



Rider Pro 15

Operator's manual



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

CONTENTS

Operator's Manual for Rider Pro 15

Safety instructions	2	Checking and adjustment of throttle wire	23
Safety rules for USA	2	Checking and adjusting the choke wire	23
Introduction	4	Replacement of fuel filter	24
Driving and transport on public roads	4	Checking the fuel pump's air filter	24
Towing	4	Replacing the air filter	25
Use	4	Checking the transmission's air intake	26
Serial number	5	Checking the engine's cooling air intake	26
Explanation of symbols	6	Muffler air intake	26
Safety instructions	7	Check the level of the battery acid	27
General use	7	Check the safety system	28
Driving on slopes	8	Checking the tyre pressure	29
Children	9	Fitting the cutting unit	30
Maintenance	9	Installing BioClip 90	31
Presentation	11	Checking and adjustment of the cutting unit's ground pressure	31
Location of the controls	11	Checking the cutting unit's parallelism	32
Throttle control	12	Adjusting the parallelism of the cutting unit	32
Choke lever	12	Removing the cutting unit	33
Speed limiter	12	Removing the belts	33
Cutting unit	13	Replacing the cutting unit's belts	34
Lift lever for cutting unit	13	Service position for the cutting unit	36
Lever for adjustment of cutting height	14	Checking the blades	39
Parking brake	14	Replacing the break-pin (BioClip)	40
Seat	14	Lubrication	41
Fuelling	14	Lubrication chart	41
Driving	15	General lubrication	42
Before starting	15	Lubricating wires	42
Starting the engine	15	Lubrication instructions according to chart	42
Driving the machine	16	Trouble shooting schedule	48
Cutting tips	17	Storage	49
Stopping the engine	18	Winter storage	49
Disengage lever	18	Service	49
Maintenance	19	Wiring diagram	50
Maintenance schedule	19	Technical data	51
Removing of the machine hoods	21	Servicejournal	53
Checking and adjusting the steering wires	22		
Adjusting the brakes	23		

IMPORTANT INFORMATION

Read through these instructions carefully so that you know how to use and maintain the machine before using it.

For servicing other than described in this manual contact an authorised dealer for parts and service.

SAFETY INSTRUCTIONS



1. Safety rules for USA



Safe operation practices for ride-on mowers

IMPORTANT!

This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

I. General operation

1. Read, understand and follow all instructions in the manual and on the machine before starting.
2. Only allow responsible adults, who are familiar with the instructions, to operate the machine.
3. Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blade.
4. Be sure the area is clear of other people before mowing. Stop the machine if anyone enters the area.
5. Never carry passengers.
6. Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
7. Be aware of the mower discharge direction and do not point it at anyone. Do not operate the mower without either the entire grass catcher or the guard in place.
8. Slow down before turning.
9. Never leave a running machine unattended. Always turn off blades, set parking brake, stop engine and remove keys before dismounting.
10. Turn off blades when not mowing.
11. Stop engine before removing grass catcher or unclogging chute.
12. Mow only in daylight or good artificial light.
13. Do not operate the machine while under the influence of alcohol or drugs.
14. Watch for traffic when operating near or crossing roadways.
15. Use extra care when loading or unloading the machine into a trailer or truck.

II. Slope operation

Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. *All* slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it.

DO

Mow up and down slopes, not across. Remove obstacles such as rocks, tree limbs, etc. Watch for holes, ruts or bumps. Uneven terrain could overturn the machine. *Tall grass can hide obstacles.*

Use slow speed. Choose a low gear so that you will not have to stop or shift while on the slope.

Follow the manufacturer's recommendations for wheel weights or counterweights to improve stability.

Use extra care with grass catchers or other attachments. These can change the stability of the machine.

Keep all movement on the slopes *slow* and *gradual*. Do not make sudden changes in speed or direction.

Avoid starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly *straight* down the slope.

DO NOT

Do not turn on slopes unless necessary and then, turn slowly and gradually downhill, if possible.

Do not mow near drop-offs, ditches or embankments. The mower could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.

Do not mow on wet grass. Reduced traction could cause sliding.

Do not try to stabilize the machine by putting your foot on the ground.

Do not use grass catcher on steep slopes.

III. Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. *Never* assume that children will remain where you last saw them.

1. Keep children out of the mowing area and under the watchful care of another responsible adult.
2. Be alert and turn machine off if children enter the area.
3. Before and when backing, look behind and *down* for small children.
4. Never carry children. They may fall off and be seriously injured or interfere with safe machine operation.
5. Never allow children to operate the machine.
6. Use extra care when approaching blind corners, shrubs, trees or other objects that may obscure vision.

SAFETY INSTRUCTIONS

IV. Service

1. Use extra care in handling gasoline and other fuels. They are flammable and vapours are explosive.
 - a) Use only an approved container.
 - b) Never remove gas cap or add fuel with the engine running. Allow engine to cool before refuelling. Do not smoke.
 - c) Never refuel the machine indoors.
 - d) Never store the machine or fuel container inside where there is an open flame, such as in a water heater.
2. Never run a machine inside a closed area.
3. Keep nuts and bolts, especially blade attachment bolts, tight and keep equipment in good condition.
4. Never tamper with safety devices. Check their proper operation regularly.
5. Keep machine free of grass, leaves or other debris build-up. Clean up oil or fuel spillage. Allow machine to cool before storing.
6. Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
7. Never make adjustments or repairs with the engine running.
8. Grass catcher components are subject to wear, damage and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts, when necessary.
9. Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves and use extra caution when servicing them.
10. Check brake operation frequently. Adjust and service as required.



Danger, keep hands and feet away

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

If your machine has a hydrostatic transmission you should only tow it very short distances at low speed if absolutely necessary, otherwise the transmission may be damaged.

Intended use

This machine is designed solely for cutting grass on conventional lawns and other cleared and leveled ground without obstacles, as rocks, stumps etc., and, in conjunction with accessories supplied by the manufacturer even for other special tasks for which instructions are delivered with the accessory. 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.

Safe operation practices for Ride-On Mowers

Before starting cutting operations, train different driving operations on an open ground without people nearby until you feel familiar with handling the equipment. This is particularly important if you have no or little prior experience of driving a vehicle.

Data indicates that operators, age 60 years and above, are involved in a large percentage of riding mower-related injuries. These operators should evaluate their ability to operate the riding mower safely in order to protect themselves and others from serious injury.

Never carry children, even with the blades off. They may fall off and be seriously injured or interfere with safe machine operation.

INSTRUCTION

Dear customer

Thank you for choosing a Husqvarna Rider. Husqvarna Riders are built to a unique design with a front-mounted cutting unit and a patented rear-wheel steering system. Riders are designed for maximum efficiency even in small or confined areas. The closely grouped controls and pedal-operated hydrostatic transmission also contribute to the performance of this machine.

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. The last chapter in the operator's manual consists of a Service Journal. Make sure that all service work and repairs are recorded. A well-documented service history reduces the costs of seasonal maintenance and influences the second-hand value of the machine. Remember to take along the operator's manual when you take the Rider to the workshop for servicing.

Driving 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

When your machine is equipped with a hydrostatic transmission you should, if necessary, 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 is designed solely for cutting grass on conventional lawns and other cleared and leveled ground without obstacles, as rocks, stumps etc., and, in conjunction with accessories supplied by the manufacturer even for other special tasks for which instructions are delivered with the accessory. 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

SAFETY INSTRUCTIONS

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. For example, before this machine was delivered it was inspected and adjusted by your dealer. See the certificate in the Service Journal in this manual.

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 machines type designation.
- The manufacturer's type number.
- The machine's serial number.

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

The engine serial number is given on a bar code decal. This is located on the left side of the crankcase, in front of the starter motor. The sign states

- The engine serial number (E/NO).
- Code.

Please quote these when ordering 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 instructions.
Study them carefully so that you know what they mean.



Read the instructions.

R

Reverse

N

Neutral



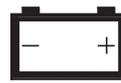
Fast



Slow



Engine off



Battery



Choke



Fuel



Oil pressure



Cutting height



Backwards



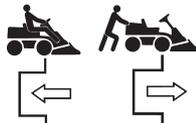
Forwards



Ignition



Use hearing protection



Hydrostatic freewheel



Parking brake



Brake



Warning



Sound level



Warning! Rotating blades



Warning! Risk that the machine can tip over



Never drive across a slope



European standard for machine safety



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



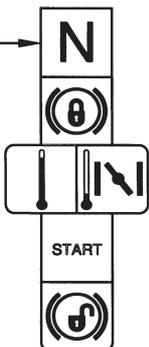
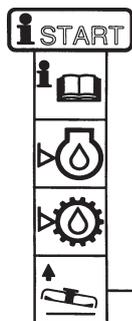
Never carry passengers on the machine or equipment



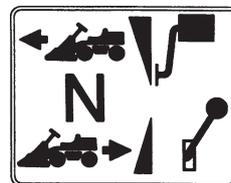
Keep hands and feet away from under the hood when the engine is running



Drive very slowly without the cutting unit



Starting instructions
Read the instructions
Check the engine's oil level
Check the hydrostat's oil level
Lift up the cutting unit
Hydrostatic pedals in neutral position
Brake
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

These instructions are for your safety. Read them carefully.



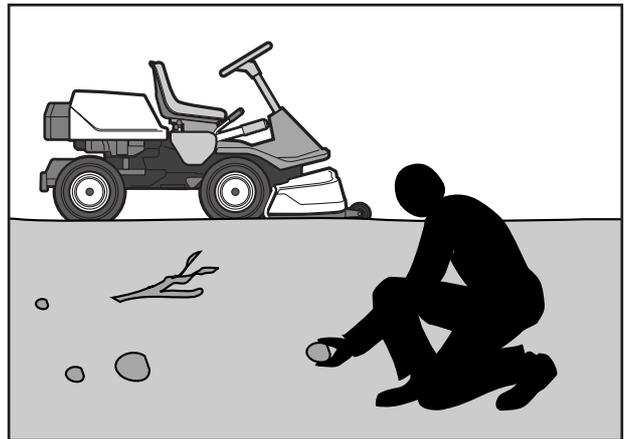
This symbol implies that important safety rules are applicable. This is for your safety and the operating reliability of the machine.

General use:

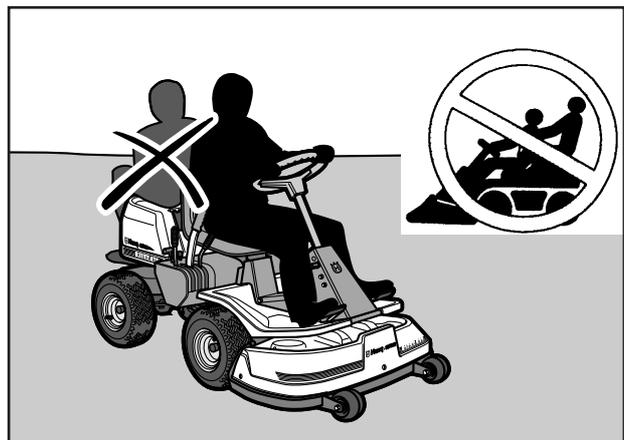
- Make yourself familiar with the controls and how to stop quickly.
- Read all the instructions in Operator's Manual and on the machine before starting it. Make sure you understand them, and then follow them.
- Only allow adults who are familiar with the machine to use it.
- Wear approved safety glasses or a visor during assembly and driving.
- Never use the machine barefoot. Always wear heavy-duty shoes, preferably toe-capped.
- Never wear loose fitting clothes which can fasten in moving parting.
- Clear the area of objects such as stones, toys, and wires, etc. which can be caught up by the blades and thrown out.
- Check that there are no other persons in the area before starting to cut.
- Stop the machine if anyone comes into the work area.
- Never carry passengers.
- Do not cut backwards unless absolutely necessary.
- Always look down and behind before and during reversing.
- Keep an eye on the ejected grass and do not direct it towards anyone.
- Slow down before turning.
- Never leave the machine unattended when the engine is running. Always switch off the blades, pull on the parking brake, stop the engine and take out the keys before leaving the machine.
- Switch off the blades when you are not cutting.
- Only cut in daylight or good artificial lighting.
- Never use the machine when you have consumed alcohol, drugs, or certain medicines.



Read the instructions before starting the machine.



Clear the area from stones etc. before cutting.



Never carry passengers.



WARNING!

This machine can cut off hands and feet, and eject objects. Failure to follow the safety instructions can lead to severe injury.

SAFETY INSTRUCTIONS

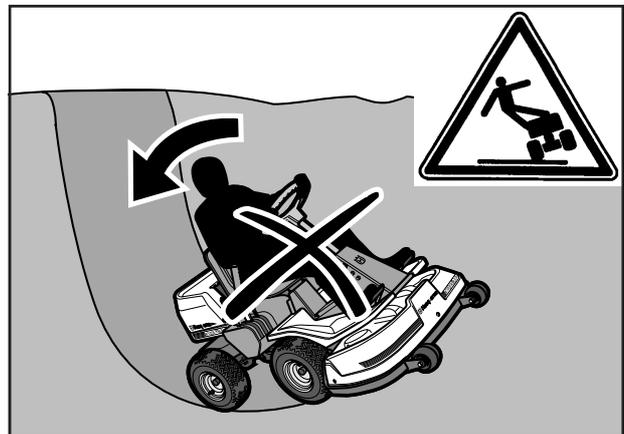
- Watch out for traffic when working close to a road, or crossing one.
- Be careful when rounding a fixed object so that the blades do not hit it. Never drive intentionally over a foreign object.
- The machine is heavy and can cause very severe crush injuries. Be extra careful when loading it on a trailer or truck.
- Be careful when pulling a load or using heavy equipment.
 - a. Only use approved tow hooks.
 - b. Limit the load to what you can manage safely.
 - c. Do not make sharp turns. Be careful when reversing.
 - d. Use counterweights or wheel weights when indicated in the instructions.
- Do not cut close to edges, ditches or banks. The machine can suddenly tip over if a wheel goes over the edge of a drop or a ditch, or if a bank gives way.
- Do not cut wet grass. It is slippery and the tyres can lose their grip so that the machine slides.
- Do not try to stabilise the machine by placing one foot on the ground.
- The Rider lawn mower must **never** be driven close to an edge or ditch when cleaning the chassis.

Driving on slopes

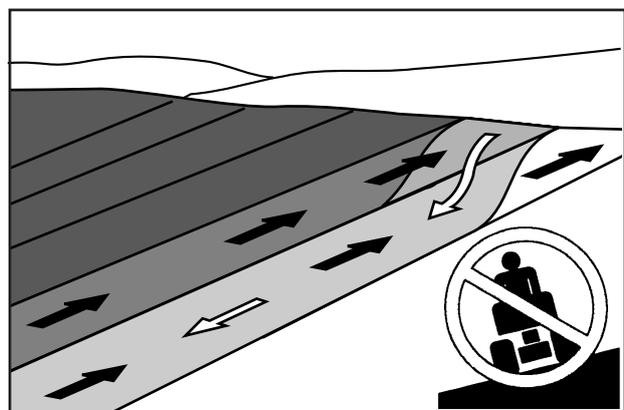
Driving on slopes is one of the situations where there is the most serious risk that the driver can lose control or that the machine tips over, which can cause severe injuries or be fatal. All slopes require extra care. If you cannot reverse up the slope or if you feel uncertain avoid cutting it.

Do as follows:

- Remove obstacles such as stones and branches etc.
- Cut upwards and downwards, not sideways.
- Look out for and avoid driving over furrows, holes or mounds. On uneven surfaces it is easier for the machine to tip over. High grass can conceal obstacles.
- Drive slowly. Use small movement on the hydrostat pedals.
- Follow the manufacturer's recommendations on wheel weights or counterweights to increase stability.
- Be extra careful with the grass collector or other equipment which can alter the stability of the machine.
- Always drive smoothly and slowly on slopes. Avoid sudden changes of speed or direction.
- Avoid starting or stopping on a slope. If the tyres begin to skid switch off the blades and drive slowly down the slope.
- Avoid unnecessary turns on slopes, and if turning is necessary turn slowly and gradually, downwards if possible.



Be extra careful when driving on slopes.



Cut slopes upwards and downwards, not sideways.

SAFETY INSTRUCTIONS

Children

Tragic accidents can occur if the driver does not pay attention to children in the vicinity. Children are often attracted to the machine and the work of mowing. Never assume that children stay where you last saw them.

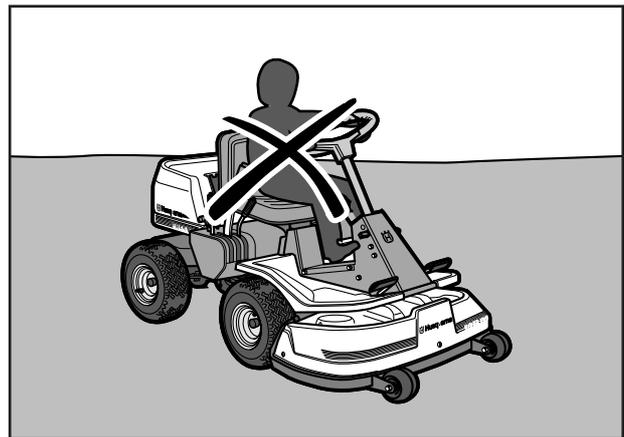
- Keep children away from the mowing area and under the close supervision of another adult.
- Be on your guard and switch off the machine if children come into the work area.
- Before and during reversing look behind and down for small children.
- Never allow children to ride on the machine. They can fall off and become seriously injured or obstruct an otherwise safe manoeuvre of the machine.
- Never allow children to steer the machine.
- Be extra careful close to corners, bushes, trees or other objects which obstruct your view.



Keep children away from the mowing area.

Maintenance

- Petrol/gasoline and petrol/gasoline fumes are toxic and highly inflammable. Be extra careful when handling petrol.
 - a. Store the fuel in containers approved for this purpose.
 - b. Never fill up the machine with fuel when the engine is running. Let the engine cool before filling up with fuel. Do not smoke. Do not fill fuel in the vicinity of sparks or naked flames.
 - c. Never fill up with fuel indoors.
 - d. If leakage has occurred in the fuel system the engine must not be started until this is rectified.
 - e. Never store the machine or fuel containers indoors if there are naked flames, such as in a boiler room or where there is electrical equipment which can emit sparks.
- Check the fuel level each time before using the machine, and leave space for the fuel to expand since the heat from the engine and hot sun can cause the fuel to run over.
- Avoid overfilling. If fuel has been spilt on the Rider wipe it up and wait until it has evaporated before starting the engine. If petrol is spilt on clothes, change them.
- Be extra careful when handling battery acid. Spilling acid on the skin can cause severe burn injuries. Rinse immediately with water. If acid gets into the eyes this can cause blindness. Contact a doctor.



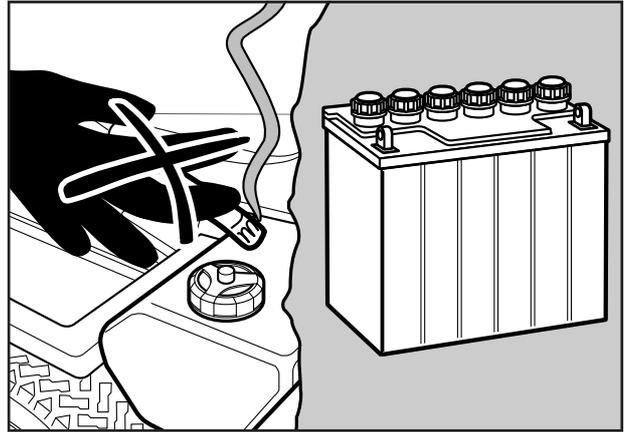
Never allow children to drive the machine.



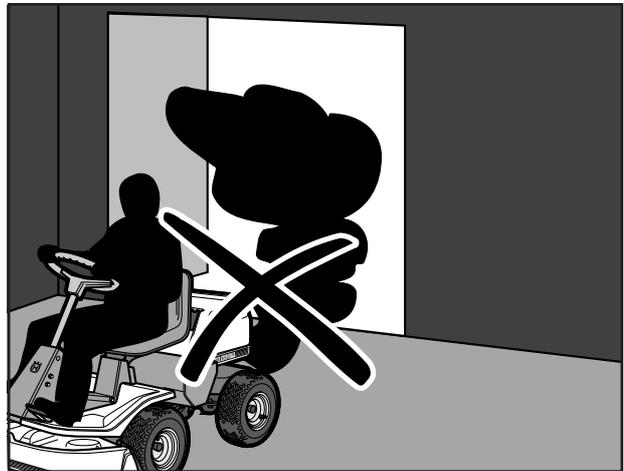
Never fill up with fuel indoors.

SAFETY INSTRUCTIONS

- Be careful with the maintenance of the battery. Explosive gas is formed in the battery. Never handle the battery when smoking or in the vicinity of naked flames or sparks. Otherwise the battery can explode and cause severe injuries.
- Never drive the machine in an enclosed space. The exhaust fumes contain carbon monoxide, an odourless, toxic and fatal gas.
- Make sure that bolts and nuts, especially attachment bolts for the blade units are properly tightened and that the equipment is in good order.
- Never alter the safety devices. Check regularly that they function. The machine must not be driven with defective or unmounted safety devices.
- Do not alter the setting of the governor and do not race the engine.
- Reduce the fire risk. Keep the machine clean from grass, leaves and other refuse which fastens in it. Allow the machine to cool before placing it in the storage area.
- Stop and inspect the equipment if you drive over an object. If necessary repair the machine before starting.
- Never make adjustments with the engine running.
- The parts on the grass collector can become worn, damaged and aged, so that moving parts are exposed or so that an object can be thrown out. Check the parts regularly and if necessary replace them with spare parts recommended by the manufacturer.
- The machine is tested for safety and approved only for equipment supplied or recommended by the manufacturer.
- The blades are sharp and can cause cutting injuries. Wrap over the blades or use protective gloves when handling them.
- The BioClip cutting unit should only be used to give high quality results on lawn surfaces that you are familiar with. If the blades of the cutting unit strike an obstacle this could change their spacing and lead to expensive repairs.



Never smoke in the vicinity of the battery or the fuel.



Never drive the machine in an enclosed space.



Clean the machine regularly from grass, leaves and other waste.

PRESENTATION

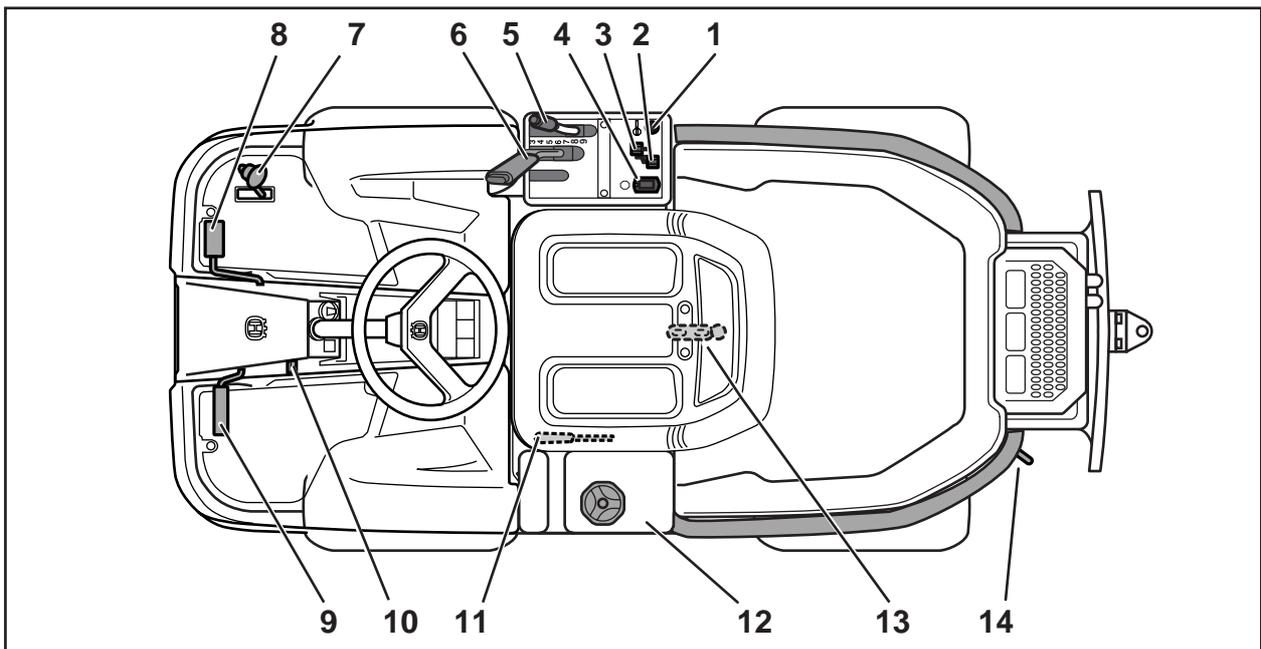
Presentation

Congratulations on choosing an excellent quality product, Rider ProFlex. These instructions describe the Rider Pro 15.

The Rider Pro 15 is equipped with a 15-horsepower four-stroke V-twin Kawasaki engine.

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

One pedal for driving forward and one for reverse.



Location of the controls

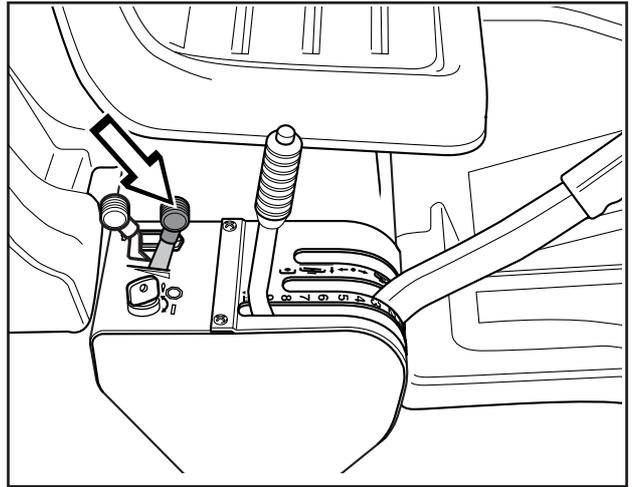
- | | |
|----------------------------------------------------|--------------------------------------|
| 1. Ignition lock | 8. Speed limiter for driving forward |
| 2. Choke lever | 9. Parking brake |
| 3. Throttle control | 10. Lock button for parking brake |
| 4. Counter | 11. Lever for adjustment of seat |
| 5. Lever for adjustment of cutting height | 12. Fuel tank cap |
| 6. Lifting lever for cutting unit with lock button | 13. Main lock |
| 7. Speed limiter for reversing | 14. Lever to disengage the drive |

PRESENTATION

Throttle control

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

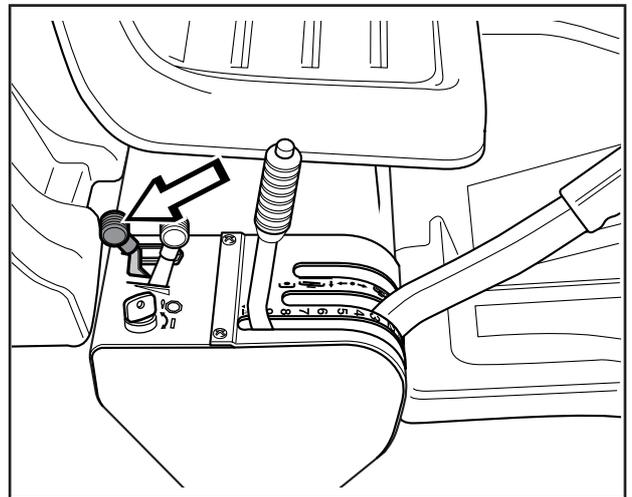
To increase or reduce the engine speed the control is moved forwards or backwards.



Choke lever

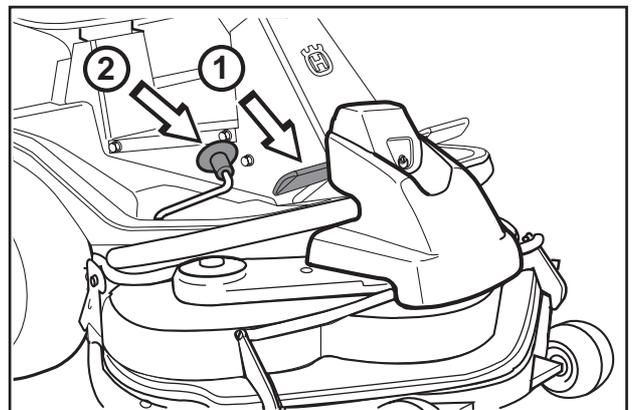
The choke lever is used for cold starting and to give the engine a richer fuel mixture.

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) to reverse.



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

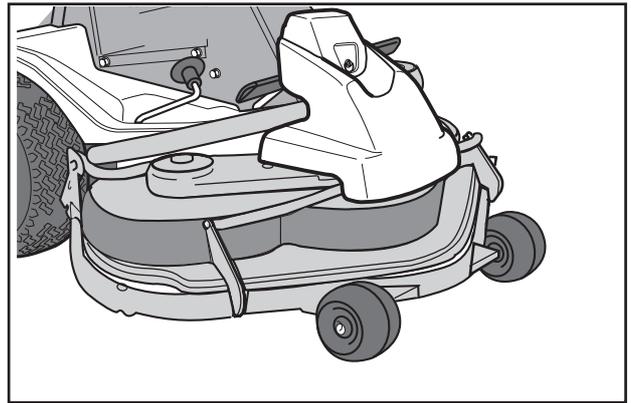
PRESENTATION

Cutting unit

Rider Pro 15 can be equipped with numerous attachments.

The BioClip unit finely cuts the lawn by cutting the grass several times before returning the clippings to the lawn as fertiliser.

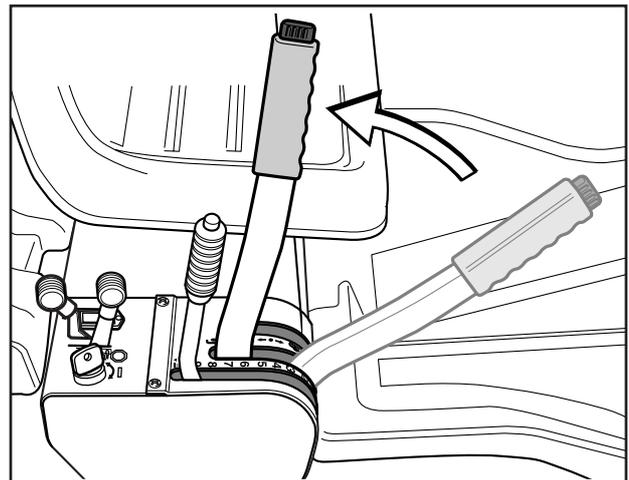
Cutting unit with side ejection or rear ejection, i.e. the cuttings are ejected from the side or rear of the unit.



Lift lever for cutting unit

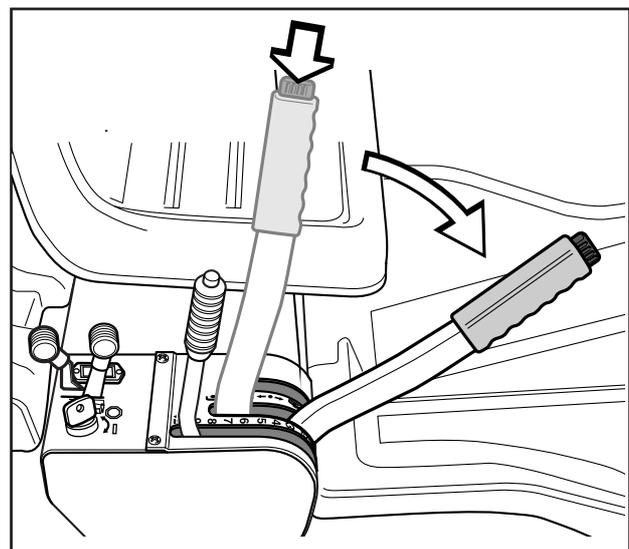
The lift lever is used to set the cutting unit in transport or mowing position.

1. Pull back the lever to the locked position for transport.
The cutting unit will lift up and the blades stop rotating.



Lifting of the cutting unit

2. Press in the lock button and move the lever forwards for the mowing position.
The unit will lower down and the blades start to rotate.
3. The lever can also be used to temporarily regulate the cutting height, e.g. for a small mound in the lawn.



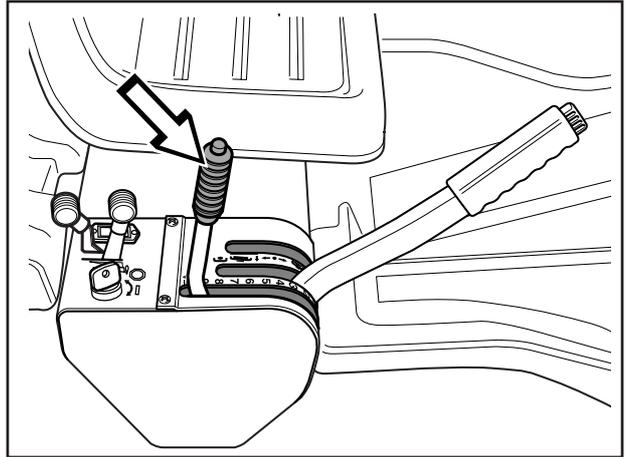
Lowering of the cutting unit

PRESENTATION

Lever for adjustment of the cutting height

The cutting height can be adjusted to 9 different positions with the cutting height lever.

Cutting unit with side/rear ejector, 40-90 mm.
BioClip cutting unit, 45-95 mm.

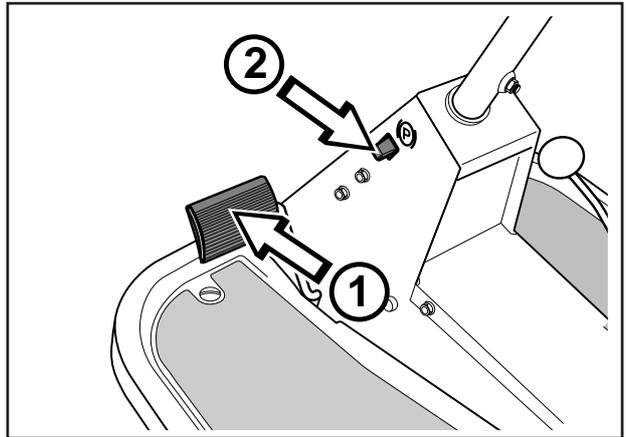


Parking brake

The parking brake is applied as follows:

1. Push down the brake pedal (1).
2. Fully depress the lock button on the steering column (2).
3. Release the brake pedal while holding the button pressed.

The parking brake lock disengages automatically when the brake pedal is pressed.

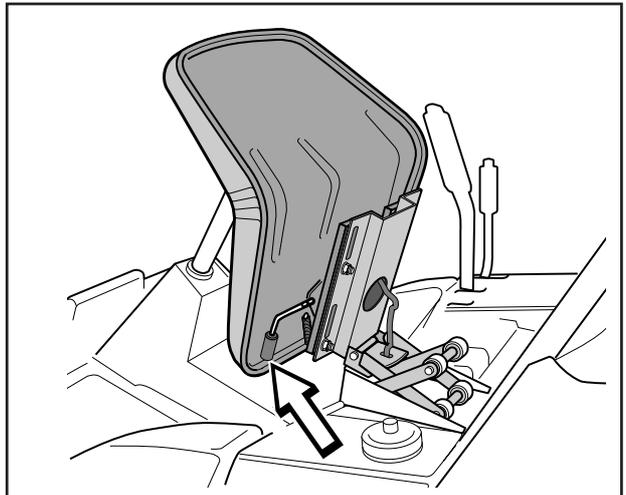


Seat

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

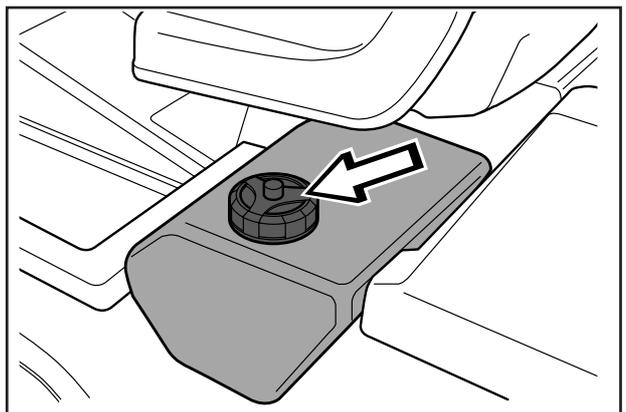
The seat can also be adjusted lengthways.

To adjust move the lever under the front edge of the seat to the left, so that the seat can be moved forward or backwards to the required position.



Fuelling

The engine runs on unleaded petrol with a minimum octane rating of 87 (not mixed with oil). We recommend the use of Aspen biodegradable alkylate petrol. Refer to the "Technical data" for information on methanol and ethanol fuels.



WARNING!
Petrol is highly flammable.
Exercise care and refuel outdoors
(see safety instructions).

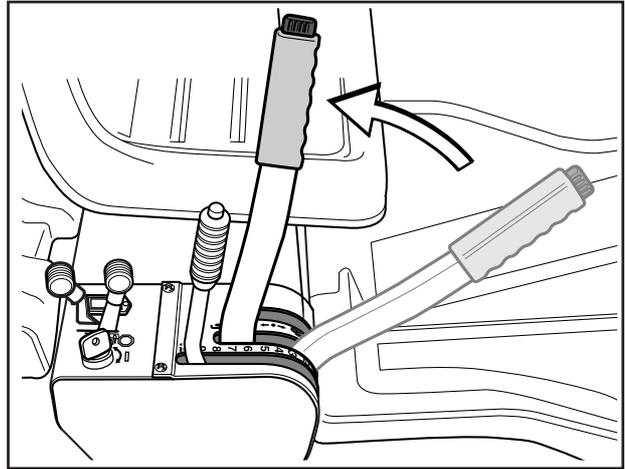
DRIVING

Before starting

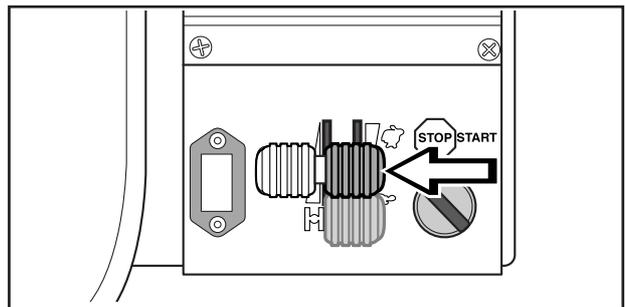
- Read the safety instructions and information on the location and function of the controls before starting (see pages 7–14).
- Conduct daily maintenance before starting (see maintenance schedule on page 19-20).
- Adjust the seat to the required position.

Starting the engine

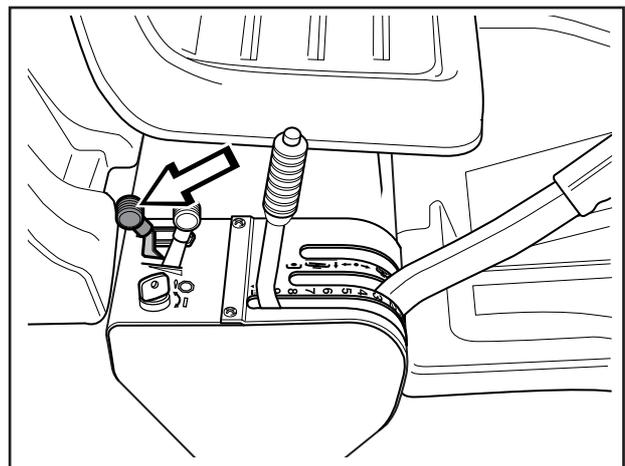
1. Lift up the cutting unit by pulling the lever backwards to locked position (transport position) and apply the parking brake.



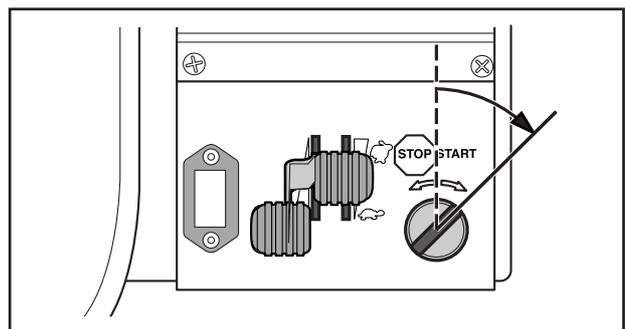
2. Move the throttle control to the middle position.



3. If the engine is cold move the choke lever backwards to its end position.



4. Turn the ignition key to the start position.

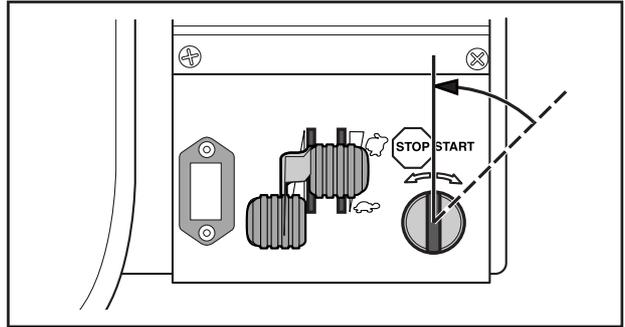


DRIVING

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

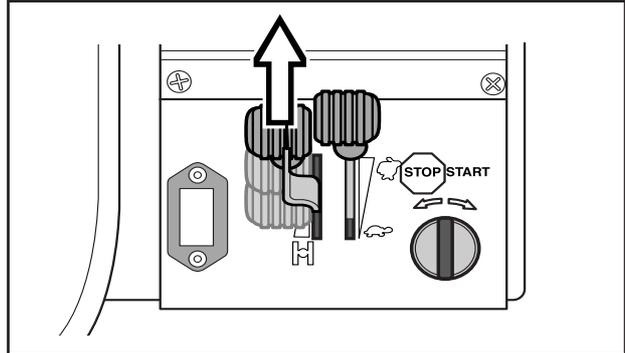
IMPORTANT INFORMATION

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.

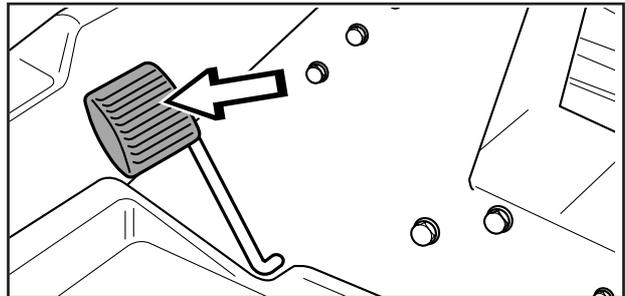
Let the engine run at moderate speed or half throttle for 3-5 minutes before subjecting it to heavy load.



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

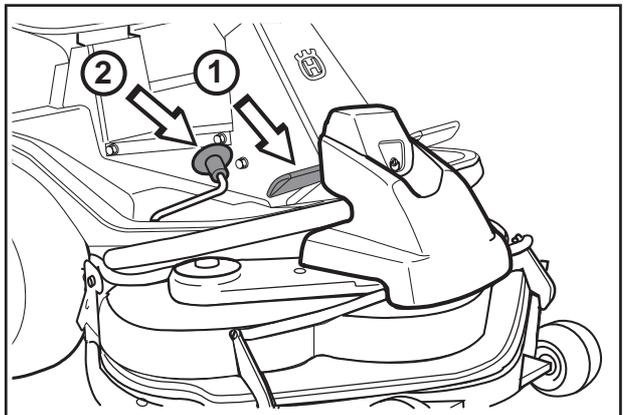
Driving the machine

- Release the parking brake by pressing the brake pedal.



- Carefully press down one of the pedals until the required speed is obtained.

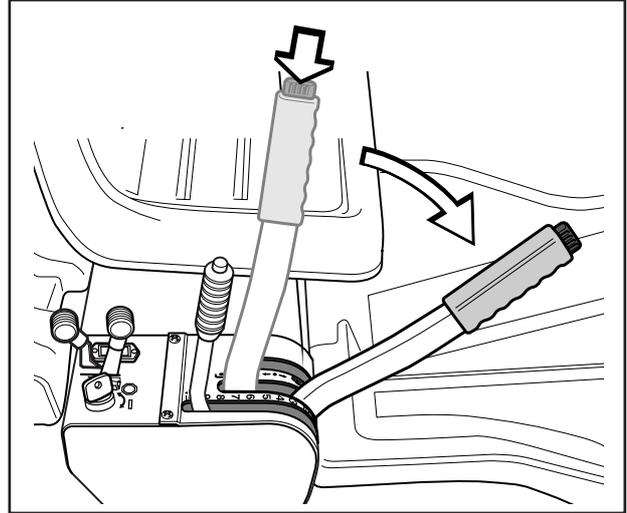
To drive forward press down pedal (1), or to reverse pedal (2).



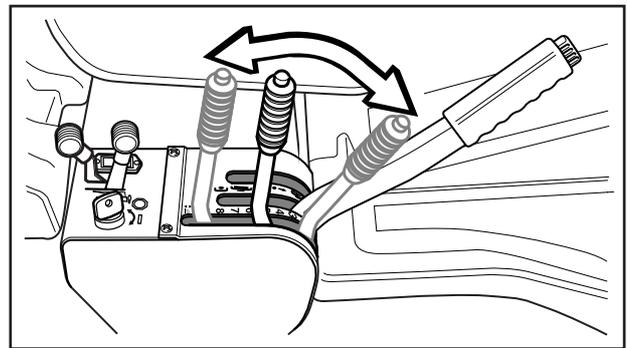
WARNING!
Make sure that branches do not obstruct the pedals when mowing under bushes, otherwise you may lose control.

DRIVING

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



4. Select the required cutting height (1–9) with the cutting height lever.



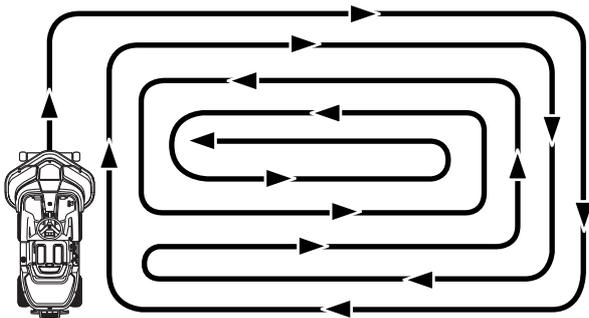
Cutting tips

- Localise and mark stones and other fixed objects to avoid collision.
- Start with a high cutting height and reduce down until the required mowing results are obtained.
- The mowing 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 or the engine speed reduced without noticeably affecting the mowing results.

- 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.
- Hose down the cutting unit with water underneath each time it is used. Put the cutting unit in the service position first.
- If you use the BioClip unit it is important to mow the grass regularly.



Mowing pattern



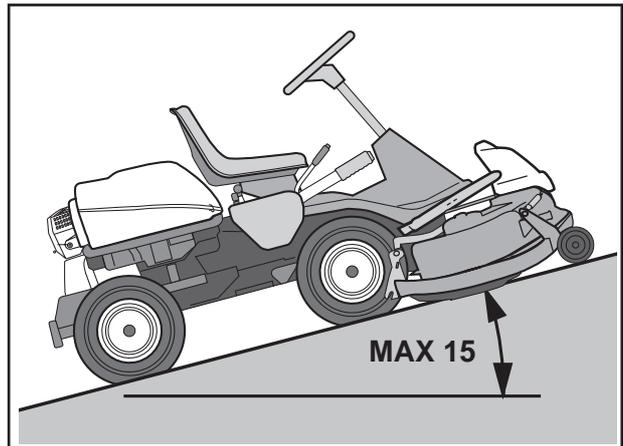
WARNING!

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

DRIVING



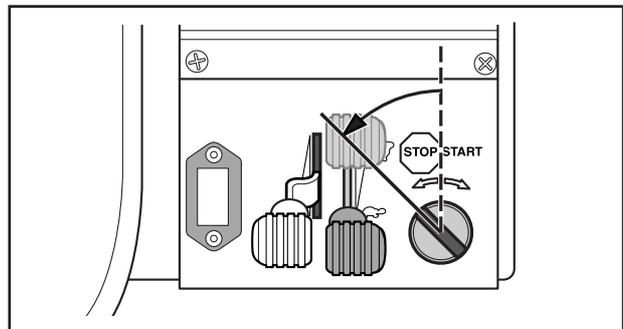
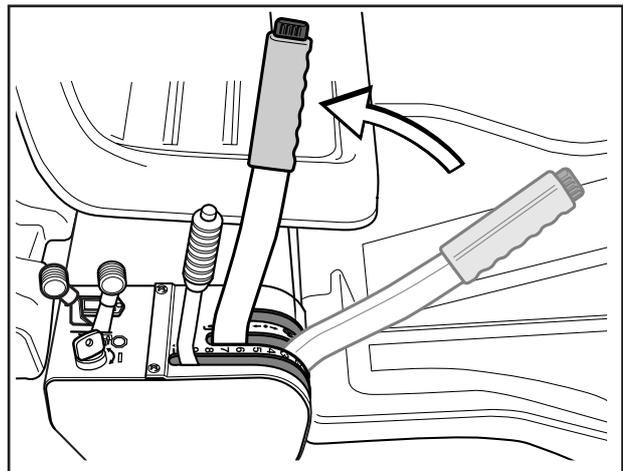
WARNING!
Never drive the machine on ground at an angle of more than 15°. Mow slopes upwards and downwards, never across. Avoid sudden changes in direction.



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.

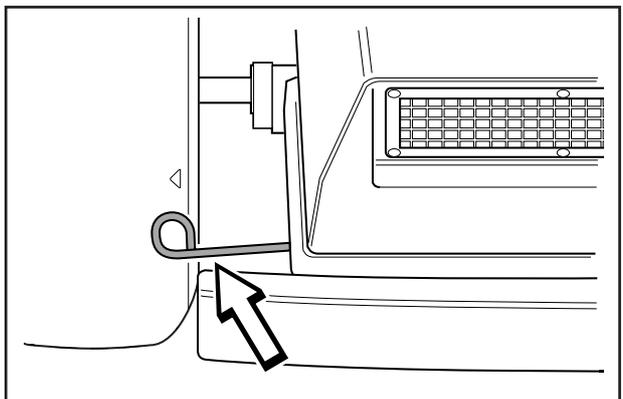
1. Lift up the cutting unit by pulling the lever back to the locked position.
2. Move the throttle control to the MIN. position. Turn the ignition key to the STOP.
3. When the Rider is at a standstill, press down the parking brake and push in the locking button.



Release lever

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

The diagram shows the release lever in the out position.



MAINTENANCE

Maintenance schedule

The following is a list of the maintenance which should be conducted on the machine. For the items which are not described in these instructions go to an authorised service workshop.

Maintenance	Page	Daily main-tenance		Weekly ³⁾ main-tenance	At least once a year	Maintenance interval in hours			
		before	after			25	50	100	300
Check for fuel and oil leakage	-	○							
Check the parking brake	23	●							
Check the engine oil level (when you refuel)	45	●				●			
Check the fuel pump air filter	24	●							
Check the seat safety switch	28	●							
Check the lift lever safety switch	28	●							
Check the parking brake safety switch	28	●				●			
Check/clean the engine cooling air intake	26		●						
Check the cutting unit:	31		●						
• blades are secure	39		●						
• condition of blades (sharpness, shape, etc.)	39		●						
• blade synchronisation (90° between BioClip)	39		●						
Check steering wires (for play, etc.)	22		●						
Check fasteners (screws, nuts, etc.)	-		○						
Start engine and blades, listen for noise	-		○						
Clean underside of cutting unit	36		●						
Clean transmission air intake	26		●			●			
Check battery acid level	27			●					
Check transmission oil level	46			●					
Check the condition of belts, pulleys, etc.	-			○					
Check for damage	-			○					
Check tyre pressures (60 kPa)	29			●					
Check for damage to wire guide at articulated joint	-			○					
Clean the area around the engine thoroughly	-			○					
Clean thoroughly around transmission	-			○					
Clean all belts, pulleys, etc.	42			●					
Lubricate belt tensioner (nipple)	44			●					
Lubricate triangle link	43			●					
Lubricate the driver's seat	44			●					
Lubricate all wires	42			●					
Lubricate bearing surfaces on cutting unit	42			●					
Clean inside frame tunnel	-			○					
Lubricate pedal mechanism inside frame tunnel	43			●					
Lubricate the gear lever	46			●					
Lubricate the parking brake wire	46			●					

MAINTENANCE

Maintenance	Page	Daily main-tenance before after	Weekly ³⁾ main-tenance	At least once a year	Maintenance interval in hours			
					25	50	100	300
Lubricate throttle control	44		●					
Lubricate choke control	44		●					
Smörj styrkedja i ramtunnel.	43		●					
Lubricate steering chain inside frame tunnel	22		●					
Clean engine cooling air intake	26			●	●			
Clean the air filter pre-filter (oil-foam)	27			●	●			
Change engine oil ¹⁾	45			●			●	
Clean the air filter cartridge ²⁾ (paper filter)	25			●		●		
Check/adjust cutting height setting	31			●		●		
Check/adjust parking brake	23			●		●		
Inspect flame guard/spark arrestor (optional equipment)	-			○		○		
Replace the engine oil filter (every 200 hours)	47			●			●	
Clean/replace spark plugs	-			○			○	
Replace fuel filter in pipe	24			●			●	
Clean pulse-air filter	26			●			●	
Clean the cooling flanges	-			○			○	
Check engine valve clearance ⁴⁾	-			○				○
Check whether oil change ⁴⁾ are necessary for K62 gearbox (every 500 hrs)	-			○			○	
Replace the air filter pre-filter (oil-foam) ²⁾	25			●				●
Replace the air filter (paper filter) ²⁾ (every 200 hours)	25			●			●	
Carry out 300 hour service ⁴⁾	-			○				○

¹⁾ First change after 5 hours. ²⁾When driving with a heavy load or when the ambient temperature is high, replace every 25 hours. Clean every 25 hours if pre-filter is not fitted. Clean and replace the filter more often in dusty conditions. ³⁾ For daily use of the machine lubrication should be conducted twice a week. ⁴⁾ Conducted by 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:

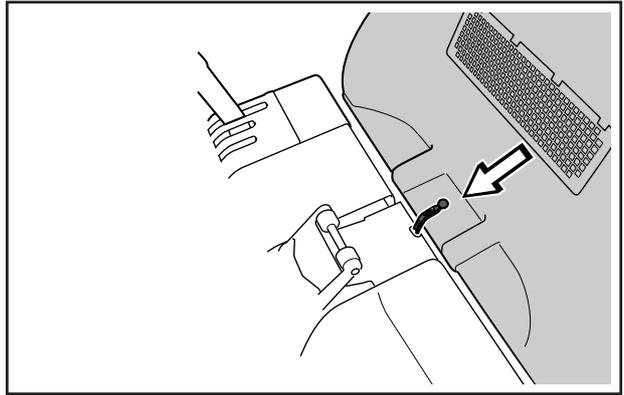
- The engine is switched off.
- The parking brake is applied.
- The ignition key is removed.
- The cutting unit is disengaged.
- The ignition cables are removed from the plugs.

MAINTENANCE

Removing of the machine hoods

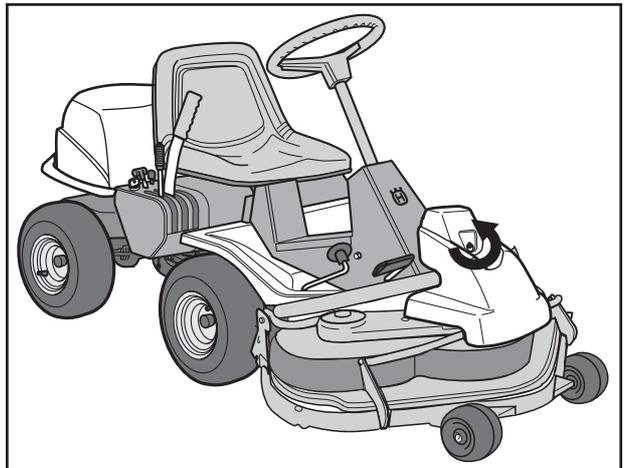
Engine hood

Release the rubber strap securing the engine hood and raise the hood.



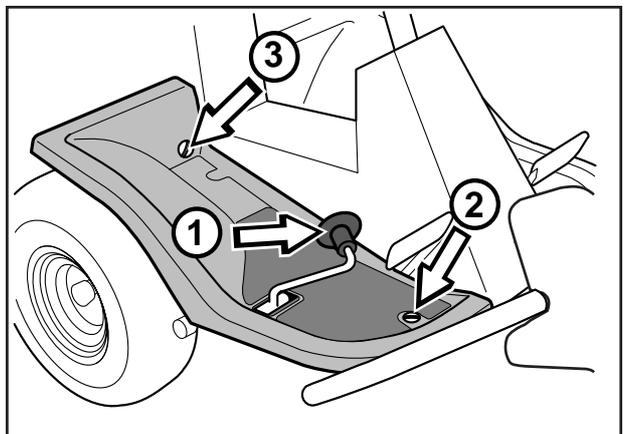
Front hood

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



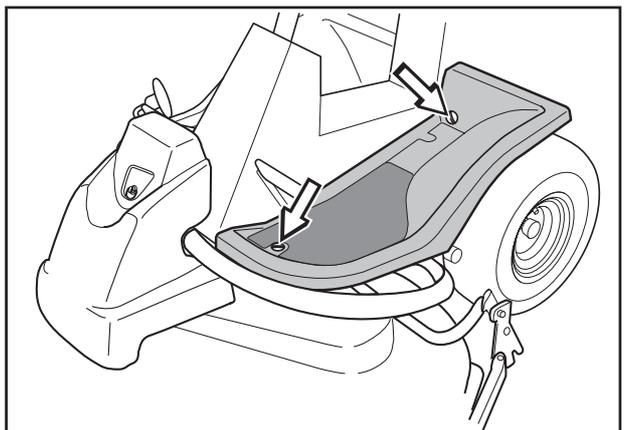
Right-hand fender

Dismantle the foot-plate (1), screws (2 and 3), and lift off the fender.



Left-hand fender

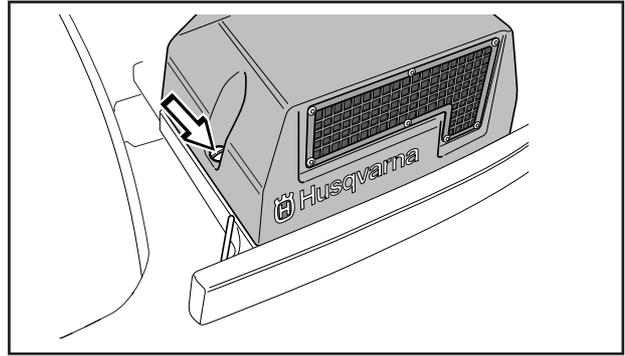
Dismantle the screws (1 and 2), and lift off the fender.



MAINTENANCE

Transmission cover

Undo the two screws (one on each side) and lift off the transmission cover.



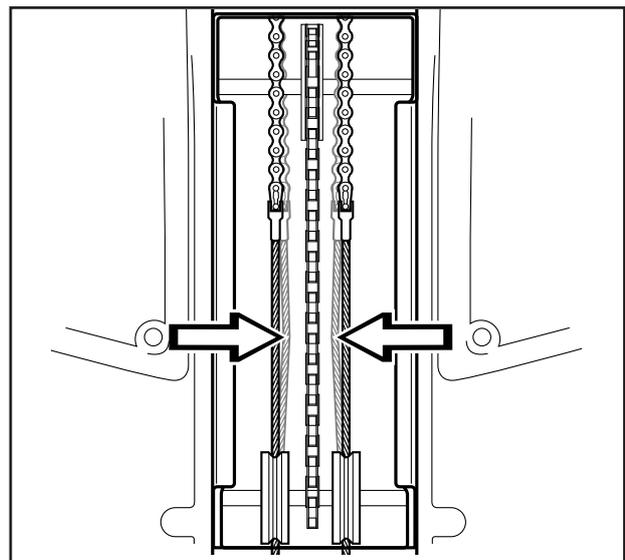
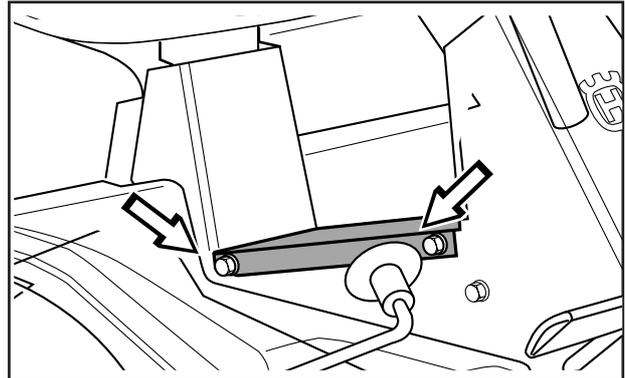
Checking and adjustment of the steering wires

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:

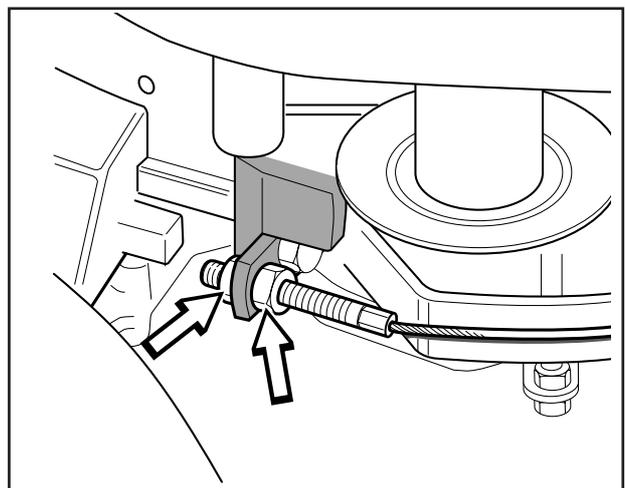
1. Dismantle the frame-plate by releasing the screws (two on each side).
2. Check the tension of the steering wires by pushing them together (at the arrows). It should be possible to push them together so that the distance between them is half as much, without using unnecessary force.



3. When necessary the wires can be tensioned by tightening the adjusting nuts one on each side of the machine.

Do not tension the wires too tightly, they should only be *tightened up* to the steering rim.

Check the wire tension on completion of the adjustment as per item 2.

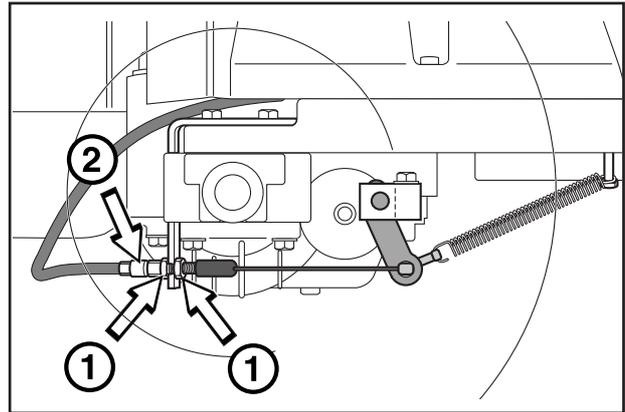


MAINTENANCE

Adjusting the brakes

The parking brake (on the right) is adjusted as follows:

1. Remove the transmission cover.
2. Unhook the spring (A) from the screw (B).
3. Make sure the parking brake is released.
4. Adjust so there is 1 mm play between the outer cable and the adjuster screw when you pull the outer cable.
Adjust the adjuster screw using the nuts.
5. Tighten the nuts carefully to prevent damaging the adjuster screw.
6. Refit the spring (A).
7. Check that the brake works.



WARNING!
Poorly adjusted brakes can result in reduced braking power.

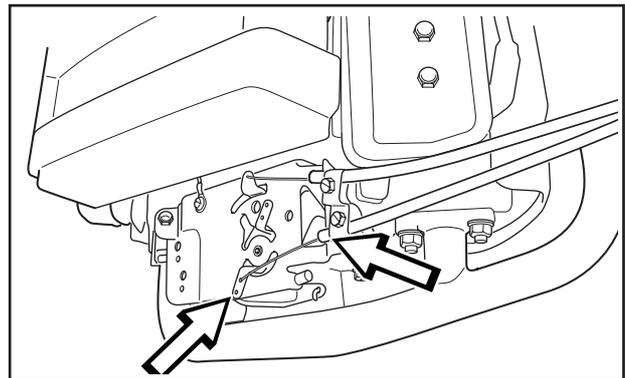
Checking and adjustment of the throttle wire

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.



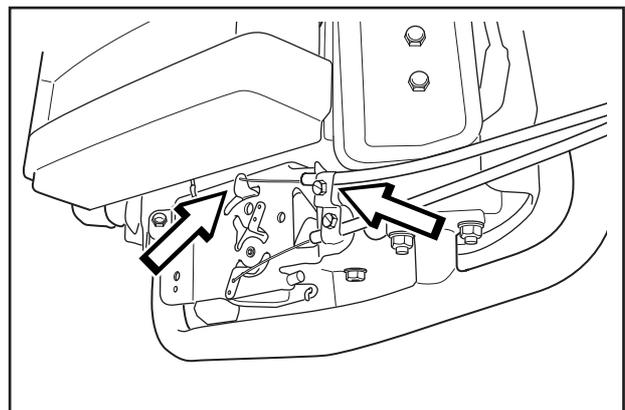
Checking and adjusting the choke wire

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.



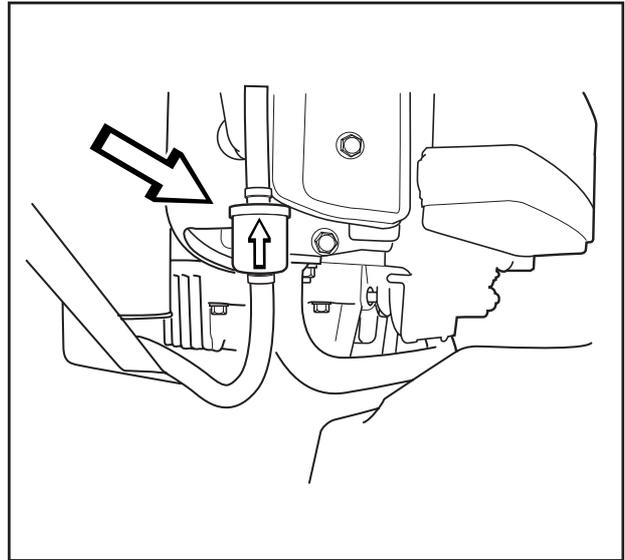
MAINTENANCE

Replacement of the fuel filter

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

Replace the filter as follows:

1. Release the rubber strap under the seat and raise the engine hood.
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 the new filter into the ends of the hoses. Turn the filter so that the "FLOW" arrow is pointing upwards towards the fuel pump. If necessary apply liquid detergent to the ends of the filter to facilitate connection.
5. Push the hose clips back on the filter and tighten.

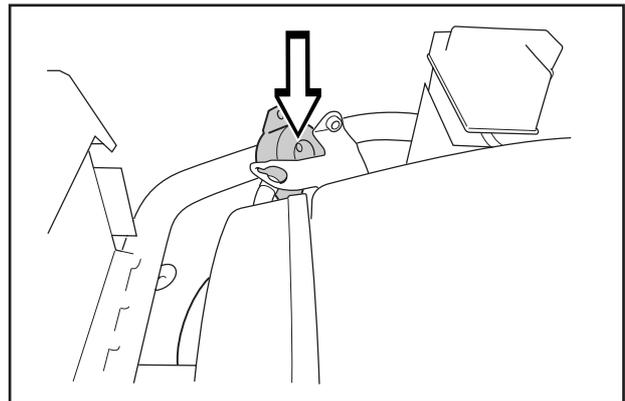


Checking of the fuel pump's air filter

Check regularly that the fuel pump's air filter is free from dirt.

The filter can when necessary be cleaned with a brush.

1. Remove the two screws that hold the fuel pump.
2. Prise out the pump without disconnecting the hoses and clean the filter with a brush.
3. Put the fuel pump back in place.



MAINTENANCE

Replacing the air filter

If the engine seems to lack power or does not run smoothly this may be because the air filter is clogged.

It is therefore important to replace the air filter at regular intervals (see maintenance schedule on page 19-20 for correct service interval).

Clean/ replace the air filter as follows:

1. Release the rubber strap under the seat and raise the engine hood.



WARNING!
Let the exhaust system cool down before servicing it, otherwise you could burn yourself.

2. Fold out the two snap-locks and lift off the cover on the air filter housing.

3. Pull off the foam plastic pre-filter from the paper filter and wash clean in mild detergent.

Squeeze it dry in a clean cloth.

4. Unscrew the wing nut from the air filter and lift out the paper filter. Tap the filter against a hard surface to shake off the dust. If the paper filter is still dirty it should be replaced.

IMPORTANT INFORMATION

Do not use compressed air to clean the paper filter.

Do not wash the paper filter.

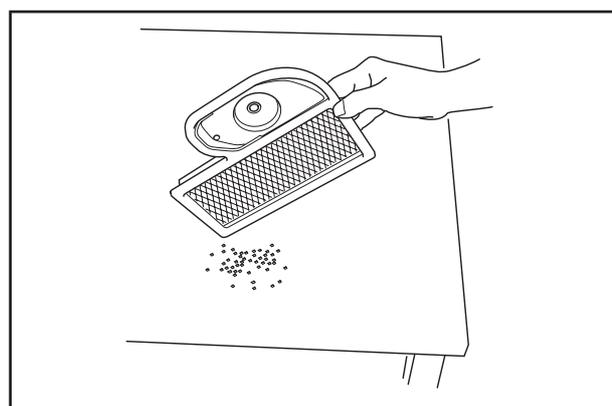
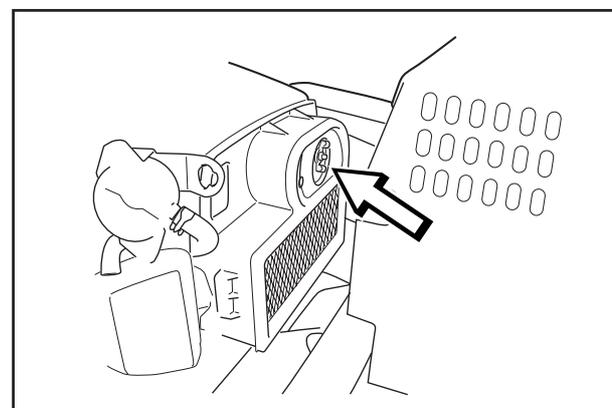
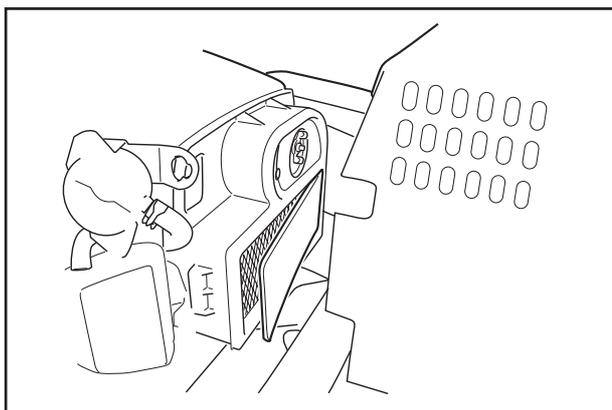
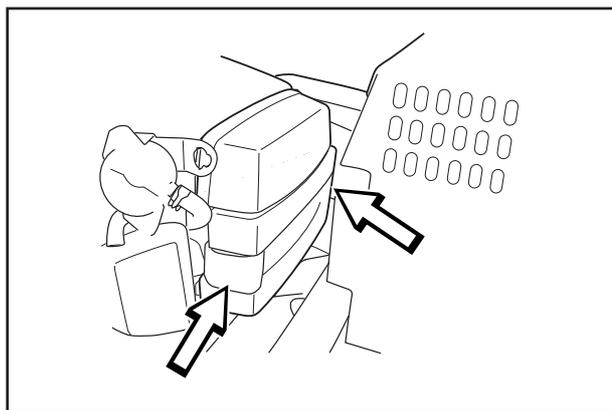
Do not oil the paper filter.

5. Refit the air filter as follows:

Insert the paper filter in the air filter housing and tighten the wing nut.

6. Fit the pre-filter over the rectangular section of the paper filter.

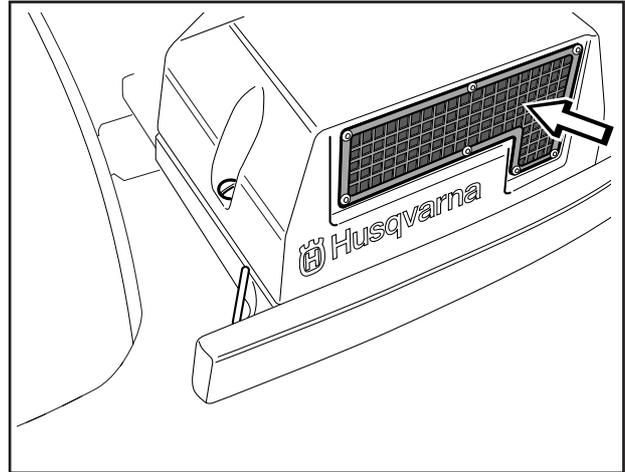
7. Refit the cover on the air filter housing. Bring up the cover from below and make sure the pre-filter does not drop out of place. Secure with the two clips.



MAINTENANCE

Check the transmission's air intake

Check that the transmission's air intake is not blocked.

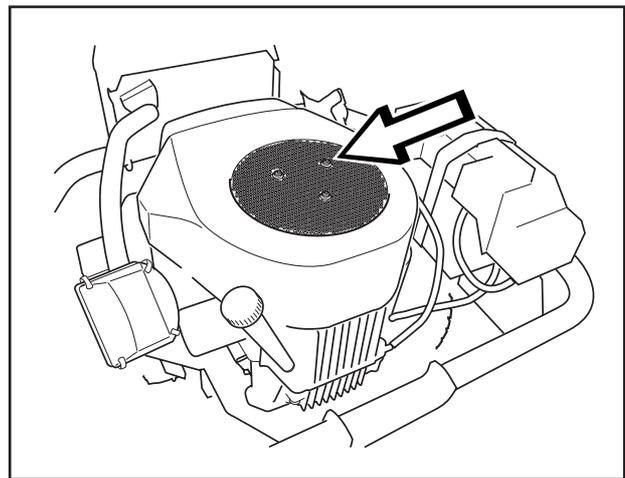


Check the engine's cooling air intake

Release the rubber strap under the seat and raise the engine hood.

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

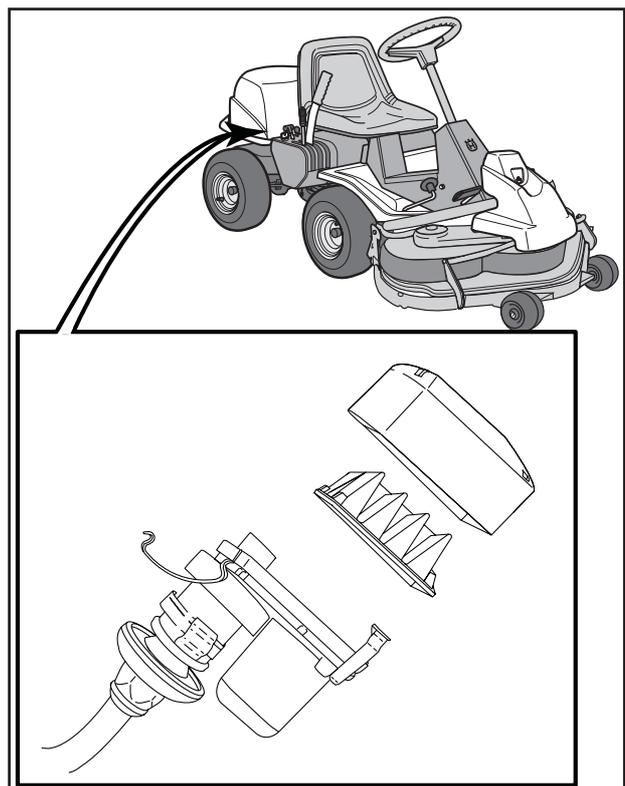
If the cooling intake is blocked this will interfere with the cooling of the engine, which can damage the engine.



Muffler air intake

Cleaning the filter

1. Connect the spring that tensions the tensioning roller.
2. Loosen the four quick-action clips and lift off the cover and remove the filter.
3. Blow out the filter using compressed air.
4. Replace the filter in the cover and secure the cover using the quick-action clips. Replace the engine hood.



MAINTENANCE

Check the level of the battery acid

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



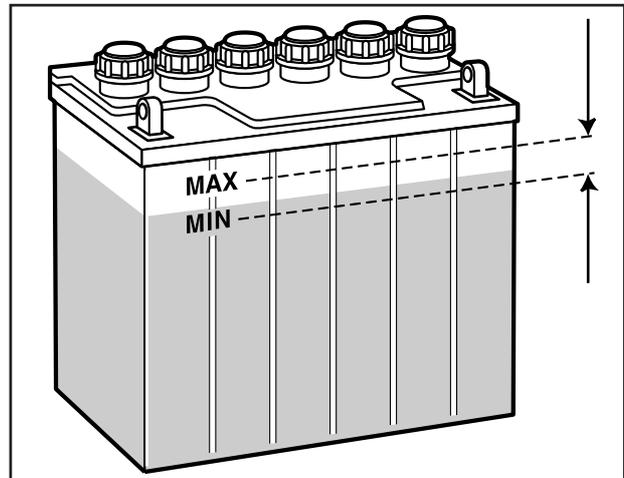
WARNING!
Procedures on contact with acid

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

Inspecting the safety system

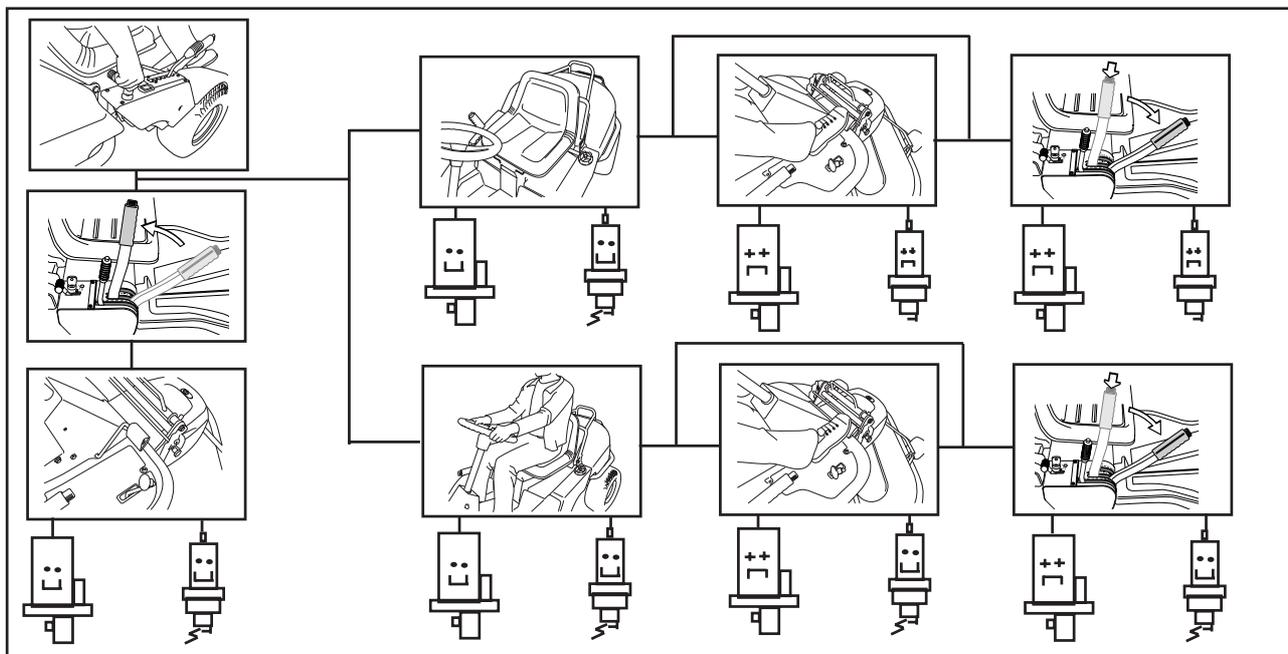
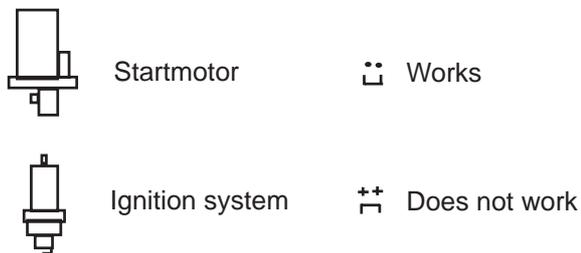
The Rider is equipped with a safety system that prevents starting or driving under the following conditions:

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

Checking the tyre pressure

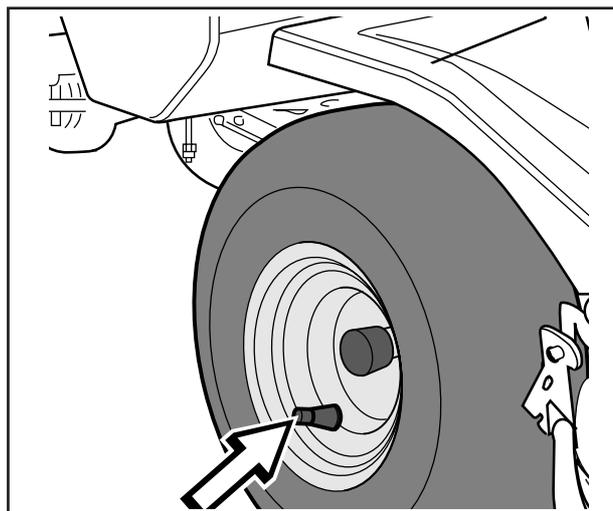
The tyre pressure should be 60 kPa (0.6 kp/cm²) all round.

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

The maximum tyre pressure is 80 kPa (0,8 kp/cm²).

IMPORTANT INFORMATION

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



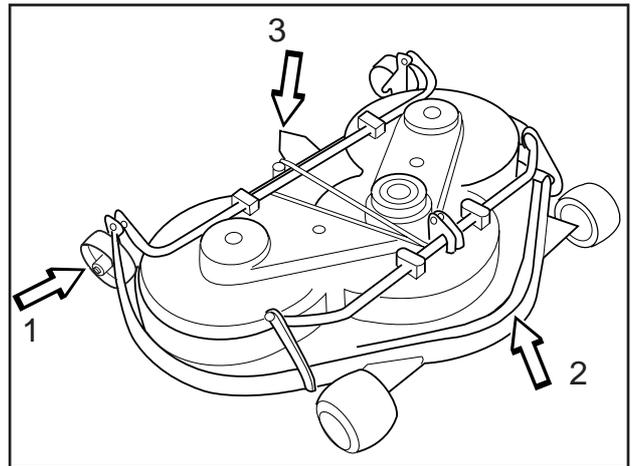
MAINTENANCE

Fitting the cutting unit

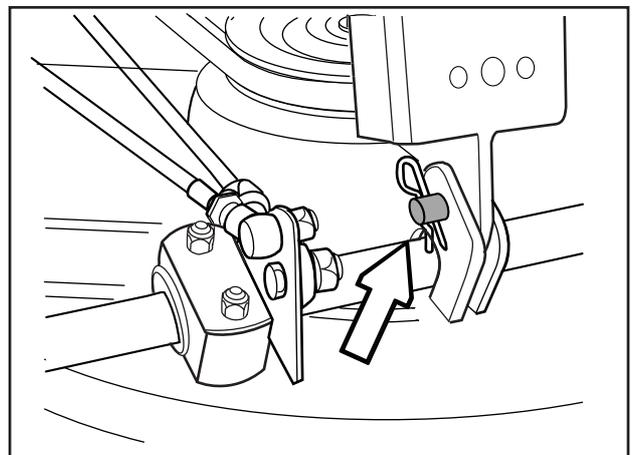
1. Position the Rider on a flat surface and apply the parking brake, see page 10. Check that the lever for adjusting the cutting height is at the lowest setting.

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

2. Grasp the handle at the front (BioClip 90) or hold the frame of the cutting unit (2) and slide the unit underneath the rider mower, making sure that the tongue on the cutting unit (3) engages correctly.



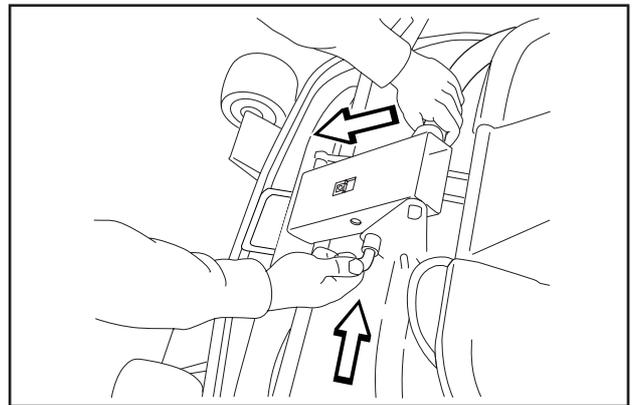
3. Insert the bolt and secure it with a locking pin.



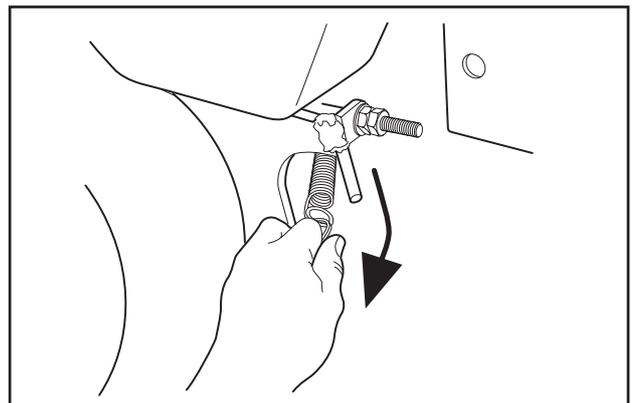
4. Press down the frame and insert the pin. Fit the drive belt around the drive wheels of the cutting unit.

5. Hook up the height adjustment strut.

6. Fit the front cover.



7. Fit the spring that tensions the tensioning pulley.

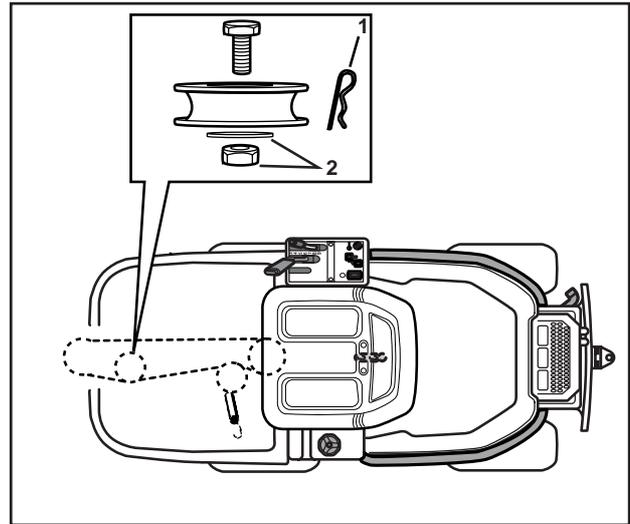


MAINTENANCE

Installing BioClip 90

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

1. Disengage the spring from the tensioning wheel.
3. Remove the locking pin (1) that is located next to the support wheel.
4. Fit the cutting unit as instructed on the previous page.

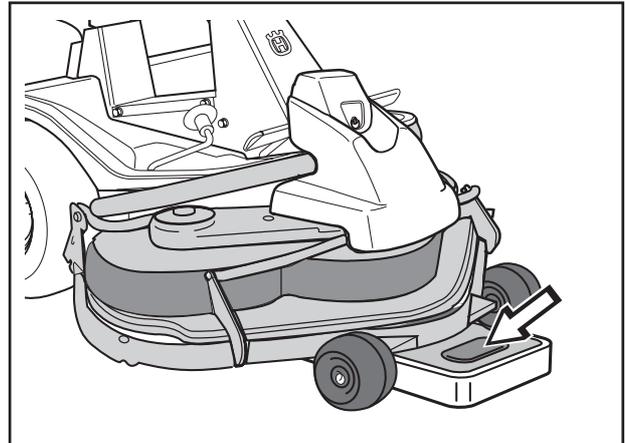


Checking and adjustment of the cutting unit's ground pressure

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.

Adjusting of the cutting unit's ground pressure is conducted as follows:

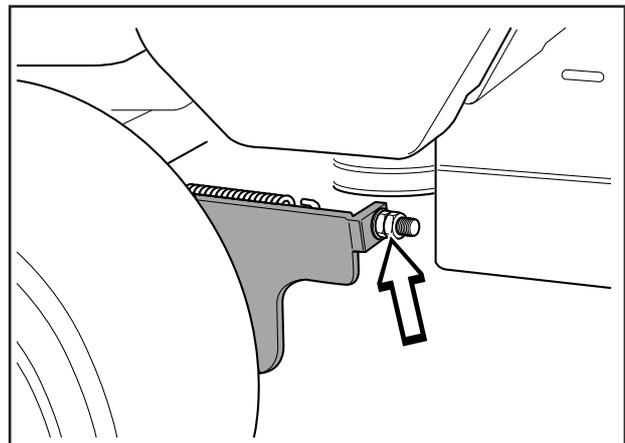
1. Place a set of bathroom scales under the cutting unit's frame (front edge) so that it rests on the scales. If necessary a block can be placed between the frame and scales so that the support wheels do not bear any weight.



BioClip 103

2. 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.

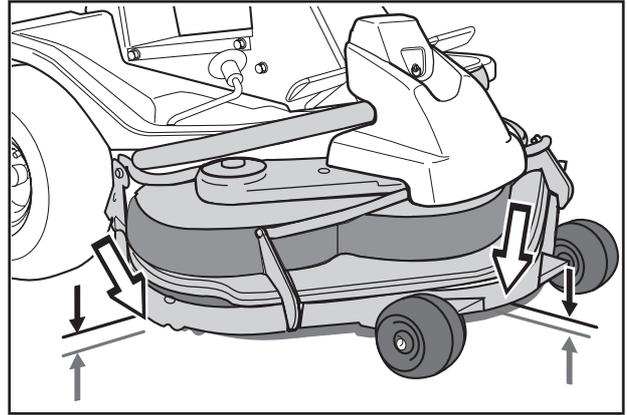


MAINTENANCE

Checking the cutting unit's parallelism

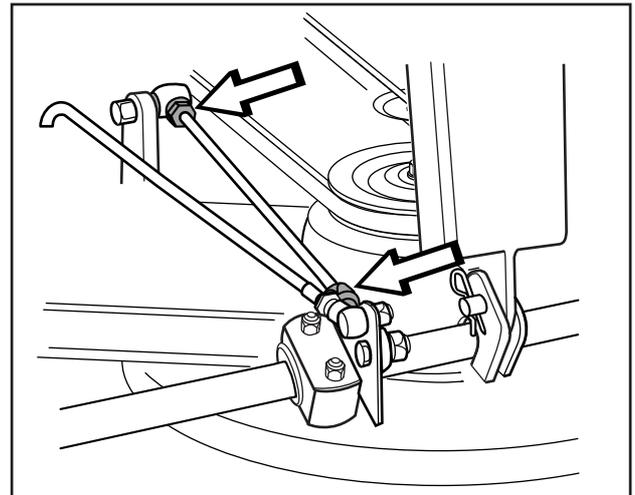
Check the parallelism of the cutting unit as follows:

1. Place the machine on a level surface.
2. 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 higher than the front edge.



Adjusting the parallelism of the cutting unit

1. Remove the front hood and right-hand fender, as described on page 20.
2. Undo the nuts on the lift strut.
3. Unscrew the strut (anticlockwise) to lower the rear edge of the hood.
Screw the strut in (clockwise) to raise the rear edge of the hood.
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.



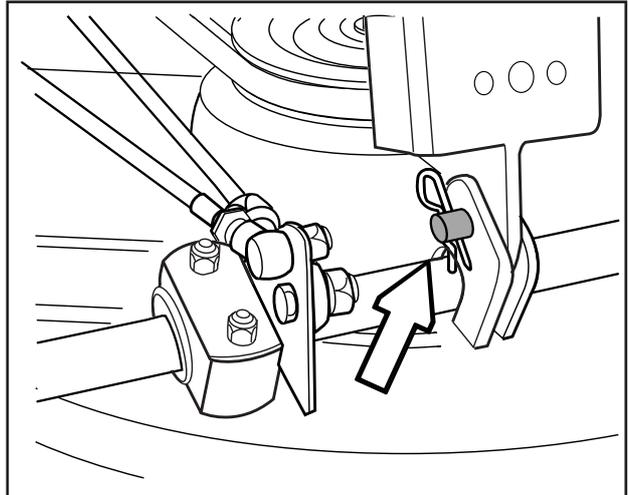
MAINTENANCE

Removing the cutting unit



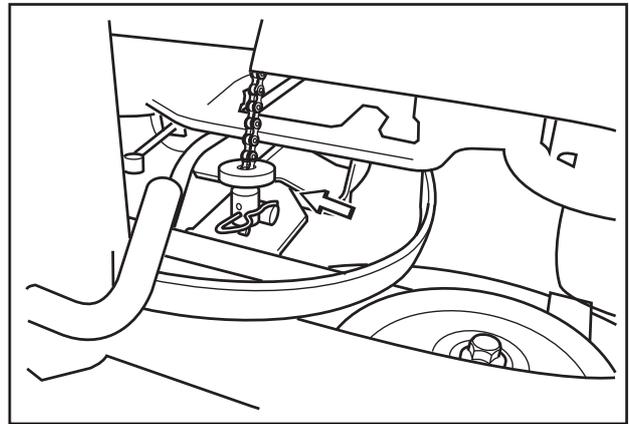
WARNING!
Wear protective glasses when removing the cutting unit. The spring which tensions up the belt can go off and cause personal injury.

1. Carry out steps 1-9 to put the cutting unit in the service position, see "Service position for cutting unit" on page 34.
2. Remove the bolt and lift off the cutting unit.



To fit the cutting unit simply reverse the procedure for removal. See page 29 for instructions on fitting the BioClip 90 deck.

When fitting: Make sure that the "tongue" on the deck engages with the hole in the underside of the machine.



Removing the belt

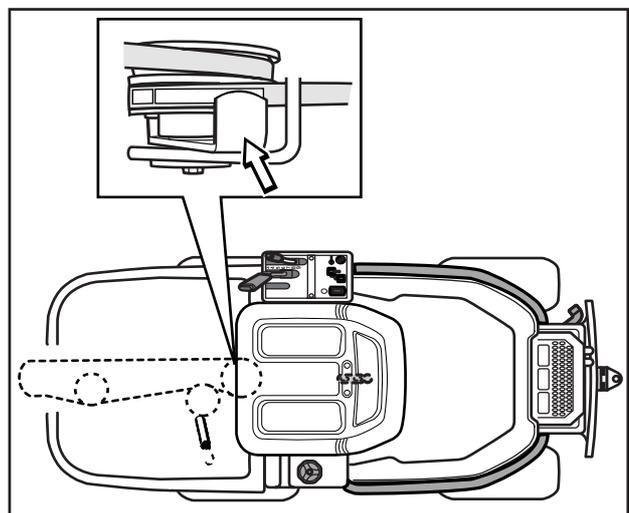
Starting point when Removing the belt:

- No unit attached to the Rider.
- The front part of the belt hangs loose.

The entire belt is only dismantled as set out below, when the snow plough is fitted on the Rider.

- Remove the guide plate from underneath the drive wheel. Use a 13 mm spanner.
- Prise the belt off the middle pulley and remove the belt.

Reverse the above sequence to refit the belt.



MAINTENANCE

Replacing the cutting unit's belts

Belt replacement on the BioClip 103

There are two versions of BioClip 103. Version 1 has one toothed belt and version 2 has two. The toothed belts drive the blades and synchronise their rotation. The belts are located under a cover on top of the cutting unit.

1. Remove the cutting unit, see page 31.
2. Remove the front bolt from the parallel strut and tip the strut backwards. Push the height adjustment strut forwards.
3. Loosen the two bolts holding the protective hood and then lift off the hood.

Useful hint: Mark the positions of the blades on the respective pulley using a felt-tip pen.

4. Version 1:

Loosen the three bolts 1/2 - 1 turn. Press the sides of the belt together to give maximum slack and tighten one of the bolts. Replace the belt and tighten as shown (see decal on cover). Set the blades at 90° to each other and loosen the bolt again. The spring ensures the correct belt tension. Check the positions of the blades again and adjust if necessary by repositioning the belt on the teeth. Tighten the three bolts to 45 Nm.

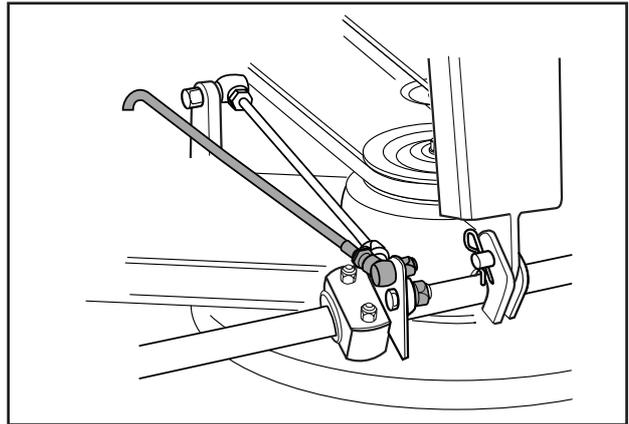
4. Version 2:

Loosen the nuts on the eccentric plate and turn this away.

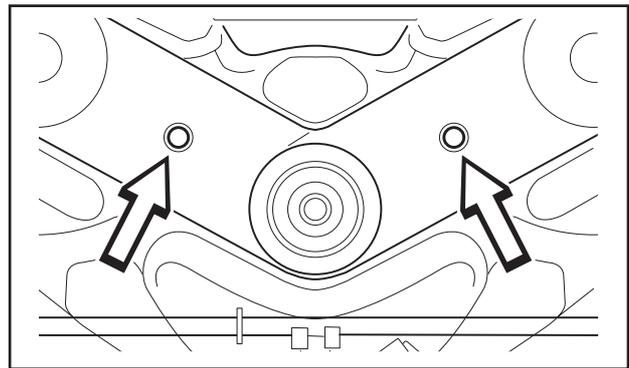
Loosen the four nuts (see diagram) holding the outer blade bearing enough so that the bearing can be moved.

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

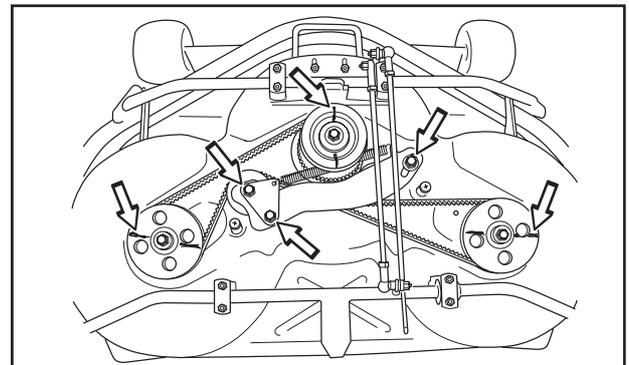
Repeat the procedure for the lower belt.



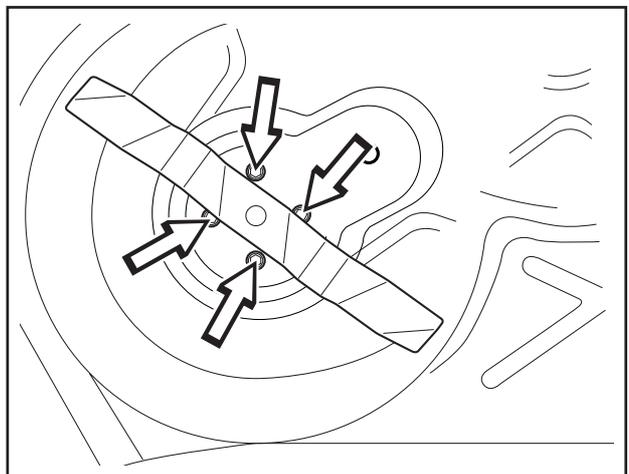
BioClip 103 Versions 1 and 2



BioClip 103 Versions 1 and 2



BioClip 103 Version 1



BioClip 103 Version 2



WARNING!
Protect your hands by wearing gloves when working with the blades.

MAINTENANCE

5. Version 2:

Assembly: First fit the lower belt and then the upper belt.

Ensure the blades are positioned as set out in the diagram, at 90 degrees to each other, otherwise the belts must be adjusted. When the blade bearings are loose the belts 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. Version 2:

When the belt can be moved 7 mm inwards using a force of 10 N the belt is adjusted correctly.

7. Version 1 och 2:

Fit the protective cover over the belts and replace the parallelism arm.

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.

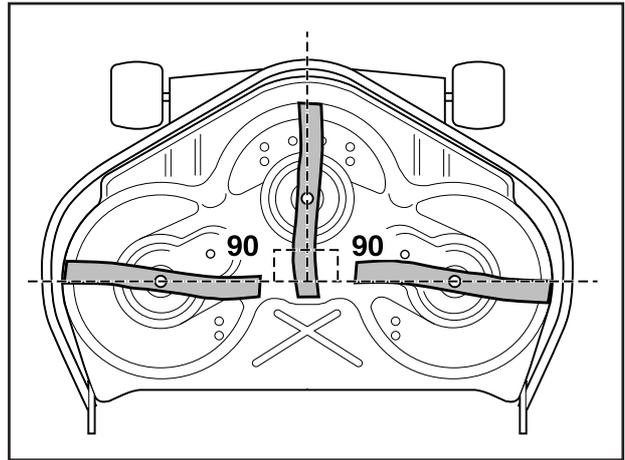
When changing the belt on a BioClip 90 follow steps 1-7 of the above procedure for version 2. NOTE! BioClip 90 has just 1 belt.

Belt replacement on cutting unit's with side or rear ejectors

Cutting units with side or rear ejectors are powered by *one* V-belt. Proceed as follows to replace the V-belt:

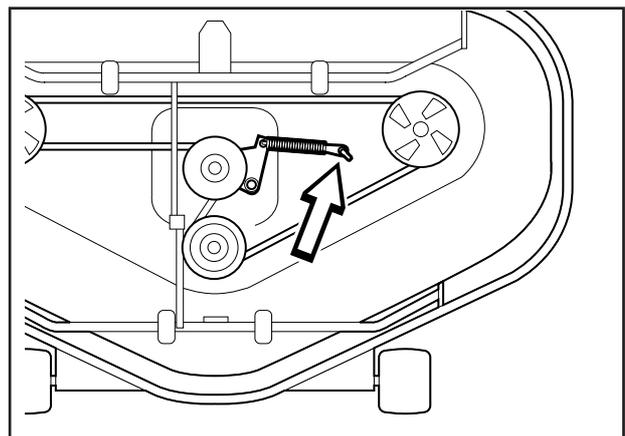
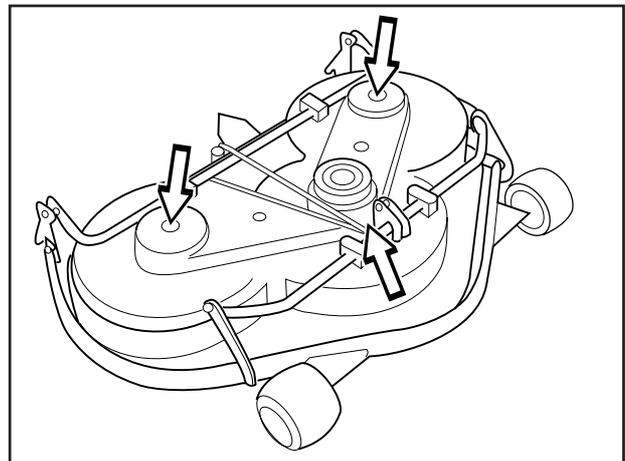
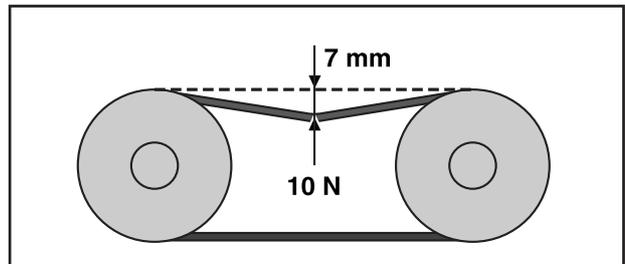
1. Remove the cutting unit, see page 33.
2. Undo the bolt on the lift strut and the two screws on the cover. Lift the cover off the cutting unit.
- 3& Loosen the spring that tensions the V-belt and pry off the belt.

Simply reverse the procedure to fit the new belt.



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.



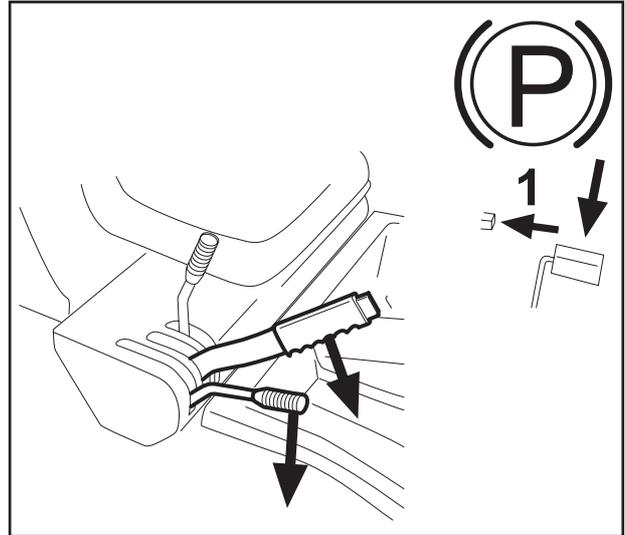
MAINTENANCE

Service position for cutting unit

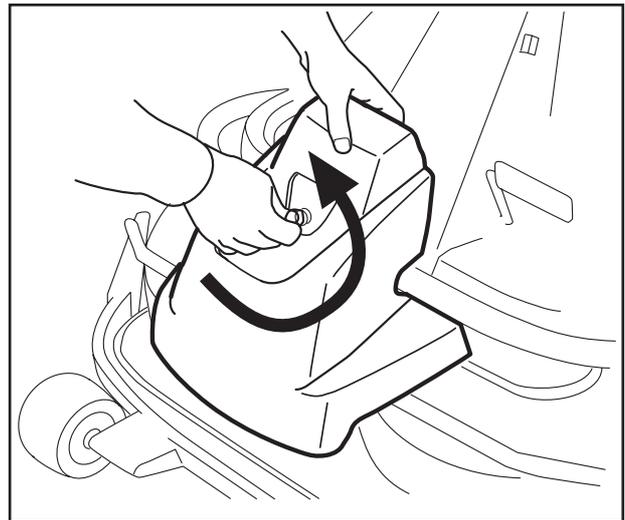
The cutting head can be placed in the service position to provide easy access for cleaning, repairs and servicing. In the service position the cutting unit is raised and locked in the vertical position.

Placing in service position

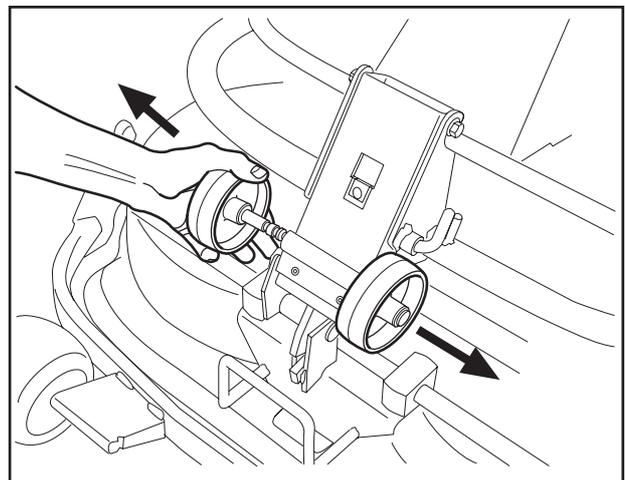
1. Position the machine on flat ground. Apply the parking brake (1), see page 14. Adjust the cutting unit to the lowest cutting height and lower the cutting unit.



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.

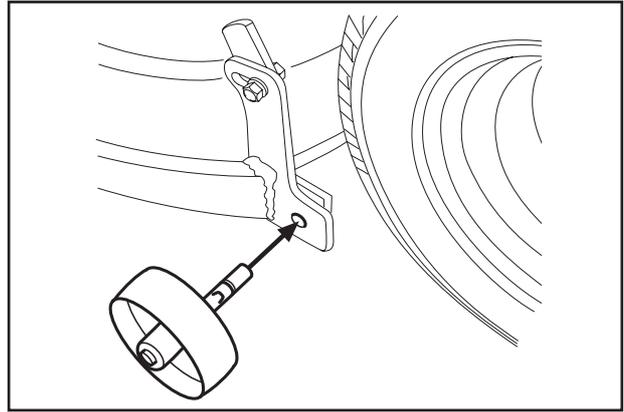


MAINTENANCE

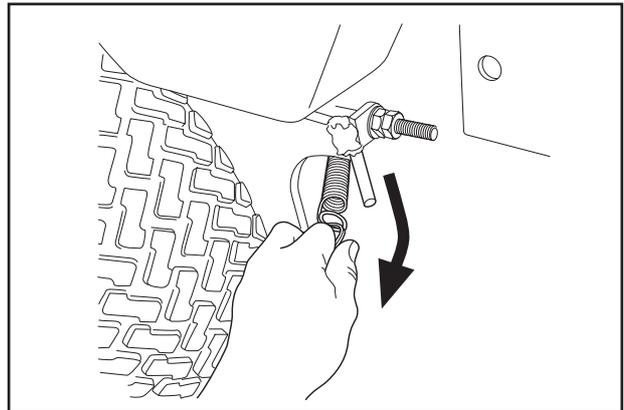
4. Fit the support wheels on either side of the rear of the cutting unit.



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

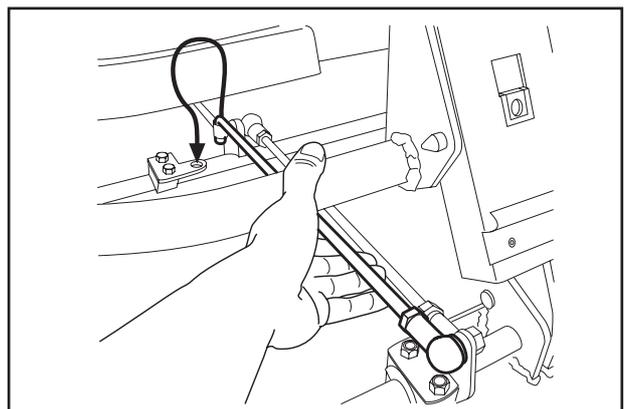
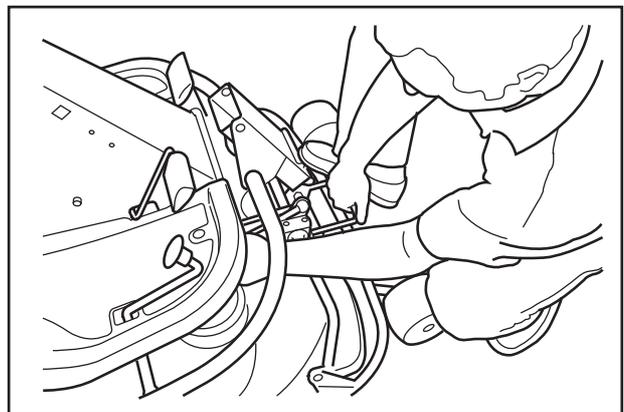


5. Disengage the spring from the drive belt tensioning wheel.



6. Move the cutting height lever to the lower position.

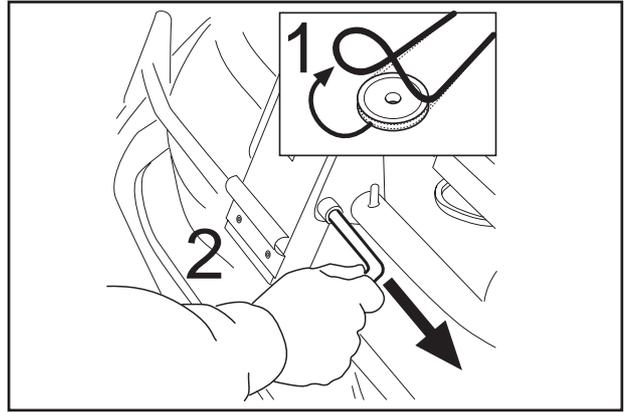
7. Place a foot on the front edge of the cutting unit near the wheel and raise the front edge of the unit to make it easier to remove the lift strut. Engage the strut in the holder.



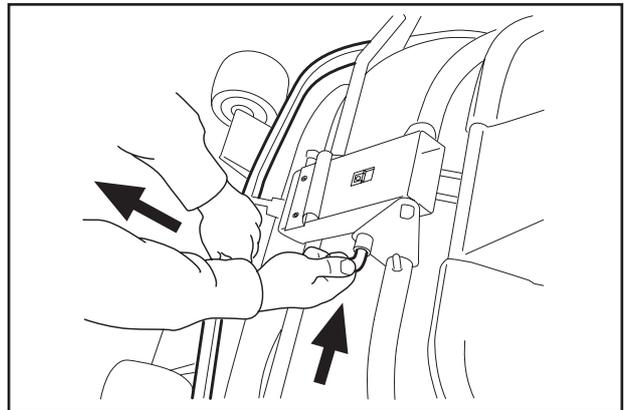
MAINTENANCE

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

Take care not to get your hand trapped.

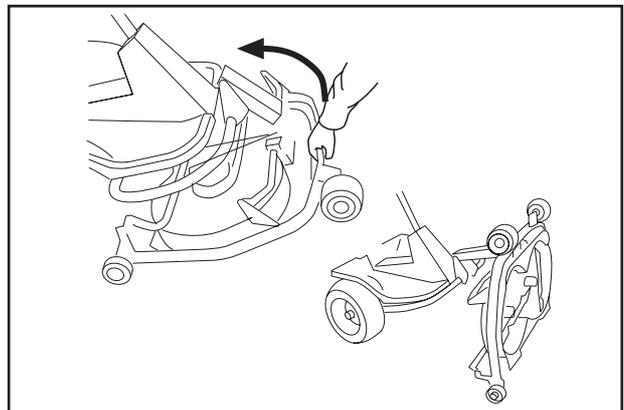


9. Pull the frame forwards and refit the pin.



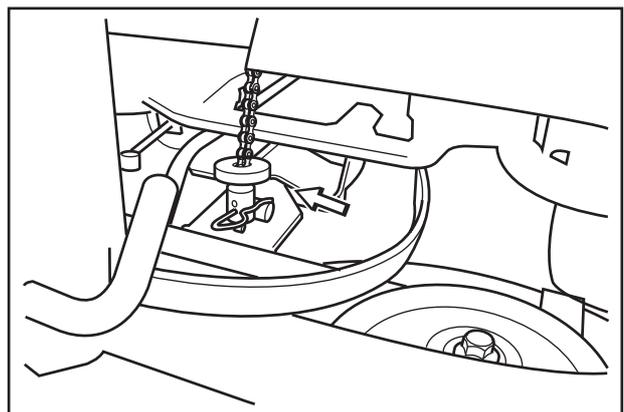
10. Grasp the front edge of the cutting unit, pull out and raise into the service position.

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" 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.

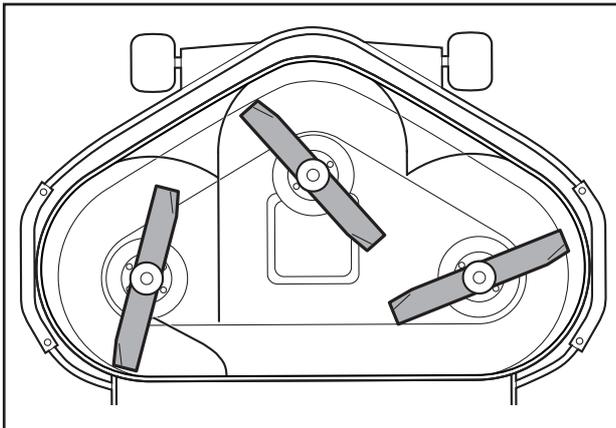
Check that the blades' attachment screws are tight.

IMPORTANT INFORMATION

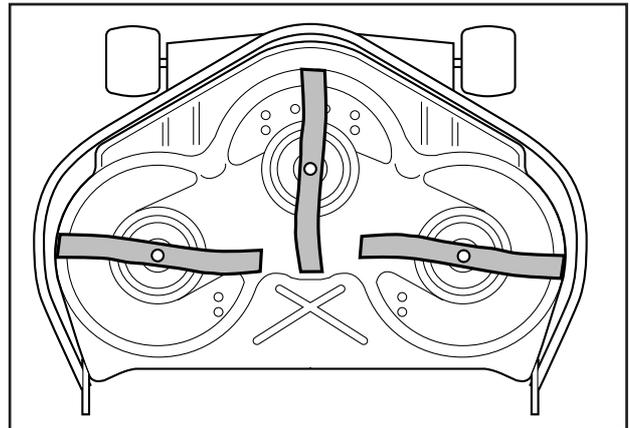
Replacing or sharpening the blades should be conducted by an authorised service workshop.

IMPORTANT INFORMATION

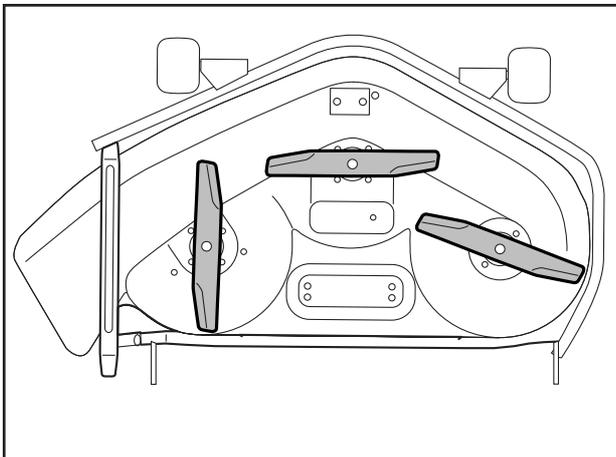
On the Bioclip unit the relative positioning of the blades should always be as shown in the diagram with an angle of 90° between the blades. Otherwise the blades can go against each other and damage the unit.



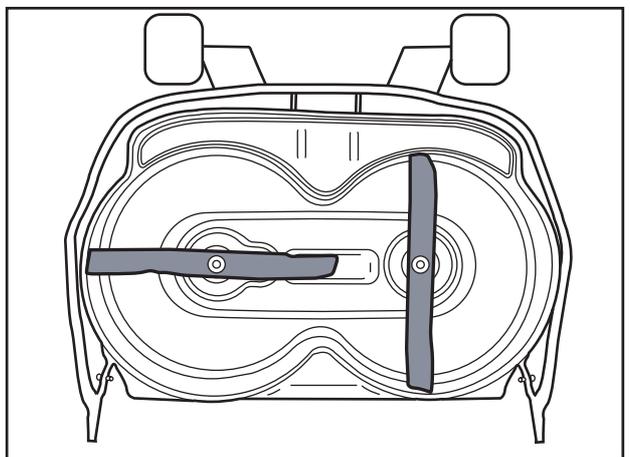
Cutting units with rear ejection



BioClip 103



Cutting units with side ejection



BioClip 90

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.

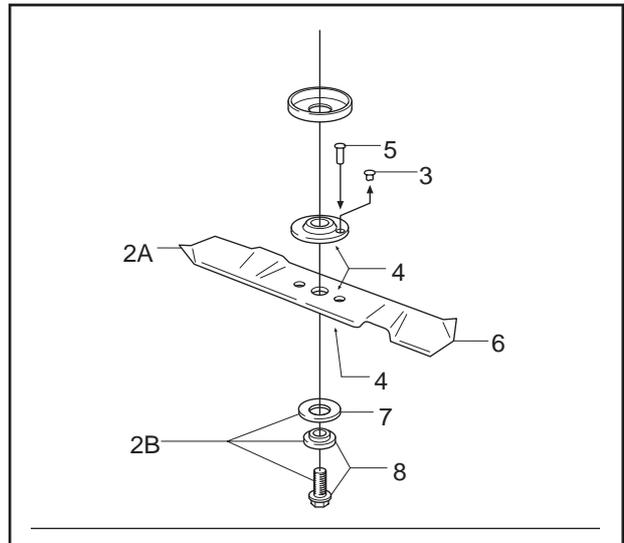
MAINTENANCE

Replacing the break-pin (BioClip)

The blades are fitted with a break-pin to protect the BioClip 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 unit in the service position, see "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 free from metal. Clean if necessary.
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)



LUBRICATION

General

Remove the ignition key to prevent accidental movement during lubrication.

If lubricating with an oil can, fill the can with engine oil.

If lubricating with grease, use grease 503 98 96-01 or a similar chassis grease or bearing grease with good corrosion resistance, unless otherwise specified.

If the Rider is used daily it should be lubricated twice a week.

Wipe off excess lubricant after lubrication.

It is important that lubricant does not get onto the drive surfaces of the belts or pulleys. If this happens, try to clean it off with white spirit. If the belt continues to slip it must be replaced. Do not use petrol or other petroleum products to clean V-belts.

Lubricating wires

Lubricate both ends of the wires, moving the controls through their full travel range while doing so. Refit the rubber protectors over the wires after lubrication. Wires with a casing will seize up unless lubricated regularly. If this happens it can lead to operating problems such as uncontrolled braking.

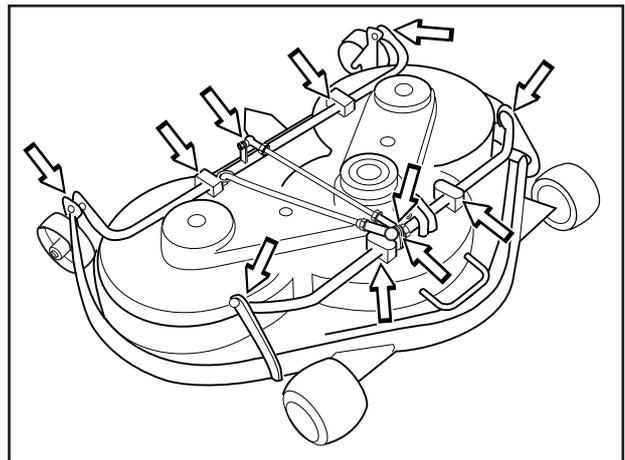
If a wire does seize up, remove it and hang it up vertically. Lubricate with light engine oil until the oil starts to drip from the lower end. Useful hint: Fill a small plastic bag with oil, tape it tightly around the wire casing and hang the wire vertically from the bag overnight. If this does not free up the wire then it must be replaced.

1. Cutting unit

Remove the nose cowling.

Lubricate using an oil can:

- Joints and bearings

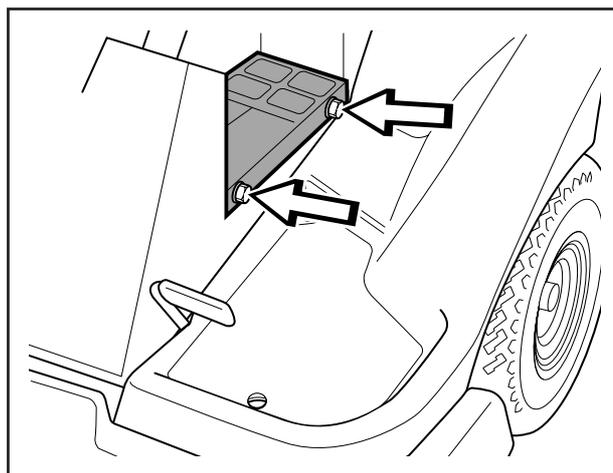


LUBRICATION

2. Pedal mechanism in frame tunnel

Lubricate the pedal mechanism in the frame tunnel.

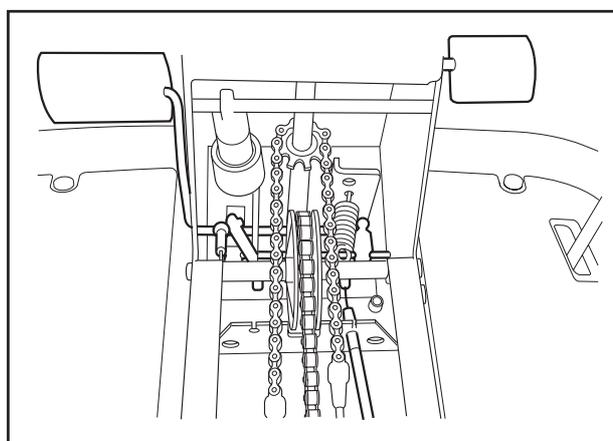
Remove the cover from the frame tunnel by undoing the screws, two on each side



Pump the pedals and lubricate the moving parts using an oil can

Lubricate the wires connected to the brake and drive pedals using an oil can

Lubricate as described under “Chains in frame tunnel” before refitting the cover over the frame tunnel.



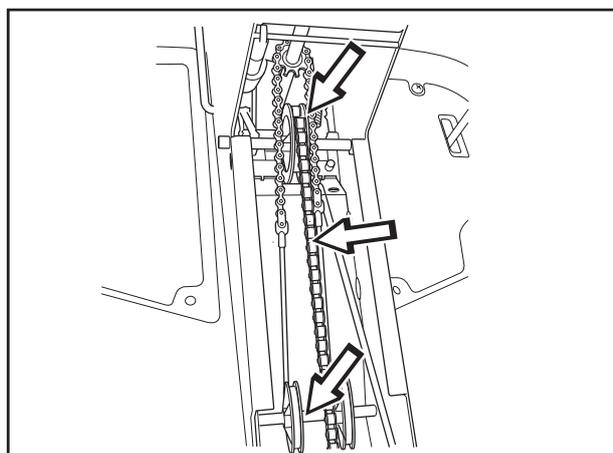
3. Chains in frame tunnel

Remove the cover from the frame tunnel, see step 2.

Lubricate the chains in the frame tunnel using an oil can or motorcycle chain spray.

Lubricate the shaft of the control wire pulleys with grease. Press the rollers to the side and brush the shaft with grease.

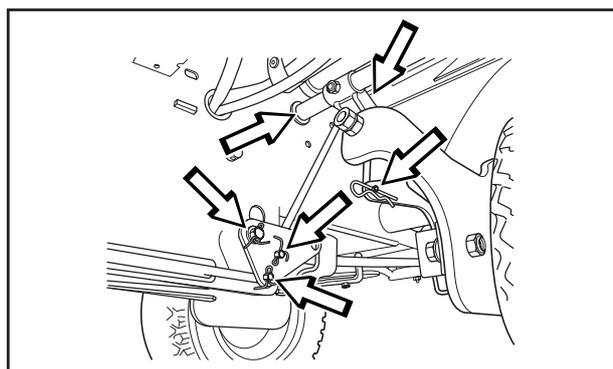
Refit the cover over the frame tunnel.



4. Triangular link and joints

Lubricate the triangular link and the joints on the cutting height adjustment strut behind the right front wheel.

Lubricate using oil can.



LUBRICATION

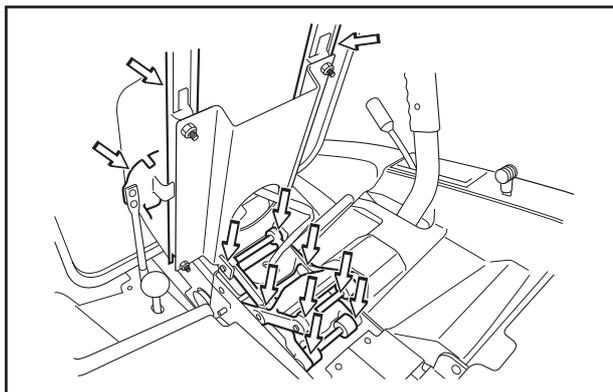
5. Driver's seat

Tip up the seat.

Lubricate the linkage of the scissor springs using an oil can; there are 8 lubrication points.

Lubricate the seat leg length adjustment mechanism using an oil can.

Lubricate the leg length adjustment rails using an oil can.

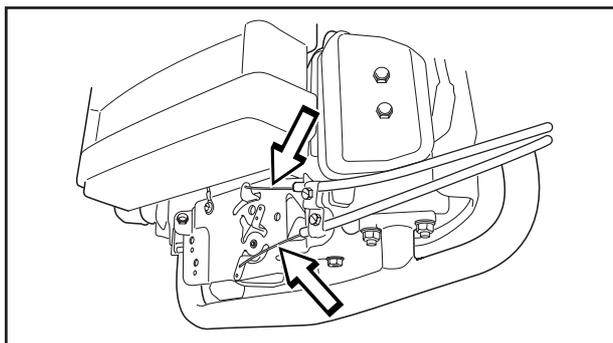
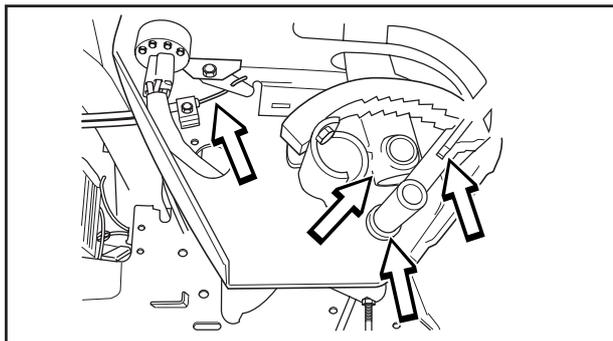


6. Throttle and choke wires, lever bearings

Remove the right side panel from the lever housing (1 screw) and open the engine hood. Lubricate the exposed ends of the wires using an oil can, including the ends at the engine. Move the levers through their full range of travel and lubricate again.

Lubricate joints, locks and bearings for the cutting deck control levers using an oil can.

Refit the side panel on the lever housing. Make sure the tabs engage correctly in the housing.

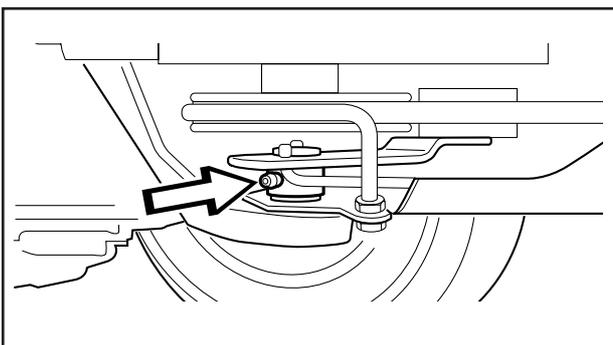


7. Belt tensioner

Use a grease gun to lubricate the single nipple on the right side below the lower engine pulley, until grease is forced out.

Use good quality molybdenum sulphide grease.

Grease with a familiar brand name (petrol company, etc.) is generally of good quality.



LUBRICATION

8. Engine oil

Check the engine oil level when the Rider is on level ground.

Release the rubber strap under the seat and raise the engine hood.

Take out the dipstick, wipe it clean and push it in again.

Do **not** screw in the dipstick.

Take out the dipstick again and read the oil level.

The oil level should be between the marks on the dipstick. If the level is close to the "ADD" mark, top up with oil to the "FULL" mark on the dipstick. Never fill above the "FULL" mark.

Oil is added through the hole that the dipstick sits in.

Use SAE 30 or SAE 10W-30 grade engine oil, or 10W/40, class SC-SH (above 0° C/+32°F). SAE 40 oil can be used above +20°C/+68°F. Use SAE 5W-20 engine oil, class SC-SH (below 0° C/+32°F).

The engine holds 1.5 litres of oil, excluding the filter (1.7 litres including filter).

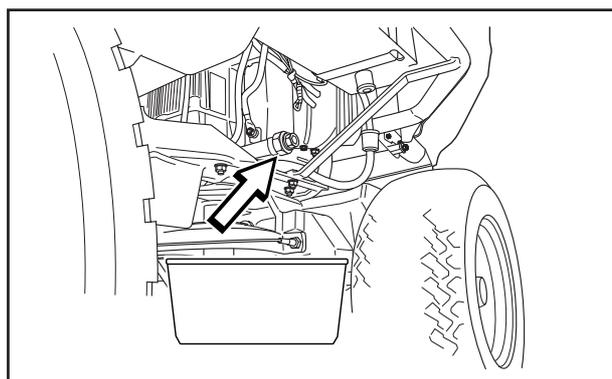
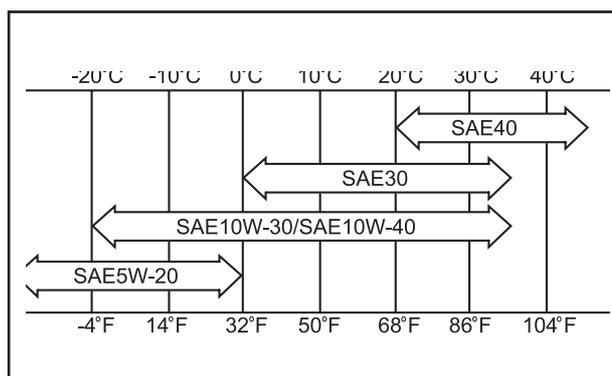
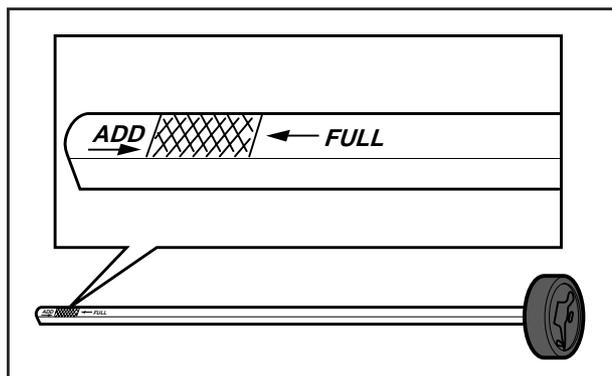
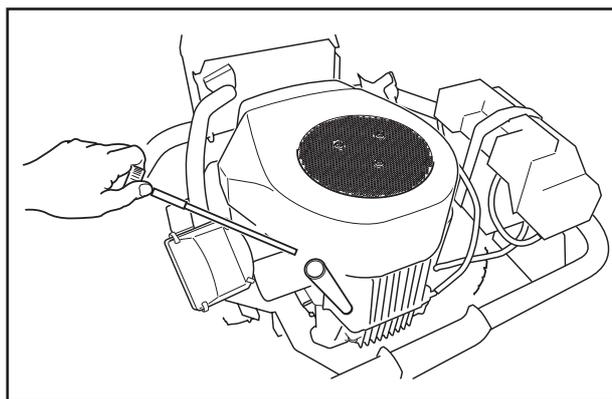
Changing the engine oil

The engine oil must be changed after the first 8 hours of operation and every 100 hours thereafter.



WARNING!
Engine oil can be very hot if it is drained off directly after the engine is stopped. Therefore allow the engine to cool down first.

1. Open the engine hood.
2. Place a container under the drain plug on the left side of the engine.
3. Take out the dipstick. Remove the drain plug from the left side of the engine.
4. Let the oil drain out into the container.
5. Refit the drain plug and tighten it.
6. Fill with oil to the "FULL" mark on the dipstick. Use the grade of oil specified above.
7. Run the engine until hot and check that there is no leakage from the drain plug.



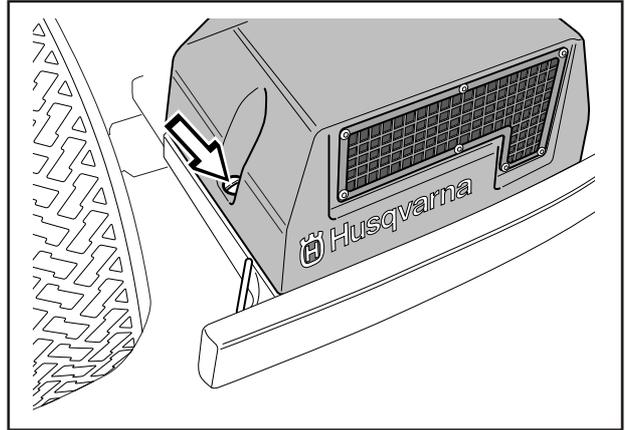
IMPORTANT INFORMATION

Used engine oil is hazardous to health and must by law not be poured out on the ground or in the nature, but shall be handed in to a workshop or special environmental station. Avoid skin contact, wash with soap and water in the event of spillage.

LUBRICATION

9. Gear lever

Remove the transmission cover by undoing the two screws.

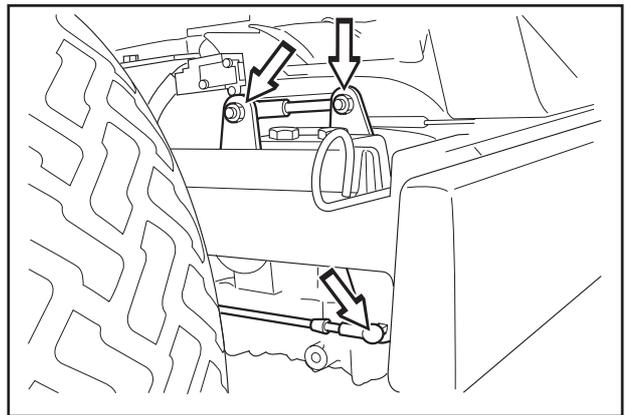


Lubricate the joints and bearings on the left side using an oil can.

Push the rubber protector out of the way and lubricate the hydrostatic wire using an oil can. Press the pedal a few times and lubricate again.

Refit the rubber protector.

Refit the transmission cover.



10. Parking brake wire

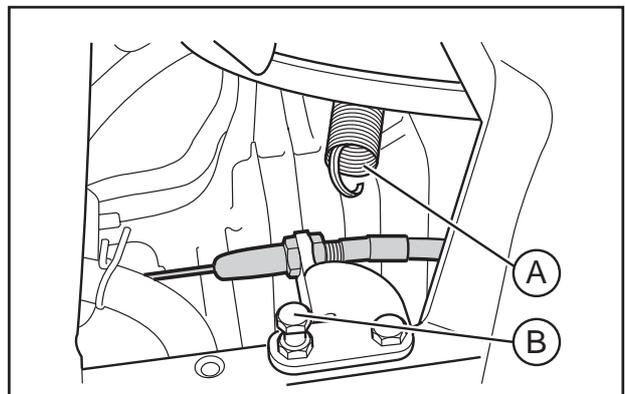
Remove the transmission cover; see "Gear lever".

Unhook spring (A) from screw (B) if necessary.

Push the rubber protector aside to lubricate the wire.

Lubricate the wire using an oil can, press the brake pedal a few times and lubricate again.

Refit spring (A) and the transmission cover.

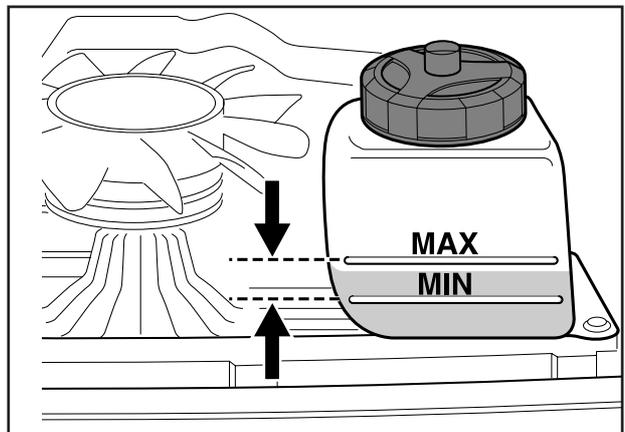


11. Transmission oil level

1. Check the level of the transmission oil by looking through the air intake mesh. The oil level should be between the "MIN" and "MAX" marks on the oil reservoir at 20°C.

If it is necessary to top up the oil you must remove the transmission cover first.

2. Unscrew the cap from the oil reservoir and top up with SAE 10W/30 grade engine oil, class SF-CC, until the oil level reaches the "MAX" mark. Screw the cap back onto the oil reservoir and refit the transmission cover.



LUBRICATION

12. Transmission

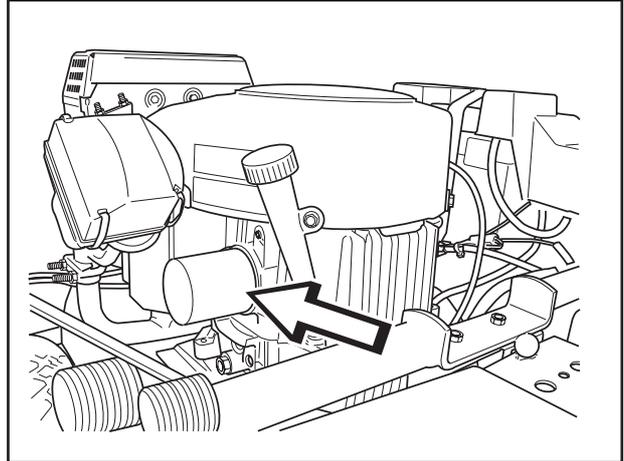
The oil and filter should be replaced by an authorised service workshop as described in the workshop manual.

13. Replacing the oil filter



WARNING!
The engine oil may be very hot if it is drained immediately after stopping the engine. Let the engine cool down for a while first.

1. Release the rubber strap under the seat and raise the engine hood.
2. Drain the engine oil as described under "Changing the engine oil".
3. Remove the oil filter. If necessary use a filter spanner.
4. Coat the seal on the new filter with clean, fresh engine oil.
5. Tighten the filter by hand until you feel it make contact, then tighten a further 3/4 turn.
6. Run the engine until it is hot, then check that there is no leakage from the oil filter seal.
7. Check the engine oil level and top up if necessary. The oil filter holds 0.2 litres of oil.



IMPORTANT INFORMATION

Dispose of used filters at a recycling station.

Used engine oil is a health hazard and must not be emptied onto soil or in the countryside.

Filters and oil must be taken to a workshop or other suitable place where they can be disposed of safely.

Avoid skin contact, wash with soap and water in the event of spillage.

TROUBLE SHOOTING SCHEDULE

Problem	Procedure
Engine will not start.	<ul style="list-style-type: none">• Fuel tank empty.• Plug defective.• Plug connection defective.• Dirt in carburettor or fuel pipe.
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">• Wrong gear, too high.• Carburettor incorrectly set.• Air filter clogged.• Fuel tank vent blocked.• Ignition setting defective.• Dirt in fuel pipe.• Choking or incorrectly adjusted throttle cable
Engine seems to have no power.	<ul style="list-style-type: none">• Air filter clogged.• 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.• 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 (Aspen) 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 plugs and pour in a tablespoon of engine oil in each cylinder. Pull round the engine to distribute the oil and screw the plugs back on.
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.

Service

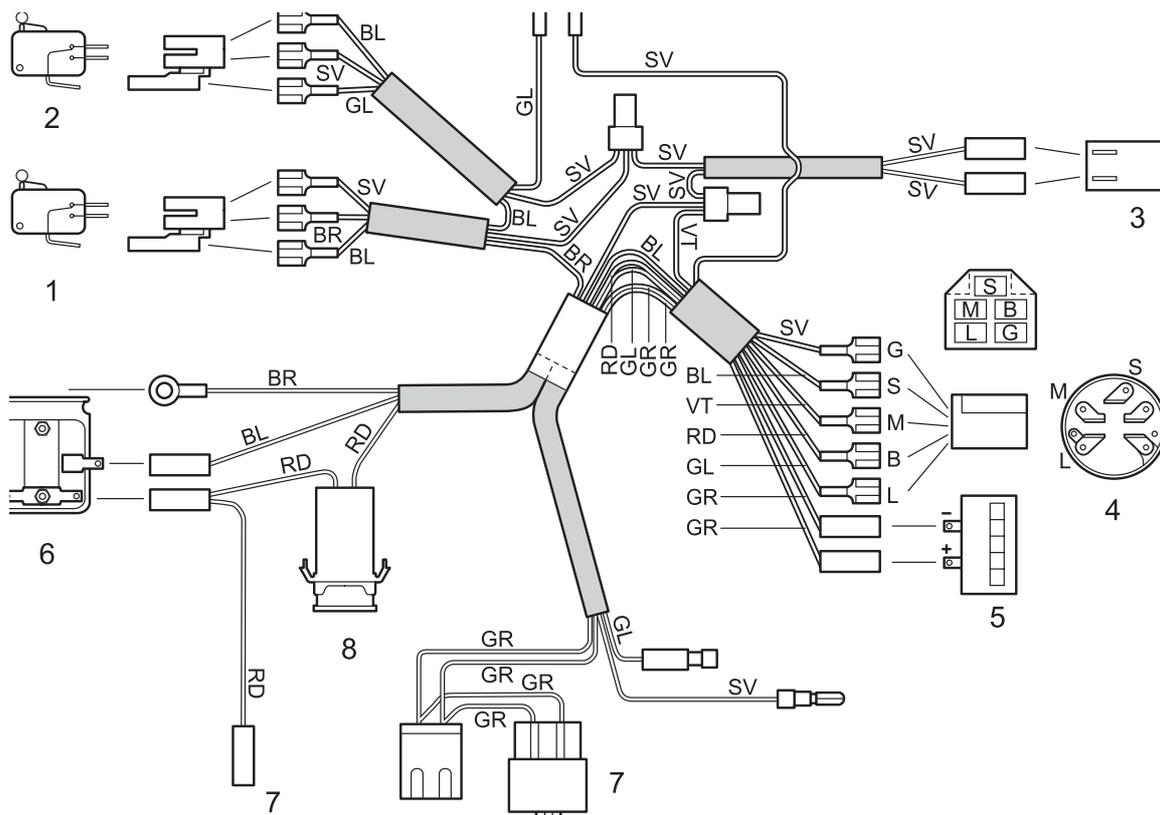
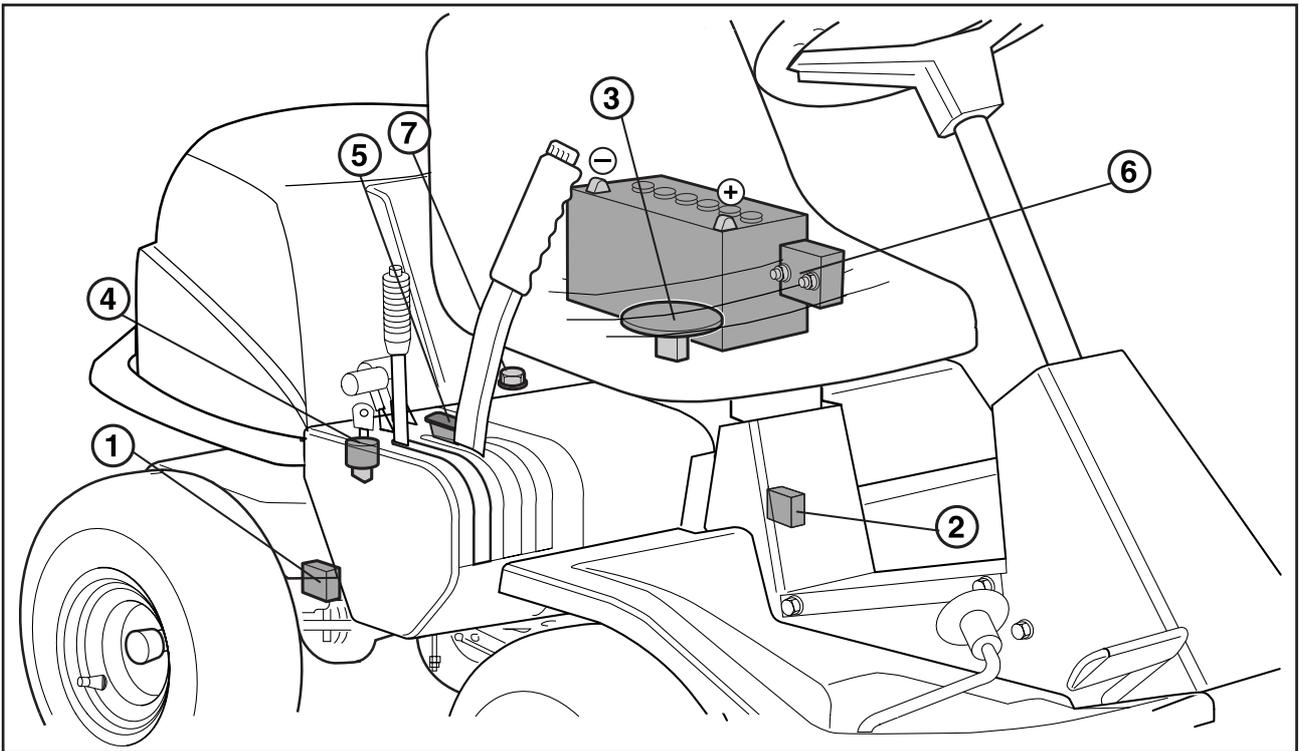
When ordering spare parts state the purchase year, model, type, and serial number.

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.



WIRING DIAGRAM



1. Microswitch, hydrostatic transmission
2. Microswitch, cutting unit
3. Microswitch, seat
4. Ignition lock
5. Counter
6. Start relay
7. Engine
8. Fuse 15 A

Explanation of colour abbreviations in wiring diagram.

- R** = Red
- B** = Blue
- W** = White
- BL** = Black
- Y** = Yellow
- BR** = Brown

TECHNICAL DATA

Rider Pro 15

Dimensions	Rider Pro 15
Length without unit	2 145 mm
Width without unit	1 050 mm
Height	1 060 mm
Unladen weight	245 kg
Wheel base	855 mm
Track	715 mm
Tyre size	16 x 6,50 x 8
Tyre pressure, front & rear	60 kPa (0,6 kp/cm ²)
Max. gradient	15°

Engine

Manufacture	Kawasaki
Model	FH451V-AS50
Power	11/15 kW/hk
Displacement	494 cm ³ / 30.1 cu.in.
Fuel	min. 87 octane unleaded (max. methanol 5%, max. ethanol 10%, max, MTBE 15%)
Tank volume	7 litres
Oil	SAE 30 or SAE 10W/30, SAE 10W/40 class SC-SH
Oljevolym	1.5 litres /1.6 US qt
Oil volume incl. filter	1.7 litres /1.6 US qt
Start	Electric starter

Electrical system

Type	12 V, negative earthed
Battery	12 V, 24 Ah
Main fuse	Spade connector 15 A
Spark plug	Champion RCJ8Y, electrode gap = 0.75 mm / 0.030"

Transmission

Manufacture	Tuff Torq K 62F
Oil	SAE 10W/30, class SF-CC

When the service life of this product has been served and it is no longer used it should be returned to the dealer or to an applicable station for recycling.

TECHNICAL DATA

Cutting unit

	BioClip 90	BioClip 103
Cutting width	900 mm	1030 mm
Cutting heights	9 settings, 45-95 mm	9 settings, 45-95 mm
Blade length	440 mm	410 mm
Sound level	100 dB(A)	100 dB(A)

	Side ejector 97	Rear ejector 97
Cutting width	970 mm	970 mm
Cutting heights	9 settings, 40-80 mm	9 settings, 40-80 mm
Blade length	350 mm	350 mm
Sound level	100 dB(A)	100 dB(A)

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.

EU declaration of conformity (Only applies to Europe)

(Directive 89/392/EEC, Annex II, A)

We, **Husqvarna AB**, S-561 82 Huskvarna, Sweden, tel. +46 36-146500, declare under sole responsibility that the **riders mowers Husqvarna Rider Pro** from 1998's serial numbers and onwards (the year is clearly stated in plain text on the type plate with subsequent serial number), is in conformity with the following standards or other normative documents following the provisions in the COUNCIL'S DIRECTIVES:

- of June 14 1989 "relating to machinery" **89/392/EEC**, and applicable supplements.
- of March 22 1984 "relating to permitted sound power levels for lawn mowers" **84/538/EEC**, and applicable supplements.
- of May 3 1989 "relating to electromagnetic compatibility" **89/336/EEC**, and applicable supplements.

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

Huskvarna October 16, 1998



Roger Andersson, Development manager

SERVICE JOURNAL

Work done	Date, mileage, stamp, sign
<p>25 hour service</p> <ol style="list-style-type: none">1. Clean the air filter pre-filter (oil-foam element). (more regularly in dusty conditions)2. Clean the engine cooling air intake and transmission air intake.3. Clean the fuel pump air filter. (in dusty conditions).	

SERVICE JOURNAL

Work done	Date, mileage, stamp, sign
<p>50 hour service</p> <ol style="list-style-type: none">1. Clean / replace the air filter pre-filter (oil-foam element). (more regularly in dusty conditions)2. Clean the engine cooling air intake and transmission air intake.3. Clean the paper air filter.4. Clean the fuel pump air filter.5. Check/adjust cutting height setting.6. Check/adjust parking brake.7. Inspect flame guard/spark arrestor (optional equipment)	

SERVICE JOURNAL

Work done	Date, mileage, stamp, sign
<p>100/200 hour service</p> <ol style="list-style-type: none">1. Change the engine oil. Change the oil filter every 200 hours.2. Clean / replace the air filter pre-filter (oil-foam element).3. Clean the paper air filter. Replace every 200 hours. (more regularly in dusty conditions)4. Clean the engine cooling air intake and transmission air intake.5. Check/adjust cutting height setting.6. Check/adjust parking brake.7. Inspect flame guard/spark arrestor (optional equipment)8. Clean/replace spark plug.9. Replace fuel filter in fuel line.10. Clean the fuel pump air filter.11. Clean pulse-air filter.12. Check screw and nuts.13. Check need for oil change and filter change for K62 gearbox (every 500 hours).	

SERVICE JOURNAL

Work done	Date, mileage, stamp, sign
<p>300 hour service</p> <ol style="list-style-type: none">1. Change engine oil.2. Replace the air filter (oil-foam element).3. Replace air filter (paper air filter).4. Clean the fuel pump air filter.5. Check/adjust cutting height setting.6. Check/adjust parking brake.7. Inspect flame guard/spark arrestor (optional equipment)8. Replace engine oil filter.9. Clean/replace spark plug.10. Replace fuel filter in fuel line.11. Clean pulse-air filter.12. Clean the cooling flanges on the cylinders and cylinder head.13. Check engine valve clearance.14. Check need for oil change for K62 gearbox (every 500 hours).15. Carry out 300 hour service at authorised dealer.	

SERVICE JOURNAL

Work done	Date, mileage, stamp, sign
<p>At least once a season</p> <ol style="list-style-type: none">1. Change engine oil (100 hours).2. Clean / replace the air filter pre-filter (oil-foam element) (25 hours). (more regularly in dusty conditions)3. Clean / replace the paper air filter (100 hours). (more regularly in dusty conditions).4. Clean the fuel pump air filter (50 hours).5. Check/adjust cutting height setting (50 hours).6. Check/adjust parking brake (50 hours).7. Inspect flame guard/spark arrestor, optional equipment (50 hours).8. Replace engine oil filter (200 hours).9. Clean/replace spark plug (100 hours).10. Replace fuel filter in fuel line (100 hours).11. Clean pulse-air filter (100 hours).12. Clean the cooling flanges on the cylinders and cylinder head (100 hours). (more regularly in dusty conditions).13. Check engine valve clearance (300 hours).14. Replace oil in K62 gearbox (500 hours).15. Carry out 300 hour service at authorised dealer.	



2001W02