



# **Operator's Manual**

# Track dumper

# DTOS



Machine models DT05-P/DT05-D

Edition 2.0

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Technical data, dimensions and weights are only given as an indication. Responsibility for errors or omissions not accepted.

The cover picture may feature the vehicle with optional equipment (options).

Photographs and graphics are symbolic representations and may differ from the actual products.

The Operator's Manual and any amendments to it must always be available at the location where the vehicle is operated. Possible amendments are included at the end of the Operator's Manual.



WACKER NEUSON

Wacker Neuson Linz GmbH Flughafenstraße 7 A-4063 Hörsching Phone: +43 (0) 7221 63000

Fax: +43 (0) 7221 63000-2200

E-mail: office.linz@wackerneuson.com

www.wackerneuson.com



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# Introduction

# 1. 1 Important information on this Operator's Manual

Please store the Operator's Manual in the storage bin under the engine cover.

This Operator's Manual contains important information on how to work safely, correctly and economically with the machine. Therefore, it aims not only at new operators, but it also serves as a reference for experienced ones. It helps to avoid hazardous situations and reduce repair costs and downtimes. Furthermore, the reliability and the service life of the machine will be increased by following the instructions in the Operator's Manual. This is why the operator's manual must always be kept at hand in the machine.

The safety of the operator and other persons heavily depends on how safely the machine is used. Therefore, carefully read and understand this Operator's Manual prior to the first drive. This Operator's Manual will help to familiarize yourself more easily with the machine, thereby enabling you to use it more safely and efficiently.

Prior to the first drive, carefully read chapter "Safety Instructions" as well, in order to be prepared for possible hazardous situations, as it will be too late for it during operation. As a rule, keep the following in mind:

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

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

Extensive maintenance and repair work must always be performed by a technician with appropriate training. Insist on using original spare parts when performing maintenance and repair work. This ensures operational safety and readiness of your machine, and maintains its value.

Your Neuson dealer will be happy to answer any further questions regarding the machine or the Operator's Manual.

# Abbreviations/symbols

- · Identifies a list
  - Subdivision within lists or an activity. Follow the steps in the recommended order.
- ™ Identifies an activity
- Description of the effects or results of an activity
- s. fig. (w/o. fig.) = without figure
- "Opt." = Optional

The abbreviation "Opt." indicates control elements or other groups of the machine that can be installed as an option.



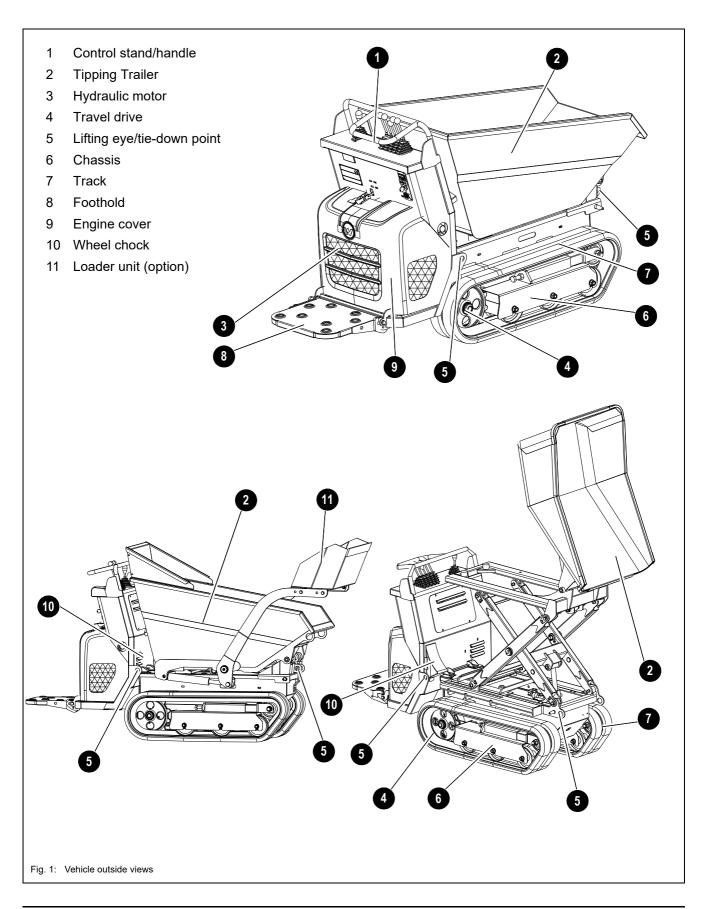
This symbol shows the travel direction – for better orientation in figures and graphics.

1-1 BA DT05 EN - Edition 2.0 \* dt05b110.fm





# 1. 2 Overall view of vehicle





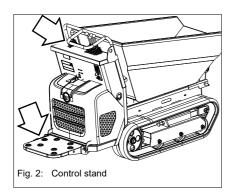


# 1. 3 Brief description

The DT05 dumper is a self-propelled work machine. Get informed on and follow the legal regulations of your country. The main components of the vehicle are:

- · Tracked travel gear
- · Control stand
- · Internal combustion engine
  - Model DT05-P: single-cylinder petrol engine (up to series FB05777)
  - Model DT05-P: single-cylinder petrol engine according to the standard EPA Tier 4 / Stage V (from series FC05835)
  - Model DT05-D: single-cylinder diesel engine (up to series FB05880)
  - Model DT05-D: single-cylinder diesel engine according to the standard EPA Tier 4 / Stage V (from series FC05909)
- · Tipping Trailer
- · High-tip skip (option)
- · Loader unit (option)

# Definition of operator's control stand



The dumper's control stand is the:

- Foothold
- · Control stand

The vehicle may only be operated from the running board and control stand.



# Danger!

The operator must not lean or reach outside the dimensions of the vehicle. This applies in particular to their feet! Otherwise –

### **Accident hazard!**

Stand on the foothold ensuring that neither your feet nor other limbs protrude beyond the dimensions of the vehicle!



# Danger!

The operator must always firmly hold onto the handle of the control stand with both hands! Otherwise –

## **Accident hazard!**

The operator is subject to high acceleration forces in particular when starting vehicle travel!

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# 1. 4 Regulations

# Requirements to be met by the operator

Earth moving machines may be driven and serviced only by persons who meet the following requirements:

- 18 years or older
- · Physically and mentally suited for this work
- Persons have been instructed in driving and servicing the earth moving machine and have proven their qualifications to the contractor
- · Persons are expected to perform work reliably.

They have been appointed by the contractor for driving and servicing the earth moving machine.

Observe the legal regulations of your country.





# 1. 5 EC Declaration of Conformity model DT05-P, for vehicles with CE mark on the type label (up to series FB05777)

# **EC Declaration of Conformity**

#### Manufacturer

Messersì, Via Arceviese, 44, 60010 Casine di Ostra, Ancona - Italy



#### **Product**

Machine designation	Compact Dumper
Machine type	D11-02
Trade name	DT05-P
Serial number	xxxxxxx
Engine/output kW	GX200UT/4.5
Measured sound power level dB(A)	97
Guaranteed sound power level dB(A)	99

#### Conformity assessment procedure

-

# Notified body involved in procedure

Vericert SRL

Via L. Masotti, 5

48124 Fornace Zarattini (RA)

EU notification number 1878

## **Directives and standards**

With this document we declare that this product corresponds to the applicable regulations of the following directives and standards:

2014/30/EU, 2000/14/EC, 97/68/EG, EN ISO 12100:2010;

EN 474-1:2006 (up to 5.5.8.1, 5.8.2, 5.9, 5.19.1), EN 474-6:2010 (up to 5.7.3.3).

# Authorized representative for the compilation of technical documentation

Messersì S.p.a. Via Arceviese, 44 60010 Casine di Ostra, Ancona - Italy

Casine di Ostra \_\_•\_\_•\_\_

Marco Vignaroli,

Managing director

The indications specified above correspond to the existing information at time of going to press. Changes may have been carried out in the meantime (see original declaration of conformity supplied with the vehicle). Valid for the EU and states with legislation that is similar to that of the EU. Valid for machines with CE mark, which have not undergone any unauthorized changes since commissioning.

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# 1. 6 EC Declaration of Conformity model DT05-P, for vehicles with CE mark on the type label (from series FC05835)

# **EC Declaration of Conformity**

#### Manufacturer

Messersì, Via Arceviese, 44, 60010 Casine di Ostra, Ancona - Italy



#### **Product**

Machine designation	Compact Dumper
Machine type	D11-02
Trade name	DT05-P
Serial number	xxxxxxxx
Engine/output kW	GX200UT/4.5
Measured sound power level dB(A)	97
Guaranteed sound power level dB(A)	99

# Conformity assessment procedure

-

# Notified body involved in procedure

Vericert SRL

Via L. Masotti, 5

48124 Fornace Zarattini (RA)

EU notification number 1878

#### **Directives and standards**

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Messersì S.p.a.

Via Arceviese, 44

60010 Casine di Ostra,

Ancona - Italy

Casine di Ostra \_ \_•\_ \_•\_ \_

Marco Vignaroli,

Managing director

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# 1. 7 EC Declaration of Conformity model DT05-D, for vehicles with CE mark on the type label (up to series FB05880)

# **EC Declaration of Conformity**

#### Manufacturer

Messersì, Via Arceviese, 44, 60010 Casine di Ostra, Ancona - Italy



#### **Product**

Machine designation	Compact Dumper	
Machine type	D11-01	
Trade name	DT05-D	
Serial number	xxxxxxx	
Engine/output kW	L70N6/4.9	
Measured sound power level dB(A)	101	
Guaranteed sound power level dB(A)	101	

# Conformity assessment procedure

-

# Notified body involved in procedure

Vericert SRL

Via L. Masotti, 5

48124 Fornace Zarattini (RA)

EU notification number 1878

## **Directives and standards**

With this document we declare that this product corresponds to the applicable regulations of the following directives and standards:

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# 1. 8 EC Declaration of Conformity model DT05-D, for vehicles with CE mark on the type label (from series FC05909)

# **EC Declaration of Conformity**

#### Manufacturer

Messersì, Via Arceviese, 44, 60010 Casine di Ostra, Ancona - Italy



#### **Product**

Machine designation	Compact Dumper
Machine type	D11-01
Trade name	DT05-D
Serial number	xxxxxxxx
Engine/output kW	L70V6 / 4.9
Measured sound power level dB(A)	101
Guaranteed sound power level dB(A)	101

# Conformity assessment procedure

-

# Notified body involved in procedure

Vericert SRL

Via L. Masotti, 5

48124 Fornace Zarattini (RA)

EU notification number 1878

## **Directives and standards**

With this document we declare that this product corresponds to the applicable regulations of the following directives and standards:

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Messersì S.p.a. Via Arceviese, 44

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# 1. 9 Type labels and component numbers

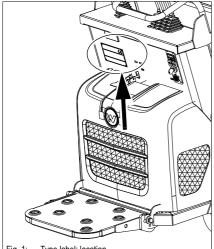


Fig. 1: Type label: location



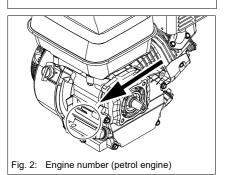


Fig. 3: Diesel engine number

Serial number

The number is located on the type label.

The type label is located at the rear left of the control stand.

Type label information (example):

**COMPACT DUMPER** Machine designation:

(Hersteller)-----Manufacturer: (Modell)-----Model: Model year:

(Fahrzeugtyp)-----Type

Power: (Leistung)-----VIN: (Fahrgestellnummer)-----

Max. payload:

GAWR (gross axle weight rating) front:(Zulässige Achslast vorne)-----

GAWR rear: (Zulässige Achslast hinten)-----

GWR:

Transport mass: (Transportgewicht)-----Operating mass: (Betriebsgewicht)-----

Other information - see chapter 6 Technical data on page 6-1

# **Engine number**

The type label (arrow) is located next to the oil check plug.

The type label (arrow) is located below the tank (engine).

1-9 BA DT05 EN - Edition 2.0 \* dt05b110.fm





# 1. 10 Signs and symbols

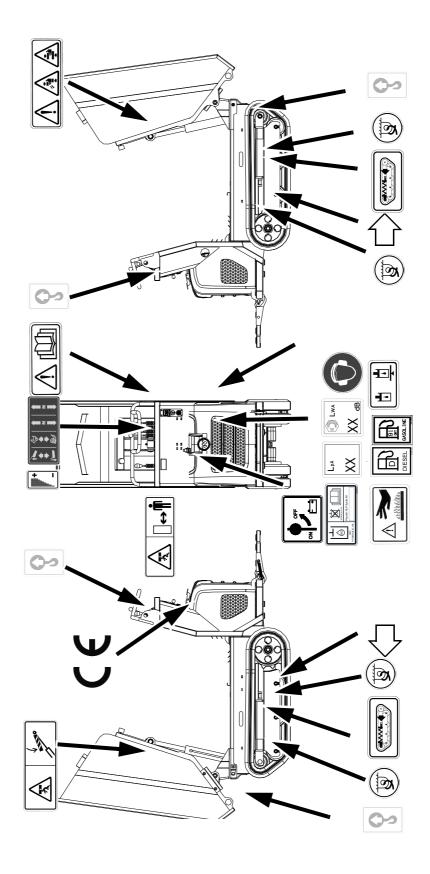








Fig. 4: Lifting eye label



Fig. 5: Label for points used for tying down the machine



Fig. 6: Noise level label



Fig. 7: Label with indication of sound pressure

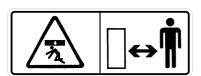


Fig. 8: Danger label



Fig. 9: CE mark

The following states signs and symbols which are not unequivocally comprehensible. They do not contain explanatory text and are not explained in the following chapters.

### Meaning

Machine is raised by the lifting eyes

- see chapter Crane-lifting the machine on page 3-23

#### **Application**

On the chassis near the front and rear lifting eyes

#### Meaning

Tie-down points for tying down the machine for transport.

- see chapter Tying down the machine on page 3-25

## **Application**

On the chassis at the front and rear anchoring points

#### Meaning

Noise levels produced by the machine.

L<sub>Wa</sub> = sound power level

Other information - see chapter 6. 11 Noise levels on page 6-5

### **Application**

Protective plate on control stand

#### Meaning

Indication of operator-perceived sound pressure level.

 $L_{Pa}$  = sound pressure level

Other information - see chapter 6. 11 Noise levels on page 6-5

#### **Application**

Protective plate on control stand

## Meaning

### General indication of danger

This symbol alerts persons standing or working near the machine of an existing danger.

### **Application**

On left and right of skip

#### Meaning

The CE mark means that the machine meets the requirements of the Machine Directive and that the conformity procedure has been performed. The machine meets all the health and safety requirements of the Machine Directive.

#### **Application**

On the type label







Fig. 10: Petrol

Meaning

Fill in petrol only! 91 octane regular

# **Application**

On the control stand (model DT05-P)



Fig. 11: Diesel

#### Meaning

Add diesel fuel only!

#### **Application**

On the control stand (model DT05-D)

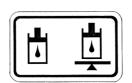


Fig. 12: Hydraulic oil

### Meaning

The reservoir contains hydraulic oil.

- see chapter Adding hydraulic oil on page 5-18



Next to the filler inlet of the hydraulic oil reservoir

## Meaning

Read the Operator's Manual before using the machine.

# **Application**

On left and right of skip



Fig. 13: Read and understand the Operator's

#### Meaning

Use a safety prop before performing work under the skip.

### **Application**

On left and right of skip



Fig. 14: Safety prop

# Meaning

### General indication of danger

This symbol warns individuals who stay in the vicinity of the machine about the general shearing risk that exists about it.



On left and right of skip

# Meaning

Do not touch hot surfaces, wait for parts to cool down.

# **Application**

**Application** 

Near the exhaust system



Fig. 16: Hot surfaces

Fig. 17: Track tension adjustment

Fig. 15: Shearing hazard

#### Meaning

Danger due to components under spring tension! Indicates the device for adjusting track tension.



Right and left side of chassis









Fig. 18: Main label



Fig. 19: Accelerator



Fig. 20: Ear protection



Fig. 21: Biodegradable hydraulic oil

#### Meaning

This label explains the machine's control elements

 see chapter 3. 1 Overview of control stand (type DT05-P skip) on page 3-2

### **Application**

On the control stand

# Meaning

Indication of throttle.

# **Application**

On the control stand

# Meaning

The machine's control stand is not enclosed, therefore always carry an ear protection.

# **Application**

On the control stand

# Importance (optional)

The reservoir contains biodegradable hydraulic oil.

 see chapter Important information for the use of biodegradable oil on page 5-20

### **Application**

On the hydraulic oil reservoir









# 2 Safety instructions

# 2. 1 Identification of warnings and dangers

Important indications regarding the safety of the personnel and the machine are identified in this Operator's Manual with the following terms and symbols:



# Danger!

Failure to observe the instructions identified by this symbol can cause injury or death for the operator or other persons.

Measures for avoiding danger



# Attention!

Failure to observe the instructions identified by this symbol can cause damage to the machine.

Measures for avoiding danger for the vehicle



# Warning!

This symbol identifies instructions for a more efficient and economical use of the vehicle.



# **Environment!**

Failure to observe the instructions identified by this symbol can cause damage to the environment. These types of dangers may be due to improper disposal of environmentally hazardous substances (e.g. waste oil).

# 2. 2 Warranty

Warranty claims can be brought forward to your Wacker Neuson dealer only.

Furthermore, the instructions in this Operator's Manual must be observed.

# 2. 3 Disposal

All fluids, lubricants, material, etc., used on the machine are subject to specific regulations regarding collection and disposal. Dispose of different materials and consumables separately and in an environmentally friendly manner!

Disposal may only be performed by a Wacker Neuson dealer. Also observe the national regulations regarding disposal!



# **Environment!**

Avoid environmental damage! Do not allow the oil and oily wastes to get into the ground or stretches of water!





# 2. 4 Designated use and exemption from liability

- · The vehicle is intended for:
  - · Moving earth, gravel, coarse gravel or ballast and rubble.
  - Every other application is regarded as not designated.
     Wacker Neuson shall not be liable for damage resulting from this and the risk shall be fully borne by the user.
     Designated use also includes observing the instructions set forth in
    - Designated use also includes observing the instructions set forth in the Operator's Manual and observing the maintenance and service conditions.
- The safety of the vehicle can be negatively affected by performing vehicle modifications without proper authority and by using spare parts, accessories and special equipment that have not been tested and released by Wacker Neuson. Wacker Neuson will not be liable for damage resulting from this.
- Wacker Neuson Linz shall not be liable for personal injury and/or damage to property caused by failure to observe the safety instructions and the operator's manual, and by the negligence of the duty to exercise due care when:
  - Handling
  - · Use of
  - · Servicing and performing maintenance
  - repairing the machine. This is also applicable in those cases in which special attention has not been drawn to the duty to exercise due care, in the safety instructions, the Operator's Manuals and maintenance manuals (machine/engine).
  - Read and understand the Operator's Manual before starting up, servicing or repairing the vehicle. Observe all safety instructions!
- The vehicle may not be used for transport jobs on public roads.

# 2. 5 General conduct and safety instructions

#### Organizational measures

- The machine has been designed and built in accordance with state-ofthe-art standards and the recognized safety regulations. Nevertheless, its use can pose a risk to life and limb of the user or of third parties, or cause damage to the machine and to other material property!
- The machine must only be used in technically perfect condition in accordance with its designated use and the instructions set forth in the Operator's Manual, and only by safety-conscious persons who are fully aware of the risks involved in operating the machine! Any malfunctions, especially those affecting safety, must therefore be rectified immediately!

#### Basic rule:

Before commissioning the machine, inspect the machine for safety on the road and operational safety!

- Careful and prudent working is the best way to avoid accidents!
- The Operator's Manual must always be at hand at the place of use of the machine, and must therefore be kept in its storage bin.
   Immediately complete or replace an incomplete or illegible Operator's Manual.



- In addition to the Operator's Manual, observe and instruct the operator
  in all other generally applicable legal and other mandatory regulations
  relevant to accident prevention and environmental protection.
  These compulsory regulations may also deal with handling hazardous
  substances, issuing and/or wearing personal protective equipment, or
  traffic regulations.
- With regard to specific operational features, for example those relevant to job organization, work sequences or the persons entrusted with the work, supplement the Operator's Manual by corresponding instructions, including those relevant to supervising and reporting duties.
- Persons entrusted with work on the machine must have read and understood the Operator's Manual and in particular, chapter "Safety Instructions" before beginning work. This applies especially to persons working only occasionally on the machine, for example for set-up or maintenance.
- The user/owner must check at least from time to time whether the
  persons entrusted with operation or maintenance are working in
  compliance with the Operator's Manual and are aware of risks and
  safety factors.
- The user/owner commits himself to operate and keep the machine in perfect condition, and, if necessary or required by law, to require the operating or servicing persons to wear protective clothing (for example safety shoes, hard hat).
- In the event of safety-relevant modifications or changes on the machine or of its behavior, stop the machine immediately and report the malfunction to the competent authority/person.
   Safety-relevant damage or malfunctions of the machine must be rectified immediately.
- Never make any modifications, additions or conversions to the vehicle and its superstructures (for example operator's cab, loading platform, etc.), as well as to the attachments, which might affect safety without the approval of Wacker Neuson! This also applies to the installation and the adjustment of safety devices and valves, as well as to welding work on load-bearing elements.
- Spare parts must comply with the technical requirements specified by Wacker Neuson. Original spare parts can be relied to do so!
- Replace hydraulic hoses within stipulated and appropriate intervals even if no safety-relevant malfunctions have been detected.
- Before working on or with the machine, remove jewelry, such as rings, wristwatches, bracelets, etc., and tie back long hair and do not wear loose-fitting garments, such as unbuttoned or unzipped jackets, ties or scarves.
  - Injury can result from being caught up in the machinery or from rings catching on moving parts!
- · Keep the machine clean. This reduces
  - · Fire hazard, for example due to oil-soaked rags lying around
  - Injury hazard, for example due to a dirty foothold that can cause falls and
  - Accident hazard, for example due to dirty control elements.
- Observe all safety, warning, and informational signs and labels on the machine.
- Adhere to prescribed intervals or those specified in the Operator's Manual for routine checks/inspections and maintenance!

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 For service, inspection, maintenance or repair work, tools and service center equipment adapted to the task on hand are absolutely indispensable.

### Selection and qualification of personnel, basic responsibilities

- Any work on or with the machine must be performed by reliable personnel only. Do not let unauthorized persons perform machine travel or operation! Observe statutory minimum age limits!
- The machine may be used by correctly trained or competent personnel only. The personnel's authorities for operating, equipping and performing maintenance and repair of the machine must be defined clearly and distinctly!
- Define the machine operator's responsibilities also with regard to observing traffic regulations. Give the operator the authority to refuse instructions by other persons that are contrary to safety.
- Do not allow persons to be trained or instructed or persons taking part in a general training course to work on or with the machine without being permanently supervised by an experienced person!
- Work on the electrical system and equipment, on the travel gear and the steering and braking systems may only be performed by technical personnel that has been specially trained for such work.
   Work on the hydraulic system of the machine must only be performed by personnel with special knowledge and experience in hydraulic equipment!
- Seal off the danger zone should it not be possible to keep a safe distance.
  - Stop machine operation if persons do not leave the danger zone in spite of warning! Keep out of the danger zone!

#### Danger zone:

The danger zone is the area in which persons are in danger due to the movements of the:

- Vehicle
- · work equipment
- · additional equipment or
- material
- this also includes the area affected by falling material, equipment or by debris that is thrown out.

The danger area must be extended by 0.5 m in the immediate vicinity of.

- · buildings
- scaffolds or
- · other elements of construction





# 2. 6 Safety instructions regarding operation

## **Normal operation**

- · Avoid any operational mode that might be prejudicial to safety!
- Before beginning work, familiarize yourself with the surroundings and circumstances of the job site. These are, for example, obstacles in the job site and travel area, the soil bearing capacity and any necessary barriers separating the job site from public roads.
- Take the necessary precautions to ensure that the machine is used only when in a safe and reliable state!
   Operate the machine only if all protective and safety-oriented devices, for example removable safety devices, soundproofing elements and mufflers, etc., are in place and fully functional!
- Check the machine at least once a day/per work shift for visible damage and malfunctions! Report any changes (incl. changes in working behavior) to the competent organization/person immediately. If necessary, stop the machine immediately and lock it!
- In the event of malfunctions, stop the machine immediately and lock it! Have any malfunctions rectified immediately!
- Start and operate the machine only from the operator seat!
- Perform start-up and shut-down procedures in accordance with the Operator's Manual, and observe the indicator lights!
- Before putting the machine/attachment into operation (start-up/moving), ensure that no one is at risk by putting the machine/attachment into operation!
- Before starting the machine, and again after stopping work, check whether all control levers are functional!
- Before starting machine travel always check whether the supplementary equipment has safely stowed away or attached!
- Before operating the machine on public roads, ways and places for purposes of construction work, observe the traffic regulations in force and, if necessary, ensure beforehand that the machine is in a condition perfectly compatible with these regulations!
- Ensure good illumination of the job site in conditions of poor visibility or after dark!
  - Stop machine operation if this is not possible to a reasonable degree!
- Since the machine has no acoustic warning system, stop the machine or interrupt work immediately if a person is likely to approach the working range of the machine!
- · No lifting, lowering or carrying persons!
- Installing a man basket or a working platform is prohibited!
- When crossing underpasses, bridges and tunnels, or when passing under overhead lines always ensure that there is enough clearance!
- Always keep a safe distance from the edges of building pits and slopes!
- When working in buildings or in enclosed areas, look out for in particular:
  - · Height of the ceiling/clearances
  - Width of entrances
  - · Maximum load of ceilings and floors
  - Sufficient room ventilation poisoning hazard!

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- Avoid any operation that might be a risk to machine stability!
- During operation on slopes, perform machine travel or operation uphill
  or downhill. If performing machine travel across a slope cannot be
  avoided, bear in mind the tilting limit of the machine! Always keep the
  work equipment close to the ground! This also applies to downhill
  machine travel! During machine travel across a slope, the load must be
  on the uphill side of the machine.
- If the skip is less than half full, drive backward uphill or forward downhill.
- If the skip is more than half full, drive forward uphill or backward downhill.
- On sloping terrain always adapt the travel speed to the prevailing ground conditions! Never change to lower gear on a slope but always before reaching it!
- The machine has no FOPS protection. Therefore, do not use the machine in areas with danger of falling objects!
- Before leaving the operator seat always secure the machine against unintentional movement and unauthorized use!
   Lower the work equipment to the ground
- · Before starting work check whether
  - · All safety devices are properly installed and functional
- · Before starting machine travel or before taking up work:
  - · Ensure that visibility is sufficient
  - Inspect the immediate area (children!)
  - On the job site the operator is responsible for third parties!
- Extreme caution is essential when handling fuel increased fire hazard!
  - Ensure that fuel does not come into contact with hot parts!
     Do not smoke during refueling, and avoid fire and sparks. Stop the engine during refueling and do not smoke!
- Operation in potentially explosive areas is prohibited.
- · Never get on or off a moving machine! Never jump off the machine!
- The drive levers take time getting used to them. Therefore, adjust the travel speed to your abilities and the circumstances.



# Applications with lifting gear

#### **Definition:**

Applications with lifting gear are understood as procedures involving raising, transporting and lowering loads with the help of slings and load-securing devices (for example ropes, chains). In doing so, the help of persons is necessary for securing and detaching the load. This applies, for example, to lifting and lowering pipes, shaft rings or containers.

· No applications with lifting gear!

#### **Trailer**

Hitching and towing other vehicles is prohibited!

# **Transportation**

- The machine must be loaded and transported only in accordance with the Operator's Manual!
- For towing the machine observe the prescribed transport position, permissible speed and itinerary
- Use only suitable means of transport of appropriate capacity/payload!
- Safely secure the machine on means of transport! Use suitable tiedown points and load-securing devices.
- The recommissioning procedure must be strictly in accordance with the Operator's Manual!

### Temperature ranges

The machine can be operated at a maximum temperature of +45°C and a minimum temperature of -15°C; If the machine is to be used in other temperature ranges (e.g. in tropical temperatures etc.), you must contact the Wacker Neuson distributor.

Carry out all maintenance and inspection work before storing the machine for the winter. Then store the machine in a dry place at ambient temperature (about +15°C). Observe these temperature ranges so as not to affect the machine's service life.

# 2. 7 Safety instructions for maintenance

- · Avoid any operational mode that might be prejudicial to safety!
- Observe the adjustment, maintenance and inspection activities and intervals set forth in the Operator's Manual, including information on the replacement of parts/partial equipment!
  - These activities must be performed by technical personnel only.
- The machine may not be serviced, repaired or test-driven by unauthorized personnel
- Brief the personnel/the operator before beginning special operations and maintenance! Appoint a person to supervise the activities!
- In any work concerning the operation, conversion or adjustment of the machine and its safety-oriented devices, or any work related to maintenance, inspection and repair, observe the start-up and shut-down procedures set forth in the Operator's Manual, and the information on maintenance
- · If required, secure the maintenance area appropriately!

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- Prior to performing service, maintenance and repair work, attach a
  warning label, such as "Repair work do not start machine!", to the
  starter/steering wheel or to the control elements.
  Remove the ignition key!
- Perform service, maintenance and repair work only if
  - · the vehicle is positioned on firm and level ground
  - The forward-reverse lever is in neutral
  - All hydraulically movable attachments and working equipment have been lowered to the ground
  - · the engine is stopped
  - · the starting key is removed and
  - The machine has been secured against unintentional movement
  - the maintenance prop is installed see chapter Maintenance prop on page 5-1
- If servicing or repairs are essential, you must observe the following rules:
  - · Only work in groups of two
  - Both persons must be authorized for the operation of the machine
  - Observe the specific safety instructions in the work manual
  - Keep the required distance from all rotating and moving parts, such as fan blades, belt drives, power take-offs, fans etc.
- Prior to performing assembly work on the machine, ensure that no movable parts will roll away or start moving
- To avoid accident hazard, parts and large assemblies being moved for replacement purposes must be carefully attached and secured to lifting gear.
  - Use only suitable lifting gear and suspension systems in a technically perfect state with appropriate load-bearing capacity!
    Stay clear of suspended loads!
- Have loads fastened and crane operators guided by experienced persons only!
  - The person guiding the crane operator must be within sight or sound of him.
- Always use specially designed or otherwise safety-oriented ladders and working platforms to perform overhead assembly work.
  - Never use machine parts or attachments/superstructures as a climbing aid!
  - Wear a safety harness when performing maintenance at greater heights!
  - Keep all handholds, steps, handrails, platforms, landings and ladders free from dirt, snow and ice!
- Clean the machine, especially connections and threaded unions, of any traces of oil, fuel or preservatives before performing maintenance/repair work!
  - Do not use aggressive detergents!
    Use lint-free cleaning rags!
- Before cleaning the machine with water, steam jet (high-pressure cleaner) or detergents, cover or tape up all openings which – for safety and functional reasons – must be protected against water, steam or detergent penetration. Special care must be taken with the electrical system.
- After cleaning, remove all covers and tapes applied for that purpose!



- After cleaning, examine all fuel, lubricant and hydraulic oil lines for leaks, chafe marks and damage!
   Rectify all malfunctions without delay!
- Always tighten any threaded fittings that have been loosened during maintenance and repair!
- Any safety devices removed for set-up, maintenance or repair purposes must be refitted and checked immediately upon completion of the maintenance and repair work.
- Ensure that all consumables and replaced parts are disposed of safely and with minimum environmental impact!
- Do not use the work equipment as lifting platforms for persons!
- Before taking up work on machine parts dangerous for life and limb (bruising, cutting), always ensure safe blocking/support of these areas
- Perform maintenance and repair work beneath a raised machine, attachments or additional equipment only if a safe and secure support has been provided for (the sole use of hydraulic cylinders, jacks, etc. does not sufficiently secure raised machines or equipment/attachments).
- During operation and for a certain time after using the machine, do not touch hot parts such as the engine block and the exhaust system - risk of burns!
- Retainer pins can fly out or splinter when struck with force injury hazard!
- Do not use starting aids (for example start pilot)! This especially applies to those cases in which a heater plug (intake-air preheating) is used at the same time explosion hazard!
- Apply special care when working on the fuel system increased fire hazard!

# 2. 8 Warning of special hazards

### **Electrical energy**

- Use only original fuses with the specified current rating!
   Switch off the machine immediately and rectify the malfunction if trouble occurs in the electrical system!
- During machine operation, maintain a safe distance from overhead electric lines! If work must be performed close to overhead lines, the equipment/attachments must be kept well away from them. Caution, danger! Get informed on the prescribed safety distances!
- · If your machine comes into contact with a live wire
  - · Warn others against approaching and touching the machine
  - · Have the live wire de-energized
  - Do not leave the machine until the line that has been touched or damaged has been safely de-energized!
- Work on the electrical system may only be performed by a technician with appropriate training, in accordance with the applicable electrical engineering rules.
- Inspect and check the electric equipment of the machine at regular intervals. Malfunctions such as loose connections or scorched cables must be rectified immediately
- · Observe the machine's operating voltage!

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- Always remove the grounding strap from the battery when working on the electrical system or when performing welding work!
- Starting with battery jumper cables can be hazardous if performed improperly. Observe the safety instructions regarding the battery!

#### Gas, dust, steam, smoke

- Operate the machine only on appropriately ventilated premises! Before starting the internal combustion engine on enclosed premises, ensure that there is sufficient ventilation!
   Observe the regulations in force at the respective site!
- Welding, burning and grinding work on the machine may only be performed by a Wacker Neuson dealer. Risk of fire and explosion!
- Before performing welding, flame-cutting and grinding work, clean the machine and its surroundings from dust and other flammable substances, and ensure that the premises are appropriately ventilated – explosion hazard!
- In areas with special hazards (for example toxic gases, caustic vapors, toxic environments), wear appropriate protective equipment (breathing filters, protective clothing)!

### **Hydraulic system**

- Work on the hydraulic equipment of the machine must be performed only by persons having specific technical knowledge and experience in hydraulic systems!
- Check all lines, hoses and screw connections regularly for leaks and obvious damage! Repair any damage and leaks immediately. Splashed oil can cause injury and fire.
- In accordance with the Operator's Manual/instructions for the respective assembly, release the pressure in all system sections and pressure lines (hydraulic system) to be opened before performing any implementing/repair work!
- Hydraulic and compressed-air lines must be laid and fitted properly.
   Ensure that no connections are interchanged. The fittings, lengths and quality of the hoses must comply with the technical requirements.

#### Noise

- During operation all sound baffles must be closed.
- · Wear ear protectors if necessary!

#### Oil, grease and other chemical substances

- When handling oil, grease and other chemical substances (for example battery electrolyte – sulfuric acid), observe the product-related safety regulations (safety data sheet)!
- Be careful when handling hot operating and ancillary materials; there is a risk of scalding and burning from hot liquids!

# **Battery**

- When handling the battery observe the specific safety instructions and regulations relevant to accident prevention. Batteries contain sulfuric acid – caustic!
- When charging batteries in particular, as well as during normal operation of batteries, an oxyhydrogen mixture is formed in the battery cells. Explosion hazard!





• Do not attempt to jump-start the machine if the battery is frozen or if the acid level is low; the battery can burst or explode.

Discard immediately

### **Track**

- Repair work on the tracks must be performed by technical personnel or by a Wacker Neuson service center only!
- Malfunctioning tracks reduce the machine's operational safety. Therefore perform regular checks of the tracks for
  - · Cracks, cuts or other damage
- · Check track tension at regular intervals.

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# 3 Operation

This chapter describes the controls, and contains information on the function and handling of the indicator lights and controls.

The pages stated in the table refer to the description of the controls.

Numeric or alphanumeric combinations (for example 40/**18** or 40/**A**) used for identifying control elements, mean:

figure no. 40/control element no. 18, or position A in figure no. 40

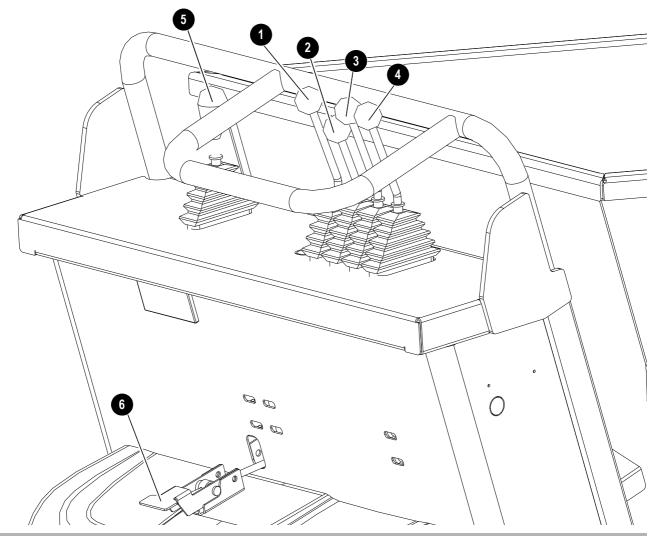
Figures carry no numbers if they are placed to the left of the text.

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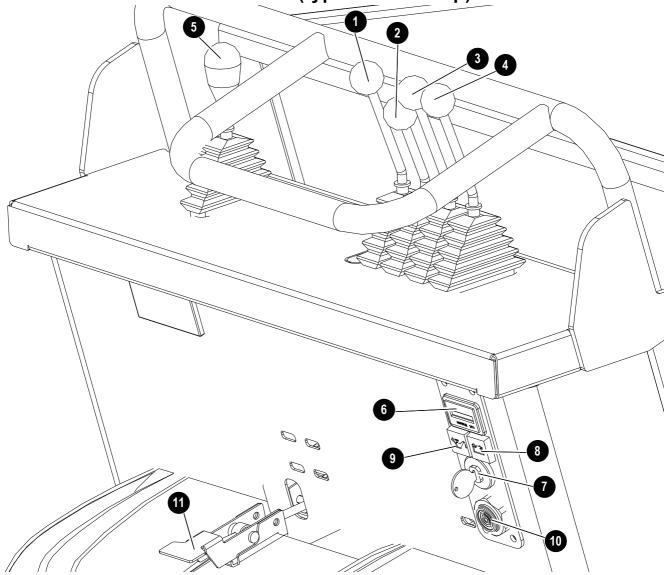
# 3. 1 Overview of control stand (type DT05-P skip)



Pos.	Definition	For more information see page
1	Skip operation	
2	Normal or high speed lever	3-14
3	Drive lever (left)	3-14
4	Drive lever (right)	3-14
5	Throttle	
6	Lock for cover	



# 3. 2 Overview of control stand (type DT05-D skip)

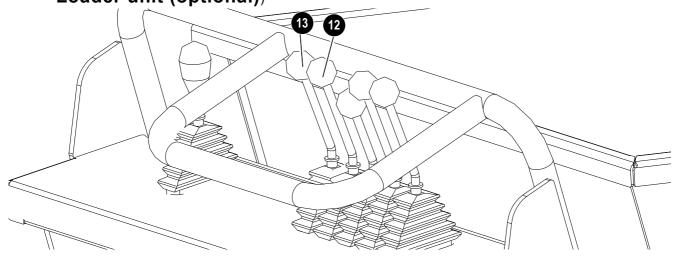


Pos.	Definition	For more information see page
1	Skip operation	3-21
2	Normal or high speed lever	3-14
3	Drive lever (left)	3-14
4	Drive lever (right)	3-14
5	Throttle	3-14
6	Hour meter	
7	Ignition lock	3-10
8	Charge function indicator light	3-4
9	Engine oil pressure telltale light	3-4
10	Acoustic warning system for control panel switched on	3-4
11	Lock for cover	





3. 3 Overview of the control stand (type DT05 high skip) (optional) / Loader unit (optional)



Pos.	Definition	For more information see page
12	Skip operation	3-31
13	Skip lifting/loader unit operation	

### 8 Alternator charge function indicator light



# Attention!

If the indicator light illuminates with the engine running:

- <sup>™</sup> Stop the engine immediately and
- ™ Have the cause repaired by an authorized workshop.

The alternator or the charging circuit of the alternator is faulty if the indicator light comes on with the engine running. The battery is no longer charged.

#### 9 Engine oil pressure indicator light



### Attention!

If the indicator light illuminates with the engine running:

- ™ Stop the engine immediately and
- Fill up oil to the correct level.

The oil pressure in the sump is possibly too low if the indicator light comes on when the engine is running.

# 10 Acoustic warning system for control panel switched on

The acoustic signal sounds if the engine is stopped and the ignition key is in the start position.

Avoids emptying the battery by keeping the control panel switched on.

™ Turn the ignition key and switch off the control panel.

3-4





# 3. 4 Putting into operation

# Safety regulations

- · Use the foothold to get onto or off the machine
- · Never use the controls or movable lines and cables as handholds.
- Never get on a moving machine. Never jump off the machine.

#### Putting into operation for the first time

#### Important information

page 5-30

- · The vehicle may be taken into service by authorized staff only
  - see chapter Selection and qualification of personnel, basic responsibilities on page 2-4.
  - see chapter 2 Safety instructions on page 2-1 of this operator's manual.
- The personnel must have read and understood this Operator's Manual before putting the machine into operation.
- The machine may only be used in technically perfect condition in accordance with its designated use and the instructions set forth in the Operator's Manual, and only by safety-conscious persons who are fully aware of the risks involved in operating the machine.
- · Go through the "Start-up" checklist in the following chapter.

#### Running-in period

Handle the machine carefully during its first 50 operating hours.

The future performance and service life of the machine are heavily dependent on the observance of the following recommendations during the running-in period.

- Do not overload the machine, but at the same time do not drive too cautiously either, as the machine will never reach its proper operating temperature.
- Do not allow the engine to run for a long period at maximum speed.
- Increase the load gradually while varying the engine speed.
- Strictly observe the maintenance schedules in the appendix

   see chapter 5. 10 Maintenance plan DT05-P (gasoline engine) on
  - see chapter 5. 11 Maintenance plan DT05-D (diesel engine) on page 5-32





#### **Check lists**

The checklists below are intended to assist you in checking and monitoring the machine before, during and after operation.

These checklists are not intended to be exhaustive; They are only intended to help you to fulfill your obligation to exercise due care.

The checking and monitoring work listed below is described in greater detail in the following chapters.

If the answer to one of the following questions is NO, first rectify the cause of the fault before starting or continuing work.

## Start-up checklist

Check the following points before putting the machine into operation or starting the engine:

nr.	Question	~
1	Enough fuel in the tank? ( <b>→</b> 5-3)	
2	Engine oil level OK? ( <b>→</b> 5-11)	
3	Hydraulic oil level OK? (➡ 5-18)	
4	Starter cable pull OK?	
5	Lubrication points greased? ( <b>→</b> 5-34)	
6	Tracks checked for cracks, cuts, etc.? (➡ 5-22)	
7	Especially after cleaning, maintenance or repair work:	
'	➡ Rags, tools and other loose objects removed?	

#### **Operation checklist**

After starting the engine and during operation, check and observe the following points:

nr.	Question	~
1	Anyone in the danger zone of the machine?	
2	Drive levers working correctly? ( <b>→</b> 3-14)	

## Parking checklist

Check and observe the following points when parking the vehicle:

nr.	Question	~
1	Loader unit (option) lowered to the ground? (➡ 3-20)	
Wh	en parking on public roads:	
2	Machine appropriately secured?	
When parking on slopes:		
3	Machine also secured with chocks under the tracks to prevent it from rolling away?	





# Before starting the engine

™ Run through the "Start-up" checklist

# General information on starting the petrol engine



# Attention!

Never start the petrol engine without petrol!

\*\*Always check the fuel tank contents before!

- The engine will not start unless the fuel cock is open
- Do not run the starter for more than 5 seconds if the engine does not start
- · Repeat the start attempt only after about 1 minute

## **Procedure**

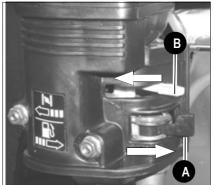


Fig. 22: Fuel cock

After you have completed the starting preparations:

- ™ Turn fuel cock **A** to the right
- ™ Turn choke lever **B** to the left



# Warning!

Do not use choke lever  ${\bf B}$  if the engine is warm or at high air temperatures.

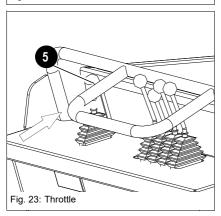


Fig. 24: Engine switch

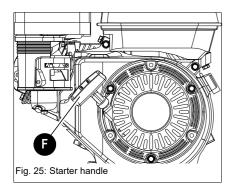
Push throttle 5 slightly forwards

™ Turn the engine switch to position **E** 





#### **Manual starter**



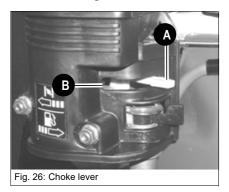


# Attention!

Do not allow starter handle **F** to whiplash against the engine. ™ Carefully move back handle **F** to avoid damage to the starter.

™ Pull slightly on the handle of starter **F** until you feel a resistance, then pull firmly.

#### When the engine has started

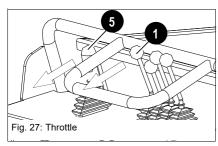


- Gradually push choke lever A to position B
- ™ Let the engine run warm
  - → After the engine has reached its operating temperature, move choke lever **A** fully to the right

At cold temperatures:

- Increase the engine speed slowly
- Do not run the engine at full load until it has reached its operating temperature

### Stopping the petrol engine



- Push throttle 5 fully backward
- ™ Push throttle 1 fully backward
  - ➡ The engine remains stationary



Fig. 28: Engine switch

™ Turn the engine switch to position **B** 

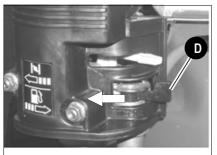


Fig. 29: Fuel cock

™ Turn fuel cock **D** to the right





# General Informationen on starting the diesel engine



# Attention!

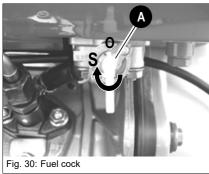
Never start the diesel engine without diesel fuel – the injection pump is fuel-lubricated! Otherwise you run the

# Danger of engine damage!

■ Always check the fuel level before starting!

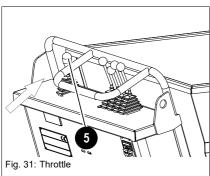
- · The engine will not start unless the fuel cock is open
- Do not run the starter for more than 5 seconds if the engine does not start
- · Repeat the start attempt only after about 1 minute

#### **Procedure**



After you have completed the starting preparations:

- ™ Turn fuel cock A clockwise to position O
  - The fuel cock is open



■ Push throttle 5 fully to the front





#### **Manual starter**





# Attention!

Do not allow starter handle **C** to whiplash against the engine.

Solution Carefully move back handle **C** to avoid damage to the starter.

Pull starter handle C gently until you can feel resistance, then slowly release handle again.



Fig. 33: Decompression lever

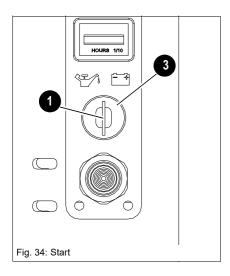
- Press decompression lever **D** all the way down.
- Firmly and quickly pull starter handle C with both hands
  - ➡ If the engine does not start:
  - ™ Repeat the procedure.



# Warning!

The engine will not start unless the cable is pull fully and firmly!

#### **Electric starter**



■ Turn the starting key to position 1

Turn and hold the ignition key in position 3 until the engine starts

- ➡ If the engine does not start after 5 seconds,
- Stop starting the engine and try again after 10 seconds
- ➡ If the engine still does not start after the second try:
- Contact a Wacker Neuson service center for troubleshooting
- As soon as the engine runs:
  - Release the starting key.



# Warning!

Do not actuate the electric starter for more than 5 seconds.





# Starting at low temperatures

When the engine runs smoothly (increased engine speed):



# Warning!

In general, a battery delivers less energy in cold conditions. Therefore ensure that the battery is always well charged.

# When the engine has started

™ Let the engine run warm

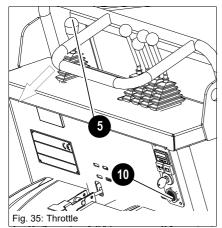
At cold temperatures:

- Increase the engine speed slowly
- Do not run the engine at full load until it has reached its operating temperature

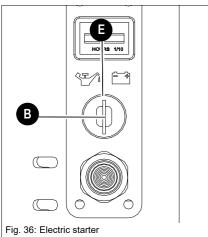




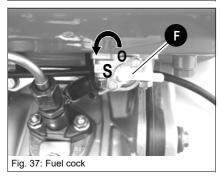
# Stopping the diesel engine



- ™ Push throttle 5 fully backward
  - → The acoustic warning system **10** sounds to indicate that the control panel is still switched on.



™ Turn starter **B** to position **E** 



™ Turn fuel cock **F** anticlockwise to position **S** 





#### Jump-starting the engine (supply battery)

# Safety regulations

- Never jump-start the engine if the battery of the machine is frozen explosion hazard!
  - ☐ Dispose of a frozen battery!
- The dumper must not touch the jump-starting vehicle when connected with jump leads sparking hazard!
- The voltage of the auxiliary power supply must be 12 V; higher supply voltage will damage the vehicles' electrical system!
- Use only authorized battery jumper cables which conform to the safety requirements and which are in perfect condition!
- The jump lead connected to the positive + terminal of the starting battery must never be brought into connection with electrically conductive vehicle parts – risk of short circuit!
- Route the battery jumper cables so they cannot catch on rotating components in the engine compartment!

#### **Procedure**

- Drive the jump-starting vehicle close enough to the machine so that the jump leads can reach to connect the two batteries.
- Let the engine of the jump-starting vehicle run
- First connect one end of the red jump lead (+) to the + terminal of the empty battery, then connect the other end to the + terminal of the starting battery
- © Connect one end of the black jump lead (-) to the terminal of the starting battery
- Firmly screwed on the engine block or onto the engine block itself. Do not connect it to the negative terminal of the empty battery, as otherwise explosive gas emerging from the battery can ignite if sparks are formed!
- Start the engine of the machine with the empty battery

#### Once the engine has started:

with the engine running, disconnect both jump leads in exactly the reverse order (first remove the — terminal, then the + terminal) – this prevents sparking near the battery!

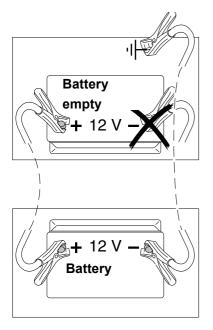


Fig. 38: Starting aid with battery jumper cables

#### Special instructions for driving on public roads

The machine is subject to the:

Applicable legal regulations of your country (e.g. road traffic regulations)



#### Warning!

Operation of electric consumers (for example the lighting equipment) is prohibited. This is why the vehicle has no socket.

Also observe the applicable regulations for accident prevention of your country.





#### Starting vehicle travel

After starting the engine:

Slowly actuate the drive lever

Machine travel starts



# Danger!

The machine has no rearview mirrors -

# Accident hazard when reversing!

The operator must be guided by another person if he does not have sufficient visibility to the rear.

#### **Drive levers**

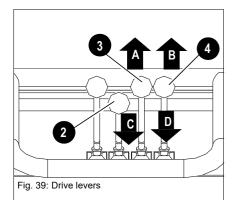


## Attention!

Never move the machine with a raised skip.

™ Tilt in the skip.

The drive movements of the machine are controlled with drive levers **3** and **4**.



Position	Function	
• A	3 Push forwards	Track dumper moves forward
• B	4 Push forwards	Track dumper moves forward
• C	3 Pull backward	Track dumper moves backward
• D	4 Pull backward	Track dumper moves backward
• C	3 Pull backward	Track dumper turns to the left
• B	<b>4</b> Push forward	Track dumper turns to the left
• A	3 Push forward	Track dumper turns to the right
• D	<b>4</b> Pull backward	Track dumper turns to the right

The machine has two speed ranges that can be selected as follows:

- Push lever **2** forwards see Overview of control stand (type DT05-P skip) on page 3-2 or see Overview of control stand (type DT05-D skip) on page 3-3
  - The machine moves at normal speed again
- Pull lever 2 backwards.
  - The machine now moves at lower speed



# Warning!

Ensure that both tracks move as you change direction, otherwise the rubber tracks are subject to increased abrasion.

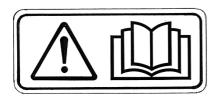




#### Machine travel on slopes

Follow these safety instructions carefully when driving on slopes, in order to avoid accidents.

#### Specific safety instructions

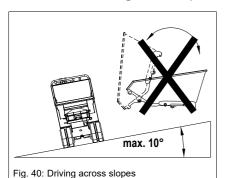


- ™ Tilt in the skip during machine operation.
- Always drive in low speed on slopes!
  - ➡ This also ensures more precise and smooth movements of the steering system.
- · During machine travel and operation on slopes or across obstacles,
- · Do not steer or drive across slopes.
  - If possible, avoid changing direction during machine travel and operation on slopes
- □ During machine operation, ensure that you can stop safely any time if the machine starts to slip or if it becomes unstable.
- Tilting, swiveling or using the skip on slopes can cause the machine to lose its balance and to tip over.
  - Therefore avoid these activities.
- Do not drive on slopes steeper than 15°, otherwise the machine can tip over.
- Do not drive across slopes steeper than 10° otherwise the machine can tip over laterally.
- If the tracks slip when driving uphill and it is no longer possible to move on with the force of the tracks alone.
  - Do not use any auxiliary means to move the machine otherwise it may tip over.
- Always move straight ahead when performing uphill or downhill machine travel. Performing machine travel diagonally or at an angle to the slope is very hazardous.
- Avoid changing direction on slopes or driving across a slope.
- Perform machine travel slowly in meadows, on leaves or wet steel plates. The machine can slip even if the ground is level. If the engine stops as you drive across a slope, immediately put the control levers to neutral position and start the engine again.





# Transverse driving on a slope



The dumper may be driven on firm ground across a slope of up to 10°.



# Danger!

Do not exceed the maximum slope.

### **Accident hazard!**

- The angle must be smaller in the case of soft and uneven ground!
- ™ Do not actuate the skip as you drive on slopes
- ™ Always tilt in the skip before driving on slopes
- Always reduce your travel speed as you drive on slopes see Drive levers on page 3-14
- Always move straight ahead when performing uphill or downhill machine travel. Avoid driving diagonally or at an angle.
- Due to the reduced width, proceed with extreme care during machine travel on slopes, and on soft and uneven ground.
- Drive with extreme care on slopes in rain or if the ground is wet or slippery.

# **Driving on slopes**

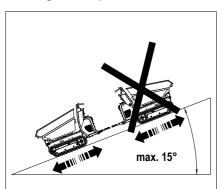


Fig. 41: Machine travel with an empty machine on slopes

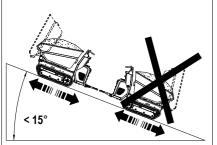


Fig. 41: Machine travel with a load on slopes

Machine travel is allowed on firm ground on a slope of up to 15°.







# Danger!

Do NOT exceed the maximum slope.

#### Accident hazard!

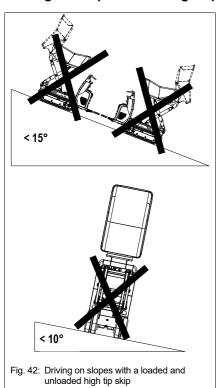
- The operator is not allowed to stand on the foothold during machine travel and operation on slopes with a loaded machine!
- If the skip is empty, the driver must not stand on the step, not even on a level and firm base.
- If the skip is **less** than half full, drive backward uphill or forward downhill.
- If the skip is **more** than half full, drive forward uphill or backward downhill.
- The angle must be smaller in the case of soft and uneven ground!
- Before driving on a slope, lower the skip and do not operate it on the slope!
- Always reduce your travel speed as you drive on slopes

   see Drive levers on page 3-14
- Always move straight ahead when performing uphill or downhill machine travel. Avoid driving diagonally or at an angle.
- Due to the reduced width, proceed with extreme care during machine travel on slopes, and on soft and uneven ground.
- Drive with extreme care on slopes in rain or if the ground is wet or slippery.





# Driving on slopes with a high-tip skip



- Do not raise or dump out the skip on slopes, otherwise the machine can tip forwards.
- ™ Unloading on slopes is not allowed.

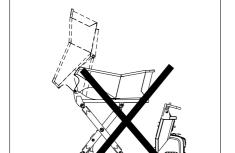


Fig. 43: Driving with a high-tip skip

- ™ Driving with a raised and tilted skip is forbidden.
- Raise and dump out the skip only if the machine is at a standstill.





#### Skip

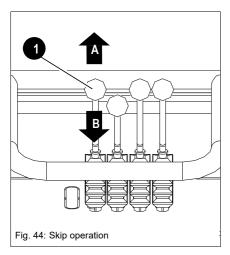


# Danger!

Do not operate the skip during machine travel and operation on slopes, otherwise –

# **Accident hazard!**

- Do not actuate the skip when driving across slopes
- □ Do not actuate the skip when driving up or down slopes



Position	Function	
• A	1 pushed forward	The tipper tilts out
• B	1 Pull backward	Skip is tilted in

**High-tip skip (option)** 



# Danger!

Do not operate the skip during machine travel and operation on slopes, otherwise  $-\$ 

# **Accident hazard!**

- Do not actuate the skip when driving across slopes
- Do not actuate the skip when driving up or down slopes

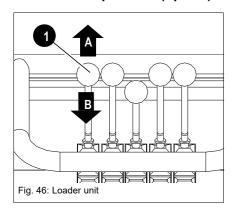
E A  13  F B
Fig. 45: Operating the high-tip skip

Position	Function		
• A	12 pushed forwards	The tipper tilts out	
• B	12 pulled backwards	Skip is tilted in	
• E	13 pushed forwards	Skip is lowered	
• F	13 pulled backwards	Skip is raised	





# Loader unit operation (option)



Position	Function	
• A	1 pushed forward	Loader unit is lowered
• B	1 pulled backward	Loader unit is raised



# Warning!

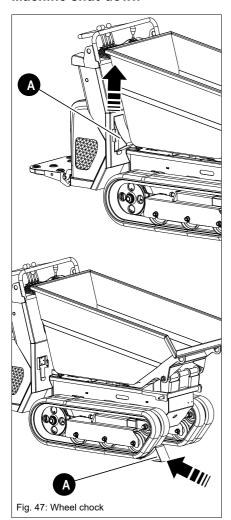
Always keep the loader unit 30 - 40 cm above the ground during machine operation.

3-20





#### Machine shut-down





# Danger!

Always park the machine on firm ground.

# **Accident hazard!**

- Park the machine on level ground
- Take the chock **A** out of its mounting
- Place the chock **A** in front of the dumper track
- Parking the machine
- ™ Tilt in the skip
- Lower the loader unit to the ground
- Reduce engine speed completely
- Disengage the starter
- Remove the starting key.



# Attention!

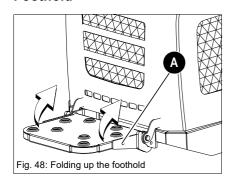
Never stop the engine under full load.

Let the engine run at idling speed for at least 1 minute before switching it off.



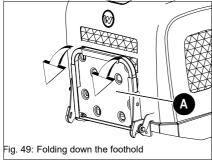


## **Foothold**



# Folding up the foothold:

Fold up foothold **A** with both hands to the upright position.



# Folding down the foothold:

□ Grab the foothold **A** with both hands.

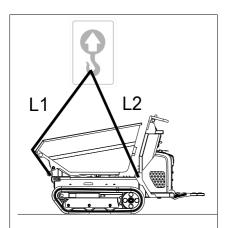
■ Fold it down to the horizontal position.

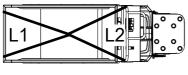
3-22

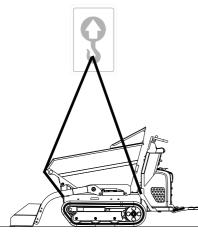




### Crane-lifting the machine







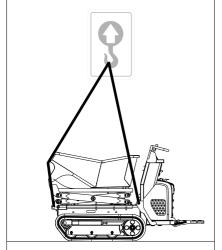


Fig. 50: Crane-lifting

#### Safety regulations

- · The crane and the lifting gear must have suitable dimensions
- · Crane-lifting the machine requires suitable lifting gear
- Secure the machine against unintentional movement!



# Danger!

Incorrect crane-lifting of the machine -

#### Accident hazard!

- Ensure that no one is near the machine!
- Have loads fastened and crane operators guided by experienced persons only! The person guiding the crane operator must be within sight or sound of him.
- Ensure that the crane and the lifting gear (cables, chains) have sufficient lifting capacity!
- Raise the machine with an empty skip only.
- ™ Stay clear of suspended loads!
- It is essential that you read the safety instructions at the beginning of this chapter and follow any other safety instructions relevant in your country!

#### № Load the machine as follows:

- · Empty the skip and the loader unit
- · Lower tipping trailer
- · Stop the engine
- Remove the ignition key (model DT05-D).
- Use suitable lifting gear, chains, etc.
- ™ Length L1 of the lifting gear on the skip must be at least 2.0 m long
- Length L2 of the lifting gear (two cables or chains) on the control stand must be at least 2.0 m long
- · Slowly raise the machine





#### Loading and transporting the machine

# Safety regulations

- The transport vehicle must be of sufficient size. See Chapter
   6 "Technical data" for the dimensions and the weight of the machine!
- Remove any mud, snow or ice from the tracks so that the machine can be safely driven onto the ramps
- Secure the machine against unintentional movement!
  - see Machine shut-down on page 3-21

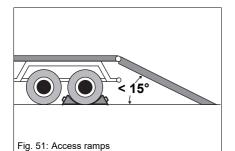


# Danger!

The machine must be loaded and transported properly -

#### **Accident hazard!**

It is essential that you read the safety instructions at the beginning of this chapter and follow any other safety instructions relevant in your country!



#### Load as follows:

- Secure the transport vehicle with chocks to prevent it from rolling.
- Place the access ramps at the smallest possible angle. Ensure that the grade does not exceed 15° (27%). Use access ramps with an anti-skid surface only.
- Ensure that the loading area is clear and access to it is not obstructed for example by superstructures.
- Ensure that the ramps and the tracks of the dumper are free of oil, grease and ice.
- Start the engine of the dumper
- ™ Lower tipping trailer
- ™ Carefully drive the dumper onto the middle of the transport vehicle.
- Stop the engine.
- Remove the ignition key (model DT05-D)



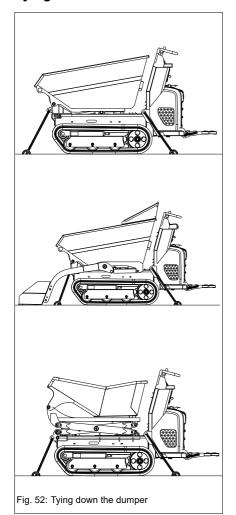
# Warning!

The manufacturer's warranty shall not apply to accidents or damage caused by loading or transporting.





## Tying down the machine





# Danger!

The machine must be loaded and transported properly -

#### Accident hazard!

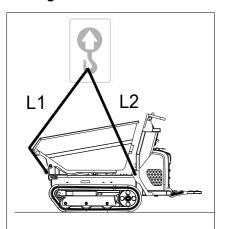
It is essential that you read the safety instructions at the beginning of this chapter and follow any other safety instructions relevant in your country!

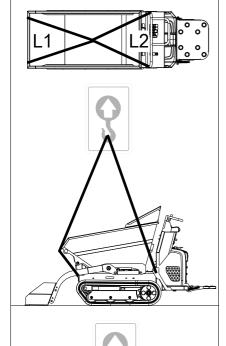
- Ensure that the authorized maximum height is not exceeded.
- Secure the tracks of the dumper on the sides.
- ™ Lower the skip and the loader unit.
- Firmly fasten the dumper onto the platform. To this end, use belts and chains of sufficient size to pass the cables between the tracks and the skip.
- Protect the engine with a simple cover before transporting the machine through heavy rain.
- Ensure that the operator of the transport vehicle knows the overall height, overall width and overall weight of the vehicle (including the dumper) as well as the applicable statutory provisions for this type of transport in the country in which the transport is occurring before driving! Tie down the machine.





# Towing the machine





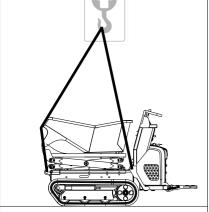


Fig. 53: Towing the vehicle



# Danger!

Keep out of the danger zone of the machine -

# **Accident hazard!**

■ Ensure that no one is in the danger zone of the dumper.



# Warning!

The manufacturer's warranty shall not apply to accidents or damage caused by towing. Using the tie-down eyelets for towing another machine is prohibited. The machine can also be salvaged with a crane.





# 3. 5 Machine operation

#### General safety instructions

- Never drive up to the edge of a pit from outside risk of cave-in!
- Do not operate the machine under projecting earth. Stones or the projecting earth can fall onto the machine.
- When working on roofs of buildings or other structures, these are to be checked for stability before starting work; The building can collapse, causing serious injury and damage.
- Do not position the machine directly underneath the workplace during demolition, otherwise demolished parts can fall onto the machine or the building can collapse, causing serious injury or damage.
- · Operation of the machine by unauthorized personnel is prohibited!
- The hydraulic system of the machine is still pressurized even when the
  engine is not running! Release the pressure in the sections of the system
  and hydraulic lines which are to be opened before starting setup or repair
  work, e.g. fitting/removing an attachment with hydraulic functions.
- Before tilting out the skip next to an excavation, secure the machine with suitable wheel chocks or other auxiliary means.
- Always watch the material as you tilt out the skip: ensure that the material is dumped out evenly and does not remain stuck in the skip, otherwise the machine could tip over.
- Do not dump the load when working on sloping ground.
- · Transporting persons or animals in the skip is prohibited.
- When transporting material, actuating the skip and/or the loader unit (option) is prohibited!
- Always perform precise and smooth control movements, do not perform abrupt movements.
- Do not get off the machine when it is moving.
- Avoid hazardous work conditions on the job site, do not work in severe weather and ensure that no one is at risk.
- Transporting persons is prohibited.

#### Loader unit operation

The following section describes work operations with the machine equipped with the loader unit. The loader unit is mainly used for earthmoving applications, and for loosening, picking up and loading loose material.

# Transporting with a full bucket



## Attention!

No transport of material: the loader unit is designed for loading loose material only.

Loading loose material is described below

Solve of the second of the





## Loading loose material



#### Attention!

Do not perform any steering movements once the bucket has penetrated the material.

Lower the loader unit only when the machine is at a standstill and if there is enough room to the front.

The loader unit is not designed for loading compacted material (hard to penetrate), serious loader unit damage can occur.

Only load loose material

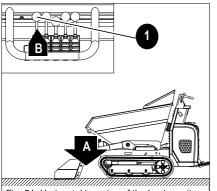


Fig. 54: Horizontal lowering of the loader unit

Lower the loader unit to the ground **A**Slide the control lever **1 B** forward



# Attention!

Do not perform any steering movements once the bucket has penetrated the material.



# Attention!

Load the machine only on firm and level ground!

■ Drive forward into the material A

If the engine speed decreases due to too much material:

Raise the loader unit a little

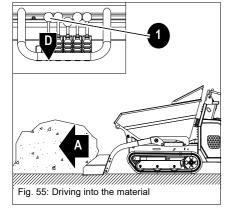
Move the control lever 1 D backwards



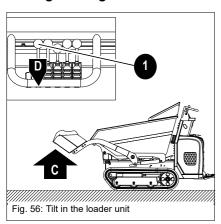
# Warning!

If the loader unit cannot be raised in the material

Reduce the load on the loader unit by reversing



#### **Ending loading**

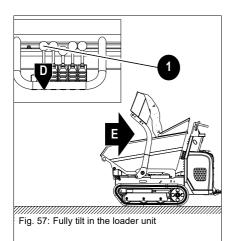


Set the loader unit to position C

Move the control lever 1 D backwards







™ Tilt in the loader unit fully E

Move the control lever 1 D backwards



# Warning!

Perform slow movements of the loader unit. This distributes the material evenly in the skip.

## Transporting with a full skip



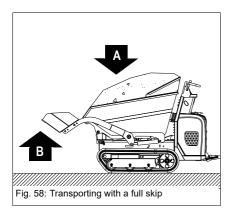
# Danger!

Careful when driving in rough terrain with a full skip -

## **Accident hazard!**

Pay particular attention to this when turning or performing machine travel on slopes. To avoid accidents:

- Fully tilt in the skip
- Bear in mind the tilting limit during machine travel and operation on slopes
- Fully tilt in the skip A
- ™ Lower the loader unit (option) to transport position **B**
- ™ Always reverse up a slope at low speed with a full skip







## Tilt out the skip

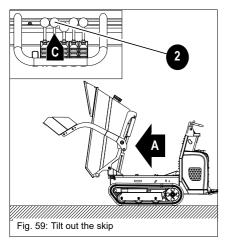


# Danger!

Tilting out the skip alongside a pit is dangerous -

#### **Accident hazard!**

- Ensure sufficient stability
- Do not drive too closely to the pit
  - · Secure the vehicle with chocks if necessary
- Slowly tilt out the skip
- \*\*Always watch the material as you tilt out the skip: ensure that the material is dumped out evenly and does not remain stuck in the skip, otherwise the machine could tip over



™ Tilt out the skip A

Slide the control lever 2 C forward

⇒ Raise the loader unit



## Attention!

As you tilt out the skip, ensure that the loader unit does not touch the ground or the material transported in the skip, otherwise the loader unit can be damaged.

■ Always select the optimal position for the loader unit





## **Empty the high tip skip (optional)**

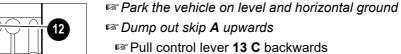


# Danger!

Careful when handling the high-tip skip -

#### **Accident hazard!**

- Do not raise or dump out the skip when driving
- Do not raise or dump out the skip on slopes or in an inclined position



- ⇒ Skip is raised
- ™ Dump out skip **D**
- Push control lever 12 F forwards
  - ⇒Skip dumps out

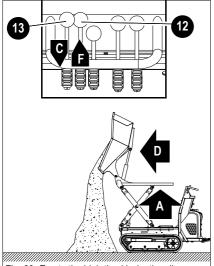


Fig. 60: Empty the high tip skip (optional)

# **Emergency lowering of the skip**

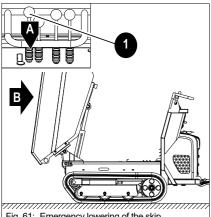


Fig. 61: Emergency lowering of the skip



# Danger!

Emergency lowering of the skip -

## Crushing hazard and injury!

Stay clear of the skip

Emergency lowering of the skip is only possible with the help of two persons.

- Pull lever 1 A backward during emergency lowering and hold it in this position
- · Once the skip is fully tilted out
  - ™ Lower the skip by hand downwards to over the pivot point **B** and at the same time pull the lever 1 A to the rear
- The skip is lowered by its own weight once it is beyond the pivot point

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# 4 Malfunctions

The information given in this chapter is provided for maintenance personnel, for fast and reliable detection of malfunctions and their appropriate repair.

Repairs must only be performed by authorized personnel.

# 4. 1 Engine malfunctions

Problem	Possible causes	See
	Wrong SAE grade of engine lubrication oil	5-29
	Fuel grade does not comply with specifications	5-29
	Malfunctioning or empty battery	5-26
Engine does not start or is not easy to start	Loose or oxidized cable connections in starter circuit	
	Malfunctioning starter, or pinion does not engage	
	Wrong valve clearance	
	Malfunctioning fuel injector	
	Malfunctioning fuse	
	Check the spark plug	5-10
	Fuel grade does not comply with specifications	5-29
Engine starts, but does not run smoothly or faultless	Wrong valve clearance	
	Injection line leaks	
	Malfunctioning fuel injector	
	Oil level too low	5-11
For the control of	Oil level too high	5-11
Engine overheats	Polluted air filter	5-14
	Malfunctioning fuel injector	
	Oil level too high	5-11
	Fuel grade does not comply with specifications	5-29
	Polluted air filter	5-14
	Wrong valve clearance	
Insufficient engine power	Injection line leaks	
	Malfunctioning fuel injector	
	Dirty carburettor (DT05-P only)	
	Malfunctioning ignition (DT05-P only)	
	Malfunctioning spark plugs (DT05-P only)	
	Oil level too low	5-11
Insufficient or no engine oil pressure	Excessive machine inclination (max. 15°)	
	Wrong SAE grade of engine lubrication oil	5-29





Problem		Possible causes	See
Engine oil consumption too high		Oil level too high	5-11
		Excessive machine inclination (max. 15°)	
	Blue	Oil level too high	5-11
		Excessive machine inclination (max. 15°)	
	White	Engine starting temperature too low	
		Fuel grade does not comply with specifications	5-29
Engine smoke		Wrong valve clearance	
		Malfunctioning fuel injector	
		Polluted air filter	5-14
	Black	Wrong valve clearance	
		Malfunctioning fuel injector	

4-2





# 5 Maintenance

## 5. 1 Introduction

The working order and the service life of vehicles are heavily dependent on maintenance.

It is therefore in the interest of the machine owner to perform the mandatory maintenance.

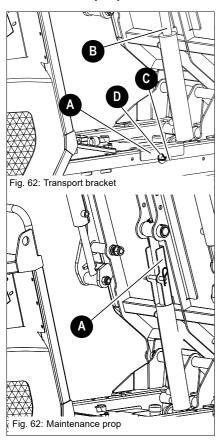
Before performing servicing and maintenance, always read, understand, and follow the instructions given in:

- Chapter 2 "Safety instructions" of this Operator's Manual and
- · The Operator's Manuals of the attachments.

Daily maintenance specified in maintenance plan "A" has to be performed by an appropriately trained machine operator. All other maintenance may only be performed by trained and qualified technical personnel.

The maintenance plans indicate when the maintenance mentioned below must be performed.

#### **Maintenance prop**





# Danger!

Careful when performing maintenance on or under the skip, and in general when performing maintenance with the skip tilted out

#### **Accident hazard!**

■ Use the maintenance prop

Proceed as follows to attach the maintenance prop:

- Remove the maintenance prop A from the transport bracket
- The maintenance prop is fastened with lock pin **C** and pin **D**
- ™ Insert the maintenance prop A on the tipping cylinder B
- Secure the maintenance prop **A** with the lock pin **C** and the pin **D**.

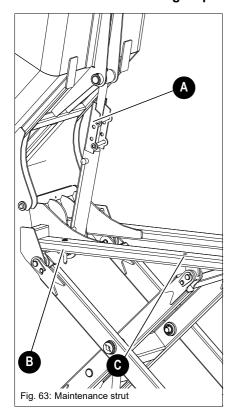
During transport fit maintenance strut  $\bf A$  as shown in  $\it Fig. 62$  – transport strut.

**5-1** BA DT05 EN – Edition 2.0 \* dt05b510.fm





# Maintenance strut for high-tip skip





# Danger!

Careful when performing maintenance on or under the skip, and in general when performing maintenance with the skip tilted out

# **Accident hazard!**

■ Use the maintenance prop

Proceed as follows to attach the maintenance prop:

- ™ Raise tipping trailer
- ™ Empty front tip skip.
- Insert maintenance prop **A** as shown in Fig. 63 maintenance prop.
  - The skip is blocked in the raised position.
- Remove the safety strut and the pin from opening **B** and insert them in opening **C**.
  - The skip is blocked in the raised position

5-2



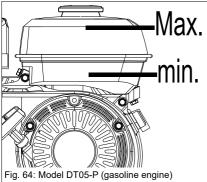


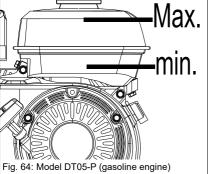
# 5. 2 Fuel system

### Specific safety instructions

- Extreme caution is essential when handling fuel increased fire hazard!
- Never perform work on the fuel system near open flames or sparks!
- · Do not smoke when working on the fuel system or when refueling!
- · Before refueling, stop the engine and remove the starting key!
- · Do not refuel in closed rooms!
- · Wipe away fuel spills immediately!
- · Keep the vehicle clean to reduce the fire hazard!

## Checking the fuel level





# Model DT05-P (gasoline engine)

Check the fuel level as follows:

- The fuel level must be between the min. and max. levels
- If the fuel level is below min.
  - Filling up with fuel



# Warning!

The vehicle has no filling level indicator, therefore always check the fuel level before putting the vehicle into operation.

# Model DT05-D (diesel engine)

Check the fuel level as follows:

- ™ Check the fuel level on sight glass A
- The fuel level must be between the min. and max. levels
- If the fuel level is below min.
  - Filling up with fuel



# Warning!

The vehicle has no filling level indicator, therefore always check the fuel level before putting the vehicle into operation.

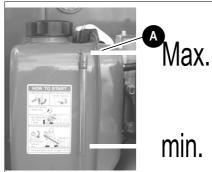
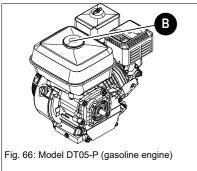


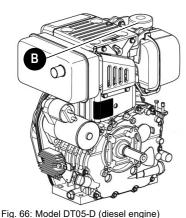
Fig. 65: Model DT05-D (diesel engine)





#### Refuelling





Filler inlet **B** of the fuel tank is located on the top side of the engine.



# Danger!

All work involving fuel carries an increased

# fire and poisoning risk!

- □ Do not refuel in closed rooms.
- Never perform work on the fuel system near open flames or sparks.



# Warning!

Ensure that you refuel with the correct fuel. It is indicated on the label beside the filler inlet.



# **Environment!**

Use a suitable container to collect the fuel as it drains and dispose of it in an environmentally friendly manner!

# Draining fuel (gasoline engine)

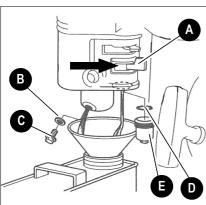


Fig. 67: Draining fuel (gasoline engine)

The filler inlet of tank **C** is located under the fuel tank.

™ Proceed as follows:

- Clean the area around filler cap C with a lint-free cloth
- Place a sufficiently large container under the place where the fuel is drained
- Open filler cap C and remove seal B
- Remove filter cup **E** and seal **D** and turn fuel cock **A** to the right
- Wait for a moment (about 3 minutes) until the oil has been completely drained from the tank
- Refit seal B and close filler cap C. Fit seal D and filter cup E back on again







# Danger!

All work involving fuel carries an increased

# fire and poisoning risk!

- Do not refuel in closed rooms.
- Never perform work on the fuel system near open flames or sparks.



# **Environment!**

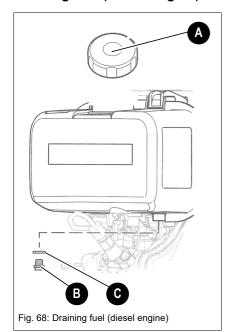
Use a suitable container to collect the fuel as it drains and dispose of it in an environmentally friendly manner!

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#### **Draining fuel (diesel engine)**



Fuel tank filler inlet **B** is located on the lower side of the tank.

™ Proceed as follows:

- Clean the area around oil filler cap B with a lint-free cloth
- Place a sufficiently large container under the place where the fuel is drained
- Open the filler cap of filler inlet A
- Open filler cap B and remove seal C
- Wait for a moment (about 3 minutes) until the oil has been completely drained from the tank
- Refit seal C and close filler cap B



#### Danger!

All work involving fuel carries an increased

# fire and poisoning risk!

- □ Do not refuel in closed rooms.
- Never perform work on the fuel system near open flames or sparks.



#### **Environment!**

Use a suitable container to collect the fuel as it drains and dispose of it in an environmentally friendly manner!

#### Stationary fuel pumps

#### General

Only refuel from stationary fuel pumps. Fuel from barrels or cans is usually dirty.

Even the smallest particles of dirt can cause:

- · Increased engine wear
- · Malfunctions in the fuel system and
- · Reduced effectiveness of the fuel filters.

#### Refueling from barrels

If refueling from barrels is unavoidable, please note the following (see Fig. 70):

- · Barrels must neither be rolled nor tilted before refueling
- Protect the suction pipe opening of the barrel pump with a fine-mesh screen
- · Immerse it down to a max. 15 cm above the floor of the barrel
- Only fill the tank using refueling aids (funnels or filler pipes) with integral micro-filter
- All vessel for refueling must always be kept clean.

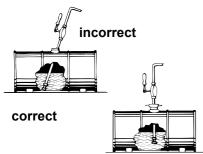


Fig. 70: Refuelling from a barrel





#### Gasoline specification

Use only high-grade fuels

Grade	Octane number	Application
<ul> <li>Regular DIN 51607</li> </ul>	91	From -15° to 45°C

For model DT05-P (gasoline engine)

#### Diesel fuel specification

Use only high-grade fuels

Grade	Cetane number	Application
<ul> <li>No. 2-D according to DIN 51601</li> </ul>		From 4° to 45°C
No. 1-D according to DIN 51601	Min. 45	For outside temperatures below 4°C or for operation above 1500 m altitude

For model DT05-D (diesel engine)

#### Cleaning the fuel filter cup (gasoline engine)

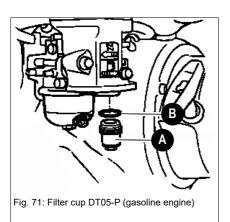


# Danger!

Gasoline is extremely flammable, and explosive under certain circumstances.

#### **Accident hazard!**

- ™ No smoking in the job site, no open flames or sparks.
- Once the filter cup is back in position, check for leaks and ensure that all gasoline spills have been wiped away before starting the engine.
- Set the fuel cock to OFF
- ™ Unscrew filter cup A with a suitable tool
- Remove filter cup **A** and O-ring **B**, and wash with a nonflammable solvent
- Allow filter cup A to dry thoroughly
- Screw filter cup A back on again with a suitable tool
- Set the fuel cock to ON and check for leaks



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#### Cleaning the fuel filter (gasoline engine)

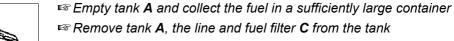


# Danger!

Gasoline is extremely flammable, and explosive under certain circumstances.

#### **Accident hazard!**

- ™ No smoking in the job site, no open flames or sparks.
- ™ Once the filter is back in position, check for leaks and ensure that all gasoline spills have been wiped away before starting the engine.

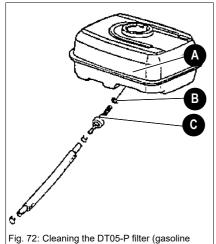


- ₩ Wash filter **C** with a nonflammable solvent
- ™ Check filter **C** for damage and dry it
- Fit seal B on the filter and install it again
  - ⇒ Specific torque 2 Nm
- ™ Check for possible leaks



#### **Environment!**

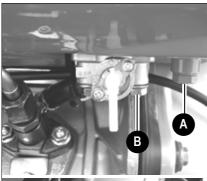
Dispose of the drained fuel in an environmentally friendly manner.







#### Cleaning the fuel filter of the diesel engine





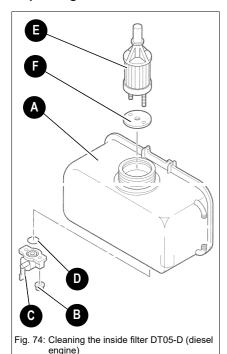
- ™ Open drain plug A with a suitable tool
  - ➡The fuel drains
- ™ Close drain plug A again after the fuel has drained completely
- □ Open screw **B** on the fuel cock
- Pull filter C out of the filler inlet of the fuel tank
- ™ Wash filter **C** with a nonflammable solvent
- S Allow filter C to dry thoroughly
- Insert filter **C** back into the filler inlet of the fuel tank
- ™ Close screw **B** on the fuel cock



#### **Environment!**

Dispose of the drained fuel in an environmentally friendly manner.

#### Replacing the fuel filter element in the tank (diesel engine)



- Empty the fuel tank A
- Unscrew screws B on the sides of fuel cock C
- Remove and discard the seal
- Replace filter E and seal F in tank A
- Fit fuel cock **C** back on again by tightening screws **B**. Use a new seal **D** as you do so



# **Environment!**

Dispose of the drained fuel in an environmentally friendly manner.

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#### Spark plug (petrol engine)



# Danger!

The engine is very hot after it has been in service.

#### **Burn hazard!**

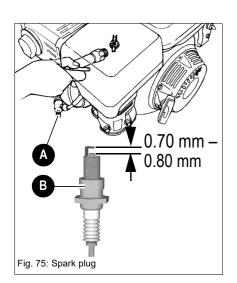
Allow the engine to cool down



# Attention!

If the spark plug is not tightened correctly, it can become very hot and cause engine damage.

- S Always tighten the spark plug firmly
- Never use a spark plug with the wrong heat range danger of engine damage!



The spark plug must be set correctly and be free of deposits to ensure that the engine runs correctly.

Remove spark plug B as follows:

- Stop the engine.
- Remove spark plug connector A
- Remove spark plug B with a suitable spark plug key
- ™ Check spark plug B as follows:
  - ™ Check the outside of spark plug B
  - ➡ Dispose of spark plug B if it is worn, or if the insulator is torn or cracked.
  - Measure the electrode gap with a suitable tool
  - → The gap must be between 0.70 and 0.80 mm
  - Check the sealing ring for wear
- Clean spark plug **B** with a suitable tool (for example a wire brush, etc.) if it can be used again

Install spark plug B as follows:

- Screw in spark plug B by hand to avoid stripping the thread
- ™ Tighten spark plug B with a suitable spark plug wrench
  - Tighten a new spark plug **B** by ½ a revolution after it makes contact, in order to compress the sealing ring
  - Tighten an old spark plug  ${\bf B}$  by 1/8-1/4 of a revolution after it makes contact, in order to compress the sealing ring
- Fit spark plug connector A back on again

We recommend the following spark plugs:

Manufacturer's description	Manufacturer
BPR5ES	NGK
• BPR6ES	NGK

5-10





# 5. 3 Engine lubrication system



#### Attention!

If the engine oil level is too high or too low, if the wrong oil is used or if an oil change is overdue, this can cause

# Engine damage and loss of output!

■ Have the oil changed by a Wacker Neuson service center

— see chapter 5. 10 Maintenance plan DT05-P (gasoline engine) on page 5-30

see chapter 5. 11 Maintenance plan DT05-D (diesel engine)
 on page 5-32

#### Checking the oil level

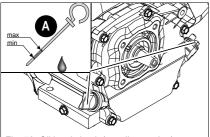


Fig. 76: Oil level check (gasoline engine)

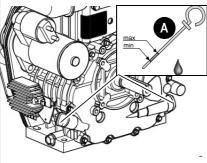


Fig. 76: Oil level check (diesel engine)

The oil level can be checked from either side.



# Warning!

Check the oil level once a day.

We recommend checking it before starting the engine. After stopping a warm engine, wait at least 5 minutes before checking.

#### Checking the oil level

Proceed as follows:

- · Park the vehicle on level ground
- → Max. inclination about 5°
- · Stop the engine!
- Oil dipstick A
- Pull it out
- ™ Wipe it with a lint-free cloth
- Push it back in as far as possible
- Withdraw it and read off the oil level
- However, if need be add oil when the oil level has reached the MIN mark on the dipstick **A**

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#### Filling up engine oil

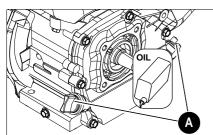
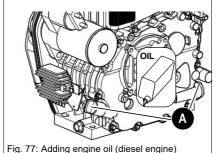


Fig. 77: Filling up engine oil (petrol engine)



 $\Lambda$ 

#### Attention!

Too much or incorrect engine oil can cause engine damage! Therefore:

™ Do not add engine oil above the MAX mark of oil dipstick 77/A

™ Use only the specified engine oil



#### **Environment!**

Use a suitable container to collect the engine oil as it drains and dispose of it in an environmentally friendly manner!

#### Proceed as follows:

- Clean the area around filler cap A with a lint-free cloth
- ™ Open filler cap A
- ™ Adding engine oil
- Wait a moment until all the oil has run into the oil sump
- ™ Check the oil level
- Add oil if necessary and check the oil level again
- ™ Close filler cap A
- ™ Completely remove all oil spills from the engine.

#### Drain engine oil

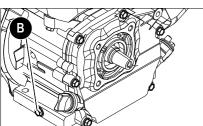
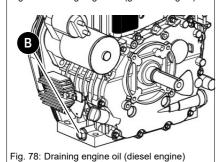


Fig. 78: Draining engine oil (gasoline engine)



#### Proceed as follows:

- ™ Clean the area around oil filler cap **B** with a lint-free cloth
- Place a sufficiently large container under the place where the oil is drained.
- ™ Open filler cap B
- Wait for a short while (appr. 3 minutes), until the oil has drained completely from the sump
- ™ Close filler cap B
  - ⇒ Specific torque DT05-D (diesel engine) 19.6 23.5 Nm



# **Environment!**

Use a suitable container to collect the engine oil as it drains and dispose of it in an environmentally friendly manner!

5-12





# Cleaning/replacing the engine oil filter (diesel engine)

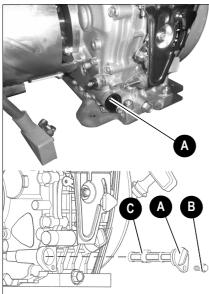


Fig. 79: Cleaning/replacing the DT05-D engine oil filter (diesel engine)

- Remove screw B
- Pull up the cover of oil filter A and take out engine oil filter C
- ™ Clean engine oil filter **C** or replace it if it is damaged
- ™ Install engine oil filter C
- Ensure the correct position of the filter
- Screw in screw B and tighten it to fasten the engine oil filter
- Refill with engine oil



# **Environment!**

Dispose of the drained fuel in an environmentally friendly manner.

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### 5. 4 Air filter

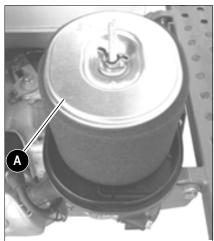


Fig. 80: Air filter (gasoline engine)



 $\Lambda$ 

#### Attention!

The filter cartridge will be damaged if it is washed or brushed out!

Bear in mind the following to avoid premature engine wear!

- Never let the engine run without the air filter installed
- Replace the filter cartridge according to the maintenance plan
- ™ Never reuse a damaged filter cartridge
- Ensure cleanliness when replacing the filter cartridge!

The filter cartridge A must be replaced as specified in the maintenance schedule:



#### Attention!

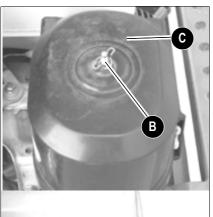
Filter cartridges degrade prematurely when in service in acidic air for longer periods of time. This risk is present, for example, in acid production facilities, steel and aluminum mills, chemical plants and other nonferrous-metal plants

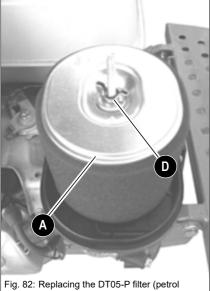
Replace the filter cartridge A after 50 hours run at the latest!





# Replacing the filter (gasoline engine)





Exchange filter cartridge A as follows:

- Stop the engine.
- ™ Unscrew wing nut **B** off cover **C**
- Remove cover C
- Unscrew wing nut **D** off filter cartridge **A**
- ™ Insert the new filter cartridge A.
- ™ Tighten wing nut **D** on filter cartridge **A**
- Ensure that all dirt (dust) inside the cover C has been removed
- Position cover **C** (ensure that it is properly seated)
- ™ Tighten wing nut **B** again on cover **C**



# **Environment!**

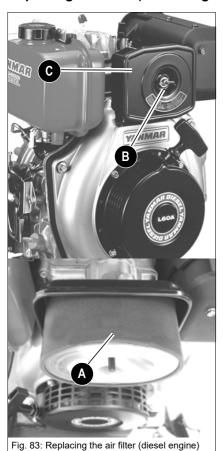
Dispose of filter cartridge A in an environmentally friendly manner.

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#### Replacing the filter (diesel engine)



Exchange filter cartridge A as follows:

- Stop the engine.
- Unscrew wing nut B off cover C
- Remove cover C
- Remove filter cartridge A
- Insert the new filter cartridge A.
- Ensure that all dirt (dust) inside the cover C has been removed
- Position cover **C** (ensure that it is properly seated)
- ™ Tighten wing nut **B** again on cover **C**



#### **Environment!**

Dispose of filter cartridge **A** in an environmentally friendly manner.



# Warning!

The filter cartridge of the diesel engine cannot be cleaned. Replace it if it is malfunctioning or according to the maintenance interval.





# 5. 5 Hydraulic system

#### Specific safety instructions



- Release the pressure in all lines carrying hydraulic oil prior to any maintenance and repair work. To do this:
  - set down all hydraulically activated work equipment on the ground and
  - actuate all control levers of the hydraulic controllers several times
- Hydraulic oil escaping under high pressure can penetrate the skin and cause serious injury. Always consult a doctor immediately, even if the wound seems insignificant – otherwise serious infections could set in!



#### Attention!

Dirty hydraulic oil, lack of oil or wrong hydraulic oil -

# Risk of serious damage to the hydraulic system!

- ™ Take care to avoid dirt when working!
- Always add hydraulic oil using the filling screen!
- Only use authorized oils of the same type

   see chapter 5. 9 Fluids and lubricants on page 5-29
- Always add hydraulic oil before the level gets too low see Adding hydraulic oil on page 5-18
- If the hydraulic system is filled with biodegradable oil, then only biodegradable oil of the same type can be used for adding oil observe the label on hydraulic oil reservoir!
- Contact customer service if the hydraulic system filter is contaminated with metal chippings. Otherwise, follow-on damage can result!



#### **Environment!**

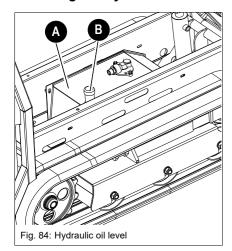
Collect drained hydraulic oil and biodegradable oil in a suitable container! Dispose of drained oil and used filters by an ecologically safe method. Always contact the relevant authorities or commercial establishments in charge of oil disposal before disposing of biodegradable oil.

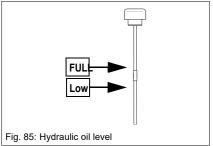
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#### Checking the hydraulic oil level





#### Proceed as follows:

- Park the machine on level ground.
- Raise the platform and lock it in the safety position See Maintenance prop on page 5-1.
- ™ Stop the engine.
- The dipstick is integrated in the sealing push-in cap **B** of hydraulic oil tank **A**
- Check whether the oil level is between MIN and MAX.
- S Add hydraulic oil if the oil level is lower.

#### Adding hydraulic oil

Refill hydraulic oil only with the engine stopped otherwise hydraulic oil will overflow at the filler opening on the hydraulic oil reservoir.

#### Add as follows:

- Park the machine on level ground.
- Raise the platform and lock it in the safety position See Maintenance prop on page 5-1.
- Stop the engine.
- ™ Unscrew filler cap B
- Use an oil funnel with micro-filter to fill in oil

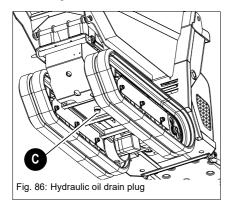
With the filter insert in place:

- ™ Adding hydraulic oil
- ™ Check the hydraulic oil level with the dipstick integrated in filler cap B
- Add if necessary and check again
- Firmly tighten filler cap **B** by hand.





#### Drain hydraulic oil



#### Proceed as follows:

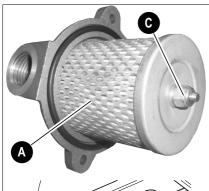
- · Retract all hydraulic cylinders.
- Clean the area around filler cap C with a lint-free cloth
- Place a sufficiently large container under the place where the oil is drained.
- Open filler cap C
- Wait for a moment (about 3 minutes) until the oil has been completely drained from the tank
- · Close filler cap C



#### **Environment!**

Collect the drained oil in a suitable container and dispose of it by an ecologically safe method!

#### Replacing the hydraulic oil filter cartridge



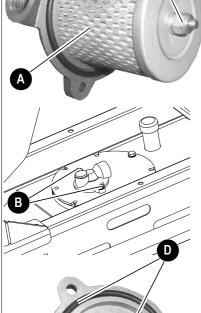


Fig. 87: Replacing the oil filter cartridge

Exchange filter cartridge A as follows:

- ™ Stop the engine
- ™ Unscrew screws **B** to take the filter out of the mount.
- ™ Unscrew the nut C on the filter cartridge A.
- Insert the new filter cartridge A.
- Ensure that seals **D** are properly fitted.
- ™ Tighten nut C on filter cartridge A.
- Ensure that all dirt (dust) has been removed
- Insert the filter in its mount.
- ™ Tighten screws **B** again.



# **Environment!**

Collect the drained oil in a suitable container and dispose of it by an ecologically safe method!



#### **Environment!**

Dispose of filter cartridge A in an environmentally friendly manner.

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#### Important information for the use of biodegradable oil

- Use only the biodegradable hydraulic fluids which have been tested and approved by Wacker Neuson. Always contact Wacker Neuson for the use of other products that have not been recommended. In addition, ask the oil supplier for a written declaration of guarantee. This guarantee is applicable to damage occurring on the hydraulic components that can be proved to be due to the hydraulic fluid.
- Use only biodegradable oil of the same type for adding oil. In order to avoid misunderstandings, a label providing clear information is located on the hydraulic oil reservoir (next to the filler inlet) regarding the type of oil currently used! Replace missing labels!
   The joint use of two different biodegradable oils can affect the quality of
  - one of the oil types. Therefore, when changing biodegradable oil, ensure that the remaining amount of the original hydraulic fluid in the hydraulic system does not exceed 8% (manufacturer indications).
- Do not add mineral oil the content of mineral oil should not exceed 2% by weight in order to avoid foaming problems and to ensure biodegradability.
- When running the machine with biodegradable oil, the same oil and filter replacement intervals are valid as for mineral oil
  - see Maintenance plan DT05-P (gasoline engine) on page 5-30
  - see Maintenance plan DT05-D (diesel engine) on page 5-32
- Always have the condensation water in the hydraulic oil reservoir drained by a
  - Wacker Neuson service center before the cold season. The water content may not exceed 0.1% by weight.
- The instructions in this Operator's Manual concerning environmental protection are also valid for the use of biodegradable oil.
- If additional hydraulic attachments are installed or operated, use the same type of biodegradable oil for these attachments to avoid mixtures in the hydraulic system.

Subsequent change from mineral oil to biodegradable oil must be performed by a

Wacker Neuson service center or by your Wacker Neuson partner.

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#### Checking hydraulic pressure lines

#### Specific safety instructions



## Danger!

Use caution when checking the hydraulic lines; especially when searching for leaks.

Hydraulic oil escaping under high pressure can penetrate the skin and cause serious injury.

# Risk of injury!

Always consult a doctor immediately, even if the wound seems insignificant – otherwise serious infections could set in!

■ Always observe the following warnings:

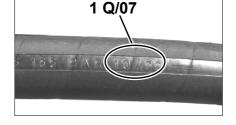
- Retighten leaking screw connections and hose connections only when the system is not under pressure. In other words, release the pressure before working on pressurized lines!
- Never weld or solder damaged or leaking pressure lines and screw connections. Replace damaged parts with new ones!
- Never search for leaks with your bare hands, but wear protective gloves!
- Use paper or wood to check for minor leaks. Never use an unprotected light or open flame!
- Have damaged flexible lines replaced by service centers only!
- Leaks and damaged pressure lines must be immediately repaired or replaced by a Wacker Neuson service center or after-sales personnel. This not only increases the operating safety of the vehicle but also helps to protect the environment.
- Replace hydraulic hoses every 6 years from the date of manufacture, even if they do not seem to be damaged.

In this respect, we recommend that you observe all the relevant safety regulations for hydraulic lines, as well as the safety regulations regarding accident prevention and occupational health and safety in your country. Also observe DIN 20066, part TI. 5.

The date of manufacture (month or quarter and year) is indicated on the flexible line.

#### Example:

The indication "1 Q/07" means manufactured in the 1st quarter of 2007.



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#### 5. 6 Tracks



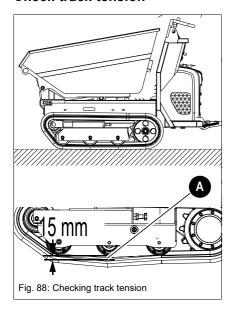
# Danger!

Careful when working on the tracks -

#### **Accident hazard!**

- Use suitable means to support and secure the machine.
- In addition, ensure that the machine cannot turn over.

#### **Check track tension**



Check track tension as follows:

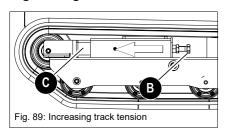
- Park the dumper on firm and level ground.
- Raise the dumper with suitable means.
- There should not be any tracks on the ground.
- Stop the engine.
- Use additional supports for the dumper and ensure that it cannot overturn
- Measure the clearance at the middle tread roller A.
  - The rubber track should not sag more than 15 mm when tight.



# Warning!

If possible, the distance from the rollers should be the same for both tracks.

#### Tightening the tracks



Proceed as follows:

- Park the dumper on firm and level ground.
- Raise the dumper with suitable means.
- There should not be any tracks on the ground.
- Stop the engine.
- Use additional supports for the dumper and ensure that it cannot overturn
- Screw in adjusting screw **B** with a suitable tool.
  - ⇒ Cylinder **C** is extended.
  - → The track is tensioned.
- ™ Check track tension
  - Repeat the procedure if the tracks are not tight enough.



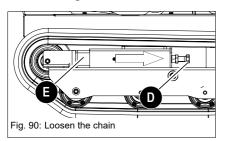
#### Warning!

Check track tension once a day since excessive or insufficient track tension can damage the tracks and the components of the undercarriage.





#### **Decreasing track tension**



- Park the dumper on firm and level ground.
- Raise the dumper with suitable means.
- ™ There should not be any tracks on the ground.
- ™ Stop the engine.
- Use additional supports for the dumper and ensure that it cannot overturn
- ™ Unscrew adjusting screw **D** with a suitable tool.
  - ➡ Ram **E** is retracted
  - The track is loosened
- ™ Check track tension
  - Repeat the procedure if the tracks are too tight.

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# 5. 7 Electrical system

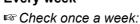
#### Specific safety instructions



- The battery contains sulphuric acid. This acid must not be allowed to come into contact with the skin, the eyes, clothing or the machine.
  - Therefore when recharging or working near the battery:
- Always wear safety glasses and protective clothing with long sleeves. If acid is spilled:
  - Thoroughly rinse all affected surfaces immediately with plenty of water!
  - Thoroughly wash any part of the body touched by the acid immediately with plenty of water and seek medical attention at once!
- Especially when charging batteries, as well as during normal operation of batteries, an oxyhydrogen mixture is formed in the battery cells – explosion hazard!
- Do not attempt to jump-start the vehicle if the battery is frozen or if the acid level is low. The battery can burst or explode!
  - Replace the battery immediately
- Never work with an open flame, avoid sparks and do not smoke near open battery cells. The gas that forms during normal battery operation can ignite!
- Use only 12 V power sources. Higher voltages will damage the electrical components
- When connecting the battery leads, ensure that the poles +/- are not inverted, otherwise sensitive electrical components will be damaged.
- Do not interrupt voltage-carrying circuits at the battery terminals sparking hazard!
- Never place tools or other conductive articles on the battery risk of short circuit!
- Disconnect the negative (-) battery terminal from the battery before starting repair work on the electrical system
- First remove the (–) terminal and then the (+) terminal as you disconnect the electrical system.
- · Dispose of used batteries properly.

#### Servicing and maintenance at regular intervals

#### **Every week**



- · Electric fuses
- · Cable and grounding connections
- Battery charge condition see Battery on page 5-26
- · Condition of battery terminals





#### Instructions concerning specific components

#### **Electric lines and fuses**

#### Always observe the following warnings:

- Malfunctioning components of the electrical system must always be replaced by a Wacker Neuson service center. Fuses may be changed by unqualified persons.
- When performing maintenance work on the electrical system, pay particular attention to ensuring good contact in leads.

#### **Alternator**

Always observe the following warnings:

- · Only test run the engine with the battery connected.
- When connecting the battery, ensure that the poles (+/-) are not inverted.
- Always disconnect the battery before performing welding work or connecting a quick battery charger



#### Warning!

Operation of electric consumers (for example the lighting equipment) is prohibited. This is why the vehicle has no socket.

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#### **Battery**



# Danger!

Battery acid is highly caustic!

#### Caustic injury hazard!

Therefore when recharging and/or working near the battery:

Always wear safety glasses and protective clothing with long sleeves

If acid is spilled:

- Immediately flush all contaminated surfaces with plenty of water
- Thoroughly wash any part of the body touched by the acid immediately with plenty of water and seek medical attention at once!

Especially when charging batteries, as well as during normal operation of batteries, an oxyhydrogen mixture is formed in the battery cells –

#### **Explosion hazard!**

- Avoid open lights and sparks near the battery and do not smoke!
- Do not attempt to jump-start the vehicle if the battery is frozen or if the acid level is low. The battery can burst or explode!
  - Replace the battery immediately
- Always disconnect the negative terminal (–) from the battery before starting repair work on the electrical system!

Battery **A** is located on the right of the engine. The battery is "maintenance-free". However have the battery checked at regular intervals to ensure that the electrolyte level is between the MIN and MAX marks.

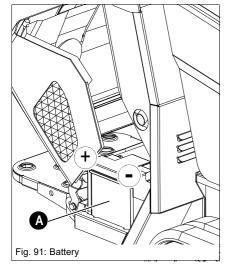
Checking the battery requires it to be removed and must be performed by a Wacker Neuson service center.

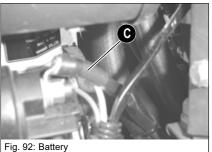
Always follow the specific battery safety instructions!



## Warning!

Do not disconnect the battery while the engine is running!





#### Disconnecting the battery in an emergency

• Firmly pull cable **C** to disconnect the battery in an emergency.



#### Warning!

Firmly pull cable **C** in an emergency only since this damages the electric line and possibly the starter.





#### 5. 8 General maintenance

#### Cleaning

Cleaning the vehicle is divided into two separate areas:

- · Exterior of the vehicle
- Engine compartment

The wrong choice of cleaning equipment and agents can impair the operating safety of the machine on the one hand, and on the other undermine the health of the persons in charge of cleaning the machine. Therefore always observe the following instructions.

#### General instructions for all areas of the vehicle

#### Cleaning with washing solvents

- · Ensure sufficient room ventilation.
- · Wear suitable protective clothing.
- · Do not use flammable liquids, such as gasoline or diesel.

#### Cleaning with compressed air

- · Work carefully.
- · Wear safety glasses and protective clothing.
- Do not aim the compressed air at the skin or at other people.
- · Do not use compressed air for cleaning your clothing.

#### Cleaning with a high-pressure cleaner or steam jet

- Electrical components and damping material must be covered and not directly exposed to the jet.
- Cover the vent filter on the hydraulic oil reservoir and the filler caps for fuel, hydraulic oil, etc.
- · Protect the following components from moisture:
  - · Hydraulic motor
  - Electrical components such as the alternator, etc.
  - · Control devices and seals
  - · Air intake filters, etc.

# Cleaning with volatile and easily flammable anticorrosion agents and sprays:

- · Ensure sufficient room ventilation.
- · Do not use unprotected lights or open flames.
- · Do not smoke!

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#### Exterior of the vehicle



#### Attention!

Cleaning the vehicle can cause engine damage.

Protect the engine against humidity

The following articles are generally suitable:

- · High-pressure cleaner
- · Steam jet

#### **Engine compartment**



# Danger!

Clean the engine only when it is at a standstill -

# Risk of injury!

™ Stop the engine before cleaning it.



#### Attention!

When cleaning the engine with a water or steam jet:

- ™ The engine must be cold
- and do not point the jet directly at electric sensors such as the oil pressure switch.

The humidity penetrating any such sensors causes them to fail and leads to engine damage!

#### Threaded fittings and attachments



All threaded fittings must be checked regularly for tightness, even if they are not listed in the maintenance plans.

- Engine fastening screws
- Fastening screws on the hydraulic system
- Line and pin fastenings on the attachment

Immediately tighten loosened connections; contact an authorized workshop if necessary.

#### **Pivots and hinges**



Lubricate all mechanical pivots on the machine (such as joints) and fittings at regular intervals even if they are not listed in the lubrication plan.





# 5. 9 Fluids and lubricants

Component/application	Fluid/lubricant	Specification	Season/tem- perature	Capacities <sup>1</sup>
Gasoline engine (model DT05-P) Honda gas- oline engine	Engine oil	AGIP MOTOROIL HD SAE 15W-40	Year-round	0.61
Diesel engine (model DT05-D) Yanmar diesel engine	Engine oil	AGIP DIESEL SIGMA S 30 SAE <sup>2</sup> 15W-40	Year-round	1.0 I
	Hydraulic oil	AGIP ARNICA 46 <sup>3</sup>		
Hydraulic oil reservoir	Biodegradable	Panolin HLP Synth 46	Year-round	15 I
	oil <sup>4</sup>	FINA BIOHYDRAN SE 46		
Grease	Roller and friction bearings <sup>5</sup>	AGIP GR SM	Year-round	As required
Grease nipples	Multi-purpose grease	AGIP GR SM	Year-round	As required
Fuel tank (model DT05-P) Honda gasoline engine	Gasoline	Regular grade gasoline <sup>6</sup> 91 octane, DIN 51 607	Year-round	3.61
Fuel tank		No. 2-D, DIN 51601 grade	Over 4°C	0.01
(model DT05-D) Yanmar diesel engine	Diesel fuel	No. 1-D, DIN 51601 grade	Below 4°C	3.3l

<sup>1.</sup> 

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The capacities indicated are approximate values; the oil level check alone is relevant for the correct oil level
Capacities indicated are no system fills
According to DIN 51511
According to DIN 51524 section 3
Biodegradable hydraulic oils based on saturated synthetic esters with an iodine value of < 10 according to DIN 51524, section 3, HVLP, HEES
KF2K-25 according to DIN 51502 multipurpose lithium grease with MoS² additive
Unleaded regular





Ma Ma	Maintenance plan/operating hours (o/h)	an/operatir	ng hours (	o/h)		
5. 10 Maintenance plan DT05-P (gasoline engine)	Onc a ———————————————————————————————————	Ever	Every	_	(	
Work description	fter	afte	/ 12 afte	after	Cust	
For servicing and maintenance on the attachment, please refer to the operation and (S) maintenance manual of the attachment manufacturer as well.	month or 50 o/h	months or r 250 /h	n/h months or r 500 n/h	ears and/or	tomer	e center e center
Fluid and filter changes ( 🖈 ):						
Perform the following oil and filter changes (check oil levels after test run):						
• Engine oil <sup>1</sup>	•	•			•	
Replace the air filter element			•		•	
Hydraulic oil filter insert <sup>2</sup>	•	•			•	
Hydraulic oil				•	•	
Replace the spark plug			•		•	
Inspection work ( 🗇 ):						
Check the following material. Refill if necessary:						
Check the fuel level, add fuel					•	
• Engine oil	•				•	
• Hydraulic oil	•				•	
Check the hydraulic oil for possible dirt, filter it if necessary	•				•	
Check hoses for leaks and pressure (visual check)	•				•	
Clean the filter cup		•			•	
Clean the fuel filter		•			•	
Air filter (damage)	•				•	
Check the exhaust system for damage and condition	•				•	
Check valve clearance, adjust if necessary			•			•
Check and clean the spark plug		•			•	
Check/set the maximum engine speed			•			•
Check alternator, starter and electric connections, bearing play and function			•			•
Pressure check of primary pressure limiting valves	•		•			•
						J

	Maintenar	Maintenance plan/operating hours (o/h)	eratin	g hou	(a/o) s		
5. 10 Maintenance plan DT05-P (gasoline engine)	S		Ever				
Work description		o. ce a r	y 6 n	afte	after o		
For servicing and maintenance on the attachment, please refer to the operation and maintenance manual of the attachment manufacturer as well.	e work	r 250 <u>/h</u> month or 50 o/h	nonths or	r 500 /h	1000 /h months or	omer ears and/or	e center e center
Check tracks for cracks and cuts	•					•	
Check the track tension and retention the tracks if necessary	•					•	
Bearing play of tread rollers, track carrier rollers, front idlers				•			•
Check piston rods for damage	•					•	
Check screws for tightness				•			•
Pin lock	•					•	
Line fixtures	•					•	
Adhesive labels and Operator's Manual				•			•
Lubrication service ( ):							
Lubricate the following subassemblies/elements: - see Lubrication plan DT05 with skip on page	page 5-34						
Tipping Trailer	•					•	
• Tilt cylinder	•					•	
Track tension	•					•	
Leakage check (♣):							
Check for tightness, leaks and chafing: pipes, flexible lines and screw connections of the following		assemblies ar	and con	components.		Repair if necessary:	sary:
Visual check	•					•	
r Engine and hydraulic system	•					•	
r⊛ Oil cooling circuit	•					•	
r⊛ Travel drive	•			i		•	

Replace the engine oil for the first time after 50 o/h or the first month, then every 250 o/h or after 6 months at the latest Replace the hydraulic oil filter for the first time after 50 hours run or the first month, then every 250 hours run or after 6 months at the latest -, %





	laintenance pl	Maintenance plan/operating hours (o/h)	s (o/h)		
5. 11 Maintenance plan DT05-D (diesel engine)	a	Ever			
Work description	ervic	after o ry 6 m after o	after o	Cust	
For servicing and maintenance on the attachment, please refer to the operation and maintenance manual of the attachment manufacturer as well.	month or 50 o/h e work aily)	months or r 500 /h nonths or r 250 /h	ears and/or 1000 /h	omer	e center e center
Fluid and filter changes ( 🗳 ):					
Perform the following oil and filter changes (check oil levels after test run):					
• Engine oil	•	•		•	
• Engine oil filter²	•	•		•	
<ul> <li>Replace the fuel filter element<sup>3</sup></li> </ul>	•	•		•	
Replace the air filter element		•		•	
• Hydraulic oil filter insert <sup>4</sup>	•	•		•	
• Hydraulic oil			•	•	
Inspection work ( ):					
Check the following material. Refill if necessary:					
Check injection setting	-	•			•
Check and adjust injection time <sup>5</sup>			•		•
Clean and adjust the fuel injection pump <sup>6</sup>			•		•
Check and adjust the injection pressure of the injection nozzles, clean the injection needles/noz-			•		•
Clean the fuel filter		•		•	
Check condition and injection of fuel injection nozzle		•		,	•
Check the fuel level, add fuel	•			•	
• Engine oil	•			•	
• Hydraulic oil	•			•	
Check the hydraulic oil for possible dirt, filter it if necessary	•			•	
Check hoses for leaks and pressure (visual check)	•			•	
Air filter (damage)	•			•	
Check the exhaust system for damage and condition	•			•	
Intake and exhaust valve clearance		•			•
Check/set the maximum engine speed		•			•
Check battery electrolyte. Add distilled water if necessary	•	•		•	
Check alternator, starter and electric connections, bearing play and function		•			•

	Maintenance plan/operating hours (o/h)	/operating hour	rs (o/h)		
5. 11 Maintenance plan DT05-D (diesel engine)	a				
Work description	ervic	after o y 6 n after	after o	Cust	
For servicing and maintenance on the attachment, please refer to the operation and maintenance manual of the attachment manufacturer as well.	month or 50 o/h ee work	r 500 /h nonths or r 250 /h	ears and/or 1000 /h months or	omer	e center e center
Pressure check of primary pressure limiting valves	•	•			•
Check tracks for cracks and cuts	•			•	
Check the track tension and retention the tracks if necessary	•			•	
Bearing play of tread rollers, track carrier rollers, front idlers		•			•
Check piston rods for damage	•			•	
Check screws for tightness		•			•
Pin lock	•			•	
Line fixtures	•			•	
Adhesive labels and Operator's Manual		•			•
Lubrication service (					
Lubricate the following subassemblies/elements: - see Lubrication plan D705 with skip on page 5-34	75				
Tipping Trailer	•			•	
• Tilt cylinder	•			•	
Track tension	•			•	
Leakage check (📆):					
Check for tightness, leaks and chafing: pipes, flexible lines and screw connections of the following assemblies and components. Repair if necessary:	assemblies and o	components. Re	epair if ne	cessary	
• Visual check	•			•	
Engine and hydraulic system	•			•	
rs Oil cooling circuit	•			•	
r Travel drive	•			•	

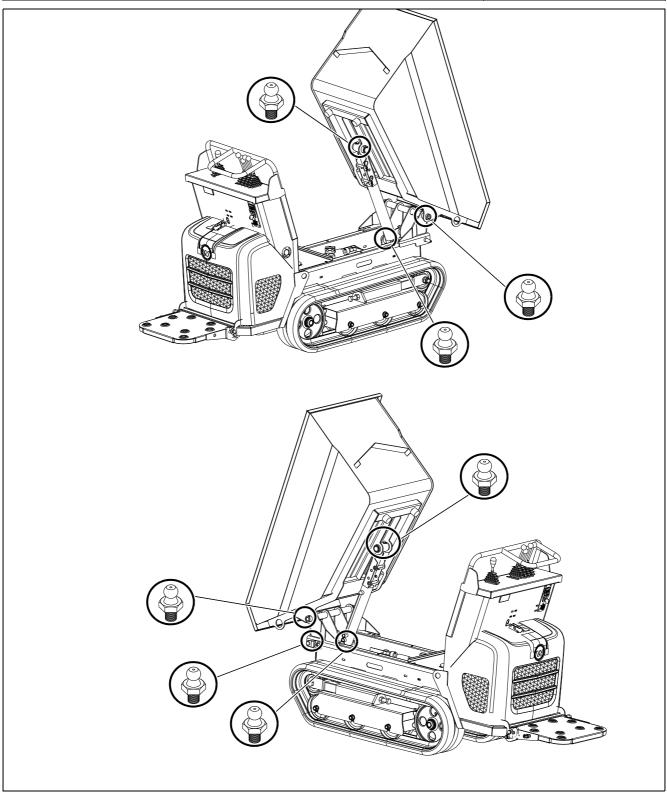
Replace the engine oil for the first time after 50 o/h or the first month, then every 250 o/h or after 6 months at the latest Replace the engine oil filter for the first time after 50 o/h or the first month, then every 250 o/h or after 6 months at the latest Replace the fuel filter for the first time after 50 o/h or the first month, then every 250 o/h or after 6 months at the latest Seplace the hydraulic oil filter for the first time after 50 hours run or the first month, then every 250 hours run or after 6 months at the latest Check and adjust injection time every other 1000 o/h servicing Clean and adjust the fuel injection pump every other 1000 o/h servicing -. 0. 6. 4. 6. 6.





# 5. 12 Lubrication plan DT05 with skip

Explanation	Symbol
Grease nipples	

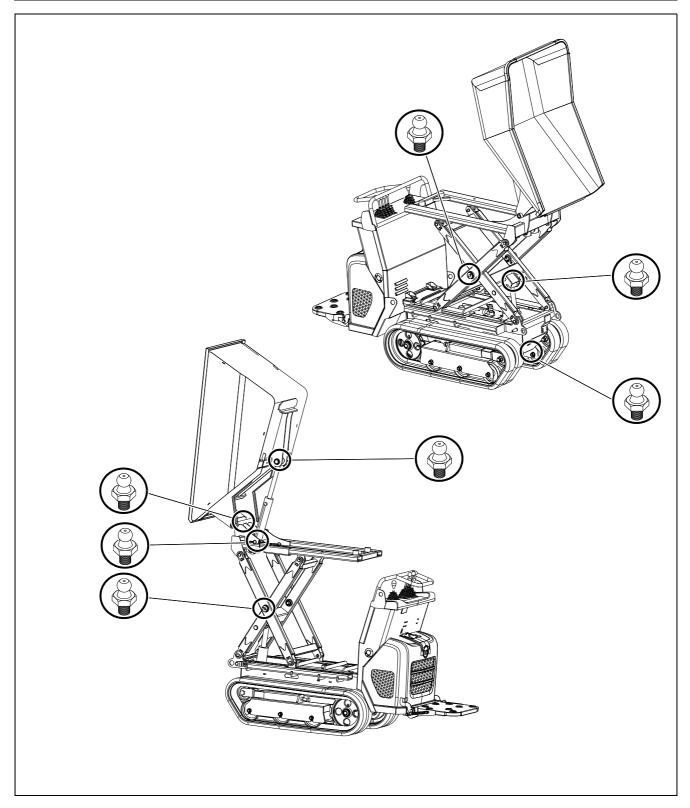






# 5. 13 Lubrication plan of DT05 with high tip skip (optional)

Explanation	Symbol
Grease nipples	



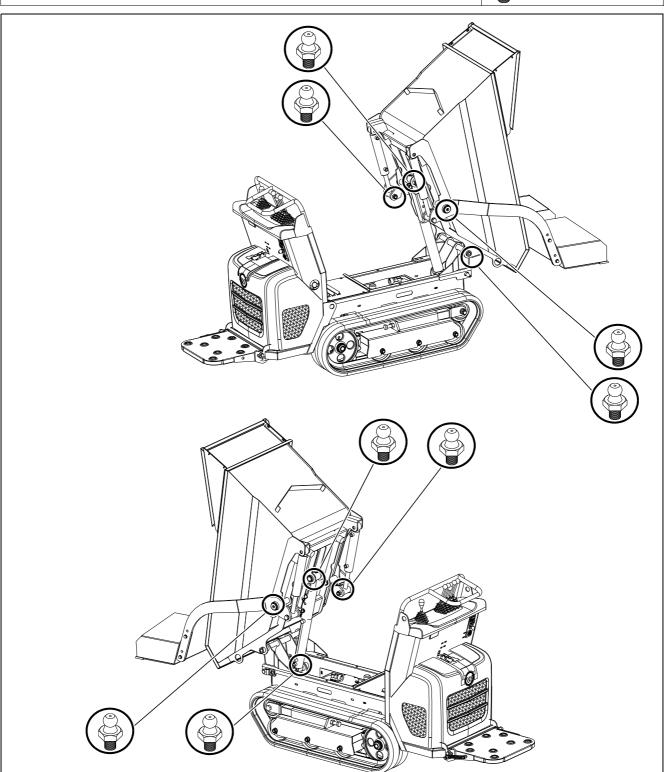
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# 5. 14 Lubrication plan DT05 with skip and loader unit (optional)

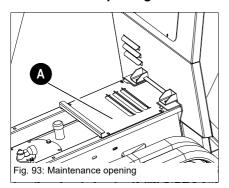
Explanation	Symbol
Grease nipples	







# **Maintenance opening**



Maintenance opening for cleaning the chassis. Unscrew 4 screws to remove housing **A**.

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# 6 Technical data

# 6. 1 Engine (DT05-P up to series FB05777)(DT05-D up to series FB05880)

Sturdy steel sheet frame, rubber-mounted engine

Hydraulic motor	Model DT05-D	Model DT05-P
Product	Yanmar diesel	Honda gasoline
Floduct	engine	engine
Туре	L70N6 CA1T1AAS1	GX 200 UT-QX-9-OH
Model	Air-cooled 4-	stroke engine
Number of cylinders	•	1
With displacement	320cm <sup>3</sup>	196cm <sup>3</sup>
Nominal bore and stroke	78 x 67 mm	68 x 54
Power	4.9 kW at 3600 min <sup>-1</sup>	4.5 kW at 3600 min <sup>-</sup>
Max. torque	18 Nm at 2400 min <sup>-1</sup>	13.2 Nm at 2500 min <sup>-1</sup>
Max. engine speed without load	3600 +/- 50 min <sup>-1</sup>	3600 +/- 500 min <sup>-1</sup>
Idling speed	1200 +/- 50 min <sup>-1</sup>	1400 +/- 100 min <sup>-1</sup>
Fuel injection system	Mechanical regula- tor	Ignition electronics
Starting aid	Reverse	e starter
Battery	12 V/30 Ah	1
Max. inclined position (engine no longer supplied with oil):	20° continuously	20° continuously
Comply with the emission level	97/68 EC, EPA	97/68 EC, EPA

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# 6. 2 Engine (DT05-P from series FC05835)(DT05-D from series FC05909)

Sturdy steel sheet frame, rubber-mounted engine

Hydraulic motor	Model DT05-D	Model DT05-P
Product	Yanmar diesel	Honda gasoline
	engine	engine
Туре	L70V6 CA1T1AAS1	GX 200 UT
Model	Air-cooled 4-stroke engine	
Number of cylinders	•	1
With displacement	320cm <sup>3</sup>	196cm <sup>3</sup>
Nominal bore and stroke	78 x 67 mm	68 x 54
Power	4.8 kW at 3600 min <sup>-1</sup>	4.5 kW at 3600 min <sup>-</sup>
Max. torque	18 Nm at 2400 min <sup>-1</sup>	13.2 Nm at 2500 min <sup>-1</sup>
Max. engine speed without load	3600 +/- 50 min <sup>-1</sup>	3600 +/- 500 min <sup>-1</sup>
Idling speed	1200 +/- 50 min <sup>-1</sup>	1400 +/- 100 min <sup>-1</sup>
Fuel injection system	Mechanical regula- tor	Ignition electronics
Starting aid	Reverse starter	
Battery	12 V/30 Ah	1
Max. inclined position (engine no longer supplied with oil):	20° continuously	20° continuously
Comply with the emission level	EU 2016/1628 STAGE V, EPA Tier 4	EU 2016/1628 STAGE V, EPA Tier 4





## 6. 3 Hydraulic system

Hydraulic system	Model DT05-D	Model DT05-P
Dump	3 gear pumps	3 gear pumps
Pump	6.3 + 1.6 + 1.6 cm <sup>3</sup> /rev	4.2 + 1.6 + 1.6 cm <sup>3</sup> /rev
Displacement	30 l/min at 3600 rpm	25 I/min at 3600 rpm
Operating pressure for operating hydraulics	145 bar	135 bar
Operating pressure for drive hydraulics	200 bar	
Hydraulic reservoir capacity	15 I	

### 6. 4 Travel gear

Chassis	Model DT05-D	Model DT05-P
2 speed ranges	1.6 and 4.0 kph	1.8 and 3.9 km/h
Climbing ability	20°	
Track width	180 mm	
No. of track rollers on either side	3 pieces	
Ground clearance	110 mm	
Ground pressure	0.15 – 0.24 kg/ cm²	0.12 – 0.25 kg/cm <sup>2</sup>

## 6. 5 Work hydraulics

Work hydraulics	Model DT05-D	Model DT05-P
Discharge volume of the hydraulic pump:	19 l/min at 3600 rpm	14 I/min at 3600 rpm
Control Unit	1 section/2 sections	
Max. operating pressure for work operation	145 <sup>±5</sup> bar	135 <sup>±5</sup> bar
Max. operating pressure for drive operation	200 <sup>±5</sup> bar	
Filter	Return filter	
Hydraulic oil reservoir	15 I	





### 6. 6 Electrical system

Electrical system	Model DT05-D	
Battery	12 V 30 Ah	

### 6. 7 Skip

Tipping Trailer	Model DT05-D	Model DT05-P
Struck	273 Liter	
Heaped	313 Liter	
Liquid capacity	142 Liter	
Length of the tipper	1280 mm	
Width of the tipper	589 mm	
Height of the tipper	386 mm	

# 6. 8 High-tip skip (option) (Up to series FB04439 for the DT05-D and up to series FB04419 for the DT05-P)

Front tip skip (optional)	Model DT05-D	Model DT05-P
Struck	170	Liter
Heaped	210 liters	
Liquid capacity	140 Liter	
Length of the tipper	1120 mm	
Width of the tipper	616 mm	
Height of the tipper	450 mm	

# 6. 9 High-tip skip (option) (From series FB05432 for the DT05-D and from series FB05398 with FB04332 for the DT05-P)

Front tip skip (optional)	Model DT05-D	Model DT05-P
Struck	250	liters
Heaped	290 Liter	
Liquid capacity	180 l	
Length of the tipper	1270 mm	
Width of the tipper	620 mm	
Height of the tipper	625 mm	





### 6. 10 Self-loading equipment (optional)

Loader unit (option)	Model DT05-D	Model DT05-P
Width	700	mm
Scraping depth	50 mm	
Capacity	65 I	

#### 6. 11 Noise levels

Sound power level	Model DT05-D	Model DT05-P
Sound power level (L <sub>WA</sub> ) <sup>1</sup>	101 dB(A)	99 dB(A)
Operator-perceived sound pressure level $(L_{PA})^2$	89 dB(A)	83 dB(A)
Uncertainty (K <sub>PA</sub> ) <sup>3</sup>	1.3 dB(A)	1.4 dB(A)

- According to ISO 6395
- According to ISO 6396 According to EN ISO 4871



#### Warning!

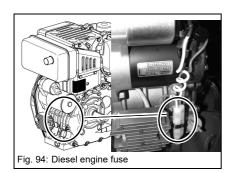
Sound power level measurement based on Directive 2000/14/EC. Operator-perceived noise level measured in compliance with EU Directives 84/532/EEC, 89/514/EEC and 95/27/EEC. Measurements performed on asphalted surface.

#### 6. 12 Vibration

Vibration	Model DT05
Effective acceleration value for the extremities of the body <sup>1</sup>	< 2.5 m/s <sup>2</sup>
Effective acceleration value for the body <sup>1</sup>	$< 0.5 \frac{m}{s^2}$

Measurements as per 2002/44/EC, ISO EN 20643 and ISO/TR 25398 (measurement under the following conditions: excavating, driving). Vehicle and attachment operation and maintenance as per Operator's Manual. Uncertainty of measurement: measurements as per EN 12096:1997 standard. Value of vibrations transmitted to human body specified under special operational and ground conditions. Therefore, it does not apply to a large number of applications. Therefore, the value of the vibrations transmitted to the human body (indicated by the vehicle manufacturer in accordance with European standards) must not be used as a reference for specifying regulations of vehicle operator exposure to vibrations

#### **6. 13 Fuses**



Fuse	Rated current (A)
Model DT05-D - diesel engine	20 A





## 6. 14 Dimensions model DT05-D with skip

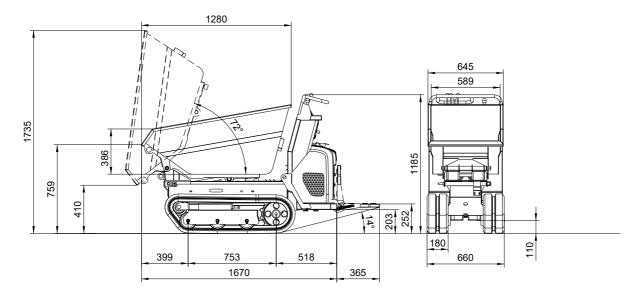


Fig. 95: Machine dimensions (model DT05-D with skip)

Main data	Model DT05-D
Payload	500 kg
Dead weight, skip	465 kg
Length	1670 mm
Width	660 mm
Height	1185 mm
Foothold projection	365 mm
Track width	180 mm
Chain length	753 mm
Front skip projection	399 mm
Skip load height (front edge)	759 mm
Length of the tipper	1280 mm
Width of the tipper	589 mm
Depth of the tipper	386 mm





## 6. 15 Dimensions model DT05-D with skip and loader unit (option)

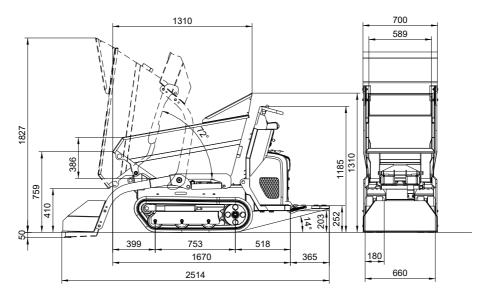


Fig. 96: Machine dimensions (model DT05-D with skip and loader unit)

Main data	Model DT05-D
Payload	500 kg
Dead weight incl. skip and loader unit	545 kg
Length	2514 mm
Width	700 mm
Height	1310 mm
Foothold projection	365 mm
Track width	180 mm
Chain length	753 mm
Front skip projection	399 mm
Skip load height (front edge)	759 mm
Length of the tipper	1310 mm
Width of the tipper	589 mm
Depth of the tipper	386 mm
Scraping depth	50 mm





# 6. 16 Dimensions model DT05-D with high-tip skip (option) (Up to series FB04439)

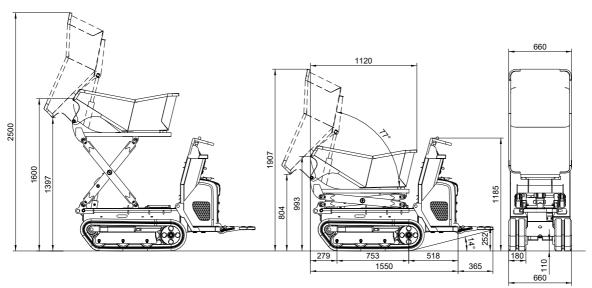


Fig. 97: Machine dimensions (model DT05-D with high-tip skip)

Main data	Model DT05-D
Payload	400 kg
Dead weight, skip	520 kg
Length	1550 mm
Width	660 mm
Height	1185 mm
Foothold projection	365 mm
Track width	180 mm
Chain length	753 mm
Front skip projection	279 mm
Skip load height (front edge)	993 mm
Length of the tipper	1120 mm
Width of the tipper	616 mm
Depth of the tipper	450 mm





# 6. 17 Dimensions model DT05-D with high-tip skip (option) (from series FB05432)

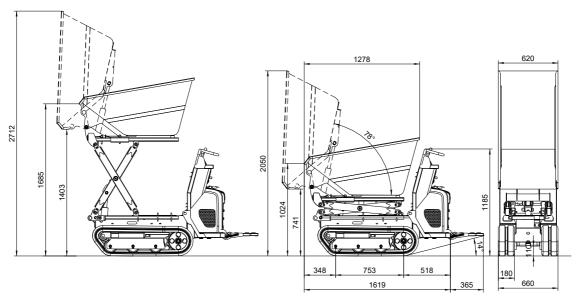


Fig. 98: Machine dimensions (model DT05-D with high-tip skip)

Main data	Model DT05-D
Payload	400 kg
Dead weight, skip	530 kg
Length	1619 mm
Width	660 mm
Height	1185 mm
Foothold projection	365 mm
Track width	180 mm
Chain length	753 mm
Front skip projection	348 mm
Skip load height (front edge)	1024 mm
Length of the tipper	1278 mm
Width of the tipper	620 mm
Depth of the tipper	625 mm





### 6. 18 Dimensions model DT05-P with skip

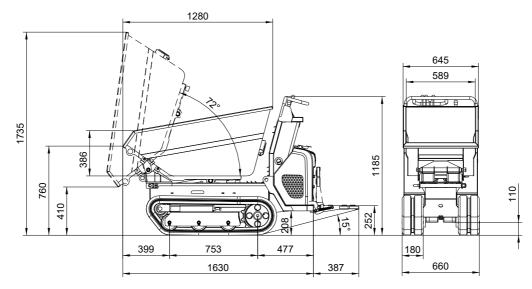


Fig. 99: Machine dimensions (model DT05-P with skip)

Main data	Model DT05-P
Payload	500 kg
Dead weight, skip	420 kg
Length	1630 mm
Width	660 mm
Height	1185 mm
Foothold projection	387 mm
Track width	180 mm
Chain length	753 mm
Front skip projection	399 mm
Skip load height (front edge)	760 mm
Length of the tipper	1280 mm
Width of the tipper	589 mm
Depth of the tipper	386 mm





## 6. 19 Dimensions model DT05-P with skip and loader unit (option)

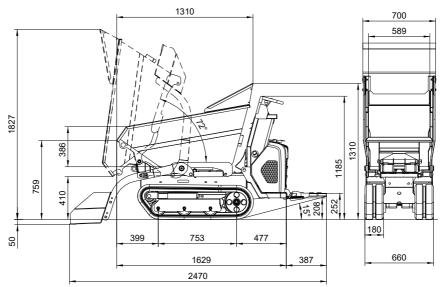


Fig. 100:Machine dimensions (model DT05-P with skip and loader unit)

Main data	Model DT05-P
Payload	500 kg
Dead weight incl. skip and loader unit	500 kg
Length	2470 mm
Width	700 mm
Height	1310 mm
Foothold projection	387 mm
Track width	180 mm
Chain length	753 mm
Front skip projection	399 mm
Skip load height (front edge)	760 mm
Length of the tipper	1310 mm
Width of the tipper	589 mm
Depth of the tipper	386 mm
Scraping depth	50 mm





## 6. 20 Dimensions model DT05-D with high tip skip (optional (up to series FB04419)

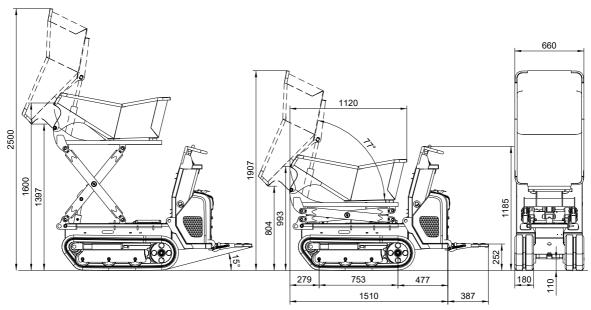


Fig. 101:Machine dimensions (model DT05-P with high-tip skip)

Main data	Model DT05-P
Payload	400 kg
Dead weight, skip	475 kg
Length	1510 mm
Width	660 mm
Height	1185 mm
Foothold projection	387 mm
Track width	180 mm
Chain length	753 mm
Front skip projection	279 mm
Skip load height (front edge)	993 mm
Length of the tipper	1120 mm
Width of the tipper	616 mm
Depth of the tipper	450 mm





# 6. 21 Dimensions model DT05-D with high tip skip (optional) (from series FB05398 including FB04332)

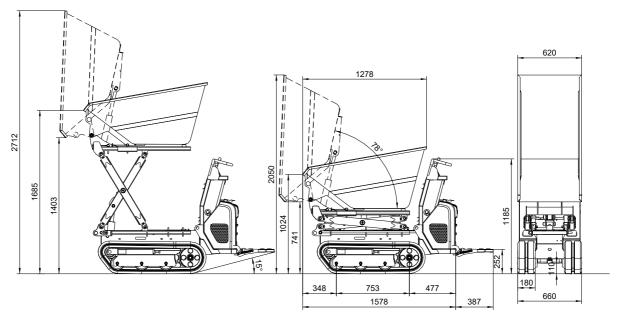


Fig. 102:Machine dimensions (model DT05-P with high-tip skip)

Main data	Model DT05-P
Payload	400 kg
Dead weight, skip	485 kg
Length	1578 mm
Width	660 mm
Height	1185 mm
Foothold projection	387 mm
Track width	180 mm
Chain length	753 mm
Front skip projection	348 mm
Skip load height (front edge)	1024 mm
Length of the tipper	1278 mm
Width of the tipper	620 mm
Depth of the tipper	625 mm





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Wacker Neuson Linz GmbH Flughafenstraße 7 A-4063 Hörsching Austria



Wacker Neuson Linz GmbH Flughafenstraße 7 A-4063 Hörsching Austria Tel. +43 (0) 7221 63000-0 Fax: +43 (0) 7221 63000-4000 E-mail office.linz@wackerneuson.com www.wackerneuson.com

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