LBX322, LBX332, LBX422, LBX432

Repair Manual

CE

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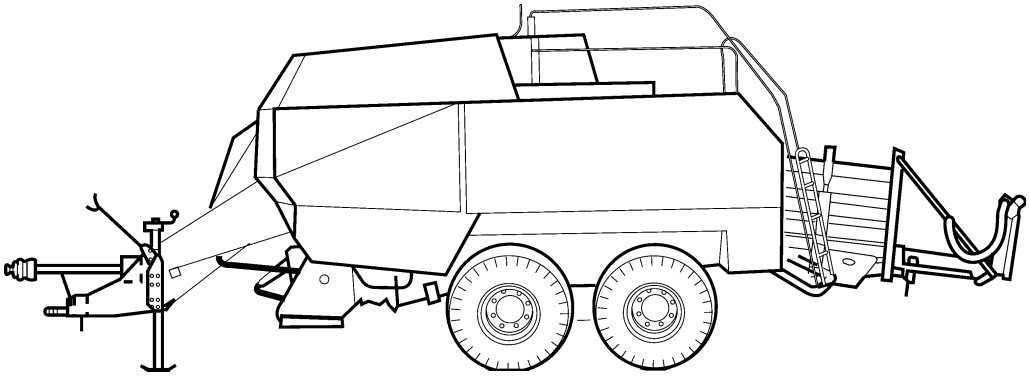
CASE

REPAIR MANUAL



LBX322 P , LBX322 R , LBX322 S , LBX332 P , LBX332 R , LBX332 S , LBX422 R , LBX422 S , LBX432 R , LBX432 S

Contents

INTRODUCTION

Contents

INTRODUCTION

Foreword

How to use this manual

The information in this manual has been structured using the Integrated Coding Environment (ICE). Ice is the new way in which technical information is created, stored and retrieved in the new Technical Information Database.

ICE coding classifies each repair operation three ways

1. Location: the function or component on the machine to which the information is related e.g. Hydraulic pump
2. Information type: the type of information describing the repair operation e.g. Remove
3. Product: The machine that the repair operation is created for e.g. Big Balers

Section contents

Your manual is first divided in sections. Sections are classified according to the main functions of the product. Each Section has a Contents page listed in numerical order and Index page listed in Alphabetical order.

Big Baler Section Contents

- DISTRIBUTION SYSTEMS
  (A) that interact with most of the functions of the product. it contains the central parts of the hydraulic, electrical, electronic, pneumatic and lubrication systems.
- POWER PRODUCTION
  (B) all of the functions related to the production of power to operate the vehicle PTO drive line and related parts.
- POWER TRAIN
  (C) all of the functions related to the transfer of power to operate the vehicle though a gearbox.
- TRAVELLING
  (D) this encompasses all parts related to the parts when the vehicle moves across ground, wheels, axles and brakes.
- BODY AND STRUCTURE
  (E) and protective shields
- CROP PROCESSING
  (K) encompasses all parts related to crop handling from pick up to bale ejecting.

Chapter contents

The Section is then divided in Chapters. Chapters are classified according to the specific function of the systems and components. Each Chapter has a contents page listed in numerical order and index page listed in alphabetical order.

An example of a Chapter and Contents, is the component e.g. LUBRICATION SYSTEM Greasing, where the system is sub divided and described through

1. TECHNICAL DATA, information describing specifications or characteristics of any function or system of the machine.
2. FUNCTIONAL DATA, information describing design and functional behavior of any function or system (How it works)
3. SERVICE, information describing the maintenance and repair of the machine.
4. DIAGNOSTIC, information related to systems, troubleshooting and errors.

An example of the ICE Coding reference could look like:

Pump - Overhaul (A.60.B)

- A = SECTION
- 60 = CHAPTER
- B.20 = COMPONENT
- F = SERVICE

- 10 = BASIC
- A.40 = OVERHAUL

Page reference

Printed references found at the base of each page then equate to

- Publication number
- Revision date of the publication
- Publication date
- Chapter reference
- Page reference

Safety rules

WARNING AND DANGER SYMBOLS
Warning symbols point out important personal safety messages. Carefully read the following safety regulations and observe advised precautions in order to avoid potential hazards and safeguard your health and safety. In this manual the symbol is accompanied by the following key words:
WARNING: concerning unsuitable repair operations that may jeopardise the safety of Repair personnel.
DANGER: Specific warnings concerning potential hazards for operator safety of for other persons directly or indirectly involved.
ACCIDENT PREVENTION
Most accidents or injuries that occur in workshops are the result of non-observance of simple and fundamental safety regulations. For this reason,
IN MOST CASES THESE ACCIDENTS CAN BE AVOIDED by foreseeing possible causes and consequently acting with the necessary caution and care. Accidents may occur with all types of machines, regardless of how well the machine in question was designed and built. A careful and judicious service technician is the best guarantee against accidents. Precise observance of the most basic safety rules is normally sufficient to avoid many serious accidents
DANGER Never carry out any cleaning, lubrication or maintenance operations when the tractor engine is running.
ACCIDENT PREVENTION Most accidents or injuries that occur in workshops are the result of non-observance of simple and fundamental safety regulations.
SAFETY RULES General guidelines
Carefully follow specified repair and maintenance procedures.
Do not wear rings, wristwatches, jewellery, unbuttoned or loose articles of clothing such as: ties, torn clothing, scarves, open jackets or shirts with open zips that may remain entangled in moving parts. It is advised to wear approved safety clothing, e.g.: non-slip footwear; gloves, safety goggles, helmets, etc.
Do not carry out repair operations with someone sitting in the drivers seat, unless the person is a trained technician who is assisting with the operation in question.
Do not operate the machine or use any of the implements from different positions, other than the drivers seat.
Do not carry out operations on the machine with the tractor engine running, unless specially indicated.
Stop the tractor engine and check that the hydraulic circuits are pressure-free before removing caps, covers, valves, etc.
All repair and maintenance operations must be carried out using extreme care and attention.
Service steps and platforms used in the workshop or elsewhere should be built according to standard accident prevention regulations.
Disconnect the p.t.o. from the tractor and label all controls to indicate that the machine is being serviced. Any parts that are to be raised must be locked in position.
Brakes are inoperative when manually released for repair or maintenance purposes. Use blocks or similar devices to control the machine in these conditions.
Only use specified towing points for towing the machine. Connect parts carefully. Make sure that all pins and / or locks are secured in position before applying traction. Never remain near the towing bars, cables or chains that are operating under load.
When loading or unloading the machine from the trailer (or other means of transportation), select a flat area capable of sustaining the trailer or truck wheels. Firmly secure the machine to the truck or trailer and lock the wheels in the position by the carrier.
Electric heaters, battery-chargers and similar equipment must only be powered by auxiliary power supplies with efficient ground insulation to avoid electrical shock hazards.
Always use suitable hoisting or lifting devices when raising or moving heavy parts. w Take extra care if bystanders are present.
Never use gasoline, diesel oil or other inflammable liquids as cleaning agents. Use non-inflammable, non toxic commercially available solvents.
Wear safety goggles with side guards when cleaning parts with compressed air.
Reduce the air pressure according to the local regulations in force.
Do not run the tractor engine in confined spaces without suitable ventilation.
Never use naked flames for lighting when working on the machine or checking for leaks.
All movements must be carried out carefully when working under, on or near the machine. Wear protective equipment: helmets, goggles and special footwear.
When carrying out checks with the tractor engine running, request the assistance of an operator in the driver's seat. The operator must maintain visual contact with the service technician at all times.
If operating outside the workshop, position the machine on a flat surface and lock in position. If working on a slope, lock the machine in position. Move to a flat area as soon as is safely possible.
Damaged or bent chains or cables are unreliable. Do not use them for lifting or towing. Always use suitable protective gloves when handling chains or cables.
Chains should always be safely secured. Make sure that the hitch-up point is capable of sustaining the load in ques-

tion. Keep the area near the hitch-up point, chains or cables free of all bystanders.
Maintenance and repair operations must be carried out in a CLEAN and DRY area. Eliminate any water or oil spillage immediately.
Do not create piles of oil or grease-soaked rags as they represent a serious fire hazard. Always store rags in a closed metal container. Before engaging the machine, make sure that there are no persons within the machine or implement range of action.
Empty your pockets of all objects that may fall accidentally unobserved into the machine inner compartments.
In the presence of protruding metal parts, use protective goggles or goggles with side guards, helmets, special footwear and gloves.
When welding, use protective safety devices: tinted safety goggles, helmets, special overalls, gloves and footwear. All persons present in the area where welding is taking place must wear tinted goggles.
NEVER LOOK DIRECTLY AT THE WELDING ARC WITHOUT SUITABLE EYE PROTECTION.
Metal cables tend to fray with repeated use. Always use suitable protective devices (gloves, goggles, etc.) when handling cables.
Handle all parts carefully. Do not put your hands or fingers between moving parts. Wear suitable safety clothing - safety goggles, gloves and shoes.
Never run the tractor engine in confined spaces that are not equipped with adequate ventilation for exhaust gas extraction.
Never place the head, body, limbs, feet, hands or fingers near rotating and moving parts. HYDRAULIC SYSTEMS
A liquid leaking from a tiny hole may be almost invisible but, at the same time, be powerful enough to penetrate the skin. Therefore NEVER USE HANDS TO CHECK FOR LEAKS but use a piece of cardboard or wood for this purpose.
If any liquid penetrates skin tissue, call for medical aid immediately. Failure to treat this condition with correct medical procedure may result in serious infection or dermatosis.
In order to check the pressure in the system use suitable instruments.
WHEELS AND TYRES Make sure that the tyres are correctly inflated at the pressure specified by the manufacturer. Periodically check the rims and tyres for damage.
Stand away from (at the side of) the tyre when checking inflation pressure.
Do not use parts of recovered wheels as incorrect welding brazing or heating may weaken and eventually cause damage to the wheel.
Never cut or weld a rim mounted with an inflated tyre.
To remove the wheels, lock all wheels. After having raised the machine, position supports underneath, according to regulations in force.
Deflate the tyre before removing any objects that may be jammed in the tyre tread.
Never inflate tyres using inflammable gasses, as this may result in explosions and injury to bystanders.
REMOVAL AND RE-FITTING Lift and handle all heavy parts using suitable hoisting equipment. Make sure that parts are sustained by appropriate hooks and slings. Use the hoisting eyebolts for lifting operations. Extra care should be taken if persons are present near the load to be lifted.
Handle all parts carefully. Do not put your hands or fingers between parts. Wear suitable safety clothing - safety goggles and shoes.
Avoid twisting chains or metal cables. Always wear safety gloves when handling cables or chains.

⚠ WARNING ⚠

PTO driven machinery can cause serious injury. Before working on or near the PTO shaft, or servicing or clearing the driven machine, put the PTO switch in the DISENGAGE position and STOP the engine. R154B

⚠ WARNING ⚠

Whenever dismounting from a vehicle stop all power sources, lower equipment to the ground, shut off engine, use park brake or lock, and remove key. M288A

IMPORTANT INFORMATION
All repair and maintenance works listed in this manual must be carried out only by staff belonging to the service network, strictly complying with the instructions given and using, whenever required, the special tools. Anyone who carries out the above operations without complying with the prescriptions shall be responsible for the subsequent damages.
The manufacturer and all the organizations of its distribution chain, including - without limitation - national, regional or local dealers, reject any responsibility for damage due to anomalous behaviour of parts and / or components not approved by the manufacturer himself, including those used for servicing or repair of the product manufacturers or marketed by the Manufacturer. In any case, no warranty is given or attributed on the product manufacturers of marketed by the Manufacturer in case of damages due to an anomalous behaviour of parts and / or components not

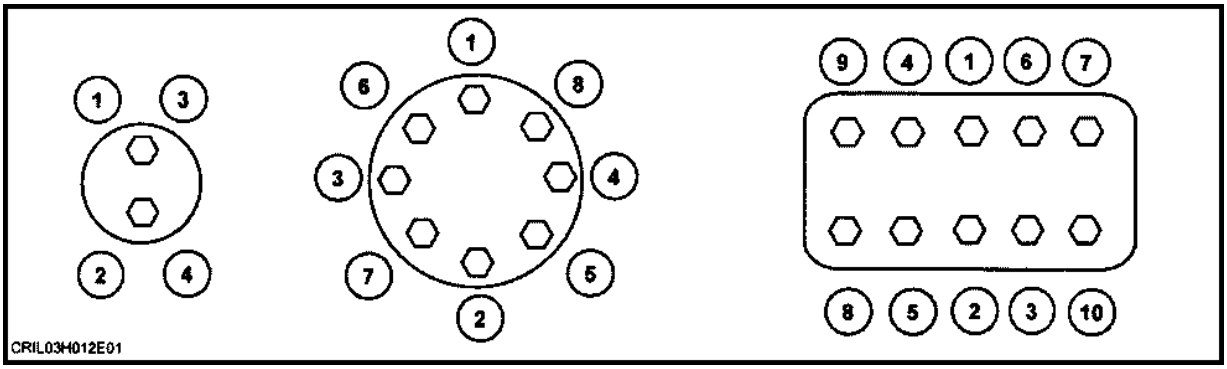
approved by the Manufacturer. No reproduction, though partial of text and illustrations allowed
GENERAL INSTRUCTIONS
SHIMMING For each adjustment operation, select adjusting shims and measure individually using a micrometer, then add up the recorded values. Do not rely on measuring the entire shimming set, which may be incorrect, or the rated value indicated for on each shim.
ROTATING SHAFT SEALS For rotating shaft seal installation, proceed as follows: - Before assembly, allow the seal to soak in the oil for at least thirty minutes - Thoroughly clean the shaft and check that the working surface on the shaft is not damaged - Position the sealing lip facing the fluid; with hydrodynamic lips, take into consideration the shaft rotation direction and position the grooves so that they will deviate the fluid towards the inner side of the seal - Coat the sealing lip with a thin layer of lubricant (use oil rather than grease) and fill the gap between the sealing lip and the dust lip on double lip seals with grease - Insert the seal in its seat and press down using a flat punch, do not tap the seal with a hammer or a mallet - Whilst inserting the seal, check that it is perpendicular to the seat; once settled, make sure that it makes contact with the thrust element, if required - To prevent damaging the seal lip on the shaft, position a protective guard during installation operations.
O - RING SEALS Lubricate the O-RING seals before inserting them in the seats, this will prevent them from overturning and twisting, which would jeopardise sealing efficiency.
SEALING COMPOUNDS Apply one of the following sealing compounds on the mating surfaces marked with an X: RTV SILMATE, RHODORSIL CAF 1 or LOCTITE PLASTIC GASKET. Before applying the sealing compound, prepare the surfaces as follows: - Remove any incrustations using a metal brush; - Thoroughly de-grease the surfaces using one of the following cleaning agents: trichlorethylene, petrol or a water and soda solution
COTTER PINS When fitting split cotter pins, ensure that the pin notch is positioned in the direction of the force required to stress the pin. Spiral cotter pins do not require special positioning.
SPARE PARTS Only use original spare parts bearing the logo shown below. Only genuine spare parts guarantee the same quality, duration and safety as original parts, as they are the same parts that are assembled during standard production. Only genuine spare parts can offer this guarantee. When ordering spare parts, always provide the following information: -
Machine model (commercial name) and serial number -
Part number of the ordered part, which can be found in the "Microfiches" or the "Spare Parts Catalogue", used for order processing
TOOLS used and illustrated in this manual have been: -
Specially researched and designed for use with these machines -
Essential for reliable operations -
Accurately built and rigorously tested so as to offer efficient and long-lasting operation By using these tools, Repair Personnel will benefit from: -
Operating in optimal technical conditions -
Obtaining the best results -
Saving time and effort -
Working in safe conditions

NOTE: *Wear limit values indicated for certain parts should be considered to be recommended, but not binding.*
The terms "front", "rear", "right-hand" and "left-hand" (when referred to different parts) are determined from the rear, facing the direction of travel during operation.

Torque

Minimum hardware tightening torques Nm lb ft lb in for normal assembly applications unless otherwise stated

IMPORTANT: *Shown below is the suggested initial torque tightening sequences for general applications, tighten in sequence from item 1 through to the last item of the hardware.*



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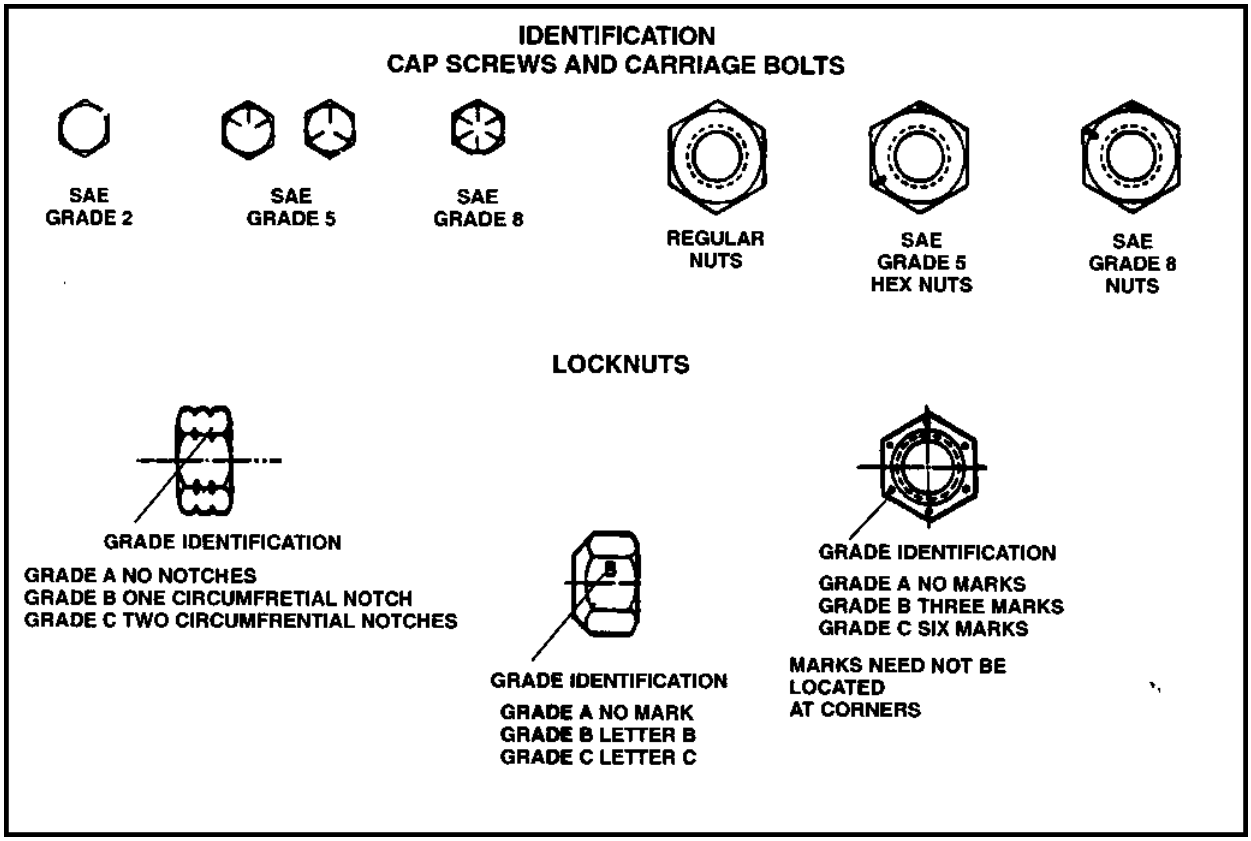
Imperial hardware

Nominal Size	SAE GRADE 2 Unplated or Silver plated	SAE GRADE 2 plated w/ZnCr GOLD	SAE GRADE 5 Unplated or Silver plated	SAE GRADE 5 plated w/ZnCr GOLD	SAE GRADE 8Unplated or Silver plated	SAE GRADE 8 plated w/ZnCr GOLD	LOCK-NUTS GR.B w/GR5 BOLT	LOCK-NUTS GR.B w/GR8 BOLT
1/4	6.2 Nm 55 lb in	8.1 Nm 72 lb in	9.7 Nm 86 lb in	13 Nm 112 lb in	14 Nm 121 lb in	18 Nm 157 lb in	6.9 Nm 61 lb in	9.8 Nm 86 lb in
5/16	13 Nm 115 lb in	17 Nm 149 lb in	20 Nm 178 lb in	26 Nm 229 lb in	28 Nm 250 lb in	37 Nm 324 lb in	14 Nm 125 lb in	20 Nm 176 lb in
3/8	23 Nm 17 lb ft	30 Nm 22 lb ft	35 Nm 26 lb ft	46 Nm 34 lb ft	50 Nm 37 lb ft	65 Nm 48 lb ft	26 Nm 19 lb ft	35 Nm 26 lb ft
7/16	37 Nm 27 lb ft	47 Nm 35 lb ft	57 Nm 42 lb ft	73 Nm 54 lb ft	80 Nm 59 lb ft	104 Nm 77 lb ft	41 Nm 30 lb ft	57 Nm 42 lb ft
1/2	27 Nm 42 lb ft	73 Nm 54 lb ft	87 Nm 64 lb ft	113 Nm 83 lb ft	123 Nm 91 lb ft	159 Nm 117 lb ft	61 Nm 45 lb ft	88 Nm 64 lb ft
9/16	81 Nm 60 lb ft	104 Nm 77 lb ft	125 Nm 92 lb ft	163 Nm 120 lb ft	176 Nm 130 lb ft	229 Nm 169 lb ft	88 Nm 65 lb ft	125 Nm 92 lb ft
5/8	112 Nm 83 lb ft	145 Nm 107 lb ft	174 Nm 128 lb ft	224 Nm 165 lb ft	244 Nm 180 lb ft	316 Nm 233 lb ft	122 Nm 90 lb ft	172 Nm 127 lb ft
3/4	198 Nm 146 lb ft	256 Nm 189 lb ft	306 Nm 226 lb ft	397 Nm 293 lb ft	432 Nm 319 lb ft	560 Nm 413 lb ft	217 Nm 160 lb ft	305 Nm 226 lb ft
7/8	193 Nm 142 lb ft	248 Nm 183 lb ft	495 Nm 365 lb ft	641 Nm 473 lb ft	698 Nm 515 lb ft	904 Nm 667 lb ft	350 Nm 258 lb ft	494 Nm 364 lb ft
1.0	289 Nm 213 lb ft	373 Nm 275 lb ft	742 Nm 547 lb ft	960 Nm 708 lb ft	1048 Nm 773 lb ft	1356 Nm 1000 lb ft	523 Nm 386 lb ft	739 Nm 545 lb ft

Metric hardware

Nominal Size	CLASS 5.8 UNPLATED	CLASS 5.8 UNPLATED	CLASS 8.8 UNPLATED	CLASS 8.8 UNPLATED	CLASS 10.9 UNPLATED	CLASS 10.9 UNPLATED	LOCKNUT CL.8 w/CL8.8 BOLT
M4	1.7 Nm 15 lb in	2.2 Nm 19 lb in	2.6 Nm 23 lb in	3.4 Nm 30 lb in	3.7 Nm 33 lb in	4.8 Nm 42 lb in	1.8 Nm 16 lb in
M6	5.8 Nm 51 lb in	7.6 Nm 67 lb in	8.9 Nm 79 lb in	12 Nm 102 lb in	13 Nm 115 lb in	17 Nm 150 lb in	6.3 Nm 56 lb in
M8	14 Nm 124 lb in	18 Nm 159 lb in	22 Nm 195 lb in	28 Nm 248 lb in	31 Nm 274 lb in	40 Nm 354 lb in	15 Nm 133 lb in

Nominal Size	CLASS 5.8 UNPLATED	CLASS 5.8 UNPLATED	CLASS 8.8 UNPLATED	CLASS 8.8 UNPLATED	CLASS 10.9 UNPLATED	CLASS 10.9 UNPLATED	LOCKNUT CL.8 w/CL8.8 BOLT
M10	28 Nm 21 lb ft	36 Nm 27 lb ft	43 Nm 32 lb ft	56 Nm 41 lb ft	61 Nm 45 lb ft	79 Nm 58 lb ft	30 Nm 22 lb ft
M12	49 Nm 36 lb ft	63 Nm 46 lb ft	75 Nm 55 lb ft	97 Nm 72 lb ft	107 Nm 79 lb ft	138 Nm 102 lb ft	53 Nm 39 lb ft
M16	121 Nm 89 lb ft	158 Nm 117 lb ft	186 Nm 137 lb ft	240 Nm 177 lb ft	266 Nm 196 lb ft	344 Nm 254 lb ft	131 Nm 97 lb ft
M20	237 Nm 175 lb ft	307 Nm 107 lb ft	375 Nm 277 lb ft	485 Nm 358 lb ft	519 Nm 383 lb ft	671 Nm 495 lb ft	265 Nm 195 lb ft
M24	411 Nm 303 lb ft	531 Nm 392 lb ft	648 Nm 478 lb ft	839 Nm 619 lb ft	897 Nm 662 lb ft	1160 Nm 855 lb ft	458 Nm 338 lb ft



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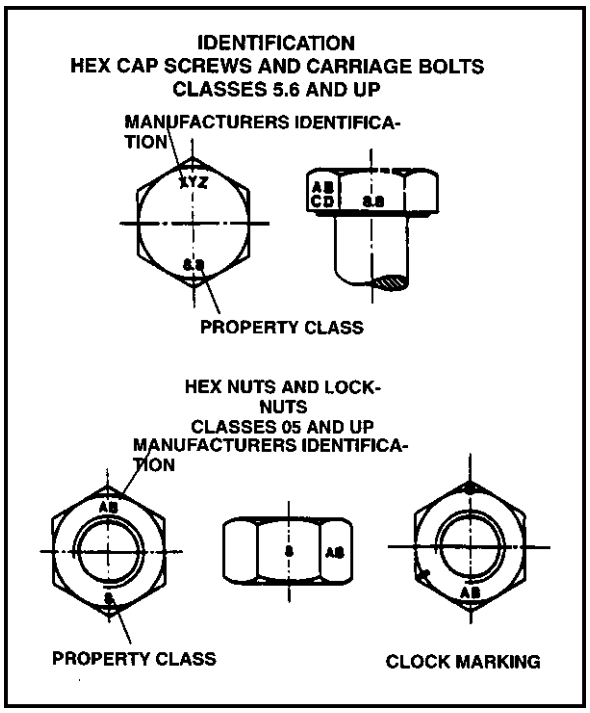
IDENTIFICATION
HEX CAP SCREWS AND CARRIAGE BOLTS
CLASSES 5.6 AND UP
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5.8
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CD
5.8
PROPERTY CLASS
HEX NUTS AND LOCK-
NUTS
CLASSES 05 AND UP
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PROPERTY CLASS
CLOCK MARKING

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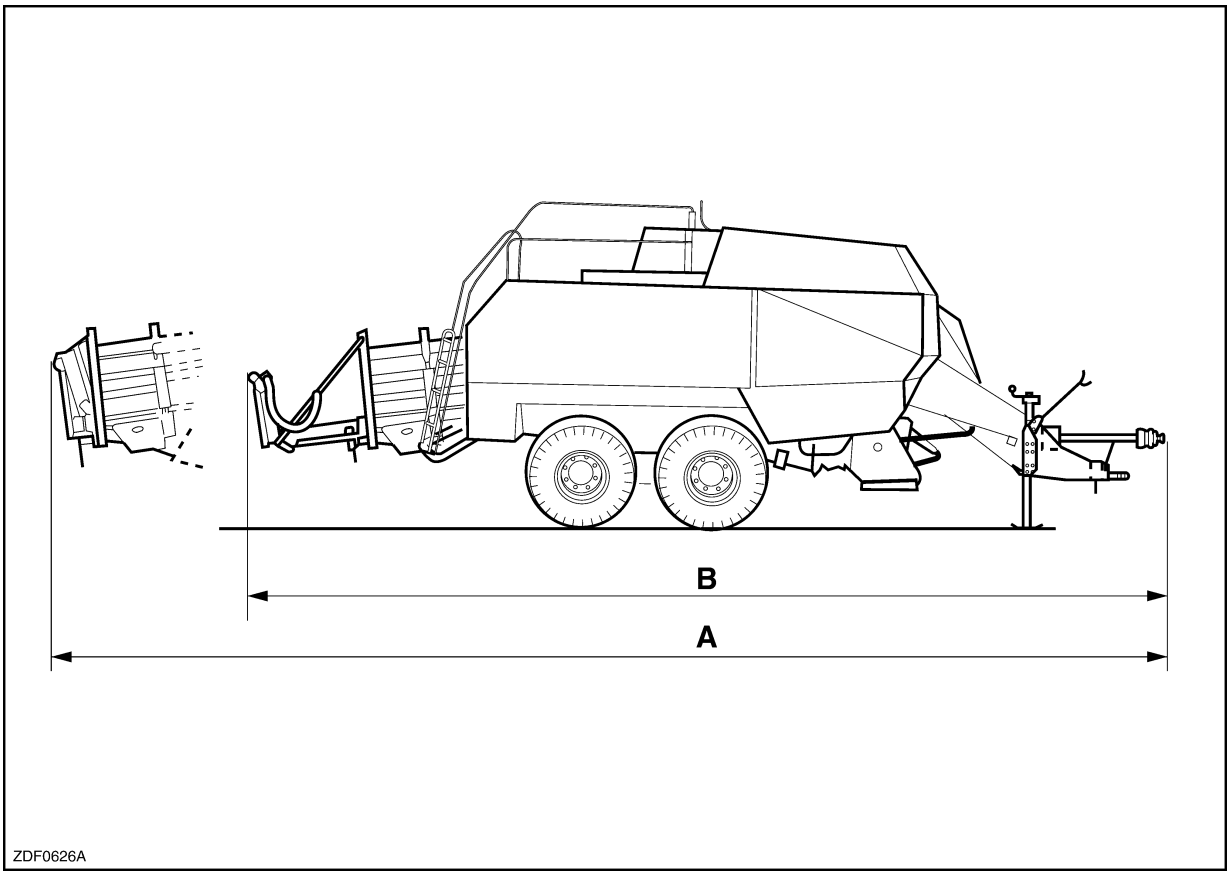
General specification



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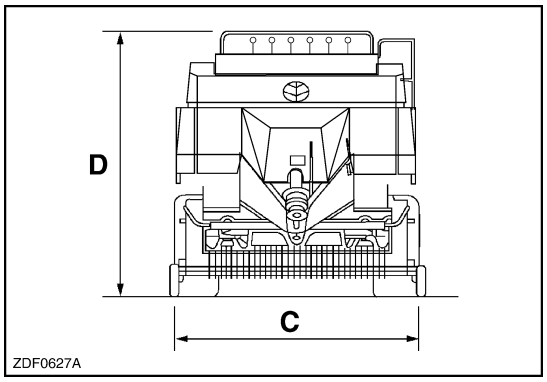

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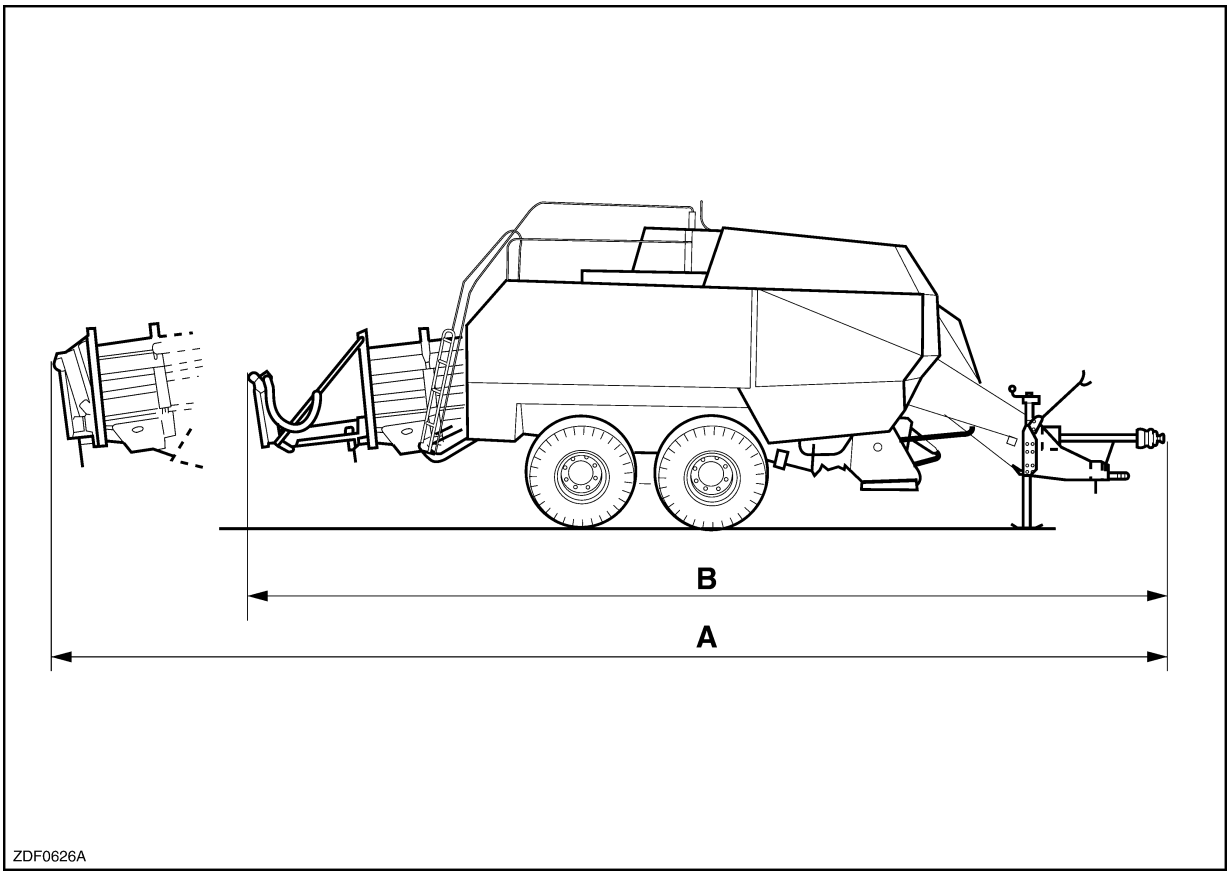
Specifications.	4 Knotter Standard	4 Knotter Packer Cutter	4 Knotter Rotor Cutter
AXLES			
A. Length with Bale chute removed	**7230 mm** (**248.6 in**).	**7230 mm** (**248.6 in**).	**7600 mm** (**299.2 in**).
B. Length with bale chute half folded	**7940 mm** (**312.6 in**).	**7940 mm** (**312.6 in**).	**8310 mm** (**327.2 in**).
B. Length with bale chute extended	**8510 mm** (**335.06 in**).	**8510 mm** (**335.06 in**).	**8800 mm** (**349.62 in**).
C. Width (600/55-22.5-12PR Tyres)	**2580 mm** (**101.75 in**).	**2580 mm** (**101.75 in**).	**2580 mm** (**101.75 in**).
C. Width (700/45-22.5-12PR Tyres)	**2820 mm** (**111 in**).	**2820 mm** (**111 in**).	**2820 mm** (**111 in**).

Specifications.	4 Knotter Standard	4 Knotter Packer Cutter	4 Knotter Rotor Cutter
C. Width (500/50-17-14PR Tyres. Width (500/50R17-146D Tyres)	**2520 mm** (**99.25 in**).	**2520 mm** (**99.25 in**).	**2520 mm** (**99.25 in**).
Height single axle	**3100 mm** (**122.25 in**).	**3100 mm** (**122.25 in**).	**3100 mm** (**122.25 in**).
Height tandem axle	**3050 mm** (**120.062 in**).	**3050 mm** (**120.062 in**).	**3050 mm** (**120.062 in**).
Weight (Base unit with bale eject system, roller bale chute, and brakes			
Baler empty	**6820 kg** (**15035 lb**).	**7170 kg** (**15807 lb**).	**7820 kg** (**17240 lb**).
At hook up ring (Baler empty)	**1120 kg** (**2469 lb**).	**1220 kg** (**2689 lb**).	**1320 kg** (**2910 lb**).
At axle wheel (Baler empty)	**5700 kg** (**12566 lb**).	**5950 kg** (**13117 lb**).	**6500 kg** (**14330 lb**).
Units with auto steer tandem axle			
Baler empty	**7420 kg** (**16358 lb**).	**7770 kg** (**17129 lb**).	**8420 kg** (**18563 lb**).
At hook up ring	**1120 kg** (**2469 lb**).	**1220 kg** (**2689 lb**).	**1360 kg** (**2998 lb**).
At axle wheel	**6300 kg** (**13889 lb**).	**6550 kg** (**14440 lb**).	**7060 kg** (**15564 lb**).
Swivel ring hitch	1. Standard ball size for **30 mm** (**1.18 in**) (ISO 6489-3 cat II and ASAE S482 cat II 2. Standard ball size for **38 mm** (**1.5 in**) (ISO 6489-3 cat III and ASAE S482 cat III 3. Standard ball size for **40 mm** (**1.57 in**) (ISO 6489-3 cat III and ASAE S482 cat III)		
Fixed ring hitch	Optional for German high hitch application (DINN 11026)		
Pivotable ring hitch	Optional for Italian application (CUNA type F2)		
Fixed ball hitch	Standard ball size for **80 mm** (**3.15 in**) (ISO 6489-3 cat II and ASAE S482 cat II)		
Single axle with hydraulic brakes	Options available		
Single axle with pneumatic brakes			
Single axle without brakes			
Spring mounted tandem and auto steer with hydraulic brakes			
Spring mounted tandem and auto steer with pneumatic brakes			
Spring mounted tandem and auto steer without brakes			
Auto steer Max. steering axle	**15 °**.	**15 °**.	**15 °**.
Parking brake	Folding crank type.		
PICK UP			
Operating width (DIN 11220)	**1982 mm** (**78.06 in**).	**1982 mm** (**78.06 in**).	**2000 mm** (**78.75 in**).
Width at deflectors	**1968 mm** (**77.5 in**).	**1968 mm** (**77.5 in**).	**1968 mm** (**77.5 in**).
Width at external tines	**1782 mm** (**70.18 in**).	**1782 mm** (**70.18 in**).	**1800 mm** (**70.87 in**).
Diameter (on guards)	**267 mm** (**10.5 in**).	**267 mm** (**10.5 in**).	**329 mm** (**12.93 in**).
Number of tines	56 double 112		
Tine spacing	**66 mm** (**2.62 in**).		
Number of bars	4		
Drive	Chain		
Protection	Slip and overrunning clutch (not adjustable) Preset at **1000 Nm** (**737 lb ft**).	Slip and overrunning clutch (not adjustable) Preset at **1000 Nm** (**737 lb ft**).	Slip and overrunning clutch (not adjustable) Preset at **1450 Nm** (**1069 lb ft**).
Gauge wheels	15 x 6.00-6-4pr		

Specifications.	4 Knotter Standard	4 Knotter Packer Cutter	4 Knotter Rotor Cutter
Pick up lift standard	Hydraulic. adjustable min. height setting		
Pick up flotation	Single adjustable right hand		
Pick up reel speed	**141 RPM**.	**140 RPM**.	**117 RPM**.
Centering auger diameter	**330 mm** (**13 in**).	**330 mm** (**13 in**).	**260 mm** (**10.25 in**).
Centering auger direction	Undershot		
Centering auger speed	**233 RPM**.	**231 RPM**.	**338 RPM**.
Windguard	Plate type, central, single height adjustment.		
FEEDER			
Packer / Rotor	Packer: 2 forks 6 single tines	Packer: 3 forks 6 single tines	Rotor: width W pattern **972 mm** (**38.25 in**).
Drive	Chain No. 80	Chain No. 100	Chain No. 120
Packer / Rotor rotation speed	**168 RPM**.	**166 RPM**.	**86 RPM**.
Protection	Slip clutch (not adjustable) preset at **2100 Nm** (**1549 lb ft**).	Slip clutch (not adjustable) preset at **4000 Nm** (**2950 lb ft**).	Slip clutch (not adjustable) preset at **6500 Nm** (**4795 lb ft**).
PRE-COMPRESSION			
Charge chamber	Volume **0.25 m³** (**8.83 ft³**).	Volume **0.25 m³** (**8.83 ft³**).	Volume **0.25 m³** (**8.83 ft³**).
Windrow size compensation	Automatic charge sensor engaged stuffer clutch, stuffer trip sensitivity lever		
Stuffer	Fork type with 4 tines	Fork type with 6 tines	Fork type with 4 tines
Drive	Oil bath gearbox		
Speed	Up to 42 cycles per minute		
Stuffer protection	Shearbolt M10 X 60 (10.9)		
Width	**800 mm** (**31.5 in**).		
BALE CHAMBER AND PLUNGER			
Plunger speed	42 strokes / min.		
Length of stroke	**710 mm** (**27.93 in**).		
Mounting	4 Vertical roller bearings running on recessed plunger rail, 2 horizontal bearings.		
Drive	Crank and connecting rod.		
Bale chamber size, width / height	**800 X 870 mm** (**31.5-34.25 in**).		
Bale chamber size, length	**2540 mm** (**100 in**).		
Bale density	Electric / hydraulic or hydraulic		
Density adjustment	From tractor seat, via monitor or manual density valve adjustment.		
Bale pressing	2 pivotable side panels and top panel.		
Bale Width	**800 mm** (**31.5 in**).		
Bale Height	**900 mm** (**35.43 in**).		
Bale Length	**1200-2500 mm** (**47.25-98.43 in**).		
Roller bale chute	Optional or standard depending on configuration		
Plate bale chute			
Bale eject, tractor controlled			
Bale ejection rear controlled			
TYING MECHANISM			
Knotters quantity and type	4 double knot		
Twine spacing	**172 mm** (**6.75 in**).		
Knotters / needle drive	Oil bath gearbox and PTO shaft		
Protection	Mechanical linkage, timed with the plunger shearbolt M8 X 60 (8.8)		
Knotter performance indicators	Monitor (audio and visual) and monitoring flags		
Twine storage	2 dust proof boxes		
Twine capacity	2 x 15 = 30 balls (2 interconnected balls per knotter and 3 interconnected balls per needle)		
Extra storage boxes	2 lockable boxes (each able to contain 2 balls of twine or a standard toolbox		

Specifications.	4 Knotter Standard	4 Knotter Packer Cutter	4 Knotter Rotor Cutter
Twine type:Heavy-duty plastic	110-150 m/kg		
Knot strength	**1560 N** (**350 lb**).		
Heavy-duty sisal	70 m/kg		
PTO speed	**1000 RPM**.		
PTO shaft	Low maintenance Power Drive		
PTO Protection	Shearbolt M10 x 70 (8.8). Overrunning clutch and slip clutch. Set at **1200 Nm** (**885 lb ft**).		Shearbolt M10 x 70 (8.8). Overrunning clutch and slip clutch. Set at **1400 Nm** (**1033 lb ft**).
Flywheel: Diameter and weight	**720 mm** (**28.37 in**) **234 kg** (**516 lb**).		
Flywheel brake	Direct acting		
Gearbox oil bath	Enclosed triple reduction gears spiral bevel (1st set) Spur (2nd set) Spur (3rd set)		
CUTTING SYSTEM			
Maximum number of knives	-	6	23
Knife distance	-	Centre **120 mm** (**4.72 in**) On the sides **100 mm** (**3.93 in**).	**39 mm** (**1.53 in**).
Theoretical cutting length	-	**114 mm** (**4.5 in**).	**40 mm** (**1.57 in**).
knife removal	-	From pick up front side	From knife drawer
Knife operation	-	Hydraulic from tractor, with status on the monitor	
Knife protection	-	Individual springs 2 off	Individual springs
Knife and blank storage	-	Separate	
BALER MONITOR (OPTIONAL)	The baler system from serial number 4412 are ISOBUS 11783 compatible at 60 amperes. Refer to the OPERATOR'S MANUAL for a full description of operating functions and settings that can be set and used before operating the baler.		

General specification



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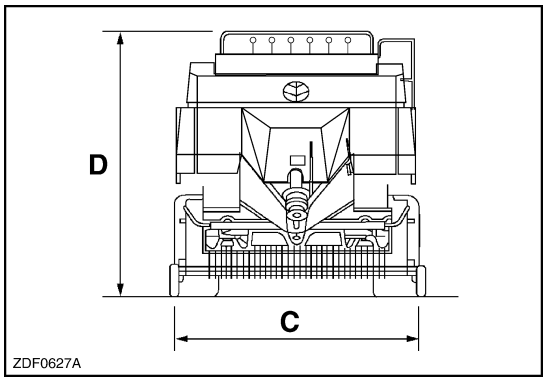

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Specifications	6 Knotter Standard	6 Knotter Rotor cutter
AXLES		
A. Length with Bale chute removed	**7230 mm** (**284.6 in**).	**7600 mm** (**299.18 in**).
B. Length with bale chute half folded	**7940 mm** (**312.6 in**).	**8310 mm** (**327.2 in**).
B. Length with bale chute extended	**8510 mm** (**335.06 in**).	**8800 mm** (**349.62 in**).
C. Width (600/55-22.5-12PR Tyres)	**2960 mm** (**116.75 in**).	**2960 mm** (**116.75 in**).
C. Width (700/45-22.5-12PR Tyres)	**3200 mm** (**126 in**).	**3200 mm** (**126 in**).
C. Width (500/50-17-14PR, Width (500/50R17-146D Tyres)	**2900 mm** (**114.25 in**).	**2900 mm** (**114.25 in**).
Height tandem axle	**2950-3050 mm** (**116-120.06 in**).	**3050-3150 mm** (**120.06-124 in**).
Weight (Base unit with bale eject system, roller bale chute, and brakes		

Specifications	6 Knotter Standard	6 Knotter Rotor cutter
Baler empty	**7720 kg** (**17019 lb**).	**8830 kg** (**19466 lb**).
At hook up ring (Baler empty)	**1280 kg** (**2822 lb**).	**1550 kg** (**3417 lb**).
At axle wheel (Baler empty)	**6440 kg** (**14198 lb**).	**7280 kg** (**16050 lb**).
Units with auto steer tandem axle		
Baler empty	**8320 kg** (**18342 lb**).	**9430 kg** (**20790 lb**).
At hook up ring	**1180 kg** (**2601 lb**).	**1550 kg** (**3417 lb**).
At axle wheel	**7140 kg** (**15741 lb**).	**7880 kg** (**17372 lb**).
Swivel ring hitch	1. Standard ball size for **30 mm** (**1.18 in**) (ISO 6489-3 cat II and ASAE S482 cat II 2. Standard ball size for **38 mm** (**1.5 in**) (ISO 6489-3 cat III and ASAE S482 cat III 3. Standard ball size for **40 mm** (**1.57 in**) (ISO 6489-3 cat III and ASAE S482 cat III)	
Fixed ring hitch	Optional for German high hitch application (DINN 11026)	
Pivotable ring hitch	Optional for Italian application (CUNA type F2)	
Fixed ball hitch	Standard ball size for **80 mm** (**3.15 in**) (ISO 6489-3 cat II and ASAE S482 cat II)	
Single axle with hydraulic brakes	Options available	
Single axle with pneumatic brakes		
Single axle without brakes		
Spring mounted tandem and auto steer with hydraulic brakes		
Spring mounted tandem and auto steer with pneumatic brakes		
Spring mounted tandem and auto steer with out brakes		
Auto steer Max. steering axle	**15 °**.	**15 °**.
Parking brake	Folding crank type	
PICK UP		
Operating width (DIN 11220)	**2246 mm** (**88.42 in**).	**2400 mm** (**94.5 in**).
Width at deflectors	**2232 mm** (**87.87 in**).	**2352 mm** (**92.62 in**).
Width at external tines	**2046 mm** (**80.56 in**).	**2200 mm** (**86.62 in**).
Diameter (on guards)	**267 mm** (**10.5 in**).	**329 mm** (**12.93 in**).
Number of tines	64 double 128	68 double 136
Tine spacing	**66 mm** (**2.625 in**).	
Number of bars	4	
Drive	Chain	
Protection	Slip and overrunning clutch (not adjustable) Pre set at **1000 Nm** (**737 lb ft**).	Slip and overrunning clutch (not adjustable) Pre set at **1450 Nm** (**1069 lb ft**).
Gauge wheels	15 X 6.00-6-4PR	
Pick up lift standard	Hydraulic. Adjustable minimum height setting.	
Pick up flotation	Single adjustable spring, right hand side.	
Pick up reel speed	**141 RPM**.	**117 RPM**.
Centering auger diameter	**330 mm** (**13 in**).	**260 mm** (**10.25 in**).
Centering auger direction	Undershot	Overshot
Centering auger speed	**233 RPM**.	**338 RPM**.
Windguard	Plate type central single height adjustment	
FEEDER		
Packer / Rotor	Packer: 3 forks 9 single tines	Rotor: width W pattern **972 mm** (**38.25 in**).
Drive	Chain No 80	Chain No 120
Packer / Rotor rotation speed	**168 RPM**..	**86 RPM**.

Specifications	6 Knotter Standard	6 Knotter Rotor cutter
Protection	Slip clutch (not adjustable) pre-set at **2100 Nm** (**1549 lb ft**).	Slip clutch (not adjustable) pre-set at **6500 Nm** (**4795 lb ft**).
PRE-COMPRESSION		
Charge chamber	Volume **0.3 m³** (**10.6 ft³**).	Volume + anti friction floor **0.3 m³** (**10.6 ft³**).
Windrow size compensation	Automatic charge sensor engaged stuffer clutch. Stuffer trip sensitivity lever.	
Stuffer	Fork type with 6 tines	Fork type with 4 tines
Drive	Oil bath gearbox	
Speed	Up to 42 cycles per minute	
Stuffer protection	Shearbolt M10x60	
Width	**1184 mm** (**46.625 in**).	**1184 mm** (**46.625 in**).
BALE CHAMBER AND PLUNGER		
Plunger speed	42 Strokes / min	
Length of stroke	**710 mm** (**27.95 in**).	
Mounting	4 Vertical roller bearings running on recessed plunger rail with 2 horizontal bearings.	
Drive	Crank and connecting rod	
Bale chamber size, width / height	**1184 X 070 mm** (**46.62 X 34.25 in**).	
Bale chamber size, length	**2540 mm** (**100 in**).	
Bale density	Electro hydraulic or hydraulic	
Density adjustment	From tractor seat using monitor or manual density valve	
Bale pressing	Two pivotable side panels and a pivotable top panel	
Bale Width	**1200 mm** (**47.25 in**).	
Bale Height	**700 mm** (**27.5 in**).	
Bale Length	**1200-2500 mm** (**47.25-98.425 in**).	
Roller bale chute	Optional items	
Plate bale chute		
Bale eject, tractor controlled		
Bale ejection rear controlled		
TYING MECHANISM		
Knotters quantity and type	6 double knot	
Twine spacing	**180 mm** (**7.09 in**).	
Knotters / needle drive	Oil bath grearbox and PTO shaft	
Protection	Mechanical linkage, timed with the plunger shearbolt M8x 60 (8.8)	
Knotter performance indicators	Monitor indication (audio-visual) and monitoring flags	
Twine storage	Two dust proof boxes	
Twine capacity	2 x 15 = 30 Balls Two interconnected balls per knotter Three interconnected balls per needle	
Extra storage boxes	Two lockable boxes	
Twine type: Heavy-duty plastic	110-150 m/kg	
Knot strength	**1560 N** (**350 lb**).	
Heavy-duty sisal	70 m/kg	
PTO speed	**1000 RPM**.	
PTO shaft	Low maintenance Power drive (40hr greasing)	
PTO Protection	Shearbolt M10 x 60 (10.9). Overrunning clutch and slip clutch. Set at **1400 Nm** (**1033 lb ft**).	Shearbolt M10 x 60 (10.9). Overrunning clutch and slip clutch. Set at **1600 Nm** (**1180 lb ft**).
Flywheel: Diameter and weight	**800 mm** (**31.5 in**)**270 kg** (**595 lb**).	
Flywheel brake	Direct acting	
Gearbox oil bath	Enclosed triple reduction gears spiral bevel = 3 Sets spur	
CUTTING SYSTEM		
Maximum number of knives	-	33
Knife distance	-	**39 mm** (**1.53 in**).
Theoretical cutting length	**40 mm** (**1.57 in**).	

Specifications	6 Knotter Standard	6 Knotter Rotor cutter
knife removal	-	From knife drawer
Knife operation	-	Hydraulic from tractor, with status on the monitor
Knife protection	Individual springs	
Knife and blank storage	-	Separate
BALER MONITOR (OPTIONAL)	The baler system from serial number 4412 are ISOBUS 11783 compatible at 60 amperes. Refer to the OPERATOR'S MANUAL for a full description of operating functions and settings that can be set and used before operating the baler.	

Consumables

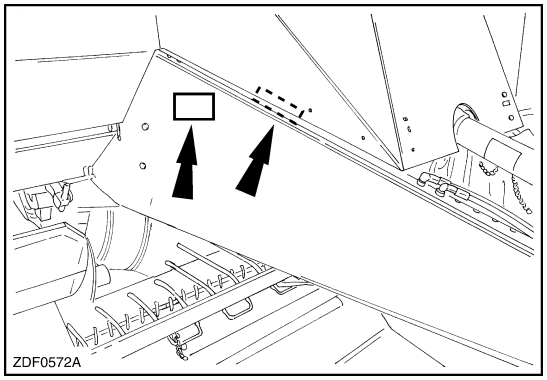
General Lubricants

IMPORTANT: *Consult the Operator Manual for the latest fluid types and quantities to use*

ITEM	Servicing Interval	Amount	International Specification
Centralised greasing System			
Plunger grease Bank	Daily	As required	**CASE AKCELA MOLY GREASE**Lithium NLGI 2
Left hand general grease Bank	Daily	As required	Lithium NLGI 2
Right hand general grease bank	Daily	As required	Lithium NLGI 2
Left hand knotter grease bank	Daily	As required	Lithium NLGI 2
Right hand knotter grease bank	Daily	As required	Lithium NLGI 2
Automatic greasing system	Daily	**4.0 L1 US gal**	Lithium NLGI 2
Remaining conventional grease points	10h 50h 100h 250h	As required	Lithium NLGI 2
Integrated automatic oiler	Daily	**5 L1.2 US gal**	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	As required	API GL5 MIL-L-2105 D
Main drive gearbox	Annually	**20 L5.3 US gal**	API GL5 MIL-L-2105 D
Stuffer drive gear box	Annually	**3.75 L1.0 US gal**.	API GL5 MIL-L-2105 D
Knotter drive gearbox	Annually	**2.75 L0.7 US gal**.	API GL5 MIL-L-2105 D
Bale density	Annually	**9.0 L2.4 US gal**.	DIN 51524 part 2 HV46 (except ASTM D943 or ISO VG 46 API CE MIL-L-2104 E API CF-2/SJ

Product identification

The machine is identified using a serial number and/or a manufacturing code. Machine identification information must be supplied when requesting parts.



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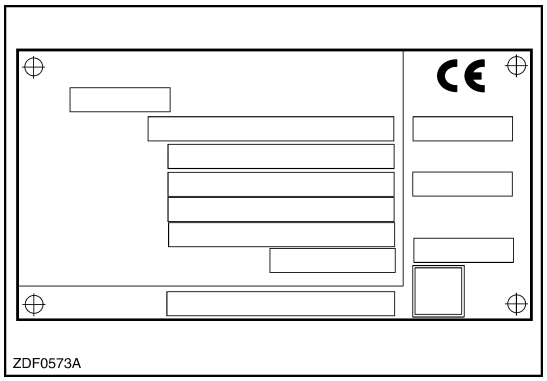
Model, serial number and year of manufacture are stamped on the manufacturer's identification plate. The vehicle identification plate is located on the right-hand side of the baler hitch. The serial number is also stamped in the baler hitch.



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EXPLANATION OF MACHINE SERIAL NUMBERS 344.

Example of serial number = No 344238013
344125001: The first two digits identify the model within a product line:
4 Knotter Standard 80x90 bale size = 30
4 Knotter Packer cutter 80x90 bale size = 31
4 knotter Rotor cutter 80x90 bale size = 32
6 Knotter Standard 120x70 Bale size = 33
6 Knotter Rotor cutter 120x70 Bale size = 34 as shown above
6 Knotter Standard 120x90 Bale size = 35
6 Knotter Rotor cutter 120x90 Bale size = 36
34 **(4)** 238013: The third digit indicates the product line. There are 5 product lines in Zedelgem: 4 = Balers
344 **(238)** 013: These 3 digits indicate the batch in which the machine was made.
34 **(4238)** 013: Product line number (4) and batch together form the series number (4238).
344238 **(013)**: The last 3 digits are a sequential number for each model within a batch.
Summarizing we can say that this machine is the 6 Knotter Rotor cutter 120x70 Bale size of series 4238.

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