

REPAIR MANUAL

AXLES AND STEERING

ENGINE

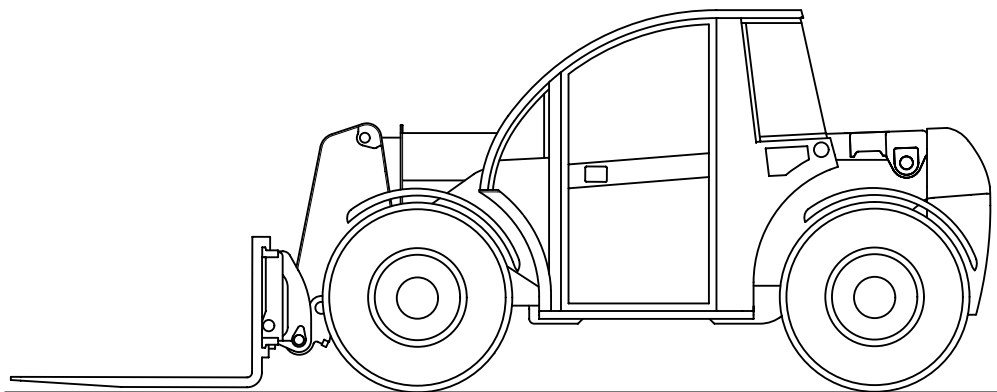
TRANSMISSION

BOOM

CHASSIS

TECHNICAL DATA

CLAAS



LH80000

CLAAS TARGO C Series

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The machines in this handbook are designed essentially for agricultural and associated applications. This is their intended use.

Any modifications made to the machine without prior written approval from CLAAS or if the machine is used in any way contrary to the intended use or if the machine is not properly driven or maintained then the Company will not accept any liability whatsoever for any damage or injury (whether direct or consequential).

The method of operation and maintenance specified in this handbook should be strictly adhered to.

For your parts requirements, it is essential that only genuine CLAAS parts are fitted. Any resultant damage from non-genuine parts will invalidate your machine warranty.

CLAAS operates a policy of continuous improvement to its products and reserve the right to change specifications and equipment without notice. Therefore some information within this handbook may differ from your machine.

This manual is designed to service machines:

**from Serial No. 50600011
up to Serial No. 50600251.**

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General

The contents of this Repair Manual, although correct at the time of publication, may be subject to alteration by the manufacturer without notice.

This manual assumes that maintenance personnel have a sound knowledge of workshop practices and safety procedures associated with the repairs of this type of machine. This manual is designed to assist with the more specialised information required for removal and strip-down of major components.

It is recommended that the relevant part of this Repair Manual is studied carefully before proceeding with any maintenance.

Machine identification

To make sure that the correct parts are obtained, always quote the machine Serial Number when ordering parts.

Health and Safety

To prevent injury to personnel and damage to equipment and machinery, care must be taken to operate in a safe manner. Read the Safety Warnings that follow and always work in a safe manner and obey the relevant Warnings.

Throughout this manual and on the machine there are safety notes. Each note starts with a single word. The meaning of these single words is as follows:

WARNING *Identifies a hazard exists. If proper precautions are not taken, it is highly probable that the operator (or others) could be killed or seriously injured.*



CAUTION *Identifies a reminder of safety practices. Failure to observe these safety practices could result in injury to the operator (or others) or damage to the machine.*



In general these notes are used to indicate that the procedures being described in the manual must be followed to avoid serious injury or death to yourself or others. The notes are also used to protect the machine from unsafe maintenance practices.

SAFETY WARNINGS

- WARNING**  Always wear correct fitting protective clothing. Loose or baggy clothing can be extremely dangerous when operating or maintaining a machine.
- WARNING**  Where possible, only work on or close to engines or machinery when they are stopped. If this is not practical, remember to keep tools, test equipment and all parts of your body well away from moving parts.
- WARNING**  Avoid contact with exhaust pipes and exhaust manifolds when the engine is running; these can be very hot.
- WARNING**  Many liquids used on this machine are harmful if taken internally or splashed into the eyes. In the event of accidentally swallowing oil, diesel fuel, anti-freeze, battery acid etc., **DO NOT** induce vomiting, but **OBTAIN QUALIFIED MEDICAL ASSISTANCE IMMEDIATELY.**
- WARNING**  Always obtain advice before mixing oils; some are incompatible.
- WARNING**  Never run an engine in an enclosed space unless an exhaust extraction system is used.
- WARNING**  Always disconnect battery cables before working on the electrical system to prevent injury caused by electric shock.
- WARNING**  When it is necessary to work on the electrical system with power on, for fault diagnosis, always have a safety man in attendance
- WARNING**  Any dust found on the machine or produced during work on the machine should be removed by extraction, not by blowing. Dust waste should be dampened, placed in a sealed container and marked for safe disposal.
- WARNING**  Always dump pressure from the hydraulic system before carrying out any maintenance or adjustment (**refer to Hydraulic Repair Manual**).
- WARNING**  Never leave the machine unattended with pressure in the system.
- WARNING**  Fine jets of hydraulic fluid at high pressure can penetrate the skin. Do not use your fingers to check for hydraulic fluid leaks. Do not put your face close to suspected leaks. If hydraulic fluid penetrates your skin **OBTAIN QUALIFIED MEDICAL ASSISTANCE IMMEDIATELY.**
- WARNING**  Never allow unqualified personnel to attempt to remove or replace any part of the machine.
- WARNING**  Always use the correct lifting equipment to remove large or heavy components.
- WARNING**  Never attempt to lift or hold up the machine using the lash-down points.

SECTION 1

AXLES AND STEERING

AXLES

DESCRIPTION

The front axle has a transmission/reduction box fitted, with both front and rear axles having epicyclic reduction gears contained in the wheel hubs. The front axle is fitted with a limited slip differential whilst the rear axle has a standard type differential. The front axle housing incorporates the brakes.

Steering is available to both axles, depending on the steering mode selected. The axle hubs are steered by the operation of a double acting hydraulic cylinder attached to the axle.

FRONT AXLE

Removal

1. Park the machine on firm level ground.
2. Raise the boom and fit the boom safety stop.
3. Set the wheels straight ahead, in line with the chassis and fit chocks to the front and rear of the rear wheels.
4. Stop the engine and apply the parking brake.
5. Refer to page 1.70 and dump hydraulic pressure from the brake systems and steering system, then disconnect the battery.

CAUTION



Support the drive shaft clear of the axle to make sure it is not damaged during axle removal.

6. Disconnect the drive shaft from the axle flange and support clear of axle.
7. Disconnect the inductive magnetic steering sensor electrical lead.

CAUTION



Support the hydrostatic motor clear of the axle to make sure it is not damaged during axle removal.

8. Disconnect the hydrostatic motor from the transmission box flange and support clear of axle.
9. Slacken front axle wheel nuts.
10. Support the chassis at a sufficient height to allow the wheels to be removed.

11. Support axle with a forklift or trolley jacks.

12. Remove front wheels.

13. Disconnect the parking brake linkage (1) and position cable and attachments clear of the axle.

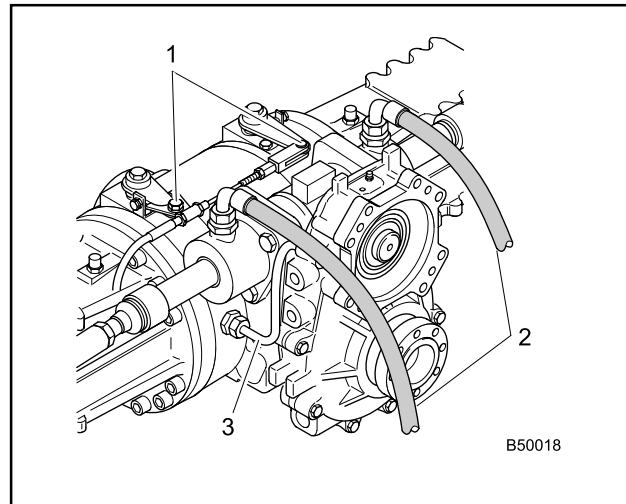
14. Disconnect brake pipes from left (3) and right (not shown) brake units, fit blanks to open pipes and brake unit connections.

15. Disconnect steering hoses (2) from steering cylinder, fit blanks to open pipes and steering cylinder connections.

WARNING



*Secure the axle to the fork lift/trolley jacks to prevent axle tipping on removal.
The axle weighs 391 kg, take care when removing and transporting.*



1. Parking brake linkage and adjuster
2. Steering hoses
3. LH Brake pipe (RH similar)

16. Remove the eight attachment bolts/nuts securing axle to chassis (four each side) and remove support plates.

17. Lower axle on fork lift/trolley jacks.

18. Move axle clear of machine and place on a suitable support.

Installation

1. Installation is the reverse of the removal procedure.

2. Torque load components as follows:

Axle to chassis nuts	640 Nm (472 lbf ft.)
Drive shaft bolts	61-81 Nm 45-60 lbf ft.)
Wheel nuts	300 Nm (221 lbf ft.)
Hydrostatic motor to Axle bolts	150 Nm (110 lbf ft.)

3. Check axle and wheel hub oil levels are correct.

4. When the axle has been dismantled and reassembled, refer to the Axle Assembly section and test the differential operation.

5. Connect the parking brake linkage (1). Refer to testing and adjusting section to set up parking brake control cable.

6. Refer to Page 1.69 and bleed the brakes then test brake function and parking brake operation.

7. Start engine, make sure front wheel steering is selected and operate steering through full range several times to bleed air from steering system.

8. Test machine operation.

REAR AXLE

Removal

1. Park the machine on firm level ground.
2. Set the wheels straight ahead, in line with the chassis and fit chocks to the front wheels.
3. Stop the engine and apply the parking brake.
4. Refer to page 1.70 and dump hydraulic pressure from the steering system, then disconnect the battery.

CAUTION



Support the drive shaft clear of the axle to make sure it is not damaged during axle removal.

5. Disconnect the drive shaft from the axle flange and support clear of axle.
6. Disconnect the load sensor electrical lead.
7. Disconnect the inductive magnetic steering sensor electrical lead.
8. Disconnect steering hoses from steering cylinder, fit blanks to open pipes and steering cylinder connections.
9. Slacken rear axle wheel nuts.
10. Support the chassis at a sufficient height to allow the wheels to be removed.
11. Remove rear wheels.
12. Support axle with a forklift or trolley jacks.
13. Remove the bolts attaching the axle front support to the chassis.
14. Remove the bolts attaching the axle rear support to the chassis.

WARNING



Secure the axle to the fork-lift/trolley jacks to prevent axle tipping on removal. The axle weighs 298 kg dry weight, take care when removing and transporting.

15. Lower axle on fork-lift/trolley jacks.
16. Move axle clear of machine and place on a suitable support.

Installation

1. Installation it the reverse of the removal procedure.

2. Torque load components as follows:

Axle to chassis nuts	640 Nm (472 lbf ft.)
Drive shaft bolts	70-85 Nm (52-63 lbf ft.)
Wheel nuts	300 Nm (221 lbf ft.)
Axle support bolts	370 Nm (273 lbf ft.).

3. Check axle and wheel hub oil levels are correct.

4. When the axle has been dismantled and reassembled, refer to the Axle Assembly section and test the differential operation.

5. Start engine, make sure rear wheel steering is selected and operate steering through full range several times to bleed air from steering system.

6. Test machine operation.

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