

Operator's manual Rider 15V2



Please read these instructions carefully and make sure you understand them before using the machine.

English

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Operator's Manual for Rider 15V2

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IMPORTANT INFORMATION

Read carefully through the Operator's manual so that you know how to use and maintain the Rider before you use it.

For service measures other than those described in this manual, please contact an authorised dealer that provides parts and service.

INTRODUCTION

Dear customer

Thank you for choosing a Husqvarna Rider. Husqvarna Riders are built to a unique design with a frontmounted cutting unit and a patented rear-wheel steering system. Riders are designed for maximum efficiency even in small or confined areas. Collected controls and a hydrostatic transmission controlled by pedals also contribute to the machine's performance.

We hope you will find this operator's manual very useful. By following its instructions (on operation, service, maintenance, etc.) you will significantly extend the life of the machine and even its second-hand value.

When you sell your Rider, make sure you pass on the operator's manual to the new owner.

Travel and transport on public roads

Check the relevant road traffic regulations before driving the machine on a public road. If transporting the machine on another vehicle always use approved securing devices and make sure that the machine is securely held.

Towing

Your machine is equipped with a hydrostatic transmission and, if necessary, you should only tow the machine over short distances and at a low speed, otherwise there is a risk of damaging the transmission.

Intended use

This machine has been designed to mow grass on lawns and other open and level ground surfaces without obstacles such as stones, tree stumps, etc., even when the machine is equipped with special accessories provided by the manufacturer, for which the operating instructions are provided in conjunction with delivery. Use in any other way is considered as contrary to the intended use. Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements of the intended use.

This machine should be operated, serviced and repaired only by persons who are familiar with its particular characteristics and who are acquainted with the relevant safety procedures.

Accident prevention regulations, all other generally recognised regulations on safety and occupational medicine, and all road traffic regulations must be observed at all times.

Any arbitrary modifications carried out to this machine may relieve the manufacturer of liability for any resulting damage or injury.

INTRODUCTION

Good service

Husqvarna products are sold all over the world and only through servicing dealers. This is to ensure that you, the customer, get the best support and service.

When you need spare parts or advice on service issues, warranty terms, etc., contact:

This Operator's Manual belongs to machine with serial number:	Engine	Transmission

Serial number

The serial number can be found on the printed plate attached to the front, left-hand side under the seat. Stated on the plate, from the top are:

- The type designation of the machine.
- The manufacturer's type number.
- The serial number of the machine.

State the type designation and serial number when ordering spare parts.

The engine number is stated at a bar-code decal placed on the left side of the crankcase, in front of the starter. The bar-code states:

- The serial number of the engine.
- Code.

Please state these when ordering spare parts.

The transmission's serial number is stated on the barcode decal located on the front of the housing on the left-hand drive axle:

- Type designation is stated above the barcode and starts with the letter "K".
- The serial number is stated above the barcode and has the prefix "s/n".
- The manufacturer's type number is stated under the barcode and has the prefix "p/n".

State the type designation and serial number when ordering spare parts.

EXPLANATION OF SYMBOLS

These symbols are on the machine and in the operator's manual.
Study them carefully so that you know what they mean.



Read the operator's manual

N

Neutral



Fast



Slow



Engine off



Choke



Fuel



Oil level



Cutting height



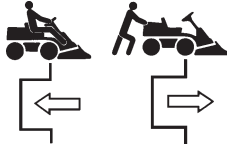
Backwards



Forwards



Ignition



Hydrostatic free wheel



Use hearing protection



Parking brake



Warning



Noise emission to surroundings in accordance with the directive of the European Community. The machine's emission is indicated in the chapter TECHNICAL DATA and on the decal.



Warning!
Rotating blades.



Warning!
Risk that the machine
can tip over



Never drive across a
slope



CE conformity
marking



Never use the machine if persons, especially children, or animals, are in the vicinity.



Never carry passengers on the
machine or equipment.



Keep hands and feet away
from under the hood when
the engine is running.



Drive very slowly without
the cutting unit.



N



START



Starting instructions

Read the instructions

Check the engine's oil level

Check the hydrostat's oil level

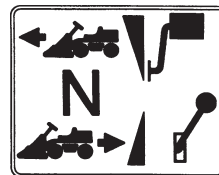
Lift up the cutting unit

Put the hydrostat pedals in the
neutral position

If the engine is cold use the choke

Start the engine

Release the parking brake before
driving



Speed limiter pedal forwards

Neutral

Speed limiter pedal reverse



Switch off the engine and take off
the ignition cable before repairs
or maintenance

SAFETY INSTRUCTIONS

Safety instructions

These instructions are for your safety. Read them carefully.

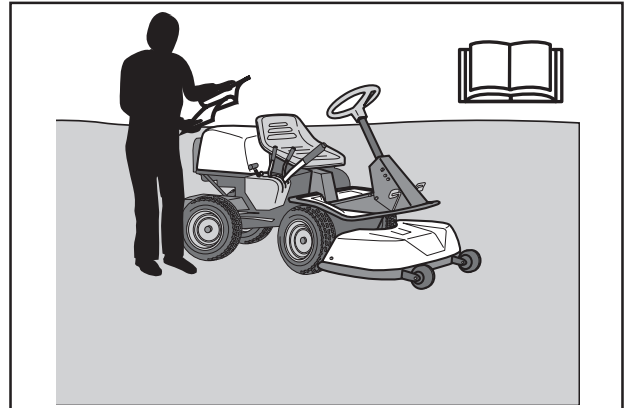


WARNING!

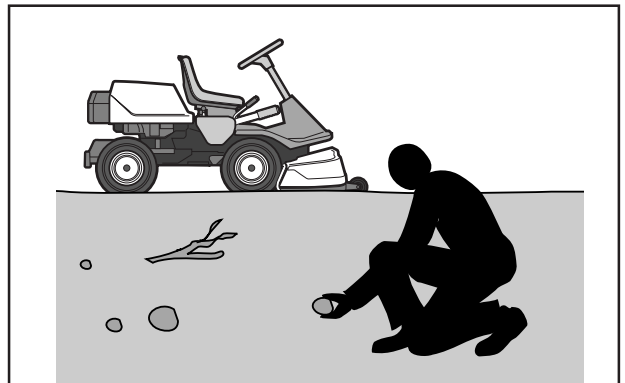
The inserted symbol means that important safety instructions need to be observed. It applies to your safety.

General use

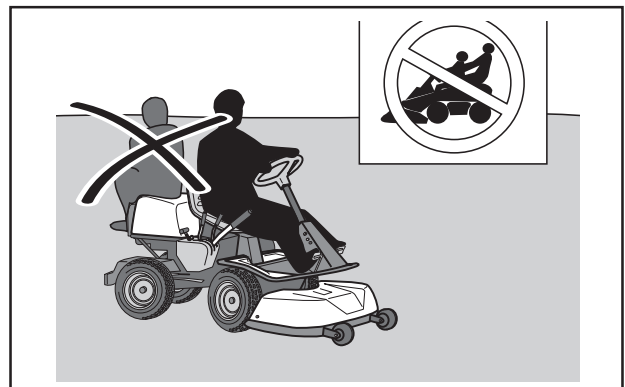
- Read all the instructions in this operator's manual and on the machine before you start it. Ensure you understand them and then observe them.
- Learn how to use the machine and its controls safely and learn to how to stop quickly. Also learn to recognize the safety decals.
- Only allow the machine to be used by adults who are familiar with its use.
- Make sure nobody else is in the vicinity of the machine when you start the engine, engage the drive or drive off.
- Make sure animals and people maintain a safe distance from the machine.
- Stop the machine if any one enters the working area.
- Clear the area of objects such as stones, toys, wires, etc. that may become caught in the blades and be thrown out.
- Look out for the ejector and do not direct it towards anyone.
- Stop the engine and prevent it from starting before you clean the cutting unit.
- Remember the operator is responsible for danger or accidents.
- Never carry passengers. The machine is only intended to be used by one person.
- Always look downwards and backwards before and while reversing. Keep watch for both large and small obstacles.
- Slow before cornering.
- Switch off the blades when you are not mowing.



Read the operator's manual before starting the machine.



Clear the area of objects before mowing.



Never carry passengers.




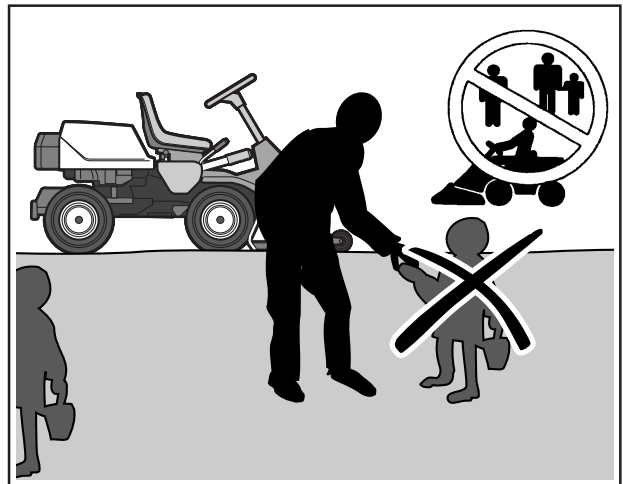
WARNING!

This machine can sever hands and feet as well as throw objects. Failure to observe the safety instructions can result in serious injuries.

SAFETY INSTRUCTIONS

- Take care when rounding a fixed object, so that the blades do not hit it. Never run the machine over foreign objects.
- Only use the machine in daylight or in other well-lit conditions. Keep the machine at a safe distance from holes or other irregularities in the ground. Pay attention to other possible risks.
- Never use the machine if you are tired, if you have consumed alcohol, or if you are taking other drugs or medication that can affect your vision, judgment or co-ordination.
- Keep an eye on the traffic when working close to a road or when crossing it.
- Never leave the machine unsupervised with the engine running. Always stop the blades, apply the parking brake, stop the engine and remove the keys before leaving the machine.
- Never allow children or other persons not trained in the use of the machine to use or service it. Local laws may regulate the age of the user.

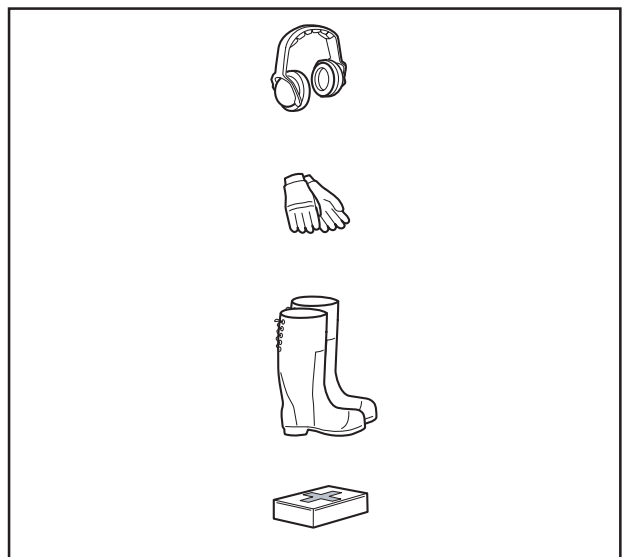
 **WARNING!**
Engine exhaust, some of its constituents and certain vehicle components contain or emit chemicals considered to cause cancer, birth defects or other reproductive impairment. The engine emits carbon monoxide, which is a colourless, poisonous gas. Do not use the machine in enclosed spaces.



Keep children away from the area to be mowed.

 **WARNING!**
You must use approved personal protective equipment whenever you use the machine. Personal protective equipment cannot eliminate the risk of injury but it will reduce the degree of injury if an accident does happen. Ask your dealer for help in choosing the right equipment.

- Use ear protectors to eliminate the risk for impairment of hearing.
- Wear approved protective glasses or full-face visor during assembly and when operating.
- Never wear loose fitting clothes that can catch in moving parts.
- Never use the machine when barefoot. Always wear protective shoes or protective boots, preferably with steel toes.
- Make sure that you have first aid equipment close at hand when using the machine.



Personal protective equipment.

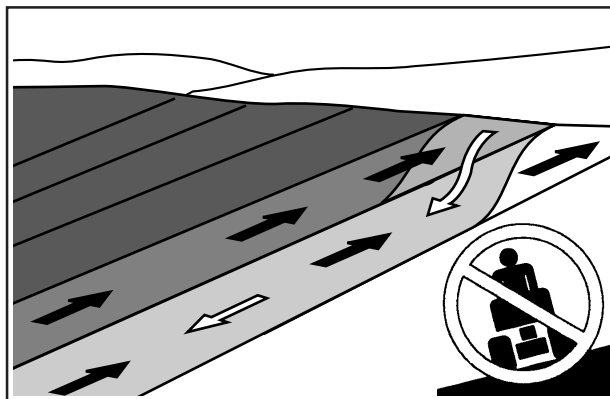
SAFETY INSTRUCTIONS

Driving on slopes

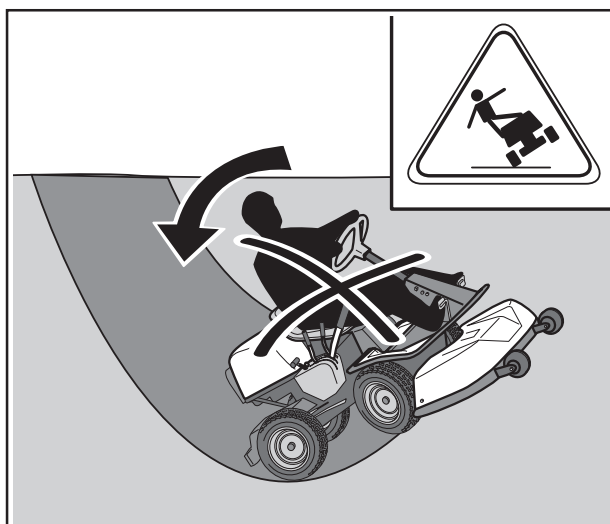
Driving on slopes is one of the operations where the risk of the driver losing control of the machine or of it overturning is the greatest; this can result in serious injury or death. All slopes demand extra care. If you cannot reverse up a slope or if you feel unsure, do not mow it.

Proceed as follows:

- Remove obstacles such as stones, branches, etc.
- Mow upwards and downwards, not sideways.
- Do not use the machine on ground that slopes more than 15°.
- Avoid starting or stopping on a slope. If the tyres start to slip, stop the blades and drive slowly down the slope.
- Always drive smoothly and slowly on slopes.
- Do not make any sudden changes in speed or direction.
- Avoid unnecessary turns on slopes, if necessary, turn slowly and gradually downwards if possible.
- Watch out for and avoid driving over furrows, holes and bumps. It is easier for the machine to overturn on uneven ground. Tall grass can hide obstacles.
- Drive slowly. Do not turn the wheel sharply. The machine engine-brakes better in low gear.
- Take extra care if any attachments are fitted that can change the stability of the machine.
- Do not mow too close to edges, ditches or banks. The machine can suddenly overturn if one wheel comes over the edge of a steep slope or a ditch, or if an edge gives way.
- Do not mow wet grass. It is slippery, and tyres can lose their grip so that the machine skids.
- Do not try to stabilize the machine by putting your foot on the ground.
- When cleaning under the machine, it may never be driven near verges or ditches.
- Follow the manufacturer's recommendations regarding wheel weights or counterbalance weights to increase stability.



Mow upwards and downwards on slopes, not sideways.



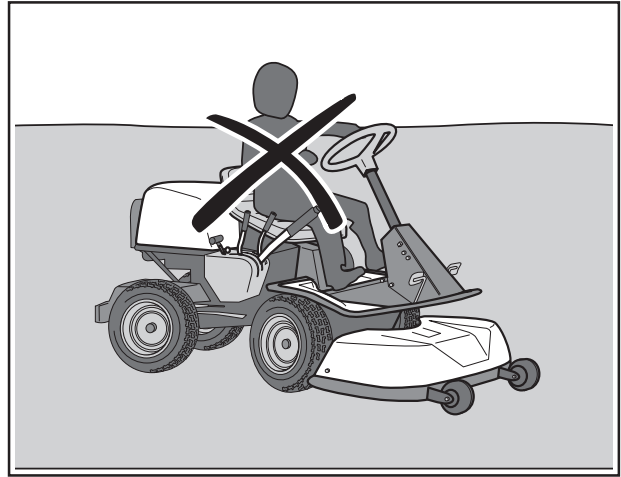
Be especially careful when driving on slopes.

SAFETY INSTRUCTIONS

Children

Serious accidents may occur if you fail to be on your guard for children in the vicinity of the machine. Children are often attracted to the machine and mowing.

- Never assume that children will remain where you last saw them.
- Keep children away from the area to be mowed and under close supervision by another adult.
- Keep an eye out and shut off the machine if children enter the work area.
- Before and during reversing procedures, look behind you and down for small children.
- Never allow children to ride along. They can fall off and seriously injure themselves or be in the way for safe manoeuvring of the machine.
- Never allow children to operate the machine.
- Be particularly careful near corners, bushes, trees or other objects that block your view.



Never allow children to operate the machine.

Maintenance

- Stop the engine. Prevent starting by removing the ignition cables from the spark plugs or remove the ignition key before making any adjustments or carrying out maintenance.
- Never fill the fuel tank indoors.
- Petrol and petrol fumes are poisonous and extremely flammable. Be especially careful when handling petrol, as carelessness can result in personal injury or fire.
- Only store fuel in containers approved for the purpose.
- Never remove the fuel cap and fill the petrol tank while the engine is running.
- Allow the engine to cool before refuelling. Do not smoke. Do not fill petrol in the vicinity of sparks or naked flames.
- Pay attention to the risk of environmental influence when handling oil, oil filter, fuel and battery. Observe the local waste regulations.
- Electrical shock can cause injury. Do not touch wires while the engine is running. Do not test the ignition system using your fingers.



Never fill the fuel tank indoors.

SAFETY INSTRUCTIONS

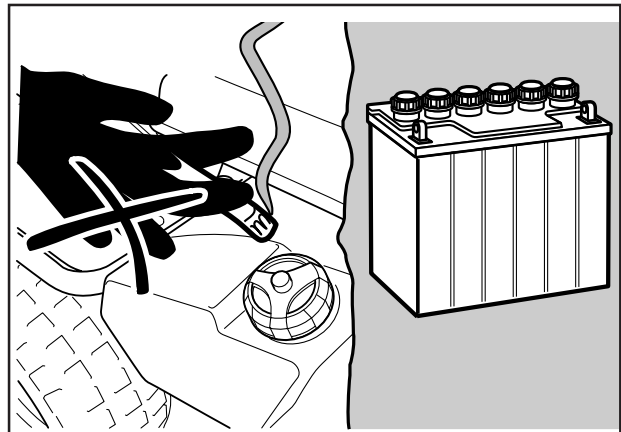
- If leaks arise in the fuel system, the engine must not be started until the problem has been resolved.
- Store the machine and fuel in such a way that there is no risk that leaking fuel or fumes can cause any damage.
- Check the fuel level before each use and leave space for the fuel to expand, because the heat from the engine and the sun may otherwise cause the fuel to expand and overflow.
- Avoid overfilling. If you spill petrol on the machine, wipe up the spill and wait until it has evaporated before starting the engine. If you spill petrol on your clothing, change your clothing.
- Allow the machine to cool before performing any actions in the engine compartment.
- Be especially careful when handling battery acid. Acid on the skin can cause serious corrosive injuries. In the event of spillage on the skin wash immediately with water.
- Acid in the eyes can cause blindness, contact a doctor immediately.
- Take care with battery maintenance. Explosive gases form in the battery. Never perform maintenance on the battery while smoking or in the vicinity of open flames or sparks. This can cause the battery to explode and cause serious injuries.
- Make sure all nuts and bolts are tightened correctly and that the equipment is in good condition.
- Do not modify safety equipment. Check regularly to be sure it works properly. The machine must not be driven if protective plates, protective covers, safety switches or other protective devices are not fitted or are defective.
- Do not change the setting of governors and avoid running the engine at excessively high revs. If you run too fast, you risk damaging the machine components.
- Observe the risk of injury caused by moving or hot parts if the engine is started with the engine cover opened or the protective covers removed.



WARNING!
The engine and the exhaust system become very hot during operation.
Risk of burn injuries if touched.



WARNING!
The battery contains lead and lead pollutants, chemicals that are considered to cause cancer, birth defects or other reproductive impairment. Wash your hands after touching the battery.



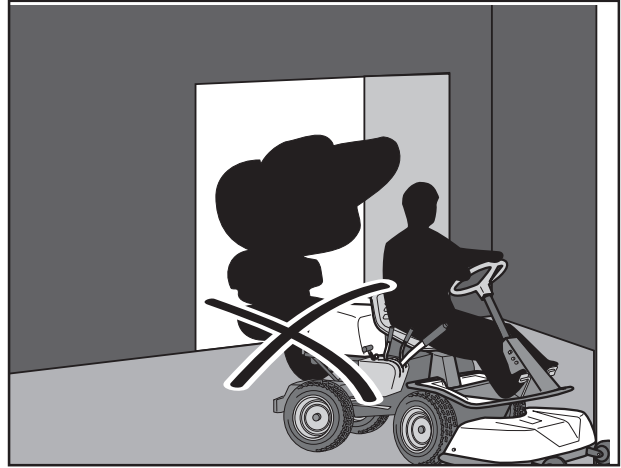
Do not smoke when carrying out maintenance.

SAFETY INSTRUCTIONS

- Never use the machine indoors or in spaces lacking proper ventilation. Exhaust fumes contain carbon monoxide, an odourless, poisonous and highly dangerous gas.
- Stop and inspect the equipment if you run over or into anything. If necessary, make repairs before starting.
- Never make adjustments with the engine running.
- The machine is tested and approved only with the equipment originally provided or recommended by the manufacturer.
- The blades are sharp and can cause cuts. Wrap the blades or wear protective gloves when handling them.
- Check regularly that the parking brake works. Adjust and maintain as required.
- The mulching unit should only be used where better quality mowing is required and in known areas.
- Reduce the risk of fire by removing grass, leaves and other debris that may have fastened on the machine. Allow the machine to cool before putting it in storage.

Transport

- The machine is heavy and can cause serious crush injuries. Be especially careful when it is loaded in or out of a car or on and off of a trailer.
- Use an approved trailer to transport the machine. Activate the parking brake and secure the machine using approved fasteners, such as tension belts, chains or ropes when transporting.
- Check and observe local road traffic regulations before transporting or driving the machine on roads.



Never run the machine in an enclosed area.



Regularly clean grass, leaves and other debris from the machine.

IMPORTANT INFORMATION

The parking brake is not sufficient to lock the machine during transport. Ensure you secure the machine firmly to the transporting vehicle. Reverse the machine on to the transporting vehicle to prevent it from overturning.

PRESENTATION

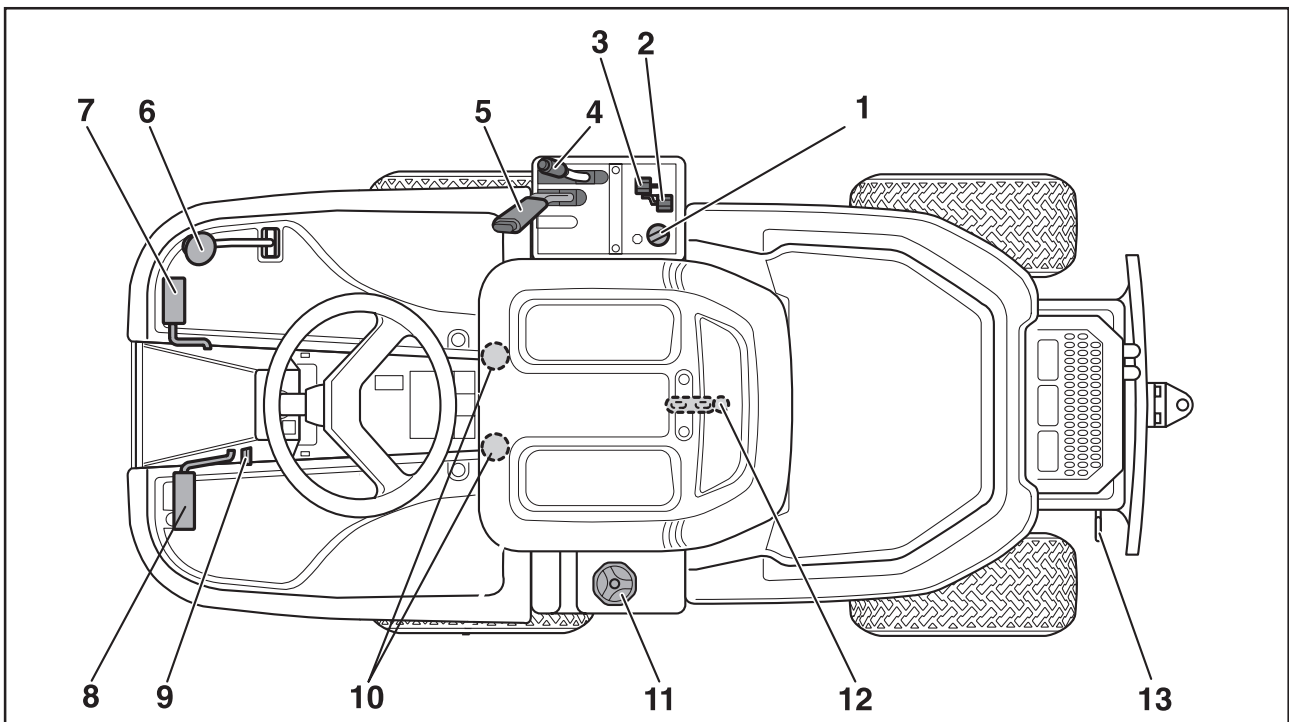
Presentation

Congratulations on your choice of a top quality product which you will enjoy for many years.

These instructions describe the Rider 15V2. This rider mower is equipped with a 15 horsepower Kawasaki engine.

The power transmission from the engine is handled by a hydrostatic gearbox, which allows variable variation of the speed by using the pedals.

There is one pedal for driving forwards and one pedal for reversing.



Location of the controls

- | | |
|---------------------------------------|--------------------------------------|
| 1. Ignition lock | 8. Parking brake |
| 2. Choke lever | 9. Lock button for parking brake |
| 3. Throttle lever | 10. Lever for adjusting seat |
| 4. Adjustment of cutting height | 11. Fuel tank cap |
| 5. Lifting lever, cutting unit | 12. Main lock (under seat) |
| 6. Speed limiter for reversing | 13. Lever for disengagement of drive |
| 7. Speed limiter for driving forwards | |

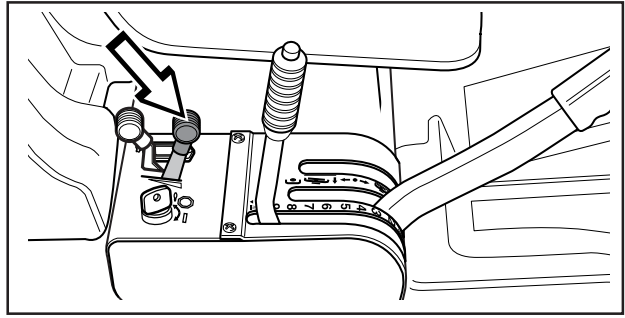
PRESENTATION

Throttle control

The throttle control regulates the engine speed, and thereby also the rotation speed of the blades.

To increase or reduce the engine speed the control is moved forwards or backwards.

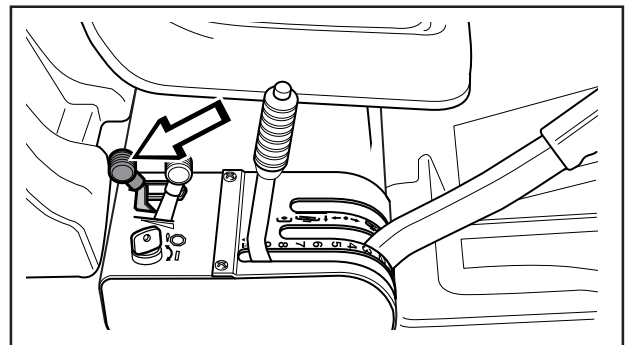
Avoid idling the engine for long periods, as there is a risk of carbon build-up on the spark plugs.



Choke lever

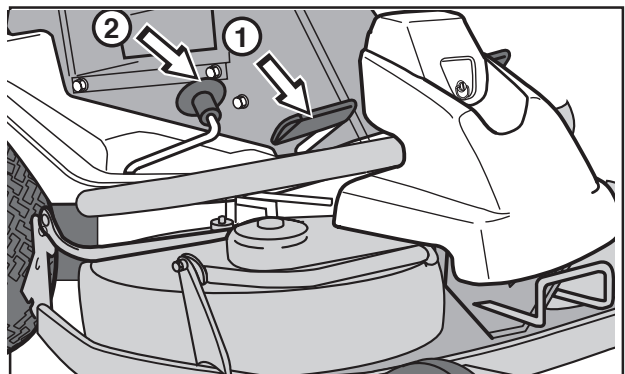
The choke lever is used for cold starting and to give the engine a richer fuel mixture.

For cold starting the lever is moved backwards to its end position.



Speed limiter

The speed of the machine is steplessly regulated with two pedals. Pedal (1) is used to drive forwards and pedal (2) for reversing.



WARNING!

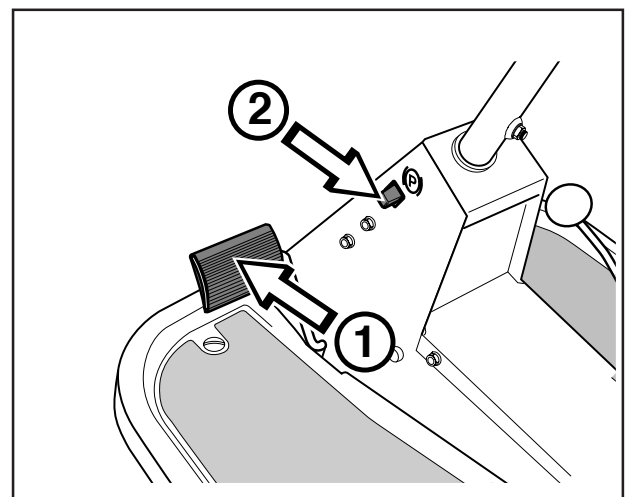
Make sure that branches do not obstruct the pedals when mowing under bushes, otherwise you may lose control.

Parking brake

The parking brake is activated as follows:

1. Press down the parking brake pedal (1).
2. Press in the lock button (2) on the steering column.
3. Release the parking brake pedal while keeping the button pressed in.

The parking brake lock is automatically disengaged when the parking brake pedal is pressed down.



PRESENTATION

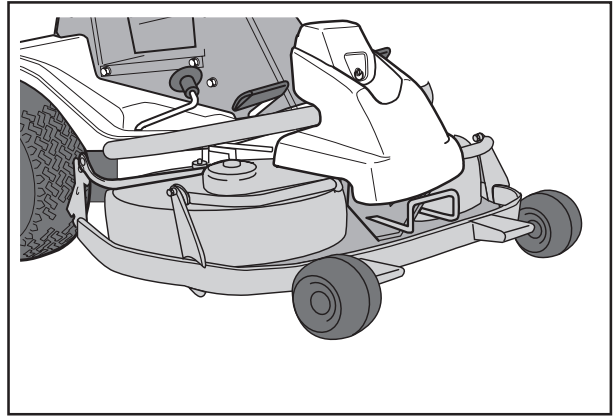
Cutting unit

The Rider 15V2 can be fitted with five different cutting units.

BioClip	-	900 mm/35"
Combi	-	1030 mm/41"
Combi	-	1120 mm/44"

See "Maintenance \ Checking the Blades" for identification of the cutting unit.

The combi deck functions as a mulching deck when a bio-clip plug is mounted. Without the plug, the deck will function as a rear ejection deck.



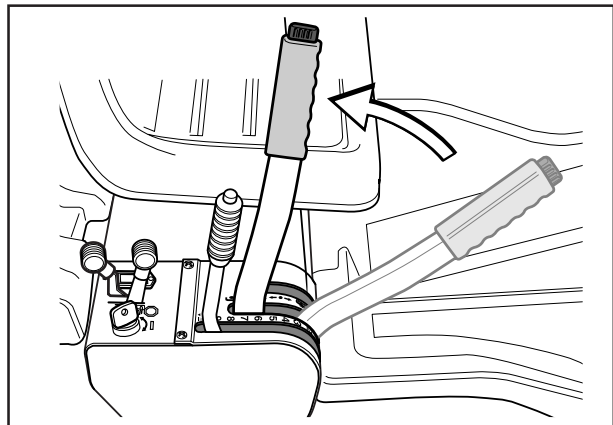
Lift lever for cutting unit

The lift lever is used to set the cutting unit in transport or cutting position.

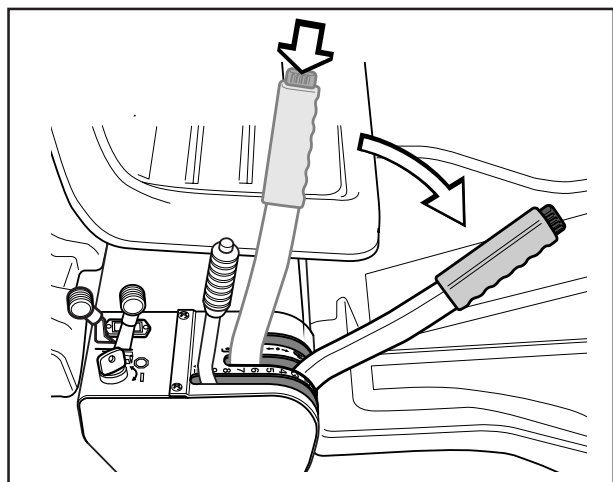
If the lever is pulled back the unit will lift up and the blades will automatically stop rotating (transport position).

If the lock button is pressed and the lever is moved forward the unit will be lowered and the blades will automatically start rotating (cutting position).

The lever can also be used to temporarily regulate the cutting height, e.g. for a small mound in the lawn.



Lifting of the cutting unit (transport position)



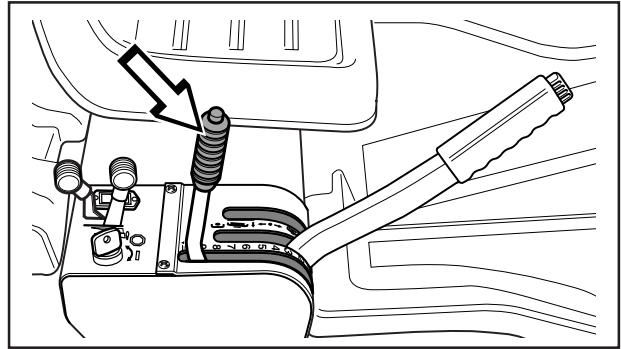
Lowering of the cutting unit (cutting position)

PRESENTATION

Lever for adjustment of cutting height

With this lever the cutting height can be adjusted to 9 different positions.

Combi unit	40-90 mm (1 9/16" - 3 9/16")
BioClip	45-95 mm (1 3/4" - 3 3/4")

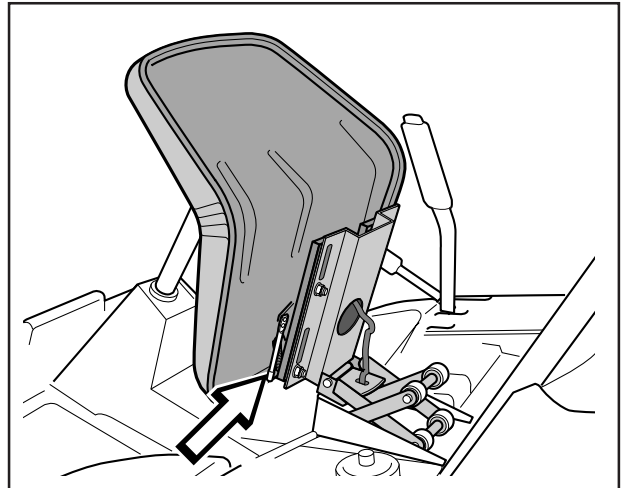


Seat

The seat has a jointed attachment on the front edge and can be tipped forward.

The seat can also be adjusted lengthways.

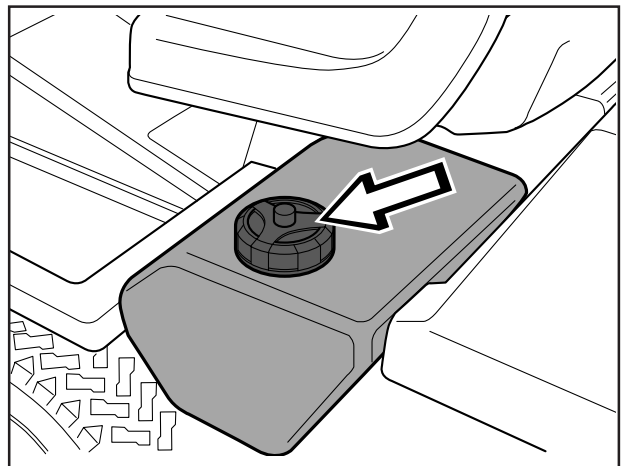
Move the lever, mounted under the front edge of the seat, to the left. The seat can then be moved forwards or backwards to the required position.



Fuelling

The engine should be run on 87 octane (or higher) unleaded petrol/gasoline (no oil added). For more information about methanol and ethanol fuels, see "Technical Data".

Do not fill the tank completely, leave an expansion area of at least 2.5 cm (1").

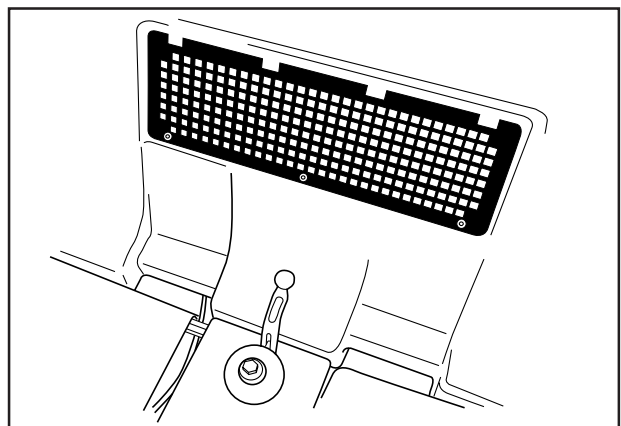


WARNING!
Petrol/gasoline is highly inflammable. Observe care and fill up with fuel outdoors (see safety instructions).

IMPORTANT INFORMATION

The air intake grille in the engine cover behind the driver's seat must not be blocked by, for example, clothing, leaves, grass or dirt.

Impaired cooling of the engine. Risk of major engine damage.



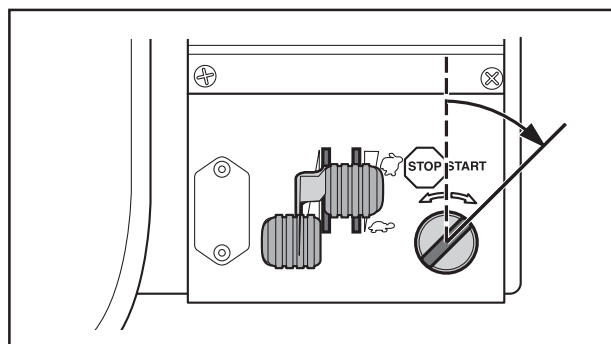
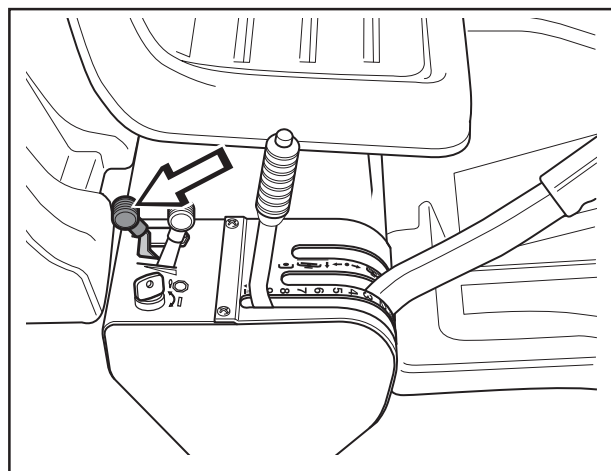
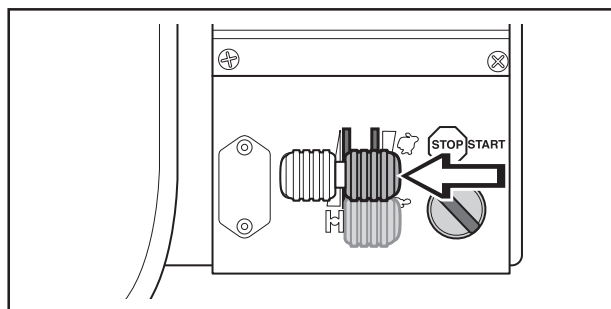
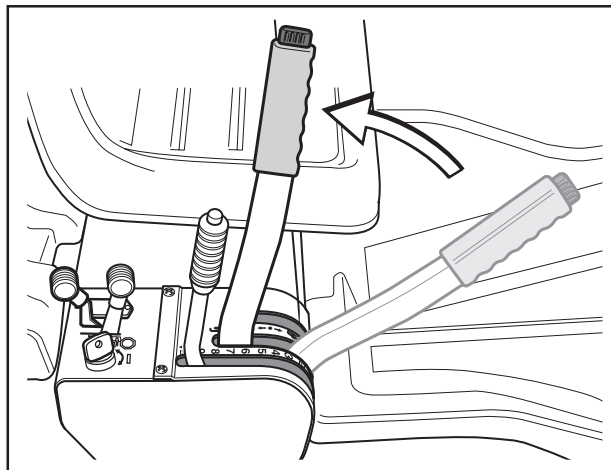
DRIVING

Before starting

- Read the safety instructions and information on the location and function of the controls before starting, see page 5-14.
- Conduct daily maintenance before starting (see “Maintenance schedule” on page 20).

Starting the engine

1. Lift up the cutting unit by pulling the lever backwards to locked position (transport position) and apply the parking brake.
2. Move the throttle control to the middle position.
3. If the engine is cold move the choke lever backwards to its end position.
4. Turn the ignition key to the start position.



DRIVING

- When the engine starts release the ignition key immediately back to neutral position.

IMPORTANT INFORMATION

Do not run the starter for more than about 5 seconds at a time. If the engine does not start, wait about 15 seconds before trying again.

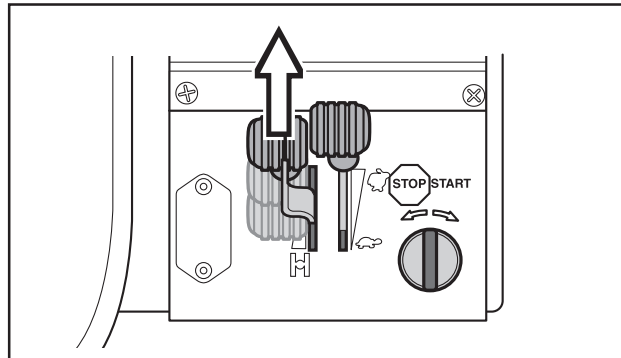
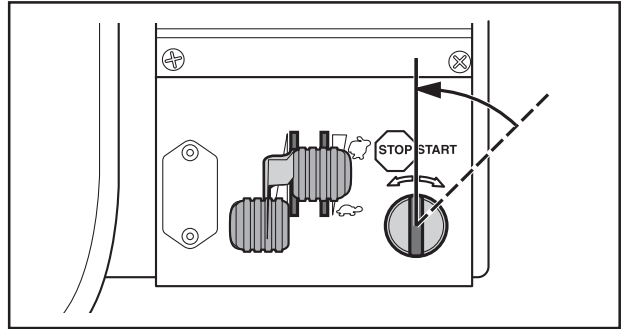
- Push the choke lever gradually forward when the engine has started.
- Set the required engine speed with the throttle control.

Let the engine run at moderate speed or half throttle for 3-5 minutes before subjecting it to heavy load.



WARNING!

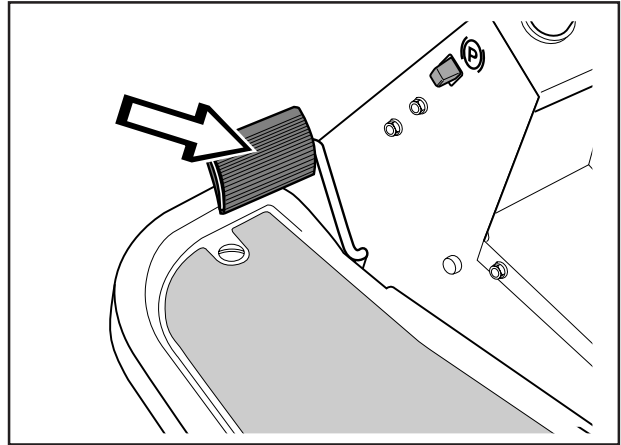
Never run the engine indoors, in enclosed or poorly ventilated areas. The exhaust fumes contain toxic carbon monoxide.



DRIVING

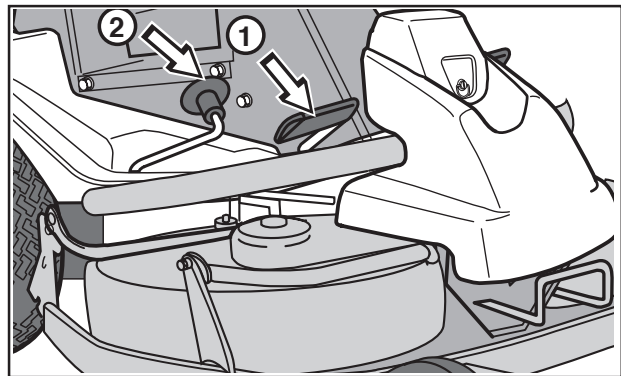
Driving the machine

1. Release the parking brake by pressing down the parking brake pedeal and then releasing it.



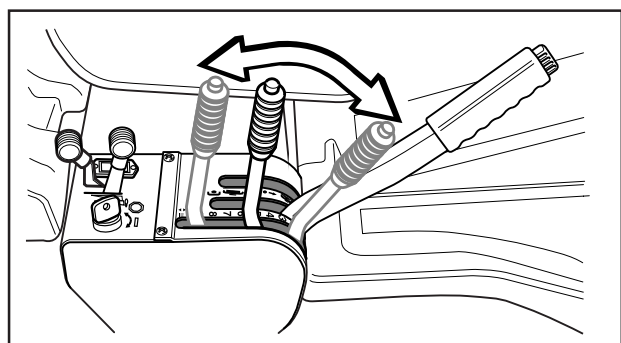
2. Carefully press down one of the pedals until the correct speed is reached.

To drive forwards: press down pedal (1).
To reverse: press down pedal (2).



3. Select the required cutting height (1-9) with the cutting height lever.

To obtain a uniform cutting height it is important that the tyre pressures are equal on both front wheels 60 kPa/8.5 PSI.

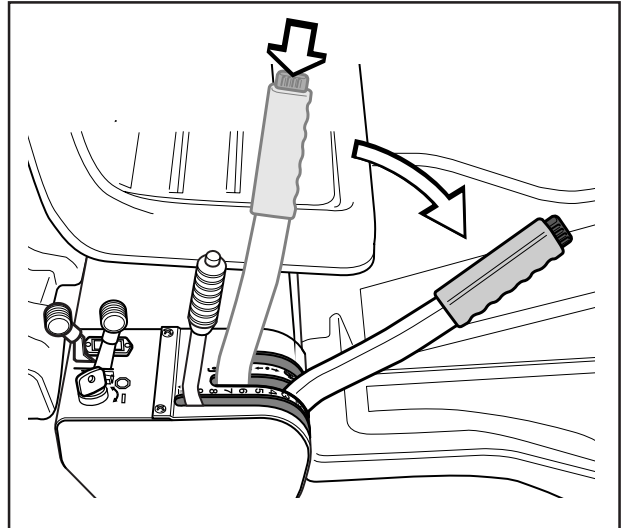


DRIVING

4. Push in the lock button on the lift lever and lower down the cutting unit.

IMPORTANT INFORMATION

The service-life of the drive belts increases considerably if the engine is run at low speed when engaging the blades. For this reason do not increase the throttle until the cutting unit has been lowered to the cutting position.

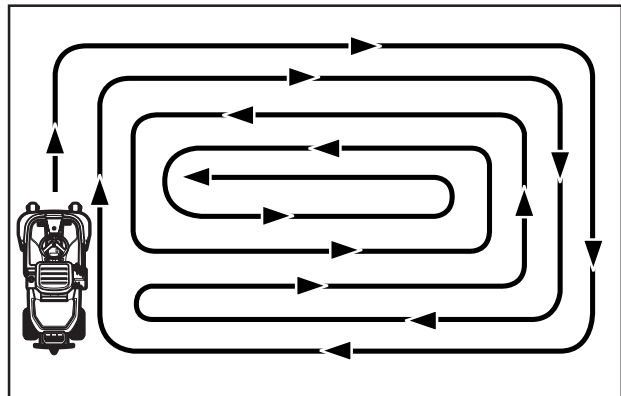


WARNING!

Clear the lawn from stones and other object which can be thrown out by the blades.

Cutting tips

- Localise and mark stones and other fixed objects to avoid collision.
- Start with a high cutting height and reduce down until the required cutting result are obtained.
- The cutting results are best with a high engine speed (fast rotating blades) and low driving speed (slow moving machine). If the grass is not too high and thick, the driving speed can be increased without noticeably depreciating the mowing result.
- The best lawns are achieved if the grass is cut often. Mowing becomes more uniform and the grass cuttings become more evenly distributed over the surface. The total time consumption is not greater since it is possible to select a higher driving speed without inferior mowing results.
- Avoid mowing a wet lawn. The mowing results are inferior since the wheels sink down into the soft lawn.
- Wash down the underside of the cutting unit with water after use. Do not use a high pressure jet. Put the cutting unit in the service position while doing this.
- If you use the mulching function, it is important to mow the grass regularly.



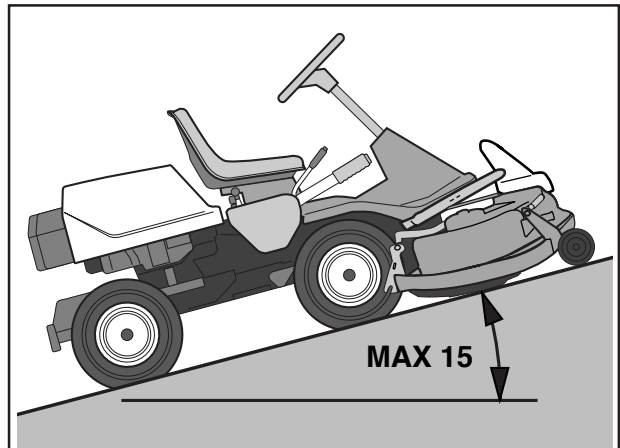
Mowing pattern

DRIVING



WARNING!

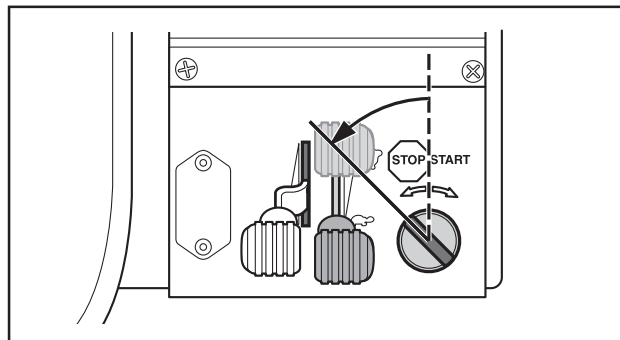
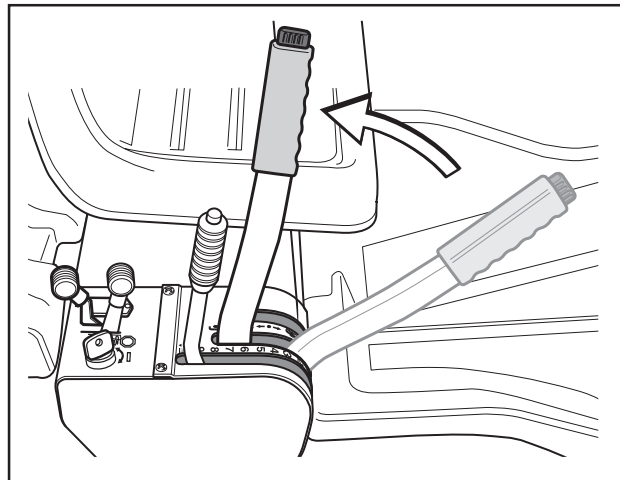
Never drive the machine on ground with a slope of more than 15°. Mow slopes upwards and downwards, never across. Avoid sudden changes in direction.



Stopping the engine

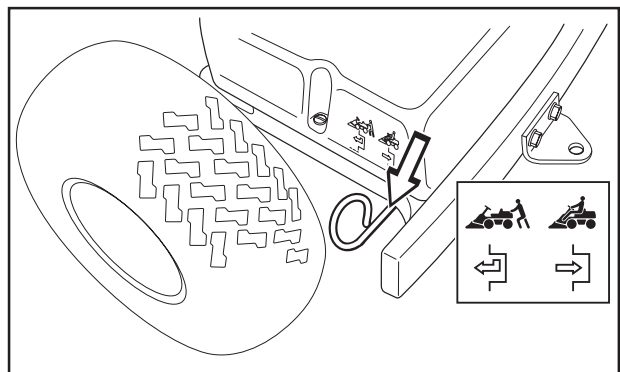
Preferably allow the engine to idle for a minute to obtain normal working temperature before stopping it if it has been working hard. Avoid idling the engine for long periods, as there is a risk of carbon build-up on the spark plugs.

1. Lift up the cutting unit by pulling the lever back to the locked position.
2. Move the throttle control to the MIN. position. Turn the ignition key to the STOP.
3. When the Rider is at a standstill, press down the parking brake and push in the locking button.



Release lever

The release control must be pulled out in order for the Rider to be moved when the engine is shutdown.



MAINTENANCE

Maintenance schedule

The following maintenance items should be conducted on the machine. For the items not described in these instructions, ask an authorised service workshop.

Maintenance	Page	Daily maintenance before start	Maintenance interval in hours			
			25	50	100	200
Check the engine's oil level	39	●				
Check / clean the engine's cooling air inlets	28	●				
Check the fuel pump's air filter	25	●				
Check the steering wires	22	●				
Check the battery	25	●				
Check the safety system	27	●				
Check screws and nuts	–	○				
Check for fuel and oil leakage	–	○				
Clean around the silencer	–	○				
Check the silencer	23		●			
Check the cutting unit	30		●			
Check the tyre pressures 60 kPa/8.5 PSI	28		●			
Lubricating the belt adjuster ¹⁾	41		●			
Lubricate joints and shafts ¹⁾	41		●			
Clean the foam element in the air filter ²⁾	24		●			
Check the V-belts	–		○			
Clean the hydrostat's cooling fins	–		○			
Change the engine oil ^{3,4)}	40			● ³⁾	● ³⁾	
Check the transmission's oil level	41			●		
Adjusting the parking brake	22			●		
Check and adjust the throttle wire	23			●		
Check and adjust the choke wire	23			●		
Clean the engine's and hydrostat's cooling flanges ²⁾	–			○		
Clean/Replace the paper element in the air filter ^{2,5)}	24				●	● ⁵⁾
Clean dust and dirt from cylinder and cylinder head fins					○	
Tighten screws and nuts	–				○	
Replace the fuel filter	24				●	
Clean and replace spark plugs	26				●	
Change the oil filter	40					●
Check and adjust valve clearance ⁶⁾	–					
Clean the engine's and hydrostat's cooling flanges ⁶⁾	–					
Clean combustion chambers ⁶⁾	–					
Clean and lap valve seating surface ⁶⁾	–					

¹⁾ For daily use of the machine, lubrication should be conducted twice a week. ²⁾ During dusty conditions cleaning and replacement should be more frequent. ³⁾ First change after 8 hours. Replace after every 50 hours with heavy loads or high temperatures. ⁴⁾ Change the oil filter every 200 hours. ⁵⁾ Replace the paper element yearly or every 200 hours. ⁶⁾ Conducted by an authorised service workshop.

● = Described in these instructions. ○ = Not described in these instructions.



WARNING!

No service procedures must be conducted on the engine or cutting unit unless:

- The engine is switched off.
- The ignition key is removed.
- The ignition cable is removed from the plug.
- The parking brake is applied.
- The cutting unit is disengaged.

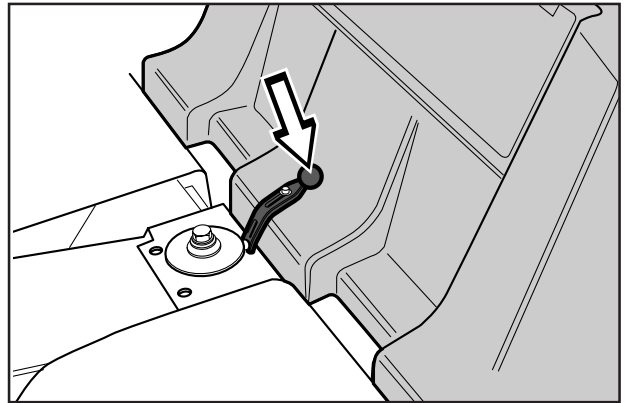
MAINTENANCE

Removing the machine hoods

Engine hood

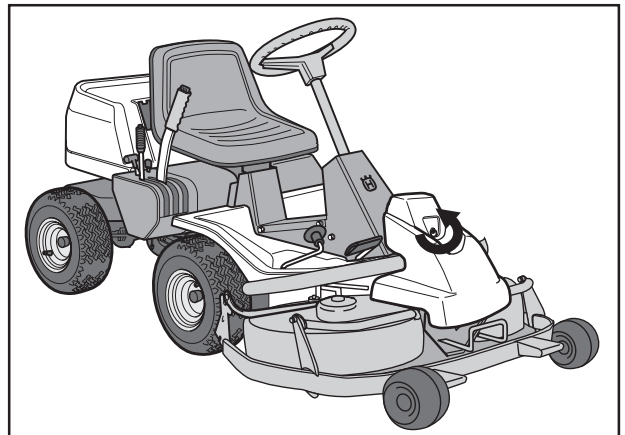
The engine is accessible for servicing when the engine hood is lifted up.

Tilt the seat forward, release the rubber strap under the seat, and tilt the hood backwards.



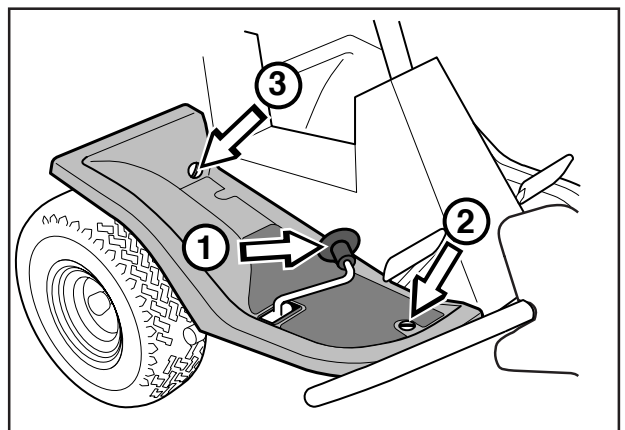
Front hood

Release the clip on the front hood and lift off the hood.



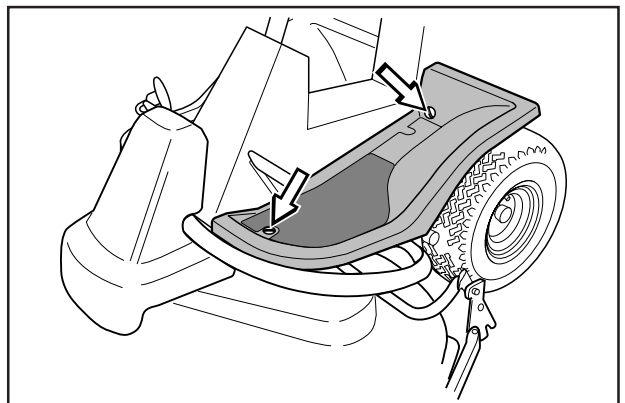
Right-hand fender

Remove the knob (1), the screws (2 and 3) and lift off the fender.



Left-hand fender

Release the screws in the fender (2) and lift off the fender.



MAINTENANCE

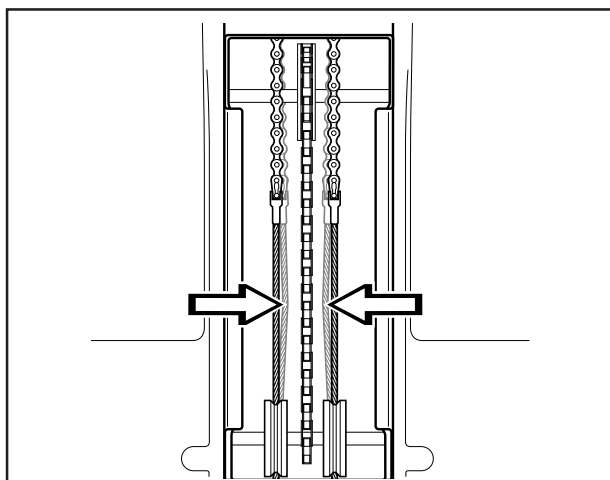
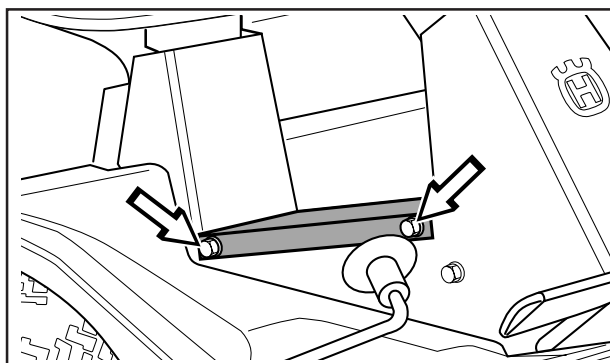
Checking and adjustment of the steering wires

The steering is controlled by means of wires.

These can in time become slack, which implies that the adjustment of the steering becomes altered.

Check and adjust the steering as follows:

1. Dismantle the frame-plate by releasing the screws (two on each side).
2. Check the tension of the steering wires by pushing them together as shown in the diagram. It should be possible to push them together so that the distance between them is half as much, without using unnecessary force.

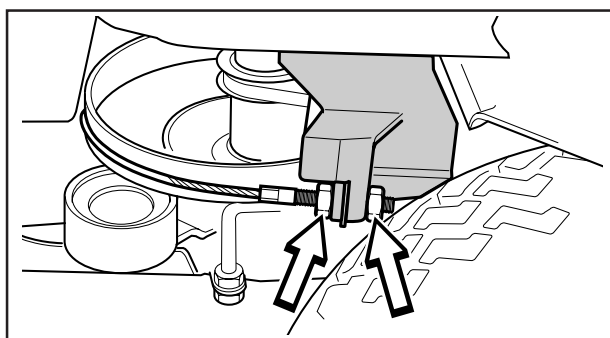


3. If necessary, the wires can be adjusted by tightening the adjuster nuts on each side of the steering collar. Do not tension the wires too much, they should only be *tightened* against the steering collar.

Support the wire so it does not twist.

If you tension only one side, the steering wheel's centre position may change.

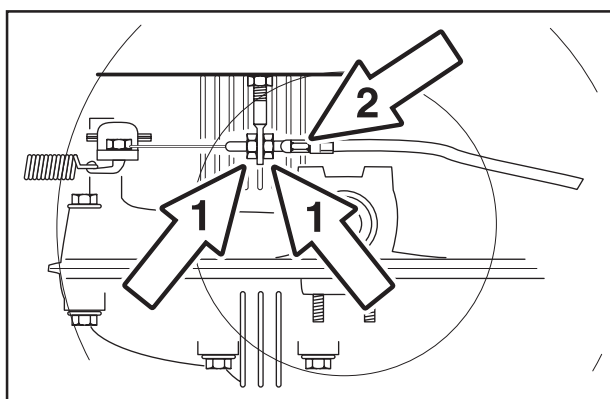
Check the wire tension as set out in point 2 after you have made the adjustment.



Adjusting the parking brake

The parking brake is adjusted as follows:

1. Loosen the locking nuts (1).
2. Tension the cable using the adjuster screw (2) until the play in the cable is taken up.
3. Tighten the locking nuts (1).
4. The parking brake should be checked again after the adjustment has been made.



WARNING!
A poorly adjusted parking brake can result in reduced braking ability.

MAINTENANCE

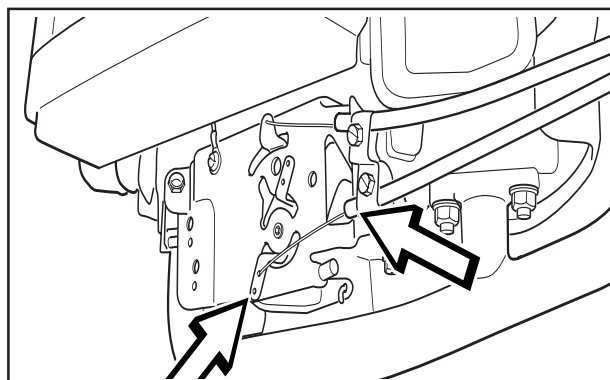
Checking and adjustment of the throttle wire

Check that the engine responds to the throttle control and that the correct engine speed is achieved at full throttle.

If in doubt, contact the service workshop.

If adjustment is necessary, adjust the lower wire as follows:

1. Release the clamping screw that secures the wire casing and set the throttle control to full throttle.
2. Check that the throttle wire is attached to the correct hole in the lower lever, see diagram.
3. Pull the throttle wire casing to the far left and tighten the clamping screw.



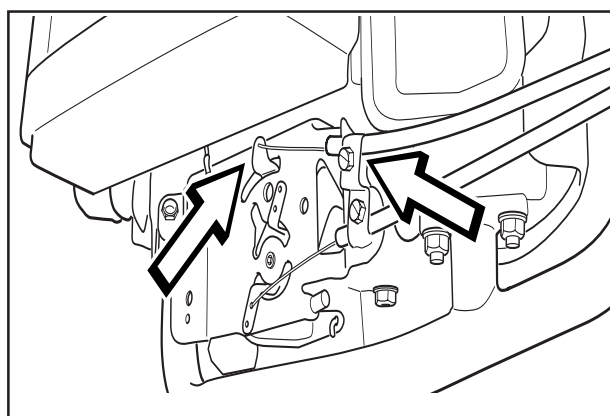
Checking and adjusting the choke wire

If the engine is producing black smoke or is difficult to start then the choke wire (upper wire) may be incorrectly adjusted.

If in doubt contact your service workshop.

If it is necessary to adjust the choke, proceed as follows:

1. Release the clamping screw that secures the wire casing and set the choke control to maximum choke.
2. Check that the throttle wire is attached to the upper lever, see diagram.
3. Pull the choke wire casing to the far right and tighten the clamping screw.



Inspecting the muffler

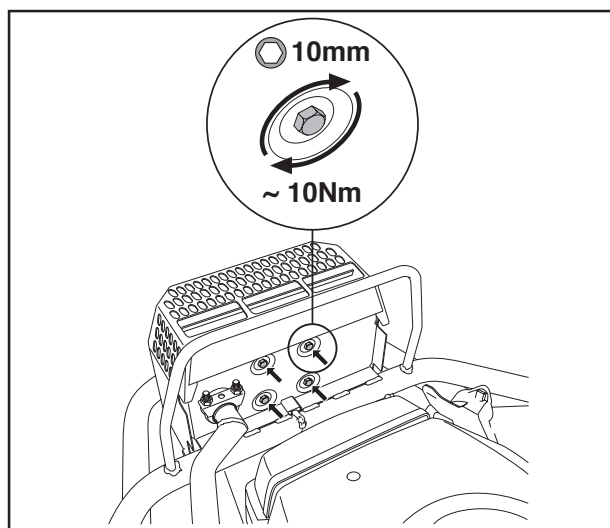
Check regularly that the muffler is complete and secured correctly.

Temperature variations and vibrations can mean that the tightening torque for the screws drops. The screws should be checked when servicing to guarantee the correct torque. The tightening torque should be about 10 Nm. Never use a defective muffler.



WARNING!!

The muffler gets very hot in use and remains so for a short time afterwards. Contact can result in burns. Remember the risk of fire.



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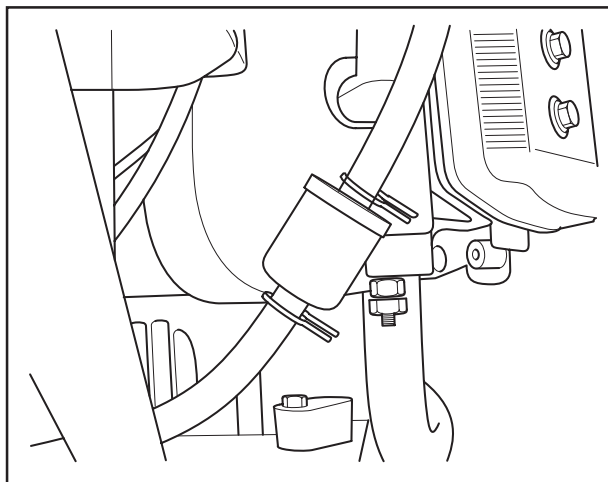
MAINTENANCE

Replacing the fuel filter

Replace the pipe fitted fuel filter every 100 running hours (once per season) or more frequently if it is clogged.

Replace the filter as follows:

1. Fold open the engine cover.
2. Move the hose clips away from the filter. Use a pair of flat pliers.
3. Pull off the filter from the hose ends.
4. Press in the new filter on the hose ends. If necessary soap solution can be applied on the filter ends to simplify fitting.
5. Push the hose clips back on the filter.



Replacing the air filter



WARNING!
Exhaust system is hot. Allow to cool down. Risk of finger injuries.

If the engine seems to lack power or runs irregularly, the reason may be a clogged air filter.

It is therefore important to replace the air filter at regular intervals (see "Maintenance schedule" for correct service interval).

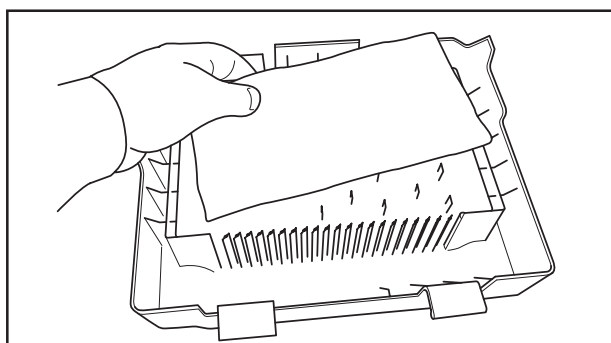
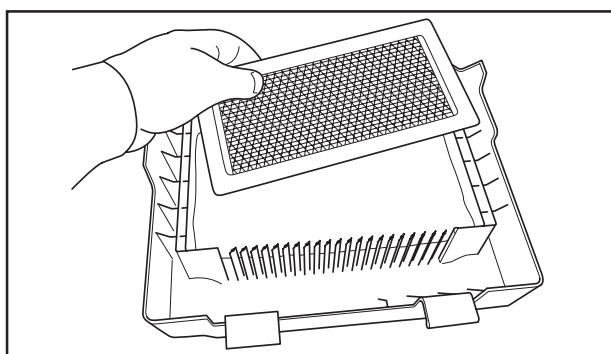
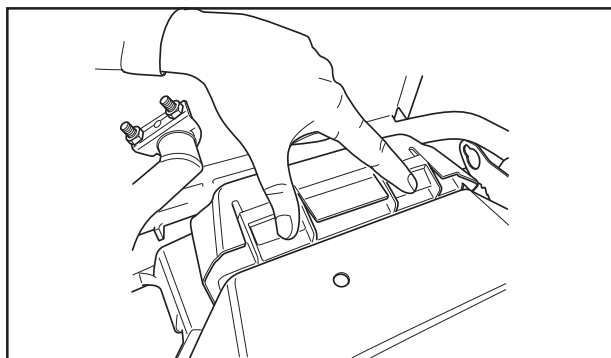
1. Remove the air cleaner case from the air cleaner body by pushing down the latches with fingers.

IMPORTANT INFORMATION

Never run the engine with the air cleaner removed.

Filters should not be oiled. They should be assembled dry.

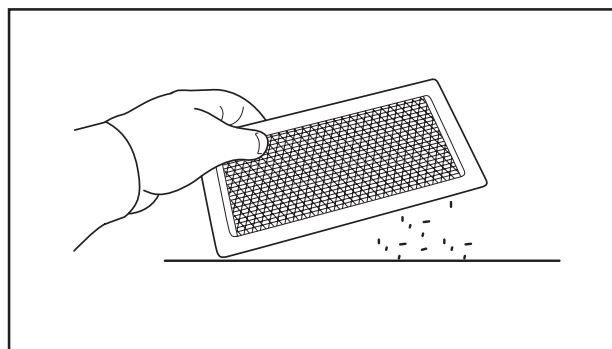
2. Lift out the paper element and the foam element from the air cleaner case.
3. Clean the foam element by washing it in detergent and water.
4. Dry the foam element thoroughly.



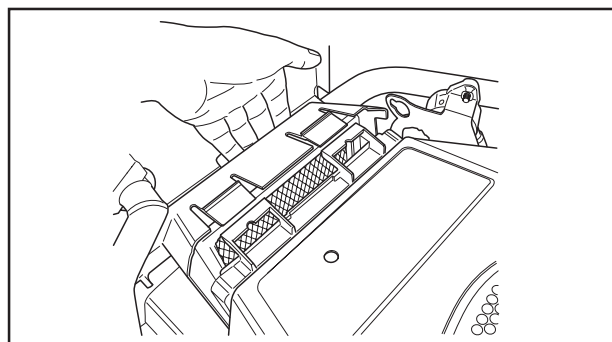
MAINTENANCE

5. Clean the paper element by tapping gently to remove dust. If the element is very dirty, replace it with a new one.

Always replace the paper element every 200 hours.



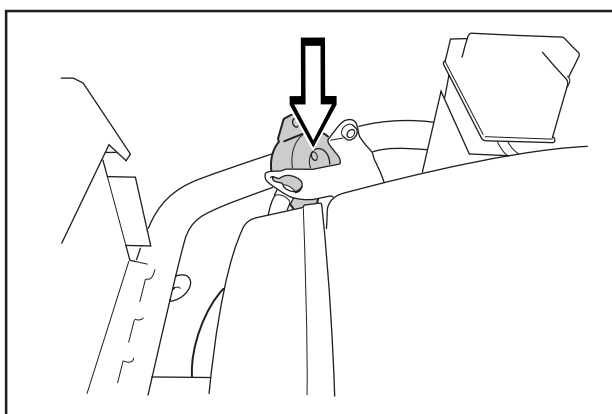
6. Reinstall the foam element and the paper element into the air cleaner case.
7. Reinstall the air cleaner case into the air cleaner body by putting the hooks on the bottom of the air cleaner case into the air cleaner body bottom.



Checking of the fuel pump's air filter

Check regularly that the fuel pump's air filter is free from dirt. The filter can, when necessary, be cleaned with a brush.

- Remove the screws and fold out the pump from the bracket. No hoses are to be removed.
- Reinstall the pump to the bracket.



Check the level of the battery acid

Check that the level of the battery acid lies between the markings. Top up the cells with *only* distilled water.



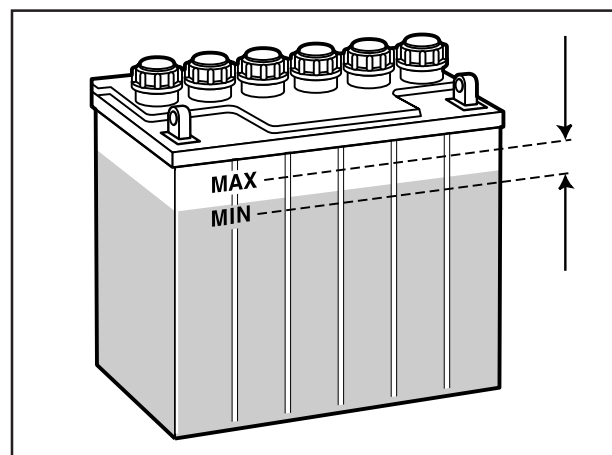
WARNING!
Procedures on contact with acid

External: Rinse well with plenty of water.

Internal: Drink large quantities of water or milk. Contact a doctor as soon as possible.

Eyes: Rinse well with plenty of water. Contact a doctor as soon as possible.

Batteries emit explosive gas. Sparks, flames and cigarettes must absolutely not be brought into the vicinity of the battery.



MAINTENANCE

Ignition system

The engine is equipped with an electronic ignition system. Only the spark plugs require maintenance.

For recommended spark plug, see chapter "Technical data".

IMPORTANT INFORMATION

Fitting the wrong spark plug type can damage the engine.

1. Remove the ignition cable shoe and clean around the spark plug.
2. Remove the spark plug with a 3/4" (19 mm) spark plug socket wrench.
3. Check the spark plug. Replace the spark plug if the electrodes are burned or if the insulation is cracked or damaged. Clean the spark plug with a steel brush if it is to be reused.
4. Measure the electrode gap with a gapping tool. The gap should be 0.75 mm/0.030". Adjust as necessary by bending the side electrode.
5. Reinsert the spark plug, turning by hand to avoid damaging the threads.
6. After the spark plug is seated, tighten it using a spark plug wrench so that the washer is compressed. A used spark plug should be turned 1/8 of a turn from the seated position. A new spark plug should be turned 1/4 a turn from the seated position.
7. Replace the ignition cable shoe.

IMPORTANT INFORMATION

Inadequately tightened spark plugs can cause overheating and damage the engine. Tightening the spark plug too much can damage the threads in the cylinder head.

MAINTENANCE

Inspecting the safety system

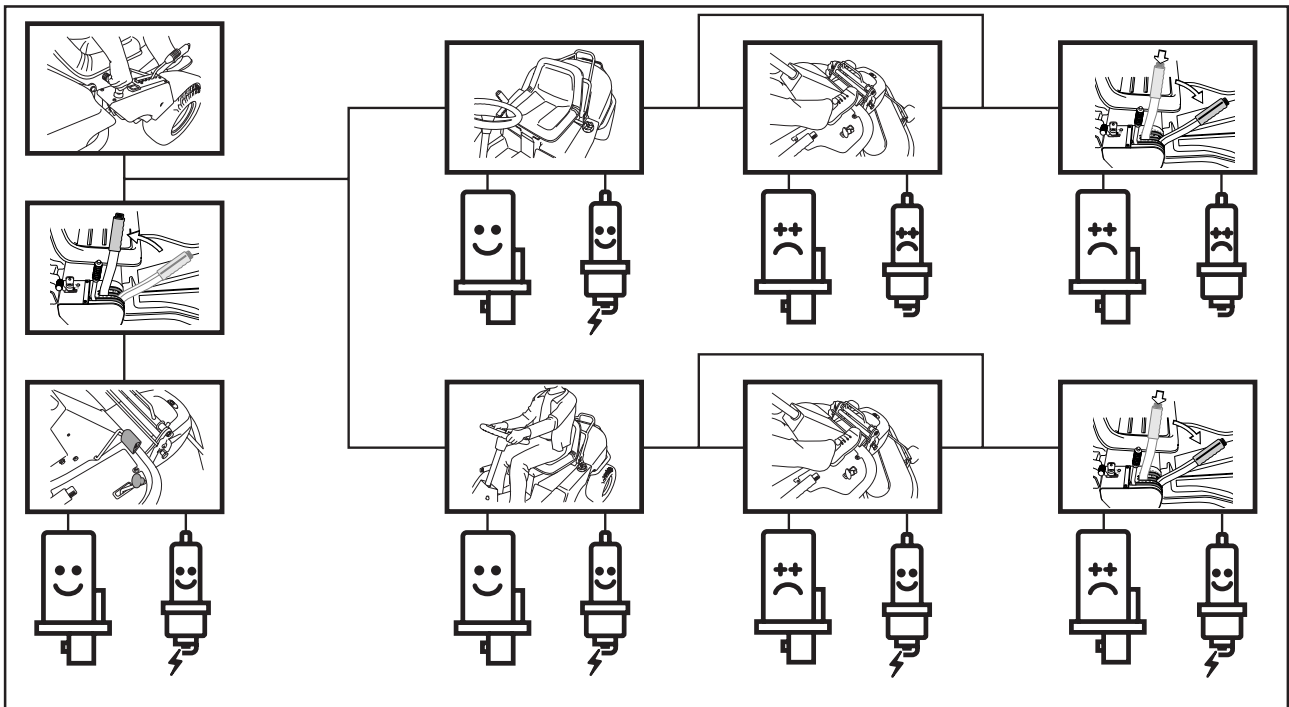
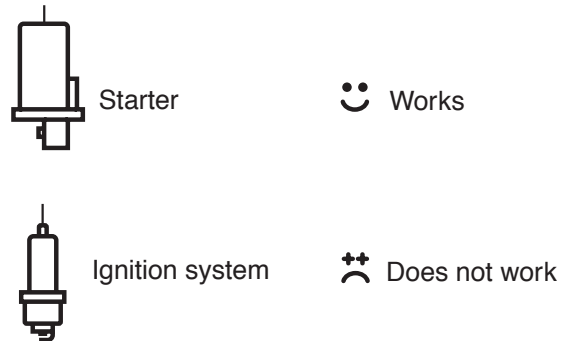
The Rider is equipped with a safety system that prevents starting or driving under the following conditions:

The engine should only be possible to start when the cutting unit is in its raised position and the hydrostat pedals are in the neutral position.

The driver does not need to be seated in the driver's seat.

Make daily inspections to ensure that the safety system works by attempting to start the engine when one of the conditions is not met. Change the conditions and try again.

Check that the engine stops if you temporarily move out off the driver's seat while the cutting unit is lowered or the hydrostat pedals are not in the neutral position.



MAINTENANCE

Main fuse

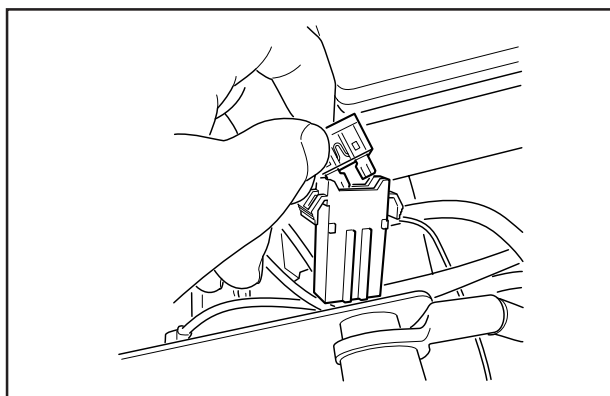
The fuse is located in a loose holder under the battery case cover, in front of the battery.

Type: Flat-blade U-link, 15 A.

Do not use any other type of fuse when replacing.

A blown fuse indicates that the U-link has burnt off. Pull the fuse out of the holder when replacing.

The fuse is used to protect the electrical system. If it blows again shortly after replacing, then there is a short circuit which must be rectified before the machine is used again.



Checking the tyre pressure

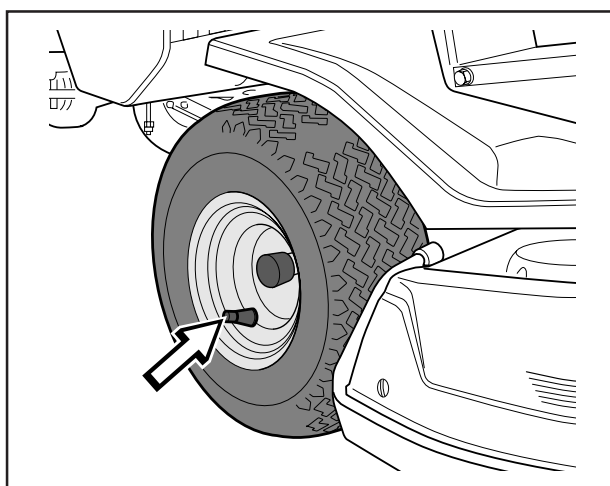
The tyre pressure should be 60 kPa (0.6 kp/cm²/8.5 PSI) all round.

To improve driving the pressure on the rear tyres can be reduced to 40 kPa (0.4 kp/cm²/5.6 PSI).

The maximum tyre pressure is 100 kPa (1.0 kp/cm²/14 PSI).

IMPORTANT INFORMATION

Different tyre pressures on the front tyres will result in the blades cutting the grass at different heights.



Checking the engine's cooling air intake

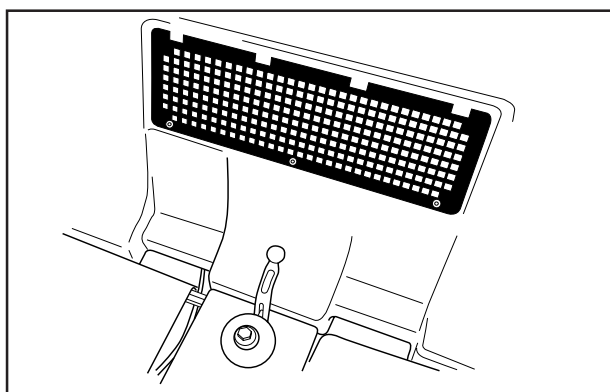
Clean the air intake grille in the engine cover behind the driver's seat.

Fold open the engine cover.

Check that the cooling intake is free from leaves, grass and dirt.

Check the air duct, located on the inside of the engine cover, ensure it is clean and does not rub against the cooling air intake.

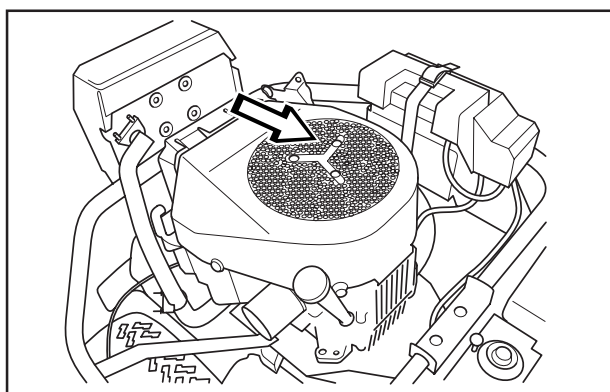
A blocked cooling intake will interfere with the cooling of the engine, which can damage the engine.



Air intake grille



WARNING!
The cooling air intake rotates when the engine is running. Mind your fingers.



Cooling air intake

MAINTENANCE

Fitting the cutting unit

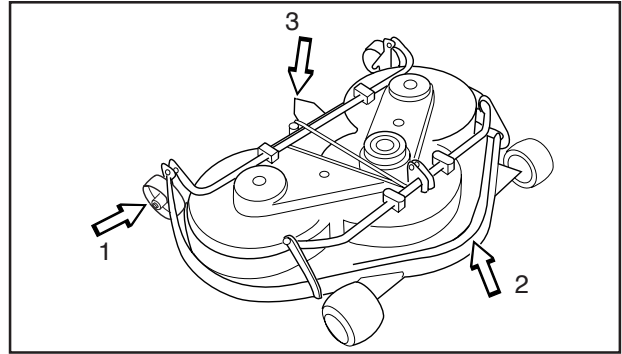


WARNING!
Wear protective glasses when fitting the cutting unit. The collet spring which tensions up the belt can go off and cause personal injury.

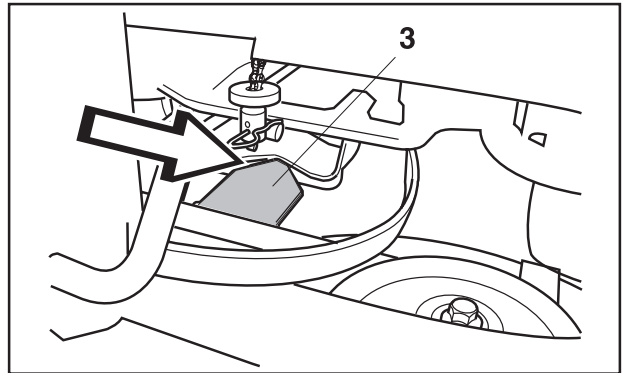
1. Place the Rider on a flat surface and apply the parking brake. Check that the lever for setting the cutting height is in the lowest position.

Make sure the support wheels are fitted to the cutting unit (1).

2. Grasp the handle at the front or hold the frame of the cutting unit (2) and slide the unit underneath the rider mower.



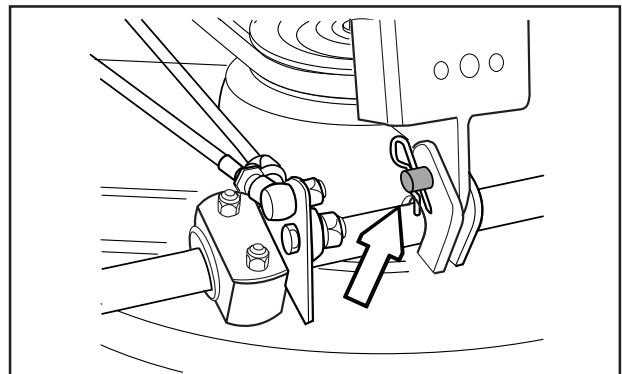
Make sure that the tongue (3) on the cutting unit engages correctly.



3. Insert the bolt and secure it with a locking pin.

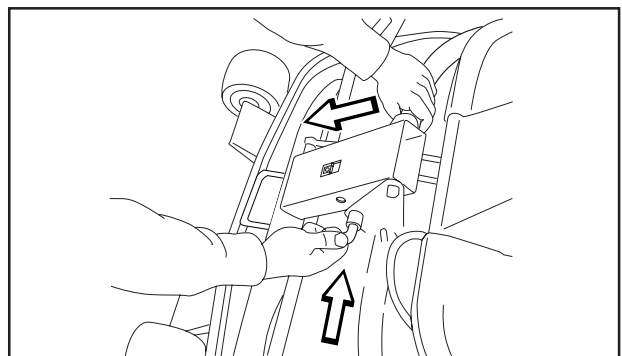


WARNING!
Observe caution to avoid trapping your hand.



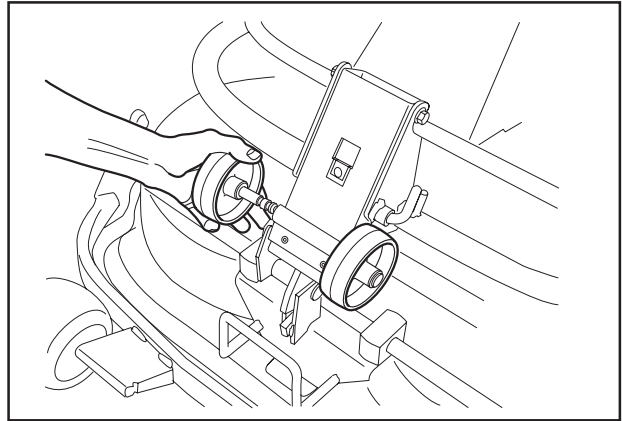
4. Press down the frame and insert the pin. Fit the drive belt around the drive wheels of the cutting unit.

5. Hook up the height adjustment strut.

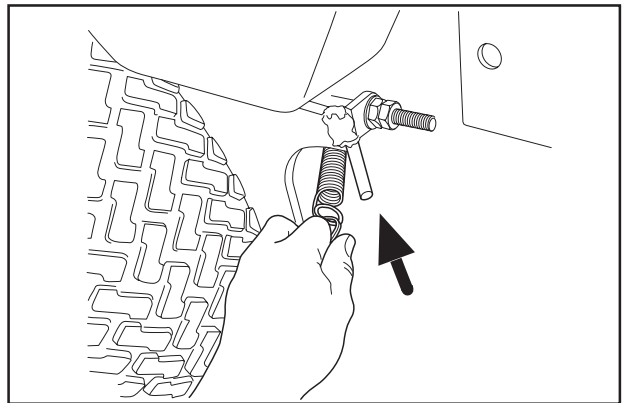


MAINTENANCE

6. Move the support wheels to their parking position.
7. Fit the front cover.



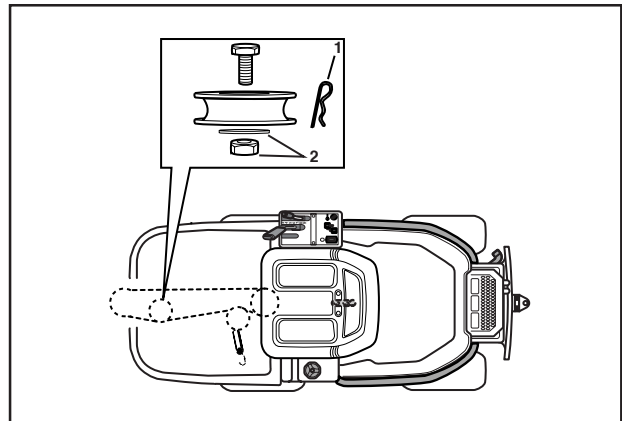
8. Secure the collet spring.



Installing BioClip 90

In order to install BioClip 90 the drive belt support wheel must first be removed.

1. Release the collet spring, see fig above.
2. Remove the locking pin (1) that is located next to the support wheel.
3. Screw off the nut and washer (2) under the centre of the support wheel. Remove the screw and support wheel.
4. Fit the cutting unit according to the instructions above.

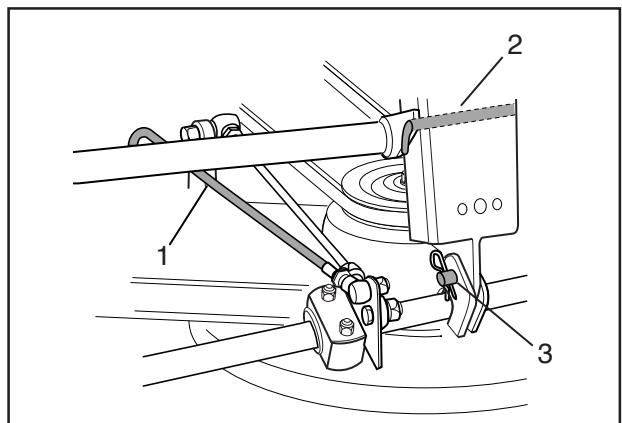


Removing the cutting unit



WARNING!
Wear protective glasses when removing the cutting unit. The collet spring which tensions up the belt can go off and cause personal injury.

1. Carry out points 1-9 to put the cutting unit in the service position, see "Service position for the cutting unit".
2. Remove the bolt (3) and lift off the cutting unit.



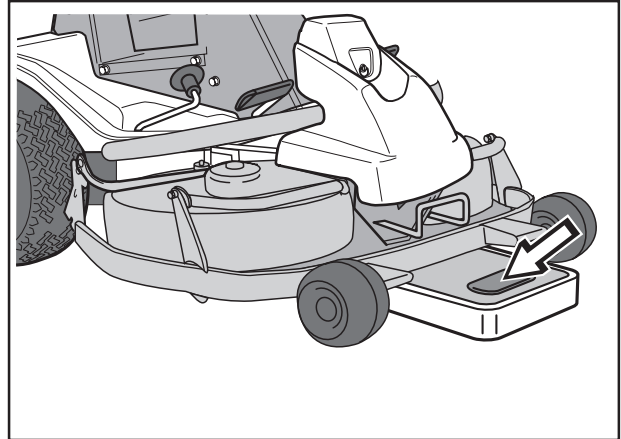
MAINTENANCE

Checking and adjusting the cutting unit's ground pressure

To achieve the best cutting results the cutting unit should follow the underlying surface without pressing too hard against it.

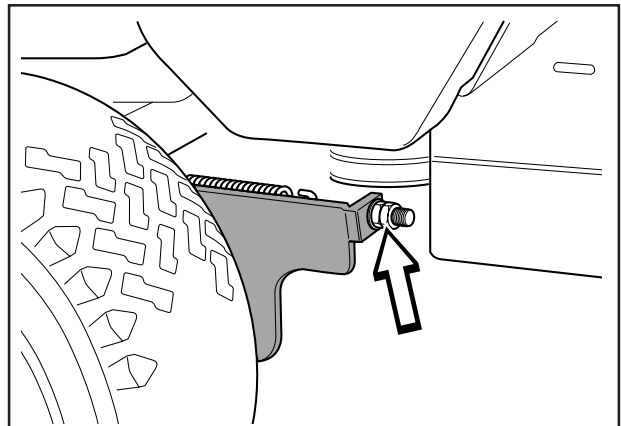
The pressure is adjusted with a screw on each side of the machine.

1. Check the air pressure in the tyres 60 kPa (0.6 kp/cm²/8.5 PSI).
2. Place the Rider on a flat surface.
3. Put the lifting lever in the mowing position.
4. Place a set of bathroom scales under the cutting unit's frame (front edge) so that it rests on the scales. If necessary a block can be placed between the frame and scales so that the support wheels do not bear any weight.



5. Adjust the unit's ground pressure by screwing in or out the adjusting screws located behind the front wheels on both sides.

The ground pressure should be between 12 and 15 kg (26.5-33 lb).

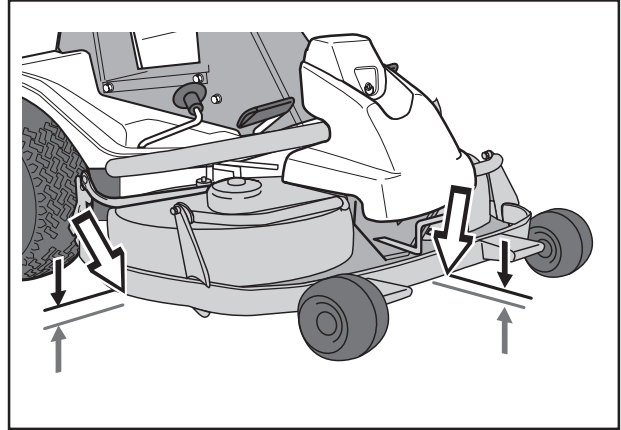


MAINTENANCE

Checking the cutting unit's parallelism

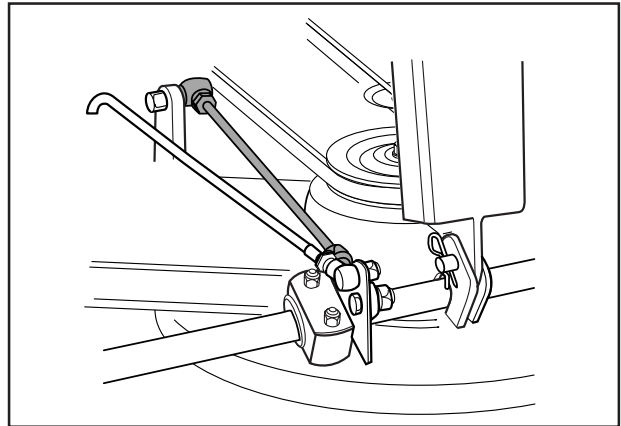
Check the parallelism of the cutting unit as follows:

1. Check the air pressure in the tyres 60 kPa (0.6 kp/cm²/8.5 PSI).
2. Place the machine on a level surface.
3. Put the lifting lever in the mowing position.
4. Measure the distance between the ground and the front and rear edges of the cutting unit hood. The cutting unit should slope forwards slightly so that the rear edge is 2-4 mm (1/8") higher than the front edge.



Adjusting the parallelism of the cutting unit

1. Remove the front hood and right-hand fender.
2. Undo the nuts on the lift strut.
3. Screw out (extend) the stay to raise the rear edge of the cover. Screw in (shorten) the stay to lower the rear edge of the cover.
4. Tighten the nuts after adjustment.
5. On completion of the adjustment the unit's parallelism should be re-checked.
6. Fit the right-hand fender and the front hood.

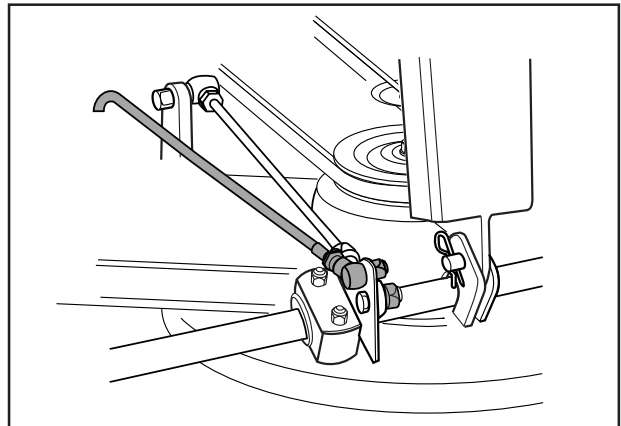


Replacing the cutting unit belt

Belt replacement on BioClip 90

The BioClip 90 is driven by a toothed belt that synchronises rotation of the blades. The belt is located under the cover of the cutting unit.

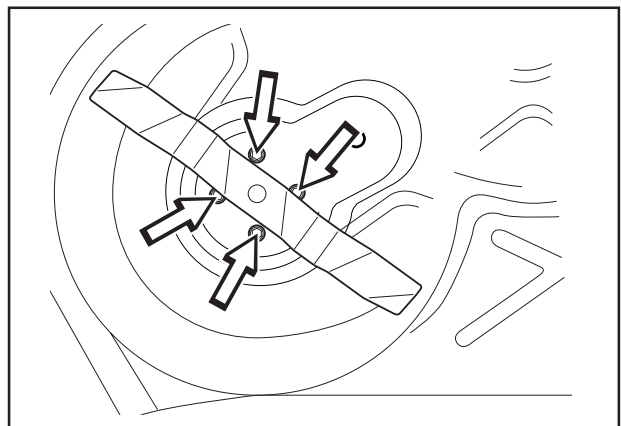
1. Remove the cutting unit.
2. Remove the front bolt from the parallel strut and tip the strut backwards. Push the height adjustment strut forwards.
3. Loosen the bolts holding the protective hood and then lift off the hood.
4. Useful hint: Mark the positions of the blades on the respective pulley using a felt-tip pen.



WARNING!
Wear gloves to protect your hands when working with the blades.

Loosen the nuts on the eccentric plate and turn this away. Loosen the four nuts (see diagram) holding the blade bearing enough so that the bearing can be moved.

Slide the blade bearing in towards the centre and pry off the belt.



MAINTENANCE

IMPORTANT INFORMATION

The blades on a BioClip unit should be set at 90 degrees to each other. In all other cases the blades can collide and cause serious damage to the cutting unit.

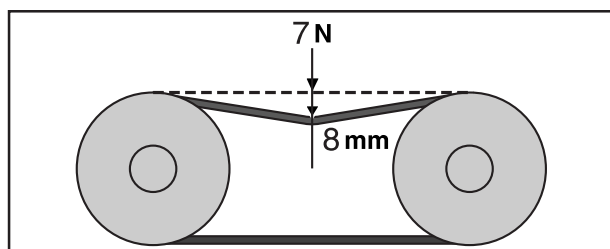
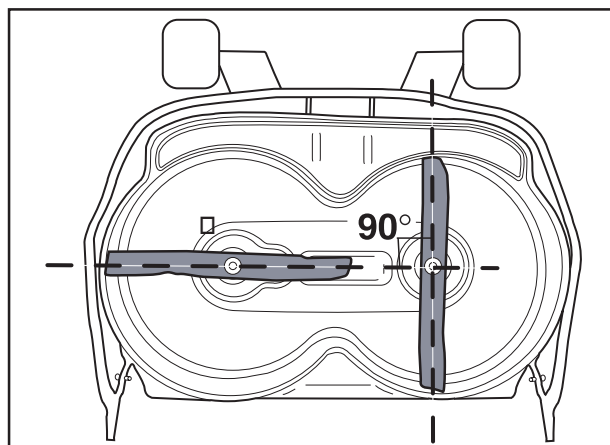
5. Ensure the blades are positioned as set out in the diagram, at 90 degrees to each other, otherwise the belt must be adjusted. When the blade bearings are loose the belt can be moved around to the next tooth.

Tighten the nuts enough so that the bearings rest against the cutting hood but still can be moved.

Tension the belt by turning the eccentric adjuster on top of the cutting hood. Tighten the nut.

Tighten all nuts on the blade bearings.

6. When the belt can be moved 8 mm (5/16") inwards using a force of 7 N (1.5 lb) the belt is adjusted correctly.
7. Fit the protective cover over the belts and replace the parall strut.



Belt replacement on the Combi 103, 112 cutting unit

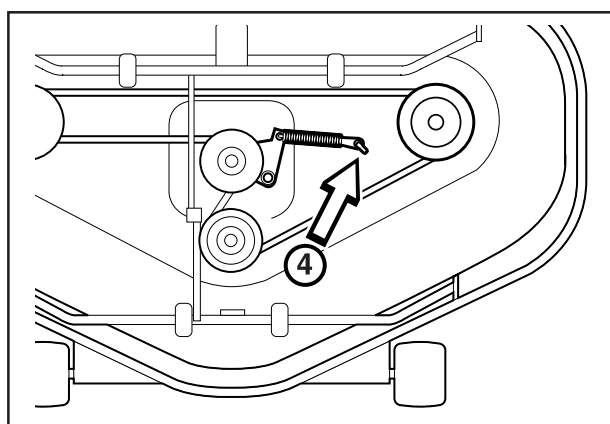
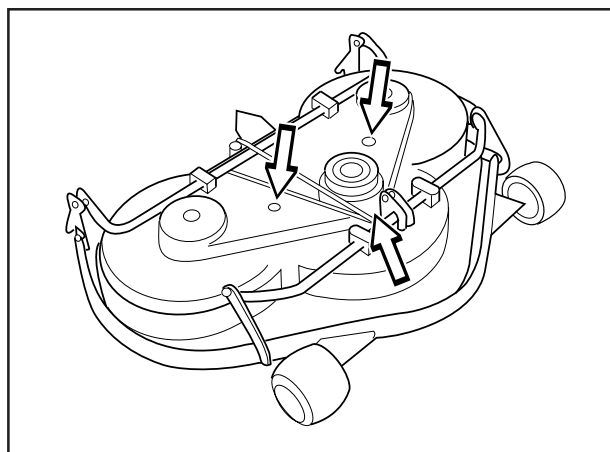


WARNING!
Wear gloves to protect your hands when working with the blades.

On these cutting units with "collision-proof" blades, the blades are driven by one V-belt. Do as follows to change the V-belt:

1. Remove the cutting unit.
2. Undo the bolt on the lift strut and the two screws on the cover. Lift the cover off the cutting unit.
3. Loosen the spring (4) that tensions the V-belt and pry off the belt.

Simply reverse the procedure to fit the new belt.



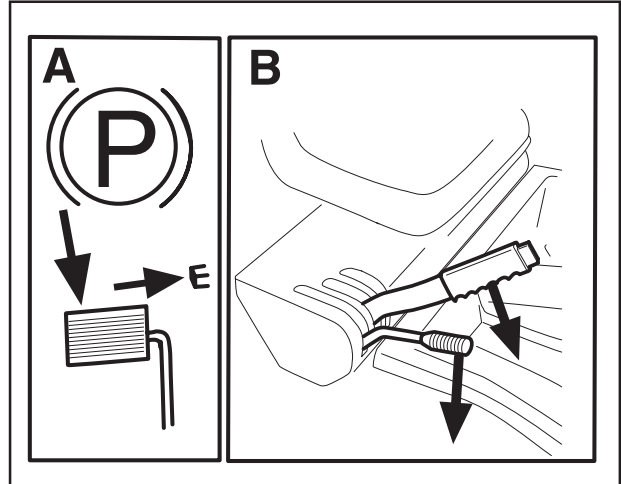
MAINTENANCE

Service position for the cutting unit

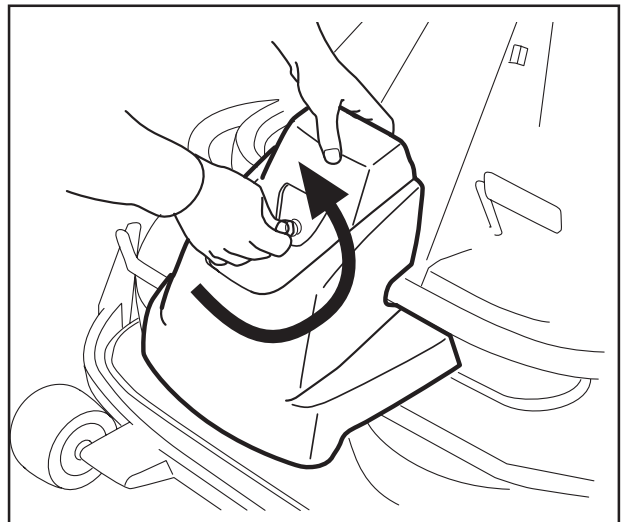
The cutting head can be placed in the service position to provide easy access for cleaning, repairs and servicing. In the service position the cutting unit is raised and locked in the vertical position.

Placing in service position

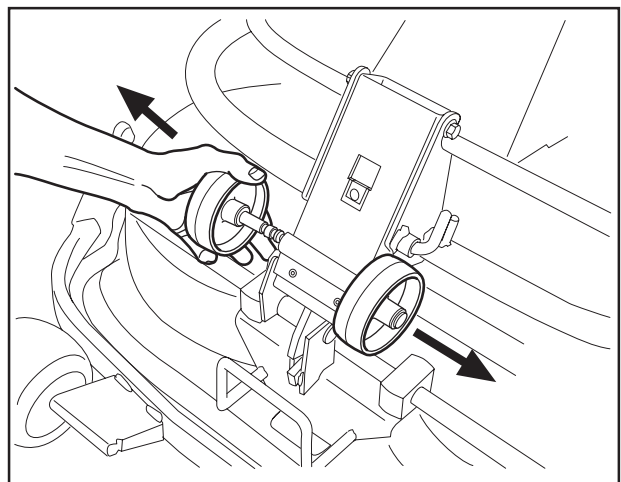
1. Position the machine on flat ground. Apply the parking brake (A). Adjust the cutting unit to the lowest cutting height and lower the cutting unit (B).



2. Remove the front hood by removing the pin. (There are complete instructions on using the service position inside the front hood).



3. Remove the two support wheels from under the front hood.

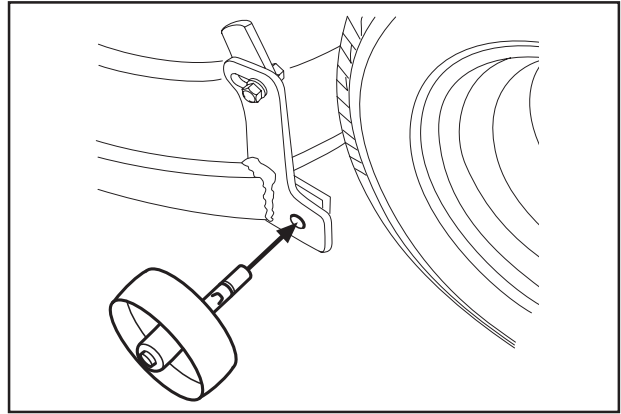


MAINTENANCE

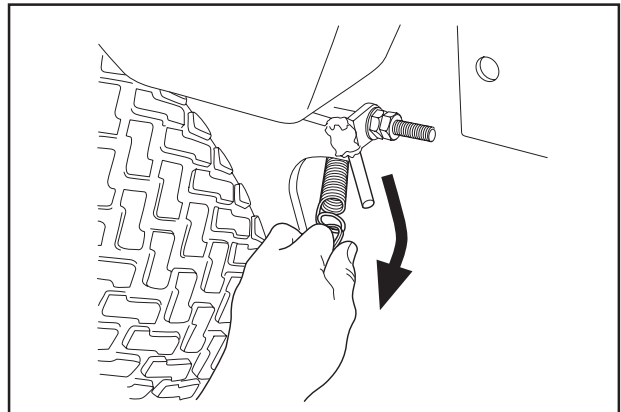
4. Fit the support wheels on either side of the rear of the cutting unit.



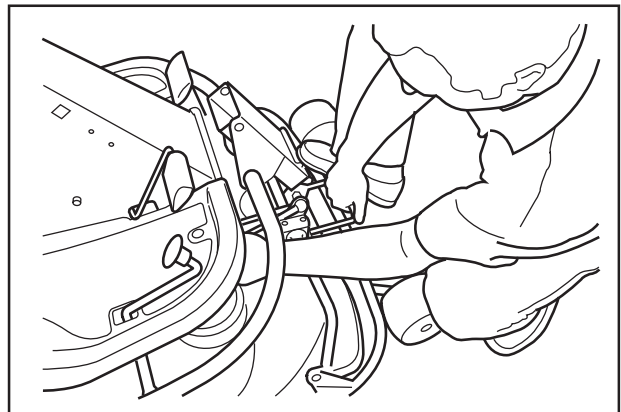
WARNING!
Wear protective glasses when dismantling the cutting unit. The spring which tensions up the belt can go off and cause personal injury.



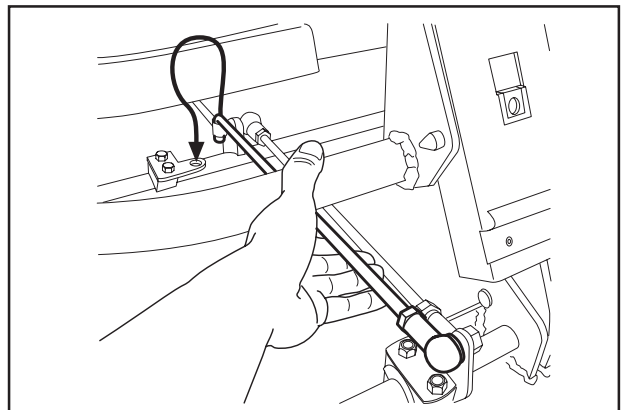
5. Disengage the spring for the drive belt tensioning wheel.



6. Place a foot on the front edge of the cutting unit near the wheel and raise the front edge of the unit to make it easier to remove the lift strut.



7. Engage the strut in the holder.

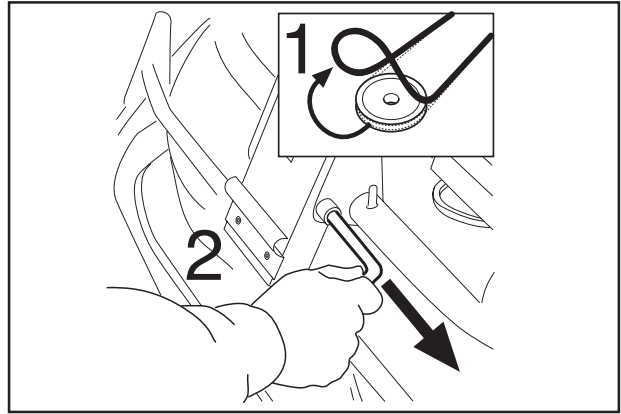


MAINTENANCE

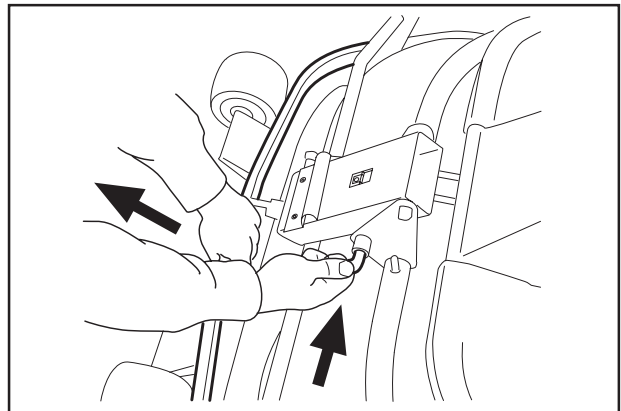


WARNING!
Observe caution to avoid
trapping your hand.

8. Lift off the drive belt (1). Then pull out the pin (2).

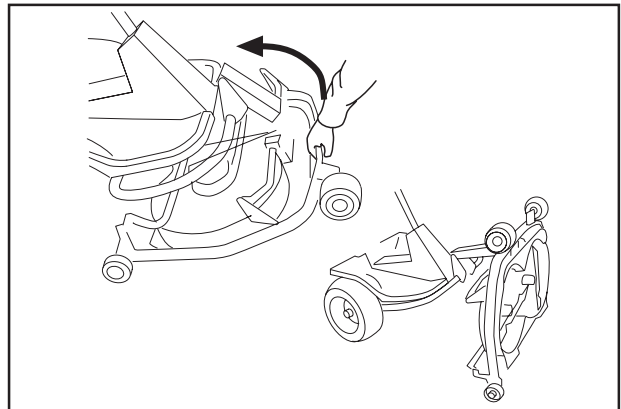


9. Pull the frame forwards and refit the pin.



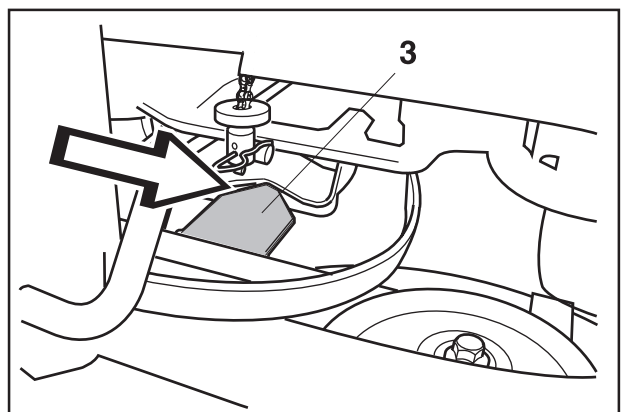
10. Grasp the front edge of the cutting unit, pull out and raise into the service position.

If the cylindrical bolt, which is now holding the cutting unit is removed, the cutting unit can be lifted off.



Restoring from service position

To leave the service position, reverse the procedures set out in "Placing in the service position". Make sure that the cutting unit's "lug" (3) enters the loop correctly on the underside of the machine, see diagram.



MAINTENANCE

Checking the blades

To achieve the best mowing results it is important that the blades are undamaged and well-sharpened.

Check that the blades' attachment screws are tight.

IMPORTANT INFORMATION

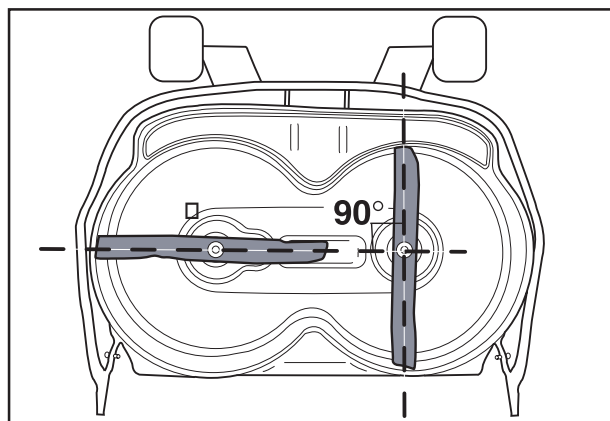
Replacing or sharpening the blades should be conducted by an authorised service workshop.

The blades should be balanced after sharpening.

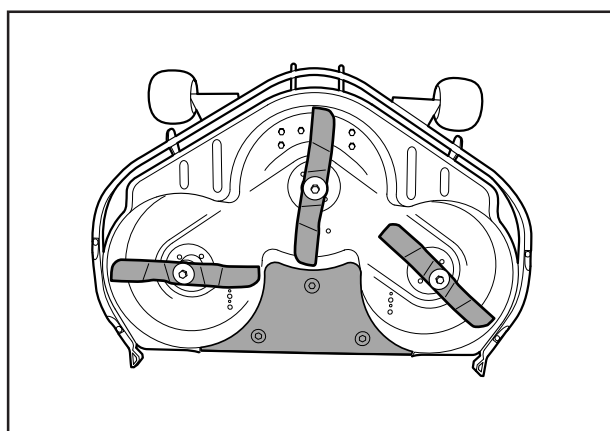
Damaged blades should be replaced when hitting obstacles that result in a breakdown. Let the servicing dealer judge whether the blade can be repaired/ground or must be discarded.

IMPORTANT INFORMATION

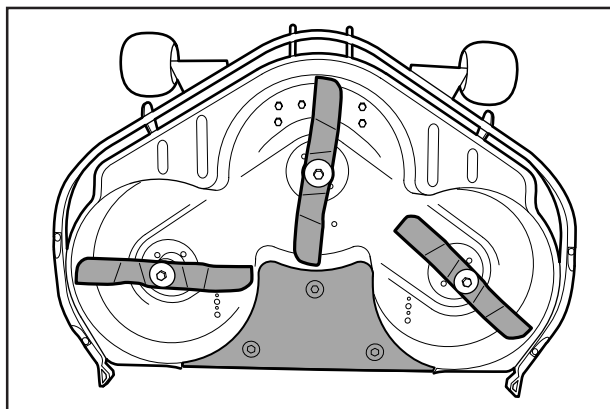
BioClip 90 should always have the blades in the relative position shown in the diagrams with an angle of 90° between the blades. Otherwise the blades can go against each other and damage the unit.



BioClip 90



Combi 103



Combi 112

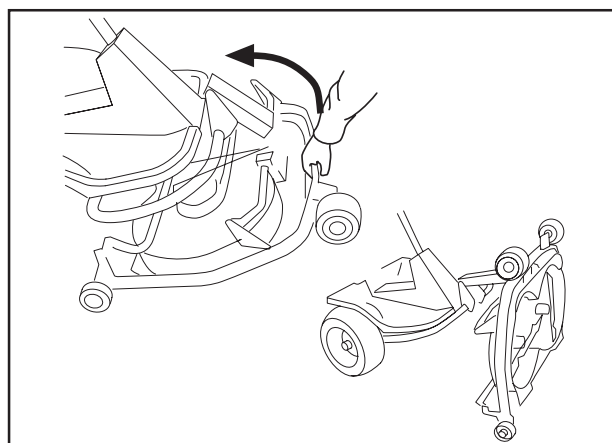
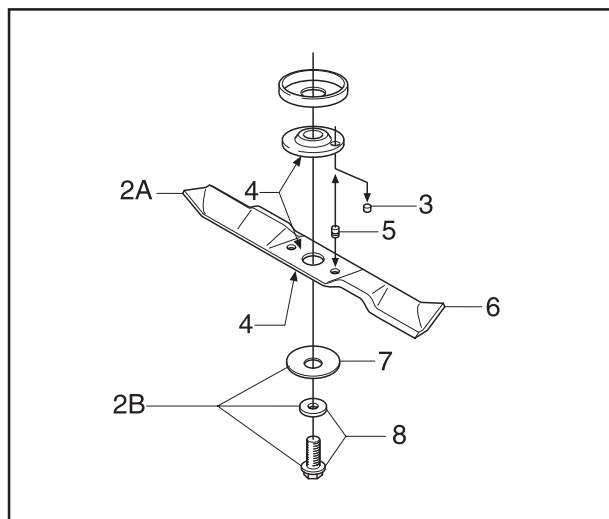
MAINTENANCE

Replacing the break-pin (BioClip 90)

The blades are fitted with a break-pin to protect the cutting unit and its drive when colliding with obstacles. A domed, spring friction washer is fitted to each blade bolt. The washer must always be replaced with a new washer if the blade bolt is loosened. Otherwise the break-pin can break causing the blades to collide.

Only use original spare parts. A set containing a blade, break-pin and friction washer can be purchased from your dealer.

1. Put the cutting unit in the service position, see "Service position for the cutting unit\Placing in the service position".
2. Remove the blade (2A) by removing the blade bolt with washer and friction washer (2B).
3. Remove the remains of the broken break-pin (3).
4. Make sure the contact surfaces (4) on the blade and the blade mounting are metallic clean.
5. Fit **one** new break-pin (5) in the blade mounting.
6. Fit the blade (6), make sure it is fitted as illustrated.
7. Fit a **new** friction washer (7) with the concave face turned towards the blade.
8. Fit the blade bolt with washer (8). Tightening torque 45-50 Nm (4.5-5 kpm/32-36 lbf).



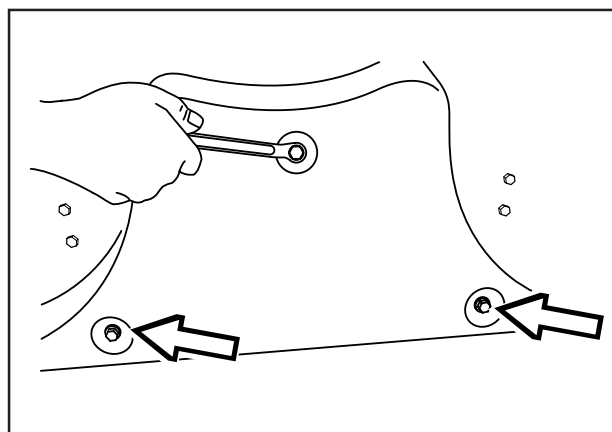
Service position

Removal of BioClip plug (Combi)

To change a Combi unit from BioClip function to cutting unit with rear ejection, remove the BioClip plug located under the unit with three screws.

1. Put the unit in the service position, see "Placing in the service position".
2. Remove the three screws holding the BioClip plug, and remove the plug.
3. Tip: Fit three full-thread screws M8x15 mm in the screw holes to protect the threads.
4. Replace the unit in normal position.

Fit the BioClip plug in the reverse order.



Removal of BioClip plug

LUBRICATION

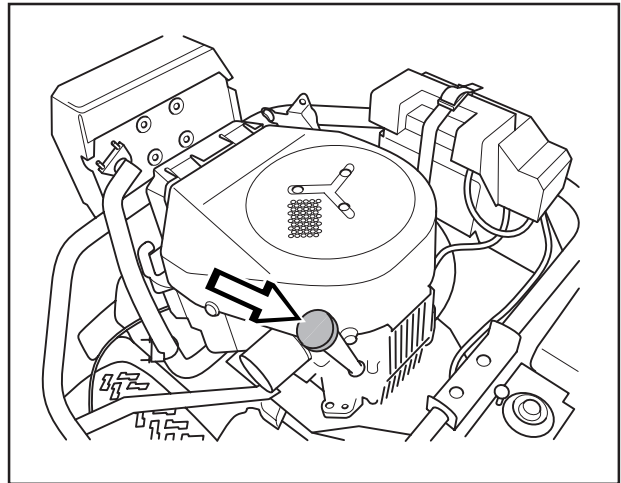
Checking the engine's oil level

Check the oil level in the engine when the Rider stands horizontal and the engine is switched off.

Fold open the engine cover.

Release the dip stick and pull out. Wipe off the oil and insert again without screwing it in.

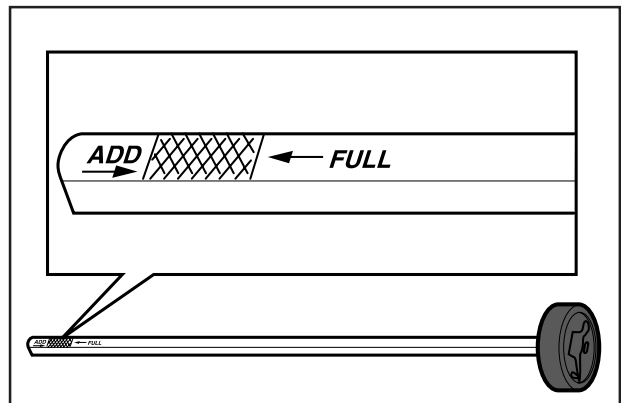
Pull out the dip stick. Check the oil level.



The oil level should be between the markings on the dip stick. If the level approaches the ADD mark, top up with oil to the FULL mark.

The oil is filled in the same hole as for the dip stick.

Fill the oil slowly. Tighten the dipstick correctly before starting the engine. Start and run the engine at idling speed for approx. 30 seconds. Turn off the engine. Wait 30 seconds and check oil level. If necessary fill so that the oil comes up to the "FULL" mark on the dip stick.



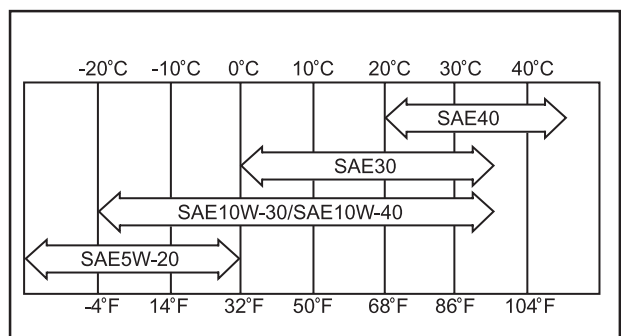
The following engine oils are recommended:

- API Service Classification: SF, SG, SH or SJ

Choose the viscosity according to the temperatures in the picture:

Do not mix different types of oil.

Remember that using multi grade oils (5W-20, 10W-30, and 10W-40) will increase oil consumption. Check oil level more frequently when using them.



LUBRICATION

Changing the oil

The oil should be changed for the first time after 8 hours of running time. Thereafter it should be changed every 100 hours of running time.

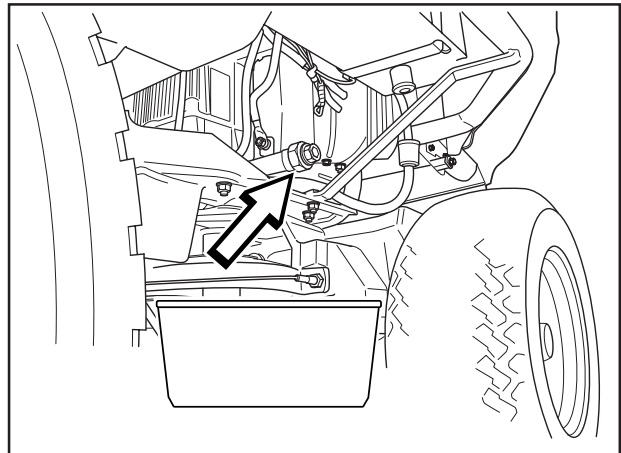
With heavy loads or high temperatures replace the oil after every 50 hours.



WARNING!

Engine oil can be very hot if it is drained off directly after the engine is stopped. Therefore allow the engine temperature to drop from hot to warm level first.

1. Place a receptacle under the engine's drain plug, located on the left-hand side of the engine.
2. Remove the dip stick and drain plug.
3. Drain the oil run into the receptacle while the engine is warm.
4. Fit the drain plug and tighten.
5. Refill with fresh oil to the FULL mark on the dip stick. The oil is filled in the same hole as for the dip stick. See "Checking the engine's oil level" for filling instructions. The engine holds 1.5 litres (1.6 USqt) when oil filter is not changed and 1.7 litres (1.8 USqt) when oil filter is changed.
6. Run the engine warm and then check that there is no leakage from the drain plug.



IMPORTANT INFORMATION

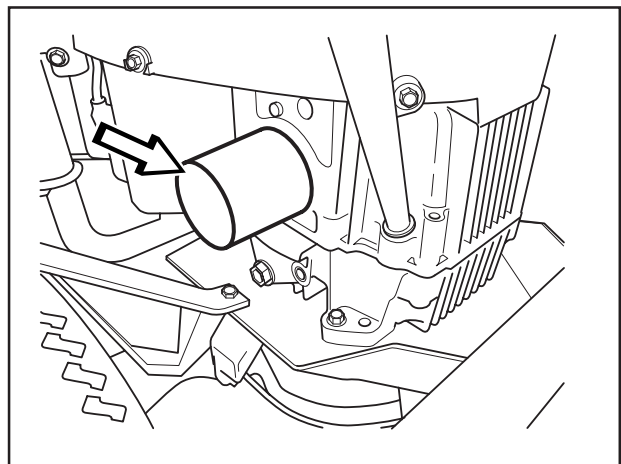
Used engine oil and filter are hazardous to health and environment and must in accordance with the law not be poured out on the ground or in the nature, and must be handed in to a workshop or other designated station for treatment. Avoid skin contact. Wash with soap and water in the event of spillage.

Changing the oil filter

Replace the oil filter every 200 operating hours. Remove the old filter by turning it counterclockwise, using an oil filter tool. Lightly coat the rubber gasket with new oil and then install the filter by turning it clockwise until the rubber gasket will touch its seat. Tighten the filter an additional 1/2 turn. Supply new engine oil as specified in "Checking the engine's oil level".

Start the engine for about 3 minutes and then stop and check for leakage.

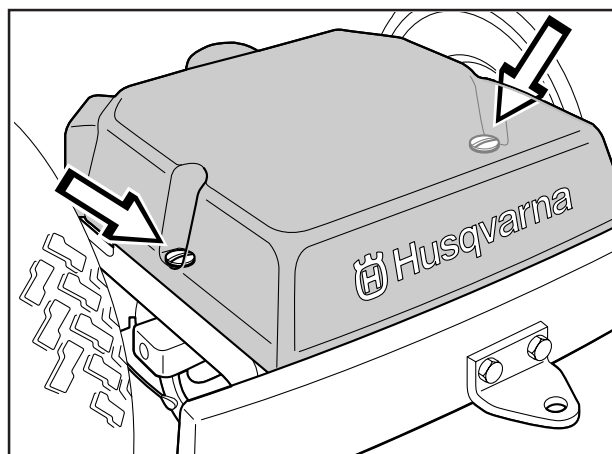
Add oil to compensate for oil level drop due to oil filter capacity.



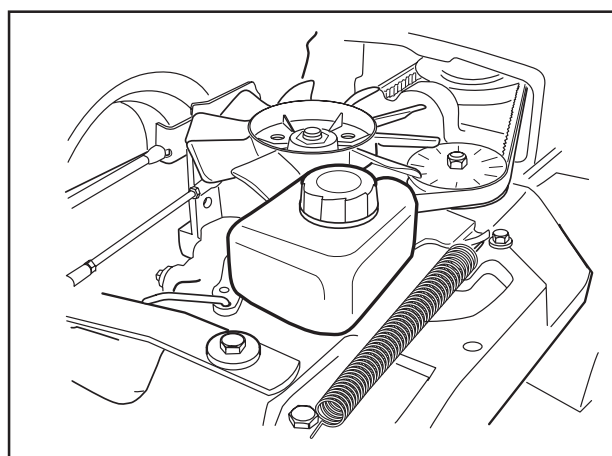
LUBRICATION

Checking the transmission's oil level

1. Remove the transmission cover. Loosen both screws (one on each side) and lift off the transmission cover.



2. Check that there is oil in the transmission's oil tank. Fill if necessary with engine oil SAE 10W/30 (class SF-CC).

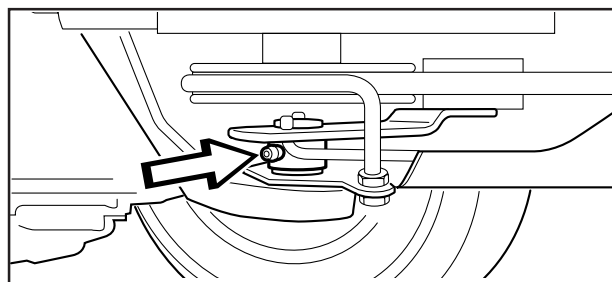


Lubricating the belt adjuster

The belt adjuster should be lubricated regularly using good quality molybdenum disulphide grease*.

1 nipple from the right-hand side under the engine's lower belt pulley, until grease is forced out.

With daily use lubrication should be conducted twice a week.



General lubrication

All joints and bearings are lubricated on manufacture with molybdenum sulphide grease. Re-grease with same type of grease*. Lubricate the steering and control wires with engine oil.

The machine should be lubricated regularly, and twice a week when used daily.

* Grease from well-known brand names (petrol companies, etc.) usually maintains a good quality. The most important property is that the grease provides good protection against corrosion.

TROUBLE SHOOTING SCHEDULE

Problem	Procedure
Engine will not start.	<ul style="list-style-type: none">• Fuel tank empty.• Spark plugs defective.• Spark plug connections defective or changed.• Dirt in carburettor or fuel pipe.• Starter does not pull round engine.
Starter does not pull round engine.	<ul style="list-style-type: none">• Battery flat.• Bad contact between cable and battery terminal.• Lift lever for cutting unit in wrong position.• Main fuse blown. The fuse is placed in front of the battery, under the battery cover.• Ignition lock faulty.• Gear shift/hydrostat pedal not in neutral.• Hydrostat pedals not in the neutral position.
Engine does not run smoothly.	<ul style="list-style-type: none">• Spark plug defective.• Carburettor incorrectly set.• Air filter clogged.• Fuel tank vent blocked.• Ignition setting defective.• Dirt in carburettor or fuel pipe.• Choking or incorrectly adjusted throttle cable.
Engine seems to have no power.	<ul style="list-style-type: none">• Air filter clogged.• Spark plug defective.• Dirt in carburettor or fuel pipe.• Carburettor incorrectly set.• Choking or incorrectly adjusted throttle cable.
Engine overheats.	<ul style="list-style-type: none">• Engine overloaded.• Air intake or cooling flanges blocked.• Fan damaged.• Too little or no oil in engine.• Ignition defective.• Spark plug defective.
Battery does not charge.	<ul style="list-style-type: none">• One or more cells faulty.• Bad contact between battery terminals and cables.
Machine vibrates.	<ul style="list-style-type: none">• Blades are loose.• Engine is loose.• Imbalance on one or more blades, resulting from damage or inferior balancing after sharpening.
Uneven mowing.	<ul style="list-style-type: none">• Blades blunt.• Cutting unit skew.• Long or wet grass.• Grass blockage under hood.• Different tyre pressures on right and left sides.• Over-speeding.• Drive belts slipping.• The blade has a broken break-pin (BioClip).

STORAGE

Winter storage

At the end of the season the machine should immediately be put in order for storage, also if it is going to stand idle for more than 30 days. Fuel which is left to stand for long periods (30 days or more) can leave tacky deposits which can block the carburettor and interfere with the engine.

Fuel stabiliser is an acceptable alternative to avoid tacky deposits during storage. If alkylate petrol is used stabiliser is not necessary since this fuel is stable. However, one should avoid changing from standard to alkylate petrol since sensitive rubber parts can harden. Add stabiliser to the fuel in the tank or the storage container. Always use the mixing ratios indicated by the manufacturer. Run the engine for at least 10 minutes after adding the stabiliser so that it will reach the carburettor. Do not empty the fuel tank and carburettor if stabiliser has been added.



WARNING!

Never place an engine with fuel in the tank indoors or in poorly ventilated areas where petrol fumes can come into contact with naked flames, sparks or pilot flames in boilers, hot water heaters, or drying cabinets, etc. It is highly inflammable and negligent usage can cause severe person injury and material damage. Drain off the fuel in an approved container outdoors and well clear of naked flames. Never use petrol for cleaning purposes. Use degreasing agents and hot water instead.

To put the machine in order for storage, follow these instructions:

1. Carefully clean the machine, especially under the cutting unit. Touch-up paint damage to avoid rust.
2. Inspect the machine for worn or damaged parts and tighten loose screws and nuts.
3. Change the oil, and take care of the waste oil.
4. Empty the fuel tank. Start the engine and run it until the carburettor is emptied of fuel.
5. Remove the spark plugs and pour about a tablespoon of engine oil in each cylinder. Turn over the engine so that the oil is evenly distributed and then refit the spark plugs.
6. Grease all grease nipples, joints and axles.
7. Remove the battery. Clean it, charge it, and store it in a cool place.
8. Store the machine in a clean and dry place and cover it over for extra protection.

Cover

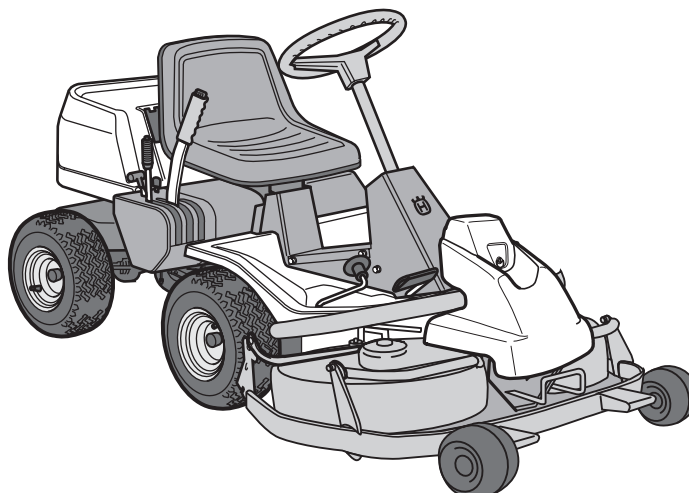
There is a cover to protect your machine during storage or transport. Contact your dealer for a demonstration.

Service

When ordering spare parts, always state the purchase year, model, type, and serial number.

Always use genuine parts.

Annual inspection or trimming by an authorised service workshop is a good way of getting the best out of your machine the next season.



TECHNICAL DATA

Dimensions

Length without cutting unit	2020 mm/6.61 ft
Width without cutting unit	880 mm/2.89 ft
Height	1060 mm/3.52 ft
Weight	247-260 kg/543-572 lb including unit
Wheel base	855 mm/2.8 ft
Track	Front 715 mm/2.34 ft, rear 625 mm/2.05 ft
Tyre size	16 x 6.50 x 8
Tyre pressure, front & rear	60 kPa (0.6 kp/cm ² /8.5 PSI)
Max. gradient	15°

Rider 15V2

Engine

Manufacture	Kawasaki model FH 430V
Power	11.2/15 kW/h.p.
Displacement	431 cm ³ /26.3 cu.in
Fuel	Min. 87 octane unleaded (Max methanol 5%, max ethanol 10%, max MTBE 15%)
Tank volume	7 litres/7.4 USqt
Oil	Class SF, SG, SH, or SJ SAE40, SAE30, SAE10W-30/SAE 10W-40, or SAE 5W-20
Oil volume, oil filter included	1.7 litres/1.8 USqt
Oil volume, oil filter excluded	1.5 litres/1.6 USqt
Start	Electric starter 12 V

Noise emissions and cutting width

Measured noise level	100 dB(A)
Guaranteed noise level	100 dB(A)
Cutting width	900 - 1120 mm/35"-44"

Electrical system

Type	12 V, negative ground
Battery	12 V. 24 Ah
Spark plug	Champion RCJ8Y electrode gap = 0.75 mm/0.030"

Transmission

Manufacture	Tuff Torq K46
Oil	SAE 10W/30, class SF-CC

Cutting unit

Type	3-blade unit with Rear ejection/Side ejection/Combi 2-blade unit with BioClip	
Cutting width	900 mm/35" (BioClip) 1030 mm/41" (Combi)	1120 mm/44" (Combi)
Cutting heights	40-90 mm/1 9/16"-3 9/16", 45-95 mm/1 3/4"-3 3/4" (BioClip)	
Blade diameter	390 mm/15 3/8" (Combi103) 440 mm/17 1/4" (BioClip 90)	420 mm/16 1/2" (Combi 112)

EC DECLARATION OF CONFORMITY

EC declaration of conformity (Only applies to Europe)

Husqvarna AB, SE-561 82 Huskvarna, Sweden, tel: +46-36-146500, declares under sole responsibility that **the Husqvarna Rider 15V2**, from 2002's serial numbers and onwards (the year is clearly stated in plain text on the rating plate with subsequent serial number), complies with the requirements of the COUNCIL'S DIRECTIVES:

- of June 22, 1998 "relating to machinery" **98/37/EC, annex IIA.**
- of May 3, 1989 "relating to electromagnetic compatibility" **89/336/EEC**, and applicable supplements.
- of May 8, 2000 "relating to the noise emissions in the environment" **2000/14/EC.**

Information regarding noise emissions and the mowing width, see the Technical Data.

The following harmonised standards have been applied: **EN292-2, EN836.**

The registered body **0404, SMP Svensk Maskinprovning AB**, Fyrisborgsgatan 3, SE-754 50 Uppsala, Sweden has issued the report with number **01/901/025, 01/901/026** regarding the assessment of conformity according to annex VI to the COUNCIL'S DIRECTIVE of May 8, 2000 "relating to the emission of noise to surroundings" **2000/14/EC.**

Huskvarna January 3, 2002



Roger Andersson, Development Manager/Garden Products

When this product is worn out or no longer used it should be returned to the dealer or other appropriate body for recycling.

We reserve the right to change technical specifications without prior notice.

Note that no legal claims are valid on the basis of information in this manual.

Use only genuine parts for repairs. The warranty is not valid if non genuine parts are used.

SERVICE JOURNAL

Work done	Date, mileage, stamp, sign
<p>Pre-delivery service</p> <p>1. Top up battery with acid and recharge for four hours. <input style="float: right;" type="checkbox"/></p> <p>2. Fit steering wheel, seat and any optional equipment. <input style="float: right;" type="checkbox"/></p> <p>3. Adjust cutting unit: <input style="float: right;" type="checkbox"/></p> <p style="padding-left: 20px;">Adjust the lifting springs (the "weight" of the cutting unit should be 12-15 kg/26,5-33 lbs). Applies to BioClip and Combi deck. <input style="float: right;" type="checkbox"/></p> <p style="padding-left: 20px;">Adjust cutting unit so that rear edge is about 2–4 mm/1/8" higher than front edge. <input style="float: right;" type="checkbox"/></p> <p style="padding-left: 20px;">Adjust cutting unit height setting so that cutting height limit is 5 mm/3/16" above the frame of the unit at the lowest cutting height. <input style="float: right;" type="checkbox"/></p> <p>4. Check that engine has correct amount of oil. <input style="float: right;" type="checkbox"/></p> <p>5. Check that the right amount of oil is in the transmission. <input style="float: right;" type="checkbox"/></p> <p>6. Check and adjust tyre pressure (60 kPa/0.6 bar/8.5 PSI). <input style="float: right;" type="checkbox"/></p> <p>7. Connect battery. <input style="float: right;" type="checkbox"/></p> <p>8. Fill with fuel and start engine. <input style="float: right;" type="checkbox"/></p> <p>9. Check that machine does not move in neutral. <input style="float: right;" type="checkbox"/></p> <p>10. Check: <input style="float: right;" type="checkbox"/></p> <p style="padding-left: 20px;">Forward drive. <input style="float: right;" type="checkbox"/></p> <p style="padding-left: 20px;">Reverse drive. <input style="float: right;" type="checkbox"/></p> <p style="padding-left: 20px;">Operation of blades. <input style="float: right;" type="checkbox"/></p> <p style="padding-left: 20px;">Seat safety switch. <input style="float: right;" type="checkbox"/></p> <p style="padding-left: 20px;">Lift lever safety switch. <input style="float: right;" type="checkbox"/></p> <p style="padding-left: 20px;">Safety switch for the hydrostat pedals. <input style="float: right;" type="checkbox"/></p> <p>11. Check engine revs 2 900±100rpm. <input style="float: right;" type="checkbox"/></p> <p>12. Check the screws on the muffler. (10Nm) <input style="float: right;" type="checkbox"/></p> <p>13. Tell customer about: <input style="float: right;" type="checkbox"/></p> <p style="padding-left: 20px;">Need and benefits of following the service schedule.</p> <p style="padding-left: 20px;">The need and advantages of leaving the machine for regular service.</p> <p style="padding-left: 20px;">The effects of maintenance on the machine's second hand value.</p> <p style="padding-left: 20px;">Range of applications for BioClip.</p> <p>14. Complete proof of sale, etc.</p>	<p style="text-align: center;">Pre-delivery service carried out. No outstanding problems. Certified:</p>
<p>After first 8 hours</p> <p>1. Change engine oil. <input style="float: right;" type="checkbox"/></p>	

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