

AGCO®

5545 / 5546 / 5556 / 5546A / 5556A Round Baler

SERVICE MANUAL 79027368 A Rev.

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NOTES

Safety Signs

SAFETY SIGNS



WARNING: DO NOT remove or obscure Danger, Warning or Caution signs. Replace any Danger, Warning or Caution signs that are not readable or are missing. Replacement signs are available from your dealer in the event of loss or damage. The actual location of the safety signs is illustrated at the end of this section.

If a used machine has been purchased, make sure all safety signs are in the correct location and can be read.

See Safety Sign Location of this section for illustrations.

Replace any safety signs that can not be read or are missing. Replacement safety signs are available from your dealer.

Specifications

Lighting

Red tail lamps and flashing amber warning lamps with turn signals

Power and Control tractor 12 Vdc by using SAE 7-pin connector

Electronic Controls

Compatibility ISO 11783

Voltage

Minimum..... 8 Vdc

Maximum 16 Vdc

Temperature

Minimum..... -10 degrees C (14 degrees F)

Maximum 65 degrees C (149 degrees F)

Tires

Baler

tire size 14L x 16.1

pressure 241 kPa (35 psi)

wheel hardware size 9/16-18

wheel hardware torque..... 165 Nm (120 lbf ft)

Pickup

tire size 16 x 4 Chevron

pressure semi-pneumatic

Drives

PTO speed..... 540 or 1000 rev/min

Pickup..... chain driven

Forming belts chain driven

Gearbox 540 or 1000 rev/min

Input driveline..... CV U-joint

Overload protection

pickup and stuffer..... radial pin clutch

forming belt drives..... slip clutch

Specifications

Mesh Wrap

Dimensions and Weights

Width, mesh attachment only.....	1888 mm (74.3 in)
Length, overall baler with mesh attachment.....	4260 mm (168 in)
Weight, mesh attachment (approximate).....	453 kg (1000 lb)
Tongue weight with the baler empty and tailgate closed will be reduced approximately.....	45 kg (100 lb)

Drive

Feed roll drive bale forming belts

Feed rolls

number..... 2

type..... 1 rubber covered, 1 plated steel

Mesh wrap rolls

length..... 1220 or 1320 mm (48 or 52 in)

diameter (maximum)..... 305 mm (12 in)

Bale Wrapping

Type of mesh wrap..... knitted polyethylene (or equivalent)

Lubrication

The mesh wrap system used sealed bearings that are lubricated for life from the factory. If a sealed bearing is damaged, replace the sealed bearing.

Lubrication

FIG. 51: Twine knife plunger (1). Lubricate every 50 hours.

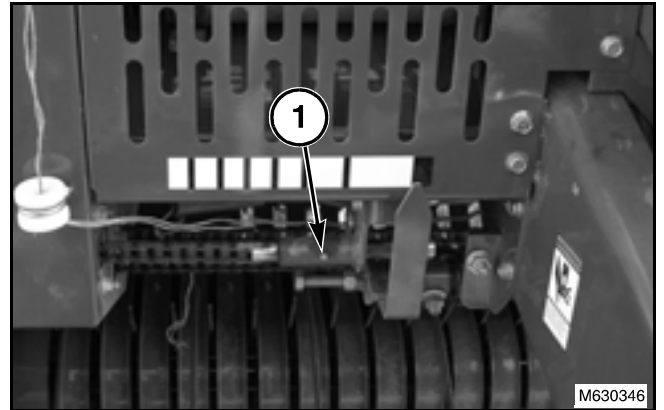


FIG. 51

FIG. 52: Pickup and stuffer shaft hub (1). Lubricate every 50 hours.

Radial Pin Clutch (2). Lubricate every 50 hours.

Overrunning clutch (3). Lubricate every 50 hours.

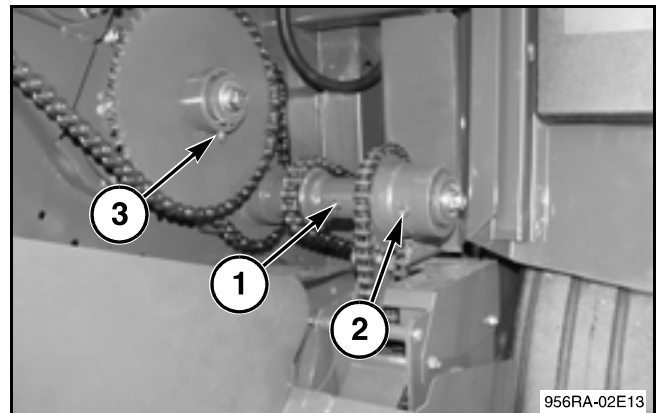


FIG. 52

FIG. 53: Clutch shaft (1). Lubricate every 50 hours.

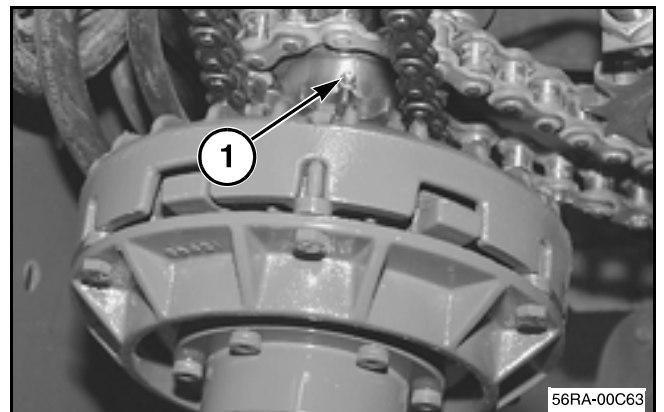


FIG. 53

FIG. 54: Kicker pivot - each side (1). Lubricate every 50 hours.

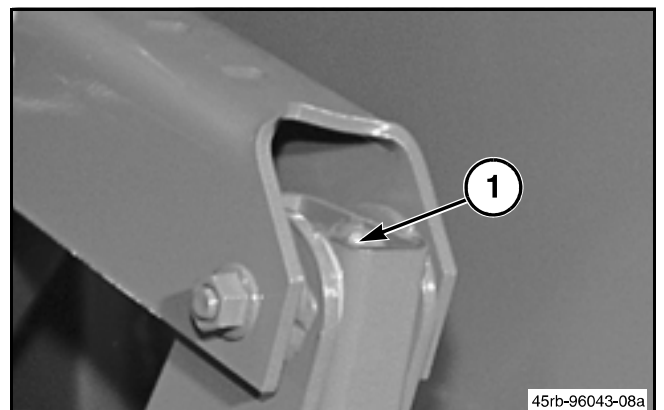


FIG. 54

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Pickup and Stuffer

Installation

FIG. 16: Install the new cam roller (1) on the cap screw (2).

Install the spacer (3) on the cap screw with the chamfer toward the cam roller.

Install the cap screw into the threaded hole in the crank arm (4). Tighten the cap screw to 145 Nm (105 lbf ft).

Start the nut onto the cap screw. To tighten the nut, hold the head of the cap screw with a socket through the hole in the cam track. With a box end or an open end wrench, tighten the nut to 145 Nm (105 lbf ft).

Repeat the procedure for each cam roller that is being replaced.

Install all shields and wrappers on the pickup assembly.

Install the windguard assembly. See Windguard on page 3 in this section.

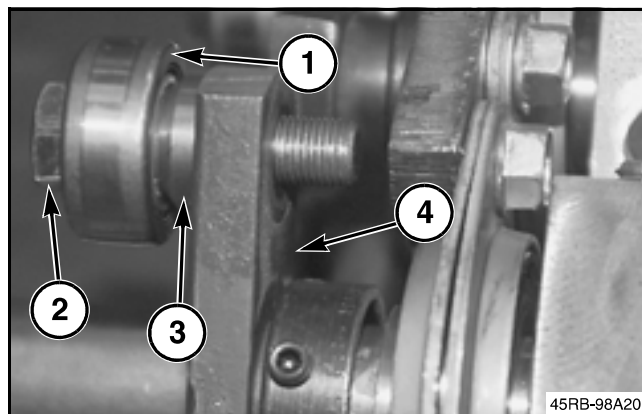


FIG. 16

Pickup and Stuffer

STUFFER

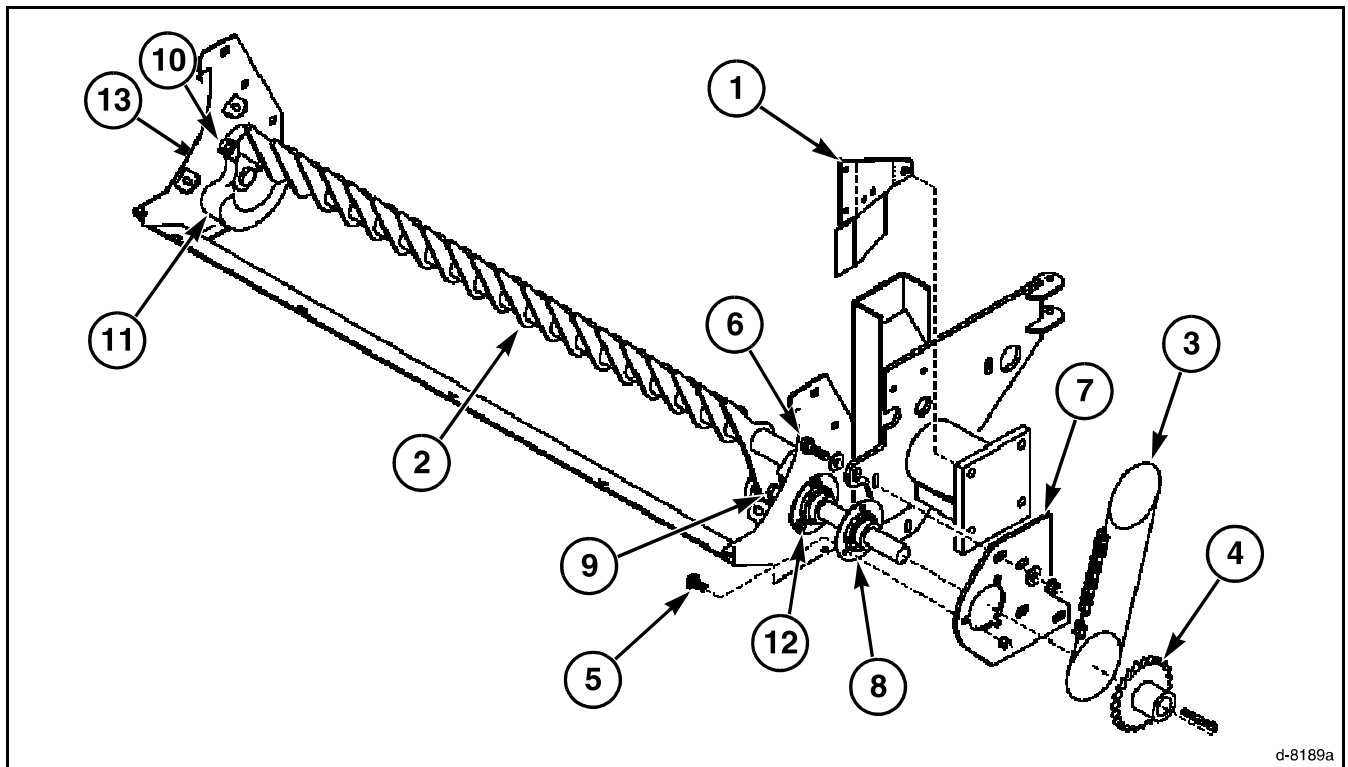


FIG. 32

Removal

FIG. 32: Remove the stuffer chain shield and the pickup support (1) from the left-hand side of the baler. Remove any other shield needed to get better access to the stuffer crank (2).

Remove the stuffer chain (3).

Remove the stuffer sprocket (4). See Gib Key Removal and Installation in the General Service Procedures section.

Remove the 3/8-16 x 1 carriage bolts (5) and 1/2-13 x 1-3/4 hex flange bolts (6). Remove the outer bearing support (7).

Remove the paint on the stuffer crank shaft.

Loosen the set screw on the lock collar on the outer bearing (8). Use a punch to loosen the locking collar by driving the locking collar in the counterclockwise direction.

Remove the outer bearing, collar and flanges.

Remove the 5/8-11 x 2 bolt (9) that connects the link assembly to the stuffer.

Remove the 1/2-13 x 1-3/4 bolt (10) from the stuffer crank idler (11).

Loosen the set screw on the lock collar on the inner left-hand bearing (12). Use a punch to loosen the locking collar by driving the locking collar in the counterclockwise direction.

Remove the inner left-hand bearing, collar and flanges.

Loosen the set screw on the lock collar on the right-hand bearing (13).

Use a punch to loosen the locking collar by driving the locking collar in the counterclockwise direction.

Remove the right-hand bearing, collar and flanges.

Move the stuffer crank idler toward the right-hand side of the baler to remove the stuffer crank idler from the stuffer crank. If necessary, move the stuffer crank toward the left-hand side of the baler. Keep the 1/4 x 1 woodruff key. Lower the stuffer crank to clear the baler frame. Pull the stuffer crank out of the baler.

Remove the stuffer from the stuffer crank.

Installation

Slide the stuffer onto the stuffer crank.

Put the stuffer crank into position on the left-hand side and the stuffer idler on the right-hand side of the baler.

Put the woodruff key in the stuffer crank. Lift the stuffer crank up and insert the stuffer crank into the stuffer crank idler. Slide the stuffer crank idler into position. Insert the 1/2-13 x 1-3/4 bolt into the stuffer crank idler. Tighten the bolt.

Install the bearings, flanges, and collars onto the stuffer crank and stuffer crank idler shafts. Tighten the 3/8-16 x 1 carriage bolts evenly while rotating the stuffer crank.

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Drive System

RADIAL PIN CLUTCH

Description

FIG. 28: The radial pin clutch (1) protects the pickup and stuffer from overload. The radial pin clutch is located on the starting roll shaft.

The factory torque setting for the radial pin clutch is between 600 Nm (5312 lbf inch) and 750 Nm (6640 lbf inch). The number of springs used in the clutch varies depending on the clutch. Most clutches have 12 inner and 12 outer springs.

The radial pin clutch ratchets when an overload is reached. The radial pin clutch will slip occasionally if correctly set.

Removal

Loosen the tension on the left-hand auger chain and upper stuffer chain.

FIG. 29: Remove the six 3/8-16 x 1-1/4 flange screws (1) the connect the radial pin clutch (2) to the sprocket assembly (3).

Remove the 5/8-11 x 1-1/2 flange screw (4), hardened plain washer (5) and special washer (6).

Remove the radial pin clutch from the starting roll shaft.

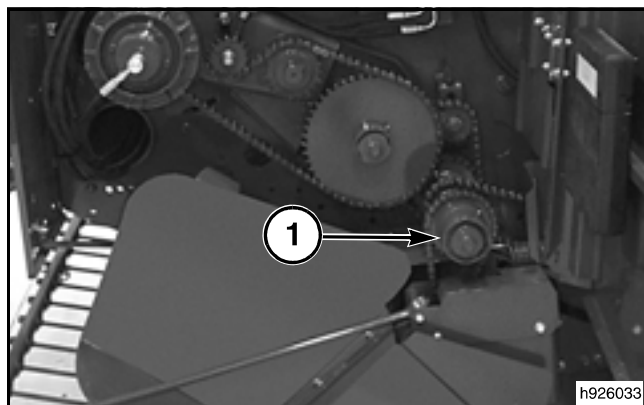


FIG. 28

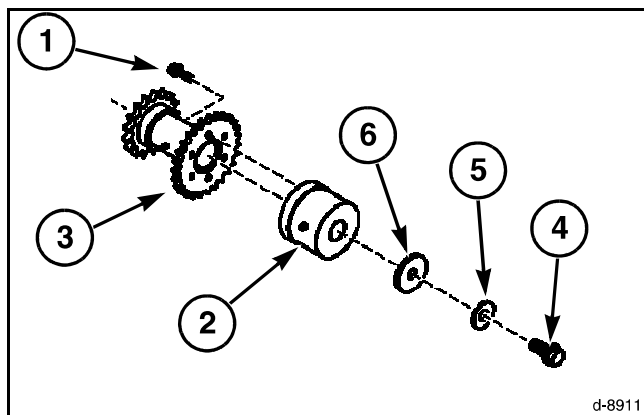


FIG. 29

Disassembly

FIG. 30: Remove the snap ring (1) from the radial pin clutch.



FIG. 30

Drive System

FIG. 58: Install and tighten the lower drive roll chain (1).

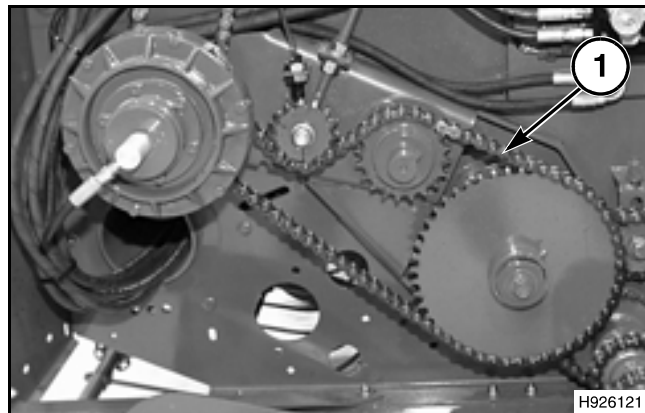


FIG. 58

FIG. 59: Install and tighten the upper stuffer chain (1).

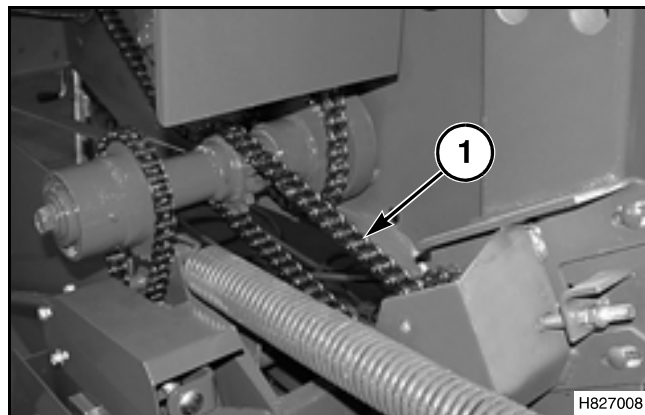


FIG. 59

FIG. 60: Remove the left-hand auger chain (1).

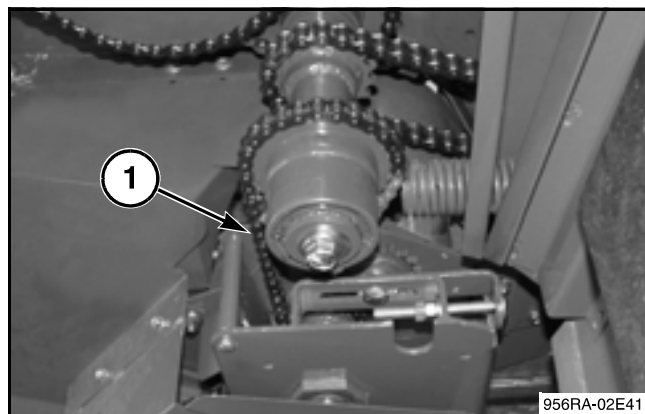


FIG. 60

Shearbar (Optional) Adjustment

NOTE: Only silage balers or balers with the shearbar kit will have a shearbar.

FIG. 61: Check the gap between the knife (1) and the starting roll bars (2). There must be a 1.5 to 3 mm (0.059 to 0.118 in) gap between the knife and the starting roll bars. Rotate the starting roll at least one revolution to make sure the knife does not touch any of the starting roll bars. If the gap is not correct, loosen the adjustment bolts (3), and adjust the gap. Tighten the adjustment bolts to 145 Nm (105 lbf ft).

NOTE: The starting roll from a standard baler is shown. Automatic balers have flat bars.

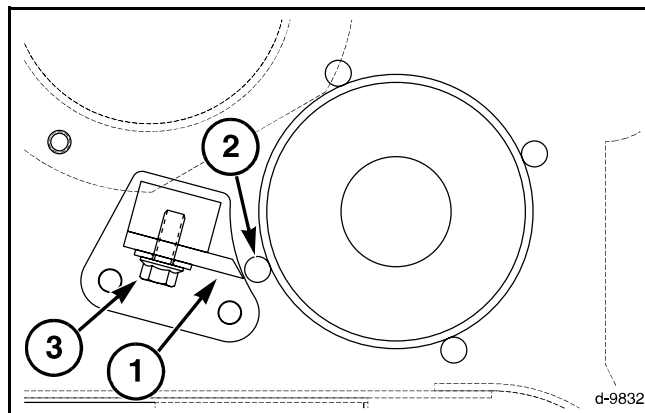


FIG. 61

Drive System

Install the wire clamps onto the gearbox.

FIG. 84: Slide the implement driveline (1) onto the input shaft of the gearbox. Align the holes in the yoke with the groove on the input shaft. Install and tighten the cap screws (2) to 105 Nm (76 lbf ft).



WARNING: A loose yoke can slip off a shaft and result in injury to persons or damage to the machine.

When installing a quick disconnect yoke, the spring activated locking pins must slide freely and be seated in the groove on the PTO shaft.

Pull on the implement driveline to make sure the quick disconnect yoke cannot be pulled off the PTO shaft.

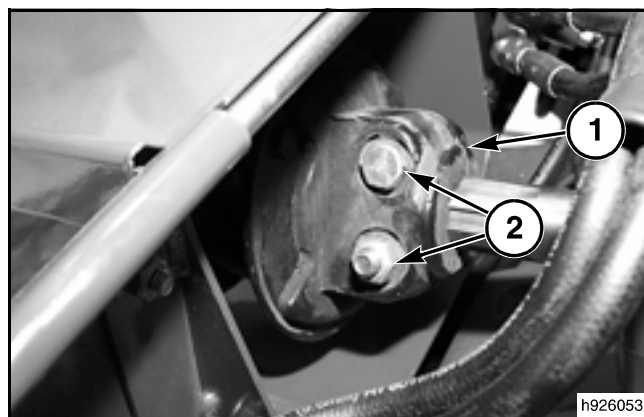


FIG. 84

When installing a clamp yoke, tighten the bolts to the correct torque.

When installing a quick disconnect yoke, the spring engaged locking pins must slide freely and be seated in the groove on the shaft. Pull on the implement driveline to make sure the quick disconnect yoke cannot be pulled off the shaft.

Replace the quick disconnect yoke on the tractor end of the implement driveline.

Lubricate the splines of the tractor PTO shaft with oil or grease. Connect the implement driveline to the tractor PTO shaft. Make sure the locking pins are seated in the groove on the PTO shaft.

Check the level of the lubricant in the gearbox. See Gearbox in the Lubrication and Maintenance section.

Close the shield over the gearbox.

Operate the baler to check for proper operation of the gearbox.

Drive Line

FIG. 98: Install the retaining ring and bearing ring onto the yoke. The two tabs on the bearing ring must be toward the yoke.



FIG. 98

FIG. 99: Align the openings in the shield with the tabs on the bearing yoke. Push in on the tabs and push down on the shield until the bearing ring is seated in the groove in the shield.



FIG. 99

FIG. 100: Install the retaining ring into the groove in the shield.

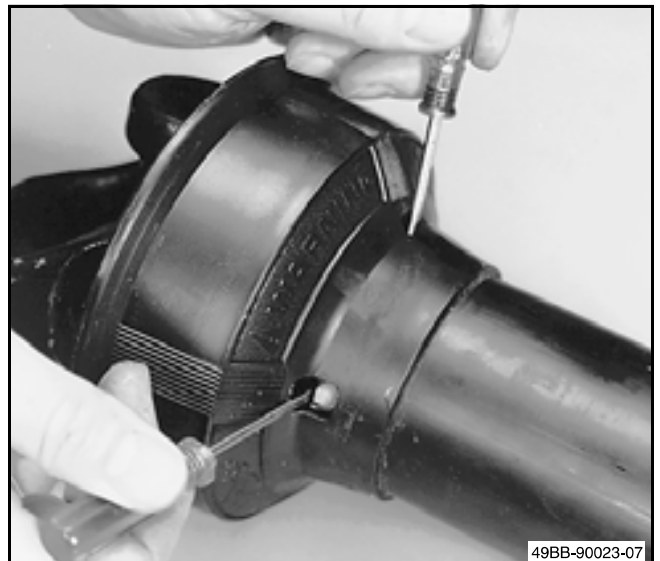


FIG. 100

Drive Line

FIG. 128: Put the quick disconnect yoke into the vise so the bearing caps are square with the jaws of the vise. Make sure the trunnion is aligned with the bearing caps. Tighten the vise until both bearing caps are flush with the yoke.



FIG. 128

FIG. 129: Drive one of the bearing caps into the yoke until the groove for the snap ring can be seen.



FIG. 129

FIG. 130: Make sure the groove for the snap ring is clean. Install the snap ring. Use a screwdriver to push the snap ring into the groove all the way around.

Drive the other bearing cap into the yoke until the groove for the snap ring can be seen. Make sure the groove for the snap ring is clean. Install the snap ring. Use a screwdriver to push the snap ring into the groove all the way around.



FIG. 130

FIG. 131: Set the quick disconnect yoke on the vise so the shoulders (1) of the cross are supported by the jaws of the vise. DO NOT permit the trunnions (2) to contact the vise. Hit the yoke with the hammer to seat the bearing cap against the snap ring. DO NOT hit the yoke near the opening for the bearing cap.

Turn the quick disconnect yoke over in the vise. Be careful not to damage the trunnions. Hit the yoke with the hammer to seat the other bearing cap against the snap ring. DO NOT hit the yoke near the opening for the bearing cap.

Use the same procedure to seat the bearing caps against the snap rings in the shaft yoke.

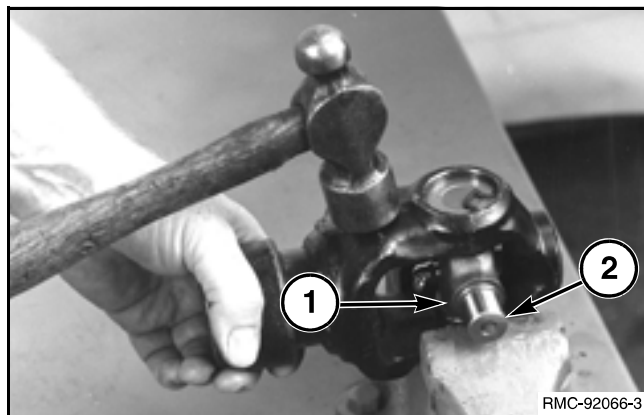


FIG. 131

Drive Line

FIG. 160: If equipped, install the grease fitting in the new cross. Align the grease fitting with one of the trunnions.



FIG. 160

FIG. 161: Remove the bearing caps from the new cross. Apply grease to the needle rollers in the bearing caps. The grease is used to hold the needle rollers in the bearing caps during installation. Use your finger to push the grease into the needle rollers and to push the needles out against the bearing cap.

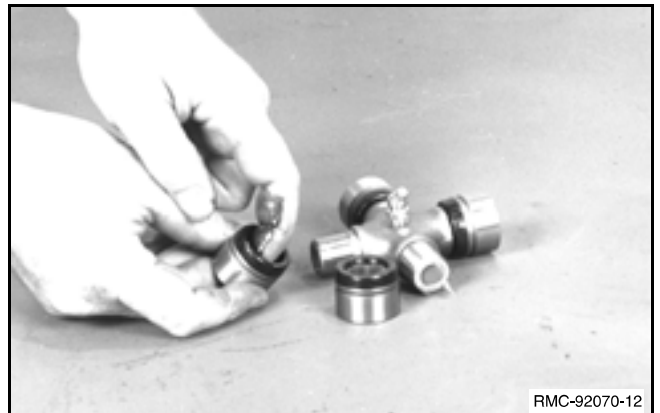


FIG. 161

FIG. 162: Make sure the trunnions of the new cross are clean. Install the cross in the shaft yoke.

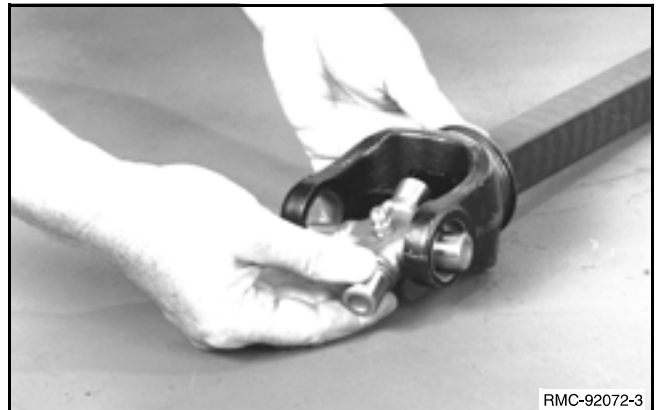


FIG. 162

FIG. 163: Push the cross to one side of the shaft yoke. Use the trunnion as a pilot and push the new bearing cap onto the cross and into the opening in the ear.



FIG. 163

Roller Chains

O-Ring Roller Chain (If Equipped)

FIG. 186: The pump drive chain (1) is a O-ring chain. Because of the O-ring seals, lubrication can only be added to the outside of the chain. Lubrication is only required to prevent the formation external rust.

The O-ring roller chains must never be soaked in, cleaned with, or lubricated with solvent. Solvent will damage the O-rings.

IMPORTANT: Some spray lubricants contain solvents that can damage the O-rings. Only use spray lubricants that are designed for O-ring chain.

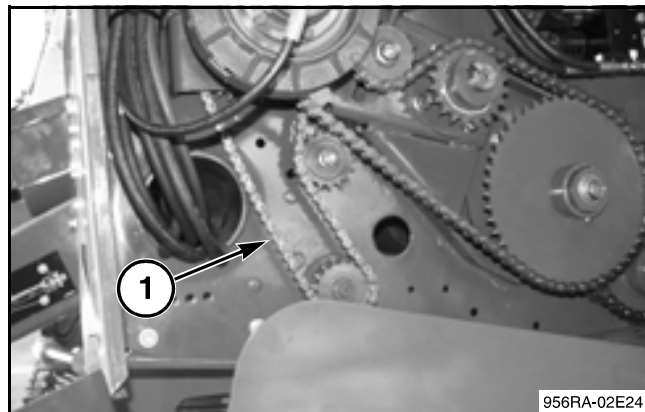


FIG. 186

REMOVAL AND INSTALLATION

Removal

Turn the drive until the connecting link is fully engaged on one of the sprockets. This will relieve the tension on the connecting link pins.

Move the tensioner to release the tension on the chain.

Remove the connecting link pins and lift the chain off the sprockets.

Installation

NOTE: Do not install a new chain on worn sprockets. Several hours of operation under such conditions will do more damage to a new chain than many hours of normal use.

Never insert a new link in a chain that has been elongated by wear. The pitch of the new link will be shorter than the pitch of the original links. The shock each time the new link engages a sprocket will soon destroy the chain.

Do not install a worn chain on new sprockets. A worn chain will ride high on the outer tips of the sprocket teeth causing rapid wear of the new sprockets.

FIG. 187: Install the chain onto the sprockets with the chain ends on a sprocket. Make sure the chain is routed correctly.

Install the connecting link pins.

When using spring clip connectors (1), always install the spring clip with the open end of the clip trailing the direction of chain travel (2). This will prevent removal or loss of the spring clip by accident.

Tighten the chain to the correct tension. See Tension on page 74.

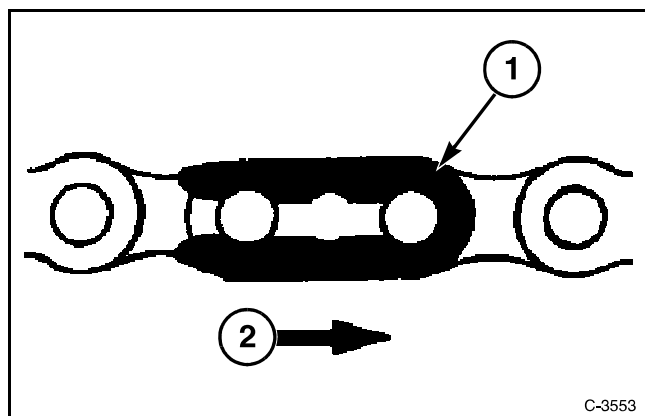


FIG. 187

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Electrical





CONSOLE GENERAL INFORMATION

Key Functions








The following table is a list of the keys used on the console and a short description.

Some keys are not available on standard balers.





General Keys

Key	Key Name	Function
	Main Work	Goes back to the main work screen.
	OK	Do the procedure.
	Cancel	Do not do the procedure.
	Next Screen	Opens the next set of keys. <i>NOTE: Your next screen icon can be different.</i>



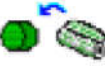







Main Work Keys

Key	Key Name	Function
	Cycle Start Key	Starts the twine tie cycle or mesh wrap cycle.
	Twine Settings	Opens the twine settings screens. This key is only shown when twine is selected.
	Mesh Settings	Opens the mesh wrap settings screen. This key is only shown when mesh is selected.
	Baler Settings	Opens the bale settings screen.
	Manual Mode	Permits the baler functions to be done manually.
	Service Screen	Opens the service screen.
	Bale Counter	Opens the bale counter screen.

Wrap Settings Keys

Key	Key Name	Function
	Next Profile	View or edit the settings of the next twine wrap profile.
	Previous Profile	View or edit the settings of the previous twine wrap profile.
	Next Screen	Opens the next twine settings screen.
	Select Profile	Select the current profile to be the active profile. This key is only shown when the profile shown is not the selected profile.

Manual Mode Keys

Key	Key Name	Function
	Twine Run	Moves the twine arm toward the left-hand side of the baler.
	Twine Cut	Moves the twine arm toward the right-hand side of the baler.
	Mesh Run	Moves the mesh wrap toward the run position. This key is only shown if the baler is equipped with mesh wrap.
	Mesh Cut	Moves the mesh wrap toward the cut position. This key is only shown if the baler is equipped with mesh wrap.
	Tailgate Up	Opens the tailgate.
	Tailgate Down	Closes the tailgate
	Kicker Out	Moves the kicker out.
	Kicker Home	Moves the kicker toward the home position.
	Clutch Run	The clutch engage switch will engage the clutch.
	Clutch Stop	The clutch stop switch will disengage the clutch.

Electrical

Mesh Wrap - If Equipped

The mesh wrap settings can only be changed if mesh is selected as the wrap type.


To change the mesh wrap settings, press the  key on the main work screen.

FIG. 5: The Mesh Program screen shows the current mesh wrap settings. The settings are also changed from this screen.

To change a setting, select the setting to be changed. Enter the desired value or setting. For specific instructions, see the Operator Manual for your console.

Mesh Wraps

The Mesh Wraps setting is the number of layers of mesh wrap applied to the bale.

Mesh wraps recommendation:

Crop	Wraps
Alfalfa and Grass	2.1-2.5
Straw and Stover	3.0-4.0

NOTE: Apply at least two wraps of mesh to the bale.

Look at a bale after unloading and if necessary, change the number of wraps.

Tail Delay

The tail delay adds additional time after the mesh is cut to make sure the forming belts have pressed the mesh against the bale. The length of time for the mesh tail delay is set in the tail delay setting.

If the mesh tail unwinds when the bale is ejected, change the length of the tail delay. This will change the position of the mesh tail on the bale.

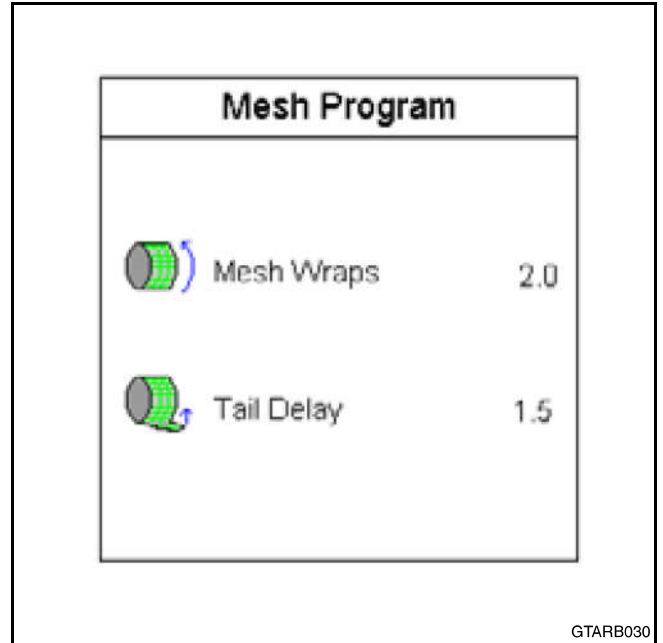


FIG. 5

GTARB030

Electrical

Baler Configuration Screen


Press the  key on the Service Screen to enter the Baler Configuration Screen.

FIG. 14: The Baler Configuration Screen shows the current settings. The settings are also changed from this screen.

These settings will not need to be changed unless the equipment on the baler changes.

To change a setting, select the setting to be changed. Enter the desired value or setting. For specific instructions, see the Operator Manual for your console.

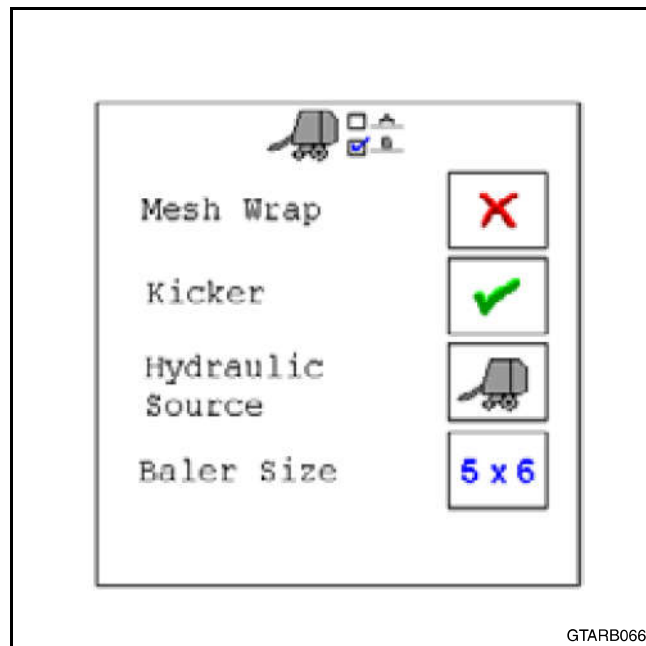










FIG. 14

Setting	Display	Value List	Description
Mesh Wrap	Mesh Wrap	 , 	Selects whether or not mesh wrap is installed on the baler.
Kicker	Kicker	 , 	Selects whether or not a kicker is installed on the baler.
Hydraulic Source	Hydraulic Source	 , 	Supply of hydraulic power - baler or tractor.
Baler Size	Baler Size	5 x 6 , 4 x 6 , 4 x 5	Selects size of the baler in feet (width x height).

NOTE:  = No,  = Yes

Electrical

Gate Up Valve Short Circuit

Alarm Number: 012

Priority:



Audible Alarm: Medium

Baler Automatic Only

Problem Summary: Too much current used in the gate up valve circuit.

Check:

- Check the resistance of the coil. The resistance must be approximately 5.1 ohms.
- There must not be a short between the brown/yellow wire in pin 1 of the valve connector and the red wire in pin 2

Gate Down Valve Not Detected

Alarm Number: 013

Priority:



Audible Alarm: Medium

Baler Automatic Only

Problem Summary: Resistance in the gate down valve circuit more than 200 ohms.

Check:

- On standard balers, make sure that the baler is configured for tractor source hydraulics. See baler configuration screen.
- Check the resistance in the coil. The resistance must be approximately 5.1 ohms.
- Connection of the wiring harness to the baler control box
- Connection of the wiring harness to the valve
- Continuity in the brown/red wire from pin 1 at the valve connection to pin 8 at the baler control box
- Check for 12 volts at pin 2 (red wire) at the valve connection when tractor power is on
- Continuity in the red wire from pin 3 at the tractor connector to pin 1 at the valve connector

Gate Down Valve Short Circuit

Alarm Number: 014

Priority:



Audible Alarm: Medium

Baler Automatic Only

Problem Summary: Too much current used in the gate down valve circuit

Check:

- Check the resistance of the coil. The resistance must be approximately 5.1 ohms.
- There must not be a short between the brown/red wire in pin 1 of the valve connector and the red wire in pin 2

Kicker Valve Not Detected

Alarm Number: 015

Priority:



Audible Alarm: Medium

Baler All

Problem Summary: Resistance in the kicker valve circuit is more than 200 ohms.

Check:

- On balers without a kicker, make sure that the baler is configured for no kicker. See baler configuration screen.
- Check the resistance in the coil. The resistance must be approximately 7.5 ohms.
- Connection of the wiring harness to the baler control box
- Connection of the wiring harness to the valve
- Continuity in the brown/yellow wire from pin 1 at the valve connection to pin 9 at the baler control box
- Check for 12 volts at pin 2 (red wire) at the valve connection when tractor power is on
- Continuity in the red wire from pin 3 at the tractor connector to pin 1 at the valve connector.

Electrical

Sensor 5v Supply < 4v

Alarm Number: 075

Priority: 

Audible Alarm: High

Baler All

Problem Summary: The sensor power supply is less than four volts.

Check:

- Check the sensor supply voltage on the Sensor Service Screen. The sensor supply voltage must not be lower than 4.75 volts.
- Check the tractor power voltage.

Sensor 5v Supply > 6v

Alarm Number: 076

Priority: 

Audible Alarm: High

Baler All

Problem Summary: The sensor power supply is more than six volts.

Check:

- Check the sensor supply voltage on the Sensor Service Screen. The sensor supply voltage must not be greater than 5.25 volts.
- Check the tractor power voltage.

Solenoid Ground > 2v

Alarm Number: 077

Priority: 

Audible Alarm: Low

Baler All

Problem Summary: The solenoid ground has more than positive two volts.

Check:

- Make sure that all tractor ground connections are correct.
- Check continuity for the ground wires from pins at the baler controller to the tractor plug. See the electrical schematic.

Solenoid Ground < -2v

Alarm Number: 078

Priority: 

Audible Alarm: Low

Baler All

Problem Summary: The solenoid ground has less than negative two volts.

Check:

- Use the sensor service screen to check the sensor ground voltage.

Clutch Slip

Alarm Number: 080

Priority: 

Audible Alarm: High

Baler All

Problem Summary: More than 30 percent slip detected between the PTO and Clutch slip sensors.


Check:

- Make sure the baler is not overloaded or plugged.
- Check the clutch adjustment.
- Check the PTO and Clutch slip sensor adjustment.
- Remove contamination from PTO and Clutch slip sensors.
- Check the baler timing and clutch slip frequency on the Sensor Service Screen. The alarm will occur if the difference between the readings is more than 30 percent.
- On standard balers, continue to hold the hydraulic remote lever for one second after the tailgate and kicker are home. This will prevent trapping pressure in the hydraulic system.

Electrical

Applying Mesh - Standard Balers

1. The bale size sensor input indicates a full bale.
2. The stop icon is illuminated.
3. The baler delays to allow the operator to stop the tractor. The length of the auto start delay is set on the Baler Settings screen.


If the baler is not set for auto tie, the operator must press the  key.

4. The Wrap Feed and Mesh Select relays are energized and then the Wrap On/Off relay is energized to move the mesh feed rolls forward.
5. The mesh feed rolls begin rotating. The mesh count switch begins opening and closing.
6. The mesh count switch inputs indicate the programmed number of mesh wraps have been applied to the bale.
7. Only the Wrap On/Off relay and the Mesh Select relays are energized to move the feed rolls to the home position.
8. The mesh count switch stops opening and closing when the mesh wrap is cut.
9. The operator moves the tractor hydraulic remote lever to the open position. The tailgate cylinders extend to raise the tailgate.
10. The tailgate latch switches open to indicate the tailgate latches are open.
11. The clutch solenoid deenergizes to disengage the main drive clutch.
12. When the tailgate begins to raise, the tailgate clear switch opens.
13. The tailgate up switch closes to indicate the tailgate is completely raised.
14. If the baler has a kicker and the kicker is turned on, the kicker solenoid energizes. The kicker cylinders extend to send the kicker out.
15. When the kicker begins moving out, the kicker home switch opens.
16. The kicker out switch closes to indicate the kicker is completely out.
17. The operator moves the tractor hydraulic remote lever to the down position. The tailgate cylinders retract to lower the tailgate.
18. When the tailgate begins to lower, the tailgate up switch opens.
19. The tailgate clear switch closes to indicate the tailgate is down.
20. The kicker solenoid deenergizes and the kicker cylinders retract to send the kicker home.
21. When the kicker begins moving home, the kicker out switch opens.

22. When the tailgate is completely closed, the tailgate latch switches close.
23. The clutch solenoid energizes to engage the main drive clutch.
24. The drive icon is illuminated.
25. The kicker home switch closes to indicate the kicker is completely home.

Electrical

Test Using the Console

Press the  key to enter the Service Screen.



Press the  key on the Service Screen to enter the Switch Service Screen.

FIG. 49: The switch service screen shows the name of the switch and whether that switch is open or closed.

If necessary, press the  key to see the next page of switches.

The switch test screen shows the present condition of the switch: open or closed. When the switch changes condition, the indication for that switch will also change. Check the condition of the switch in both the open and closed positions.

To test the Hot Oil Switch circuit:

- Make sure that the oil temperature is below 90 degrees C (194 degrees F).

The switch test screen must show that the Hot Oil Switch is closed.

- Unplug the wiring harness from the hot oil switch.

The switch test screen must show that the Hot Oil Switch is open.

If the condition of the switch does not change, check the following:

- Switch wiring. See Electrical Schematic and Continuity Test in this section.
- Operation of the component.

LOW OIL SWITCH - AUTOMATIC BALERS

Location

FIG. 50: The low oil switch (1) is located near the bottom of the oil reservoir.

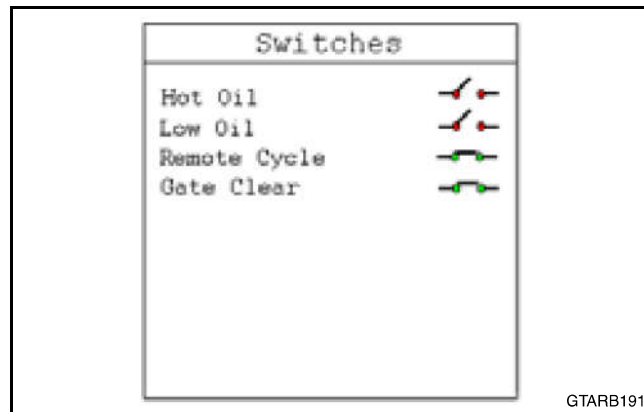


FIG. 49

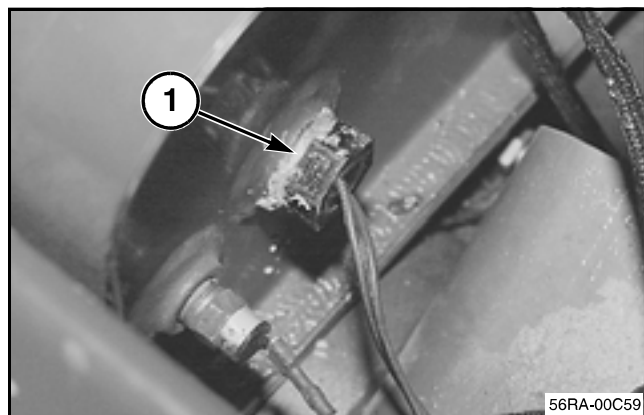


FIG. 50

Electrical

BALE SIZE SENSOR

Location

FIG. 66: The bale size sensor (1) is located above the twine box on the right-hand side of the baler.

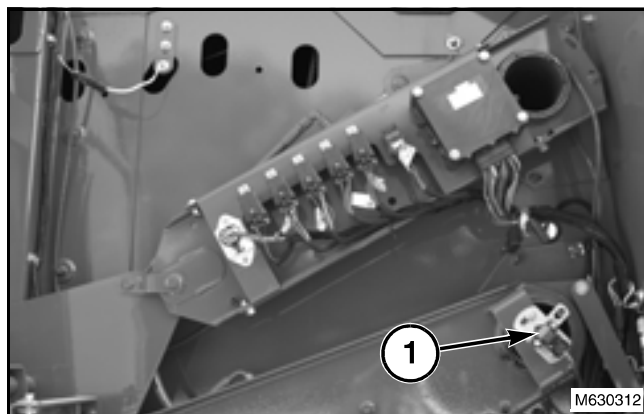


FIG. 66

Description

FIG. 67: The bale size sensor is a hall effect sensor. The hall effect sensors used on this machine can be identified by the sealant (1) on the top of the sensor.

NOTE: The twine arm sensor is a different type of sensor.

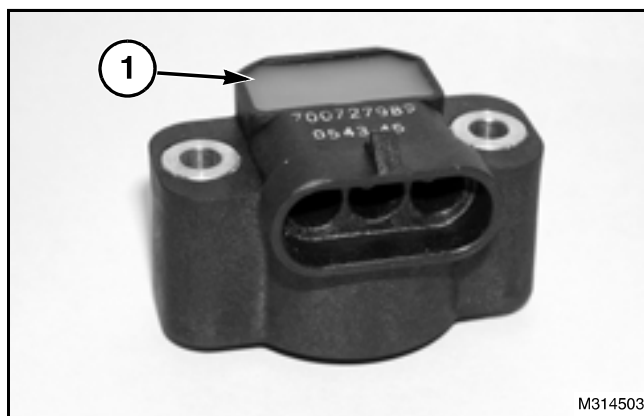



FIG. 67

Test Using the Console

Press the  key on the console to enter the Service Screen.

Press the  key on the Service Screen to enter the Sensor Service Screen.

FIG. 68: The sensor service screen shows the name of the sensor and supply voltage or frequency. When the sensor changes condition, the indication for that sensor will also change.

The bale size sensor voltage will be within the range of 0.5 to 4.5 volts.

To test the size shape sensor, remove the bale size sensor assembly from the baler. Watch the screen while another person turns the bale size sensor. The voltage must increase and decrease smoothly. Install the bale size assembly. Put the bolts in the center of the slots. It will be necessary to calibrate the bale size sensor.

Sensors	
Left Shape (v)	2.54
Right Shape (v)	2.48
Bale Size (v)	1.26
Twine Position	1.44
Sensor Supply (v)	5.04
Sensor Ground (v)	0.07
ECU PWR Supply (v)	13.51
PWR Supply (v)	13.46
Baler Timing (Hz)	68
Clutch slip (Hz)	72

FIG. 68

Electrical

FIG. 92: The Threader Calibration Complete screen will be shown.



FIG. 92

Restore Factory Default

This key is only available for later software versions. If it is necessary to restore factory defaults on early software versions, see your dealer.

Restore the factory defaults when:

- The twine arm sensor has been replaced.
- A twine arms sensor calibration does not give the desired threader control.



Press the  key to restore the factory default settings for the twine arm sensor calibration.

FIG. 93: A confirmation screen will be displayed.

Press the  key to restore the factory default settings and return to the threader calibration screen.


Press the  key to cancel and return to the threader calibration screen.



FIG. 93

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- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

Electrical

Power Cord Connector

Remove the strain relief from the cover at the rear of the connector.

Disconnect the cover from the connector and slide the cover away from the connector.

Install the tool with the blades going into the connector slot sides without the notches. Slowly push the tool all the way into the connector to push the tabs away from the body of the connector.

Slowly pull the wire to remove the terminal from the rear of the connector.

Remove the tool from the connector.

Cut the wire at the end of the terminal.

Strip the correct amount of insulation from the wire for the terminal being installed.

Put the new terminal on the wire. Crimp the new terminal onto the wire.

Slowly push the terminal into the connector to the correct depth. Pull the wire a small amount to make sure the tabs are engaged in the body of the connector.

Seal the area where the wire enters the rear of the connector. Apply GE® Silicone II Black Rubber Adhesive Sealant, or equivalent.

Install the cover on the connector.

Install the strain relief.

CAN Bus

Implement Power Relays

FIG. 123: There are two relays on the console harness. One is for power for the implement controller. The other is for power.

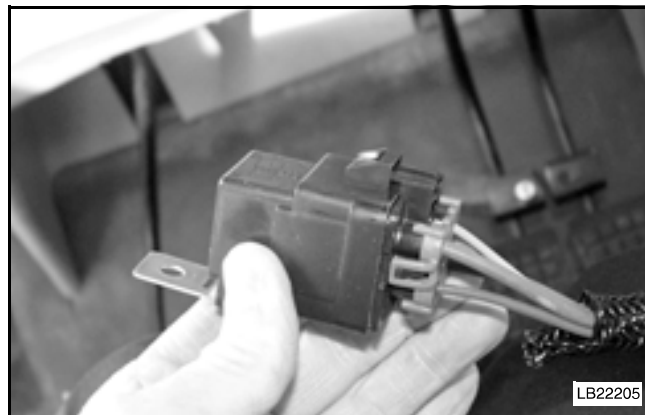


FIG. 123

Tractor Power Socket

FIG. 124: The console harness connects to the power socket (1) in the tractor cab.

If the tractor does not have a power socket, a switched power harness is available. The switched power harness kit connects directly to the battery. The harness kit contains the necessary fuses to protect the electronic components.

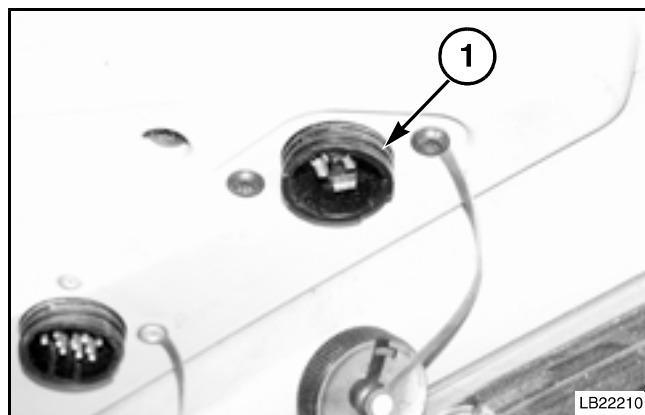


FIG. 124

FIG. 125: The console harness can be connected directly to the tractor power socket, if:

- (1) Terminal 1 is a 12 VDC switched power
- (2) Terminal 2 is a 12 VDC unswitched power
- (3) Terminal 3 is a ground

If terminals 1 and 2 are reversed, the power source switching harness must be used. If the console is connected directly to the power socket, the console will not save information properly when the tractor key is turned to the off position. It is also possible that fuses will blow during operation.

When the console is connected correctly, the screen will remain illuminated for at least one second after the tractor key is turned off. If connected incorrectly, the screen will go dark immediately after the tractor key is turned off.

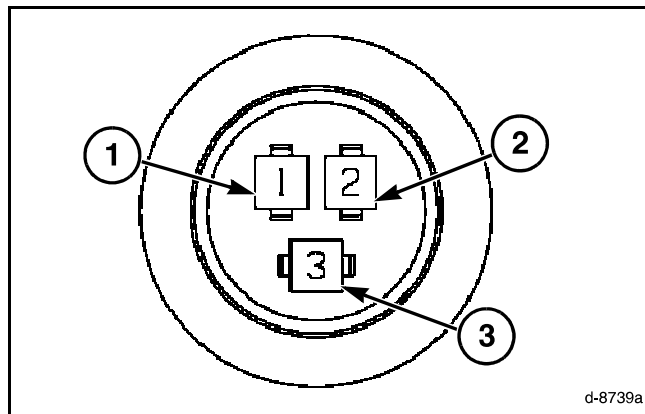


FIG. 125

Contents

Tailgate Idler Rolls	05-33
Removal	05-33
Disassembly and Assembly	05-34
Installation	05-35
Scraper (Optional) Adjustment	05-35
Lower Tailgate Idler Rolls	05-35
Removal	05-35
Disassembly and Assembly	05-36
Installation	05-38
Belt Deflection Rolls	05-39
Removal	05-39
Disassembly and Assembly	05-40
Installation	05-41
Adjustment	05-41
INDEX	05-43

Forming Belts

Forming Belts Not Eligible for Warranty Replacement

FIG. 18: Slight fraying of the edges is a normal condition, and does not indicate a defective belt. Frayed edges is not a warrantable failure.

Wear on the back side of the forming belt indicates rubbing against the baler side wall or components. This does not indicate a defective belt, and is not warrantable. Adjustments must be made to correct belt tracking to avoid further wearing or curling of the belt.

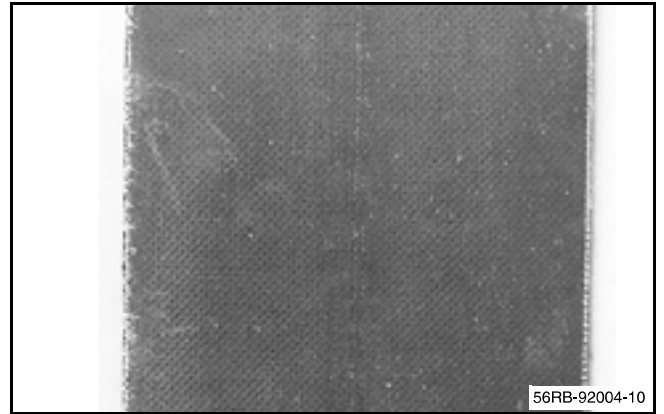


FIG. 18

FIG. 19: Belts that are cut and/or torn in two are not considered a warranted failure.

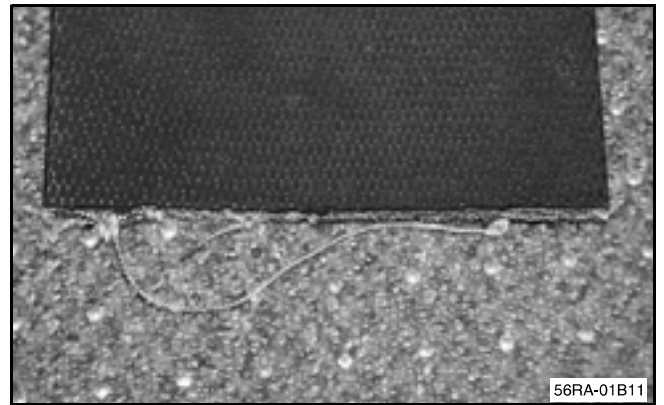


FIG. 19

FIGS. 20–21: Belts with holes and/or tears are not considered a warranted failure.

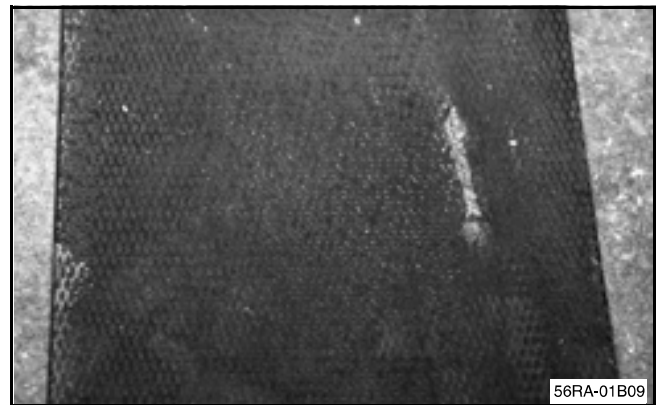


FIG. 20



FIG. 21

Bale Forming System

Installation

Put the roll into position in the belt tension arm assembly.

FIG. 42: Apply 4 drops of Loctite® 243 to the threads of the cap screws (1 or 2). Install the cap screws and tighten to 217 Nm (160 lbf ft).

Lower and remove the hoist.

Turn the belt tension release valve fully clockwise.

Apply tension to the forming belts.

Put the tailgate lockout valve into the UNLOCKED position. Lower the tailgate

Run the baler and check the tracking of the forming belts. To adjust the tracking see the Forming Belt section.

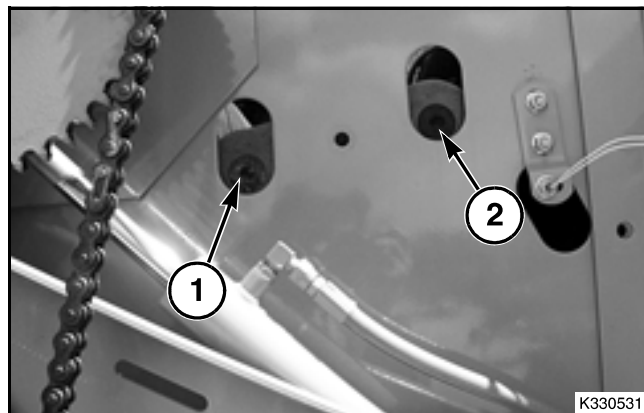


FIG. 42

Bale Forming System

FIG. 65: Remove the upper drive roll chain (1).

Disconnect the spring from the bale shape assembly. Disconnect the wires from both sensors. Cut the plastic ties that connect the wiring harness onto the bale shape assembly. Remove the bale shape assembly.

Remove the bale density rolls and belt guides. See Bale Density Rolls on page 24.

Remove the grease lines (2) to the belt tension pivot and to the bale density pivot.

Support the bale density cylinders. Remove the cap screw and cylinder pin (3) from the lower side of each bale density cylinder.

Remove the 1/2-13 x 5 cap screw (4), nut, and spacer from the support assembly (5). Remove the support assembly. Repeat the procedure on the other side of the baler.

Use a hoist to support the bale density arm.

Remove the cap screw and cylinder pin (6) from the upper side of each bale density cylinder. Support the bale density cylinders.

Remove the cap screws that hold the bale density arm onto the baler. Remove the bale density arm from the front of the baler.

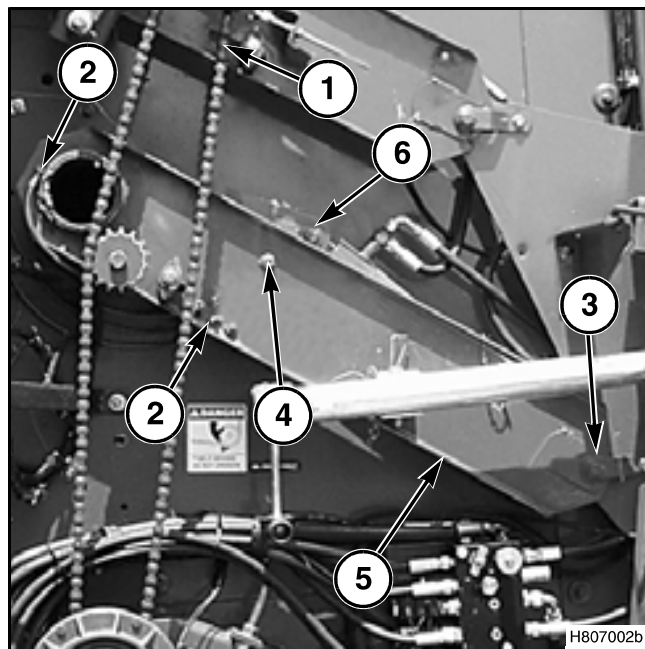


FIG. 65

Installation

Put the bale density arm into position on the baler using a hoist.

Install the cap screws and nuts that hold the bale density arm onto the baler. Force the plate in the forward direction as far as possible. Tighten the cap screws.

Remove the hoist.

Put the bale density cylinders into position. Install the cylinder pins and cap screws in the upper side of each bale density cylinder.

Install the support assembly, 1/2-13 x 5 cap screw, spacer, and nut. Repeat the procedure on the other side of the baler.

Install the cylinder pins and cap screws into the lower side of each bale density cylinder.

Install the grease lines to the belt tension pivot and to the bale density pivot.

Install the upper drive roll chain.

Install the bale density rolls and belt guides. See Bale Density Rolls on page 24.

Bale Forming System

Disassembly and Assembly

FIG. 91: Use a slide hammer to pull the bearing hub from the bearing.

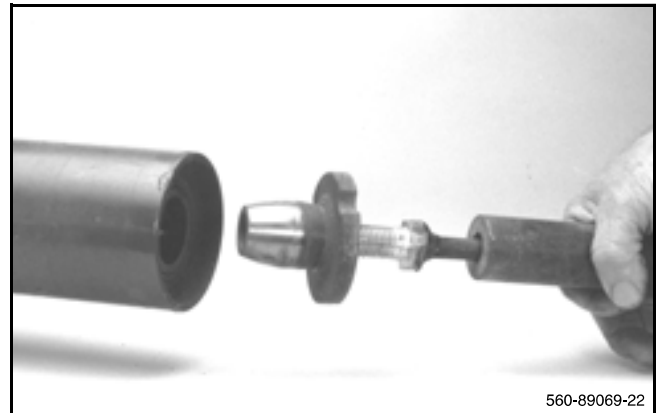


FIG. 91

FIG. 92: Use a slide hammer to pull the bearing from the roll end.

Inspect the bearings for rough or noisy operation and replace if necessary.

Inspect the hole in each end of the roll for excessive clearance.

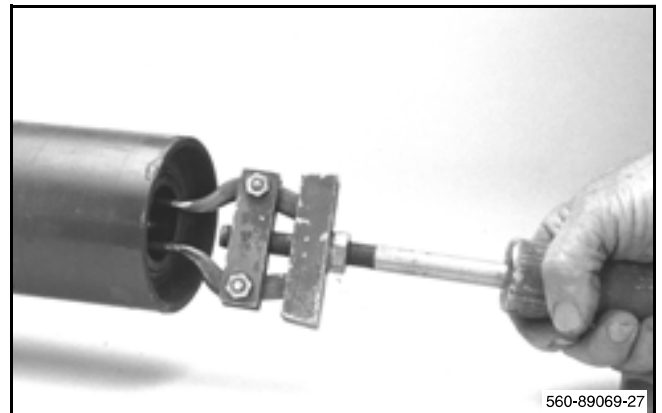


FIG. 92

FIG. 93: Press a new bearing into each end of the roll. The side of the bearing with the flange (1) is installed into the roll.

Press the hubs into the bearings on each end of the roll.

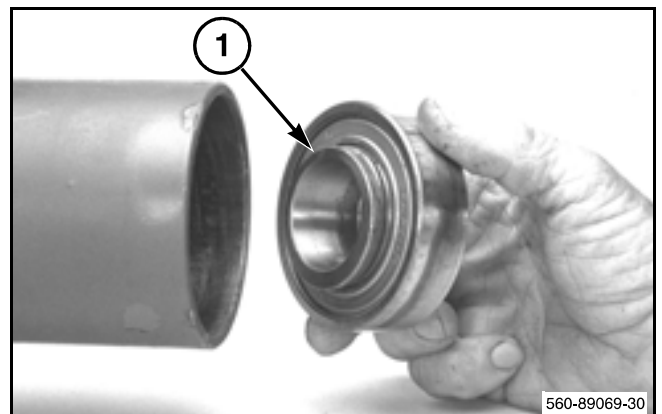


FIG. 93

Twine System

TWINE TUBE ADJUSTMENT

FIG. 3: The distance between the twine tubes in the twine arm can be changed from 51 to 178 mm (2 to 7 in) by moving the right-hand tube (1).

To change the distance, loosen the adjusting bolts (2) and slide the twine tube to the desired position.

The notches (3) on the twine arm indicate the approximate distance between the twine tubes in inches.

- Closed = 51 mm (2 in) between twine tubes
- First notch = 76 mm (3 in) between twine tubes
- Second notch = 102 mm (4 in) between twine tubes
- Third notch = 127 mm (5 in) between twine tubes
- Fourth notch = 152 mm (6 in) between twine tubes
- Open = 178 mm (7 in) between twine tubes

Tighten the adjusting bolts.

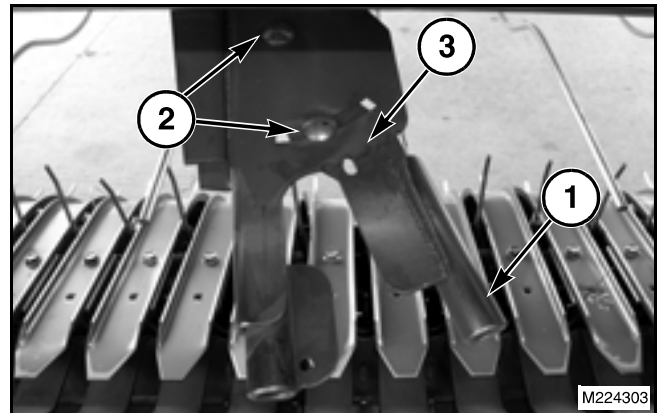


FIG. 3

TWINE GUIDE ADJUSTMENT

FIGS. 4–5: The twine guides (1) help to guide the twine onto the edges of the bale.

NOTE: If the twine guides are set in farther than the console settings, the twine guides will determine the distance of the twine from the edge of the bale.

The twine guides are located inside the bale chamber. The twine guides are spring loaded so crop entering the bale chamber will rotate but not bend the twine guide.

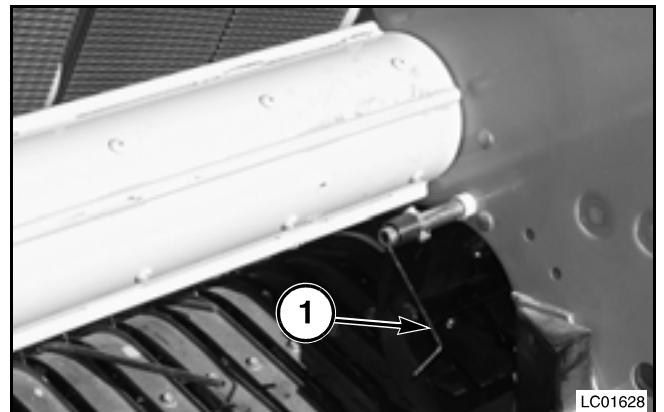


FIG. 4

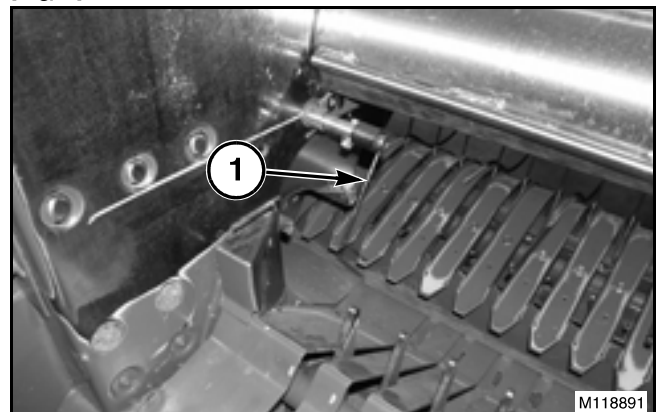


FIG. 5

Mesh Wrap System

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTION
Mesh wrap attachment does not apply mesh	Mesh roll is empty	Install new mesh wrap roll.
	Feed rolls not adjusted correctly	Set the correct tension between the feed rolls. See the Adjustments section.
	Feed rolls not tight against the forming belts	Adjust the mesh actuator forward.
Mesh wrap attachment does not cut mesh	Knife not sharp	Remove and sharpen the knife or install a new knife.
	Mesh cut off arm not being tripped.	Adjust the mounting position of the mesh wrap actuator further back.
	Cutoff arm lock is in the locked position	Move the cutoff arm lock to the unlocked position.
Mesh wrap is not being cut cleanly	Feed Roll Brake braking force is not correctly adjusted	See Mesh Feed Roll Brake in this section.
Mesh applied to the bale but the console gives mesh not started alarm	Mesh count switch is not adjusted correctly	Adjust the switch.
	Mesh count wheel is not running on the mesh roll	Make sure that the mesh overrun retainer bar is down.
Mesh torn, or runners in mesh on the bale	Mesh wrap catching on a sharp object	Check feed rolls and all mesh contact surfaces for sharp objects causing snags.
	Tension adjustment between the feed rolls not correct	Adjust the tension between the feed rolls. See the Adjustments section.
	Bale too large causing contact with the baler tailgate roll or ricks	Reduce the bale diameter.
	Mesh wrap is not being cut cleanly	Set mesh feed roll brake
Mesh wrapping around the starting roll	Mesh is catching on a sharp object	Check for sharp edges that can snag the mesh wrap.
Mesh wrap getting loose and gathering in the baler forming belts when twine is being used	Mesh roll is turning and feeding out mesh	Secure the mesh roll by wrapping a retaining strap around the roll and support rods to prevent the roll from rotating.

Mesh Wrap System

RUBBER FEED ROLL

Removal

FIG. 39: Move the mesh wrap carriage so the mesh feed roll brake (1) is not touching the brake drum (2).

Engage the cut off arm lock (3) to lock the mesh wrap cutoff arm into the up position.



WARNING: The cutoff arm for the mesh wrap can move rapidly without warning. Lock the cutoff arm into the up position before servicing or loading mesh wrap.

Remove any paint from the roll shaft.

Loosen the cap screws on the steel feed roll. Release the tension between the steel feed roll and the rubber feed roll.

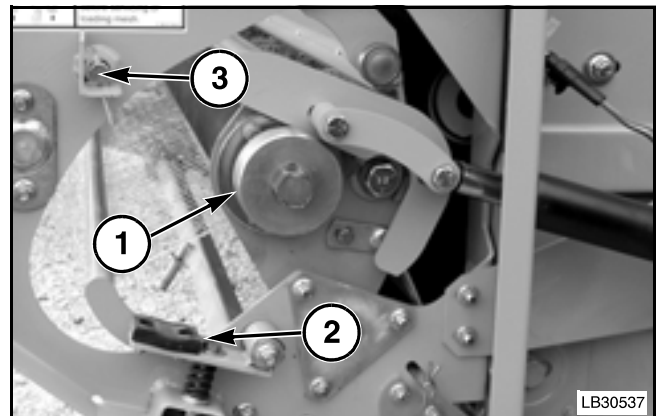


FIG. 39

FIG. 40: Loosen the two setscrews on the brake drum (1). Remove the brake drum and key.

Loosen the setscrew on the bearing locking collar (2). Use a punch to loosen the locking collar by driving the locking collar in the clockwise direction when facing the bearing on the right-hand side. Remove the locking collar.

Remove the three 3/8-16 x 3/4 washer head machine screws from the bearing flanges (3). Remove the bearing (4) and bearing flanges from the roll shaft.

Remove the 3/4-10 x 2 cap screw (5) and hardened washer from the left-hand side of the roll.

Remove the feed roll (6).

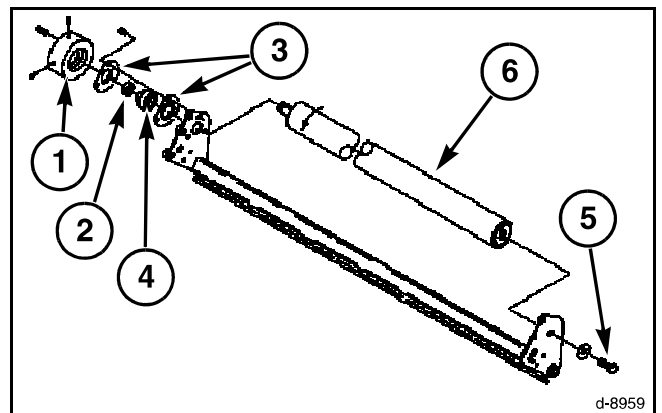


FIG. 40

Disassembly and Assembly of Left-Hand Bearing

NOTE: The roll shown is not rubber covered. The procedure for replacing the left-hand bearing is the same.

FIG. 41: Use a slide hammer to pull the bearing hub from the bearing.

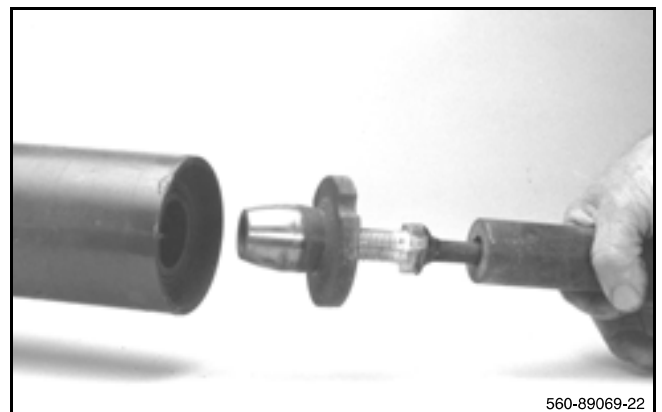


FIG. 41

Mainframe and Wheels

FIG. 7: The length (A) of the spring (1) on the tailgate latch must be 380 mm (14-15/16 in) from hook to hook when the tailgate is latched.

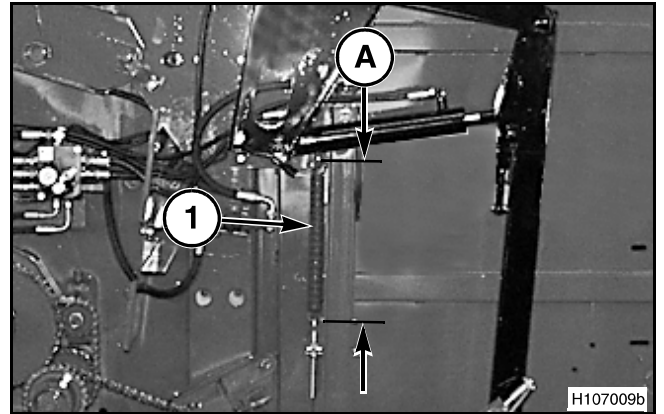
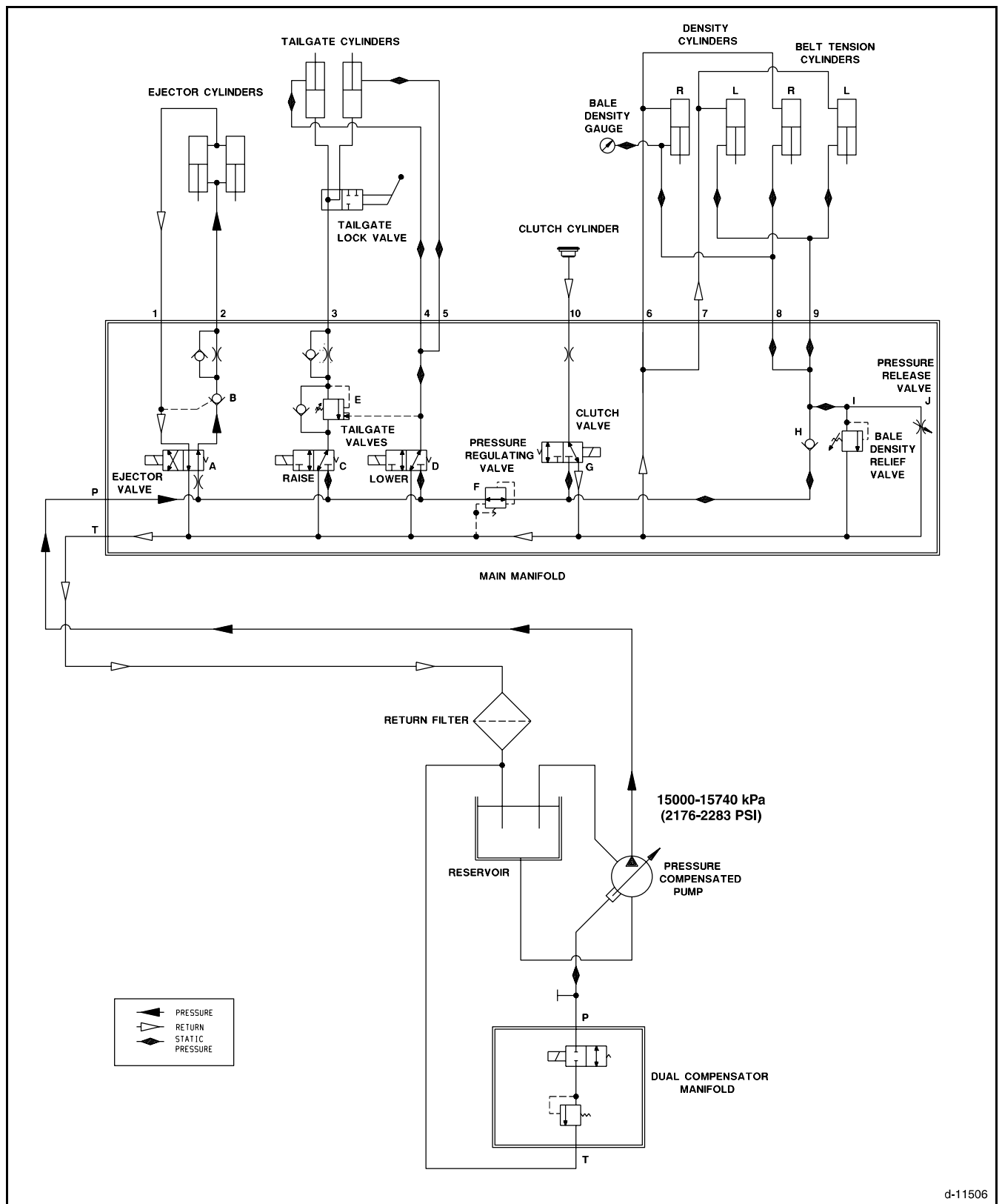


FIG. 7

Hydraulic Troubleshooting - Automatic Balers

TROUBLESHOOTING

Clutch Will Not Engage



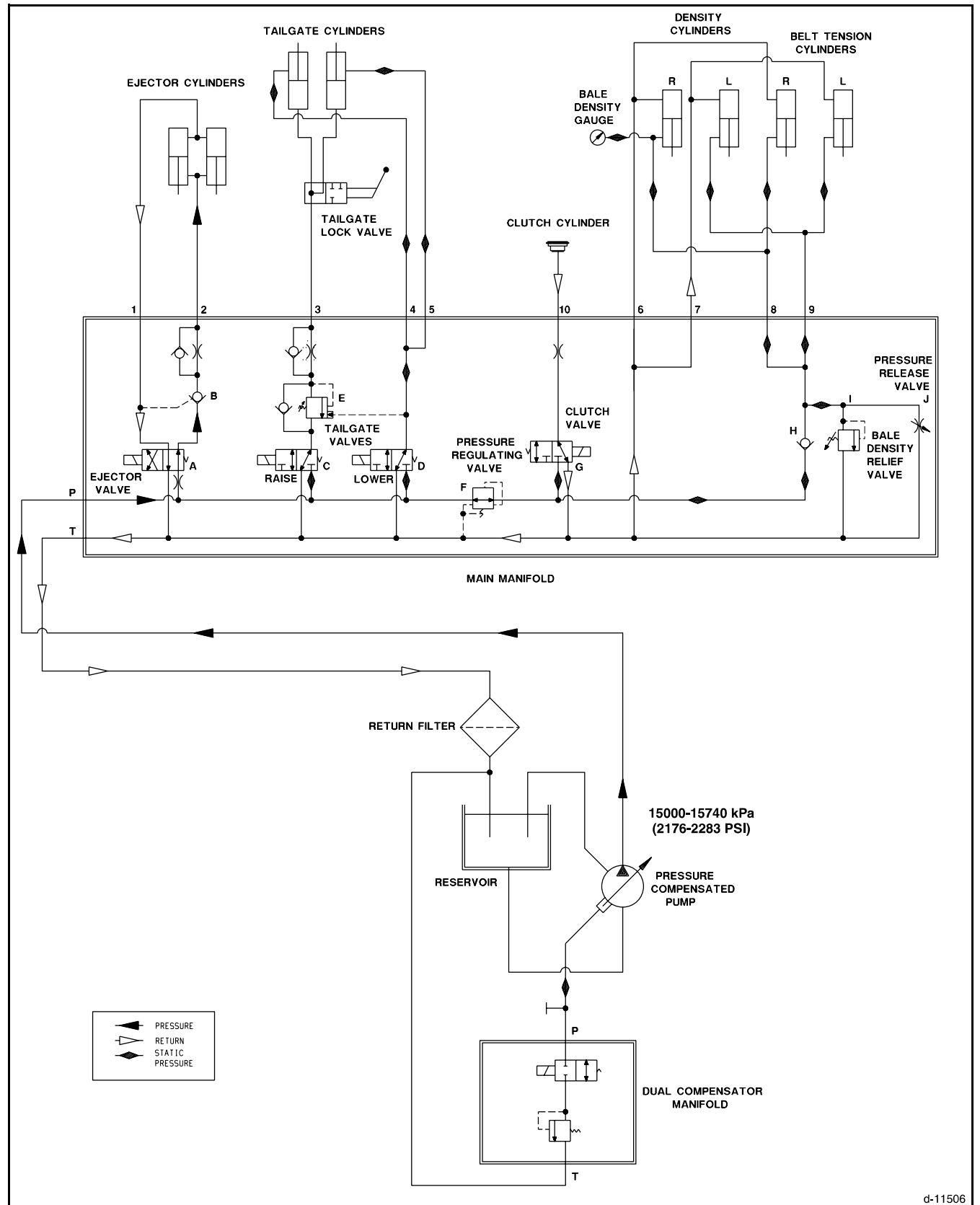
d-11506

FIG. 5

FIG. 5: Tailgate closed, kicker retracting, clutch engaging

Hydraulic Troubleshooting - Automatic Balers

Kicker Will Not Retract



d-11506

FIG. 10

FIG. 10: Tailgate closed, kicker retracting, clutch engaging

Hydraulic Troubleshooting - Automatic Balers

Hydraulic Oil Too Hot

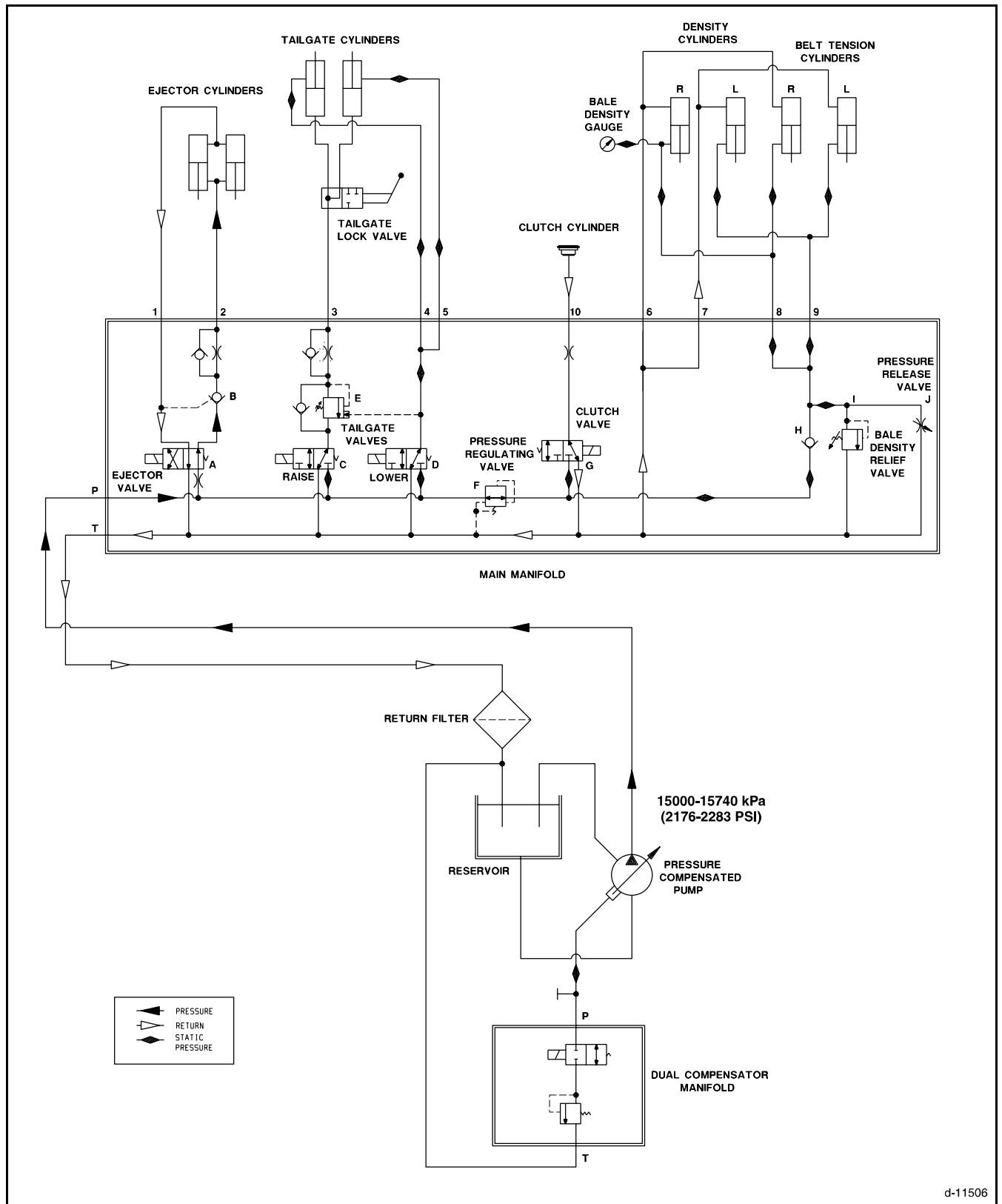


FIG. 16

FIG. 16: Tailgate closed, kicker retracting, clutch engaging

Hydraulic Repair - Automatic Balers

Gauge Ports

FIG. 19: Gauge port locations are shown. The table below shows the required gauge range, fitting size, wrench size and plug torque.

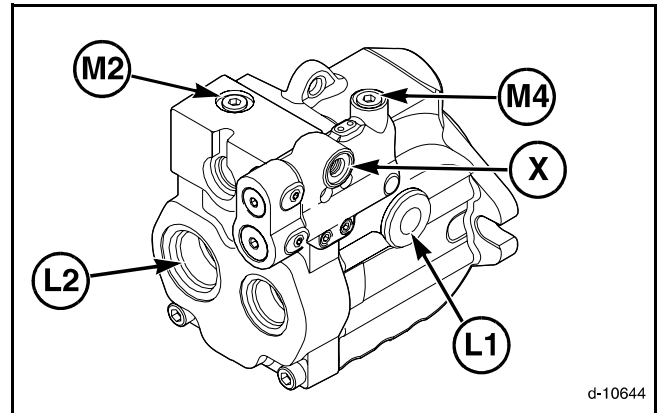


FIG. 19

Port	Purpose	Range of Gauge	Fitting	Wrench Size	Torque
M2	System pressure	0-300 bar (0-5000 psi)	7/16 - 20 O-ring	1/4 in	34-68 Nm (25-50 lbf ft)
M4	Servo pressure	0-300 bar (0-5000 psi)	7/16 - 20 O-ring	1/4 in	34-68 Nm (25-50 lbf ft)
L1, L2	Case pressure	0-10 bar (0-100 psi) <i>NOTE: Tee into the case drain line.</i>	7/8 - 14 O-ring	3/8 in	54-136 Nm (40-100 lbf ft)
X	Pilot line	0-300 bar (0-5000 psi)	7/16 - 20 O-ring Use the T in the line		34-68 Nm (25-50 lbf ft)

Hydraulic Repair - Automatic Balers

FIG. 42: Install the rear bearing onto the shaft.
Install new O-rings onto the housing and back plate.

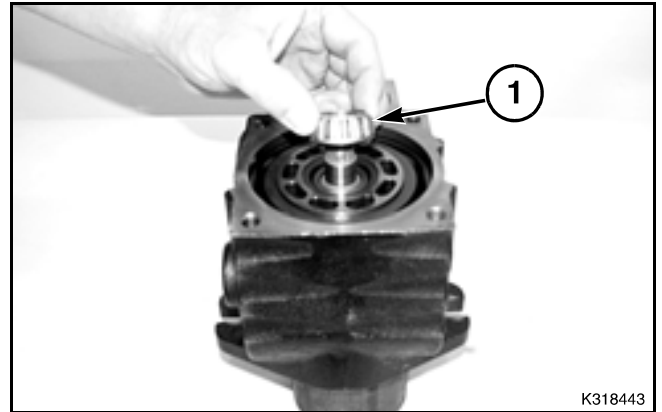


FIG. 42

FIG. 43: Install the servo piston (1) and cylinder (2) onto the back plate.

Install the check valve and spring (3).

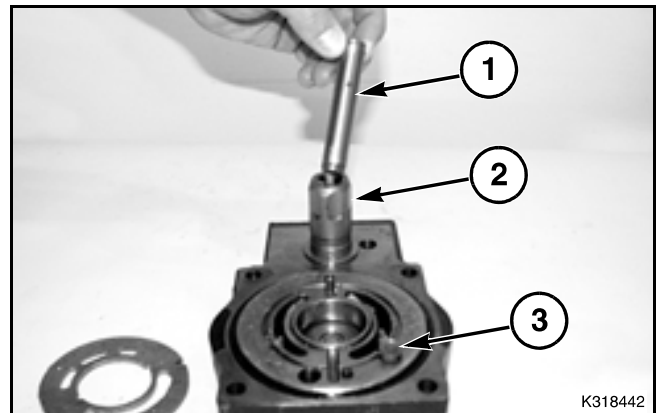


FIG. 43

FIG. 44: Install the valve plate (1) onto the back plate. If necessary, use petroleum jelly to hold the valve plate in place. The pin (2) on the back plate is put into the notch (3) in the valve plate.

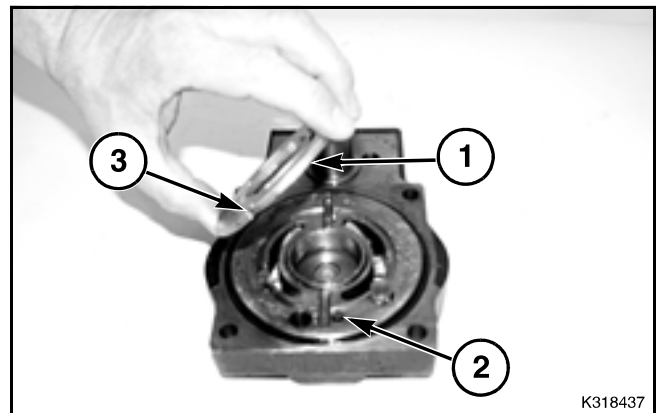


FIG. 44

FIG. 45: Install the back plate onto the pump housing. Install and tighten the four M10 x 45-12.9 socket head cap screws (1) in a diagonal pattern to 48 to 61 Nm (35 to 45 lbf ft).

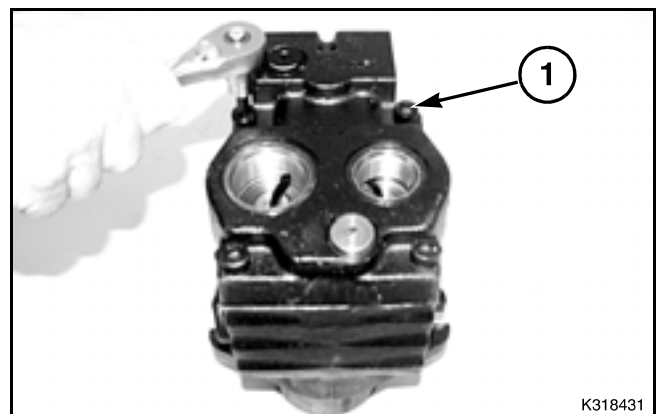


FIG. 45

Hydraulic Repair - Automatic Balers

Install the spool plug (19) with a new O-ring (18). Tighten the spool plug with a 3/16 inch hex wrench to 11 to 14 Nm (8 to 10 lbf ft).

Install the seat (16) and the two springs (15) into the control housing. Put a new O-ring (14) and back-up rings (13) onto the low pressure adjustment screw (12).

Install the low pressure adjustment screw (12) using a 6 mm hex wrench. The adjustment screw must be flush plus one turn. This is the initial setting. The flow compensator must be adjusted after installation.

Install the set screw (20) and a tighten to 7 to 11 Nm (6 to 8 lbf ft) using a 4 mm hex wrench.

Installation

FIG. 59: Use petroleum jelly to hold new O-rings (1) in position on the load sense control valve (2).

Install the control valve onto the pump end cap using the four screws (3). Tighten the screws in a diagonal pattern to 15 to 18 Nm (11 to 13 lbf ft). Check the torque of the first screw again.

The pressure and flow compensator adjustment screws will need to be set. See Adjustment in this section.

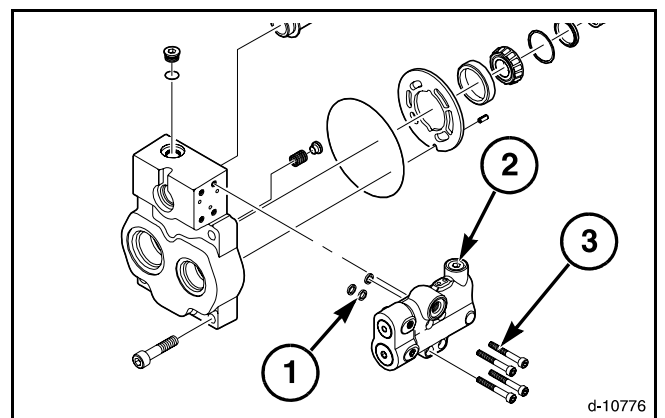


FIG. 59

Hydraulic Repair - Automatic Balers

Kicker Directional Valve, Tailgate Directional Valves, Clutch Valve

Make sure the stem of the valve is not bent. A bent stem will not permit the valve to operate correctly.

Use a brass rod to move the spool in the bore and check the bore for foreign particles. If there are foreign particles in the bore that cannot be removed, replace the cartridge.

Insert the brass rod into the end of the cartridge until the end of the brass rod is against the end of the spool. Slowly push the spool in until the spool will not move. The spool must move smoothly. Quickly pull the brass rod from the cartridge. The spring in the cartridge must push the spool to the end of the cartridge quickly and smoothly. The spool must seat tightly at the end of the stroke. If the spool does not work correctly, replace the cartridge.

FIG. 74: Kicker Directional Valve



FIG. 74

FIG. 75: Tailgate Directional Valve



FIG. 75

FIG. 76: Clutch Valve



FIG. 76

Hydraulic Repair - Automatic Balers

Installation

When installing the dual compensator valve, use the identification tags on the hoses and wiring harness connectors, made during the removal procedure.

FIG. 97: Install the dual compensator valve (1) on the baler. Use the two bolts and the two nuts (2) to fasten the dual compensator valve on the baler.

Connect the hoses (3) to the dual compensator valve. Use the identification tags, made during the removal procedure, and the port numbers stamped on the valve body to mark the hoses.

Connect the wiring harness connector (4) to the coil.

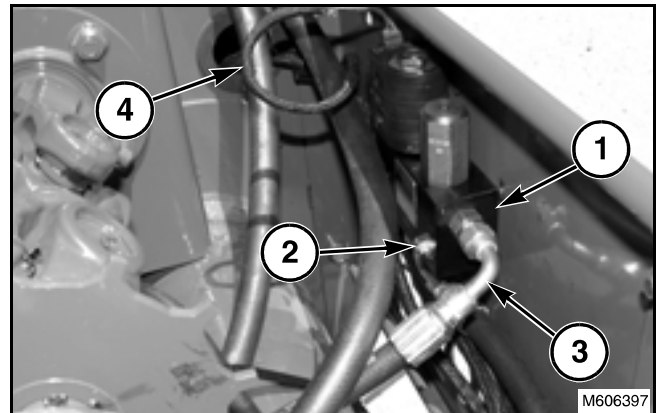


FIG. 97

TAILGATE LOCKOUT VALVE

Removal

Make sure the tailgate is all the way down. Slowly open the lines to relieve any pressure in the valve.

FIG. 98: Use a detergent solution and a low pressure spray washer to clean the valve (1) area.

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

Fasten identification tags on the hoses (2) connected to the valve.

Disconnect the hoses from the valve. Install caps on all of the hoses.

Hold the valve and remove the two mounting bolts (3) from the bottom of the valve. Remove the valve from the baler.

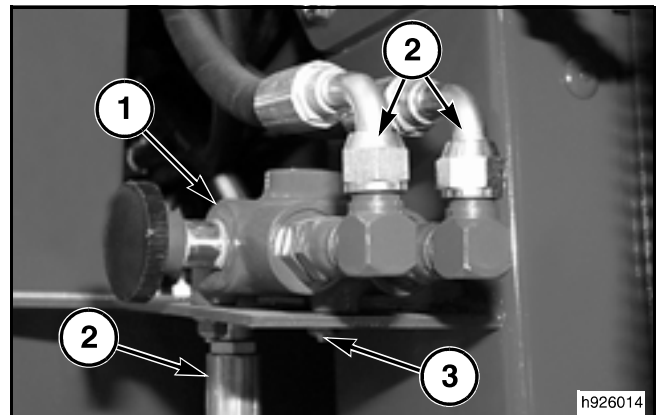


FIG. 98

Disassembly

Remove the hydraulic fittings from the side of the valve body.

Hydraulic Troubleshooting - Standard Balers

GENERAL INFORMATION

FIG. 109: Wear safety goggles and use a piece of cardboard or wood to find hydraulic leaks. Never use hands; leaking hydraulic fluid under high pressure can enter under the skin causing serious injury.

Use steam or detergent spray to clean the components prior to looking for the cause of an external leak. Do not point the spray nozzle directly at the seals, bearings, or electrical components as high pressure water can force contamination past the seals or cause contamination to the electrical components.

Replace the components as required and operate the baler to make sure the problem has been corrected.

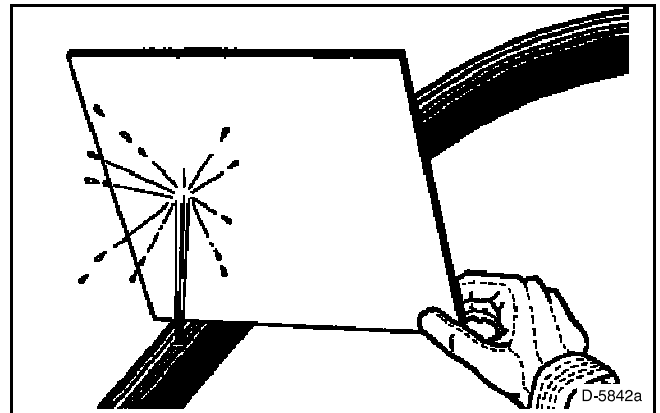


FIG. 109

Hydraulic Troubleshooting - Standard Balers

Kicker Will Not Extend

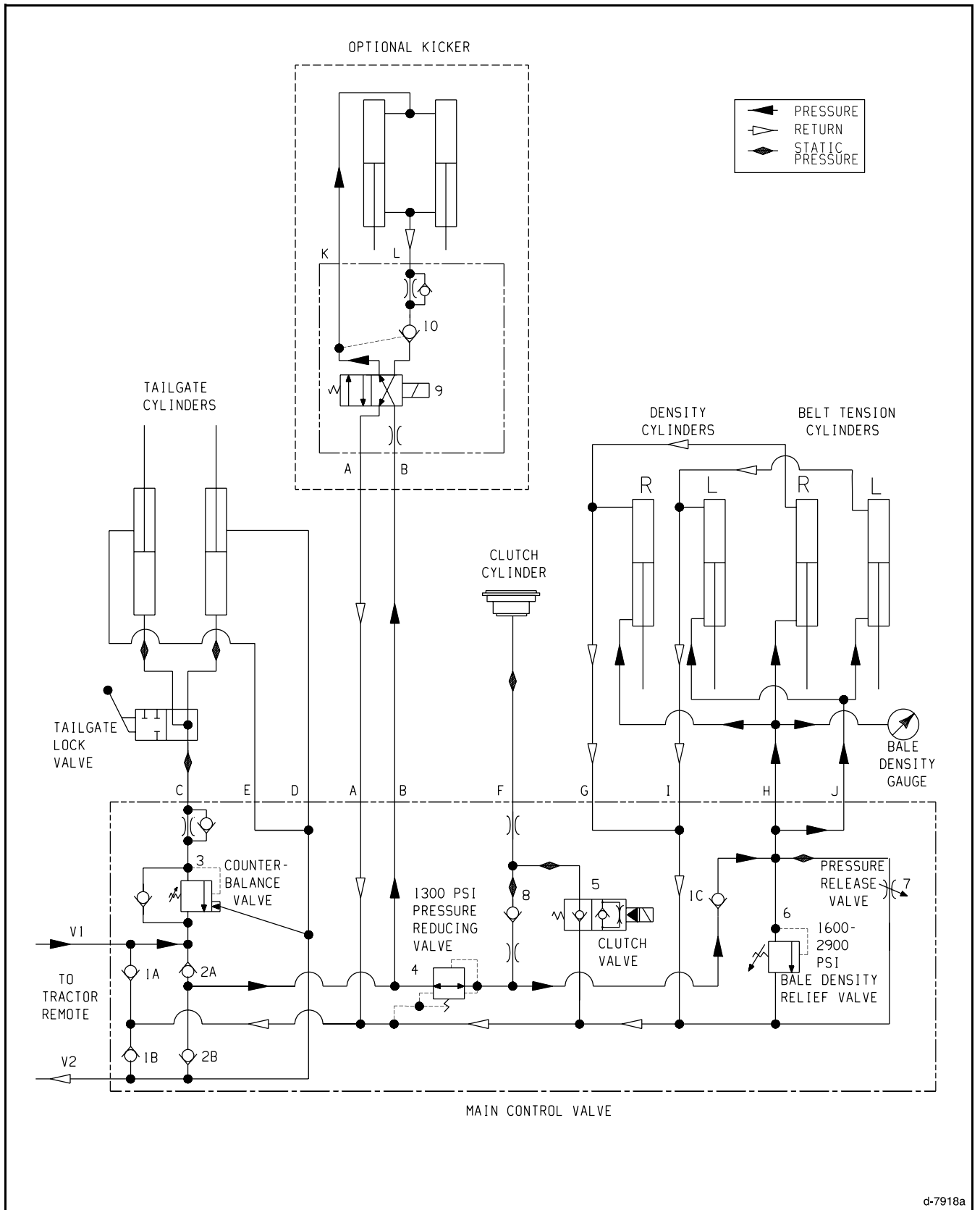


FIG. 116
FIG. 116: Tailgate up, kicker moving out, forming belts tightening

Hydraulic Troubleshooting - Standard Balers

Pickup Will Not Raise (Only If Equipped With An Optional Hydraulic Pickup Lift)

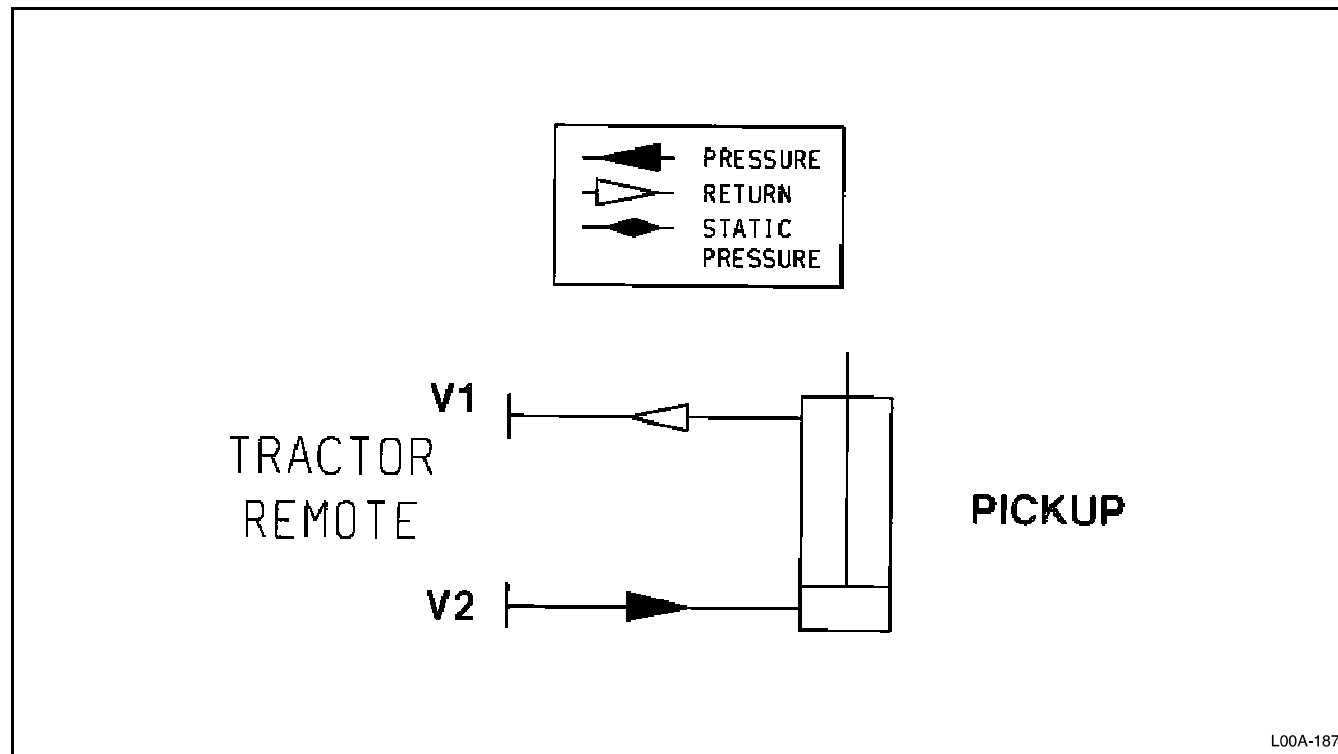


FIG. 121

FIG. 121: Pickup raising

Operation

The pickup lift is operated by the tractor hydraulics. Move the remote lever to lower or raise the pickup.

Oil will flow from the tractor to the base end of the pickup cylinder to raise the pickup. Oil will return to the tractor from the rod end of the cylinder.

Troubleshooting

1. Make sure the tractor remote valve is in the correct position. The tractor remote valve must be shifted so pressurized oil from the tractor enters the port on the base side of the pickup lift cylinder.
 2. Make sure there is not a problem with the tractor hydraulic system. The tractor hydraulic system must have a minimum of 10 342 kPa (1500 psi). See the service manual for the tractor and check the tractor hydraulic system.
- NOTE: If the tractor has more than one tractor remote valve, a quick check can be made of the tractor remote valve being used for the baler. Connect the baler to a different tractor remote valve and check the operation of the baler. If the problem is corrected, the problem is in the first tractor remote valve. If the problem is not corrected, the problem, such as low flow or low tractor relief setting, can still be in the tractor hydraulic system. See the service manual for the tractor and check the tractor hydraulic system.*
3. The problem can be caused by bad piston seals in the pickup cylinder. The oil flows around the piston seals so there is not enough pressure to extend the pickup cylinder. See Checking a Cylinder for Bad Piston Seals in this section.

Hydraulic Repair - Standard Balers

Inspection

Wash all of the parts in cleaning solvent.

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. Put the parts on clean wax paper and use only lint free paper towels to wipe parts.

Remove and discard the O-rings and backup rings as you inspect the components. Inspect the O-rings and the backup rings for cuts and damage. All of the backup rings are split for easy installation. If an O-ring or a backup ring is cut, check the bore in the valve body for damage.

Inspect each valve. Replace the valve if there is any wear or damage. Do not disassemble the valves. Disassembling the valves will change the pressure setting.

Check Valve (Ports 1A, 1B, 1C, and 8)

FIG. 128: Use a brass rod to move the poppet in the bore. Check the bore for foreign particles. If there are foreign particles that cannot be removed, replace the check valve.

Use the brass rod to push the poppet into the check valve. Inspect the poppet and the seat for wear and damage. If the poppet and seat are worn or damaged, replace the check valve. Quickly pull the brass rod from the check valve. The spring must push the poppet onto the seat. If the poppet does not move smoothly, replace the check valve.

Inspect the sides of the pilot piston for scoring and wear and replace as necessary. Also check the bore in the manifold for scoring and wear. If a bore is damaged, replace the manifold.

Reverse Check Valve (Ports 2A and 2B)

FIG. 129: Pull on the poppet. Inspect the poppet and the seat for wear and damage. If the poppet and seat are worn or damaged, replace the check valve. Quickly release the poppet. The spring must pull the poppet onto the seat. If the poppet does not move smoothly, replace the check valve.

Inspect the sides of the pilot piston for scoring and wear and replace as necessary. Also check the bore in the manifold for scoring and wear. If a bore is damaged, replace the manifold.



FIG. 128



FIG. 129

Hydraulic Repair - Standard Balers

Disassembly

FIG. 149: Make identification tags for each of the components. Fasten the identification tags to the components as the components are removed.

Remove the nut from the top of the coil (1) on the kicker valve and remove the coil.

Remove the kicker valve (2) from the valve body using a deep well socket. Be careful not to bend the stem of the cartridge.

Remove the pilot operated check valve (3).

Remove the hydraulic fittings from the kicker control valve.

Remove the orifice plate (4) in port L. Make note of the direction that the orifice plate is installed. The groove is faces toward the valve block.

Remove the orifice plug (5) in port B.

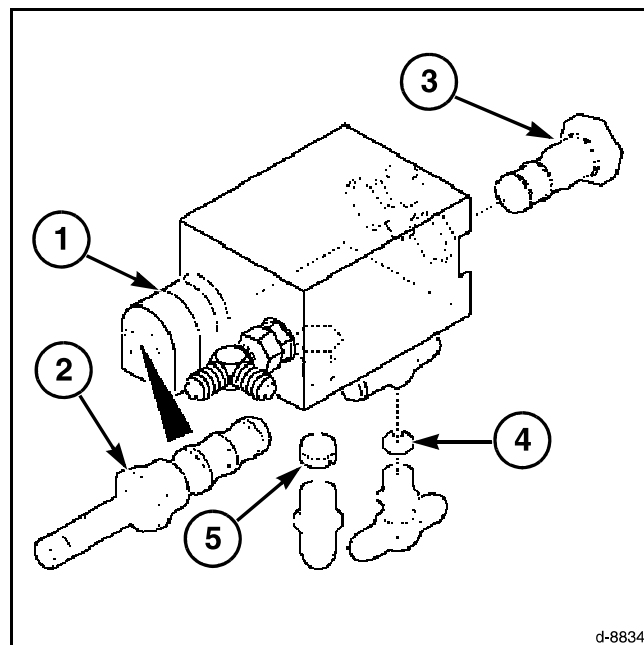


FIG. 149

Inspection

Wash all of the parts in cleaning solvent.

NOTE: It is important to keep the parts of the control valve clean. Small particles of dirt or lint can prevent the control valve from working correctly. Put the parts on clean wax paper and use only lint free paper towels to wipe parts.

Remove and discard the O-rings and backup rings as you inspect the components. Inspect the O-rings and the backup rings for cuts and damage. All of the backup rings are split for easy installation. If an O-ring or a backup ring is cut, check the bore in the valve body for damage.

Inspect each valve. Replace the valve if there is any wear or damage. Do not disassemble the valves. Disassembling the valves will change the pressure setting.

Kicker Valve

FIG. 150: Make sure the stem of the valve is not bent. A bent stem will not permit the valve to operate correctly.

Use a brass rod to move the spool in the bore and check the bore for foreign particles. If there are foreign particles in the bore that cannot be removed, replace the cartridge.

Insert the brass rod into the end of the cartridge until the end of the brass rod is against the end of the spool. Slowly push the spool in until the spool will not move. The spool must move smoothly. Quickly pull the brass rod from the cartridge. The spring in the cartridge must push the spool to the end of the cartridge quickly and smoothly. The spool must seat tightly at the end of the stroke. If the spool does not work correctly, replace the cartridge.



FIG. 150

Hydraulic Repair - Standard Balers

Tailgate Cylinders

Disassembly

Clean the outside of the cylinder with cleaning solvent.

Fasten the tube in a vise or other holding equipment. Be careful not to damage the tube.

Remove the spanner nut from the front of the tube.

Pull the rod, the piston, and the guide straight out of the tube to prevent damage to the tube.

Fasten the rod eye in a vise and put a support under the rod near the piston. Put a shop cloth between the support and the piston rod to prevent damage to the rod.

Remove the hex nut from the end of the piston rod.

Remove the piston from the piston rod.

Remove the O-ring from the rod.

Remove the piston seal from the outside of the piston.

Remove the O-ring, the backup ring, and the internal retaining ring from the outside of the guide.

Remove and lip seal and the wiper ring from the inside of the guide.

Inspection

Clean all parts in cleaning solvent.

Check to make sure the rod is straight. If the rod is not straight, install a new rod. Do not try to straighten the rod.

Remove any marks and sharp edges on the chamfer at the piston end of the piston rod.

Illuminate the inside of the tube. Inspect the inside of the tube for deep grooves and other damage. If there is any damage to the tube, a new tube must be used.

Inspect the guide end of the tube for sharp edges that will damage the O-rings on the piston and the guide. Remove any sharp edges.

Inspect the piston for damage and wear. If the piston is damaged or worn, replace the piston.

Assembly

Apply clean hydraulic oil to all of the components and seals before assembly. Apply clean hydraulic oil to the bore of the tube and the rod before installing the components.

Install a new lip seal in the inside of the guide. The lip of the seal must be toward the small end of the guide.

Install a new wiper ring in the inside of the guide. The lip of the wiper must be toward the large end of the gland.

Install the new O-ring, backup ring, and internal retaining ring in the groove on the outside of the guide. The O-ring must be between the backup ring and the small end of the guide.

Fasten the piston rod eye in the vise.

Push the guide onto the threaded end of the rod. Be careful not damage the wiper ring and lip seal.

Put a support below and near the end of the rod. Use a shop cloth between the support and the rod to prevent damage to the rod.

Install a new O-ring on the rod.

Put the piston on the piston rod.

Clean the threads of the hex nut and the rod with cleaning solvent.

Apply a thread locker to the threads of the rod.

Install the nut on the rod.

Install a new O-ring, a new backup ring, and the internal snap ring in the groove on the outside of the piston. The backup ring must be between the O-ring and the internal snap ring.

Fasten the tube in a vise or other holding equipment. Be careful not to damage the tube.

Lubricate the piston, the guide, and the inside of the tube with clean oil.

Push the piston straight into the tube. Push the guide into the tube enough to install see the threads on the inside of the tube.

Air pressure or hydraulic oil pressure must be applied to the rod end of the cylinder before tightening the spanner nut. Do the following steps to tighten the spanner nut.

- a. If air pressure is available, apply 689.4 kPa (100 psi) of air pressure to the fitting in the rod end of the cylinder. If air pressure is not available, install the hydraulic hoses for the cylinder, on the baler, to each end of the cylinder. This prevents the guide from turning in the cylinder during the tightening procedure.
- b. Apply pressure to retract the rod into the cylinder.
- c. Tighten the spanner nut until the nut is finger tight against the end of the cylinder.
- d. Using a hammer and a punch, tighten the nut an additional 6.35 mm (1/4 in) measured on the circumference of the cylinder.
- e. Release the pressure from the cylinder.


Operation

POWER

The console does not have a power switch. The console is connected to the tractor key switch and turns on when the key is turned on.

FIG. 3: After power up, the start up screen (1) will be displayed for about four seconds. The software version (2) is given on this screen.

Then, the console home screen will be displayed. After a delay, the implement work screen will be displayed.

If errors are detected, an audible alarm will sound and the error description will be displayed on the screen. Press the  key to turn off the audible alarm. See Alarms for more information.

If the console is connected correctly, the screen will remain illuminated for at least one second after the tractor key is turned off.

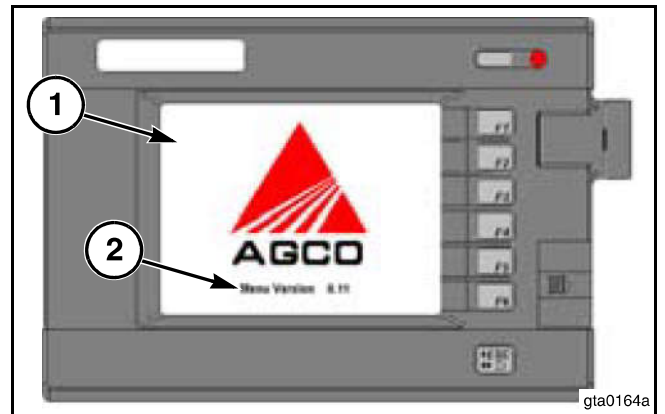


FIG. 3

LOADING IMPLEMENT INFORMATION

The first time each implement is connected to the console, the implement information will be downloaded to the console. The implement information will also be downloaded if the implement information had been deleted.

The information that is downloaded from the implement is called the object pool.

FIG. 4: The bar (1) at the top of the console home screen shows that the implement information is being downloaded to the console. This process can take several minutes.

When the download is complete, the implement screen will be displayed.

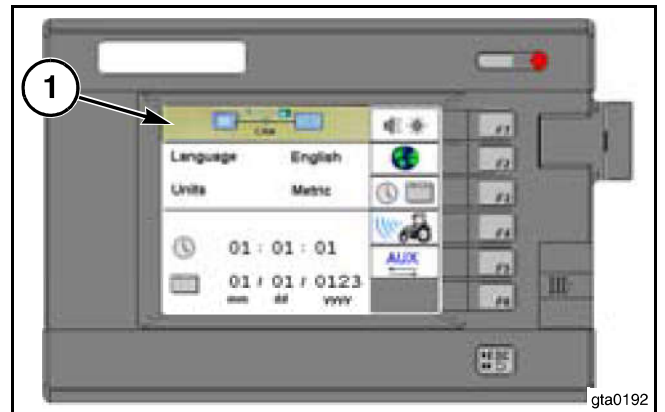





FIG. 4

Operation

Time and Date

FIG. 15: Press the  or  key to enter the time and date screen.



Press the  key to go back to the console home screen.

NOTE: On later versions of software, the time and date formats are set on the Language and Units screen.

On early versions of software, the time and date formats cannot be changed.

The time and date are entered in the format shown on the screen for your console.

To change the time or date:

1. Rotate the knob to highlight the value to be changed. A rectangle will indicate the current item.
2. Press the knob in to select the value.
3. Rotate the knob to change the value.
4. Press the  key to accept the new value.
Press the  key to keep the previous value.

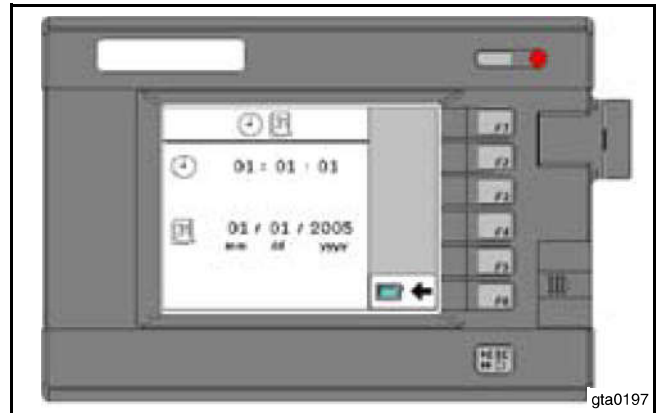


FIG. 15

Electrical Schematics

CONSOLE HARNESS WITHOUT POWERED RADAR CONNECTION

FIG. 28: The console harness without a powered radar connection has a white CAN terminator (1).

There is a connector for a radar but only has one wire to the connector. The radar must be powered through another harness.

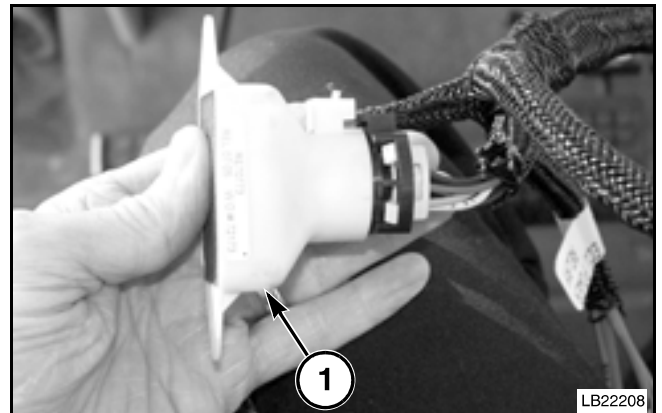


FIG. 28

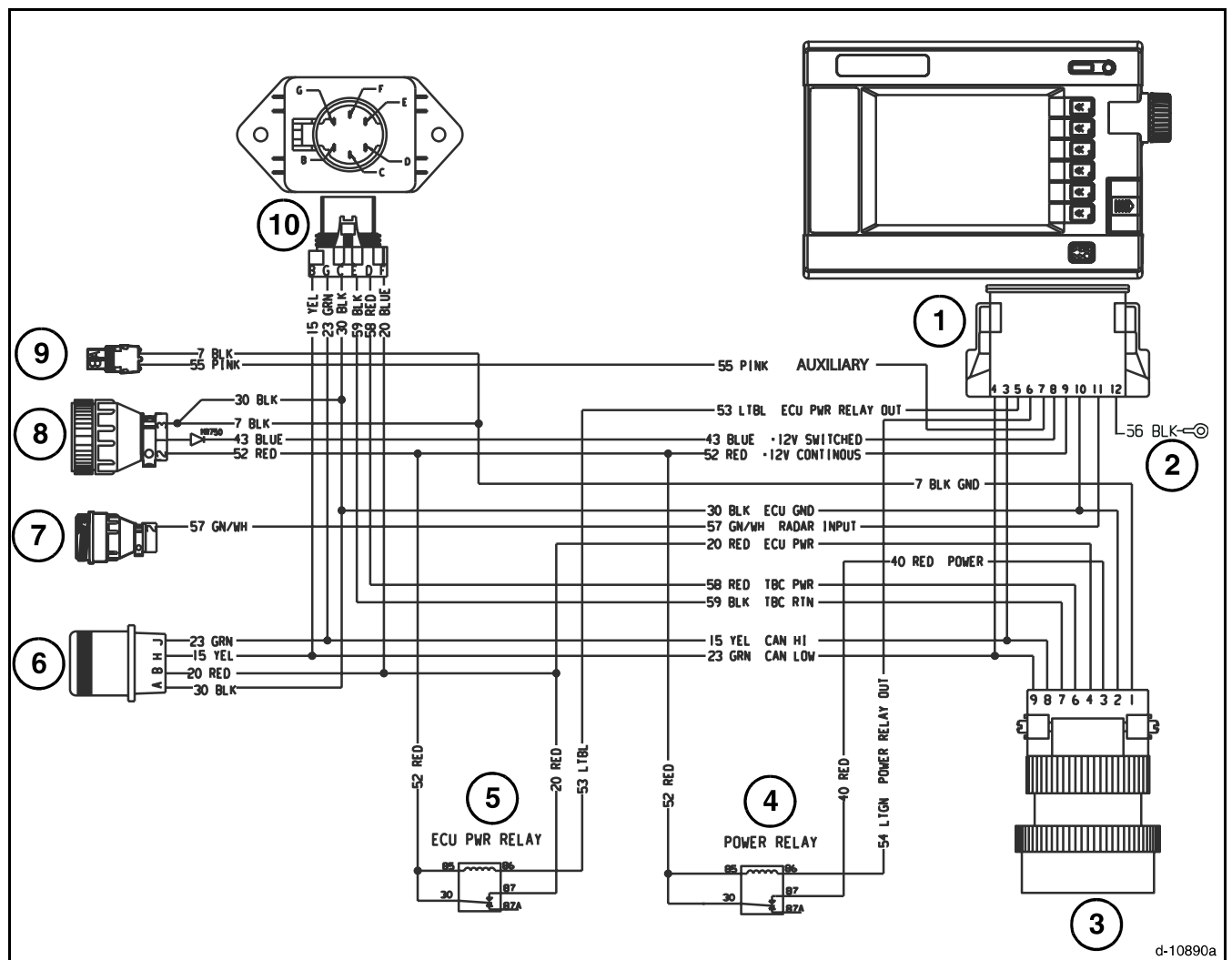


FIG. 29

FIG. 29: Console Harness Electrical Schematic Components

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