NEW HOLLAND

# LOADER BACKHOE

# B110
# B115
# TIER 3

## REPAIR MANUAL

87643850 NA

Issued 03-2007

NEW HOLLAND

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# REPAIR MANUAL

## BACKHOE LOADER

## B110
## B115
## TIER 3

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**TO READER**

This manual has been printed for a kilful engineer to supply necessary technical information to carry out service operations on this machine.

Read carefully this manual to collect correct information relevant to repair procedures.

For any question or remark, or in case of any error relevant the contents of this manual, please contact:

**CNH AMERICA LLC**
245 E North Avenue
Carol Stream, Il 60188 U.S.A.

**REFERENCE**

Beyond this Service Manual, also refer to documents hereunder listed:

- Operator's Manual
- Parts Catalogue

**COMPLETE HANDBOOK FOR INSTRUCTIONS AND REPAIRS**

The complete Service Manual consists of two volumes:

- B110- B115
  Service Manual "LOADER BACKHOE"
- B110- B115
  Service Manual "Engine"

The Service Manuals for "Loader backhoe" and "Engine" contain the necessary technical information to carry out service and repair on machine and on engine, necessary tools to carry out those operations and information on service standard, on procedures for connection, disconnection, disassembly and assembly of parts.

The complete Service Manual which covers the loader backhoe models B110 - B115 consists of the following volumes, which can be identified through their print no. as stated below:

| VOLUME | MACHINE TYPE | PRINT NUMBER |
|---|---|---|
| Service Manual - "Loader backhoe" | B110 - B115 | 876.43.850 |
| Service Manual - "Engine" | B110 - B115 | 876.43.867 |

**AVOID ACCIDENTS**

The majority of accidents and injuries which occur in industry, on the farm, at home 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 complete observance of one simple rule would prevent many thousands of serious injuries each year.

This rule is: 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.

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## LOADER BACKHOE MODELS

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

| | B110 | B115 |
|---|---|---|
| Powershift | ● | ● |
| Powershuttle | ● | / |
| Cab | ● | ● |
| Rops | ● | / |
| 2WD | ● | / |
| 4WD | ● | ● |
| 4WS | / | ● |
| Pilot control | ● | ● |
| Mechanical control | ● | ● |
| Engine 82 kW - 110 HP model F4HE9484C*J102 | ● | / |
| Engine 82 kW - 110 HP model F4HE9484C*J103 | / | ● |
| Long dipper | ● | ● |

# INDEX

## SECTION 00 - SAFETY PRECAUTIONS

## SECTION 01 - MAINTENANCE

## SECTION 02 - TECHNICAL SPECIFICATIONS

1. LOADER BACKHOE MODELS ..... 3
2. IDENTIFICATION OF MAIN COMPONENTS ..... 4
3. TECHNICAL SPECIFICATIONS ..... 5
4. LOADER ATTACHMENT DIMENSIONS AND PERFORMANCE ..... 8
5. BACKHOE ATTACHMENT DIMENSIONS AND PERFORMANCE ..... 10
6. LIFTING CAPACITIES ..... 12
7. LOADER BUCKET WITH FORKS DIMENSIONS AND PERFORMANCE ..... 14
8. FLUID AND LUBRICANT CAPACITIES AND SPECIFICATIONS ..... 15

## SECTION 17 - TORQUE CONVERTERS

1. POWERSHUTTLE TORQUE CONVERTER ..... 3
1.1 DESCRIPTION AND OPERATION ..... 3
1.2 TECHNICAL SPECIFICATIONS ..... 4
1.3 OVERHAUL ..... 4
1.4 INSPECTION ..... 4
1.5 DISASSEMBLY AND ASSEMBLY ..... 5
1.6 STALL TEST ..... 5
1.7 FAULT FINDING ..... 6
2. POWERSHIFT TORQUE CONVERTER ..... 7
2.1 DESCRIPTION AND OPERATION ..... 7
2.2 TECHNICAL SPECIFICATIONS ..... 8
2.3 OVERHAUL ..... 8
2.4 INSPECTION ..... 9
2.5 DISASSEMBLY AND ASSEMBLY ..... 9
2.6 STALL TEST ..... 11
2.7 FAULT FINDING ..... 12

## SECTION 21 - TRANSMISSION

1. POWERSHUTTLE TRANSMISSION “TURNER MODEL COM-T4-2025” ..... 3
1.1 TECHNICAL SPECIFICATIONS ..... 3
1.2 TIGHTENING TORQUES ..... 5
1.3 TRANSMISSION CONTROLS ..... 6
1.4 LUBRICATION ..... 11
1.5 TRANSMISSION OIL FLOW AND SUPPLY ..... 12
1.6 TRANSMISSION HYDRAULIC VALVES AND PRESSURE TEST POINTS ..... 18
1.7 TRANSMISSION POWER FLOW ..... 19
1.8 TRANSMISSION 2WD COMPONENTS ..... 23
1.9 TRANSMISSION 4WD COMPONENTS ..... 26
1.10 TRANSMISSION REMOVAL ..... 31
1.11 DISASSEMBLY AND ASSEMBLY ..... 32
1.12 FAULT FINDING ..... 90

1.13 SPECIAL TOOLS ..... 93

2. POWERSHIFT TRANSMISSION “DANA T16000” ..... 94
2.1 TECHNICAL SPECIFICATIONS ..... 94
2.2 TRANSMISSION CONTROLS ..... 95
2.3 LUBRICATION ..... 105
2.4 PRESSURE SPECIFICATIONS AND CHECK POINTS ..... 106
2.5 TRANSMISSION COOLER ..... 108
2.6 TRANSMISSION HYDRAULIC DIAGRAM ..... 109
2.7 OPERATION ..... 110
2.8 POWER FLOWS ..... 117
2.9 GEAR AND CLUTCH LAY OUT ..... 132
2.10 TRANSMISSION / ENGINE REMOVAL FROM LOADER ..... 133
2.11 TRANSMISSION COMPONENTS ..... 137
2.12 DISASSEMBLY AND ASSEMBLY ..... 155
2.13 SPECIAL TOOLS ..... 264
2.14 FAULT FINDING ..... 265
2.15 FAULT FINDING ..... 267

## SECTION 25 - FRONT AXLES

1. FRONT AXLE 2WD “CARRARO” ..... 3
1.1 TECHNICAL SPECIFICATIONS ..... 3
1.2 DISASSEMBLY AND ASSEMBLY ..... 5
1.3 FAULT FINDING ..... 23

2. FRONT AXLE 4WD “CARRARO” ..... 25
2.1 TECHNICAL SPECIFICATIONS ..... 25
2.2 DISASSEMBLY AND ASSEMBLY ..... 31
2.3 FAULT FINDING ..... 77

3. FRONT AXLE 4WS “CARRARO” ..... 80
3.1 TECHNICAL SPECIFICATIONS ..... 80
3.2 DISASSEMBLY AND ASSEMBLY ..... 84
3.3 FAULT FINDING ..... 137

4. SPECIAL TOOLS ..... 140

## SECTION 27 - REAR AXLE

1. REAR AXLE 2WS ..... 3
1.1 DESCRIPTION AND OPERATION ..... 3
1.2 TECHNICAL SPECIFICATIONS ..... 6
1.3 DISASSEMBLY AND ASSEMBLY ..... 8
1.4 FAULT FINDING ..... 27

2. REAR AXLE 4WS “CARRARO” ..... 28
2.1 TECHNICAL SPECIFICATIONS ..... 28
2.2 DISASSEMBLY AND ASSEMBLY ..... 32
2.3 FAULT FINDING ..... 81

3. SPECIAL TOOLS ..... 84

## SECTION 33 - BRAKES SYSTEM

1. TECHNICAL SPECIFICATIONS ..... 3

2. HAND BRAKE ..... 6
2.1 HAND BRAKE ADJUSTMENT ..... 7

3. BRAKE MASTER CYLINDERS ..... 8
3.1 BRAKE RESERVOIR ..... 13
3.2 BRAKE BLEEDING PROCEDURE ..... 13

## SECTION 35 - HYDRAULIC SYSTEM

1. HYDRAULIC DIAGRAMS ..... 3
1.1 HYDRAULIC DIAGRAM - 2WS MECHANICAL MODELS ..... 3
1.2 HYDRAULIC DIAGRAM - 2WS PILOT MODELS ..... 5
1.3 HYDRAULIC DIAGRAM - 4WS MECHANICAL MODELS ..... 7
1.4 HYDRAULIC DIAGRAM - 4WS PILOT MODELS ..... 9

2. HYDRAULIC PUMP ..... 11
2.1 DESCRIPTION AND OPERATION ..... 11
2.2 TECHNICAL SPECIFICATIONS ..... 11
2.3 LOAD SENSING VALVE ..... 13
2.4 REMOVAL ..... 15
2.5 COMPONENTS ..... 16
2.6 DISASSEMBLY AND ASSEMBLY ..... 17

3. CONTROL VALVES ..... 21
3.1 CONTROL VALVES “HUSCO” (B110 MECHANICAL MODELS) ..... 21
3.2 CONTROL VALVES “REXROTH” (B115 MECHANICAL MODELS) ..... 58
3.3 CONTROL VALVES “REXROTH” (B110 - B115 PILOT MODELS) ..... 74
3.4 SOLENOID VALVE FOR PILOTING THE BACKHOE CONTROL VALVE (WITH HYDRAULIC CONTROL) ..... 82
3.5 ACCUMULATOR GLIDE RIDE “PARKER” ..... 85
3.6 CIRCUIT RELIEF VALVES ..... 88

4. HYDRAULIC SWING SYSTEM ..... 98
4.1 DESCRIPTION AND OPERATION ..... 98
4.2 HYDRAULIC OIL FLOW ..... 99
4.3 PRECISION SWING CONTROL ..... 101

5. HYDRAULIC CYLINDERS ..... 104
5.1 LOADER CYLINDER ..... 105
5.2 LOADER BUCKET CYLINDER ..... 111
5.3 4X1 BUCKET CYLINDER ..... 117
5.4 BACKHOE BOOM CYLINDER ..... 120
5.5 BACKHOE CROWD CYLINDER ..... 124
5.6 BACKHOE BUCKET CYLINDER ..... 128
5.7 SHORT AND LONG TELESCOPIC CYLINDER ..... 132
5.8 STABILIZERS CYLINDER ..... 136
5.9 SWING CYLINDER ..... 140
5.10 SPECIAL TOOLS ..... 144

6. PILOT HYDRAULIC CONTROL LEVERS ..... 145
6.1 TECHNICAL SPECIFICATIONS ..... 145
6.2 DESCRIPTION AND OPERATION ..... 146
6.3 DISASSEMBLY AND ASSEMBLY ..... 149
6.4 PILOT HYDRAULIC CONTROL VALVE ..... 152

7. FAULT FINDING AND FLOW TESTING ..... 155
7.1 PRELIMINARY CHECKS ..... 155
7.2 FAULT FINDING (WITH “HUSCO” CONTROL VALVES) ..... 156
7.3 PRESSURE TESTING (WITH “HUSCO” CONTROL VALVES) ..... 161
7.4 FAULT FINDING (WITH “REXROTH” CONTROL VALVES) ..... 169

## SECTION 39 - CHASSIS

1. DESCRIPTION AND OPERATION ..... 3
2. REMOVAL AND INSTALLATION COMPONENTS ..... 4
2.1 COMPONENTS WITHIN THE CHASSIS ..... 4
2.2 COMPONENTS BELOW THE CHASSIS ..... 5
2.3 COMPONENTS ATTACHED OUTSIDE THE CHASSIS ..... 7
2.4 COMPONENTS ATTACHED ABOVE THE CHASSIS ..... 8
2.5 TIGHTENING TORQUES ..... 10

## SECTION 41 - STEERING SYSTEM

1. STEERING SYSTEM 2WS ..... 4
2. STEERING SYSTEM 4WS ..... 7
3. STEERING MOTOR ..... 12
3.1 TECHNICAL SPECIFICATIONS ..... 13
3.2 COMPONENTS ..... 15
3.3 DISASSEMBLY AND ASSEMBLY ..... 16
3.4 SPECIAL TOOLS ..... 33
3.5 FAULT FINDING ..... 33

## SECTION 50 - CAB HEATING AND AIR CONDITIONING

1. TECHNICAL SPECIFICATIONS ..... 3
2. CAB HEATING ..... 5
2.1 DESCRIPTION AND OPERATION ..... 5
3. AIR CONDITIONING ..... 12
3.1 PRINCIPALS OF AIR CONDITIONING ..... 12
3.2 SAFETY PRECAUTIONS ..... 17
3.3 DESCRIPTION AND OPERATION ..... 18
3.4 FAULT FINDING AND TESTING ..... 26
3.5 FLUSHING THE SYSTEM ..... 44
3.6 EVACUATING THE SYSTEM ..... 46
3.7 CHARGING THE SYSTEM ..... 47
3.8 COMPONENTS OVERHAUL ..... 48
3.9 COMPRESSOR ..... 53
3.10 SPECIAL TOOLS ..... 67

## SECTION 55 - ELECTRICAL SYSTEM

1. GENERALITIES ..... 3
1.1 TEMPORARY WIRING HARNESS REPAIR ..... 3
1.2 FAULT FINDING ..... 4
2. ELECTRICAL DIAGRAMS ..... 5
2.1 ELECTRICAL DIAGRAMS - POWERSHUTTLE CAB ..... 5
2.2 ELECTRICAL DIAGRAMS - POWERSHIFT CAB ..... 22
2.3 ELECTRICAL DIAGRAMS - 4WS ..... 38
2.4 ELECTRICAL DIAGRAMS - ROPS ..... 55
3. CONTROLS AND INSTRUMENTS ..... 69
3.1 FRONT INSTRUMENT PANEL ..... 69
3.2 CALIBRATION OF SPEEDOMETER ..... 71
3.3 SIDE INSTRUMENT PANEL ..... 72
3.4 IMMOBILISER CIRCUIT ..... 76

4. DIAGNOSTICS DISPLAY ..... 77
4.1 SYMBOL ..... 78
4.2 SETUP MENU ..... 79
4.3 PROCEDURE ABOUT SELF TEST ..... 81
4.4 ON BOARD ERROR CODE RETRIEVAL ..... 82
4.5 BACKLIGHTING AND DIMMING ..... 83
4.6 WORK HOURS ..... 84
4.7 FUNCTIONAL DESCRIPTION ..... 85
4.8 MAINTENANCE ..... 91
4.9 WARNING MESSAGES ..... 92
5. STARTING SYSTEM ..... 98
5.1 DESCRIPTION AND OPERATION ..... 98
5.2 FAULT FINDING ..... 99
5.3 STARTER MOTOR ..... 102
6. ALTERNATOR ..... 108
6.1 TECHNICAL SPECIFICATIONS ..... 108
6.2 DESCRIPTION AND OPERATION ..... 108
6.3 COMPONENTS ..... 110
6.4 REMOVAL ..... 111
6.5 PRELIMINARY CHECK AND TESTS ..... 112
6.6 FAULT FINDING ..... 121
7. BATTERY ..... 122
7.1 TECHNICAL SPECIFICATIONS ..... 122
7.2 DESCRIPTION AND OPERATION ..... 122
7.3 REMOVAL AND INSTALLATION ..... 123
7.4 MAINTENANCE ..... 125
7.5 TESTS ..... 127
7.6 CONNECTING A BOOSTER BATTERY ..... 129
7.7 BATTERY MASTER SWITCH ..... 129
8. COMPONENT TESTING ..... 130
8.1 GENERAL INTRODUCTION ..... 130
8.2 COMPONENT TESTING ..... 131
8.3 GROUND POINTS ..... 131
8.4 KEY-START AND STOP SWITCH ..... 133
8.5 ALTERNATOR ..... 134
8.6 TRANSMISSIONS ..... 134
8.7 PARKING BRAKE SWITCH ..... 138
8.8 CAB ..... 139
8.9 4WD SWITCH ..... 144
8.10 BRAKE PEDAL SWITCHES ..... 144
8.11 BRAKE OIL LEVEL SWITCH ..... 145
8.12 FRONT WORK LAMP SWITCH - REAR WORK LAMP SWITCH (2) MAIN LIGHT SWITCH ..... 145
8.13 HAZARD SWITCH ..... 146
8.14 FLASHER MODULE ..... 146
8.15 MULTI FUNCTION SWITCH ..... 147
8.16 FRONT WIPER MOTOR (1) - REAR WIPER MOTOR (2) ..... 147
8.17 4WS -STEERING SELECTOR SWITCH ..... 148
8.18 STEERING CONTROL UNIT ..... 149
8.19 4WS REAR AXLE STEERING SENSOR ..... 151
8.20 4WS FRONT AXLE STEERING SENSOR ..... 151
8.21 STEERING SOLENOIDS ..... 152
8.22 DIFFERENTIAL LOCK SWITCH (1) ..... 153
8.23 LOADER ..... 154

8.24 BACKHOE ..... 156
8.25 REVERSING BUZZER ..... 160
8.26 FUEL LEVEL SENDER ..... 160

## SECTION 82 - LOADER

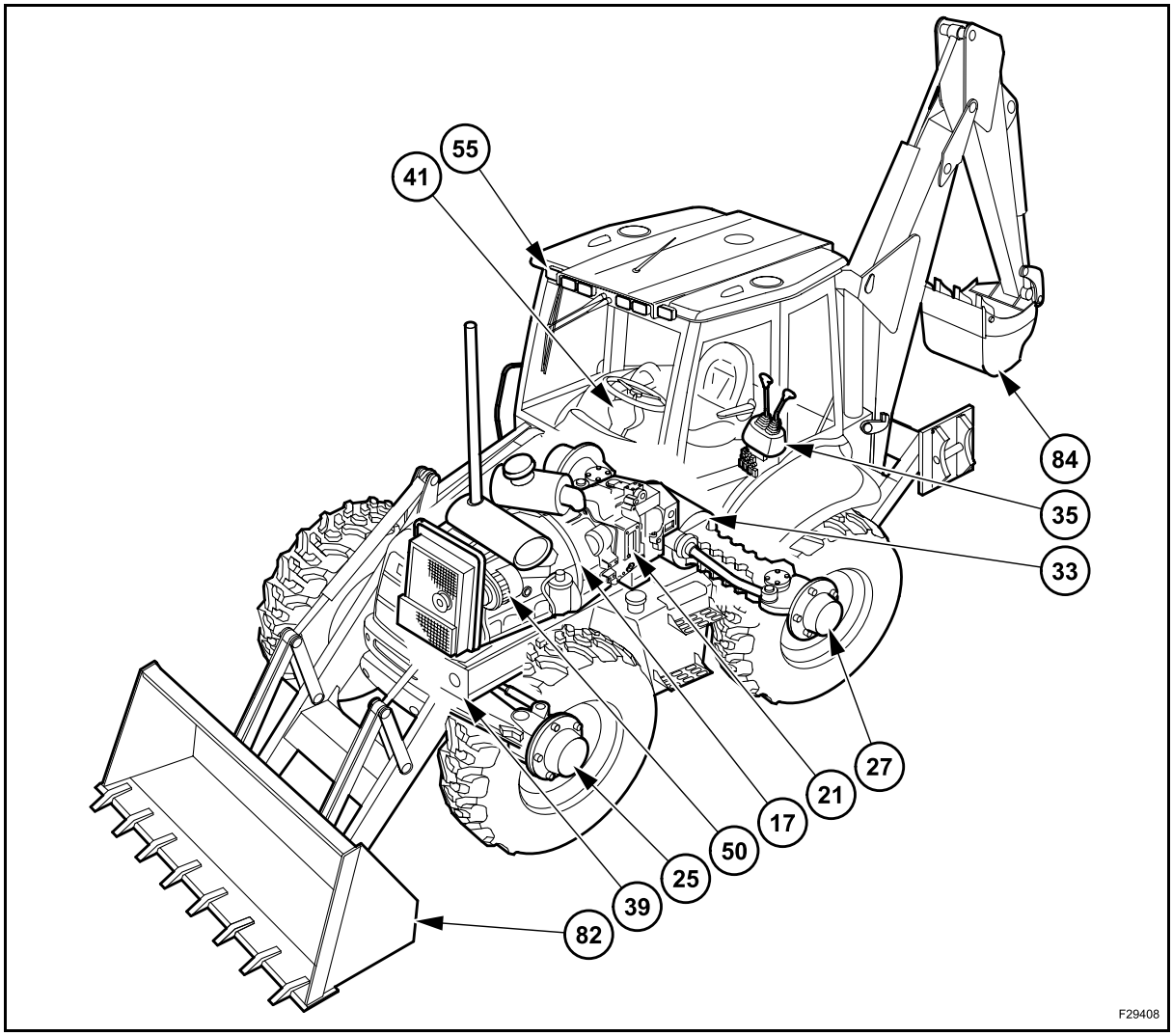
1. LOADER ATTACHMENT CONTROLS ..... 4
2. LOADER BUCKET SELF LEVELING ..... 7
3. LOADER ATTACHMENT SAFETY STRUT ..... 10
4. LOADER BUCKET REMOVAL ..... 12
5. LOADER ARM REMOVAL (B110) ..... 15
6. LOADER ARM REMOVAL (B115) ..... 17

## SECTION 84 - BACKHOE

1. DESCRIPTION AND OPERATION ..... 3
2. BACKHOE ATTACHMENT MECHANICAL CONTROLS ..... 6
3. BACKHOE ATTACHMENT HYDRAULIC CONTROLS ..... 14
4. REMOVAL AND INSTALLATION ..... 16
5. TELESCOPIC DIPPER (HED) REVISION ..... 23

**SECTIONS INDEX**

Where disassembly of a specific component is required refer to the relevant repair manual section.




**SECTION 17: TORQUE CONVERTER**

**SECTION 21: TRANSMISSION**

**SECTION 25: FRONT AXLE**

**SECTION 27: REAR AXLE**

**SECTION 33: BRAKE SYSTEM**

**SECTION 35: HYDRAULIC SYSTEM**

**SECTION 39: CHASSIS**

**SECTION 41: STEERING SYSTEM**

**SECTION 50: CAB HEATING AND AIR CONDITIONING**

**SECTION 55: ELECTRICAL SYSTEM**

**SECTION 82: LOADER**

**SECTION 84: BACKHOE**

**B110**
**B115**

# SECTION 00 - SAFETY PRECAUTIONS

## PERSONAL SAFETY

Throughout this manual and on machine decals, you will find precautionary statements (“CAUTION”, “WARNING”, and “DANGER”) followed by specific instructions. These precautions are intended for the personal safety of you and those working with you. Please take the time to read them.

**⚠ CAUTION**

THE WORD “CAUTION” IS USED WHERE A SAFE BEHAVIORAL PRACTICE ACCORDING TO OPERATING AND MAINTENANCE INSTRUCTIONS AND COMMON SAFETY PRACTICES WILL PROTECT THE OPERATOR AND OTHERS FROM ACCIDENT INVOLVEMENT.

**⚠ WARNING**

THE WORD “WARNING” DENOTES A POTENTIAL OR HIDDEN HAZARD WHICH HAS A POTENTIAL FOR SERIOUS. IT IS USED TO WARN OPERATORS AND OTHERS TO EXERCISE EVERY APPROPRIATE MEANS TO AVOID A SURPRISE INVOLVEMENT WITH MACHINERY.

**⚠ DANGER**

THE WORD “DANGER” DENOTES A FORBIDDEN PRACTICE IN CONNECTION WITH A SERIOUS HAZARD.
FAILURE TO FOLLOW THE “CAUTION”, “WARNING” AND “DANGER” INSTRUCTIONS MAY RESULT IN SERIOUS BODILY INJURY OR DEATH.

## MACHINE SAFETY

Additional precautionary statements (“ATTENTION” and “IMPORTANT”) are followed by specific instructions. These statements are intended for machine safety.

**ATTENTION:** the word “ATENTION” is used to warn the operator of potential machine damage if a certain procedure is not followed.

**IMPORTANT:** the word “IMPORTANT” is used to inform the reader of something he needs to know to prevent minor machine damage if a certain procedure is not followed.

**SAFETY RULES**

- Carefully follow specified repair and maintenance procedures.
- Do not wear rings, wristwatches, jewels, unbuttoned or flapping clothing such as ties, torn clothes, scarves, open jackets or shirts with open zips which could get hold into moving parts.
  We advise to use approved safety clothing such as anti-slipping footwear, gloves, safety goggles, helmets, etc.
- Never carry out any repair on the machine if someone is sitting on the operator's seat, except if they are certified operators to assist in the operation to be carried out.
- Never operate the machine or use attachments from a place other than sitting at the operator's seat.
- Never carry out any operation on the machine when the engine is running, except when specifically indicated.
- Stop the engine and ensure that all pressure is relieved from hydraulic circuits before removing caps, covers, valves, etc.
- All repair and maintenance operations should be carried out with the greatest care and attention.
- Service stairs and platforms used in a workshop or in the field should be built in compliance with the safety rules in force.
- Disconnect the batteries and label all controls to warn that the Machine is being serviced. Block the machine and all equipment which should be raised.
- Never check or fill fuel tanks and accumulator batteries, nor use starting liquid if you are smoking or near open flames as such fluids are flammable.
- Brakes are inoperative when they are manually released for maintenance purposes. In such cases, the machine should be kept constantly under control using blocks or similar devices.
- The fuel filling gun should remain always in contact with the filler neck.
  Maintain this contact until the fuel stops flowing into the tank to avoid possible sparks due to static electricity buildup.
- Use exclusively specified towing points for towing the machine. Connect parts carefully.
  Ensure that foreseen pins and/or locks are steadily fixed before applying traction.
  Do not stop near towing bars, cables or chains working under load.
- To transfer a failed machine, use a trailer or a low loading platform trolley if available.
- To load and unload the machine from the transportation mean, select a flat area providing a firm support to the trailer or truck wheels. Firmly tie the machine to the truck or trailer platform and block wheels as required by the forwarder.
- For electrical heaters, battery-chargers and similar equipment use exclusive auxiliary power supplies with a efficient ground to avoid electrical shock hazard.
- Always use lifting equipment and similar of appropriate capacity to lift or move heavy components.
- Pay special attention to bystanders.
- Never pour gasoline or diesel oil into open, wide and low containers.
- Never use gasoline, diesel oil or other flammable liquids as cleaning agents. Use non-flammable non-toxic proprietary solvents.
- Wear protection goggles with side guards when cleaning parts using compressed air.
- Do not exceed a pressure of 2.1 bar, in accordance with local regulations.
- Do not run the engine in a closed building without proper ventilation.
- Do not smoke, use open flames, cause sparks in the nearby area when filling fuel or handling highly flammable liquids.
- Do not use flames as light sources when working on a machine or checking for leaks.
- Move with caution when working under a Machine, and also on or near a Machine. Wear proper safety accessories:
  helmets, goggles and special footwear.
- During checks which should be carried out with the engine running, ask an assistant to sit at the operator's seat and keep the service technician under visual control at any moment.
  In case of operations outside the workshop, drive the machine to a flat area and block it. if working on an incline cannot be avoided, first block the Machine carefully. Move it to a flat area as soon as possible with a certain extent of safety.
- Ruined or plied cables and chains are unreliable. Do not use them for lifting or trailing. Always handle hem wearing gloves of proper thickness.
- Chains should always be safely fastened. Ensure that fastening device is strong enough to hold the load foreseen. No persons should stop near the fastening point, trailing chains or cables.
- The working area should be always kept CLEAN and DRY. Immediately clean any spillage of water or oil.
- Do not pile up grease or oil soaked rags, as they constitute a great fire hazard. Always place them into a metal container. Before starting the Machine or its attachments, check, adjust and block the operator's seat. Also ensure that there are no persons within the Machine or attachment operating range.
- Do not keep in your pockets any object which might fall unobserved into the Machine's inner compartments.

**Thanks very much for your reading,**

**Want to get more information,**

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**Have any questions please write to me:**
**admin@servicemanualperfect.com**