trip Arm
35 – Trip Spacer
36 – Density Cylinder Sprocket
37 – TDC Reservoir
38 – Bale Counter (Manual Balers ONLY)
39 – Right Twine Feed Sensor (Auto-Electric ONLY)
40 – Pickup Flotation Spring

Fig. 23: Component Identification - Right Side

(Range is 0-999). This is the default display and is active whenever: the Control Module is turned on, is NOT in a "tie" sequence, or the SELECT Key has NOT been pressed within the last 5 seconds to change to a different channel.

This display also indicates the condition of the Tailgate. When the Tailgate is "closed", the bottom segment of the leftmost digit is displayed (next to the icon showing a "closed" tailgate – see top illustration in Fig. 35); likewise, when the Tailgate is "open", the top segment of the leftmost digit is displayed (next to the icon showing an "open" tailgate with a discharged bale – see bottom illustration in Fig. 35).

To reset the Daily Bale Counter to Zero, press and hold the DECREASE and INCREASE Keys, simultaneously, to reset the Daily Bale Count display to ZERO.

NOTE: *Numerical values (marked with an *) for channels 2 and 3 are arbitrary values; they ONLY represent a range, NOT an actual count.*

Channel 2 – Twine Density (Spacing of Wraps Across Bale) (Fig. 36)

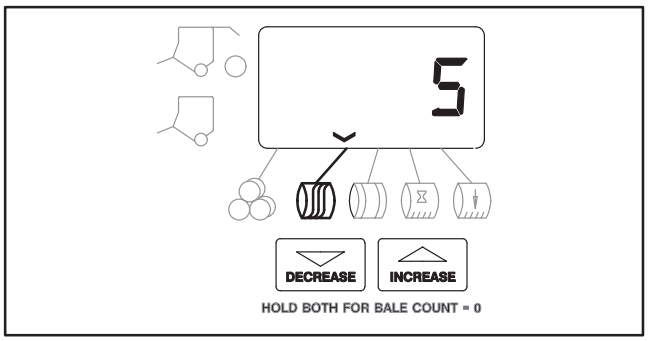


Fig. 36: Channel 2 – Twine Density

Press DECREASE Key for more spacing between wraps (fewer overall wraps) or INCREASE Key for less spacing between wraps (more overall wraps).
Range is 0–12* in 1 step increments; Default is 6.

NOTE: *The Twine Arm moves faster across the face of the bale as the setting approaches "0".*

* Arbitrary Numbers

Channel 3 – Twine End Wraps (Fig. 37)

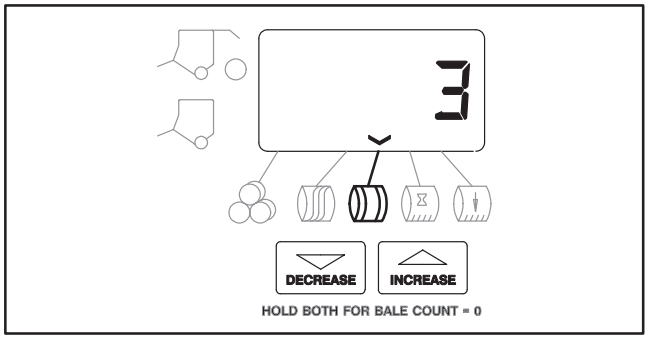


Fig. 37: Channel 3 – Twine End Wraps

Press DECREASE for fewer wraps or INCREASE for more wraps.
Range is 0–9* in 1 step increments; Default is 3).

NOTE: *The Twine Arm pauses for a shorter period of time at each bale end as the setting approaches "0".*

* Arbitrary Numbers

Channel 4 – Twine Arm Pause (Delay for Twine to Start on Bale) (Fig. 38)

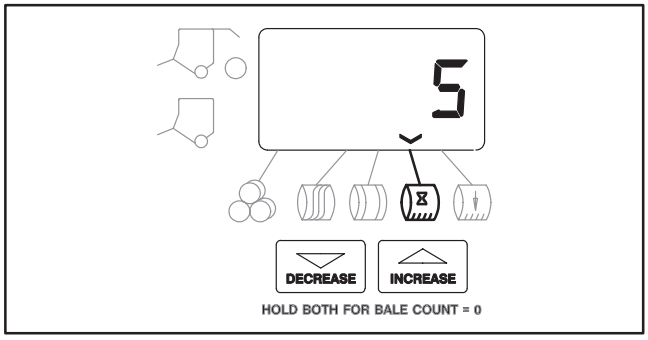


Fig. 38: Channel 4 – Twine Arm Pause

Press the DECREASE Key for a shorter delay or the INCREASE Key for a longer delay.
Range 0–20 seconds in 1 second increments; Default is 2 seconds.

NOTE: *The Twine Arm pause time is shorter as the setting approaches "0".*

Building a Bale

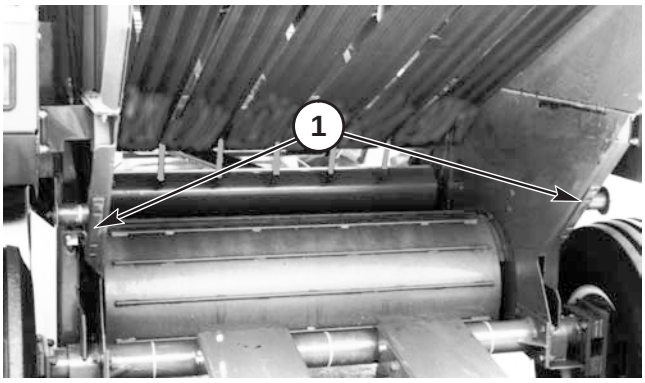
12. If the "GO ARROW" appears in the front of the Baler icon, you can proceed to build a bale. To build a bale, toggle the Bale Size Sensor up and down. The Bale Size Sensor is located on the left side of the Baler in the top front corner. The Sensor pivots about the Shuttle Stabilizer Sprocket. Each time the red light on the cord end of of the Sensor flashes, a count is being registered. After 9 counts, the Bar Graph on the display should begin to grow. Continue to toggle the Sensor. When the Bar Graph reaches the 2-1/2 foot mark, one (1) audible signal will sound and the the Bar Graph will flash on and off. Keep toggling the Bale Size Sensor until three (3) audible signals are sounded and a flashing "CYCLE" icon appears in the upper right hand corner of the display (the "GO ARROW" will also disappear). At this point, the Twine Arm should extend and point directly to the back of the Baler while pausing.
13. The Twine Arm will remain at the pause position until one of the following conditions occur:
    a. If both twines have started on the bale (accomplished only when both Twine Wheels have rotated *simultaneously)*, the Twine Arm will advance to the left side of the Baler to apply end wraps and then proceed to "home" while making intermittent stops.
    b. If, within 15 seconds, only one twine starts on the bale (accomplished when only one Twine Wheel rotated*)*, the Twine Arm will still wrap the bale, but with only one string. Once the wrapping mode is completed, an E–1 error code will display on the control indications that the bale was wrapped with only one twine. The operator then has the option to correct the problem and rewrap the bale by pressing the "CYCLE" and "ENTER" keys or to eject the bale with only a single twine.
    c. If, after 15 seconds, neither twine has started on the bale (accomplished when neither Twine Wheel rotated*)*, an E–3 error message will display on the control and the Twine Arm will return to the home position.

Open Tailgate

14. Simulate opening the Tailgate by passing a magnet past the Tailgate switch. The "TAILGATE" icon should appear and then disappear when the magnet is removed. The Bale Size Bar Graph should have also disappeared, the Bale Count incremented by one, and the "GO ARROW" icon should have reappeared in front of the "BALER" icon.
15. Repeat Steps 12., 13. & 14., if desired.

GATE STOPS (Fig. 57)

The position of the Gate Stops, which are located on each side of the Baler Frame, can be adjusted by adding or removing Shims. Gate Stop adjustment is only required if some of the Gate components have been replaced. If necessary, shim each side so that, with the Gate closed, the Gate Latches are ahead of the Latch Pins by a measured distance of 1/8″ (3 mm).



1 – Gate Stop Adjustment Shims

Fig. 57

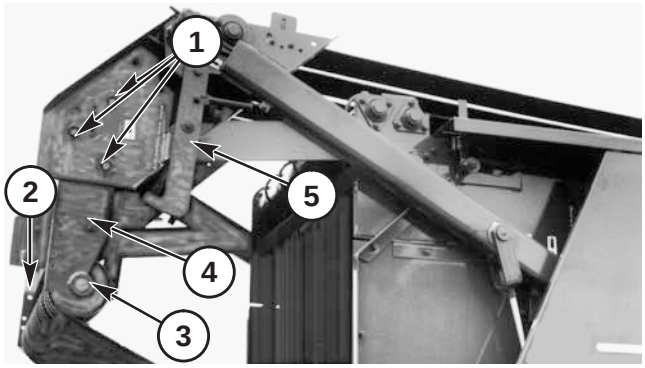
NOTE: *After Gate Stops have been adjusted, it may also be necessary to readjust the Gate End Roller position. Refer back to the Gate End Roller topic in the next paragraph.*

GATE END ROLLER (Fig. 58)

The Gate End Roller can be adjusted by means of the 1/2″ Bolts (3 for 1475 or 2 for 1875) and (1) 5/16″ Bolt on each side of the Gate. The 1/2″ Bolts are installed in slots and the 5/16″ Bolt can be positioned in any one of a series of holes to vary the position of the Roller. The Roller should be adjusted and maintained at a position of 1/2 to 1″ (13 to 25 mm) from the 16″ Lower Drive Roller. This distance should be increased to 1 to 1-1/2″ (25 to 38 mm) for Balers with the Quick Wrap.

NOTE: *The Tailgate MUST be tight against the stops before making adjustment. (See Fig. 57)*

IMPORTANT: *BE SURE that the Roller is set to the same position on both sides of the Gate, as determined by the 5/16″ Bolt pattern. Also, BE SURE that the Right and Left Gate End Roller Support Arms are kept parallel to each other to insure proper Belt tracking.*



1 – Gate End Roller Adjustment Bolts
2 – Lower Belt Guide
3 – End Roller
4 – Right Support Arm
5 – Gate Latch

Fig. 58

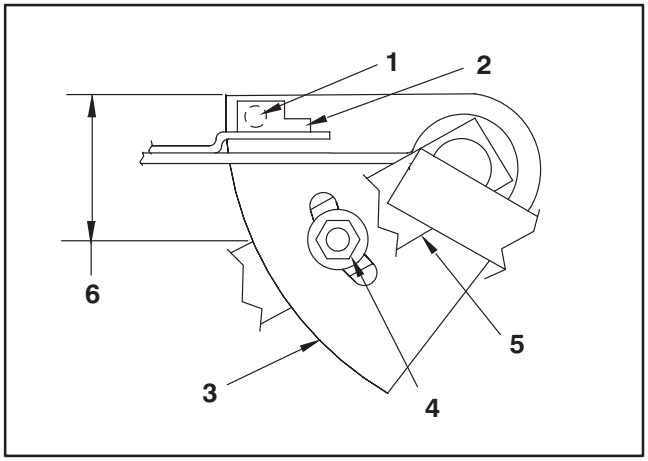
OVERRUNNING CLUTCH SPROCKET (Fig. 59)

The Scraper Roller Overrunning Clutch Sprocket assembly gives positive drive to the Roller while allowing for slight differences in the Roller and Belt speeds. To check for freedom of rotation, with the Baler empty, shuttle locks engaged, and Baler disconnected from the tractor, use a 3/4″ wrench and rotate the cap screw clockwise. The Overrunning Clutch should rotate without rotating any of the other drives. The Clutch is a self-contained unit and can be removed by removing the retaining cap screw.

NOTE: *If the Clutch needs to be removed, block Gears on the opposite side of the Baler with a block of wood.*

PACKING ROLLER CLEARANCE (Figs. 59 & 62)

The purpose of the Packing Roller is to compress the material which is entering between it and the 8″ Lower Roller. The Packing Roller is spring-loaded and driven from the left side of the machine. Clearance between the lower 8″ Roller and the Packing Roller should be set at 1/4″ (6 mm). This setting is made with the 1/2″ Bolts on the end of the Packing Roller Roll Arms on both sides of the Baler. This clearance should be checked on a routine basis every 100 hours. The Packing Roller Tension Spring lengths, on both sides of the machine, should be set to 9″ (229 mm). For lighter, fluffier crops, the clearance should be opened up and the spring tension should be reduced.



1 – Magnet
2 – Switch
3 – Cam/Pause Plate (Move Counterclockwise to Place Twine Closer to Edge of Bale)
4 – 5/16 Carriage Bolt, Plain Washer and Hex Nut
5 – Actuator Arm Assembly
6 – Factory Setting - 1.1″ (28 mm)

Fig. 80: Cam/Pause Plate Position Adjustment (As Viewed Looking Up from Bottom of Baler)

AUTOMATIC BALE CONTROL SYSTEM SWITCH ADJUSTMENTS

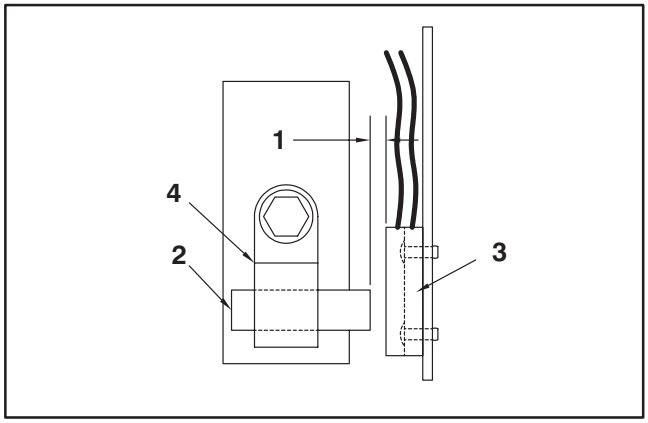
Tailgate Switch (Fig. 81)

1. When the Tailgate is latched, the Magnet will be rotated away from the Switch and the Switch should be in the open mode.

2. When the Tailgate is unlatched, the magnet will swing alongside the end of the switch. The end of the Magnet must be positioned 1/16 to 3/32″ (1.6 to 2.4 mm) from the Switch to cause it to close. To move the Magnet, loosen the Clamp, slide the Magnet to the correct position and retighten the Clamp.

NOTE: *The holes for mounting the Tailgate Switch are slotted. When installing a new Switch, make sure the Switch is positioned so that one end of it is near the Magnet as shown in Fig. 81.*

3. Check the continuity of the Switch (using an ohmmeter or equivalent) by placing the tester leads on each terminal lead from the Switch. As the Magnet approaches the Switch, the Switch should close.

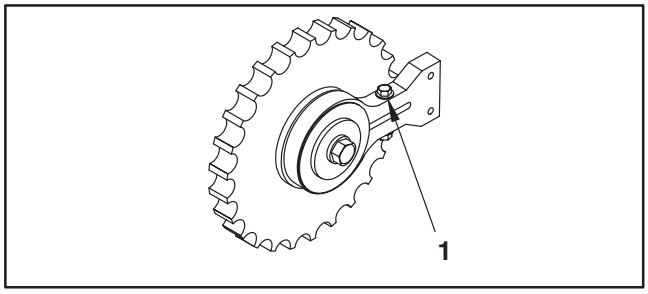


1 – 1/16 to 3/32″ (1.6 to 2.4 mm) Clearance
2 – Magnet
3 – Switch
4 – Clamp

Fig. 81: Tailgate & End Wrap/Pause Switch Magnet Adjustment

Friction Block Drag (Fig. 82)

The Friction Block clamps to the Hub of the Sprocket and is to create 3 to 4 in-lbs (0.34–0.45 Nm) of drag as the Friction Block rides on the Sprocket Hub. To adjust the amount of drag, tighten or loosen the Bolt and Lock Nut.



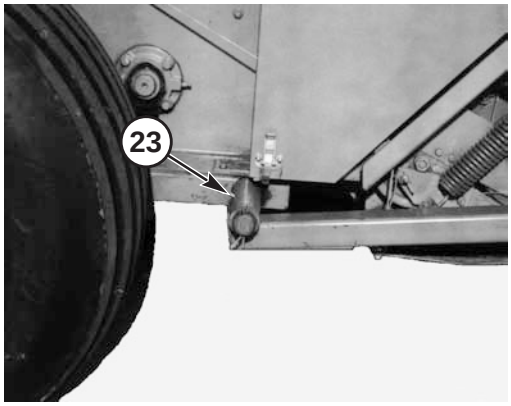
1 – Drag Adjusting Bolt and Lock Nut

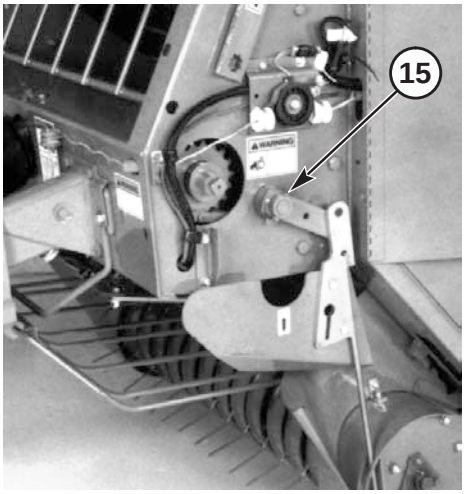
Fig. 82

Bale Size Indicator Sensor (Fig. 83)

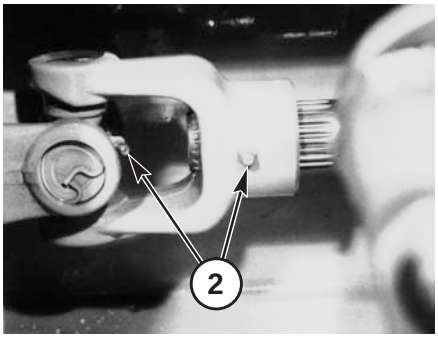
The distance between the input end of the Sensor and the tip of the Sprocket Tooth is to be 0.10 to 0.12″ (2.5 to 3 mm). To adjust, loosen the Jam Nuts on either side of the Sensor Mounting Bracket, move the Sensor to the correct position and tighten both Jam Nuts against the Mounting Bracket. DO NOT overtighten the Nuts on the plastic threads.

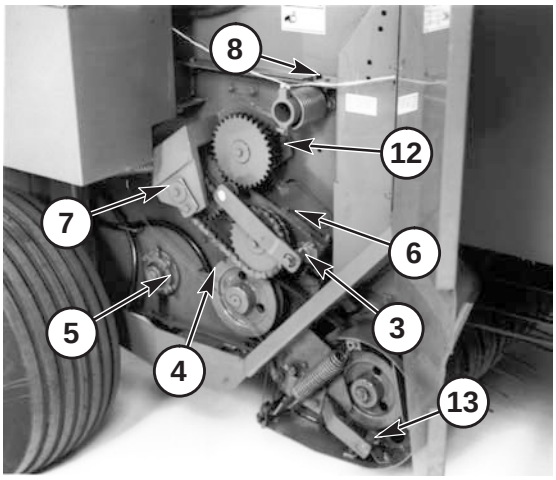
NOTE: *Moving the Sensor too close to or too far from the Sprocket Tooth will cause poor bale size count signals.*

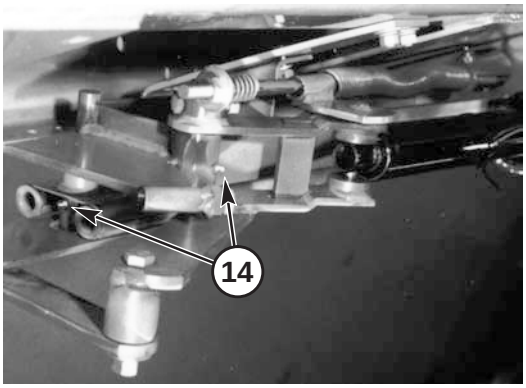




Front Master





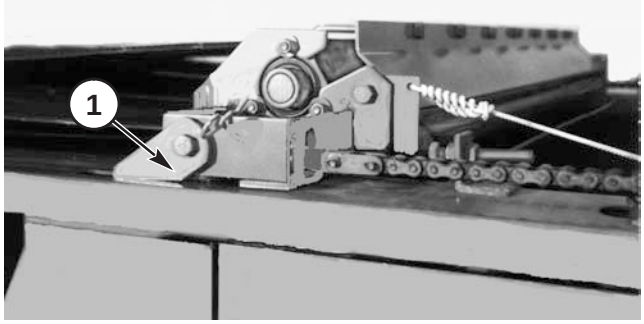


Activating Shuttle Locks (Fig. 107)

WARNING

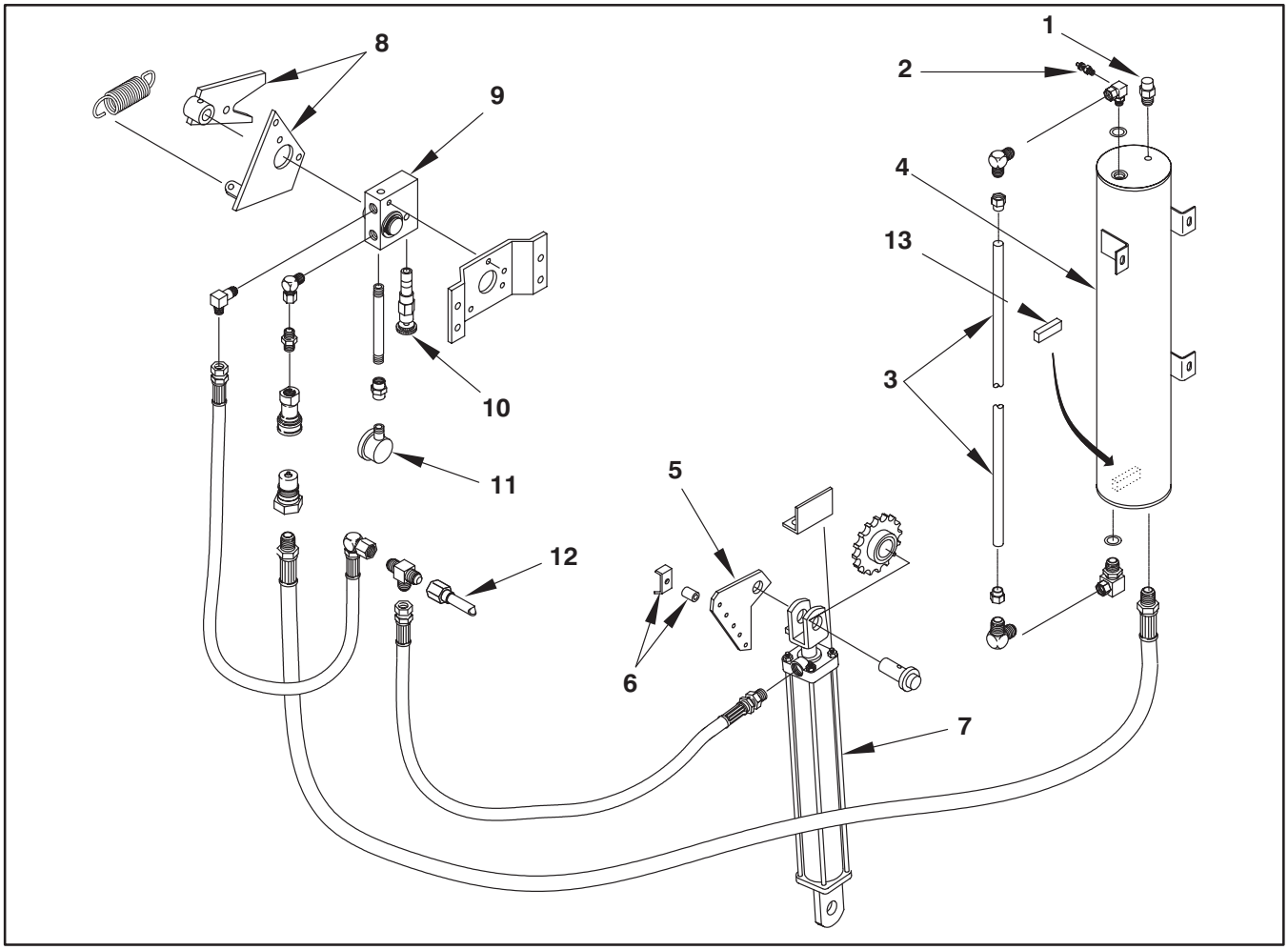
BEFORE servicing the belts, BE SURE to release the tension on the belts with the shuttle locks. NEVER have the PTO engaged while the shuttle locks are engaged. ALWAYS engage BOTH locks to make sure that belt tension is completely locked out.

To use the Shuttle Locks, first open the Gate. Then, carefully climb up onto Twineboxes, remove the Hairpin Cotterpins and swing the Locks over. Reinstall the Hairpin Cotterpins, carefully climb down and then slowly close the Gate.



1 – Shuttle Lock "Engaged" (One Each Side)

Fig. 107



1 – Relief Valve & Adapter
2 – Valve Stem
3 – Sight Tube
4 – Reservoir
5 – Trip Arm
6 – Trip Spacer Assembly
7 – Right Density Cylinder
8 – Valve Trip Mechanism
9 – Manifold
10 – Relief Valve Cartridge (070633)
11 – Pressure Gauge
12 – To Left Density Cylinder
13 – Magnet (Inside Reservoir)

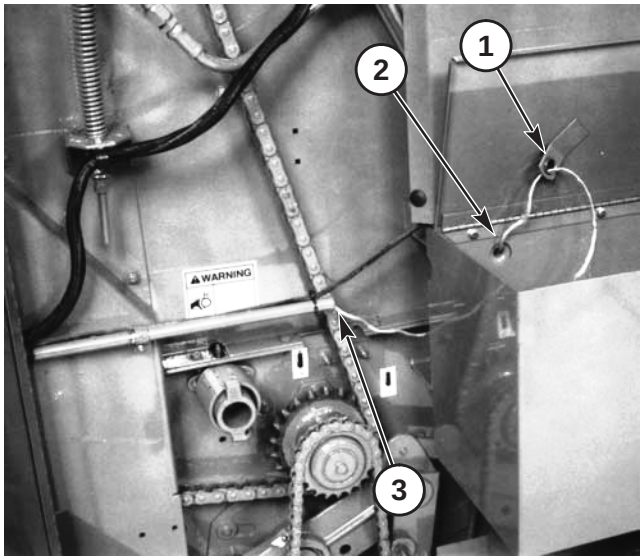
Fig. 108: Total Density Control (TDC) System

TWINE ROUTING (Figs. 120 thru 124)

To thread the Baler with twine, proceed as follows:

NOTE: *Use the following twine routing procedure from each Twinebox through the Twine Tubes in the Baler Frame.*

1. Place up to three balls of twine in the Twinebox. If continuous feeding is desired, route the twine end through the Guide above the twine ball on the Twinebox Cover, tie the twine ends together (always tie the outside twine end of the first ball to the inside twine end of the next ball for continuous feeding). On each side of the Baler, pull the end of twine from the center of the first ball and out through the hole in the side of the Twinebox.



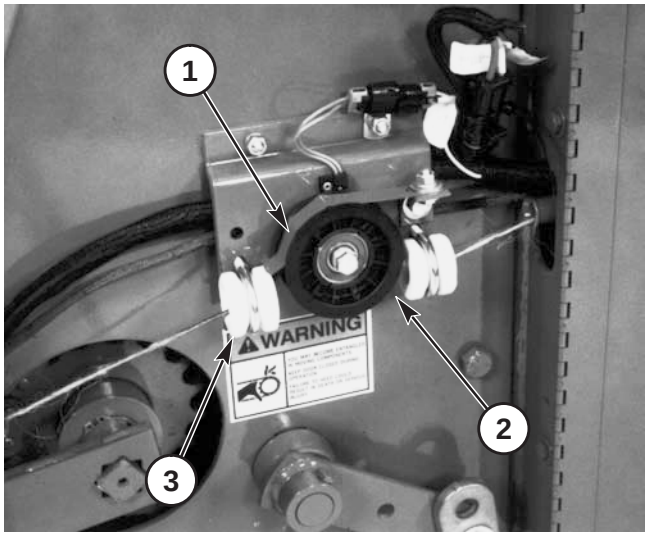
1 – Twine Routed Through Guide in Cover
2 – Twine Exiting Three-bale Twinebox
3 – Twine Routed to and through Twine Tube in Front Frame

Fig. 120

2. Feed the twine through the Twine Tube in the Front Frame, through the Rope Guide (Manual Control models) or Twine Sensor (Auto-Electric models) on the Frame, through the Twine Tube on the corner of the Hitch.

NOTE: *The characteristics of the wrapping materials used to wrap bales varies significantly. Therefore, the way in which the twine is routed around the Twine Wheels (or through the Rope Guides on Manual Tie Models) is important. To achieve optimum placement of the wrapping material on the bale. The plastic material should be wrapped around the Twine Wheels 1-1/2 times. The sisal style twine works best with a 1/2 wrap around the Twine Wheel. However, if the Twine Wheel appears to be slipping, 1-1/2 wraps around the Twine Wheel should be considered.*

NOTE: *The Twine Keeper is to be adjusted so the Tab of the Keeper rests on the Twine Guide while the outside corners of the Twine Keeper are flush with the outside edges of the Twine Wheels. The Twine Keeper is to be centered between the flanges of the Twine Wheel.*



1 – Twine Spring resting on Guide
2 – Twine Wheel
3 – Twine Guide

Fig. 121: Twine Sensor (Automatic Bale Control Model)

PICKING UP MATERIAL (cont.)

PROBLEM	CAUSE	REMEDY
Pickup NOT running or running at below full speed.	Pickup set too low to the ground.	Readjust Pickup to raise the setting or raise the Baler Axle.
	Improper Drive Belt tension.	Readjust the tension; see Adjustments chapter.
	Pickup mechanism jammed.	Clean out blockage.
	Overfill Clutch mechanism activated.	Wrap and eject bale and make smaller bale the next time.
	Overfill Clutch improperly adjusted.	Readjust Clutch mechanism and linkage.

STARTING THE BALE

Difficulty is encountered in starting the bale to rotate.	RPM too high.	Reduce the PTO RPM to 300 on 540 RPM Balers and 700 RPM on 1000 RPM Balers.
	Packing Roller too slippery.	Install Packing Roller Lagging Kit.
	Material is NOT being fed in uniformly.	Feed crop evenly until bale has started to rotate.
	Material is extremely dry and windrows are too small, making it impossible for a sufficient amount of material to get into the Bale Chamber quick enough to start the core rolling.	Increase the windrow size by combining windrows. Use Shuttle Stops to provide slackened Belts during core formation.
Material wraps on Packing Roller.	Bale Starter does NOT drop down.	Lubricate all of the pivots on the Bale Starter assembly. Leave PTO running while closing Gate.
	Material has too high a moisture content.	Stop baling and wait for material to dry.
	Baling below 50% moisture when making balage.	Bale at moisture levels between 50% and 70%.

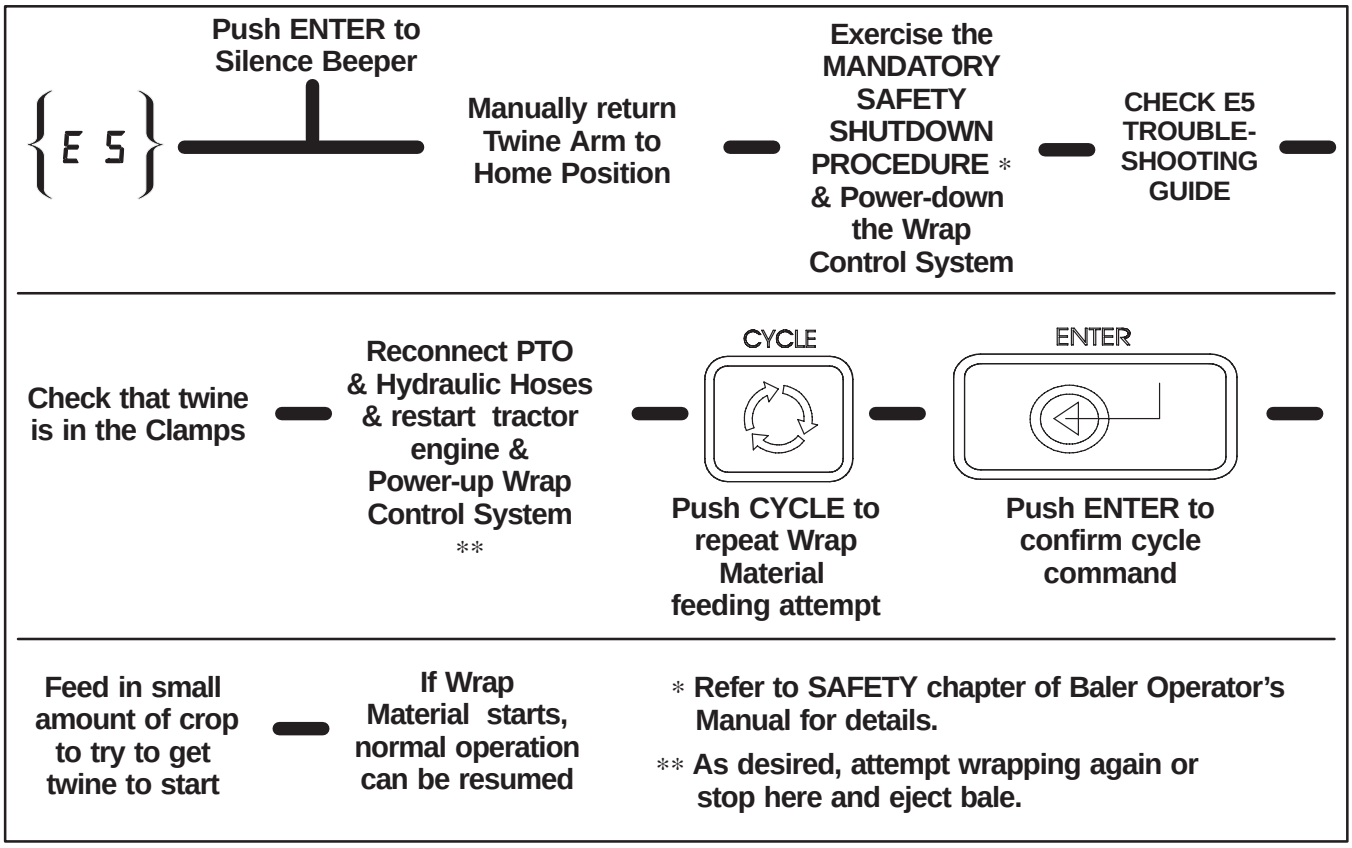
WRAPPING & EJECTING BALE

Twine falls off left edge of bale.	Twine Tube is being extended too far to the left.	Adjust Twine Arm Stop.
	Twine improperly wrapped around the bale.	When starting to wrap the bale with Twine, place two wraps of Twine at the center of the bale to secure the Twine on the bale.
	Bale improperly formed.	Feed more material on the edges of the bale on the next bale formed; see “Baling” topic in Operation chapter.

E 5 - Twine Arm Obstruction (Twine Tie System ONLY)

NOTE: *Twine may or may NOT have started; Twine Arm may return HOME automatically depending on whether Arm was moving out from HOME or moving back to HOME.*

On a Twine Tie system only, an E5 error message could potentially occur, due to an obstruction in the path of the Twine Arm. The following action should be taken:



TWINE TIE SYSTEMS

NOTE: *The Twine Arm and Actuator comes fully assembled and mounted on the Baler from the factory.*

Manual Twine Wrap System (Fig. 129)

Tractor Control Box Installation

A Bracket is provided for attaching the Receptacle onto the tractor. The Bracket should be located on the rear of the tractor in a position which prevents the Cable from being caught by the PTO.

Appropriate hardware and mounting brackets are provided for attaching the Control Box to a non-supportive member (such as the cab or a fender) on the tractor. BE SURE to locate the Control Box within convenient reach. Make the Red (+) 12-volt and White (-) 12-volt tractor battery/ground connections for powering the Control Box. A 20 amp Bus Bar connection is also acceptable. Any intermediate wire or harness must be AWG 10 gauge or heavier.

Bale Counter Installation

1. Pop rivet the Bale Counter to the Counter Mounting Bracket using the Pop Rivets supplied.
2. Attach one end of the Extension Spring to the Bale Counter Arm closing the loop in the Spring to secure.
3. Mount the Counter Assembly to the TDC Valve Trip Mechanism using the existing hardware on the Baler (TDC Valve Trip Stop Bolt & TDC Valve Mounting Bolt).
4. Loosen the TDC Valve Trip Mounting Bolt. Attach the other end of the Extension Spring to the end of the Bolt facing the front of the Baler and secure.

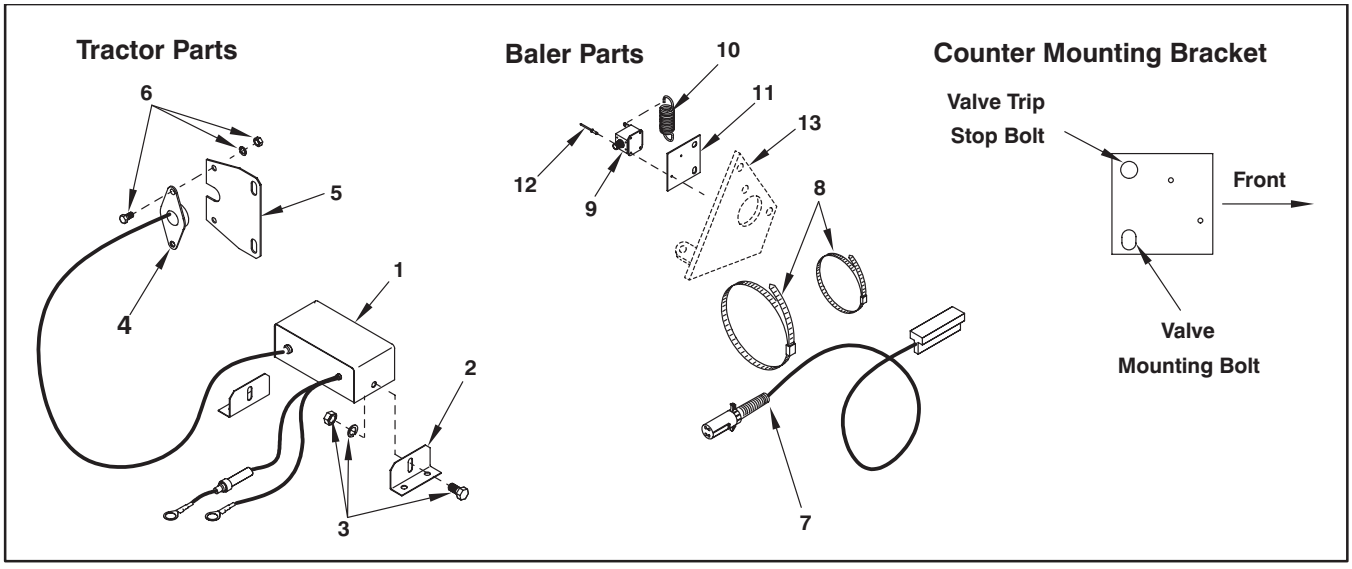
Baler Actuator Cable Installation

1. Remove Windguard to gain access to the Twine Arm Actuator.
2. Route Actuator Cable through Cable and Hose Support, along Hydraulic Hoses, through the Hitch Assembly and plugging into the Actuator. Secure the Cable with the Cable Ties provided.

CAUTION

DO NOT secure cable to any moving parts or pinch points.

3. Replace Windguard.



1 – Manual Twine Control Box
2 – Control Box Mounting Bracket
3 – 1/4 x 3/4 Cap Screw, Lock Washer & Nut
4 – Control Box to Implement Receptacle
5 – Receptacle Mounting Bracket
6 – 1/4 x 1 Cap Screw, Lock Washer & Nut
7 – Implement Harness
8 – Wire Ties
9 – Bale Counter
10 – Counter Extension Spring
11 – Counter Mounting Bracket (slotted hole to bottom)
12 – Pop Rivet
13 – Front Plate of TDC Valve Trip

Fig. 129: Manual Twine Control Parts

CHEVRONED BELT DUTCHMAN KIT

The Dutchman Kit (126230) contains (1) 36″ long, 6″ wide section of Chevron Belt, already laced and ready for splicing. Installation details are provided with the Kit.

NET STRIPPER KIT

The Net Stripper Kit (127038 - 1475 & 127039 - 1875) prevents the netting from following the belts up the backside of the Baler.

CHAIN OILER KIT

The Chain Oiler Kit (806491) provides automatic oiling of all Drive Chains as the Baler is used. Installation details are provided with the Kit.

SAFETY CHAIN (Fig. 138)

The recommended Safety Chain for use with these Balers can be obtained in Kit 803320.

NOTE: *If the Baler is to be transported on a public highway, a Safety Chain Kit should be obtained and installed following the details in the Transporting chapter.*

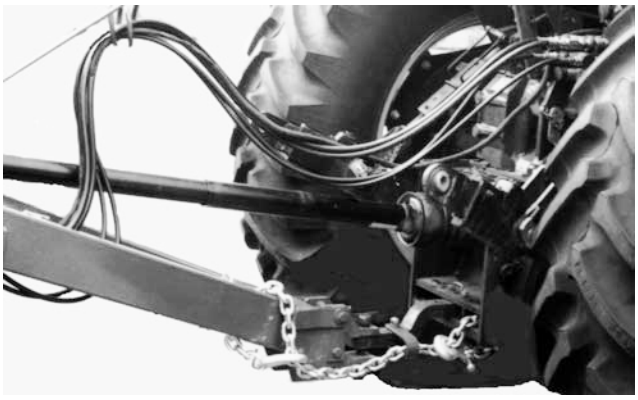


Fig. 138: Safety Chain (Installed)

CONNECTOR KIT 119923

This Connector Kit repairs the male and female ends of the Connectors (2 wires) that join the ends of the Baler Harness with the Left and Right Twine Feed Sensors, End Wrap Pause Sensor, Pinch Roll Count Sensor (Net Wrap models only) and the Shuttle Return & Full Size Bale Sensor on the Automatic Bale Control models. The Kit also repairs the Connectors for the End Wrap Pause Sensor, Gate Latch Sensor & Full Size Bale Sensor on the Automatic Twine Wrap models. Installation details are provided with the Kit.

CONNECTOR KIT 119924

This Connector Kit repairs the male and female ends of the Connectors (3 wires) that join the ends of the Baler Harness with the Bale Size Sensor. Installation details are provided with the Kit.

CONNECTOR KIT 119925

This Connector Kit repairs the male and female ends of the Connector (2 wires, 18 AWG blue and yellow) that joins the ends of the Baler Harness with the Implement Harness. Installation details are provided with the Kit.

CONNECTOR KIT 119926

This Kit repairs the 6 hole Connector to the Cab Module of the Auto–Electric Tie System in the tractor Power Harness. Installation details are provided with the Kit.

CONNECTOR KIT 119927

This Connector Kit repairs the male and female ends of the Connector (2 wires, 10 AWG red and black) that joins the ends of the Baler Harness with the Implement Harness. Installation details are provided with the Kit.

CONNECTOR KIT 119928

This Kit repairs the Fuse Holder in the tractor Power Harness on both Automatic Bale Control and Manual Twine Wrap models. Installation details are provided with the Kit.

CONNECTOR KIT 119929

This Connector Kit repairs the end of the Baler Harness (30 wire Connector) that plugs into the Implement Module. Installation details are provided with the Kit.