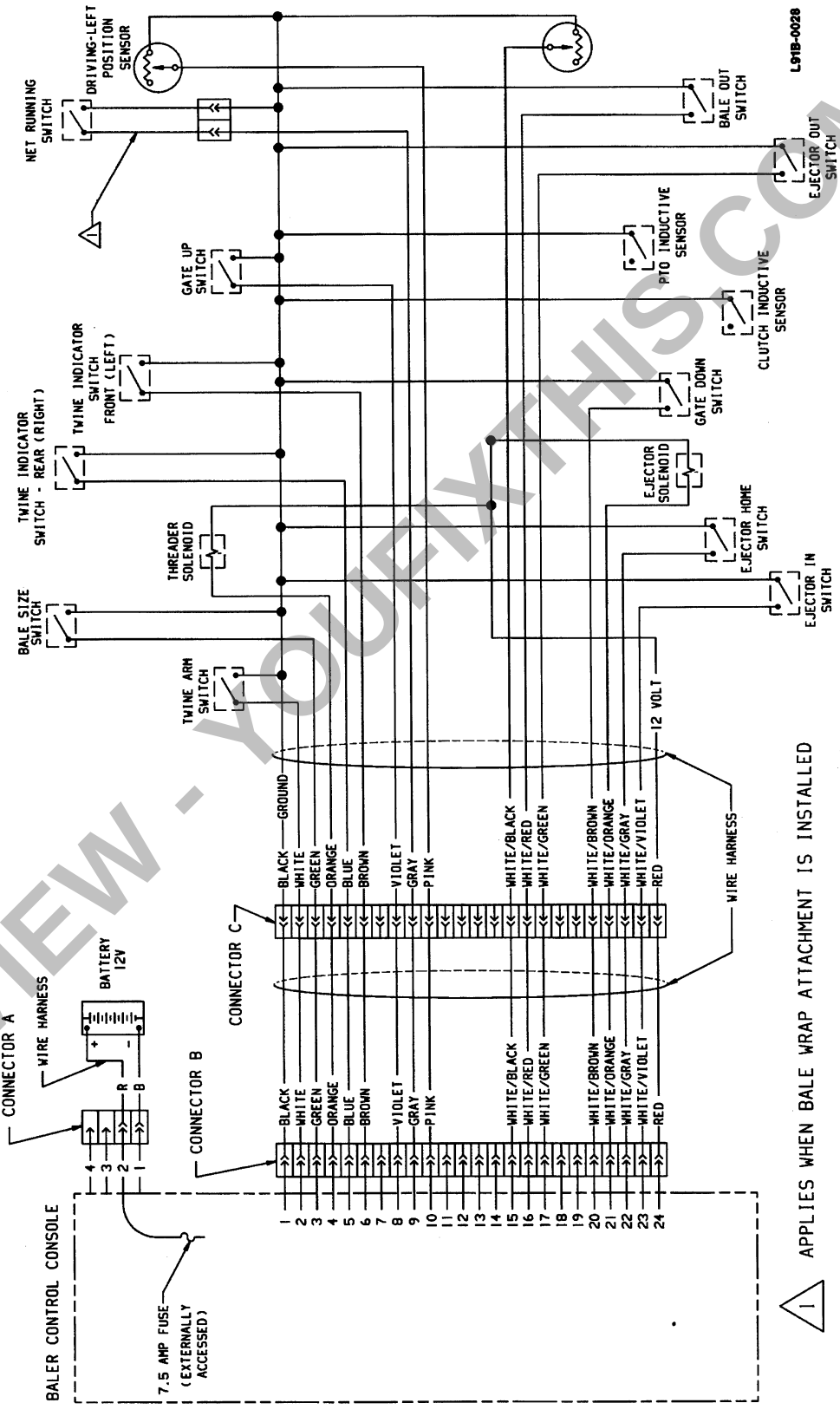
ELECTRICAL SCHEMATIC



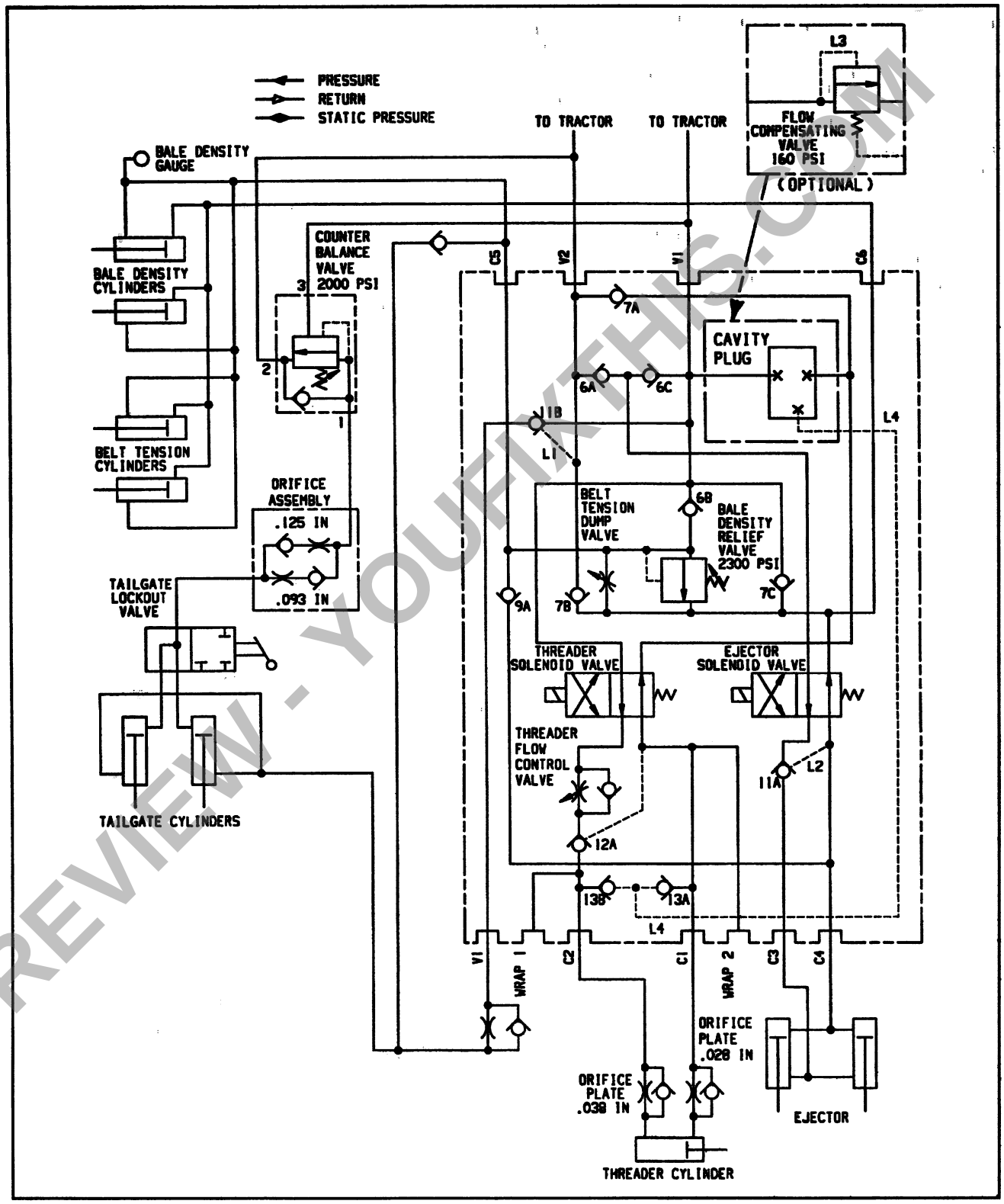
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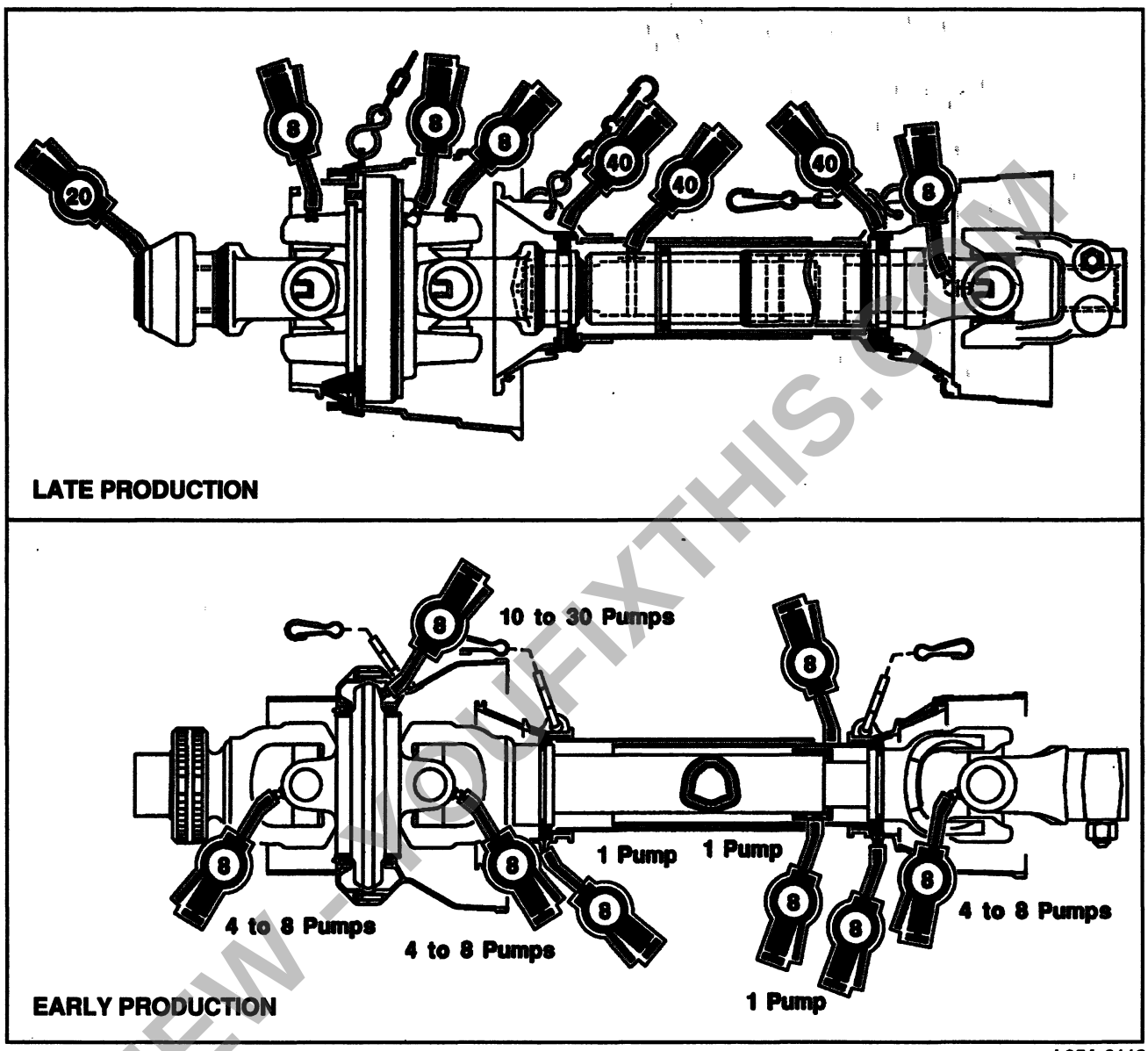
BASIC HYDRAULIC SCHEMATIC



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L95A-0112

IMPLEMENT DRIVE LINE

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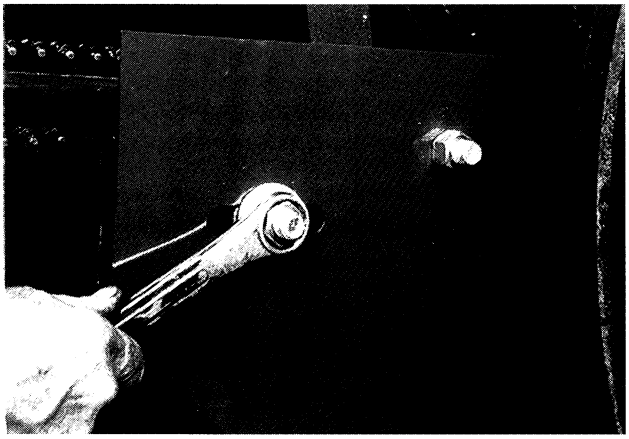
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Tine Bar Bearing Replacement

Left Tine Bar Bearings

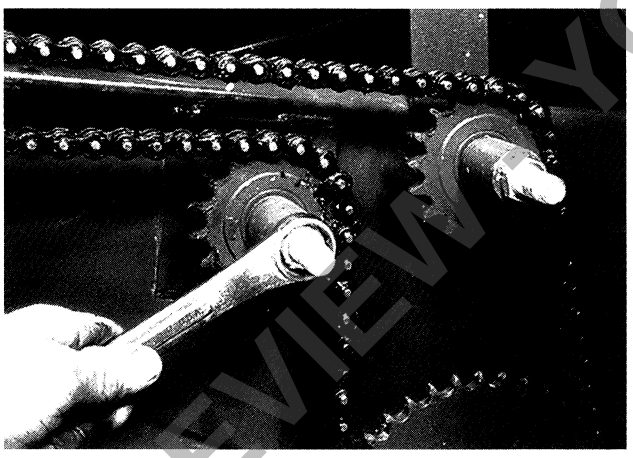
See the safety warnings at the beginning of this section and follow the procedures.

1. Remove the pickup drive chain shield.



560-89052-14

2. Loosen the nut for the chain tensioner sprocket and slide the tension sprocket to the end of the slot.



560-89052-16

3. Lift the drive chain off the sprockets. If necessary remove the master link.

4. Remove the left end deflector wrapper.



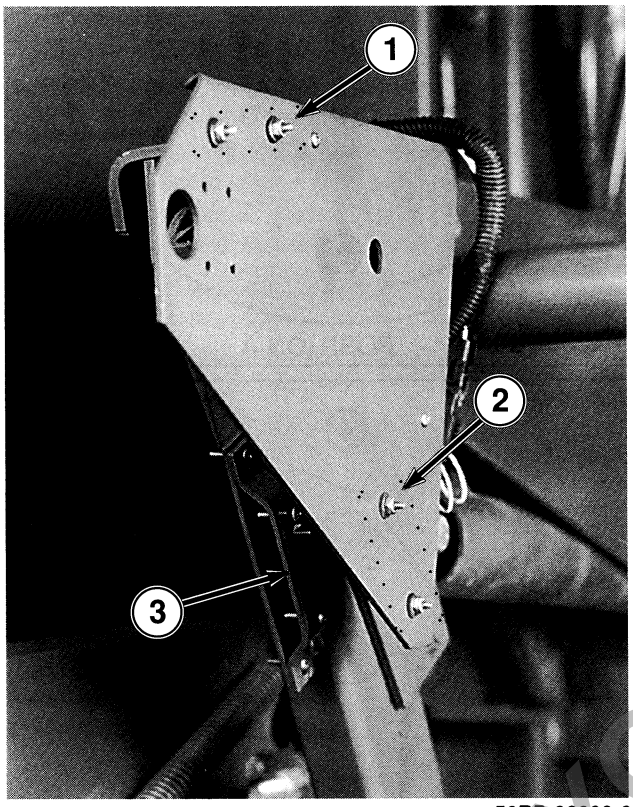
56RB-95013-28

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Ejector Out Switch and Ejector Home Switch

There is no adjustment for the ejector out switch or the ejector home switch.

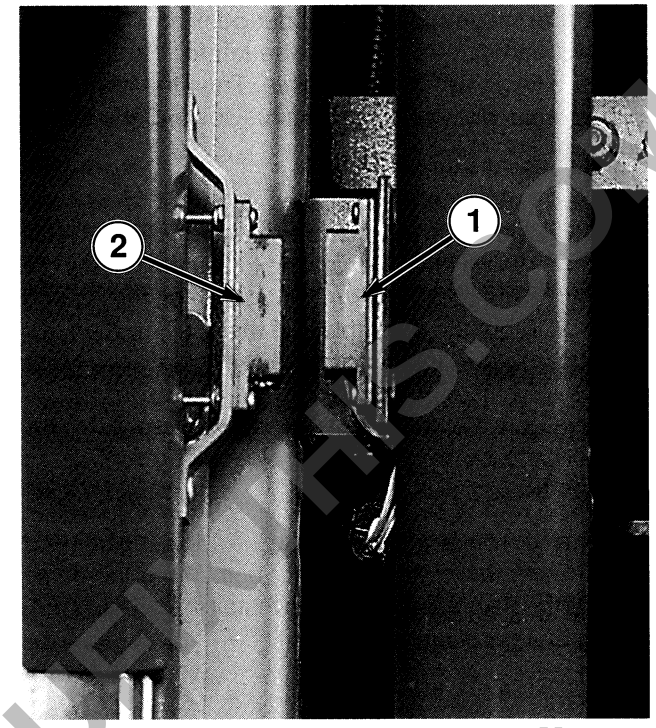


56RB-92099-6

1. Ejector Out Switch (behind shield)
2. Ejector Home Switch (behind shield)
3. Actuator

Gate Down Switch

There is no adjustment for the gate down switch.

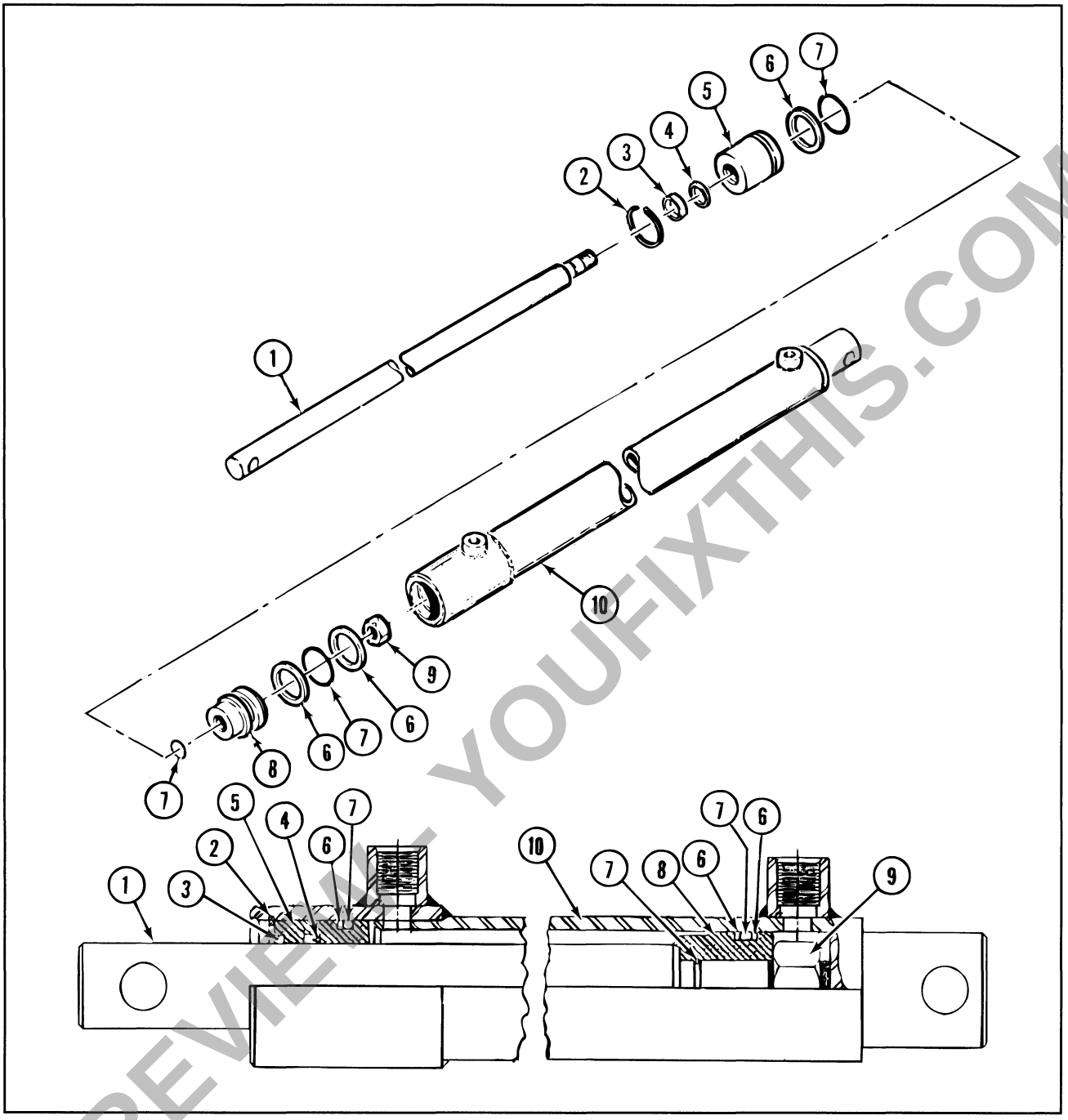


56RB-91032-7

1. Gate Down Switch
2. Actuator

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L92A-0222

TAILGATE CYLINDERS - LATE PRODUCTION

1. Piston Rod
2. Retaining Ring
3. Wiper
4. Seal
5. Gland
6. Backup Ring
7. O-Ring
8. Piston
9. Self-Locking Nut
10. Tube

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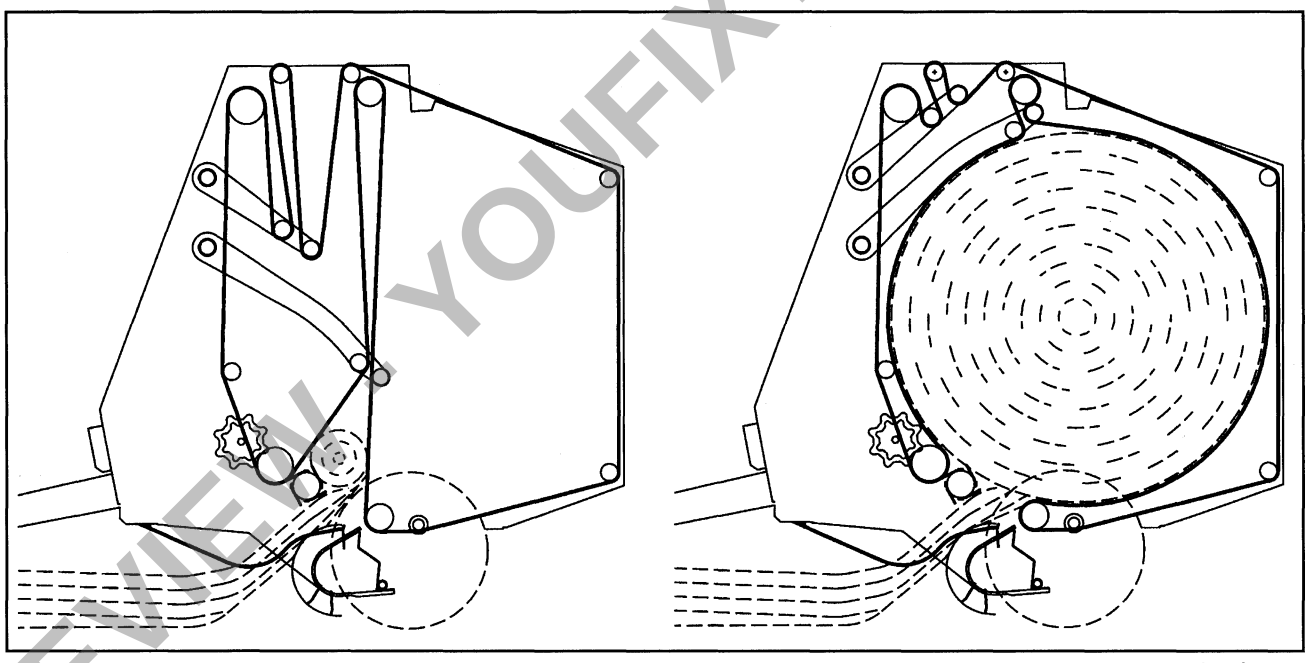
SYSTEM DESCRIPTION AND OPERATION

The mainframe components consist of the top drive roll, bottom drive roll, starting roll, upper chamber roll, rienk shaft, and idler rolls. The top drive roll and bottom drive roll are rubber covered to help prevent belt slippage. The starting roll is covered with a series of rubber flaps to help start the bale.

The belt tension system uses a belt tension arm and two belt tension rolls to keep the proper tension on the forming belts. The belt tension arm is controlled by two belt tension cylinders. Mounted below the belt tension system is the bale density system. The bale density system uses a bale density arm and two bale density rolls to apply tension through the forming belts to the bale as the bale is being formed. The bale density arm is controlled by two bale density cylinders. The density of the bale is controlled by restricting the expansion of the bale into the bale chamber until the bale is sufficiently packed and able to overcome the force applied by the bale density system.

The wheels are mounted on hubs equipped with tapered bearings. The spindles are replaceable.

NOTE: Mainframe and belt tension service requires the removal and installation of gib keys and bearing locking collars. Refer to General Service Procedures in Section 1003 for gib key and bearing replacement service procedures.



L95A-0143

STARTING THE BALE **COMPLETING THE BALE**

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Section 1001

INTRODUCTION

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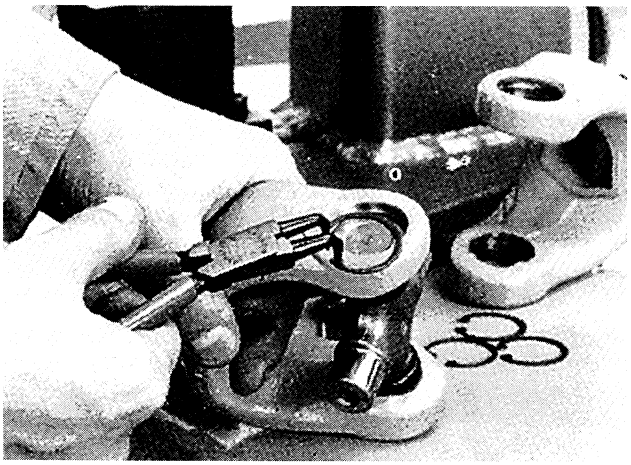
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9. Remove both snap rings that fasten the bearing caps in the yoke.

NOTE: The yoke shown in the photos is different from the yokes in your *IDL*, but the procedure is the same.



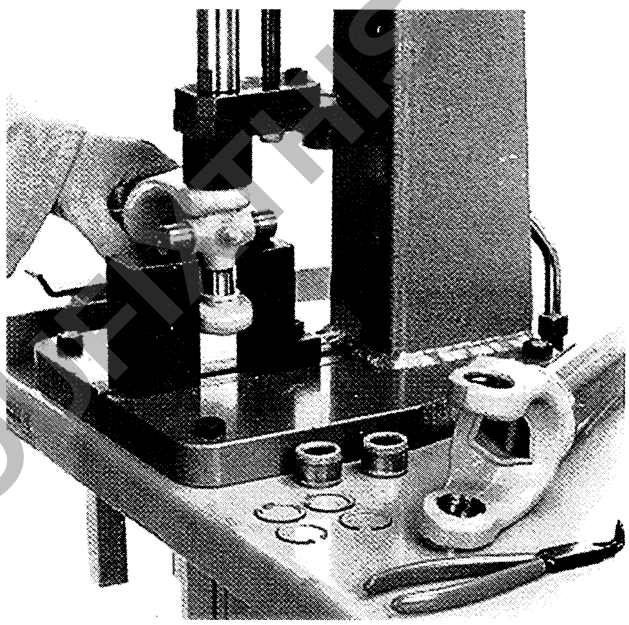
BP89072-10-5

10. Use a suitable fixture to support the cross. Press the yoke down onto the cross to drive the upper bearing cap part of the way out of the yoke.

Fasten the upper bearing cap in a vise and pull the yoke from the bearing cap.

Put the yoke in the press so the remaining bearing cap is up and the support is under the cross. Press the yoke down onto the cross to drive the bearing cap part of the way out of the yoke. Remove the cross from the yoke.

Fasten the bearing cap in the vise and pull the yoke from the bearing cap.



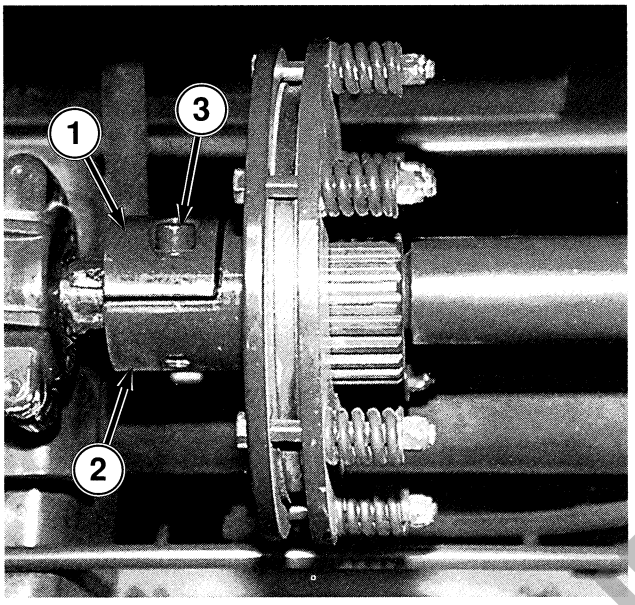
BP89072-9-7

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7. Remove the two socket head cap screws that fasten the clutch hub to the gearbox output shaft.

NOTE: Do not pry the clutch hub cap off of the gearbox output shaft. The clutch hub and clutch hub cap must be slid off of the end of the gearbox output shaft.



56RB-95001-9

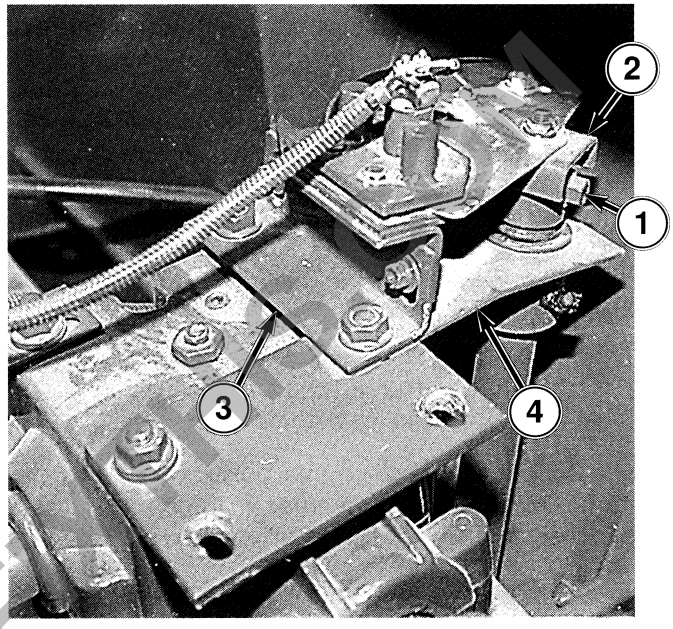
1. Socket Head Cap Screw
2. Clutch Hub
3. Clutch Hub Cap

8. Slide the clutch shaft and clutch assembly toward the left side of the machine. Make sure the clutch hub is free of the gearbox output shaft.

9. Remove the two 3/8 IN bolts that fasten the center support strap for the rienk shaft to the gearbox.

NOTE: The center support strap for the rienk shaft is on the 5-FT wide baler only.

10. Remove the socket head bolt that fastens the timing plate bracket to the twine arm jackshaft. Remove the two nuts that fasten the switch assembly bracket to the gearbox.



56RB-95001-7

1. Socket Head Bolt
2. Timing Plate Bracket
3. Switch Assembly Bracket
4. Jackshaft Support Bracket

11. Lift the timing plate bracket, the switch assembly bracket, and the jackshaft support bracket off of the gearbox.

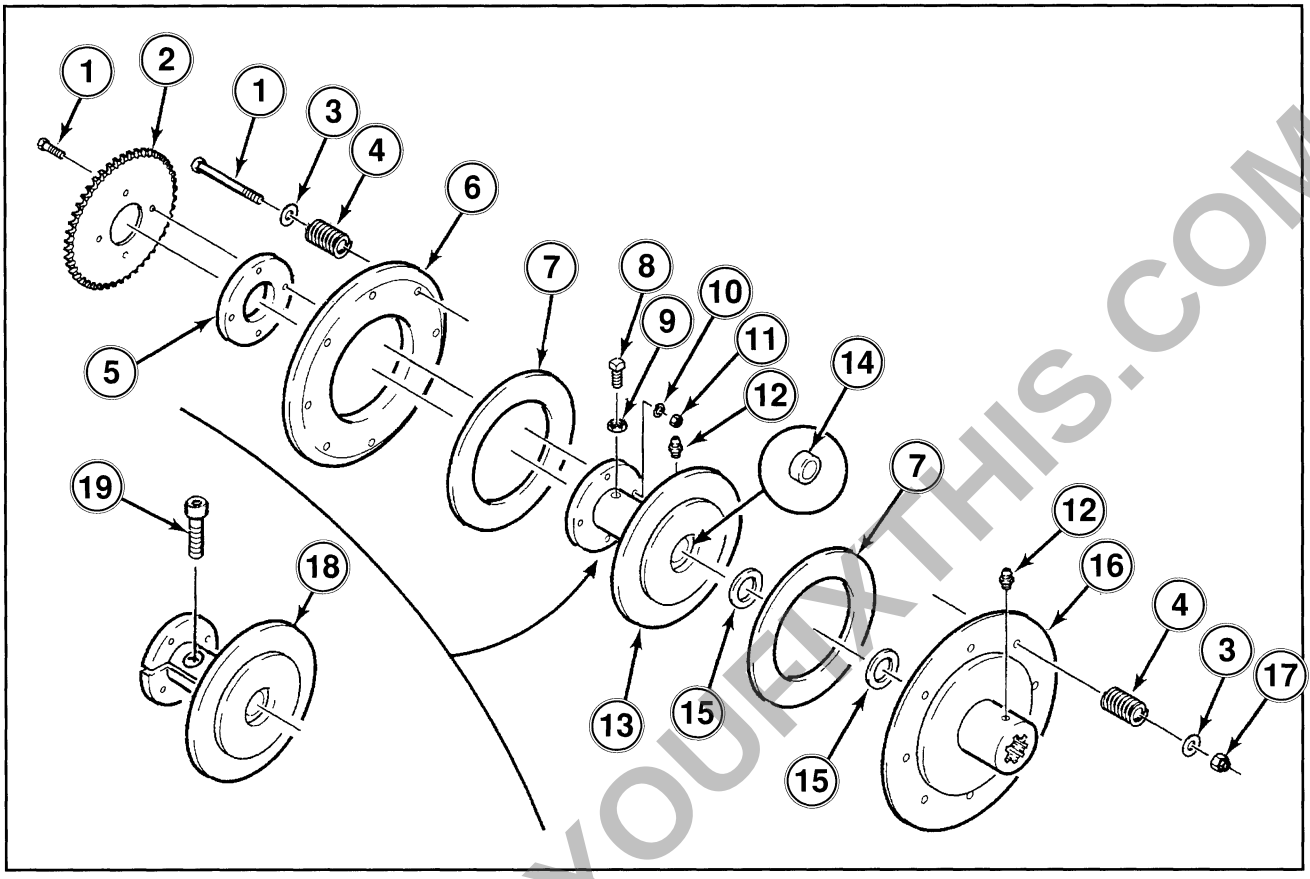
12. Remove the four HFTLN that fasten the gearbox to the mainframe.

13. Raise the gearbox high enough for the studs to clear the mainframe and remove the gearbox.

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Disassembly and Inspection of Clutch

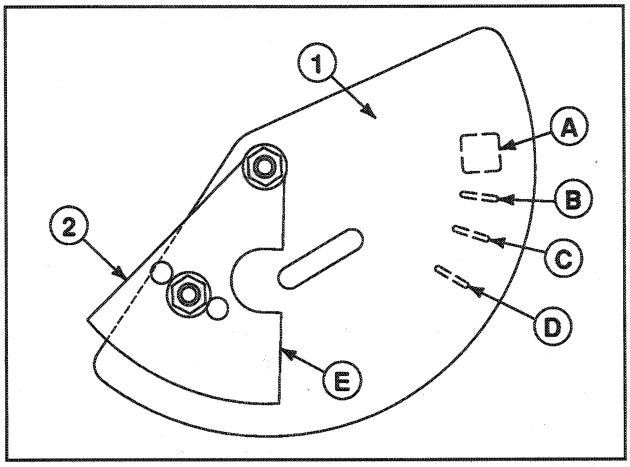


L89A-0008

1. Bolt
2. Drive Sprocket
3. Flat Washer
4. Spring
5. Spacer Plate
6. Inner Pressure Plate
7. Fiber Disc
8. Set Screw, Early Production
9. Jam Nut, Early Production
10. Lock Washer
11. Nut
12. Grease Fitting
13. Clutch Hub, Early Production
14. Bushing
15. Seal
16. Outer Pressure Plate
17. Self-Locking Nut
18. Clutch Hub, Late Production
19. Socket Head Cap Screw

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L94A-0194a

1. Timing Plate
2. Delay Plate

A. Lobe A - Actuates Twine Arm Switch when Twine Arm is in home position
B. Lobe B - NOT USED in this mode.
C. Lobe C - NOT USED in this mode.
D. Lobe D - Actuates Twine Arm Switch to send twine arm toward home position when wrapping with mesh (if equipped)
E. Delay Plate - NOT USED in this mode.

When lobe D closes the twine arm switch, the baler control console deenergizes the threader solenoid valve. When the threader solenoid valve shifts, oil flows to the base end of the threader cylinder. The threader cylinder extends, causing the twine arm to move toward the right side of the baler. The screen will show:



When the threader solenoid valve deenergizes, the flow of oil to the mesh drive cylinder stops. The oil flows to the two knife cylinders. As the knife cylinders extend, linkage forces the mesh drive cylinder to retract so the feed roller drive disengages. The right knife cylinder also applies a brake at the end of one of the feed rollers. At the same time the knife cylinders actuate the knife to cut the mesh.

When the mesh is cut, a spring returns mesh flap to the storage position. The actuator is no longer aligned with the mesh running switch and the mesh running switch opens. When the mesh running switch opens, NET is no longer shown on the screen. The screen must not show NET when the twine arm is moving toward the home position. If the screen shows NET, check to make sure the mesh has been cut.

As the twine arm moves toward the home position, lobes C and B on the timing plate close the twine arm switch. There is no change in the function. The twine arm continues to move to the home position.

When the twine arm reaches the home position, lobe A closes the twine arm switch. The threader solenoid valve remains deenergized, so oil is still being supplied to the base end of the threader cylinder. This keeps the threader cylinder extended so the twine arm stays in the home position. Oil is also still being supplied to both knife cylinders in the mesh wrap attachment. The right knife cylinder keeps the brake applied at one end of the feed rollers.

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OPERATION - AUTOMATIC MODE

The following paragraphs describe the basic operations of the electronic and hydraulic controls during the bale making procedure. Operations described here are in the automatic mode. The MANUAL switch on the baler control console is in the OFF position. See Baler control console in this section for a description of the switches and lamps. See Identification and Location of Switches in this section for the location of the switches.

Whenever possible, operate the baler in the automatic mode to take advantage of the features of the baler. The manual mode is provided primarily for servicing the machine and gives the operator control of the ejector and twine solenoids. The manual mode also allows the operator the ability to run the baler if there is a malfunction in the automatic mode.

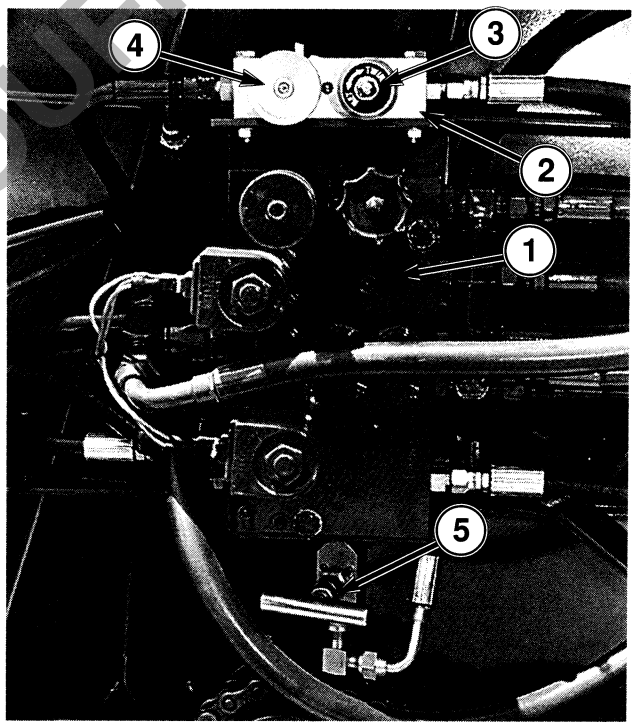
NOTE: See Section 8010 for a description of the hydraulic functions.

Preparing to Bale

The operator selects the bale size by adjusting the bale size selector knob. Adjusting the bale size selector knob changes the position of the bale size switch.

The operator selects the correct position for the TWINE ARM switch on the baler control console. The Twine ARM switch has two positions for twine application and one for mesh application. To apply twine in a 4 FT (1.2 meter) baler, the TWINE ARM switch must be in the DELAY position. In the DELAY position, the twine arm will be held in the out position for 4 seconds. The twine arm is held in the out position to add additional wraps of twine to the left side of the bale. To apply twine in a 5 FT (1.5 meter) baler, the TWINE ARM switch must be in the NO DELAY position. When the TWINE ARM switch is in the NO DELAY position, the twine arm will not be held in the out position. On the 5 FT (1.5 meter) baler, the twine arm moves over center in the out position to add additional wraps to the left side of the bale. If the optional mesh wrap attachment is being used, the TWINE ARM switch must be in the Net position.

If the baler is equipped with the optional mesh wrap attachment, the operator must check some additional items. To apply twine to the bale, the needle valve mounted on the bottom of the baler control valve must be closed. To close the needle valve turn the handle on the needle valve all the way clockwise. The selector valve on the mesh wrap valve must be turned all the way clockwise to the TWINE position. To apply mesh to the bale, the knob on the needle valve must be turned all the way counterclockwise to the open position. The selector valve must be turned all the way counterclockwise to the w position. The flow control valve on the mesh wrap valve must be adjusted to apply a minimum of two wraps of mesh to each bale. During the mesh wrapping operation the twine arm will also operate. To prevent twine from feeding, the operator must either remove the twine from the twine arms or tie the two twines together in the twine box.



56RB-95039-8

1. Baler Control Valve
2. Mesh Wrap Valve
3. Selector Valve
4. Flow Control Valve
5. Needle Valve

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Automatic Mode Operation

NOTE: If the baling cycle is interrupted by the loss of power or the auto/manual switch being moved to the MANUAL position, the baling cycle must be completed in the manual mode.

1. When the full bale alarm sounds, the operator can make corrections to the bale shape before actuating the automatic sequence. Then stop the forward motion of the tractor and move the start/auto switch momentarily to the START position. The twine arm will move from right to left. When the twine starts on the rotating bale, the twine lamp will flash.

2. The twine arm continues moving toward the left until the actuator closes the contact of the twine out switch, deenergizing the threader solenoid. At this time the full bale alarm stops sounding and the twine arm moves to the right.

3. The twine arm continues moving toward the right until the actuator closes the contacts of the twine home switch. At this time, the clutch solenoid is deenergized causing the clutch cylinder to retract, stopping the rotation of the baler forming belts and the pickup.

4. When the clutch cylinder has completely pulled the clutch arms together, the actuator on the clutch arms has closed the clutch switch and energized the tailgate up solenoid.

5. At this time, the tailgate will rise until the actuator mounted on the right side of the tailgate is aligned with the gate up switch.

6. As the tailgate is near the raised position, the bale will drop out onto the ground. This allows the bale in plunger to move inward and close the bale in switch.

7. The ejector solenoid is then energized, sending the ejector out. The bale is pushed rearward to clear the area and enable the tailgate to close.

8. When the ejector has extended rearward completely, the ejector out switch is opened by the actuator mounted on the ejector arm near the right side pivot point.

9. The tailgate down solenoid is energized and the tailgate up solenoid deenergized causing the tailgate to lower.

10. As the tailgate approaches approximate two-thirds closed, the switch actuator will open the ejector switch and deenergize the ejector solenoid causing the ejector to retract toward the home position.

NOTE: The ejector is held out until the bottom rear corner of the tailgate passes the center line of the bale. This lets the ejector hold the bale away from the moving tailgate if the bale rolls back toward the baler on a downward slope.

11. After the tailgate has closed completely, the gate down lamp illuminates. At this time the clutch solenoid is energized, engaging the clutch, and starting the baler belts and pickup revolving.

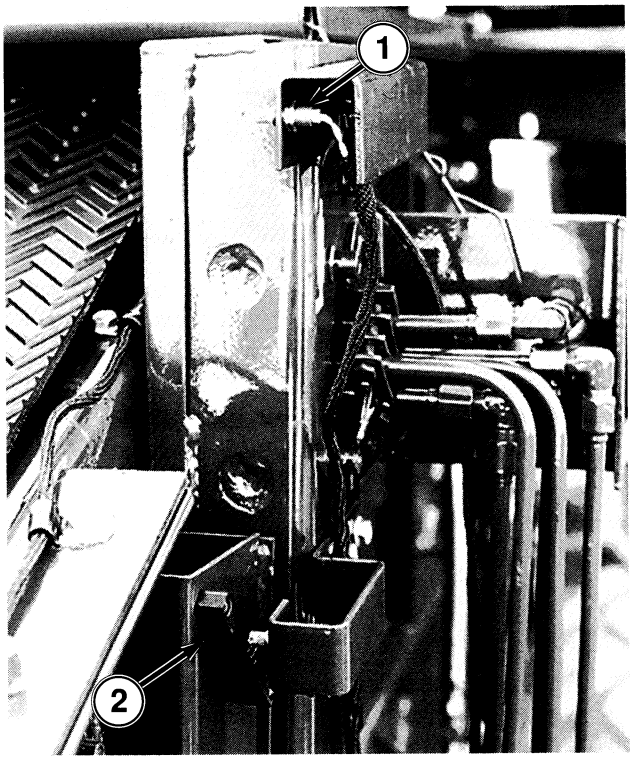
NOTE: The tailgate down solenoid continues to be energized for approximately 12 seconds after the gate down lamp illuminates.

12. Approximately 12 seconds after the gate down lamp illuminates, forward motion can be resumed for starting the next bale.

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Gate Up Switch



56RB-87086-8

1. Gate up switch
2. Actuator

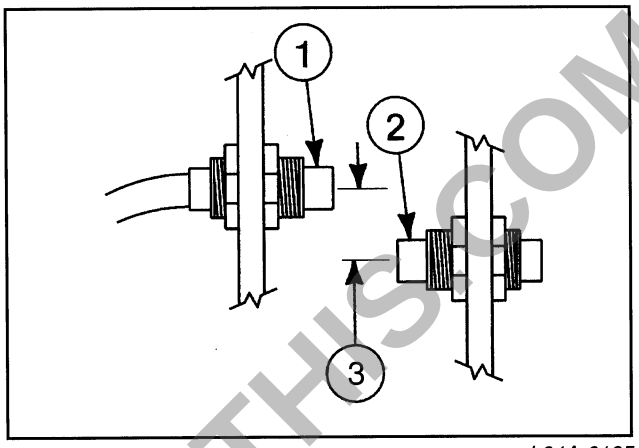
NOTE: If the body of the gate up switch is round, the gate up switch is adjustable. If the body of the gate up switch is rectangular, the gate up switch is not adjustable.

See the safety warnings at the beginning of this section and follow the procedures.

1. Make sure the tailgate is all the way up.

2. Put the tailgate lockout switch in the LOCKED position.

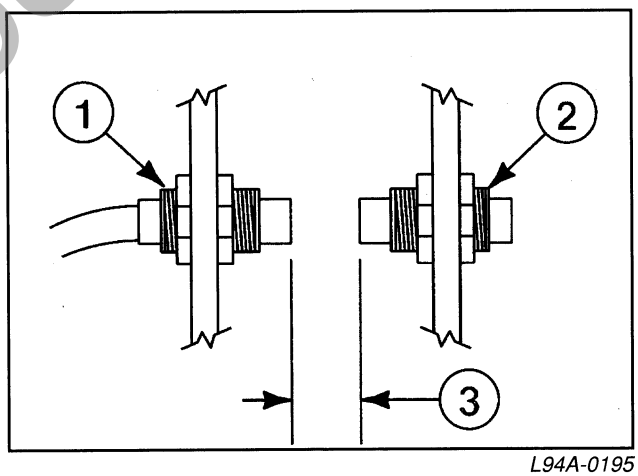
3. The centerline of the gate up switch must be within 1/4 IN (6 mm) of the centerline of the actuator. If the alignment is not correct, adjust the position of the gate up switch in the mounting bracket or adjust the position of the mounting bracket.



L94A-0195

1. Switch
2. Actuator
3. Difference between centerlines.

4. There must be 1/8 to 1/4 IN (3 to 6 mm) gap between the gate up switch and the actuator. Adjust the gate up switch to get the correct gap.



L94A-0195

1. Switch
2. Actuator
3. Gap

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TWINE CUTTER ASSEMBLY

Operation

The twine cutter assembly located on the inner right side of the mainframe, is made of a pull rod, rod support, an anvil, and knife.

When the twine arm moves to the HOME position, the twine arm pushes against a leaf spring that pulls on the pull rod. The pull rod in turn causes the twine knife to rotate down against the anvil and cut the twine.

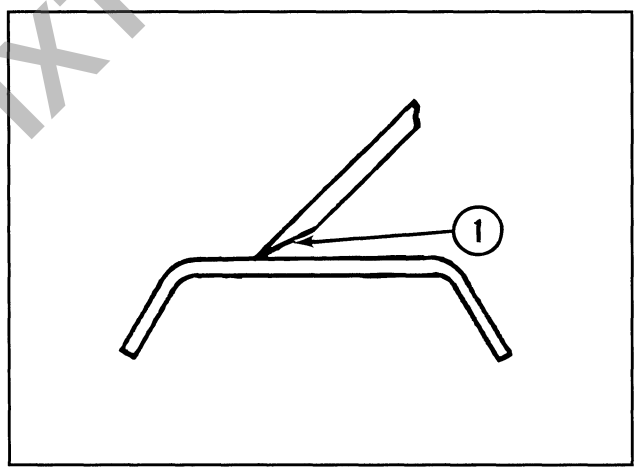
The cutting edge of the twine knife must be as sharp as possible at all times to make sure the twine knife cuts correctly all the time. When the twine frays rather than cutting cleanly, the twine knife is dull or the knife does not contact the anvil all the way across. The twine knife has two cutting edges and can be turned over to use the second edge for cutting. The two cutting edges can be sharpened.

Twine Knife

See the safety warnings at the beginning of this section and follow the procedures.

1. Make sure the twine knife is sharp. The twine knife can be replaced, sharpened, or turned over to use the opposite cutting edge. When installing the twine knife, make sure the bevel of the knife's cutting edge is on the bottom for correct operation.

2. To adjust the twine knife, loosen the twine knife mounting bolts. Move the twine knife so the cutting edge contacts the anvil all the way across. Tighten the mounting bolts.



L89A-0075

1. Sharpened surface

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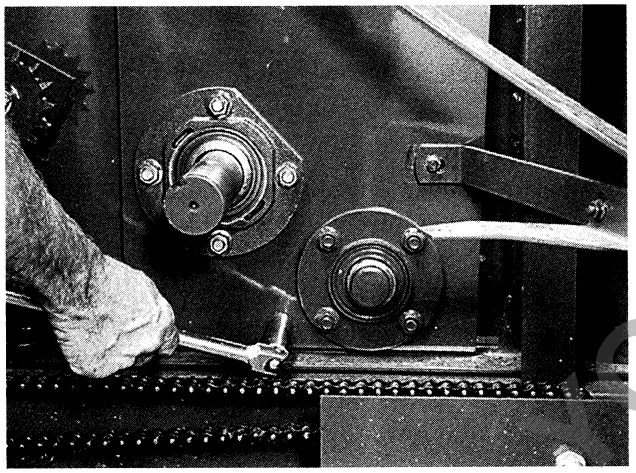
Installation

See the safety warnings at the beginning of this section and follow the procedures.

NOTE: If the starting roll was removed, install the starting roll. See Starting Roll; Installation in this section.

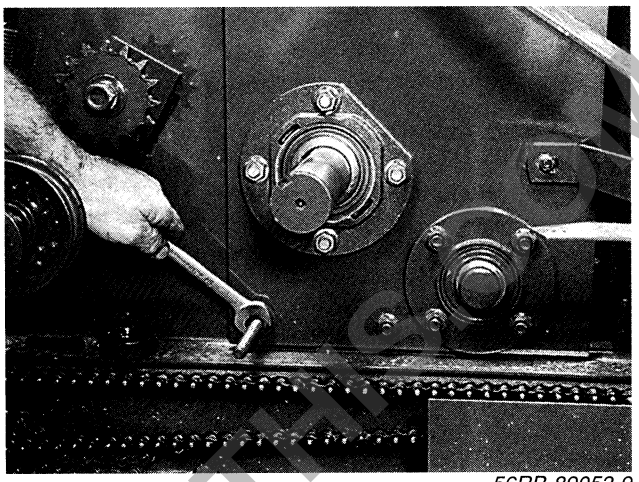
1. Slide the bottom drive roll into position through the mainframe on the left side and over the forming belts.

2. Install the roll support bracket on the left side of the mainframe. Make sure the spacers are installed on the lower bolt and the twine guide rod. Adjust the roll support so the shaft of the starting roll is centered in the grass ring and tighten the bolts.



56RB-89053-7

3. Install and tighten the nut on the twine guide rod. Make sure the twine guide rod is rotated properly so the twine guide rod does not interfere with the twine arm movement.



56RB-89053-9

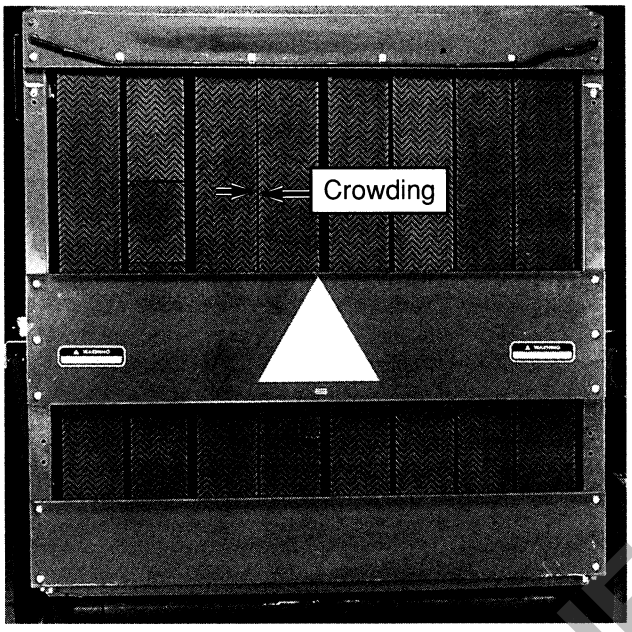
4. Install the side door support straps.

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Rear of Baler - One Forming Belt Crowding

If only one of the forming belts is crowding to one side, remove the forming belt. Taper both ends of the forming belt. Install the forming belt in the opposite direction.



56RB-91032-3

ONE FORMING BELT CROWDING

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4. If the problem occurs in only the auto mode, check the forming belts. The baler control console will not energize the tailgate up solenoid valve until the twine arm is in the home position and the forming belts have stopped.

If the forming belts are not turning, the problem can be in the clutch inductive sensor circuit. The clutch inductive sensor circuit tells the baler control console when the drive belts have stopped. Make sure the disc is not vibrating, causing the clutch inductive sensor to indicate the drive belts are turning. Also see Test Mode in Section 4001 and check the clutch inductive sensor and circuit.

If the forming belts are turning, the problem can be in the twine arm circuit or in the clutch circuit. The twine arm must be in the home position for the clutch to disengage. The twine arm switch must have sensed the correct sequence as the twine arm moved to the home position. If the problem is in the twine arm circuit, the problem can be caused by:

a. A bad twine arm switch or circuit for the twine arm switch. See Test Mode in Section 4001 and check the twine arm switch and circuit.

b. The twine arm switch or the timing plate adjustment not being correct. See Adjusting the Switches: Twine Arm Switch, in Section 4001 and adjust the timing plate and the twine arm switch.

c. Debris between the lobes on the timing plate. The lobes on the timing plate open and close the twine arm switch. In the auto mode, the baler control console counts the number of lobes to determine when to move the twine arm. Debris between the lobes can cause the baler control console to count two lobes as only one. The baler control console will not move the twine arm until the twine arm switch has closed the correct number of times. Use the manual mode to move the twine arm to the home position. Clean the timing plate and check for damage. Check the operation of the twine arm in the auto mode.

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The operator then makes sure the POWER switch on the baler control console is in the OFF position. It is recommended that the POWER switch be in the OFF position when the tractor engine is started.

The operator makes sure the tractor remote valve is in the NEUTRAL position so there is no oil flow to the baler control valve. The operator does not shift the tractor remote valve until the start of the tying cycle.

The operator makes sure the PTO is disengaged and starts the tractor engine. The operator shifts the tractor remote valve from the NEUTRAL position to the position to start the twine arm to the out position. The threader solenoid valve is not energized, so the twine arm will not move. The oil entering the baler control valve flows to the rod end of the belt tension cylinders and the bale density cylinders. This increases the pressure in the bale density circuit to make sure there is tension on the forming belts. The operator holds the tractor remote valve in position until the pressure in the bale density circuit stops increasing. The pressure stops increasing when the pressure in the bale density circuit has reached the relief valve setting of the tractor or the bale density relief valve, whichever is lowest. The pressure setting of the bale density relief valve is approximately 2300 psi (15 859 kPa). The oil entering the baler control valve also flows to the rod end of the tailgate cylinders and the ejector cylinders. This helps makes sure the tailgate is closed and the ejector is retracted.

The operator moves the MANUAL switch on the baler control console to OFF. The operator then moves the POWER switch on the baler control console to ON. The POWER / DRIVE lamp will illuminate continuously if the following conditions are met:

a. The baler control console does not detect any errors. If there is an error in the system, the POWER / DRIVE lamp will flash and the alarm will beep. See Error Checking Detail in this section 4010 for a description of the errors.

b. The twine arm switch is closed indicating the twine arm is in the home position. If the twine arm switch is not closed, the TWINE ARM lamp will be illuminated.

c. The gate down switch is closed indicating the tailgate is all the way down. If the gate down switch is not closed, the TAILGATE/EJECTOR lamp will be illuminated.

d. The ejector in switch is closed indicating the ejector is retracted. If the ejector in switch is not closed, the TAILGATE/EJECTOR lamp will be illuminated.

NOTE: See Identification and Location of Switches in Section 4010 for the location of the switches. All of the reed switches are normally open type switches. When a reed switch is aligned with an actuator the reed switch is closed. See Checking a Switch and a Switch Circuit in Section 4010 for a description of the operation of the reed switches.

The operator engages the PTO. The operator also selects a gear on the tractor that will give the correct speed for baling. The operator drives over the windrow so the baler is approximately centered on the windrow. After moving forward, the operator makes two quick left to right sharp swings across the windrow to start the core of the bale.

After making sure the core of the bale is started, the operator watches the RIGHT and the LEFT drive lamps (arrows) on the baler control console. The lamps are actuated by two bale shape switches, one at each upper rear corner of the tailgate. The bale shape switches monitor the tension of the two outside forming belts. When the two outside forming belts are tight, none of the drive lamps will be illuminated. If less crop is being added to one side of the bale, there will be less tension on the outside forming belt on that side. When the tension decreases the bale shape switch will cause one of the drive lamps to illuminate. If the tension continues to decrease, the second and then the third drive lamp will be illuminated. The drive lamps tell the operator which direction to move the baler over the windrow to make the bale even. If the operator does not swing far enough to both the right and the left, the bale will be larger in the middle (barrel shaped bale). If the bale is larger in the middle, both the LEFT and the RIGHT drive lamps will be illuminated.

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BALER CONTROL VALVE

Removal

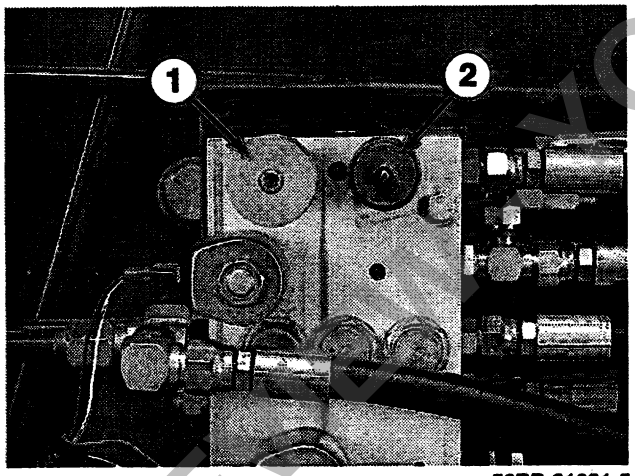
See the safety warnings at the beginning of this section and follow the procedures.

1. Make sure the tailgate is all the way down.

2. Use a detergent solution and a low pressure spray washer to clean the valve area.

NOTE: It is important to keep the parts of the baler control valve clean. Small particles of dirt or lint can prevent the baler control valve from working correctly.

3. Relieve the pressure in the bale tension system by turning the belt tension dump valve fully counterclockwise. Move the tractor remote valve to both power positions to relieve the pressure in the circuit to the baler. Put the tractor remote valve in the NEUTRAL position. Check the pressure in the bale density gauge on the front of the baler before removing any hoses. The bale density gauge must indicate 0 psi (0 kPa).



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1. Bale Density Relief Valve
2. Belt Tension Dump Valve

4. Find the fitting in port V1 in the rear of the baler control valve. See the illustration of the baler control valve for location of port V1. Slowly loosen the hose on the fitting to relieve the pressure in the rod end of the tailgate cylinders.

5. Find the fitting in port C3 in the baler control valve. See the illustration of the baler control valve for location of port C3. Slowly loosen one of the hoses on the fitting to relieve the pressure in the rod end of the ejector cylinders.

6. Fasten identification tags on the hoses connected to the baler control valve. Identification numbers for the ports are stamped on the body of the baler control valve. Use these numbers to identify the hoses.

7. Disconnect the hoses from the baler control valve. Install caps and plugs on all of the hoses.

8. Fasten identification tags on the wires for the coils on the two solenoid valves. Polarity identification (+ and -) is not necessary. Disconnect the wires from the coils.

9. Hold the baler control valve and remove the two bolts and self-locking nuts. Remove the baler control valve from the baler.

Installation

See the safety warnings at the beginning of this section and follow the procedures.

1. If a new baler control valve is being installed, install the fittings in the baler control valve.

2. Put the baler control valve into position on the mounting bracket. Install and tighten the two bolts and self-locking nuts.

3. Connect the wiring harness to the two coils. Polarity identification (+ and -) is not necessary.

4. Connect the hoses to the baler control valve. Make sure the hoses are connected to the fittings in the correct ports.

5. Operate the baler to make sure the baler control valve works correctly.

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16. If your machine is equipped with a cavity plug, the problem can be caused by a bad O-ring seal on the cavity plug, allowing oil to flow by the seal. Move the tractor remote valve to both power positions to relieve the pressure in the circuit to the baler. Put the tractor remote valve in the NEUTRAL position. Slowly remove the cavity plug from the baler control valve. Inspect and replace any O-ring or backup ring that is cut or damaged on the cavity plug. If an O-ring or backup ring is cut or damaged, inspect the bore of the baler control valve for damage.

17. If your machine is equipped with a flow compensating valve, the problem can be caused by the spool binding in the flow compensating valve allowing the flow compensating valve to remain open. Move the tractor remote valve to both power positions to relieve the pressure in the circuit to the baler. Put the tractor remote valve in the NEUTRAL position. Slowly remove the flow compensating valve from the baler control valve. Inspect the bore of the flow compensating valve for foreign particles. If there are foreign particles that cannot be removed, replace the flow compensating valve.

Replace any O-rings that are cut or damaged. If an O-ring or a backup ring is cut, check the bore for damage. Install the flow compensating valve and check the operation. If the problem has not been corrected, continue the procedure.

18. The problem can be caused by check valve 6A or check valve 7C not closing. If check valve 7C is open, oil will flow around check valve 7C, open check valve 7B, and flow out port V2 to the tractor. If check valve 6A is open, the oil can flow through check valve 6C, around check valve 6A, and flow out port V2 to the tractor. Move the tractor remote valve to both power positions to relieve the pressure in the circuit to the baler. Put the tractor remote valve in the NEUTRAL position. Slowly remove the check valves. Clean and inspect the check valves and replace as necessary. See Checking a Check Valve in this section.

19. The problem can be caused by a bad rod seal in the mesh drive cylinder. If there is hydraulic oil coming from the rod seal, repair or replace the mesh drive cylinder. The mesh drive cylinder is a single acting cylinder and does not have piston seals.

20. If equipped with a pickup clutch cylinder, the problem can be caused by a bad rod seal or piston seal in the pickup clutch cylinder. If there is hydraulic oil coming from the rod seal or breather plug, repair or replace the pickup clutch cylinder. See Cylinders in section 8010.

NOTE: The pickup clutch cylinder is part of the mesh wrap system. Some early production mesh wrap systems do not have this cylinder.

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Tying the Bale - Adding Additional Wraps of Twine to the Right Side of the Bale

Description

Additional wraps of twine can be added to the right side of the bale by operating the TWINE switch. The TWINE switch is in the HOME position and the twine arm is moving toward the home position. To add additional wraps, the operator MOMENTARILY moves the twine switch to the OUT position. The speed of the twine arm is such that moving the TWINE switch only momentarily will add an additional wrap. Moving the twine switch to the OUT position energizes the threader solenoid valve, changing the flow of oil to the threader cylinder. The twine arm then moves toward the left side of the baler. When the operator moves the TWINE switch back to the HOME position, the threader solenoid valve is deenergized and the twine arm moves toward the home position again. The operator DOES NOT shift the tractor remote valve.

Operation

See Tying the Bale - Moving the Twine Arm to the Out Position for a description of the flow when the twine arm is moving toward the out position. See Tying the Bale - Moving the Twine Arm to the Home Position for a description of the flow when the twine arm is moving toward the home position.

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See the safety warnings at the beginning of this section and follow the procedures.

1. If there is a problem in more than one function, the problem can be in the tractor hydraulic system. See the service manual for the tractor and check the tractor hydraulic system.

NOTE: If the tractor has more than one remote hydraulic circuit, a quick check can be made of the tractor remote circuit being used for the baler. Connect the baler to a different tractor remote hydraulic circuit and check the operation of the baler. If the problem is corrected, the problem is in the first tractor remote circuit. If the problem is not corrected, the problem, such as low flow or low tractor relief valve setting, can still be in the tractor hydraulic system. See the service manual for the tractor and check the tractor hydraulic system.

2. Make sure the tractor remote valve is in the correct position. After the tailgate is raised, the tractor remote valve must be shifted to lower the tailgate. The tractor remote valve must be shifted so pressurized oil from the tractor enters port V2 at the front of the baler control valve.

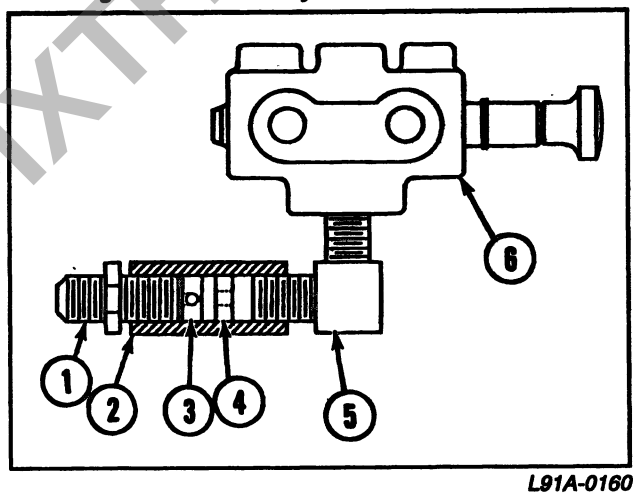
3. Make sure the tailgate lockout valve is open. If the tailgate lockout valve is closed, oil flow from the tailgate cylinders will be blocked. Pull the knob on the tailgate lockout valve all the way out to open the tailgate lockout valve.

4. Check for binding in the tailgate. Make sure the lubrication points are properly lubricated.

5. The problem can be caused by a plugged orifice plate in the orifice assembly at the front of the tailgate lockout valve. If the orifice is plugged, the oil cannot flow from the base end of the tailgate cylinders. Make sure the tailgate is all the way down. Move the tractor remote valve to both power positions to relieve the pressure in the circuit to the baler. Put the tractor remote valve in the NEUTRAL position. The counterbalance valve is mounted on the orifice assembly. Slowly loosen the hose at port 3 of the counterbalance valve to release the pressure in the rod end of the tailgate cylinders. Fasten identification tags to the hoses on the counterbalance valve and disconnect the hoses. Remove the counterbalance valve from the orifice assembly. Remove the tube from the elbow. It is not necessary to remove the fitting from the tube. Hold the tube and remove the retainer disc from the tube. Remove the orifice plate from the tube. Clean all of the parts with Loctite cleaner or an equivalent non-petroleum cleaner.

Rotate the tube so the open end of the tube is up. Install the orifice plate in the tube so the small hole is toward the fitting. Turn the retainer disc into the bore until the retainer disc is against the orifice plate. Apply one drop of Loctite 601 retaining compound, or equivalent, to the edge of the threads around the retainer disc. Turn the retainer disc out of the tube one and one half turns. The orifice plate must be free to move after the Loctite is dry. Make sure the threads on the elbow are clean and apply pipe thread sealant to the threads. Install the tube on the elbow. Install the counterbalance valve on the orifice assembly.

NOTE: If the fitting and the tube must be disassembled, clean both parts with Loctite cleaner or an equivalent non-petroleum cleaner. Apply one drop of Loctite 601 retaining compound, or equivalent, to the threads of the fitting before assembly.



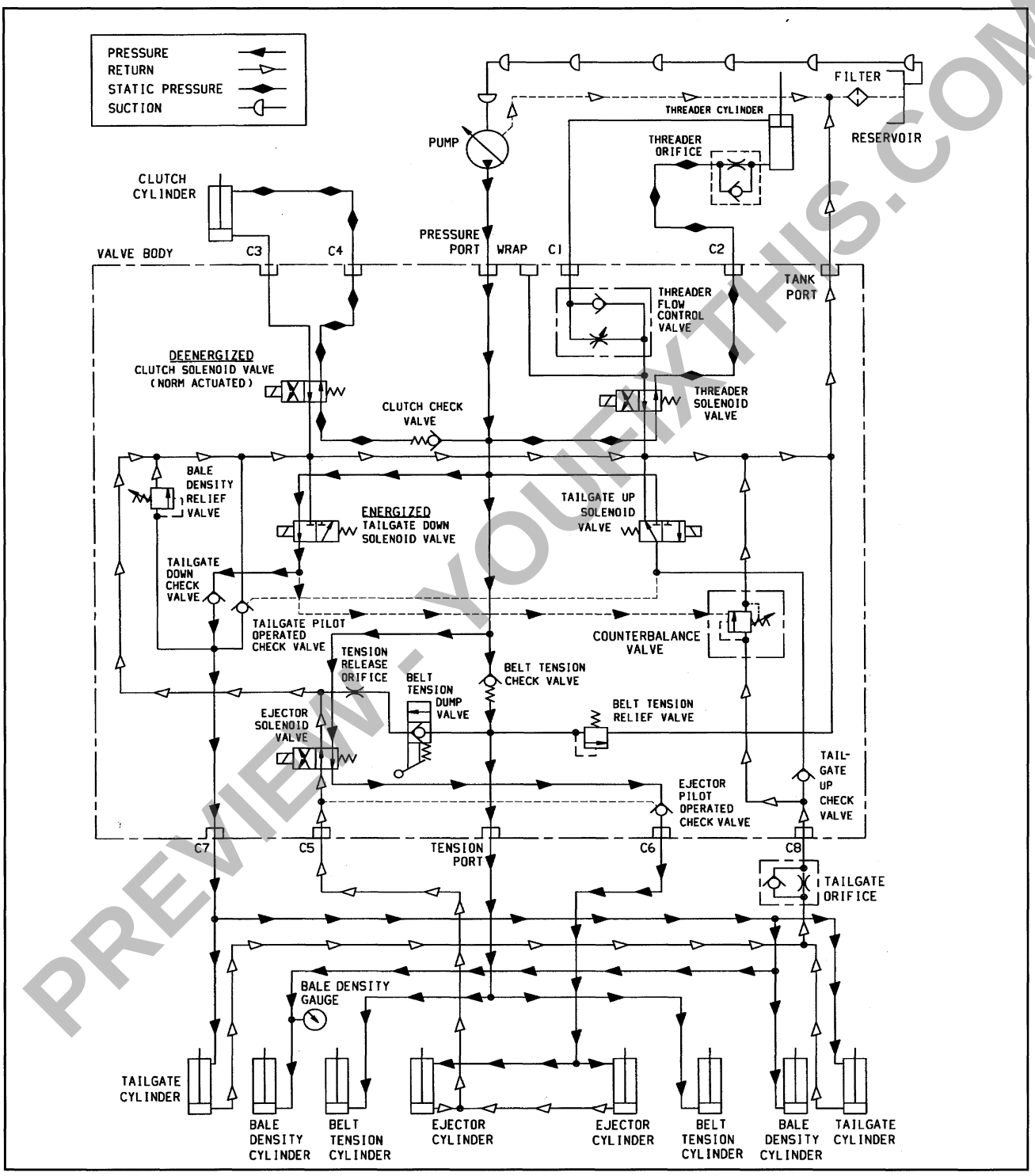
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1. Fitting
2. Tube
3. Orifice Plate
4. Retainer Disc
5. Elbow
6. Tailgate Lockout Valve

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To retract the ejector the ejector solenoid valve is deenergized. Pressurized oil from the pump goes through the ejector solenoid valve to the ejector check valve. The ejector check valve opens to let the oil flow to the port C6. From port C6 the oil flows to the rod end of the ejector cylinders to retract the ejector.

The return oil from the base end of the ejector cylinders is forced through port C5, through the ejector solenoid valve, and on to the reservoir.



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EJECTOR RETRACTING

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