Operating instructions
120/Z

www.hoflader.com

Edition January 2021
17412
102332.1

English

Thaler GmbH & Co. KG
Weidingerstraße 24, 84570 Polling, Germany
Tel.: +49 (0)8633 50550-0, Fax: +49 (0)8633 50550-10 Email: info@hoflader.com

You have decided to purchase a loader from Thaler Maschinenbau.
We are grateful for the trust you have placed in us.

You have purchased a sturdy, high-performance product, which with its many possible applications, will make your day-to-day work easier.

These instructions provide you with information about:
Proper handling and operation of the machine
Maintenance, care and operating instructions to preserve the value of your machine
Details about proper and intended use
Information about environmental protection

Read through these instructions carefully and thoroughly.

We hope that you have pleasure in your daily work using the loader.

Thaler Maschinenbau GmbH & Co KG

If you have any questions about your machine, or come across any problems, please contact your local dealer, importer, or come directly to us – we would be glad to assist you further.

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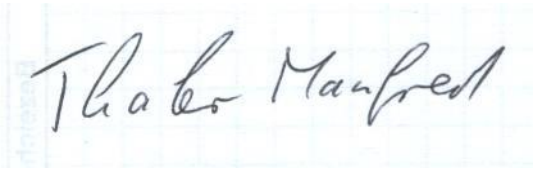
Weidingerstraße 24, 84570 Polling
Tel. 08633/50550-0, Fax. 08633/50550-10 E-mail: info@hoflader.com

EC Declaration of Conformity

For the purposes of the EC Machinery Directive 2006/42/EC
The design of the machine
Make
120/Z
2022/A, 2026/A
2026/KA, 2034/KA
3034/A, 3045/A, 3051/A, 3051/AZ
3045/TA, 3051/TA
Type designation Hoflader

is developed, constructed and manufactured in accordance with
with the EC Directive 2006/42/EC
under the sole responsibility of
Company Thaler GmbH & Co. KG, Weidingerstraße 24, 84570 Polling, Germany
Technical documentation within the meaning of the Directive is complete.
The operating instructions belonging to the machine are available in the original version.



Polling, 11. January 2021

Thaler Manfred
Managing director

Table

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Service: **Technical department/Spare parts:** **Technical advice and documentation:**	**Mr Johann Thaler** **Mr Tobias Decker** **Tel: +49 (0)8633-5055017** **johann.thaler@hoflader.com** **technik@hoflader.com**
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1.3 Technical data of my machine

Please enter the technical data of your machine here.

1. **Type** _____
2. **Delivery date** _____
3. **Chassis number** _____
4. **Diesel engine manufacturer** _____
5. **Diesel engine type** _____
6. **Diesel engine number** _____
7. **Axle brand** _____
8. **Front axle code number** _____
9. **Front axle number** _____
10. **Rear axle code number** _____
11. **Rear axle number** _____
12. **Cab type and number** _____
13. **Tyres** _____
14. **Additional equipment** _____

_____

_____

_____

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1.4 Instruction certificate Page 1 stays with the customer

It is hereby confirmed that, upon the handover of

Thaler type: _____
Chassis number: _____ _____

comprehensive instruction was carried out for the machine in accordance with the safety instructions and the operating instructions. I have been handed the following technical documents:

Operating instructions (number)……...

Spare parts list (number)……

Engine documentation ……

The instruction was carried out by:_____
(Company stamp)

Name of the instructor:_____
(Name in block capitals)

_____
(Place, date, signature of the instructor)

_____
(Place, date, signature of customer/person being instructed)

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1.4 Instruction certificate Page 2 for the dealer's warranty department

It is hereby confirmed that, upon the handover of

Thaler type: _____
Chassis number: _____ _____

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(Company stamp)

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(Name in block capitals)

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(Place, date, signature of customer/person being instructed)

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1.4 Instruction certificate Page 3 send back to the manufacturer

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Chassis number: _____

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Operating instructions (number)……

Spare parts list (number)…….

Engine documentation ……

The instruction was carried out by:_____
(Company stamp)

Name of the instructor:_____
(Name in block capitals)

_____
(Place, date, signature of the instructor)

_____
(Place, date, signature of customer/person being instructed)

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1.5 Handover certificate Page 1 stays with the customer

Type and chassis number Date

Importer/dealer 1 Stamp and signature Signature in block letters _____	Dealer 2 (if not same as 1) Stamp and signature Signature in block letters _____
Dealer 3 (if not same as 1) Stamp and signature Signature in block letters _____	Dealer 4 (if not same as 1) Stamp and signature Signature in block letters _____
Customer address: Name _____ Forename _____ Street _____ House number _____ Country/postcode _____ Town/place _____ The machine was handed over by me with all technical documentation: Dealer signature The machine was handed over to me along with all technical documentation and in perfect condition Customer signature_____	Type of use O Agricultural O Construction O Industrial O Hire/rental fleet O Municipal O Landscape gardening O Horse farming/equine industry Other purpose – description. Fill out in German or English _____ _____ _____ _____

1.5.1 Handover inspection Page 1 stays with the customer

When the machine is handed over by the dealer, the dealer must perform a handover inspection. The manufacturer has already performed this inspection. With this additional inspection by the dealer, it is ensured that the machine is handed over to the customer in a good condition.

Before handing over the machine, check the following points:

O Lubricate all greasing points
O Check that the wheel nuts are tight
O Check the hydraulic oil level
O Check the brake system
O Check the coolant level
O Check the steering system functions
O Check the safety belt
O Check the machine for leaks
O Check tyre pressures
O Check the engine oil level
O Check the collision protection
O Check that all hoses are tightly fitted
O Check the hydraulic system functions
O Check the lighting and instruments
O Check that all bolts are tight
O Perform a test drive

Remarks:

Place and date_____
Signature of the customer service technician_____

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1.5 Handover certificate Page 2 for the warranty department

Type and chassis number Date

Importer/dealer 1 Stamp and signature Signature in block letters _____	Dealer 2 (if not same as 1) Stamp and signature Signature in block letters _____
Dealer 3 (if not same as 1) Stamp and signature Signature in block letters _____	Dealer 4 (if not same as 1) Stamp and signature Signature in block letters _____

Customer address:
Name _____
Forename _____
Street _____
House number _____
Country/postcode _____
Town/place _____

The machine was handed over by me with all technical documentation:
Dealer signature

The machine was handed over to me along with all technical documentation and in perfect condition

Customer signature_____

Type of use
O Agricultural
O Construction
O Industrial
O Hire/rental fleet
O Municipal
O Landscape gardening
O Horse farming/equine industry
Other purpose – description.
Fill out in German or English
_____
_____
_____
_____

1.5.1 Handover inspection Page 2 for the dealer's warranty department

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O Check the collision protection
O Check that all hoses are tightly fitted
O Check the hydraulic system functions
O Check the lighting and instruments
O Check that all bolts are tight
O Perform a test drive

Remarks:

Place and date_____
Signature of the customer service technician_____

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1.5 Handover certificate Page 3 send back to the manufacturer

Type and chassis number Date

Importer/dealer 1 Stamp and signature Signature in block letters _____	Dealer 2 (if not same as 1) Stamp and signature Signature in block letters _____
Dealer 3 (if not same as 1) Stamp and signature Signature in block letters _____	Dealer 4 (if not same as 1) Stamp and signature Signature in block letters _____
Customer address: Name _____ Forename _____ Street _____ House number _____ Country/postcode _____ Town/place _____ The machine was handed over by me with all technical documentation: Dealer signature The machine was handed over to me along with all technical documentation and in perfect condition Customer signature_____	Type of use O Agricultural O Construction O Industrial O Hire/rental fleet O Municipal O Landscape gardening O Horse farming/equine industry Other purpose – description. Fill out in German or English _____ _____ _____ _____

1.5.1 Handover inspection Page 3 send back to the manufacturer

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O Check that the wheel nuts are tight
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O Check that all hoses are tightly fitted
O Check the hydraulic system functions
O Check the lighting and instruments
O Check that all bolts are tight
O Perform a test drive

Remarks: _____

_____

_____

_____

_____

Place and date_____
Signature of the customer service technician_____

1.6 Introduction

These instructions describe the operation and maintenance/care of the loader.
Before starting up the machine, every operator and also the maintenance personnel must familiarise themselves with the machine using these instructions.
These instructions contain the required knowledge to ensure safe and hazard-free handling, for cleaning, care and maintenance and the technical safety instructions for the machine.

Note

These instructions must always be in the machine or at its place of use.
These instructions do not serve as an explanation or manual for extensive repair or maintenance work. Such work is only to be performed by accredited specialised personnel.

The operating instructions are to be read by the following persons:
→ Persons in charge of operating the machine.
→ Persons responsible for any kind of troubleshooting.
→ Persons in charge of the maintenance, repair, care and disposal of fuels and operating materials.
→ Persons responsible for transporting the machine.

Only by carefully **reading and observing** the instructions can you ensure:
→ Correct, proper and safe operation of the machine.
→ The required expert maintenance, cleaning, care and trouble-free operation.
→ Compliance with the technical safety requirements.

Failure to observe these instructions can result in serious accidents with fatal injuries for the user and third-parties!

Should these instructions not comply with the safety instructions, environmental protection and accident prevention specified by national regulations, the missing instructions should be added to this manual by the user/operator of the machine.

The instructions are supplied as loose pages and are delivered in a clamping folder. This means that it is always possible for the operator to expand and/or correct the manual to comply with national regulations concerning safety/accident prevention and environmental protection.

If you have any questions about these instructions, please contact your local dealer/importer or contact us directly. We are happy to assist you.

1.7 General information about these operating instructions

The technical data in these operating instructions refers to standard models.
Firstly, they describe the standard functions that, at the time of printing, belonged to the standard equipment fitted in the Federal Republic of Germany.
The standard equipment depends on the country-specific requirements in the country of sale and can vary. Illustrations in these instructions can show products that are not mentioned or non-standard products. Equipment and their function as well as available special options depend on the respective model and can vary.

All descriptions, illustrations, weight specifications and technical data are fully non-binding and correspond to the equipment or state of the art at the time of publication.
We reserve the right to make changes as required by the further technical development of our products. Changes may occur at any time in the areas of equipment, technology, visual appearance or the design without prior notice.
There can be no claim for change, conversion or replacement as a result of this for machines that have already been delivered.

We are happy to give you information about if and to what extent any subsequent changes to the equipment of your machine might be possible. Speak to your responsible dealer, or to us, directly.

Always obey the safety instructions contained in these instructions, required by the legislators or by the professional associations.

The CE marking of this machine shows that the machine was manufactured in compliance with the EC regulations.

Despite the utmost care, we cannot rule out the possibility of the occurrence of arithmetic errors, typographical errors or omissions in the diagrams, dimensions, technical data and all other specifications. For this reason, we do not accept any liability for the accuracy or completeness of these operating instructions.
Any liability or warranty beyond that of our general terms and conditions of business is excluded.

For all warranty and damage claims, the instructions in the GERMAN operating instructions are binding.
Translation of these operating instructions into all other European languages is carried out by the responsible importers or by a translation company commissioned to do so.
WE DO NOT ACCEPT ANY WARRANTY FOR THE COMPLETENESS AND CORRECTNESS OF ALL INSTRUCTIONS THAT ARE NOT IN THE GERMAN LANGUAGE.

1.8 Description of the pictograms used in these instructions

Danger
Warning of possible accident and risk of injury

Danger
Warning of possible accident or risk of injury caused by electric shock

Caution
Warning of possible technical damage

Caution
Warning of possible physical injury or harm to health

Note
Important general information

Environmental Protection
Important information about protection and preservation of our environment

1.9 Warranty and liability

→ As a matter of principle, all work performed under warranty must be discussed with the manufacturer if possible **before** it takes place. Only the manufacturer can decide whether the damage is covered by the warranty or not, and if and to what extent the costs will be reimbursed.
We reserve the right to check any work performed under warranty at the end customer's location.

→ Spare parts that are required for work performed under warranty will be ordered in the same way as other spare parts and invoiced by us accordingly.
If the warranty claim is accepted by us or by our suppliers, a credit note will be issued.

→ Defective parts must be returned to the manufacturer with a warranty claim application within 14 days. It is not possible to process a warranty claim application or create a credit note without the old parts. All applications or old parts that are not returned to us in a timely manner cannot be processed further.

→ **Any warranty claim requires that the fully completed handover certificate, instruction certificate and handover inspection be sent to us directly after the sale. If the manufacturer does not have these documents, it is impossible for us to process the warranty claim.**

→ The general terms and conditions of business are binding for a reimbursement of costs.
The warranty excludes all damage:
To wearing parts, such as brake pads, cables, glass breakage on headlamps or cab windows, V-belts, filters, operating materials, lights, etc. Damage caused by personal negligence.
Damage caused by failing to observe the operating instructions.
Damage caused by improper maintenance or use of unsuitable filter materials or operating materials.
Damage caused by failing to observe the proper and intended use.
Damage caused by failing to perform regular visual checks.
Consequential damage caused by loose bolts/screws, loose hydraulic and air lines, leaks on the axles/gearboxes or hydraulic systems that are ignored or not repaired immediately.
Damage caused by unauthorised modifications to the machine that were not approved by the manufacturer.
Damage caused by the attachments not being suitable for the machine or approved by the manufacturer.
Damage to paintwork caused by stones, aggressive materials such as manure, slurry, salt or similar materials, improper maintenance or cleaning.
Damage caused by improper repairs and/or performed using unsuitable tools.

→ Operate and service the loader only as described in the operating instructions.

→ Only use the loader if all the safety and protective equipment is present and functional.

→ Observe the monitoring equipment while operating.

→ Only trained and qualified personnel may perform repairs.

→ Observe the operating instructions.

→ The manufacturer/supplier is not liable for damage resulting from a failure to observe these points. The risk is borne solely by the user/operator.

1.10 Intended use

The yard loader is constructed using state of the art technology and in compliance with the generally accepted technical and safety standards. Despite this, use of the machine may present a hazard to the life and limb of the user or third parties or damage to the loader or other property. The safety rules must therefore be fully complied with, without exception. The machine must always be kept in technically perfect working order, without exception.

The machine may only be operated in compliance with the operating instructions and safety regulations, for its intended purpose and in technically perfect working order.
In the event of any faults, the machine must be taken out of use until the faults are rectified.
Compliance with the operating instructions, the maintenance and inspection instructions helps to prevent faults, accidents and long downtime periods.
Proper and intended use includes reading and complying with these instructions.

 **Danger**

Improper use may cause severe injury or death to the operator or to third parties. In addition, extensive damage to property may occur.

The machine is designed for use mainly in covered areas.
The machine may only be used to pick up and load material through forward motion of the machine. The specifications in the instructions are to be observed.
The machine may only be used with other attachments, in particular with attachments made by other manufacturers, if they do not affect the safety requirements of the machine **and** written approval has been obtained from Thaler.
The attachments that are to be used for certain types of work must be designed for this purpose.
Example: A grapple rake is not designed for removing silage, or to stack and transport round or square bales.
The use of attachments that are not suitable for the loader can result in serious accidents with fatal injuries and cause extensive property damage.
Any damage to persons, buildings or the machine resulting from this are not covered by the warranty, rather it is the sole responsibility of the operator.

All other use of the loader, for example:
→ Lifting or transporting people
→ Use as a work platform
→ As a towing vehicle
→ After a change has been made to the loader
→ After unprofessional repair/troubleshooting
→ Using the loader to lift, transport, push, stack, etc.
Without the appropriate work equipment/attachment is considered to be improper use.

1.11 Use on public roads

In the Federal Republic of Germany, the following must be observed to drive on public roads:

The requirements of the STVZO/STVO (German road traffic licensing regulations/German road traffic ordinance) are binding and must be observed in every case.

The loader is registration-free up to a top speed of 18 km/h.
A Class 5 or L driving license is required to drive the machine.
The operator only needs an operating permit/special permit from the vehicle registration office.

This is granted by the responsible authorities according to the following requirements:

→ Max. top speed 18 km/h
→ Lighting in accordance with the STVZO
→ Inspection by the TÜV (technical monitoring association – "TÜV Gutachten")
→ The complete address of the operator must be clearly legible and indelible on the left-hand side of the vehicle. (Forename, surname, place of residence or company name and registered office)
→ Left, right and back are speed signs obligatory.
→ Carrying trailers is not permitted (except 48T18 under certain conditions) Requirements).
→ Transport of persons and cargo is prohibited.
Sharp edges and / or burial teeth must be protected.
→ When participating in public road transport, the loader must be operated by the operator A Warndreieck, assembly box, warning vest and warning lights (With a total weight above 3.5t).
→ In case of a permissible total weight of more than 4 tonnes, a additional chock must be used to be available.

The conditions for participation in public road transport in other European countries Countries are subject to the respective admission requirements in the respective country.
All information given in this manual refers to the operation of the machine in Germany.
You can find out which conditions you have to consider in a country other than Germany from your responsible importer or office.

Failure to comply with relevant national regulations can result in money or prison terms.

1.12 Identification of the machine (chassis number)

→ A type plate is fitted on the machine on the right-hand side near the steering column (in the direction of travel).
→ The chassis number is punched on the front part of the machine on the right hand side (in the direction of the travel).
→ The type plate of the diesel engine is found on the left-hand side above the injection pump.
→ All attachments have a type plate on the rear panel on the right-hand side.
→ All axles have a type plate on the side.
→ All hydraulic motors have a type plate found on the back.
→ The drive pump (axial piston pump) has a type plate.
→ The drive motor (axial piston motor) has a type plate.
→ Safety-relevant components are provided with a test number.

2.1 General safety instructions

- → The general safety and accident prevention regulations provided for by law and/or the employer's liability insurance associations must be strictly adhered to.
- → These instructions must be complied with during operation, maintenance and repairs.
- → The loader is only to be accessed using the intended steps, and these must always be kept in clean and non-slip condition.
- → Operating levers, pedals and the driver's cab must always be kept absolutely free of dirt, grease or oils.
- → The operating instructions should always be kept where the machine is in use and accessible at all times.
- → General applicable laws and other binding regulations concerning compulsory insurance, road traffic regulations, environmental protection and accident prevention are to be observed and instructed.
- → This also applies to generally applicable rules of the individual countries that are not or not completely mentioned in these instructions.
- → The approved top speed and gross weight are to be observed and complied with.
- → The operating instructions must be supplemented by the operator in the following areas and kept up-to-date:
  - → Instructions about supervision and reporting obligations
  - → Particular instructions about organisation or working procedures
  - → Particular requirements/instructions for the personnel
- → If substances hazardous to health are found on the site of use, suitable protective clothing should be worn and/or the personnel should be instructed to wear this protective clothing.
- → The control devices may only be operated from the driver's seat.
- → It is forbidden to stand in the loader's danger zone. The safety distance is of 5 m.
- → It is forbidden to stand in the unsecured articulating area of the loader.
- → The working equipment must not be swung over persons, working areas or equipment. If there is any danger to people, the machine operator must give warning signs (sound the horn).
- → A safety distance of 0.5 m should be maintained to fixed components such as buildings, equipment, etc. to avoid the risk of crushing.
- → Generally applicable work, such as visual inspection for loose bolts, leaking hydraulic lines or components, cracks in the frame, etc. must be performed at regular intervals and/or before starting work (i.e. daily).
- → All maintenance work must be performed on a regular basis.

2.2 Personal safety, personnel qualifications

→ The required legally prescribed minimum age for operating persons is to be adhered to.
→ The operating persons must be in possession of the appropriate driving license.
→ The loader may only be driven and repaired or serviced by persons who are physically and mentally suitable to do so.
→ All persons who are responsible for activities on or with the loader must have read the operating instructions and, in particular, the section with the safety instructions. This also applies to persons who are only occasionally assigned to working on or with the machine.
→ Only trained and instructed personnel may work with or on the machine.
The responsibilities for operating, maintenance and repair must be defined.
→ It must be ensured that the loader is only used, serviced and/or repaired by persons trained to do so.
→ The operator is responsible for ensuring that the machine driver's responsibility is defined in accordance with the road traffic regulations. The machine's driver must be empowered to refuse improper or illegal instructions from third parties.
→ Personnel being trained or instructed may only operate the machine under the constant supervision of an experienced and authorised person.
→ All work on the electrical system, electronics, hydraulic system, brakes, chassis or steering system may only be performed by trained and experienced persons.
→ Persons may only operate, maintain or repair this machine if they have the necessary experience and are completely sober (0.0 percent blood alcohol level) and/or have no more residual alcohol in their blood.
→ Persons may only operate, maintain or repair this machine if they have the necessary experience and are not under the influence of medication or drugs.

If the machine is operated by a private person or by persons who are both the operator and user at the same time, the safety instructions must still be observed and complied with.
The instructions concerning personal safety and personnel qualifications are mandatory!
If no trained personnel is available for the various activities, the operator/user must take appropriate measures to get them!

2.3 Safety instructions for normal operation of the machine

These instructions apply to all persons who are assigned to working with or on the machine.

→ Any unsafe action is prohibited.

→ It is not permitted to wear a safety helmet on the machine.
The machine is constructed as a compact loader, the associated protective devices (FOPS) were designed for operation **without a safety helmet**.

→ Take appropriate measures to ensure that the machine is only operated in a functional condition.

→ The machine may only be operated if all protective and safety-related equipment, e.g. removable protective equipment, sound insulation, exhaust devices, are fitted and functional!

→ **Before starting work on site, familiarise yourself with the working environment.**
This includes any obstacles in the transport and working area, the bearing capacity of the ground and any necessary isolation of the working area to traffic area used by the public.

→ Every time **before** starting work (or daily), perform a check and visual inspection for any visible defects (loose bolts, loose or leaking hydraulic hoses, loose or leaking air intake or coolant hoses, etc.).

→ If there are any changes in the operational behaviour (a different engine noise, sluggish performance, etc.) or leaking hydraulic lines, the machine should be immediately shut down, secured and the damage promptly rectified.

→ In the event of any malfunctions, the machine should be immediately shut down, secured and the damage rectified.

→ **Every** time before starting work or driving (or daily), the lighting system, signalling system, brakes, steering etc. should be checked to ensure they are working properly.

→ Before starting up, check that no one is present in the machine's danger area.

→ Only start and operate the loader from the driver's seat.

→ Safety equipment such as start-up locks, drive locks or road locks, must be in a functional condition and must not be bypassed or tampered with.
Any non-functional safety equipment and locks must be repaired immediately, or the machine must be shut down and secured until they can be repaired.

→ Before driving and to prevent accidents, every accessory must be secured to the machine.

→ When driving on public roads, squares or paths, the applicable traffic rules and regulations must be observed.

→ Before driving, the machine must be put into a condition that complyies with these traffic regulations.

→ Turn on the lights in conditions of poor visibility or when it is dark.

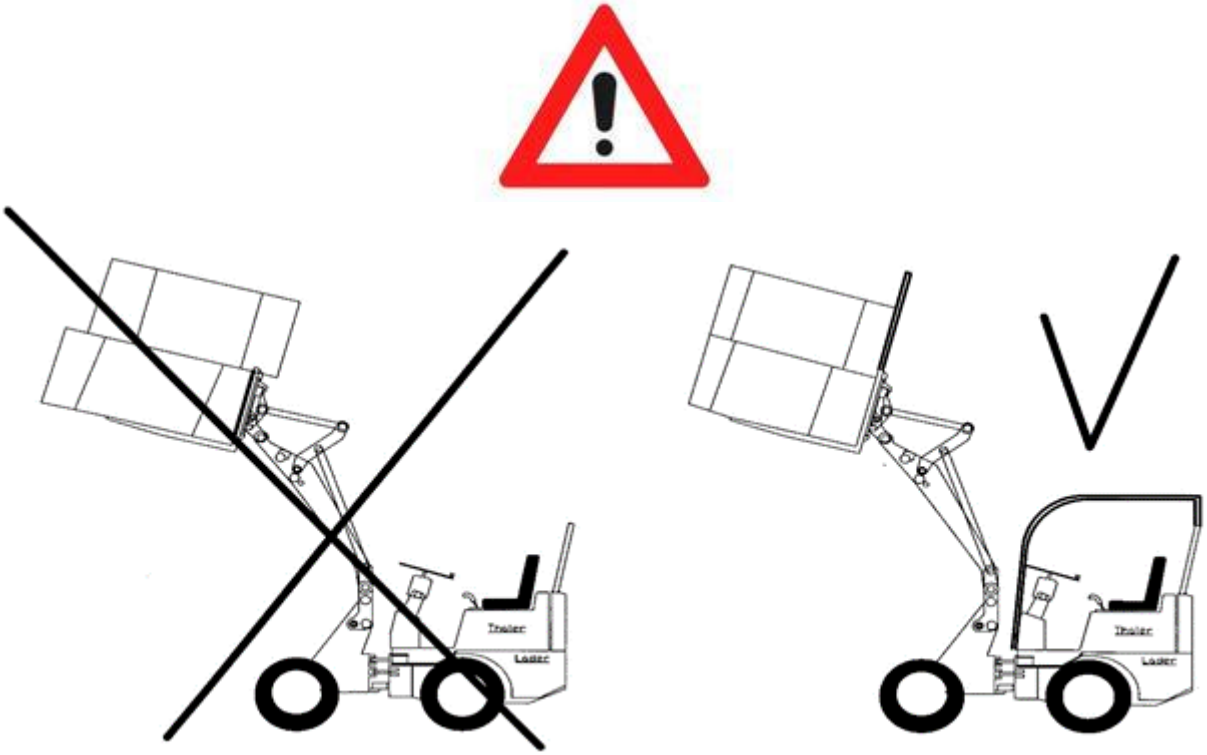
→ When manoeuvring around excavations, embankments, overhead lines, tunnels, bridges, gates and underpasses, ensure that there is sufficient headroom and width clearance and maintain a safe distance.

→ Any working practice that endangers the stability of the machine is prohibited.

→ Get information about the load capacities (payloads) of the machine in conjunction with its corresponding equipment.

→ The respective bearing loads or payloads can be found in the operating instructions.
→ **Attachments and cargoes are only to be carried close to the ground, especially when travelling downhill.**
Close to the ground means: the load is only lifted up far enough to ensure that the load and the attachment are no longer touching the ground. Lifting the load to 30 or 40 cm above the ground, for example, is no longer considered to be close to the ground.
Even at this height, a sudden steering movement of the machine can cause the machine to lose control and tip over.
→ **Lifting the load is only permitted if:**
  → The machine is **standing** on a level, straight and paved surface when it is extended (risk of tipping).
→ **Never drive with a raised load to navigate a corner or to pass embankments or slopes (risk of tipping).**
→ Never traverse slopes or embankments across the slope. (Risk of tipping)
→ Adjust your **speed** to suit the **terrain conditions** or the **load being carried**.
  → The **higher the weight being carried**, the **lower** the speed should be.
  → The **bumpier** the terrain, the **lower** the speed should be.
  → Always reduce your speed **before** you reach the slope, never **on** the slope.
  → The load must always be positioned towards the hillside when on an uphill or downhill slope.
→ When leaving the machine, it should be secured to prevent it from rolling away unintentionally and to prevent unauthorised use.
  → The working device or attachment should be lowered to the ground and the hydraulic pressure relieved.
  → Apply the handbrake.
  → Remove the ignition key.
  → Apply a wheel chock when parking the machine on a slope.

2.4 Safety instructions for transporting packaged goods



Loading, transporting and stacking of large bales, crates or packaged goods is only permitted with the attachments designed for this purpose.
These must be designed to prevent the load from falling off over the lifting arm.
Example: A grapple rake is not designed to transport or stack large or round bales, rather only to transport manure.

It is forbidden to load and transport large bales, round bales or packaged goods of any type without a cab or driver protective roof AND the suitable attachment.
Falling bales or stacks of crates and falling objects of all types can result in severe or fatal accidents.
The user/operator of the machine has the sole liability for the proper equipment of the machine.

2.5 Safety instructions and intended use of attachments


List of the most frequently used attachments and their application.

Bucket, earth bucket, large or light material bucket, stone scoop, potato bucket, etc. are only to be used to push, excavate or transport bulk materials.
Using the bucket as a working platform, for example, is forbidden.
Failure to observe this may result in serious injury or even death.

(Only transport close to the ground, see page 21)

The grapple rake is only to be used to muck out the stalls and transport or load manure. The clamp is designed to secure the manure mat and is not designed for "ripping out" work.
Use of the grapple rake for moving silage, or to transport large bales or round bales, for example, is forbidden.
Failure to observe this may result in serious injury or even death. There may also be serious technical damage to the attachment or to the machine.

(Only transport close to the ground, see page 21)

The pallet fork is only intended to pick up, transport, stack or load pallet-borne material or boxes, cage pallets, etc.
It is not permitted to use it to transport or stack large or round bales, as the pallet fork does not prevent the load from tipping off over the rocker.
Failure to observe this may result in serious injury or even death. There may also be serious technical damage to the attachment or to the machine.

(Only transport close to the ground, see page 21)

Bale forks of all types are exclusively designed to pick up, transport, stack or load large or round bales.
Any other use is strictly prohibited.
Failure to observe this may result in serious injury or even death. There may also be serious technical damage to the attachment or to the machine.

(Only transport close to the ground, see page 21)

For silage handling, only attachments that are expressly designed for that purpose are permitted. They must **also** have been approved by Thaler Maschinenbau for use on the machine (silage gripper buckets, silage gripper forks, silage cutting clamps, etc.).

Improper usage of attachments can result in serious injury or even death. There may also be serious technical damage to the attachment or to the machine. Damage resulting from improper use are not covered by the manufacturer's warranty, rather are the sole responsibility of the user/operator.
The user/operator alone bears responsibility for proper use of the machine and compliance with all instructions and regulations.
In the interest of your health and in keeping life and limb intact, any sort of experimentation and improper use of attachments and of the loader is prohibited. The user/operator bears the sole liability for any infringements.

2.6 Dealing with vapour, smoke, gas, dust, electrical power etc.

→ Due to the exhaust gas produced by the diesel engine, the machine may only be operated in well-ventilated spaces.
Before starting the machine, ensure that there is adequate ventilation.
The applicable rules should be observed and complied with when working underground.

Warning in accordance with California's Proposition 65
→ According to the State of California, diesel engine exhaust and some of its components cause cancer, birth defects and other reproductive damage. Battery poles, connection terminals and associated parts contain lead and lead compounds. **After handling, wash your hands.**

→ Welding, burning and cutting work may only be performed with express permission.
There may not be any risk of fire or explosion.
→ **Before** welding, burning or grinding, the machine and its surroundings must be thoroughly cleaned of all flammable materials, dirt, and dust.
→ Ensure that there is adequate ventilation.

→ In the event of special hazards caused by poisonous or corrosive gases, vapours or in a contaminated environment, appropriate protective clothing should be worn.

Electrical power
→ When performing ground work, it must be ensured that no underground cables are laid in the area.
→ In the event of hitting an unexpected underground cable, the driver must stop work immediately.
→ When working in the vicinity of overhead power lines, a mains voltage-dependent safety distance must be maintained between the lines and the loader along with its working equipment.
Prescribed safety distances:
- → Up to 1,000 V 1.0 m
- → From 1 kV to 110 kV 3.0 m
- → From 110 kV to 220 kV 4.0 m
- → From 220 kV to 380 kV 5.0 m
- → With unknown mains voltage 5.0 m

→ In the event that overhead or underground lines are touched or damaged
- → Do not leave the machine.
- → Immediately drive the machine out of the danger area.
- → Warn outsiders to prevent them from approaching or touching the machine (sound horn, shouting, etc.)
- → Ensure that the line is immediately switched off.
- → Only leave the machine when the touched, damaged line has been switched off.

2.7 Dealing with the hydraulics, pneumatics, noise, oils, greases and chemical substances



→ Regularly check all lines, hoses, fittings and assemblies for leaks and externally visible damage.

→ Oil leaking under pressure can result in serious injuries (eyes, scalds, cuts at high pressures, etc.) or to a fire in the machine.

→ Leaks and damage to hydraulic lines or assemblies must be repaired immediately, or the machine must be shut-down until they have been repaired.

→ **Before** opening hydraulic or pneumatic lines, ensure that they are completely **depressurised**.

→ Never open lines that are under pressure under any circumstances.
Risk of injury!

→ For this, observe the instructions in the operating instructions or consult with authorised specialist personnel.

→ Ensure that the hydraulic and pneumatic lines are correctly laid. This work may only be performed by authorised specialised personnel.
All parts used must meet the manufacturer's requirements (quality, length, pressure and temperature stability, etc.).

→ All safety equipment must be fitted and functional.

→ When handling oils, grease or other chemical substances, the safety instructions for the respective product must be observed (see the instruction leaflet, or instructions on the oil or grease container, etc.).

→ While filling up the machine, smoking or naked lights or flames are forbidden. There is an increased risk of fire or explosion.

→ **Use commercially available winter diesel at low outdoor temperatures.**
The addition of petrol is forbidden (fire and/or explosion hazard).
The use of Startpilot (or other starting aids) is not permitted (risk of engine damage).

2.8 Transportation, towing, recommissioning and final disposal




→ Transport the machine only in accordance with the instructions in the operating instructions.
→ Observe the specified weight of the machine and the attachments.
→ Only use transport means with sufficient load bearing capacity.
→ **Only transport the machine with the articulation lock applied.**

→ The machine can only be towed in accordance with the instructions in the operating instructions.
→ The maximum speed and distances when towing are to be complied with.
→ The function of the steering, breaking system etc. is limited or not non-existent without the diesel engine running (if necessary, use a tow bar).

→ If the machine is brought back into operation after a long standstill, the instructions in the operating instructions must be complied with.

→ On final disposal or decommissioning of the machine, all operating fluids and auxiliary materials should be drained and disposed of in an environmentally-friendly manner.
→ After the operating fluids have been drained and/or battery have been removed, all parts must be disposed of according to regulations and in an environmentally-friendly manner.
→ Ensure that it is not possible to recommission the machine.

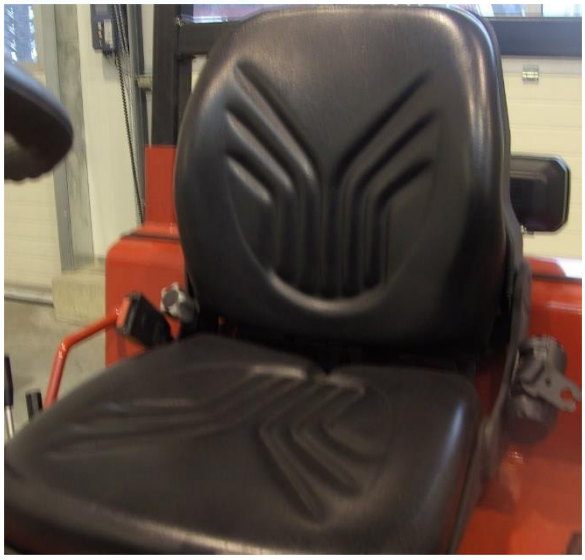
2.9 Battery master switch

The battery main switch is a special equipment.
The battery master switch is fitted on the right-hand side (in the direction of travel) next to the driver's seat. Or left on the front car.
This switch can be used to isolate the whole electrical system from the battery in case of emergency (short circuit – fire hazard).

→ Switch the battery off overnight to prevent/avoid discharging.
→ Switch the battery off overnight to prevent any eventual damage (short circuit).
→ Use the switch as an additional means of protection against theft by removing the switch.
→ When you remove the switch, it is important to cover the opening with the protective cap. This prevents moisture from getting into the switch (short circuit, risk of fire, premature wear).
→ Never actuate the switch when it is under load. Always first switch off the ignition before actuating the master switch.

→ **Turn the switch to the right (clockwise) – the electrical system is supplied with power.**
→ **Turn the switch to the left (anticlockwise) – the power supply to the electrical system is switched off.**

2.10 safety belt – start inhibit / drive lock



The machine is equipped with a safety belt including an integrated switch in the safety belt lock.

→ The safety belt has to be worn for all kind of work.
→ The safety belt is interfaced with the safety devices of the machine.
→ Before starting the diesel engine the safety belt has to be fastened.
→ The switch has to work as intended always in perfect state.
Any manipulation of the switch is forbidden.
→ A manipulation of the switch may lead to serious injury or death, when the driver is hit on the head from the hoop guard in case of tipping (falling) over of the machine.
→ A properly fitted safety belt prevents that the driver is flung out of the seat and hit on the head from the roll bar (Fops) in case of tipping over of the machine.

2.11 Safety labels used

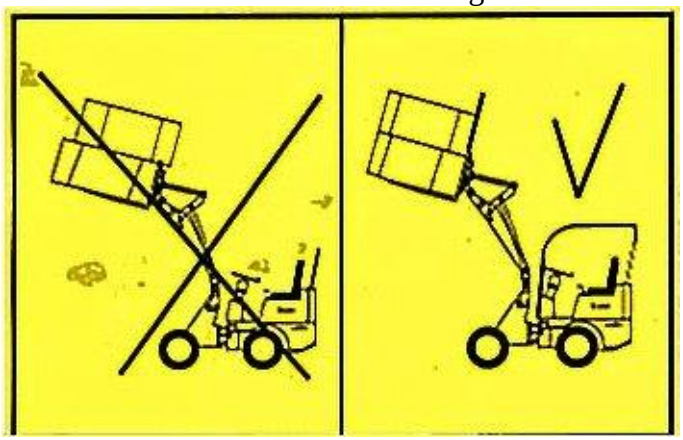
The machine is fitted with yellow safety labels to provide warnings or important information.
These must be kept in a clean and legible condition.
They may not be removed.
Damaged stickers must be replaced immediately. These can be ordered through your dealer or directly from us.

Before commissioning, the instructions are to be read.

Before maintenance work, the machine must be secured and the instructions must be read.

Be careful in the machine's danger area – risk of crushing.

The lifting arm and bucket is not a working platform.



Transporting and stacking packaged goods, large bales without suitable attachments and FOPS superstructure is forbidden.

Never linger in the unsecured danger area of the machine.

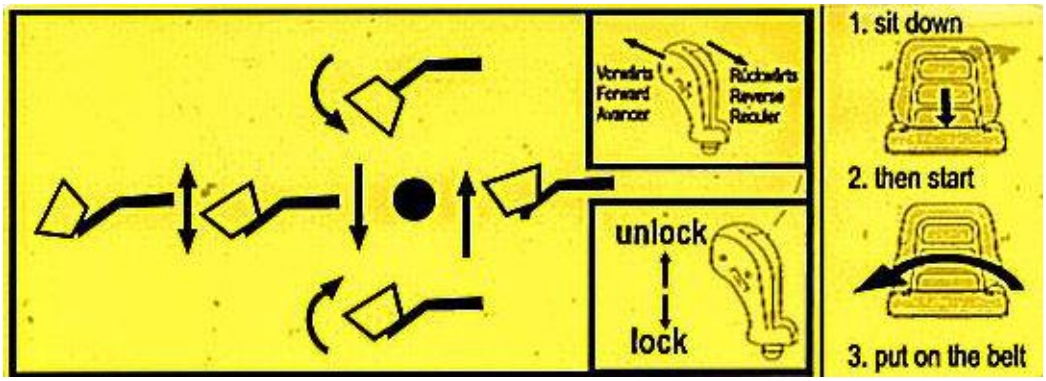
Never drive transversely across slopes – risk of tipping over.

Keep away from the machine – danger of ejected parts.

Do not touch any rotating parts or reach into the area of rotating parts. Wait for them to come to a standstill.

Watch out for overhead power lines. Maintain a safe distance.

Never reach into the crushing area of rotating parts.



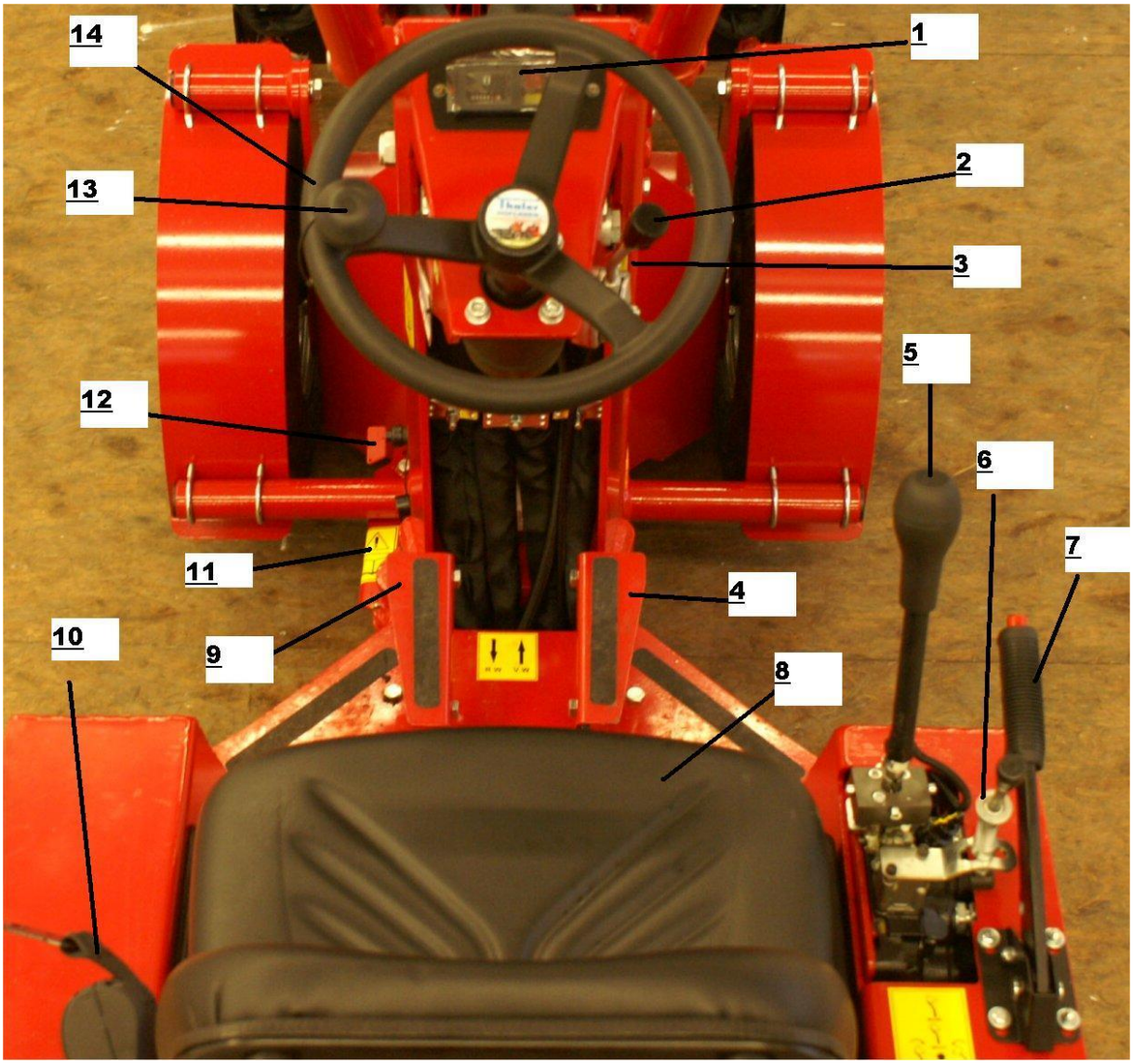
Joystick stickers:
Joystick forwards – rearwards = lower/raise.
Joystick fully forward = floating position.
Joystick left – right = retract bucket or dump.
Switch on the joystick = forwards – neutral – reverse.
Joystick down – up = road lock on/off.
Seating sequential switch:
Correct sequence to drive the machine

1. Sit down
2. Start engine (can also be done after belting up)
3. Belt up

The current machinery directive stipulates that the machine must have a driver restraint system (safety belt).
In addition, the manufacturer must take steps to prevent predictable misuse. The seating sequential switch ensures that the machine can only be driven when the driver is properly belted up according to the regulations.

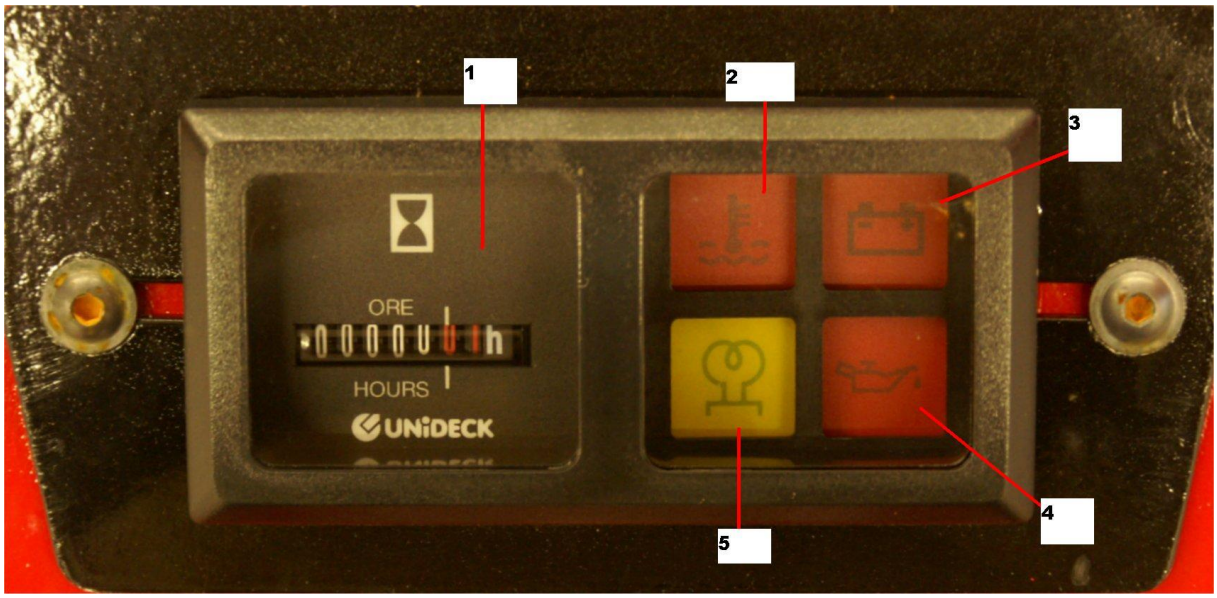
Fasten the safety belt.
Always fasten the safety belt for every machine operation.
Do not try to jump off the machine if it starts to tip over.
The safety belt prevents you from being thrown out of the machine and/or holds you in the seat if the machine tips over.
Failure to observe this may lead to serious or fatal accidents.

3.1 operating devices



1. dashboard
2. hand throttle
3. ignition lock
4. pedal forward
5. joystick with horn
6. auxiliary control unit
7. handbrake
8. driver's seat
9. pedal backward
10. safety belt
11. bend protection
12. battery master switch
13. steering knob
14. steering wheel

3.2 Instruments, indicator and warning devices



1. Operating hours counter
2. Engine temperature indicator light
3. Alternator indicator light
4. Engine oil pressure indicator light
5. Prehating control

If one of the red warning lamps lights up while
the engine is running, the engine must be switched off immediately

→ Always keep the warning lights in working order.
→ Regularly check the warning lights for their function.
→ Immediately repair the fault on the engine (workshop).
→ The machine may only be reused after the fault has been rectified.
→ Failure to observe the warning lights can lead to serious technical damage to the vehicle Diesel engine or the machine.
→ Damage caused by the fact that warning lights are defective or ignored
Are not covered by the warranty / warranty of the manufacturer. It is liable
Exclusively the user / operator for damages resulting therefrom.

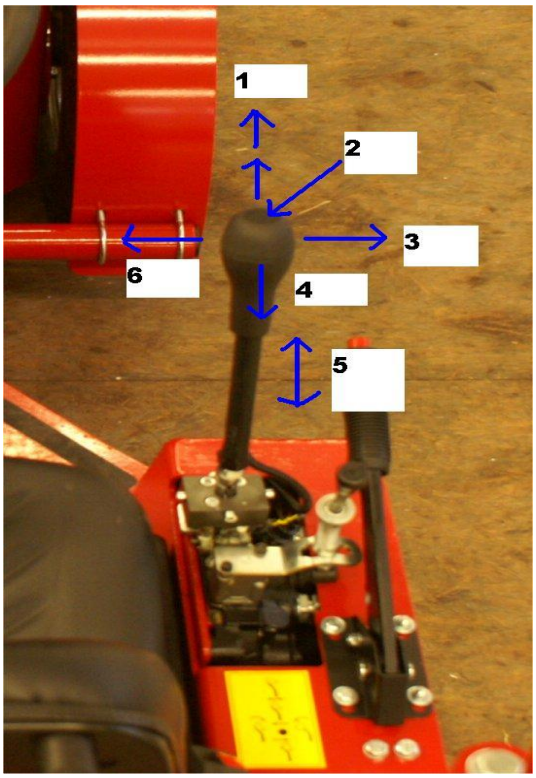
3.3 Before initial and daily start-up of the engine

→ **Before** commissioning the machine, read through the instructions carefully.
→ Use the instructions to familiarise yourself with the controls, safety regulations, as well as the proper and intended use of the machine.
→ Only operate the machine from the driver's seat.
→ Get instruction by specialists (local dealer) **before** you drive the machine for the first time.
→ Use a large area free of obstructions for your first attempts at driving.
→ Every time before starting work, check the machine to ensure that it is in good condition.
→ **Lubricate all greased bearings before starting work.**

→ Do not work with the machine when there are any faults that put operational safety at risk.
→ Check that all safety devices are fitted and ready for their intended use.
→ Check all tyres for damage, wear and that they are at the correct pressure.
→ Remove or fasten loose parts in the driver's cab.
→ Clean all controls and check their condition.
→ Clean all steps and handles and check their condition.
→ Perform a visual inspection for cleanliness and damage.
→ Check that all safety-related components are working properly.
→ Check that all bolts, joints, pivots, pins, wheel bolts, etc. are tight.
→ Check that all instruction labels and safety stickers are present and legible.
→ Check the loader for oil and fuel leaks.
→ Check the levels of the engine oil, hydraulic oil and fuel.

→ Any faults detected here should be fixed immediately before the machine is started up.

3.5 Operation Joystick



1. Lower the swingarm or extend it to the rest Floating position for the swingarm
2. Horn
3. Tipping out the shovel
4. Lifting the swingarm
5. Joystick up and down - roadblock
6. Retract the shovel

Swingarm
Joystick to the rear (4) - Lifting swingarm
Joystick forward (1) - Lower swingarm
Joystick over the resistance forward (1) - Schwimmstellung

Attachment
Joystick to the left (6) - Pull in the shovel
Joystick to the right (3) - Tip the shovel

Lock
Press joystick down in neutral position (5) - Lock on
Joystick up (5) - Lock off

→ Keep the swing arm lowered while driving.
→ Danger of overturning the loader when the swingarm is raised.
→ Actuating the swingarm and attachment only from the driver's seat.
→ Always work with the necessary calm and caution.
→ Hectic and fast operation leads to accidents and premature wear of the Machine.
→ Press the joystick with calm and thoughtfulness. Hectic "tearing" leads to accidents und premature wear. As a result, the ecu does not work faster.
→ Never switch to the floating position when the swing arm is raised.
→ The floating position may only be switched on when the swingarm is lowered.
→ Always lower the swingarm at the end of work and at the end of the work.
→ If the joystick is released, it goes back to the neutral position by itself. Except from the floating position, this function is shaved and must be manually neutral position can be moved back.

3.6 Refuelling the loader

→ **Fire hazard!** – Diesel fuel is flammable. Smoking, fire and naked flames are prohibited while refuelling.
→ Only use diesel fuel in accordance with DIN EN 590.
→ Mixing with petrol is prohibited.
→ Refuelling with petrol is prohibited.
→ **Refuelling with bio-diesel or vegetable oil is prohibited.**
Refuelling with bio-diesel or vegetable oil can result in severe engine damage.
The operator alone is liable for any damage occurring from the use of incorrect fuel.
→ Diesel fuel is harmful to the environment. In the interests of our environment, ensure that no fuel is spilled.
→ Any escaping, overflowing or spilled fuel must be immediately absorbed with a suitable binding agent and then disposed of in an environmentally friendly manner.
→ Inform the responsible persons/agencies immediately if there is a release of diesel fuel into the environment.
→ The diesel tank and fuel tank are located at the rear right of the vehicle.
→ Lower the lifting arm and turn off the diesel engine before refuelling.
→ Diesel is hazardous to your health. Use suitable protective gloves.
→ Open the fuel filler cap.
→ Refuel the machine through the filler neck..
→ Close the tank lid after refuelling and wipe up any spilled fuel off of the machine (environmental and paintwork damage).

3.7 Safety instructions and care of the driver's seat

To preserve your health, it is a prerequisite that the driver's seat is always functional and individually adjusted to you. Preserve the functionality of your driver's seat with care and regular functional testing (see maintenance schedule).

→ The driver's seat must not be adjusted while driving – risk of **accident!**
→ Check that the screw connections are firmly fitted during inspections.
→ Check the driver restraint systems during the inspections.
→ The driver's seat may only be fitted and repaired by specialised personnel.
→ The operating instructions must be kept in the vehicle or at the job site.

→ Incorrectly adjusted driver's seats have a smaller suspension movement area. To avoid back injury and damage to the driver's seat, the weight adjustment must be set to match the individual weight of the driver **before every start-up** and **every time the driver changes**.
→ To avoid injury, **no objects** must be stored **in the suspension movement area** of the driver's seat.
→ To reduce the risk of accidents, you must check that the adjustment devices are correctly engaged **before starting-up** the vehicle.
→ With the back cushion removed, the seat back adjustment may only be operated if the back plate is supported, for example, with your hand. Failure to observe this results in a high risk of injury when the back plate snaps forwards.
→ Any change to the standard condition of the driver's seat can revoke the tested condition of the driver's seat. The functionality of the driver's seat may be compromised, which could endanger your safety. For this reason, every structural change to the driver's seat must be approved by Grammer.
→ When removing and installing the driver's seat, the instructions provided by the vehicle manufacturer must be observed.
→ Do not lift up the driver's seat using the covers. Failure to observe this causes an increased risk of accidents due to loose or broken covers.
→ Before removing the driver's seat, all the plug connections between the driver's seat and the on-board electrical system must be disconnected. When reattaching the plug connections, ensure that they are sealed (dust, water). **Make sure that all the electrical systems are functioning properly.**
→ The safety belt must be fastened **before every start-up**.
→ Screw connections must be regularly checked to ensure they are firmly fitted. If the driver's seat wobbles, this may indicate that there are loose screw connections or other defects.
→ If you notice any irregularities in the driver's seat functionality (e.g. defective suspension of the drivers seat, improper curvature of the lumbar support or damaged gaiters), immediately consult a specialist workshop to fix the cause.

→ Driver's seats with a built-in switch for the seat occupancy sensor (seat contact) must not be loaded with objects on the surface of the seat, as this could cause the vehicle could start moving without a driver.
Increased risk of accidents
Unloading the seat while driving results in a sudden vehicle stop (after a delay of about 2 seconds).

→ During operation, while the driver's seat is loaded, do not press the gaiter inwards.
-Risk of crushing-

→ Ensure that no objects or liquids penetrate inside the driver's seat.

→ The driver's seat is not waterproof and should be protected against splashes!

→ Conversion or retrofit work on driver's seats manufactured by Grammer may only be performed by approved specialised workshops, trained personnel or suitably instructed persons, taking account of the applicable operating, maintenance and installation regulations as well as country-specific regulations.

→ There is a risk of injury and material damage if the installation is carried out improperly, and in addition, the functionality of the driver's seat cannot be guaranteed.

Dirt can impair the function of the driver's seat. Therefore, always keep your driver's seat clean!

The fabric must not be loosened and removed from the seat frame to clean it.

Risk of injury from the backrest springing forward! When cleaning the backrest upholstery, the seat back must be held by hand when the seat back adjustment lever is actuated.

Please note:

Do not clean the driver's seat with a high-pressure washer!

When cleaning the upholstered surfaces, avoid soaking through the upholstery.

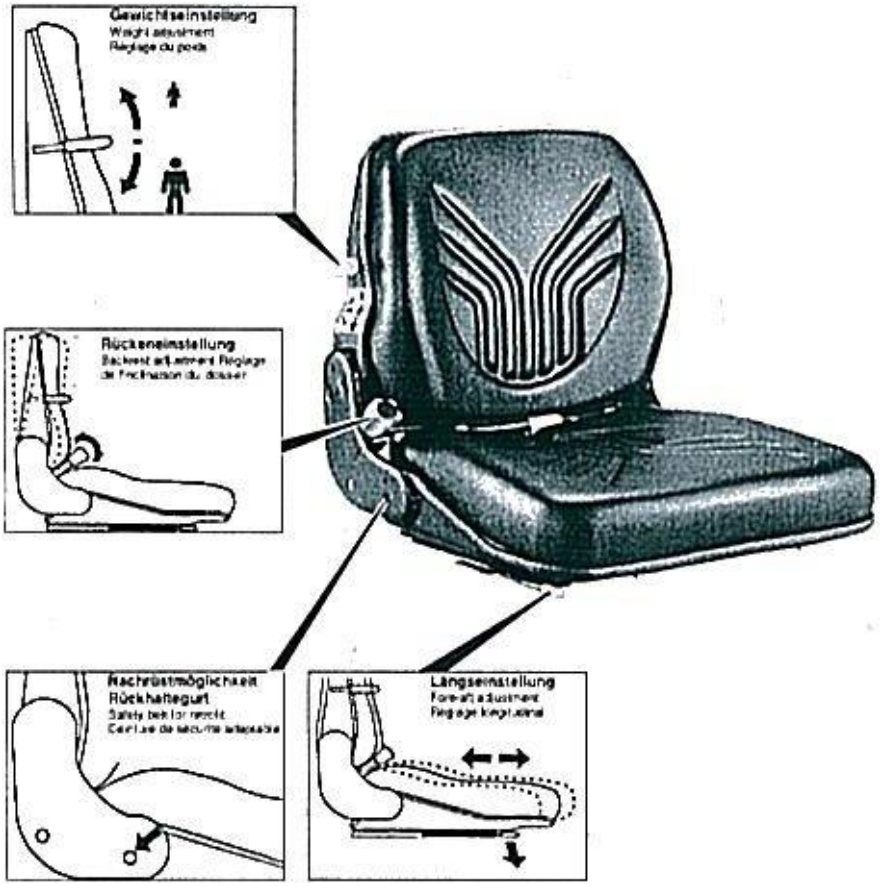
Test commercially available upholstery or plastic cleaners first on a hidden small area to check if it is compatible.

Observe the maintenance instructions

Grammer, Cobo / MT and Thaler do not accept any warranty or liability for damage resulting from improper assembly, application, use or repair.

Sources of the texts and photos for the driver's seat description:
Grammer AG and Cobo / MT

3.8 Setting the driver 's seat B12 - SC45

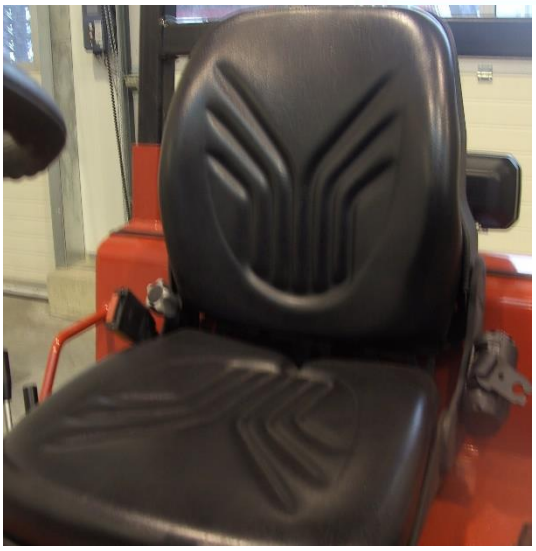


→ Adjust the driver's seat only when the machine is at a standstill.

You can adjust the driver's seat according to your individual needs to body size and
Adjust the body. Adjust the seat so that the levers and pedals are comfortable
When the back rests against the backrest. This is the best way to prevent tensions and fatigue.

The following settings are possible (see graphic):
1. Weight setting:
Adjust the driver's seat to your weight by moving the lever on the right side up or down.
You have 3 options to choose from: light - medium - heavy.
2. Backrest adjustment:
Place the backrest with the wheel on the right side of the driver 's seat on your
Personal needs.
3. Longitudinal setting:
Adjust the length setting by "pulling out sideways" (away from driver 's seat)
Locking lever. Slide the seat forward or back until you are in the desired position. Release the lever and move the seat gently forward or backward until the lever clicks back into place and the seat can no longer move.

3.9 seat belt, interlock, fuse and working lights



Use the seat belt for all types of work.
Check the belt buckle and the belt before you fasten it.
Damaged parts must immediately be replaced.

interlock:
The belt buckle is equipped with an electric switch, which is coupled with the machine control.
If the belt is not fastened and properly locked, the diesel engine cannot be started.

- → Sit down in a way that your back has contact with the backrest.
- → Pull the belt over your pelvis and engage the latch in the belt buckle.
- → Make sure that you do not have any breakable or sharp parts (bunch of keys, glasses etc.) in the pockets.
- → You press the red button at the belt buckle to unlatch the belt. Thereby hold the belt and let it slowly slide in direction of the reel. Do not let the belt spring back with a jerk. This may cause injury or damage the reel.

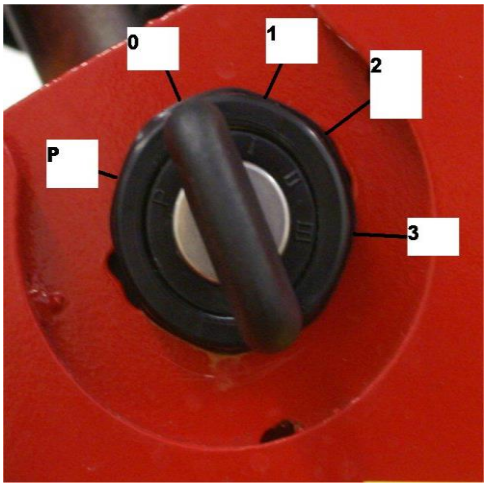
The machine is equipped with a single fuse.
This is located on the left side below the steering wheel.
If this fuse fails the whole electrical system is „dead“.

The machine can be optionally equipped with a working light.
The switch for this headlamp is integrated inside the housing of the headlamp.
The headlamp is installed ahead in the centre of the Fobs cabin.
The power supply is provided by the supply for the horn.

3.10 Starting the diesel engine

The machine is equipped with a "start lock". **The diesel engine can only be started when the seat belt is worn.**

→ Check that nobody is in the danger area of the loader.
→ Allow the engine to run at low speed for a while at low temperatures warm up.
The lower the outside temperatures, the longer the warm-up phase.
→ **Towing the machine at startup difficulties is not possible and prohibited. Towing leads to serious technical damage to the Hydraulic system.**
→ **Before starting, follow the instructions in the chapter "Before commissioning" by.**
→ Stop the engine immediately if the warning lights do not go out.
→ Do not restart the engine until all faults have been eliminated.
→ Do not stop the engine immediately from full load. Allow the engine to run for some time Temperature adjustment with idling gas running.



The ignition lock is located on the right under the steering wheel.

P = parking position - (is not occupied)
0 = ignition off - remove key
1 = ignition on
2 = preheating
3 = start the engine

→ Lift the engine speed slightly with the hand throttle lever.
→ Turn the ignition key to position 1
(Engine oil pressure and alternator warning light must be on).
→ Turn the ignition key against the spring pressure in direction 2 to additionally the pre-glow control lights up. The key depending on the outside temperature Hold this position for some time (max. 1 min / Attention the control lamp does not go by itself).
→ Turn the ignition key against the spring pressure in direction 3.
The starter starts the starting process. Release the key as soon as the engine is started starts (all warning lights must go out).
If the engine does not start after 20 seconds, release the key and wait 1 minute.

3.11 The diesel engine does not start or immediately shuts down

It is impossible to bump start the loader while towing. This results in severe damage to the hydraulic system.

→ Do not try to start the engine for longer than 20 seconds. Then release the key and wait for 1 minute.
→ Repeat the starting procedure.
→ If the engine does not start after the second starting procedure, consult a specialised workshop.
→ Do not, under any circumstances, use a starting aid such as Startpilot or similar. This can result in severe damage to the engine.
→ Do not mix any petrol in with the diesel fuel.
→ Only use commercially available diesel in accordance with DIN EN 590.
→ At low temperatures, use commercially available winter diesel.

Allow the machine to warm up at low temperatures by idling (approx. 5 minutes). Only place the machine under full load when both the diesel engine and the hydraulic oil have more or less reached their operating temperature.

3.12 Run the machine

→ Keep the swingarm as close to the ground as possible while driving.
→ Set your driving speed according to local conditions.
→ Never ride crosswise to the slope.
→ Pay attention to persons and obstacles in the danger area.
→ Set your driving speed according to weather conditions -
In the case of snow and ice, caution should be exercised and the speed reduced.
→Decrease your driving speed **against** a slope, not a slope.

The machine is equipped with 2 pedals.

RW = Reverse
VW = forward drive

→ Adjust the throttle to the desired speed.
→ Place both feet on the pedals and leave them on the pedals.
→ Press the left or right pedal downwards depending on the desired direction of travel.
Press the other pedal without pressure.
The pedals must be of both feet in the respective change of direction of travel "Guided".
Do not press any pedal while the other is blocked.
Leave both feet on the pedals, but do not block its movements.
→ Decrease the speed **with** the pedals. Do not leave the
Pedals free of impact. This leads to the pedals rocking and the machine
Does not come to rest.
→ **A sudden release of the pedals may result in serious injury or damage**
On the machine.
→ Always keep both pedals under control.
→ To stop the machine, move the pedals back in the neutral position, and only after
Stopping the machine, apply the handbrake and remove the feet from the pedals.
→ Push the throttle back to the idle position.

3.13 Stopping, braking, parking and parking

→ Bring the machine to a standstill with the pedals.
→ Do not press the pedals jerky.
→ Do not release the pedals abruptly.
→ The machine is braked or stopped via the drive.
→ This machine has no foot brake.

Hold the machine to the neutral position by pressing the pedals evenly. After the pedals are in the neutral position and the machine has come to a standstill, tighten the handbrake and push the throttle lever back to the idle position.

→ Do not place the machine on a flat, secure surface.
→ The machines can get very hot. Pay attention to the requirements of fire protection.
→ Do not place the machine on a slope.
→ Make sure that no unauthorized person can move the machine away, roll or roll Unintentionally.
→ Release the swingarm to the ground and relieve it completely.
→ Never leave the machine standing with the swingarm or load raised.
→ Due to its design, the lifting rocker is seated by its own weight.
→ An uncontrolled tilting of the bucket can also occur.
→ Disconnect the diesel engine.
→ Tighten the handbrake.
→ Remove the ignition key.
→ If necessary, make a chock.

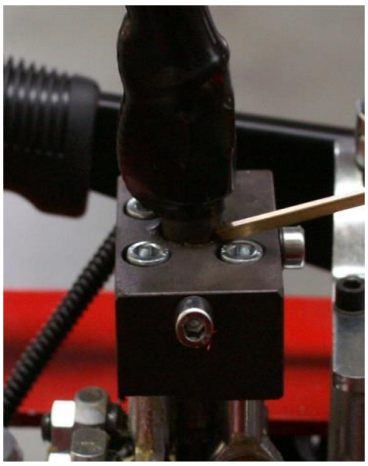
Ensure that no unauthorized person can operate the machine.
Incorrect operation of the machine can result in serious or fatal injuries or serious technical damage to the machine.

The manufacturer is not liable for damage caused by an incorrect or improper use
Use of the machine. The risk is borne entirely by the user / operator.

3.14 Road lock on the joystick



The machine is fitted with a road lock for the control unit (lifting arm).
This lock must be used when driving on roads. It should prevent the lifting device being lowered unintentionally.
Failure to do so can result in serious or fatal injuries or serious technical damage.



The machine is fitted with a control unit which meets the statutory requirements regarding a road lock.
If the joystick is in the neutral position, it can be moved upwards or downwards by a latch fitted in the cross controller.

Downwards = road lock is switched on – the joystick can not be moved any longer. Unintentional lowering of the lifting arm during road travel is impossible.

Upwards = road lock is switched off – all functions are active.
This photo shows the joystick in the down position – the road lock is switched on.
Never use force to operate the joystick when it is locked.
This can result in serious technical damage to the cross controller of the control unit.

This photo shows the road lock in its switched off state – all functions are enabled.
The joystick can be moved freely in all directions without **effort**.

3.15 Road lock for additional control unit, operating powered equipment

The additional control unit is fitted with a road lock in the same way as the joystick.
A handle is located on the lever for this purpose with which the lock can be lifted up.
In addition, the additional control unit is fitted with a one-sided latch as standard.
This means: The lever can be locked in both the neutral position (road lock) and in the working position (e.g. road sweeper).

This photograph shows the lever in the neutral position – road lock on.
Never use force to operate the lever when it is locked. This can result in serious technical damage to the controller on the control unit.

This photograph shows the lever in the unlocked condition – road lock, or the latching function is switched off.

In this state, the lever is held in the centre using springs for most attachment functions (e.g. grapple rake).

When combined with a pressure-free return, most motorized attachments can be operated.
Please note the volume requirements or other requirements of the loader or the attachment (the operating instructions of the respective attachment in conjunction with this manual).
The attachment must be appropriate for the type of loader in regards to its volume requirement and in particular the oil cooling.
Ask your dealer or us directly **before** you purchase a corresponding attachment.
Many attachments which can be bought "cheaply" from the dealer around the corner or on the Internet, are not suitable for use on the yard loader.
For this reason, all warranty claims and guarantees are void if an attachment is used which was not sourced from us or for which no written approval has been given by us. Any resulting damage is the sole responsibility of the user/operator.
Thaler Maschinenbau develops and manufacturers attachments for this yard loader which can be used without any second thoughts on the machine.

3.16 Transport lock, blocking of the articulated joint for maintenance

The machine is equipped with a transport lock or a fuse to block the articulated joint. This fuse is there for your safety and can help prevent serious or fatal injuries.

→ Attach the fuse when the machine is mounted on a transport device from A transported to B.
→ Attach the fuse for all repairs.
→ Attach the fuse during all maintenance.

Failure to do so can result in serious or fatal injuries. The responsibility for this lies not with the manufacturer but only with the operator/user.

→ **Place the buckling fuse before placing the machine on a transport device to thenupt.**
→ **Never operate the steering with the articulated joint blocked.**
→ **After transport, first loosen/remove the buckling fuse.**
→ **During maintenance work in the buckling area of the machine, the buckling Protection is Install.**

Drive the loader onto the transport device and steer the machine straight.
The buckling protection is located on the left side of the front car in the direction of travel with 2 x M 12 screws attached (see photo above).
These screwsare soldering and screwing the buckling protection on the holders on the frontand rear**carriages (see photo below).**
Now the loader can be lashed on the transport device or maintenance work can be carried out.
Proceedin reverse order to remotely protect the buckling fuse.

3.17 Changing attachmentdevices

This operating manual only describes how to deal with:
→ the shovel
→ of the pallet fork
→ the dung fork or the crocodile bite
For all other attachmentdevices, theoperating instructionsare to beused for this purpose.

→ Use only attachments that are suitable for this machine or are
Thaler.
→ Thaler assumes no liability for the, use of attachment devices that
are not suitable for the respective loader type, which are not coming from ourcompany
or for which no written release has been given by us. For all of them
resulting injuries or damages are solely liable by the operator/ user.
→ Use the attachments only in accordance with their intended purpose Use.
→ Unapproved attachments may overload the machine.
→ It can cause instability of the machine.
→ It can lead to the machine tipping over.
→ It can cause diesel engine or hydraulic power units to overheat.
→ It can result in serious or fatal injuries.
Place the mounting bolts of the device holder under the mounting hooks of the respective attachment device (note the respective equipment of your machine).
Lift the swingarm and make sure that the device is picked up on the left and inaccordance withthe recording frame o(note the design of the machine).
Pull in the attachment device.
Secure the attachment device witha bolt and make sure that the attachment is properly seated and cannot be lost..
Turn off the motor and move the control lever for theauxiliary hydraulics several times in both directions, to switch the cables without pressure.
Depending on the device, connect the hydraulic lines to the couplings provided for this purpose.
When dismantling the device, proceed in reverse order.
→ Make sure, thats the attachment device is secure.
→ If possible, place the attachmentdevices in such a way that they do not
exposed to sunlight (pressure build-up in the pipes).
→ Before uncoupling, turn the cables without pressure as described above.
→ Attach the dust caps to the plugs and sockets.
→ When dome, keep a tub under to absorb any leaking oil.
Dispose of this environmentally friendly.

3.18 Operation with the bucket, pallet fork and grapple rake



Incorrect or improper use of attachments can result in serious accidents with serious injuries or even fatal consequences.

→ Only use the attachments in accordance with their intended use.
→ Please note that, when attachments are fitted to the machine, it is longer and turning takes more space and swings out further.
→ Always ensure that no-one is in the working or hazard area of the machine.
→ Immediately stop working if anyone enters the working or hazard area.
→ Only use attachments that are suitable for this type of machine.
→ Unsuitable attachments can result in severe or fatal accidents.

Bucket:
Bucket, earth bucket, large or light material bucket, stone scoop, potato bucket, etc. are only to be used to push, excavate or transport bulk materials.
Using the bucket as a working platform, for example, is forbidden.

(Only transport close to the ground, see page 21)

Pallet fork:
The pallet fork is only intended to pick up, transport, stack or load pallet-borne material or boxes, cage pallets, etc.
It is not permitted to use it to transport or stack large or round bales, as the pallet fork does not prevent the load from tipping off over the rocker.

(Only transport close to the ground, see page 21)

Manure fork or grapple rake:
The manure fork or grapple rake is only to be used to muck out the barn and transport or load manure.
Use of the manure fork or grapple rake for removing silage, or to transport large bales or round bales, for example, is forbidden.

(Only transport close to the ground, see page 21)

→ Always adjust your speed to suit the local conditions and the properties of the material being transported.
→ Adjust your speed accordingly: the higher the load on the machine, the lower the speed you should choose.
→ Always ensure that no material can fall from the attachment over the rocker.
→ Avoid excessive wheel spin. This leads to increased tyre wear and fuel use, and the performance of your machine is not fully utilised.
→ Only drive with the load lowered. Particularly when the loader is folded, there is an increased risk of tipping. Adjust your speed to suit the local conditions and do not use the loader on steeply sloping ground.

Working with the bucket:

→ To pick up loose material, lower the bucket so that it is parallel to the ground and drive into the material to be loaded.
Adjust the vehicle speed to suit the characteristics of the material to be loaded.
Driving at top speed with full throttle into the material to be loaded, i.e. "racing", only results in premature wear of the machine.
In addition, it can result in serious injury.

→ If you want to load material that is difficult to penetrate with the bucket, use the control lever to perform slight up and down movements of the scraper blade.
With the machine moving forwards at the same time, this will result in the bucket being completely filled more quickly and safely than "racing into" the pile.
Your machine will reward you with a long and trouble-free service life.

→ When excavating, lower the bucket to the ground and tip it far enough forwards so that a digging angle is created.
After the scraper blade has penetrated the ground, flatten out the bucket again so that the most even layer possible is removed. Avoid unnecessary wheel spin.
Choose the "thickness of the layer" according to the properties and resistance of the material. With hard ground, use the control lever to move the scraper blade up and down to make excavation easier.

Working with the pallet fork:

→ Only pick up material that is securely fastened on pallets or in crates.

→ Always ensure that no material can fall over the back of the forks.

→ Slowly drive the forks under the pallet or crate. Ensure that the weight is evenly distributed. Drive carefully forwards until the pallet or crate lies on the back of both forks. Lift the load carefully and tip slightly to the rear. Only lift the load until the pallet or crate is off the ground.
Ensure that the load is evenly distributed and that it will not fall off to the left, right, front or rear.

Working with the manure fork or the grapple rake:

→ The manure fork and the grapple rake are only designed to loosen, pick up, transport and load manure or loose straw, hay or grass.

→ Neither the manure fork nor the grapple rake are designed to remove silage or to transport round or big bales.

→ Open the clamp on the attachment. Lower the fork until it is parallel to the ground and drive into the material to be loaded. Adjust your vehicle's speed to suit the characteristics of the material to be loaded.
Driving at top speed with full throttle into the material to be loaded, i.e. "racing", only results in premature wear of the machine.
In addition, it can result in serious injury.
To achieve sufficient filling, proceed as you would with the bucket.
Close the clamp and loosen the hard-packed material with careful up and down movement of the tines. Avoid sudden jerky movements and forceful "tearing" of the manure on the floor of the stall. This only results in premature wear of the machine.

→ **Observe these procedures and your machine will reward you with a long and trouble-free service life. Unnecessary repairs lead to unnecessary costs. Bear in mind that damage to the machine or to the attachments that results from incorrect, reckless and violent work with the machine are not covered by the manufacturer's warranty.**

3.19 Measures in the event of the machine tipping over



The correct actions to take if the machine tips over:

→ Immediately switch the engine off, if improper and reckless operation of the loader caused it to be at an extreme angle or to tip over.

→ Hold on tight and remain seated in the machine. Under no circumstances should you attempt to jump off the machine if it is tipping over.

→ **Under no circumstances should you start the engine up immediately after righting the machine.**

→ Engine oil can run into the suction duct or the combustion chamber of the engine if the machine has overturned. Even a short go at starting the engine will cause surge pressure in the engine.
The result is an extremely expensive repair or replacement of the engine.
Such damage is not covered by the manufacturer's warranty or guarantee, rather is the sole responsibility of the user/operator.

→ Contact a specialist workshop to have the engine inspected. Only start the engine again when approved by a specialist workshop for operation.

→ Check the hydraulic oil levels and the water level in the battery.
Top these up if necessary.

→ Check the engine oil level and the coolant.
Top these up if necessary.

→ Spilled oil or other fluids are harmful to the environment.

→ Catch any leaking oil or other fluids and/or remove any oil and fluids that have already leaked and dispose of them in an environmentally-friendly manner.

→ After the machine has been released or repaired, clean it at a suitable location (paved surface with oil separator). Carefully clean the machine to completely remove any leaked oil and other fluids.

→ Spilled oil damages our environment and increases the risk of fire on your machine.

→ Spilled battery fluid damages our environment and results in damage to the paintwork on the machine.

→ Spilled coolant damages our environment and results in damage to the hoses and plastic parts on the machine.

Please observe and implement these points in the interests of our environment.
We can all contribute to the protection of our environment with little effort.

Remember:

We have not inherited the Earth and do not own it.
We have borrowed it from our children and must hand it back again.

3.20 Measures to be taken at high or low outdoor temperatures

High or low outdoor temperatures can cause damage to the machine.
Take the following precautions to prevent damage.

At **high** temperatures:
→ Keep the air intake ducts for the water cooling clean.
→ Keep the cooling fins of the radiator clean.
→ Keep the engine free from dirt. A coating of dirt on the engine prevents the engine from loosing heat in a controlled manner.
→ Use the correct viscosity grade for engine and hydraulic oils.
→ Check the air filter regularly.
→ Keep the whole machine free from oil and dust. Perform regular cleaning to reduce the risk of fire on the machine at high outdoor temperatures.

At **low** outdoor temperatures:
Watch out for the weather conditions. Snow, mud and black ice can cause serious accidents.
Very low temperatures can make starting aids necessary.
These might include oil or fuel heaters, additional starter battery, etc. Consult your dealer.
Do not use petrol as an additive to the diesel fuel or starter assistance spray (Startpilot).
Additional starter batteries may not be connected in series (24 V).
→ Use engine oil with the correct viscosity.
→ Use commercially available winter diesel.
→ Make sure that the starter battery is fully charged.
→ Fill up the fuel tank at the end of each working day.
→ Where possible, park the machine in closed rooms or at least under a wind-protected canopy or similar.
→ After starting the engine, allow it to idle and warm up.
The lower the outdoor temperatures, the longer the required warm-up time (below 0 °C).
→ **Immediate engine speed acceleration at low outdoor temperatures can cause damage to the hydraulic system of the machine and/or the diesel engine.**
→ At temperatures around -5 °C, the diesel tank can experience temperatures of down to **-20 °C** depending on the airstream or drafts. Due to this, there may be problems with winter diesel even at moderate sub-zero temperatures. To avoid problems with the diesel, add approximately 0.002 l of flow improver to the tank before refuelling. You can thereby avoid problems with your machine with minimal effort.
Tractor units, trucks or cars filled from the same tank will not normally have problems because they have a coarser filter or are fitted with electrical fuel heaters.

3.21 Operation at sub-zero temperatures

Diesel and biofuels sulphide at sub-zero temperatures. The fuel becomes thick and viscous and glues the microporous filter surface. This leads to faults in the diesel circuit and to power losses in the dieselengine. Winter diesel is also not free of these problems. Winter diesel is safe under **Laboratory conditions** up to -20°C.
Depending on the weather conditions, -20°C is achieved at an outside temperature of e.g. -7°C on the diesel tank of the machine (e.g. wind cooling, driving wind, etc.).
As a result, problems with the operational safety of the machine may occur as early as -7°C outside temperature.

Operational safety can be increased by adding flow improvers when refueling the machine.
(See page 53)

3.22 Towing and transport

It is not possible to tow the machine.
Beforetowing the machine, the two lines of the pump must**be closed** to the motors **by a specialist.kstatt die beiden Leitungen der Pumpe zu den Motoren k**

→ Remove the two pressure lines from the pump and connect them to a suitable intermediate piece.
→ Close the connections at the pump blind to preventarun.
→ Now you can tow the machine at step speed (max. 5km/h).
→ Tow the machine only as far asfor the mountains from the danger zone necessary (max. 500m)
→ For longer distances, use a transport device or insert the machine place in repair.
→ Tow the machine only with a towbar.
→ Notethat the steering and brakes are only partially functional.
→ **Improper towing can result in serious damage to total failure of the driving hydraulics. Resulting damages do not fall under the warranty of the manufacturer, but is solely the responsibility of the operator/ User.**

Transport:

→ Before transport, clean the machine of coarse dirt.
→ Make sure that the transport equipment is sufficiently load-bearing.
→ Clean the ramps and wheels of the machine of oil anddirt, to prevent slipping.
→ Cautionin case of snow and smooth ice (risk of falling during loading).
→ If possible, always charge the machine backwards (Danger of overturning when loading forward) .
→ Use only ramps that are sufficient for the weight of the machine and are undamaged.
→ Before the machine is to be lathed, apply the transport barrier as in the "Transport lock" described.
→ Tolathe machine at the designated points with beltsthat are the weight of the machine are sufficient.
→ Use wedgesto secure the machine.

3.23 Device locking mechanically

Only the Thaler standard recording is described here in the manual mechanically.

The device lock is designed as a simple bolt with locking splint.

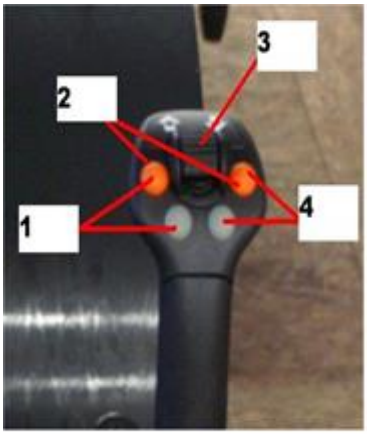
→ Before starting work, check whether the attachment is actually working properly is locked.

3.25 Diesel engine – general

→ Always observe all instructions contained in the operation and maintenance manual of the diesel engine. This manual is issued with the loader's operating instructions. Keep it in a safe place so that it is available at any time as required.
→ The diesel engine is guaranteed for 2 years. This does not apply to the electrical components of the diesel engine such as the oil pressure switch, alternator, starter motor and temperature probe. These are guaranteed for one year from the date of delivery.
→ V-belts are a wearing part and very dependent on regular and correct maintenance. All filters and V-belts are not covered by the warranty.
→ If there are any differences in the maintenance intervals specified in these instructions and in the manual for the diesel engine, the information contained in **these** operating instructions is to be followed.
→ Neither these instructions nor the diesel engine's manual contain detailed information about repairing or overhauling the engine. This is only to be performed by authorised specialised personnel.
→ Only use genuine maintenance materials from Thaler or Yanmar.
This is authorised by Yanmar and meets the required technical standards.
The use of "cheap" filter materials can, under certain circumstances, void any warranty claims.
→ For all work on the diesel engine, switch the engine off, remove the ignition key and the battery master switch. Ensure that no unauthorised person can start up the engine while you are working on it.
→ Inspect regularly (e.g. at every refuelling) to ensure that all hoses from the engine to the air filter, from the engine to the radiator, etc. are properly attached and fastened.
→ **Never wash the machine with the diesel engine running. Any water that is sucked into the machine can cause surge pressure in the engine.**
→ **Washing with the engine running can destroy the fan blades.**
→ **Damage to the diesel engine due to incorrect maintenance, the failure to carry out visual inspections, the use of incorrect or poor-quality filter materials, operation with too little, the wrong sort or poor-quality motor oil are not covered by the manufacturer's warranty, rather they lie solely in the responsibility of the user/operator.**

3.27 pressure relief of the hydraulic clutches, coupling and uncoupling of the equipment devices

The machine is equipped with a control unit, which is – depending on type and construction – provided either with a mechanical lever, or an electrical function or a comfort control for the 3. control circuit (see also pages 35, 46 and 47). Proceed as follows in order to depressurize the couplings.



mechanical lever:
Switch off the diesel engine and move the mechanical lever to the left and to the right, in order to relieve the couplings.
electrical version:
You have to switch off the diesel engine in order to relieve the electrical version.
After the ignition is switched on, you can relieve the couplings with the knobs on the joystick.
comfort hydraulics proportional control:
You have to switch off the engine to relieve the couplings. After the engine has stopped you have to press and hold the knob on the joystick. Now move the joystick forward and backward to relieve the couplings.
Please note when coupling the equipment device / attachment:

1. Shut the attachments (e. g. crocodile pincer) completely.
2. Put all functions of the attachment in neutral position.
3. Put all functions of the joystick in neutral position.
4. Switch off the diesel engine.
5. Depressurize the couplings.
6. Disconnect the hoses of the attachment from the machine.
7. You have to catch and dispose properly possibly escaping hydraulic fluid*.
8. Start the diesel engine.
9. Open the equipment locking.
10. Park the attachment on an even surface.
11. Do not put the attachment in the direct sunlight.

* The machines are equipped with couplings, which can also be coupled or uncoupled with residual pressure. These couplings release the hydraulic fluid outward into the coupling. This gives the impression that the coupling would be possibly defective.

4.1 Safety instructions for maintenance and inspection




- → Persons assigned to maintaining the machine must have the necessary expertise.
- → Suitable working and/or protective clothing should be worn for all maintenance work.
- → Hearing protection should be worn if there are high noise levels.
- → Maintenance work may not be performed if these instructions have not been read and understood.
- → Observe all basic safety instructions and the warning signs fitted on the machine.
- → Observe all general safety regulations, including those that are not listed in these instructions.
- → The operating instructions must always be in the loader or in its place of use.
- → All maintenance work may only be performed if the machine has been secured.
- → Working under the raised loader swing arm is forbidden. If work under a raised swing arm is unavoidable, the arm must be secured using an appropriate support.
- → Do not perform any work or procedures that could endanger your safety.
- → Make sure that all articulated joint safety devices are applied as described in the "Transport lock" section.
- → Only work with functional, undamaged and suitable hand tools.
- → Unsuitable tools can result in serious injuries.
- → Do not smoke when handling flammable liquids.
- → In the event of a fire, do not try to extinguish the machine with water, rather use suitable powder CO_2 or foam extinguishers. If water is used to extinguish a fire, burning fluids can "float away".
- → Inform the fire brigade in every case.
- → Avoid oils and greases coming into contact with the skin or eyes.
- → Risk of scalding from hot oil.
- → Do not use fuels or solvents to clean the skin.
- → All leaks must be fixed immediately.
- → Do not allow oil or oily waste to enter the soil or watercourses.
- → Leaking oil or fuel is to be collected and disposed of in an environmentally friendly manner.
- → Any oil or fuel that has already escaped should be absorbed using a suitable binding agent and disposed of in an environmentally friendly manner.
- → Bio oils, biodegradable oils etc. must also be disposed of in an environmentally friendly manner, just like any other oil.

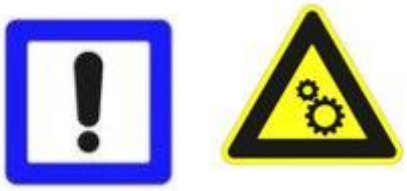
4.2 Reduction of residual pressure, securing the machine

Certain tasks need to be carried out before starting maintenance.
→ Park the machine on a level, firm and dry surface.
→ Lower the swing arm.
→ Apply the handbrake and switch off the engine.
→ Switch off the battery master switch.
→ Depressurise all the hydraulic circuits and move all the levers to neutral position.
→ If required, apply a wheel chock.
→ Clean the machine of any coarse dirt.
→ Perform a visual inspection for leaks on all the components and hoses.
→ Perform a visual inspection on the machine (tyres, attachments, locks, etc.).
→ Remove the ignition key.
These tasks should also be carried out when the machine is parked after daily use.

Residual pressure in the hydraulic system
→ Hydraulic systems can be under considerable residual pressure.
→ Depressurise the hydraulic circuits before opening them.
→ A jet of hydraulic oil under pressure can penetrate through the skin.
→ Consult a doctor without delay if oil penetrates into the eyes or skin.
→ The residual pressure only drops gradually. Even after a long period of standstill, there can still be residual pressure in individual systems.
→ Move all of the controls on the control device (joystick, auxiliary hydraulics, etc.) several times in all directions with the engine switched off to depressurise the lines.
→ Actuate the inch/brake pedal several times to depressurise the drive hydraulics.

Even now, there can still be residual pressure in the system. When opening the hoses, proceed with the required caution to avoid injuries.

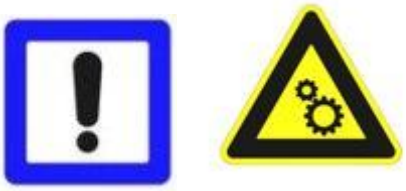
4.3 Daily maintenance



The following work must be carried out on a daily basis:

→ Cleaning the machine.
→ Check for damage to the machine.
→ Control for leaks.
→ Checking the tyres for damage.
→ Check dirt separators (cyclone) fromair filters.
→ Check engine oil level if necessary.
→ Check hydraulic oil level if necessary.
→ Check all screws on a fixed fit.
→ Check all wheel screws for fixed seat.
→ Check the seat belt.
→ Control of the electrical system, instruments, indicator lights and optical as well as acoustic warning devices.
→ All hydraulic functions (steering, swinging lifting - lowering, etc.) to function Check.
→ Inspect attachments.
→ Check the exhaust for defects or excessive smoke development.
→ Fops-Rops-guard check for proper fastening and damage. Lubrication according to lubrication plan.
→ Vorsatzgeräte abschmieren.

4.4 Weekly maintenance

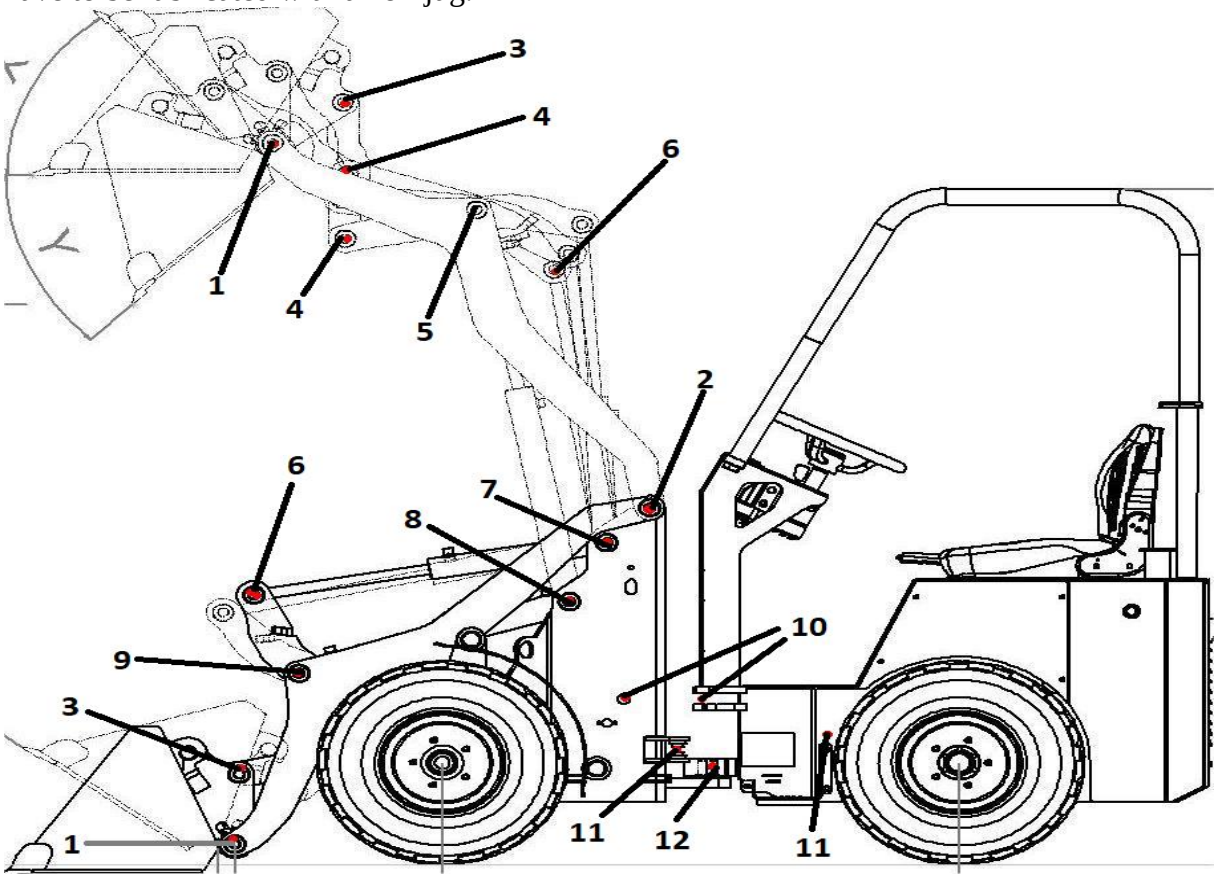


Do the following work once a week:

→ Check the fuel system for tightness.
→ Check wheel motors for tightness.
→ Check air intake ducts and cooling fins on the engine for contamination.
→ Check the motor for tightness.
→ Check the acidity of the battery.
→ Check attachments (welds, screws, etc.) .
→ Piston rods of the hydrauliccylinders for damage and contamination.
→ In case of damage, replace the piston rod or cylinder.
→ Remove dirt thoroughly (leads to leaking on the piston rod).
→ Check the installation of pipelines and hoses.
→ Clean dirt separators (cyclone) on the air filter.
→ Check the oil level in the oil bath air filter and refill it if necessary.
→ Check the installation of the electrical cables.
→ Oil lubrication of all levers, bowden pulls and hinges.
→ Tighten all screws.
→ Check the motor bearings and fastening of the wheel motors.

4.5 Lubrication Schedule

Lubricate all lubrication points daily with water-resistant multi-purpose grease.
All other moving parts such as handbrake levers, foot pedals, bowden pulls, etc.
have to be lubricated with an oil jug.



1: Swingarm front
2: swingarm rear
3: Push rod front
4: Push rod rear
5: Deflection lever
6: Device cylinder at the front
7: Rear device cylinder
8: Rear lifting cylinder
9: Lifting cylinder front
10: pendulum lever front + rear
11: Steering cylinder front + rear
12: main bearing

4.6 Running-in period and 5 H Service

You have decided to purchase a brand new machine. To be able to enjoy your new machine for a long time, you should observe a few things.

The diesel engine is new and has been run for perhaps 3 hours prior to delivery.
Allow your engine to have a running-in period, and do not operate at more than 70 % of its capacity during the first 50 operating hours. Keep the speed of the engine under three-quarters of full speed.

The following tasks should be performed after 5 operating hours:
→ Retighten all bolts.
→ Retighten all wheel bolts.
→ Check all pipes and hoses, tighten up if necessary.
→ Check all engine mounts and that the wheel motors are securely fitted, retighten if necessary.
→ Give the whole machine a thorough visual inspection.

4.7 50 H Service

Your machine is brand new and is in the start-up phase.

Therefore, carry out the following work after the first 50 hours of operation.

→ Change engine oil
→ Change Hydraulic oil filter.
→ Change fuel filters.
→ Clean oil bath air filters and change oil.
→ Clean dirt separators (cyclone).
→ Check the acidity of the battery if necessary.
→ Tighten all screws.
→ Retighten all wheel screws.
→ Check and tighten all pipes and hoses.
→ Check all electrical equipment of the machine.
→ Check all hydraulic functions.
→ Subject the entire machine to a detailed visual inspection.

This customer service after the first 50 hours of operation is with the most important customer service you perform. With this customer service, contaminants of the oils caused by the "inflow" of the individual components are removed from the machine. The "saving" of this customer service can lead to very expensive and above all completely unnecessary repairs.

4.8 Hydraulic system – general, maintenance of the hydraulic hoses



During maintenance of the hydraulic system, the utmost levels of cleanliness must be maintained to prevent a premature failure of the system.

→ Observe the maintenance intervals.
→ Before opening the hydraulic tank, clean off the lid and the surrounding area.
→ Only use clean oil cans.
→ Only use fresh, clean hydraulic oil.
→ Only fill up the oil to the middle sight glass (with the swing arm lowered).
→ Do not overfill the tank.
→ If the hydraulic oil is very contaminated, it must be changed **immediately** – even if the service interval has not been reached. If the oil is not changed when it is very contaminated, it may cause total failure of the hydraulic system in certain circumstances. Damages that occur because the hydraulic oil was not changed are not covered by the manufacturer's warranty. The risk is borne solely by the user/operator.

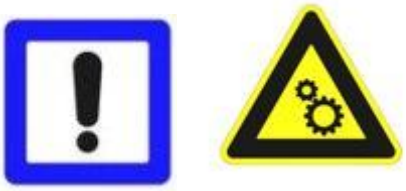
Only change the hydraulic oil in the tank. It is vital to remove any contamination in the tank by rinsing it out.
Fill up to the filling specifications using fresh, clean oil.
→ Observe the specifications of the hydraulic oil.
Please note: Only use e.g. biological oil after written approval has been given by the manufacturer.
Damage resulting from incorrect hydraulic fluids is not covered by the manufacturer's warranty. The risk is borne solely by the user/operator.
After major repair work where the axial piston pump or the engine has been run dry, the system must be bled before starting the diesel engine.
Incorrect starting-up results in the immediate destruction of the drive.
This damage is not covered by the manufacturer's warranty. The risk is borne solely by the user/operator.

→ Only use original hydraulic hoses.

Requirements	Test times	Change intervals
Normal usage times of up to approx. 3 hours per day (approx. 1,000 operating hours per year)	1 x annually	Every 6 years
High usage times of up to approx. 5 hours per day (approx. 2,000 operating hours per year)	2 x annually	Every 4 years
Very high usage times as of 5 hours per day (more than 2,000 operating hours per year)	2 x annually	Every 2 years

Hydraulic hoses are subject to very high loads.
Burst hydraulic hoses can result in serious injury or severe technical damage to the hydraulic system.

4.10 Maintenance intervals, filling quantities and specification



Run the work, depending on which interval is reached first.
Daily and weekly maintenance work can be found in chaptern.
The works, which are done after the first 5h or 50h, can be found in the respective chapters.
You will find all the work to be carried out in the previous chapters

Work	50 h	200 h	300h	1000h	2500h	Or annually	2 years
Clean air filters	X					X	
Change engine oil and filter		X				X	
Change hydraulic oil filters			X			X	
Change hydraulic oil				X			X
Check fuel system		X				X	
Change fuel filters			X			X	
Major inspection			X			X	
Setting the valve clearance			X				
Clean injection nozzles or adjust			X				
Partial overhaul of the diesel engine					X		
General overhaul of the diesel engine					5000h		

Engine oil	Approx 2.0l	Synth 5 W 40 (Page 85)
Hydraulic fluid	Approx 20l	Synth 5 W 40 (Page 85)
Fuel tank	Approx 20l	Diesel fuel (DIN EN 590)

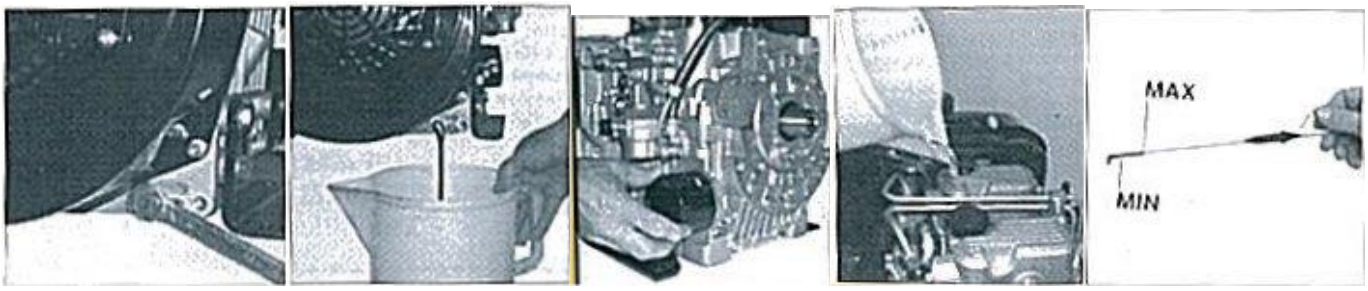
All required maintenance materials can be ordered from your dealer or directly from us.

Synt 5W-40

Product characteristics application	The significantly improved engine quality of Synt 5W-40 results in particular from the further improved wear protection and improved engine cleanliness, even with extended oil change intervals (according to the manufacturer's instructions !!) Synt 5W-40 is suitable as a high-performance, low-friction motor oil for demanding engines. It is recommended for car, petrol and diesel engines, including turbo versions and for direct injection engines, under all operating conditions (without PD, WIV, DPF)

Usable for	ACEA A3/B4 API SM, SL/CF BMW longlife-01 GM-LL-B-025 MB 229.3 VW 502.00/505.00 Renault RN 0700 / RN 0710 PSA B71 2296

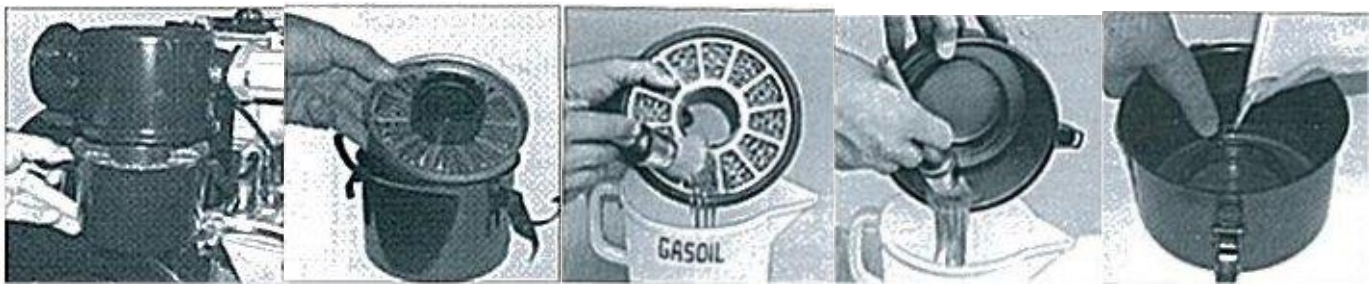
4.12 Engine oil change, clean air filter



Source: Lombardini Motoren GmbH

For engine oil change, place the machine on aflat, fixed surface.
Back up themachine as described in the manual. Observe all safety regulations.

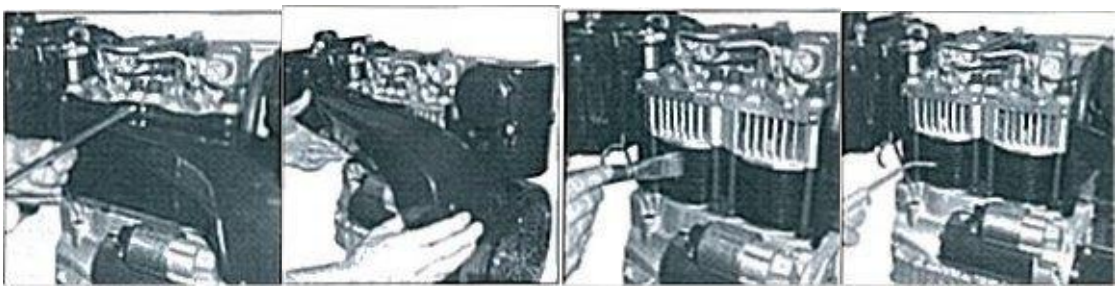
→ Remove the drain screw. Drain the oil into a suitable container.
→ Remove the old filter.
→ **Dispose of filters and oil in an environmentally friendly manner.**
→ Rub the seal of the neuen filter with oil and mount it by hand.
→ Reassemble and tighten the drain screw.
→ Remove the filling screw and refill the engine oil.
→ Check the oil level with the measuring rod.



Source: Lombardini Motoren GmbH

→ Open the air filter and remove the item.
→ Clean the upper filter cup.
→ Clean the filter insert with diesel fuel and dry it with compressed air.
→ Empty and clean the lower filter cup.
→ **Dispose of oil and diesel fuel in an environmentally friendly manner.**
→ Refill engine oil until the mark and reassemble the filter.
→ **Make sure that the air filter is filled and mounted correctly. Otherwise, you can dirt and dust enter the engine and cause serious damage to the Cause total damage.**

4.13 Cleaning cooling fins, changing hydraulic oil filters



Source: Lombardini Motoren GmbH

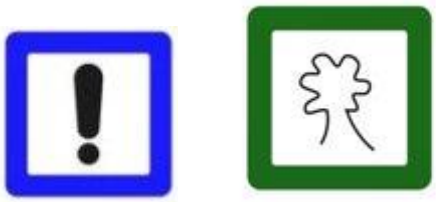
Observe all safety regulations and secure the machine before you start.
→ Remove the fan hood.
→ Clean the cooling fins with a brush and kerosene.
→ Dry the ribs with compressed air.
→ Reinstall the fan hood.
→ Clean the machine of any leaked kerosene.

Openthe red lid of the hydraulic oil filter carefully.
Remove the aluminum oil guide.
Pull out the old filter and dispose of it in an environmentally friendly manner.
Insert the new filter.
Gently press the aluminum oil guide into the housing.
Mount the lid and tighten it carefully with a key.

Note thats is the lid made of plastic and can break when tightening too tightly.

Fill in any leaked hydraulic oil until the level is about
has reached the center of the sight glass.

4.14 Cleaning of the machine, care of the plastic**parts**



In order to keep the machine in a safe and technically and optically perfectcondition, daily cleaning is necessary.

Clean the machine only in suitable places (oil. separators).

→ Clean the tins, handles, controls and footspace daily.
→ Clean the machine thoroughly once a week.
→ In case of contact with aggressive materials such as **slurry, barn manure or stray salt,** thoroughly clean the machine immediately after completion of these work. Slurry, barn manure, salt and similar materials are very aggressive and both the painted and galvanized parts of your machine. There can be very severe paint damage.
→ **Paint damage caused by poor cleaning is, not covered by the manufacturer's warranty. Responsibility lies solely with operator/ user.**

→ When cleaning, also think of the underside of the machine.
→ No dirt or mud must accumulate here.
→ Before cleaning with water, cover the intake nozzle of the air filter.
→ Make sure that no water enters the exhaust.
→ Do not clean electrical components with the high-pressure cleaner.
→ When washing, set the high-pressure cleaner to a maximum of 120 bar and 80°C.
→ Do not wash directly to the stickers or other sensitive parts.

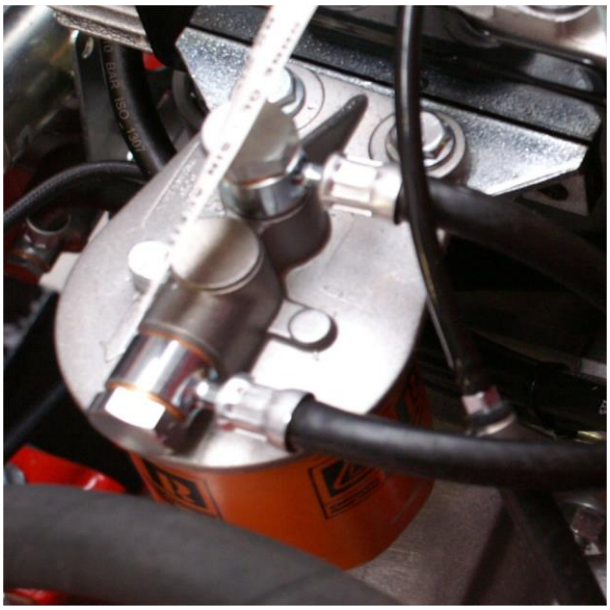
→ *Do not wash the machine with a high-pressure cleaner for the first three months. The paint is not yet fully hardened, which means that when cleaning with a high-pressure cleaner can cause paint damage.*
→ *In the delivery state, the paint is not yet fully hardened. Contact with manure, slurry, salt or similarly aggressive materials can cause severe damage (discoloration or detachment of the deck-sent). If possible, avoid contact with these aggressives for the first 3 months materials or clean the machine immediately after contact with sponge and water hose (do not use a high-pressure cleaner). No Aggressive Cleaner Use.*
→ The plastic parts of the steering column or driver's seat are regularly fitted with cockpit spray or treat the same treatment in order to prevent premature fading or porous, the parts are Prevent.
→ The artificial leather covers of the driver's seat regularly with an appropriate care product Treat.
→ All bellows of the machine regularly with an appropriate care product Treat to avoid fading or premature wear.

4.15 Daily Security Check

Perform a daily security check on your machine.
Damage found must be repaired immediately.

To be checked are:
→ Ascent, stepping board, handles, operating elements on a proper seat and Function.
→ Check all steel components for damage and loose screws.
→ Check the guard rail.
→ Check the seat belt.
→ Check the device recording and the device lock.
→ Check the condition of the reflectors and the lighting.
→ Check the tyres for foreign objects.
→ Check the condition of all warning stickers.

4.16 Changing fuel filters, venting diesel engine



The machine is equipped with several diesel filters.
There is a sieve in the tank nozzle.
In the shut-off valve of the tank there is an suction sieve, which can be cleaned.
To do this, the tank must be drained.

In the intake hose from the tank to the pump there is a fuel pre-filter, which canonly be renewed with housing. kpl

And there is the main filter on the front of the engine.

→ Refuel the fuel tank fully.
→ Close the shut-off valve at the tank outlet.
→ Replace the pre-filter with a new one.
→ Remove the main filter on the motor.
→ Rub the seal of the filter with fuel and mount the filter by hand.
→ Open the shut-off valve.
→ Diesel fuel is harmful to the environment. Catch any leaking diesel and dispose of this and the filters in an environmentally friendly manner.

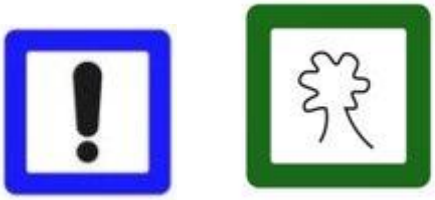
The diesel engine is self-venting. Use the following procedure to restart the engine after a filter alarmor after the tank has been released.
→ The fuel tank must be full.
→ Open the shut-off valve.
→ Start the motor in short bursts ("organ", max. 20 seconds each)
→ Wait 1 minute.
→ Repeat this process until the motor starts.
→ Run the motor without load for a few minutes to completely control the system Venting.

4.17 Opening the driver's cab Open

The driver's cab can be opened for maintenance purposes.

To open the driver's cab you need an 8mm key. This was included in the scope of delivery of your machine. Insert the inbus key into the designated opening. Rotate the key to open and close in the direction indicated on stickers. The driver's cab / bonnet can be opened by 180°.

4.16 Battery, Electrical System, External Start



The battery is maintenance-free. In order to maintain a long battery life, some maintenance measures are still necessary.

→ Keep the surface of the battery clean and dry.
→ Check the acidity of the battery according to the maintenance plan and fill in when required **distilled** water.
→ The battery releases explosive gases. Smoking, fire and open light are Prohibited.
→ Do not place any tools on the battery - short-circuit risk.
→ Battery acid is corrosive. Prevent any skin contact with the acid.
→ Wear protective gloves and goggles.
→ In case of contact with the acid, the affected areas must be immediately supplied with clear water Rinse. Consult a doctor.
→ Make sure that the cover of the plus pole is always present and closed.
→ **Battery acid or waste batteries are harmful to the environment. Dispose of waste Batterie environment friendly.**

When disconnecting the battery, the negative pole and then the positive pole must always be disconnected first. When clamping in reverse order.

When working on the electrical system, the battery must be disconnected. Do not clean electrical components with the high-pressure cleaner. Do not touch incandescent lamps or reflectors with your fingers.
Have faults in the electrical system fixed by a specialist.

The entire system is secured with a fuse. This is located on the right side below the steering wheels.
Use only fuses of the same thickness and design.

4.19 Decommissioning and recommissioning

If you shut down the loader for a longer period of time (e.g. winter months), the following information must be observed:

→ Clean the loader thoroughly.
→ Change engine oil and filter.
→ Refuel the machine.
→ Place the machine on a flat and load-bearing floor.
→ Make sure you have a dry environment.
→ Block the articulated joint.
→ Lower the swingarm.
→ Back up the machine as described in the instructions.
→ Bock the machine so far thatall 4 wheels no longer have ground contact.
→ Lower the air pressure to 1 bar.
→ Turn off all hydraulic systems without pressure.
→ Charge the battery completely and disconnect it (main battery switch).
→ Lubricate the machine thoroughly and completely.
→ Spray the engine, open piston rods and bare metal parts with a anti-corrosion agent.
→ Close the intake and exhaust opening of the diesel engine.

Recommissioning:

→ Increase the air pressure to the prescribed value.
→ Bock off the machine.
→ Remove the anti-corrosive agent from the piston rods.
→ Connect the battery (main battery switch).
→ Remove the closures from the intake and exhaust duct.
→ Remove the buckling fuse.
→ Start the engine and carefully put the machine back into operation.
→ Treat the machine to an eneerone phase after a prolonged standstill.
→ Perform all maintenance work as well as visual and safety checks, before using the machine to work.

5.1 Technical description of the machine

Base:
The machine consists of a split vehicle frame. The front car with the swingarm and the rear framein which the drive unit is housed.
They are connected by a bending pendulum joint.

Drive:
The drive consists of a diesel engine that drives the driving and working hydraulics.
The driving hydraulics supply 4 wheel motors, which pass the power on to the wheels.

Steering:
Fully hydraulic articulated pendulum steering via a double-acting hydraulic cylinder.

Brakes:
The drive is at the same time the service brake of the vehicle.
In addition, the vehicle is equipped with a parking brake.

Hydraulic:
The machine has 2 separate systems, which are supplied by a tank.

→The steering and working hydraulics
→The drive

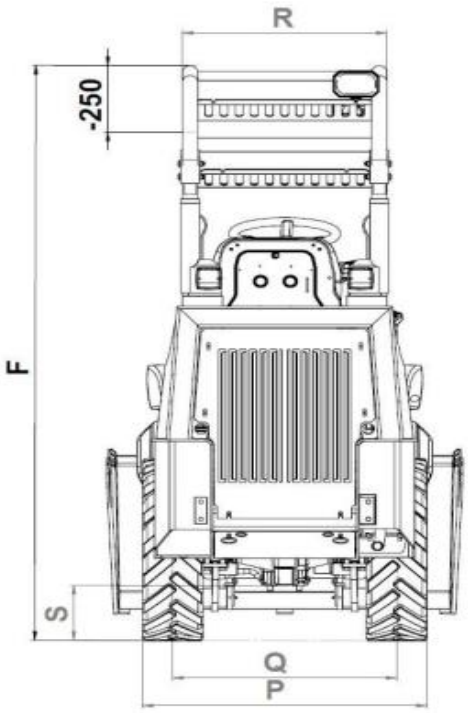
The traction drive is driven by an axial piston adjustment pump. This is flanged directly on the engine. The generated force is passed directly to the wheel motors with the help of an oil flow. The manual throttle lever and pedal path can be used to control both the driving speed and the thrust power of the drive.
The steering and working hydraulics are supplied by a gear pump, which is flanged directly to the axial piston adjustment pump.
The system is equipped with pressure limiting valves and filters.

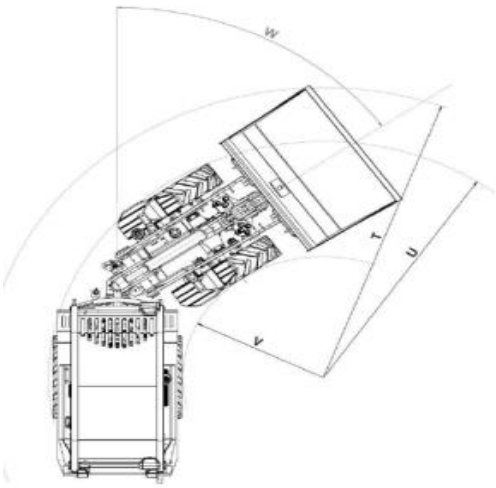
Electrics:
The operating voltage of the electrical system is 12V.
The system is secured by a fuse.

Design:
The machine has been designed as a compact loader.
The machine is equipped with a Fops-Rops guard, which is designed for operation without a safety helmet.
The machine is designed for use on covered surfaces.

5.2 Specifications

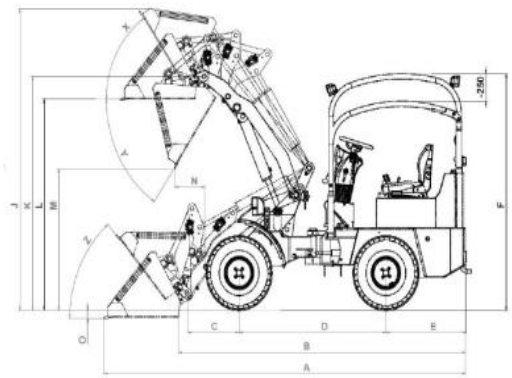
Data sheet 120/Z





		120/Z		
	Lifting force	550kg		
	Tipping load shovel			
	Machine straight	500kg		
	Machine bent (45°)			
	Tipping load pallet fork (45°)			
	Machine straight	400kg		
	Machine bent (45°)			
A	Total length with shovel	2810mm		
B	Total length without shovel	2330mm		
C	Axle center to shovel pivot point	500mm		
D	Wheel distance	1250mm		
E	Rear overhang	610mm		
Q	Height above Fops-Rop's roof	2000mm		
J	Total work height	2645mm		
K	Max height at the shovel pivot point	2150mm		
L	Overload height	2080mm		
M	Max discharge height	1690mm		
N	Range at M	450mm		
O	Depth of mining	20mm		
P	Total width standard	870mm		
Q	Gauge			
R	Width over brackets	650mm		
S	Ground clearance	160mm		
T	Max Radius			
U	Radius at the outer edge	1870mm		
V	Radius	1000mm		
W	Knickangle			
X	Roll back angle at maximum lifting height	50°		
Y	Max tipping angle	42°		
Z	Roll-back angle on the ground	40°		
	Hydraulitank volume	20l		
	Diesel tank volume	20l		
	Front axle weight	272kg		
	Rear axle weight	540kg		
	Weight	812kg		
	Operating weight	996kg		

Information without additional weight



Dimensions for standard tyres
Dimensions change depending on the attachment and tyres as well as technical development

All information subject to reservation. We reserve the right to change in the course of technical development!!!

5.2 Specifications

	120/Z		
Power Displacement	20 hp 1000cc		
Speed	0 - 14 km/h 1-stage		
Hydraulic power 3. Control circuit Standard	Max. 18 l/min		
Lifting force	550kg		
Tipping load shovel - loader straight	500kg		
Tipping load pallet fork - loader straight	400kg		
Total length with shovel	2810mm		
Total length without shovel	2330mm		
Axle center to shovel pivot point	500mm		
Wheel distance	1250mm		
Rear overhang	610mm		
Height above Fops-Rop's roof	2000mm		
Max height at the shovel pivot point	2150mm		
Depth of mining	20mm		
Total width of standard tyres	870mm		
Gauge			
Width over brackets	650mm		
Ground clearance	160mm		
Radius	1000mm		
Knickangle			
Roll back angle at maximum lifting height	50°		
Max tipping angle	42°		
Roll-back angle on the ground	40°		
Hydraulic tank volume	20l		
Diesel tank volume	20l		
Weight	812kg		
Operating weight	996kg		

Proof of inspection

1. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

2. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

3. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

4. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

Proof of inspection

5. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

6. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

7. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

8. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

Proof of inspection

9. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

10. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

11. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

12. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

Proof of inspection

13. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

14. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

15. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

16. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

Proof of inspection

17. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

18. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

19. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

20. Inspection
Performed on …….
At operating hours ……

Stamp and signature – workshop

5 Legal notice

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Printed in Germany

The German edition of the operating instructions is legally binding for both parties