

SERVICE MANUAL

Backhoe Loaders
BI00C / BI00CLR / BI00CTC
BI10C / BI10CTC / BI15C

Print No. 84568042A



Hello

Thank you very much for your download.

In the last page of this PDF document.

There is a link.

Please click on that link and return to our website.

Then you can get the complete manual immediately.

No need to wait.

Thanks for continuing to read the documentation.

Best wishes.

SERVICE MANUAL

Backhoe Loaders
B100C / B100CLR
B100CTC / B110C
B110CTC / B115C

Print No. 84568042A



NEW HOLLAND

CONSTRUCTION

PREVENT ACCIDENTS

The majority of accidents and injuries which occur in the workshop, at the worksite or on the road, are caused by the failure of some individual to follow simple and fundamental safety rules or precautions. For this reason most accidents can be prevented by recognizing the real cause and taking the necessary precautions, before the accident occurs.

Regardless of the care used in design and construction of any type of equipment, there may be conditions that cannot be completely safeguarded against, without interfering with reasonable accessibility and efficient operation.

A careful operator and / or technician is the best insurance against accidents.

The careful observance of this single safety rule would be sufficient to prevent serious injuries:

Never attempt to clean, lubricate or adjust a machine while it is in motion.

WARNING

Before carrying out any maintenance operation, adjustment and or repair on machines equipped with attachments, controlled hydraulically or mechanically, make sure that the attachment is lowered and safely set on the ground. If it is necessary to have the equipment partially or fully raised to gain access to certain items, be sure the equipment is suitably supported by means other than the hydraulic lift cylinders, cable and /or mechanical device used for controlling the equipment.

CNH ITALIA S.p.A.
Technical Information
Via Plava, 80
10135 Torino - Italy

All rights reserved. Reproduction of text or illustrations, in whole or in part, is strictly prohibited.

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>

LOADER BACKHOE MODELS

The complete range of Loader Backhoe models described in this manual are identified below:

	B100C B100CLR B100CTC	B110C B110CTC	B115C
Powershift	/	●	●
Powershuttle	●	●	/
Stabilizer sideshift	●	●	●
Stabilizer center pivot	/	/	●
Cab	●	●	●
Rops	/	/	/
2WD	/	/	/
4WD	●	●	●
4WS	/	/	●
Pilot control	●	●	●
Mechanical control	●	●	●
Engine Iveco 72 kW - 97 HP model F5HFL413C*A (electronic)	●	/	/
Engine 82 kW - 110 HP model F5HFL413B*A (electronic)	/	●	●
Short backhoe dipper	●	/	/
Long backhoe dipper	●	●	●

INDEX

SECTION 00 - SAFETY RULES

FOREWORD.....	4
SAFETY INSTRUCTIONS	6
PREVENTION OF FIRE OR EXPLOSIONS	8
PREVENTION OF BURNS	9
PRECAUTIONS FOR WASTE DISPOSAL.....	10

SECTION 01 - MAINTENANCE

SECTION 02 - TECHNICAL SPECIFICATIONS

MODELS	3
IDENTIFICATION OF MAIN COMPONENTS.....	4
TECHNICAL SPECIFICATIONS.....	7
DIESEL ENGINE	7
TRANSMISSION.....	9
AXLES	10
BRAKES	10
STEERING.....	11
HYDRAULIC SYSTEM	11
FRONT COUNTERWEIGHT	12
BUCKETS	12
TYRES	13
DPF SYSTEM	14
DIMENSIONS AND PERFORMANCE.....	18
DIMENSIONS - 2WS SIDESHIFT	18
DIMENSIONS - 2WS CENTER PIVOT	19
DIMENSIONS - 2WS TC - SIDESHIFT	20
DIMENSIONS - 4WS SIDESHIFT	21
DIMENSIONS - 4WS CENTER PIVOT	22
LOADER ATTACHMENT PERFORMANCE.....	23
PERFORMANCE OF LOADER ATTACHMENT WITH FORKS	33
BACKHOE ATTACHMENT PERFORMANCE	38
BACKHOE ATTACHMENT LIFTING CAPACITY	58
MAXIMUM LIFTING LOADS.....	63
LOADER ATTACHMENT MAXIMUM LIFTING LOAD TABLE	63
BACKHOE ATTACHMENT MAXIMUM LIFTING LOAD TABLE	64
SUPPLY SUMMARY TABLE	65

SECTION 10 - ENGINE

REMOVAL AND INSTALLATION THE ENGINE HOOD, THE RADIATOR AND ENGINE	3
PRELIMINARY OPERATIONS	3
BATTERY	4
DISCONNECT	4
ENGINE HOOD	6
REMOVE	6
RADIATOR	9
REMOVE	9
ENGINE	16
REMOVE	16
INSTALL	26
RADIATOR	35
INSTALL	35
ENGINE HOOD	41
INSTALL	41
BATTERY	44
CONNECT	44
ENGINE ERROR CODES	46

SECTION 21 - TRANSMISSION

POWERSHUTTLE TRANSMISSION	3
TECHNICAL SPECIFICATIONS	4
CONTROLS	8
LUBRICATION	12
GREASING	15
REMOVAL FROM MACHINE	17
DISASSEMBLY AND ASSEMBLY	20
TROUBLESHOOTING	132
TRANSMISSION ERROR CODES	136
REPAIR TIMES	140
SPECIAL TOOLS	141
POWERSHIFT TRANSMISSION	142
TECHNICAL SPECIFICATIONS	142
CONTROLS	153
LUBRICATION	155
GREASING	157
REMOVAL FROM MACHINE	158
DISASSEMBLY AND ASSEMBLY	161
TROUBLESHOOTING	325
TRANSMISSION ERROR CODES	329
REPAIR TIMES	333
SPECIAL TOOLS	334

SECTION 25 - FRONT AXLES

2WS FRONT AXLE.....	3
TECHNICAL SPECIFICATIONS.....	3
LUBRICATION AND GREASING	4
REMOVAL FROM MACHINE	6
DISASSEMBLY AND ASSEMBLY.....	7
TROUBLESHOOTING.....	7
4WD - 2WS FRONT AXLE	10
TECHNICAL SPECIFICATIONS.....	10
LUBRICATION AND GREASING	11
REMOVAL FROM MACHINE	13
DISASSEMBLY AND ASSEMBLY.....	14
TROUBLESHOOTING.....	57
SPECIAL TOOLS.....	61
4WS FRONT AXLE.....	62
TECHNICAL SPECIFICATIONS.....	62
LUBRICATION AND GREASING	63
REMOVAL FROM MACHINE	65

SECTION 27 - REAR AXLE

2WS REAR AXLE (B100C - B100CTC).....	3
TECHNICAL SPECIFICATIONS.....	3
LUBRICATION AND GREASING	5
REMOVAL FROM MACHINE	7
DISASSEMBLY AND ASSEMBLY.....	8
TROUBLESHOOTING.....	61
REPAIR TIMES.....	67
SPECIAL TOOLS.....	68
2WS REAR AXLE (B110C - B110CTC).....	69
TECHNICAL SPECIFICATIONS.....	69
LUBRICATION AND GREASING	71
REMOVAL FROM MACHINE	73
DISASSEMBLY AND ASSEMBLY.....	74
TROUBLESHOOTING.....	127
REPAIR TIMES.....	133
SPECIAL TOOLS.....	134
4WS REAR AXLE (B115C).....	135
TECHNICAL SPECIFICATIONS.....	135
LUBRICATION AND GREASING	138
REMOVAL FROM MACHINE	140
DISASSEMBLY AND ASSEMBLY.....	141
TROUBLESHOOTING.....	219
REPAIR TIMES.....	225
SPECIAL TOOLS.....	227

SECTION 33 - BRAKE SYSTEM

PARKING BRAKE	3
TECHNICAL SPECIFICATIONS	3
OPERATION	3
ADJUSTMENT	4
DISASSEMBLY AND ASSEMBLY	6
SERVICE BRAKE	15
TECHNICAL SPECIFICATIONS	15
OPERATION	15
BRAKE PUMP - Remove	16
BRAKE PUMP - Install	18

SECTION 35 - HYDRAULIC SYSTEM

HYDRAULIC DIAGRAMS	3
HYDRAULIC DIAGRAM - 2WS SIDESHIFT MECHANICAL MODELS POWERSHUTTLE (B100C - B100CTC)	3
HYDRAULIC DIAGRAM - 2WS SIDESHIFT PILOT MODELS POWERSHUTTLE (B100C - B100CTC - B110C - B110CTC)	5
HYDRAULIC DIAGRAM - 2WS SIDESHIFT PILOT MODELS POWERSHUTTLE (B100CLR)	7
HYDRAULIC DIAGRAM - 2WS SIDESHIFT MECHANICAL MODELS POWERSHUTTLE (B100CLR)	9
HYDRAULIC DIAGRAM - 2WS SIDESHIFT MECHANICAL MODELS POWERSHIFT (B110CTC)	11
HYDRAULIC DIAGRAM - 4WS SIDESHIFT MECHANICAL MODELS POWERSHIFT (B115C)	13
HYDRAULIC DIAGRAM - 4WS SIDESHIFT PILOT MODELS POWERSHIFT (B115C)	15
HYDRAULIC DIAGRAM - 4WS CENTER PIVOT PILOT MODELS POWERSHIFT (B115C)	17
HYDRAULIC PUMP	19
HYDRAULIC FIXED-FLOW-RATE GEAR PUMP	19
HYDRAULIC VARIABLE-FLOW-RATE PISTON PUMP	30
CONTROL VALVES	44
LOADER CONTROL VALVE	53
BACKHOE ATTACHMENT CONTROL VALVE	57
RELIEF VALVES	69
BACKHOE ATTACHMENT CONTROL VALVE PILOT SOLENOID VALVE	78
ACCUMULATOR "AUTO GLIDE RIDE" PARKER	81
TECHNICAL SPECIFICATIONS	81
MAINTENANCE	81
SAFETY	81
CHECKING AND ADJUSTING THE PRECHARGE PRESSURE	82
HYDRAULIC SWING SYSTEM	84
OPERATION	84
HYDRAULIC CYLINDERS	87
LOADER ATTACHMENT BOOM CYLINDER	88
LOADER BUCKET CYLINDER	95
4X1 LOADER BUCKET CYLINDER	101
BACKHOE BOOM CYLINDER	104
BACKHOE ATTACHMENT DIPPER CYLINDER	108
BACKHOE BUCKET CYLINDER	112
TELESCOPIC CYLINDER	116

INDEX

STABILIZER CYLINDER - CENTER PIVOT	120
STABILIZER CYLINDER - SIDESHIFT	124
SWING CYLINDER.....	128
BACKHOE ATTACHMENT LOCK CYLINDER - SIDESHIFT	132
SPECIAL TOOLS.....	133
HYDRAULIC CONTROL LEVERS	134
TECHNICAL SPECIFICATIONS.....	134
CONTROLS AND OPERATION	135
COMPONENTS	136
DISASSEMBLY AND ASSEMBLY.....	138
CONTROL LEVER VALVE	141
TROUBLESHOOTING	143
PRELIMINARY CHECKS.....	143
TROUBLESHOOTING (WITH "REXROTH" CONTROL VALVES).....	144
SWING.....	146
HYDRAULIC PUMP	147

SECTION 39 - CHASSIS

DESCRIPTION	3
REMOVAL AND INSTALLATION OF COMPONENTS	6
COMPONENTS WITHIN THE CHASSIS	6
COMPONENTS OF THE LOWER PART OF THE CHASSIS	7
COMPONENTS ATTACHED OUTSIDE THE CHASSIS.....	11
COMPONENTS OF THE UPPER PART	12

SECTION 41 - STEERING SYSTEM

DESCRIPTION	3
2WS STEERING SYSTEM	4
4WS STEERING SYSTEM	7
POWER STEERING	11
TECHNICAL SPECIFICATIONS.....	11
COMPONENTS	13
DISASSEMBLY.....	15
ASSEMBLY.....	18

SECTION 50 - CAB HEATING AND AIR CONDITIONING

TECHNICAL SPECIFICATIONS.....	3
GENERAL.....	3
CAB HEATING.....	5
CONTROLS.....	5
OPERATION.....	6
OVERHAUL	9
TROUBLESHOOTING.....	11

INDEX

AIR CONDITIONING.....	12
PRINCIPLES OF AIR CONDITIONING	12
CONTROLS	17
OPERATION.....	18
TROUBLESHOOTING AND TESTING.....	25
FLUSHING THE SYSTEM	43
DRAINING THE SYSTEM.....	45
CHARGING THE SYSTEM.....	46
OVERHAUL	47
COMPRESSOR	52
TECHNICAL SPECIFICATIONS.....	52
REMOVAL AND INSTALLATION	53
DISASSEMBLY AND ASSEMBLY.....	56
TROUBLESHOOTING.....	65

SECTION 55 - ELECTRIC SYSTEM

ELECTRIC DIAGRAMS	3
ELECTRIC DIAGRAMS - POWERSHUTTLE CAB (B100C - B100CTC - B110C - B110CTC).....	3
ELECTRIC DIAGRAMS - POWERSHIFT CAB (B110C - B110CTC).....	21
ELECTRIC DIAGRAMS - 4WS POWERSHIFT CAB (B115C)	40
CONTROLS AND INSTRUMENTS.....	59
FRONT INSTRUMENT PANEL	59
SIDE INSTRUMENT CLUSTER PANEL (B100C - B100CTC - B110C - B110CTC - B115C).....	62
SIDE INSTRUMENT CLUSTER (B100C - B100CTC - B110C - B110CTC - B115C).....	64
ANTI-START SYSTEM	66
DIAGNOSTIC DISPLAY (B100C - B100CTC - B110C - B110CTC - B115C).....	67
SYMBOLS.....	69
SETUP MENU.....	70
PROCEDURE ABOUT SELF TEST.....	71
ON BOARD ERROR CODE RETRIEVAL.....	72
BACKLIGHTING AND DIMMING.....	73
WORK HOURS.....	74
OPERATION.....	75
WARNING SYSTEM	79
MAINTENANCE	80
WARNING MESSAGES.....	82
STARTING SYSTEM	88
OPERATION.....	88
STARTER MOTOR.....	91
TROUBLESHOOTING.....	98
ALTERNATOR.....	100
TECHNICAL SPECIFICATIONS.....	100
OPERATION.....	100
COMPONENTS	102
REMOVAL.....	103
PRELIMINARY CHECKS AND TESTS.....	104
TROUBLESHOOTING.....	113

INDEX

BATTERY	114
TECHNICAL SPECIFICATIONS.....	114
OPERATION.....	114
REPLACEMENT	115
CHARGE AND ELECTROLYTE LEVEL CHECK	116
CONNECTING A BOOSTER BATTERY	117
BATTERY MASTER SWITCH	117
TROUBLESHOOTING.....	118

SECTION 82 - LOADER

LOADER ATTACHMENT CONTROLS.....	4
LOADER ATTACHMENT OPERATION	4
4x1 LOADER BUCKET CONTROL (Optional)	7
LOADER ATTACHMENT CONTROL LOCK (Specific to certain countries).....	8
LOADER BUCKET SELF-LEVELLING.....	9
LOADER ATTACHMENT SAFETY STRUT.....	12
LOADER ATTACHMENT SAFETY STRUT (B100C - B110C).....	12
LOADER ATTACHMENT SAFETY STRUT (B100CTC - B110CTC - B115C)	14
REMOVAL AND INSTALLATION OF LOADER BUCKET	15
LOADER BUCKET (B100C - B110C).....	15
LOADER BUCKET (B100CTC - B110CTC - B115C)	16
LOADER BUCKET WITH FORKS (Optional)	17
BUCKET TEETH REPLACEMENT.....	18
LOADER REMOVAL.....	19
LOADER ATTACHMENT (B100C - B110C).....	19
LOADER ATTACHMENT (B100CTC - B110CTC - B115C)	21

SECTION 84 - BACKHOE

DESCRIPTION AND OPERATION.....	3
BACKHOE ATTACHMENT CONTROLS.....	6
BACKHOE ATTACHMENT MECHANICAL CONTROLS	7
BACKHOE ATTACHMENT HYDRAULIC CONTROLS	17
BACKHOE ATTACHMENT SIDESHIFT (Sideshift version)	23
BACKHOE ATTACHMENT DISASSEMBLY	25
CENTER PIVOT BACKHOE ATTACHMENT DISASSEMBLY.....	25
SIDESHIFT BACKHOE ATTACHMENT DISASSEMBLY.....	28
BACKHOE BUCKET REPLACEMENT	30
BUCKET TEETH REPLACEMENT.....	31
DIPPER REMOVE	32
TELESCOPIC DIPPER REVISION.....	35
OVERHAUL	35
BACKHOE ATTACHMENT HYDRAULIC HANDLING	38
CONTROLS.....	38
HYDRAULIC DIAGRAM	38
DISASSEMBLY AND ASSEMBLY.....	39

B100C - B100CLR - B100CTC

B110C - B110CTC

B115C



SECTION 00 - SAFETY RULES

SAFETY INSTRUCTIONS

WARNING

This warning symbol points out important messages involving your safety.

Carefully read the safety rules contained herein and follow advised precautions to avoid potential hazards and to safeguard your safety and personal integrity.

In this manual you will find this symbol together with the following keywords:

WARNING

This symbol warns about the possibility of potential damages to the machine that can involve the operator's safety.

WARNING

With specific warnings about potential dangers for the operator's or other persons integrity directly or indirectly involved.

The non-compliance with the warnings preceded by the above-mentioned keywords (WARNING and DANGER) can cause serious accidents or even the death of the persons involved.

Moreover, in the present Manual, some instructions are given with text in italics, preceded by the words **NOTE** and **CAUTION**.

NOTA: *it emphasizes and underlines to the operator the correct technique or correct procedure to follow.*

WARNING

This symbol warns about the possibility of potential damages to the machine that can involve the operator's safety.

FOREWORD

Loader backhoes B100C - B100CLR - B100CTC - B110C - B110CTC - B115C have been designed to perform most earth-moving operations.

If you use this machine for duties involving the use of attachments, accessories, or special tools, consult your Dealer to make sure that the adaptations or modifications carried out are in conformity with the machine's technical specifications and with current regulations on safety.

Any modifications or adaptations which are not approved by the manufacturer may invalidate the machine's original conformity with safety requirements.

The machine must be used according to its intended use, respecting the safety and precautionary rules and strictly following the operating instructions.

Any functional disorders, especially those affecting the safety of the machine, should therefore be rectified immediately.

DANGER

A different use of the excavator or of its working equipment:

- for lifting or transporting persons;
- as working platform;
- for lifting loads without the attachment being approved for this purpose;
- for pulling loads;
- is considered unintended use.

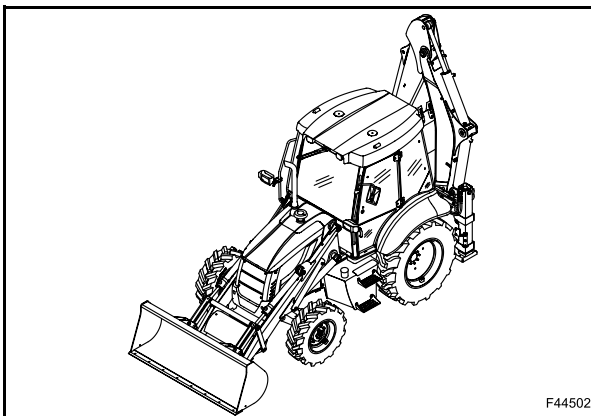
Unintended use may cause injury or life-threatening risks for the operator and for other persons.

The manufacturer/supplier cannot be held responsible for any damage resulting from unintended use. The risk involved in such misuse lies entirely with the user.

DANGER

It is absolutely forbidden to tamper with and/or change the setting of any of the hydraulic system valves to avoid damaging machine components, with a consequent risk for personal safety.

The current Operator's Manual is the user's guide for correct run-in, use and maintenance of the machine.





Suggest:

If the above button click is invalid.

Please download this document first, and then click the above link to download the complete manual.

Thank you so much for reading

Carefully read this Operator's Manual and store it in the cab for quick location and reference.

Instructions concerning safety, operation and maintenance have been developed to permit safe service and repair of this machine without any risk.

In the event of queries or suggestions relevant to your machine do not hesitate to address to your Dealer.

Dealers have qualified and trained personnel at disposal as well as Original Spares, means and equipment suitable to carry out all necessary maintenance.

Any modifications or adaptations which are not approved by the manufacturer may invalidate the machine's original conformity with safety requirements.

IMPORTANTE: *the engine and fuel system on your machine are designed and built to government emissions standards. Tampering by dealers, customers, operators and users is strictly prohibited by law. Failure to comply with this prohibition could result in government fines, rework charges, invalid warranty, legal action and possible confiscation of the machine until rework to original condition is completed. Engine service and/or repairs must be carried out by a certified technician only.*

NOTA: *each machine is supplied complete with a copy of this Manual. Descriptions and illustrations provided herein are not binding. The Manufacturer, provided that the basic characteristics of machine types described and shown in this Manual remain the same, reserves the right to change components, parts and accessories supplied without any commitment to timely update this publication; and this any time it deems it convenient for improvement purposes or due to commercial or manufacturing requirements. For exact information, please consult your Dealer or contact the Manufacturer's Branch Offices, who remain at your disposal for further help.*

SPARE PARTS

The "non-genuine" spare parts have not been checked and authorized by the Manufacturer.

The assembly and/or use of such products may have negative effects on the machine design features and could impair its operation safety.

The Manufacturer is not liable for any damage caused by "non-genuine" spare parts or accessories.

WARRANTY

This machine is under warranty according to the regulations in force in Your Country and in compliance with the sales agreement drawn up with the Dealer.

The warranty, however, expires if the operation and maintenance instruction for this machine and contained in this manual, have not been followed.

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>