HD 70 • HD 70K • HD O70V
HD 75 • HD 75K • HD O75V • HD O75K
HD 75.4 • HD 75.4K

Valid from Serial-No. H1520018 (42 325)



Operating Manual with Safety Information

Ref. 127 52 16/03.01-en

Operating Manual
with Safety Information

Articulated Tandem Roller

HD 70, HD 70K, HD O70V
HD 75, HD 75K, HD O75V, HD O75K
HD 75.4, HD 75.4K

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1.00 Preface

1.00.01 General

You have received a quality product from HAMM. All the components of this machine have been carefully inspected and tested. As a result, they comply with the quality that you expect.

The machine has been built in accordance with the current state-of-the-art and the safety regulations. Even so, it is essential that the safety instructions as well as the operating and servicing instructions are read and observed prior to commissioning. Any improper use or incorrect handling of the machine will cause:

- Risks to the life and limb of the user, or third parties
- Interference to the machine and other assets of the user
- Hazards for the efficient use of the machine

The operating manual for the engine is an integral part of this operating manual. This manual is applicable for the servicing and maintenance of the engine. The safety instructions must be observed.

Despite compliance with the safety, operating and servicing regulations, there remain residual risks. Due to the high operating weight and the raised centre of gravity of the machine, there is a considerable danger of toppling especially when driving transversely across hills. The smooth surface of the roller drum, respectively tires, reduces the lateral track holding on wet, uneven surfaces. Operation on snow or ice is prohibited. When driving on a hard surface, and especially when traversing hills, the lateral track holding is reduced when the vibration is switched on (falling hazard).

The high reliability of the machine is retained through correct operation and careful servicing. This also includes the use of the specified types of fuel and oils and the use of original HAMM spare parts.

This manual will help you to understand the machine. It provides:

- Regulations for your safety
- Information about the machine and its characteristics
- Operation
- Servicing instructions
- Details about how to obtain spare parts and customer service.

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Our representatives will help you to keep your roller in a perfect operating condition.

After the warranty period, our representatives will also assist you with advice and service. You can obtain from them our original HAMM spare parts, which comply with the technical specifications as well as ensuring replaceability and quality.

Our customer service college holds training courses for roller drivers.

They provide you with:

- General, technical safety instructions
- Machine operation and servicing
- Practical handling of the roller
- More economic use by means of accessories

Similarly, our skilled sales advisers are at your service at all times. They can provide you with the optimum product solution for your requirement. The safety, operating and servicing instructions provided in this manual are intended for roller drivers and mechanics.

For this reason, always keep it handy!

609-03

1.00.02 Preface for the operating manual

This operating manual should make it easier to understand the machine and to operate it according to its possible uses.

The operating manual contains important information, which will ensure that the machine can be operated in a safe, proper and economic manner. When observed it helps to avoid hazards, reduce repair costs and downtimes, as well as improving the reliability and service life of the machine.

The operating manual must be supplemented with instructions arising from national regulations on accident prevention and environmental protection.

The operating manual must always be available at the location where the machine is used.

The operating manual for the engine is also an integral part of the operating manual. This manual is applicable for the servicing and maintenance of the engine. The safety instructions must be observed.

The operating manual must be read and complied with by every person involved in operating with/on the machine, e.g.

- Operation, including servicing, disposal of fuels and auxiliary materials
- Maintenance (servicing, inspection, repair) and/or
- Transport.

In addition to the operating manual and the mandatory regulations on accident prevention in the country of use and at the operating location, the acknowledged regulations for safe and proper working must be observed.

601-00

1.00.03 Special symbols in the text

The following symbols are used for marking texts that are not applicable for all machine versions:

CE only for machines with CE equipment

CE only for machines without CE equipment

Option special equipment

Position of the diagrams

The position of the diagrams is indicated with letters and numerals. The items marked with letters in alphabetical order, are only explained in the associated text section, each of which starts anew for every single description. The items marked with numerals are equivalent to the numbering on the diagrams for the control elements, equipment and switches. They are identical with the numbers of the individual control elements. These item numbers are given in brackets in the descriptive text. They also ensure that important and additional information can be located immediately and without difficulty in the descriptions of the elements.

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HAMM reserves the right to modify individual components, without giving prior notice to customers. The content of this edition can also be amended without giving prior notice.

This edition applies for the standard version of the machine types listed above. Accordingly, it may be that component descriptions are included in this manual, which are not fitted in your machine. HAMM is not liable for possible damage that may arise from the use of this edition on a machine that deviates from the standard version.

Please contact the service department of your supplier to obtain information about adjustments, servicing work or repairs that are not included in this edition.

600-00

1.01 Use

1.01.01 Correct use

The machine is exclusively intended for the customary use of compacting load-bearing loose soil, road substructures, road surfacing or similar surfaces. Any other or additional use is deemed to be not in accordance with the intended use. The manufacturer/supplier is not liable for resultant damage. The user alone bears the risk.

Intended use also includes observation of the operating manual and compliance with the inspection and servicing conditions specified by the manufacturer.

The machine has been built according to the state-of-the-art and the acknowledged technical safety regulations. Even so, when it is used risks can arise for the life and limb of the user, or third parties, respectively interference to the machine and other assets.

The machine may only be used in a technically perfect condition, as intended, with an awareness for safety and hazards, taking into account the operating manual. All safety devices that are removed for transportation purposes (roll-over frame ROPS, handles, silencers, etc.), must be properly fitted to the machine prior to use. Faults that can affect safety must be rectified immediately.

Unlawful alterations on the machine exclude any liability by the manufacturer for resultant damage.

611-00

1.02 Information

1.02.01 Noise and vibration details

The noise and vibration details given below in accordance with the EC Machinery Directive (98/37/EC) were determined at the rated speed of the drive engine and with the vibration switched on in accordance with ISO 6081. Machine fitted with cab and silencing, placed on a resilient surface. When in use, the data may deviate depending on the actual operating condition at the time.

Noise details
The noise level required according to Annexe 1, Section 1.7.4 of the EC Machinery Directive, at the operator location is

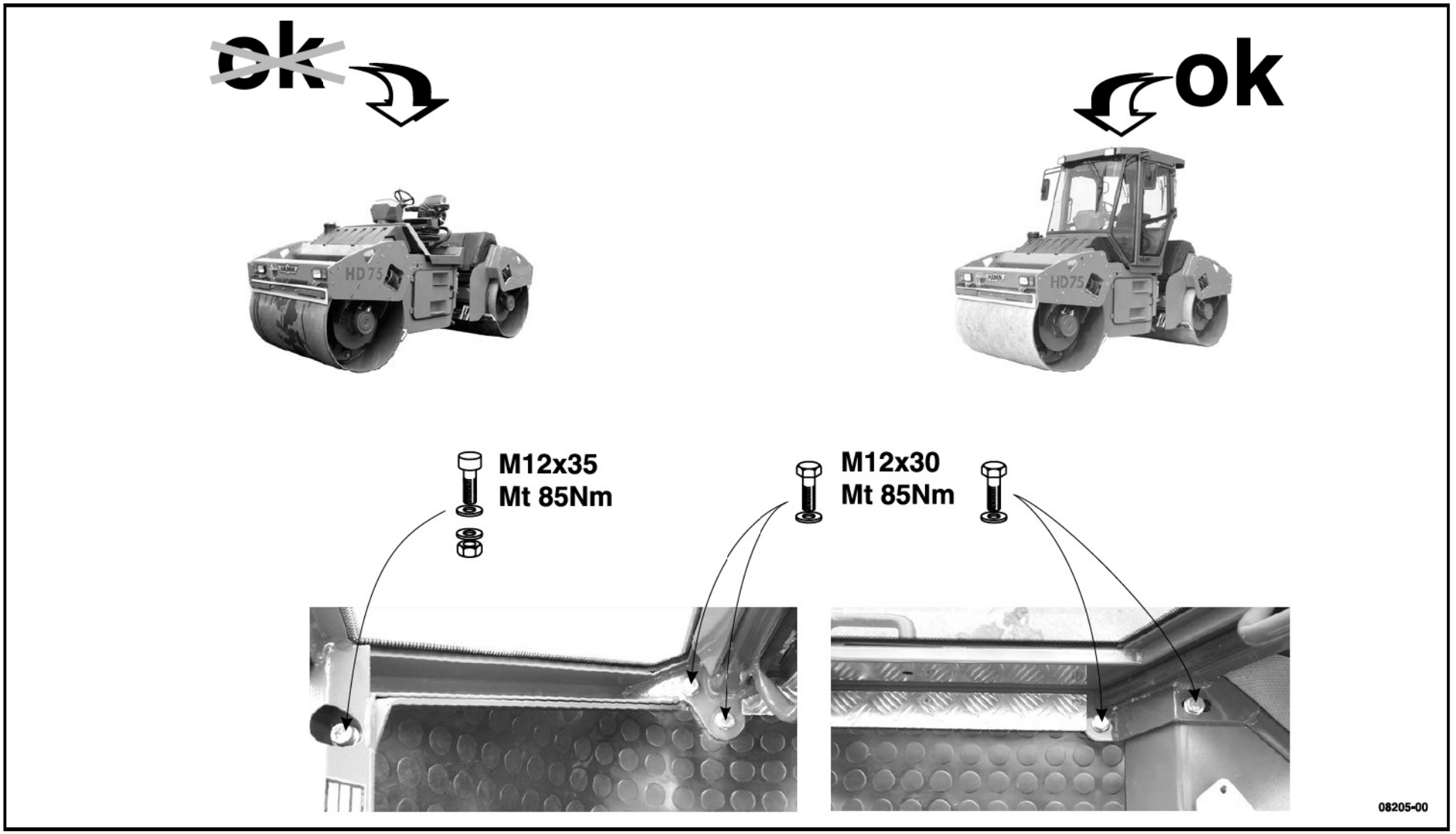
HD 70, HD O70V, HD 75,
HD O75V, HD 75.4 .....81 LpA = dB(A)
HD 70K, HD 75K, HD O75K,
HD 75.4K .....79 LpA = dB(A)

Vibration details
The vibration details for whole body vibration in way of the driver's seat according to Annexe 1, Section 3.6.3a of the EC Machinery Directive (mean effective value of acceleration, determined according to ISO 2631, Part 1)

HD 70, HD O70V, HD 75,
HD O75V, HD 75.4 .....0,3 m/sec^2
HD 70K, HD 75K, HD O75K,
HD 75.4K .....0,3 m/sec^2
602-03

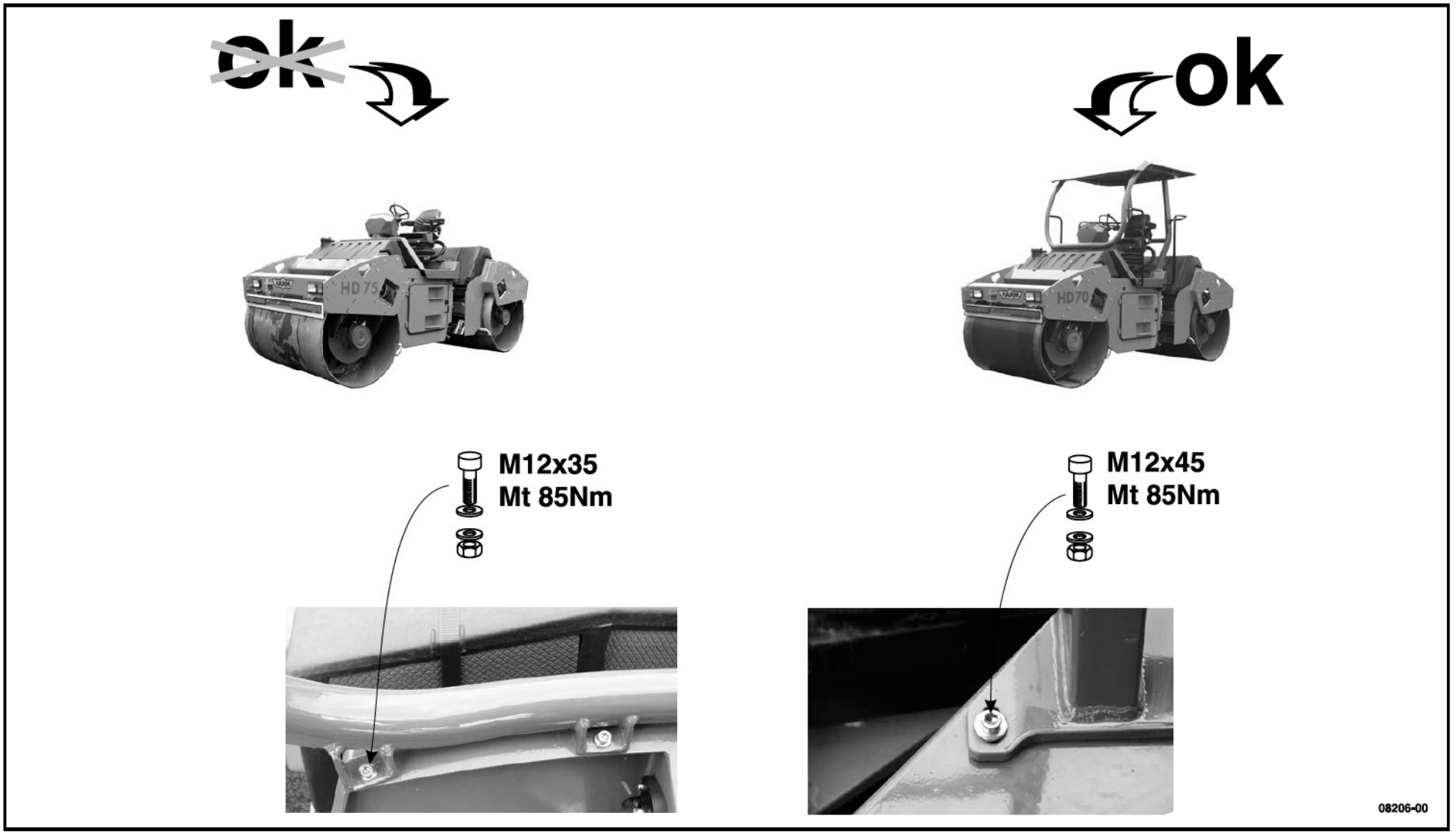
1.02.02 Mounting instructions - safety device ROPS-cab

⚠ Only operate the machine with the roll-over frame fitted!



1.02.03 Mounting instructions - safety device ROPS

⚠ Only operate the machine with the roll-over frame fitted!



1.02.04. Safety

The safety instructions apply to various models fitted with different pieces of equipment. Therefore some of them may not apply to your machine.

Warning comments and symbols

The following texts resp. markings are used in the operating manual for special information. Please pass on these safety instructions to other users.

⚠ Direct hazard; possible consequences:
Death or severe injuries.

⚠ Possibly hazardous situation; possible consequences:
Death or severe injuries.

☝ Hazardous situation; possible consequences:
Slight or minor injuries, warning of damage to property.

☞ Possibly dangerous situation; possible consequences:
The product or something in its vicinity can be damaged.

i Usage tips and useful information.
This does not consist of information that gives a warning about a hazardous or dangerous situation.

Principle; agreed use

- The machine has been built according to the latest state-of-the-art and the acknowledged safety regulations. Even so, when in use, danger to life and limb can occur for the user or third parties and/or the machine and other assets.
- The machine may only be used in a technically perfect condition, as intended, taking safety and hazards into account in accordance with the operating manual. All safety devices removed for transportation purposes (roll-over safeguard ROPS, handles, silencers, etc.), must be properly fitted prior to using the machine. Faults that can affect safety, must be rectified immediately.
- Unauthorized modifications to the machine negate any liability of the manufacturer for resultant damage.
- The machine is intended exclusively for the customary use of compacting, load-bearing, lose ground, road foundations, road coverings or similar surfaces. Any other or additional use is deemed to be of a non-conforming nature. The manufacturer/supplier shall not be liable for damage resulting from such non-conforming use. The user bears the risk alone.
- Conforming use also includes observation of the operating manual and compliance with the servicing and maintenance conditions specified by the manufacturer.

Organisational measures

- The operating manual is to be kept constantly available at the place of use of the machine (in the tool compartment or in the container provided for that purpose).
- The operating manual for the internal combustion engine is an integral part of the machine operating manual.
- In addition to the operating manual, the generally valid statutory and other binding regulations on accident prevention and environmental protection, must be observed.
- Such obligations can also apply, e.g. to the handling of hazardous substances or the provision/wearing of personal safety equipment as well as to the compliance with the highway code or industrial medicine regulations.
- Supplementing the operating manual with instructions, including supervisory and reporting obligations to take into account special operational features.
- Prior to starting work, the personnel en-

trusted with working on the machine, must have read the operating manual, in particular the chapter on safety. It may be too late once work has started. This is especially the case for personnel that is only employed occasionally on the machine, e.g. for repairs or servicing.

- The safety and hazard awareness of the personnel should be occasionally checked, taking into account the operating manual.
- The personnel may not wear long hair openly, lose clothing or jewellery, including rings. There is a danger of injury, e.g. by being caught on or pulled into the machine.
- Where necessary, or where specified by regulations, personal safety equipment must be used.
- Observe all the safety and hazard information on the machine.
- Keep all safety and hazard information on the machine in a completely legible condition.
- Without the permission of the manufacturer, do not carry out any modifications, attachments and alterations to the machine, that can affect safety. This also applies for the fitment and adjustment of safety equipment and valves, as well as for welding on load-bearing components.
- Spare parts must comply with the manufacturer's technical specifications. This is always ensured with original spare parts.
- Replace the hydraulic hose lines at the specified resp. suitable intervals, even where no faults of relevance for safety can be detected.
- Comply with the deadlines specified or given in the operating manual for recurring inspections.
- Suitable workshop equipment is essential for carrying out maintenance work.
- The fitment of tires presupposes adequate knowledge and proper assembly tools.
- Provide instructions on the location and handling of fire extinguishers.
- Comply with the fire alarm and fire-fighting possibilities.

Personnel selection and qualification; basic obligations

- Work on/with the machine may only be carried out by suitable, reliable personnel. Comply with the statutory minimum age.
- Only skilled or trained personnel may be employed.
- The responsibilities of the personnel for operating, maintenance and repairs must be clearly specified.
- Ensure that only specifically appointed personnel is working on the machine.
- Specify the responsibilities of the machine driver, including the statutory traffic regulations, and empower the driver to refuse to carry out instructions from third parties that would endanger safety.
- Personnel that is being instructed and trained as part of a general training course, may only be permitted to work on the machine under the constant supervision of an experienced person.
- Work on the electrical equipment of the machine may only be carried out by an electrician or trained persons under the control and supervision of an electrician in accordance with the electrotechnical regulations.
- Work on the chassis, brakes and steering systems may only be carried out by

skilled personnel that have been trained for this type of work.

- Only personnel with special knowledge and experience of hydraulics may work on hydraulic equipment.

Safety instructions for specific operational phases

Normal operation

- Desist from all modes of working that endanger safety.
- Prior to starting work at a location, become acquainted with the surroundings. This also includes, e.g. obstructions within the working and traffic area, the load-bearing capacity of the ground and the necessary safeguards at the construction site for public traffic.
- Steps must be taken to ensure that the machine is only operated in a safe and functional condition, when all safety equipment and fittings required for safety, e.g. detachable safety facilities, EMERGENCY STOP devices, silencing devices, extraction devices, are present and functional.
- The machine must be inspected for externally visible damage and defects at least once per shift. Any alterations that have occurred (including the operational behaviour) must be reported immediately to the pertinent department/person. Where necessary, the machine must be immediately shut down and secured.
- In the event of functional disturbances, the machine must be immediately shut down and secured. Rectify faults without delay.
- Starting the engine and driving the machine may only take place from the driver's position. The engine must not be started by short-circuiting the electrical connection on the starter, since the machine can immediately move off. The function of the starting safeguard switch for the drive lever must not be disengaged!
- Prior to starting the engine, become acquainted with all the equipment and controls, as well as their function. It will be too late once the machine is operating.
- The accelerating and brake mode of the machine will be influenced by viscous hydraulic oil. With low external temperatures, especially during frost, wait several minutes after the engine has started. Run the machine with a moderate load and speed to warm up, until the hydraulic fluid has reached 20 °C *(43 °F)*.
- Always wear the safety belt when driving.
- Never adjust the driver's seat whilst driving.
- The vibration must not be operated in the direct vicinity of buildings (danger of collapse). Prior to switching on the vibration, ensure that no pipes in the ground (gas, water, sewerage, electricity) can be damaged or destroyed.
- Take note of on and off procedures, control displays according to the operating manual.
- Prior to starting the machine, ensure that nobody can be endangered by the machine when it moves off.
- Prior to moving off, check the immediate vicinity for possible persons.
- Prior to moving off/starting to work, check whether the brakes, EMERGENCY STOP device, steering, indicators and lighting equipment are functional.
- Ensure adequate visibility. Adjust the required mirrors.
- Prior to starting the machine, ensure that the accessories are safely stowed. Raise fitted accessories from the ground.
- Never leave the driver position whilst driving.
- CE In emergency situations and when the machine is endangered, actuate the

EMERGENCY STOP switch to bring the machine to an immediate standstill.

- CE Never use the EMERGENCY STOP switch as a service brake.
- ☒ In emergency situations and when the machine is endangered, actuate the parking brake to bring the machine to an immediate standstill.
- ☒ Do not use the parking brake as a service brake.
- When driving on the public highways, paths and places, observe the applicable highway code and ensure that the machine is in a statutory condition.
- Always switch on the lights when visibility is poor and in the dark.
- The carriage of additional persons is not permitted.
- Ensure an adequate distance when negotiating underpasses, bridges, tunnels, overhead cables, etc.
- Always maintain an adequate distance to building pit edges and embankments.
- Desist from all operating modes that may affect the stability of the machine.
- The speed must always be adapted to the conditions within the vicinity.
- Do not traverse across hills; always keep the operating equipment and load close to the ground, especially when going downhill.
- Avoid sudden curves when going up and downhill.
- Never switch down to the lower gear on a hill. Always do so beforehand.
- As a matter of principle, prior to leaving the driver's position, secure the machine against unintentional rolling away (engage the 0-position lock, apply parking brake, switch off the engine).
- If the driver should leave the machine, remove the ignition key and lock the cab doors, resp. instrument cover.
- Prior to leaving the machine, fully lower the fitted additional equipment.
- Never jump from the machine (danger of injury). Use the steps and handles.
- Switch off the machine, using the main battery switch.

Special work whilst using the machine, maintenance work, as well as fault rectification during the work sequence; waste disposal

- Comply with the adjustment, maintenance and inspection work and deadlines specified in the operating manual, including the instructions on the replacement of components/equipment. This work may only be carried out by skilled personnel.
- Prior to carrying out special and maintenance work, inform the operating personnel. Keep unauthorized persons away from the machine whilst this work is being carried out. Appoint a supervisor.
- For all work that concerns the operation, production adaptation, conversion or adjustment of the machine and its safety relevant equipment, as well as inspection, servicing and repairs, observe the switch on and off procedures according to the operating manual and the information for maintenance work.
- Where necessary, provide wide ranging safeguards for the maintenance area.
- During servicing and repair work, secure the machine against unintentional starting. This includes:
  - Locking the main controls and remo-

ving the key.
  - Remove the key from the main battery switch, and attach a warning sign to the steering wheel.
- As a matter of principle, servicing and maintenance work may only be carried out with the engine at a standstill.
- The engine cowling may only be opened when the engine is switched off.
- Keep away from moving, rotating or revolving parts and do not touch them (danger of accident).
- Only carry out servicing and maintenance work when the machine has been parked on a flat, load-bearing surface and secured against rolling away and buckling (danger of crushing).
- Servicing and maintenance work may only be carried out under the raised driver platform when the safety catch has been engaged. Open the engine cowling completely (danger).
- Following servicing and maintenance work which requires raising of the operator's platform, after lowering the operator's platform must be firmly reconnected, respectively bolted to the machine frame. Only in this manner is the roll-over safeguard ensured.
- When replacing individual components and larger assemblies, these should be carefully fastened and secured to lifting gear so as to prevent any danger. Only suitable and technically perfect lifting gear, as well as load-bearing media with adequate carrying capacity may be used. Do not remain or work under a suspended load.
- Only experienced persons should be allowed to attach loads and guide crane drivers. The guide must be within sight of the operator or must be able to speak to him.
- During assembly work above body height, use the provided or other safety ladders and working platforms. Do not use machine components as ladders. When carrying out servicing work at considerable heights, wear a safety harness. Keep all handles, steps, platforms and ladders free from dirt, snow and ice.
- At the start of servicing/repair, clean the machine, in particular the connections and screw unions, of oil, fuel or preservatives (fire hazard). Do not use any caustic cleaners. Use lint-free cleaning rags.
- Prior to cleaning the machine with water or a steam jet (high pressure cleaner) or other solvents, cover all openings in which for safety and/or functional reasons no water/steam/solvent may penetrate. Especially endangered are electric motors and control cabinets.
- After cleaning, the covers must be removed completely.
- After cleaning, check all fuel, engine oil, hydraulic fuel pipes for leaks, lose connections, worn sections and damage. Any defects must be rectified immediately.
- During servicing and maintenance work, always firmly tighten loosened screw connections.
- Where the disassembly of safety equipment is required during fitment, servicing and repairs, reassembly and testing of the safety equipment must be carried out immediately upon completion of the servicing and repair work.
- Ensure the safe and environmentally compatible disposal of operating media and auxiliary substances, replacement components and fouled solvents.

Information on particular types of hazards

Electrical energy

- Only use original fuses of the specified amperage. Switch the machine off immediately where faults occur in the electrical power supply.
- When starting the machine with jump leads, always connect the positive terminal to the positive terminal and the negative terminal to the negative terminal. The negative terminal should always be connected last and removed first.
- Keep an adequate distance between the machine and overhead power cables. When working close to overhead power cables, the equipment must not come close to the cables. Danger! Obtain information on the safe distances to be maintained.
- After making contact with power cables
  - Do not leave the machine.
  - Drive the machine out of the danger zone.
  - Warn bystanders against coming close to and touching the machine.
  - Give instructions for the power to be switched off.
  - Only leave the machine when the contacted/damaged cable has definitely been disconnected.
- Work on electrical equipment may only be carried out by an electrician or trained persons under the control and supervision of an electrician in accordance with the electrotechnical regulations.
- When working on the electrical equipment, the machine must be disconnected from the battery by means of the main battery switch or by disconnection of the negative terminal (earth cable) from the battery.
- Do not smoke when servicing the battery (explosion hazard). Keep away from sparks or naked flames.
- Properly dispose of old batteries.
- Regularly inspect the electrical equipment of the machine. Defects, such as lose connections or scorched cables must be eliminated immediately.
- Only use insulated tools.

Gas, dust, steam, smoke

- Internal combustion engines and fuel-operated heating systems may only be operated in adequately ventilated areas. Ensure adequate ventilation prior to starting in an enclosed space (toxic hazard). Comply with the pertinent local regulations.
- The machine may not be operated where combustible gases or dust can be formed (e.g. close to fuel, coal or grain stores, wood dust or similar items).
- Unusual noise and considerable smoke produced by the engine whilst the machine is operating, can indicate danger. Determine cause and rectify the damage.
- Only carry out welding, cutting and grinding work on the machine when this has been expressly approved. This can produce, e.g. a danger of fire and explosion.
- Prior to welding, cutting and grinding, clean the machine and the vicinity of dust and combustible materials. Ensure adequate ventilation (explosion hazard).

Hydraulic, pneumatic

- Work on hydraulic equipment may only be carried out by persons with special knowledge and experience of hydraulics.
- All pipes, hoses and screw unions must be regularly inspected for leaks and externally visible damage. Damaged components must be replaced immediately. Continued operation is not permissible. Escaping jets of oil can cause injuries and fire.
- Highly pressurized, escaping fluids (hydraulic fluid, fuel) can penetrate the skin. As a consequence, in the event of

such injuries, consult a physician immediately. Otherwise, severe infections can occur.

- Prior to working on hydraulic lines, secure the machine against rolling away (parking brake, chock). Completely lower attachments. Only then may the pipes be depressurized.
- Depressurize those system sections and pressure pipes that are to be opened (hydraulic, compressed air) prior to the start of repair work, in accordance with the assembly specification.
- Properly install and assemble hydraulic and compressed air pipes. Do not exchange the connections. Fittings, length and quality of the hose pipes must comply with the requirements.

Noise

- During use, the silencing equipment on the machine must be in the protective position.

Fuel, oil, grease and other chemical substances

- Only use suitable and clean lubricants, otherwise the warranty will be void.
- Observe the applicable safety regulations for the product when handling oils, greases and other chemical substances.
- Do not heat the oil above 160 °C *(320 °F)*, otherwise the oil or oil vapours can ignite.
- Prior to filling up, switch off the engine and heating, and remove the ignition key. Do not top up with fuel in enclosed spaces. Immediately wipe away any spilt fuel.
- Take care when handling fuel - increased fire hazard. Never top up with fuel when in close proximity to naked flames or sparks. Do not smoke when filling up.
- Take care when handling brake fluid and battery acid (toxic and corrosive).
- Take care when handling hot fuels and auxiliary substances (danger of burning resp. scalding).
- Parting agent emulsions for tires may only be mixed from water and parting agent concentrate in accordance with the details given by the parting agent manufacturer. Observe the environmental protection regulations.

Transport and towing

- Towing, loading and transporting may only be carried out in accordance with the operating manual.
- Only use suitable transporting media and lifting gear with adequate load-bearing capacity. Note the weight and dimensions (technical details).
- When loading, only use load bearing and secure loading ramps. Ensure that people are not endangered by toppling or slipping.
- Prior to loading, ensure that the vehicle (e.g. trailer, low loader, etc.) cannot tip up when the machine is driven onto the loading area.
- Do not step or stand below a suspended load (danger).
- When guiding the machine and during loading, do not stay within the danger zone of the machine (danger).
- Use regulation loading bridges.
- Drive the machine slowly on and off the loading area.
- Secure the machine against shifting using squared timber, chocks and ca-

bles. Support the damping elements of the roller drum suspensions to secure them against overload.

- Prior to unloading, completely remove the squared timber, chocks and cables.
- All safety devices removed for transportation purposes (roll-over safeguard ROPS, handles, silencers, etc.), must be properly fitted prior to using the machine.
- When towing, maintain the required transport position, observe the permissible speed and distance.

ROPS cab

- The machine frame must not be warped, bent or broken (distorted) in way of the cab fastening.
- The reinforcing elements of the ROPS cab must not have any rust, be damaged, have any hairline cracks or evident fractures.
- All bolted connections of the reinforcing elements must comply with the specified regulations and must be firmly bolted together (observe tightening torques).
- Bolts and nuts must not be damaged, bent or distorted.
- No additional components may be attached on reinforcing elements without the permission of the manufacturer.
- Any alteration to the reinforcing elements, which reduce their stability, is prohibited.

Roll over protection (ROPS)

- The machine frame in way of the ROPS mounting may not be distorted, bent or torn (deformed).
- The ROPS must not have any rust, damage, incipient cracks or clear breakages.
- All screw unions must comply with the statutory specifications and be firmly bolted together (comply with the tightening torques).
- Bolts and nuts may not be damaged, twisted or deformed.
- No additional components may be attached without the permission of the manufacturer.
- Any modification to the ROPS, which reduces stability, is prohibited.

610-00

1.02.05 Fuel

⚠ Be careful when handling fuel (increased fire hazard).
The diesel engine and any fuel-operated heating systems must be switched off prior to filling with fuel.
Do not fill with fuel in enclosed spaces.
Wipe away spilt fuel immediately. Do not inhale the emitted vapours.
Fuel is flammable and explosive. For this reason, when handling fuel or even when in close proximity, avoid naked flames or ignitable sparks. Do not smoke! This also applies where the fuel is only perceivable from its characteristic smell. If the smell of fuel should arise within the actual machine, the cause must be determined and eliminated immediately.

The diesel engine should be operated only with standard diesel fuel with a sulphur content below 0.5 %. With a higher sulphur content, the engine oil change intervals must be reduced.
Permitted fuel specifications are:

- DIN 51 601
- BS 2869: A1 and A2
  (with A2, note sulphur content)
- ASTM D 975-81: 1-D and 2-D
- VV-F 800 C: DF-A, DF-1 and DF-2

Marine diesel fuel, light fuel oil, etc., must not be used.
The stated engine oil exchange intervals presume the use of diesel fuel with a maximum sulphur content of 0.5 % and a constant ambient temperature down to -10 °C *(+ 14 °F)*.
For diesel fuels with a sulphur content exceeding 0.5 % up to 1.0 %, or constant ambient temperatures below -10 °C *(+ 14 °F)*, the engine oil exchange intervals must be halved.
When using diesel fuels with manufacturer guaranteed winter characteristics, the need to use additives up to the guaranteed temperature is not necessary.
For lower temperatures, the flow capacity and filtration capability of the diesel fuel will be insufficient (crystallised paraffin).
For this reason, during the winter months, diesel fuels with improved low temperature behaviour is available on the market. Prior to the start of the winter season, ensure that you fill up with winter diesel fuel.
To maintain the flow capacity and filtration capability of summer diesel fuel at low temperatures, a quantity of engine petroleum (observe country specific regulations) or standard fuel additives, so-called flow improvers, must be added to the fuel tank. A dissolution of already crystallised paraffin is not possible.

Engine petroleum can be added up to a ratio of 30 %:

Ambient temperature	Summer diesel fuel in %	Additive in %
±0 to -9 °C	80	20
-10 to -14 °C	70	30
32 to15,8 °F	*80*	*20*
14 to 6,8 °F	*70*	*30*

With extremely low temperatures, an addition of additive is also required even with winter diesel fuel:

Ambient temperature	Winter diesel fuel in %	Additive in %
-15 to -25 °C	70	30
5 to -13 °F	*70*	*30*

When using flow improvers, the engine performance is retained, and use of the vehicle even at extremely low temperatures is made possible.
Observe the information provided by the manufacturer.
715-00

1.03 Roller marking

1.03.01 Type plate, Vehicle Identity No.

The clear marking of the roller is ensured by the Vehicle Identity No. It is given on the type plate together with the type designation and weight details.
The type plate is fastened to the machine frame. It must not be changed or removed.
If the type plate becomes illegible or is lost, a replacement type plate must be requested without delay from HAMM Customer Service, stating the Vehicle Identity No. which is punched into the front, right-hand side of the machine frame. This replacement type plate should then fastened on the machine.

☞ When placing an order for spare parts, please quote the Vehicle Identity No. and type designation of your machine.

602-02

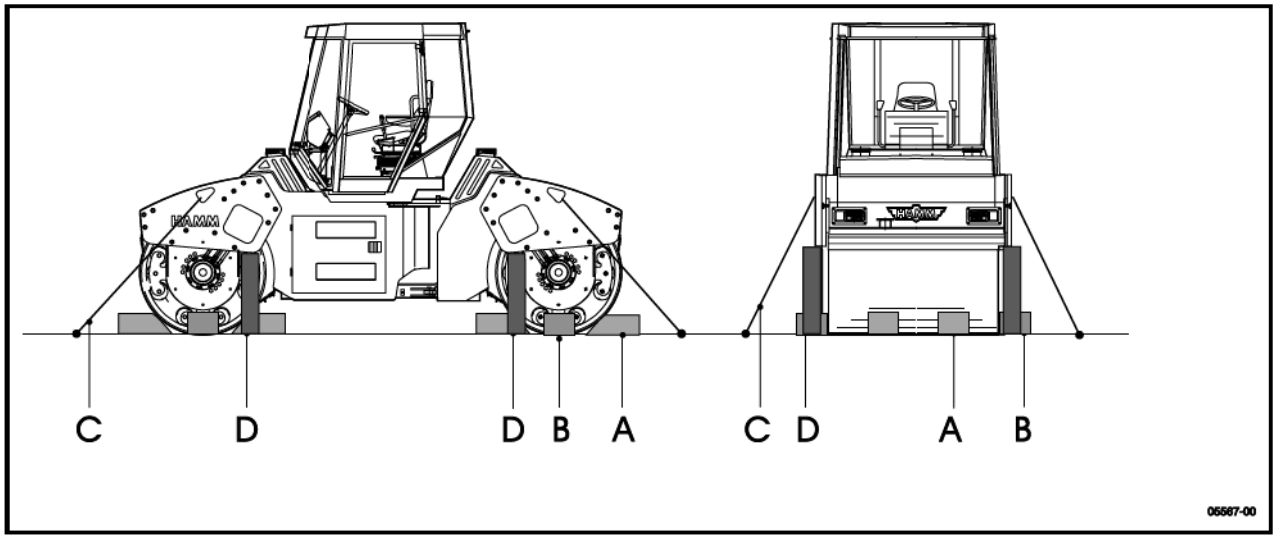


1.04 Technical details

1.04.01 Loading and transporting

For loading and transporting the machine, adequate knowledge is needed on the loading of vehicles as well as their behaviour under load. The pertinent accident prevention regulations and the other generally accepted technical safety and highway code regulations must be observed.

- Weight and dimensions (technical details).
- When loading on a HGV, it is essential to use a loading ramp.
- Where necessary support the loading area, so that the vehicle (trailer) does not topple when the machine is being driven onto the loading platform.
- Only use regulation loading bridges or planks. When driving the machine on, ensure that the roller drum, resp. tires have proper contact.
- The loading bridges and planks must be free from grease, dirt, ice, etc.
- Drive the machine slowly onto the loading area, using the 3/4 speed setting of the diesel engine.
- Park the machine and secure against unauthorized starting (see chapter “Stopping, switching the engine off, leaving the machine”).
- Secure the roller drum, resp. tires against shifting by means of chocks A and squared timber B. To prevent the shock absorbing elements for the roller drum suspension from being overloaded when tied down, a chock D must be fitted between roller frame and roller drum.
- Tie down the machine with cables C to the loading area only by means of the marked eyelets (see diagram).
- For crane loading, fasten cables only to the marked eyelets.
- Prior to unloading, completely remove chocks, squared timber and cables.

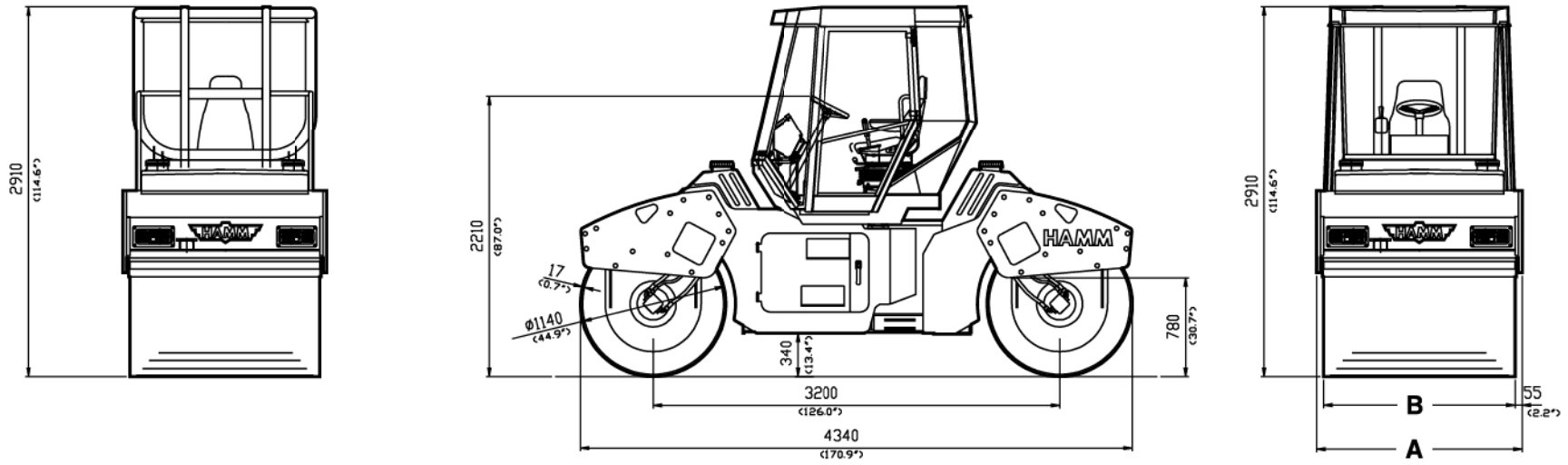


- All safety devices removed for transportation purposes (roll-over safeguard ROPS, handles, silencers, etc.), must be properly fitted prior to using the machine.
- Drive the roller slowly and carefully from the loading area.

716-02

1.04.02 Dimension sheet HD 70, HD O70V, HD 75, HD O75V, HD 75.4

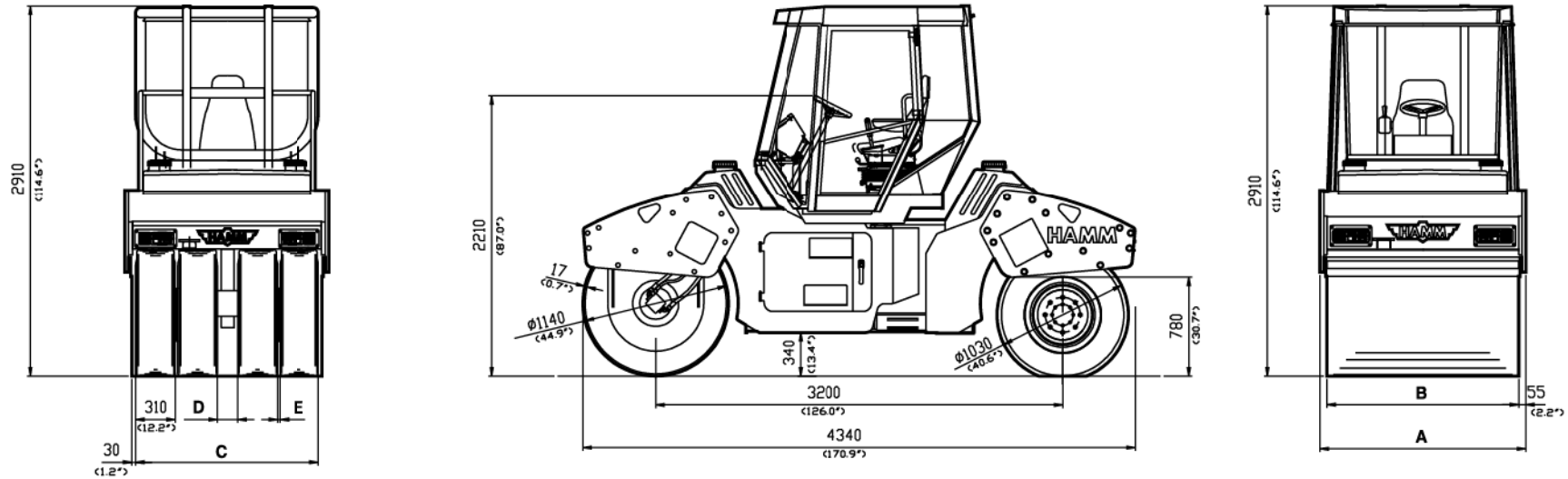
Typ	A		B	
	mm	inch	mm	inch
HD70	1610	63,4	1500	59,1
HD75	1790	70,5	1680	66,1



05574-00

1.04.03 Dimension sheet HD 70K, HD 75K, HD O75K, HD 75.4K

Typ	A		B		C		D		E	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
HD70K	1610	63,4	1500	59,1	1440	56,7	160	6,3	20	0,8
HD75K	1790	70,5	1680	66,1	1620	63,8	153	6,0	114	4,5



05579-00

1.04.04 Technical data	HD 70		HD 75	
Empty weight without cab	6,250 kg	*(13,781 lbs)*	6,650 kg	*(14,663 lbs)*
Operating weight with cab	7,200 kg	*(15,876 lbs)*	7,600 kg	*(16,758 lbs)*
Axle load front	3,600 kg	*(7,938 lbs)*	3,800 kg	*(8,379 lbs)*
Axle load rear	3,600 kg	*(7,938 lbs)*	3,800 kg	*(8,379 lbs)*
Vibration	front/rear			front/rear
Working width/crab steering	1,500/1,600 mm	*(59.10/63.04")*	1,680/1,780 mm	*(66.19/70.13")*
Turning circle radius external/interna	5,675/4,175 mm	*(223.60/164,50")*	5,765/4,085 mm	*(227.14/160.95")*
Drum diameter	1,140 mm	*(44.92")*	1,140 mm	*(44.92")*

Capacities

Fuel tank	130.00 Ltr.	*(34.32 USgal.)*	130.00 Ltr.	*(34.32 USgal.)*
Engine (for oil change)	10.00 Ltr.	*(2.64 USgal.)*	10.00 Ltr.	*(2.64 USgal.)*
Engine with cooling and heating system (at new filling)	13.00 Ltr.	*(3.43 USgal.)*	13.00 Ltr.	*(3.43 USgal.)*
Oil tank hydraulic system	50.00 Ltr.	*(13.20 USgal.)*	50.00 Ltr.	*(13.20 USgal.)*
Vibrator	9.50 Ltr.	*(2.50 USgal.)*	11.00 Ltr.	*(2.90 USgal.)*
Water tank - sprinkling for front and rear drum - 2 tanks	720.00 Ltr.	*(190.08 USgal.)*	720.00 Ltr.	*(190.08 USgal.)*

Engine

Deutz Diesel engine, 4-stroke, 4 cylinder, oil cooled	type BF4M 1011F
Rating according to ISO 3046/1, ISO 9249 at 2,500 rpm	56.2 kW/76.5 PS
Rating according to SAE J1349 at 2,800 rpm	61 kW/82 HP

608-20

Electrical system	**HD 70**	**HD 75**
Operating voltage	12 V	12 V

1 battery, 12 Volt/135 Ah.

Transmission		
Hydrostatic transmission, infinitely variable, single lever operation	all-wheel drive	all-wheel drive
Operating gear	0-6,3 km/h *(0-3.91 mph)*	0-6,3 km/h *(0-3.91 mph)*
Transport gear	0-12,6 km/h *(0-7.82 mph)*	0-12,6 km/h *(0-7.82 mph)*
Climbing ability with vibration up to	30 %	30 %
Climbing ability without vibration up to	40 %	40 %

Vibration		
Direct hydrostatic transmission.		
Stage 1: Frequency/amplitude	max. 48 Hz/0.62 mm *(2880 VPM/0.02")*	max. 48 Hz/0.57 mm *(2880 VPM/0.02")*
Stage 2: Frequency/amplitude	max. 58 Hz/0.32 mm *(3480 VPM/0.01")*	max. 58 Hz/0.30 mm *(3480 VPM/0.01")*

Steering

Hydrostatic power-assisted steering using an articulated reciprocating joint. Steering lock 39° to both sides. Reciprocating compensation 10° upwards and downwards.

Track offset (crab steering)

Hydrostatic track offset can be infinitely adjusted to both sides up to 100 mm *(3.94")*.

Service brake

During use, the machine is braked by the hydrostatic transmission. Wear-free braking.

Parking brake

Spring-loaded disc brake acting on each hydraulic motor of the transmission. Manual and automatic.

EMERGENCY STOP brake

By means of hydrostatic transmission and spring-loaded disc brakes.

Water sprinkling

Pressure sprinkling, manual actuation and automatic pause.

Special equipment

On request, the machine can be equipped with extensive special accessories.

Subject to design, weight and dimensional modifications.

606-26

1.04.05 Technical data	HD O70V		HD O75V	
Empty weight without cab	6,750 kg	*(14,884 lbs)*	7,250 kg	*(15,986 lbs)*
Operating weight with cab	7,700 kg	*(16,979 lbs)*	8,200 kg	*(18,081 lbs)*
Axle load front	3,800 kg	*(8,379 lbs)*	4,050 kg	*(8,930 lbs)*
Axle load rear	3,900 kg	*(8,600 lbs)*	4,150 kg	*(9,151 lbs)*
Vibration	front			front
Oszillation	rear			rear
Working width/crab steering	1,500/1,600 mm	*(59.10/63.04")*	1,680/1,780 mm	*(66.19/70.13")*
Turning circle radius external/interna	5,675/4,175 mm	*(223.60/164.50")*	5,765/4,085 mm	*(227.14/160.95")*
Drum diameter	1,140 mm	*(44.92")*	1,140 mm	*(44.92")*

Capacities

Fuel tank	130.00 Ltr.	*(34.32 USgal.)*	130.00 Ltr.	*(34.32 USgal.)*
Engine (for oil change)	10.00 Ltr.	*(2.64 USgal.)*	10.00 Ltr.	*(2.64 USgal.)*
Engine with cooling and heating system (at new filling)	13.00 Ltr.	*(3.43 USgal.)*	13.00 Ltr.	*(3.43 USgal.)*
Oil tank hydraulic system	50.00 Ltr.	*(13.20 USgal.)*	50.00 Ltr.	*(13.20 USgal.)*
Water tank - sprinkling for front and rear drum - 2 tanks	720.00 Ltr.	*(190.08 USgal.)*	720.00 Ltr.	*(190.08 USgal.)*

Engine

Deutz Diesel engine, 4-stroke, 4 cylinder, oil cooled	type BF4M 1011F
Rating according to ISO 3046/1, ISO 9249 at 2,500 rpm	56.2 kW/76.5 PS
Rating according to SAE J1349 at 2,800 rpm	61 kW/82 HP

608-26

Electrical system	**HD O70V**	**HD O75V**
Operating voltage	12 V	12 V

1 battery, 12 Volt/135 Ah.

Transmission

Hydrostatic transmission, infinitely variable, single lever operation	all-wheel drive	all-wheel drive
Operating gear	0-7,4 km/h *(0-4.6 mph)*	0-7,4 km/h *(0-4.6 mph)*
Transport gear	0-10,5 km/h *(0-6.5 mph)*	0-10,5 km/h *(0-6.5 mph)*
Climbing ability with/without vibration up to	30/40 %	30/40 %

Vibration/oscillation

Direct hydrostatic transmission.

Vibration:	Stage 1:	Frequency/amplitude	max. 42 Hz/0.61 mm (2520 VPM/0.02")	max. 42 Hz/0.57 mm (2520 VPM/0.02")
Vibration:	Stage 2:	Frequency/amplitude	max. 50 Hz/0.42 mm (3000 VPM/0.02")	max. 50 Hz/0.39 mm (3000 VPM/0.02")
Oscillation:	Stage 1:	Frequency/tangential amplitude	max. 30 Hz/1.46 mm (1800 VPM/0.06")	max. 30 Hz/1.33 mm *(1800 VPM/0.05")*
Oscillation:	Stage 2:	Frequency/tangential amplitude	max. 36 Hz/1.46 mm (2160 VPM/0.06")	max. 36 Hz/1.33 mm *(2160 VPM/0.05")*

Steering

Hydrostatic power-assisted steering using an articulated reciprocating joint. Steering lock 39° to both sides. Reciprocating compensation 10° upwards and downwards.

Track offset (crab steering)

Hydrostatic track offset can be infinitely adjusted to both sides up to 100 mm *(3.94")*.

Service brake

During use, the machine is braked by the hydrostatic transmission. Wear-free braking.

Parking brake

Spring-loaded disc brake acting on each hydraulic motor of the transmission. Manual and automatic.

EMERGENCY STOP brake

By means of hydrostatic transmission and spring-loaded disc brakes.

Water sprinkling

Pressure sprinkling, manual actuation and automatic pause.

Special equipment

On request, the machine can be equipped with extensive special accessories.
Subject to design, weight and dimensional modifications.

606-35

1.04.06 Technical data	HD 70K		HD 75K	
Empty weight without cab	6,000 kg	*(13,230 lbs)*	6,350 kg	*(14,002 lbs)*
Operating weight with cab	7,600 kg	*(16,758 lbs)*	7,800 kg	*(17,199 lbs)*
Axle load front	3,600 kg	*(7,938 lbs)*	3,800 kg	*(8,379 lbs)*
Axle load rear	3,350 kg	*(7,387 lbs)*	3,500 kg	*(7,718 lbs)*
Load per tire, rear	837,5 kg	*(1,847 lbs)*	875 kg	*(1,929 lbs)*
Vibration	front			front
Working width/crab steering	1,500/1,565 mm	*(59.10/61.66")*	1,680/1,745 mm	*(66.2/68.75")*
Turning circle radius external/internal	5,675/4,175 mm	*(223.60/164.50")*	5,765/4,085 mm	*(227.1/161")*
Drum diameter	1,140 mm	*(44.92")*	1,140 mm	*(44.92")*
Smooth tires, 4 off	11.00-20 12 PR			11.00-20 12 PR
Air pressure	3.0 bar	*(43.5 PSI)*	3.0 bar	*(43.5 PSI)*

Capacities

Fuel tank	130.00 Ltr.	*(34.32 USgal.)*	130.00 Ltr.	*(34.32 USgal.)*
Engine (for oil change)	10.00 Ltr.	*(2.64 USgal.)*	10.00 Ltr.	*(2.64 USgal.)*
Engine with cooling and heating system (at new filling)	13.00 Ltr.	*(3.43 USgal.)*	13.00 Ltr.	*(3.43 USgal.)*
Oil tank hydraulic system	50.00 Ltr.	*(13.20 USgal.)*	50.00 Ltr.	*(13.20 USgal.)*
Vibrator	9.50 Ltr.	*(2.51 USgal.)*	11.00 Ltr.	*(2.90 USgal.)*
Water tank - sprinkling for front drum - 2 tanks	720.00 Ltr.	*(190.08 USgal.)*	720.00 Ltr.	*(190.08 USgal.)*
Water tank - additive sprinkling for tires	11.00 Ltr.	*(2.90 USgal.)*	11.00 Ltr.	*(2.90 USgal.)*

Engine

Deutz Diesel engine, 4-stroke, 4 cylinder, oil cooled	type BF4M 1011F
Rating according to ISO 3046/1, ISO 9249 at 2,500 rpm	52.5 kW/76.5 PS
Rating according to SAE J1349 at 2,800 rpm	61 kW/82 HP

608-22

Electrical system	**HD 70K**	**HD 75K**
Operating voltage	12 V	12 V

1 battery, 12 Volt/135 Ah.

Transmission		
Hydrostatic transmission, infinitely variable, single lever operation	all-wheel drive	all-wheel drive
Operating gear	0-6,3 km/h *(0-3.9 mph)*	0-6,3 km/h *(0-3.9 mph)*
Transport gear	0-12,6 km/h *(0-7.8 mph)*	0-12,6 km/h *(0-7.8 mph)*
Climbing ability with vibration up to	30 %	30 %
Climbing ability without vibration up to	40 %	40 %

Vibration		
Direct hydrostatic transmission.		
Stage 1: Frequency/amplitude	max. 48 Hz/0.62 mm *(2880 VPM/0.02")*	max. 48 Hz/0.57 mm *(2880 VPM/0.02")*
Stage 2: Frequency/amplitude	max. 58 Hz/0.32 mm *(3480 VPM/0.01")*	max. 58 Hz/0.30 mm *(3480 VPM/0.01")*

Steering

Hydrostatic power-assisted steering using an articulated reciprocating joint. Steering lock 39° to both sides. Reciprocating compensation 10° upwards and downwards.

Track offset (crab steering)

Hydrostatic track offset can be infinitely adjusted to both sides up to 100 mm *(3.94")*.

Service brake

During use, the machine is braked by the hydrostatic transmission. Wear-free braking.

Parking brake

Spring-loaded disc brake acting on each hydraulic motor of the transmission. Manual and automatic.

EMERGENCY STOP brake

By means of hydrostatic transmission and spring-loaded disc brakes.

Water sprinkling	Front drum	Pressure sprinkling, manual actuation and automatic pause.
	Smooth tires	Additive pressure sprinkling, manual actuation.

Special equipment

On request, the machine can be equipped with extensive special accessories.

Subject to design, weight and dimensional modifications.

606-27

1.04.07 Technical data	HD 75.4K		HD O75K	
Empty weight without cab	6,600 kg	*(14,553 lbs)*	6,160 kg	*(13,583 lbs)*
Operating weight with cab	7,550 kg	*(16,648 lbs)*	7,650 kg	*(16,868 lbs)*
Axle load front	4,050 kg	*(8,930 lbs)*	4,150 kg	*(9,151 lbs)*
Axle load rear	3,500 kg	*(7,718 lbs)*	3,500 kg	*(7,718 lbs)*
Load per tire, rear	875 kg	*(1,929 lbs)*	875 kg	*(1,929 lbs)*
Vibration	front			-
Oscillation	-			front
Working width/crab steering	1,680/1,745 mm	*(66.2/68.8")*	1,680/1,745 mm	*(66.2/68.8")*
Turning circle radius external/internal	5,765/4,085 mm	*(227.1/161")*	5,765/4,085 mm	*(227.1/161")*
Drum diameter	1,140 mm	*(44.92")*	1,140 mm	*(44.92")*
Smooth tires, 4 off	11.00-20 12 PR			11.00-20 12 PR
Air pressure	3.0 bar	*(43.5 PSI)*	3.0 bar	*(43.5 PSI)*

Capacities

Fuel tank	130.00 Ltr.	*(34.32 USgal.)*	130.00 Ltr.	*(34.32 USgal.)*
Engine (for oil change)	10.00 Ltr.	*(2.64 USgal.)*	10.00 Ltr.	*(2.64 USgal.)*
Engine with cooling and heating system (at new filling)	13.00 Ltr.	*(3.43 USgal.)*	13.00 Ltr.	*(3.43 USgal.)*
Oil tank hydraulic system	50.00 Ltr.	*(13.20 USgal.)*	50.00 Ltr.	*(13.20 USgal.)*
Water tank - sprinkling for front drum - 2 tanks	720.00 Ltr.	*(190.08 USgal.)*	720.00 Ltr.	*(190.08 USgal.)*
Water tank - additive sprinkling for tires	11.00 Ltr.	*(2.90 USgal.)*	11.00 Ltr.	*(2.90 USgal.)*

Engine

Deutz Diesel engine, 4-stroke, 4 cylinder, oil cooled	type BF4M 1011F
Rating according to ISO 3046/1, ISO 9249 at 2,500 rpm	52.5 kW/76.5 PS
Rating according to SAE J1349 at 2,800 rpm	61 kW/82 HP

608-27

Electrical system	**HD 75.4K**	**HD O75K**
Operating voltage	12 V	12 V

1 battery, 12 Volt/135 Ah.

Transmission		
Hydrostatic transmission, infinitely variable, single lever operation	all-wheel drive	all-wheel drive
Operating gear/transport gear	0-7,4/0-10,5 km/h *(0-4.6/0-6.5 mph)*	0-7,4/0-10,5 km/h *(0-4.6/0-6.5 mph)*
Climbing ability with/without vibration up to	30/40 %	30/40 %

Vibration/oscillation

Direct hydrostatic transmission.

Vibration:	Stage 1:	Frequency/amplitude	max. 42 Hz/0.57 mm *(2520 VPM/0.02")*	-
Vibration:	Stage 2:	Frequency/amplitude	max. 50 Hz/0.39 mm *(3000 VPM/0.02")*	-
Oscillation:	Stage 1:	Frequency/tangential amplitude	-	max. 30 Hz/1.33 mm *(1800 VPM/0.05")*
Oscillation:	Stage 2:	Frequency/tangential amplitude	-	max. 36 Hz/1.33 mm *(2160 VPM/0.05")*

Steering

Hydrostatic power-assisted steering using an articulated reciprocating joint. Steering lock 39° to both sides. Reciprocating compensation 10° upwards and downwards.

Track offset (crab steering)

Hydrostatic track offset can be infinitely adjusted to both sides up to 100 mm *(3.94")*.

Service brake

During use, the machine is braked by the hydrostatic transmission. Wear-free braking.

Parking brake

Spring-loaded disc brake acting on each hydraulic motor of the transmission. Manual and automatic.

EMERGENCY STOP brake

By means of hydrostatic transmission and spring-loaded disc brakes.

Water sprinkling

Pressure sprinkling, manual actuation and automatic pause.

Special equipment

On request, the machine can be equipped with extensive special accessories.

Subject to design, weight and dimensional modifications.

606-36

1.04.08 Technical data HD 75.4

Empty weight without cab ..... 7,150 kg *(15,766 lbs)*
Operating weight with cab ..... 8,100 kg *(17,861 lbs)*
Axle load front ..... 4,050 kg *(8,930 lbs)*
Axle load rear ..... 4,050 kg *(8,930 lbs)*
Vibration ..... front/rear
Working width/crab steering ..... 1,680/1,780 mm *(66.19/70.13")*
Turning circle radius external/interna ..... 5,765/4,085 mm *(227.14/160.95")*
Drum diameter ..... 1,140 mm *(44.92")*

Capacities

Fuel tank ..... 130.00 Ltr. *(34.32 USgal.)*
Engine (for oil change) ..... 10.00 Ltr. *(2.64 USgal.)*
Engine with cooling and heating system (at new filling) ..... 13.00 Ltr. *(3.43 USgal.)*
Oil tank hydraulic system ..... 50.00 Ltr. *(13.20 USgal.)*
Water tank - sprinkling for front and rear drum - 2 tanks ..... 720.00 Ltr. *(190.08 USgal.)*

Engine

Deutz Diesel engine, 4-stroke, 4 cylinder, oil cooled ..... type BF4M 1011F
Rating according to ISO 3046/1, ISO 9249 at 2,500 rpm ..... 56.2 kW/76.5 PS
Rating according to SAE J1349 at 2,800 rpm ..... 61 kW/82 HP
608-28

Electrical system **HD 75.4**

Operating voltage .....12 V

1 battery, 12 Volt/135 Ah.

Transmission

Hydrostatic transmission, infinitely variable, single lever operation .....all-wheel drive

Operating gear.....0-9,0 km/h *(0-5.6 mph)*

Climbing ability with vibration up to.....20 %

Climbing ability without vibration up to .....25 %

Vibration

Direct hydrostatic transmission.

Stage 1: Frequency/amplitude .....max. 42 Hz/0.57 mm (*2520 VPM/0.02")*

Stage 2: Frequency/amplitude .....max. 50 Hz/0.39 mm *(3000 VPM/0.02")*

Steering

Hydrostatic power-assisted steering using an articulated reciprocating joint. Steering lock 39° to both sides. Reciprocating compensation 10° upwards and downwards.

Track offset (crab steering)

Hydrostatic track offset can be infinitely adjusted to both sides up to 100 mm *(3.94")*.

Service brake

During use, the machine is braked by the hydrostatic transmission. Wear-free braking.

Parking brake

Spring-loaded disc brake acting on each hydraulic motor of the transmission. Manual and automatic.

EMERGENCY STOP brake

By means of hydrostatic transmission and spring-loaded disc brakes.

Water sprinkling

Pressure sprinkling, manual actuation and automatic pause.

Special equipment

On request, the machine can be equipped with extensive special accessories.

Subject to design, weight and dimensional modifications.

606-37

Notes

2.00 Controls

2.00.01 General

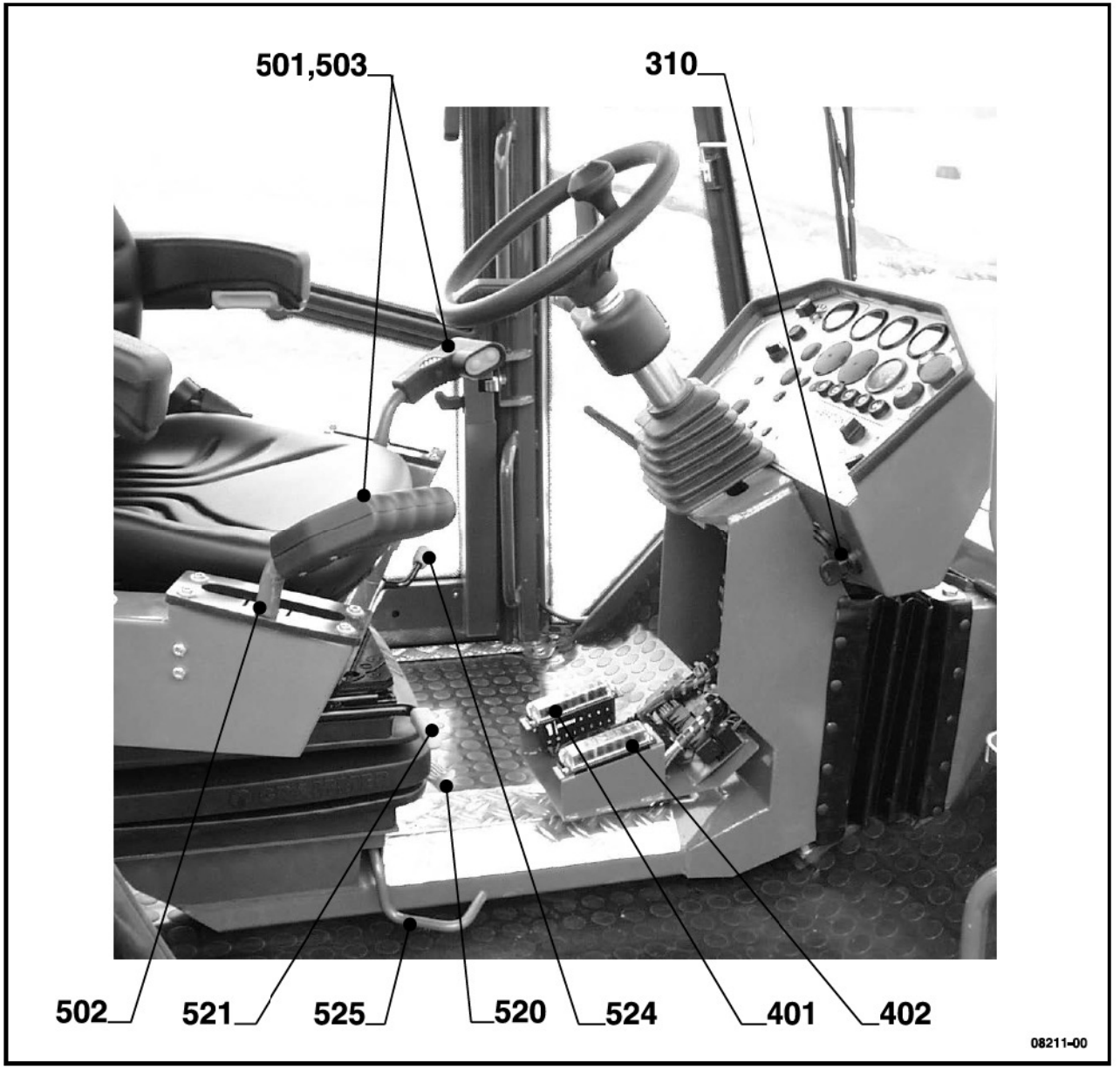
This operating manual applies for several types within this series. As a consequence, this manual may contain descriptions for controls that are not fitted in your machine.
The item numbers refer to the descriptions of the individual elements in this chapter. These item numbers are given in brackets in the text dealing with operation and maintenance.
100-01

2.00.02 Overview

303 Lever switch - flasher/lighting
330 Rotary switch cab heating
341 Foot switch - water sprinkling
405 Socket
501 Drive lever
502 0-position lock/parking brake
503 Multifunctional handle
504 Engine speed lever
525 Seat adjustment left - right
528 Steering column adjustment



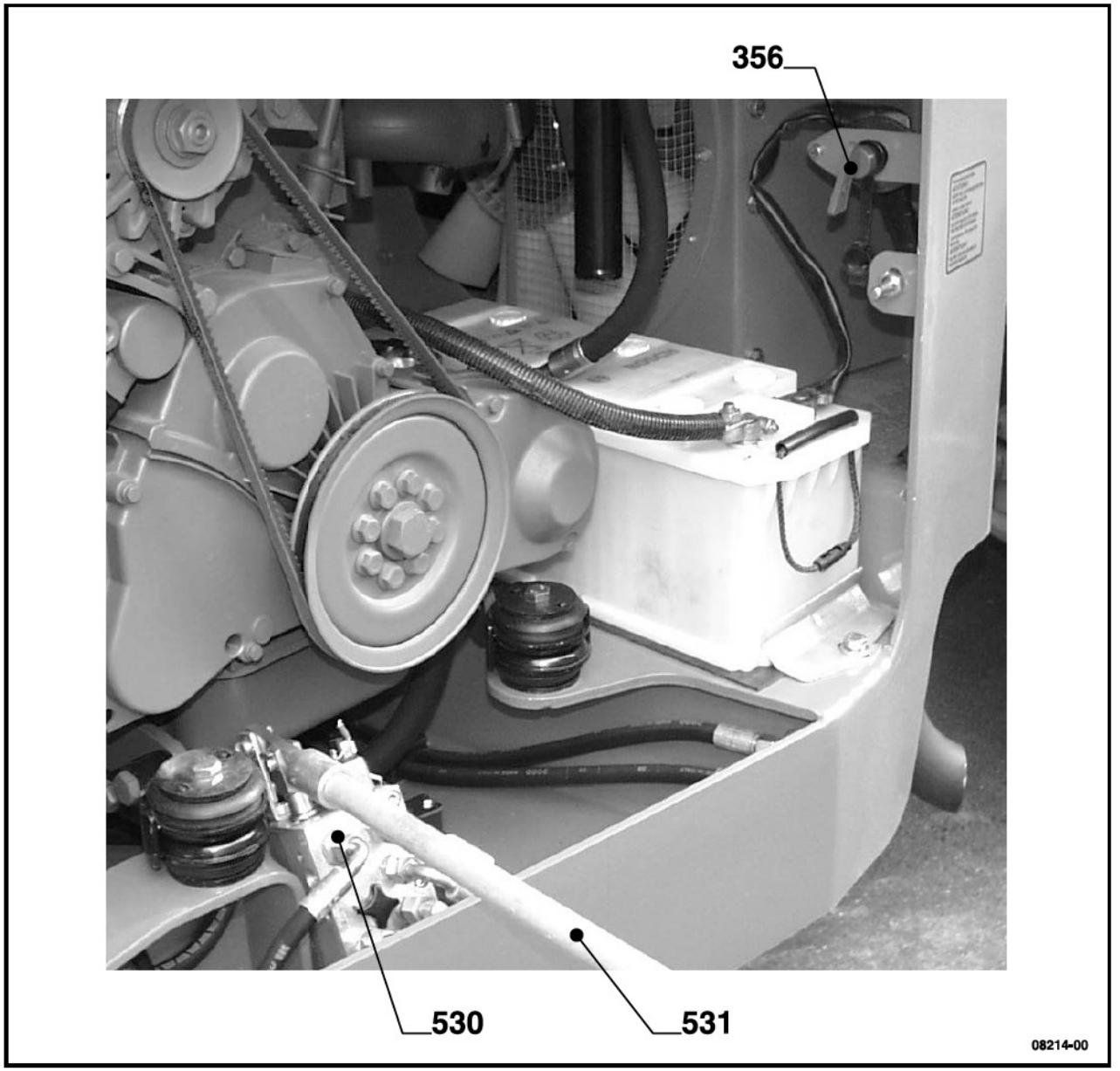
310 Key switch
401 Left fuse-box
402 Right fuse-box
501 Drive lever
502 0-position lock/parking brake
503 Multifunctional handle
520 Seat adjustment weight/height
521 Seat adjustment forwards - backwards
524 Seat adjustment turning
525 Seat adjustment left - right



230 Cab lighting
331 Toggle switch - ventilation
332 Rocker switch
front screen wipers
333 Rocker switch
rear screen wipers
335 Rocker switch
windscreen wiper left - right
336 Rocker switch
rear working headlamps
337 Rocker switch
front working headlamps
403 Fuses cab console



356 Battery main switch
530 Manual pump
531 Actuation tube



101 Operating hour meter
102 Engine temperature display
103 Oil temperature display hydraulic system
104 Fuel filling level
108 Speed display (optional)
109 Compaction indicator HCM (optional)
110 Frequency display (optional)
111 Filling level display water sprinkling
201 Indicator lamp charge current (red)
202 Warning flasher engine oil pressure (red)
203 Warning flasher air filter (yellow)
204 Warning flasher parking brake (red)
207 Control lamp water sprinkling (green)
211 Control lamp flasher (green)
212 Control lamp - track offset (yellow, optional)
213 Control lamp - chip spreader (red, optional)
225 Warning flasher ASC (red)
302 EMERGENCY STOP switch
305 Pushbutton switch - warning flasher
311 Pushbutton switch - rotating-beam lamp (optional)
312 Rotary switch - vibration
313 Rotary switch - frequency adjustment (optional)
314 Pushbutton switch - drive speed
316 Rotary switch - vibrator preselect. (optional)
317 Interval switch - water sprinkling
318 Pushbutton switch - additive sprinkling
319 Rotary switch vibr. mode manual-automatic (optional)
324 Rotary switch - water sprinkling preselection
326 Rotary switch - water pump preselection
344 Toggle switch - chip spreader (optional)



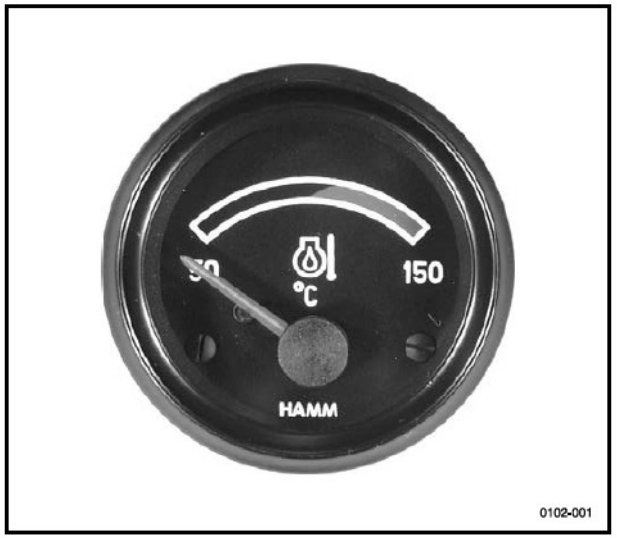
2.00.03 Description of the controls

The items marked with numerals are equivalent to the pertinent numbering of the illustrations for the control elements, control equipment and switches. They are identical with the numbers of the individual operating and control elements. In the descriptive text, these item numbers are given in brackets. This also ensures that important, additional information can be located quickly and without any trouble within the descriptions of the components.
100-02



101 Operating hour meter

Registers the operating hours when the diesel engine is running. The servicing work is to be carried out in accordance with the number of operating hours.
101-00



102 Engine temperature display

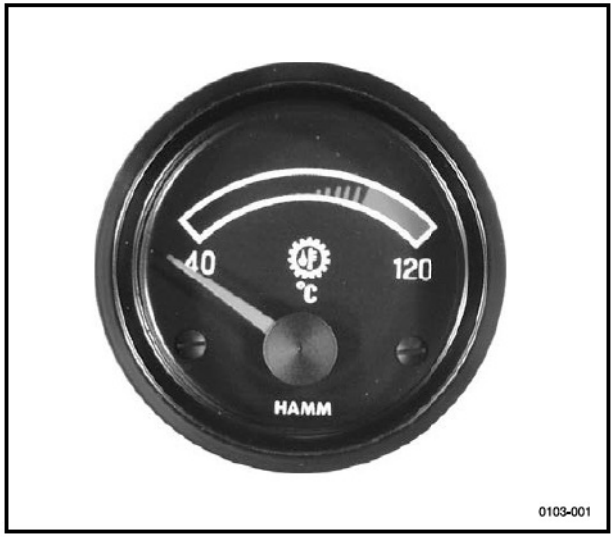
Standard display: Needle within the black sector.
If the engine temperature should rise to within the red sector or if an audible signal is given

- Stop the machine.
- Let the engine run at idle speed.

If the oil temperature does not drop noticeably

- Switch the engine off.
- Determine the cause for the rise in temperature and rectify.

102-00



103 Oil temperature display - hydraulic system

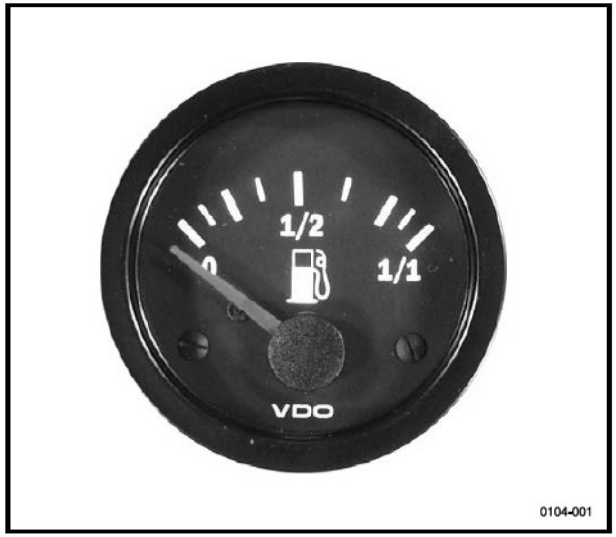
Standard display: Needle within the black sector.
If the hydraulic fluid temperature should rise to within the red sector or if an audible signal is given

- Stop the machine
- Let the engine run at idle speed.

If the fluid temperature does not drop noticeably

- Switch the engine off
- Determine the cause for the rise in temperature and rectify.

103-03



104 Fuel tank filling level display

Displays the filling level in the fuel tank.

☞ Never drive until the fuel tank is empty. Fill up every evening. This prevents the formation of condensate in an empty tank.

Only use clean fuel!

104-00



108 Speed display (optional)

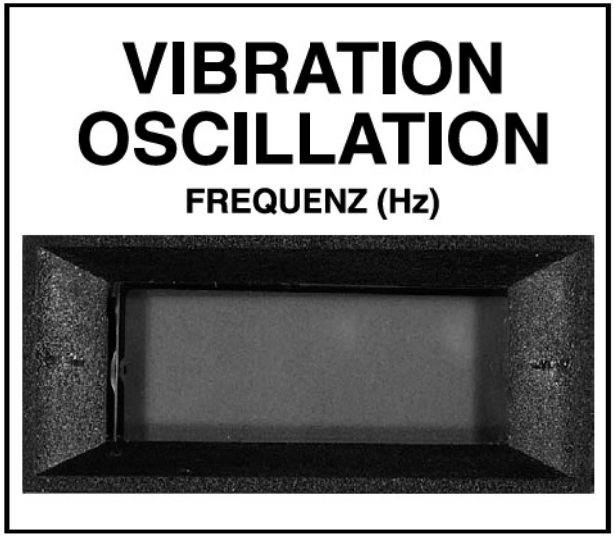
Displays the driving speed.

108-00



109 Compaction display HCM (optional)

The displayed figure depends on the material to be compacted.
The higher the figure displayed, the higher the material compaction, respectively the load-bearing capacity. This display is only active when the vibration is switched on. Use is only permissible for soil compaction.
If the machine is not equipped with compaction display HCM (optional) there is no needle deflection.
109-00



110 Frequency display (optional)

Displays the vibrator frequency set with the rotary switch (313).
110-00

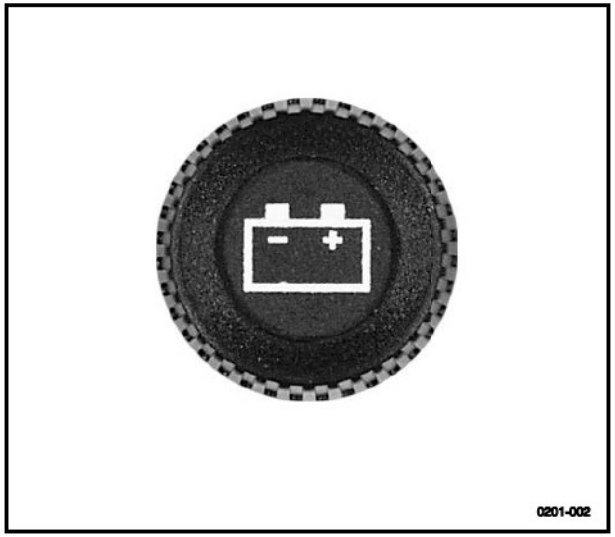


111 Filling level display water sprinkling

Displays the filling level in the water tank for water sprinkling.

Only use clean water!

111-00



201 Indicator lamp charge current (red)

When the electrical system is switched on (key switch (310) position 1) and the engine is at a standstill, the indicator lamp must light up. The indicator lamp goes out after the engine has been started. If the lamp lights up during use, this indicates a lack of charge current.

201-00

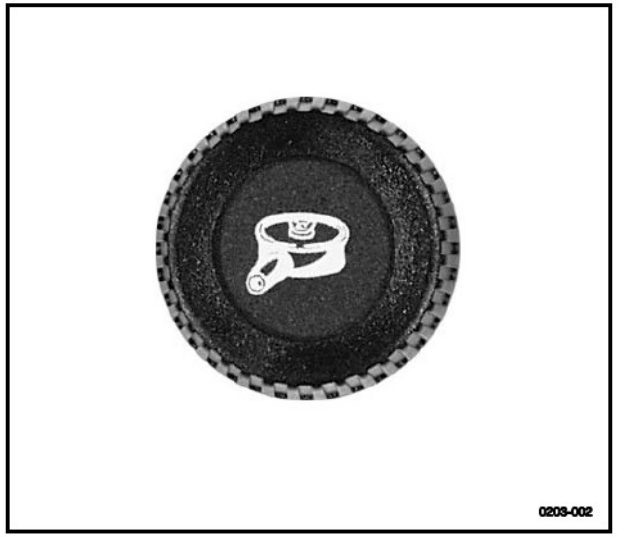


202 Warning flasher engine oil pressure (red)

When the electrical system is switched on (key switch (310) position 1) and the engine is at a standstill, the warning lamp must flash.

The warning lamp must go out after the engine has started. Flashing during use indicates an inadequate lube oil pressure. The minimum oil pressure is 1.0 bar *(14.5 PSI)* at idle speed (750-850 rpm). Flashing of the warning lamp when the engine is warm and at idle speed is still permissible, provided the warning lamp goes out when the speed increases.

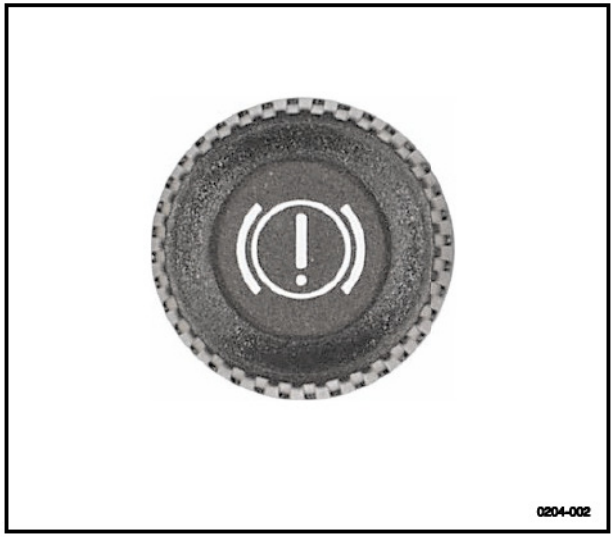
202-00



203 Warning flasher air filter (yellow)

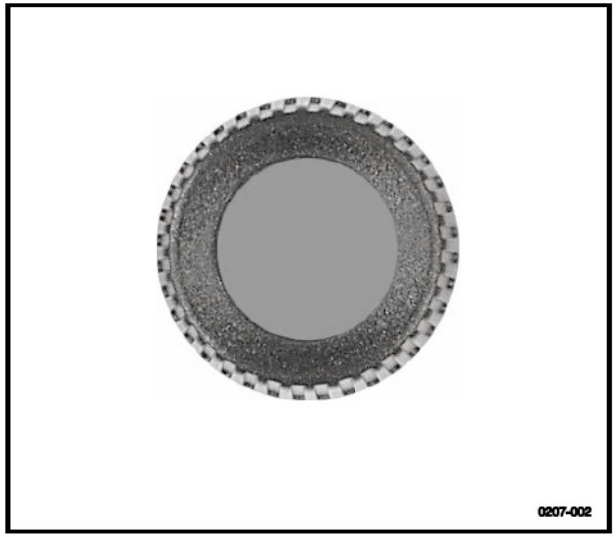
Flashing during use indicates a fouled air filter cartridge.

203-00



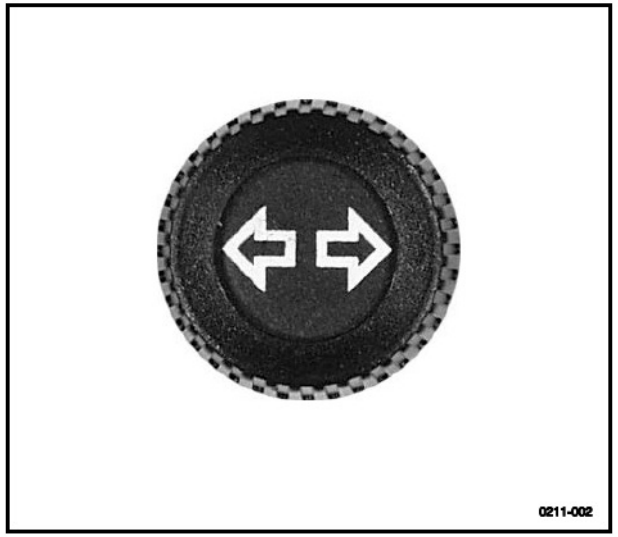
204 Warning flasher parking brake (red)

When the parking brake is engaged and the EMERGENCY STOP switch is actuated the warning flasher flashes.
Flashing when driving indicates inadequate oil pressure for releasing the parking brake (switch off machine, rectify cause).
204-03



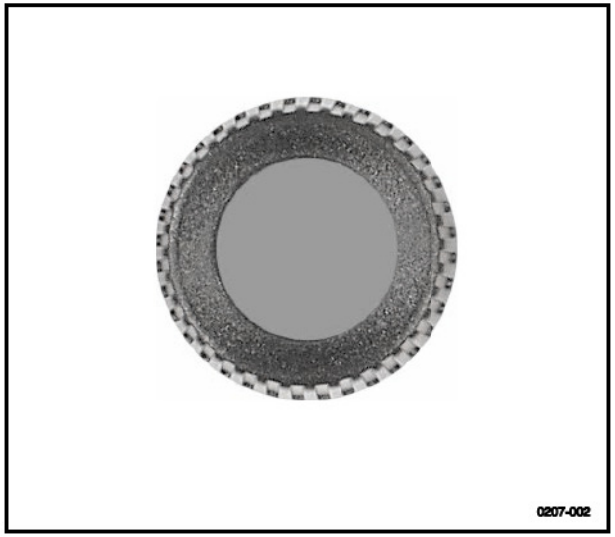
207 Control lamp water sprinkling (green)

The control lamp lights up during water sprinkling when the water pump is operating.
207-00



211 Control lamp flasher (green)

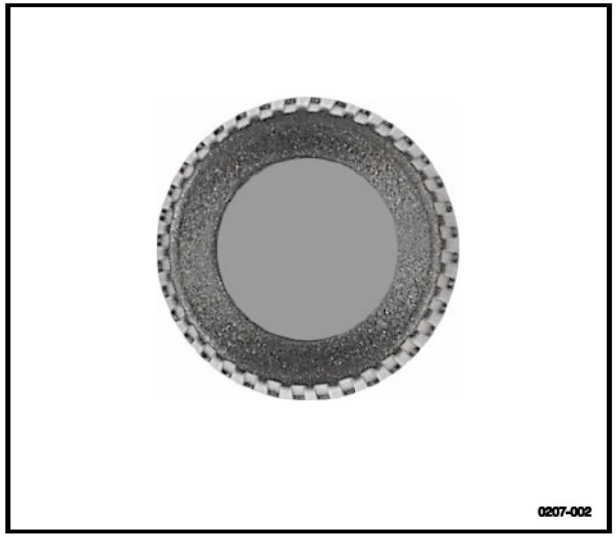
When the direction indicator is actuated, the control lamp flashes.
211-00



212 Control lamp track offset (yellow, optional)

The control lamp lights up during track offset (crab steering).

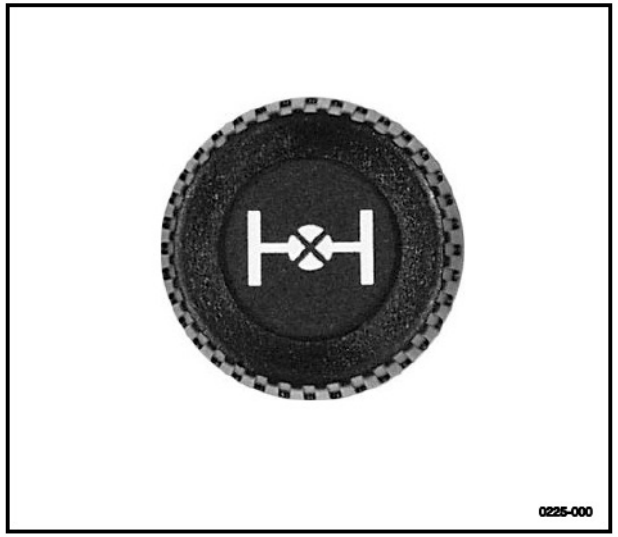
212-00



213 Control lamp chip spreader (red, optional)

The control lamp lights up when the chip spreader is actuated.

213-00

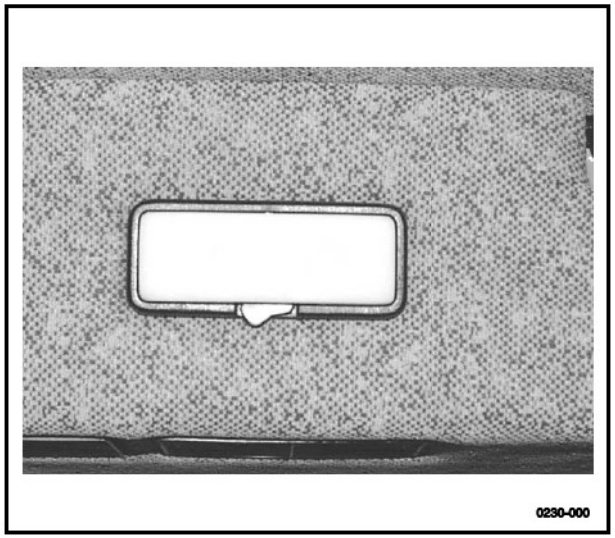


225 Warning flasher ASC (red)

⚠ Never operate the machine when the warning flasher is flashing (risk of accident).

A flashing during operation signalizes a failure in the ASC module. Stop the machine, shut-off the engine and the electric system! As soon as the electric system is switched-on anew, the data of the electronic unit will be in basic position. If the warning flasher is still flashing after re-starting, the ACS system is malfunctioning. Request the assistance of customer services!

225-00



230 Cab lighting

This functions even when the electrical system is switched off.
230-00



302 EMERGENCY STOP switch

By actuating the EMERGENCY STOP switch, the hydraulic transmission and the vibration are stopped; the hydraulic brakes are actuated (warning flasher (204) flashes).
On .....**DOWN**

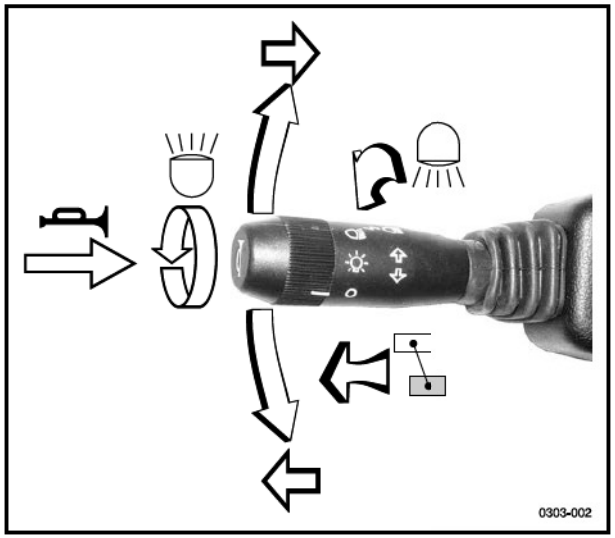
⚠ Roller brakes immediately and without delay!
Do not use as the service brake!

To release the switch knob, turn clockwise. The warning flasher (204) continues to flash until the drive lever (501) is engaged in the 0-position.
Off .....**TOP**

ⓘ After the EMERGENCY STOP switch has been used, the machine must be returned to the start position:

- Engage drive lever (501) in the 0-position.

302-05



303 Lever switch flasher/track offset/horn/lighting

The lever switch has five functions:

- Direction indicator
- Track offset (crab steering)
- Horn
- Parking light - driving light
- Reversing lights

Direction indicator
The actuating direction is equivalent to the direction of rotation of the steering wheel when negotiating curves.
Left curve .....Lever **BACK**
Right curve .....Lever **FORWARD**

When the direction indicator is actuated, the pilot light (211) flashes.

Track offset (crab steering)
For adjusting the track offset the lever switch is fully drawn upward and hold. The adjustment is carried out by the steering wheel.
The track offset is carried out to the left or to the right, depending on the direction.
Lever not actuated .....**STEERING**
Lever pulled .....**TRACK OFFSET**

The control lamp (212) indicates a track offset.

Horn
Press the actuating knob of the lever towards the centre of the steering wheel.

Parking light - driving light
The lighting is switched on by turning the actuating knob aroud the lever axis.
Lighting Off.....**BACK**
Parking light.....**CENTRE**
Driving light.....**FORWARD**

Reversing lights
The reversing lights are switched on by pulling the lever downwards.
On .....**DOWN**
Off.....**UP**
303-02



305 Pushbutton switch warning flasher

When the switch is actuated, the warning flasher system is switched on (switch knob flashes).
On .....**DOWN**
Repeat actuation releases the switch knob and the lamp inside the switch knob goes out.
Off.....**UP**

i The perfect function of the warning flasher system should be checked prior to starting the machine.

305-00

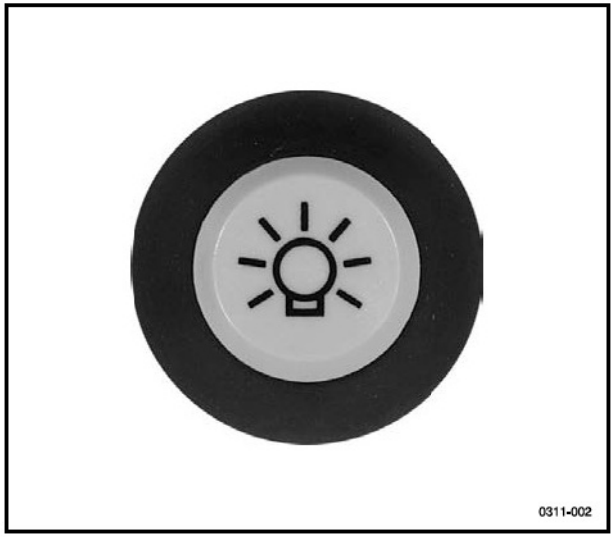


310 Ignition key electrical system/engine start

The ignition key is used to provide power to the electrical components as well as to start and stop the diesel engine.
Key position 0
Electrical system .....**OFF**
Diesel engine.....**STOP**
(key free)
Key position 1
Electrical system .....**ON**
Key position 2.....**PREHEAT**
Key position 3.....**ENGINE START**
(key returns to position 1 after the engine has started)

i When the engine is at a standstill and the electrical system is left on for any length of time (key position 1), the battery will be rapidly discharged.

310-00



311 Pushbutton switch rotating-beam lamp (optional)

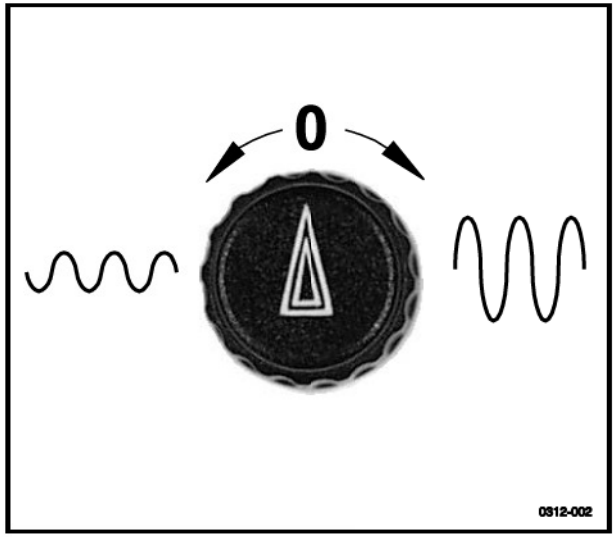
When the switch is actuated, the rotating-beam lamp is switched on (switch knob lights up).

On .....**DOWN**

Repeat actuation releases the switch knob and the lamp inside the switch knob goes out.

Off.....**UP**

311-00



312 Rotary switch vibration

The vibration is switched on and off by means of the rotary switch. Depending on the switch position, the vibration operates with a large or small amplitude.

Small amplitude.....**LEFT**

Vibration Off **0**

Large amplitude .....**RIGHT**

⚠ When in the vicinity of buildings, do not switch the vibration on (danger of collapse)!

312-00



313 Rotary switch frequency adjustment (optional)

The rotary switch is used for adjusting the vibrator frequency, whereby the current value is shown on the frequency display (110). The frequency can also be adjusted when the vibration is in use.

Low frequency value .....**LEFT**

High frequency value .....**RIGHT**

313-00

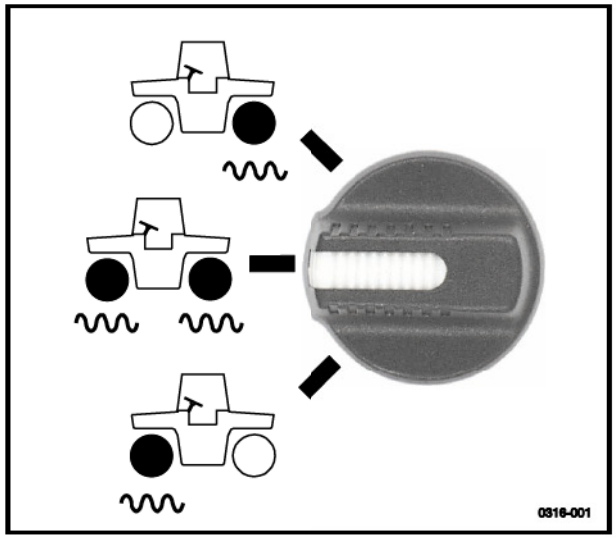


314 Pushbutton switch drive speed

When the switch is actuated, the transmission is switched to the transporting gear (2nd gear) (switch knob lights up).
Transport gear .....**DOWN**
Repeat actuation releases the switch knob and the lamp inside the switch knob goes out.
Working gear .....**UP**

⚠ Do not actuate whilst driving (danger of injury due to strong acceleration, resp. braking)! Damage to the drive elements would be the consequence.

314-00

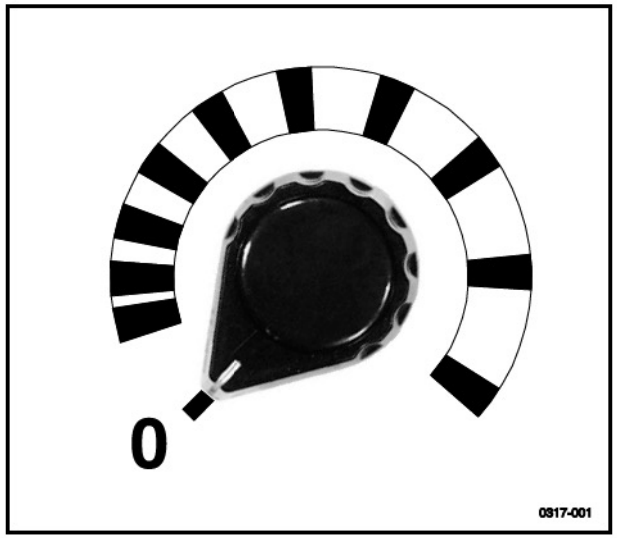


316 Rotary switch vibrator preselection (optional)

Depending on the switch setting, the vibration acts in the front roller drum, in the rear roller drum or in both roller drums.

Front vibration .....**DOWN**
Double vibration.....**CENTRE**
Rear vibration .....**UP**

316-02



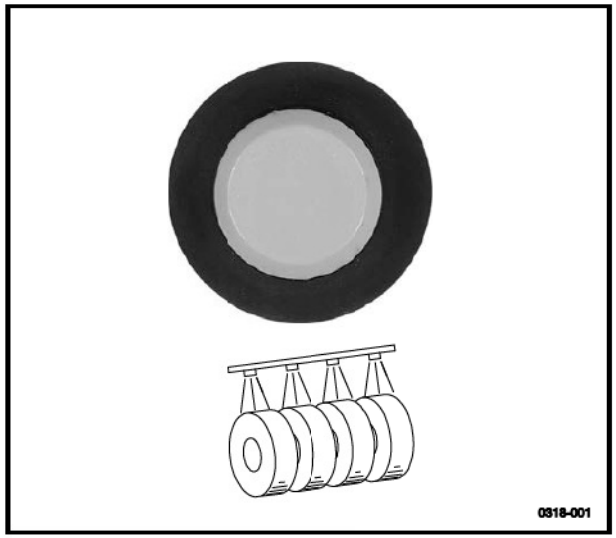
317 Interval switch water sprinkling

Automatic water sprinkling is switched on and off with the interval switch. 9 different stages are provided for the pause intervals of the water pump.

To the right.....**ON**
Longer pause time .....to the **RIGHT**
Shorter pause time .....to the **LEFT**
Fully counter-clockwise .....**OFF**

The sprinkling time always remains the same, irrespective of the switch setting.
This sprinkling time is set in the factory at 6 seconds. It can be adjusted to between 2.5

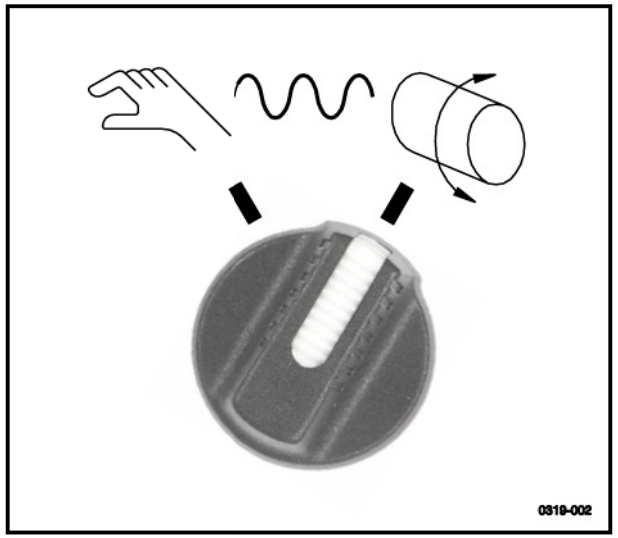
and 9 seconds to take into account the pertinent conditions of use.
317-00



318 Pushbutton switch additive sprinkling

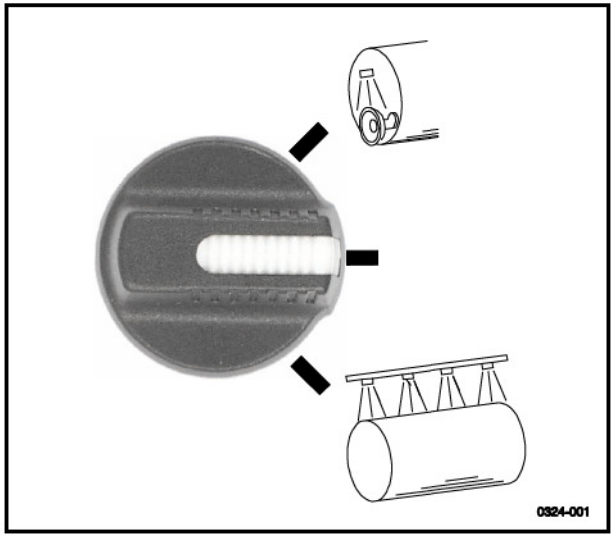
Wetting of the tires only continues whilst the pushbutton is actuated.

On .....**ACTUATE**
318-00



319 Rotary switch vibration mode manual-automatic (optional)

The vibration operating mode is selected with the rotary switch. The vibrators are switched on and off manually or automatically.
Manual .....**RIGHT**
The vibration can be switched on or off at any time with the pushbutton switch on the multifunctional handle (503).
Automatic .....**LEFT**
Switching the vibration on and off is coupled with the drive speed.
Braking (below 1.5 km/h, *0.93 mph*) ...**OFF**
Acceleration (above 0.5 km/h, *0.31 mph*) .....**ON**
319-00

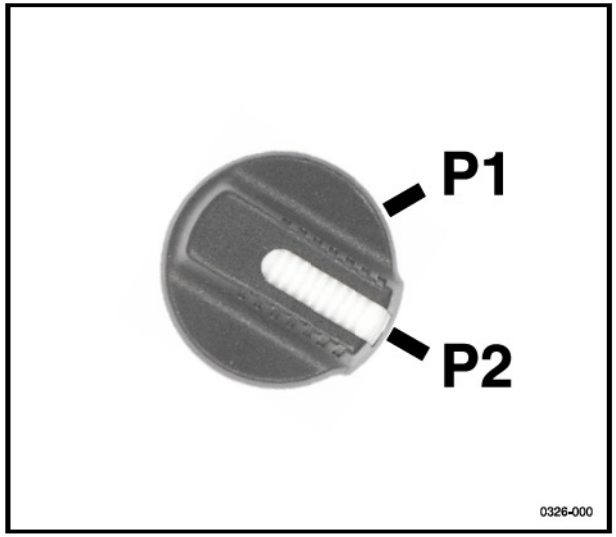


324 Rotary switch water sprinkling preselection

Depending on the switch position, the roller drum or the edge compaction and cutting device are moistened from the water sprinkling. In the centre position both components are moistened.

Only roller drum.....**LEFT**
Roller drum with edge compaction and cutting device at the same time...**CENTRE**
Only edge compaction and cutting device .....**RIGHT**

324-00



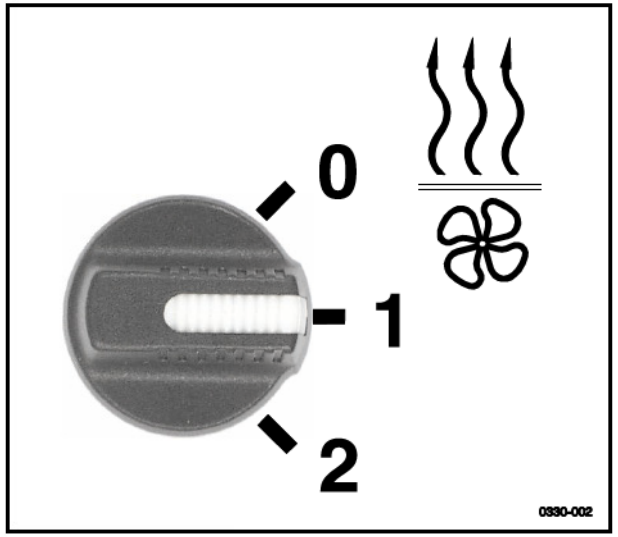
326 Rotary switch water pump preselection

The safety of the pressure sprinkling is ensured by two water pumps. Depending on the switch position, the water sprinkling is provided from pump 1 or pump 2.

Pump 1.....**UP**
Pump 2.....**DOWN**

i We recommend to periodically run the pumps alternatively to avoid defects by corrosion.

326-00

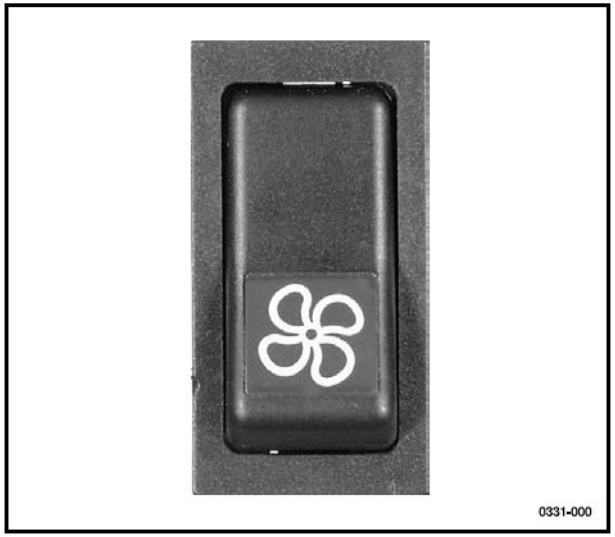


330 Rotary switch cab heating

The blower for cab heating can be activated with the rotary switch:

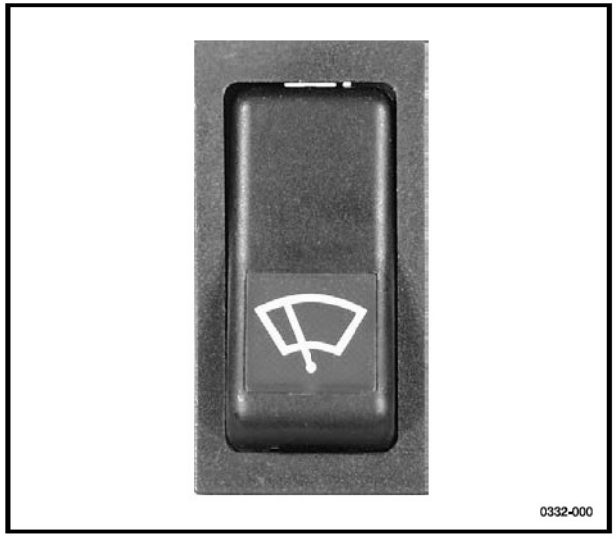
Ventilation Off.....**0**
Ventilation stage 1.....**1**
Ventilation stage 2.....**2**

330-01



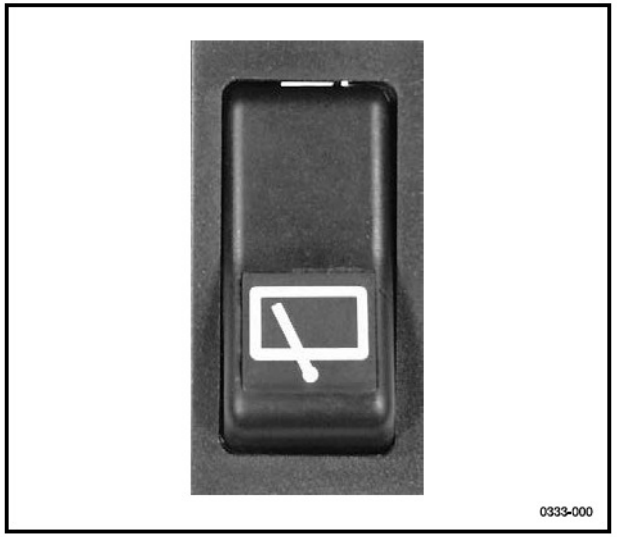
331 Toggle switch ventilation

Ventilation Off.....**UP**
Ventilation Stage 1.....**DOWN**
Ventilation Stage 2.....**DOWN**
331-01



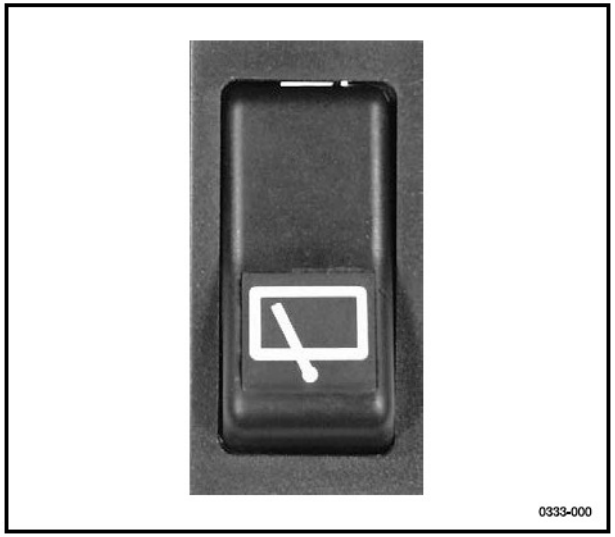
332 Rocker switch front windscreen wiper

Off.....**UP**
On .....**DOWN**
332-01



333 Rocker switch rear windscreen wiper

Off.....**UP**
On .....**DOWN**
333-01



335 Rocker switch windscreen wiper left - right

Off.....**UP**
On .....**DOWN**
335-01



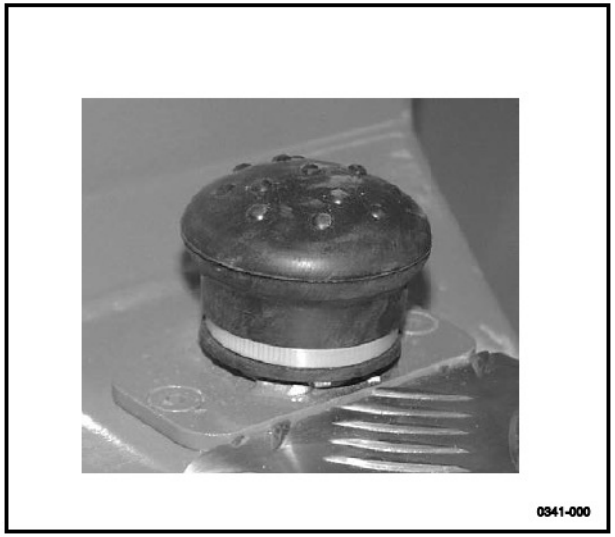
336 Rocker switch rear working headlamps

Using the rocker switch the rear working headlamps on the cab are switched on.
Off.....**UP**
On .....**DOWN**
336-00



337 Rocker switch front working headlamps

Using the rocker switch the front working headlamps on the cab are switched on.
Off.....**UP**
On .....**DOWN**
337-00



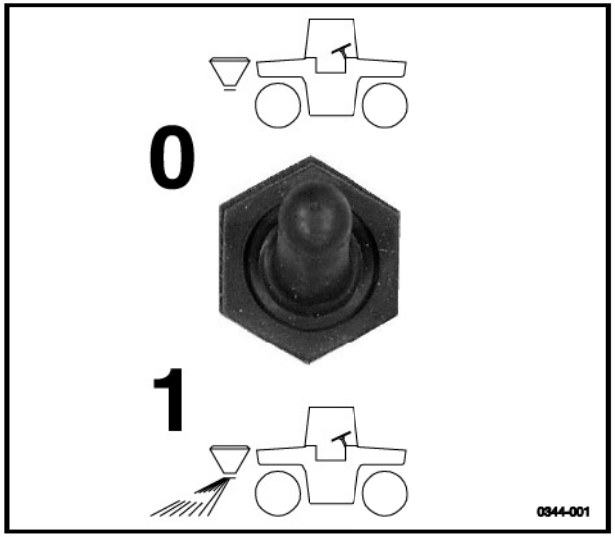
341 Foot switch water sprinkling

Sprinkling of the roller drums only takes place whilst the foot switch is actuated.

On .....**ACTUATE**

i Actuation of the foot switch overrules the effect of the interval switch (317).

341-00



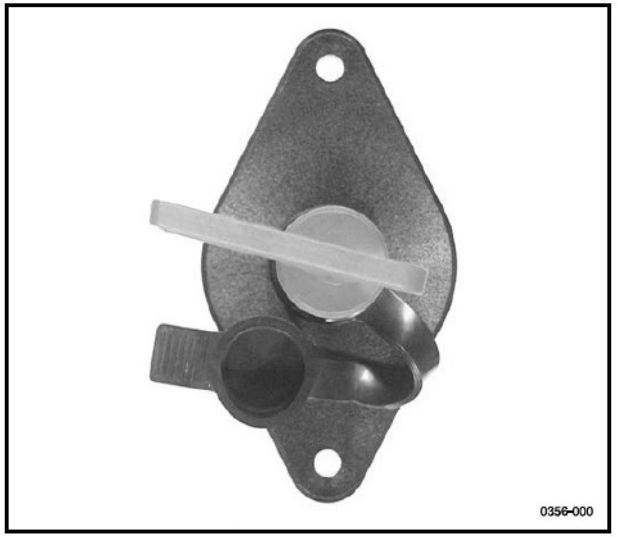
344 Toggle switch chip spreader (optional)

The toggle switch is used to switch the spreading plate on or off. The control lamp (213) is on with chip-spreading system switched on.

Off .....**TOP**
On .....**DOWN**

☞ Before switching off spreading plate, the opening of the chip infeed must be shut, because any chip material fed in afterwards may block the spreading plate.
The spreading plate shall not be switched on with chip spreader dismantled, in order to avoid an overheating of the hydraulics.

344-00



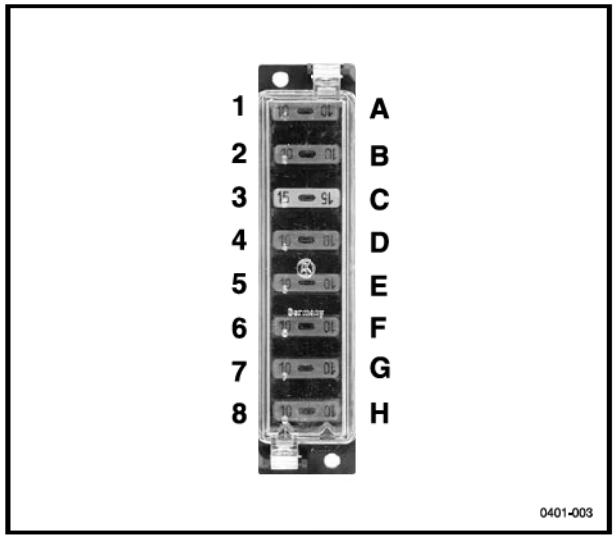
356 Battery main switch

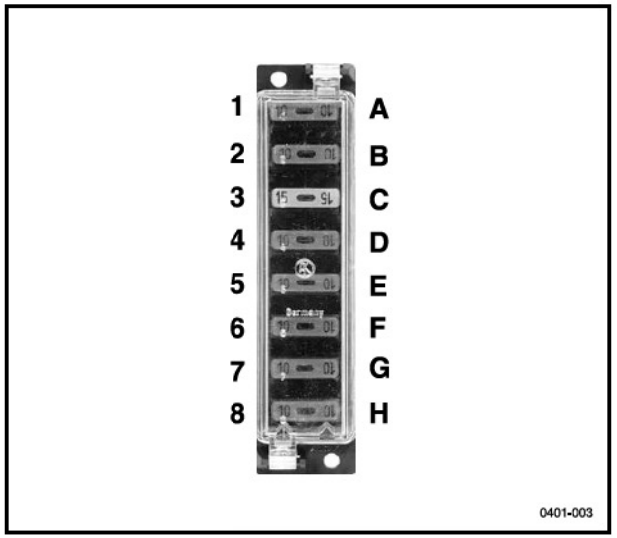
The battery main switch disconnects the electrical circuit by disconnecting the connection to the negative terminal of the battery. All electrical components are then non-functional.
Key position down
Power circuit .....**INTERRUPTED**
(key free)
Key position left
Power circuit.....**CLOSED**
(key engaged)

☞ The battery main switch may only interrupt the power circuit when the engine is

at a standstill and the electrical system is switched off, otherwise voltage peaks can damage the electrical components.

356-00





401 Left fuse-box

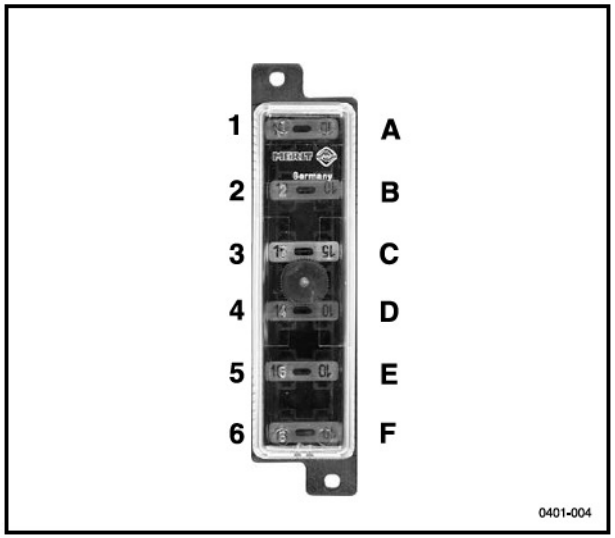
A	Parking light, instrumentation lighting	10A
B	Parking light	10A
C	Driving light	15A
D	Rear headlamp, working headlamp	10A
E	Unoccupied	10A
F	Unoccupied	10A
G	Direction indicator	10A
H	Warning flasher	10A

401-09

402 Right fuse-box

A	Control equipment, horn drive speed, tire heating	10A
B	EMERGENCY STOP, parking brake	10A
C	Vibration, compaction meter	10A
D	Speedometer	10A
E	Track offset	10A
F	Water pump	15A
G	Socket	10A
H	Blower cab heating	10A

402-06



403 Fuses cab console

A	Windscreen wiper front/rear (terminal 15)	10A
B	Windscreen wiper right/left (terminal 15)	10A
C	Working headlamps on cab (terminal 15)	10A
D	Ventilator, radio, tachograph (terminal 15)	10A
E	Lighting for control instruments (terminal 58)	10A
F	Cab lighting, radio, tachograph (terminal 30)	10A

403-02



405 Socket 12V

Can be subjected to a maximum load of 100 W (8 A).

405-01



501 Drive lever

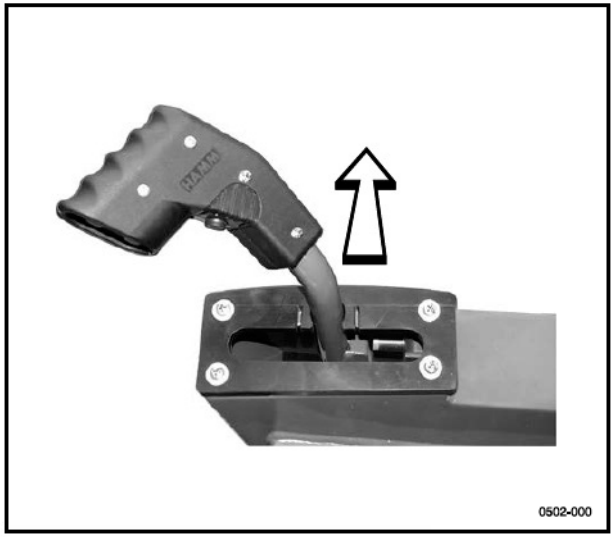
The drive lever determines the direction of travel and the speed.

Forward travel .....towards the **FRONT**
Reverse travel .....towards the **BACK**
Braking.....towards the **MIDDLE**
Stopping .....**MIDDLE**

The speed is equivalent to the extent of the lever deflection.

Move the lever uniformly and quickly. When going up or down hill, reduce the speed by means of the drive lever and increase the engine speed.

501-00



502 0-position lock/parking brake

To engage press the right drive lever in the centre setting into the 0-position lock. This position has two functions.
To disengage press the drive lever to the driver seat.

The 0-position lock

⚠ The 0-position lock is a safety device. It prevents the unintentional starting of the machine when the diesel engine is started. If the driver leaves the driver position even for a brief period the 0-position lock must be engaged.

Position .....**ENGAGED**

- Diesel engine can be started.
- Drive lever locked in the centre position (501).
- EMERGENCY STOP interruption is cancelled.

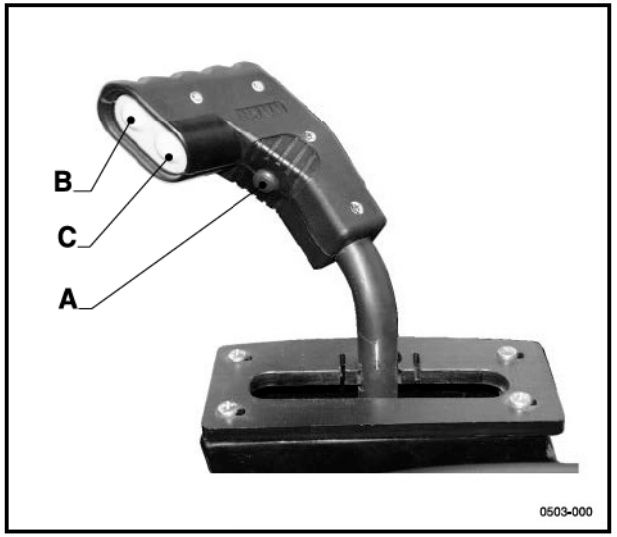
Position .....**DISENGAGED**

- Drive lever is free.
- Diesel engine cannot be started.

Parking brake

The parking brake is applied when the drive lever is engaged in the 0-position lock. When the parking brake is applied the warning flasher (204) flashes.

502-03



503 Multifunctional handle

Vibration

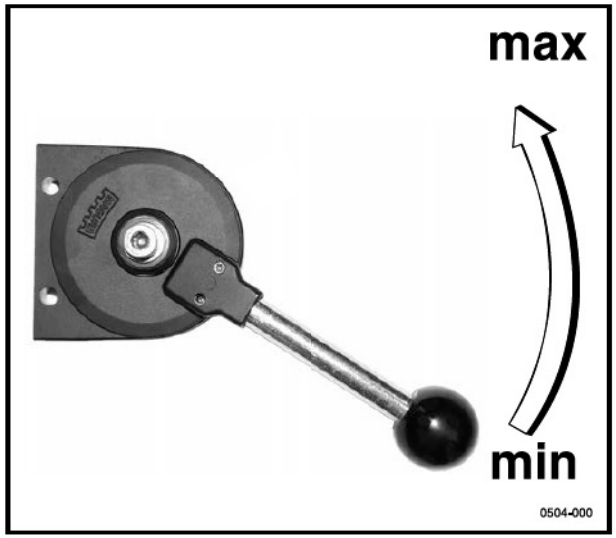
When the vibration is switched on (rotary switch (312) ON), the vibration can be switched on and off at any time with the pushbutton switch A.

Vibration On .....**ACTUATE**
Vibration Off .....**ACTUATE** again

Edge compaction and cutting device (optional)

The lifting resp. lowering movement continues whilst one of the pushbutton switches (B or C) is actuated.

Pushbutton switch B .....**RAISE**
Pushbutton switch C ..... **LOWER**
503-02



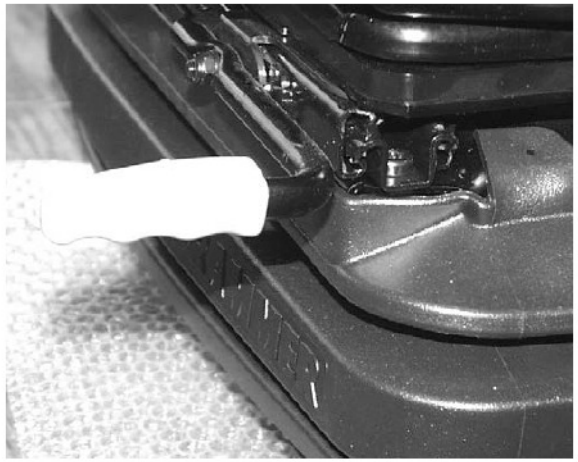
504 Engine speed

The speed of the diesel engine can be infinitely adjusted by means of the adjusting lever, between idle and maximum speed.
Idle speed .....**BOTTOM**
Max. speed .....**TOP**
504-02



520 Seat adjustment - weight/height

To absorb sudden machine movements by the fitted cushioning, this must be adjusted to the weight of the driver. By turning the lever clockwise or anticlockwise, the pretension of the cushioning is infinitely adjusted to the weight of the driver between 50 kg *(110 lbs)* and 130 kg *(287 lbs)*. The set weight is indicated in the adjacent window. The seat height can be adjusted to 3 levels. By raising the seat manually by about 30 mm *(1.18")*, the seat engages in the next highest level. To lower, the seat must be initially raised fully. It can then be lowered to the lowest level.
520-00



0521-000

521 Seat adjustment forwards - backwards

After the lever is raised, the upper section of the seat can be moved forwards or backwards in partial stages of 15 mm *(0.59")*.

521-00

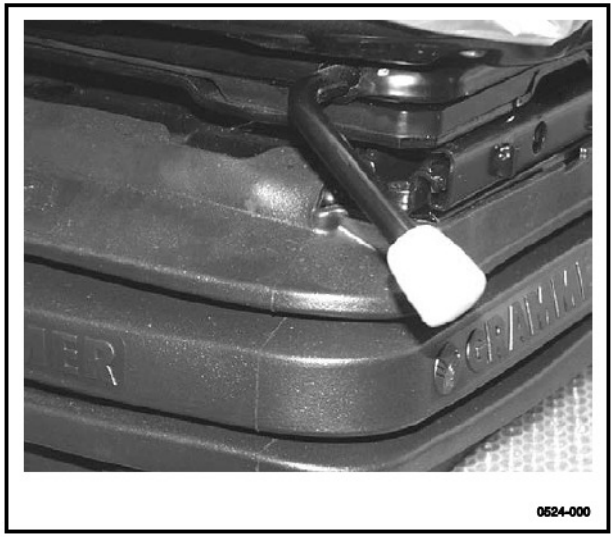


0522-000

522 Seat adjustment backrest

The pitch of the backrest can be moved forwards or backwards when the lever is raised.

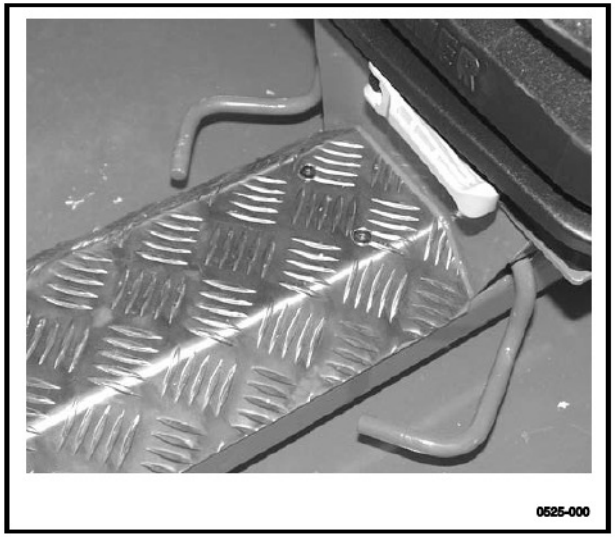
522-00



524 Seat adjustment turning

By lifting the lever, the seat can be rotated in 10° stages to the left or right.

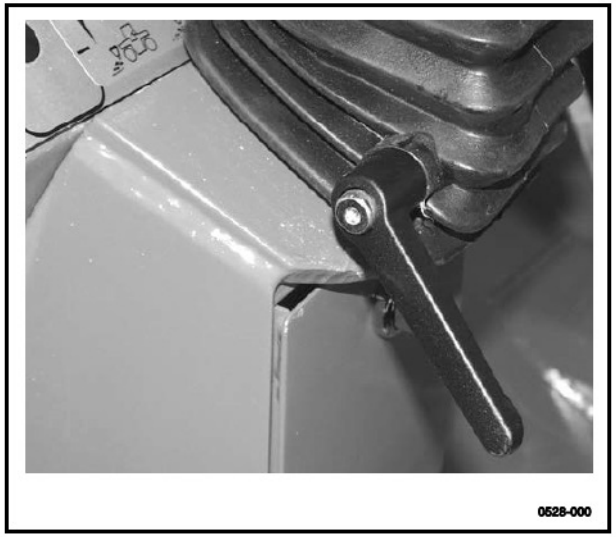
524-00



525 Seat adjustment left - right

By pressing down the foot lever, the complete seat pedestal can be moved to the left or right in 15°, 30° and 40° stages.

525-01



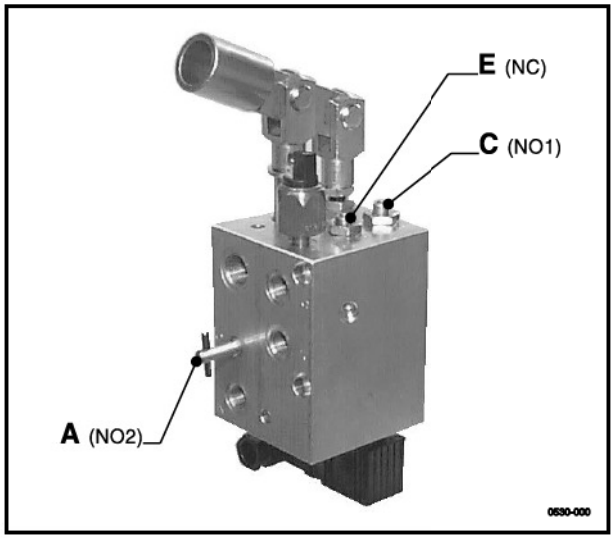
528 Steering column adjustment

Adjust the steering column as follows:

- Release the T-screw.
- Adjust the steering column to the required tilt.

⚠ After steering column adjustment:
Retighten the T-screw!
Do not adjust whilst driving!

528-01



530 Manual pump

The manual pump has two functions.

- Tilting the operator's platform together with the driver's cab.
- Releasing the spring pressure brake for towing where there is a failure in the feed pressure.

By opening, respectively closing screw valves, the pertinent function is set.

Operator's platform
Raise operator's platform
Thumb screw A.....**CLOSE**
Lower operator's platform
Thumb screw A.....**OPEN**
Lifting and lowering is carried out with the manual pump.

Brakes
Brakes for towing
Thumb screw A.....**CLOSE**
Bolt C.....**CLOSE**
Bolt E.....**OPEN**
Brakes normal use
Thumb screw A.....**OPEN**
Bolt C.....**OPEN**
Bolt E.....**CLOSE**
The brakes are released with the manual pump.
530-02



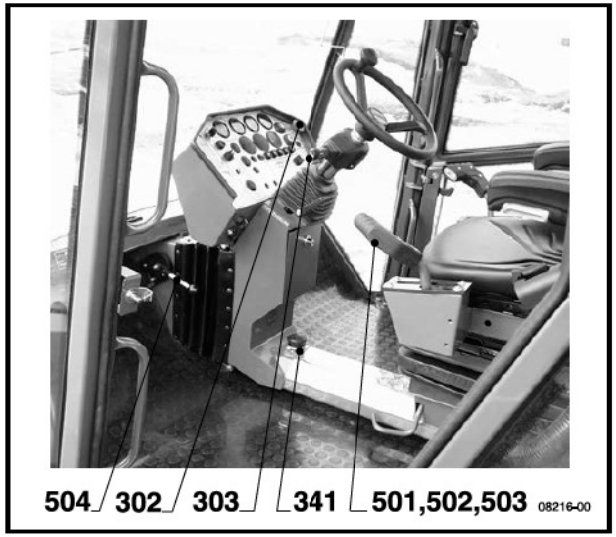
531 Actuation tube

The actuation tube is used for actuating the manual pump (530).
531-02

2.01 Driving

2.01.01 General

⚠ Prior to every taking into use:
Check the machine for traffic and operational safety! Read and observe the operating manual and safety instructions.





What must be done prior to the start of work?

- Carry out inspection and servicing work (see chapter on Servicing).
- Keep the surfaces and the driver position free from obstructions, grease, dirt, ice, etc.
- Check the indicator (303) and warning flasher system (305), as well as the horn (303) and lighting (303).
- Check the tire air pressure.

☝ With excessive air pressure there is the danger of an explosion! Only use suitable tire filling equipment to obtain the specified air pressure.

- Check the filling level of the fuel tank. Fill up to the lower edge of the filler socket. Never drive until the fuel tank becomes empty.

Only use clean fuel!

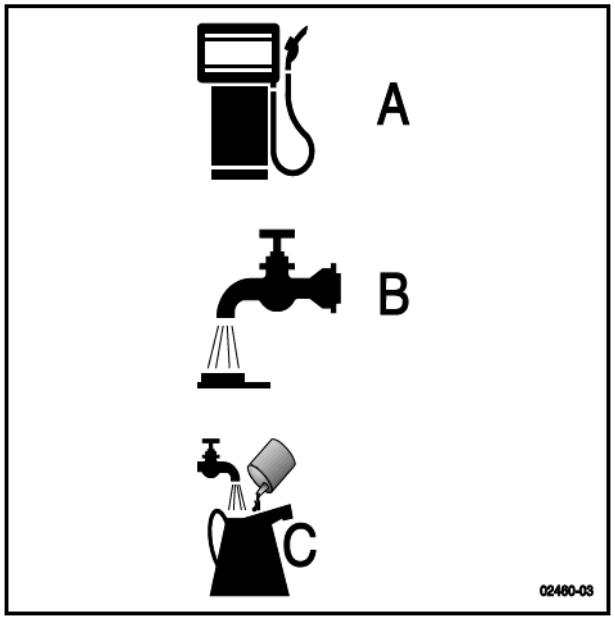
Note the information on filling up, in the chapter on "Fuel".

☞ Fill the fuel tank fully in the evening. This prevents the formation of condensate in the empty tank.

⚠ There is an increased risk of fire when fuel is handled.
Prior to filling up, switch off the engine and fuel operated heatings.
Do not smoke when filling up with fuel!
Never top up with fuel when in close proximity to naked flames or sparks.
Do not top up with fuel in enclosed spaces!

- Check the filling level of the water tank. Fill up to the lower edge of the filler socket.
- Check the filling level of the additive tank. Fill up to the lower edge of the filler socket.

Only use clean water!



Operating media symbols

The filling points for operating media are marked on the machine by means of symbols. Depending on the type of machine and equipment, the following symbols are attached to the machine:

A Fuel
B Water sprinkling
C Additive sprinkling

700-04

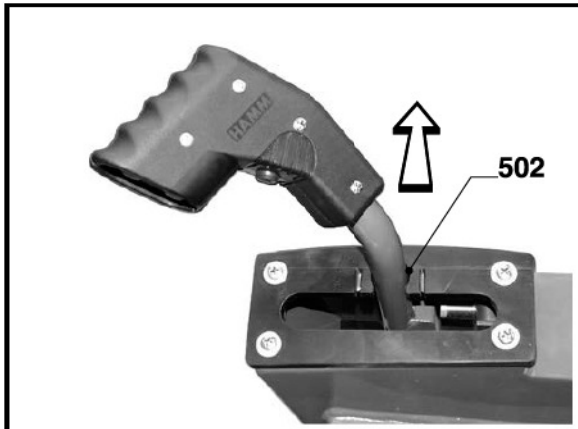
2.01.02 Precautions prior to starting the machine

The machine may only be started and driven by knowledgeable and authorised people.

⚠ Prior to starting work, take note of the working environment.This includes, e.g. obstructions within the working and driving area, the load-bearing capacity of the ground and the required safeguards for public traffic. Become aware of all the equipment and controls of the machine and their function. It will be too late once you are already working.
Ensure that nobody is in front of, underneath or behind the machine. Do not allow anybody to stand within the danger zone of the machine.
Ensure adequate visibility, adjust the required mirrors properly.
Keep the control and safety signs clean.Illegible or lost signs must be replaced immediately.
After carrying out servicing or repair work, which requires the removal of the driver's cab or driver's stand, the driver's stand and driver's cab must be firmly bolted to the machine frame. Only in this way is the roll-over safeguard ensured.
Following servicing work, check that all tools have been removed from the machine and that all safety devices have been reattached and placed in their protective position.
The diesel engine should only be started from the driver's position. The engine must not be started by short-circuiting the electrical connections on the starter.

701-03







Basic position prior to starting

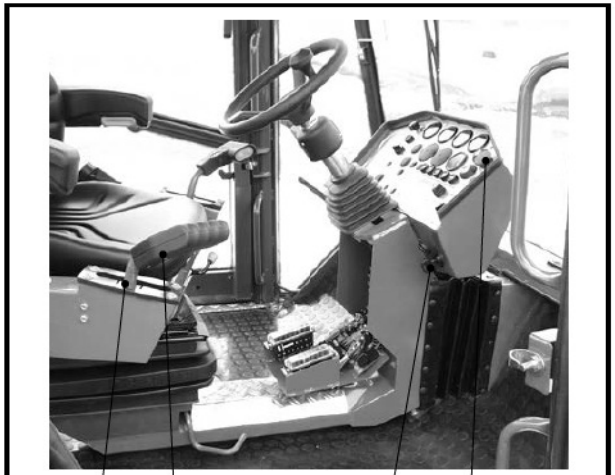
The controls must be in the basic position prior to starting the diesel engine.

- Adjusting lever (504).....**BOTTOM**
- Drive lever (501).....**CENTRE**
- 0-position lock/ parking brake (502).....**ENGAGED**
- EMERGENCY STOP (302).....**TOP**
- Vibration (312).....**OFF**
- Gearshift (314).....**TOP**

i The starter is connected via the starter switch to the ignition key switch only when the 0-position lock is engaged. Only in this way can the engine be started.

702-09







2.01.03 Engine start

⚠ Internal combustion engines and fuel-operated heating systems may only be operated in adequately ventilated areas. Ensure adequate ventilation prior to starting (toxic hazard).

☞ Starting the engine at the maximum speed lever setting (504) can result in damage to the engine, resp. the hydraulic transmission.
The start sequence may only be continued for a maximum 20 seconds, otherwise the starter will overheat and be destroyed. A pause must be allowed between the individual start procedures, so that the starter can cool down. If the engine should fail to start after two attempts, find the cause and rectify. Note the engine operating manual.
The engine cannot be started by towing, since the hydrostatic transmission acts as a brake where there is no supply pressure. Damage to the drive elements would be the consequence.

703-00

- Adjusting lever (504)....**1/4 UPWARDS**
- Ignition key (310)
  (electrical system ON).....**0→1**

By turning the ignition key to position "1", the

- Charge current warning lamp (201)
- Engine oil pressure warning flasher (202)
- Parking brake warning flasher (204) must light up
- Ignition key.....**1→3**

The warning lamps (201, 202) must go out when the engine is running.

704-02

Prior to moving off

⚠ Always use the safety belt (danger of accident)!

- The accelerating and brake mode of the machine will be influenced by viscous hydraulic oil. With low external temperatures, especially during frost, wait several minutes after the engine has started. Run the machine with a moderate load and speed to warm up, until the hydraulic fluid has reached 20 °C *(43 °F)*.
- If the machine has become frozen to the ground, when moving off, ensure that no lumps of soil have stuck to the roller drum. This can damage the scrapers. For this reason, where there is a danger of frost, park the machine on boards or on dry gravel!

705-00

2.01.04 Driving

- Adjusting lever (504) .....**UP**
- 0-position lock/ parking brake (502) .....**DISENGAGED**
- Drive lever (501) .....to the **FRONT** or .....to the **BACK**

☝ Do not switch off the ignition switch (310) whilst driving (key position 0).

706-07

⚠ On machines with a driver's cab, the lower door sections must always be closed when driving (danger of toppling). Always use the safety belt!

The carriage of additional persons is not permissible.

Raise fitted accessories from the ground.

Prior to moving off, check the closer vicinity to see whether anyone is present.

In emergency situations and in the event of danger, the machine can be made to stop immediately by actuating the EMERGENCY STOP switch.

Do not use the EMERGENCY STOP switch as a service brake.

The drive speed must always be adapted to the ambient conditions.

With a rising power requirement, pull back the drive lever accordingly (reduce speed), otherwise the engine may stall.

In the event of functional defects in the steering and brakes, stop the machine immediately and have the faults rectified.

Never leave the driver's position when driving.

Steer the machine in way of building pit edges and embankments, so that it cannot slip or topple.

Always ensure an adequate distance when negotiating underpasses, bridges, tunnels, overhead cables, etc.

Desist from every mode of operation that may affect the stability of the machine.

Avoid sudden curves when going up and downhill and when traversing across slopes (danger of toppling).

The smooth surface of the roller drum reduces the sideways tracking on wet, uneven ground. The machine may not be used on snow or ice.

707-03

Gearshift

The machine has a working gear (1st gear) and a transport gear (2nd gear). Change-over is by means of a pushbutton switch (314). In both ranges, the drive speed can be infinitely adjusted with the drive lever (501). The gearshift should only be actuated when the machine is at a standstill.

Working gear (1st gear) .....**TOP**
Transport gear (2nd gear).....**BOTTOM**

⚠ Only use the transport gear (2nd gear) when using the highway! Work assignments may only be carried out with the working gear (1st gear).
If the gearshift is actuated when driving, the machine will be considerably accelerated or braked (danger of toppling, danger of damage to the drive elements).
As a matter of principle, steeper gradients should only be negotiated with the working gear (1st gear).

708-00



08215-00

Warning flasher ASC

⚠ Never operate the machine when the warning flasher (225) is flashing (risk of accident)!

A flashing during operation signalizes a failure in the ASC module. Stop the machine, shut-off the engine and the electric system! As soon as the electric system is switched-on anew, the data of the electronic unit will be in basic position. If the warning flasher is still flashing after re-starting, the ACS system is malfunctioning. Request the assistance of customer services!

734-00

2.01.05 Driving with vibration

When the vibration is switched on, the roller drum vibrates in line with the speed of the vibrator. These hammering impacts produce a manifold increase in the compaction force of the machine.
The vibration may only be used at maximum speed of the diesel engine, and can be operated in two amplitude ranges and the associated frequencies with double or single vibration.
A resilient mount of the roller drum prevents the vibrations from being transmitted to the machine frame.

⚠ The vibration must not be operated in the direct vicinity of buildings or bridges, since these vibrations can cause damage or destruction (danger of collapse).
Prior to switching the vibration on, ensure that none of the pipes laid underground (gas, water, power, sewerage) can be damaged or destroyed (danger of explosion) by the vibrations.
The ground adhesion is reduced by the vibrating roller drum. When negotiating a hard surface and, especially when traversing across hills, the sideways tracking is reduced (danger of toppling).

Where intensive compaction is required on earthworks with few transitions, the machi-

ne must pass over the material to be compacted at low speed, whilst exciting and compacting at a suitable frequency.

The vibration is switched on and off with the rotary switch (312). Depending on the switch setting, the vibration operates with a large or small amplitude.

Small amplitude
Large frequency .....**LEFT**
Vibration Off **0**
Large amplitude
Small frequency .....**RIGHT**

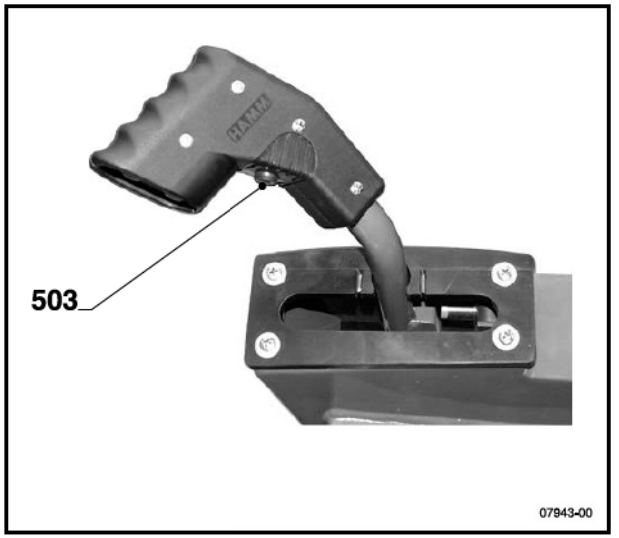
When the vibration is switched on, the vibrator can be switched off and on with the multifunctional handle (503).

ECOMATIC (option)
The specially developed ECOMATIC system has the task of keeping the frequency of the vibrator constantly at the required level. All occurring disturbances, such as speed fluctuations of the diesel engine due to varying energy absorption of the ground or the transmission, are compensated by actual-rated value comparison.
The frequency of the vibrator is changed with the rotary switch (313), whereby the current level is shown on the frequency display (110).
Frequency adjustment is also possible during vibration.

- Small frequency.....**LEFT**
- Large frequency .....**RIGHT**

Depending on the position of the rotary switch (316), the vibration is effective in the front roller drum, in the rear roller drum or in both roller drums.

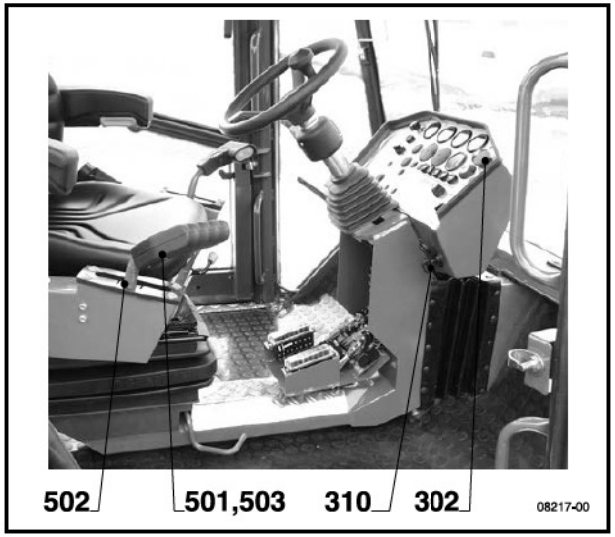
- Front vibration .....**DOWN**
- Double vibration.....**CENTRE**
- Rear vibration .....**UP**

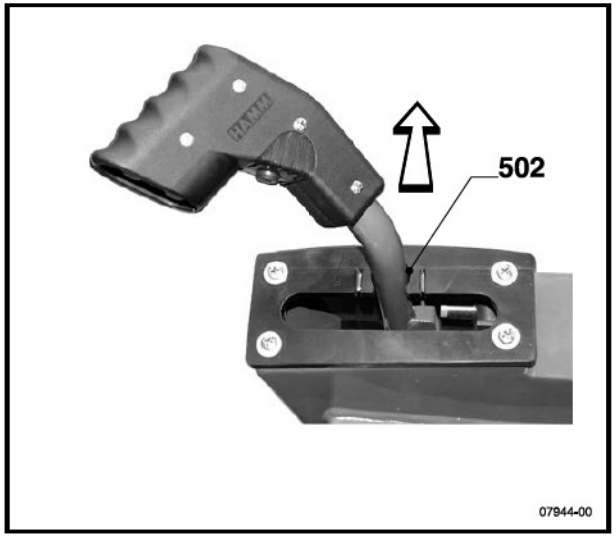


Manual - automatic operating mode (option)

- Manual (319) .....**LEFT**
  The vibration is switched on and off only by means of the pushbutton switch on the multifunctional handle (503).
- Automatic (319).....**RIGHT**
  The vibration is switched on and off coupled with the drive speed.

712-08







2.01.06 Stopping, switching the engine off, leaving the machine

Stopping

- Vibration (312).....**OFF**
- Drive lever (501).....**CENTRE**

The hydrostatic transmission brakes the machine to a standstill.

⚠ If the driver leaves the driver position even for a brief period, switch off the engine!
Servicing only when the engine is at a standstill.

Prior to switching the engine off

- Vibration (312).....**OFF**
- Adjusting lever (504).....**DOWN**
- 0-position lock/ parking brake (502).....**LOCKED**
- Gearshift (314).....**TOP**
- Completely lower attached accessories.

Switch engine off

- Ignition key (310).....**1→0**

713-10

☞ Do not switch the engine off from full load, but allow it to continue to run at idling speed for 1-2 minutes so that the engine can cool down.
With the engine at a standstill and the electrical system switched on (key position 1), the battery is rapidly discharged.

Leaving the machine

The driver may only leave the machine, when it has been properly parked. Similarly, the highway code regulations must be complied with.
Prior to leaving the machine, the driver must ensure that

- the 0-position lock (502) is locked, the attached accessories are lowered and the engine is switched off.
- the key switch (310) is in the lock position "0" and the ignition key has been removed.
- the machine is rendered powerless at the battery main switch and the key is removed.
- the cab doors, respectively control cover as well as all panel covers are closed.
- especially on hills, the machine is secured by a chock to prevent it from rolling away.
- on public highways, the machine does not hinder the traffic. If this cannot be avoided, warning signs (lighting) must be erected in accordance with the safety instructions.

⚠ Never park the machine on slopes or the edge of slopes. Do not park the machine on loose or freshly deposited soil. On hills, always park the machine on the hillside and secure with chocks to prevent it rolling away (danger of falling).

714-03

2.01.07 Monitoring

During use, watch the control and display devices on the instrument panel at regular intervals.

Where an alarm lamp indicates a fault, determine the cause and have it rectified.
Watch the temperature display. If the temperature should rise to an excessive level, determine the cause and have it rectified. An additional audible signal indicates a too high working temperature.

Check the filling levels for operating media (fuel, water, additive). Top up the tanks well in advance. Never drive until the fuel tank is empty.

The three-phase alternator is driven by a fan belt. If this fan belt should break, the battery charge current will fail. The alarm lamp for the charge current (201) lights up. Switch off the engine immediately, to avoid battery discharge. Replace the broken fan belt by a new one.



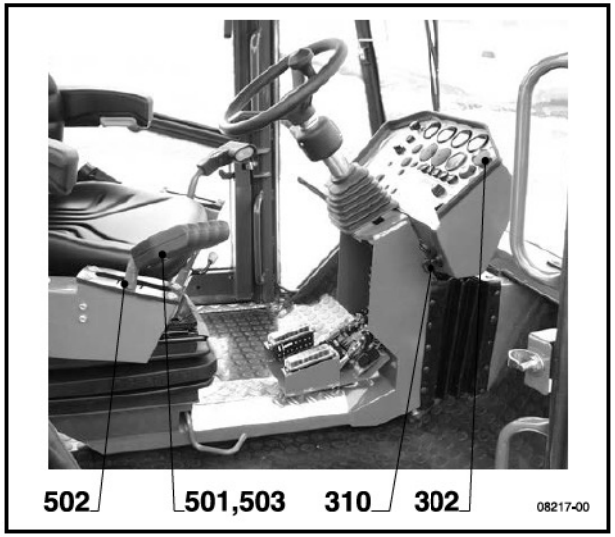
To maintain a perfectly functioning three-phase alternator note the following items:

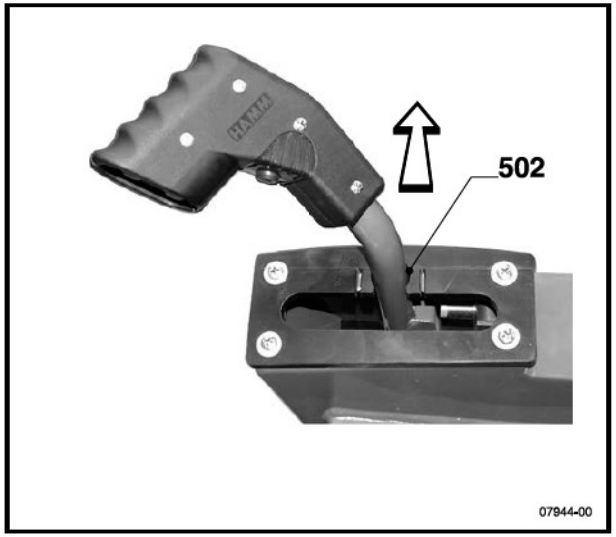
- When the engine is running, do not disconnect the connection between the battery and the alternator.
- Do not exchange the battery connections.
- Replace faulty charge current control lamp immediately.
- During electric arc welding, disconnect the ground line from the battery.

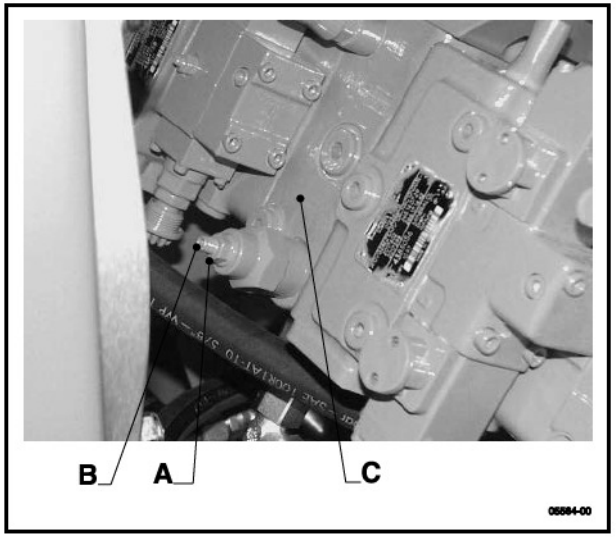
711-07

2.01.08 Towing

Towing the machine presupposes adequate knowledge of the function of the hydrostatic transmission and the mode of action of the spring loaded disc brakes. Towing preparations may only be carried out by persons who are accustomed to doing so and are aware of the hazards. The machine may only be fastened on the towing eyes and may only be towed with a towbar. Damaged pipes, respectively hose lines, from which oil is leaking, must be replaced prior to towing (environmental protection).







Prior to towing

- Drive lever (501).....**CENTRE**
- 0-position lock (502).....**ENGAGED**
- If the diesel engine is still functional, switch it off (310).
- Use chocks or squared timber to prevent the machine from rolling away.
- Disengage the frictional connection of the hydrostatic transmission drive.
- Disconnect the parking brakes.
- Only use a towbar for towing (brakes not functional).

Towing

Where possible, start the diesel engine (for the hydraulic steering).

i If the diesel engine is not functioning, only limited steering of the machine will be possible, and this will require additional strength on the steering wheel (emergency steering). Prior to moving off, remove the chocks or squared timber.

The machine may only be towed at a low speed (1 km/h, *0.62 mph*). The towing distance must not exceed 0.5 kilometres *(0.31 miles)*.

After towing

- Switch off the diesel engine.
- Use chocks or squared timber to prevent the machine from rolling away.
- Engage the frictional connection of the hydrostatic transmission drive.
- Reconnect the parking brakes.
- Remove the tow-bar.

717-00

Disconnecting the frictional closure of the hydrostatic transmission

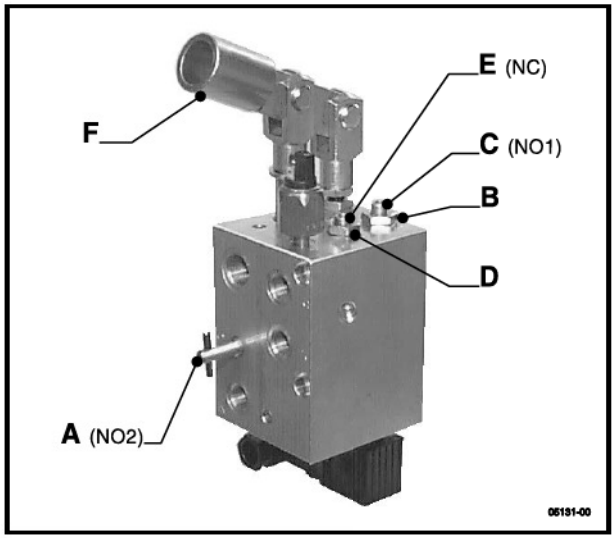
Only when the oil flow can circulate pressureless in the hydraulic system is towing of the machine possible. On both high-pressure valves:

- Release lock nut A on drive pump C.
- Screw in stud B until screw end is flush with the lock nut.

Producing the frictional closure of the hydraulic transmission

- Fully unscrew the stud.
- Tighten the lock nut.

718-03



Disengaging the parking brake

⚠ The pretension of the spring-powered brakes may be reduced with manual pump (530) for towing purposes when the diesel engine or the hydraulic system are faulty.

- Screw in thumb screw A to the valve seat.
- Release lock nut B.
- Screw in bolt C to the valve seat.
- Release lock nut D.
- Unscrew bolt E by two revolutions.
- Vent spring-powered brakes by uniformly pumping on lever F (about 30 pump strokes).

Due to leakage while towing up spring-powered brakes open by continuously and slowly pumping on.

Engaging the parking brake

- Unscrew thumb screw A by two revolutions.
- Unscrew bolt C by two revolutions.
- Tighten lock nut B.
- Screw in bolt E to the valve seat.
- Tighten lock nut D.

i Do not unscrew the bolt by more than 2 revolutions from the housing, since hydraulic oil can escape between the bolt and housing, resp. air can penetrate the system.

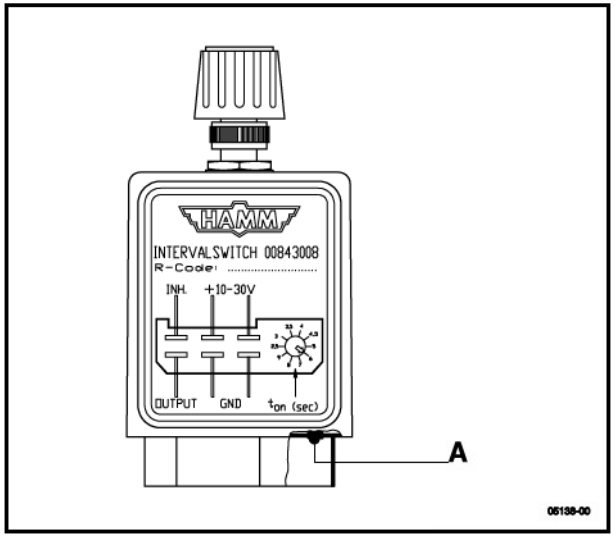
719-04

2.01.09 Water sprinkling

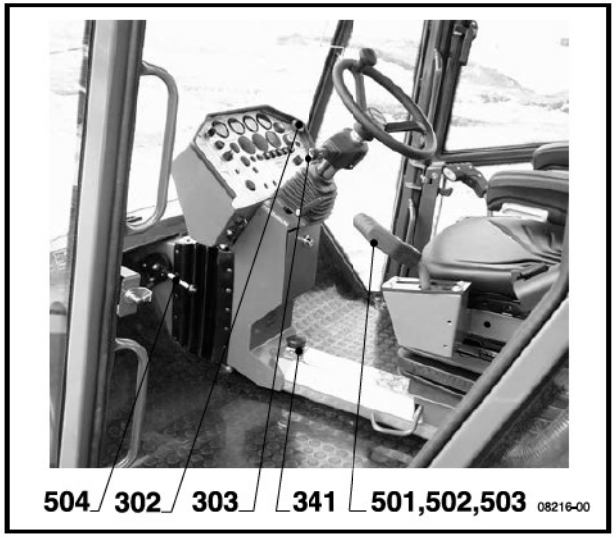
Pressure sprinkling ensures reliable moistening of the roller drums during blacktop work and thus prevents the adhesion of bituminous materials.



An electric water pump supplies the sprinkling system with water, whereby the water consumption can be optimally adjusted to the operating conditions during automatic operation. A 9-stage interval circuit determines the moistening of the roller drums by prolonging or shortening the pump pause time. By actuating a foot pushbutton, the water pump can be switched to continuous operation at any time. A large capacity, non-corroding water filter, located upstream of the water pump, prevents premature fouling of the pump and pipes. Additional filters upstream of the spray nozzles ensure a trouble-free function. Servicing is dependent on the cleanliness of the water used. The safety of the pressure sprinkling is ensured by two water pumps. Depending on the switch position (326), the water sprinkling is provided from pump 1 or pump 2. We recommend to periodically run the pumps alternatively to avoid defects by corrosion.



The automatic water sprinkling is switched on and off, and the length of the pause time is adjusted with the interval switch (317). The sprinkling period is always the same, and is not affected by the adjustable pause time. This sprinkling time is set in the factory at 6 seconds. It can be adjusted by means of the rotary switch A to between 2.5 and 9 seconds to take into account the pertinent conditions of use. The control lamp (207) indicates when a water pump is operating.

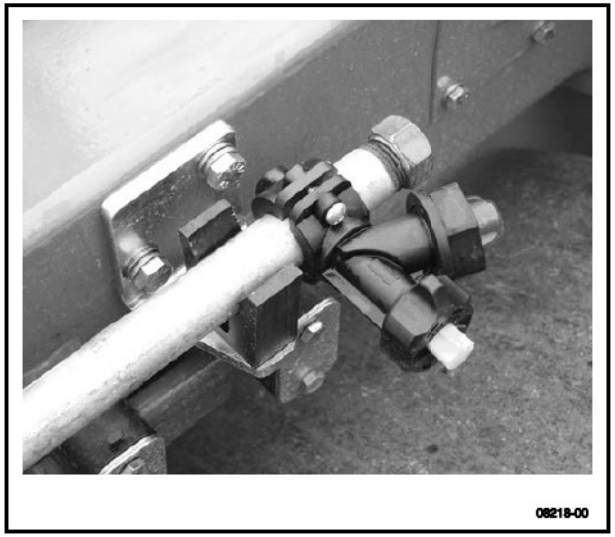


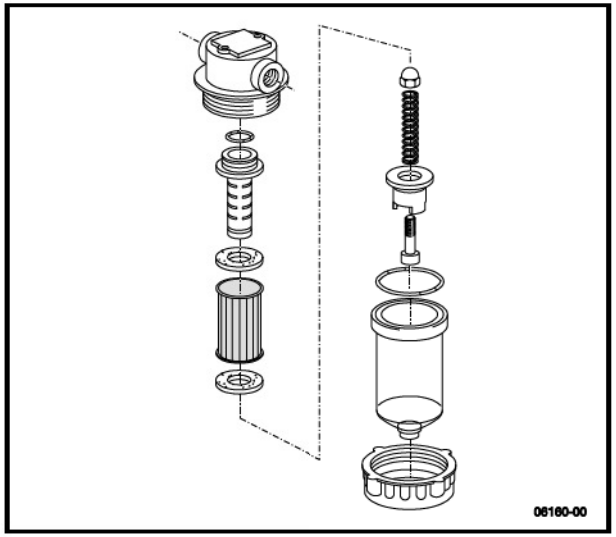
With the foot pushbutton (341) the water pump can be switched to continuous use. Sprinkling of the roller drums continues whilst the pushbutton is actuated.

Water tanks

Information to safeguard the corrosion-free water tanks:

- Only use clean water.
- Never fill the water tanks under pressure.
- Remove all filling covers so as to compensate the pressure.
- Never climb onto the water tanks.





When there is danger of frost

Freezing water causes damage to the sprinkling system. Where there is a danger of frost, the system must be drained. If a frost-protected storing is possible, the complete sprinkler pipes can be taken off the machine. Then only water filter and water tanks have to be drained.

Otherwise

- Remove one cap nut per spray pipe (pay attention to the sealing ring inside).
- Release the lateral cap nut on the spray nozzles and remove together with the valve inside and membrane. After emptying the nozzle case reinstall the spray nozzle.
- Release the cap nut on the water filter and remove together with the sight glass (pay attention to the sealing ring on the sight glass).
- Remove the filter unit from the filter housing.
- Clean the filter unit, sight glass and cap nuts, and store in a toolbox.
- Reinstall the filter unit, sight glass and cap nuts only just before work starts.

726-05

2.01.10 Additive sprinkling

Additive sprinkling permits moistening of the tires with a parting agent emulsion. This prevents the adhesion of the bitumen to the tires when compacting blacktops. Only in this way can a clean and smooth surface be produced.
The emulsion may only be mixed from parting agent concentrate and water in accordance with the instructions from the parting agent manufacturer (observe the regulations for environmental protection). The additive sprinkling is switched on and off with the pushbutton switch (318). Sprinkling of the tires continues whilst the pushbutton is actuated.



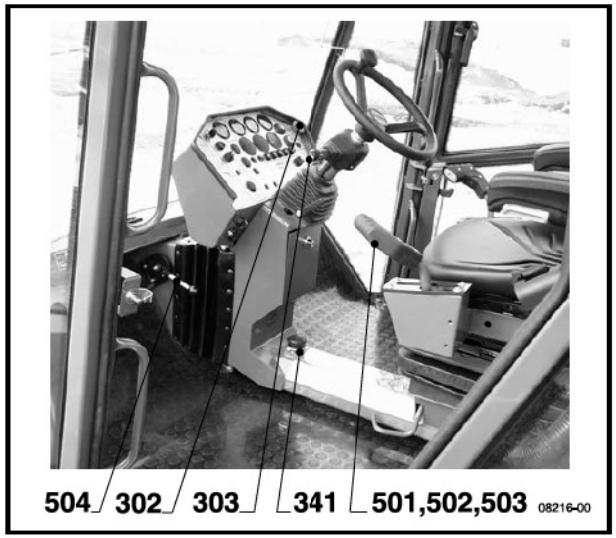
The frequency of sprinkling depends on the temperature of the tires. Cold tires need to moistened more frequently than when they are warm. Prior to negotiating hot blacktops, ensure that the working surface of the tires is clean and adequately moistened.
During the long winter standstill, we recommend that the tanks for additive sprinkling are drained and cleaned.

Where highly dilute parting agent emulsion is used, the tank must be emptied if there is a danger of frost, and the pump for additive sprinkling must be drained. For this, disconnect the pressure hose from the hose socket and switch the pump on until the intake pipe and pump are free from liquid.
727-00

2.02 Heating/ventilation

2.02.01 General

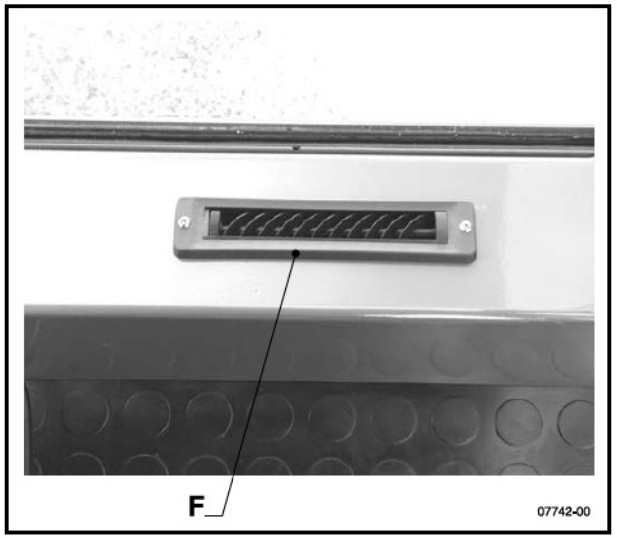
The comfort, well-being and stamina of the driver are highly dependent on a properly adjusted heating and ventilation system. This is especially the case during the winter. By adjusting the floor heating and opening the ventilation nozzles, temperature layers can be achieved, with the pleasant effect of a “cool head and warm feet”. A special heating and ventilation system can be operated independently to improve the internal climate.



2.02.02 Heating

The heat exchanger of the heating device is connected to the cooling circuit of the diesel engine. When the heating is switched on, the current of air heated in way of the heat exchanger is directed through the outlet A into the cab.
The heating is switched on and off by means of the rotary switch (330).

Air flow off.....**0**
Air flow stage 1.....**1**
Air flow stage 2.....**2**



For demisting or defrosting the front screens the current of air can be adjusted by opening and twisting the louvres.
720-04

2.02.03 Ventilation

In addition to the heater, a blower is fitted in the cab console. This blower supplies the cab with fresh outside air that has been cleaned from dust by a filter. Depending on the degree of fouling of the outside air, this filter has to be replaced at regular intervals.

When the toggle switch (331) is actuated, the ventilation is switched on.

Ventilation OFF .....**UP**
Ventilation ON.....**DOWN**

The air flow reaches the cab via the nozzles A which can be opened or closed by adjusting the vanes. The direction of the air flow coming from the ventilation nozzle, can be adjusted by twisting the vane ring.
721-02

2.03 Tilting the driver platform

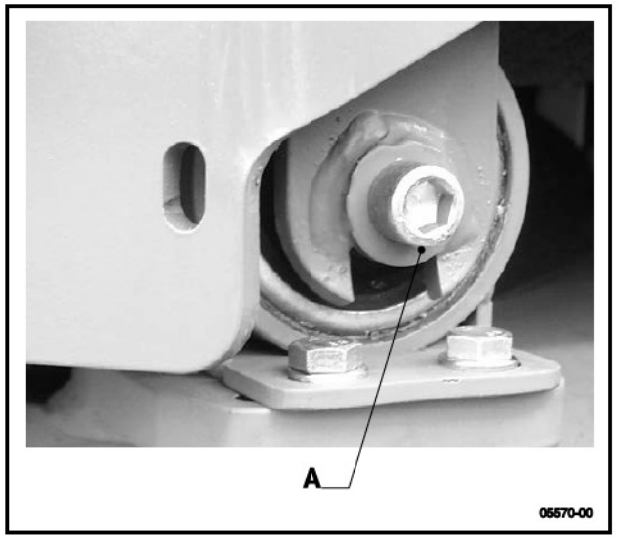
2.03.01 General

Tilting of the driver platform may only be carried out by trained personnel who are aware of the risks.

Prior to lifting

- Drive lever (501) .....**CENTRE**
- 0-position lock parking brake (502) .....**ENGAGED**
- Adjusting lever (504) .....**DOWN**
- Ignition switch (310) .....**1→0**
- Close cab doors.

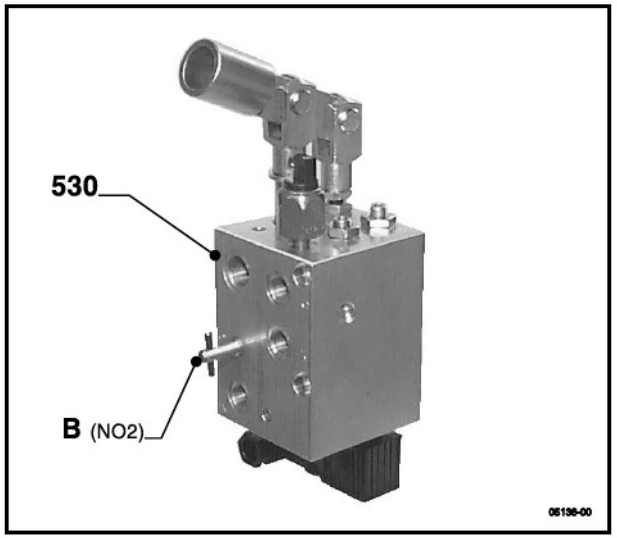
722-02



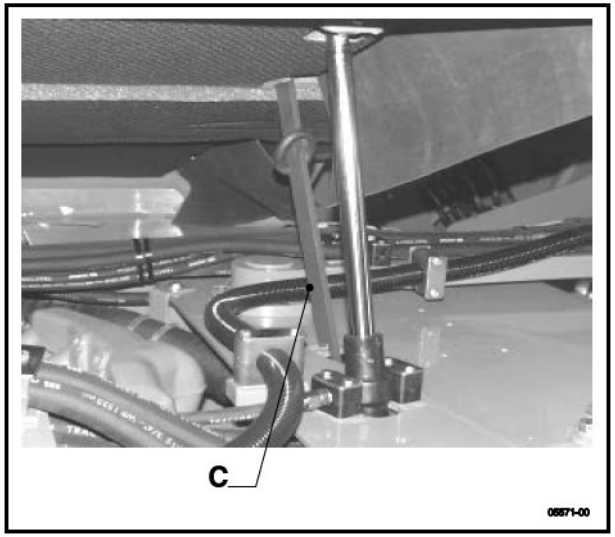
2.03.02 Raise driver platform

Remove all loose parts in the cab (tools, bottles, bags, etc.).

- Unscrew the two fastening bolts A for the operator's platform.
- Screw in thumb screw B in way of the manual pump (530) up to the valve seat.
- Insert actuating pipe (531) in the seating of the manual pump (530) and raise the driver platform by uniform pumping until safety catch C engages.
- Remove the actuating pipe.



⚠ Only carry out servicing work when the safety catch of the raised driver platform is engaged. Danger!



2.03.03 Lower driver platform

⚠ Prior to lowering, ensure that no one is within the danger zone. Completely remove tools, replaced components and other items that do not belong to the machine.

Prior to lowering, the driver platform must be raised slightly so that the safety catch C can be lifted from the safety bolt.

- Unscrew thumb screw B in way of the manual pump (530) by two revolutions.
- Insert actuating pipe (531) in the seating of the manual pump (530).
- Lift safeguard C and push actuating pipe downwards. Lower the driver platform until the safety catch has released the downwards stroke.
- Release safety catch and close the driver platform completely.
- Remove the actuating pipe.
- Screw in and tighten fastening bolts A.

724-02

HD 70 • HD 70K • HD O70V
HD 75 • HD 75K • HD O75V • HD O75K
HD 75.4 • HD 75.4K

Valid from Serial-No. H1520018 (42 325)



Service Manual

Ref. 127 76 42/07.01-en

Service Manual

Articulated Tandem Roller

HD 70, HD 70K, HD O70V
HD 75, HD 75K, HD O75V, HD O75K
HD 75.4, HD 75.4K

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3.00 Introduction

3.00.01 General

As with all technical equipment, the machine needs care and servicing. The extent and the frequency of the servicing work depends mainly on the frequently different operating and working conditions. Under difficult working conditions, the machine will require servicing at more frequent intervals, than those specified for normal use.
The servicing intervals are laid down according to the reading on the operating hour meter, whereby additional servicing work must be carried out during running-in according to the running-in regulations. The work required to safeguard and maintain the operational safety, must be carried out as listed below.
Running-in, servicing frequencies and servicing work for the diesel engine must be carried out in accordance with the servicing manual of the engine manufacturer.
Special expertise is presumed for carrying out some inspection and servicing work, which cannot be given in these instructions. We recommend that this work is carried out by trained personnel.
800-02

3.00.02 Information on ordering spare parts

☞ So that your HAMM roller is optimally ready for use, we recommend that a stock is kept of the maintenance parts required, as listed under 3.02.02.

Information on ordering spare parts

The components of a HAMM roller are carefully chosen by our engineers. Provided you only use Original HAMM Parts, you can be certain that your roller will provide the highest performance and the best use.

You should contact our agent in your area. Only he can supply you with Original HAMM Parts, which are guaranteed for quality.

On request, our customer service network can provide you with fitters who are fully informed about the machine and are aware of the latest improvements.

Ordering details

- Name of company and address
- Machine type and Vehicle Identity Number
- Diagram No. and designation of the diagram resp. text page of the spare parts list
- Part number, designation and quantity required
- Shipping address, i.e. rail station or post office, where the spare parts are not being delivered to your company address, but to a building site
- Details on the type of shipment, e.g. rail express, etc.

Customer services

A close-knit, worldwide network of authorized dealers and service stations guarantees the fast, perfect and high-quality HAMM customer service for you.

When you use this service, you are certain of obtaining the following advantages:

- perfect repair
- trained fitters
- fast repair
- brief standstill of your machine
- warranty on the work completed
- warranty on the fitted Original HAMM Parts

in other words, low costs with a high return.

870-00

3.00.03 Special symbols in the text

The following symbols are used for marking texts that are not applicable for all machine versions:

CE only for machines with CE equipment

CE only for machines without CE equipment

Option special equipment

Position of the diagrams

The position of the diagrams is indicated with letters and numerals. The items marked with letters in alphabetical order, are only explained in the associated text section, each of which starts anew for every single description. The items marked with numerals are equivalent to the numbering on the diagrams for the control elements, equipment and switches. They are identical with the numbers of the individual control elements. These item numbers are given in brackets in the descriptive text. They also ensure that important and additional information can be located immediately and without difficulty in the descriptions of the elements.

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HAMM reserves the right to modify individual components, without giving prior notice to customers. The content of this edition can also be amended without giving prior notice.

This edition applies for the standard version of the machine types listed above. Accordingly, it may be that component descriptions are included in this manual, which are not fitted in your machine. HAMM is not liable for possible damage that may arise from the use of this edition on a machine that deviates from the standard version.

Please contact the service department of your supplier to obtain information about adjustments, servicing work or repairs that are not included in this edition.

600-00

3.00.04 Safety

Warning comments and symbols

The following texts resp. markings are used in the operating manual for special information. Please pass on these safety instructions to other users.
Observe the safety instructions of the Operating Manual with Safety Information!

⚠ Direct hazard; possible consequences:
Death or severe injuries.

⚠ Possibly hazardous situation; possible consequences:
Death or severe injuries.

Hazardous situation; possible consequences:
Slight or minor injuries, warning of damage to property.

☞ Possibly dangerous situation; possible consequences:
The product or something in its vicinity can be damaged.

i Usage tips and useful information.
This does not consist of information that gives a warning about a hazardous or dangerous situation.

603-00

Information

⚠ Observe the safety and accident prevention regulations.
Servicing work may only be carried out when the engine is switched off. The engine cowling may only be opened when the engine is switched off. Keep away from moving, rotating or revolving parts and do not touch them (danger of accident).
The oil should only be changed when the engine is at operating temperature.
Danger of scalding resp. burning!
As a matter of principle, servicing work on the engine should be carried out in accordance with the servicing manual of the engine manufacturer.
When working in the danger zone of the pivoted steering, switch off engine and electrical system! Prior to starting work, remove the key from the battery separator switch, where fitted (hazardous). Where the machine is equipped with a buckle safeguard, this must be engaged prior to starting with the work.
When checking the fluid levels, respectively when changing fluids (fuel, oil, coolant, water), the machine must be placed on a flat surface. Only in this way is a precise measurement of the fluid possible.

i Only use suitable and pure lubricants, otherwise the warranty will become void.

800-03



safety strut not inserted



safety strut inserted

3.00.05 Use of Bio-Hydraulic Oil

The hydraulic system of the machine is normally filled with mineral oil in the factory. All the servicing intervals specified in this service manual refer to mineral oil.
Bio-Hydraulic Oil may be used, subject to the following preconditions:

- Only Bio-Oil on a special synthetic, saturated complex-ester base may be used. HAMM uses and recommends FINA BIOHYDRAN SE. Other oils used must comply with the specifications of the above stated oil. The neutralization value (acid of the oil) must not exceed 2.
- When replacing the hydraulic oil (Bio-Oil replacing mineral oil, resp. mineral oil replacing Bio-Oil) all the filters in the oil circuit must be replaced after 50 operating hours. Thereafter, the intervals for filter change as specified in these instructions apply.
- Old Bio-Oil must be treated just like mineral oil, and must be taken to a reliable disposal site.

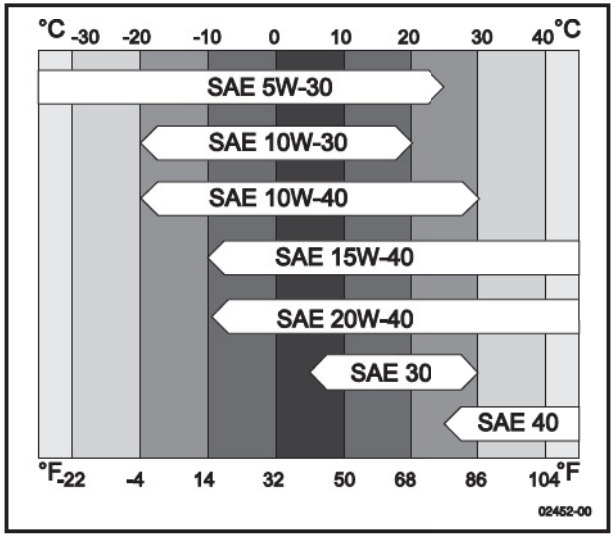
801-00

3.01 Lubricant details

3.01.01 Viscosity - Temperature range

The viscosity of lube oil changes with the temperature. The ambient temperature at the place of use is decisive for the choice of the viscosity (SAE category).

Diagram only valid for engine oil.
804-00



	Quality	Viscosity		Marking
Engine oil The oil quality must comply with the API classification	CD/SE CD/SF CE/SF CE/SG	see diagram		□
Hydraulic oil The viscosity is specified according to DIN 51 519 (ISO-VG: viscosity grade)	HLP-D	VG 22 VG 32 VG 46 VG 68 VG 100	**Conditions** arctic winter summer tropical extremely hot	▭
Special oil Only special Hamm oil is permissible Order No. 01 23 80 51				◇
Gear box oil with Limited-Slip-Additions The oil quality must comply with the API classification	API GL-5	SAE 85W-90		⬡
Coolant antifreeze for engine, liquid cooled Blend: 40 % antifreeze concentration, 60 % water				○
Grease Lithium saponified multi-purpose grease waterproof, with high-pressure additives Temperature range -25 °C to +120 °C *(-13 °F to 248 °F)*				△

3.02 Servicing survey

3.02.01 Servicing schedule

☞ Observe the servicing intervals of the running-in instructions 3.03!
Servicing of the engine must be carried out in accordance with the engine operating manual!

A = check **C** = grease
B = clean **D** = replace

Maintenance point	Monitoring see section	every 10 operating hours, see section	every 250 operating hours, see section	every 500 operating hours, see section	every 1000 operating hours, see section	every 2000 operating hours, see section
LED's	3.04.01					
Dry air filter	3.04.02	A 3.05.02				
Hydraulic oil		A 3.05.03				D 3.09.01
Emergency stop		A 3.05.04				
Water filter		A 3.05.06				
Spray nozzles		A 3.05.07				
Filter indicator - hydraulic filter		A 3.05.08				
Pivoted steering and bearing			C 3.06.01			
Steering cylinder bolt			C 3.06.02			
Turntable - roller drum connection			C 3.06.03			
Toothed belt oscillation drive			C 3.06.04			D 3.09.04
Scraper			A 3.06.05			
Radiator			A 3.06.06			
Vibrator oil			A 3.06.07		D 3.08.01	
Filter insert hydraulic				D 3.07.01		
Filter insert steering				D 3.07.02		
Filter insert fuel prefilter				D 3.08.02		
Suction filter oil tank						D 3.09.01
Safety filter cartridge						D 3.09.02
Water sprinkling system						B 3.09.03

3.02.02 Essential servicing components
HD 70, HD 70K, HD O70V, HD 75, HD 75K, HD O75V, HD O75K, HD 75.4, HD 75.4K
42325→

A = check, replace if necessary
D = replace

Quantity	Service part				first time after	servicing intervals in operating hours			
						every 250	every 500	every 1000	every 2000
10,0 l	Engine oil		□		**50 D**		**D**		
50,0 l	Hydraulic oil		▭						**D**
9,5 l	Vibrator oil (HD 70, HD 70K)		◇	each side		**A**		**D**	
11,0 l	Vibrator oil (HD 75, HD 75K)		◇	each side		**A**		**D**	
1	V-belt		00 39 84 70			**A**		**D**	
1	Air filter cartridge		01 20 95 74			**A**		**D**	
1	Safety filter cartridge		01 20 96 04						**D**
1	Filter cartridge	lubrication oil	00 25 11 94		**50 D**		**D**		
1	Filter cartridge	fuel	00 39 83 73		**50 D**		**D**		
1	Filter cartridge	fuel prefilter	00 27 98 46		**50 A**		**A**		
1	Repair set	fuel pump	01 24 33 30					**D**	
1	Seal	valve cover	01 21 42 33				**A**		
1	Filter insert	steering	00 38 32 79		**50 D**		**D**		
1	Filter insert	hydraulic	01 22 73 86	⇒ 49031	**50 D**		**D**		
1	Filter insert	hydraulic	01 28 54 91	49032 ⇒	**50 D**		**D**		
2	Suction filter	oil tank	01 23 61 99						**D**
1	Filter insert	water filter	00 38 65 96			**A**			
2	Toothed belt	oscillation drive	01 24 67 55						**D**
3	Gasket ring	205x15 cleaning cover	00 57 64 76						**D**
1	Concentrated separating compound of additive sprinkling (smooth tire)		00 34 19 40			**A**			

3.03 Running-in instructions

(also observe the engine operating manual!)

3.03.01 After 50 operating hours

- Replace filter insert of the steering pressure filter.
- Replace filter insert of the hydraulic pressure filter.

803-02

3.04 Monitoring during use (also observe the engine operating manual).

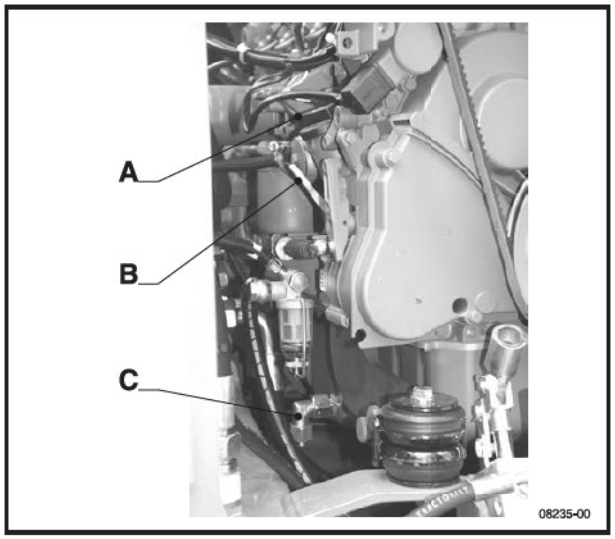
3.04.01 LED's

During use, watch the control and display devices on the instrument panel at regular intervals. Where a LED indicates a fault, determine the cause and have it rectified. Detailed description of the elements see operating manual, section 2.00.03.
812-09

3.04.02 Dry air filter

The serviceability of air filter cartridge and safety cartridge is controlled by an electrical indicator. If the LED display (203) flashes, the air filter cartridge and/or the safety cartridge must be replaced (see servicing every 10 operating hours).
810-07

3.05 Servicing every 10 operating hours (also observe the engine operating manual).



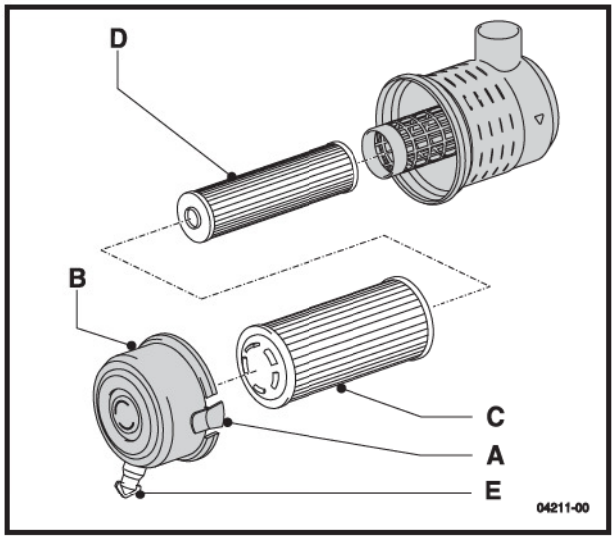
3.05.01 Maintenance points on diesel engine for oil change

Running-in, servicing frequencies and servicing work for the diesel engine must be carried out in accordance with the servicing manual of the engine manufacturer.

- A Oil filler
- B Oil dip stick
- C Oil drain screw

☐ **Only oil with this marking is permissible, see lubricant details 3.01.**

872-00



3.05.02 Inspect and clean the dry air filter

Before work starts check if the opening of the dust discharge valve E is closed by humid deposits of dirt.

- Compress the dust discharge valve and clean the discharge slot.

Inspection of the serviceability of air filter cartridge and safety cartridge must be carried out when the engine is running.

- Run diesel engine briefly at maximum speed.

Provided the warning flasher (203) does not light up, both filter cartridges are fully operational.
If the warning light flashes, air filter cartridge C resp. safety cartridge D must be replaced.

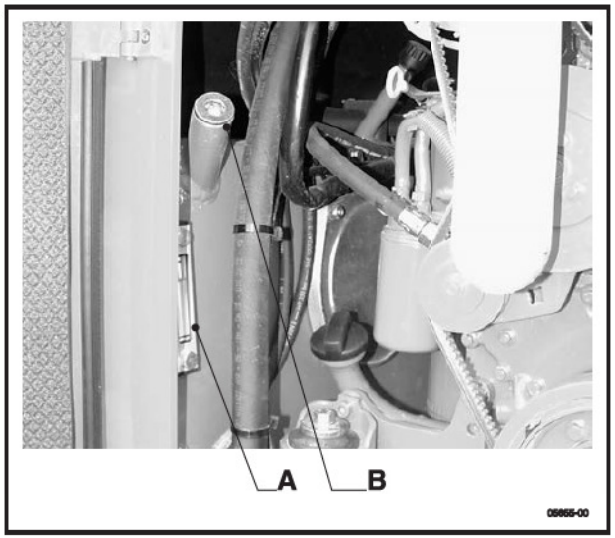
Replacing the air filter cartridge

- Press junction claw A and remove dust collection container B.
- Clean the inside of the dust collection container.
- Replace air filter cartridge C.
- Reassemble in the reverse order.

i Checking the serviceability of safety cartridge D is carried out when replacing air filter cartridge C. For this, start the engine with the filter housing open and accelerate briefly to maximum speed. Provided the warning flasher (203) does not light up, the safety cartridge is still fully serviceable. If the warning light flashes, the safety cartridge must be replaced (see servicing every 2000 operating hours).

810-02

Servicing every 10 operating hours (also observe the engine operating manual).

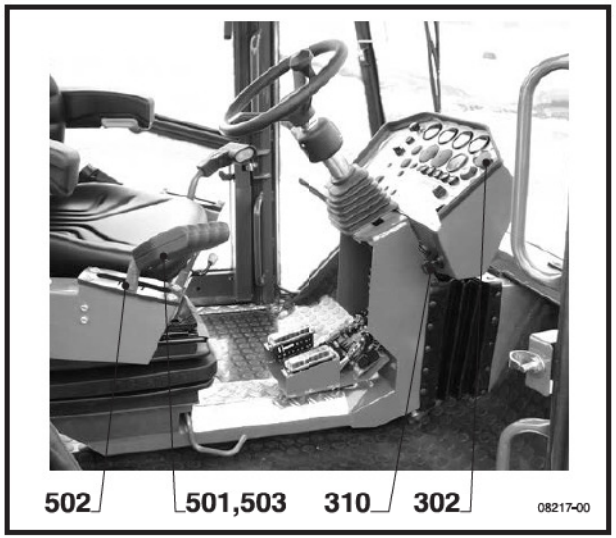


3.05.03 Check oil level in the hydraulic oil tank

- Check only when the engine is cold.
- Correct oil level: Middle of sight glass A. Do not exceed this level!
- Where there is a lack of oil, top up with suitable oil through filler opening B.
- With a considerable loss of oil, find and rectify the cause.

Only oil with this marking is permissible, see lubricant details 3.01.

811-00



3.05.04 Check function of emergency stop

⚠ The transmission must be actuated for this servicing work. Ensure that nobody is within the danger zone of the machine. Observe the safety regulations.

- Actuate the EMERGENCY STOP switch (302). Transmission does not react to movements of the drive lever (501).
- Place machine in the start position (see control elements No. 302).

813-03



3.05.05 Other inspection and servicing work

Visual inspection: Air pressure of tires.

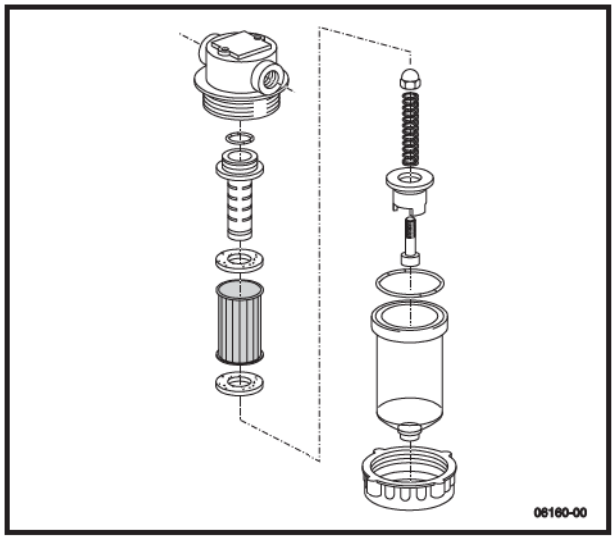
Check indicator lamps

ⓘ Only to be carried out with the engine at a standstill!

- Turn key switch (310) to position 1.
- Charge current warning lamp (201) alight.
- Engine oil pressure warning flasher light (202) flashes.

- Parking brake warning flasher of the parking brake (204) flashes.
- Check function of direction indicator system (303).
- Check function of horn (303).
- Check function of headlamps (303).
- Check function of warning flasher (305).

812-06

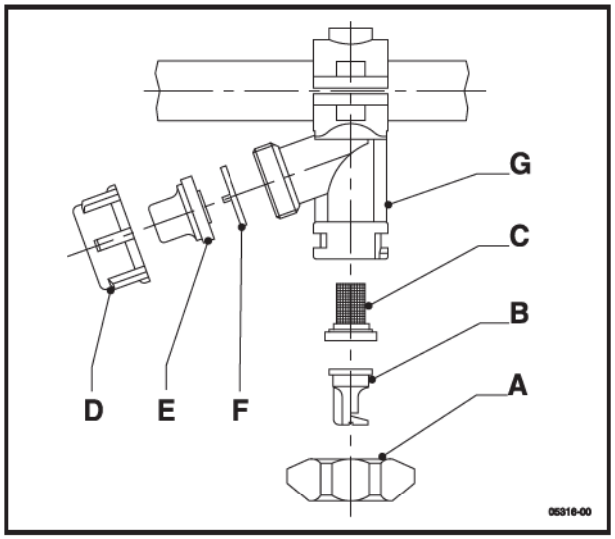


3.05.06 Clean water filter for pressure sprinkling

- Unscrew cap nut and remove together with sight glass (note sealing ring on the sight glass).
- Remove filter unit from the filter head and disassemble.
- Clean all components thoroughly.

Reassemble in the reverse order.

816-00



3.05.07 Clean spray nozzles

- Unscrew cap nut A and remove together with spray nozzle B and filter C.
- Remove and clean filter and spray nozzle from the cap nut.
- Unscrew cap nut D.
- Remove valve insert E and membrane F.
- Rinse case G when the water sprinkling is switched on.
- Reassemble in the reverse order.

871-00



3.05.08 Check filter indicator of hydraulic pression filter

The operational readiness of the hydraulic filter cartridge is controlled by an electrical and optical indicator. A reliable indication is only possible when the machine is at operating temperature. As soon as the optical indicator is approaching the red range, carry out inspection.

⚠ This servicing work can only be carried out when the engine is running. Observe the safety regulations!

- Check at service temperature of the machine with maximum speed of the diesel engine.
- Change filter cartridge when the optical indicator reaches the red range and the LED display flashing.

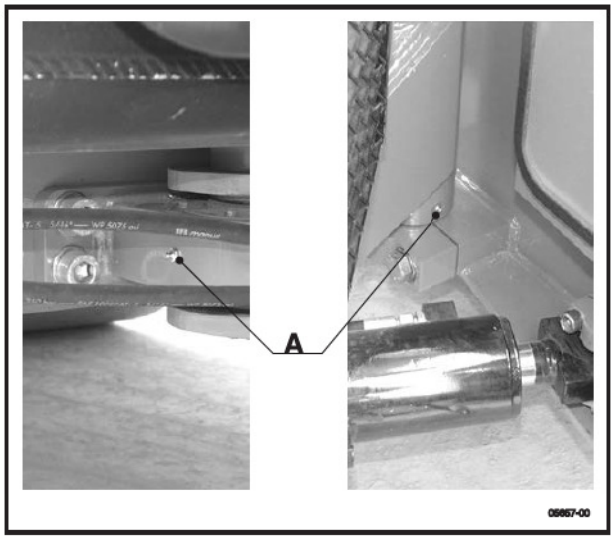
☞ An early contaminated filter can be the first indication for a failure in the hydraulic system.

i The viscosity of the hydraulic oil is influenced by the temperature. With the oil being cold, the indicator is in the red range, however, the indicator must change to the green range as soon as the service temperature has been reached.

819-02

3.06 Servicing every 250 operating hours (also observe the engine operating manual).

Carry out all servicing work specified under 10 operating hours. In addition:



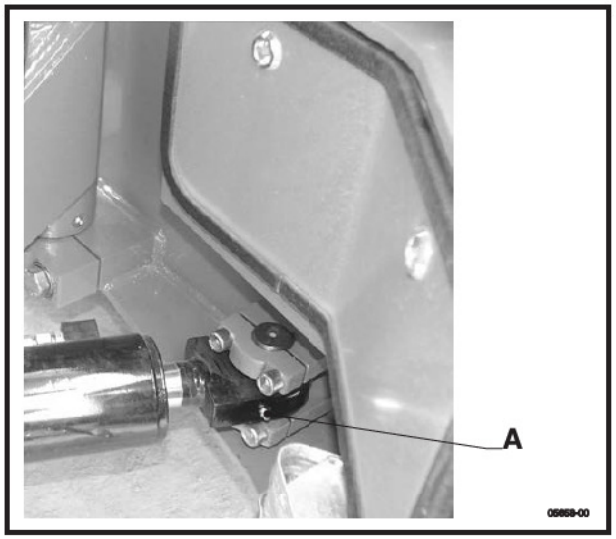
3.06.01 Lubricate pivoted steering and pivoted bearing

⚠ Work within the endangered area of the pivoted steering may only be carried out with the engine at a standstill and the electrical system switched off! In addition the safety strut must be inserted!

- Grease lubrication nipple A.

△ **Only oil with this marking is permissible, see lubricant details 3.01.**

820-03



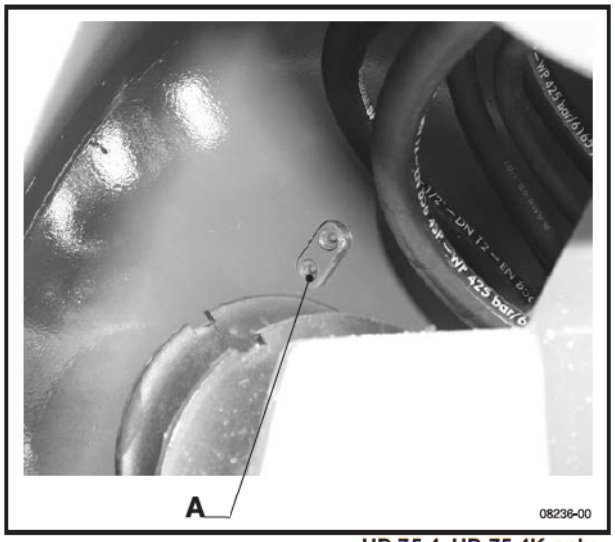
3.06.02 Lubricate the steering cylinder bolts

⚠ Work within the endangered area of the pivoted steering may only be carried out with the engine at a standstill and the electrical system switched off! In addition the safety strut must be inserted!

- Grease lubrication nipple A.

△ **Only oil with this marking is permissible, see lubricant details 3.01.**

821-01



HD 75.4, HD 75.4K only

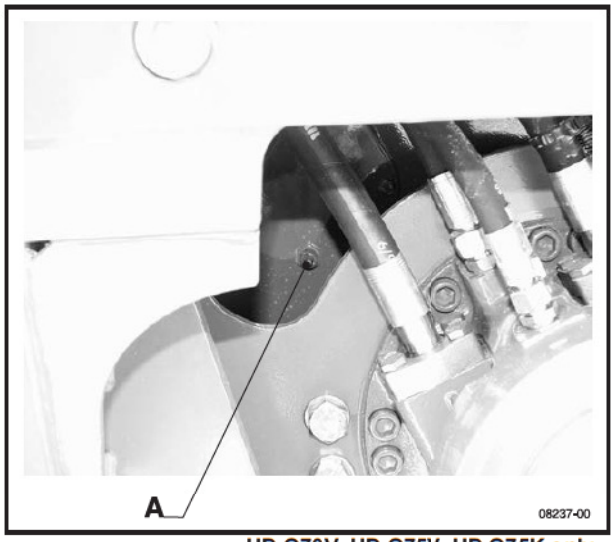
3.06.03 Lubricate turntable for the roller drum connection

- Grease lubrication nipple A (4 x per turntable).

△ **Only oil with this marking is permissible, see lubricant details 3.01.**

823-00

Servicing every 250 operating hours (also observe the engine operating manual).
Carry out all servicing work specified under 10 operating hours. In addition:



HD O70V, HD O75V, HD O75K only

3.06.04 Lubricate toothed belt for the oscillation drive

- Grease lubrication nipple A (1 x per drum side).

△ **Only oil with this marking is permissible, see lubricant details 3.01.**

874-01



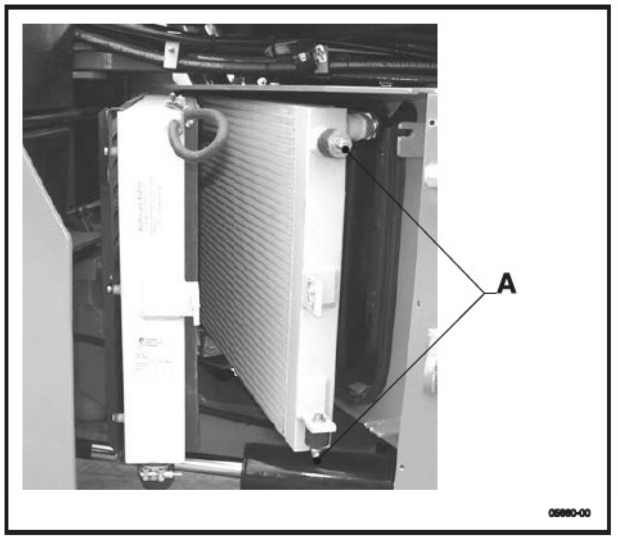
3.06.05 Check scrapers

Check that the scrapers have proper contact with the roller drum. Readjust where necessary.

- Raise retainer sheet and lock with the locking lever.
- Release the clamp connection (7 x).
- Adjust the scrapers to the roller drum.
- Tighten the clamp connection.

Check the condition of the scrapers. Replace worn out scrapers.

825-00



3.06.06 Check the radiator

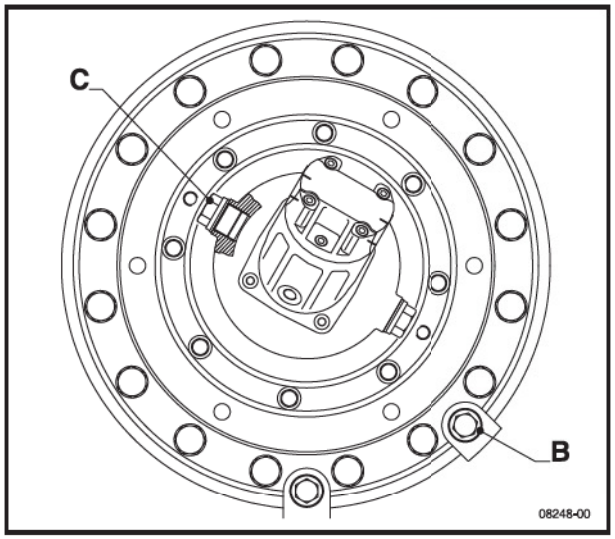
- Check the cooling fins of the radiator for fouling.

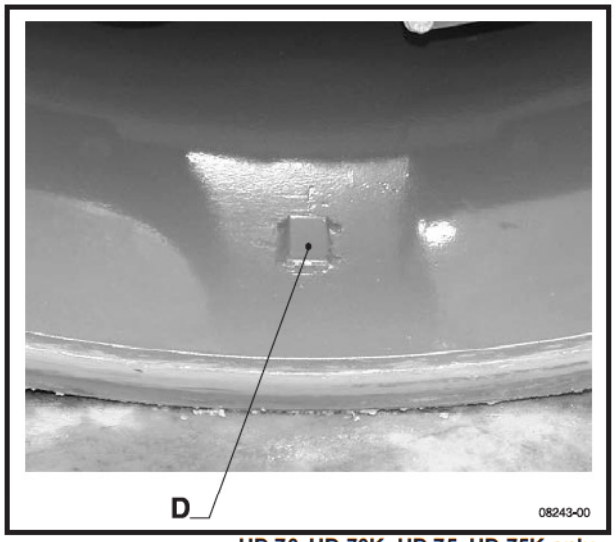
If the radiator is fouled, it must be thoroughly cleaned immediately.

- Unscrew the fastening screws A and swivel the radiator outwards.
- Clean the radiator with a high-pressure cleaner from the inside to the outside.
- Tighten cooler in its previous position.

824-02

Servicing every 250 operating hours (also observe the engine operating manual).
Carry out all servicing work specified under 10 operating hours. In addition:





HD 70, HD 70K, HD 75, HD 75K only

3.06.07 Check the vibrator oil level

Drive the machine slowly forwards so that the marking D is exactly vertical beneath the axle.

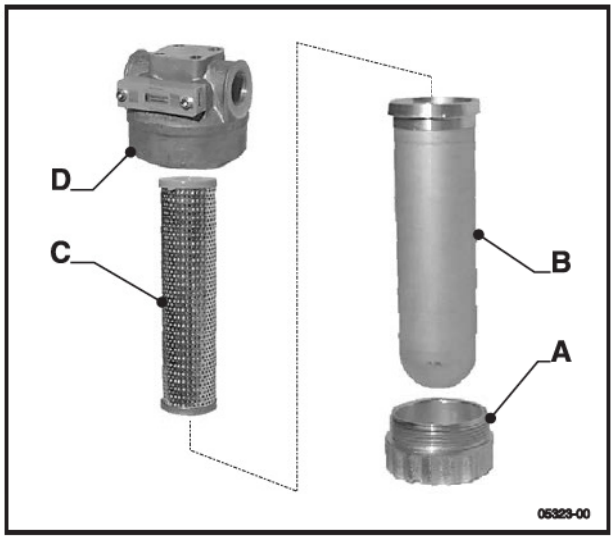
- Screw out control screw B. If the oil level is correct, some oil must escape from the bore.
- If there is a lack of oil, top up with oil through filler bore C.

◇ **Only oil with this marking is permissible, see lubricant details 3.01.**

814-01

3.07 Servicing every 500 operating hours (also observe the engine operating manual).

Carry out all servicing work specified under 10 and 250 operating hours. In addition:

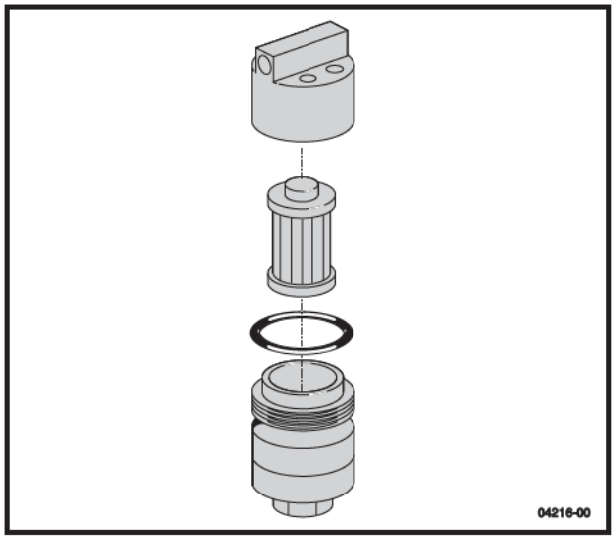


3.07.01 Replace filter insert of the hydraulic oil filter

Danger of scalding resp. burning!

- Release the cap nut A and remove together with the housing B.
- Remove fouled filter insert C and replace with a new one.
- Check the condition of the seals in the filter head D and replace where necessary.
- Mount the filter and tighten it manually.

836-03

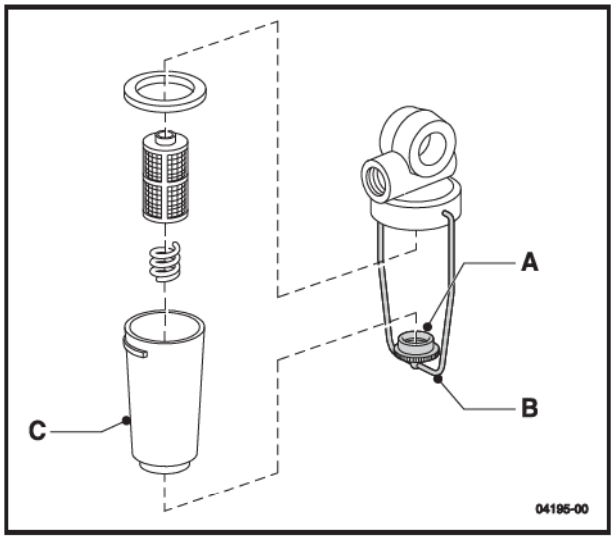


3.07.02 Replace filter insert of the steering pressure filter

Danger of scalding resp. burning!

- Release cup housing.
- Pull filter insert from the filter head and replace with a new one.
- Clean any fouling away from inside the cup housing then screw back into the filter head and tighten.

836-00



3.07.03 Clean filter cartridge of the fuel prefilter

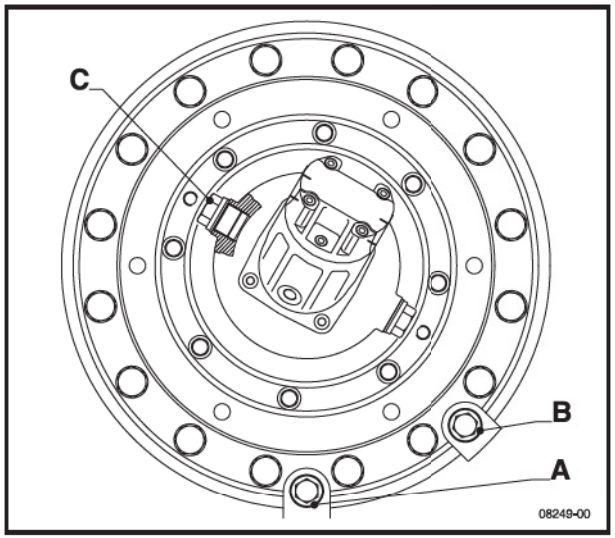
Do not smoke and do not use any naked flames when working on the fuel system. Collect escaping fuel, do not allow it to seep into the ground!

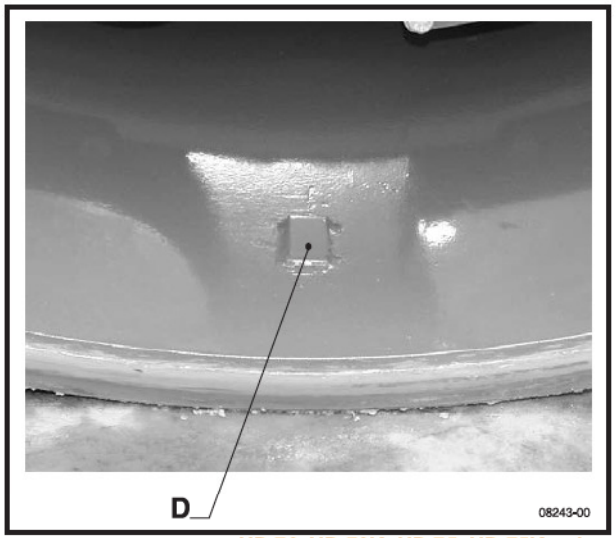
- Release clamp nut A.
- Swivel wire clip B to one side.
- Remove sight glass C with screen filter, clean in fuel and then reassemble.

837-00

3.08 Servicing every 1000 operating hours, at least once annually (also observe engine operating manual).

Carry out all servicing work specified under 10, 250 and 500 operating hours. In addition:





HD 70, HD 70K, HD 75, HD 75K only

3.08.01 Replace oil in vibrator

Danger of scalding resp. burning!

Drive the machine slowly forwards so that the marking D is exactly vertical beneath the axle.

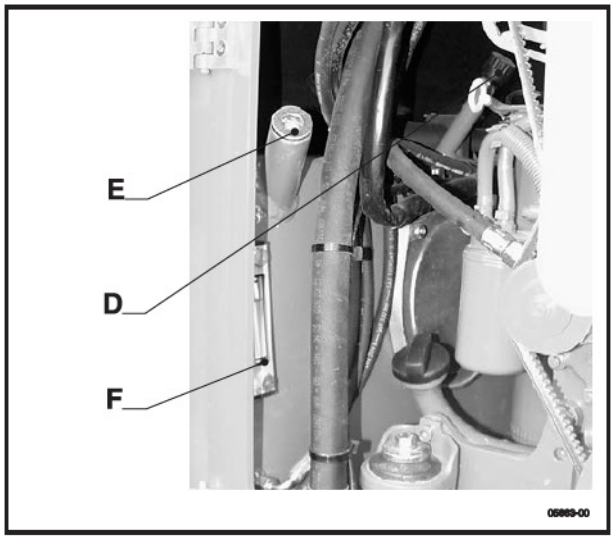
- For pressure compensation, remove filler screw C.
- Unscrew oil drain plug A and allow used oil to drain into a suitable container.
- Screw in and tighten the oil drain plug with gasket.
- Unscrew the control screw B.
- Fill with specified type of oil through filler bore C, until some oil escapes from the bore.
- Screw in and tighten the fill and control screw with gasket.

◇ **Only oil with this marking is permissible, see lubricant details 3.01.**

838-01

3.09 Servicing every 2000 operating hours, at least once annually (also observe engine operating manual).

Carry out all servicing work specified under 10, 250, 500 and 1000 operating hours. In addition:



General:
After an extended standstill (e.g. during the winter), carry out the following servicing work prior to reuse (e.g. in the spring). Condensate and deposits of dirt can affect the function of the engine and the hydraulic power plant.

3.09.01 Change hydraulic oil and suction filter

Danger of scalding resp. burning!
For cleaning do not use any cotton waste! Collect used oil in a container and ensure environmentally safe disposal! Do not allow to seep into the ground.

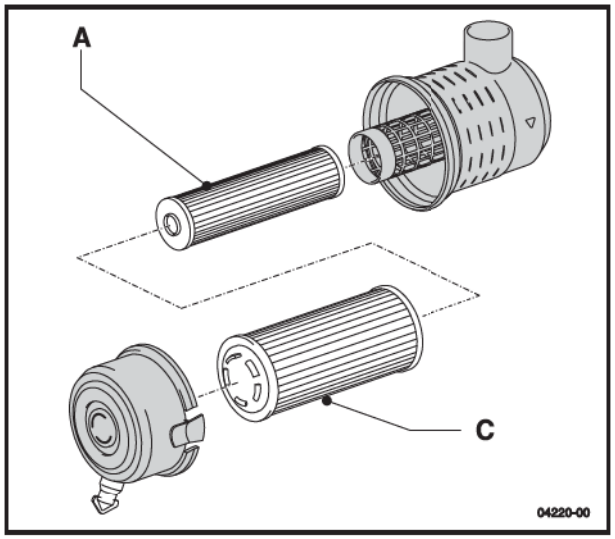
- Unscrew oil drain plug beneath the oil tank and drain off used oil.
- Remove cleaning cover beneath the oil tank and check for deposits of dirt in the tank. If these are present, thoroughly clean the tank.
- Unscrew the suction filter C in the oil tank from the pipe socket and clean or replace with a new filter.
- Fit new gasket to cover and attach.
- Remove ventilation filter D, clean in fuel and reinsert.
- Screw in and tighten the oil drain plug.
- Fill with specified type of oil through filler opening E until it reaches the middle of sight glass F.
- Start the engine, actuate the drive lever (501) at low speed until the transmission engages. Similarly actuate the steering. The pipes and hose lines will be filled with oil and vented.
- Check oil level with the engine at a standstill, possibly top up to the middle of the sight glass.
- Check hydraulic system for leaks.

☞ Avoid consequential damage! Following damage to the hydraulic system, in which foreign bodies have entered the oil circuit, the complete hydraulic system must be cleaned. This work may only be carried out by trained personnel! Request assistance from customer services!
Afterwards, replace all the intake, return or pressure filters in the hydraulic system after 50 and 125 operating hours.

▭ **Only lubricant with this marking is permissible, see lubricant details 3.01.**

860-03

Servicing every 2000 operating hours, at least once annually (also observe the engine operating manual).
Carry out all servicing work specified under 10, 250, 500 and 1000 operating hours. In addition:



3.09.02 Replace the safety cartridge

The safety cartridge should be replaced at the following intervals:

- After five services of the main filter cartridge.
- At the latest after 2000 operating hours.
- Where the warning flasher (203) does not go out after the main filter cartridge has been serviced.
- When the main filter cartridge is faulty.

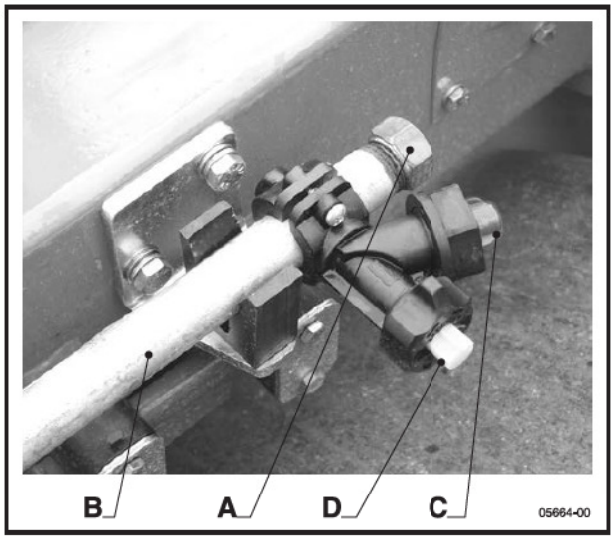
Replace only with the engine at a standstill!

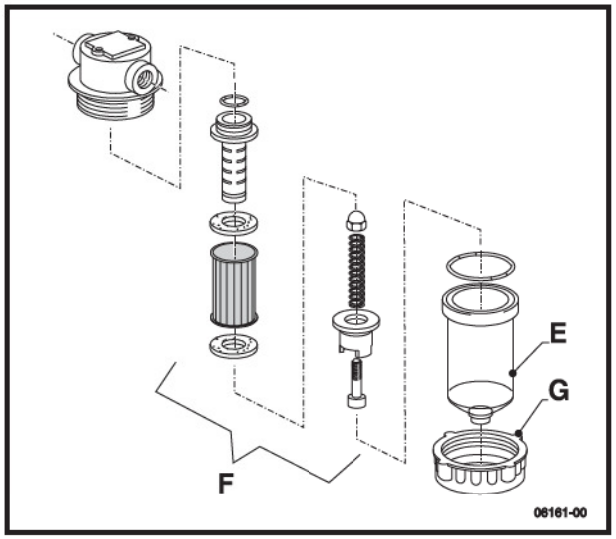
- Remove main filter cartridge C.
- Pull out safety cartridge A.
- Insert new safety cartridge.
- Fit main filter cartridge.

The safety cartridge may only be taken out of the housing for replacement purposes. The safety cartridge may not be cleaned. The engine must not be operated without the main filter cartridge.

861-01

Servicing every 2000 operating hours, at least once annually (also observe the engine operating manual).
Carry out all servicing work specified under 10, 250, 500 and 1000 operating hours. In addition:





3.09.03 Clean the water sprinkling system

i The following procedure applies for both water tanks.

- Remove drain plug beneath the water tank and drain off remaining water.
- Unscrew closure caps A on the spray pipes B.
- Remove valve insert C with membrane as well as spray nozzles D with filter from the nozzle case.
- Remove sight glass E with filter unit F from the water filter for pressure sprinkling and clean.
- Thoroughly clean water tank with high-pressure cleaner (where available) or with a jet of water.
- Clean spray pipes, nozzle case and hose lines.

Reassemble in the reverse order. Clean water filter and spray nozzles as specified in Section 1.5.

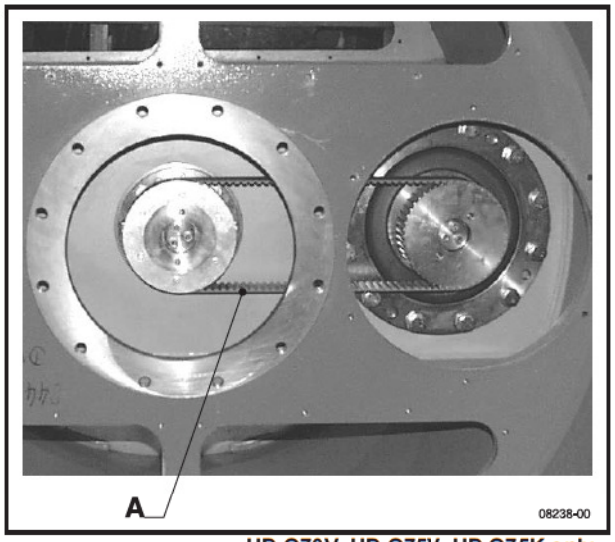
When there is danger of frost

Freezing water causes damage to the sprinkling system. Where there is a danger of frost, the system must be drained. If a frost-protected storing is possible, the complete sprinkler pipes can be taken off the machine. Then only water filter and water tanks have to be drained.

- Remove one cap nut A per spray pipe (pay attention to the sealing ring inside).
- Release the lateral cap nut C on the spray nozzles and remove together with the valve inside and membrane. After emptying the nozzle case reinstall the spray nozzle.
- Release the cap nut G on the water filter and remove together with the sight glass E (pay attention to the sealing ring on the sight glass).
- Remove the filter unit F from the filter head.
- Clean the filter unit, sight glass and cap nuts, and store in a toolbox.
- Reinstall the filter unit, sight glass and cap nuts only just before work starts.

865-03

Servicing every 2000 operating hours, at least once annually (also observe the engine operating manual).
Carry out all servicing work specified under 10, 250, 500 and 1000 operating hours. In addition:



HD O70V, HD O75V, HD O75K only

3.09.04 Replace toothed belt for the oscillation drive

To avoid longer downtimes of the machine we recommend to replace the toothed belt of the oscillation drive after 2000 operating hours.

⚠ This work may only be carried out by trained personnel! Request assistance from customer services!

873-00