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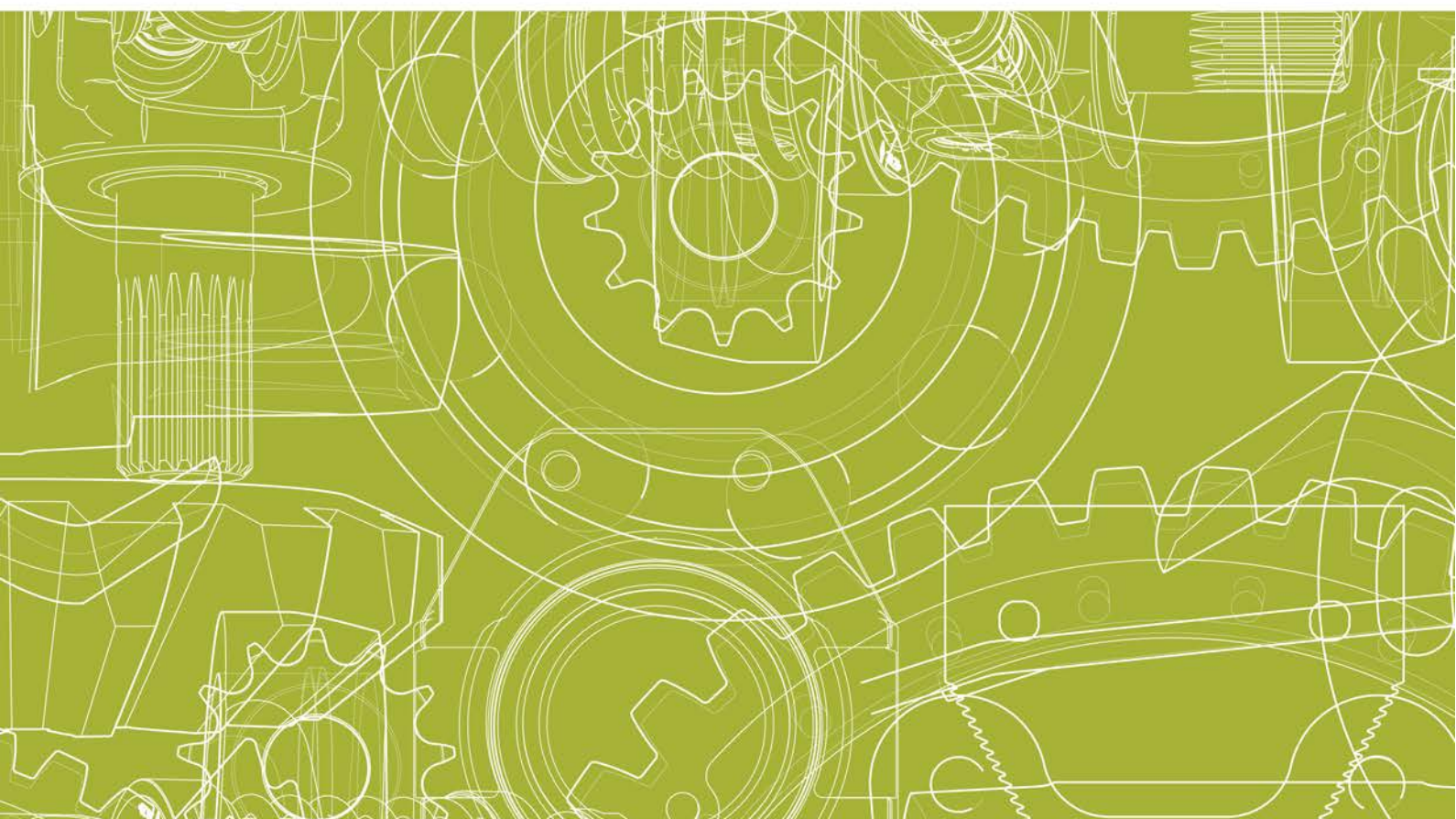
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CLAAS

Operator's Manual



Service & Parts

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1 Foreword

1.1 Operator's Manual

Important information on the operating personnel

This Operator's Manual applies to the model 415-01_6030, 415-01_6035, 415-03 and 415-05 telehandlers, and is only intended for use by the operator.

It provides instructions on the use, the adjustment, the operation and the maintenance of the machine.

Before performing machine travel or operation for the first time, the user must be briefed on this machine and must carefully read and understand this Operator's Manual, in particular chapter "**Safety instructions**".

Work on the machine may only be performed by trained and instructed personnel that has been authorized by the operating company. Any person involved in operation, inspection, maintenance, servicing, repair work or transport of the machine must read, understand and follow the complete instructions in the Operator's Manual and in particular the safety instructions.

The buyer/operating company is responsible for the operators' training in safe working on and with the machine. CLAAS KGaA mbH recommends repeating training at regular intervals.

The buyer/operating company is responsible for ensuring that any additional safety regulations applicable in the country of use of the machine are followed.

The machine may only be operated by persons who are physically, mentally and professionally suited for this work.

Persons under the influence of alcohol or drugs may **not** use the machine.

The operator is the person performing machine operation and/or travel.

- Before putting the machine into operation, the operator of the machine must ensure that it is in a perfect condition, and during operation he must pay attention to the regulations regarding operation.
- The operator is responsible for ensuring that the machine and its use do not constitute a risk.
- Before working with the machine, the operator must familiarize himself with all the control elements and their functions, and with the handling of the machine.



Information

Careful and prudent working is the best way to avoid accidents!

Important information on this Operator's Manual

- The Operator's Manual and amendments form part of the machine and must always be available at the place of use of the machine.
- Store this Operator's Manual in the storage compartment or net provided for this in the cabin.
- Immediately replace an incomplete or illegible Operator's Manual by a new one.
- In addition to the Operator's Manual, observe and instruct the operator in all other generally applicable, legal and other mandatory regulations relevant to accident prevention and environmental protection.
- Please contact CLAAS KGaA mbH if you require more information on the machine and the Operator's Manual.
- CLAAS KGaA mbH keep abreast of the latest technical developments and constantly improve their products. For this reason, we may from time to time need to make changes to figures and descriptions in this documentation which do not reflect products that have already been delivered and that will not be implemented on these machines.
- Technical data, dimensions and weights are only given as an indication. Responsibility for errors or omissions not accepted.

Explanation of symbols and abbreviations

The indication **left** or **right** in the descriptions always refers to the travel direction of the machine.

Symbols	Explanation
•	Identifies a general list
1	Identifies a list in a table (position numbers)
2	
1.	Identifies activities that must be performed in a certain order
2.	
➡	Identifies results
▶	Identifies things to be avoided in the warning and safety instructions
Abbreviations	Explanation
min.	minimum
max.	maximum
e.g.	for example
Fig.	Figure
o/h	Operating hours
Order no.	Order, item or part number
(opt)	Option
ROPS	Roll Over Protective Structure
FOPS	Falling Object Protective Structure

1.2 Warranty and liability

Warranty claims can be made only if the conditions of warranty have been observed. They are included in the General Conditions of Sales and Delivery for new machines and spare parts sold by the dealers. Furthermore, the instructions in this Operator's Manual must be observed.

Information on maintenance, repairs and spare parts

Operational safety and readiness of the machine do not only depend on your reliable control, but also on maintenance and servicing of the machine. This is why regular maintenance and servicing is absolutely necessary.



Information

Repair work, maintenance or modifications may only be performed by specifically trained technical personnel or by a service centre!

Follow the instructions, in particular in chapters "Information on maintenance" and "Maintenance overview".



Information

Insist on using original spare parts for repairs!

The machine's permits, certifications, registrations, etc., may be withdrawn if machine parts/components with a prescribed condition or quality, or machine parts/components that can put persons at risk during operation, are subsequently modified or exchanged.

2 Safety

2.1 Safety symbols and signal words

Explanation

The following symbol identifies safety instructions.
It is used for warning against potential personal risk or danger.



DANGER

DANGER identifies a situation causing death or serious injury if it is not avoided.

Consequences in case of non-observance.

- Avoidance of injury or death.
-



WARNING

WARNING identifies a situation that can cause death or serious injury if it is not avoided.

Consequences in case of non-observance.

- Avoidance of injury or death.
-



CAUTION

CAUTION identifies a situation that can cause injury if it is not avoided.

Consequences in case of non-observance.

- Avoidance of injury.
-

NOTICE

NOTICE identifies a situation that causes damage to the machine if it is not observed.

- Avoidance of damage to property.
-

2.2 Conduct and safety instructions

Prerequisites for operation

- The machine has been designed and built in accordance with state-of-the-art standards and the recognized safety regulations. Nevertheless its use can cause danger to the operator or other persons, or damage to the machine.
- Store this Operator's Manual in the place provided for this in or on the machine. Immediately replace a damaged or illegible Operator's Manual and any supplements to it.
- The machine must only be operated in accordance with its designated use and the instructions set forth in this Operator's Manual.
- The operator and owner are obligated not to put into operation or operate a damaged or malfunctioning machine.
 - If a damage or malfunction occurs during operation, put the machine out of operation immediately and secure it against restart.
 - Have all malfunctions jeopardizing the safety of the operator or other persons immediately repaired by an authorized service centre.
- Do not put the machine into operation or operate it after an accident; have it inspected for damage by an authorized service centre.
 - Have the seat belt replaced by an authorized service centre after an accident, even if there is no visible damage.
 - Cabin and protective structures
- Remove all dirt, snow and ice from climbing aids (for example handholds, footholds, handrails).
- The owner is responsible for requiring the operating and maintenance personnel to wear protective clothing and equipment as required by the circumstances.

2.3 Qualification of operating and maintenance personnel

Owner's duties

- Only allow specifically authorized, trained and experienced persons to operate, drive and perform maintenance on the machine.
- Do not allow persons to be trained or instructed by anyone other than an authorized and experienced person.
- Have persons to be trained or instructed practise under supervision until they are familiar with the machine and its behaviour (for example with the steering and braking behaviour).
- Children and persons under the influence of alcohol, drugs or medicine are not allowed to access the machine or operate it.
- Clearly and unequivocally define the responsibilities of the operating and maintenance personnel.
- Clearly and unequivocally define the responsibilities on the job site, also in view of traffic regulations.
- Give the operator the authority to refuse instructions by other persons that are contrary to safety.
- Have the machine serviced and repaired only by an authorized service centre.

Required knowledge of operator

- The operator is responsible for other persons.
- Avoid any operational mode that might be prejudicial to safety.
- The specific national driving licence is required.
- The machine may only be operated by authorized and safety-conscious persons who are fully aware of the risks involved in operating the machine.
- The operator and owner are obligated to operate the machine only in a safe and working condition.
- All persons working on or with the machine must have read and understood the safety instructions in this Operator's Manual before starting work.
- Follow, and instruct the operator in, legal and other mandatory regulations relevant to accident prevention.
- Observe and instruct the operator in regulations regarding road traffic and environmental protection.
- Use only the defined accesses for getting on and off the machine.
- Be familiar with the emergency exit of the machine.

Preparatory measures for the operator

- Before starting, check the machine whether it can be driven and operated safely.
- Tie back long hair and remove all jewellery.
- Wear close-fitting work clothes that do not hinder movement.

2.4 Operation

Preparatory measures

- Operation is only allowed with correctly installed and intact protective structures.
- Keep the machine clean. This reduces injury, accident and fire hazards.
- Safely store objects you carry with you in the places provided for this (for example in the storage compartment, drinks holder).
- Do not carry objects with you that protrude into the operator's work space. They can create another danger in case of an accident.
- Observe all safety, warning and information labels.
- Start and operate the machine only with the seat belt fastened and only from the place provided for this.
- Check the condition and the fastening of the seat belt.
Have malfunctioning seat belts and mounting hardware replaced by an authorized service centre.
- Before starting work, adjust the seating position so that all control elements can be reached and fully operated.
- Perform the personal adjustment at machine standstill only (for example of the operator seat, steering column).
- Ensure that all safety devices are properly installed and functional before starting work.
- Before starting work or after interrupting work, ensure that the brake, steering, signalling and light systems are functional.
- Before putting the machine into operation, ensure that nobody is in the danger zone.

Job site

- The operator is responsible for other persons.
- Before starting work, familiarize yourself with the job site.
This applies to, for example:
 - Obstacles in the working and travelling area
 - Any barriers separating the job site from public roads
 - Soil weight-bearing capacity
 - Existing overhead and underground lines
 - Special operating conditions (for example dust, steam, smoke, asbestos)
- The operator must know the maximum dimensions of the machine and the attachment – see “Technical data”.
- Maintain a safe distance (for example from buildings, edges of building pits).
- When working in buildings or in enclosed areas, look out for:
 - Height of the ceiling/clearances
 - Width of entries/passages
 - Maximum load of ceilings and floors
 - Sufficient room ventilation
(for example risk of carbon monoxide poisoning)
- Use existing visual aids to stay aware of the danger zone.
- In conditions of darkness and poor visibility, switch on existing work lights and ensure that road users are not blinded by these lights.
- If the existing lights of the machine are not sufficient for performing work safely, ensure additional lighting of the job site.
- Due to hot machine parts, maintain a safe distance from easily flammable material (for example from hay, dry leaves).

Danger zone

- The danger zone is the area in which persons are in danger due to the movements of the machine, attachment and/or load.
- The danger zone also includes the area that can be affected by falling material, equipment or by parts that are thrown out.
- Extend the danger zone sufficiently in the immediate vicinity of buildings, scaffolds or other elements of construction.
- Seal off the danger zone should it not be possible to keep a sufficient safety distance.
- Stop machine operation immediately if persons do not stay clear of the danger zone.

Carrying passengers

- Carrying passengers with the machine is PROHIBITED.
- Carrying passengers on/in attachments/tools is PROHIBITED.
- Carrying passengers on/in trailers is PROHIBITED.

Mechanical integrity

- The operator and owner are obligated to operate the machine only in a safe and working condition.
- Operate the machine only if all protective and safety-oriented equipment (for example protective structures such as a cabin or rollbar, removable safety devices) is installed and functional.
- Check the machine for visible damage and defects.
- In case of damage and/or unusual behaviour, put the machine out of operation immediately and secure it against restart.
- Have all malfunctions jeopardizing the safety of the operator or other persons immediately repaired by an authorized service centre.

Starting the engine of the machine

- Start the engine only according to the Operator's Manual.
- Observe all warning lights and indicator lights.
- Do not use any liquid or gaseous starting aids (for example ether or starting fuel).

Machine operation

- Start and operate the machine only with the seat belt fastened and only from the place provided for this.
- Put the machine into operation only if visibility is sufficient (have another person guide you if necessary).
- Operation on slopes:
 - Travel/work only uphill or downhill.
 - Avoid machine travel across a slope, observe the machine's permissible inclination (and of the trailer if necessary).
 - Keep loads on the uphill side of the machine and as close as possible to it.
 - Keep attachments/work equipment close to the ground.
- Adapt the travel speed to the circumstances (for example the ground conditions, weather conditions).
- There is increased danger during backward machine travel. Persons in the blind spot of the machine cannot be seen by the operator.
 - Ensure that nobody is in the danger zone when you change the travel direction.
- Never get on a moving machine and never jump off the machine.

Machine travel on public roads/sites

- The specific national driving licence is required.
- Observe the national regulations (for example the road traffic regulations) during machine travel on public roads/sites.
- Ensure that the machine is in compliance with the national regulations.
- In order not to blind other motorists, using the existing work lights during machine travel on public roads/site is prohibited.
- When crossing for example underpasses, bridges, tunnels, ensure that the clearance height and width is sufficient.
- The attachment fitted onto the machine must be certified for travel on public roads/sites (see for example the registration documents).
- The attachment fitted onto the machine must be empty and in transport position.
- The attachment fitted onto the machine must be equipped with the mandatory lights and protective equipment.
- Take measures against unintentional operation of the operating hydraulics.
- If the machine has different steering modes, ensure that the mandatory steering mode is selected.

Stopping the engine of the machine

- Stop the engine only according to the Operator's Manual.
- Before stopping the engine, lower the work equipment/attachment to the ground.

Stopping and securing the machine

- Unbuckle the seat belt only after stopping the engine.
- Before leaving the machine, secure it to prevent it from rolling away (for example with the parking brake, suitable wheel chocks).
- Remove the ignition key and secure the machine against unauthorized operation.

2.5 Lifting gear applications

Requirements

- Have loads fastened and the operator guided by a qualified person having specific knowledge of lifting gear applications and the usual hand signals.
- The person giving instructions to the operator must stay in visual contact with the operator when fastening, guiding or removing the load (maintain visual contact).
- If this not be possible, ask one more person with the same qualifications to guide.
- The operator may not leave his seat as long as the load is raised.

Fastening, guiding and removing loads

- Follow the applicable specific regulations for fastening, guiding and removing a load.
- Wear protective clothing and equipment when fastening, guiding and removing loads (for example a hard hat, safety glasses, protective gloves, safety boots).
- Do not place lifting and fastening gear over sharp edges or rotating parts. Loads must be fastened so as to prevent them from slipping or falling.
- Move loads only on horizontal, level and firm ground.
- Move loads close to the ground.
- In order to avoid oscillating movements of loads:
 - Perform smooth, slow movements with the machine.
 - Use cables to guide the load (do not use hands to guide).
 - Bear in mind the weather conditions (for example the wind force).
 - Keep a minimum safety distance from objects.
- The operator may allow the load to be fastened and removed only if the machine and its work equipment are not being moved.
- Danger zones must not overlap with the work zones of other machines.

Lifting gear applications

- The machine must be certified for lifting gear applications.
- Observe the national regulations for lifting gear applications.
- Lifting gear applications are procedures involving raising, transporting and lowering loads with the help of lifting and fastening gear.
- The help of an accompanying person is necessary for fastening, guiding and removing the load.
- There must be nobody under the load.
- Stop the machine immediately and stop the engine if persons enter the danger zone.
- Use the machine for lifting gear applications **ONLY** if the mandatory lifting gear (for example a joint rod and load hook) and safety equipment (for example optical and acoustic warning devices, hose burst valve, stability table) is installed and functional.
- Use only lifting and fastening gear certified by a test/certification body, observe the inspection intervals
(Use only chains and shackles. No belts, slings or cables).
- Do not use any lifting and fastening gear that is dirty, damaged or not of sufficient size.
- Do not interrupt the work process with a load attached.

2.6 Trailer operation

Trailer operation

- The machine must be certified for trailer operation.
- Observe the national regulations for trailer operation.
- The specific national driving licence is required.
- Carrying passengers on/in trailers is PROHIBITED.
- Observe the maximum permissible tongue load and towing capacity.
- Do not exceed the permissible trailer speed.
- Trailer operation with the towing gear of the machine is prohibited.
- Trailer operation changes the machine's operating behaviour, the operator must be familiar with this and act accordingly.
- Bear in mind the machine's steering mode and the trailer's turning circle.
- Before hitching/unhitching the trailer, secure it to prevent it from rolling away (for example with the parking brake, suitable wheel chocks).
- There must be nobody between the machine and the trailer when hitching a trailer.
- Hitch the trailer onto the machine correctly.
- Ensure that all equipment works correctly (for example the brakes, lights).
- Before starting machine travel, ensure that nobody is between the machine and the trailer.

2.7 Attachment operation

Attachments

- Use only attachments that are certified for the machine or its protective equipment (for example a shatter protection).
- All other attachments require the machine manufacturer's release.
- The danger zone and the work zone depend on the attachment used – see the Operator's Manual of the attachment.
- Secure the load.
- Do not overload attachments.
- Check the correct position of the lock.

Operation

- Carrying persons on/in an attachment is prohibited.
- Installing a work platform is prohibited.
 - Exception: The machine is certified and equipped with the necessary safety equipment.
- Attachments and counterweights modify handling, as well as the steering and braking capability of the machine.
- The operator must be familiar with these modifications and act accordingly.
- Before starting work, operate the attachment to check that it works correctly.
- Before putting the attachment into operation, ensure that nobody is in danger.
- Lower the attachment to the ground before leaving the operator seat.

Removing and fitting attachments

- Before uncoupling or coupling hydraulic connections:
 - Stop the engine
 - Release the pressure in the operating hydraulics
- Picking up and lowering attachments to the ground requires special care:
 - Pick up and safely lock the attachment in accordance with the Operator's Manual.
 - Lower the attachment only to firm, level ground and secure it to prevent it from tipping over or rolling away.
- Put the machine and the attachment into operation only if:
 - The protective equipment has been installed and is functional.
 - The connections for the lights and the hydraulic system have been established and are functional.
- Perform a visual check of the lock after locking the attachment.
- There must be nobody between the machine and the equipment when picking up or lowering an attachment to the ground.

2.8 Towing, loading and transporting

Towing

- Seal off the danger zone.
- Ensure that no one is near the towing bar or cable.
The safety distance is equal to 1.5 times the length of the towing equipment.
- Observe the mandatory transport position, permissible speed and itinerary.
- A tractor vehicle of the same weight category must be used as a minimum. Furthermore, the tractor vehicle must be equipped with a safe braking system and sufficient tractive power.
- Use only towing bars or cables certified by a test/certification body, observe the inspection intervals.
- Do not use any towing bars or cables that are dirty, damaged or not of sufficient size.
- Fasten towing bars or cables only at the defined points.
- Tow away only in accordance with this Operator's Manual to avoid damage to the machine.
- Observe the national regulations (for example the light regulations) when towing on public roads/sites.

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