Original instructions

Diesel forklift truck

RCD40-50

CE

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first in intralogistics

Address of manufacturer and contact details ▷

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Rules for the operating company of industrial trucks

In addition to these operating instructions, a code of practice containing additional information for the operating companies of industrial trucks is also available.

This guide provides information for handling industrial trucks:

- Information on how to select suitable industrial trucks for a particular area of application
- Prerequisites for the safe operation of industrial trucks
- Information on the use of industrial trucks
- Information on transport, initial commissioning and storage of industrial trucks

Internet address and QR code ▷

The information can be accessed at any time by pasting the address **https://m.still.de/vdma** in a web browser or by scanning the QR code.

1 Introduction

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1

Introduction

Truck data

We recommend that you record all basic fork-lift truck data in the following table so that it is available if required by the sales network or authorised service centre.

Type	
Serial number	
Date of delivery	

Intended use

The industrial truck may only be used as permitted.

The industrial truck is used for moving and lifting the loads indicated on the capacity rating plate.

Damages and defects

Damages and other defects to industrial trucks or to attachments must be reported to the Supervisor immediately. Industrial trucks and attachments which are not safe to operate may not be used until they have been properly repaired.

Safety installations and switches may not be removed or rendered unusable. Specified settings may only be changed with the approval of the manufacturer.

Danger areas

Danger areas are those areas in which persons are in danger as a result of the movements of industrial trucks, their operating equipment, their load carrying devices (e.g. their attachments) or the loaded goods. This also includes the area which can be reached by falling goods or lowering or falling operating equipment and devices.

People must not stand in the danger area of an industrial truck.

Working areas

Only the areas approved by the operating company or its representative may be used for transportation purposes. Loads may only be deposited or stored at the intended places.

In operating areas with magnetic fields that have a magnetic flux density greater than 5 mT, unintentional truck and lift mast movements cannot be entirely excluded under unfavourable circumstances. Components developed especially for use in such operating areas must be used.

Driving routes

Driving routes shall be sufficiently paved, level and free of objects. Drain channels and railways crossings, etc., shall be levelled and, if necessary, covered with ramps in such a way that they can be driven over without bumps as far as possible.

Industrial trucks shall only be used on routes without sharp curves, excessive slopes and gates which are too narrow or too low.

Inclines used by industrial trucks shall not exceed the limits specified by the manufacturer and must have an adequately rough surface. Level and smooth transitions at the upper and lower end shall prevent the load from touching the floor or causing damages to the chassis.

The admissible area and point load of driving lanes or routes may not be exceeded. There shall be an adequate clearance between the highest parts of industrial trucks or the load and the fixed parts of the surrounding areas.

The EU Directive 89/654/EEC (Minimum Regulations for Health and Safety at Work) shall be observed. The respective national regulations apply for non-EU countries.

Danger points on driving lanes or routes shall be secured or marked by the customary road traffic signs and by additional warning signs, if necessary.

When driving on public roads, the corresponding regulations must be observed, as well as country-specific restrictions for winter road conditions.

Fire protection

The operating company is responsible for adequate fire protection in the vicinity of the industrial truck. Depending on the form of use, it is responsible for additional fire protection on the industrial truck. Enquiries should be directed to the responsible supervisory authority in case of doubt.

Attachments

Attachments shall only be used as permitted. The driver shall be instructed in the handling of attachments.

The attachment operating instructions are enclosed for trucks that are delivered from the factory with an attachment. Before commissioning a truck with an attachment, you must check that loads are handled securely. Depending on the type of attachment, it may be necessary to make adjustments, e.g. pressure settings or adjusting stops and operating speeds. See the attachment operating instructions for the corresponding instructions.

If attachments are not supplied with the industrial truck, the specifications of the industrial truck manufacturer and the attachment manufacturer must be observed.

The attachments and the connection of power supplies for powered attachments may only be made by specialists in accordance with the specifications of the manufacturer. The proper functioning of the attachments shall be checked after each installation before initial use.

The permissible carrying capacity of the attachments and the permitted load of the industrial truck (carrying capacity and load moment) combined with the attachments shall not be exceeded., refer to additional capacity rating plate.

Modifications, in particular attachments or conversions, are not permitted to be made to the industrial truck without the manufacturer's approval.

Trailers

Industrial trucks may only be used to tow trailers if they are intended for this purpose by the manufacturer and if they are fitted with the appropriate trailer coupling. The maximum towed load specified in the operating instructions for unbraked or braked trailers must not be exceeded.

The towing industrial truck must be operated in such away that safe driving and braking of the towed vehicle is ensured for all driving movements.

Impermissible use

⚠ DANGER

High risk of property damage, injury and death.

Avoid impermissible use.

The operating company or driver, and not the manufacturer, is liable if the truck is used in a manner that is not permitted.

The following list is exemplary and is not intended to be exhaustive.

It is not permitted:

- To use the truck to transport people (if the truck is not designed for this purpose)
- in areas where there is a risk of fire of explosion
- for stacking/unstacking operations on slopes
- To stand on the fork arms when raised
- To exceed the truck's maximum load capacity
- To increase the truck's load capacity, e.g. by attaching an additional weight.

Description of use and climatic conditions

Normal use

- Indoor and outdoor use.
- Ambient temperature in tropical and Nordic regions ranging from -20°C to +40°C.
- Use at up to 2000 metres above sea level.

Special uses (applies to trucks with special equipment)

- Ambient temperature in tropical regions up to +40°C.
- Cold store version reaches -32°C

Modifications to the truck

Unauthorised truck modification is not permitted.

Only in the event that the truck manufacturer is no longer in business and there is no successor in the interest to the business, may the user arrange for a modification or alteration to a powered industrial truck, provided, however, that the user

- arranges for the modification or alteration to be designed, tested and implemented by an engineer(s) expert in industrial trucks and their safety,
- maintains a permanent record of the design, test(s) and implementation of the modification or alteration,
- approves and makes appropriate changes to the capacity plate(s), decals, tags and instruction handbook, and
- affixes a permanent and readily visible label to the truck stating the manner in which the truck has been modified or altered, together with the date of the modification or alteration and the name and address of the organization that accomplished those tasks.

Symbols used

The terms DANGER, WARNING, CAUTION, NOTE and ENVIRONMENT NOTE are used in these operating instructions. They are intended to draw attention to specific dangers or unusual information that needs to be highlighted:

⚠ DANGER

Means that failure to comply can risk the lives of others and/or cause major damage to equipment.

⚠ WARNING

Means that failure to comply can result in the risk of serious physical injury and/or major damage to equipment.

⚠ CAUTION

Means that failure to comply can result in the risk of major damage to equipment or destruction.

NOTE

This means that particular attention must be paid to the specific technical meaning because this may not be obvious, even to a specialist.

ENVIRONMENT NOTE

The instructions listed here must be complied with otherwise environmental damage may result.

⚠ CAUTION

This label is found on the truck in the areas where particular care and attention are required from the operator.

Refer to the appropriate section in these operating instructions.

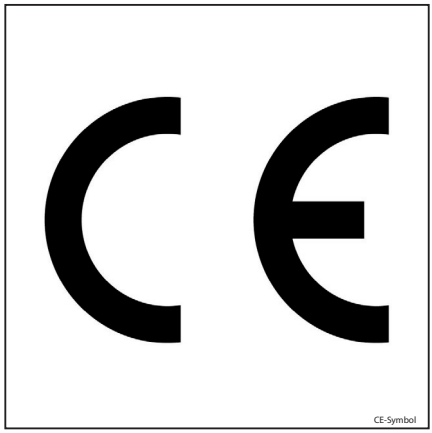
For your safety, additional symbols are also used. Please take these different symbols into consideration.

CE labelling

The manufacturer uses CE labelling to indicate that the truck complies with the standards and regulations valid at the time of marketing. This is confirmed by the issued EC declaration of conformity. The CE labelling is attached to the nameplate.

An independent structural change or addition to the truck can compromise safety, thus invalidating the EC declaration of conformity.

The EC declaration of conformity must be carefully stored and made available to the responsible authorities.



EMC – Electromagnetic compatibility

Electromagnetic compatibility (EMC) is a key quality feature of the truck.

EMC involves

- limiting the emission of electromagnetic interference to a level that ensures the troublefree operation of other equipment in the environment.
- ensuring sufficient resistance to external electromagnetic interference so as to guarantee proper operation at the planned usage location under the electromagnetic interference conditions to be expected there .

An EMC test thus firstly measures the electromagnetic interference emitted by the truck and secondly checks it for sufficient resistance to electromagnetic interference with reference to the planned usage location . A number of electrical measures are taken to ensure the electromagnetic compatibility of the truck .

⚠ CAUTION

The EMC regulations for the truck must be observed.

When replacing truck components the protective EMC components must be installed and connected again.

EC declaration of conformity in accordance with Machinery Directive

EC / EU declaration of conformity

STILL GmbH
Berzeliusstraße 10
D-22113 Hamburg

We declare herewith that the machine

Industrial truck model:	**Forklift Truck**
Model:	**See EC declaration of conformity**
Serial No.:	**See EC declaration of conformity**

conforms to EC Machinery Directive 2006/42/EC in the latest valid version and to EMC Directive 2014/30/EU in the latest valid version, as determined for industrial trucks in the harmonised standard EN 12895: 2015. In addition we declare, that radio equipment , if any, installed in this machine, conforms to RED Directive 2014/53/EU in the latest version.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Person authorised to compile the technical file in accordance with the named directives.

See EC declaration of conformity

In addition, we hereby declare that the equipment conforms to the requirements of the Directive for Noise Emissions 2000/14/EC. The conformity was verified by the conformity assessment procedure described in Annex V.

Measured sound power level	LWA : dB
Guaranteed sound power level	LWA : dB

Hamburg, (date)

See EC declaration of conformity	See EC declaration of conformity
R&D Manager	Quality Director

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Safety

Definition of terms used for responsible persons

Operating company

The operating company is the natural or legal person or group who operates the truck or on whose authority the truck is used.

The operating company must ensure that the truck is only used for its proper purpose and in compliance with the safety regulations set out in these operating instructions.

The operating company must ensure that all users read and understand the safety information.

The operating company is responsible for the scheduling and correct performance of regular safety checks.

We recommend that the national performance specifications are adhered to.

Specialist

A qualified person is defined as a service engineer or a person who fulfils the following requirements:

- A completed vocational qualification that demonstrably proves their professional expertise. This proof should consist of a vocational qualification or a similar document.
- Professional experience indicating that the qualified person has gained practical experience of industrial trucks over a proven period during their career During this time, this person has become familiar with a wide range of symptoms that require checks to be carried out, such as based on the results of a hazard assessment or a daily inspection
- Recent professional involvement in the field of the industrial truck test in question and an appropriate further qualification are essential. The qualified person must have experience of carrying out the test in question or of carrying out similar tests. Moreover, this person must be aware of the latest technological developments regarding the industrial truck to be tested and the risk being assessed

Competent person

A competent person is a specialist in the field of industrial trucks who has:

- Successfully completed training, as at least a service engineer for industrial trucks
- Many years of professional experience with industrial trucks
- Knowledge of the accident prevention regulations
- Knowledge of the relevant national technical regulations

The competent person is able to assess the condition of industrial trucks in terms of health and safety.

Drivers

This truck may only be driven by suitable persons who are at least 18 years of age, have been trained in driving, have demonstrated their skills in driving and handling loads to the

operating company or an authorised representative, and have been specifically instructed to drive the truck. Specific knowledge of the truck to be operated is also required.

The training requirements under §3 of the Health and Safety at Work Act and §9 of the plant safety regulations are deemed to have been satisfied if the driver has been trained in accordance with BGG (General Employers' Liability Insurance Association Act) 925. Observe the national regulations for your country.

Driver rights, duties and rules of behaviour

The driver must be trained in his rights and duties.

The driver must be granted the required rights.

The driver must wear protective equipment (protection suit, safety footwear, safety helmet, industrial goggles and gloves) that is appropriate for the conditions, the job and the load to be lifted. Solid footwear should be worn to ensure safe driving and braking.

The driver must be familiar with the operating instructions and have access to them at all times.

The driver must:

- have read and understood the operating manual
- have familiarised himself with safe operation of the truck
- be physically and mentally able to drive the truck safely

⚠ DANGER

The use of drugs, alcohol or medications that affect reactions impair the ability to drive the truck!

Individuals under the influence of the aforementioned substances are not permitted to perform work of any kind on or with the truck.

Prohibition of use by unauthorised persons

The driver is responsible for the truck during working hours. He must not allow unauthorised persons to operate the truck.

When leaving the truck, the driver must secure it against unauthorised use, e.g. by pulling out the key.

Safety guidelines

It is essential that operating personnel and repair personnel observe the" rules for the proper use of industrial trucks" enclosed with these operating instructions.

Examples of those listed are:

- Operating industrial trucks
- Driving licence
- Driveways and working areas
- Rights, duties and rules of behaviour for the driver
- Special operating areas
- Information regarding setting off, driving and braking
- Information for maintenance and repair
- Regular tests
- Disposal of greases, oils and batteries

The operating company or the person it has commissioned must ensure that the driver understands all safety information and that all guidelines and safety regulations are observed.

During training, the driver must familiarise themselves with the following:

- The operating conditions of the working areas
- The specific technical characteristics of the industrial truck
- The operation of attachments

Practise driving, control and steering operations with an unloaded truck until they are completely mastered. Only then can a loaded industrial truck be used for practice.

Safety information

⚠ DANGER

The industrial truck must not be used by unauthorised persons.

Only trained persons and those authorised for operation may have access to the industrial truck.

⚠ DANGER

Safety systems (e.g. the seat switch) are there for safety.

Safety systems must never be disabled, regardless of the kind.

⚠ DANGER

Any additional bores or welding to the overhead guard will compromise its rigidity.

It is therefore strictly prohibited to drill holes in the overhead guard or to weld to it.

⚠ CAUTION

Welding operations on other parts of the vehicle can cause damage to the electronics.

Therefore, before performing any welding, always disconnect the battery and all connections to the electronic control units.

⚠ CAUTION

Different functions are supported by gas springs. Gas springs are under a high internal pressure of up to 300 bar.

They must only be removed when not under compression and must not be opened without instructions. Any kind of damage, lateral forces, buckling, temperatures in excess of 80° C and heavy contamination must be avoided under all circumstances.

Damaged or defective gas springs must be replaced immediately.

Contact your service partner.

⚠ WARNING

In trucks with an accumulator, serious injuries can occur if the accumulator is not properly handled.

Before starting work on the accumulator it must be depressurised.

Contact your service partner.

⚠ WARNING

Depending on the duration of use and operating time, components carrying exhaust gases and exhaust air may become hot.

Protective equipment must therefore be worn.

⚠ WARNING

The areas in which the truck is operated must be adequately lit.

If it is insufficiently lit, working spotlights must be installed to ensure that the driver can see properly.

⚠ WARNING

Health risk due to non-ionising radiation from retrofitted devices (e.g. radio transmitter).

Always ensure that the manufacturer's instructions are observed and that no persons with active or non-active implantable medical devices are harmed.

If non-ionising radiation is present, affix a warning sign within the driver's field of vision.

⚠ CAUTION

Various pieces of special equipment are connected to the special "speed reduction" function. This is simply an assistance function, on which the driver must not solely rely during operation.

The driver is always responsible for safe operation.

⚠ CAUTION

If drivers have active medical equipment, e. g. pace makers or hearing aids, these may be impaired.

Check with a doctor or the medical equipment manufacturer whether the equipment is sufficiently protected against electromagnetic interference.

NOTE

If your truck is equipped with a fire extinguisher, make sure that you familiarise yourself with it in case of an emergency. Handling information is provided on the fire extinguisher.

Exhaust gases

⚠ CAUTION

Risk to health from exhaust gases! Exhaust gases from internal combustion engines are harmful to your health. In particular, the soot particles contained in the diesel exhaust gas can cause cancer. Letting the combustion engine idle runs a risk of poisoning from the CO, CH and NO_x components contained in the exhaust gas

Modern exhaust gas treatment systems (e.g. catalytic converters, particle filters or comparable systems) can clean exhaust gases in a way that reduces the health hazard and risk of poisoning when operating the truck.

– Observe the national laws and regulations when using trucks with an internal combustion engine in entirely or partially enclosed working areas.

– Always ensure sufficient ventilation.

Ground condition for using the truck

In order for the truck to be used, suitable ground must have the following characteristics:

- Even and level
- Hard
- Sturdy
- Free of obstacles
- Properly prepared for the purpose

Safety Regulations Relative to Forklift Use

- The operator must familiarize himself with the forklift to be able to better describe any defects and assist maintenance personnel. The operator, trained and authorized to use the forklift, must be familiar with the controls and performances of the forklift.
- Any defect (squeaking, leaks, etc.) must be promptly reported because, if neglected, it could cause more serious failures/defects.
- Carry out the inspections indicated in the chapter on "Daily Inspections".

ENVIRONMENT NOTE

Report any oil and/or battery fluid leaks: they are dangerous and highly polluting.

⚠ CAUTION

If you notice a burning smell, stop the forklift and turn off the engine, then disconnect the battery.

Residual dangers, residual risks

Despite careful working and compliance with standards and regulations, the occurrence of other risks when using the truck cannot be entirely excluded.

The truck and all other system components comply with current safety requirements. Nevertheless, even when the truck is used for its proper purpose and all instructions are followed, some residual risk cannot be excluded.

Even beyond the narrow danger areas of the truck itself, a residual risk cannot be excluded. Persons in this area around the truck must exercise a heightened degree of awareness, so that they can react immediately in the event of any malfunction, incident or breakdown etc.

⚠ WARNING

All persons that are in the vicinity of the truck must be instructed regarding these risks that arise through use of the truck.

In addition, we draw attention to the safety regulations in these operating instructions.

Risks can include:

- Escape of consumables due to leakages, rupture of lines and containers etc.
- Risk of accident when driving over difficult ground such as gradients, smooth or irregular surfaces, or with poor visibility etc.
- Falling, tripping etc. when moving on the truck, especially in wet weather, with leaking consumables or on icy surfaces
- Fire and explosion risks due to batteries and electrical voltages
- Human error resulting from failure to observe the safety regulations,
- Unrepaired damage or defective and worn components,
- Insufficient maintenance and testing
- Use of incorrect consumables
- Exceeding test intervals

The manufacturer is not held responsible for accidents involving the truck caused by the failure of the operating company to comply with these regulations either intentionally or carelessly.

Stability

The stability of the truck has been tested to the latest technological standards and is guaranteed provided that the truck is used properly and according to its intended purpose. These standards only take into account the dynamic and static tipping forces that can arise during specified use in accordance with the operating rules and intended purpose. However, the danger of exceeding the moment of tilt due to improper use or incorrect operation and losing stability can never be excluded.

The loss of stability can be avoided or minimised by the following actions:

– Always secure the load against slipping, e.g. by lashing.

– Always transport unstable loads in suitable containers.

– Always drive slowly when cornering.

– Drive with the load lowered.

– Even with sideshifts, align the load as centrally as possible with the truck and transport in this position.

– Avoid turning and diagonally driving across slopes or gradients.

– Never have the load facing downhill when travelling on slopes or gradients.

– Pick up only loads of the approved width.

– Always take great care when transporting suspended loads.

– Do not drive over ramp edges or steps.

Safety regulations when driving

Driving conduct

The driver must follow the public rules of the road when driving in company traffic.

The speed must be appropriate to the local conditions.

For example, the driver must drive slowly around corners, in tight passageways, when driving through swing-doors, at blind spots, or on uneven surfaces.

The driver must always maintain a safe braking distance from vehicles and persons in front, and must always have the truck under control. Stopping suddenly, turning quickly and overtaking at dangerous or blind spots must be avoided.

– Initial driving practice must be carried out in an empty space or on a clear roadway.

The following are forbidden during driving:

- Allowing arms and legs to hang outside the truck
- Leaning the body over the outer contour of the truck
- Climbing out of the truck
- Moving the driver's seat
- Adjusting the steering column
- Releasing the seat belt
- Disabling the restraint system
- Raising the load higher than 300 mm above the ground (with the exception of manoeuvring processes during the placement into stock/removal from stock of loads)
- Using electronic devices, for example radios, mobile phones etc.

⚠ WARNING

The use of multimedia and communication equipment as well as playing these devices at an excessive volume during travel or when handling loads can affect the operator's attention. There is a risk of accident!

– Do not use devices during travel or when handling loads.

– Set the volume so that warning signals can still be heard.

⚠ WARNING

In areas where use of mobile phones is prohibited, use of a mobile phone or radio telephone is not permitted.

– Switch off the devices.

Visibility when driving

The driver must look in the drive direction and have a sufficient view of the driving lane.

Particularly for reverse travel, the driver must be sure that the driving lane is clear.

When transporting goods that impair visibility, the driver must drive the truck in reverse.

If this is not possible, a second person acting as a guide must walk in front of the truck.

In this case the driver must only move at walking pace and with extra care. The truck must be stopped immediately if eye contact with the guide is lost.

Rear-view mirrors are only to be used for observing the road area behind the truck and not for reverse travel. If visual aids (mirror, monitor) are necessary to achieve sufficient visibility, it is necessary to practise using them. For reverse travel using visual aids, extra care should be taken.

When using attachments, special conditions apply; see the chapter entitled "Fitting attachments".

Any glass (variant, e.g. windscreen) and mirrors must always be clean and free of ice.

Safety regulations in case of accidental lateral tipping

If as a result of incorrect manoeuvring the truck appears to be tipping over sideways, carefully follow the instructions below:

a) Do not leave the forklift truck.

b) Tilt your head forward and move your body in the opposite direction to which the forklift is tipping.

c) Remain firmly seated, grip the steering wheel and dig your heels in. Wait until the truck has reached a stable position before leaving the truck.

Exercise caution when handling gas springs and accumulators

⚠ WARNING

Gas springs are under high pressure. Improper removal results in an elevated risk of injury.

For ease of operation, various functions on the truck can be supported by gas springs. Gas springs are complex components that are subject to high internal pressures (up to 300 bar). They may under no circumstances be opened unless instructed to do so, and may be installed only when not under pressure. If required, the authorised service centre will depressurise the gas spring in accordance with the regulations before removal. Gas springs must be depressurised before recycling.

– Avoid damage, lateral forces, buckling, temperatures over 80°C and heavy contamination.
– Damaged or defective gas springs must be changed immediately.
– Contact the authorised service centre.

⚠ WARNING

Accumulators are under high pressure. Improper installation of an accumulator results in an elevated risk of injury.

Before starting work on the accumulator it must be depressurised.

– Contact the authorised service centre.

Safety regulations for handling consumables

Permissible consumables

⚠ DANGER

Failure to observe the safety regulations relating to consumables may result in a risk of injury, death or damage to the environment.

– Observe the safety regulations when handling such materials.

The permissible materials required for operation can be found in the supply table in the chapter entitled "Maintenance".

Oils

⚠ DANGER

Oils are flammable!

– Follow the statutory regulations.
– Do not allow oils to come into contact with hot engine parts.
– No smoking, fires or naked flames!

⚠ DANGER

Oils are toxic!

– Avoid contact and consumption.
– If vapour or fumes are inhaled, move to fresh air immediately.
– In the event of contact with the eyes, rinse thoroughly (for at least 10 minutes) with water and then consult an eye specialist.
– If swallowed, do not induce vomiting. Seek immediate medical attention.

⚠ WARNING

Prolonged intensive contact with the skin can result in dryness and irritate the skin!

– Avoid contact and consumption.
– Wear protective gloves.
– After any contact, wash the skin with soap and water, and then apply a skin care product.
– Immediately change soaked clothing and shoes.

⚠ WARNING

There is a risk of slipping on spilled oil, particularly when combined with water!

– Spilt oil should be removed immediately with oil-binding agents and disposed of according to the regulations.

ENVIRONMENT NOTE

Oil is a water-polluting substance!

- *Always store oil in containers that comply with the applicable regulations.*
- *Avoid spilling oils.*
- *Spilt oil should be removed immediately with oil-binding agents and disposed of according to the regulations.*
- *Dispose of old oils according to the regulations.*

Hydraulic fluid

⚠ WARNING

These fluids are pressurised during operation of the truck and are hazardous to your health.

– Do not spill the fluids.
– Follow the statutory regulations.
– Do not allow the fluids to come into contact with hot engine parts.

⚠ WARNING

These fluids are pressurised during operation of the truck and are hazardous to your health.

– Do not allow the fluids to come into contact with the skin.
– Avoid inhaling spray.
– Penetration of pressurised fluids into the skin is particularly dangerous if these fluids escape at high pressure due to leaks in the hydraulic system. In case of such injury, immediate medical assistance is required.
– To avoid injury, use appropriate personal protective equipment (e.g. protective gloves, industrial goggles, skin protection and skin care products).

ENVIRONMENT NOTE

Hydraulic fluid is a water-polluting substance.

- *Always store hydraulic fluid in containers that comply with regulations*
- *Avoid spills*
- *Spilt hydraulic fluid should be removed immediately with oil-binding agents and disposed of according to the regulations*
- *Dispose of old hydraulic fluid according to the regulations*

Battery acid

⚠ WARNING

Battery acid contains dissolved sulphuric acid. This is toxic.

- Avoid touching or swallowing the battery acid at all costs.
- In case of injury, seek medical advice immediately.

⚠ WARNING

Battery acid contains dissolved sulphuric acid. This is corrosive.

- When working with battery acid, use appropriate PSA (rubber gloves, apron, protection goggles).
- When working with battery acid, never wear a watch or jewellery.
- Do not allow any acid to get onto clothing or skin or into the eyes. If this does happen, rinse immediately with plenty of clean water.
- In case of injury, seek medical advice immediately.
- Immediately rinse away spilt battery acid with plenty of water.
- Follow the statutory regulations.

ENVIRONMENT NOTE

- Dispose of used battery acid in line with the applicable regulations.

Disposal of consumables

ENVIRONMENT NOTE

Materials that accumulate during repair, maintenance and cleaning must be collected properly and disposed of in accordance with the national regulations for the country in which the truck is being used. Work must only be carried out in areas designated for the purpose. Care must be taken to minimise any environmental pollution.

- Soak up any spilt fluids such as hydraulic oil, brake fluid or gearbox oil using an oil-binding agent.
- Neutralise any spilt battery acid immediately.
- Always observe national regulations concerning the disposal of used oil.

Environmental considerations

Disposal of components and batteries

The truck is composed of different materials. If components or batteries need to be replaced and disposed of, they must be:

- disposed of,
- treated or
- recycled in accordance with regional and national regulations.

NOTE

The documentation provided by the battery manufacturer must be observed when disposing of batteries.

ENVIRONMENT NOTE

We recommend working with a waste management company for disposal purposes.

Packaging

During delivery of the truck, certain parts are packaged to provide protection during transport. This packaging must be removed completely prior to initial start-up.

ENVIRONMENT NOTE

The packaging material must be disposed of properly after delivery of the truck.

Emissions

The values specified apply to a standard truck (compare the specifications in the "Technical data" chapter). Different tyres, lift masts, additional units etc. may produce different values.

Noise emissions

The values were determined based on measuring procedures from the standard EN 12053 "Safety of industrial trucks.

This machine emits the following sound pressure level:

Continuous sound pressure level in the driver's compartment

Model	Continuous sound pressure level in the driver's compartment	
	LpAZ	Measurement uncertainty KpA
RCD50	85.2 dB(A)	4 dB(A)

The values were determined in the test cycle on an identical machine from the weighted values for operating statuses and idling.

However, the indicated noise levels at the truck cannot be used to determine the noise emissions at workplaces according to the most recent version of Directive 2003/10/EC (daily personal noise pollution). If required, these noise emissions must be determined directly at the workplaces under the actual conditions present (further sources of noise, particular application conditions, sound reflections) by the operating company.

NOTE

Please note the definition of "operating company" in the sense of responsible persons!

Vibrations

The vibrations of the machine have been determined on an identical machine in accordance with the standards DIN EN 13059 "Safety of industrial trucks - Test methods for measuring vibration" and DIN EN 12096 "Mechanical vibration - Declaration and verification of vibration emission values".

Frequency-weighted effective value of acceleration on the seat

The following value is valid for all truck models:

Model	Weighted effective value of acceleration to which the body (feet or seat surface) is subjected	Measurement uncertainty
RCD50	Seat <1.554 m/s2	0.3 m/s2

Tests have indicated that the amplitude of the hand and arm vibrations on the steering wheel or the operating devices in trucks is less than 2.5 m/s2. There are therefore no

measurement guidelines for these measurements.

The personal vibration load on the driver over a working day must be determined by the operating company at the actual place of use in accordance with Directive 2002/44/EC, in order to consider all additional influences, such as driving route, intensity of use etc. are considered.

NOTE

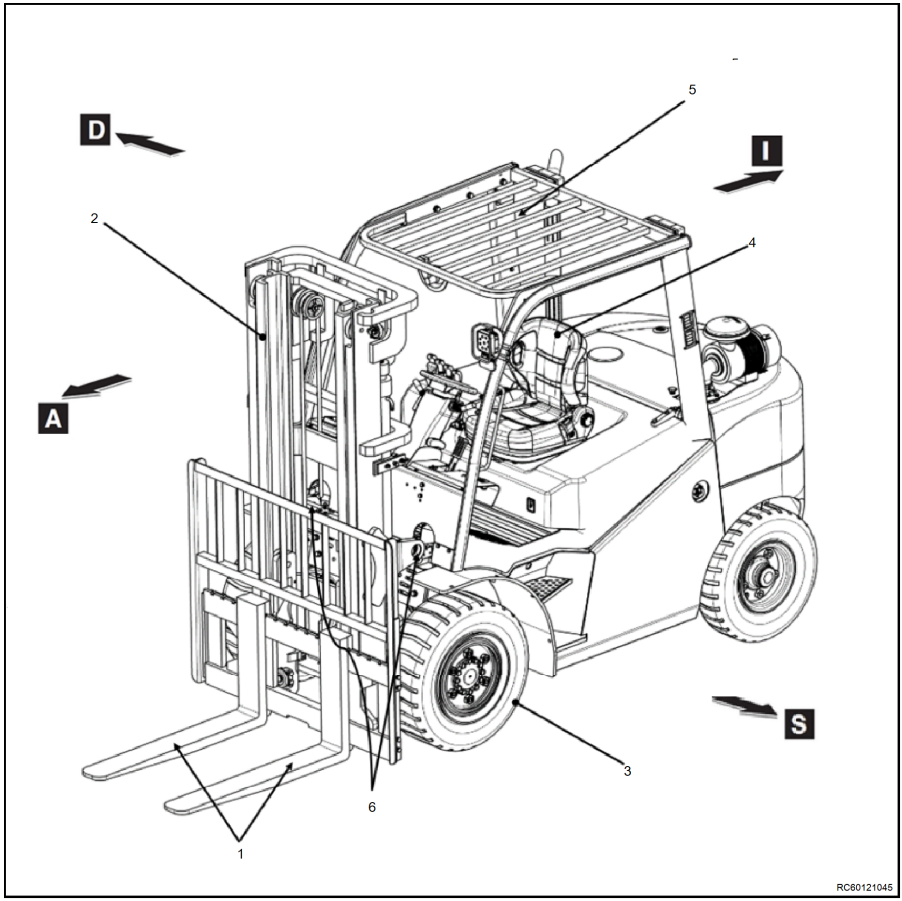
Please note the definition of "operating company" in the sense of responsible persons!

3

Overview

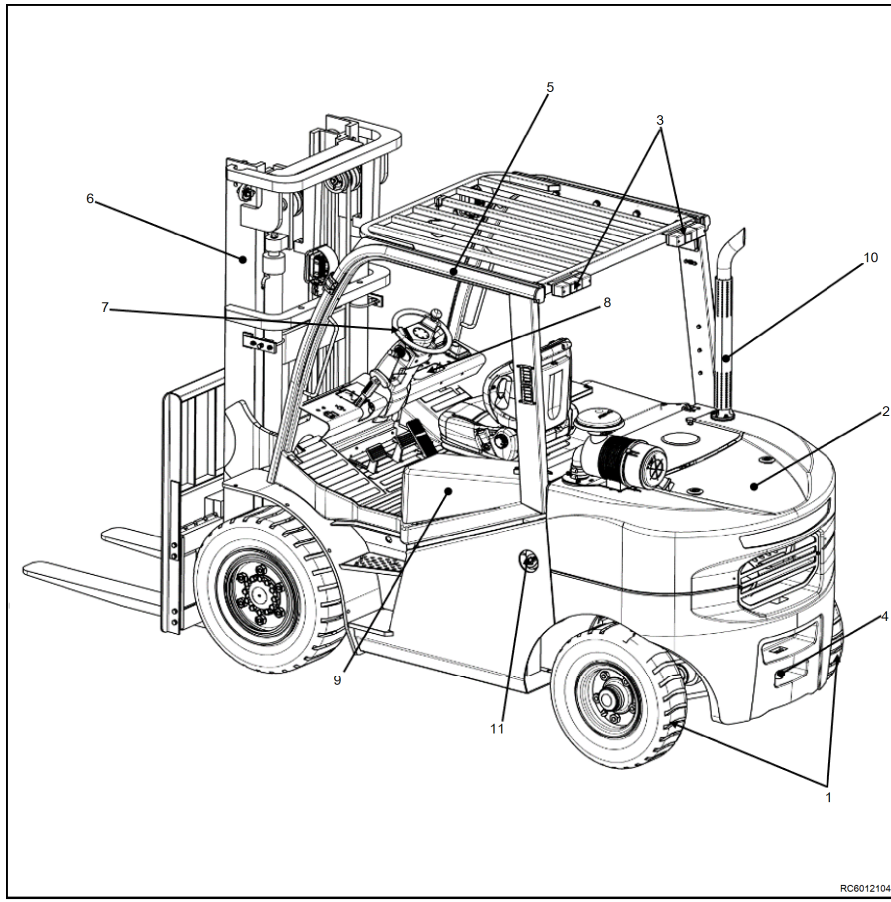
General view

General front view



1- Fork arms
2- Mast
3- Front wheels
4- Driver's Seat
5- Overhead guard
6- Tilt cylinder
A- Forward
D- Right
I- Backwards
S- Left

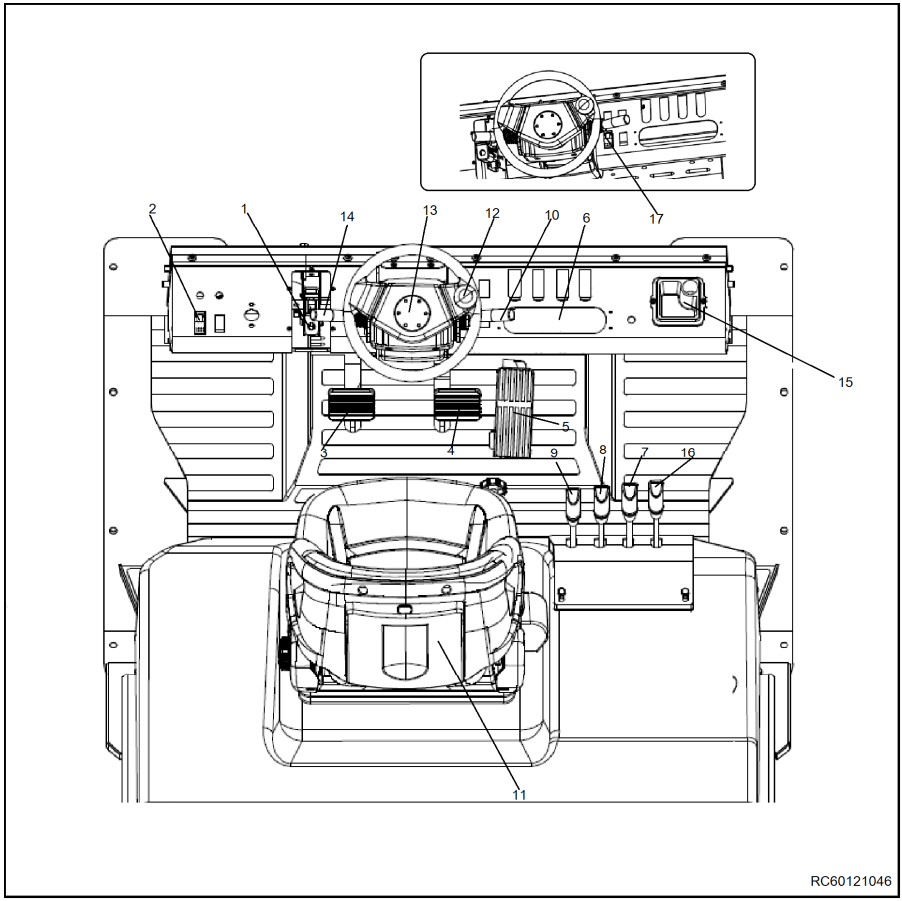
General rear view



1- Rear wheels
2- Rear weight
3- Rear lights
4- Trailer coupling
5- Overhead guard
6- Mast
7- Steering wheel
8- Control panel
9- Engine bonnet
10- Exhaust pipe
11- Filler cap for fuel tank

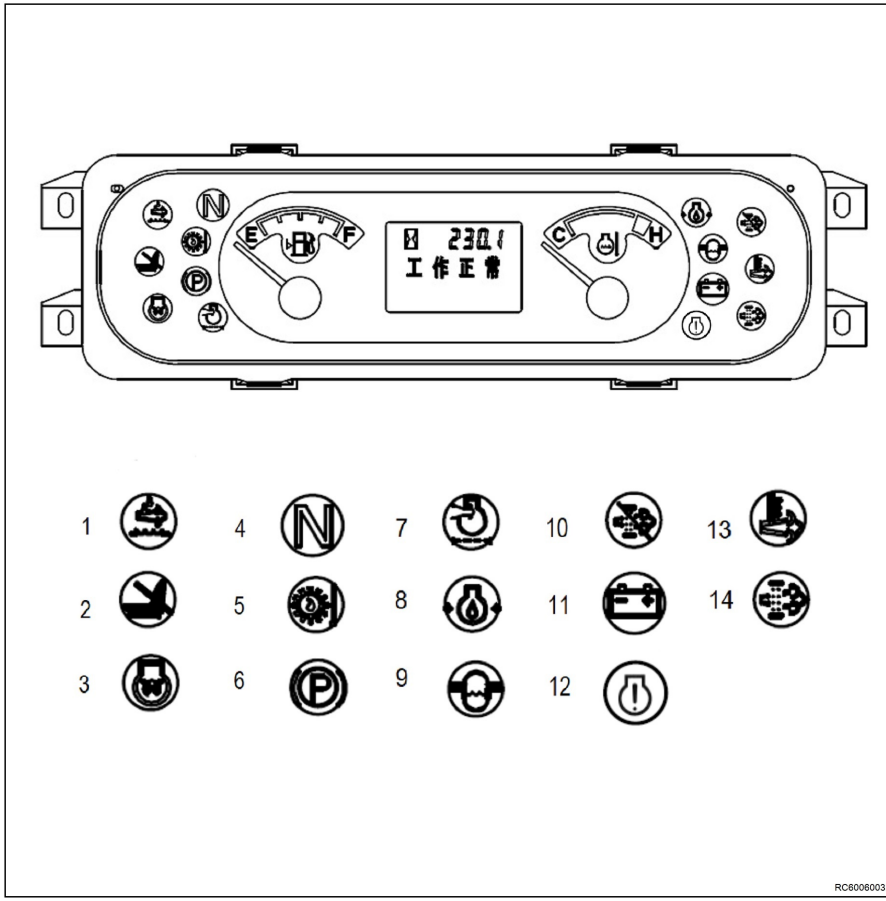
Instrumentation and controls

Overview of the driver's compartment



1	Parking brake	9	Lifting and lowering operating handle
2	Speed switch	10	Lighting and direction indicator switch
3	Inching pedal	11	Driver's seat
4	Brake pedal	12	Steering wheel
5	Accelerator pedal	13	Horn button
6	Display unit/Control panel	14	Direction selection lever
7	Side shifter operation lever	15	Cup holder
8	Forward tilting and back tilting operating handle	16	Fixtures operating lever
		17	DPF reprocessing switch

Display unit



1 “SCR error” indicator light
2 Seat indicator light
3 Indicator light for "glow plug preheating"
4 Neutral Position indicator
5 ”Torque Converter Oil Temperature“ indicator light
6 ”Parking brake“ indicator light
7 ”Clogged air filter” indicator light
8 ”Engine oil pressure“ indicator light
9 “Water separator light” indicator light
10 ”DPF regeneration disabled“ indicator light(Red light)
11 ”Battery charging“ indicator light
12 "Engine error light" indicator light(Red light)
13 DPF regeneration indicator light/Exhaust temperature warning light(Yellow light)
14 “DPF regeneration request” indicator light(Yellow light)

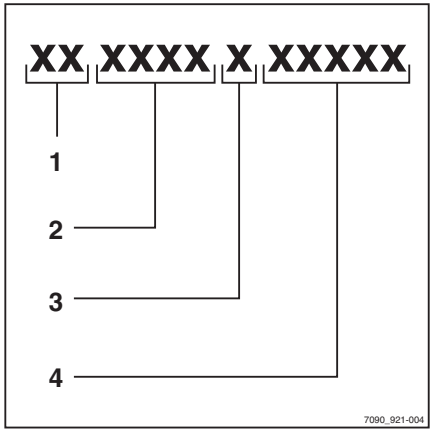
Truck identification

Chassis number

The truck serial number is stamped on the lower crossmember of the chassis at the driver's step plate

Production number

▷



NOTE

The production number is used to identify the truck. It can be found on the nameplate and must be referred to in all technical questions.

The production number contains the following coded information:

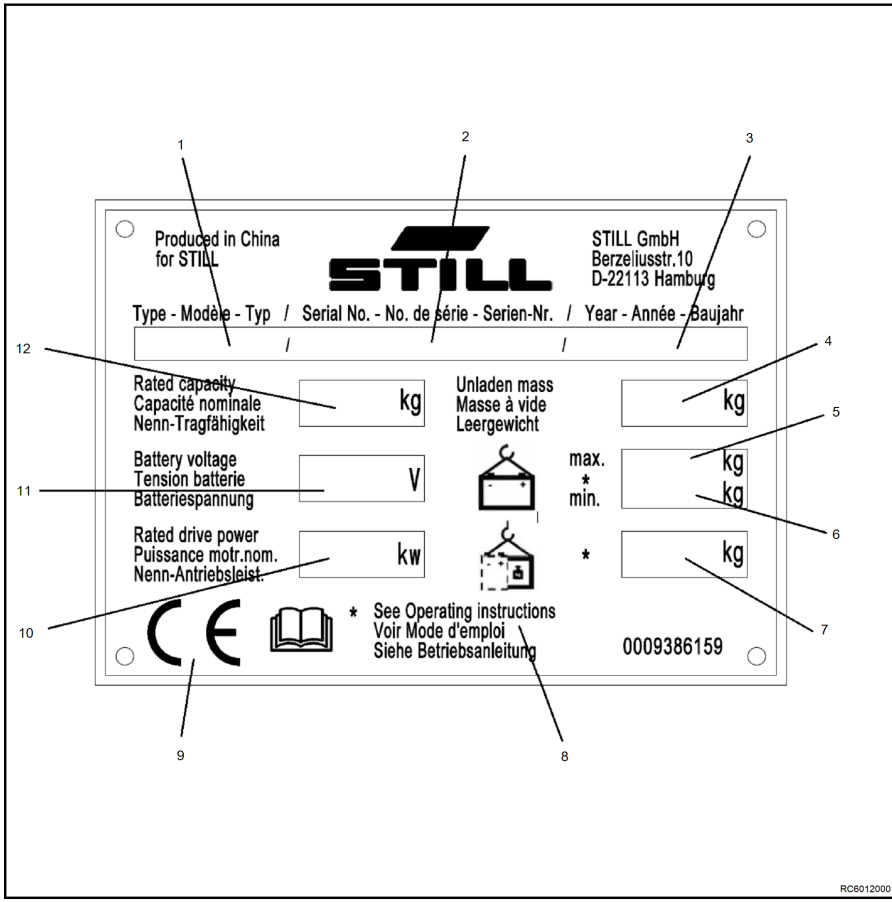
(1) Production location

(2) Model

(3) Year of manufacture

(4) Sequential number

Nameplate



1 Type
2 Production number
3 Year of manufacture
4 Tare weight in kg
5 Max. permissible battery weight in kg (for electric forklift trucks only)
6 Min. permissible battery weight in kg (for electric forklift trucks only)
7 Ballast weight in kg (for electric forklift trucks only)
8 Refer to the technical data listed in these operating instructions for more detailed information
9 CE labelling
10 Nominal drive power in kW
11 Battery voltage in V
12 Rated capacity in kg

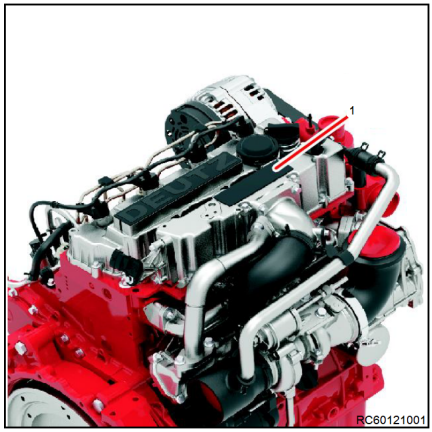
The truck can be identified from the information on the nameplate.

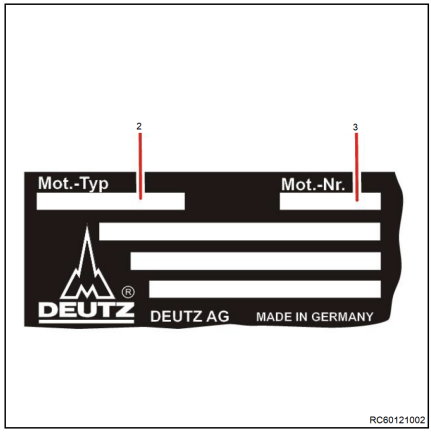
The information for the battery weights (5 , 6) and the ballast weight(7)only applies to electric forklift trucks.

Engine plate

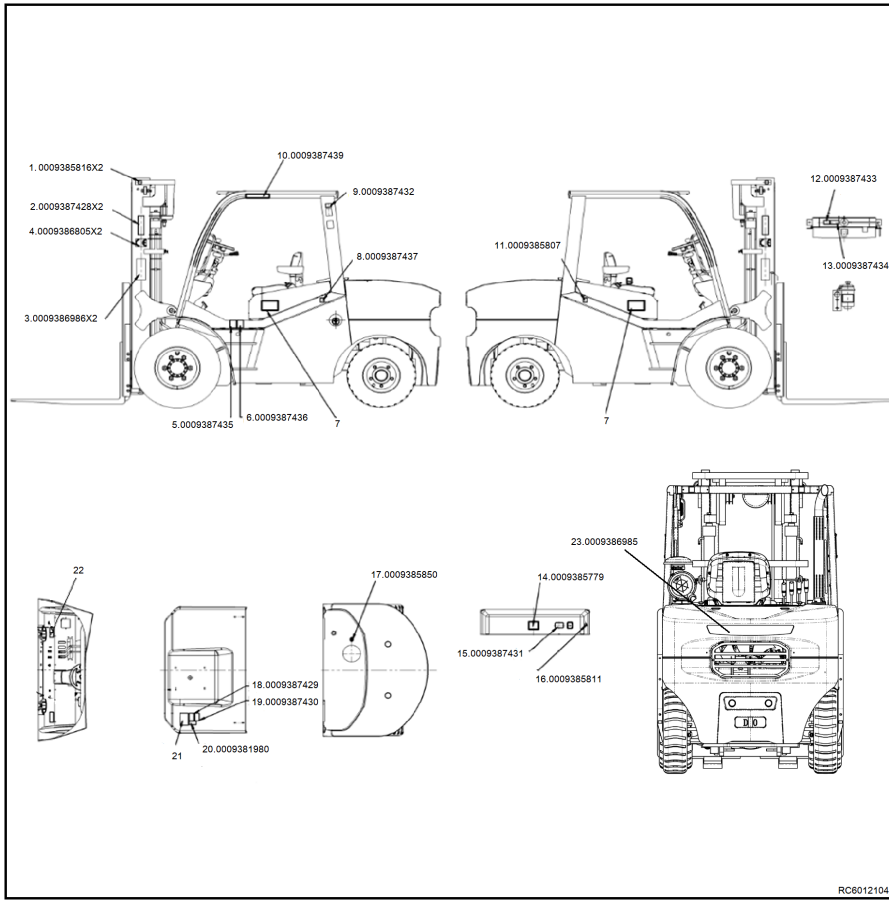
The engine plate(1) is fixed to the cylinder head cover or the crankcase.

The type(2),engine no.(3) and performance data are attached to the engine plate.

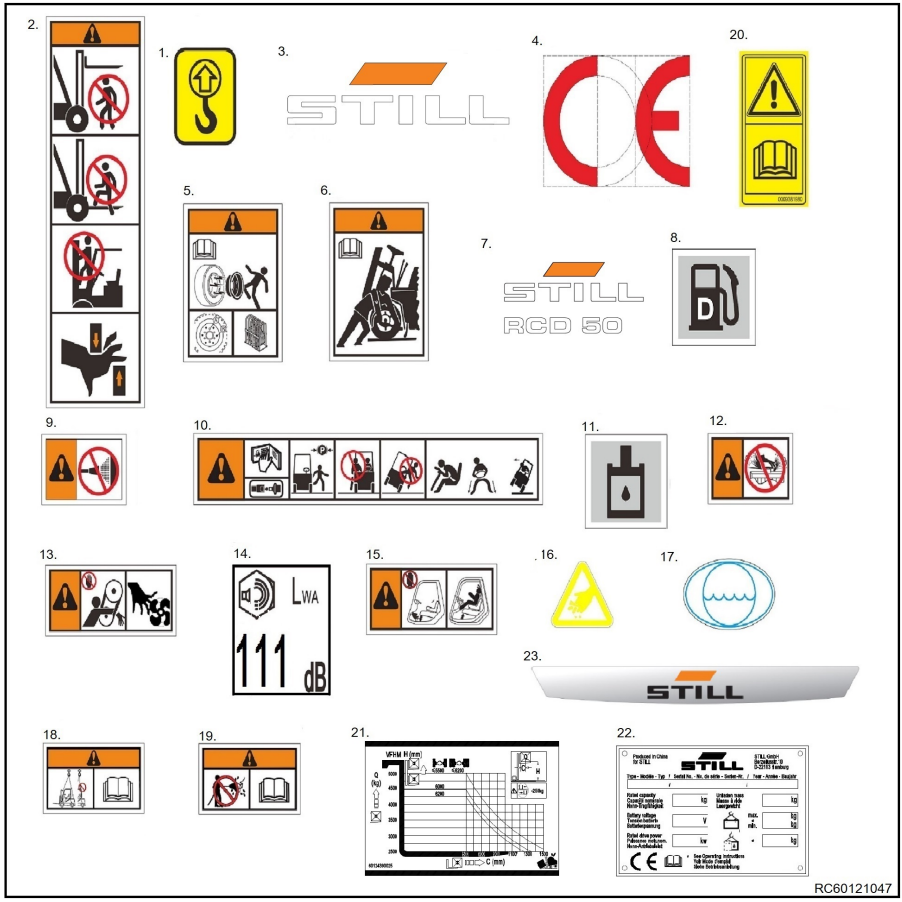




Location of the decals



Location of the decals



1 Decal information: Lifting gear attachment point
2 Warning sign: Do not stand underneath the fork/Do not stand on the fork/Do not enter space behind the mast/ Injury to hand
3 Manufacturer's name
4 CE label
5 Decal information: Caution / Dismantle the wheel according to the instruction
6 Decal information: Caution / Fasten the wheel
7 Model information
8 Decal information: Filling in diesel
9 Decal information: Caution / Danger due to shearing
10 Decal information: Caution/Read the operating instructions/Fasten the seat belt/Apply the parking brake when leaving the truck/ Passengers are not allowed/Do not jump off if the truck is tipping over/Brace feet/Hold on tight/Lean in the opposite direction to which the truck is tipping
11 Decal information: Hydraulic oil tank
12 Warning sign: Danger due to overheating of radiator
13 Warning sign: Danger due to shearing
14 Sound pressure level
15 Warning sign: Danger due to shearing / Danger to the driver's head with engine hood not fully closed.
16 Warning sign: Danger due to shearing
17 Decal information: Adding coolant
18 Warning sign: Always lifting by lifting gear attachment point
19 Warning sign: Preventing water into the electrical parts

20 Decal information: Caution / Read the operating instruction
21 Decal information: Capacity rating plate
22 Nameplate
23 Manufacturer's name

4

Use and operation

Truck transport and lifting

Use a truck or flatbed trailer to carry the forklift truck

The truck is normally transported by road and rail complete with lift mast. If the truck's dimensions exceed the max. clearance size allowed, it is transported with mast disassembled.

The forklift must be secured to the transport means during transport using appropriate restraint systems .

– Lower the lift mast completely.

– Tilt the lift mast forward.

NOTE

The fork arms must be resting on the ground.

– Apply the parking brake as described in chapter entitled"Parking brake".

– Use two wedges to block each of the front and rear wheels to prevent rolling.

– Use ropes to secure the forklift truck on the truck. ▷

CAUTION

Also use ropes to secure the mast in the case that the mast shall be disassembled during the transport.

Environmental conditions for transport and storage

The forklift truck must be protected from the effects of the weather during transport and

storage. In salty environments, appropriate protection must be provided.

Lifting the truck with a crane

⚠ DANGER

When lifting the truck with a crane, there is a risk of accident and fatal injury if personnel are in the working area of the crane.

When using a crane to lift the truck, pay particular attention to ensure that no personnel are in the vicinity of the crane. Comply with the load capacity rating marked on the crane nameplate. Never walk under a suspended load!

⚠ CAUTION

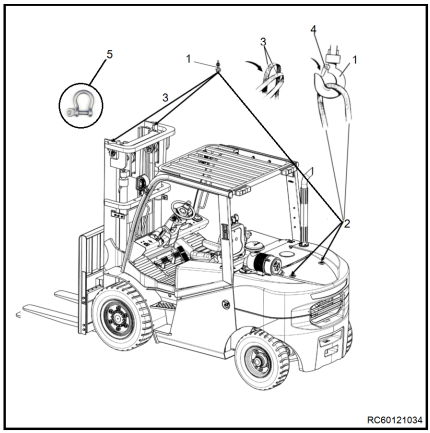
Use a spreader and crane with sufficient load capacity to lift the truck. For the weight of the truck, see the manufacturer's nameplate.

NOTE

Before lifting the truck, fasten the slings to the given lifting points. These lifting points are not specifically marked on the truck.

– Lower the lift mast completely, and tilt it fully backwards.
– Remove the rubber grommets from the openings in the counterweight.
– Remove the counterweight grid.

– Attach a sling (2) (able to at least bear the weight of the forklift truck) to the openings in the counterweight.
– Attach two shackles (5) to the two openings in the upper beam of the outer lift mast.
– Attach a sling (3) (able to at least bear the weight of the forklift truck) to the two shackles.
– Prevent the slings from rubbing against any sharp edges on the truck.
– Attach the ends of all the slings to the crane hook (1).



⚠ CAUTION

After hanging the slings from the lifting hook, the safety lock (4) must be fastened. The slings must not touch the overhead guard or any other installed equipment when the truck is being lifted.

⚠ DANGER

The overhead guard will be damaged if it is contacted by lifting equipment that is under tension from lifting. This can result in later failure of the overhead guard and the risk of severe injury or death. Ensure that no part of any lifting equipment contacts the overhead guard during lifting.

Commissioning the truck

⚠ CAUTION

Do not use the forklift truck before it has been commissioned by a service engineer authorized by the manufacturer.

⚠ CAUTION

The forklift truck may be commissioned only by a service engineer authorized by the manufacturer.

Remaining ready for operation

Pre-shift checks

Carrying out the following checks as part of your daily routine will help to keep the forklift truck in good condition. These checks are supplemental and do not replace periodic maintenance work.

NOTE

If, when carrying out the daily checks, you discover a defect or you are unsure whether the truck will function properly, do not use the truck and contact the technical service department.

Daily checks before use

The following checks must be performed on a daily basis in order to keep your truck in good condition and to operate safely. These checks supplement and do not replace the scheduled maintenance operations.

- Check the correct position and fastening, intactness and operation of the various safety components installed on the truck.
- Make sure that "seat switch" is working correctly.
- Check that the brakes work correctly, checking their travel and efficiency.
- Check the tyre pressure and wear conditions.
- Visually inspect wheels for correct tightness.
- Make sure that the lights work correctly (if applicable).
- Visually check that the chains are taut.
- Make sure that the start/stop key works correctly.
- Check that the fork arms are in good condition;
- Check that the fork arm control levers work correctly
- Check the fuel filter water trap
- Check engine coolant level.
- Check brake oil level.
- Check transmission oil level.
- Check axle oil level.
- Engine oil level checking procedure
- Check the area under the forklift truck for leaking consumables.

⚠ CAUTION

DO NOT use the truck, but call the technical service department, if you notice any malfunctions or if you have any doubts about its correct operation.

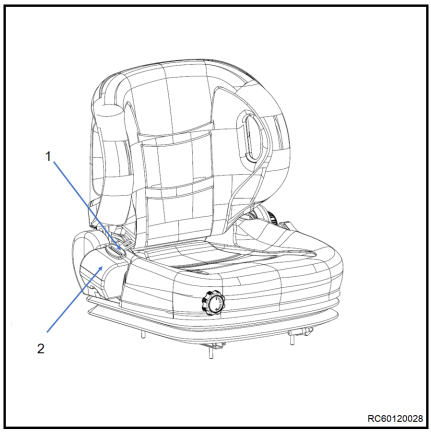
Seat belt status and performance checks

⚠ DANGER

For safety reasons, the condition and protective ability of the seat belt must be checked on a daily basis.

Do not operate the vehicle with the seat belt removed.

– Check the condition of the belt: pull the seat belt(1) all the way out of the retractor(2) and check the seat belt for damage. ▷



⚠ CAUTION

The seat belt must be replaced if it is cracked, worn or has been damaged in an accident.

– Carefully check the connection between the seat belt and the seat.

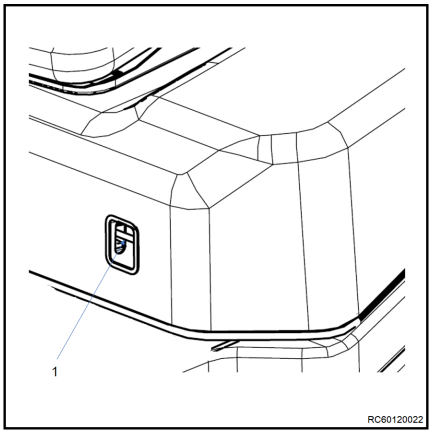
– Carefully check the connection between the seat and the panel cover below.

NOTE

Only when the driver sits on the seat, the forklift can be operated.

– Push the lever (1)on the front left-hand side of the engine bonnet upwards with your left hand. ▷

– Open the bonnet and raise it around 30°.



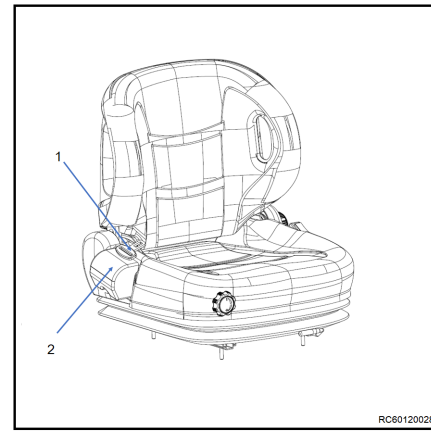
NOTE

The bonnet is held up by the gas spring.

– Try to pull the belt. The automatic blocking mechanism must not allow the belt (1) to come out of the retractor (2).

⚠ CAUTION

A warning sound will be activated when the operator leaves the seat without parking brake applied. The signal will sound even if the truck has been switched off and the key removed.



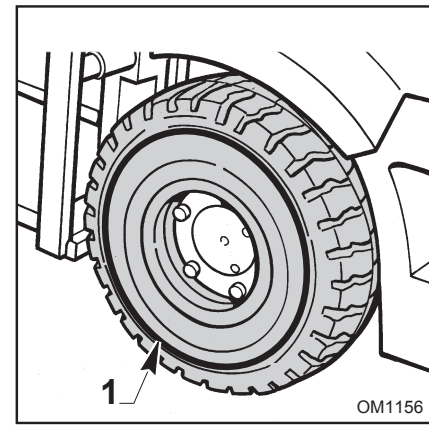
Checking the condition of the tyres

Superelastic tyres

Superelastic tyres must be changed before the profile reaches the maximum wear allowed. The maximum wear of the tyre manufacturer is indicated by a line on the side (1) along the circumference of the tyre.

⚠ DANGER

If the forklift truck is used on wet or slippery surfaces, replace the tyres before the thickness of the tread drops below 1 mm.



Check the wheel nuts for correct condition

– Visually check the markings in the wheel nuts and rims are correctly attached, re-tighten with torque spanner if necessary. ▷

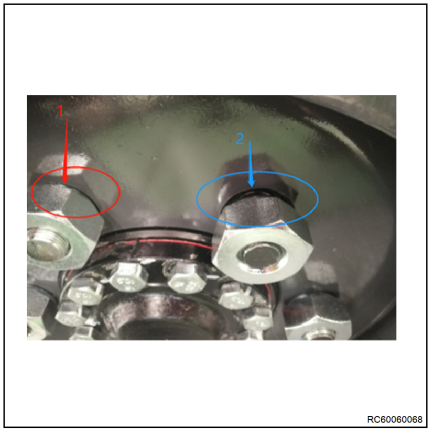
Tightening torque:

Front tyres (M20X1.5) : 525 N.m±10%

Front tyres (M20X1.5) : 525 N.m±10%

– Visually check if the column is deformed or whether the hole for the rim is larger, re-tighten with torque spanner if yes. Replace the rim when there is serious deformation.

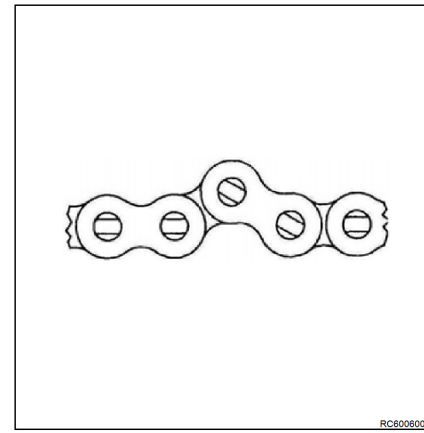
– If the markings are difficult to recognize, check if there is any gap (As the arrows show) between the joint face of the rims and nuts. Re-tighten with torque spanner if gap exits. ▷



– Check the wheels and rims for wear and deformation, change the tyres if there is any deformation.

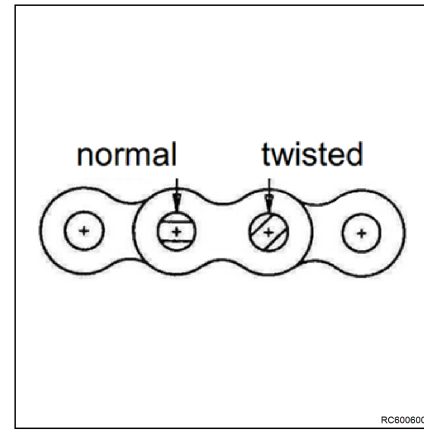
Check the condition and operation of chain

– Check load chains for any distortion before operation. ▷

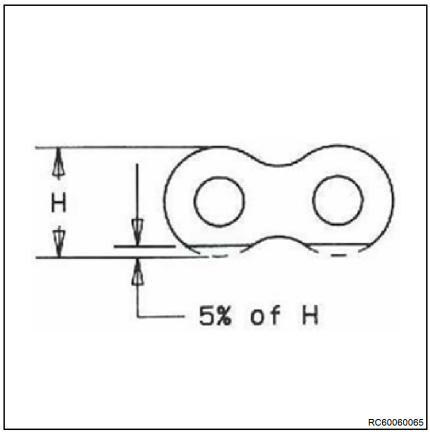


– Stop using the forklift immediately when the hinge pins of chain rotate before operation. ▷

– Lift and lower the lifting mast without load for one round to check the operation of lifting chain for any abnormal sound or block.



– Contact your service center if chains are suffering abnormal force. ▷



– Keep the chains clean, ensure no excessive dust exits; Immediately lubricate the chains with specified chain spay if chain surfaces are dry. ▷

NOTE

If the truck is used in the food industry, please use lubricating grease in place of spray.

– During operation or maintenance, stop using the forklift if there is any crack of chain plate.

Checking the coolant level

DANGER

Risk of burns. When the engine is hot, the radiator is under pressure and hot coolant can spray out if the radiator cap is unscrewed.

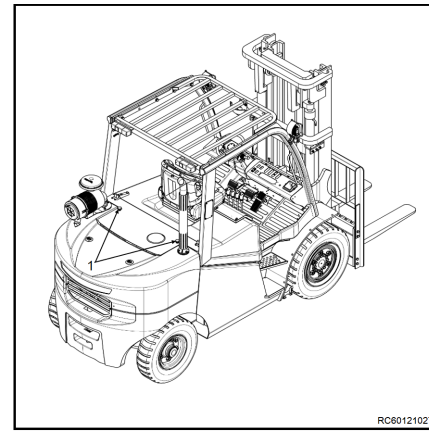
– Check coolant level when the engine is cold and switched off.

⚠ CAUTION

Risk of engine damage! If there is cooling fluid missing, this indicates leakages in the cooling system.

Check the cooling system for leaks, such as from leaking hose clips.

– Remove the radiator water tank cover by loosening two screws(1). ▷

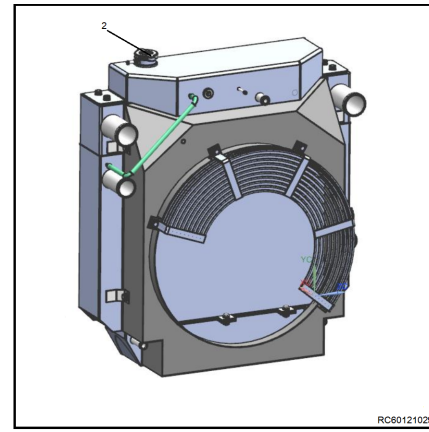


– Carefully unscrew the radiator cap (2). ▷
– Check whether the radiator is filled to the top with coolant.

NOTE

To perform this check, the truck must be parked on a level surface.

– If necessary, add coolant in line with the specifications given in the chapter entitled "Supply table".



The radiator is assembled with coolant level sensor. The corresponding light in the display will illuminate while the coolant is too low, fill in the radiator with specified coolant accordingly. ▷

– Screw the radiator cap back on securely.

Checking the engine oil level

– Stop the truck and ensure it is parked on a level surface.

– Open the bonnet.

– Take out the dipstick (1) and wipe with a clean cloth. ▷

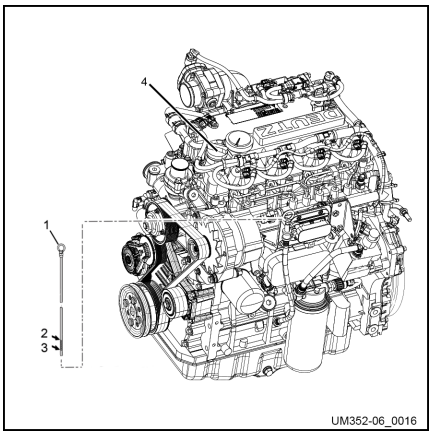
– Fully reinsert the dipstick.

– Remove the dipstick. The oil level should be between the upper (2) and lower (3) markings on the dipstick.

NOTE

If necessary, open the oil filler cap (4) and add oil.

– Fully reinsert the dipstick.



Transmission oil level inspection procedure

NOTE

Check the transmission level with the transmission in neutral, the oil hot (at least 40°C) and with the truck on level ground.

– Ensure the forklift truck is stopped on a level surface.

– Remove the bottom plate.

– Run the truck in neutral for 3-5 minutes.

– Take out the dipstick(1)and wipe with a clean cloth. ▷

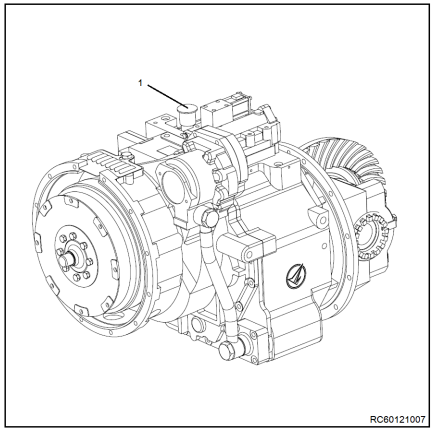
– Fully reinsert the dipstick.

– Take out the dipstick. The oil level should be between the upper and lower marks on the dipstick scale. If necessary, add transmission oil via the oil inlet.

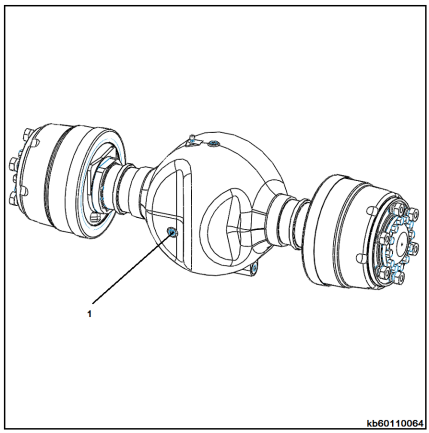
– Fully reinsert the dipstick.

⚠ DANGER

Take care not to touch moving parts during this operation.



Checking the drive axle gearbox oil ▷



– Unscrew the oil plug at the oil level aperture (1).
– Check the gear shaft oil level to ensure it is near the observation aperture position(around 15mm).
– If necessary, fill the gearbox with gear oil until oil flows out of the oil level aperture.

NOTE

Please refer to the chapter on replacing the drive axle gearbox oil for steps to take when adding gear oil.

Checking the hydraulic oil level

ENVIRONMENT NOTE

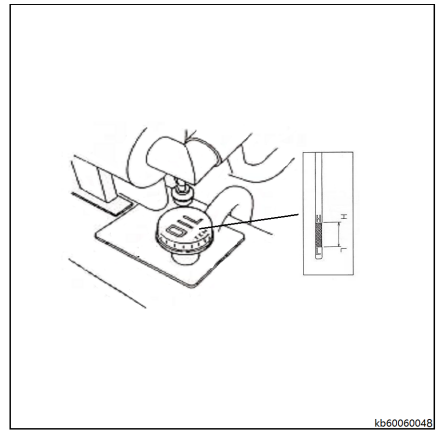
Please follow the instructions for handling/ disposal of fluids and lubricants.

NOTE

The oil level should only be checked with the lift mast vertical and the fork carriage lowered.

– Apply the parking brake.
– Open the engine cover.
– Screw the oil cap with dipstick.

– Use a clean cloth to dry the dipstick(1)
– The oil level should be between the upper and lower markings on the dipstick.

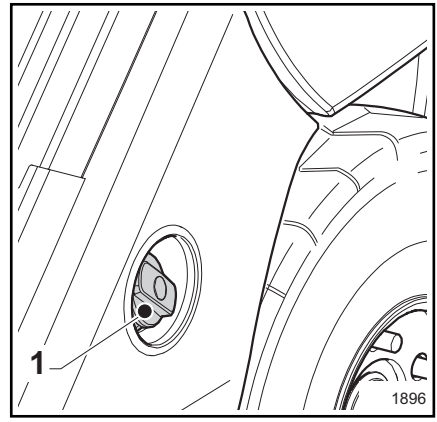


⚠ WARNING

The hydraulic oil must be checked while the engine is stopped and the forklift is in horizontal level,

– When required, fill the hydraulic oil up to the upper marking.
– Re-fit the oil dipstick.
– Safely refit the engine cover.

Refuelling



⚠ DANGER

Turn off the engine before refuelling. Do not smoke or use naked flames while refuelling.

– Remove the fuel tank cap (1) and refuel.
– Close the fuel tank cap (1).

⚠ CAUTION

Risk of damage to injection system due to entering air.

Do not allow the tank to empty entirely if possible so that no air can enter the injection system.

Diesel fuel - Specifications

⚠ CAUTION

Risk of component damage if non-approved fuels are used!

Use only approved fuels with the following specifications.

If non-approved fuels are used, compliance with specified emission values and the service life of the engine cannot be guaranteed!

Diesel fuel should comply with the following specifications. The table lists several world-wide specifications for diesel fuels.

Diesel Fuel Specification	Location
ASTM D975 No.1D S15,S500 No.2D S15,S500	USA
EN590:96	European Union
ISO 8217 DMX	International
BS 2869–A1 or A2	United kingdom
JIS K2204 Grade No.2	Japan
KSM-2610	Korea
GB252	China

NOTE

Use of products with specifications lower than those shown in the table could cause damage to the truck not covered by the warranty.

Additional Technical Fuel Requirements

- The fuel cetane number should be equal to 45 or higher.
- The sulfur content must not exceed 0.5% by volume.Less than 0.05% is preferred.Especially in U.S.A. and Canada, Low Sulfur (300–500mg/kg sulfur content) or Ultra Low Sulfur fuel should be used.
- NEVER mix kerosene,used engine oil, or residual fuels with the diesel fuel.
- Water and sediment in the fuel should not exceed 0.05% by volume.
- Keep the fuel tank and fuel-handling equipment clean at all times.
- Poor quality fuel can reduce engine performance and / or cause engine damage.
- Fuel additives are not recommended. Some fuel additives may cause poor engine performance.
- Ash content not to exceed 0.01% by volume.
- Carbon residue content not to exceed 0.35% by volume. Less than 0.1% is preferred.
- Total aromatics content should not exceed 35% by volume. Less than 30% is preferred.
- PAH (polycyclic aromatic hydrocarbons) content should be below 10% by volume.
- Metal content of Na, Mg, Si, and Al should be equal to or lower than 1 mass ppm. (Test analysis method JPI-5S-44–95).
- Lubricity : Wear mark of WS 1.4 should be Max.0.018 in (460 µ m) at HFRR test.

NOTE

Bio-Diesel fuels technical requirements , please contact your authorised dealer .

Winter operation with diesel fuel

⚠ CAUTION

Adding petrol can lead to malfunctions in the fuel injection system!

– Do not add petrol.

– Do not add petroleum, kerosene or additional fluidity additives.

– If necessary, query with the authorised service centre.

In winter operation, special demands are placed on the low-temperature performance of fuels. Generally, diesel fuels that can be used at temperatures down to -44 C are available on the open market. Therefore, it is not necessary to add additives to improve the fluidity. Adding petrol can lead to the formation of vapour pockets (cavitation) in the fuel system. This disrupts the function of the fuel injection system and, if continued over a long period of time, can lead to component damage.

Engine coolant - Specifications

⚠ DANGER

Scald hazard !

- NEVER remove the radiator cap if the engine is hot. Steam and hot engine coolant will spurt out and seriously burn you. Allow the engine to cool down before you attempt to remove the radiator cap.
- Securely tighten the radiator cap after you check the radiator. Steam can spurt our during engine operation if the cap is loose.
- ALWAYS check the level of engine coolant by observing the reserve tank.
- Failure to comply will result in death or serious injury.

⚠ WARNING

Burn hazard !

- Wait until the engine cools before you drain the engine coolant. Hot engine coolant may splash and burn you.
- Failure to comply will result in death or serious injury.

⚠ CAUTION

Coolant hazard !

- Wear eye protection and rubber gloves when you handle Long Life or Extended Life engine coolant. If contact with the eyes or skin should occur, wash with clean water.
- Failure to comply may result in minor or moderate injury.

NOTE

- *Only use the engine coolant specified. Other engine coolants may affect warranty coverage, cause an internal build up of rust and scale and / or shorten engine life.*
- *Prevent dirt and debris from contaminating engine coolant. Carefully clean the radiator cap and the surrounding area before you remove the cap.*
- *NEVER mix different types of engine coolants. This may adversely affect the properties of the engine coolant.*

Engine coolant specifications

Use a Long Life Coolant (LLC) or an Extended Life Coolant (ELC) that meets or exceeds the following guidelines and specifications.

Alternative engine coolant

If an Extended or Long Life Coolant is not available, alternatively ,you may use an ethylene glycol or propylene glycol based conventional coolant (green).

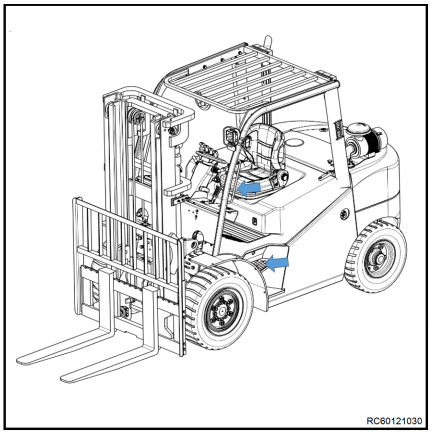
Notes:

1 ALWAYS use a mix of coolant and water.NEVER use water only.
2 Mix coolant and water per the mixing instructions on the coolant container.
3 Water quality is important to coolant performance. We recommends that soft, distilled, or demineralized water be used to mix with coolants.
4 NEVER mix extended or long life coolants and conventional (green) coolants.
5 NEVER mix different types and / or colors of extended life coolants.
6 Replace the coolant according to "Scheduled maintenance."

Additional technical coolant specifications:

- ASTM D6210,D4985 (US)
- JIS K-2234 (Japan)
- SAE J814C, J1941, J1034 or J2036 (International)

Mounting/dismounting



⚠ CAUTION

Always face the vehicle when dismounting the fork-lift, in order to prevent injury to the legs and back.

NOTE

Do not grip the steering wheel or joysticks when mounting/dismounting the forklift.

– First place your left foot on the step. Grip the handrail or overhead guard beam and mount the truck from the left-hand side.

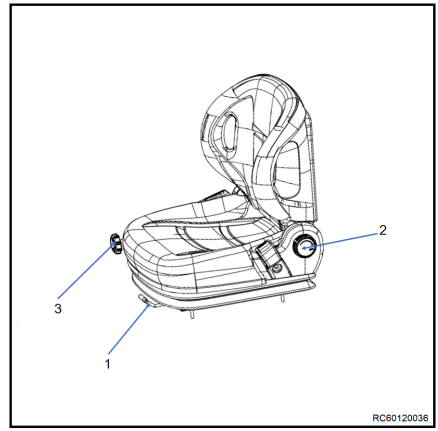
– Use the step and handrail or overhead guard beam to dismount from the left-hand side.

⚠ CAUTION

Do not mount or dismount the truck from the right hand side unless it is an emergency.

Sealt belt

Adjustment of the driver's seat ▷



⚠ CAUTION

Slide the driver's seat to find the best operating position relative to the steering wheel, the accelerator and braking pedals, and the joystick.

Before starting the truck and whenever changing drivers, adjust the seat to match the driver's weight and make sure that the settings have all engaged properly. Do not place any objects in the driver's rotation range.

NOTE

Remaining in a sitting position for long periods of time puts a great amount of pressure on the spine. Make sure this pressure is reduced by bending forwards frequently.

Moving the driver's seat

– Lift the lever(1)and hold.
– Push the driver's seat into the desired position.
– Release the lever.
– Ensure that the driver's seat is securely engaged.

Adjusting the seat backrest

Do not put pressure on the seat backrest while engaging it.

– Turn the knob(2)clockwise.
– Move the backrest forwards and backwards until the driver finds the best sitting position.
– Release the knob.

Adjusting the seat suspension

NOTE

The driver's seat can be adjusted to suit the weight of the individual driver. In order to achieve the best seat suspension setting, the driver should perform the adjustment whilst sitting on the seat.

– Adjust the suspension to your individual comfort using the adjusting knob (3).

Fastening the seat belt

DANGER

Even when using an approved restraint system, there is some residual risk that the driver might be injured if the truck tips over.

This risk of injury can be reduced through the combined use of the restraint system and the seat belt.

In addition, the seat belt protects against the consequences of rear-end collisions and falling off a ramp.

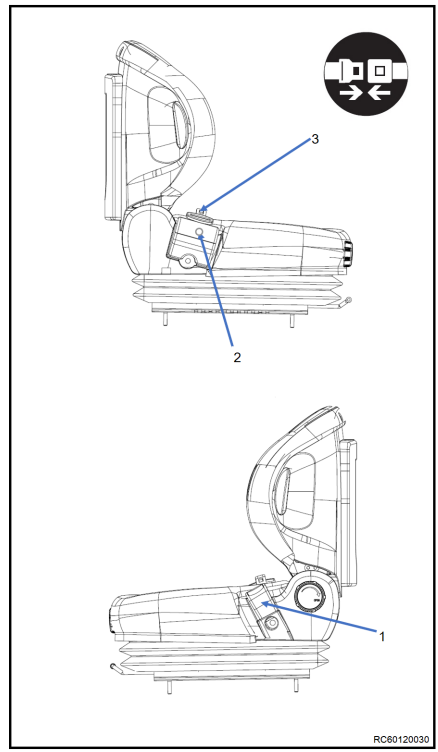
– We therefore recommend that you also use the seat belt.

DANGER

Only bracket doors or full cabs with closed, sturdy doors constitute a driver restraint system. PVC doors (weather protection) are not a restraint system!

If the doors are open or have been removed, you must use an alternative suitable restraint system (e.g. a seat belt)!

Fastening the seat belt



DANGER

Risk to life when driving without a seat belt!

If the truck tips over or crashes into an obstacle and the driver is not wearing his seat belt, he can be hurled out of the truck. The driver could slide under the truck or collide with an obstacle. There is a risk to life!

- Fasten the seat belt before every trip
- Do not twist the seat belt when fastening it
- Only use the seat belt to secure one person
- Have any malfunctions repaired by the STILL service centre

- Smoothly pull the seat belt out of the belt retractor(2) and fasten over the thighs with a close fit to the body.

NOTE

Sit as far back as possible so that your back is leaning against the seat backrest. The automatic blocking mechanism permits sufficient freedom of movement on the seat.

- Insert the buckle (3)into the seat belt socket (1).
- Check the tension of the seat belt. The belt should fit closely around your body.

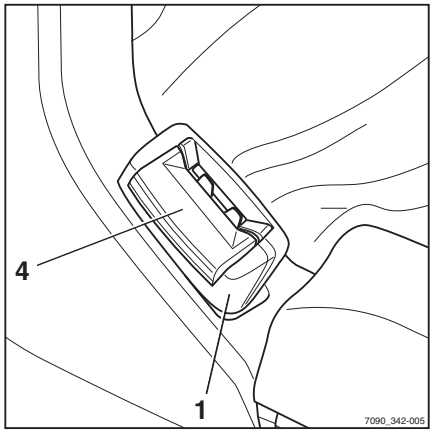
Fastening on a steep slope

The automatic blocking mechanism prevents the belt from being extended whenever the truck is on a steep gradient. It is no longer possible to pull the seat belt out of the belt retractor.

- Move away carefully on the slope.
- Fasten the seat belt.

Releasing the seat belt

– Push the red button (4) on the buckle (1). ▷
– Manually guide the belt tongue slowly back to the retractor.



NOTE

Do not allow the seat belt to retract too quickly. The automatic blocking mechanism may be triggered if the belt tongue strikes the housing. It will then no longer be possible to pull the seat belt out with the usual force.

– Using increased force, pull the seat belt around 10-15 mm out of the retractor to disengage the blocking mechanism.
– Slowly allow the seat belt to retract again.
– Protect the seat belt from dirt (for example, by covering it).

Malfunction due to cold weather conditions

– If the buckle or belt retractor is frozen, thaw them out and dry them thoroughly to prevent recurrence.

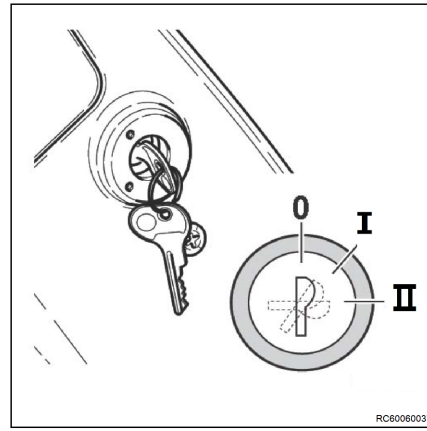
⚠ CAUTION

Do not subject buckle or belt retractor to excessive heat when thawing out.

– Do not use air warmer than 60 °C when thawing out!

Switches

Ignition device



NOTE

The forklift can only be started if the reversing lever is in the centre position (neutral).

The ignition key has three positions:

Position "0"

- Key removal position (no circuit powered except for horn, stop lights; seat and ISO PCB)

Position "I"

- Pre-heating position, all circuits are powered

Position "II"

- Engine starting position

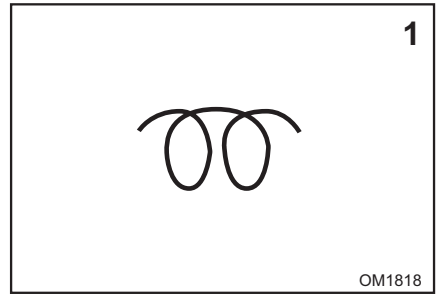
Start-up

– To start the engine, insert the key, turn it to position "II" and release it as soon as the engine starts (the key will go back to position "I").

Starting at cold temperature.

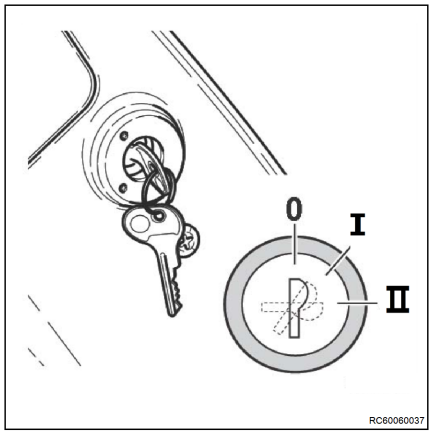
– Insert the key in the switch and turn it to position "I". The pre-heater will start automatically and the warning light (1) will come on.

– Wait for the warning light (1) to go out, then turn the key to position "II" and release it as soon as the engine fires (the key will go back to position "P").



Lighting and turn indicator switch

The turn indicator and the lighting are active if the ignition key is in position "I".

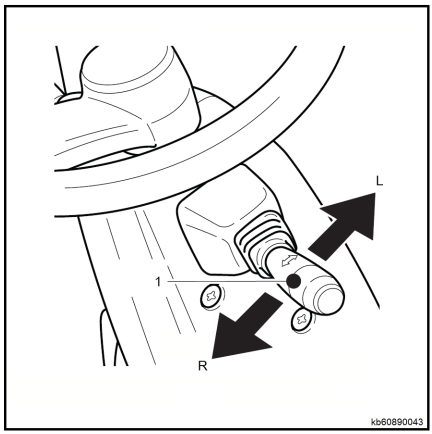


Direction indicators

– When the lever (1) is moved into position "R", the right indicator light lights up.

– When the lever (1) is moved into position "L", the left indicator light lights up.

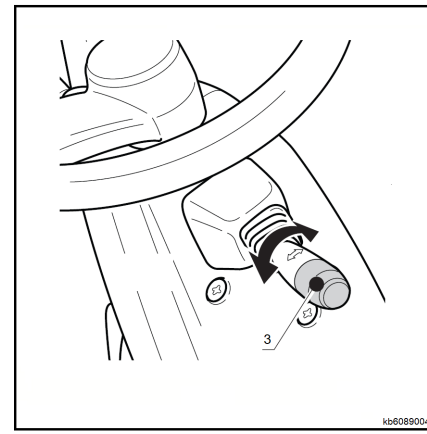
R	Turn Right
N	Neutral
L	Turn Left



Lighting

– The lighting is switched on by turning knob (3) on the lever:

- Turning the knob to the first click switches on the clearance lights;
- Turning the knob until the second click switches on the clearance lights, front headlights, and also rear lights.

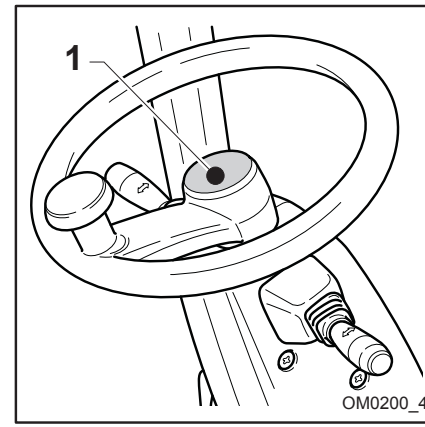


Lamp switch	0(OFF)	1st	2nd
Clearance lamp	OFF	ON	ON
Front headlights	OFF	OFF	ON
Rear combination lights	OFF	OFF	ON

Warning horn;

The horn allows the driver to draw attention to his and his truck's presence if necessary.

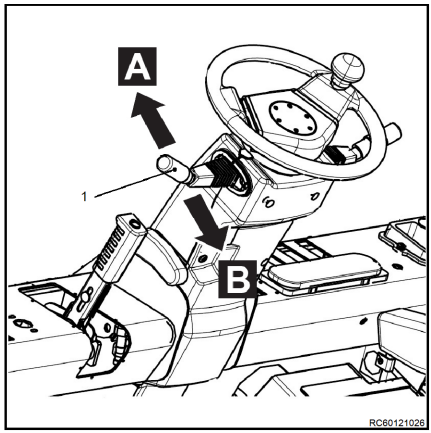
– Press the button (1) in the centre of the steering wheel to actuate the horn.



Direction selection lever

Direction selection lever (1) is used to select the required drive direction of the truck or to switch the drive mode to idling. The direction selection lever offers three different positions:

- **FORWARDS** — direction selection lever pushed forwards into position "A"
- **NEUTRAL** — direction selection lever in centre position between "FORWARDS" and "REVERSE"
- **REVERSE** — direction selection lever pulled backwards into position "B"



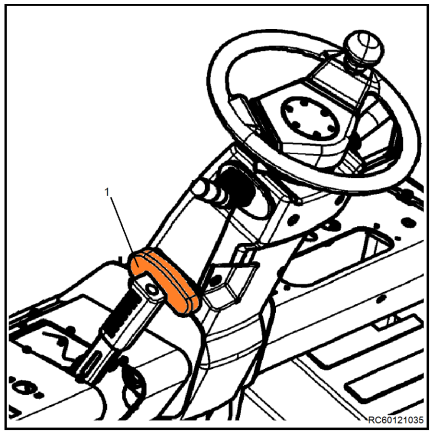
Adjusting the position of steering wheel

⚠ DANGER

Only adjust the steering column when the truck is stationary.

Angle adjustment

– Pull down the handle(1) clockwise.
– Move the steering column into the required position.
– Pull back the handle anti-clockwise to its original position.

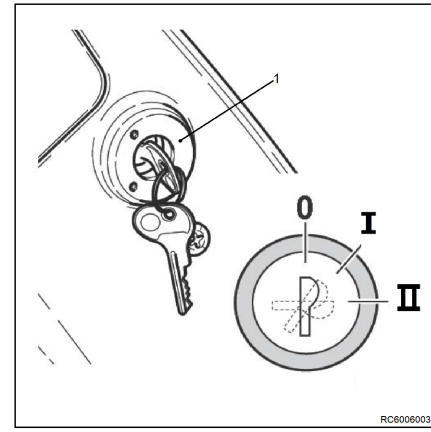


Start the engine

– Sit in the driver's seat and fasten the seat belt. Ensure that the cab doors or the driver restraint system installed on the truck is closed.

– Ensure that the direction selection lever (if present) is in the central position (neutral).

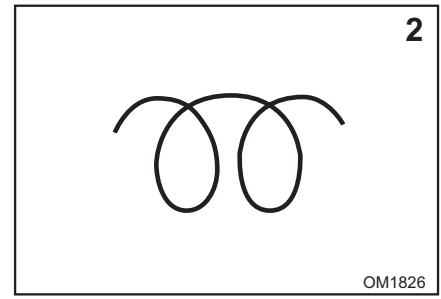
– Insert the switch key (1) and turn it to position "**II**". Release the switch key as soon as the engine starts. ▷



Starting the engine at low temperatures.

– Insert the switch key (1) and turn it to position "**I**"; hold the switch key in this position until the lamp (2) goes out. ▷

– Turn the switch key to position "**II**". Release the switch key as soon as the engine starts.



NOTE

If the engine does not start, stop the starting procedure and try again later. Wait at least one minute between start attempts in order to avoid running down the battery. If the engine still does not start after three attempts, do not try to start the engine again. Instead, contact your authorised service centre.

⚠ DANGER

Risk to health from exhaust gases! Exhaust gases from internal combustion engines are harmful to your health. In particular, the soot particles contained in the diesel exhaust gas can cause cancer. Letting the engine idle poses a risk of poisoning from the CO, CH and NO_x components contained in the exhaust gas.

Modern exhaust gas treatment systems (e.g. catalytic converters, particle filters or comparable systems) can clean exhaust gases in a way that reduces the health hazard and risk of poisoning when operating the truck.

– Observe the national laws and regulations when using trucks with an internal combustion engine in entirely or partially enclosed working areas.

– Always ensure sufficient ventilation.

⚠ DANGER

Risk to health from exhaust gases!

Do not leave the truck with the engine running in order to warm up the engine. Warm up the engine by using the truck at a low speed for a few minutes.

Driving

Driving

⚠ CAUTION

When using mirrors, ensure that the rear-view mirror is only used for monitoring the traffic behind the vehicle. Reverse travel is therefore only permitted when looking directly behind you.

⚠ CAUTION

Always tilt the mast backwards and lower the fork arms to the ground around 300mm.

⚠ CAUTION

Check the safety around the forklift and sound the horn before starting the truck.

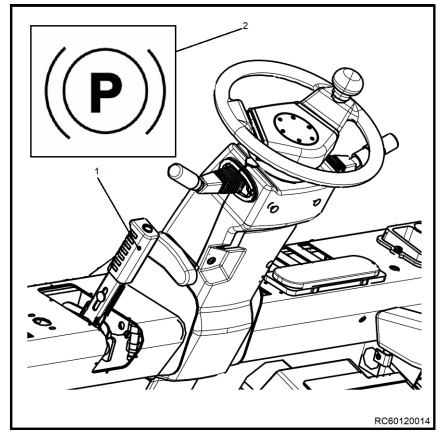
NOTE

The drive functions of the truck are only activated when the driver's seat is occupied.

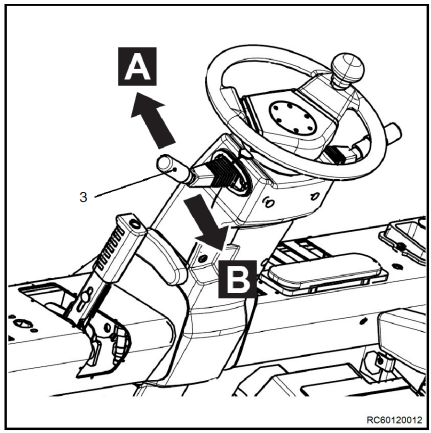
– Sit in the driver's seat and fasten the safety belt.

– Start the engine.

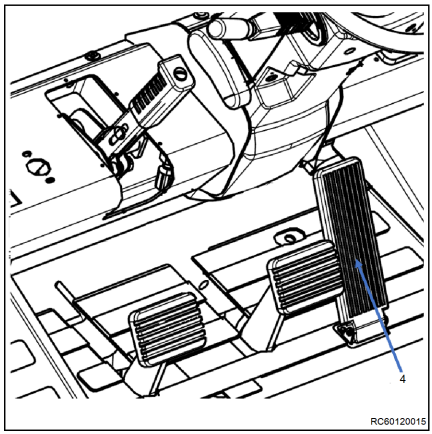
– Release the parking brake (1) , and the corresponding LED(2) will turn off. ▷



– Move direction selection lever (3) in the required drive direction: (A) FORWARDS, (B) BACKWARDS. ▷



– Gently press the accelerator pedal(4) to set off. ▷



Forward

– Put the direction lever into the forward direction.

– Smoothly press the accelerator pedal

The speed of the forklift truck accelerates in relation to the increase in pedal travel.

Reversing

– Place the direction lever in the reverse direction.

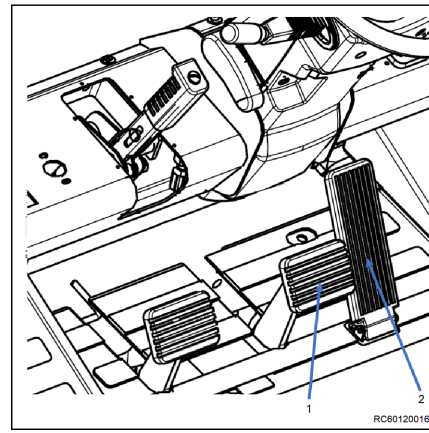
– Steadily press the accelerator pedal

The speed of the forklift truck accelerates in relation to the increase in pedal travel.

Changing direction of travel

– To change direction, release the accelerator pedal (2) . ▷

– Press the service brake pedal (1) until the truck comes to a complete stop.

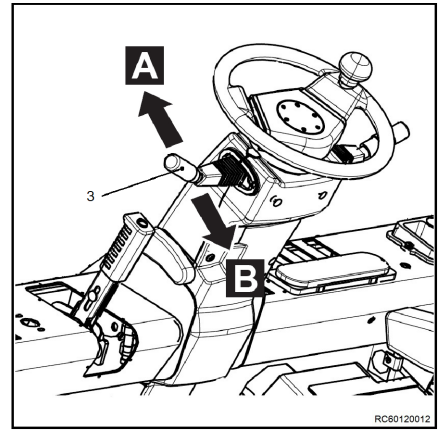


– Move the lever (3) in the opposite direction of travel: (A) FORWARDS, (B) BACKWARDS; then press the accelerator pedal (2) . ▷

The forklift truck will now accelerate in the new drive direction.

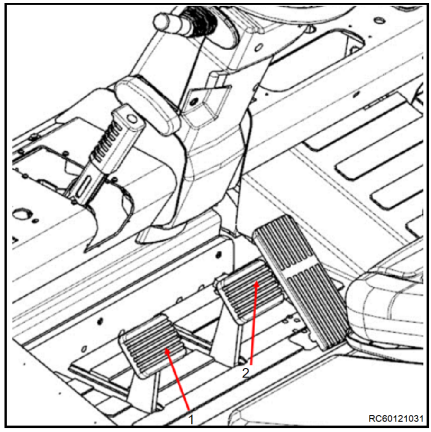
⚠ DANGER

Using operating lever to directly reverse the operating direction of the forklift truck during operation is strictly prohibited. Reversing direction during operation will result in damage to the forklift truck.



Brake system

Driving brake pedal and inching pedal ▷



NOTE

We recommend that the driver familiarizes himself with the efficacy of the braking apparatus when the forklift truck is not carrying a load. Operate the forklift truck slowly on an uncrowded road surface to test travelling functions.

Driving brake pedal

Press the brake pedal(2)to slow or stop the truck. At the same time, the brake lights come on.

Inching pedal

– If the inching pedal (1) is depressed, the engine is disengaged at the beginning of the pedal travel. The service brake begins to grip when the pedal is depressed further.

– Small, precise movements of the truck are possible when you actuate the inching pedal (1) lightly if the accelerator pedal is actuated as well. Actuate the pedal (1) in order to move the truck gradually, even if the engine is running at full capacity.

Operating the service brake

Braking and stopping

⚠ DANGER

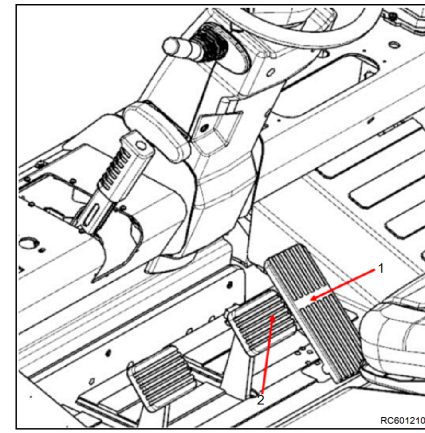
At speeds that are too high, there is a danger that the truck could slip or overturn!

The braking distance of the truck depends on the weather conditions and the level of contamination on the roadway. Note that the basic braking distance increases with the square of the speed.

– Adapt your driving and braking style to suit the weather conditions and the level of contamination on the roadway.

– Always choose a driving speed that will provide a sufficient stopping distance.

– Take the foot off the accelerator pedal (1).
– Press the brake pedal (2) until the truck is stationary.
– Actuate the parking brake to keep the forklift truck braked.



Procedure in the event of failure of the service brake

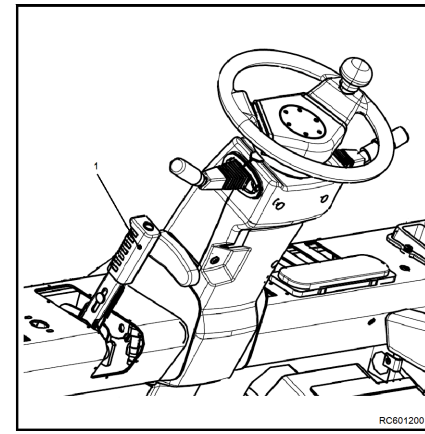
– Bring the truck to a standstill by actuating the parking brake and park it securely.
– Do not operate the truck again until the service brake has been repaired and is functional.

Parking brake

The parking brake must be actuated every time the driver exits the truck.

NOTE

If the driver exits the truck without actuating the parking brake, a warning signal sounds. This signal even sounds if the truck has already been switched off and the ignition and stop key has been removed.



Actuating the parking brake:

– Pull down the parking brake lever(1) until the lock position is reached and the parking brake indicator light comes on.

Releasing the parking brake:

– Release the parking brake lever(1).The parking brake will return to its original position and the parking brake indicator light will turn off.

DANGER

The forklift truck must not be operated if there are problems with the braking system.

If there is a fault with the braking system or parts of the system have abraded, please contact your authorised dealer.

Lifting system and attachments

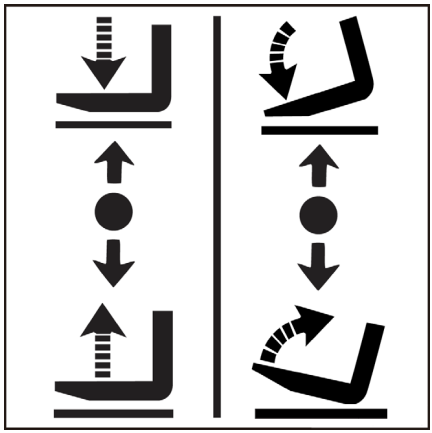
Operating the lifting device

⚠ DANGER

When the lifting device or any attachments are moving, there is a danger the driver will be caught between the lifting device and the forklift truck.

Therefore, the driver must not be located at or enter in between the lifting device and the forklift truck. The lifting device and attachments may only be used for their specified uses. The driver must receive training related to the operation of the lifting system and attachments. Keep in mind the maximum lift height.

– Take note of the switching symbols with arrows. ▷



Operation of the control lever must be slow and steady. Lifting, lowering and tilting speeds depend on the range of motion of the control level.The control lever will automatically return to neutral when released.

Lifting the fork carriage ▷

⚠ DANGER

If any danger occurs when raising the lift mast, immediately stop raising the fork arms.

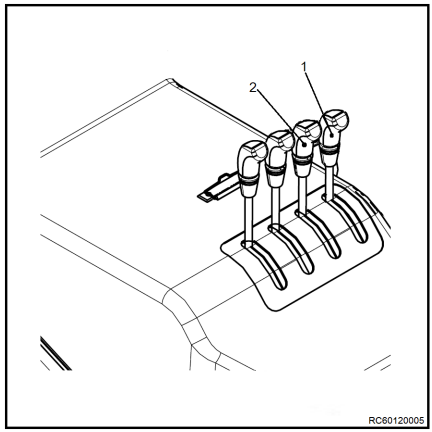
– Push the control lever (1) back.

Lower the fork carriage

– Push the control lever (1) forward.

Tilting the lift mast forward

– Push the control lever (2) forward.



Tilting the lift mast backward

– Push the control lever (2) back.

When transporting a load, tilt the lift mast backwards for better stability.

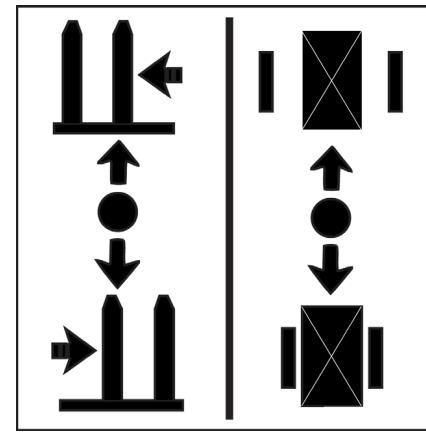
Operating attachments

Attachments are optional pieces of equipment installed on the forklift truck: (such as sideshift forks, rotators, clips, etc.). Please do not exceed the working pressure of attachments during operation, and ensure that operation is in compliance with datasheets. One or two additional control levers can be installed to operate attachments.

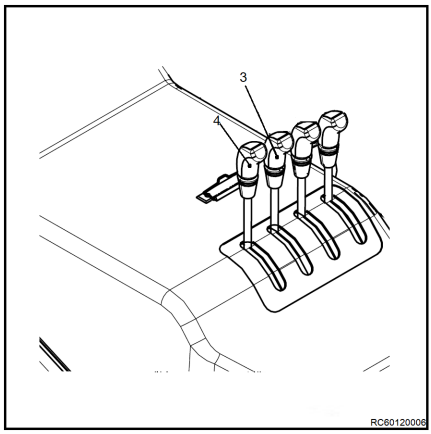
NOTE

Below is a description of attachment operations. The forklift truck can be configured with different operating levers.

– Take note of the switching symbols with arrows ▷



Sideways movement



NOTE

In order to prevent damage, do not operate in a sideways direction when the fork arms are on the ground.

– Push the control lever (3) forwards and move to the left.

– Push the control lever (3) backwards and move to the right.

Operating fixtures

– Push the control lever (4) forwards to open the jig.

– Push the control lever (4) backwards to clamp the jig.

Handling loads

Safety regulations when handing loads

The safety regulations for handling loads are shown in the following sections.

⚠ DANGER

There is a risk to life caused by falling loads or if parts of the truck are being lowered.

- Never walk or stand underneath suspended loads or raised fork arms.
- Never exceed the maximum load indicated on the capacity rating plate. Otherwise stability cannot be guaranteed!

⚠ DANGER

Risk of accident from falling or crushing!

- Do not step onto the forks.
- Do not lift people.
- Never grab or climb on moving parts of the truck.

⚠ DANGER

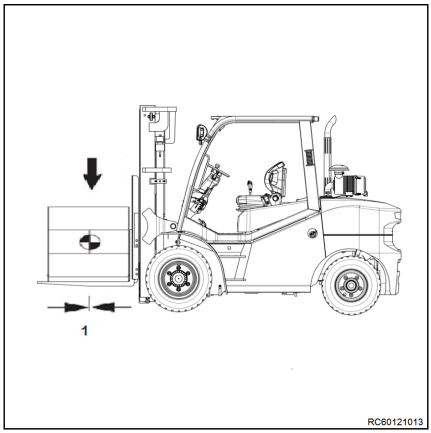
Risk of accident from a falling load!

- When transporting small items, attach a load safety guard (variant) to prevent the load from falling on the driver.
- Use a closed roof covering (variant) in addition.

Load centre distance and load capacity

Before lifting goods, the relationship between the weight, load centre of gravity distance and maximum lift height of the goods must be understood.

Load centre distance refers to the distance between the vertical plane of the fork arms and the centre of gravity of the loads(1).



NOTE

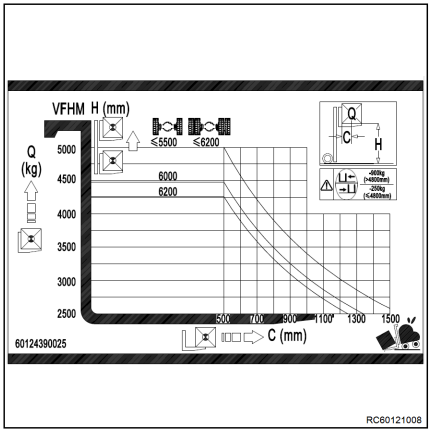
The centre of gravity of a load is not necessarily located at the central point of the load itself. The load capacity refers to the weight of goods able to be lifted to a specified height within a given load centre distance.

NOTE

Check the load limits. In the following circumstances, please contact your authorised dealer before operating.

- *Before lifting irregular loads or goods that sway.*
- *Where the load centre of gravity distance is excessively long.*
- *Before using attachments.*

Capacity plate



DANGER

The parameters in the load diagram and on the labels apply to compact, uniform loads. These load limits must not be exceeded. Exceeding the load limits will affect the stability of the forklift truck and the strength of the lift mast.

Refer to the CAPACITY CHART before lifting goods. If attachments are fitted, refer to the load rating label for the attachment.

For example:

Truck model: RCD50 with single tyre

Load centre: 500 mm

Lift height: ≤5500 mm

In this case, the maximum load capacity is: 5000 kg

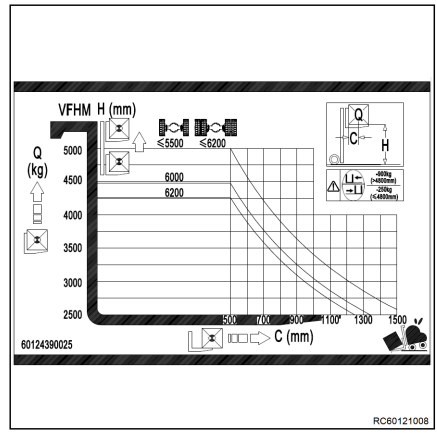
– Before loading, make sure that the dimensions and weight of the load are within the approved standard specified in the “Technical datasheet” chapter and on the load rating plate.

– Before operating an attachment, read the load capacity data plate on the attachment.

Before lifting a load

Before lifting a load, check the load capacity diagram (1) on the engine cover.

The maximum capacity is determined by the lifting height and the load centre distance.



NOTE

Check the load capacity limits and contact your authorised dealer before transporting:

– off-centre or swinging loads

– loads with the mast tilted forwards or the load not near the ground

– loads beyond the centre of gravity

– before operating attachments

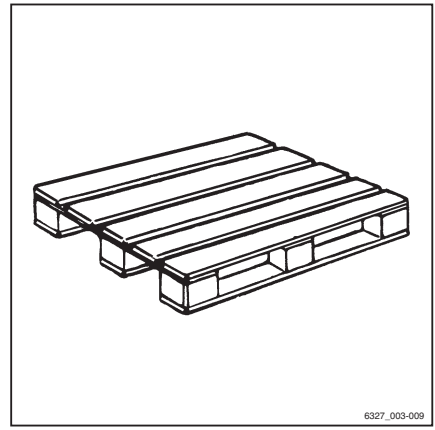
– loads at wind force 6 and higher

Transporting pallets

As a rule, loads (e.g. pallets) must be transported individually. Transporting multiple loads at the same time is only permitted:

- when instructed by the supervisor and
- when the technical requirements have been met.

The driver must ensure proper condition of the load. Only safely and carefully positioned loads may be transported.



Danger area

The danger area is the area in which people are at risk due to the movements of the truck, its working equipment, its load-carrying equipment (e.g. attachments) or the load. Also

included are the areas where loads could fall or working equipment could fall or be lowered.

⚠ DANGER

Risk of injury!

– Do not step on the fork.

⚠ DANGER

Risk of injury!

– Do not step under the raised forks.

⚠ DANGER

People may be injured in the danger area of the truck!

The danger area of the truck must be completely clear of all personnel, except the driver in his normal operating position. If persons fail to leave the danger area despite warnings:

– Cease work with the truck immediately.

– Secure the truck against use by unauthorised parties.

⚠ DANGER

Danger of death from falling loads!

– Never walk or stand underneath suspended loads.

Transporting suspended loads

Before transporting suspended loads, consult the national regulatory authorities (in Germany, the employer's liability insurance associations).

National regulations may place restrictions on these operations. Contact the relevant authorities.

⚠ DANGER

Suspended loads that begin to swing can result in the following risks:

- Impaired braking and steering action
- Tipping over the load wheels or drive wheels

- Tipping the truck at right angles to the direction of travel
- Risk of crushing of guide persons
- Reduced visibility.

⚠ DANGER

Loss of stability.

Slipping or swinging suspended loads can lead to a loss of stability and cause the truck to tip over.

– When transporting suspended loads, observe the following instructions

Instructions for transporting suspended loads:

- Swinging loads must be prevented by using the proper driving speed and driving style (careful steering, braking)
- Hanging loads must be hooked on to the truck in such a way that the harness cannot shift or release unintentionally and cannot be damaged
- When transporting suspended loads, suitable devices (e.g. guy wires or supporting poles) must be available so that accompanying persons can guide suspended loads and prevent the loads from swinging
- Take particular care to ensure that there is no one in the drive direction in the driving lane
- If, despite this, the load begins to swing, ensure that no person is placed at risk

⚠ DANGER

Risk of accidents!

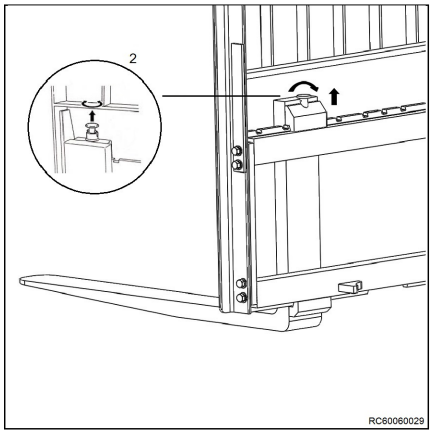
When transporting hanging loads, never perform or end driving and load movements abruptly.

Never drive on slopes with a suspended load.

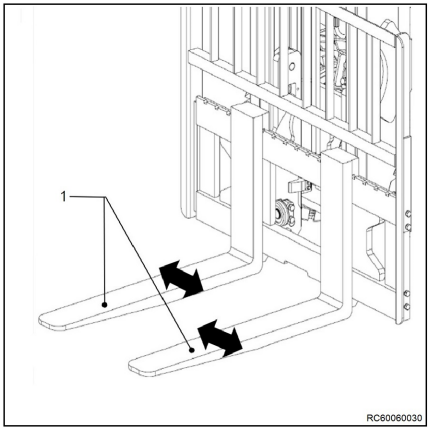
Transporting containers holding fluids as hanging loads is not permitted.

Adjusting the fork arm distance

– Raise the knob (2) and rotate it by 90°. ▷



– Adjust the fork arms (1) according to the dimensions of the load to be lifted. ▷
– Ensure that an equal distance is maintained from both fork arms to the centre line of the fork carriage.
– Ensure that the fork arms are locked in one of the grooves on the fork carriage using the knob (2).



⚠ CAUTION

For greater load stability, the distance between the two fork arms must be as large as possible while remaining consistent with the lifting points of the load, so that the load centre of gravity is between the fork arms.

⚠ CAUTION

For greater load stability, the position of the fork arms must be as symmetrical as possible with respect to the centre of the fork carriage.

Picking up a load

⚠ DANGER

The truck may tip over if the load is too heavy.

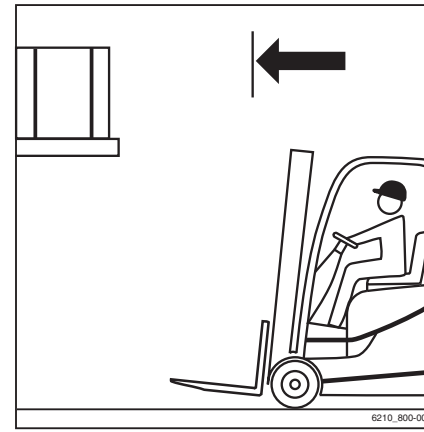
Before picking up the load, check that the dimensions and weight of the load lie within the permitted range for the truck. This information can be found on the capacity rating plate.

⚠ DANGER

There is a risk to life caused by a falling load or if parts of the truck are being lowered.

- Never walk or stand underneath suspended loads or raised fork arms.
- Never exceed the maximum load values specified on the capacity rating plate. Otherwise, stability cannot be guaranteed.

- Only store pallets that do not exceed the specified maximum size. Damaged loading equipment and incorrectly formed loads must not be stored.
- Attach or secure the load to the lifting accessory so that the load cannot move or fall.
- Store the load so that the specified aisle width is not reduced by protruding parts.
- Drive carefully towards the racking. ▷



– Position the forks.
– Set the lift mast to vertical.
– Lift the fork carriage to the stacking height.

⚠ DANGER

Risk of accident due to changed moment of tilt!

If a truck is operated with a forwards tilt (variant) of more than 3°, there is a greater risk of the load slipping when the load is raised or lowered. The load centre of gravity and the moment of tilt change when the load slips. The truck may tip forwards.

– Only tilt the lift mast forwards with a raised lifting accessory when it is directly above the stack.
– When the lift mast is tilted forward, take particular care to ensure that the truck does not tip forwards and that the load does not slip.

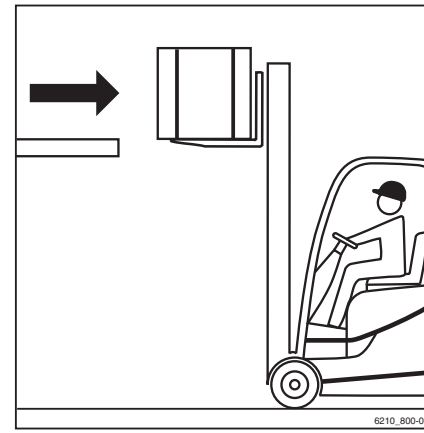
⚠ CAUTION

Component damage possible!

When inserting the fork into the racking, ensure that the racking and load are not damaged.

– Insert the fork as far under the load as possible using the brake Inching pedal. Stop the truck using the service brake as soon as the fork back is resting against the load. The load centre of gravity must be midway between the fork arms.

– Lift the fork carriage until the load is resting entirely on the fork. ▷



NOTE

The lifting speed can be increased by adjusting the engine speed. Refer to the chapter entitled "Increasing the lifting speed".

⚠ DANGER

Risk of accident!

– Beware of any people in the danger area.

⚠ CAUTION

Component damage possible!

– Ensure that the roadway behind you is clear.

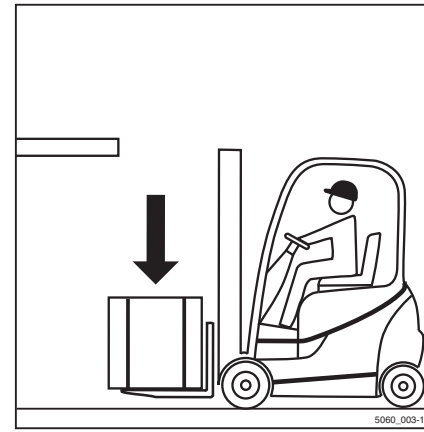
– Move backwards carefully and slowly until the load is clear of the racking. Brake gently.

⚠ DANGER

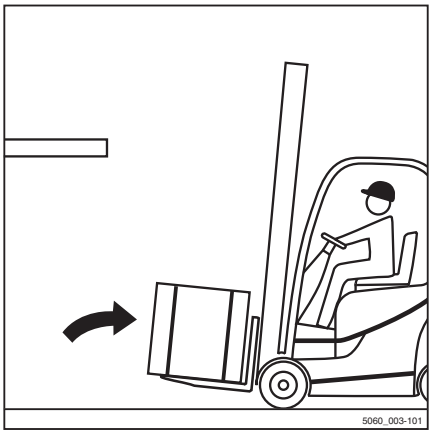
Never tilt the lift mast with a raised load due to the risk of tipping!

– Lower the load before tilting the lift mast.

– Lower the load while maintaining ground clearance. ▷



– Tilt the lift mast backwards. The load can now be transported. ▷

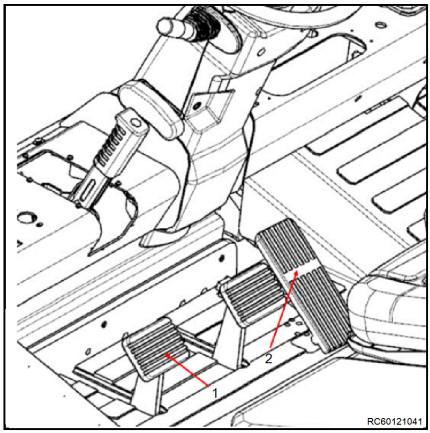


Increasing the lifting speed ▷

– Fully depress the brake Inching pedal (1) and hold it down. The drive wheels are now uncoupled from the engine.

– Pull the "lift" operating lever as far back as possible. The truck begins to lift.

– Depress the accelerator pedal (2) to increase the engine speed. This action increases the lifting speed. In this way, the lifting speed can be controlled using the accelerator pedal.



Transporting loads ▷

NOTE

Observe the information in the chapter entitled "Safety regulations when driving".

⚠ DANGER

The higher a load is lifted, the less stable it becomes. The truck can tip over or the load can fall, increasing the risk of accident!

Driving with a raised load and the lift mast tilted forward is not permitted.

– Only drive with the load lowered.
– Lower the load until ground clearance is reached (not over 300 mm).
– Only drive with the lift mast tilted backwards.

– Drive slowly and carefully round corners! ▷

NOTE

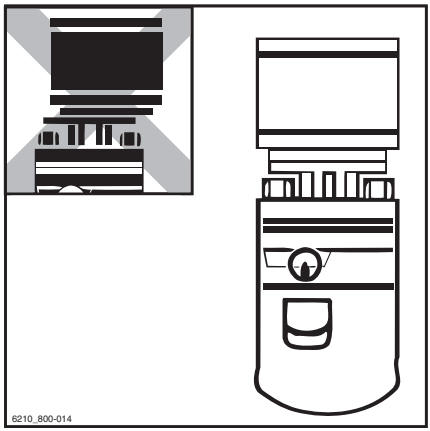
Observe the information in the chapter entitled "Steering".

– Always accelerate and brake gently!

NOTE

Observe the information in the chapter entitled "Operating the service brake".

– Never drive with a load protruding to the side (e.g. with the sideshift)! ▷



Driving on ascending and descending gradients ▷

⚠ DANGER

Danger to life!

Driving on ascending and descending gradients carries special dangers!

– Always follow the instructions below.

– On ascending and descending gradients, the load must be carried facing uphill.
– It is only permitted to drive on ascending and descending gradients that are marked as traffic routes and that can be used safely.
– Ensure that the ground to be traversed is clean and provides a good grip.
– Do not turn on ascending and descending gradients.
– Do not drive onto or along ascending and descending gradients at an angle.
– Do not park the truck on ascending or descending gradients.
– In case of emergency, secure the truck with wedges so that the truck does not roll away.

– Reduce the driving speed on descending gradients.

It is not permitted to drive on long ascending and descending gradients greater than 15% due to the specified minimum braking and stability values.

– Before driving on ascending and descending gradients greater than 15%, consult the authorised service centre.

The process of placing loads into stock and removing loads from stock while on an ascending or descending gradient is not permitted!

– Always place loads into stock and remove loads from stock on a horizontal plane.

Driving on lifts

The driver may only use this truck on lifts with a sufficient rated capacity and for which the operating company has been granted authorisation.

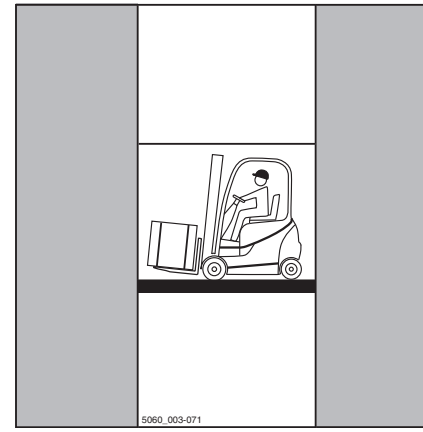
⚠ DANGER

There is a risk to life if you are crushed or run over by the truck.

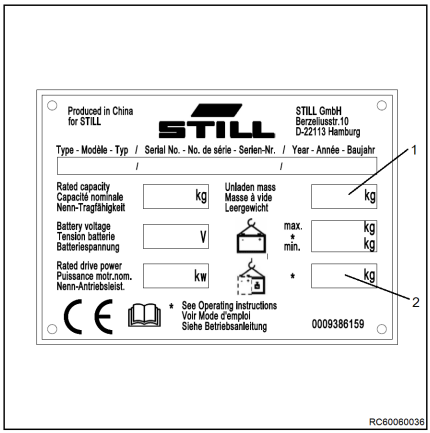
– There must be no personnel already in the lift when the truck is driven into the lift.

– Personnel are only permitted to enter the lift once the truck is secure, and must exit the lift before the truck is driven out.

▷



Determining the actual total weight



- Park the truck securely.
- Determine the unit weights by reading the truck nameplate and, if necessary, the attachment (variant) nameplate and, if necessary, by weighing the load to be lifted.
- Add the determined unit weights to obtain the actual total weight of the truck:

  Tare weight (1)

  \+ Ballast weight (variant) (2)

  \+ Attachment net weight (variant)

  \+ Weight of the load to be lifted

  \+ 100 kg allowance for driver

  = Actual total weight

- Drive the truck with the forks forwards into the lift without touching the shaft walls.
- Park the truck securely in the lift to prevent uncontrolled movements of the load or the truck.

Driving on loading bridges

⚠ DANGER

Risk of accident if the truck crashes!

Steering movements can cause the tail end to veer off the loading bridge towards the edge. This may cause the truck to crash.

The lorry driver and the truck driver must agree on the lorry's departure time.

- Before driving across a loading bridge, ensure that it is properly attached and secured and has a sufficient load capacity (lorry, bridge etc.).
- Drive slowly and with care on the loading bridge.
- Ensure that the vehicle onto which you will be driving is secured to prevent it from shifting and that it can support the load of the truck.

Determining the actual total weight

– Park the truck securely.

– Determine the unit weights by reading the truck nameplate and, if necessary, the attachment (variant) nameplate and, if necessary, by weighing the load to be lifted.

– Add the determined unit weights to obtain the actual total weight of the truck:

Tare weight (1)

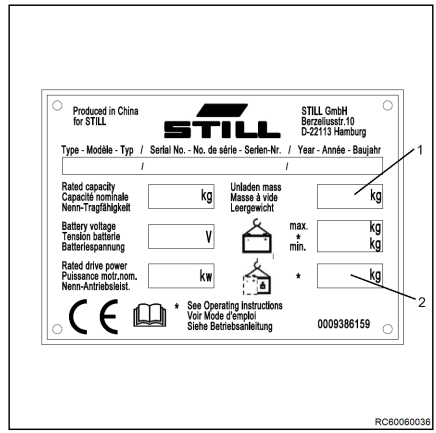
\+ Ballast weight (variant) (2)

\+ Attachment net weight (variant)

\+ Weight of the load to be lifted

\+ 100 kg allowance for driver

= Actual total weight



Setting down loads

⚠ DANGER

Risk of accident due to changed moment of tilt!

Please note that the lift mast can be tilted far enough forwards with a raised load to cause the truck to tip over. The load centre of gravity and the moment of tilt both change when the load slips. The truck may tip forwards.

– Only tilt the lift mast forwards with a raised lifting accessory when it is directly above the stack.

– When the lift mast is tilted forwards, take particular care to ensure that the truck does not tip forwards and that the load does not slip.

NOTE

If the truck is to be used to place a raised load in storage with the lift mast tilted forwards, e.g. in a rack with sloping racking channels, an additional load capacity diagram must be created because the stability will be affected. Please contact the authorised service centre.

⚠ WARNING

Risk of accident from a falling load!

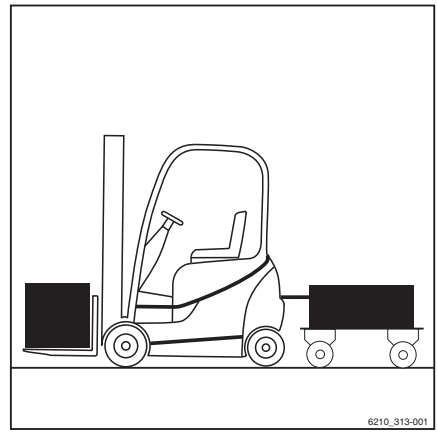
If the fork or the load remains suspended during lowering, the load may fall.

– When removing a load from storage, move the truck far enough back so that the load and the fork can be lowered freely.

– Drive up to the stack with the load lowered in accordance with regulations. ▷
– Set the lift mast to vertical.
– Lift the load to the stacking height.
– Drive the truck carefully into the stack. Use the brake Inching pedal at the same time

– Lower the load until it rests securely on the racking. ▷
– Look behind!
– Move the truck back until the fork arms can be lowered without touching the stack.
– Lower the fork to the ground clearance position.
– Tilt the lift mast backwards and drive away.

Towed load



⚠ DANGER

There is an increased risk of accident when using a trailer.

Using a trailer changes the truck handling characteristics. When towing, operate the truck such that the trailer train can be safely driven and braked at all times. The maximum permissible speed when towing is 5 km/h.

– Do not exceed the permissible speed of 5 km/h.
– Do not couple the truck in front of rail vehicles.
– The truck must not be used to push any kind of trolley.
– It must be possible to drive and brake at all times.

⚠ CAUTION

Risk of damage to components!

The maximum towed load for occasional towing is the rated capacity specified on the nameplate. Overloading can lead to component damage on the truck. The sum of the actual towed load and the actual load on the fork must not exceed the rated capacity. If the existing towed load corresponds to the rated capacity of the truck, no load may be transported on the fork at the same time. The load can be distributed between the fork and the trailer.

– Check the load distribution and adjust it to correspond to the rated capacity.
– Observe the permissible rigidity value of the tow coupling.

⚠ CAUTION

Risk of damage to components!

The maximum towed load only applies when towing unbraked trailers on a level surface (maximum deviation +/- 1%) and on firm ground. The towed load must be reduced if towing on gradients. If necessary, notify the authorised service centre of the application conditions. The service centre will provide the required data.

– Inform the authorised service centre.

⚠ CAUTION

Risk of damage to components!

A support load is not permitted.

– Do not use trailers with tillers supported by the tow coupling.

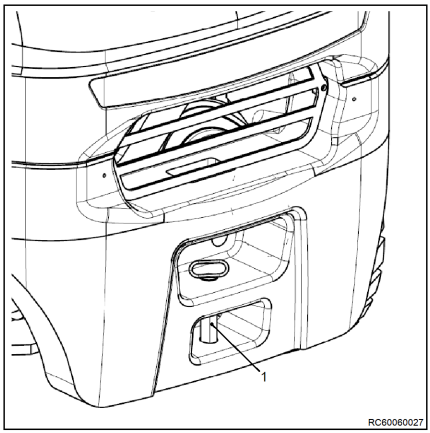
This truck is suitable for the occasional towing of trailers. If the truck is equipped with a towing device, this occasional towing must not exceed 2% of the daily operating time. If the truck is to be used for towing on a more regular basis, the manufacturer should be consulted.

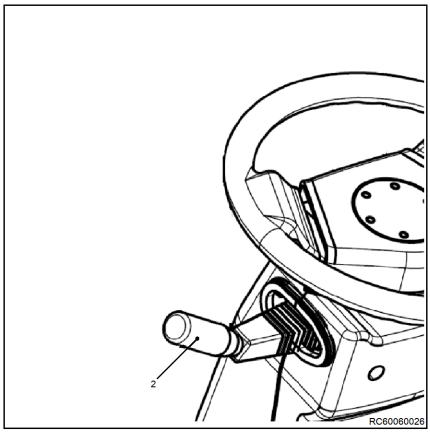
Forklift towing ▷

The forklift can be towed, in case of breakdown, using the tow coupling (1) Before towing models with reversing lever on the steering wheel, check that this lever (2) is in the central position.

⚠ CAUTION

During the towing operation, the operator must be on board the forklift in order to perform the steering and braking operations and the engine must be running.

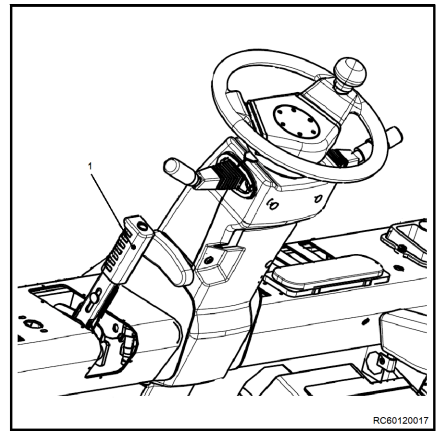




Leaving the truck

– Before exiting the truck, lower the forks to the ground, tilt the mast forwards.

– Apply the parking brake (1). ▷
– Switch off the truck by turning the key from “II” position to the “0” position.
– Remove the ignition key.



⚠ DANGER

Do not switch off the truck by turning the key when the truck is moving.

⚠ DANGER

NEVER leave the forklift truck without having first applied the parking brake (1) and removed the key. NEVER park the truck on a gradient or slope. The truck may only be parked on a slope in emergency situations. In this case, suitable wheel chocks must be positioned under the front wheels.

Cleaning

Cleaning the truck

– Park the truck securely.

– Switch the electrical system off before cleaning.

⚠ WARNING

There is a risk of injury due to falling when climbing onto the truck!

When climbing onto the truck, you can get stuck or slip on components and fall. Higher points on the truck should only be accessed using the appropriate equipment.

– Strictly adhere to the following steps.

– Use only the steps provided to climb onto the truck.

– Use equipment such as stepladders or platforms to reach inaccessible areas.

Washing the truck exterior

⚠ CAUTION

There is a risk of short circuit if water penetrates the electrical system!

– Strictly adhere to the following steps.

– Prior to cleaning, switch off the power supply to the electrical system.

– Do not spray electrical components and the covers on these components directly with water.

⚠ WARNING

Failure to follow these instructions could result in damaged components!

The engine must be switched off during washing. Water should not be used to clean the area around the central electrical system; instead, only clean with a dry cloth or clean compressed air.

⚠ WARNING

Excessive water pressure or water and steam that are too hot can damage truck components.

– Strictly adhere to the following steps.

– Only use high-pressure cleaners with a maximum output power of 50 bar and at a maximum temperature of 85°C.

– When using high-pressure cleaners, make sure there is a distance of at least 20 cm between the nozzle and the object being cleaned.

– Do not aim the cleaning jet directly at adhesive labels or information signs.

⚠ DANGER

Risk of fire! Deposits/accumulations of combustible materials may ignite in the vicinity of hot components (e.g. exhaust pipes).

– Strictly adhere to the following steps.

– Regularly remove all deposits/accumulations of foreign materials in the vicinity of hot components.

– Do not place combustible materials in the engine compartment.

⚠ DANGER

Risk of fire! Flammable fluids can be ignited by hot components on the truck.

– Strictly adhere to the following steps.

– Do not use flammable fluids for cleaning.

– Observe the manufacturer's guidelines for working with cleaning materials

⚠ CAUTION

Abrasive cleaning materials can damage component surfaces!

Using abrasive cleaning materials that are unsuitable for plastics may dissolve plastic parts or make them brittle. The screen on the display operating unit may become cloudy.

– The procedures outlined below must be followed in all cases.

– Clean plastic parts only with cleaning materials intended for plastic parts.
– Observe the manufacturer's guidelines for working with cleaning materials

⚠ CAUTION

Excessive water pressure or water and steam that are too hot can damage truck components.

– The procedures outlined below must be followed in all cases.

– Clean the truck exterior with water-soluble cleaning materials and water (water jet, sponge, cloth).
– Clean all walk-in areas, the oil filling openings and their surroundings, and the lubricating nipples before lubricating.

NOTE

Please note: The more often the truck is cleaned, the more frequently it must be lubricated.

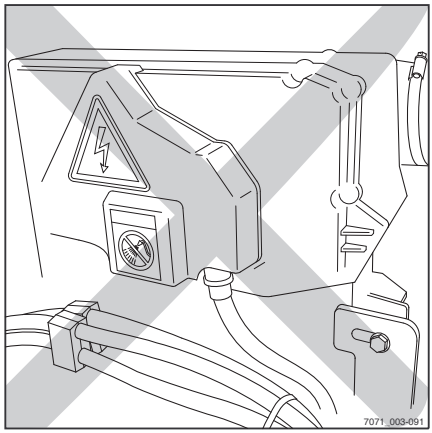
Cleaning the electrical system ▷

⚠ CAUTION

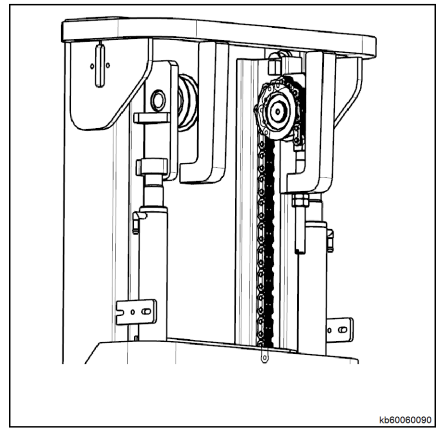
Cleaning electrical system parts with water can damage the electrical system.

– Cleaning electrical system parts with water is forbidden!
– Use dry cleaning materials in accordance with the manufacturer's specifications.
– Do not remove covers etc.

– Clean the electrical system parts with a metal-free brush and blow the dust off with low-pressure compressed air.



Lubricate the lift mast and chains with chain spray



NOTE

If there is excessive dust on the chain affecting the ability of the lubricant to permeate the chain, the lifting chain must be cleaned.

– Place an oil collecting trough under the lift mast
– Carry out cleaning with an alkyl derivative such as an industrial diesel fuel cleaning agent (please comply with the manufacturer's safety instructions).
– Additives may not be used if using a steam nozzle.
– Immediately blow the chain dry after cleaning to remove water both on the chain surface and inside the hinge pins. Move the chain several times during the blow-drying process.
– Immediately apply chain spray and keep the chain moving while doing so.

NOTE

The lifting chains are a safety component. The use of cold cleaning agents, chemical cleaning agents, corrosive liquids or liquids containing acid or chlorine will cause direct damage to the chains.

After washing

– Carefully dry the truck (e.g. with compressed air).
– Sit in the driver's seat and start up the truck in accordance with the regulations.

⚠ CAUTION

Risk of short circuits!

– If any moisture has penetrated into the electrical system despite the precautionary measures taken, the system must first be dried using compressed air.

Decommissioning

General information

This chapter contains information about "**temporary decommissioning**" and "**permanent decommissioning**".

Measures to be implemented when decommissioning

The following tasks must be carried out if the truck is not used for an extended period:

- Clean the truck as described in the chapter entitled "**Cleaning the forklift truck**" and park the truck in a dust-free, dry, frost-free and well-ventilated area.
- Lift the fork carriage to the stop several times.
- Tilt the lift mast forwards and backwards several times and, if fitted, move attachment repeatedly.
- Lower the fork carriage. To relieve the strain on the load chains, lower the fork carriage onto a suitable supporting surface, e.g. a pallet.
- Check hydraulic oil level and top up if required.
- Apply a thin layer of oil or lubricating grease to all unpainted parts as corrosion protection.
- Lubricate all lubrication points listed in the chapter entitled "**Summary table of maintenance operations**".
- Spray all exposed electrical contacts on the battery with a suitable contact spray.
- Remove the battery and store it in a dry and frost-free room.
- Regularly check the charge state of the battery and recharge if necessary.
- Jack up the truck so that the tyres are not touching the ground. This will prevent permanent deformation of the tyres.
- Fill the fuel tank.

– Preserve the engine as specified by the engine manufacturer.
– Cover the truck with a cover that is **NOT** made of plastic.
– If the truck is to be decommissioned for longer periods, contact the authorised service centre to find out about additional measures.

Recommissioning after storage

If the truck has been in storage for longer than six months, it must be carefully checked before being recommissioned. As in the annual inspection, this check should also include all safety items for the truck.

– Clean the truck thoroughly; see the chapter entitled "Cleaning".
– Oil joints and controls.
– Check battery condition and acid density; recharge if necessary.
– Restore engine to normal condition according to regulations of engine manufacturer.
– Check engine oil for condensed water and change if necessary
– Check hydraulic oil for condensation water; change if necessary.
– Carry out the checks and tasks that are to be performed before daily use.
– Put the truck into operation.

During commissioning, the following must be checked in particular:

- Drive, control, steering
- Brakes (service brake, parking brake)
- Lifting system (load-carrying equipment, load chains, mounting)

NOTE

For further information, see the truck workshop manual or contact the authorised service centre.

Permanent decommissioning (scrapping)

The forklift truck must be scrapped in compliance with local regulations. In the event of queries regarding the scrapping of forklift trucks in accordance with regulations, contact the authorised sales network or the recycling companies authorised for scrapping.

ENVIRONMENT NOTE

In particular, batteries, fluids (oils, fuels, lubricants etc.), electrical and electronic components and rubber components must be disposed of in compliance with specific local regulations for each type of material.

5

Maintenance

General information

To keep the forklift truck in a good operating condition, the repair work specified on the following pages must be carried out regularly, at the indicated intervals, and using the consumable material designed for the purpose. A written record must be kept of all work that has been carried out. This is the only way of guaranteeing validity of the warranty.

⚠ CAUTION

Any upcoming maintenance and repair work must be carried out by authorised service engineers in order to guarantee that the truck remains in a good, safe operating condition and that it fulfils all technical specifications.

⚠ CAUTION

The intervals for the various maintenance tasks to be carried out on a regular basis must be shortened accordingly if the truck is used in particularly severe conditions, such as:

– In dusty environments
– At temperatures below zero
– For particularly heavy-duty work

To determine the amended maintenance intervals, please contact your authorised service centre.

NOTE

Please contact your authorised service centre for a maintenance contract that is appropriate for your forklift truck.

Personnel qualifications

Only qualified and authorised personnel are allowed to perform maintenance work. Regular safety checks and checks after unusual incidents must be performed by a competent person. The competent person must conduct their evaluation and assessment from a safety standpoint, unaffected by operational and economic conditions. The competent person must have sufficient knowledge and experience to be able to assess the condition of a truck and the effectiveness of the protective devices in accordance with technical conventions and the principles for testing trucks.

Maintenance work without special qualifications

Simple maintenance work, such as checking the hydraulic oil level, may be carried out by untrained personnel. A qualification such as those held by a competent person is not required to carry out this work. The required tasks are described in the chapter entitled "Remaining ready for operation".

Preliminary maintenance operations

Carry out the following steps before performing maintenance operations:

- Park the truck in an area where it does not obstruct other trucks.
- Park the truck on a flat surface and secure it with wheel chocks behind the wheels to prevent it from rolling away unintentionally.
- Seal off the area where you are performing the maintenance.
- Lower the fork arms to the ground.
- Apply the parking brake.
- Turn off the forklift truck, and remove the ignition and stop key.

⚠ DANGER

Risk of severe electric shock.

Disconnect the negative connecting terminal from the battery before performing any work on the electrical system.

Scheduled truck maintenance

Maintenance — 500 hours

At operating hours										Carried out	
500		1500		2500		3500		4500			
5500		6500		7500		8500		9500		✓	✗
Chassis, bodywork and fittings											
Check the chassis for cracks											
Check the overhead guard/cab and panes of glass for damage											
Check the controls, switches and joints for damage, and apply grease and oil											
Check the driver's seat for correct function and for damage											
Check that the seat belt is in good condition and functions correctly											
Tyres and wheels											
Check that the wheels are securely attached and check the tightening torques of the wheel nuts											
Check the tyres for wear and check the air pressure if necessary											
Check the wheels for damage											
Internal combustion engine											
Change the engine oil and filter											
Check the cooling system for leaks and correct function											
Check the coolant and top up if necessary											
Replace the air filter insert											
Fuel system											
Change the fuel filter											
Check the fuel lines and clips											
Steering and steering axle											
Lubricate the rear wheel bearings											
Lubricate the steering axle and check for leaks											
Brake											
Check the oil level of the brake system											
Hydraulics											
Check hydraulic system for condition, correct function and leaks											
Lift mast											
Check load chains for damage and wear, adjust and lubricate											
Check mast bearings for damage, and lubricate. Check the tightening torque											

At operating hours										Carried out	
500		1500		2500		3500		4500			
5500		6500		7500		8500		9500		✓	✖
Check mast profiles for damage and wear. Lubricate the mast profiles											

Maintenance — 1000 hours

At operating hours										Carried out	
1000		2000		4000		5000		7000			
8000										✓	✖
Chassis, bodywork and fittings											
Check chassis for cracks											
Check overhead guard/cab and panes of glass for damage											
Check controls, switches and joints for damage, and apply grease and oil											
Check driver's seat for correct function and for damage											
Variant: Check the dual pedal for damage and correct function, and lubricate											
Check that the seat belt is in good condition and functions correctly											
Check the signal horn											
Tyres and wheels											
Check that the wheels are securely attached and check the tightening torques of the wheel nuts											
Check tyres for wear and check the air pressure if necessary											
Check wheels for damage											
Torque converter											
Change the gearbox oil for the torque converter											
Replace the gearbox oil filter for converter gear											
Drive axle											
Drive axle: Check mounting, check for leaks, and clean cooling fins											
Check the axle oil level, and change the axle oil											
Internal combustion engine											
Change the engine oil and the engine oil filter											
Check the condition of the internal combustion engine (visual inspection)											
Check the exhaust system for leaks											
Adjust the valve clearance/rocker lever											
Check the cooling system for leaks and correct function											
Check the coolant and top up if necessary											
Replace the air filter element											
Fuel system											
Change the fuel filter											
Check the fuel lines and clips											

At operating hours										Carried out	
1000		2000		4000		5000		7000			
8000										✓	✖
Steering and steering axle											
Lubricate the rear wheel bearings											
Lubricate the steering axle and check for leaks											
Brake											
Check and adjust the service brake											
Check and adjust parking brake											
Check the oil level of the brake system											
Change the brake oil											
Electrical system											
Check the fuses											
Check lighting and indicator lights											
Check all power cable connections											
Hydraulics											
Check hydraulic system for condition, correct function and leaks											
Replace the filter cartridge for the hydraulic oil											
Check that the hydraulics blocking function (Isolation valve) is working correctly											
Change the hydraulic oil every 2000 hours											
Lift mast											
Check load chains for damage and wear, adjust and lubricate											
Check mast bearings for damage, and lubricate. Check the tightening torque											
Check mast profiles for damage and wear, and lubricate											
Check lift cylinders and connections for damage and leaks											
Check guide pulleys for damage and wear											
Check support rollers and chain rollers for damage and wear											
Check the play between the fork carriage stop and run-out barrier											
Check tilt cylinders and connections for damage and leaks											
Check fork carriage for damage and wear											
Check fork arm interlock for damage and that it is working correctly											
Check that there is a safety screw on the fork carriage or on the attachment											
Check fork arms for wear and deformation											
Lubricate the rolling tracks and fork carriage runners											

At operating hours										Carried out	
1000		2000		4000		5000		7000			
8000										✓	✘
Special equipment											
Heating system: Check the fresh air filter											
Heating system: Check for damage; observe the manufacturer's maintenance instructions											
Check attachments for wear and damage; observe manufacturer's maintenance instructions											
Check trailer coupling for wear and damage; observe manufacturer's maintenance instructions											

Maintenance - 3000 hours

At operating hours										Carried out	
3000		6000		9000		12000		15000		✓	✖
Chassis, bodywork and fittings											
Check chassis for cracks											
Check overhead guard/cab and panes of glass for damage											
Check controls, switches and joints for damage, and apply grease and oil											
Check driver's seat for correct function and for damage											
Variant: Check the dual pedal for damage and correct function, and lubricate											
Check that the seat belt is in good condition and functions correctly											
Check the signal horn											
Tyres and wheels											
Check that the wheels are securely attached and check the tightening torques of the wheel nuts											
Check tyres for wear and check the air pressure if necessary											
Check wheels for damage											
Torque converter											
Change the gearbox oil for the torque converter											
Replace the gearbox oil filter for converter gear											
Drive axle											
Drive axle: Check mounting, check for leaks, and clean cooling fins											
Check the axle oil level, and change the axle oil											
Internal combustion engine											
Change the engine oil and the engine oil filter											
Check the condition of the internal combustion engine (visual inspection)											
Check the exhaust system for leaks											
Adjust the valve clearance/rocker lever											
Check the cooling system for leaks and correct function											
Check the coolant and top up if necessary											
Change the coolant											
Replace the V-belt											
Replace the air filter element											
Fuel system											

At operating hours										Carried out	
3000		6000		9000		12000		15000		✓	✗
Change the fuel filter											
Check the fuel lines and clips											
Steering and steering axle											
Lubricate the rear wheel bearings											
Lubricate the steering axle and check for leaks											
Brake											
Check and adjust the service brake											
Check and adjust parking brake											
Check the oil level of the brake system											
Change the brake oil											
Electrical system											
Check the fuses											
Check lighting and indicator lights											
Check all power cable connections											
Hydraulics											
Check hydraulic system for condition, correct function and leaks											
Replace the filter cartridge for the hydraulic oil											
Check that the hydraulics blocking function (Isolation valve) is working correctly											
Lift mast											
Check load chains for damage and wear, adjust and lubricate											
Check mast bearings for damage, and lubricate. Check the tightening torque											
Check mast profiles for damage and wear, and lubricate											
Check lift cylinders and connections for damage and leaks											
Check guide pulleys for damage and wear											
Check support rollers and chain rollers for damage and wear											
Check the play between the fork carriage stop and run-out barrier											
Check tilt cylinders and connections for damage and leaks											
Check fork carriage for damage and wear											
Check fork arm interlock for damage and that it is working correctly											
Check that there is a safety screw on the fork carriage or on the attachment											
Check fork arms for wear and deformation											

At operating hours										Carried out	
3000		6000		9000		12000		15000		✓	✖
Lubricate the rolling tracks and fork carriage runners											
Special equipment											
Heating system: Check the fresh air filter											
Heating system: Check for damage; observe the manufacturer’s maintenance instructions											
Check attachments for wear and damage; observe manufacturer's maintenance instructions											
Check trailer coupling for wear and damage; observe manufacturer's maintenance instructions											

Supply table

Unit	Recommended Quantity	Operating material	Specifications
Engine	10L	Engine oil	APICJ-4 SAE 15W-40
Hydraulic transmission gear	22L	Transmission oil	Dexron III/Mobile ATF transmission oil
Hydraulic system	90L for mast below 4500mm mast	Hydraulic oil	≥-5℃:L-HM46 ≥-20℃:L-HV32(For cold storage use)
	95L for mast exceeding 4500mm mast		
Braking system	0.5L	Brake fluid	DOT-3
Bearings, lubricating grease fittings	0.1KG	Lubricating grease	NLGL 2# lithium grease
Drive axle	8L	Gear oil	-15℃~+49℃: GL-5-85W/90
			-25℃~ +49℃:GL-5-80W/90 (For cold storage use)
Cooling system	Radiator water tank: 10.1L	Coolant/water	See section "Engine coolant-Specifications"
	Reservoir box: 6.3L	Coolant/water	
Fuel	60L	Diesel	See section "Diesel fuel-Specifications"

Providing access to maintenance points

Opening the bonnet

⚠ WARNING

Risk of injury!

Switch off the engine before opening the bonnet!

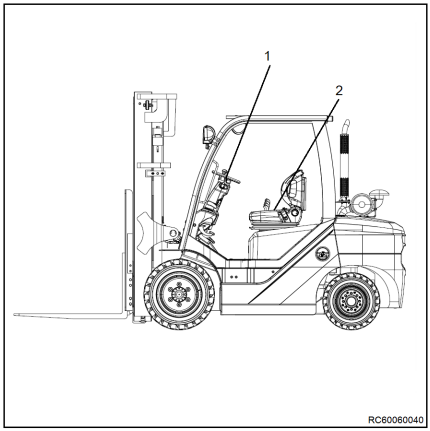
⚠ CAUTION

When opening the bonnet, the driver's seat may be damaged if it is not in its forward most position.

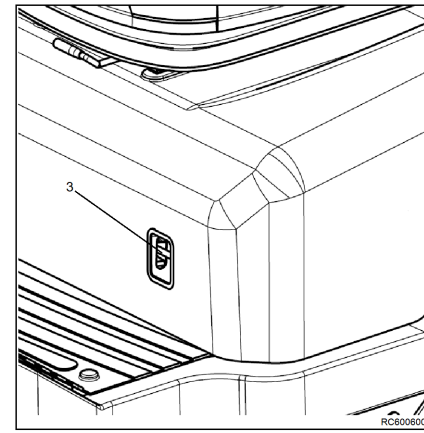
Slide the driver's seat all the way forwards.

⚠ CAUTION

– Move the steering column (1) as far forwards as possible and secure; see section entitled "Adjusting the steering column".
– Slide the driver's seat (2) all the way forward; see section entitled "Adjustment of the driver's seat".



– Push the lever (3)on the engine bonnet upwards with your left hand. ▷



⚠ WARNING

Risk of injury from the bonnet lowering! The bonnet is fitted with a gas spring that holds the bonnet in the open position. When additional load is present, for example heavy objects, strong wind or other persons, the bonnet can lower suddenly. Cold weather and ageing can also reduce the performance of the gas spring and cause the bonnet to lower.

– If the force of the gas spring is deteriorating, replace the gas spring.
– To replace the gas spring, contact the authorised service centre.

Closing the bonnet

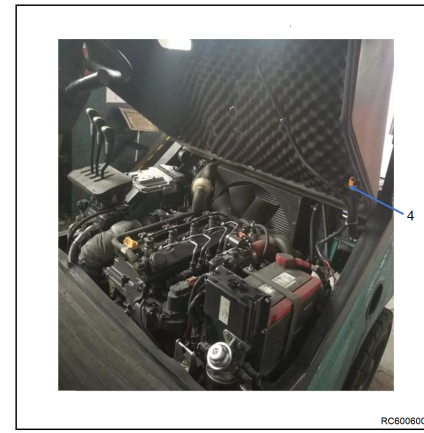
⚠ WARNING

When closing the bonnet, there is a risk of crushing!

When closing the bonnet, nothing must come between the bonnet and the edge of the chassis.

– Do not grasp any edges. Always close the bonnet by grasping one of the handles in each hand.

– Press the red button(4). ▷
– Pull down the bonnet until the lock audibly engages.
– Slide the driver's seat (2) all the way forward; see section entitled "Adjustment of the driver’s seat".
– Move the steering column (1) as far forwards as possible and secure; see section entitled "Adjusting the steering column".



Installing and removing the bottom plate

Removing the bottom plate

⚠ CAUTION

Risk of short circuit if cables are damaged!

– Check the connection cables for damage.

– When removing and reinstalling the bottom plate, make sure that the connecting cables are not damaged.

NOTE

The bottom plate has a recess into which the operator can insert their fingers in order to lift it. The recess is beneath the rubber mat.

NOTE

The accelerator pedal is attached to the bottom plate and is removed with the bottom plate. The connecting plug for the accelerator is located underneath the bottom plate.

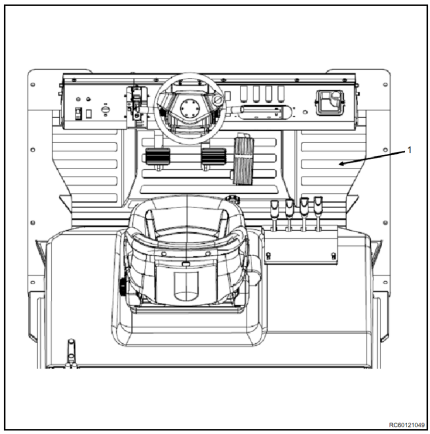
– Open the bonnet.

– Remove the rubber mat (1). ▷

– Raise the bottom plate slightly.

– Pull out the bottom plate under the brake pedal and set it down upright.

– Remove the floor plate and place it in a secure location.



Installing the bottom plate

⚠ WARNING

Risk of crushing between the bottom plate and the frame edge!

If limbs or objects are between the bottom plate and frame edge when the bottom plate is closed, they can be crushed.

– Make sure that, when you close the bottom plate, there is nothing between the bottom plate and the frame edge.

– Set down the bottom plate upright in the foot well.

– Position the bottom plate at the front.

– Carefully guide the bottom plate down and close.
– Insert the rubber mat.
– Close the bonnet.

Maintenance service

Changing the engine oil

⚠ WARNING

Risk of burn injury!

If it is necessary to discharge the engine oil when the oil is still hot, avoid contact with the oil in order to avoid burn injuries. Wear eye protection.

Failure to comply with regulations may result in death or serious injury.

⚠ CAUTION

Use only designated oil. Other types of oil may affect quality of use and shorten the service life of the engine or internal parts.

Avoid contamination of the engine by dirt or dust. Before removing the oil cap, carefully clean the oil cap/ dipstick and surrounding areas.

Avoid mixing different brands of oil. Mixing different brands of oil will seriously affect lubrication.

Avoid overfilling. Overfilling may result in white smoke, overspeed or internal damage.

⚠ CAUTION

Be environmentally responsible. Dispose of used oil in accordance with applicable laws and regulations. Failure to comply with laws and regulations will result in serious damage to the environment.

Comply with EPA guidelines or government measures for the correct handling of hazardous materials (such as oil, diesel and engine coolant). Consult the local authorities or recycling facility.

Irresponsible handling of hazardous materials, such as dumping hazardous waste into water channels, on the ground, into groundwater or drainage ditches, is prohibited.

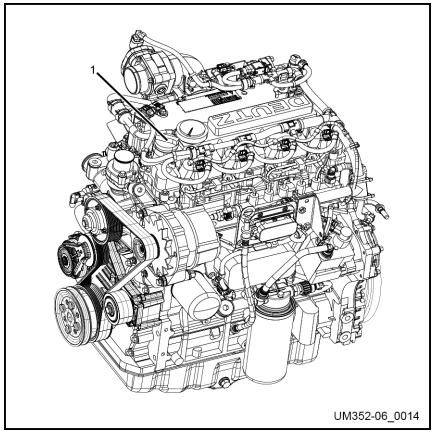
Bleed the oil using the following steps:

– Ensure that the engine is in a level position.

– Start the engine and run until it reaches operating temperature.

– Stop the engine.

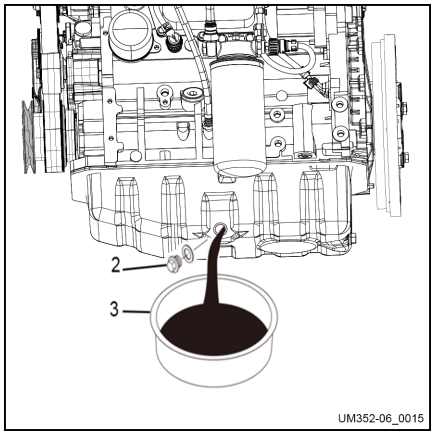
– Remove the oil filler cap (1) to ventilate the crankcase. This is beneficial for bleeding the oil. ▷



– Place an oil pan (3) under the engine to collect the used oil. ▷
– Remove the oil drain plug (2) and allow the oil to flow into the container. When the oil has been drained completely, replace the oil drain plug (2)

Tightening torque: 14-17 ft lbs(19.6-23.5 N·m, 2.0-2.4 kgf·m).

– Dispose of the used oil properly.



Filling up with engine oil

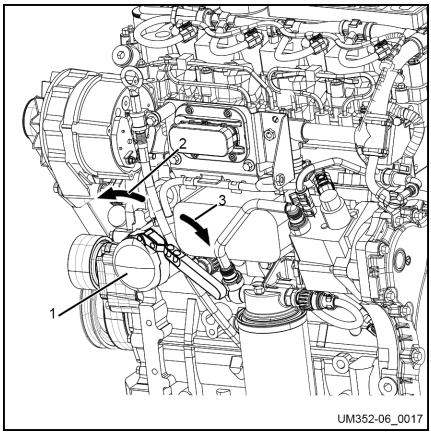
– Ensure that the engine is in a level position.
– Remove the oil filler cap (1).
– Add the specified amount of oil into the oil inlet on the side of the upper part of the engine.
– Wait three minutes and check the oil level.
– Add more oil as necessary.
– Replace the oil filler cap (1) and tighten by hand. Over-tightening may damage the cap.

Changing the engine oil filter

ENVIRONMENT NOTE

Be environmentally responsible. Dispose of used oil in accordance with applicable laws and regulations. Failure to comply with laws and regulations will result in serious damage to the environment.

– Rotate the engine oil filter (1) anticlockwise with a filter wrench (2). ▷



– Clean the mounting surface of the engine oil filter.

– Lightly coat the new filter sealing ring with a thin layer of engine oil.

– Hand-fit the new filter to the filter cover and turn clockwise until the mounting surface comes into contact with the surface of the filter cover; then tighten 3/4 of a turn using a filter wrench.

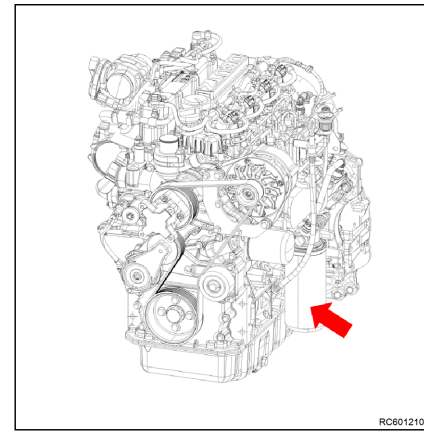
NOTE

Check the spare parts manual to find the part number of usable engine oil filters.

– Fill the engine with engine oil according to the detailed instructions in "Filling engine oil"

Changing the fuel filter cartridge

– Loosen and unscrew filter with tool. ▷
– Collect escaping fuel.
– Clean the sealing surface of the filter carrier with a clean, lint-free cloth.

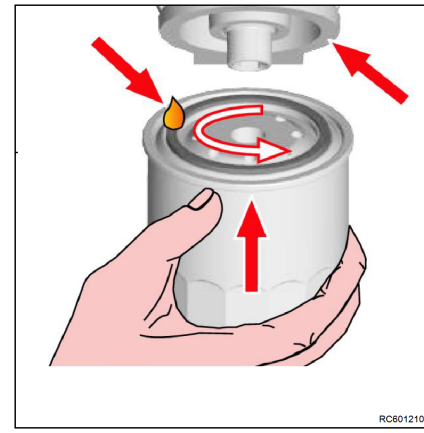


– Oil the seal of the new original spare filter lightly. ▷
– Screw on new filter by hand until the gasket is touching and tighten.

Tightening torque:

10 Nm - 12 Nm

– Vent the fuel system.



Replacing the water trap

– Turn off the engine and allow it to cool down.
– Close all oil valves.
– Disconnect the water trap sensor connector (4).
– Place a container under the water trap.

– Carefully unscrew the drain plug (3) and allow the fuel to flow out.
– Remove the water trap (2) from the mounting surface (1) by turning it to the left. Wipe up any spilled fuel.
– Put the drain plug to one side to be refitted later.
– Properly dispose of fuel, water trap and O-rings (if replaced). Follow the safety guidelines issued by the EPA or other government bodies.
– Fit the oil drainage plug (3) onto the new water trap (2) by turning it to the right and tighten by hand.

Tightening torque:

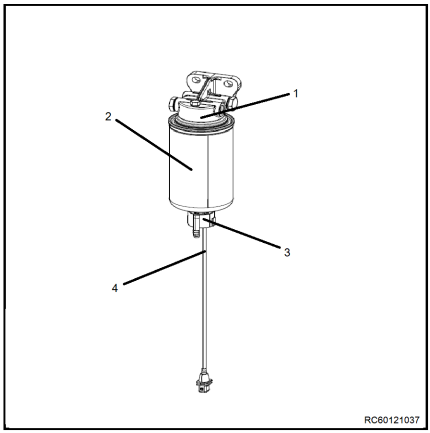
1.6Nm±0.3Nm

– Wipe clean the surface (1) of the fuel filter and apply a thin layer of diesel oil to the sealing ring of the new filter.
– Fit the new water trap(2) onto the filter cover. Turn to the right until the surface of the filter makes direct contact with the surface of the cover and tighten 1 further turn.

Tightening torque:

17Nm-18Nm

– Open all oil valves.
– Connect the water trap sensor plug.
– Vent the fuel system.
– Check the fuel filter for leaks.



Draining water in the water trap

⚠ DANGER

Risk of fire and explosion!

Diesel fuel is highly flammable and explosive under certain conditions.

When removing and carrying out maintenance on fuel system components (such as when changing the fuel filter), place an oil pan under the engine oil port.

Avoid using workshop rags to collect fuel. Fuel is highly volatile and can easily catch fire or explode.

Wipe away droplets of fuel immediately.

Wear eye protection. The fuel system is pressurised, which means that fuel may spray out when fuel system components are removed.

Failure to comply with regulations may result in death or serious injury.

⚠ WARNING

High pressure hazard!

Avoid fuel spraying onto the skin from fuel system leakages, such as a ruptured fuel injection line. Fuel sprayed onto the skin can cause serious injury. In the event of spray injuries, seek medical attention immediately.

Do not check for fuel leaks with your hands; instead use a wooden board or cardboard. Please contact an authorised engine dealer for maintenance and repairs.

Failure to comply with regulations may result in death or serious injury.

⚠ CAUTION

If no water flows out when the fuel filter/water trap drain plug is open, loosen the air vent screw on the top of the fuel filter/water trap by turning it 2-3 turns.

This situation may occur if the fuel filter/water trap is installed in a position higher than the oil level in the oil tank. After emptying the fuel filter/water trap, make sure to tighten the air vent screw.

⚠ CAUTION

Be environmentally responsible. Dispose of used oil in accordance with applicable laws and regulations. Failure to comply with laws and regulations will result in serious damage to the environment.

Comply with EPA guidelines or government measures for the correct handling of hazardous materials (such as oil, diesel and engine coolant). Consult the local authorities or recycling facility.

Irresponsible handling of hazardous materials, such as dumping hazardous waste into water channels, on the ground, into groundwater or drainage ditches, is prohibited.

If the water separator warning light in the display illuminates before the scheduled maintenance time, this is to alert the operator that the quantity of pollutants and water has been exceeded.

The fuel filter/water trap contains a sensor that detects the quantity of water and contaminants. The sensor will transmit a signal to the alarm lamp in order to alert the operator.

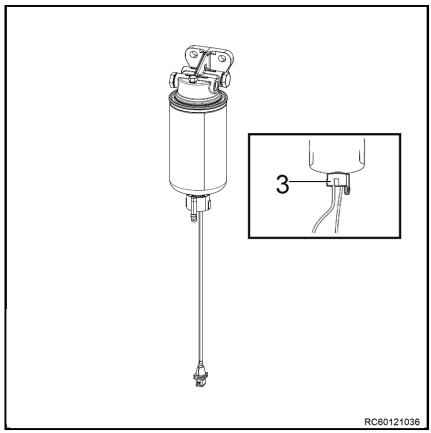
Carry out the following procedure to empty the water trap:

– Place an oil pan under the water trap.

– Unfasten the drain plug (3) at the bottom of the water trap. Empty the water contained inside. ▷

– Hand-tighten the drain plug.

– When finished, make sure to fill the fuel system with diesel. See "Filling the fuel system".



Fuel system air bleeding

⚠ WARNING

Risk of fire and explosion!

Diesel fuel is highly flammable and explosive under certain conditions.

When venting the fuel system, place an oil pan underneath the vent port. Avoid using workshop rags to collect fuel. Wipe away droplets of fuel immediately. After charging, be sure to close the air vent.

Wear eye protection. The fuel system is pressurised, which means that fuel may spray out when you open the vent port.

If the unit is equipped with an electronic fuel pump, turn the key switch to the ON position for 10-15 seconds or until fuel flows from the vent port with no air bubbles, which indicates that filling is complete.

Failure to comply with regulations may result in death or serious injury.

⚠ CAUTION

Be environmentally responsible. Dispose of used oil in accordance with applicable laws and regulations. Failure to comply with laws and regulations will result in serious damage to the environment.

Comply with EPA guidelines or government measures for the correct handling of hazardous materials (such as oil, diesel and engine coolant). Consult the local authorities or recycling facility.

Irresponsible handling of hazardous materials, such as dumping hazardous waste into water channels, on the ground, into groundwater or drainage ditches, is prohibited.

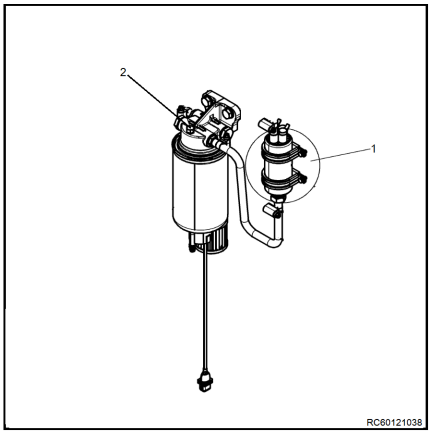
The fuel system requires air bleeding under the following circumstances:

- Before starting the engine for the first time.
- After running out of fuel and adding fuel to the tank.
- After carrying out maintenance on the fuel system, such as changing the fuel filter/ water trap, or replacing fuel system components.

To vent engine fuel systems with an electronic fuel pump:

– Place an oil pan underneath the vent port.

– Loosen the vent port (2) by rotating 2-3 turns.
– Turn the key to the ON position and fill the electronic fuel pump (1) for 10-15 seconds or until fuel flows from the vent port with no air bubbles.
– Tighten the vent port.
– Wipe away splashes and handle fuel properly.
– Do not vent the fuel system by using the starter motor to rotate the crankshaft. Doing so may overheat the starter motor and damage the coil, pinion and/or ring gear.



Changing the coolant

⚠ DANGER

Risk of burn injury!

Do not open the radiator cap when the engine is at working temperature. Steam and hot engine coolant will spurt out and cause serious burns. Allow the engine to cool down before you attempt to remove the radiator cap. Securely tighten the radiator cap after you check the radiator. Steam can spurt out during engine operation if the cap is loose.

Failure to comply with the above operating guidance may result in death or serious injury.

⚠ CAUTION

Risk of freezing injury!

Wear eye protection and rubber gloves when handling long-life or extended-life engine coolant. If contact with the eyes or skin should occur, flush eyes and wash immediately with clean water.

Failure to comply may result in injury.

ENVIRONMENT NOTE

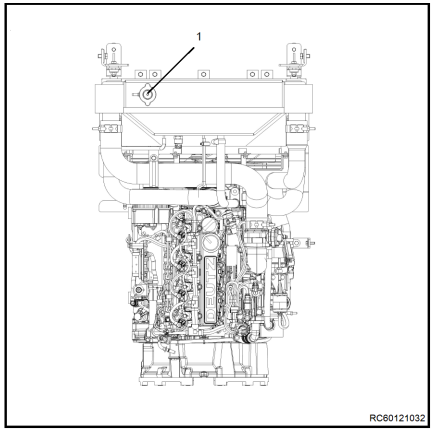
Be environmentally responsible. Please follow this procedure to dispose of hazardous waste. Failure to follow this procedure will severely damage the environment.

- *Handle hazardous waste such as engine oil, diesel or engine coolant appropriately according to guidelines from the Environmental Protection Agency or other government organizations. Consult the local authorities or recycling facility.*
- *Irresponsible handling of hazardous materials, such as dumping hazardous waste into water channels, on the ground, into groundwater or drainage ditches, is prohibited.*

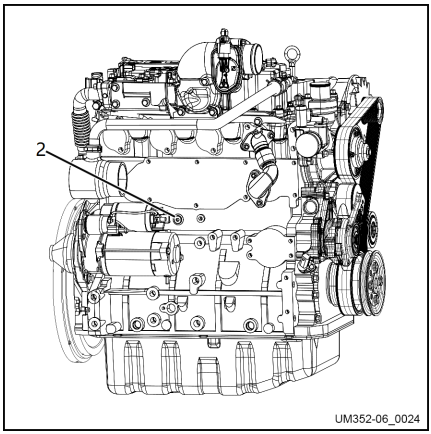
NOTE

Engine coolant contaminated with rust or scale reduces the cooling effect. Even when extended-life engine coolant is properly mixed, the engine coolant becomes contaminated as its ingredients deteriorate. Drain, flush and refill the cooling system with new coolant every 4000 hours or every two years, whichever comes first.

– Remove the radiator cap (1). ▷



– Open the drain plug (2) on the engine block and drain the coolant. ▷
– After draining the engine coolant, flush the radiator and engine block to remove any rust, scale and contaminants. Reinstall and tighten the engine block drain plug.
– Fill the radiator with engine coolant.



Filling the radiator with coolant

Follow the procedure below to fill the radiator with engine coolant. This procedure applies when filling the radiator for the first time or when refilling it after flushing.

– Check to ensure that the engine cylinder block drain plug (2) has been tightened.

Tightening torque: 26Nm

– Open the radiator cap (1).
– Slowly pour the engine coolant into the radiator, then reinstall the cap.
– Start the engine and run until it reaches operating temperature.
– Shut down engine.
– Check coolant level in the cooled engine and top up if necessary.

Checking the V-belt tensioning

Belt Tension

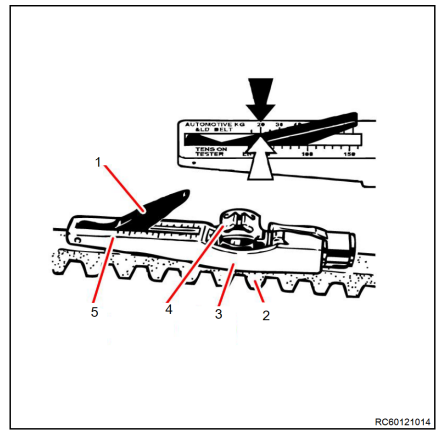
Tension needs not be adjusted separately since an auto tensioner is applied that automatically controls the tension of the belt.

- A daily check is required to see if the pointer of the auto tensioner indicates that it needs to be replaced. If so, the belt must be replaced with a new one.
- The belt shall also be replaced in case it is damaged or worn out due to other external causes. It is required to check if the micro V belt has any issues associated with crack, oiling, overheating, or abrasion.
- Tension needs not be measured separately since an auto tensioner is applied that automatically controls the tension of the belt. If necessary, tension measurement shall be

conducted as chapter entitled “Tension measurement

- The fixed lower part of the auto tensioner has a minimum/maximum indicator.
- If the indicator is found to be beyond the minimum/maximum range upon visual inspection, the belt layout components must be checked.

Tension measurement



– Lower indicator arm (1) into the measuring device.

– Place guide (3) between two belt pulleys on the V-belt (2). The stop must be at the side.

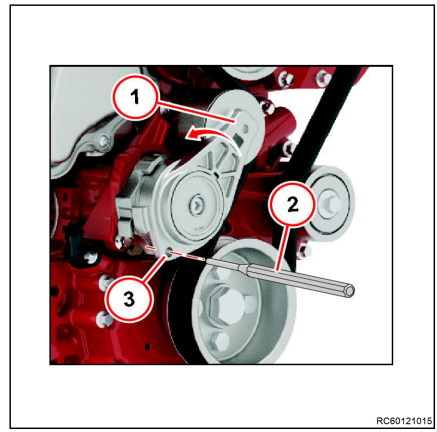
– Press the button (4) at right angles to the V-belt (2) evenly until you hear or feel the spring snap in.

– Lift the measuring device carefully without altering the position of the indicator arm (1).

– Read the measured value at the point of intersection (arrow), scale (5)and indicator arm (1).

– Retighten and repeat the measurement if necessary.

Replacing the V-belt



– Press tensioning roller with socket wrench in the direction of the arrow until a retaining pin can be fixed in the assembly bore. The V-ribbed belt is now tension free

– First pull the V-ribbed belt off the smallest roller or off the tensioning roller.

– Mount new V-ribbed belt.

– Retain tensioning pulley (1) using the pin wrench and remove the holding pin.

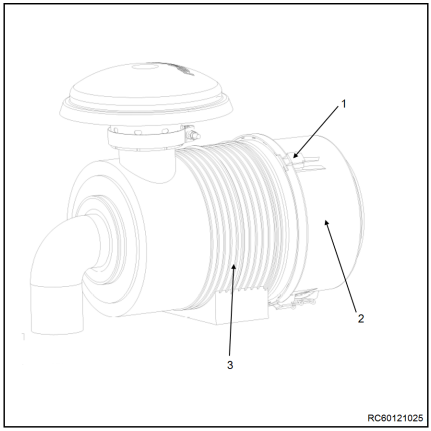
– Tension V-ribbed belt using the tensioning roller and socket wrench. Check whether the V-ribbed belt is correctly in its guide.

1 Tension pulley
2 Retaining pin
3 Assembly bore

Cleaning the air filter

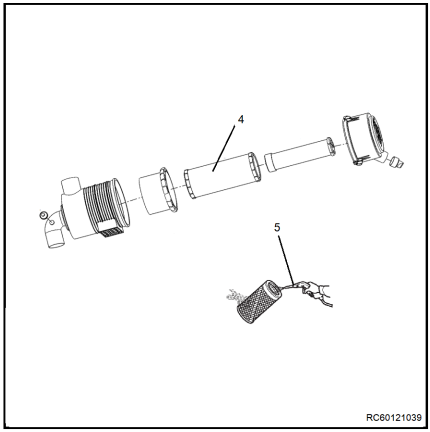
Clogged filter inserts may have an adverse impact on engine performance. Make sure to periodically clean the air filter insert.

– Open the buckle(1) and remove the air filter head cover(2). ▷



– Pull out the outer air filter(4). ▷

– Remove dust from the filter by blowing outward through the outer filter using compressed air(5). Remove dust using minimum air pressure in order to avoiding damaging the insert.



⚠ CAUTION

Flying object hazard!

Wear eye protection when carrying out maintenance on the engine and using compressed air or pressurised water jets, in order to prevent dust, flying debris, compressed air or pressurised water or gas from damaging your eyes.

Failure to follow this instruction may result in injury.

– Clean the air filter element.

– If the filter insert is damaged, heavily soiled or oily, replace it with a new insert.

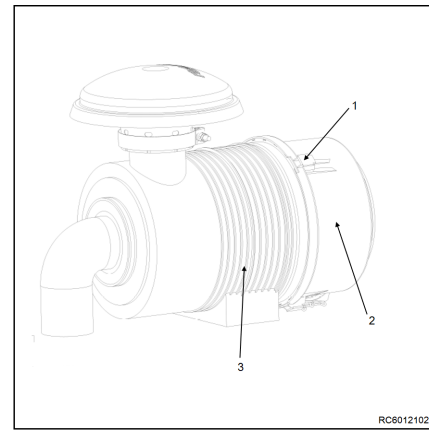
⚠ CAUTION

The air filter insert requires more frequent cleaning when the engine is running in dusty environments.

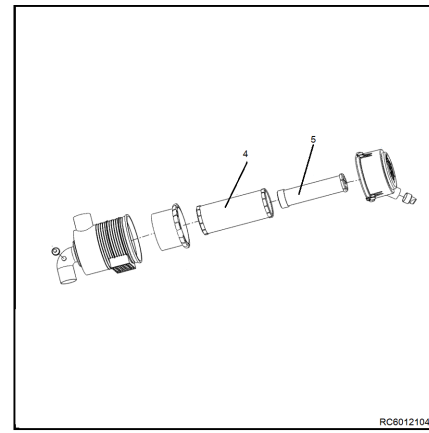
– Clean the inside of the air filter head cover (2).
– Fit the filter(4)in the air filter housing(3).
– Refit the air filter cover, and tighten the air filter head cover onto the air filter housing.

Changing the air filter

– Open the buckle(1) and remove the air filter head cover(2). ▷



– Pull out the outer air filter(4) and inner filter insert (5) in sequence. ▷



NOTE

Thoroughly clean the inside of the filter casing. Do not use compressed air to clean the filter casing.

– Ensure that the filter is not damaged during installation and that it is installed in the correct direction.
– Install the outer air filter (4) and inner air filter insert (5) back into the air filter housing (3).
– Reinstall the air filter head cover.
– Disconnect the inlet hose form the air inlet.
– When the engine is running, cover the intake opening (e.g. using cardboard or a metal plate). The air filter blockage warning light in the display should light up. To prevent damage, do not continue to block the

intake opening after the warning light illuminates.

Changing the hydraulic transmission crude oil filter

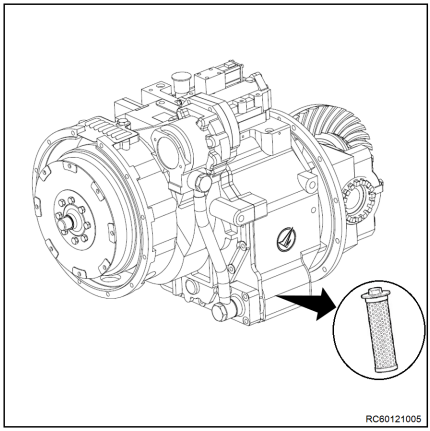
ENVIRONMENT NOTE

Please follow the instructions for disposal of fluids and lubricants.

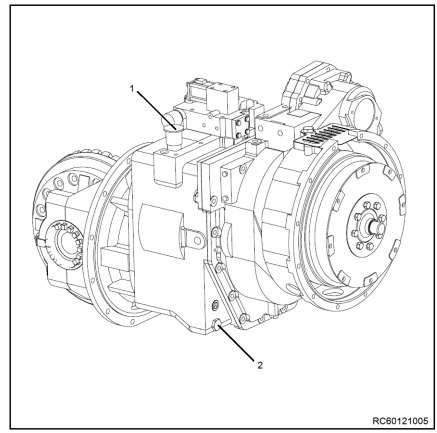
NOTE

Place a container under the crude oil filter to collect oil flowing out of the transmission.

– Remove the floor plate.
– Unscrew the fastening screws and washers on the crude oil filter.
– Slowly pull out the crude oil filter so that the oil flows into the container.
– Unscrew the crude oil filter from the oil filter seat.
– Unscrew the fastening nut on the crude oil filter; then remove the filter insert. ▷
– Replace it with a new crude oil filter insert. Fit the filter insert followed by the bottom cover onto the filter spindle; then tighten the nut.
– Refit the crude oil filter to the gearbox using the fastening screws.
– Refit the floor plate.



Changing the oil of the hydraulic transmission ▷



ENVIRONMENT NOTE

Observe precautions for handling fuel and lubricants.

– Place a container under the right side of the truck chassis.
– Remove the floor plate.
– Unscrew the oil drain plug (2).
– Fully drain the oil of the gearbox transmission gear.
– Wipe the drain plug area clean.
– Refit the drain plug and washer.

ENVIRONMENT NOTE

Properly dispose of the waste hydraulic oil.

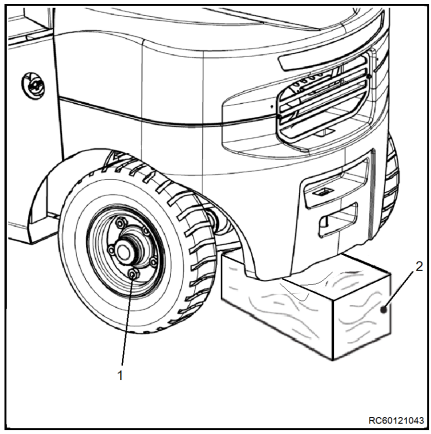
– Unscrew the filler cap (1).
– Add transmission oil through a filler pipe.
– Use the dipstick to check the transmission oil level, which should reach the upper mark on the dipstick.
– Reinstall the floor plate.
– Start the engine and run it in neutral for a while. After the engine stops running, recheck the oil level, which should be between the upper and lower marks on the dipstick. Also check the leak resistance of the oil tank.

NOTE

The filler cap also functions as a vent cap.

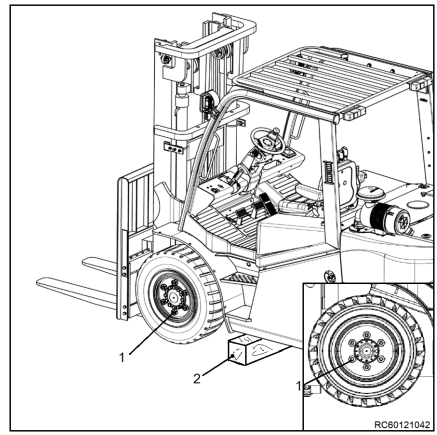
Wheel replacement procedure

Rear wheel replacement procedure



- Turn off the truck and perform the preliminary maintenance operations.
- Partially loosen the wheel fastening nuts (1).
- Raise the back of the truck by jack and arrange supports (2) under the ballast.
- Lower the truck so that it rests on the supports.
- Completely unscrew the nuts (1) and pull off the wheel.
- Fit the new wheel, positioning it in such a way that any inflation valve is always on the outside.
- Tighten the fastening nuts, following the three-stage sequence indicated in the relevant paragraph:
- Tighten the nuts slightly so that the wheel rests well on the hub.
- Tighten the nuts to 50% of the prescribed torque.
- Raise the truck to free the supports.
- Remove the supports.
- Lower the truck to the ground.
- Tighten the wheel nuts to full torque (see corresponding paragraph).
- When changing wheels with tyres, inflate to the prescribed pressure.

Front wheel change



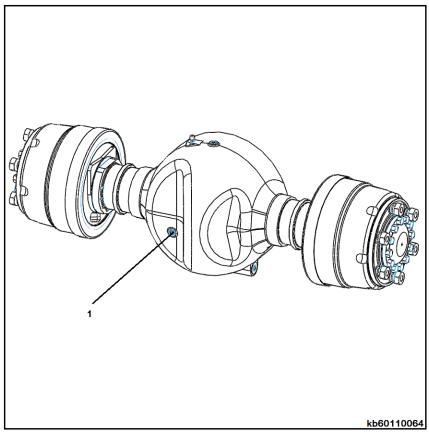
- Lift the fork arms to at least 1 m above the ground.
- Turn off the truck and perform the preliminary maintenance operations.
- Partially loosen the wheel fastening nuts (1).
- Insert a jack under the fixed stand of the lift or under the chassis frame on the side where the wheel is to be replaced.
- Block the rear wheels with wedges in order to avoid accidental movements of the truck in the reverse direction.
- Lift the front end of the truck with the jack and arrange supports (2) on the side of the wheel to be replaced.
- Lower the truck resting it on stable and solid supports (2) . Be careful not to rest it on the cylinder feed pipes.
- Completely unscrew the nuts (1) and pull off the wheel.
- Fit the new wheel, positioning it in such a way that any inflation valve is always on the outside.
- Tighten the fastening nuts, following the three-stage sequence indicated in the relevant paragraph:
- Tighten the nuts slightly so that the wheel rests well on the hub.
- Tighten the nuts to 50% of the prescribed torque.
- Raise the truck off the supports (2) .
- Remove the supports (2) .
- Lower the truck to the ground.
- Tighten the wheel nuts to full torque (see corresponding paragraph).
- When changing wheels with tyres, inflate to the prescribed pressure.

Checking the drive axle gearbox oil ▷

– Unscrew the oil plug at the oil level aperture (1).

– Check the gear shaft oil level to ensure it is near the observation aperture posi-tion(around 15mm).

– If necessary, fill the gearbox with gear oil until oil flows out of the oil level aperture.



NOTE

Please refer to the chapter on replacing the drive axle gearbox oil for steps to take when adding gear oil.

Fill up the hydraulic oil

– Unscrew the oil cap (1)assembly. ▷

– Fill up with hydraulic oil through the oil inlet:

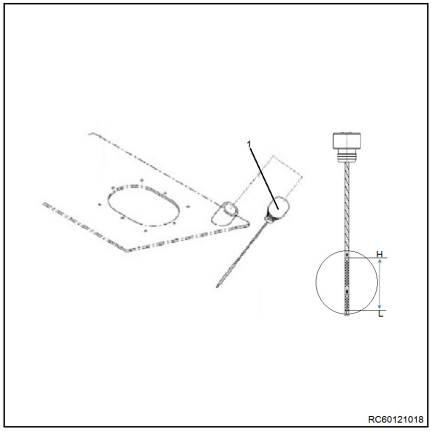
90L for mast below 4500mm mast

95L for mast exceeding 4500mm mast

– Use the dipstick to check the oil level. The oil level should reach the upper marking on the dipstick.

– Close the bonnet.

– Start the engine and run it for a while. Check the oil level again. Check the seals.



Checking the hydraulic oil level

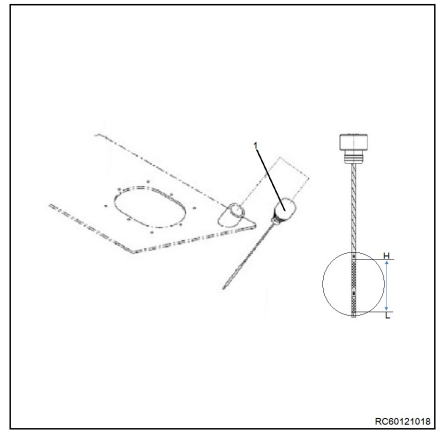
ENVIRONMENT NOTE

Please follow the instructions for handling/ disposal of fluids and lubricants.

NOTE

The oil level should only be checked with the lift mast vertical and the fork carriage lowered.

– Apply the parking brake.
– Open the engine cover.
– Screw the oil cap with dipstick(1).
– Use a clean cloth to dry the dipstick.
– The oil level should be between the upper and lower markings on the dipstick.



WARNING

The hydraulic oil must be checked while the engine is stopped and the forklift is in horizontal level,

– When required, fill the hydraulic oil up to the upper marking.
– Re-fit the oil dipstick.
– Safely close the engine cover.

Changing the suction filter and return filter

ENVIRONMENT NOTE

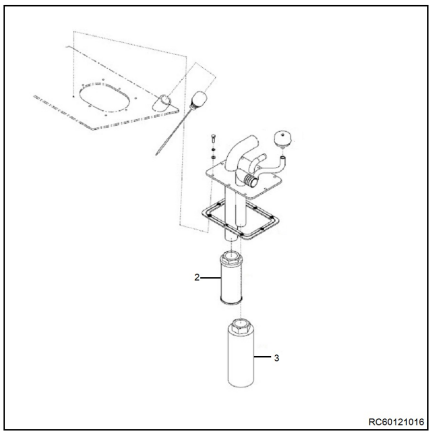
Please follow the instructions for disposal of fluids and lubricants.

NOTE

The hydraulic oil will flow out. Place an oil pan under the filter.

– Open the engine cover.
– Remove the pedal pad and bracket.
– Slacken off the fastening bolts and washers on the cover assembly, then remove the cover assembly.
– Slowly pull out the cover assembly so that the oil flows back into the tank.

– Unscrew the suction filter (2) and return filter (3) from the cover assembly. ▷
– Screw in the new intake filter until tightened.
– Refit the cover assembly to the frame using the fastening screws.
– Refit the bracket and pedal pad.
– Refit the engine cover.



Replacing the breather filter

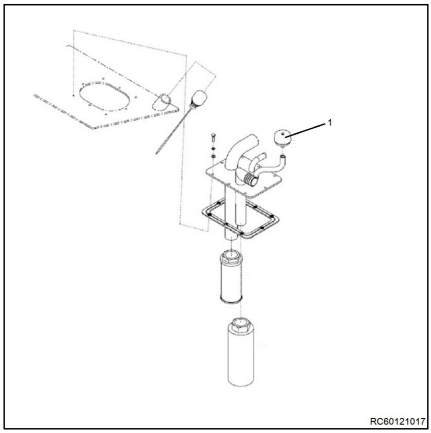
ENVIRONMENT NOTE

Please handle liquids and lubricating oil in accordance with instructions.

– Open the bonnet.
– Unscrew the breather filter (1) and dipstick and remove. ▷
– Remove the dipstick and balls on the dipstick base from the breather filter and mount onto the new the breather filter.
– Screw the breather filter and dipstick back into position.
– Close the bonnet.

NOTE

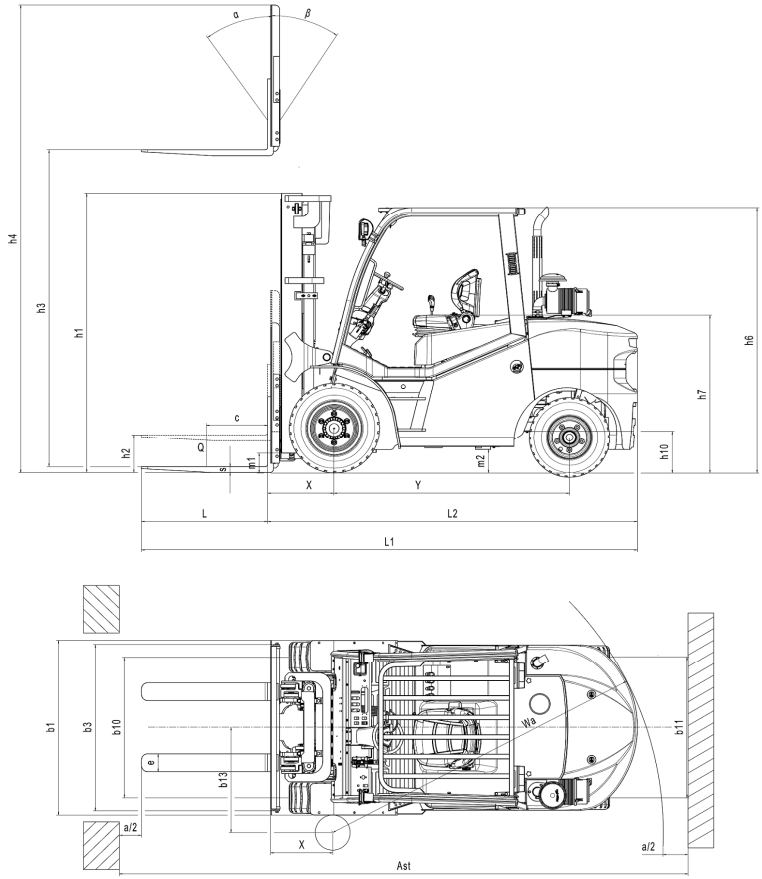
Respirators may need to be replaced more frequently in dusty environments.



6

Technical datasheet

Dimensions


α
β
h4
h3
h1
h2
Q
c
s
m1
m2
X
Y
L
L2
L1
h6
h7
h10
b1
b3
b10
e
b13
a/2
X
Ast
Ws
b11
a/2

Data sheet RCD40

NOTE

This VDI data sheet specifies only the technical values of the truck version with standard equipment. Different tyres, lift masts, additional units etc. may produce different values.

Characteristics		
Manufacturer		STILL
Model		RCD40
Power type : Electric-Diesel-Petrol-LPG-Network Power (Electric)		Diesel
Operation Type:Hand-stand on-Driver seated		Seated
Load Capacity	Q (kg)	4000
Load centre of gravity distance	c (mm)	500
Axle centre to fork face	x (mm)	562
Wheel Base	y (mm)	2000
Weights		
Service Weight	Kg	6800
Axle loading, laden front/rear	Kg	9627/1243
Axle loading, unladen front/rear	Kg	2731/3676
Wheels, chassis frame		
Tyres:SE-Super elastic PN-Pneumatic		SE
Front Tyres Size		300-15/20PR
Rear Tyres Size		7.00-12/12PR
Front Track Width	b10 [mm]	1180
Rear Track Width	b11 [mm]	1190
Dimension and overall sizes		
Mast lift, forward/backward	α/β	6°/12°
Mast Minimum Overall Height	h1 [mm]	2390
Free lift	h2 [mm]	150
Lift height	h3 [mm]	3000
Mast Maximum Overall Height	h4 [mm]	4275
Overhead Guard Height	h6 [mm]	2260
Seat Height relating to SIP/standard height	h7 [mm]	1315
Drawbar Height	h10 [mm]	380
Overall Length	l1 (mm)	4180
Lenght to Face of Forks	l2 (mm)	3110
Overall Width	b1 [mm]	1485
Fork Arm Dimensions	s/e/l (mm)	50/150/1070
Fork Carriage in Compliance with ISO 2328 Class/Form A,B		III A

Fork Carriage Width	b3 (mm)	1380
Ground Clearance below Mast(laden)	m1 (mm)	145
Ground Clearance at Centre of Wheelbase(laden)	m2 (mm)	180
Working aisle width with pallet 1000 x 1200 cross-ways****	Ast (mm)	4552
Working aisle width with pallet 800 x 1200 crossways****	Ast (mm)	4752
Turning Radius	Wa (mm)	2790
Turning Point Minimum Distance from the Truck Center Line	b13 (mm)	900
Performance data		
Driving speed (with/without load)	km/h	24/25
Lifting speed (with/without load)	m/s	0.44/0.53
Lowering speed (with/without load)	m/s	0.42/0.29
Drawbar Pull Tractive Effort (at 2km/h) with/without load	KN	25/23
Gradeability (at 2km/h) laden/unladen	%	20
Service Brake		Mechanical/Hydraulic
Engine		
Engine Type		Deutz TCD2.9 L4
Engine Power in compliance with ISO 1585	kW	55.4
Rated Number of Revolutions	rpm	2300
Cylinder Number/Displacement	cm^3	4/2900
On-board voltage		12
Others		
Drive Control Type		Hydraulic torque con-vertor
Volume fuel tank	L/Kg	90/75
Towing coupling, type DIN		PIN

Data sheet RCD50

Characteristics		
Manufacturer		STILL
Model		RCD50
Power type : Electric-Diesel-Petrol-LPG-Network Power (Electric)		Diesel
Operation Type:Hand-stand on-Driver seated		Seated
Load Capacity	Q (kg)	5000
Load centre of gravity distance	c (mm)	500
Axle centre to fork face	x (mm)	567
Wheel Base	y (mm)	2000
Weights		
Service Weight	Kg	7340
Axle loading, laden front/rear	Kg	11000/1420
Axle loading, unladen front/rear	Kg	3120/4200
Wheels, chassis frame		
Tyres:SE-Super elastic PN-Pneumatic		SE
Front Tyres Size		300-15-20PR
Rear Tyres Size		7.00-12-12PR
Front Track Width	b10 [mm]	Diesel
Rear Track Width	b11 [mm]	Seated
Dimension and overall sizes		
Mast lift, forward/backward	α/β	6°/12°
Mast Minimum Overall Height	h1 mm]	2390
Free lift	h2 [mm]	150
Lift height	h3 mm]	3000
Mast Maximum Overall Height	h4 mm]	4275
Overhead Guard Height	h6 mm]	2260
Seat Height	h7 mm]	1315
Drawbar Height	h10 mm]	380
Overall Length	l1 (mm)	4230
Lenght to Face of Forks	l2 (mm)	3160
Overall Width	b1 [mm]	1485
Fork Arm Dimensions	s/e/l mm)	50/150/1070
Fork Carriage in Compliance with ISO 2328 Class/Form A,B		III A
Fork Carriage Width	b3 (mm)	1380
Ground Clearance below Mast(laden)	m1 (mm)	145
Ground Clearance at Centre of Wheelbase(laden)	m2 (mm)	180
Working aisle width with pallet 1000 x 1200 crossways****	Ast mm)	4597
Working aisle width with pallet 800x1200 crossways****	Ast mm)	4797
Turning Radius	Wa (mm)	2830

Turning Point Minimum Distance from the Truck Center Line	b13 (mm)	900
Performance data		
Driving speed (with/without load)	km/h	24/25
Lifting speed (with/without load)	m/s	0.44/0.53
Lowering speed (with/without load)	m/s	0.44/0.53
Drawbar Pull Tractive Effort (at 2km/h) with/without load	KN	25/23
Gradeability (at 2km/h) laden/unladen	%	20
Service Brake		Mechanical/Hydraulic
Engine		
Engine Type		Deutz TCD2.9 L4
Engine Power in compliance with ISO 1585	kW	55.4
Rated Number of Revolutions	rpm	2300
Cylinder Number/Displacement	cm^3	4/2900
On-board voltage		12
Others		
Drive Control Type		Hydraulic torque convertor
Volume fuel tank	L/Kg	90/75
Towing coupling, type DIN		PIN

Mast specification

NOTE

This data would be changed under different working condition.

4T MAST SPECIFICATIONS

Mast type	Max. height	Rated capacity load center 500mm		height		free-lift height		mast angle
		4T	double tyres	closed height	height with carriage	without carriage	with carriage	front/ back
VM Standard wide-view	3000	4000	4000	2390	4275	150	150	6/12
	3300	4000	4000	2540	4575	150	150	
	3500	4000	4000	2640	4775	150	150	
	4000	4000	4000	2940	5275	150	150	6/6
	4500	4000	4000	3190	5775	150	150	
	5000	4000	4000	3440	6275	150	150	
VFM Full free duplex	3000	4000	4000	2390	4275	1544	1165	6/12
	3300	4000	4000	2540	4575	1694	1315	
	3500	4000	4000	2640	4775	1794	1415	
	4000	4000	4000	2890	5275	2044	1665	6/6
VFHM Full free triplex	3620	4000	4000	2145	4895	1299	920	6/6
	3920	4000	4000	2245	5195	1399	1020	
	4350	4000	4000	2390	5625	1544	1165	
	4500	4000	4000	2441	5775	1595	1216	
	4700	4000	4000	2507	5975	1661	1282	
	4800	4000	4000	2540	6075	1694	1315	
	5000	4000	4000	2640	6275	1794	1415	
	5400	4000	4000	2765	6675	1919	1540	3/6
	5500	4000	4000	2807	6775	1961	1582	
	6000	3480	4000	3005	7275	2159	1780	
	6200	3250	3750	3093	7475	2247	1868	

5T MAST SPECIFICATIONS

Mast type	Max. height	Rated capacity load center 500mm		height		free-lift height		mast angle
		5T	double tyres	closed height	height with carriage	without carriage	with carriage	front/ back
VM Standard wide-view	3000	5000	5000	2390	4275	150	150	6/12
	3300	5000	5000	2540	4575	150	150	
	3500	5000	5000	2640	4775	150	150	
	4000	5000	5000	2940	5275	150	150	6/6
	4500	5000	5000	3190	5775	150	150	
	5000	5000	5000	3440	6275	150	150	
VFM Full free duplex	3000	5000	5000	2390	4275	1544	1165	6/12
	3300	5000	5000	2540	4575	1694	1315	
	3500	5000	5000	2640	4775	1794	1415	
	4000	5000	5000	2890	5275	2044	1665	6/6
VFHM Full free triplex	3620	5000	5000	2145	4895	1299	920	6/6
	3920	5000	5000	2245	5195	1399	1020	
	4350	5000	5000	2390	5625	1544	1165	
	4500	5000	5000	2441	5775	1595	1216	
	4700	5000	5000	2507	5975	1661	1282	
	4800	5000	5000	2540	6075	1694	1315	
	5000	5000	5000	2640	6275	1794	1415	
	5400	5000	5000	2765	6675	1919	1540	3/6
	5500	5000	5000	2807	6775	1961	1582	
	6000	4480	5000	3005	7275	2159	1780	
	6200	4250	4750	3093	7475	2247	1868	

Numbers and Symbols

A

B

C

D

E

F

T

U

W

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Original instructions

Diesel forklift truck

RCD40-50

CE

4231 4233

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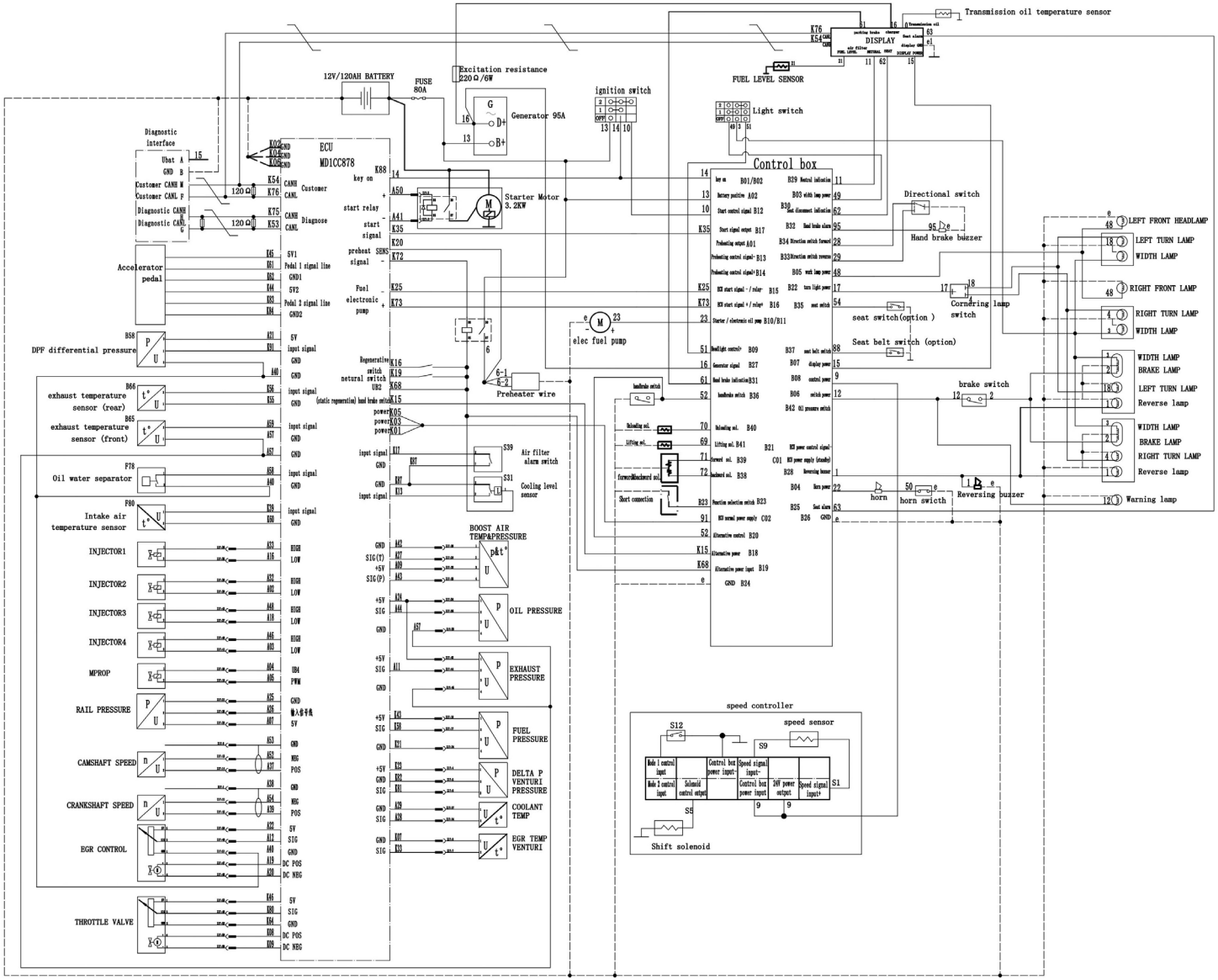
first in intralogistics

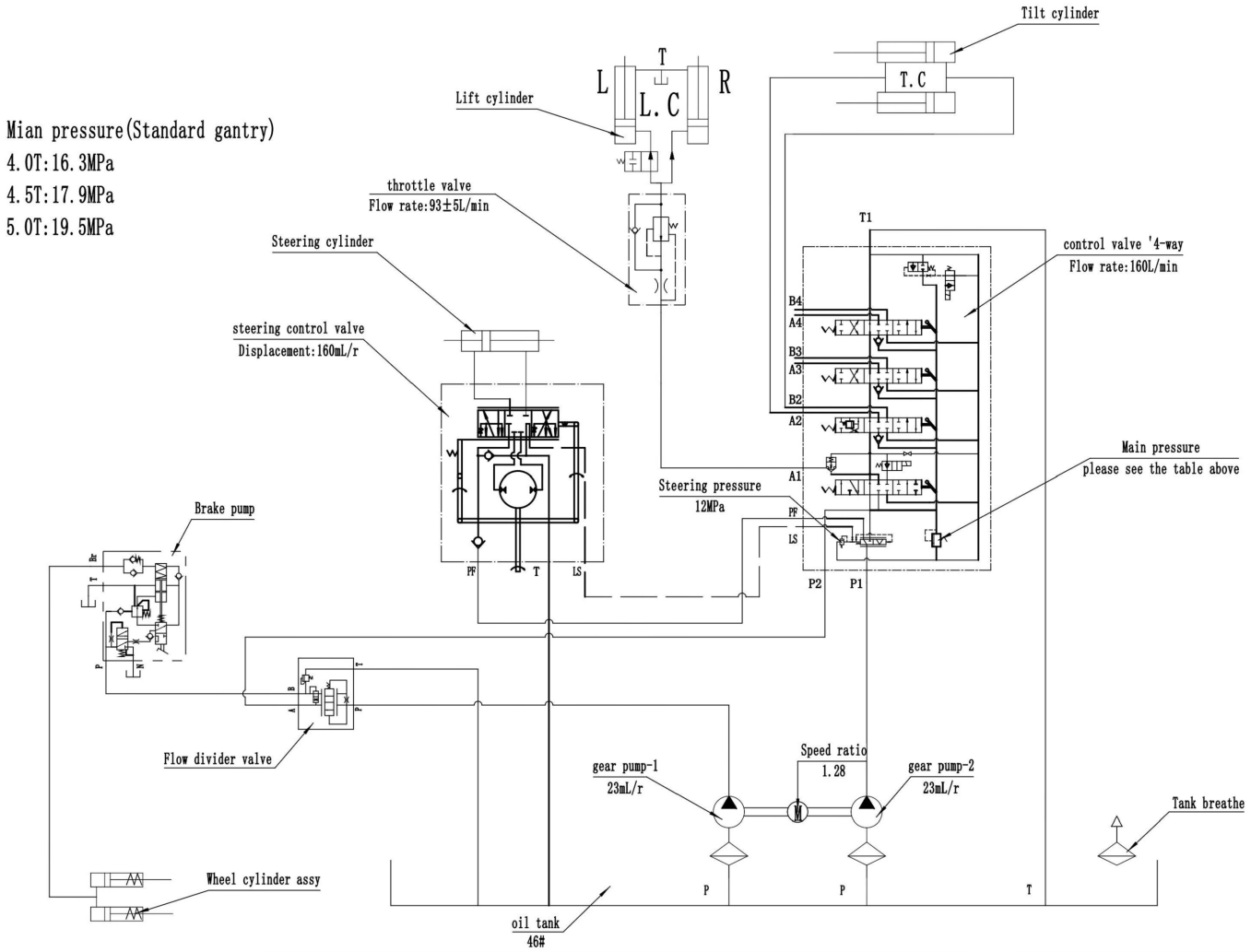
7

Diagrams

Electric schematic diagram



Hydraulic diagram



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