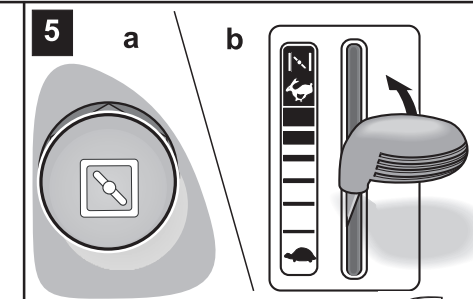
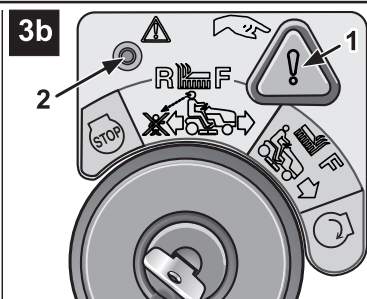
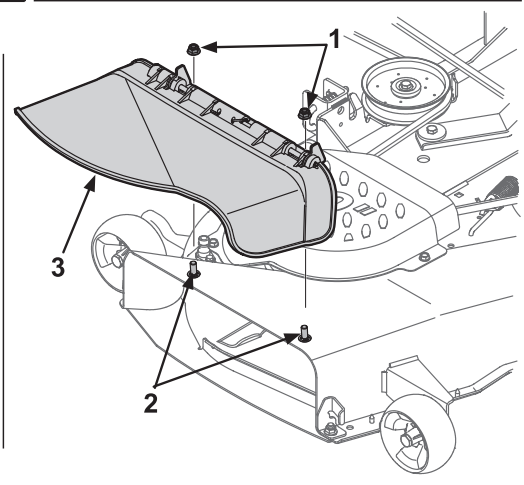
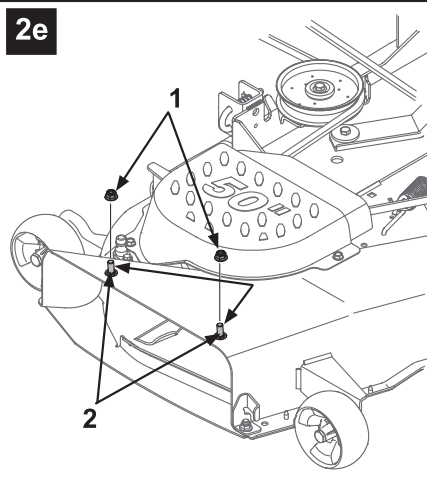
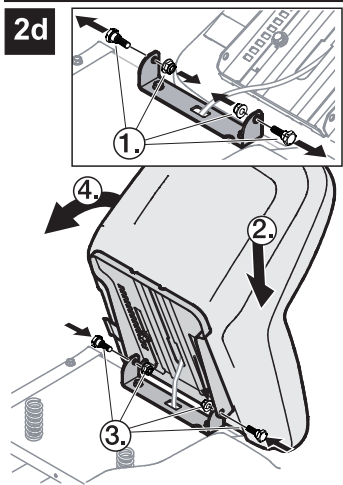
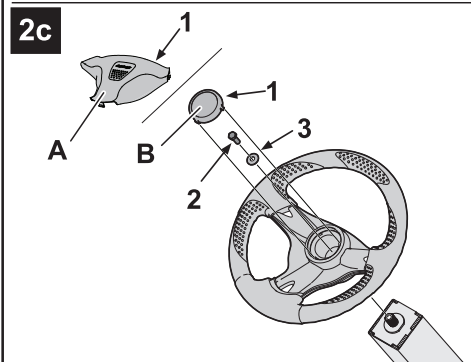
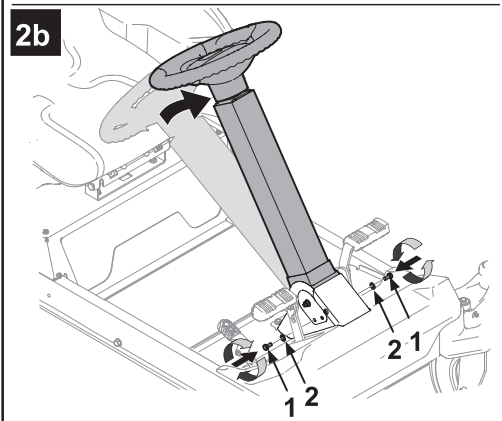
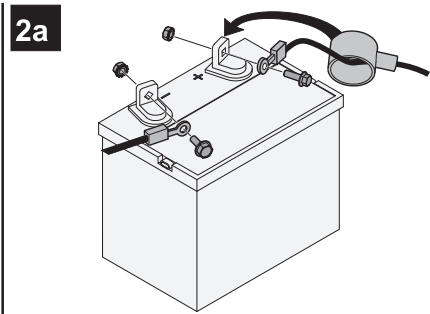
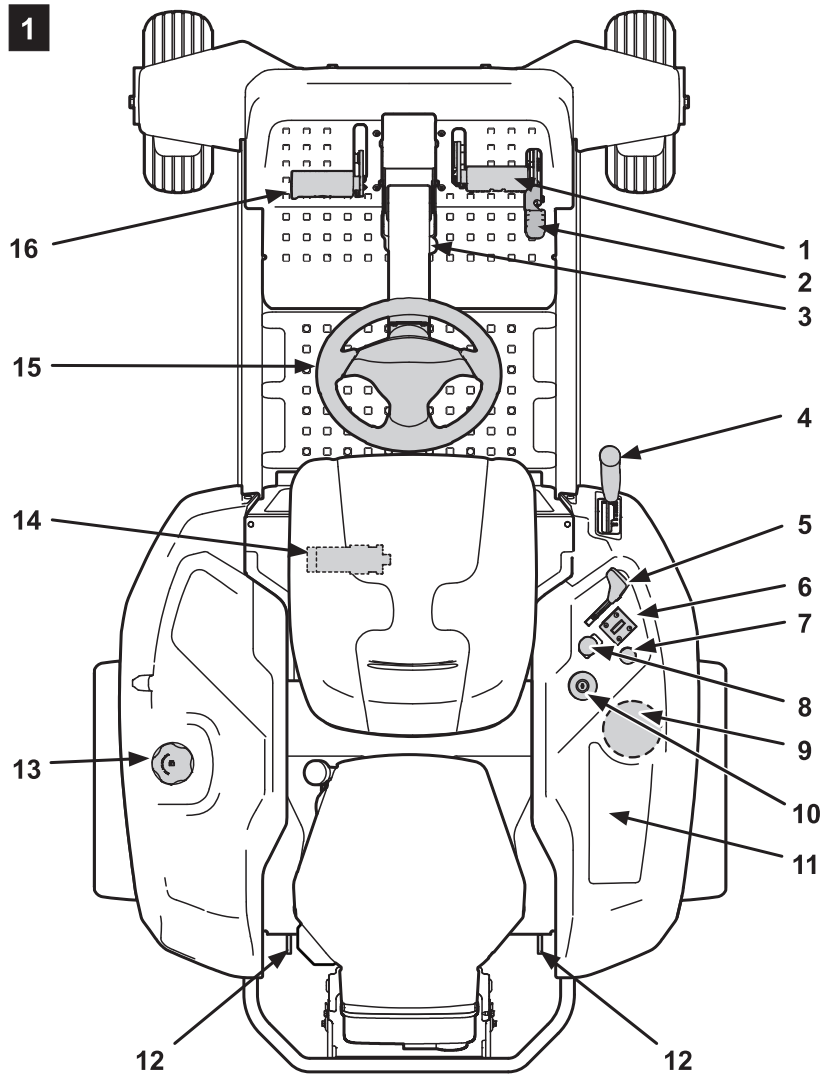


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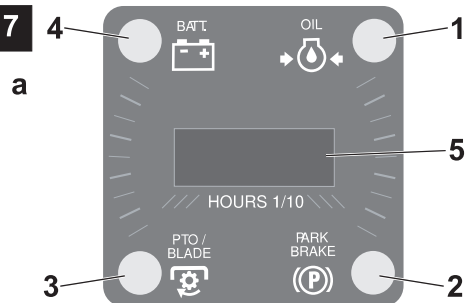




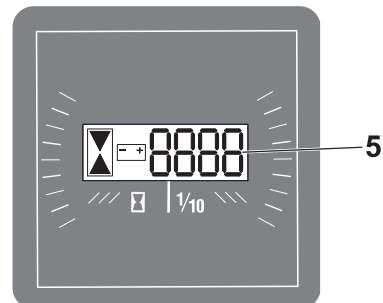
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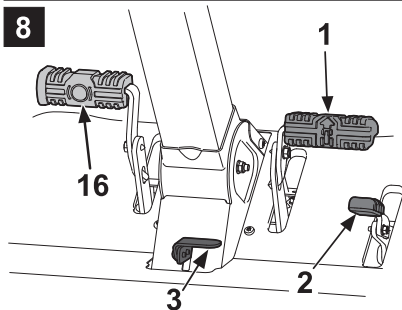
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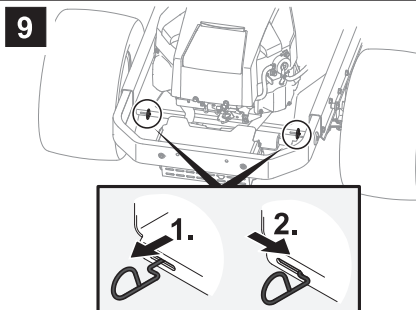
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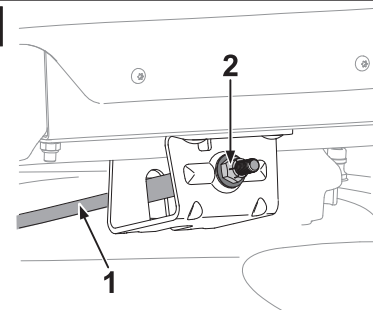
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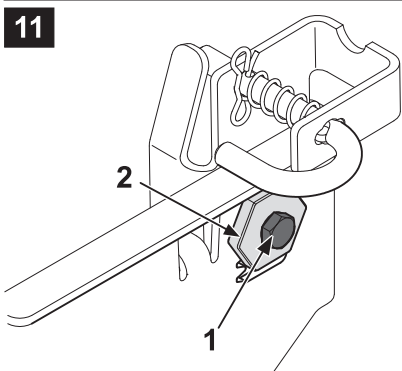
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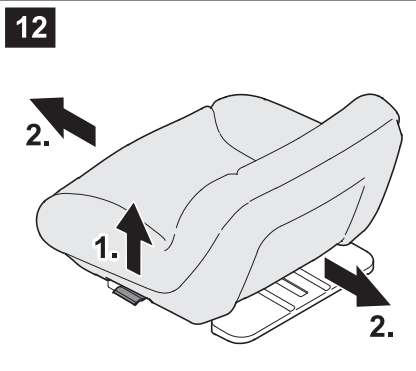
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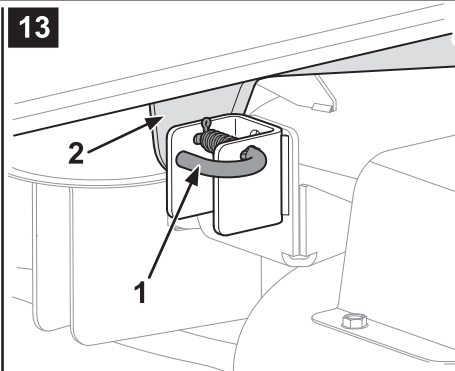
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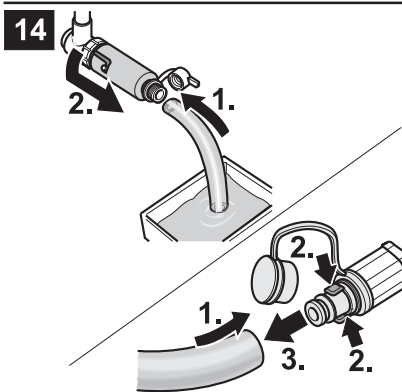
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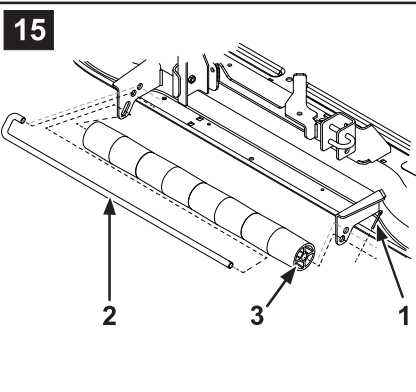
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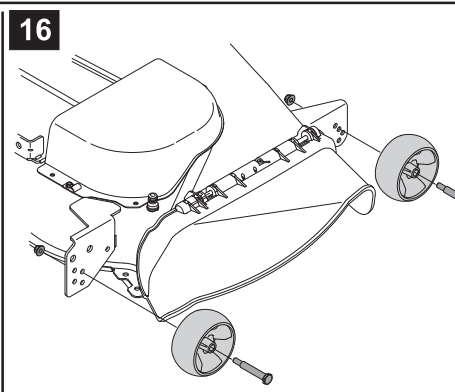
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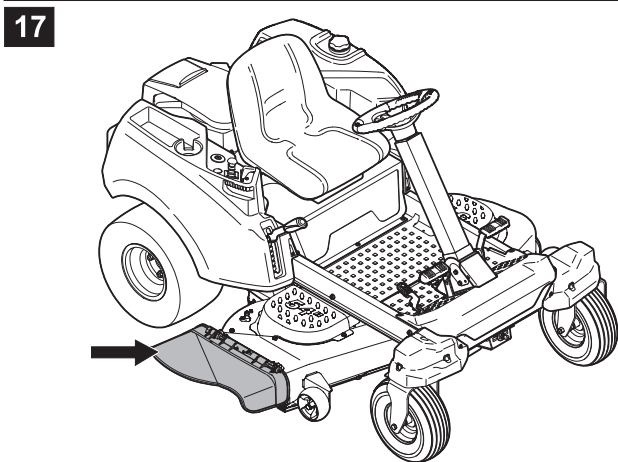
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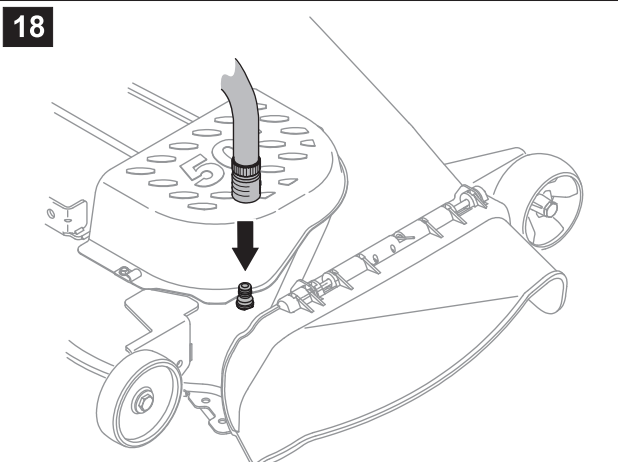
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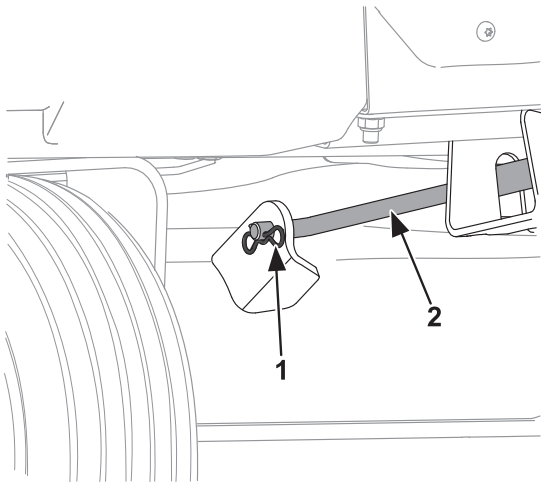
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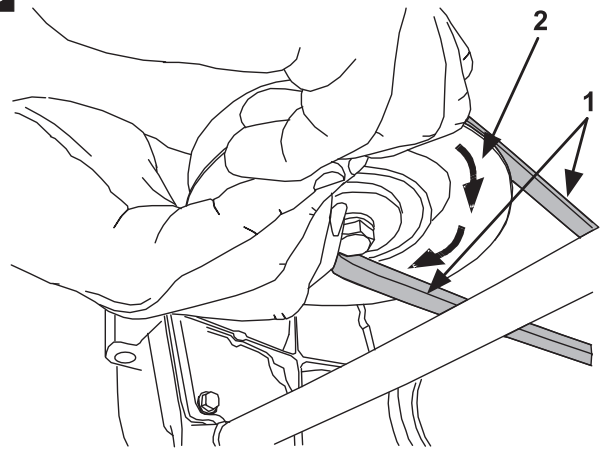
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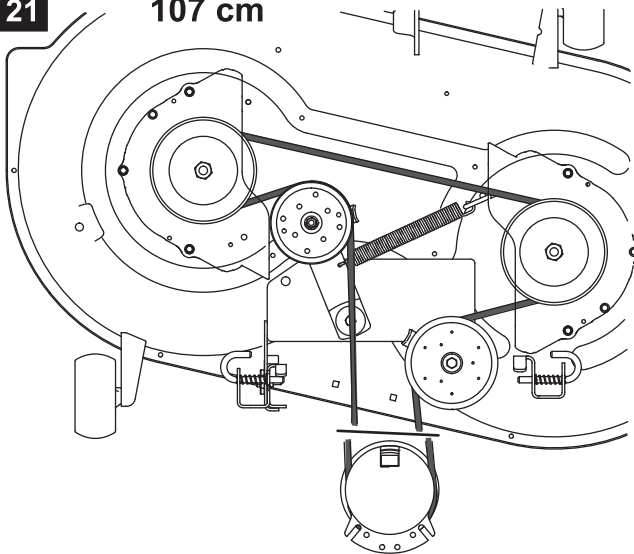


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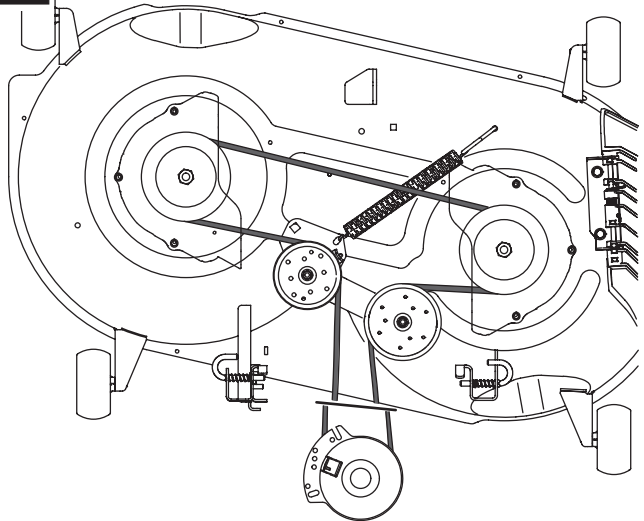
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107 cm



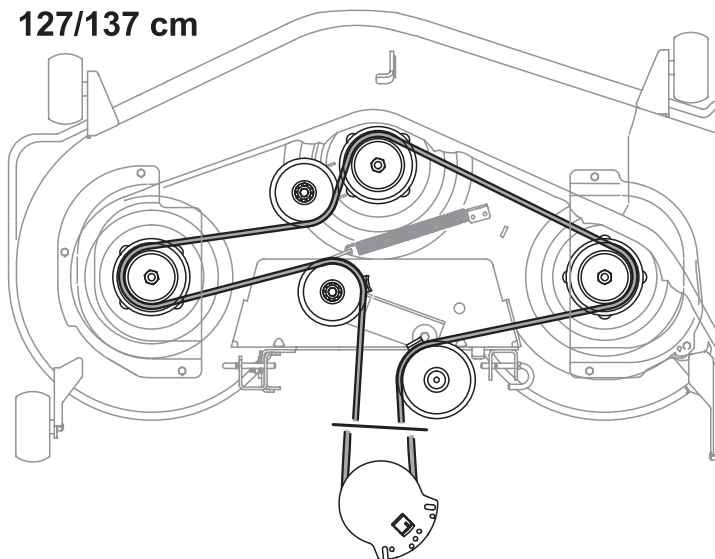
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117 cm



23

127/137 cm





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Information on rating plate

These details are very important as they will not only be needed for identifying your machine when ordering replacement parts but they will also be required by Customer Service. You will find the rating plate under the driving seat. Copy all details from the rating plate on the machine into the box below.

This and other information about the unit can be found on the separate CE declaration of conformity which is a component of this operating manual.

Illustrations



Fold out the illustrated pages at the start of the operating manual. Graphical representations can vary in detail from the appliance which has been bought.

For your safety

Using the mower correctly

This unit is designed to be used

- as a lawn tractor for mowing lawns in the house garden and leisure garden,

- with accessories which are expressly permitted for use with this unit,
- according to the descriptions and safety instructions given in this operating manual.

Any other use is not as intended. Improper use is not covered by the warranty and the manufacturer will reject any liability. The user is liable for all damage done to third parties and to their property. Unauthorized modifications made to the mower rule out any liability on the part of the manufacturer for damage resulting therefrom. This mower is not licensed for use on public roads or for transporting people.

General safety instructions

Before you use this machine for the first time, carefully read all instructions in this guide and observe them accordingly. Inform other users how to operate the machine properly.

Operate the mower only in the technical condition in which it has been provided and delivered by the manufacturer.

Keep this guide in a safe place where it is readily available whenever the machine is used.

If ownership of the mower changes, hand this guide to the new owner. Spare parts and accessories must satisfy the requirements specified by the manufacturer.

Therefore use original spare parts and original accessories only or spare parts and accessories authorised by the manufacturer. Have repair work carried out by a specialist workshop only.

Before using the mower

Any person intending to use this machine must not be under the influence of intoxicants such as alcohol, drugs or medicines. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

Do not permit children under the age of 16 to handle this machine (local regulations may specify the minimum age of the user).

Before you begin work, make that you are familiar with all attachments and operating controls as well as their functions.

Store fuel in approved containers only and never close to sources of heat (e.g. heaters, stoves or hot-waterboilers).

Replace the exhaust unit, tank or fuel cap if they become damaged. Observe guidelines when connecting towed items or attachments to the mower. Driving performance, especially steering, braking capability, and overall stability are affected by attachments, towed items, ballast weights and the weight of a grass catcher when full.

While you are using the mower

When working with or on the unit, wear appropriate work clothes (e.g. safety boots, long trousers, tight-fitting clothing, goggles and hearing protection).

Do not operate the machine if it is not in perfect working order.

Never use the unit without an attached cutter deck.

Never change the engine settings preset at the factory.

Do not refill the fuel tank while the engine is running or if it is still hot. Only refuel the mower out in the open.

Avoid naked flames, spark formation and do not smoke.

Make sure that at all times there are no persons, especially children, or animals in the working area.

Inspect the ground on which the mower is going to be used and remove any loose objects that could be picked up and thrown out again by the mower. In so doing you will not only avoid injury to persons but also damage to the mower.

Do not mow on slopes with an incline greater than 20 %. Working on slopes can be dangerous as the mower can tip over or start to slide. Never ride straight up or down an incline, but always across it. Start off slowly and brake gently on slopes. Keep the clutch engaged and proceed slowly when driving downhill. Do not use any heavy accessory equipment, e.g. grass catcher attachment, transport trailer or garden rollers, on slopes which have a gradient of more than 9 %. Do not mow lawns which have grass blades longer than 25 cm. Operate this mower only in daylight or good artificial light. The mower is not licensed for transporting people. Do not carry passengers.

Before carrying out any work on the mower

Protect yourself against injury. Before carrying out any work on the mower

- switch off the engine,
- withdraw the ignition key,
- lock the parking brake.
- wait until all moving parts have come to rest and the engine has fully cooled,
- pull off the cap of the spark plug so that the engine cannot inadvertently start.

After you have finished using the mower

Do not leave the mower unattended until you have turned off the engine, applied the parking brake and removed the ignition key.

Safety devices

The safety devices are provided for your protection and must be kept in perfect working order.

You must not modify safety devices in any way or bypass their function. Safety features are:

Discharge flap

Fig. 17

The grass flap protects you against possible injuries resulting from the cutting blade or objects that are propelled by it. The unit may only be operated with the grass flap attached.

Safety interlock system

The safety interlock system will only allow the engine to start when

- the driver is sitting on the seat,
- the brake pedal has been depressed or the parking brake is in the park position,
- the PTO switch is at the „Off“ position.

The safety interlock system automatically switches the engine off as soon as the operator leaves the seat without actuating the parking brake beforehand.

The safety interlock system automatically switches the cutter deck (PTO) off as soon as the operator leaves the seat without actuating the parking brake beforehand.

If units do not feature the OCR function or if the OCR function is deactivated, the safety interlock system will prevent reversing while the cutter deck is switched on (automatic disconnection of the cutter deck).

Information on PTO switch

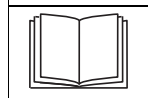
When the safety lock system has automatically switched OFF the appliance (e.g. when reversing with activated cutters), first switch ON and then OFF the PTO switch to release the lock on the clutch.

Symbols on the mower

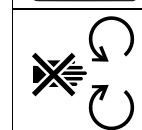
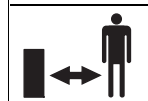
Various symbols are used on labels attached to the mower. They have the following meanings:



Warning! Before switching on the unit, read the operating instructions!



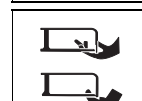
Keep third parties out of the danger area!



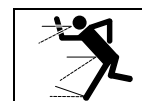
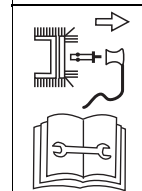
Injury hazard due to rotating blades or other moving parts. Keep hands and feet out of the openings when the machine is running.



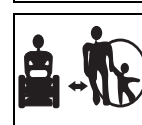
Injury hazard due to rotating blades or other moving parts.



Before working on the cutters, pull out the spark-plug terminal! Keep fingers and feet away from the cutters! Before adjusting, cleaning or checking the unit, switch off the unit and pull out the spark-plug terminal.



Injury hazard due to grass or solid objects thrown out by mower.



Keep people, in particular children, and animals away from the area in which the mower is being used.



Working on steep slopes can be dangerous.



Never ride straight up or down an incline, but always across it.



Do not operate the unit with the optional grass catcher without attaching the front counterweight.



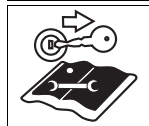
Warning!
Danger of explosion.



Battery acid/
Risk of chemical
burns.



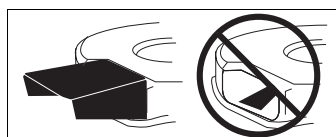
Beware of hot
surface!



Before beginning any
work on this machine,
remove the ignition
key and observe all
information contained
in this guide.



When getting on and
off, never step on the
cutter deck!



The unit may be operated with the
attached discharge flap or the
mulch locking part only.
Make sure that the symbols on the
mower are legible at all times.

Symbols in the operating instructions

The following symbols are used in
this guide:



Danger
*Draws your attention to sources of
potential danger associated with
the task you are undertaking at the
time which constitute a danger to
persons.*



Warning
*Draws your attention to potential
hazards associated with the task
you are undertaking at the time
which could result in damage to the
mower.*



Note
Indicates important information and
application tips.

Location specification

Where a position on, or in relation
to, the unit is described (e.g. left,
right), this is always from the
perspective of the driver, sitting on
the driver seat and facing forward.

Disposal information

Dispose of packaging, old units,
etc. in accordance with local
regulations.

Assembly



Note
To be able to move the tractor
manually, the gear release lever
must be in the appropriate position.
See section „Control and display
elements – gear release“.

Preparing the battery



Risk of poisoning and injury from battery acid

*Wear safety goggles and protective
gloves. Do not allow battery acid to
come into contact with skin.
If you get battery acid on your face
or in your eyes, wash off immedi-
ately with cold water and consult
a doctor. If you accidentally
swallow battery acid, drink plenty
of water and consult a doctor
immediately. Store batteries out of
the reach of children. Never tilt the
battery, as battery acid may run
out.*

*Bring the remaining, unused
battery acid to your dealer or to
a waste disposal company.*



**Risk of fire, explosion and
corrosion caused by battery acid
and gases emitted by battery acid**
*Immediately clean parts of the unit
splashed by battery acid. Battery
acid is corrosive.*

*Do not smoke, keep burning and
hot objects away. Charge batteries
in a well ventilated and dry room
only.*

*Possible short-circuit when working
on the battery. Do not place any
tools or metal objects on the
battery.*



Note
The battery is situated under the
passenger seat.

Fig. 2a

The battery is filled with battery
acid and sealed at the factory.
But even a „maintenance-free“
battery needs servicing to ensure
it has a certain service life.

- Keep the battery clean.
- Avoid tilting the battery.
Electrolyte liquid will run out of
even a “sealed” battery if it is
tilted.
- Before using the unit for the first
time, charge the battery with
a battery charger (maximum
charging current 12 volts,
6 amps) for 1–2 hours. After
charging the battery, first pull
out the battery charger plug, then
disconnect the battery (see also
operating instructions for the
battery charger).



Warning
*Disconnect and connect the battery
in the correct sequence.*

Fitting:

- First connect the red cable
(+/positive pole) and then the
black cable (–/negative pole).

Removal:

- First disconnect the black cable
(–/negative pole) and then the
red cable (+/positive pole).

Fitting the steering column

Fig. 2b

- Tilt steering column forwards and
attach in one of 2 possible
positions using the supplied
screws (1) and washers (2).

Installing the steering wheel

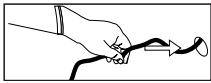
Fig. 2c

- Remove cover cap (1, depending
on model) from the steering
wheel. Remove screw (2) and
washer (3).
- When the wheels are straight,
place the steering wheel on the
steering shaft.
- Place on top the washer (3) with
the convex side up, and secure
the steering wheel with the screw
(2).
- Insert cover cap (1, depending
on model).

Installing the seat

Fig. 2d

Note



When attaching the seat, do not damage the seat switch cable! Push excess cable back into the opening of the seat support.

Mount discharge flap on the mower deck

Fig. 2e

- Remove nuts (1) from the carrier pins (2).
- Mount discharge flap (3) on the carrier pins (2) and attach with the nuts (1).

Controls and indicators



Warning. Damage to the unit.
First of all the functions of the controls and indicators are described here. Do not execute any functions yet!

Fig. 1

- 1 Forward pedal
 - 2 Reverse pedal
 - 3 Pedal for parking brake/ cruise control
 - 4 Cutting height adjustment lever
 - 5 Throttle/Choke *
 - 6 Combination indicator *
 - 7 Choke *
 - 8 PTO switch
 - 9 Can holder
 - 10 Ignition lock *
 - 11 Storage bin
 - 12 Gear release lever
 - 13 Fuel tank
 - 14 Seat adjustment lever *
 - 15 Steering wheel
 - 16 Brake pedal
- (* depending on model)

Forward pedal (1)

Fig. 8



The pedal controls the speed in a forward direction.

Reverse pedal (2)

Fig. 8



The pedal controls the speed in a reverse direction.

Information on forward/reverse pedal

To stop or change direction of travel, release the appropriate pedal.

Parking brake/ Speed control (3)

Fig. 8

This pedal has a dual function:

Actuate the parking brake .

Depress brake pedal (16) all the way and press pedal. Release the parking brake. Depress brake pedal (16) all the way, pedal is released.

Switching on Tempomat .

When driving, press the pedal. The forward speed selected at this point (but not top speed) is maintained, and the drive pedal can be released. When the forwards accelerator pedal or brake pedal is depressed, the cruise control is automatically switched off.

Cutting height adjustment lever (4)

Fig. 1

Largest cutting height, cutters top = lever to "H/8".


Smallest cutting height, cutters bottom = lever to "L/1".

Note

Smallest cutting height ~3,8 cm. Largest cutting height ~10 cm.

Choke (7/5, depending on model)


Fig. 5


To start a cold engine, pull out the choke (fig. 5a) or set the throttle to position  (fig. 5b).

Throttle (5)

Fig. 4

Set engine speed steplessly.

Fast engine speed = .

Slow engine speed = .

Combination indicator (6) (optional)

Fig. 7

According to the model, the combination indicator can consist of the following elements.

Oil pressure (1):

The indicator light is lit while the engine is running, immediately switch off engine and check oil level. Where necessary, visit a garage.

Brake (2):

Indicator lamp lights up if the brake pedal is not depressed or the parking brake is not locked when the engine starts.

Cutter deck (PTO) (3):

The indicator lamp lights up when the cutters are not switched OFF at engine start (PTO).

Battery charge indicator (4):

If the indicator light lights up when the engine is running, this means that the battery is not sufficiently charged. Where necessary, visit a garage.

Operating hour counter (5):

Indicates the operating hours in hours and $\frac{1}{10}$ hours on the display.

Ampere meter (6):

This shows the charging current from the generator to the battery.

Optional functions (depending on model)

Fig. 7a: Type 1

Fig. 7b: Type 2

Operating hour counter (type 1, type 2):

When the ignition is switched on, the battery voltage indicator is indicated for a short period and then the operating hours are indicated. The operating hours are always counted except for when the ignition key is in the „Stop“ position or when it is removed.

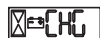
Oil change display (Type 1):

Each time 50 operating hours have elapsed (according to the model), the oil change indicator „CHG/OIL“ appears in the display for five minutes. This message appears after the next two hours of operation. See the engine manual for oil change intervals.

Maintenance indicator (Type 2):

The maintenance indicator reminds the user of the maintenance intervals for changing the engine oil and the air filter and outputs warning signals for oil level and battery voltage.

Changing the oil:



Every 50 operating hours (oil change interval) the letters CHG – OIL – SOON – TIME appear in succession on the display for 7 minutes.

Change the engine oil immediately, see engine operating manual.

Oil level:

If the letters LO – OIL – TIME appear in succession on the display, the engine oil level is too low.

Switch off the engine immediately and check the engine oil level, see engine operating manual. Top up the oil if required.

Battery voltage:



If the key is turned to the position, the battery voltage is displayed briefly and then the total operating hours.

If the letters LO – BATT – TIME appear in succession on the display, the battery voltage is too low (< 11.5 volts).

Recharge the battery as quickly as possible as specified in the "Maintenance" section of this user handbook. Possibly have the charging system checked by a service centre for possible damage.

Air filter maintenance:



Every 25 operating hours (air filter maintenance interval) the letters CLN – AIR – FILTER – TIME appear in succession on the display for 7 minutes.

Service the air filter immediately, see engine operating manual.

Notes:

- TIME means: The total operating hours (see above) are displayed.
- If the oil change and air filter maintenance intervals occur at the same time, the oil change display appears first and then the air filter display.

PTO switch (8)

Fig. 6

The PTO switch actuates an mechanical clutch to switch ON and OFF the cutters.

ON = pull the switch.

OFF = press the switch.

Note

When the safety lock system has automatically switched OFF the appliance (e.g. when reversing with activated cutters), first switch ON and then OFF the PTO switch to release the lock on the clutch.

Can holder (9)

Fig. 1

Ignition lock (10, depending on model)**Ignition lock**

Fig. 3a

Starting:

Turn key to the right until the engine is running, then release. Key is set to .

Stopping:

Turn the key to the left, to .

Ignition lock with OCR function

Fig. 3b

This ignition lock features an OCR function (= user-controlled mowing in reverse gear).

Starting:

Turn key to the right until the engine is running, then release. The key at (normal) allows mowing in the drive direction.

OCR position:

Turn key to left of normal position to reverse mowing position

and press the switch (1).

The indicator light (2) comes on and indicates to the user that the unit can now mow in reverse and forward gear.

Stopping:

Turn the key to the left, to .

Note

Do not use the OCR function unless absolutely necessary, otherwise work with the key in the normal position. The OCR function switches off automatically as soon as the key is turned to the normal

position or the engine is switched off (stop position or disconnection of the engine by the safety interlock system).

Storage bin (11)

Fig. 1

Gear release lever (12)

Fig. 9



To push the unit when the engine is switched off.

Pull out both levers (near each back wheel) and then press them to the right.



To drive the unit, push the lever to the left and press in.

Fuel tank (13)

Fig. 1

Adjustable seat (14, optional)

Fig. 12

Pull the lever, and adjust the seat.

Steering wheel (15)

Fig. 1

Brake pedal (16)

Fig. 8

The brake pedal can be used to brake quickly, to engage and disengage the locking brake, and to switch OFF speed control.

Note

The forwards and reverse accelerator pedal must not be used if the brake pedal is depressed. This may damage the gears.

Operating procedure

Follow the instructions in the engine handbook!

***Danger
Risk of injury***

No person, especially children, and/or animals should be allowed to stand close to the mower while it is in use. They could be injured by stones or similar objects that might be thrown out. Children must never be allowed to operate the mower.

Be particularly careful when mowing in reverse gear (units with OCR switch). There must be nobody in the working area of the unit. Never empty the grass catcher attachment while the cutter deck is running. While emptying the grass catcher attachment, you or other persons may be injured by ejected clippings.

If you are mowing on steep slopes, the unit may overturn and you may be injured. Never ride straight up or down an incline, but always across it. The mower should not be driven on slopes with a maximum incline greater than 20 %. Do not turn the mower round while you are still on the slope.

If the ground is wet the mower could slip due to reduced traction and overturn. Only cut the grass when the ground is dry.

Excessive speed can increase the risk of an accident.

Maintain a safe distance at all times from particularly steep slopes, trees, bushes and hedges.

Pay particular attention when you are travelling in reverse while mowing at the same time.

Inspect the ground on which the mower is going to be used and remove any loose objects that could be picked up and thrown out again by the mower.

If the cutter hits a foreign object (e.g. stone) or if the unit starts vibrating unusually: Immediately switch off the engine. Before continuing to use the unit, have it checked for damage by a service centre.

When rotary mowing, never stand in front of the grass discharge openings. Never place hands or feet on or under rotating parts.

Switch off the engine and remove the ignition key and the spark-plug terminal before loosening obstructions or removing blockages from the discharge channel.

Do not use the unit in adverse weather conditions, e.g. if there is a risk of rain or a storm.

Danger of asphyxiation due to carbon monoxide poisoning
Run the internal combustion engine outdoors only.


Explosion or fire hazard
Petrol vapour is explosive and petrol itself is extremely flammable. Fill up with petrol before you start the engine. Do not remove the fuel cap while the engine is running or if it is still hot.

Fill the fuel tank only after the engine has been switched off and allowed to cool down. Avoid naked flames, spark formation and do not smoke. Only refuel the mower out in the open.

Do not start the engine if any petrol has been spilt.


Push the mower away from the area where the petrol was spilt and wait until the petrol fumes have evaporated.

To prevent a fire hazard, keep the following parts free from grass and leaking oil: engine, exhaust, battery, fuel tank.

 ***Danger***
Injury hazard due to defective mower

Do not operate the mower unless it is in perfect working order. Always carry out a visual inspection of all parts before you use the mower. Pay particular attention to safety devices, the cutting mechanism and its supporting brackets, operating controls and threaded connections, and check that they are not damaged and are securely attached.

Replace all damaged parts before you use the mower again.

 ***Operating times***
Observe the national/municipal regulations concerning the times when the unit may be used (if required, ask the appropriate authorities).

Before operating the unit, always

Check:

- all guards,
- the engine oil level (see engine manual),
- the fuel level,
- the tyre pressure,
- Side panels, accessory equipment, air filter area for dirt and debris.

Filling up with fuel and checking the oil level

Note

The engine has already been filled with oil at the factory – please check and, if required, refill.

- Fill up with lead-free petrol.
- Fill fuel tank up to max. 2 cm below the lower edge of the inlet nozzle.
- Replace the fuel cap and ensure that it is secure.
- Check the oil level. The oil level must be between the „Full/Max.“ and „Add/Min.“ marks (see also engine handbook).

Check tyre pressure

- Check the tyre pressure (see tyre walls) on all wheels. Correct if necessary.

Preparing for operation

- Park the appliance on a firm level surface and lock the parking brake.
 - Conduct all work with the engine switched off.
 - Remove the ignition key.
- For all work on moving parts:
- Disconnect in addition the spark plug.

Adjusting the seat

Fig. 12

- Sit down on the driver's seat.
- Move seat to the required position.

Setting the cutter wheels

Fig. 16

The cutter wheels should never be lower than 6–12 mm above the ground at the lowest cutter position. The cutter wheels are not designed to bear the loads generated by the cutters and may have to be offset accordingly.

i Note

The number of cutter deck wheels varies depending on the model:

- 107 cm cutter deck:
2 wheels at front
- 117 cm cutter deck:
2 wheels at front and 2 wheels at back
- 127 cm/137 cm cutter deck:
2 wheels at front and 2 rollers (rear rollers) at back

Setting the rear rollers (depending on model)

The rear rollers can be attached in two positions.

Fig. 15

„High“ position (upper hole):

Standard position – the grass is not rolled or only minimally.

„Low“ position (lower hole):





Roll position – the grass is also rolled after cutting.

- Remove safety split pin (1) from the right side.
- Pull out axle (2) to the left.
- Insert axle into the required hole (High/Low). When inserting the rollers (3), push back onto the axle.
- Align axle (2) with the groove and push through the right holder. Re-insert safety split pin (1).

i Note


Always fit rear roller on both sides in the same position (High/Low).

Starting the engine

- Sit on the driver's seat.
- Switch off the cutter deck:
Switch off PTO and raise the cutter deck.
- Push the brake pedal down fully or lock the parking brake.
- Do not actuate accelerator pedals (= neutral position, N position).
- Move throttle to .
- If the engine is cold, pull out the choke or set the throttle to .
- Turn the ignition key to  until the engine is running (start attempt max. 5 seconds, wait 10 seconds before the next attempt). When the engine is running, set the ignition key to  F.

- Slowly push back the choke.
- Return the accelerator lever until the engine runs smoothly.

Stopping the engine

- Move the throttle to the middle position.
- Leave the engine running for approx. 20 seconds.
- Set ignition key to .
- Remove the ignition key.
- Engage the locking brake before leaving the appliance.

Driving**Danger**

Abrupt starting, sudden stopping, and driving at an excessively high speed increases the risk of accidents and may damage the unit.

Never set/adjust the driver's seat while the unit is moving.

i Note

Be particularly careful when reversing. Never change the direction of travel without first bringing the unit to a standstill.

- Start the engine as indicated.
- Release the parking brake. Press down fully the brake pedal, and release it.
- Slowly engage the drive pedal until you have reached the speed you want.


i Note

The forwards and reverse accelerator pedal must not be used if the brake pedal is depressed. This may damage the gears.

Stopping the unit


- Release the accelerator.
- Depress brake pedal until the unit stops.

Mowing**i Note**


- In normal mowing mode  F (see Operation, ignition lock):
Before reversing the machine, switch off and raise the cutter deck.

- In reverse mowing mode



-  (see Operation, ignition lock): Exercise extreme caution when reverse mowing and do not activate unless absolutely necessary.

- Do not change direction when the appliance is coasting or driving.

- Start the engine as indicated.
- To ensure adequate power output, move the throttle to .
- Switch on the cutter deck.
- Lower the cutter deck.
- Release the parking brake.
Press down fully the brake pedal, and release it.
- Slowly depress the forward drive pedal for forward direction of travel and speed. The appliance starts moving.

i Information on PTO switch

When the safety lock system has automatically switched OFF the appliance (e.g. when reversing with activated cutters), first switch ON and then OFF the PTO switch to release the lock on the clutch.

General information

When adjusting the cutting height and driving speed, ensure that the machine is not overloaded.

Depending on the length, type, and dampness of the grass it may become necessary to adjust the cutting height and appliance speed for the optimum grass catcher performance.

If blockages occur, reduce the driving speed and increase the cutting height.

The best way to mow

Cut the first two rounds so the cut grass is thrown out sideways into the middle.

- Never allow the grass to grow too long
- Never cut the grass too low.
- Drive in a straight line.
- Never mow at high speed, particularly when a mulching kit or grass catcher is installed.


Mulching

Various appliances can also mulch when fitted with the corresponding accessories. Ask your specialised dealer for details.

Note

This appliance is designed to mow lawns. Do not mow scrub, weeds, or overlong grass.

Switching off the machine

- Stopping the unit:
Release the accelerator press brake pedal until the appliance is stationary.
- Switching off the cutter deck.
- Set the throttle lever into the middle position.
- Raise the cutters to the top.
- After 20 seconds set ignition key to .
- Engage the locking brake before leaving the appliance.
- Remove the ignition key.

Pushing the appliance

Fig. 9

Push the appliance only when the engine is switched OFF.

- Release the parking brake.
- Release both gears:



Pull out both gear release levers and press to the right.

Before starting the engine move back the two gear release levers to their home positions.

Note

Never tow the appliance. This can cause serious damage to the gears.

Tips on lawn care

Mowing

A lawn is made up of various different types of grass. If you mow your lawn frequently, those types of grass which form strong roots and a firm turf surface will grow better. If you seldom cut the grass, you will enhance the development of high-growing types of grass and other weeds, such as clover, daisies ...). The normal height of a lawn is approx. 4–5 cm. Only $\frac{1}{3}$ of the total height should be mown; therefore cut 7–8 cm long grass to normal height.

Preferably do not cut the lawn shorter than 4 cm, otherwise the sward will be damaged in a dry period. If the grass has grown particularly high (for example, during a holiday period), cut it back to its normal height in several stages.

Mulching using the accessories (optional)

During mowing the grass is cut into small pieces (approx. 1 cm) and is left on the ground. A lot of the nutrients in the cut grass are retained for the benefit of the lawn. Please note the following:

- Do not mow wet grass.
- Never mow more than max. 2 cm of the total grass length.
- Drive slowly.
- Use maximum engine speed
- Clean the mower cover regularly.

Transporting the mower

Drive the machine only short distances otherwise transport it by vehicle. Use a transportation vehicle for greater distances.

Note:

The mower is not approved for public thoroughfares in accordance with StVO.

Short distances

Danger

Solid objects may be hit/propelled by the rotating cutting mechanism causing damage.

- Always switch off the cutting mechanism before moving the mower.

Long distances

Warning

Transport damages

The mode of transport used (e.g. transport vehicle, loading ramp) must be used in accordance with guidelines (refer to the respective operating instructions).

When transporting, secure the mower against slipping.

Environmental hazard due to leaked fuel

Do not transport the mower in a tilted position.

- Prepare a suitable transport vehicle.
- Attach the loading ramp to the vehicle.
- Manually push the machine in neutral onto the loading ramp. Release gears beforehand. To do this, pull out both gear release levers (12, Fig. 1; near each back wheel) and then press them to the right.
- Lock the parking brake.
- Secure the machine to prevent it from moving.

Cleaning/servicing

Danger

Injury hazard if engine is started inadvertently

Protect yourself against injury.

Before carrying out any work on the mower

- switch off the engine,
- withdraw the ignition key,
- lock the parking brake.
- Wait until all moving parts have come to rest and the engine has fully cooled,
- Remove the spark plug connector on the engine in order to prevent the engine from accidentally being started.

Cleaning the mower

Clean the unit

Warning

Do not clean the machine with a high-pressure cleaner.

- If possible, clean the machine directly after mowing.
- Place the machine on firm, level ground.
- Lock the parking brake.

Cleaning the cutting mechanism



Danger

Injury hazard due to sharp cutting blades

Wear protective gloves.

If the unit has more than one cutting mechanism, moving one cutting mechanism may cause the other cutting mechanisms to move as well. Caution when cleaning the cutters.



Warning

Damage to engine

The mower must not be tilted to an angle greater than 30°. This might cause fuel to run into the combustion chamber and could lead to engine damage.

- Raise the cutting mechanism fully.
- Clean the cutting compartment with a scrubbing brush, hand brush or cloth.

Cutters with cleaning nozzle (optional)

Fig. 18

Place the appliance on an even surface free of debris, stones, etc., and engage the locking brake.

1. Use a commercially available quick-release coupling to attach a water hose.
2. Start the engine.
3. Lower the cutters, and switch ON for a few minutes.
4. Switch OFF the cutters and engine.
5. Detach the water hose.

Repeat steps 1 to 5 for the second cleaning nozzle (if provided).

At the end of cleaning (steps 1 to 5):

- Raise the cutters to the top,
- start the engine, and switch ON the cutters for a few minutes to dry them.

Maintenance

Follow the maintenance instructions in the engine handbook. At the end of the season have the unit inspected and serviced by a repair shop.



Warning

Environmental hazard caused by engine oil

Waste oil resulting from a routine oil change should be taken to an approved collection point or specialist disposal company.

Batteries are an environmental hazard

Do not throw used batteries into the household refuse. Hand over used batteries to your dealer or to a waste management company. Remove the battery before scrapping the unit.

Using jump leads



Danger

Never bridge a defective or frozen battery with jump leads.

Ensure that the units and the jump lead clips do not touch each other and that the ignitions are switched off.

- Connect the red jump lead to the positive terminal (+) of the flat battery and the donor battery.
- Connect the black jump lead first to the negative terminal (–) of the donor battery. Connect the other clip to the frame of the engine block of the tractor with the flat battery (as far away from the battery as possible).



Note

If the donor battery is installed in a vehicle, this vehicle must not be started during the jump starting process.

- Start the tractor with the flat battery and actuate the parking brake.
- Disconnect the jump leads in reverse sequence.

Tyre pressure



Warning

Never exceed the maximum permitted tyre pressure (see tyre wall). When pumping up the tyres, do not stand in front of or over the tyre.

Excessive tyre pressure reduces the service life of the tyres. Always check the tyre pressure before driving.

After 5 operating hours

- First engine oil change. See engine manual for subsequent intervals.
- Use the oil channel or (optional) quick oil drain (Fig. 14).

After 10 operating hours

- Lubricate all rotating and bearing points of the accelerator pedal and brake pedal with several drops of light oil.
- Clean battery poles and terminals.

Every 25 operating hours

- Lubricate all blade shafts, tensioning pulleys and tensioning pulley holders via the grease nipples using grease type 251H EP. Have this work carried out by a service centre.
- Lubricate the wheel bearings and front wheel axes with 251H EP type grease applied to their respective grease nipples.
- Remove grass and dirt around the blade shafts beneath the covers. Have this work carried out by a service centre.
- Lubricate the steering with grease Type 251H EP via the grease nipples on the steering support. Have this work carried out by a service centre.

Every 50 operating hours

- Have dirt and grass remnants removed from the drive gear by a repair shop.

If required

Charge the battery

If you are not using the unit for a prolonged period, it is recommended to take the battery out of the unit and charge it before storage, as well as every 2 months during storage, and before starting up the unit again.

Check the battery's charged state with a voltmeter. When the charged state is less than 12.6 V (DC) recharge the battery (max 12 V at 6 A) with a battery charger in accordance with the table.

Voltmeter	Battery charging state	Charging time
12.7 volts	100 %	–
12.4 volts	75 %	approx. 90 min.
12.2 volts	50 %	approx. 180 min.
12.0 volts	25 %	approx. 280 min.

Note

Follow the instructions in the operating manual for your battery charger.

Replacing fuses

- Replace defective fuses only with ones of an equal strength.

Once per season

- Lubricate all rotating and bearing points (operating lever, height adjustment of the cutter deck ...) with several drops of light oil.
- Clean the spark plug and check the gap between the electrodes or replace the plug. See engine handbook.
- The rear axles must be lubricated with a special-purpose (water-repellent) grease at a specialised garage.
- Have the cutting blade sharpened or replaced in a specialist workshop.

Note

Regularly check (when visiting your workshop) the condition of the mower deck V-belt.

Removing/Installing and adjusting cutter deck

Danger

Injury hazard if engine is started inadvertently

*Protect yourself against injury.
Before carrying out any work on the mower*

- park the appliance on a level surface,
- switch off the engine,
- withdraw the ignition key,
- switch off PTO,
- lock the parking brake.

- wait until all moving parts have come to rest and the engine has fully cooled,
- remove the spark plug connector on the engine in order to prevent the engine from accidentally being started.

Danger

Injury hazard due to sharp cutting blade.

Wear protective gloves.

Disassembly

- Raise cutter deck into a position in which the V-belt is as horizontal as possible between the cutter deck and PTO clutch.
- Remove the V belt (1) from the PTO clutch/motor pulley (2) – fig. 20.

To do this, pull left or right side of the V-belt backwards and then downwards while manually turning the engine belt pulley in the opposite direction.

Note: Work carefully to avoid trapping your fingers.

- Move cutting height adjustment lever to the lowest position.
- Remove front fixing bracket from the cutter deck – Fig. 19. Pull cotter pin (1) and pull the fixing bracket (2) out of the holder.
Note: In doing so, support the cutters firmly so that they cannot simply drop to the ground.
- Pull out the pin (1) on the left and right of the cutter deck to disconnect the cutter deck from the hanger (2) – Fig. 13.
Note: In doing so, support the cutters firmly so that they cannot simply drop to the ground.
- Move cutting height adjustment lever to the highest position.
- Pull out the cutters from beneath the appliance.

Assembly

To reinstall the cutters perform the above steps (for removing the cutters) in reverse order. Work proceeds faster when you are assisted by a second person. Make sure that the suspension units are in their respective recesses on the cutter mount and the pin has engaged correctly.

Note

Following assembly, check that the V-belt is positioned correctly and is not twisted – Figs. 21 to 23.

Setting the cutter level

When mowing does not appear to be parallel to the lawn the cutters can be aligned.

Note

Before aligning the cutters check the tyre pressure on the appliance.

Setting the side level

Fig. 11

- Raise the cutters to the top.
- Carefully turn the outer cutters (risk of injury) transverse to the drive direction.
- Measure the distance between the ground and the ends of the two outer cutters. The result should be the same. If required, set the correct level by rotating the setting segment (2) on the left cutter deck side. To do so first loosen (but do not remove) the cap bolt (1) and retighten this after the adjustment.

Set the level from front to back.

Fig. 10

Note

Set/check the side level before this adjustment.

- Raise the cutters to the top.
- Carefully turn the outer cutters (risk of injury) parallel to the drive direction.
- Measure the distance between the ground and the end of the right cutter. The end of the front cutter should be about 3.2–6 mm lower than the end of the rear cutter. You may have to adjust the front receiver (1). To do this, set the correct level by adjusting the nut (2).

Off-season storage



Warning

Damage to mower materials

When the engine has cooled down, store the unit in a clean and dry room only. Always protect the mower against rust if it is to be left for comparatively long periods, e.g. over the winter.

At the end of the grass-cutting season or if the mower is not going to be used for longer than one month:

- Clean the mower and the grass catcher.
- Wipe all metal parts with an oily rag or spray them with oil to protect them from rust.
- Charge battery with a battery charger.
- When shutting down the unit for the winter, remove the battery, charge it and store in a dry/cool location (protected from frost). Charge the battery every 4–6 weeks as well as before re-installing it.

- Drain the fuel tank (out in the open air only) and service the engine as described in the engine handbook.
- Check tyre pressure.
- park the mower in a clean, dry room.

Warranty

The applicable warranty conditions in different countries are issued by our local subsidiary company or the importer of our products.

During the warranty period, any malfunctions of the unit caused by a material or manufacturing defect will be repaired free of charge.

In the event of a warranty claim, please contact your original dealer or our nearest branch office.

Information about the engine

The engine manufacturer is liable for all engine-related problems with respect to power, power measurement, technical specifications, warranty and service. Information can be found in the owner's/user handbook supplied separately by the engine manufacturer.

Troubleshooting




Danger

Injury hazard if engine is started inadvertently

Protect yourself against injury. Before carrying out any work on the mower

- switch off the engine,
- withdraw the ignition key,
- lock the parking brake.
- wait until all moving parts have come to rest and the engine has fully cooled,
- pull off the cap of the spark plug so that the engine cannot inadvertently start.

Problems that occur while you are using the mower are often caused by something simple which you will probably be able to rectify yourself. If you are in any doubt however, your dealer will be most pleased provide assistance.

Problem	Possible cause(s)	Remedy
Starter does not turn.	Safety interlock system has actuated.	To start the engine, sit on the driver's seat, fully depress brake pedal or apply parking brake. Switch off PTO.
	Battery not connected correctly.	Connect red cable to (+) battery terminal and black cable to (–) battery terminal.
	Discharged or low battery.	Check the battery, charge it or exchange it.
	Fuse has tripped.	Replace fuse. If the fuse trips repeatedly, look for the cause (usually short-circuit).
	Loose earth cable between engine and frame.	Connect earth cable.
Starter turns but engine does not start.	Choke and throttle in wrong position.	Actuate choke. Move throttle to  .
	Carburettor not receiving any fuel, fuel tank empty.	Top up with fuel.
	Defective or dirty spark plug.	Check spark plug; see engine manual.
	No ignition spark.	Have ignition checked in repair shop.

Problem	Possible cause(s)	Remedy
Engine emits smoke.	Too much oil in engine.	Switch off engine immediately. Check engine oil level.
	Engine defective.	Switch off engine immediately. Arrange for service agent to check the engine.
Excessive vibration.	Damaged blade drive shaft or defective cutting blade.	Switch off engine immediately. Have defective parts replaced.
Cutting mechanism does not discharge grass or cuts unevenly.	Engine speed too low.	Increase throttle.
	Travelling speed too high.	Set to a lower travelling speed.
	Cutting blade is blunt.	Arrange for service agent to sharpen or replace blade.
Engine is running, cutter deck is not mowing.	V-belt torn.	Have the V-belt replaced in a repair shop.