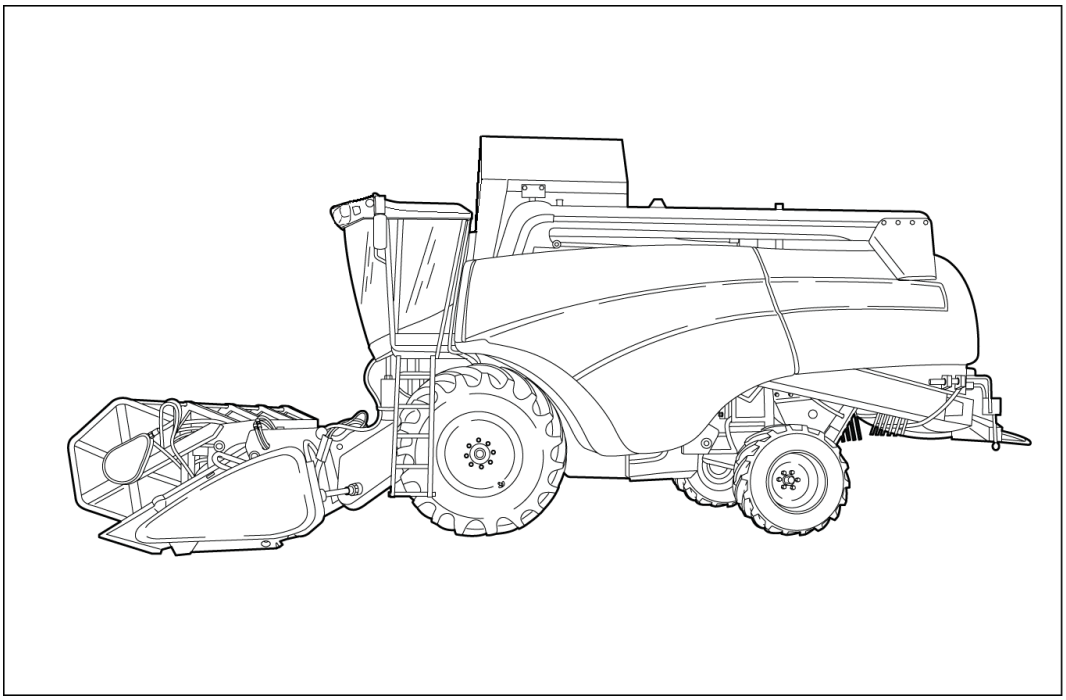
NEW HOLLAND
AGRICULTURE

SERVICE MANUAL



CX5000 series
CX6000 series

Contents

INTRODUCTION

Foreword

IMPORTANT INFORMATION

All repair and maintenance works listed in this manual must be carried out only by staff belonging to the NEW HOLLAND 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 damages due to the anomalous behavior of parts and/or components not approved by the manufacturer himself, including those used for the servicing or repair of the product manufactured or marketed by the Manufacturer. In any case, no warranty is given or attributed on the product manufactured or marketed by the Manufacturer in case of damages due to an anomalous behavior of parts and/or components not approved by the Manufacturer.

Foreword

Technical Information

This manual has been produced by a new technical information system. This new system is designed to deliver technical information electronically through CD-ROM and in paper manuals. A coding system called ICE has been developed to link the technical information to other Product Support functions e.g. Warranty.

Technical information is written to support the maintenance and service of the functions or systems on a customers machine. When a customer has a concern on his machine it is usually because a function or system on his machine is not working at all, is not working efficiently, or is not responding correctly to his commands. When you refer to the technical information in this manual to resolve that customers concern, you will find all the information classified using the new ICE coding, according to the functions or systems on that machine. Once you have located the technical information for that function or system then you will find all the mechanical, electrical or hydraulic devices, components, assemblies and sub assemblies for that function or system. You will also find all the types of information that have been written for that function or system, the technical data (specifications), the functional data (how it works), the diagnostic data (fault codes and troubleshooting) and the service data (remove, install adjust, etc.).

By integrating this new ICE coding into technical information , you will be able to search and retrieve just the right piece of technical information you need to resolve that customers concern on his machine. This is made possible by attaching 3 categories to each piece of technical information during the authoring process.

The first category is the Location, the second category is the Information Type and the third category is the Product:

- LOCATION - is the component or function on the machine, that the piece of technical information is going to describe e.g. Fuel tank.
- INFORMATION TYPE - is the piece of technical information that has been written for a particular component or function on the machine e.g. Capacity would be a type of Technical Data that would describe the amount of fuel held by the Fuel tank.
- PRODUCT - is the model that the piece of technical information is written for.

Every piece of technical information will have those 3 categories attached to it. You will be able to use any combination of those categories to find the right piece of technical information you need to resolve that customers concern on his machine.

That information could be:

- the description of how to remove the cylinder head
- a table of specifications for a hydraulic pump
- a fault code
- a troubleshooting table
- a special tool

How to Use this Manual

This manual is divided into Sections. Each Section is then divided into Chapters. Contents pages are included at the beginning of the manual, then inside every Section and inside every Chapter. An alphabetical Index is included at the end of a Chapter. Page number references are included for every piece of technical information listed in the Chapter Contents or Chapter Index.

Each Chapter is divided into four Information types:

- Technical Data (specifications) for all the mechanical, electrical or hydraulic devices, components and, assemblies.
- Functional Data (how it works) for all the mechanical, electrical or hydraulic devices, components and assemblies.
- Diagnostic Data (fault codes, electrical and hydraulic troubleshooting) for all the mechanical, electrical or hydraulic devices, components and assemblies.
- Service data (remove disassembly, assemble, install) for all the mechanical, electrical or hydraulic devices, components and assemblies.

Sections

Sections are grouped according to the main functions or a systems on the machine. Each Section is identified by a letter A, B, C etc. The amount of Sections included in the manual will depend on the type and function of the machine that the manual is written for. Each Section has a Contents page listed in alphabetic/numeric order. This table illustrates which Sections could be included in a manual for a particular product.

	SECTION										
	A - Distribution Systems										
		B - Power Production									
			C - Power Train								
				D - Travelling							
					E - Body and Structure						
						F - Frame Positioning					
							G - Tool Positioning				
								H - Working Arm			
									J - Tools and Couplers		
										K - Crop Processing	
											L - Field Processing
PRODUCT											
Tractors	X	X	X	X	X	X		X	X		
Vehicles with working arms: backhoes, excavators, skid steers, ...	X	X	X	X	X	X	X	X	X		
Combines, forage harvesters, balers, ...	X	X	X	X	X	X	X	X	X	X	
Seeding, planting, floating, spraying equipment, ...	X	X	X	X	X	X	X		X		X
Mounted equipment and tools, ...					X	X	X		X		

This manual contains these Sections. The contents of each Section are explained over the following pages.

Contents

Section Contents

SECTION A, DISTRIBUTION SYSTEMS
This Section covers the main systems that interact with most of the functions of the product. It includes the central parts of the hydraulic, electrical, electronic, pneumatic, lighting and grease lubrication systems. The components that are dedicated to a specific function are listed in the Chapter where all the technical information for that function is included.

SECTION B, POWER PRODUCTION
This Section covers all the functions related to the production of power to move the machine and to drive various devices.

SECTION C, POWER TRAIN
This Section covers all the functions related to the transmission of power from the engine to the axles and to internal or external devices and additional Process Drive functions.

SECTION D, TRAVELLING
This Section covers all the functions related to moving the machine, including tracks, wheels, steering and braking. It covers all the axles both driven axles and non-driven axles, including any axle suspension.

SECTION E, BODY AND STRUCTURE
This Section covers all the main functions and systems related to the structure and body of the machine. Including the frame, the shields, the operator's cab and the platform.

SECTION G, TOOL POSITIONING
This Section covers all the functions related to the final and/or automatic positioning of the tool once the tool is positioned using the Working Arm or the machine frame.

SECTION K, CROP PROCESSING
This Section covers all the functions related to crop processing.

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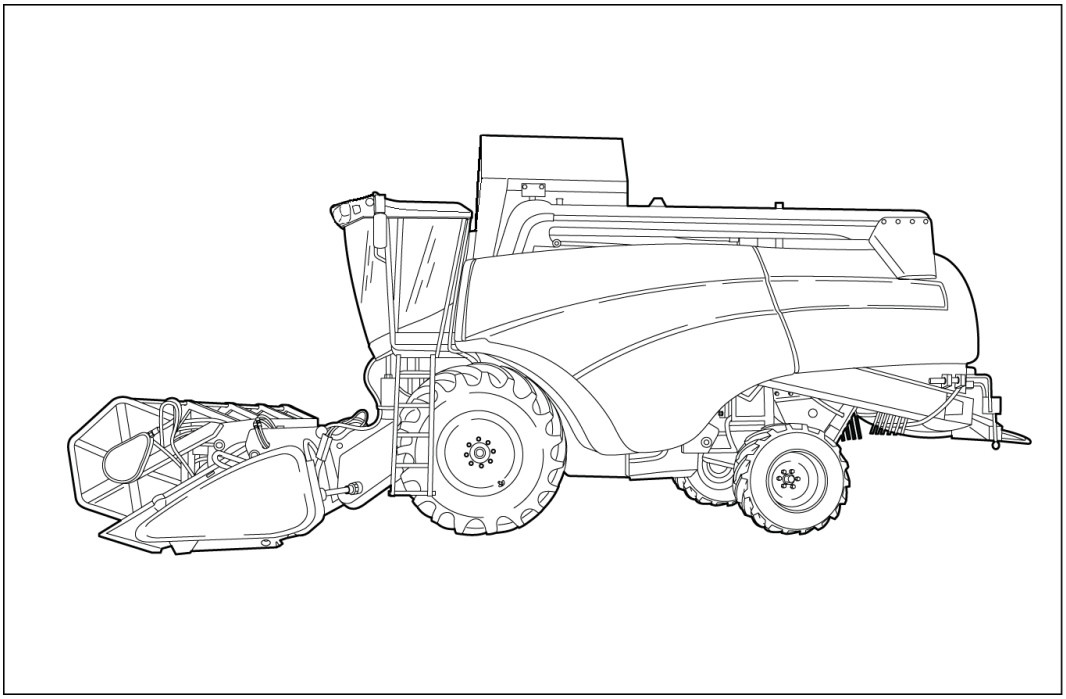
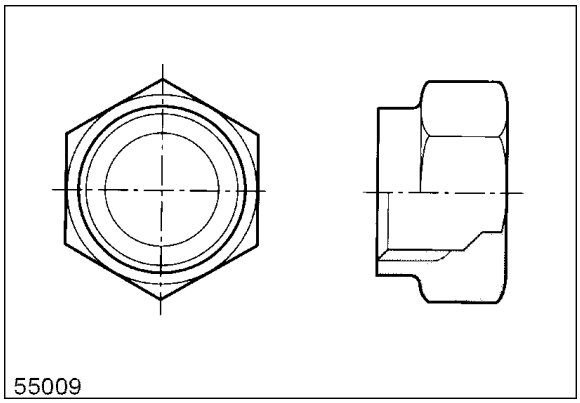
HYDRAULIC, PNEUMATIC, ELECTRICAL, ELECTRONIC SYSTEMS



CX5000 series
CX6000 series

PRIMARY HYDRAULIC POWER SYSTEM - Torque

Union nuts



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Ferrules

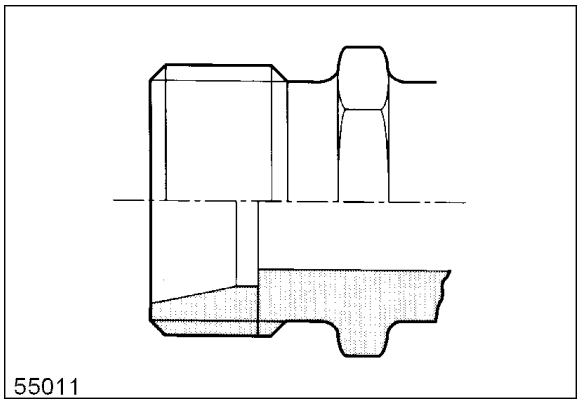
The ferrule must be pre-assembled on the tube. Tighten the union nut as specified in the table below. The ferrule and screw thread are greased.

Tube outer diameter mm (inch)	Torque Nm (lb.ft)	
	Minimum	Maximum
8 (0.32)	15 (11)	20 (15)
10 (0.4)	25 (18)	30 (22)
12 (0.47)	35 (26)	40 (29)
16 (0.63)	50 (37)	55 (40)
18 (0.71)	60 (44)	70 (51)
22 (0.87)	100 (74)	110 (81)
28 (1.10)	110 (81)	120 (88)

Metric fittings

Unions

Are suitable for use with union nuts and ferrules and ball-type nipples.



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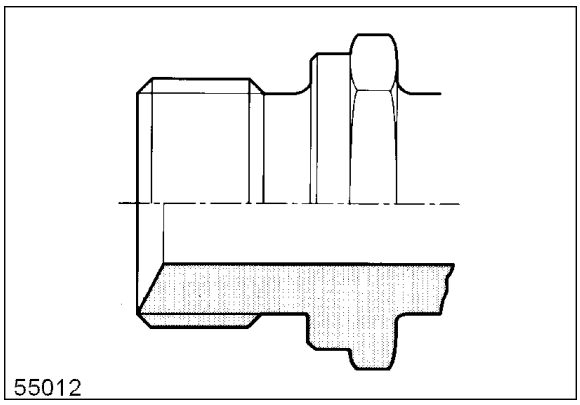
Connections

Are screwed in ISO metric thread - tolerance class 6H - with a tightening torque as specified in the table below.



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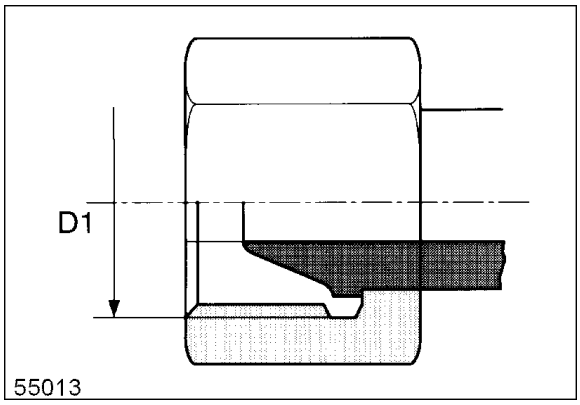
Tube outer diameter mm (inch)	Torque Nm (lb.ft)	
	Minimum	Maximum
8 (0,32)	40 (29)	45 (33)
10 (0,40)	65 (48)	70 (51)
12 (0,47)	80 (59)	85 (63)
16 (0,63)	100 (74)	120 (88)
18 (0,71)	120 (88)	140 (103)
22 (0,87)	200 (147)	220 (164)
28 (1,10)	350 (257)	380 (280)

Swivel nut with ball-type nipple

Are suitable for use with female unions



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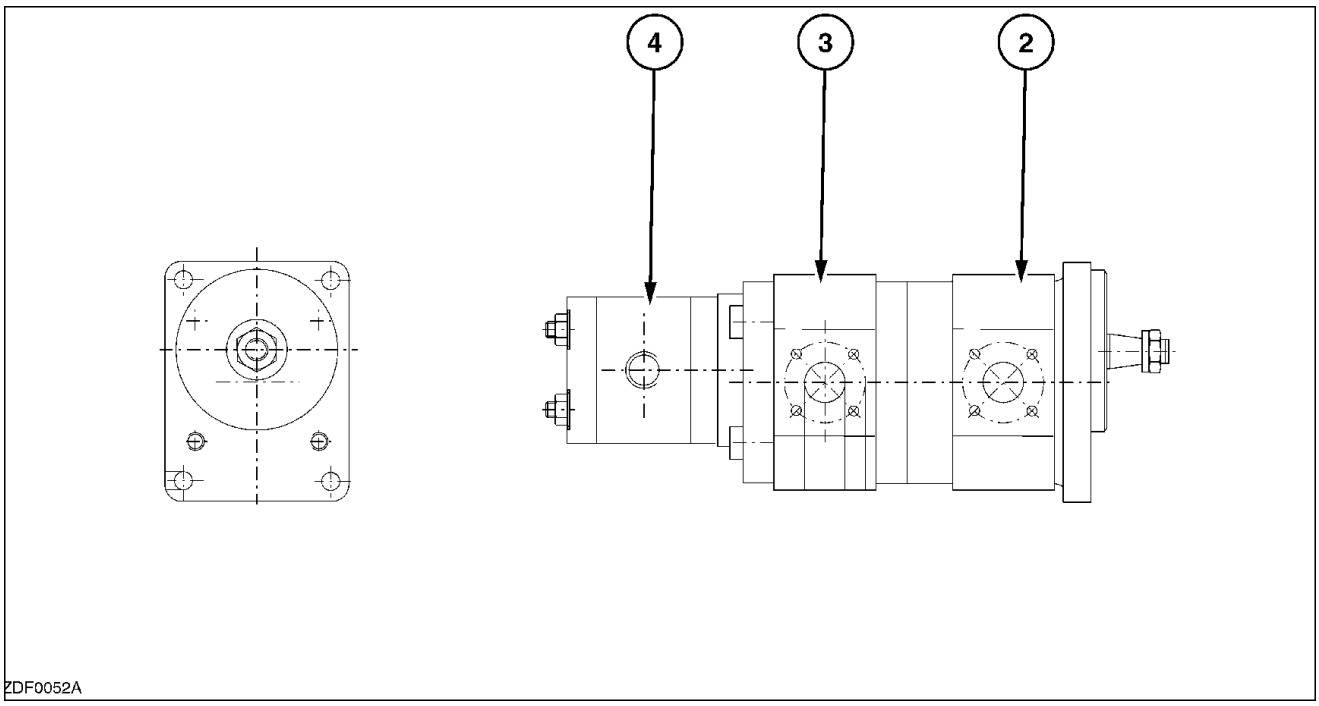
D1	Torque Nm (lb.ft)	
6H	Minimum	Maximum
M14 x 1.5	-	-
M16 x 1.5	15 (11)	20 (15)
M18 x 1.5	20 (15)	25 (18)
M24 x 1.5	30 (22)	35 (26)
M26 x 1.5	-	-
M30 x 2	-	-
M36 x 2	-	-

Hydraulic pump - General specification

The hydraulic system contains three hydraulic pumps



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Main hydraulic pump **(2)**

Type:	Silence gear type
Direction of rotation	left-hand rotation
Maximum pressure	**280 bar** (**4061 psi**)
Maximum speed	**3000 rpm**
Output per revolution	**16.5 cc/rev**.
Maximum oil flow	**48 l/min** (**12.7 gal/min**)

Hydraulic pump (Steering circuit) **(3)**

Type:	Silence gear type
Direction of rotation	left-hand rotation
Maximum pressure	**280 bar** (**4061 psi**)
Maximum speed	**3000 rpm**
Output per revolution	**5.5 cc/rev**.
Maximum oil flow	**12 l/min** (**3.2 gal/min**)

Hydraulic pump (Lateral flotation circuit) **(4)** (if installed)

Type:	Gear type
Direction of rotation	left-hand rotation
Maximum pressure	**230 bar** (**3336 psi**)
Maximum speed	**3000 rpm**
Output per revolution	**2 cc/rev**.
Maximum oil flow	**6 l/min** (**1.6 gal/min**)

PRIMARY HYDRAULIC POWER SYSTEM - Hydraulic schema

1. Engine
2. Pump (main hydraulics)
3. Pump (steering circuit)
4. Pump (lateral flotation) (If installed)
5. Oil reservoir
6. Filler cap with filter
7. Load sensing valve
8. Header height control valve
9. Header cylinders
10. Accumulator control valve
11. Header suspension accumulator
12. Pressure sensor
13. Unloading tube control valve
14. Unloading tube cylinder
15. Reel vertical adjustment valve
16. Reel vertical adjustment cylinders
17. Reel horizontal adjustment valve
18. Quick-attach coupler
19. Non-return valve (single direction restrictor)

P1. P1 = **140 bar** for adjustable steering axle (A.S.A.).
P1 = **160 bar** for fixed or powered rear axle.

20. Reel horizontal adjustment cylinders
21. Header and straw elevator reversing valve
22. Screw couplers with non return valve
23. Header and straw elevator reversing motor
24. Steering valve
25. Steering cylinder(s)
27. Load sensing valve
28. Lateral flotation control valve
29. Lateral flotation cylinder
30. Lateral float minimum pressure valve (**60 bar**)

30 a. Lateral float accumulator (**120 bar**)

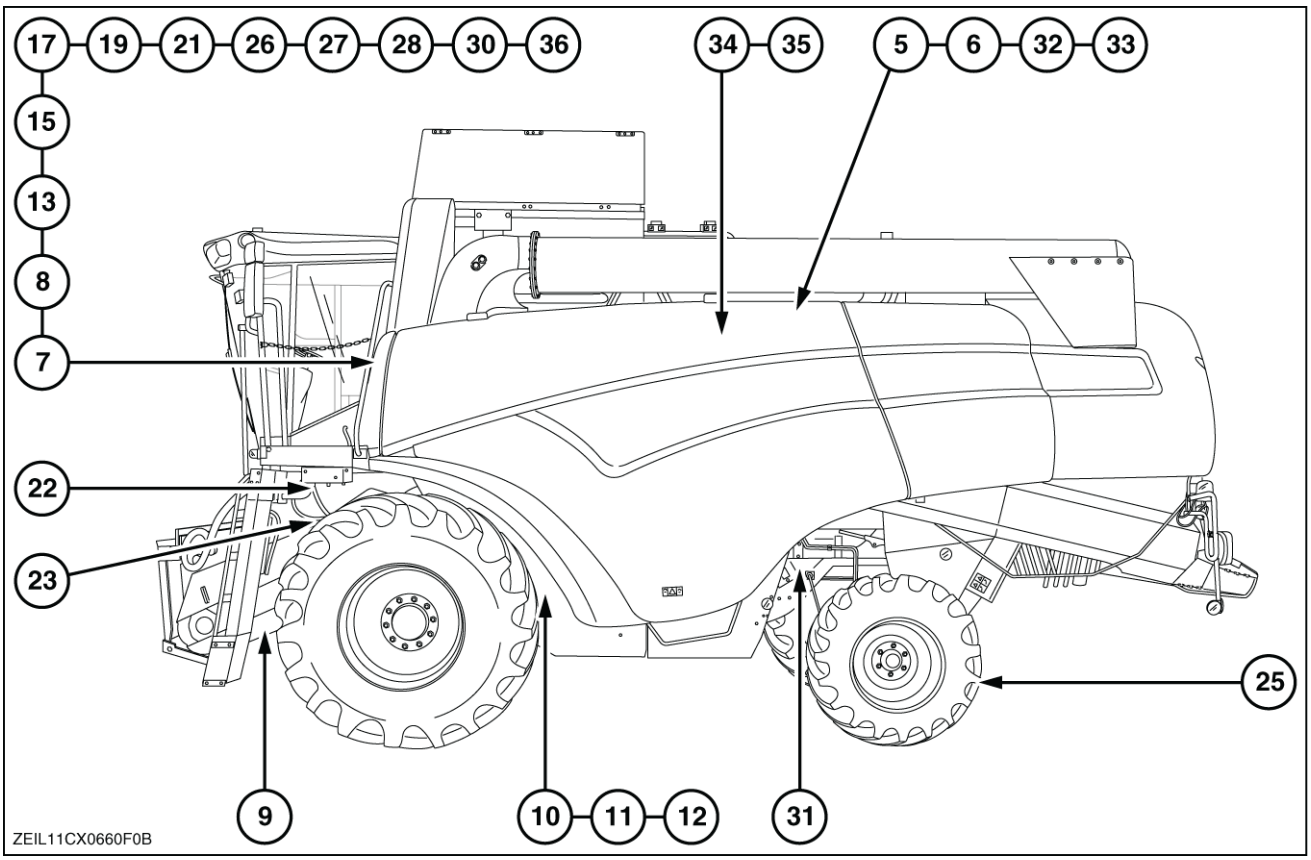
30 b. Lateral float accumulator (**85 bar**)

31. Drain hose
32. Low pressure filter
33. Breather with filter and non-return valve

P. Inlet (high pressure)
R. Return (low pressure)
- - - Pilot line, load sensing line
42. Pilot valve

P2. P2 = **200 bar** for adjustable steering axle (A.S.A.).
P1 = **220 bar** for fixed or powered rear axle.

PRIMARY HYDRAULIC POWER SYSTEM - Overview



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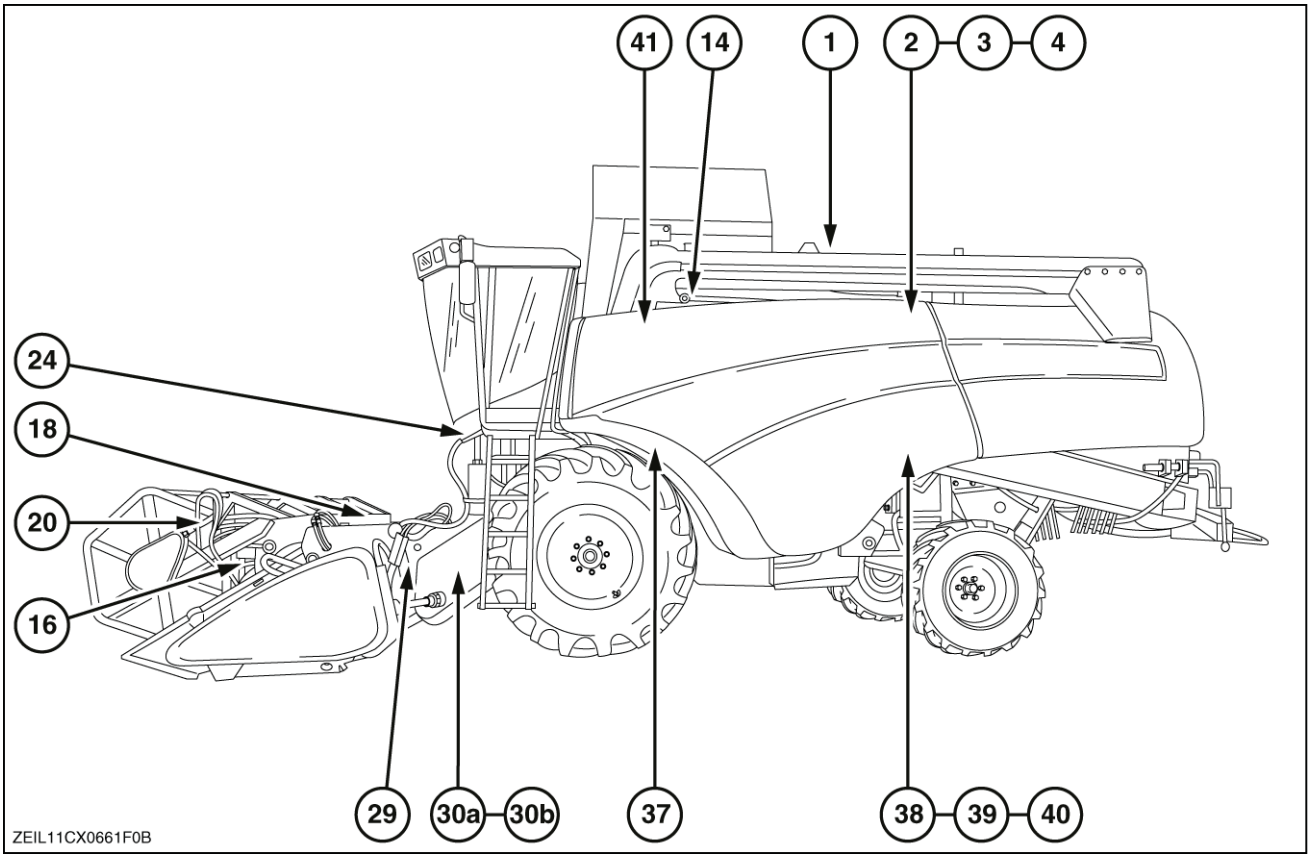

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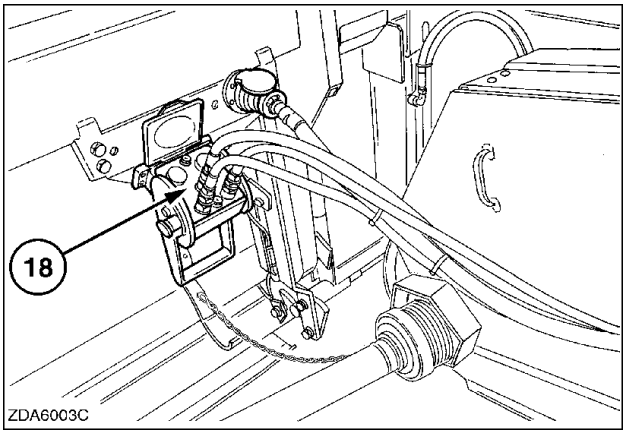
PRIMARY HYDRAULIC POWER SYSTEM - Component localisation

NOTE: *To find the location of those components, refer to* ***PRIMARY HYDRAULIC POWER SYSTEM - Overview (A.10.A)***

FRONT

Header

Header quick-release coupler **(18)**



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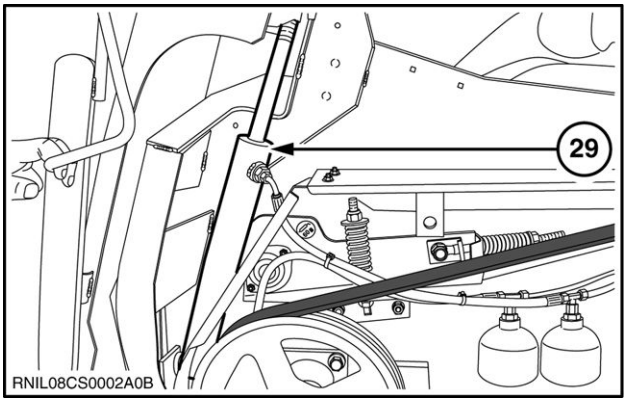
Lateral float cylinder **(29)** (if lateral float installed)



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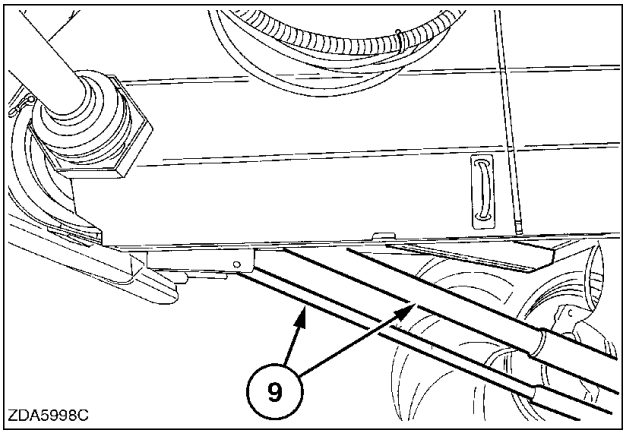
Straw elevator

Header lift cylinders **(9)**



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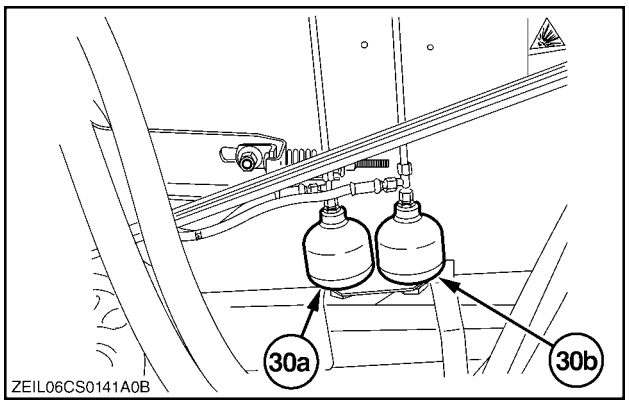
Lateral float accumulator (**120 bar**) **(30a)**
Lateral float accumulator (**85 bar**) **(30b)**



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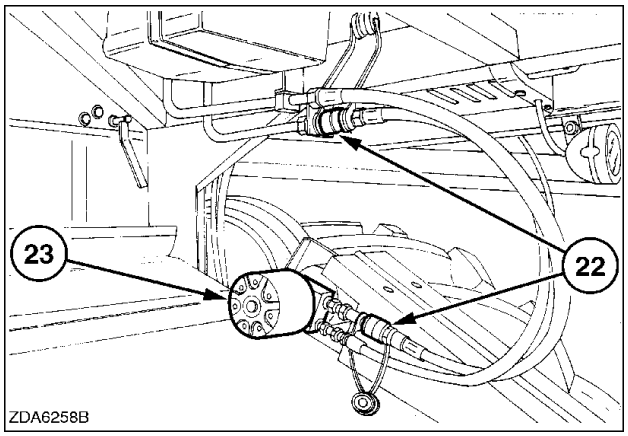
Screw couplers with non return valve **(22)**
Header and straw elevator reversing motor **(23)**



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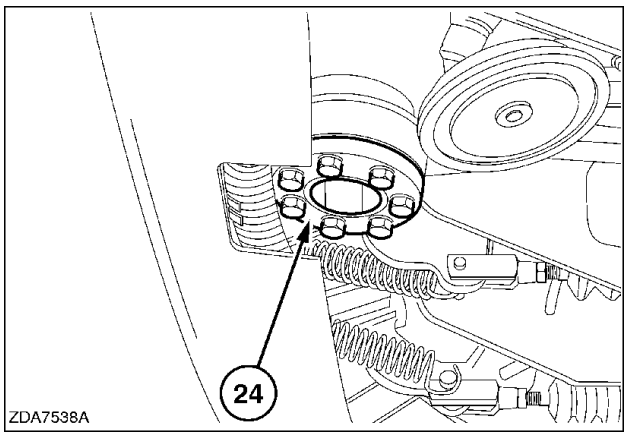
Under cab

Steering valve **(24)**



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Please download this document

first, and then click the above link

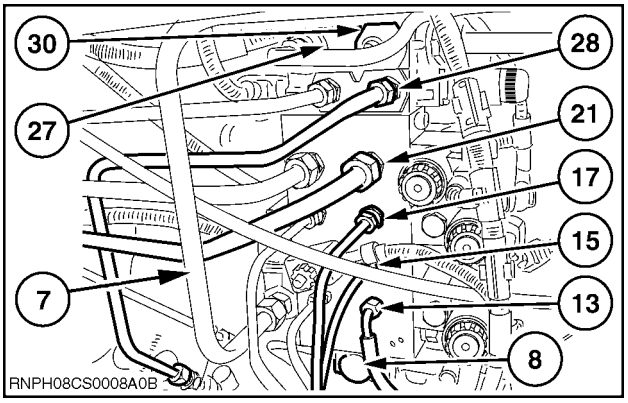
to download the complete manual.

Thank you so much for reading

LEFT-HAND SIDE

Cab left

Load sensing valve **(7)**
Header height control valve **(8)**
Unloading tube control valve **(13)**
Reel vertical adjustment valve **(15)**
Reel horizontal adjustment valve **(17)**
Header and straw elevator reversing valve **(21)**
Load sensing valve **(27)**
Lateral flotation control valve **(28)**
Lateral float minimum pressure valve (**60 bar**) **(30)**



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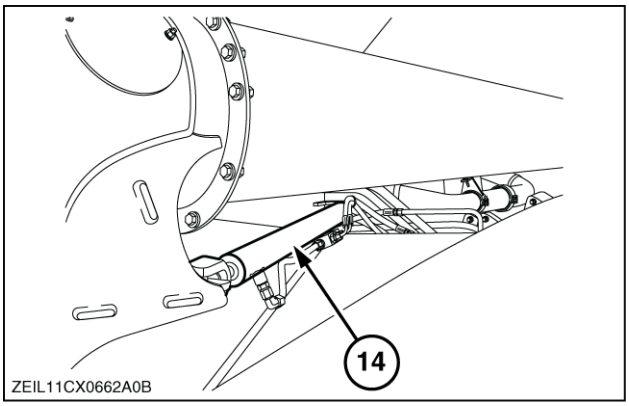
Above front wheel

Unload tube cylinder **(14)**



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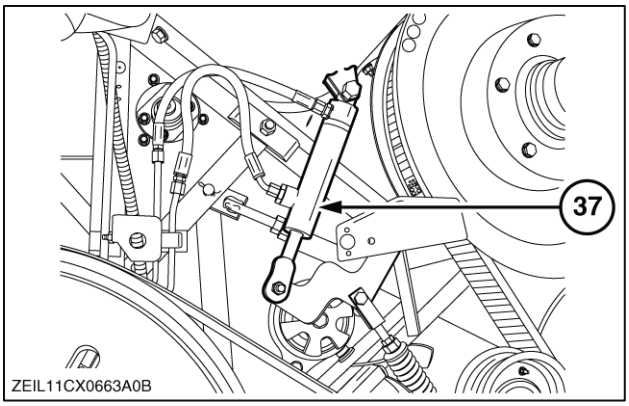
Straw elevator and header engaging cylinder **(37)**



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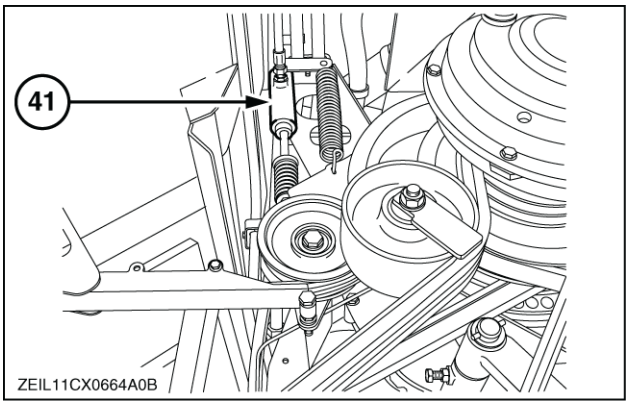
Unloading engaging cylinder **(41)**



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