Operator Manual

MF1745

Round Baler

VISION INNOVATION LEADERSHIP QUALITY RELIABILITY SUPPORT PRIDE COMMITMENT

MASSEY FERGUSON

OPERATION

General Information

FIG. 4: When parking, park the machine and the tractor on a solid level surface. Put all controls in neutral, put the tractor transmission in PARK, and apply the tractor parking brake. Stop the tractor engine and take the key with you.

Make sure the tractor and implement are in the proper operating condition according to the operators manuals. Make sure the tractor brakes and the machine brakes, if equipped, are adjusted correctly.

The tractor must have enough weight and braking capacity, especially when operating on roads and terrain that is not even. Use a tractor of recommended size and weight to tow the machine. See Specifications for the minimum tractor size and weight.

Tractor must be equipped with rollover protective structure (ROPS), and a seat belt. Use seat belt during operation.

Do not dismount from moving machinery.

Always operate the machine with the control console turned on.

Never start the tractor with PTO engaged or control console turned on.

Where possible avoid operating the baler near ditches, embankments and holes. Reduce speed when turning, crossing slopes, and on rough, slippery, or muddy surfaces.

Stay off slopes too steep for operation.

Be aware of the size of the equipment and have enough space available to allow for operation.

Always slide the hitch pin lock plate over the hitch pin and install the Klik pin when connecting the baler to the tractor.

To achieve proper braking capacity, the weight of the baler with a bale must not exceed 1.5 times the weight of the tractor.

Do not stand between the tractor and the implement to install the hitch pin when the tractor engine is running.

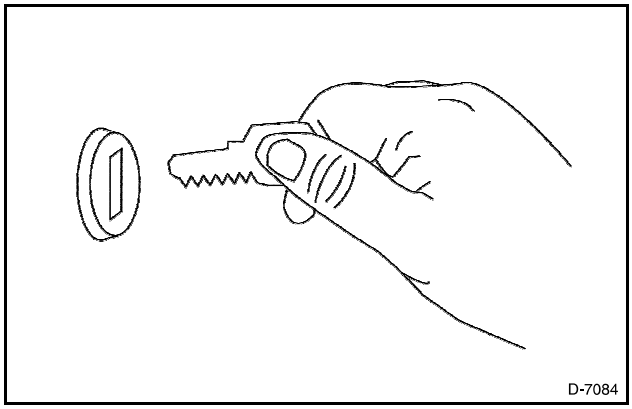

FIG. 4

FIG. 5: Avoid contact with electrical power lines. Contact with electrical power lines can cause electrical shock, resulting in very serious injury or death.

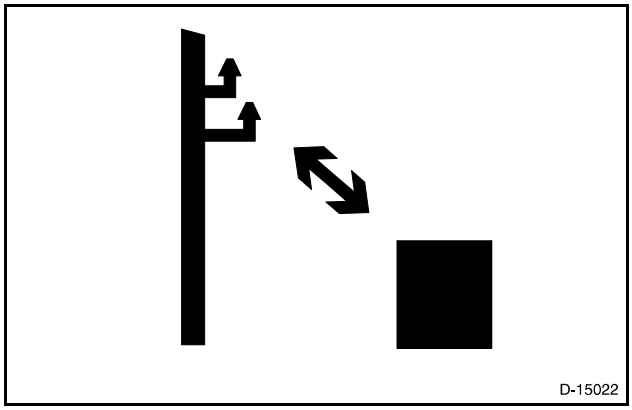

FIG. 5

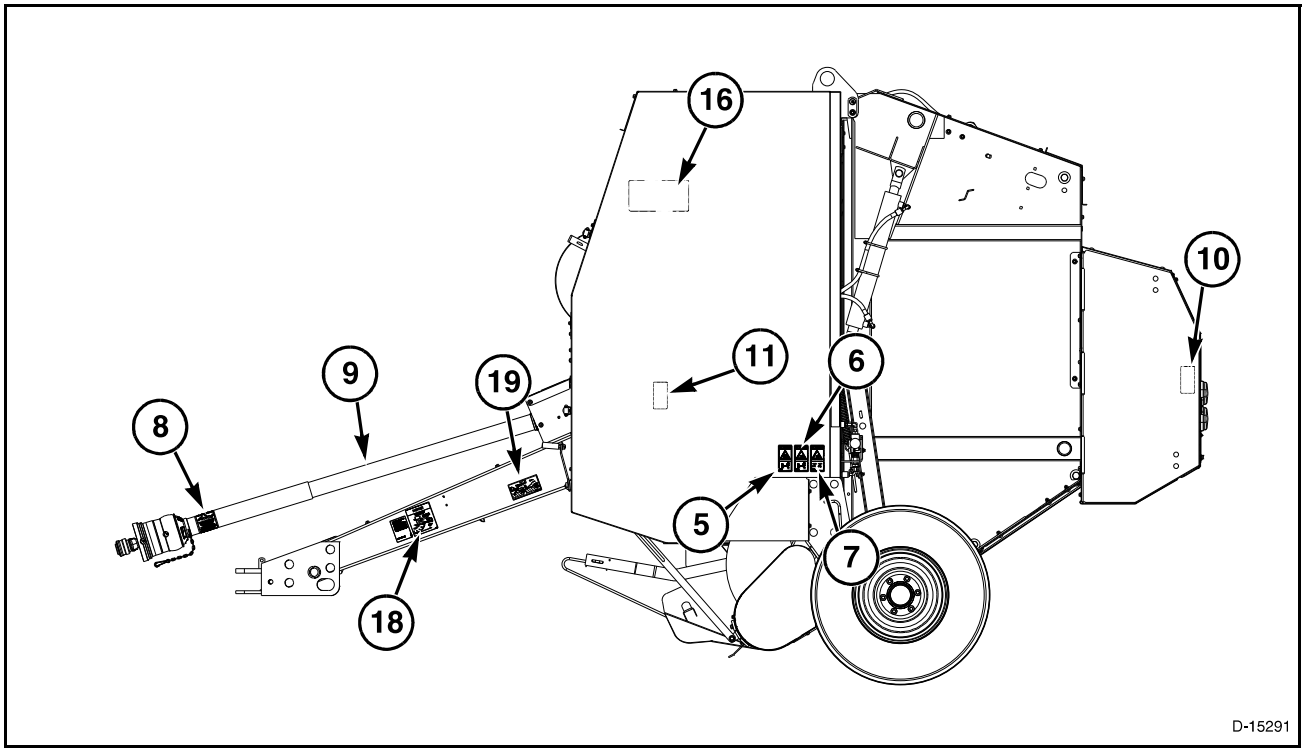

FIG. 27
FIG. 27: Left-hand View

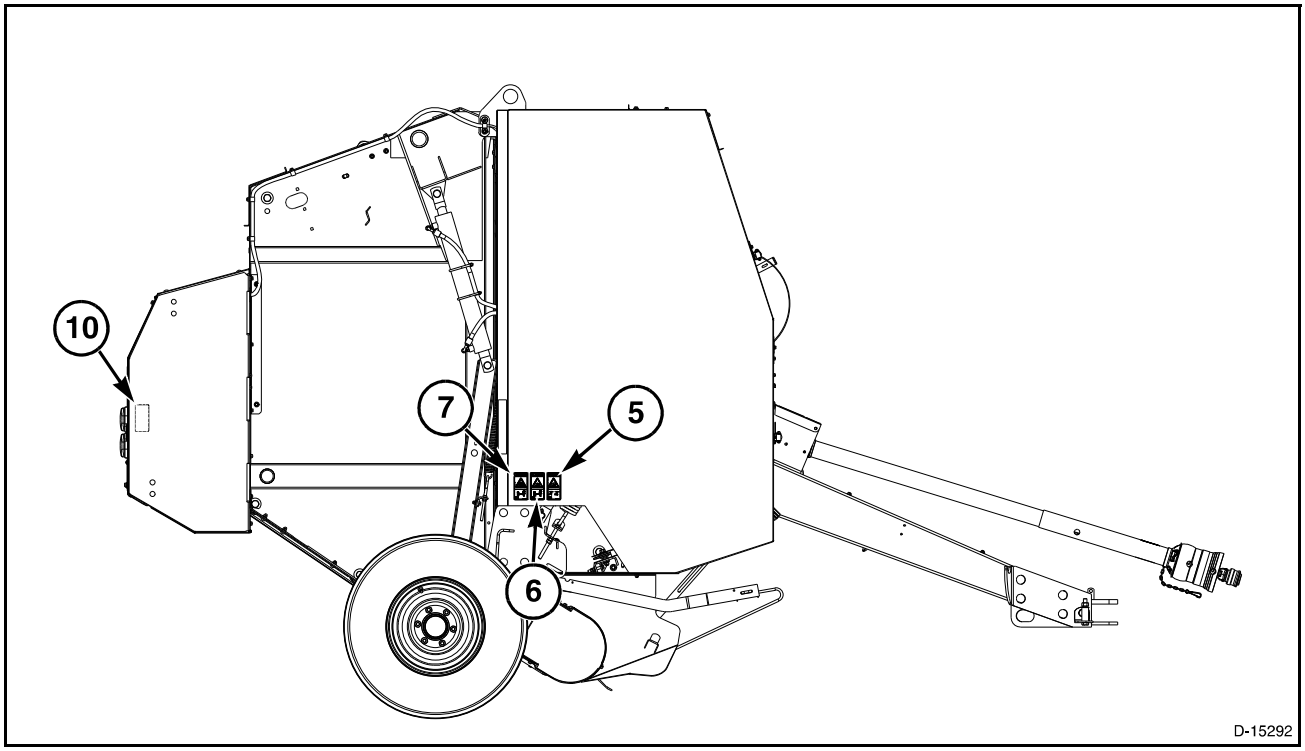

FIG. 28
FIG. 28: Right-hand View

BALER OPERATION

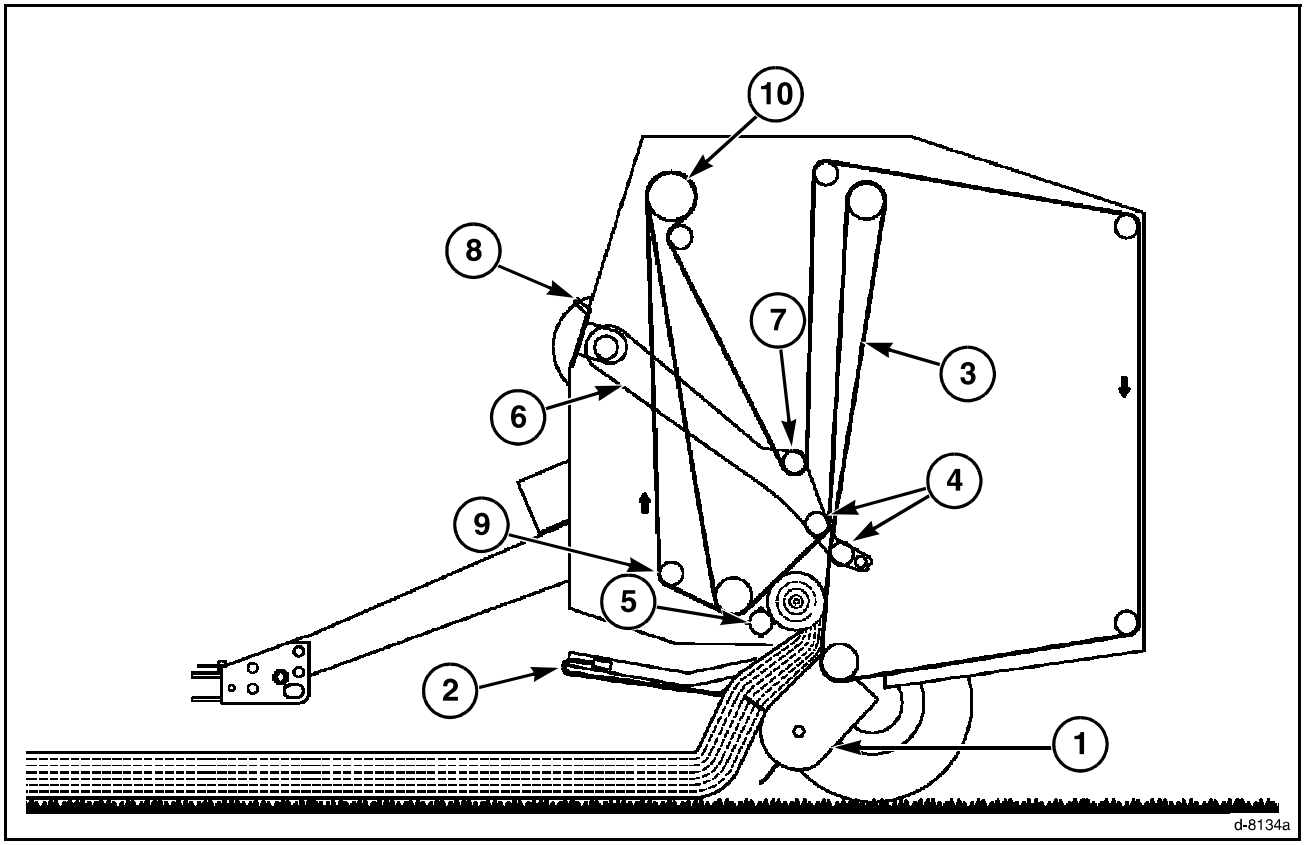

FIG. 3

FIG. 3: The illustration shows the windrowed crop being picked up. The crop moves across the pickup assembly (1) into the bottom of the open throat bale chamber. The windguard (2) holds the crop against the pickup assembly. In the bale chamber the crop contacts the rough top surface of the forming belts (3), which are moving upward. The forming belts carry the crop to the top of the starting chamber which is formed by the bale density rolls (4). The downward motion of the forming belts turns the crop downward against the starting roll (5). The starting roll folds the crop rearward into the crop coming in. The core is started and begins to roll.

Springs and hydraulic cylinders pull down on the tension arm (6). The bale density rolls are held down to reduce the size of the bale chamber to a starting size. The belt tension roll (7) is held down to remove the slack from the forming belts. As the bale increases in size, the bale density rolls are forced upward moving the bale size indicator (8) downward. The belt tension roll puts an increasing downward force against the belts. This force keeps tension on the belts and compresses the crop coming into the baler.

The stagger roll (9) holds the outside forming belts in front of the other forming belts. This releases crop deposits from behind the forming belts.

The forming belts are driven by the drive roll (10).

OPERATION
Contents

MESH WRAP (OPTIONAL)

Spacer Brackets

FIG. 21: Set the mesh wrap attachment for the width of the mesh wrap roll.

- For wider mesh wrap rolls, loosen the adjustment bolts and move the spacer brackets (1) outward.
- For narrow mesh wrap rolls, loosen the adjustment bolts and move the spacer brackets inward.

Move the spacer brackets the same distance on both sides. The mesh wrap roll must be centered in the mesh wrap attachment.

Tighten the adjustment bolts.

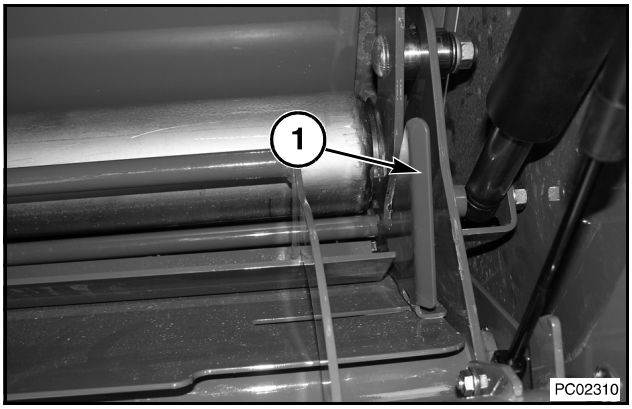

FIG. 21

Gate Down Lamp (5)

The green gate down lamp will illuminate when the tailgate is down and latched.

The gate down lamp MUST be illuminated before beginning to bale.

If the gate down lamp stops illuminating while baling, stop the baler. Do not operate the baler until the cause of this condition has been corrected.

The gate down lamp will flash when the audible alarm sounds.

Auto Tie Switch (6)

The Auto Tie Switch is a three position switch.

- In the ON position, the auto tie mode is engaged. The tying cycle will start 1.5 seconds after the audible alarm sounds to indicate a full bale. After the bale is wrapped, the audible alarm will sound to indicate the tying cycle is finished. See Wrapping the Bale - Automatic in this section for more information.
- In the OFF position, the auto tie mode is not engaged. The bale can be wrapped automatically by momentarily moving the auto tie switch to the CYCLE START position. The bale can also be wrapped manually using the twine arm switch.
- The CYCLE START position can be used to start the automatic tying cycle.

  An optional remote cycle start switch can be used instead of the CYCLE START key on the baler control console. The remote cycle start switch connects to the wiring harness.

  See Wrapping the Bale with Twine in this section for more information.

NOTE: If the twine arm switch is moved during an auto tie cycle, the baler control console will go into manual mode. The bale must then be wrapped manually.

Auto Tie Cycle

The twine arm will move to the left-hand side of the baler and stop to apply edge wraps to the bale. The baler will apply about three edge wraps to a 1524 mm (60 in) bale at rated PTO speed.

See Twine Arm Position Switches (If Equipped) in the Adjustments section to adjust the position of the left-hand side edge wraps.

NOTE: The baler will apply more edge wraps to a smaller bale at rated PTO speed.

The baler will apply less edge wraps if the baler is running slower than rated PTO speed.

The twine arm will then begin to move toward the right-hand side of the bale. The twine arm will stop to apply approximately one twine wrap to the bale before moving to the next position.

The distance between twine wrap positions is adjustable.

- To apply more twine to the bale and to put the twine wraps closer together, turn the twine wraps knob toward MAX.
- To apply less twine to the bale and to put the twine wraps farther apart, turn the twine wraps knob toward MIN.

The twine arm will stop at the right-hand side of the bale to apply edge wraps. After the edge wraps are applied, the twine arm will move the home position. The twine will be cut.

Unload the bale. See Unloading the Bale in this section.

Check the bale to determine the number of wraps of twine applied to the bale. Adjust the twine wraps knob to either increase or decrease the number of wraps of twine on the bale.

If the last position of twine wraps is too close to the right-hand edge wraps, adjust the twine wraps knob.

- Turn the knob toward MAX to move the last twine wrap position to the left.
- Turn the knob toward MIN to remove the last twine wrap position.

ADJUSTMENTS

Contents

TWINE KNIFE

FIG. 22: The twine knife (1) pivots down against the anvil (2) to cut the twine when the twine arm reaches the home position. The twine knife has a spring to open the knife up when the twine arm end tube is rotated away at the beginning of the wrapping operation.

The full width of the twine knife must contact the anvil when the twine arm is in the home position. To adjust the twine knife, loosen the screws (3) and move the twine knife into the correct position. Tighten the screws.

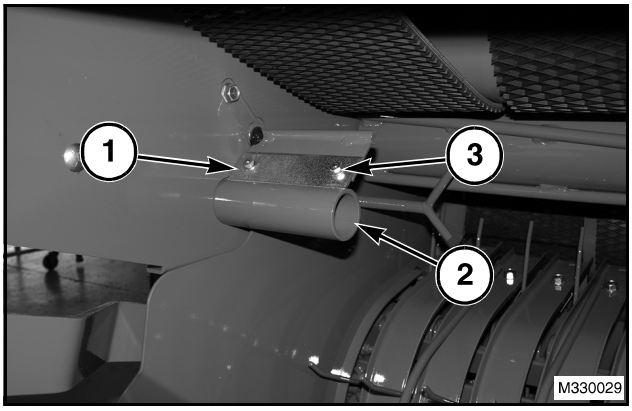

FIG. 22

FIG. 23: The length (A) of the twine knife bolt (1) is adjustable by loosening the lock nut (2) and turning the twine knife bolt. This length is set at the factory at 152 mm (5.985 in) but can require some adjustment.

- The spring (3) must not be permitted to become solid before the twine arm gets to the home position.
- The spring must be tight enough to hold the twine knife against the anvil.

NOTE: If necessary, washers (4) can be installed to increase the tension of the spring.

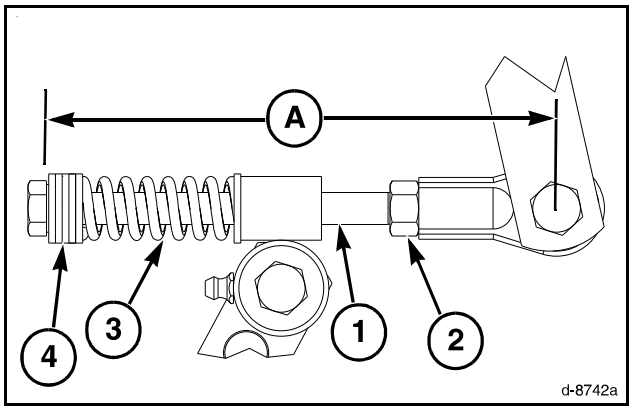

FIG. 23

TWINE ARM POSITION

FIG. 24: The twine arm (1) must pass between the twine knife and the anvil going to and from the home position.

The twine arm must clear the starting roll (2) by at least 8 mm (5/16 in) when in the center position. Check the clearance while applying a 44.4 N (10 lb) pull rearward on the end of the twine arm.

To adjust twine arm position, loosen the four 3/8-16 x 1 bolts (3) that hold the twine arm pivot to the main frame. Move the twine arm pivot and tighten the bolts. Check the adjustment.

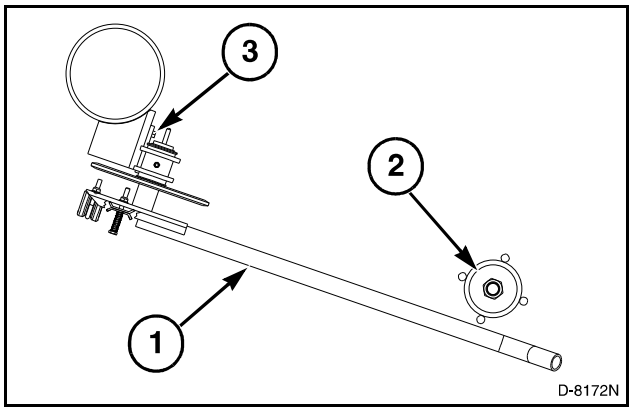

FIG. 24

GEARBOX

FIG. 3: Check the level of the lubricant in the gearbox (1) after every 100 hours of operation.

Change the oil in the gearbox after the first 50 hours of operation and then every 250 hours after that.

The dipstick (2) and the fill plug (3) are located in the top of the gearbox. Clean the area around the dipstick and the fill plug before checking or adding lubricant. Use an Allen wrench to remove the dipstick.

Check the oil level with the tongue of the baler at the correct ASABE drawbar height. See Tractor Drawbar and PTO Dimensions in the Operation section for the dimension.

To check the level of lubricant in the gearbox, remove the dipstick and wipe the dipstick clean. Insert the dipstick back into the hole and permit the threads to just contact the gearbox momentarily. Pull the dipstick out of the hole and check the level of the lubricant. The level must be between the mark and the end of the dipstick.

Add lubricant as necessary. See the Specifications section for the correct type and quantity of lubricant. DO NOT use a lighter grade than specified

The drain plug is located on the bottom of the gearbox. Clean the area around the drain plug before removing the drain plug.

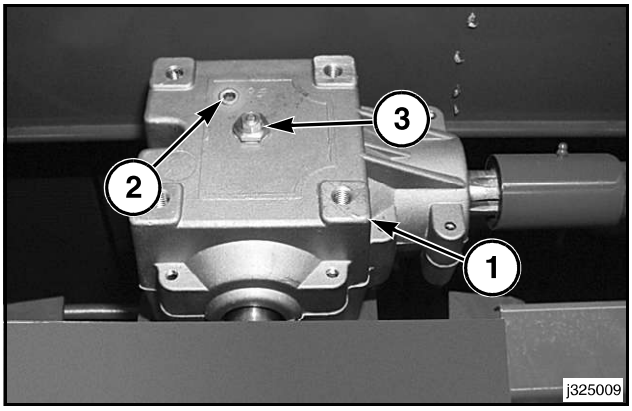

FIG. 3

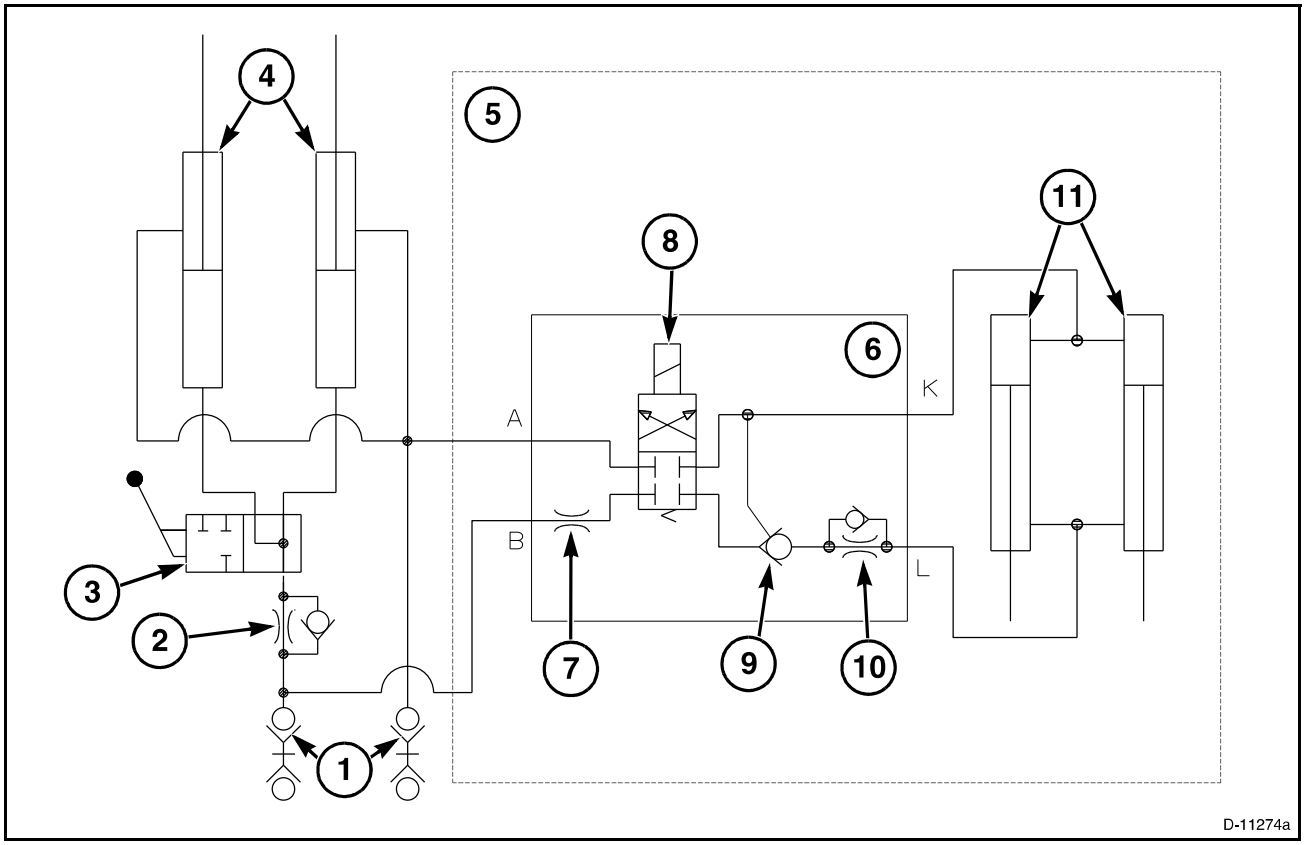

FIG. 23

FIG. 23: Tailgate Hydraulic System - With a Kicker

(1) Hoses to tractor hydraulic remotes
(2) Orifice
(3) Tailgate lockout valve
(4) Tailgate cylinders
(5) Kicker option
(6) Kicker valve
(7) 0.089 Orifice
(8) Solenoid valve
(9) Pilot operated check valve
(10) 0.076 Floating orifice
(11) Kicker cylinders

Fuses

FIG. 35: The manual tie control console has two fuses

(1) 30 Amp fuse for twine actuator

(2) 5 Amp fuse for the gate down lamp and full bale alarm

NOTE: The 5 amp fuse is after the 30 amp fuse in the circuit. If the 30 amp fuse is bad, none of the functions will work.

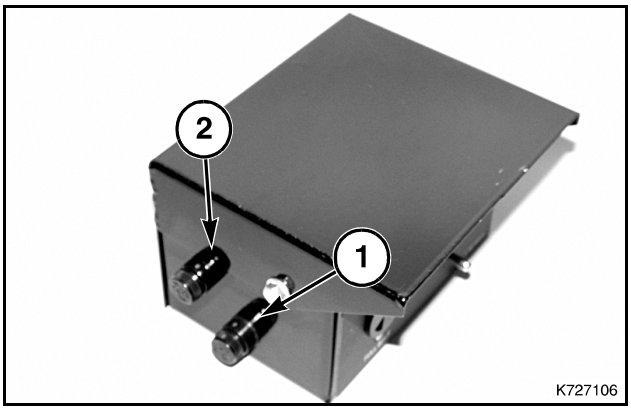

FIG. 35

FIG. 36: The auto tie control console has one 30 amp fuse (1).

FIG. 36

FIG. 37: The mesh wrap control console has one 30 amp fuse (1).

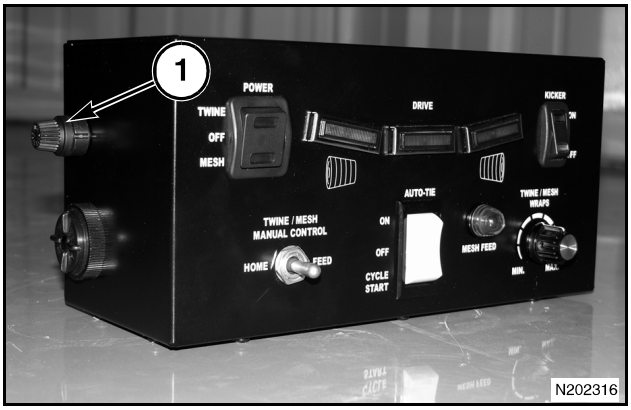

FIG. 37

FIG. 57: Connect the pulled end (1) of a new forming belt to the pulling end (2) on the old forming belt using the lacing pin (3). The pulling end has a square cut end and the pulled end has the corners cut at an angle. Make sure the surface pattern is facing outward and will be against the bale.

Apply tension to the forming belts. See Forming Belt Tension Release in this section.

Run the baler slowly to thread the new forming belt into the baler.

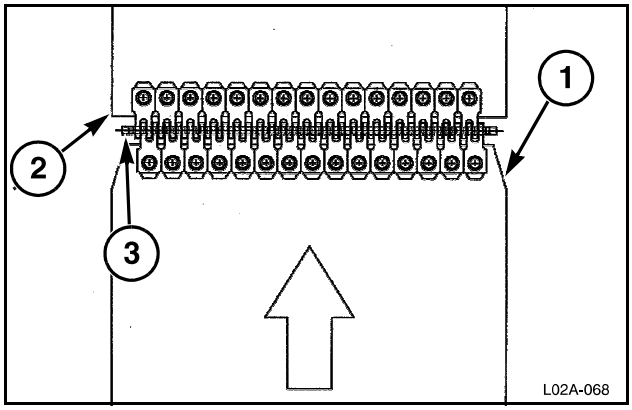

FIG. 57

FIG. 58: When the new forming belt (1) has been routed, release the tension on the forming belts. See Forming Belt Tension Release in this section.

Disconnect the old forming belt from the new forming belt.

Align the ends of the new forming belt and insert a new lacing pin to hold the ends together. The edges of the belt must align (2).

Apply tension to the forming belts. See Forming Belt Tension Release in this section.

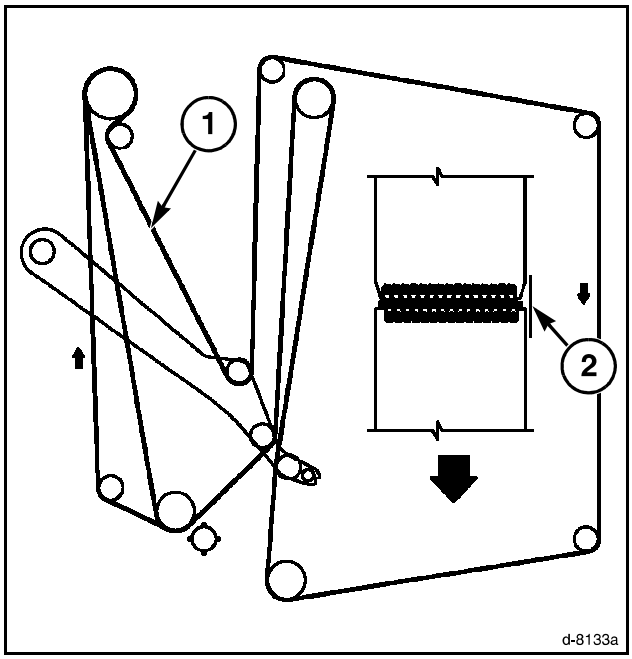

FIG. 58

BALER (CONT'D)

Problem	Possible Cause	Correction
Crop does not enter the baler	Crop too green or wet	Allow the crop to dry longer.
	Crop too dry	Baler in the early morning or late evening when there is dew on the windrow.
Main drive chains overheating	Chains are running too loose or too tight.	Check and correct the tension and alignment.
	Dry chains	Lubricate the chains with oil daily.
	Large windrows are overloading the machine	Slow down the ground speed while maintaining the PTO speed.
Pickup does not clean up windrow	Feeding crops butt first	Pick up crop in the opposite direction (tops first).
	Ground speed is too fast	Slow down the ground speed while maintaining PTO speed.
	Pickup assembly is too high	Lower the pickup so the tines are 25 mm (1 in) above the ground.
	Windrow wide and crop scattered	Install the optional gathering wheel kit.
	Windrow wider than the bale pickup	Make the windrows narrower.
		Install the optional gathering wheel kit.
Tailgate will not go up or down	Tailgate lockout valve is in the LOCKED position	Pull the tailgate lockout valve out into the UNLOCKED position.
Tailgate unlatches while baling	Tractor hydraulic valve is leaking	Repair the tractor hydraulic valve. Make sure the tractor valve is returning completely into the neutral position.
	Hydraulic oil is contaminated	Drain and replace the oil in the tractor and baler hydraulic systems.
	Hydraulic hose is damaged	Repair the hydraulic hose.
	Hay is between the tailgate and the frame	Raise the tailgate. Push the tailgate lockout valve into the LOCKED position. Clean out the hay from between the tailgate and baler frame.
	Latch is not properly adjusted or may be bent.	Check the latch and adjust if needed. See Tailgate Latch in the Adjustments section.

TRACTOR REQUIREMENTS

PTO speeds ..... 540 rev/min
Minimum recommended PTO power ..... 29.84 kW (40 hp)
Minimum tractor weight ..... 1814 kg (4000 lb)
Hydraulics
- remotes ..... one double acting remote
- minimum pressure ..... 12 410 kPa (1800 psi)
- minimum capacity ..... 30 to 38 l/min (8 to 10 gal/min)

Electrical system ..... 12V dc
Tractor tire spacing
- maximum rear ..... 2591 mm (102 in)
- minimum front and rear ..... 1346 mm (53 in)

MAXIMUM SPEED

Maximum Roading Speed ..... 32 km/hr (20 mi/hr)

IMPORTANT: Do not exceed the maximum legal speeds for this baler on public roads.

LUBRICATION

Grease fitting lubricant ..... No. 2 multipurpose lithium grease
Roller chain lubricant ..... clean engine oil
Gearbox
- capacity ..... 0.83 liter (1-3/4 pint)
- lubricant ..... SAE EP 90 W

Wheel bearing lubricant ..... heavy duty wheel bearing grease
Forming belt tension system
- capacity ..... 2.25 liter (2-1/2 qt)
- type of fluid ..... 20W hydraulic oil
- relief valve pressure setting ..... 13 790 kPa (2000 psi)

ASSEMBLY

Contents