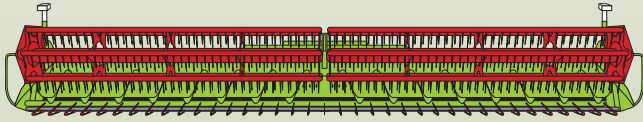


CLAAS



C1200

Repair manual

SERVICE & PARTS

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1 General Information

1.1 General

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1.1.1 Introduction

The present CLAAS REPAIR MANUAL is to provide assistance in maintaining permanent availability. This is to guarantee the high value of CLAAS machine by thorough care and technical servicing.

Experience gathered by both our service engineers and factory staff has been compiled in this REPAIR MANUAL.

The sequence of pictures shows the repair process. The text provides the necessary explanations regarding settings, the use of CLAAS special tools and the like.

The illustrations included in support to the explanations show the sequence of major repairs so that minor repairs can easily be followed.

The CLAAS REPAIR MANUAL is filled in a folder which allows to insert supplementary pages as issued following technical developments and to always have an updated manual at hand for reference.

To be sure, always compare settings and filling capacities with specifications stated in the current Operator's Manual of the combine-harvester.

CLAAS KGaA mbH

Service Department

1.2 Safety rules

1.2.1 Important notice

The instructions contained in the present CLAAS REPAIR MANUAL must be carefully read and observed by all persons involved with the operation, maintenance and inspection of this machine in order to prevent accidents.

In particular, read the present section "Safety rules".

Use only spare parts, accessories and ancillary equipment made by CLAAS and inspected and approved by CLAAS. This is the only way how designed properties of CLAAS machines and their proper service condition can be maintained. Moreover, genuine CLAAS parts preserve the active and/or passive operational safety of the machine and its occupational safety standards.

CLAAS is in no way liable for any damage or personal injury caused through the use of other than genuine or approved CLAAS parts, accessories and ancillary equipment.

Technical data, dimensions and weights are given as an indication only. CLAAS reserve the right to make changes subsequently as technical developments continue. Responsibility for errors or omissions not accepted.

Front, rear, right and left always refer to the direction of forward travel.

1.2.2 Identification of warning and danger signs

All parts of this manual having to do with your safety or the safe operation of the front attachment or the machine are marked with the following signs. Please pass all safety instructions on to other users, too.



Danger!

Nature and source of danger

Consequences: death or serious injury

– Countermeasures



Warning!

Nature and source of danger

Consequences: injuries

– Countermeasures



Caution!

Nature and source of danger

Consequences: material damage

– Countermeasures



Note!

Nature and source of information

Consequences: enhanced machine economy or easy assembly

- Measures



Environment!

Nature and source of danger

Consequences: damage to the environment

- Countermeasures

The warning and instruction signs placed on the machine provide important information for safe operation. These instructions involve your safety – observe them at all times!

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1.2.3 General safety and accident prevention regulations

- In addition to this manual, always comply with the Operator's Manual of the machine as well.
- Comply with all general safety and accident prevention regulations.
- Always comply with local traffic regulations when driving on public roads!
- Before starting the diesel engine ensure that the transmission is in neutral and all guards are installed and in their correct position.
- Always blow the horn before starting the diesel engine and engaging the main drive.
- Start the diesel engine only from the operator's seat. Never attempt to start the diesel engine by short-circuiting across the starting motor terminals as the machine may immediately start to move!
- Never run the diesel engine in a closed building!
- Clothing worn by the service technician must be close-fitting. Avoid wearing loose clothing!
- Handle fuel with care. - Fuel is highly flammable.
- Never refuel the machine in the vicinity of naked flames or sparks.
- Do not smoke during refuelling!
- Always stop the diesel engine and remove the ignition key before refuelling. Fill the fuel tank outdoors.
- Clean up any spilled fuel immediately!
- Prevent fires by keeping the machine clean!
- Be careful when handling brake fluid and electrolyte. Electrolyte is toxic and caustic!
- Perform work under the raised machine only when safe supports are provided.
- Refit guards after completing maintenance and repair work!

1.2.4 Front attachment and trailers

- Support raised front attachments securely before doing any work underneath the units.
- Take particular care when mounting front attachments to the basic machine and when attaching a trailer.
- Owing to their function, front attachments and feeder mechanisms such as belts, rollers, chains, worm gears, reels and the like cannot be completely protected by design measures; for this reason, an adequate safety distance must be maintained from these moving elements during operation. These instructions also apply to all other accessories operated on the machine.
- No person must ever be allowed between the machine and the front attachment unless the parking brake is applied and/or the wheels are chocked so that the vehicle can not start to move on its own.
- Front attachments and trailers must only be attached to the coupling devices provided for that purpose. Observe the maximum permissible load capacity of the trailer hitch.
- Hitch the trailer correctly to the forage harvester. Be alert when connecting a trailer to the forage harvester.
- Before disconnecting a front attachment always make sure that it is stable and securely parked.
- When attaching front attachments always make sure that the load on the existing rear axle is sufficient to maintain the forage harvester's steering and braking capabilities.

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1.2.5 Adjustment and maintenance work

The drives on the machine will not be automatically secured from moving after the engine has been switched off.

Moreover, when it comes to adjustments, it may be necessary to turn the drives.

For this reason, comply with the following rules:

- Before setting, cleaning and maintenance operations and when remedying problems:
 - Switch off the chopper unit.
 - Shut off the engine.
 - Disconnect the battery isolating switch.
- Before setting, cleaning and maintenance operations and when remedying problems on the hydraulic system, lower front attachment and/or feeder unit completely.
- Always turn off the battery isolating switch before carrying out any electrical repairs on the machine.

- The drives will continue to rotate after shutting down the main drive. Absolutely wait until the drives have come to a complete halt.
- It must be ensured that other persons cannot start the machine or rotate the drives.
- Liquids escaping under high pressure (fuel, hydraulic oil etc.) can penetrate the skin and cause serious injury, therefore consult a doctor immediately as otherwise serious infections can result!
- Only have qualified workshops carry out repair work on the hydraulic system.
- Be careful when opening the radiator cap. As long as the engine is hot, the radiator is under pressure!
- Do not attempt to mount a tyre unless you have the proper equipment and experience to perform the job safely.
- Dispose of oil, fuel and filters in a way that is harmless to the environment and in accordance with existing anti-pollution regulations!
- Retighten the wheel nuts regularly!

1.2.6 First aid measures

Inhaling:

- Make the person inhale fresh air and consult a doctor, depending on the symptoms.
- Remove the person from the hazard area.

Eye contact:

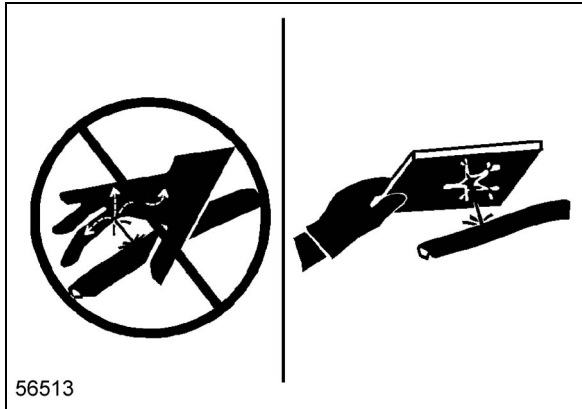
- Thoroughly flush with water for several minutes. If necessary, consult a doctor.

Skin contact:

- Thoroughly clean with plenty of water and soap and remove polluted and soaked clothing immediately, consult a doctor if skin is irritated (redness etc.).

Swallowing:

- Do not cause vomiting, consult a doctor immediately.



1

1.2.7 Danger of injury due to escaping hydraulic liquid

Danger!

Liquids under high pressure.

Liquids penetrate the skin and cause serious injury.

- Only have authorised and qualified workshops carry out work on the hydraulic system.
 - Check hose lines at regular intervals. Search for leaks using a piece of wood or cardboard.
- Ensure that the oil jet will not be directed towards your body.
- Replace any damaged hose lines.
 - Replace hose lines 6 years after the date of manufacture at the latest.

Danger!

Dealing incorrectly with injuries due to hydraulic fluids.

Death or serious injury.

Even a pinhole can result in severe injuries.

- If hydraulic fluid gets in the skin or eyes, have the injury treated by a medical specialist immediately.

1.3 General repair instructions

1.3.1 Reason of damage

Identify reason of damage, limit the case of damage and safeguard the machine.

1.3.2 Spare parts



Danger!

Use of unauthorised spare parts.

Death or serious injury.

- Spare parts must at least comply with the technical standards required by the manufacturer of the implement!
- We recommend using genuine CLAAS spare parts.

Please specify the respective identification nos. when ordering spare parts and making technical inquiries:

- Machine
- Front attachment
- Engine
- Subassembly
and/or
- Software version / versions

This is necessary as otherwise, incorrect spare part deliveries may result.

The identification no. can be found on the respective type plate.

The identification no. / nos. of the software can be found in the respective menu.

1.3.3 Gearboxes

When removing the gearboxes, always drain the gearbox oil first and then remove the gearbox. Separate parts which are firmly connected with each other by means of a soft metal-tip or plastic-tip hammer.

1.3.4 Tensioning the steel roller chains

Find the centre point in the slack span between sprockets. With the tight span slightly under load, push in the centre point of the slack span with the thumb. The chain tension is correct when its slack span deflects about **2%** of the centre distance between shafts. Check chain tension more frequently when using new chains.

Example: Distance between shafts **500 mm =**
Deflection of slack span is roughly **10 mm.**

1.3.5 Taper ring fasteners

Taper ring fasteners provide a safe mechanical connection, even when transmitting high forces from the driving element on the shaft and vice versa, provided they are properly prestressed.

Installation:

When installing taper ring fasteners, it is important that the shaft, hub, parallel key and the taper rings have been thoroughly cleaned, that semi-fluid lubricant of NLGI class 00, e.g. CLAAS AGRIGREASE LC 00/000, is applied and that the components are tightened to the specified torque in the correct order of assembly.



Warning!

Gluing on taper ring fasteners.

- No solid grease must be used when assembling the parts.

Disassembly:

After loosening the axial clamping, loosen the taper ring fastener with a sharp blow, using a block-ended tube.



Warning!

Damage to the taper ring fastener.

- The inside diameter of the block-ended tube must be large enough to extend over the tapered ring.

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1.3.6 Self-locking bolts with micro-encapsulated adhesive

Replace self-locking bolts, e.g. Verbus-Plus / Imbus-Plus upon each assembly. In exceptional cases, they may be reused up to three times.

Always tighten self-locking bolts with microencapsulated adhesive rapidly to the specified tightening torque.

Always observe the specified tightening torque.

When removing self-locking bolts, quickly unscrew them completely. Self-locking bolts must never get in contact with sealing compound.

Self-locking bolts with microencapsulated adhesive may be used only where operating temperatures will not exceed **+ 90 °C** max.

These bolts can be subjected to full stress after 24 hours at **+ 20 °C**. The complete curing period can be shortened by heating, e.g. to 15 minutes at **+ 70 °C**.

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