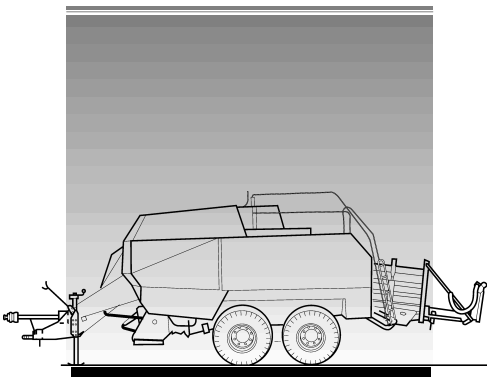


CASE

LBX322
LBX332
LBX422
LBX432

OPERATOR'S MANUAL

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SAFETY PRECAUTIONS

Farm accidents can be prevented with your help

No accident prevention programme can be successful without the wholehearted co–operation of the person who is directly responsible for the operation of the equipment.

To read of accident reports from all over the country is to be convinced that a large number of accidents can be prevented only by the operator anticipating the result before the accident is caused and doing something about it.

It is said that ”The best kind of safety device is a careful operator who with care and mature consideration can save more lives and limbs than any accident prevention programme which is not adhered to”.

Further in this section you will find a list of the most important safety precautions.

CAUTION

This symbol is used throughout this manual whenever your personal safety is involved.

Take time to read and follow the instructions and furthermore, be careful!

Some pictures in this manual may show the safety guarding open or removed to better illustrate a particular feature or adjustment.

Ensure to close or replace all guards before operating the machine.

General recommendations

1. Your square baler was designed with safety very much in mind. However, there is no real substitute for caution and attention in preventing accidents. Once an accident has happened it is too late to think about what you should have done!

2. Remember that the machine has been designed exclusively for agricultural use. Any other application must first be authorised by the manufacturer.

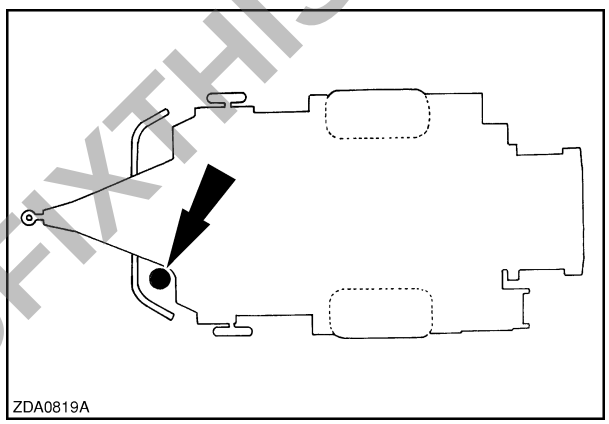
3. Read this manual thoroughly before starting, operating, servicing or carrying out any other operation on the machine. A few minutes' reading will save you time and hassle later.

4. Read all the safety decals adhered to the machine and follow the instructions. Immediately replace any decals that are missing or damaged. Place orders for these with your local dealer.

5. The machine should only be operated by responsible persons instructed on how to operate the machine and authorised to do so. Always keep a first aid kit handy.

6. Always keep a first aid kit handy.

7. It is highly recommended that a fire extinguisher (e.g. 6kg) be kept in a location on the machine, easily accessible from the ground. Recommended location is shown on figure below.



Electrical power lines:

Danger of death by electrocution!

Pay special attention to overhead electric power lines. Make sure the machine has sufficient clearance to pass in all directions (also with raised or open machine components!). Also think of the radio aerial(s) or any other factory–fitted accessory or parts which may have been added afterwards.

Should a contact between the machine an an electric power line occur, then following precautions must be taken: Stop the machine movement immediately, stop the engine and apply the handbrake. Check if you can safely leave the cab or your present position without touching the lines, jump off the last step or support position to ensure that there is no contact between any part of your body and the ground at any time. Do not touch the machine afterwards until power to the lines has been shut off. When people approach the machine, warn them not to touch the machine but ask the electric power supply company to shut off the power to the lines.

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SECTION 2 - CONTROLS, INSTRUMENTS AND OPERATION

CONTROLS, INDICATORS AND GAUGES

FLYWHEEL BRAKE

Due to the inertia of the moving parts of the baler, a flywheel brake is provided for quickly stopping the flywheel, thus all moving parts, when it is necessary (i.e. after a shearbolt has broken).

The flywheel brake is a direct−acting type and is applied by pulling the handle from the vertical position (1) down, toward horizontal position (2), and vice versa. (Fig. 1).

When the brake is activated, the flywheel should stop within 12 seconds with the tractor PTO disengaged and the machine at full speed.

Always make sure the flywheel brake has been released before engaging the PTO and operating the baler.

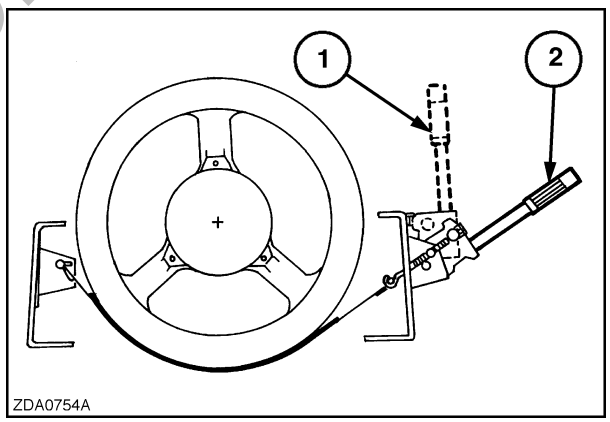
Flywheel brake disengaged (normal operation)

Flywheel brake engaged (set)

IMPORTANT: *Always engage the flywheel brake when transporting the baler from one field to another or on the road, otherwise the flywheel bearings will be damaged.*

⚠ WARNING ⚠

Do not attempt to carry out adjustments or maintenance work until the baler flywheel has stopped rotating. Always engage the flywheel brake before carrying out adjustments or maintenance work.
Never attempt to stop the baler with the tractor PTO engaged. Always disengage the tractor PTO before using the flywheel brake.



1

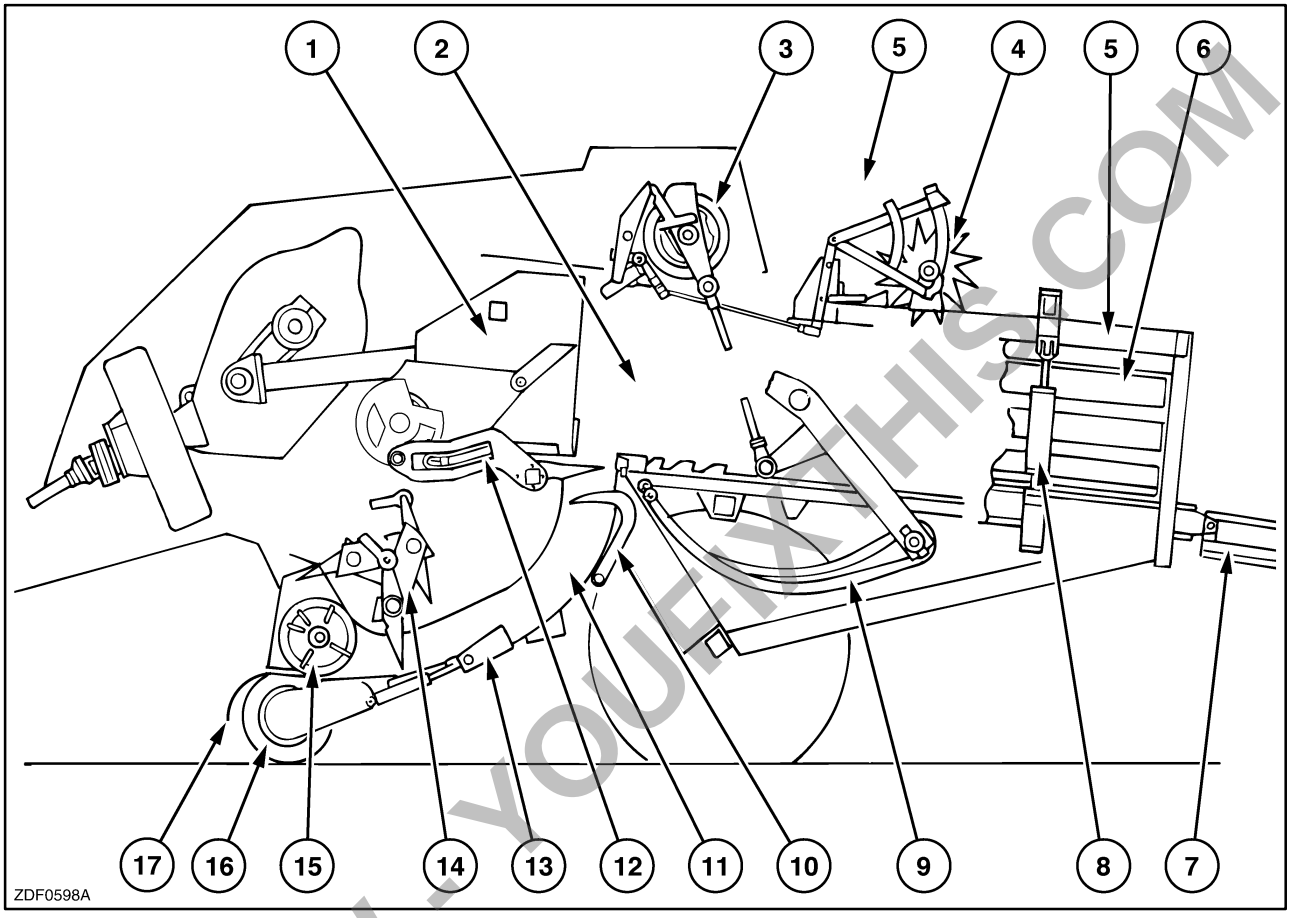
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Refer to Section 2 “Controls, Instruments and Operation”, paragraph headed “Parking the baler”.

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SECTION 3 - FIELD AND SITE OPERATION

DESCRIPTION OF OPERATION



1

1. Plunger
2. Bale chamber
3. Knotters
4. Bale length metering wheel
5. Bale chamber top door
6. Bale chamber side doors
7. Bale chute
8. Density cylinders
9. Needles
10. Crop holding fingers
11. Pre−compression chamber
12. Stuffer fork
13. Pre-compression sensing mechanism
14. Packer (or Rotor)
15. Pick-up centering augers
16. Pick-up
17. Baffle plate

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LUBRICATION AND MAINTENANCE QUICK REFERENCE

This section is designed to a give quick and easy way of locating all the grease fittings and carrying out lubrication and maintenance operations per interval.

SERVICE INTERVALS AND ITEMS	Check	Clean	Lube	Change	Adjust	Drain	PAGE No
10 HOURS OR 400 BALES OR DAILY							
Centralised greasing system (if your machine is not equipped with the automatic greasing system, grease all five grease banks)			x				4–5
Automatic greasing system (if fitted)	x				x		4–15
Ball ring hitch (if fitted)			x				4–17
Stuffer clutch pawl			x				4–17
Stuffer clutch housing			x				4–17
Knotter clutch pawl			x				4–18
Main drive overrun clutch (LBX332 models only)			x				4–18
Knotter clutch housing			x				4–18
Automatic oiler system	x				x		4–23
Crop cutting knife sharpening	x				x		4–45
Baler		x					4–88
PTO drive line (protective plastic shields only)							4–20
Previous + **50 HOURS OR 2000 BALES OR WEEKLY**							
PTO drive line (CV joint, U–joints, shields & shaft)			x				4–20
PTO mid ship bearing			x				4–21
Knotter drive PTO (upper and lower)			x				4–21
Rear wheel spindles (on units with tandem auto-steer axle only)			x				4–22
Main drive gearbox	x				x		4–26
Stuffer drive gearbox	x				x		4–27
Knotter drive gearbox	x				x		4–28
Bale density hydraulic circuit	x				x		4–29
Chain tension	x				x		4–32
Main PTO drive slip clutch	x				x		4–35

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SECTION 5 - FAULT FINDING

In troubleshooting knotter malfunctions, it is necessary to identify the characteristics of the knot mistie, then match the characteristic of the mistie to the concern column and to identify the possible cause and remedy. Operate the baler through the tying cycle manually or using the tractor engine at idle rpm.

Thereby the items listed under “Possible Cause” can be observed to determine the concern. Refer to the knotter maintenance section for additional information and correct adjustment and procedure.

TYING

CONCERN	POSSIBLE CAUSE	REMEDY
GENERAL		
Excessive bill hook tongue breakage.	Second knot hanging on bill hook.	See below.
Twine discs do not stay in time.	Twine disc drive pinion pin sheared.	Replace pin.
	Adjustable knotter worm gear slips on shaft.	Lock nut not tight or spacer washers holding gear on tapered shaft are broken.
		Check for cracked worm gear and replace, if necessary.
	Worn or broken gears.	Replace gears.
Knotter clutch will not engage.	Clutch arm stuck.	Free up clutch arm and lubricate clutch arm pivot.
	Metering wheel and knotter trip arm out of adjustment.	See knotter trip arm linkage adjustment
Failure to obtain sufficient tension on twine with roller–type tensioners.	Trash in tensioner rollers.	Clean every day.
	Groove worn in tensioner rollers.	Replace the tensioner rollers.
	Twine entangled in twine boxes.	Check twine routing.
	Crop residues accumulating along the twine routage.	Clean regularly.

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OVERALL MEASUREMENTS

4 KNOTTER BALERS	LBX322 Standard	LBX322 Packer–Cutter	LBX322 Rotor–Cutter	LBX332 Standard	LBX332 Packer–Cutter	LBX332 Rotor–Cutter
Specifications						
A: Length with bale chute closed	7230 (284 5/8")	7230 (284 5/8")	7600 (299 3/16")	7230 (284 5/8")	7230 (284 5/8")	7600 (299 3/16")
B: Length with bale chute half–folded	7940 (312 5/8")	7940 (312 5/8")	8310 (327 3/16")	7940 (312 5/8")	7940 (312 5/8")	8310 (327 3/16")
B: Length with bale chute extended	8510 (335 1/16")	8510 (335 1/16")	8880 (349 5/8")	8510 (335 1/16")	8510 (335 1/16")	8880 (349 5/8")
C: Width (600/55–22.5–12PR tyres)	2580 (101 3/4")	2580 (101 3/4")	2580 (101 3/4")	2580 (101 3/4")	2580 (101 3/4")	2580 (101 3/4")
C: Width (700/45–22.5–12PR tyres)	2820 (111")	2820 (111")	2820 (111")	2820 (111")	2820 (111")	2820 (111")
C: Width (500/50–17–14PR tyres) Width (500/50R17–146D tyres)	2520 (99 1/4")	2520 (99 1/4")	2520 (99 1/4")	2520 (99 1/4")	2520 (99 1/4")	2520 (99 1/4")
D: Height single axle	3000 (118")	3000 (118")	3100 (122 1/4")	3100 (122 1/4")	3100 (122 1/4")	3200 (126")
D: Height tandem axle	2950 (116")	2950 (116")	3050 (120 1/16")	3050 (120 1/16")	3050 (120 1/16")	3150 (124")

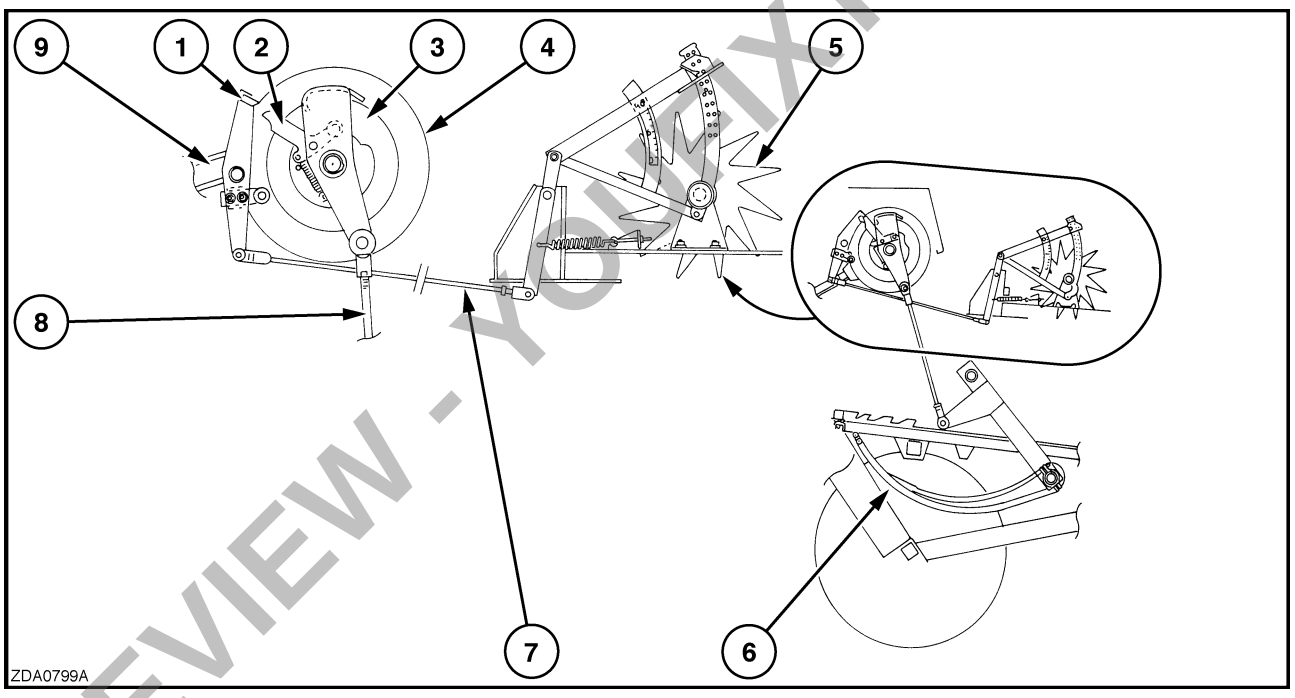
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The double knot system requires two balls of twine for each knotter, one supplying twine from the top of the bale chamber, the other supplying twine from the bottom of the bale chamber. The system uses a needle with a roller at the top and another roller just below.

The second roller carries the bottom twine and the top roller picks up the top twine and carries both into the knotter where they are tied together. The double knot knotter operates in the same way as a conventional single knotter. The only difference is in the knotter cam gears which have two sets of teeth causing the bill hook, twine disc and stripper arm to operate twice during one needle cycle to tie two knots.

KNOTTER / NEEDLE DRIVE COMPONENTS



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1. Declutch cam
2. Clutch arm
3. Clutch housing
4. Knotter gearbox
5. Metering wheel
6. Needles
7. Knotter trip control linkage
8. Needle control linkage
9. PTO drive shaft

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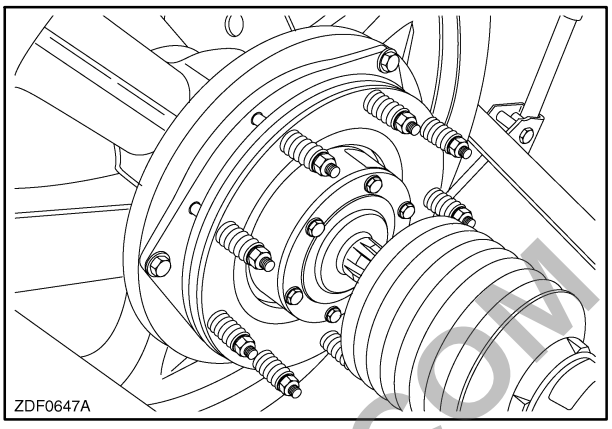
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MAIN DRIVE

PTO DRIVE SLIP CLUTCH

All models

The slip clutch requires very little maintenance, all that is required is the spring length setting is set and maintained on a regular basis

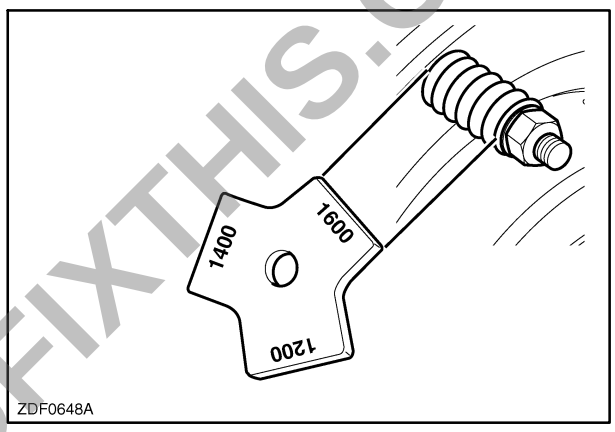


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To check and reset the spring insert the tang of the special tool (identified with the torque value to match your machine) between the two spring contact points.

Then tighten or loosen the spring retaining nut to achieve a spring length to match the tang length.

Adjust opposite springs in a clockwise direction to ensure all are checked and adjusted equally.



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Model	Tool setting	Spring length
LBX322–S LBX322–P LBX332–S LBX332–P	1200 Nm (885 lbf.ft)	46.4 mm 1.82 in
LBX322–R LBX332–R LBX422–S LBX432–S	1400 Nm (1032 lbf.ft)	45.4 mm 1.78 in
LBX422–R LBX432–R	1600 Nm (1180.lbf.ft)	44.4 mm 1.74 in

Burnishing the slip clutch

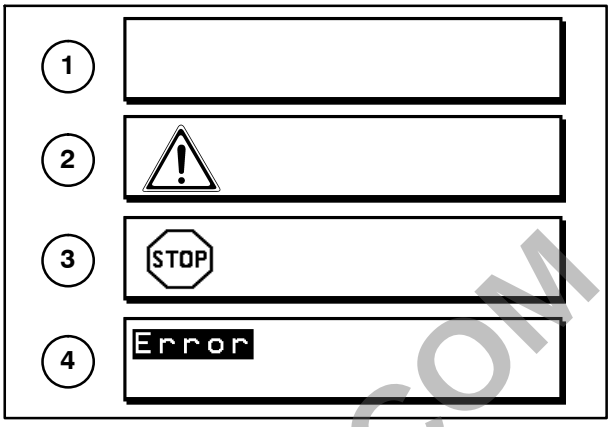
Before starting a new baling season, slip this clutch for a few seconds.

1. Release the pressure of the friction plate by loosening all the spring nuts slightly.
2. Block the flywheel by using the flywheel brake.
3. Engage the tractor PTO at a slow speed for a few seconds. Stop the tractor and release the flywheel brake.
4. Retighten all spring nuts to achieve the spring lengths as in the table above.

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MONITOR MESSAGES



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Any operating problem of the baler is indicated on the monitor by a specific message.

Four kinds of messages can appear on the monitor.

1. Operational
2. Warning
3. STOP
4. Error

1. Operational messages:
   Will inform the operator on normal baler functions.
   two operational messages can appear:

- knotting cycle
- bale drop

2. Warning messages:
   Will not keep the operator from baling but can be considered as driving aids.

NOTE: *These messages have priority on the operational messages.*

3. Alarm messages:
   Will be displayed in case of functional faults which lead to possible machine damage. A stop symbol is part of the message and immediate action is required.

NOTE: *These messages have priority on the operational and warning messages.*

4. Error messages:
   Will appear in case of failure of electric or electronic components.

All of the prior messages are described in more detail through the following pages.

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Item	Servicing interval	Amount/unit (litres)	Brand name and grade	International specificaton
Integrated automatic oiler	Daily	5 litres (1.2 US gal)	AKCELA™ HYDRAULIC FLUID 32 MS1216 or AKCELA™ HYDRAULIC FLUID 46 MS1216 or AKCELA™ HYDRAULIC FLUID BIO MS1230 SAE 15W–40	DIN 51524 part 2 HV46 (except ASTM D943) or ISO VG 46 API CE MIL-L-2104 E API CF-2/SJ
Linkages, threaded rods and pivots	Monthly	–	AKCELA™ GEAR 135H EP LS SAE 80W-90	API GL5 MIL-L-2105 D
Main drive gearbox	Annually	20 litres (5,3 US gal)	AKCELA™ GEAR 135H EP SAE 85W-140	API GL5 MIL-L-2105 D
Stuffer drive gearbox	Annually	3,75 litres (1 US gal)		
Knotter drive gearbox	Annually	2,75 litres (0,7 US gal)		
Bale density hydraulic circuit	Annually	Entire circuit: Approx 9 litres (2.4 US gal)	AKCELA™ HYDRAULIC FLUID BIO MS1230	DIN 51524 part 2 HV46 or ISO VG 46

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ATTACHING THE BALER TO THE TRACTOR

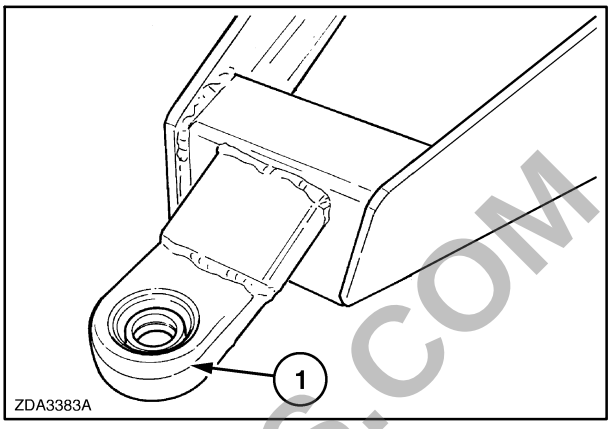
Tractor drawbar with pin

Balers are equipped with a 33 mm dia swivel ball hitch insert (1) designed to fit a 30 mm pin and clevis–type swinging drawbar on the tractor.

This meets both ISO and ASAE standards used on most tractors, but other tractors may have different drawbar hole and pin sizes, for example:

Description	Hole Dia	Pin Dia
Hitch Insert	33 mm (1.3 in)	30 mm (1.2 in) ISO Cat. II (Std)
Hitch Insert	41 mm * (1.61 in)	38 mm (1.5 in) ISO Cat. III
Hitch Insert	42 mm * (1.65 in)	40 mm (1.57 in) ASAE Cat. III

NOTE: *(*) Optional for large tractors*



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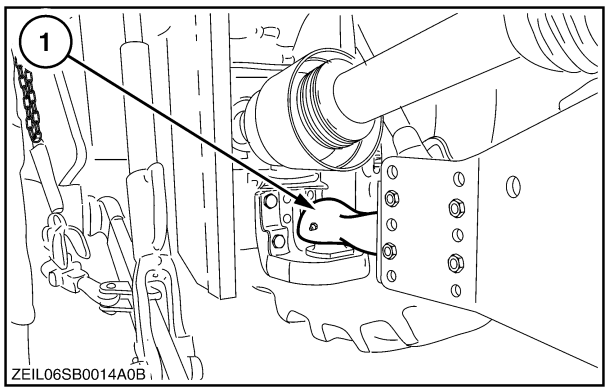
Tractor drawbar with fixed ball hitch

Balers can be equipped with an (optional) 80 mm dia fixed ball hitch designed to fit an 80 mm ball on the tractor.

This meets both ISO and ASAE standards used on most tractors, but other tractors may have different drawbar ball sizes:

Description	Ball Dia
Ball hitch	80 mm (3.15 in)

IMPORTANT: *The ball hitch must he retained in position with a lock plate. Refer to the tractor Operator's manual for more information.*



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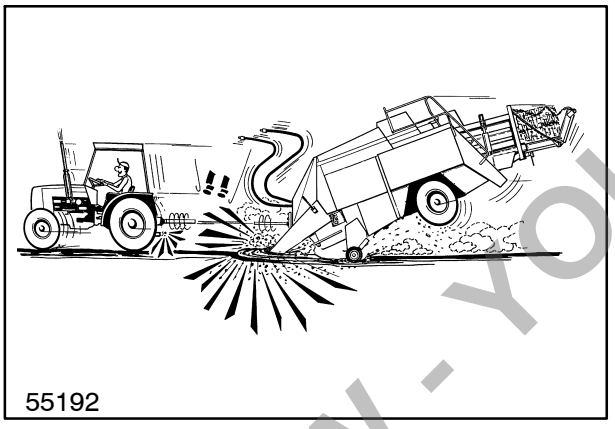
Operating the baler

1. Before attaching the baler to the tractor, ensure that the tractor is in good working order and that the brakes are efficient, particularly if operating on hilly ground. Also, ensure that the hydraulic system is compatible with that of the baler.

2. Add a reinforcement to the drawbar to carry the weight of the baler (check with your dealer to prevent damage to your tractor or possible accidents).

3. After attaching the baler to the tractor, ensure that the PTO lock pin is properly engaged in the tractor power take–off shaft. An incorrectly locked PTO shaft could work loose and cause accidents or damage to the machine.

4. Make sure that the tractor drawbar hitch pin is securely locked to prevent the pin from bouncing out.


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5. Check that the electrical system is working correctly, as well as the direction indicator lights.

6. Avoid a fire hazard by keeping the machine perfectly clean.

7. To extinguish a fire, proceed as follows:

   - Move tractor and baler upwind as far as possible from flammable material.

   - Do not eject the bale, as this increases exposure of the bale and baler components to the open air which only boosts the fire.

   - Detach the baler from the tractor at once: electrics, hydraulics, PTO shaft. Pull the hitch pin out and drive the tractor away.

   - Use a fire extinguisher or pressurised water supply to put out the fire. Call for help from bystanders or call the fire brigade if the fire persists.

   This recommended procedure might not be correct for all situations, use your own judgement as well, which is the best course of action.

Transporting the baler

1. Before transporting the baler on a public road:

   - Raise and secure the pick–up to the highest position. Release the hydraulic pressure from the lift cylinder.

   - Engage the flywheel brake.

   - Lock the needle yoke.

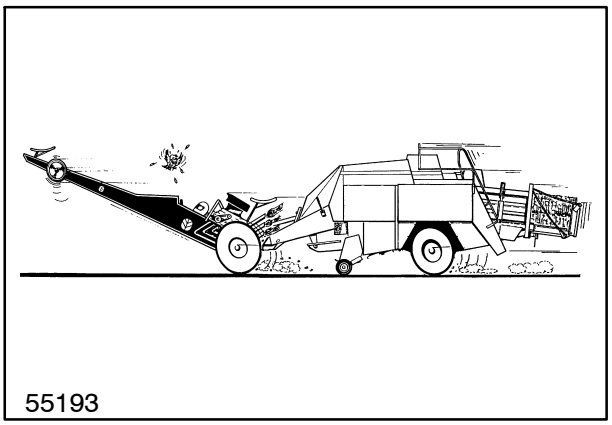
   - Raise the bale chute to close the bale chamber.

2. When travelling on public roads, always observe highway code regulations.

3. Never travel at speed in crowded areas.

4. Keep the towing speed down to 40 km/h or less depending on local road transport legal regulations.

5. The towing speed must not exceed the limit determined by local legislation.


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6. Use the rotating amber traffic warning beacons of both tractor and baler to indicate the vehicle has abnormal size and is slow–moving.

7. Always use safety signals or adequate lights when travelling with the machine on a public highway. Check with the authorities for specific requirements.

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OWNER ASSISTANCE

We at Case IH and your Case IH dealer want you to be completely satisfied with your investment. Normally your dealer's Service Department will handle any problems with your equipment. Sometimes, however, misunderstanding can occur. If your problem has not been handled to your satisfaction, we suggest contacting the owner or General Manager of the dealership, explaining the problem, and requesting assistance. When additional assistance is needed, your dealer has direct access to our branch office.

IMPROVEMENTS AND CHANGES

The company is continually striving to improve its products, and therefore reserves the right to make improvements and changes when it comes practical and possible to do so, without incurring any obligation to make changes or additions to the equipment sold previously.

All data given in this book is subject to production variations. Dimensions and weights are approximate only and the illustrations do not necessarily show balers in standard condition. For exact information about any particular machine please consult your Dealer.

ACCESSORIES

Your machine has been designed to operate in a wide variety of crops and conditions. Nevertheless additional equipment may, in certain cases, be required to improve the machine performance. A list of this additional equipment is given in the "Accessories" section in this manual.

SERVICE PARTS AND ACCESSORIES

Genuine service parts and accessories have been specially designed for your machine.

We would like to point out that "non−genuine" parts and accessories have not been examined and released by the Company. The installation and/or use of such products could thus have negative effects upon the design characteristics of your machine and thereby affect its safety. The Company is not liable for any damage caused by the use of "non−genuine" parts and accessories.

Rely on your authorised dealer to supply you with genuine Case IH parts only. These parts are covered by our warranty and will give you the best performance.

When ordering service parts, always quote the model and serial number as well as the year of manufacture which is printed on the manufacturer's identification plate.

WARRANTY

Your machine is warranted according to legal rights in your country and the contractual agreement with the selling dealer. No warranty shall, however, apply if the machine has not been used, adjusted and maintained according to the instructions given in this Operator's Manual.

It is prohibited to carry out any modifications to the machine unless specifically authorised, in writing, by a Case IH representative.

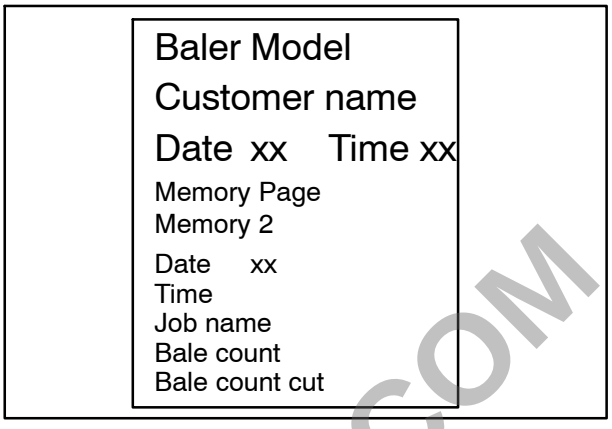
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An example of the printed memory information:

Baler Model
Customer name *
Date and time print was made

Title of screen printed (in this instance Memory Page)
Memory Page No2
Date of input to the memory
Job name *
Balecount
Balecount cut



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***NOTE:** * Entered using the monitor, refer to pages 2–47 and 2–63.*

How to change error handling

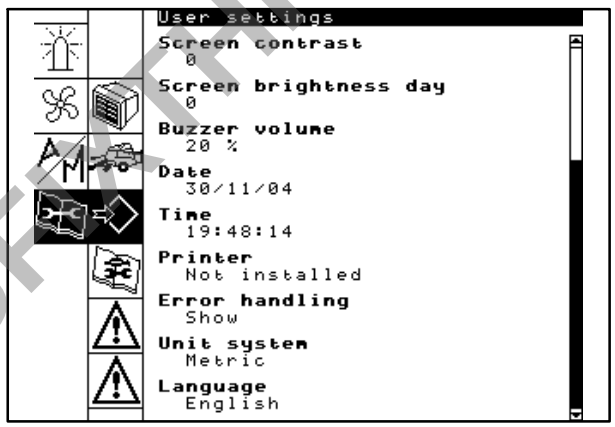
System errors can be displayed at the moment they occur or can be suppressed.

In case “suppressed” has been chosen, the warning indicator will appear in the indicator box, but the error message will not appear on the screen. To read the error message, select “active errors” from the service mode sub-menu.

Select the item ”error handling” by using the navigation keys.

The current selection will be highlighted.

- Use the minus (–) and plus (+) keys to choose the selection you prefer.
- Press the enter key to confirm your choice. The next item will become highlighted.



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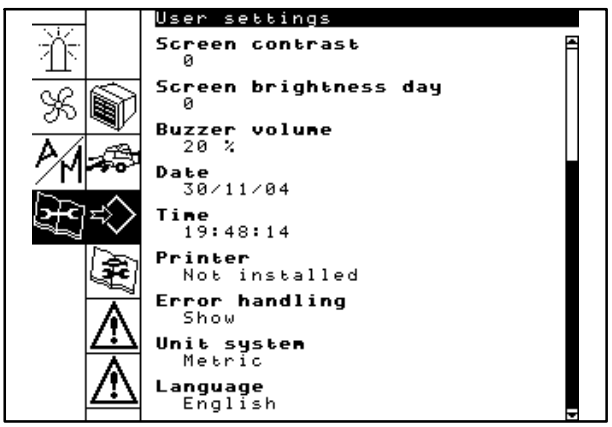
How to change unit system

Units can be displayed Metric or Imperial-inches.

Select the item ”Unit system” by using the navigation keys.

The current unit system will be highlighted.

- Use the minus (–) and plus (+) keys to choose the system you prefer.
- Press the enter key to confirm your choice. The next item will become highlighted.



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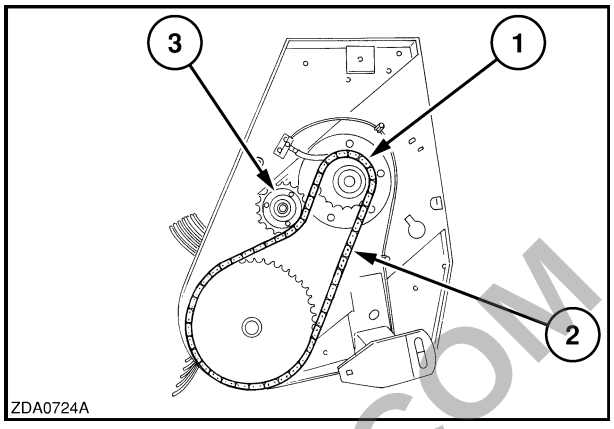
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LBX322 – LBX332R – LBX422R – LBX432R

The auger drive chain (1) tension is correct when auger drive chain (1) can be deflected 20 mm (3/4”) at (2) when applying a force of 80 N (18 lbf).

Adjust with idler sprocket (3).



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