

580N

Loader Backhoes

Service Manual

Part Number

71114480

1st Edition

English 05/2015





SERVICE MANUAL

580N 4x2 - Without cab [HBZN580NEBAH02214 -]

580N 4x2 - With cab [HBZN580NHBAH02549 -]

580N 4x4 - Without cab [HBZN580NCCA03762 -]

580N 4x4 - With cab [HBZN580NJBAH02348 -]

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INTRODUCTION

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INTRODUCTION

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(*) See content for specific models

Safety rules

DANGER

Improper operation or service of this machine can result in an accident.

Any unauthorized modifications made to this machine can have serious consequences. Consult an authorized dealer on changes, additions, or modifications that may be required for this machine. Do not make any unauthorized modifications.

Failure to comply will result in death or serious injury.

D0030A

Before you weld, cut, or drill holes on any part of this machine, make sure the part is not cast ductile iron. See your dealer if you do not know if a part is cast ductile iron. The following are cast ductile iron parts:

- two wheel drive steering link
- dump links
- front axle
- stabilizers
- extendable dipper
- swing tower
- bucket linkage

Unauthorized modifications to cast ductile iron parts can cause injury or death. Welding, cutting, or drilling can cause cast ductile iron to break. Do not weld, cut, or drill to repair or to attach items to cast ductile iron parts on this machine.

Safety rules

Before welding on the machine you must do the following.
If you have any questions about welding on the machine contact your dealer.

- Disconnect the batteries.
- Disconnect the alternator terminal wires.
- Disconnect the instrument cluster.
 - One connector for mechanical fuel injection engines.
- Disconnect the controller for backhoe pilot controls, if equipped (one connector).
- Disconnect the controller for the loader 4 in 1 bucket or auxiliary hydraulics, if equipped (one connector, located under the loader valve at the rear, left underside of the machine).

Safety rules

DANGER

Improper operation or service of this machine can result in an accident.
Do not operate this machine or perform any lubrication, maintenance, or repair on it until you have read and understood the operation, lubrication, maintenance, and repair information.
Failure to comply will result in death or serious injury.

D0010A

WARNING

Maintenance hazard!
Always perform all service procedures punctually at the intervals stated in this manual. This ensures optimum performance levels and maximum safety during machine operation.
Failure to comply could result in death or serious injury.

W0132A

WARNING

Pressurized system!
Before attempting any service procedure, it is your responsibility to know the number of accumulators on the machine, and the correct procedure for releasing the pressure of each accumulator.
Failure to comply could result in death or serious injury.

W0136A

NOTICE: *Extreme working and environmental conditions require shortened service intervals.*

Use Case fluids, lubricants, and filters for the best protection and performance of your machine. All fluids, lubricants, and filters must be disposed of in compliance with environmental standards and regulations. Contact your dealer with any questions regarding the service and maintenance of this machine.

Read the safety decals and information decals on the machine. Read the Operator's Manual and safety manual. Understand the operation of the machine before you start any service.

Before you service the machine, put a 'Do Not Operate' tag on the steering wheel or over the key switch. Ensure the tag is at a location where everyone who might operate or service the machine may see clearly. One tag is included with your new machine. Additional tags are available from your dealer.

Plastic and resin parts

- Avoid using gasoline, paint thinner, etc. when cleaning plastic parts, console, instrument cluster, etc.
- Use only water, mild soap, and a soft cloth when you clean these parts.
- Using gasoline, thinners, etc. can cause discoloration, cracking, or deformation of the part being cleaned.

Battery - Basic instructions

| | |
|---|----|
| 580N 4x2 - With cab [HBZN580NHBAH02549 -] | LA |
| 580N 4x2 - Without cab [HBZN580NEBAH02214 -] | LA |
| 580N 4x4 - With cab [HBZN580NJBAAH02348 -] | LA |
| 580N 4x4 - Without cab [HBZN580NCCA03762 -] | LA |
| 580N | LA |

⚠ WARNING

Explosive gas!

Batteries emit explosive hydrogen gas and other fumes while charging. Ventilate the charging area. Keep the battery away from sparks, open flames, and other ignition sources. Never charge a frozen battery.

Failure to comply could result in death or serious injury.

W0005A

⚠ WARNING

Hazardous chemicals!

Battery electrolyte contains sulfuric acid. Contact with skin and eyes could result in severe irritation and burns. Always wear splash-proof goggles and protective clothing (gloves and aprons). Wash hands after handling.

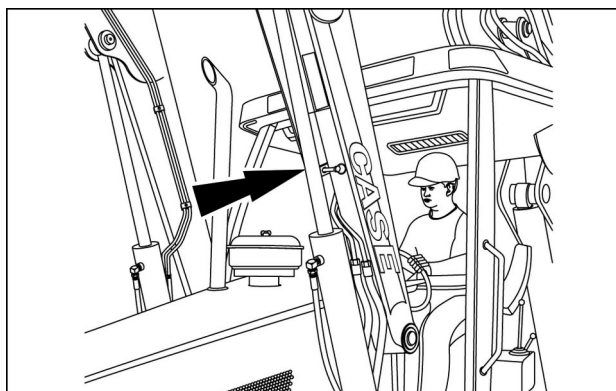
Failure to comply could result in death or serious injury.

W0006A

- Do not run the engine with the alternator wires disconnected.
- Before using an electric welder, disconnect the alternator wires, instrument cluster and batteries. Disconnect the ECU connectors.
- Do not use a steam cleaner or a cleaning solvent to clean the alternator.
- Keep the battery vents clean. Ensure the battery vents are not restricted.

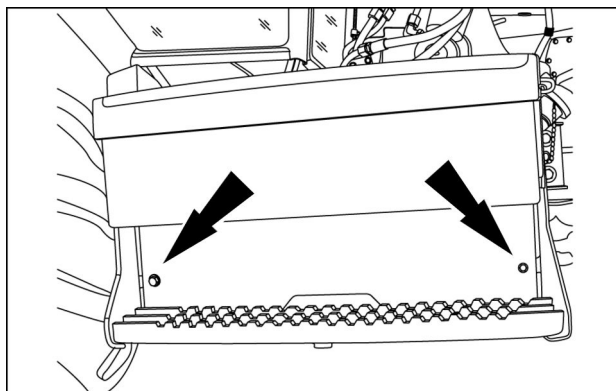
Disconnect battery

1. Park the machine on a level surface. Raise the loader and lock the support strut to hold the loader in the upright position. .



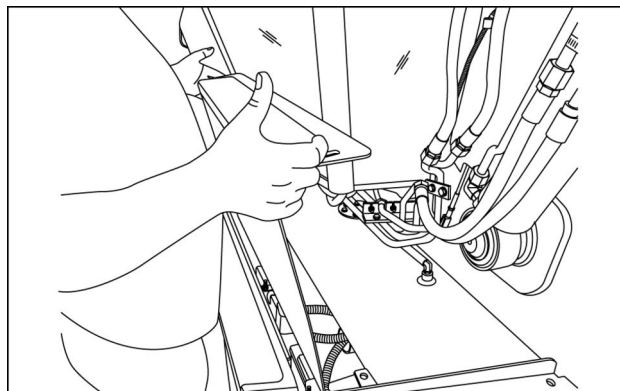
RCPH10TLB022AAL 1

2. Remove the battery cover hardware.



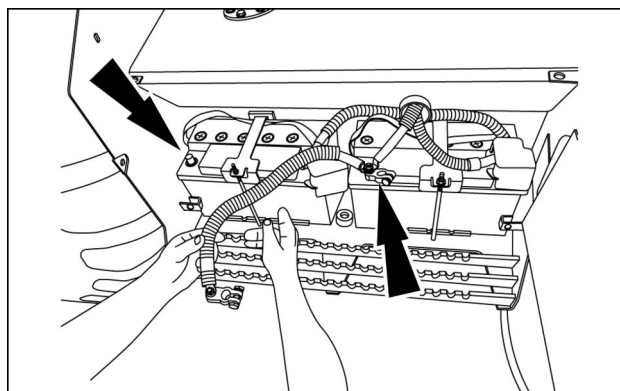
RCPH11TLB001AAM 2

3. Remove the battery cover.



RCPH11TLB002AAM 3

4. Disconnect the negative battery cable from the negative battery terminal.

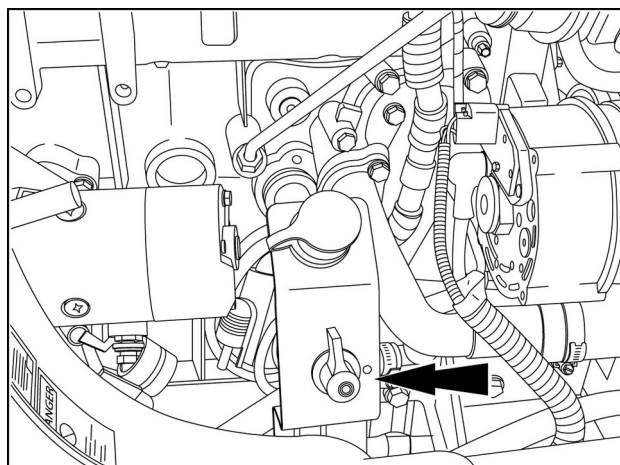


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Master disconnect switch

Enable or disable electrical power from the machine batteries to the electrical components using the master disconnect switch.

NOTICE: Some machine service procedures require an actual terminal disconnect of the batteries. Do not use the master disconnect for those types of procedures, such as welding on the machine.



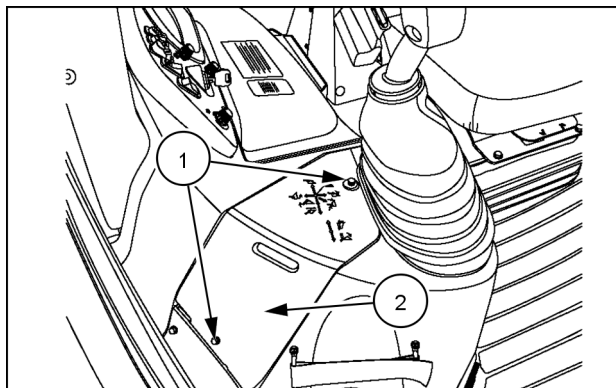
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Electronic modules - Basic instructions

| | |
|---|----|
| 580N 4x2 - With cab [HBZN580NHBAH02549 -] | LA |
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| 580N 4x4 - Without cab [HBZN580NCCAH03762 -] | LA |
| 580N | LA |

The diagnostic/service tool port is located in the fuse box at the side console. Connect the Electronic Service Tool (EST) or DATAR to this port to update software and/or perform service and diagnostic tests.

1. Turn the thumb screws **(1)** to loosen the panel cover **(2)** for the fuse box. Remove the panel cover.

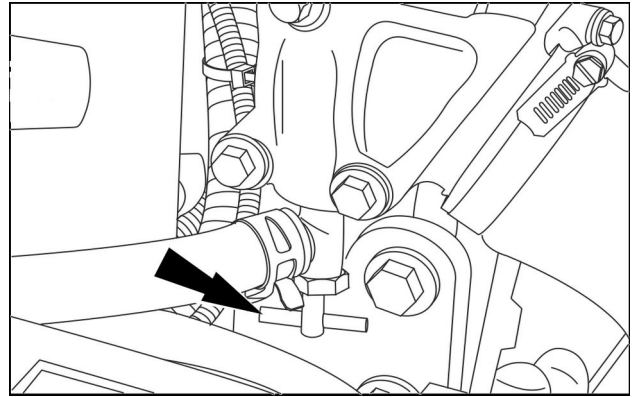


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Cab heater - Basic instructions

The heater coolant shutoff valve controls the flow of hot coolant to the heater.

- In warm ambient temperatures, turn the shutoff valve clockwise to stop hot coolant flow to the heater.
- In cold ambient temperatures, turn the shutoff valve counter-clockwise to allow hot coolant to flow to the heater.






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Torque




Use the torques in this chart when special torques are not given. These torques apply to fasteners with both UNC and UNF threads as received from suppliers dry, or when lubricated with engine oil. Not applicable if special graphite lubricants, Molydisulfide greases, or other extreme pressure lubricants are used.

Decimal hardware

Grade 5 bolts, nuts, and studs

| Size | Nm | lb in/lb ft |
|--|----------------|-------------------|
| 1/4 in | 12 - 15 Nm | 108 - 132 lb in |
| 5/16 in | 23 - 28 Nm | 204 - 252 lb in |
| 3/8 in | 48 - 57 Nm | 420 - 504 lb in |
| 7/16 in | 73 - 87 Nm | 54 - 64 lb ft |
| 1/2 in | 109 - 130 Nm | 80 - 96 lb ft |
| 9/16 in | 149 - 179 Nm | 110 - 132 lb ft |
| 5/8 in | 203 - 244 Nm | 150 - 180 lb ft |
| 3/4 in | 366 - 439 Nm | 270 - 324 lb ft |
| 7/8 in | 542 - 651 Nm | 400 - 480 lb ft |
| 1 in | 787 - 944 Nm | 580 - 696 lb ft |
| 1-1/8 in | 1085 - 1193 Nm | 800 - 880 lb ft |
| 1-1/4 in | 1519 - 1681 Nm | 1120 - 1240 lb ft |
| 1-3/8 in | 1980 - 2278 Nm | 1460 - 1680 lb ft |
| 1-1/2 in | 2631 - 2983 Nm | 1940 - 2200 lb ft |
| Markings for Grade 5 hardware    | | |

Grade 8 bolts, nuts, and studs

| Size | Nm | lb in/lb ft |
|--|----------------|-------------------|
| 1/4 in | 16 - 20 Nm | 144 - 180 lb in |
| 5/16 in | 33 - 39 Nm | 288 - 348 lb in |
| 3/8 in | 61 - 73 Nm | 540 - 648 lb in |
| 7/16 in | 95 - 114 Nm | 70 - 84 lb ft |
| 1/2 in | 149 - 179 Nm | 110 - 132 lb ft |
| 9/16 in | 217 - 260 Nm | 160 - 192 lb ft |
| 5/8 in | 298 - 358 Nm | 220 - 264 lb ft |
| 3/4 in | 515 - 618 Nm | 380 - 456 lb ft |
| 7/8 in | 814 - 976 Nm | 600 - 720 lb ft |
| 1 in | 1220 - 1465 Nm | 900 - 1080 lb ft |
| 1-1/8 in | 1736 - 1953 Nm | 1280 - 1440 lb ft |
| 1-1/4 in | 2468 - 2712 Nm | 1820 - 2000 lb ft |
| 1-3/8 in | 3227 - 3688 Nm | 2380 - 2720 lb ft |
| 1-1/2 in | 4285 - 4827 Nm | 3160 - 3560 lb ft |
| Markings for Grade 8 hardware    | | |

NOTE: Use thick nuts with Grade 8 bolts.

Click on the image link below for the full
version of the service manual

