

*Challenger*<sup>®</sup>

# Product Information Guide

**LB33, LB34, LB44**  
**Large Rectangular Balers**

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## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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### INTRODUCTION

#### LB33

The LB33 produces a bale 31.5" x 34.4". The baler is designed to bale most crops. It is designed to bale hay, silage and straw. Bale weight is up to 1000 lb. in hay, 1500 lb. in silage, and 600 lb. in straw.



C01-1048

#### LB34

The LB34 produces a bale 47.3" x 34.4". The baler is designed to bale most crops. It is designed to bale hay, silage and straw. Bale weight is up to 1500 lb. in hay, 2000 lb. in silage, and 1000 lb. in straw.



C01-1049

#### LB44

The LB44 produces a bale 46.5" x 50". The baler is designed to bale hay and straw. It is not designed to bale silage. Bale weight is up to 2000 lb. in hay, and 1400 lb. in straw.



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# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### MARKET

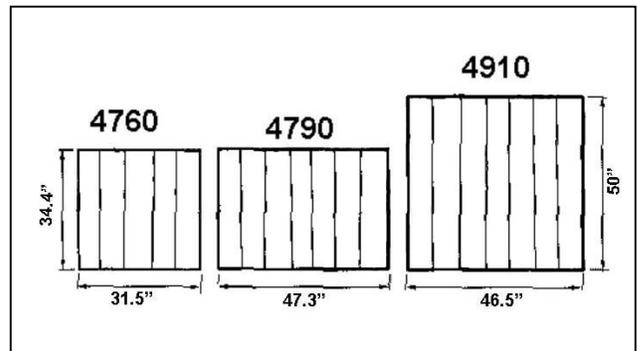
The Challenger big balers are well suited to be used by custom operators, beef operations, dairy farmers and hay or straw operations. The LB44 is built to bale hay and straw, and package it in the largest bale in the industry. The LB34 and LB33 are designed to bale hay, silage and straw. The Challenger balers make solid, high-density bales that stack and ship with ease. The big bales reduce the number of bales handled and stored, cutting manpower requirements to a minimum.



C01-1051

### BALE SIZE

The LB44 produces the largest rectangular bale on the market, which is 46.5" x 50". The LB44 produces less bales per acre, reducing the number of bales to be handled. The LB34 fits midway between the LB44 and LB33, producing a bale 47.3" x 34.4". The LB33 bale size is 31.5" x 34.4". The bale cross section on all three balers is not square, so the bales can be stacked with the twines up or the twines on the side to optimize loads on various height trailers.



C01-1052

### MAJOR COMPETITORS

**Challenger** ..... **LB44**  
None

**Challenger** ..... **LB34**  
New Holland ..... BB960  
Case-IH ..... LBX431  
Freeman ..... 1592  
Claas ..... 2200

**Challenger** ..... **LB33**  
New Holland ..... BB940  
Case-IH ..... LBX331  
John Deere ..... 100



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# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

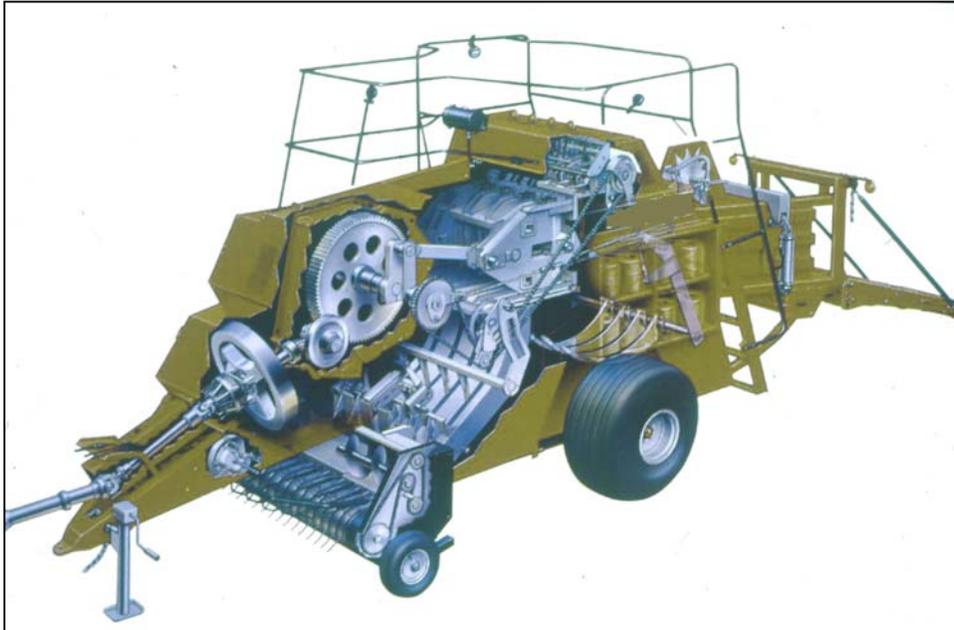
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### BALER DRIVES

#### Drive System

The drive system of the Challenger balers is designed for simplicity and long life. The massive gearbox, at the heart of the drive system, drives the plunger directly. An auxiliary drive shaft is located on each side of the gearbox. The two drives which need to be timed to the plunger, the stuffer and knotter, are driven from the left side of the baler. The packer and pickup, which do not need to be timed, are driven from the right side of the baler. The entire system uses only five drive chains on the LB33 and LB34, and six chains on the LB44. An added benefit of this system is the baler timing is extremely easy. Align three sprockets with corresponding timing marks, install and tighten the chain, and you're done. Compare this to the complicated timing system other manufacturers use, and you'll appreciate the Challenger's simplicity and reliability.



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# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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### Equal Angle Hitch

The equal angle hitch links the baler solidly to the tractor, and allows short turns with minimal driveline vibration. The baler drawbar is equipped with a swivel ball hitch, which, when hooked to the tractor, forms a solid link to reduce movement and wear in the hitch area.

The equal angle driveline employs a carrier bearing between the flywheel and tractor PTO shaft to reduce vibration. The driveline is designed for long life and low maintenance costs.



C01-1055

### Flywheel

The heavy-duty flywheel helps maintain the baler plunger momentum throughout the entire plunger stroke. The flywheel is optimally sized for each baler to produce the momentum required, but not so heavy that it draws excessive tractor power. The flywheel is equipped with a shear bolt for driveline protection.



C01-1056

### Flywheel Brake

The flywheel brake allows the operator to stop the flywheel rotation and lock the baler components for servicing and inspection.



C01-1057

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### Main Drive Slip clutch

The driveline is protected from damage by a slip clutch. The adjustable slip clutch reduces shock loads to the tractor PTO clutch by slipping slightly every plunger stroke. This is not possible with pre-set slip clutches. The driveline is also equipped with an overrunning clutch to prevent damage to the tractor PTO assembly after it has been shut off and the baler is running down. The adjustable slip clutch reduces the shock loads to the tractor PTO clutch, prolonging the clutch life and increasing operator comfort.



C01-1058

### Gearbox

A separate gearbox is built specifically for each baler. The LB33 and LB34 gearboxes use a double reduction gearset, and the massive LB44 uses a triple reduction gearset. Except for periodic oil changes and regular oil checks, the gearbox is virtually maintenance free.



C01-1059

### Packer/Pickup Drive

The packer and pickup are chain driven from a shaft from the right side of the gearbox. The packer/pickup is protected by a heavy-duty ceramic-metallic two-disc slip clutch. The discs are the same as those used on the flywheel slip clutch, for greater parts commonality. The entire drive is monitored for slippage on the control box. When the clutch slips, an audio signal and graphic on the screen inform the operator, which helps prolong slip clutch life.



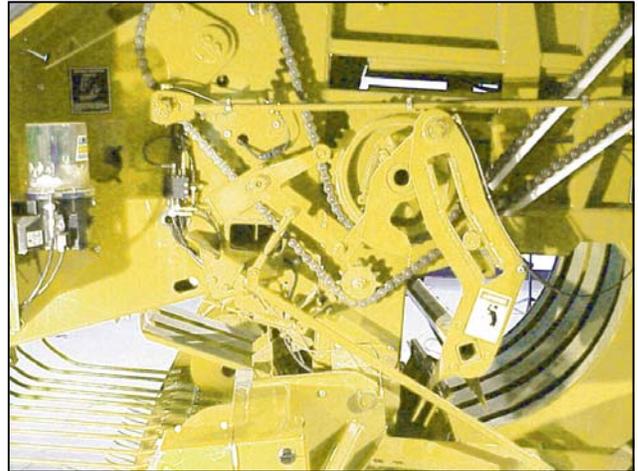
C01-1060

## FEATURES AND BENEFITS LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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### Stuffer/Knotter Drive

The stuffer and knotter are chain driven from a slave drive arm from the left side of the main gearbox. Both the stuffer and knotter are timed to the plunger, and baler timing is easily checked by aligning three sprockets with their respective timing marks. A shear bolt protects the stuffer/knotter system. The control box alerts the operator when a bolt has sheared. The stuffer/knotter drive is very simple and requires minimal maintenance, and is designed to reduce maintenance costs over the life of the baler.



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# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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### PICKUP

#### Wide, Low Profile Pickup

The pickups are designed to cope effectively with wide, heavy windrows in hay and straw, with the LB33 and LB34 also designed for silage conditions. The pickups are equipped with dual camtracks, and a center tine tube bulkhead, for added strength and reliability. The low profile design reduces crop loss by minimizing the height the crop is lifted. The windguard helps control the crop to keep it moving smoothly. The pickup can handle a wide variety of crops with minimal loss, for greater versatility.



C01-1033

#### Pickup Flotation and Gauge Wheels

Adjusting a stop on the pickup height rod sets the pickup height. The majority of the pickup weight is designed to be carried by the flotation springs, with the height adjustment control carrying the remainder. The gauge wheels are designed to prevent tine damage on uneven ground, but not to carry the weight of the pickup. The pickup height is easily set for any field condition, and the pickup floats over field obstructions to minimize damage, for lower repair costs.



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C01-1062

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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### Hydraulic Pickup Lift

The hydraulic pickup lift allows the operator to raise and lower the pickup from the tractor seat for greater operator convenience. The lift employs a double acting hydraulic cylinder (two cylinders on the LB44). By using a two-way cylinder, a float position on the spool valve is not needed.



C01-1064

### Centering Augers

The centering augers gently feed crop toward the packer chamber, where the packer fingers pull the crop into the pre-charge chamber without crop hesitation, for maximum capacity.



C01-1065

### Pickup Slip Clutch

The pickup is protected by a slip clutch. The operator is warned of any slippage by the feeder slip indicator on the control box. An overrunning clutch is also built in to avoid damage to the pickup reel by keeping it from turning backwards, reducing baler downtime and lowering operating costs.



C01-1066

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### PRE-COMPRESSION AND BALE CHAMBER

#### Pre-compression Chamber

Challenger balers use a pre-compression chamber to pre-form the crop into a uniform slice or “flake”. In contrast to competitive systems that run continuously, the Challenger system only operates when a full charge of crop has formed. The customer does not have to be concerned with windrow size or baler speed to make uniform bales, saving the customer time. The pre-charge chamber system makes each flake of crop the same, so the resulting bale is solid from top to bottom, and therefore heavier.

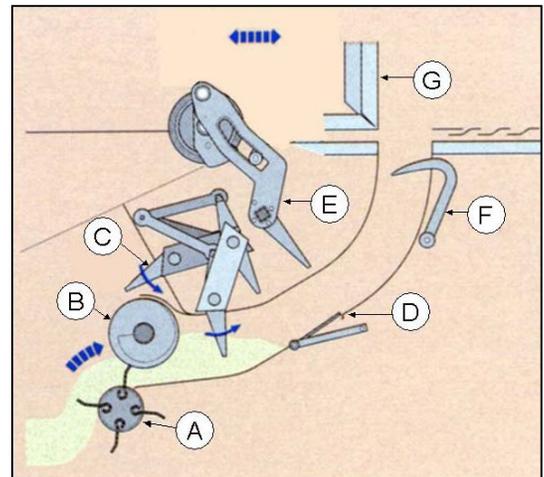


C01-1067

**Building a flake of hay and delivering it into the bale chamber is illustrated in the following four steps:**

1. Crop is picked up and continuously fed into the baler by the pickup (A) and centering augers (B). The crop is transferred into the pre-compression chamber by continuously running packer fingers (C).

- A. Pickup
- B. Centering augers
- C. Packer fingers
- D. Sensor Door
- E. Stuffer fork
- F. Charge holding fingers
- G. Plunger

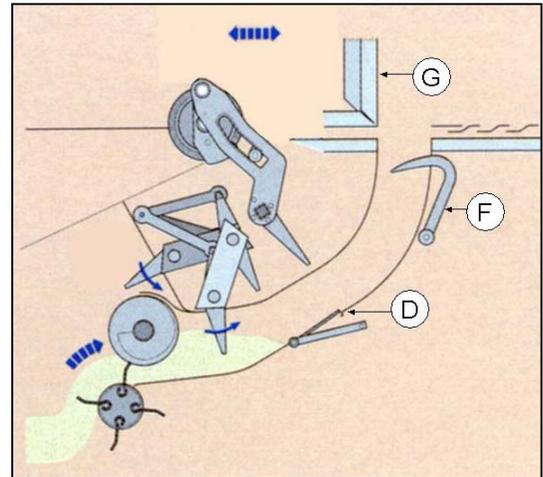


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## FEATURES AND BENEFITS

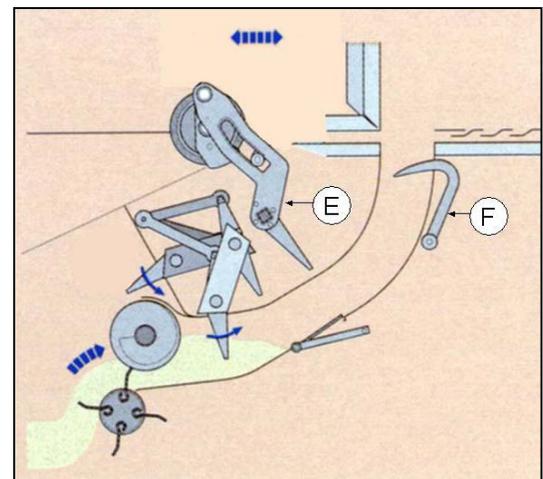
### LB33, LB34, LB44 LARGE RECTANGULAR BALERS

2. The packer fingers continuously convey crop up the pre-compression chamber until it is contained by the charge holding fingers (F). As more crop is forced up the chute, it becomes compressed. When the density of the pre-compressed crop is sufficient, it presses down on a sensor door (D) located at the bottom of the chamber. The density in the pre-compression chamber can be adjusted according to the type of material being baled. The sensor door is connected to linkage that trips (engages) the stuffer clutch, starting the stuffer cycle. At this point, the plunger (G) has completely opened the top of pre-charge chamber leading to the bale chamber.



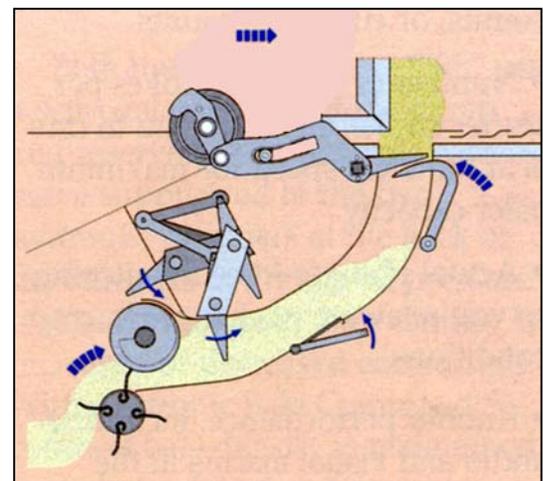
C01-1069

3. When the stuffer clutch is tripped, the stuffer fork (E) moves into the pre-charge chamber. Simultaneously, the holding fingers (F) are withdrawn. The stuffer continues, and with a single stroke, moves the pre-compressed crop (now called a flake) up into the bale chamber, while the plunger is moving rearward. Each charge transferred by the stuffer into the bale chamber is of consistent weight and density.



C01-1070

4. As the stuffer pushes the entire flake of crop into the bale chamber, the plunger sweeps it off the stuffer forks and compresses it onto the bale. The holding fingers, stuffer forks, and sensor door reset, ready for another cycle.



C01-1071

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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### Slick Chamber Floor

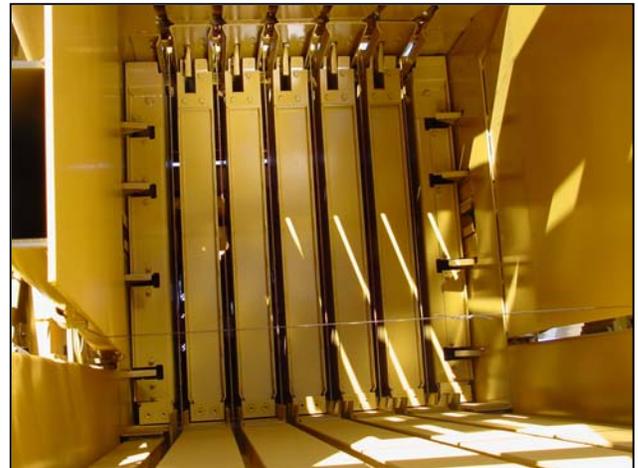
The LB33 and LB34 balers' pre-compression chamber floor is fitted with a polyethylene panel that allows silage crops to slide across it easier. This is especially helpful on a new baler starting in silage, as it would otherwise still have paint resistance in the chamber. The slick floor material reduces loading on the stuffer, lowering baler power requirements.



C01-1072

### Plunger

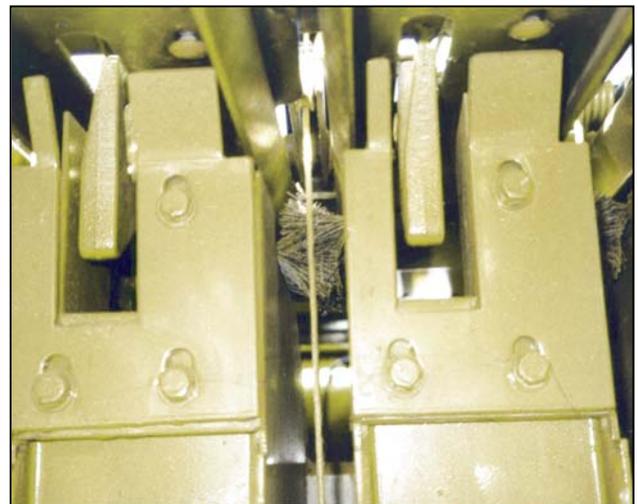
The plunger on the LB33 runs at 41 strokes / minute, the LB34 at 43 strokes / min, and the LB44 plunger runs at 25 strokes / min. The plunger speed is designed for each model to maximize output while still maintaining smooth operation. The crop is retained in the bale chamber by spring loaded hay dogs and saw tooth retainers.



C01-1073

### Needle Brushes

The LB33 and LB34 baler plunger is equipped with a set of brushes at the top of each needle slot to keep any crop material from following the needle into the knotter area. Because the problem is most prevalent in silage baling, the brushes are only fitted to the LB33 and LB34. The brushes help reduce knotter miss-ties, improving baler productivity.



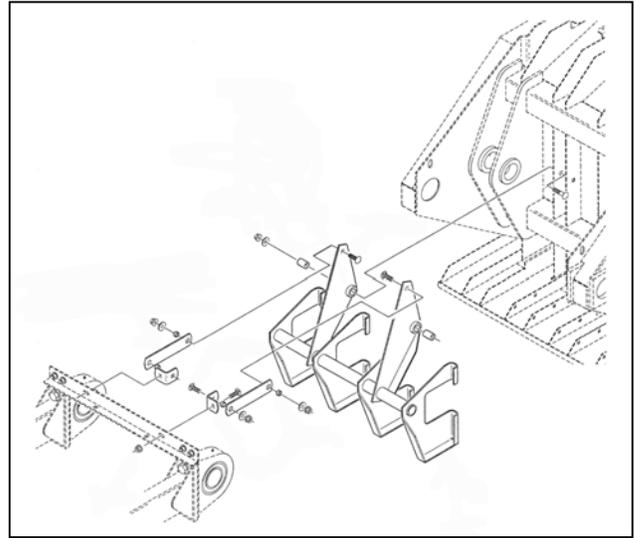
C01-1074

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### Plunger slot Cleaner

All three big balers are equipped with plunger slot cleaners as standard equipment from the factory. The slot cleaners keep crop from building up in the needle slots in adverse crop conditions, such as corn stalks or certain silage crops, which improves baler versatility.



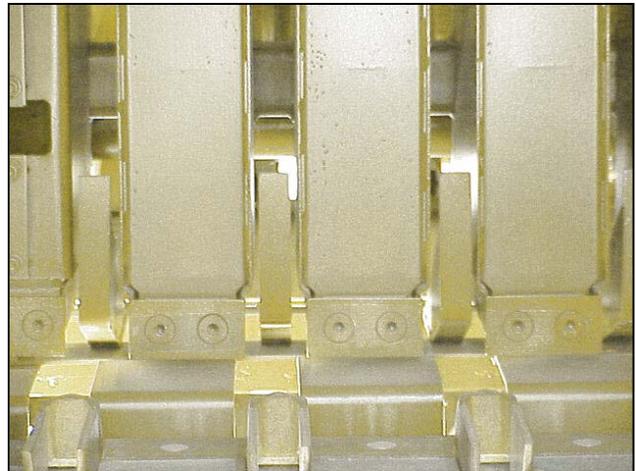
LB44 Slot Cleaners

C01-1075



LB33 and LB34 Top

H01-1076



LB33 and LB34 Bottom

H01-1077

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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### KNOTTER SYSTEM

#### Double Knotters

The Challenger big balers feature the double knotter, which ties two knots per needle cycle. The first knot completes the bale being built in the bale chamber, and the second knot joins together the twine to prepare for the next bale. By joining together the twine at the beginning and the end of the bale, the twine end does not have to be held in the twine retainer, and be tied under high tension. With the Knots being tied under less tension, miss-ties are significantly reduced, saving the operator time and aggravation.



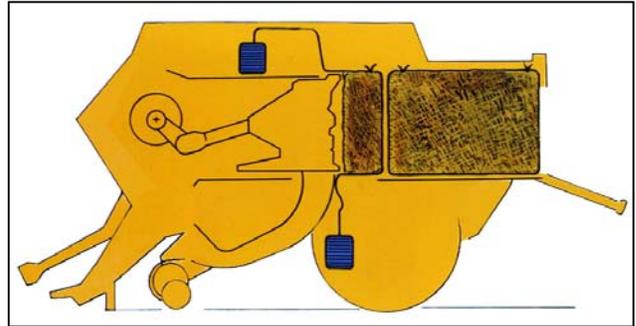
C01-1078

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

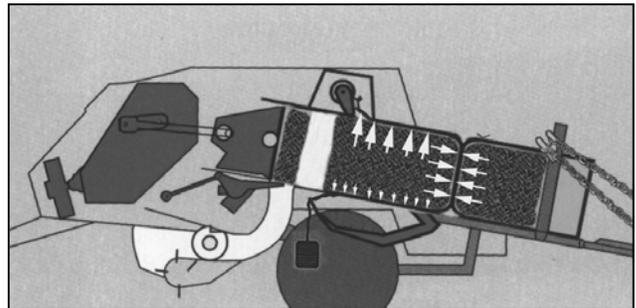
### Two Knots vs. One Knot

The principle of the double knotter is very simple. The knotter itself consists of the same components as a conventional single knotter, but designed for heavier twine. The secret is that the knotter cam gears have two sets of teeth, which cause the knotter assembly to rotate (tie a knot) twice per knotter cycle. Even though the knotter itself ties twice per cycle, knotter wear is reduced because the knots are tied under much less tension than on conventional single knotters. A key point is that the twine does not slide around the bale, but is fed at a constant 15 lb. (70 N) tension from both the bottom and top twine balls. The twine tension remains the same on high density as on low-density bales, so tying remains consistent.



C01-1079

Compare this to a conventional single knotter, where one end of the twine must be held in the twine retainer. As the bale is built in the chamber, the twine must slide around the bale, as it is only fed from the bottom. When the operator attempts to pack more hay into the bale (increase bale weight), the resistance on the twine multiplies, increasing the likelihood of the twine pulling loose from the twine retainer, causing a miss-tie. Increasing retainer pressure on the twine will cause frayed knots, increasing the possibility of broken bales. The result is that the operator must lower the density setting of the baler in order for the knotters to function reliably. The problems also increase in crops such as silage, where the twine does not slide easily along the bale. Since the bale density does not affect the twine tension, heavier bales can be made, with less chance of knotter problems.



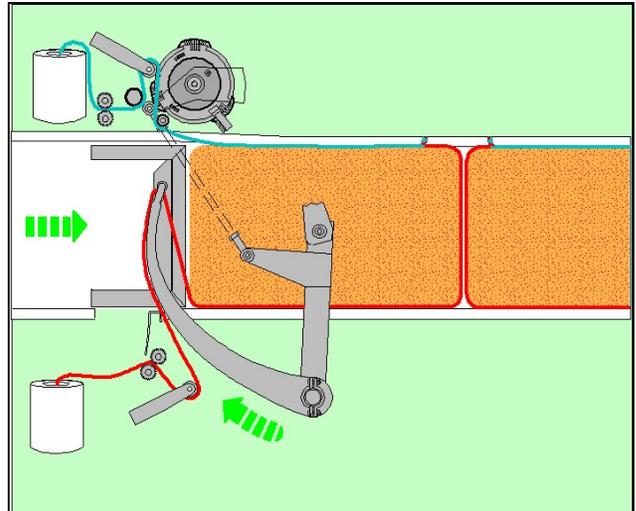
C01-1080

## FEATURES AND BENEFITS

### LB33, LB34, LB44 LARGE RECTANGULAR BALERS

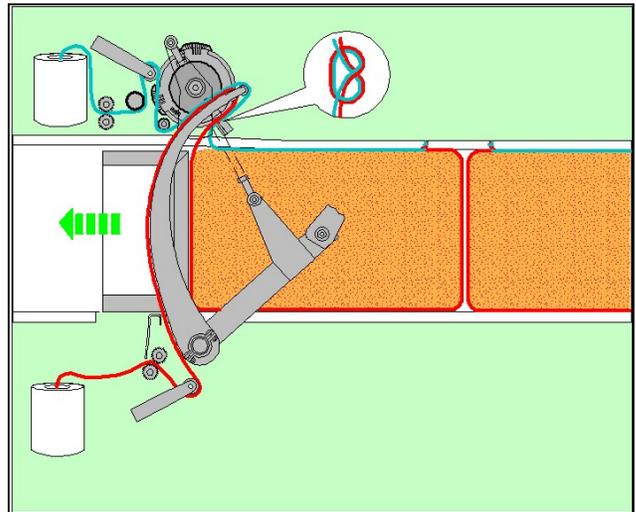
The double knotter cycle can be easily illustrated in four steps:

1. The knotter cycle begins when the bale being built reaches the desired length. The trip arm engages the knotter clutch, and as the plunger compresses the crop in the bale chamber, the needle brings the lower twine up to the knotter.



C01-1081

2. At the top of the bale chamber, the needle picks up the upper twine. Both twines are laid in the knotter, tied together, and the ends cut to finish the bale in the chamber.

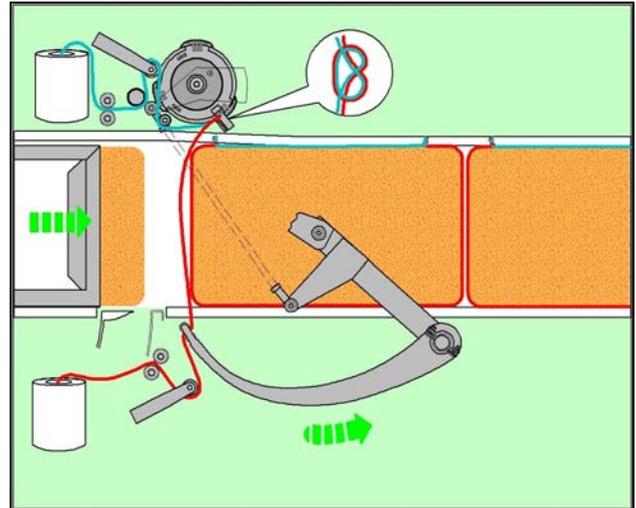


C01-1082

## FEATURES AND BENEFITS

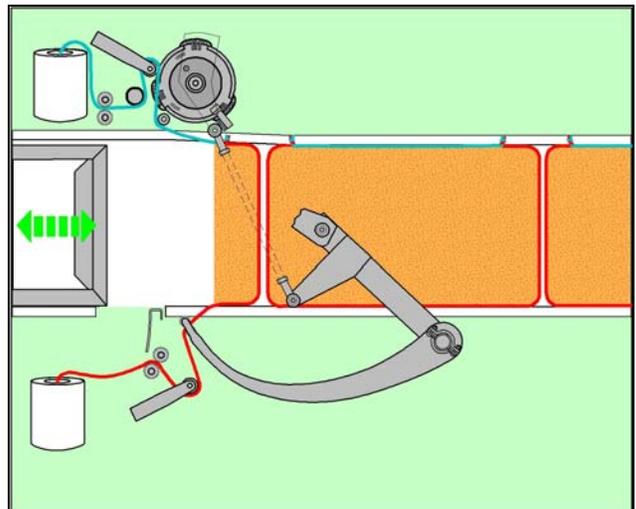
### LB33, LB34, LB44 LARGE RECTANGULAR BALERS

3. As the needle retracts, both twines are again laid into the twine retainer and across the billhook. The second knot is then tied, which connects the top and bottom twines again. The needle then fully retracts, and the twine is ready for the start of a new bale.



C01-1083

4. As the crop enters the bale chamber, twine is fed independently to the top and the bottom of the bale, without being held in the twine retainer disc. This eliminates the possibility of twine being pulled out of the retainer disc when making high-density bales.



C01-1084

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### Twine Boxes

The twine box on the LB33 holds 20 balls of twine. The box on the LB34 holds 30 balls of twine, and the box on the LB44 holds 24 balls. The twine boxes hold sufficient twine for a full days running, and are placed on each side of the baler to keep the twine flowing smoothly to the knotters, reducing baler downtime.



LB33 Twine Box

C01-1085



LB34 Twine Box

C01-1086

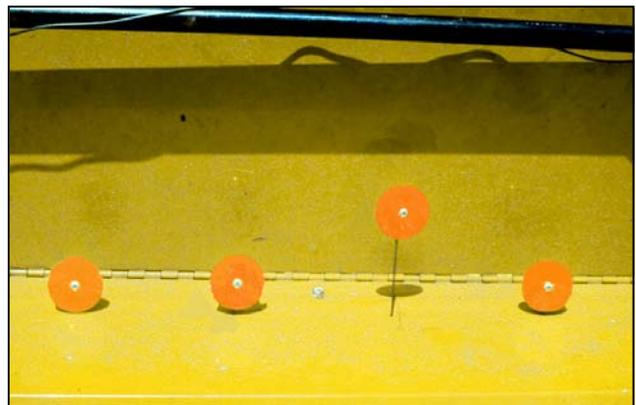


LB44 Twine Box

C01-1087

### Knotter Monitor Flags

The knotter tying is monitored both electronically on the control box and visually on the baler by the monitor flags. The flags monitor all knotter and twine malfunctions. If the twine breaks, the flag stays up. If the knot hangs up on the knotter billhook, the flag stays down. The knotter flags alert the operator as to which knotter has miss-tied, and the type of miss-tie, making it easier to diagnose.



C01-1088

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### Knotter Trip Arm

A metering wheel that rotates as the bale progresses through the chamber controls the knotter trip arm. When the pre-set bale length is reached, the trip arm engages the knotter clutch, beginning the knotter cycle. The trip arm has a positive mechanism to keep the bale length uniform, for consistent output.



C01-1089

### Needle Protection Linkage

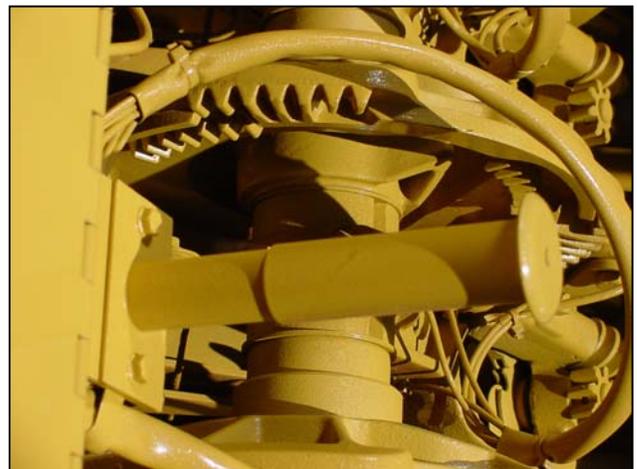
The needle protection linkage works in conjunction with the plunger drive to make sure the needles are removed from the bale chamber if the stuffer / knotter shear bolt breaks during the tying cycle. The needle linkage reduces the risk of needle damage, contributing to worry-free baler operation.



C01-1090

### Knotter Lube System

The knotter lube system allows the operator to quickly lube the entire knotter mechanism with a few strokes of the hand pumps. The LB33 system uses 80W-140 oil to lubricate 34 points. The LB34 and LB44 system lubricates 48 points. The lube system allows knotter maintenance to be performed quicker, saving time.



C01-1091

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

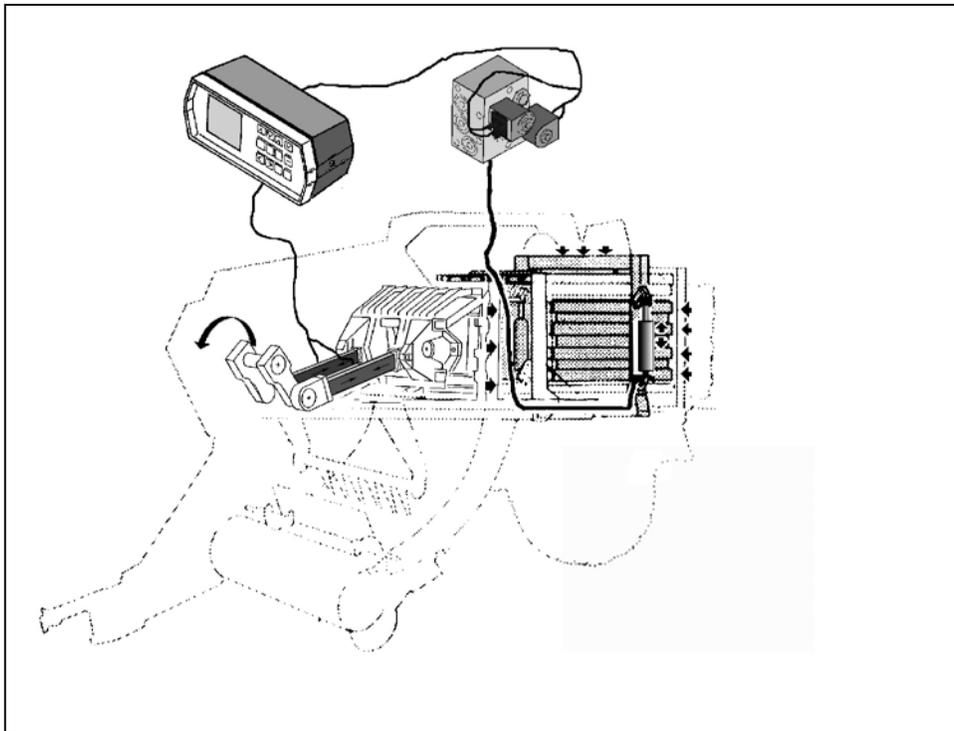
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### ELECTRONIC MONITOR SYSTEM

#### Automatic Density Control

The automatic density control system measures the resistance of the bale moving through the bale chamber (load), and adjusts the setting of the bale density cylinders to maintain the density of bale the operator desires.

The process used to achieve equal density bale automatically is very simple. The operator sets a load on the control box. The load range is from 60 to 190 on the LB33, 90 to 315 on the LB34, and 140 to 420 on the LB44. The auto density system maintains the density of the bale as field conditions change, for greater consistency and ease of operation.



C01-1093

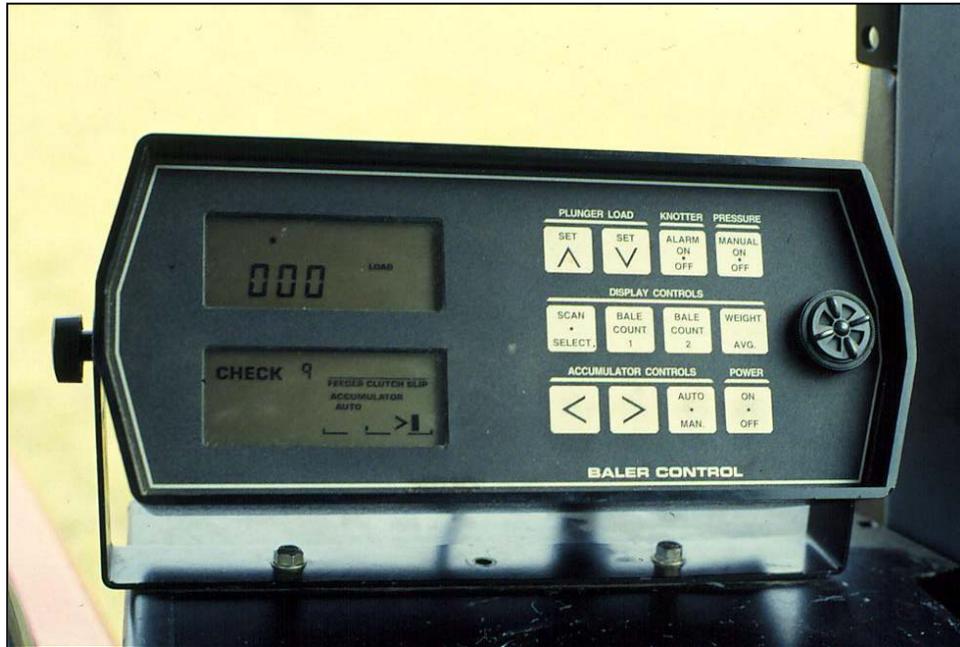
# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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### Control Box

All baler information passes through the control box. The operator doesn't have to monitor any baler mounted gauges or lights. Even though the control box monitors dozens of baler functions, it is very easy for the operator to use. The control box monitors the baler, giving the operator peace of mind.



C01-1094

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

Detailed below are some of the control box functions:

### Driving Meter (Arrows)

Each plunger arm connecting rod is equipped with a load sensor, so that the load can be measured on each side of the bale. If one side is less dense than the other, up to three arrows could appear per side directing the operator to drive in that direction to even out the bale.



C01-1095

### Stuffer Cycle Dot

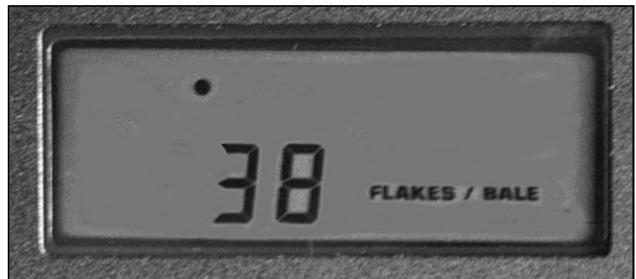
The stuffer dot flashes off, then back on, whenever the stuffer cycles. By monitoring the stuffer dot, the operator can determine if the system is operating correctly, and if the baler is baling at capacity (one stuffer stroke for every plunger stroke).



C01-1096

### Flakes/Bale

The flakes per bale figure indicates the number of stuffer strokes (flakes) that went into the last bale tied. The flakes/bale figure can be used to indicate baler capacity. The lower the flakes/bale figure, the higher the number of tons/hour of crop being baled.



C01-1097

### Pressure

The density cylinder pressure is measured and displayed on the control box. The pressure relationship gives the operator crop information. As the crop dries, the pressure will increase. If the crop moisture is rising (for example, in rain or dew), the pressure will decrease.



C01-1098

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### Plunger Load

The plunger load reading displayed on the control box is the total load on the plunger arm connecting rods for the last stuffer stroke. The control box monitor will automatically attempt to match this load to the set load entered by the operator.



C01-1099

### Feeder system Slip

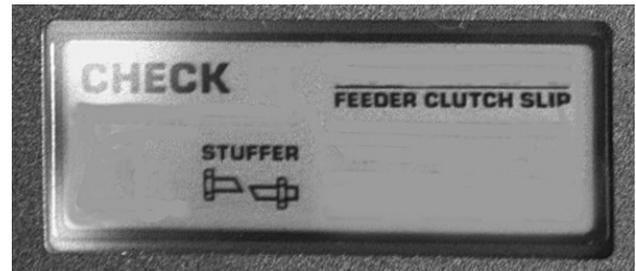
The feeder slip monitors the packer slip clutch and the pickup slip clutch. The amount of slippage is shown both as a number and a bar graph.



C01-1100

### Stuffer Shear Bolt

If the shear bolt breaks on the stuffer/knotter drive, the words "Check stuffer" and the broken shear bolt symbol will flash on the screen.



C01-1101

### Bale Counts – Field (2) and Total

The baler is equipped with two field bale counts, and a total bale count. Both field counts can be reset, but the total count always remains in memory.



C01-1102

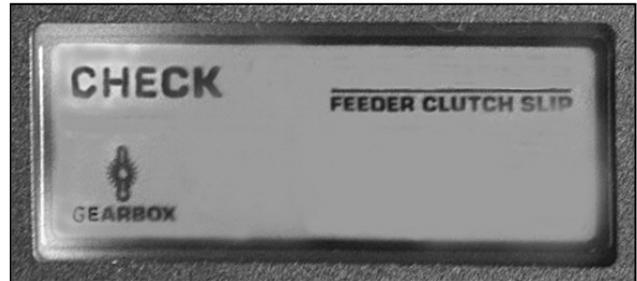
# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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### Gearbox Overheating

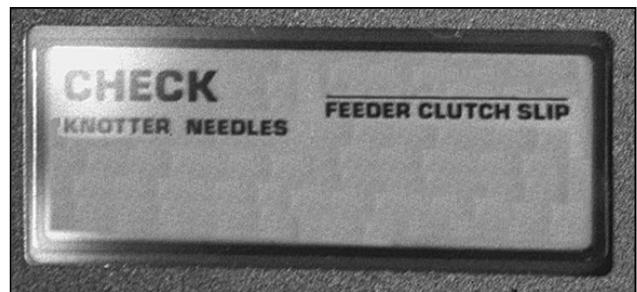
The gearbox temperature is constantly monitored. If the gearbox oil temperature rises above 175° F (80° C), an alarm will sound and the “Check Gearbox” symbol will flash.



C01-1103

### Knotter and Needle Performance

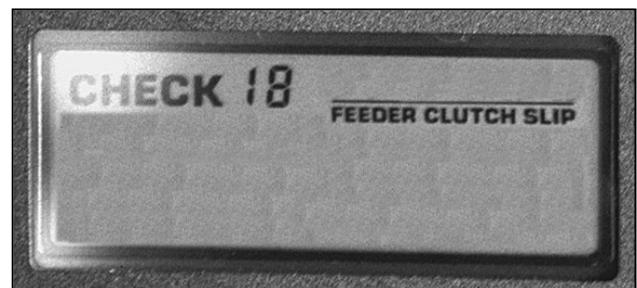
The control box monitors the knotter tying. If there is a problem, the words “Check Knotter” will flash on the screen, and the alarm will sound. If the needles do not return to the home position, or because of knotter brake slippage, do not stay in the home position, the words “Check Needles” will flash on the screen, and the alarm will sound.



C01-1104

### Automatic Electronic Performance Checks

The computer is constantly monitoring the performance of 15 different electrical components on the baler. If a problem develops, the word “Check” along with a number or letter will appear on the lower screen accompanied by an audio alarm.



C01-1105

### Manual Setting

The control box can be set to manual for testing and emergencies. The manual mode is especially helpful when hooking the baler to the tractor to check that the hydraulics are working correctly. It is also used to release hydraulic pressure on the bale chamber quickly, which is needed when starting the baler with an empty bale chamber. When the control box is in the manual mode, the display will read “off”.



C01-1106

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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### Test mode

The control box is also equipped with a test mode that can be used to service or troubleshoot the baler electrical system.



C01-1107

### Lube Indicator

The baler has lubrication points that should be lubricated on a regular basis. The control box will remind the operator at each lubrication interval. The lubrication intervals are measured in the number of bales the baler has made. So, for example, when the message "LubE 50" appears on the screen, it means that all the points on the baler that need servicing every 50 bales should be lubed. A handy chart is included in the Operator's Manual detailing the lube points and lube intervals.



C01-1108

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### MAIN FRAME

#### Hydraulic System

The density system on the baler is run from the tractor hydraulic system. An extra on-baler hydraulic system is not required, making the baler simpler. The valve can be set up to operate on tractors with either open or closed center hydraulic systems.

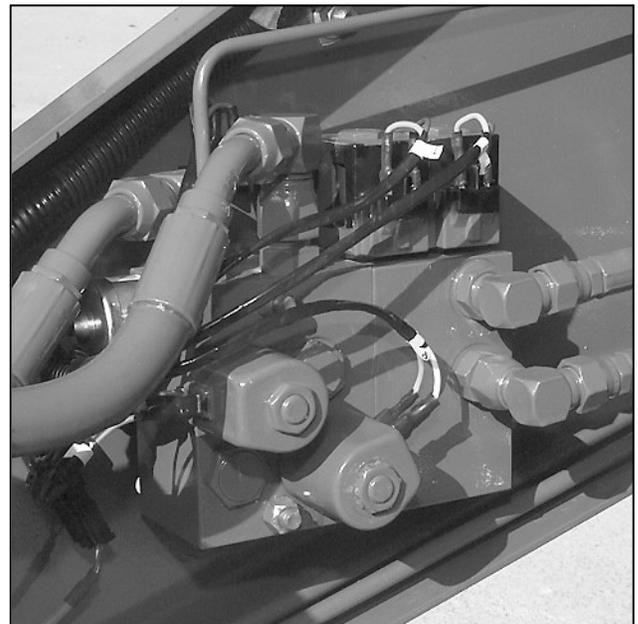


C01-1109



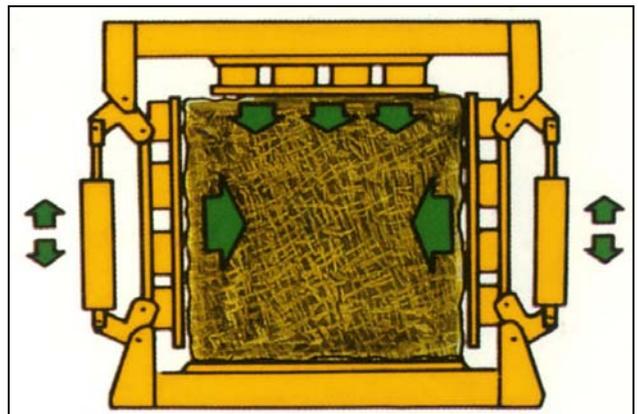
Open Center Valve

C01-1110



Closed Center Valve

C01-1111



C01-1112

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### Baler Tongue (LB33, LB34)

The tongue is bolted on to allow easier replacement if damaged. The hitch is also bolted on, which allows it to accommodate either 1 3/8" or 1 3/4" PTO drivelines. The hose and cable support is made to pivot, to reduce stress on the hoses and cables, for longer life. Storage positions for the hoses and cables are also built into the support, to keep them neat when the baler is disconnected from the tractor. The jack on all three balers is heavier built, to better withstand abuse when the baler is unhooked from the tractor.



C01-1035

### Auto Lube System

The baler is equipped with an automatic lubrication system that helps reduce the time spent on daily maintenance. The system can be set to automatically lubricate the baler at pre-set time intervals. The recommended setting for the electric lubrication pump is a one-hour lubrication interval, with a pump run time from 6 to 12 minutes. The auto lube system helps reduce maintenance time spent lubing the baler, increasing the time that can be spent baling.



C01-1042

### Shielding (LB33)

The LB33 shielding is streamlined, and one shield is used on each side of the baler for complete access to the entire side of the baler. The doors are hinged from the top, and the use of braces along the sides of the baler has been minimized, reducing areas where crop can build up, saving time cleaning off the baler.



C01-1031

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### Flotation Tires

The LB33 uses 21.5 x 16.1 (10-ply) flotation tires. These tires supply excellent flotation, reduced soil compaction, and reduce field damage when turning on the headlands. They also provide good stability on hillsides.

An optional 600/50 – 22.5 12-ply flotation tire is available as an option on the LB33.

The LB34 has 700/50 – 22.5 12-ply flotation tires.

The LB44 uses a 28L x 26, 16-ply flotation tire.



LB33 – 21.5l x 16.1

C01-1116



LB33 – 600/50 – 22.5

C01-1117



LB34

C01-1118



LB44

C01-1119

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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### Light System

The baler is equipped with work lights, warning flashers, taillights and turn signals. The light system allows the operator greater convenience when working at night, and improved safety on the road.



C01-1115

### Initial Parts Kit

The big balers are shipped with a quantity of parts for the knotters, electrical system, lube system, and spare shear bolts. The Operator's Manual details the parts supplied. The initial parts kit is provided to reduce baler downtime.



C01-1120

# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

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### OPTIONAL KITS (FIELD INSTALLED)

#### Bale Chute

The bale chute attaches to the back of the baler to gently drop the bales to the ground when the bale accumulator is not used.

Wholegoods Kit – LB33 - BK42501  
LB34, LB44 – BK41017

Estimated Installation Time – 0.5 Hr.



C01-1121

#### Heavy Duty Roller Chute Kit

The roller bale chute is used in conjunction with the bale ejector to drop the bale on the ground after it clears the bale chamber. The roller chute has two positions, long and short. The short position is generally used when baling high moisture crops, or short bales. The long position can be used when baling dry crop, or full-length bales. The roller bale chute is raised and lowered hydraulically.

Wholegoods Kit – LB33 - BK40831  
LB34 – BK40934

Estimated Installation Time – 1.5 Hr.



C01-1122

# FEATURES AND BENEFITS

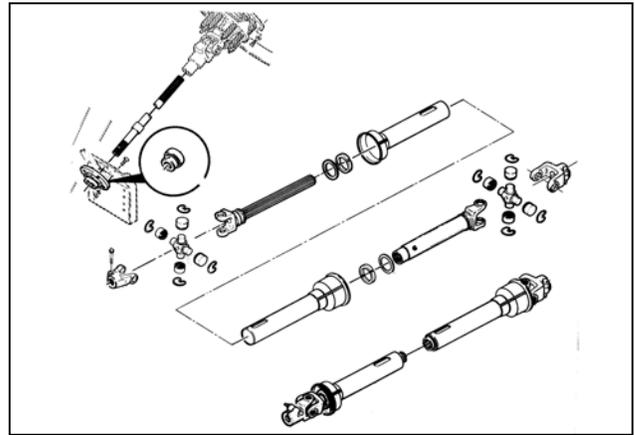
## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### Implement Driveline Kit (Type 2 to Type 3)

For use on tractors above 150 PTO hp equipped with a 20 spline, 1 3/4" PTO shaft. The kit includes the tractor and implement half ISO Type 3 driveshafts, carrier bearing, and the shaft assembly to connect to the flywheel. For correct operation, the tractor drawbar should be set at 20" rather than the 16" required for the standard driveline.

Wholegoods Kit – LB44 – BK40425

Estimated Installation Time – 1.5 Hr.



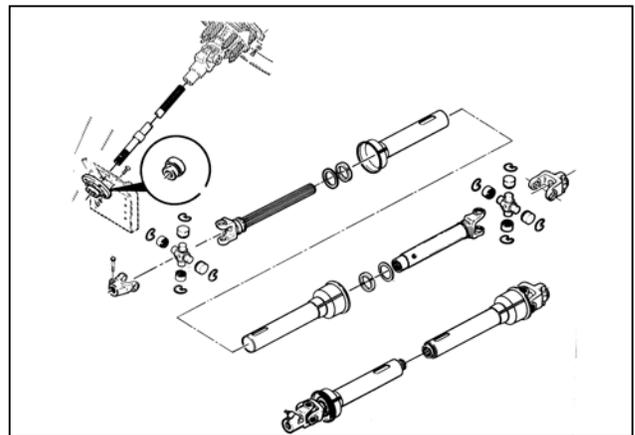
C01-1123

### Implement Driveline Kit (Type 3 to Type 2)

For use on tractors equipped with a 21 spline, 1 3/8" PTO shaft. The kit includes both the tractor and implement half ISO Type 2 driveshafts, carrier bearing, and the shaft assembly to connect to the flywheel. For correct operation, the tractor drawbar should be set at 16".

Wholegoods Kit – LB44 – BK60551

Estimated Installation Time – 1.5 Hr.



C01-1124

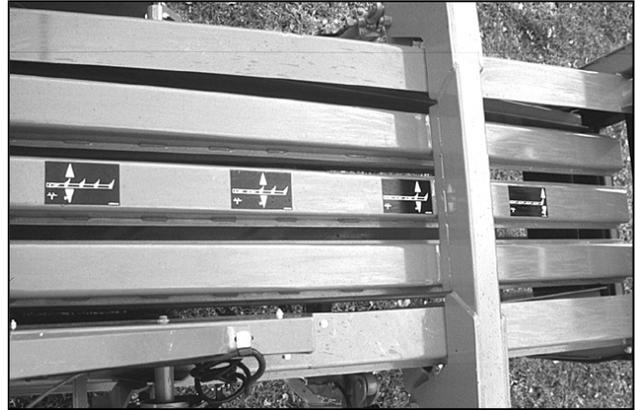
# FEATURES AND BENEFITS

## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### Bale Ejector Kit (LB33 Opt, Std on LB34)

The bale ejector is used to remove crop from the bale chamber at the end of each field or at the end of the day. The bale ejector is recommended when baling high moisture crop, such as silage. A roller bale chute is recommended when using the bale ejector, as it allows the bale to slide to the ground after ejection.

The ejector can be set to empty the entire bale chamber, or to only eject the end bale. To eject the end bale, the operator can see where the bale ends in the chamber, and using decals located on top of the bale chamber, determine the number of ejector teeth that need to be engaged. Using levers on either side of the baler, the operator engages from one to five sets of ejector teeth. The operator then activates a rocker switch located at the rear of the baler that automatically releases pressure on the bale, and then activates the ejector teeth to remove the bale. The operator has the choice to clean out the bale chamber completely, or only the last bale, for maximum versatility.



C01-1125



C01-1126

Wholegoods Kit – LB33 - BK41031

Estimated Installation Time – 3.5 Hr.



C01-1128



C01-1127

# FEATURES AND BENEFITS

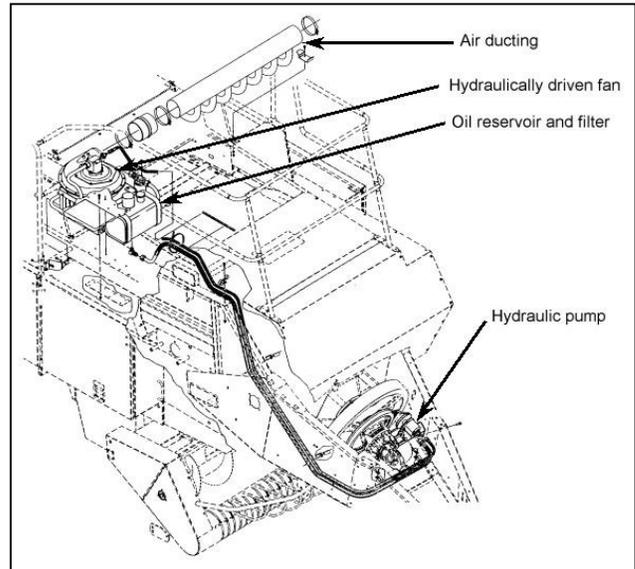
## LB33, LB34, LB44 LARGE RECTANGULAR BALERS

### Knotter Fan Kit

The knotter fan kit is to keep the knotter area of the baler clean. A hydraulic drive fan blows a steady stream of air over each knotter, which removes pieces of crop that might otherwise accumulate in the knotter area and effect knotter performance. This unit is much more reliable than electric fan systems

Wholegoods Kit – LB33 - BK41061  
LB34 – BK40954  
LB44 – BK40955

Estimated Installation Time – 7 Hr.



C01-1129

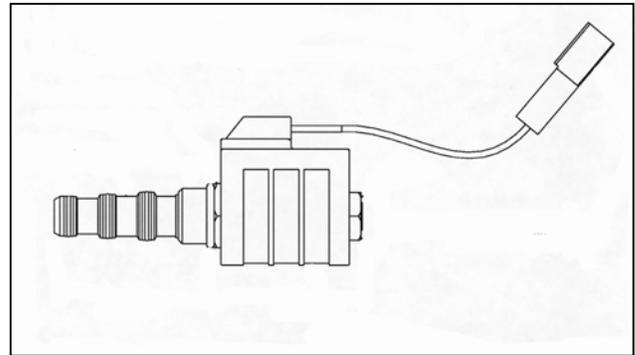
### SERVICE PARTS KITS

#### Open Center Hydraulic Valve

The open center valve is required when installing the baler on a tractor with an open center hydraulic system. The open center valve can also be used with tractors with a load sensing hydraulic system.

Service Part – 700 706 386

Estimated Installation Time – 1.0 Hr.



C01-1130

## FEATURES AND BENEFITS

### LB33, LB34, LB44 LARGE RECTANGULAR BALERS

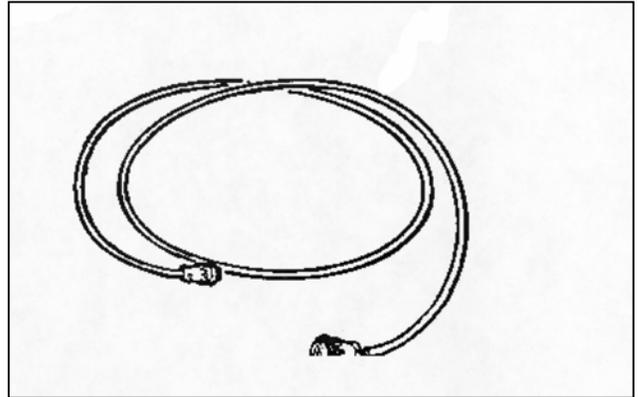
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#### Harness Extension

The bale harness extension is used when a four-wheel drive articulated tractor is used on the baler, and the cab is located farther forward from the drawbar than on a standard tractor.

Service Part – 700 706 459

Estimated Installation Time – 0.3 Hr.



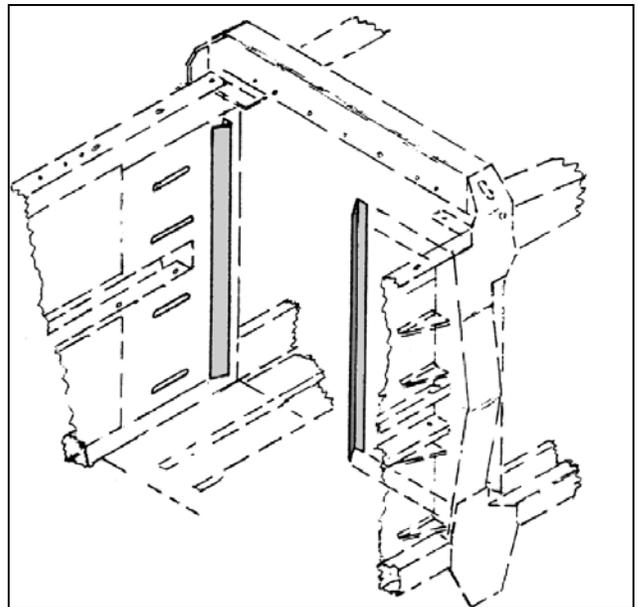
C01-1131

#### Hay Resistor Kit

Weld-in resistors are available for the LB44 balers (or the LB33 and LB34 balers if the resistors are shortened), to be used in very dry crop conditions (such as straw) to help maintain bale density. The resistor kit should only be used in this extreme condition, and should be removed in normal baling conditions.

Service Part – 700 122 870 (Kit of 2)

Estimated Installation Time – 1.0 Hr.



C01-1132

# FEATURES AND BENEFITS BA3, BA4 ACCUMULATORS

## ACCUMULATORS

### Introduction

The Challenger big bale accumulator attaches directly to the baler, and uses the same tractor hydraulic circuit as the baler. Two accumulators are available. The BA3 fits behind the LB33 baler. The BA4 fits behind the LB34 and the LB44 balers. The BA3 accumulator collects up to five bales, the BA4 three bales, and lets you drop them at the ends of the field, where they are quicker and easier to collect. You save loading time, field travel, and reduce compaction by eliminating extra trips over the field with trucks and loading equipment.



BA3 Accumulator

C01-1133

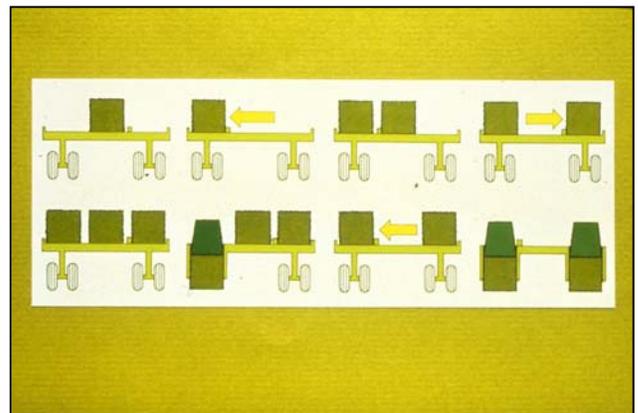


BA4 Accumulator

C01-1134

### Accumulator Shift Sequence

The accumulator bale shift sequence is illustrated. After the center bale is pushed onto the accumulator, it activates a hydraulic push bar that moves the bale onto the side cart. The second bale is pushed onto the opposite side cart. The third bale will sound a buzzer on the control box warning the operator that the accumulator is full. The operator then can unload the side carts, allowing the push bar to move the middle bale to an empty side cart.



C01-1152

# FEATURES AND BENEFITS BA3, BA4 ACCUMULATORS

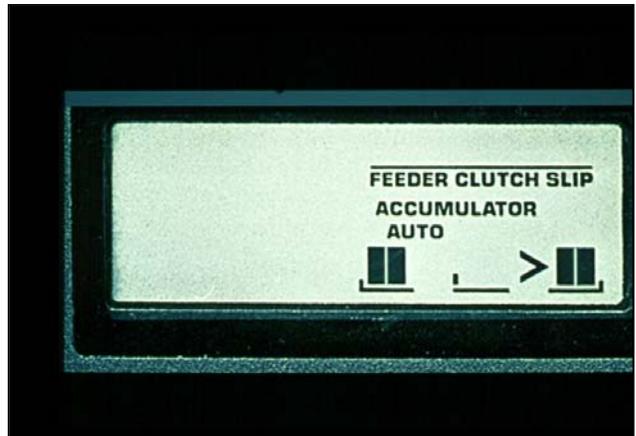
## Accumulator Display

The baler control box displays the accumulator details. The control box screen shows an icon of the bale, the shift bar and an arrow to indicate the direction the next bale will be shifted.



C01-1135

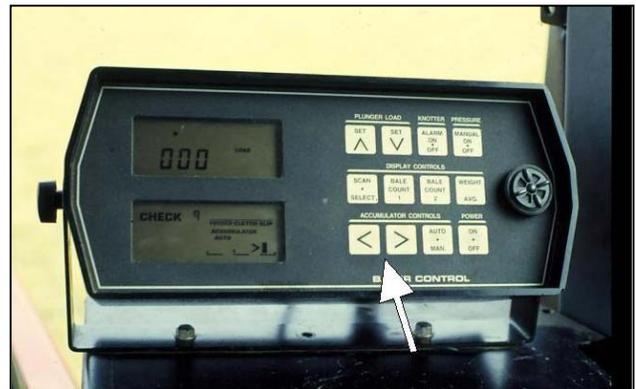
The bale shift bar indicator and bale direction arrow shows the direction of the next bale shift.



C01-1136

## Bale Shift Control

The bales can be shifted on the accumulator either automatically or manually. When in automatic mode, the baler control console will automatically shift the bales. If the accumulator is in the manual mode, the operator uses the switches on the baler control console to shift the bales.



C01-1114

## FEATURES AND BENEFITS BA3, BA4 ACCUMULATORS

### Bale Unload Control Box

The bale unload control box is mounted in the tractor cab. The operator presses the right switch to unload the right side of the cart, and the left switch to unload the left cart. When the switch is depressed, the latch holding the side cart up disengages, the weight of the bale(s) tilts the side cart back, and the bale(s) slide onto the ground.



C01-1137

### Bale Shift Bar

The bale shift bar moves the bales to the side carts. On the BA3, the shift bar can be adjusted to three different positions, depending on whether the bales are long or short, or the bales are dry hay or silage. The bales can be shifted to the side carts either automatically or manually (using the control box).



C01-1138

### Bale Sensors

The bale sensors detect the bale, which then directs the control box to send a signal to the bale shift bar to push the bale to the side cart. On the BA3, two front sensors and two rear sensors are used. The sensors are adjustable, to allow bales from 54" to 98" to be made. The BA4 uses one rear sensor bar to accommodate 81" to 102" long bales.



C01-1139

## FEATURES AND BENEFITS BA3, BA4 ACCUMULATORS

### Three-Bale Mode (BA3)

The BA3 accumulator can be used as a three-bale accumulator, when the side cart extensions are folded up, and the control box programmed to the three-bale mode. If the accumulator will be used exclusively as a three-bale accumulator, the side cart extensions can be removed, and bale stops added.



C01-1140

### Five-Bale Mode (BA3)

The BA3 accumulator can be used as a five-bale accumulator when the side cart extensions are folded down, and the control box programmed to the five-bale mode. Changing from the three-bale to the five-bale mode can be done quickly and easily, to accommodate any size field.



C01-1141

### Side Cart Locks (BA3)

The side carts can be locked up when roading, or when the accumulator is used as a three bale accumulator. A spring assists in folding or unfolding the side carts to the five-bale accumulator mode.



C01-1142

## FEATURES AND BENEFITS BA3, BA4 ACCUMULATORS

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### Dual Caster Wheels

The dual caster wheels allow the accumulator to make sharp turns in the field, without causing field damage. The four tires provide good flotation, for less soil compaction. The caster wheels are equipped with stabilizing brakes to keep the wheels from shimmying during road transport, for a more stable ride.



C01-1143

### Centralized Lubrication System

The accumulator is equipped with a grease divider valve, which allows the operator to grease 12 points all from one location. The lube system decreases the time required to service the accumulator, increasing productivity.



C01-1144

# FEATURES AND BENEFITS BA3, BA4 ACCUMULATORS

## Valve and Mounting Kits

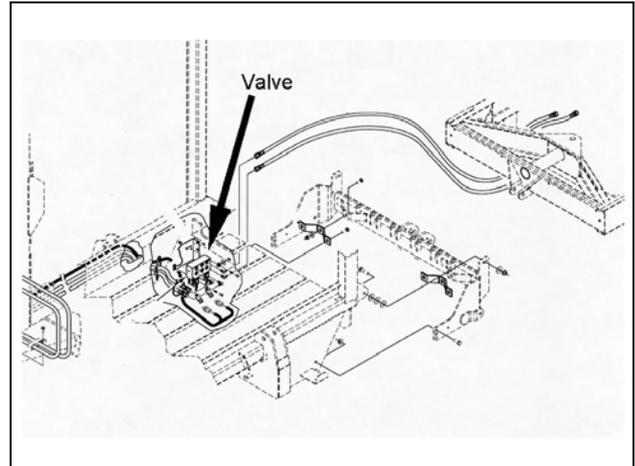
A valve and/or mounting kit is required when mounting an accumulator to a big baler.

### BA4 onto LB44 Baler Mounting Kit

The mounting kit consists of an auxiliary valve, which mounts at the rear of the baler, electrical harness, hoses, brackets and hardware to connect the BA4 accumulator to the LB44 big baler.

Wholegoods Kit – BK41034

Estimated Installation Time – 1.5 Hr.



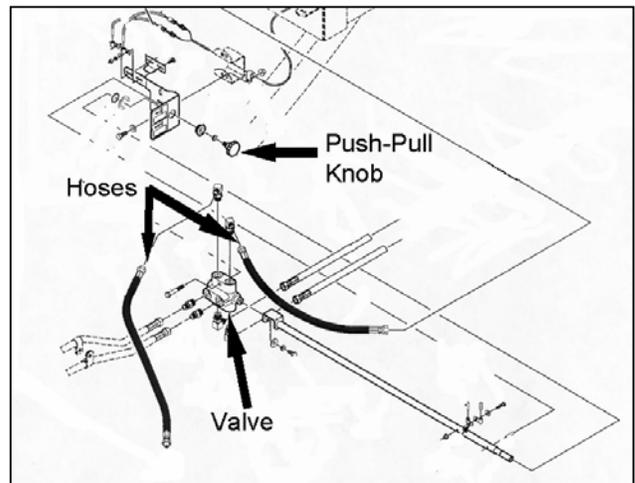
C01-1145

### BA4 onto LB34 Baler Mounting Kit

The mounting kit consists of a valve assembly, hoses, wiring harness, and hardware to accommodate both accumulator and ejector functions. A push-pull knob located on the right rear of the baler accomplishes switching between the accumulator and ejector functions.

Wholegoods Kit – K40964

Estimated Installation Time – 3.0 Hr.



C01-1146

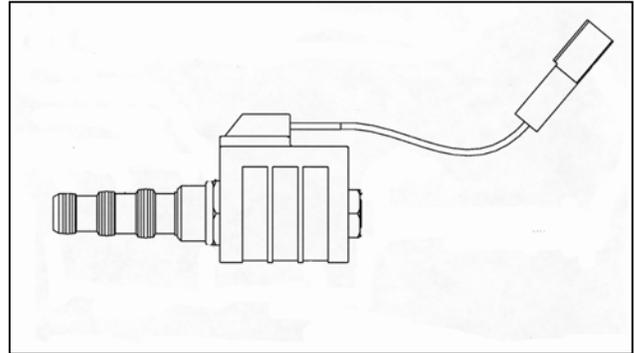
## FEATURES AND BENEFITS BA3, BA4 ACCUMULATORS

### **BA3 onto LB33 w/Ejector - Second Function Valve**

The kit consists of a solenoid valve assembly that installs in the rear valve block, to accommodate both accumulator and ejector functions. Switching between ejector function and accumulator function is done with a switch on the left rear of the baler.

Wholegoods Kit – K41033

Estimated Installation Time – 0.5 Hr.



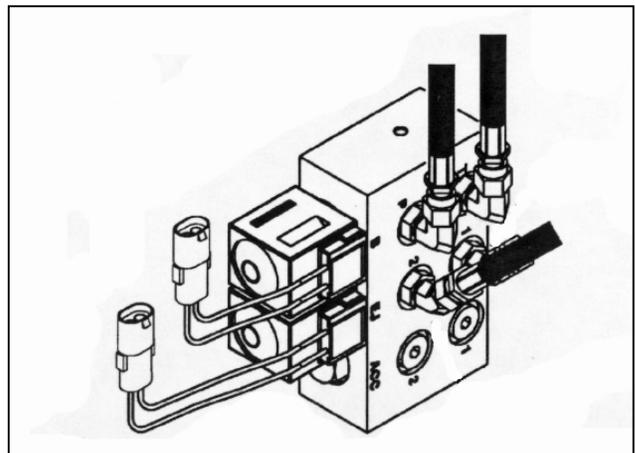
C01-1147

### **BA3 onto LB33 w/o Ejector - Auxiliary Hydraulic Kit**

The kit consists of a valve assembly, hoses, wiring harness and hardware. The auxiliary hydraulic kit is necessary for accumulator installation when the baler is not equipped with an ejector.

Wholegoods Kit – K41032

Estimated Installation Time – 1.5 Hr.



C01-1148

## FEATURES AND BENEFITS BA3, BA4 ACCUMULATORS

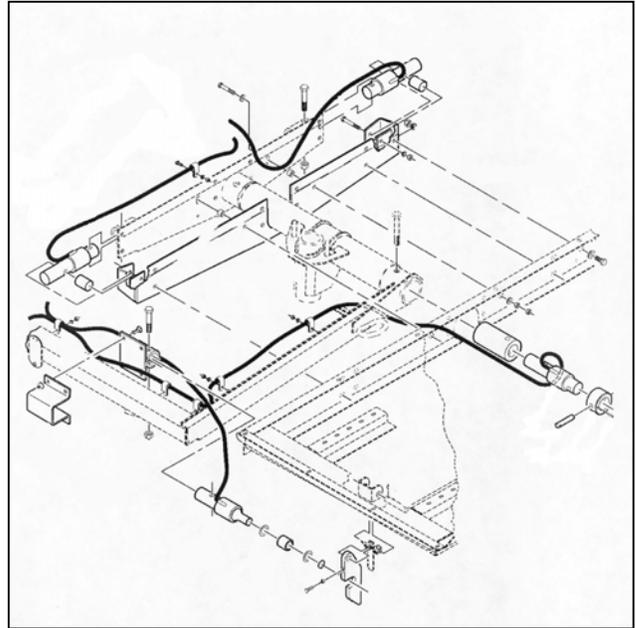
### Optional Kits (Field Installed)

#### Bale Weight Kit (BA4 Only)

The bale weight kit is installed on the left bale cart, and consists of four weigh bars, wiring and a scale box. The baler control box displays the bale weight after the bale is shifted to the left cart. The bale weight average can also be viewed on the control box, along with the number of bales used to calculate the average. The bale weight and bale weight average can be used as a management tool to determine the maximum truck payloads when shipping hay.

Wholegoods Kit – K40635

Estimated Installation Time – 5.0 Hr.



C01-1149

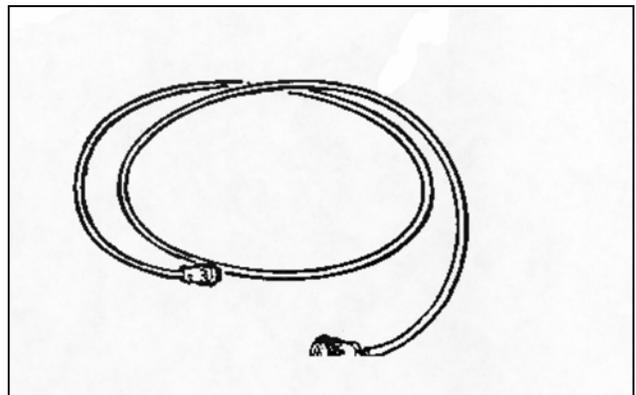
### Service Parts Kits

#### Bale Unload Harness Extension

The bale unload harness extension is used when a four-wheel drive articulated tractor is used on the baler, and the cab is located farther forward from the drawbar than on a standard tractor. The harness extension connects the bale unload control box to the standard accumulator wiring harness.

Service Part – 700 706 487

Estimated Installation Time – 0.3 Hr.



C01-1150

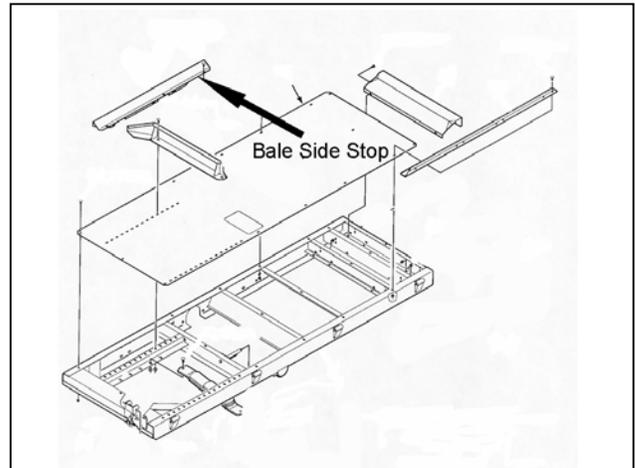
## FEATURES AND BENEFITS BA3, BA4 ACCUMULATORS

### Outside Bale Stops

If the accumulator is to be used exclusively as a three bale accumulator, the fold up side carts can be removed, and bale side stops can be installed. One stop needs to be ordered for each side.

Service Part – 700 129 944

Estimated Installation Time – 1.0 Hr.



C01-1151

# SPECIFICATIONS

## LB33 LARGE RECTANGULAR BALER

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**MODEL** ..... LB33 Large Rectangular Baler

### DIMENSIONS AND WEIGHTS

Length	
Without Bale Chute in (mm) .....	286 (7265)
With Standard Bale Chute in (mm).....	355 (9009)
With Roller Bale Chute	
Operating Position, Maximum in (mm).....	357 (9070)
Storage and Road Position in (mm).....	297 (7544)
Height	
Top of Knotter Shielding in (mm) .....	107.5 (2731)
Top of Hand Railing in (mm) .....	124.5 (3162)
Width (Overall)	
Shipping (Less Tires) in (mm) .....	89.4 (2270)
Operating in (mm) .....	100 (2540)
Weight (Approx.)	
Baler lb (kg).....	12,900 (5851)
Baler with Bale Ejector and Roller Bale Chute lb (kg) .....	13,425 (6090)
Tongue (Empty) lb (kg).....	2050 (930)

### BALE CHAMBER

Width in (mm).....	31.5 (800)
Height in (mm).....	34.4 (875)
Bale Length (Adjustable) IN (mm) .....	Up to 98.4 (2500)

### TIRES

Baler.....	21.5L x 16.1, 14 ply
Baler (Optional) .....	600/50-22.5, 12 ply
Pickup Gauge Wheel.....	4.00 x 16 (2) Pneumatic w/Inner Tube

### MAIN DRIVE

PTO Speed rpm .....	1000
PTO Type .....	ASAE Type 2, 1 3/8 IN, 21 Teeth
(Optional) .....	ASAE Type 3, 1 3/4 IN, 20 Teeth
Drive Line Category.....	ISO 8 (ASAE 6)
Drive Line Protection .....	Overrunning, Slip Clutches, and Shear Bolt
Flywheel Brake.....	Direct Acting
Flywheel Diameter in (mm).....	29.5 (750)
Flywheel Width in (mm) .....	4.3 (110)
Flywheel Weight lb (kg).....	360 (163)
Gearbox .....	Enclosed Double Reduction
Gears .....	Spiral Bevel (1st set) Spur (2nd set)
Bearings .....	Tapered Roller and Spherical
Lubrication .....	Oil Bath
Temperature Switch Setting °F (°C).....	172° to 190° (78° to 88°)

# SPECIFICATIONS

## LB33 LARGE RECTANGULAR BALER

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### PICKUP ASSEMBLY

Outside Width in (mm).....	91.2 (2316)
Effective Width in (mm) .....	77.5 (1968)
Width, Tine to Tine in (mm) .....	70.2 (1782)
Overall Width w/Gauge Wheels in (mm) .....	107.4 (2729)
Pickup Tinebar Drive .....	Cam and Drive Arms on Right and Left
Number of Bars .....	4- w/Center Carrier
Number of Tines.....	112
Tine Spacing in (mm) .....	2.6 (66)
Tine Bar Bearings.....	Sealed Ball
Drive.....	RC50 and RC60 Roller Chain
Protection .....	Slip and Overrunning Clutches
Height control .....	2-Fixed Gauge Wheels and Adjustable Control Arm
Pickup Lift.....	Hydraulic Cylinder

### BALE CHAMBER FEEDING SYSTEM

Packers .....	Fork Type w/4 Hard Surfaced Tines
Crank .....	Heavy Duty
Drive.....	RC80H roller chain
Protection.....	Splined Slip Clutch
Charge Chamber Volume ft <sup>3</sup> (m <sup>3</sup> ).....	6.65 (188)
Windrow Size Compensation .....	Automatic Charge (Sensor Engages Stuffer Clutch)
Stuffer.....	Fork Type
Drive.....	RC100 Roller Chain
Drive Protection .....	Shear Bolt

### PLUNGER

Speed strokes/min.....	40.97
Length of stroke in (mm) .....	27.95 (710)
Mounting .....	4 Tapered Roller Bearings (Sealed) 2 Ball Bearing Rollers (Sealed)

# SPECIFICATIONS

## LB33 LARGE RECTANGULAR BALER

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### CONTROL AND MONITORING SYSTEM

Type .....	Microprocessor Based Electronic Control
Baler Controls	
Plunger Load to Control Bale Density, Alarm Volume, Displays and Reset Field Bale Count, Manual Hydraulic Pressure Control.	
Baler Functions Monitored	
Plunger Load, Bale Chamber Tension Pressure, Bale Count - Field (2) and Total, Flakes / Bale, Driving Meter, Stuffer Cycles, Knotter and Needle Performance, Feeder Performance, Stuffer Shear Bolt, Gearbox Overheating, Low Voltage, Automatic Electronic System Performance Checks	
Non-volatile Memory Storage	
Load, Display and Control Modes, Bale Counts	
Display .....	Dual LCD with Back Lighting
Control Switches .....	Hermetically Sealed Membrane (12) with Back Lighting
On-Off Functions .....	Both Automatic and Manual
Electrical Protections	
Under and Over Voltage, Output Overload (Short Circuits, etc), Breaker Switch, Static Discharge, etc	
Baler Switches .....	Hermetically Sealed Reed (3)
Console Size	
Width in (mm).....	13.8 (350)
Depth in (mm) .....	5.2 (132)
Height in (mm) .....	5.3 (135)
Electrical Requirements .....	12V DC

### TYING MECHANISM

Knotters .....	4 Double Knot Type
Spacing in (mm) .....	6.8 (172)
Type Tie .....	Twine Only
Twine Storage Capacity .....	20 Balls
Type Twine.....	High Quality Split Film Polypropylene or Sisal
Minimum Knot Strength lb (N).....	300 (1330)

### BALE CHAMBER TENSION SYSTEM

Type .....	Electronic Controlled Hydraulics
Valve .....	Solenoid Poppet Type
System supply .....	Tractor Hydraulics
Standard .....	Closed Center
Optional.....	Open Center

# SPECIFICATIONS

## LB33 LARGE RECTANGULAR BALER

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### LIGHTS

Working .....	3
Service .....	3
Safety .....	Flashing and Turn Signal, Tail Light
Power and Control.....	Tractor 12V by Using ASAE 7 Pin Connector

### CENTRALIZED LUBRICATION SYSTEM

Automatic Centralized Lubrication System, Main Baler	
Timed Electrical Pump, Positive Displacement Grease Divider Valves.....	Lubes 16 Points
Manual Centralized Lubrication System, Knotters	
Three Positive Displacement Manual Oil Pumps .....	Lubes 34 Points

### BALE ROLLER CHUTE (OPTIONAL)

Length (2 Position Adjustable)	
Maximum Overall in (mm) .....	78.4 (1990)
Minimum Overall in (mm) .....	65.6 (1640)
Maximum Effective in (mm).....	72.8 (1850)
Minimum Effective in (mm).....	51.1 (1500)
Number of Rollers .....	5
Roller Diameter in (mm) .....	5 (122)
Type of Lift .....	Hydraulic Power Lift with Ejector
Bounce Control Brass Friction Discs (2) Diameter in (mm) .....	3 (75)

### BALE EJECTOR

Number of Teeth .....	10
Slide Type .....	Ball Bearing Rollers
Power .....	Hydraulic Cylinder
Cylinder Size in (mm).....	2.5 (64)
Valve .....	Mounted on Baler Control Valve
Control .....	Standard with Electronic Baler Control Console
Operation .....	Switch at Rear of Left Twine Box
Stroke in (mm).....	20 (508)
Number of Teeth Engaged .....	Operator Selected, Dual Handle Control
Amount of Hay Ejected (Operator Selected) in (mm) .....	18 (457) To Full Bale Chamber

# SPECIFICATIONS

## LB33 LARGE RECTANGULAR BALER

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### TRACTOR REQUIREMENTS

Horsepower	
Minimum hp (kW).....	90 (67)
Minimum weight to ballast tractor lb (kg).....	15,600 (7090)
PTO speed rpm (r/min).....	1000
PTO .....	
	Or PTO ASAE Type 3, 1-3/4 IN 20 Teeth
Hydraulics .....	Two Double Acting Remote Valves
	Pickup Lift and Bale Chamber Tension Control
Type of Hydraulic System	
Standard .....	Closed Center
Optional Conversion.....	Open Center
Electrical system .....	12V DC
Lights .....	ASAE 7-pin Connector Outlet

### LUBRICATION

Gearbox	
Quantity qt ( L ) .....	10 (9.5)
Lubrication .....	SAE 80W 140 or SAE 85W 140, API GL-5
Hydraulic System	
System Supply .....	Tractor Hydraulics
Centralized Lubrication System for Knotter	
Quantity (Approximately) gal ( L ).....	2.0 (7.6)
Lubrication .....	SAE 80W 140 or SAE 85W 140, API GL-5

(Specifications and design are subject to change without notice and without liability therefore.)

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# SPECIFICATIONS

## LB34 LARGE RECTANGULAR BALER

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**MODEL** ..... LB34 Large Rectangular Baler

### DIMENSIONS AND WEIGHTS

Length	
Without Bale Chute in (mm) .....	285 (7239)
With Roller Bale Chute	
Operating Position, Maximum) in (mm) .....	358 (9093)
Storage and Road Position in (mm) .....	297 (7544)
Height	
Top of Knotter Shielding in (mm) .....	108 (2743)
Top of Hand Railing in (mm) .....	140 (3556)
Width (Overall)	
Shipping (Less Tires) in (mm) .....	105 (2667)
Operating in (mm) .....	117 (2972)
Weight (Approx.)	
Baler lb (kg).....	17,280 (7838)
Baler with Roller Bale Chute lb (kg) .....	17,680 (8020)
Tongue (Empty) lb (kg).....	2950 (1338)

### BALE CHAMBER

Width in (mm).....	47.25 (1200)
Height in (mm).....	34.4 (875)
Bale Length (Adjustable) in (mm).....	Up to 98.4 (2500)

### TIRES

Baler.....	700/50-22.5, 12 ply
Pickup Gauge Wheel.....	4.00 x 16 (2) Pneumatic w/Inner Tube

### MAIN DRIVE

PTO Speed rpm .....	1000
PTO Type .....	ASAE Type 2, 1 3/8 IN, 21 teeth
(Optional) .....	ASAE Type 3, 1 3/4 IN, 20 teeth
Drive Line Category.....	ISO 8 (ASAE 6)
Drive Line Protection .....	Overrunning, Slip Clutches, and Shear Bolt
Flywheel Brake.....	Direct Acting
Flywheel Diameter in (mm).....	34 (864)
Flywheel Weight lb (kg) .....	535 (243)
Gearbox .....	Cast, Enclosed Double Reduction
Gears .....	Spiral Bevel (1st set) Spur (2nd set)
Bearings .....	Tapered Roller and Spherical
Lubrication .....	Oil Bath
Temperature switch setting °F (°C) .....	172° to 190° (78° to 88°)

# SPECIFICATIONS

## LB34 LARGE RECTANGULAR BALER

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### PICKUP ASSEMBLY

Outside Width in (mm).....	104.8 (2661.5)
Effective Width in (mm) .....	87.9 (2232)
Width, Tine to Tine in (mm) .....	80.6 (2046)
Overall Width w/Gauge Wheels in (mm) .....	118.1 (3000)
Pickup Tinebar Drive .....	Cam and Drive Arms on Right and Left
Number of Bars .....	4- w/Center Carrier
Number of Tines.....	120
Tine Spacing in (mm) .....	2.6 (66)
Tine Bar Bearings.....	Sealed Ball
Drive.....	RC50 and RC60 Roller Chain
Protection .....	Slip and Overrunning Clutches
Height control .....	2-Fixed Gauge Wheels and Adjustable Control Arm
Pickup Lift.....	Hydraulic Cylinder

### BALE CHAMBER FEEDING SYSTEM

Packers .....	Fork Type w/6 Hard Surfaced Tines
Crank .....	Heavy Duty
Drive.....	RC80 roller chain
Protection.....	Splined Slip Clutch
Charge Chamber Volume ft <sup>3</sup> (m <sup>3</sup> ).....	9.98 (0.282)
Windrow Size Compensation .....	Automatic Charge (Sensor Engages Stuffer Clutch)
Stuffer.....	Fork Type
Drive.....	RC80 Roller Chain
Drive Protection .....	Shear Bolt

### PLUNGER

Speed strokes/min.....	42.65
Length of stroke in (mm) .....	27.95 (710)
Mounting .....	4 Tapered Roller Bearings (Sealed) 2 Ball Bearing Rollers (Sealed)

# SPECIFICATIONS

## LB34 LARGE RECTANGULAR BALER

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### CONTROL AND MONITORING SYSTEM

Type .....	Microprocessor Based Electronic Control
Baler Controls	
Plunger Load to Control Bale Density, Alarm Volume, Displays and Resets Field Count, Manual Hydraulic Pressure Control.	
Baler Functions Monitored	
Plunger Load, Bale Chamber Tension Pressure, Bale Count - Field (2) and total, Flakes /Bale, Driving Meter, Stuffer Cycles, Knotter and Needle Performance, Feeder Performance, Stuffer Shear Bolt, Gearbox Overheating, Low Voltage, Automatic Electronic System Performance Checks	
Non-volatile Memory Storage	
Load, Display and Control Modes, Bale Counts	
Display .....	Dual LCD with Back Lighting
Control Switches .....	Hermetically Sealed Membrane (12) with Back Lighting
On-Off Functions .....	Both Automatic and Manual
Electrical Protections	
Under and Over Voltage, Output Overload (Short Circuits, etc), Breaker Switch, Static Discharge, etc	
Baler Switches .....	Hermetically Sealed Reed (3)
Console Size	
Width in (mm).....	13.8 (350)
Depth in (mm) .....	5.2 (132)
Height in (mm) .....	5.3 (135)
Electrical Requirements .....	12V DC

### TYING MECHANISM

Knotters.....	6 Double Knot Type
Spacing in (mm) .....	6.75 (172)
Type Tie .....	Twine Only
Twine Storage Capacity .....	30 Balls
Type Twine.....	High Quality Split Film Polypropylene or Sisal
Minimum Knot Strength lb (N) .....	300 (1330)

### BALE CHAMBER TENSION SYSTEM

Type .....	Electronic Control Hydraulics
Valve .....	Solenoid Poppet Type
System supply.....	Tractor Hydraulics
Standard .....	Closed Center
Optional.....	Open Center

# SPECIFICATIONS

## LB34 LARGE RECTANGULAR BALER

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### LIGHTS

Working .....	3
Safety .....	Flashing and Turn Signal, Tail Light
Power and Control.....	Tractor 12V by Using ASAE 7 Pin Connector

### CENTRALIZED LUBRICATION SYSTEM

Baler.....	Timed Electrical Pump Positive Displacement Grease Divider Valves, Lubes 19 Points
Knotters.....	4 Positive Displacement Manual Oil Pumps, Lubes 48 Points

### BALE ROLLER CHUTE (OPTIONAL)

Length (2 Position Adjustable)	
Maximum Overall in (mm) .....	78.4 (1990)
Minimum Overall in (mm) .....	65.6 (1640)
Maximum Effective in (mm).....	72.8 (1850)
Minimum Effective in (mm).....	51.1 (1500)
Number of Rollers .....	6
Roller Diameter in (mm) .....	5 (122)
Type of Lift .....	Hydraulic Power Lift
Bounce Control Brass Friction Discs (2) Diameter in (mm) .....	3 (75)

### BALE EJECTOR

Number of Teeth .....	10
Slide Type .....	Ball Bearing Rollers
Power .....	Hydraulic Cylinders
Cylinder Size in (mm).....	2.5 (64)
Valve .....	Mounted on Baler Control Valve
Control .....	Standard with Electronic Baler Control Console
Operation .....	Switch at Rear of Left Twine Box
Stroke in (mm).....	20 (508)
Number of Teeth Engaged .....	Operator Selected, Dual Handle Control
Amount of Hay Ejected (Operator Selected) in (mm) .....	18 (457) To Full Bale Chamber

# SPECIFICATIONS

## LB34 LARGE RECTANGULAR BALER

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### TRACTOR REQUIREMENTS

Horsepower	
Minimum hp (kW).....	120 (90)
Minimum weight to ballast tractor lb (kg).....	19,500 (8865)
PTO speed rpm (r/min).....	1000
PTO .....	ASAE Type 2, 1-3/8 IN 21 Teeth Or PTO ASAE Type 3, 1-3/4 IN 20 Teeth
Hydraulics .....	Two Double Acting Remote Valves Pickup Lift and Bale Chamber Tension Control
Type of Hydraulic System	
Standard .....	Closed Center
Optional Conversion.....	Open Center
Electrical system .....	12V DC
Lights .....	ASAE 7-pin Connector Outlet

### LUBRICATION

Gearbox	
Quantity qt ( L ) .....	20 (18.9)
Lubrication .....	SAE 80W 140 or SAE 85W 140, API GL-5
Hydraulic System	
System Supply .....	Tractor Hydraulics
Centralize Lubrication System for Knotter	
Quantity (Approximately) gal ( L ).....	1.7 (6.4)
Lubrication .....	SAE 80W 140 or SAE 85W 140, API GL-5

(Specifications and design are subject to change without notice and without liability therefore.)

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# SPECIFICATIONS

## LB44 LARGE RECTANGULAR BALER

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**MODEL** ..... LB44 Large Rectangular Baler

### DIMENSIONS AND WEIGHTS

Length	
Without Bale Chute in (mm) .....	284.5 (7230)
With Bale Chute in (mm) .....	350.5 (8900)
Height	
Top of Knotter Shielding in (mm) .....	124 (3150)
Top of Hand Railing in (mm) .....	145 (3680)
Width (Overall)	
Shipping, (Less Tires) in (mm) .....	103 (2615)
With 28Lx26 Tires in (mm) .....	125.5 (3190)
Weight (Approx.)	
Baler lb (kg).....	18,300 (8440)
Tongue (empty) lb (kg).....	3340 (1515)
Bale Chute lb (kg) .....	250 (115)

### BALE CHAMBER

Width in (mm) .....	46.5 (1180)
Height) in (mm).....	50 (1270)
Bale Length (Adjustable) in (mm) .....	Up to 108 (2743)

### TIRES

Baler.....	28L x 26, 16 ply
Bolt Circle Diameter in (mm) .....	13.2 (335)
Pickup Gauge Wheel.....	4.00x16 (2) Pneumatic w/Inner Tube

### MAIN DRIVE

PTO Speed rpm .....	1000
PTO Type.....	ASAE Type 2, 1 3/8 IN, 21 teeth
(Optional) .....	ASAE Type 3, 1 3/4 IN, 20 teeth
Drive Line Category.....	ISO 8 (ASAE 6)
Drive Line Protection .....	Overrunning, Slip Clutches, and Shear Bolt
Flywheel	
Diameter in (mm) .....	34 (864)
Weight lb (kg).....	535 (243)
Bearings.....	Taper Roller (2)
Brake.....	Direct Acting
Gearbox .....	Enclosed Triple Reduction
Gears .....	Spiral Bevel (1st set), Spur (2nd and 3rd Set)
Bearings.....	Tapered Roller and Spherical
Lubrication .....	Oil Bath
Temperature switch settings	
Cast Gearbox Housing °F (°C).....	172° to 190° (78° to 88°)
Welded Gearbox Housing °F (°C).....	149° to 167° (65° to 75°)

# SPECIFICATIONS

## LB44 LARGE RECTANGULAR BALER

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### PICKUP ASSEMBLY

Outside Width w/o Gauge Wheels in (mm).....	97.5 (2475)
Effective Width in (mm) .....	83.6 (2125)
Width, Tine to Tine in (mm) .....	77.9 (1978)
Overall Width w/Gauge Wheels in (mm) .....	110.5 (2810)
Diameter in (mm).....	14.4 (366)
Number of Bars .....	5
Number of Tines.....	120
Tine Spacing in (mm) .....	3.38 (86)
Tine Bar Bearings.....	Sealed Ball
Drive.....	RC50 Roller Chain
Protection .....	Slip and Overrunning Clutches
Height Control .....	2-Gixed Gauge Wheels and Adjustable Control Arm
Pickup Lift.....	(2) Hydraulic Cylinder

### BALE CHAMBER FEEDING SYSTEM

Packers .....	Fork Type w/ 6 Hard Surfaced Tines
Crank .....	Heavy Duty
Drive.....	RC80 Roller Chain
Protection.....	Splined Slip Clutch
Charge Chamber Volume ft <sup>3</sup> (m <sup>3</sup> ).....	12.5 (0.354)
Windrow Size Compensation .....	Automatic Charge (Sensor Engages Stuffer Clutch)
Stuffer.....	Fork Type w/ 6 Tines
Drive.....	RC100 Roller Chain
Drive Protection .....	Shear Bolt

### PLUNGER

Speed strokes/min.....	25.4
Length of stroke in (mm) .....	30.7 (780)
Mounting .....	4 Tapered Roller Bearings (Sealed) 2 Ball Bearing Rollers (Sealed)

# SPECIFICATIONS

## LB44 LARGE RECTANGULAR BALER

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### CONTROL AND MONITORING SYSTEM

Type .....	Microprocessor Electronic Control
Baler Controls	
Plunger Load to Control Bale Density, Alarm Volume, Displays and Resets Field Count, Manual Hydraulic Pressure Control	
Baler Functions Monitored	
Plunger Load, Bale Chamber Tension Pressure, Bale Count - Field (2) and Total, Flakes /Bale, Driving Meter, Stuffer Cycles, Knotter and Needle Performance, Feeder Performance, Stuffer Shear Bolt, Gearbox Overheating, Low Voltage, Automatic Electronic System Performance Checks	
Stored Memory	
Load, Alarm Settings, Display and Control Modes, Bale Counts	
Display .....	Dual LCD with Back Lighting
Control Switches .....	Hermetically Sealed Membrane (12) with Back Lighting
On-Off Functions .....	Both Automatic and Manual
Electrical Protections	
Under and Over Voltage, Output Overload (Short Circuits, etc), Breaker Switch, Static Discharge, etc	
Baler Switches .....	Hermetically Sealed Reed (3)
Console Size	
Width in (mm).....	14 (360)
Depth in (mm) .....	5.25 (133)
With Cable (Approximate) in (mm).....	9 (230)
Height in (mm) .....	6.5 (165)
Electrical requirements .....	12V DC

### TYING MECHANISM

Knotters.....	6 Double Knot Type
Spacing in (mm) .....	6.75 (172)
Type Tie .....	Twine Only
Twine Storage Capacity .....	24 Balls
Type Twine.....	High Quality Split Film Polypropylene or Sisal
Minimum Knot Strength lb (N).....	300 (1330)

### BALE CHAMBER TENSION SYSTEM

Type .....	Electronic Control Hydraulics
Valve .....	Solenoid Poppet Type
System supply .....	Tractor Hydraulics
Standard .....	Closed Center
Optional Conversion.....	Open Center

# SPECIFICATIONS

## LB44 LARGE RECTANGULAR BALER

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### LIGHTS

Working .....	6
Safety .....	Flashing and Turn Signal, Tail Light
Power and control .....	Tractor 12V by Using ASAE 7 Pin Connector

### CENTRALIZED LUBRICATION SYSTEM (Optional)

Baler .....	Timed Electrical Pump
	Positive Displacement Grease Divider Valves, Lubes 19 Points
Knotters .....	4 Positive Displacement Manual Oil Pumps, Lubes 48 Points

### TRACTOR REQUIREMENTS

Horsepower	
Minimum hp (kW) .....	135 (101)
Recommended hp (kW) .....	150+ (110+)
Minimum weight to ballast tractor	
Baler Only lb (kg) .....	20,000 (9090)
Baler and Accumulator lb (kg) .....	22,487 (10,200)
PTO Speed rpm (r/min) .....	
PTO .....	ASAE type 2, 1-3/8 IN 21teeth
	Or PTO ASAE type 3, 1-3/4 IN 20 teeth
Hydraulics .....	
	Two Double Acting Remote Valves
	Pickup Lift and Bale Chamber Tension Control
Type of Hydraulic System	
Standard .....	Closed Center
Optional Valve Conversion .....	Open Center
Minimum Pressure psi (kPa) .....	
Electrical system .....	12V DC
Lights .....	ASAE 7-pin Connector Outlet

### LUBRICATION

Gearbox	
Quantity qt ( L ) .....	20 (18.9)
Lubrication .....	SAE 80W 140 or SAE 85W 140, API GL-5
Hydraulic system	
System supply .....	Tractor Hydraulics
Centralize lubrication system for knotter	
Quantity (approximately) gal ( L ) .....	2 (7.6)
Lubrication .....	SAE 80W 140 or SAE 85W 140, API GL-5

(Specifications and design are subject to change without notice and without liability therefore.)

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# SPECIFICATIONS

## BA3 BALE ACCUMULATOR

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**MODEL** ..... BA3 Bale Accumulator

### DIMENSIONS & WEIGHTS

Length  
Accumulator in (mm) ..... 122 (3100)  
Baler and Accumulator ft (m) ..... 32.5 (9.90)

Width  
Field in (mm) ..... 176 (4470)  
Transport in (mm)..... 122 (3100)  
Without Wings (3 Bale) in (mm) ..... 122 (3099)

Height:  
Field in (mm) ..... 48 (1200)  
Transport in (mm)..... 69 (1753)

Weight  
Field (Empty) lb (kg)..... 3360 (1525)

### SHIPPING DIMENSIONS

Height in (mm)..... 102 (2590)  
Width in (mm) ..... 50 (1270)  
Length in (mm) ..... 119 (3022)  
Weight lb (kg)..... 3520 (1597)

### BALE SIZE

Width in (mm)..... 31.5 (800)  
Height in (mm)..... 34.4 (874)  
Length in (mm) ..... 54 to 98 (1372 to 2489)  
Capacity (Bales)..... 3 or 5

### FRAME

Tire Size ..... 9.5L-14, 6 ply w/ Inner Tube  
Axle Type ..... Dual Wheel Caster (2) w/Stabilizing Brake

### CONTROL AND MONITORING SYSTEM

Bale Shift Control ..... Electronic Built into Baler Control Console  
(3 or 5 Bale Mode)

Bale Unload Control ..... Electrical Standard, Operator Controlled  
Functions Monitored (Control Console)..... Bales Loaded, Direction of Next Bale,  
Operator Alert - 3 and 5 bale mode,  
Manual Mode, Bale to be Unloaded  
Bale Shift Bar Malfunctions

# SPECIFICATIONS BA3 BALE ACCUMULATOR

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**HYDRAULICS** ..... Solenoid Valve Mounted to Baler Control Valve

**LUBRICATION**

Centralized Lubrication System..... Standard  
12 Point Positive Displacement Grease Divider Valve

(Specifications and design are subject to change without notice and without liability therefore.)

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# SPECIFICATIONS

## BA4 BALE ACCUMULATOR

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**MODEL** ..... BA4 Bale Accumulator  
(LB34 and LB44 Balers)

### DIMENSIONS AND WEIGHTS

Length  
Accumulator in (mm) ..... 123 (3125)  
Baler and Accumulator ft (m) ..... 34 (10.4)  
Width (Overall) in (mm) ..... 156 (3960)  
Height in (mm) ..... 46 (1170)  
Weight lb (kg) ..... 3250 (1475)

### BALE SIZE

Width  
4790 Bale in (mm) ..... 47.3 (1200)  
4910 Bale in (mm) ..... 46.5 (1180)  
Height  
4790 Bale in (mm) ..... 34.4 (875)  
4910 bale in (mm) ..... 50 (1270)  
Bale Length in (mm) ..... 81 to 102 (2057 to 2590)  
Capacity (Bales) ..... 3

### FRAME

Tires ..... 9.5L x 14, 4 Ply w/Inner Tube  
Axle Type ..... Dual Wheel Caster (2) w/Stabilizing Brake

### CONTROL AND MONITORING SYSTEM

Bale Shift Control ..... Electronic Built into Baler Control Console  
Automatic or Manual Operation  
Bale Unload Control ..... Electrical Standard, Operator Controlled  
Functions Monitored (Control Console) ..... Bales Loaded, Direction of Next Bale,  
Operator Alert - Manual Mode, Bale to  
be Unloaded, Bale Shift Bar Malfunction

# SPECIFICATIONS BA4 BALE ACCUMULATOR

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**HYDRAULICS** ..... Solenoid Valve Mounted to Baler Control Valve  
Uses Same Tractor Hydraulic Circuit as Baler Control Valve

## **LUBRICATION**

Centralized Lubrication System..... Standard  
12 Point Positive Displacement Grease Divider Valve

## **OPTIONAL KITS (Field Installed)**

Bale Weight Kit ..... Automatically Weighs Bales Transferred to the Left Side  
Cart, Informs Operator of each New Bale Weight, Auto Tare,  
Bale Weight Average, Bale Count for Bale Weight Average

(Specifications and design are subject to change without notice and without liability therefore.)

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## COMPETITIVE COMPARISONS LB33 LARGE RECTANGULAR BALER

MAKE MODEL	Challenger LB33	John Deere 100	New Holland BB940	Case-IH LBX431
<b>DIMENSIONS &amp; WEIGHT</b>				
Overall Width in (m)	100 (2.54)	102 (2.62)	97 (2.48)	97 (2.48)
Working Length ft (m)	355 (9.01)	317 (8.04)	330 (8.42)	330 (8.42)
Overall Height ft (m)	124 (3.16)	99 (2.53)	121(3.08)	121(3.08)
Total Weight lbs (kg)	13,425 (6090)	13,320 (6040)	14,286 (6480)	14,286 (6480)
Tongue Weight lbs (kg)	2050 (930)	2500 (1133)	INA	INA
<b>BALE SIZE &amp; WEIGHTS</b>				
Bale Width in (mm)	31.5 (800)	31.5 (800)	32 (813)	32 (813)
Bale Height in (mm)	34.4 (875)	31.5 (800)	35 (889)	35 (889)
Bale Length (max.) in (mm)	98 (2489)	98 (2489)	98 (2489)	98 (2489)
Bale Weight lbs (kg)	1000 (454)	1000 (454)	1000 (454)	1000 (454)
Cross Section (width x height)	1083.6 sq. in.	992.25 sq. in.	1120 sq. in.	1120 sq. in.
Bale Volume	61 cu. ft.	56 cu. ft.	63 cu. ft.	63 cu. ft.
<b>TRACTOR REQUIREMENTS</b>				
PTO rpm	1000	1000	1000	1000
Horsepower (minimum) hp (kW)	90 (60)	90 (60)	120 (89)	120 (89)
Hydraulic Remotes	2	1	2	2
Electrical System	12 volt	12 volt	12 volt	12 volt
<b>MAIN DRIVE TRAIN</b>				
Drive Line Protection	Yes	Yes	Yes	Yes
Shear Bolt	Yes	Yes	Yes	Yes
Overrunning Clutch	Yes	Yes	Yes	Yes
Slip Clutch	Slip w/Shearbolt	Slip w/Shearbolt	Slip w/Shearbolt	Slip w/Shearbolt
Main Gearbox	Bevel & Spur Gear	INA	Bevel & Spur Gear	Bevel & Spur Gear
<b>PICKUP</b>				
Working Width in (mm)	77.5 (1968)	78.5 (2000)	78.7(1999)	78.7(1999)
Tine Bars & No. of Tines	4 - 112	5 - 130	4 - 112	4 - 112
Protection	Slip Clutch	Torque limit Clutch	Slip Clutch	Slip Clutch
Gauge Wheels	(2) 4.00 x 8	(2) 15 x 6	(2) 4.00 x 6	(2) 4.00 x 6
Lift Control	Hydraulic	Hydraulic	Hydraulic	Hydraulic
<b>PLUNGER</b>				
Mounting	6 Sealed Bearings	INA	6 Sealed Bearings	6 Sealed Bearings
Speed	41 SPM	50 SPM	42	42
Length of Stroke in (mm)	28 (710)	29.6 (750)	28 (710)	28 (710)
<b>TYING SYSTEM</b>				
Style	Double Knotter	Single Knotter	Double Knotter	Double Knotter
Number of Knotters	Four	Four	Four	Four
Spacing of twines in (mm)	7 (178)	INA	7 (178)	7 (178)
Twine Capacity (# of Balls)	20	24	26	26
Type of Twine	Sisal or Plastic	INA	Sisal or Plastic	Sisal or Plastic
Recommended				

## COMPETITIVE COMPARISONS LB33 LARGE RECTANGULAR BALER

MAKE MODEL	Challenger LB33	John Deere 100	New Holland BB940	Case-IH LBX431
<b>BALE CHAMBER TENSIONING</b>				
Type of System	Electronic Controlled Hydraulics	Sensor Controlled Hydraulics	Electronic Controlled Hydraulics	Electronic Controlled Hydraulics
System Source	Tractor Hydraulics	Self-Contained	Self-Contained	Self-Contained
<b>TIRES</b>				
Standard Tire Size (Baler)	21.5L x 16.1 /14 600/50-22.5	21.5L x 16.1 /10 (Optional Tandem) 38 x 20 x 16.1 /8 15 x 6-6 /4	21.5L x 16.1 /14	21.5L x 16.1 /14
Pickup Gauge Wheel size	4.00 x 8/2		4.00 x 6	4.00 x 6
<b>LUBRICATION SYSTEM</b>				
Knotters	Standard	Standard	Standard	Standard
Other Baler Components	Standard	N/A	Standard	Standard
<b>CONTROL &amp; MONITOR SYSTEM</b>				
Type	Microprocessor	Microprocessor	Microprocessor	Microprocessor
Baler Controls	Bale Density Yes	Bale Density NA	Bale Density NA	Bale Density NA
Accumulator Controls	-Plunger Load	-Bale Density	-Plunger Load	-Plunger Load
Functions Monitored	-Bale Chamber (Tension Pressure) -Bale Count (Total & Field) -Flake per Bale -Driving Indicators -Stuffer Cycle -Knotter & Needle - Performance -Feeder Slip -Gearbox Overheating	Control W/ Three preset levels -Density Control -Driving Indicators -Bale Count (Total & Field) -Open Bale Chamber Indicators -Precutter Engaged Indicator -Strokes per Bale & Strokes per Minute -Four function Alarm -Sensor Malfunction -Twine Malfunction -Clutch Engagement	-Bale Chamber (Tension Pressure) -Bale Count (Total & Field) -Stuffer Cycle -Knotter & Needle - Performance -Feeder Slip	-Bale Chamber (Tension Pressure) -Bale Count (Total & Field) -Stuffer Cycle -Knotter & Needle - Performance -Feeder Slip
<b>HIGH MOISTURE HAY CAPABILITIES</b>	Yes	Yes	Yes	Yes
<b>OPTIONAL EQUIPMENT</b>	Flat Drop Bale Chute Roller Bale Chute (for high moisture bales) Bale Ejector Kit Bale Accumulator	Field Working Lights Knotter Cleaner Bale Ejector Kit Fire Extinguisher	INA	INA

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## COMPETITIVE COMPARISON LB34 LARGE RECTANGULAR BALER

MAKE MODEL	Challenger LB34	New Holland BB960	Case-IH LBX431
<b>DIMENSIONS &amp; WEIGHT</b>			
Overall Width in (m)	117 (2.97)	126 (3200)	126 (3200)
Overall Length ft (m)	285 (7.24)	285 (7.24)	285 (7.24)
Overall Height ft (m)	140 (3.56)	120 (3.05)	120 (3.05)
Total Weight lbs (kg)	17,680 (7980)	16,534 (7500)	16,534 (7500)
Tongue Weight lbs (kg)	2950 (1338)	INA	INA
<b>BALE SIZE &amp; WEIGHTS</b>			
Bale Width in (mm)	47.2 (1200)	47.2 (1200)	47.2 (1200)
Bale Height in (mm)	34.4 (875)	35.4 (899)	35.4 (899)
Bale Length (max. in (mm)	98 (2489)	98.4 (2500)	98.4 (2500)
Bale Weight lbs (kg)	1000 (454)	1000 (454)	1000 (454)
Cross Section (width x height)	1083.6 sq. in.		
Bale Volume	61 cu. ft.		
<b>TRACTOR REQUIREMENTS</b>			
Horsepower (minimum)	120 (kW)	120 (89 kW)	120 (89 kW)
PTO	1000 rpm	1000 rpm	1000 rpm
Hydraulics	2 remotes	2 remotes	2 remotes
Electrical System	12 volt	12 volt	12 volt
<b>MAIN DRIVE TRAIN</b>			
Drive Line Protection	Yes	Yes	Yes
Shear Bolt	Yes	Yes	Yes
Overrunning Clutch	Yes	Yes	Yes
Slip Clutch	Slip w/Shearbolt	Slip w/Shearbolt	Slip w/Shearbolt
Main Gearbox	Bevel & Spur Gear	Bevel & Spur Gear	Bevel & Spur Gear
<b>PICKUP</b>			
Working Width in (mm)	77.5 (1968)	78.7	78.7
Tine Bars & No. of Tines	4 - 112	4 - 112	4 - 112
Protection	Slip Clutch	Slip Clutch	Slip Clutch
Gauge Wheels	(2) 4.00 x 8	(2) 4.00 x 6	(2) 4.00 x 6
Lift Control	Hydraulic	Hydraulic	Hydraulic
<b>PLUNGER</b>			
Mounting	6 Sealed Bearings	6 Sealed Bearings	6 Sealed Bearings
Speed spm	41	42	42
Length of Stroke in (mm)	28 (710)	28 (710)	28 (710)
<b>TYING SYSTEM</b>			
Style	Double Knotter	Double Knotter	Double Knotter
Number of Knotters	6	5	5
Spacing of twines in (mm)	7 (178)		
Twine Capacity (# of Balls)	30	26	26
Type of Twine	Sisal or Plastic	Sisal or Plastic	Sisal or Plastic
Recommended			

## COMPETITIVE COMPARISON LB34 LARGE RECTANGULAR BALER

<b>MAKE MODEL</b>	<b>Challenger LB34</b>	<b>New Holland BB960</b>	<b>Case-IH LBX431</b>
<b>BALE CHAMBER TENSIONING</b> Type of System System Source	Electronic Controlled Hydraulics Tractor Hydraulics	Electronic Controlled Hydraulics Self-Contained	Electronic Controlled Hydraulics Self-Contained
<b>TIRES</b> Standard Tire Size (Baler) Pickup Gauge Wheel size	700/50-22.5 4.00 x 8/2	21.5L x 16.1 /14 4.00 x 6	21.5L x 16.1 /14 4.00 x 6
<b>LUBRICATION SYSTEM</b> Knotters Other Baler Components	Standard Standard	Standard Standard	Standard Standard
<b>CONTROL &amp; MONITOR SYSTEM</b> Type Baler Controls Accumulator Controls Functions Monitored	Microprocessor Bale Density Yes -Plunger Load -Bale Chamber (Tension Pressure) -Bale Count (Total & Field) Flake per Bale -Driving Indicators -Stuffer Cycle -Knotter & Needle - Performance -Feeder Slip -Gearbox Overheating	Microprocessor Bale Density DNA -Plunger Load -Bale Chamber (Tension Pressure) -Bale Count (Total & Field) -Stuffer Cycle -Knotter & Needle - Performance -Feeder Slip	Microprocessor Bale Density DNA -Plunger Load -Bale Chamber (Tension Pressure) -Bale Count (Total & Field) -Stuffer Cycle -Knotter & Needle - Performance -Feeder Slip
<b>OPTIONAL EQUIPMENT</b>	Pan Bale Chute Roller Bale Chute (for high moisture bales)  Bale Accumulator	INA	INA

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## **COMPETITIVE COMPARISONS**

### **LB33, LB34 LARGE RECTANGULAR BALER**

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#### **Challenger features to sell compared to the New Holland BB940 and BB960 big balers or Case-IH LBX 331 and 431**

- Simpler drives with only five drive chains keep maintenance and expenses low.
- Easy timing of knotter and stuffer to the plunger drive.
- Pre-compression chamber, packer, and stuffer are simpler in design, and proven reliable over many seasons of service.
- True bale density measures bale load (density) through two load cells on the plunger connecting rods. This is much superior to measuring gearbox deflection.
- Tractor hydraulic valves are used to supply hydraulic oil to keep the bale density control valve simple and effective.
- Six knotters are used on the Challenger 4790 (vs. 5 knotters on the New Holland BB960 or Case-IH LBX 431), to allow more density to be built into every bale.
- Knotter fan employs a hydraulic drive for higher airflow volume.
- The bale ejector can be set to remove all crop in the bale chamber, or just the last bale, for better ejector utilization.
- A bale accumulator that is integrated into the baler design, and utilizes the baler control box.

#### **Challenger features to sell compared to the John Deere 100 big baler**

- Simpler drives with only five drive chains keep maintenance and expenses low.
- Easy timing of knotter and stuffer to the plunger drive.
- Pre-compression chamber gives uniform bale flake in light or heavy windrows, for better bale shape and density.
- True bale density measures bale load (density) through two load cells on the plunger connecting rods. This is much superior to measuring gearbox deflection.
- Tractor hydraulic valves are used to supply hydraulic oil to keep the bale density control valve simple and effective.
- A double knotter is used to build high-density bales with fewer knotter problems than a single knotter.

## **COMPETITIVE COMPARISONS LB33, LB34 LARGE RECTANGULAR BALER**

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### **Challenger features to sell compared to the Claas 2200 big baler**

- Simpler drives with only five drive chains keep maintenance and expenses low.
- Easy timing of knotter and stuffer to the plunger drive.
- Pre-compression chamber gives uniform bale flake in light or heavy windrows, for better bale shape and density.
- True bale density measures bale load (density) through two load cells on the plunger connecting rods. This is much superior to measuring gearbox deflection.
- Tractor hydraulic valves are used to supply hydraulic oil to keep the bale density control valve simple and effective.
- A double knotter is used to build high-density bales with fewer knotter problems than a single knotter.

### **Challenger features to sell compared to the Freeman 1592 big baler**

- Simpler drives with only five drive chains keep maintenance and expenses low.
- Easy timing of knotter and stuffer to the plunger drive.
- Pre-compression chamber gives uniform bale flake in light or heavy windrows, for better bale shape and density.
- True bale density measures bale load (density) through two load cells on the plunger connecting rods. This is much superior to measuring gearbox deflection.
- Tractor hydraulic valves are used to supply hydraulic oil to keep the bale density control valve simple and effective.
- A double knotter is used to build high-density bales with fewer knotter problems than a single knotter.

(Specifications and design are subject to change without notice and without liability therefore.)

Sales Engineering, July 2002