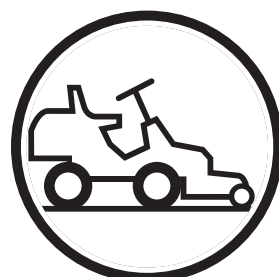


Operator's Manual

P 524



Please read the Operator's Manual carefully and make sure you understand the instructions before using the machine.

English

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SERVICE JOURNAL

Delivery Service

- 1 Charge the battery for 4 hours at max. 3 amperes.
- 2 Check and adjust the air pressure in the front and rear tyres (100 kPa/1.0 bar/14.5 PSI).
- 3 Adjust the cutting deck:

Adjust lift springs (effective weight of cutting deck should be 12-15 kg / 26.5-33 lb).

Adjust the cutting deck so that its rear edge is about 2-4 mm/1/8" higher than its front edge.

Adjust the cutting deck's cutting height setting so that the cutting height limit is 5 mm/3/16" above the unit frame at the lowest cutting height.
- 4 Check that the right amount of oil is in the engine.
- 5 Check that there is oil in the transmission's oil tank.
- 6 Connect the battery.
- 7 Fill the fuel tank and start the engine.
- 8 Check that the machine does not move in neutral.
- 9 Check:

Driving forwards.

Reversing.

Engaging the blades.

Safety switch in the seat.

Safety switch for the lifting lever.

The safety switch for the hydrostat pedals.
- 10 Check the oil level in the hydraulic system, top up if necessary.

11 Inform the customer about:

The need and advantages of following the service schedule.

The transmission guarantee is only valid if the synchronisation of the front and rear wheels has been checked and adjusted in compliance with the service schedule. If synchronisation is not carried out, the system will be damaged.

If the temperature is below 0° C the machine must be warmed up for at least 10 minutes to heat up the hydraulic oil and the transmission. Otherwise there is a risk that the transmission breaks and the service life is reduced.

The effects of service and maintaining a service journal on the machine's resale value.

Application areas for CombiClip.

Fill in the sales papers, etc.

Delivery service has been carried out. No remaining remarks. Certified:

Date, mileage, stamp, signature

After the first 25 hours

- 1 Change engine oil.
- 2 Changing the gearbox oil.
- 3 Check the synchronisation between the front and rear wheels.
- 4 Stretch the pump belt. Turn the adjustment screw half a turn.

INTRODUCTION

Dear Customer!

Thank you for purchasing a Husqvarna Rider. Husqvarna Riders have been designed according to a unique concept with a front mounted cutting deck and patented rear wheel steering. The Rider is built to give maximum efficiency even in small and confined areas. Collected controls and a hydrostatic transmission controlled by pedals also contribute to the machine's performance.

This Operator's Manual is a valuable document. Following the instructions (use, service, maintenance, etc.) can considerably increase the life span of your machine and even increase its resale value.

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

The final chapter of this operator's manual comprises a Service Journal. Ensure that service and repair work is documented. A well-kept service journal reduces service costs for the season-based maintenance and affects the machine's resale value. Take the operator's manual along when the Rider is left to the workshop for service.

Driving and Transport on Public Roads

Check applicable road traffic regulations before driving and transport on public roads. You should always use approved load retainers during transport and ensure that the machine is well secured.

Towing

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

The power transmission must be disengaged when towing, see "Bypass valves" on page 16.

Use

This ride-on mower is designed to mow grass on open and level ground surfaces. In addition, there is a number of accessories recommended by the manufacturer that broadens the application area. Please contact your dealer for more information about which accessories are available. The machine may only be used with the equipment recommended by the manufacturer. All other types of use are incorrect. The manufacturer's instructions with regard to driving, maintenance, and repair must be followed precisely.

IMPORTANT!

The transmission/gearbox guarantee is only valid if the synchronisation of the front and rear wheels has been checked and adjusted in compliance with the service schedule. The system will be damaged if synchronisation is not carried out.

The machine may only be operated, maintained, and repaired by persons that are fully conversant with the machine's special characteristics and safety regulations.

Accident prevention regulations, other general safety regulations, occupational safety rules, and traffic regulations must be observed.

Unauthorised modifications to the design of the machine may absolve the manufacturer from liability for any resulting personal injury or property damage.

INTRODUCTION

Proper Service

Husqvarna's products are sold all over the world and ensures that you as a customer receive only the best support and service. Before the product is delivered, the machine has, for example, been inspected and adjusted by your dealer, see the certificate in the "Delivery Service" on page 3.

When you need spare parts or support concerning service, warranty issues, etc., please consult the following professional:

This Manual belongs to the machine with the manufacturing number:	Engine	Transmission

On the machine's rating plate you will find the following information:

- The machine's type designation.
- Manufacturer's product number
- The machine's serial number.

Please state the type designation and serial number when ordering spare parts.

KEY TO SYMBOLS

Symbols

These symbols can be found on the rider and in the operator's manual.

WARNING! Careless or incorrect use can result in serious or fatal injury to the operator or others.

Please read the Operator's Manual carefully and make sure you understand the instructions before using the machine.

Always wear:

- Approved hearing protection

This product conforms to the applicable EC Directives.

Fast

Slow

Stop the engine.

Choke

Fuel

Oil level

Cutting height

Reversing

Forward

Ignition

Hydrostatic free wheeling

Parking brake



Noise emission to surroundings in accordance with the directive of the European Community. The machine's emissions are set out in the chapter Technical data and on the decal.



Clutch in



Clutch out



Warning for rotating parts. Mind your hands and feet.



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



Never drive directly across a slope



Never use the Rider if persons, especially children or pets, are in the immediate vicinity.



Never carry passengers on the Rider or on its tools



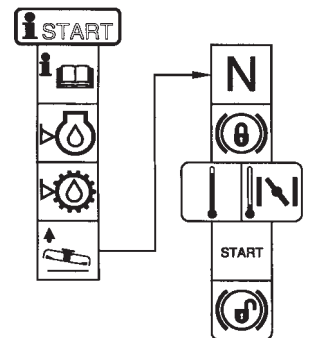
Drive very slowly without the cutting deck



Brake



Starting instructions



KEY TO SYMBOLS

Switch off the engine and remove the ignition cable before carrying out repairs or maintenance



Checking the Engine Oil Level



Check the transmission oil level



Lift up the cutting deck



Apply the parking brake



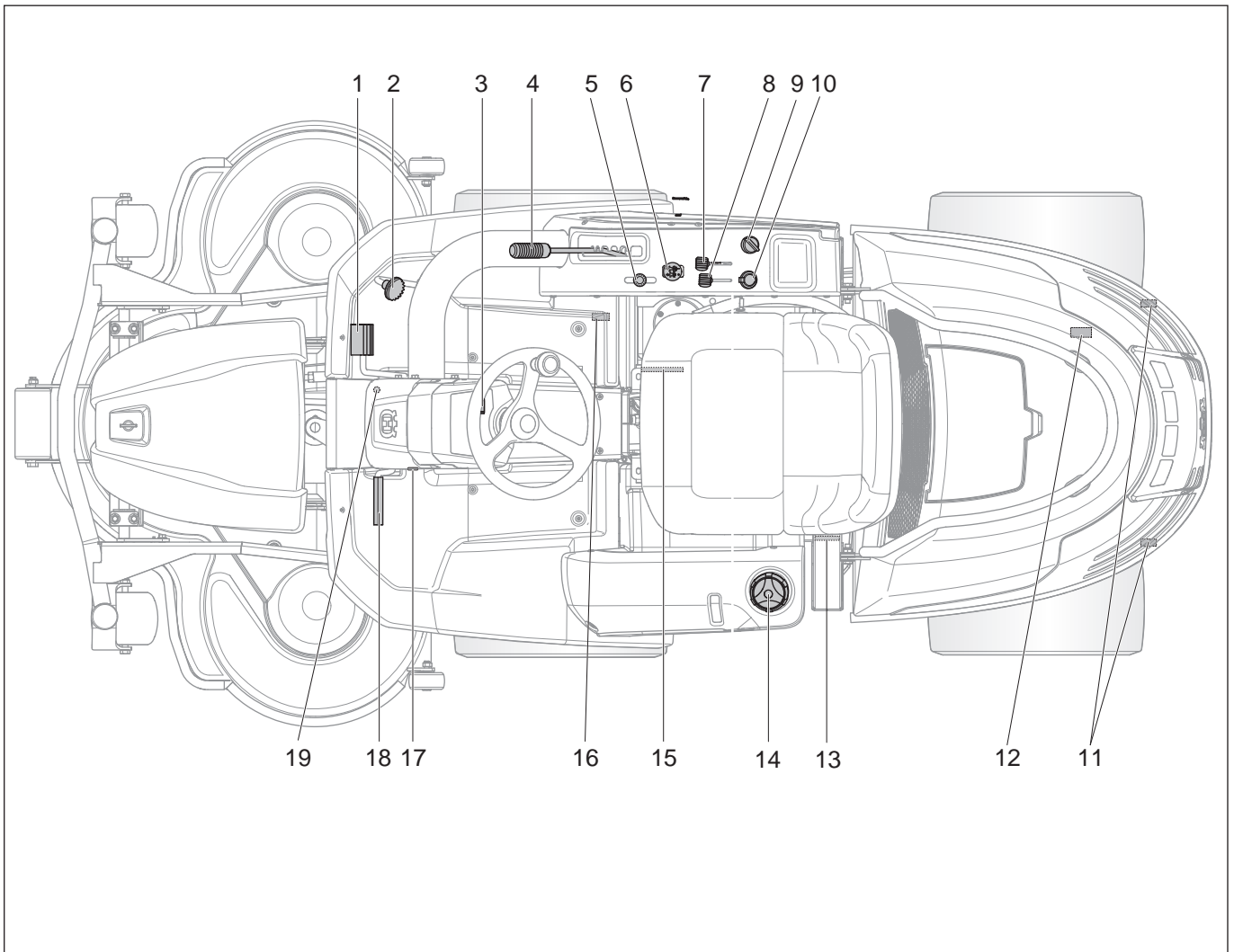
Use the choke if the engine is cold



Disengage the parking brake before driving



WHAT IS WHAT?



Placement of controls

- | | |
|---|------------------------------------|
| 1 Accelerator for driving forwards | 11 Hood lock |
| 2 Accelerator for reversing | 12 Rear bypass valve |
| 3 Switch for the lights | 13 Product and serial number plate |
| 4 Cutting height adjustment lever | 14 Fuel cap |
| 5 Lever for hydraulic lift of attachments | 15 Seat adjustment |
| 6 PTO button | 16 Front bypass valve |
| 7 Throttle control | 17 Hour meter |
| 8 Choke Lever | 18 Parking brake |
| 9 Ignition lock | 19 Lock button for parking brake |
| 10 Power outlet | |

SAFETY INSTRUCTIONS

Safety Instructions

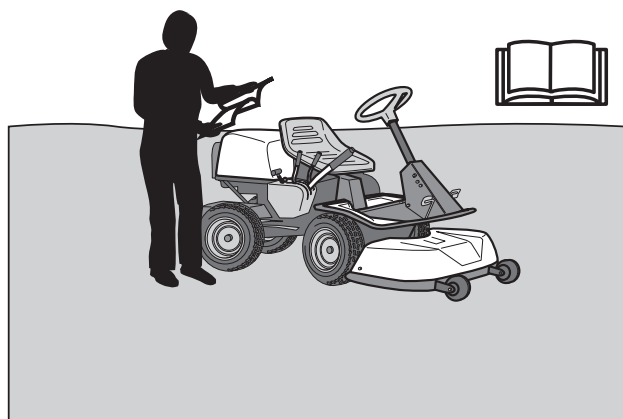
These instructions are for your safety. Read them carefully.

Insure your Rider

- Check the insurance coverage for your new Rider.
- Contact your insurance company.
- You should have fully comprehensive insurance including: third party, fire, damage, theft and liability

General Use

- Read all instructions in this operator's manual and on the machine before starting it. Ensure you understand them and then observe them.



WARNING!

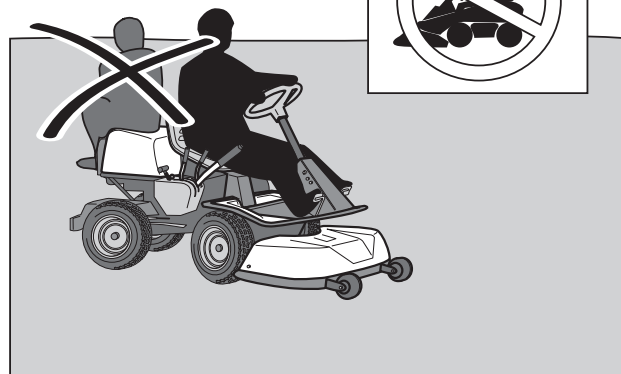
This machine produces an electromagnetic field during operation. This field may under some circumstances interfere with active or passive medical implants. To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their physician and the medical implant manufacturer before operating this machine.

- Learn how to use the machine and its controls safely and learn how to stop quickly. Also learn to recognise the safety decals.
- Only allow the machine to be used by adults who are familiar with its use.
- Make sure nobody else is in the vicinity of the machine when you start the engine, engage the drive, or run the machine.

- Clear the area of objects such as stones, toys, steel wire, etc. that may become caught in the blades and thrown out.



- Stop the engine and prevent it from starting before you clean the discharge deck.
- Beware of the discharge deck and do not point it at any one.
- Stop the engine and prevent it from starting before you clean the cutting deck.
- Remember that the driver is responsible for dangers or accidents.
- Never carry passengers. The machine is only intended to be used by one person.



- Always look down and behind before and during reversing manoeuvres. Keep watch for both large and small obstacles.
- Slow down before turning.
- Shut down the blades when not mowing.
- Be careful when rounding fixed objects, so that the blades do not hit them. Never run the machine over foreign objects.



WARNING!

This machine can sever hands and feet as well as throw objects. Failure to follow the safety regulations can lead to severe injury.

SAFETY INSTRUCTIONS



WARNING!
The muffler contains chemicals that may be carcinogenic. Avoid contact with these chemicals if the muffler should break.



WARNING!
The engine emits carbon monoxide, which is a colourless, poisonous gas. Do not use the machine in enclosed spaces.

- Only use the machine in daylight or in other well-lit conditions. Keep the machine at a safe distance from holes or other irregularities in the ground. Pay attention to other possible risks.
- Never use the machine if you are tired, if you have consumed alcohol, or if you are taking other drugs or medication that can affect your vision, judgement, or co-ordination.
- Beware of traffic when working near or crossing a road.
- Never leave the machine unsupervised with the motor running. Always shut down the blades, pull back the parking brake, stop the engine, and remove the ignition key before leaving the machine.
- Never allow children or other persons not trained in the use of the machine to use or service it. Local laws may regulate the age of the user.



WARNING!
You must use approved personal protective equipment whenever you use the machine. Personal protective equipment does not eliminate the risk of accidents, but it can reduce the effects of an injury in the event of an accident. Ask your dealer for help in choosing the right equipment.

- Use hearing protection to minimise the risk of hearing impairment.



- Never wear loose clothing that can fasten in moving parts.

- Never use the machine when barefoot. Always wear protective shoes or protective boots, preferably with steel toes.



- Make sure that you have first aid equipment close at hand when using the machine.



Driving on slopes

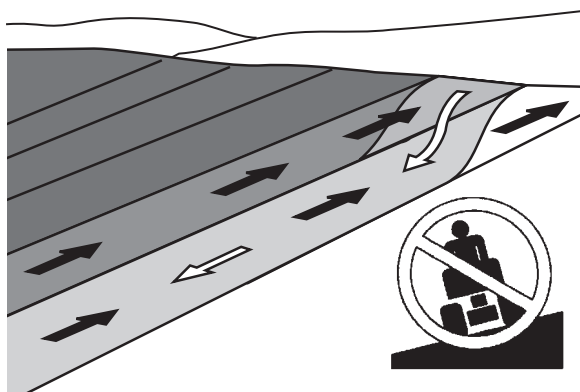
Driving on slopes is one of the operations where the risk of the driver losing control of the machine or of it overturning is the greatest; this can result in serious injury or death. All slopes demand extra care. If you cannot reverse up a slope or if you feel unsure, do not mow it.

IMPORTANT!

Do not drive down slopes with the unit raised.

Do as follows

- Remove obstacles such as stones, tree branches, etc.
- Mow up and down, not side-to-side.



- Never drive the machine on terrain that slopes more than 10°.
- Be extra cautious with any additional equipment, which can alter the machine's stability.
- Avoid starting or stopping on a slope. If the tyres start to slip, stop the blades and drive slowly down the slope.
- Always drive evenly and slowly on slopes.
- Make no sudden changes in speed or direction.

SAFETY INSTRUCTIONS

- Avoid unnecessary turns on slopes, and if it proves necessary, turn slowly and gradually downward, if possible. Drive slowly. Do not turn the wheel sharply.
- Watch out for and avoid driving over furrows, holes, and bumps. It is easier for the machine to overturn on uneven ground. Tall grass can hide obstacles.

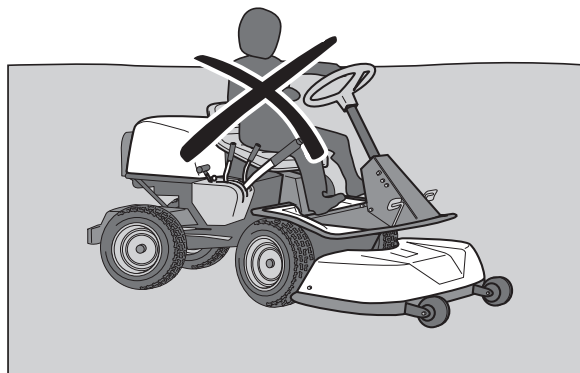


- Do not mow near verges, ditches, or banks. The machine can suddenly overturn if one wheel comes over the edge of a steep slope or a ditch, or if an edge gives way.
- Do not mow wet grass. It is slippery, and tyres can lose their grip so that the machine skids.
- Try not to stabilise the machine by putting your foot on the ground.
- When cleaning the chassis, the machine may never be driven near verges or ditches.
- When mowing, keep away from bushes and other objects.
- Follow the manufacturer's recommendations regarding wheel weights or counterbalance weights to increase machine stability.

Children

- Serious accidents may occur if you fail to be on guard for children in the vicinity of the machine. Children are often attracted to the machine and mowing. Never assume that children will stay put where you last saw them.
- Keep children away from the mowing area and under close supervision by another adult.
- Keep an eye out and shut off the machine if children enter the work area.
- Before and during a reversing manoeuvre, look backward and downward for small children.
- Never allow a child to ride with you. They can fall off and seriously injure themselves or be in the way for safe manoeuvring of the machine.

- Never allow children to operate the machine.



- Be particularly careful near corners, bushes, trees or other objects that block your view.

Maintenance

- Stop the engine. Prevent the engine from starting by removing the spark plug cables from the spark plugs or by removing the ignition key before making any adjustments or performing maintenance.
- Never fill the fuel tank indoors.



- Petrol and petrol fumes are poisonous and extremely flammable. Be especially careful when handling petrol, as carelessness can result in personal injury or fire.
- Only store fuel in containers approved for the purpose.
- Never remove the fuel cap or fill the fuel tank while the engine is running.
- Allow the engine to cool before refuelling. Do not fill petrol in the vicinity of sparks or naked flames. Do not smoke.
- Handle oil, oil filters, fuel and the battery with care, of concern for the environment. Follow the local recycling requirements.
- Electrical shocks can cause injuries. Do not touch cables when the engine is running. Do not test the ignition system with your fingers.

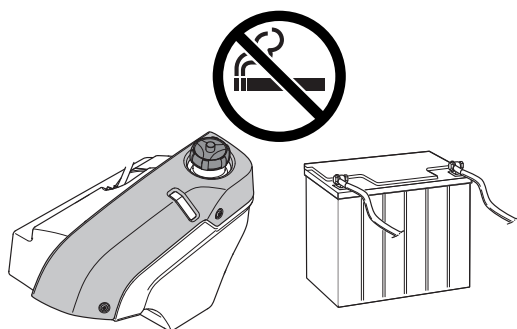


WARNING!

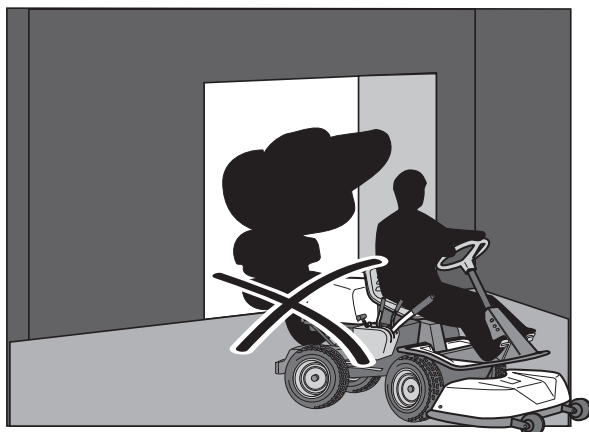
The engine and the exhaust system become very hot during operation. Risk of burn injuries if touched. When mowing, keep away from bushes and other materials in order to avoid a heating effect.

SAFETY INSTRUCTIONS

- If leaks arise in the fuel system, the engine must not be started until the problem has been resolved.
- Store the machine and fuel in such a way that there is no risk of leaking fuel or fuel vapour leading to injury.
- Check the fuel level before each use and leave space for the fuel to expand, because the heat from the engine and the sun may otherwise cause the fuel to expand and overflow.
- Avoid overfilling. If you spill petrol on the machine, wipe up the spill and wait until it has evaporated before starting the engine. If you spill petrol on your clothing, change your clothing.
- Allow the machine to cool before taking any actions in the engine room.
- Be careful when servicing the battery. Explosive gases form in the battery. Never perform maintenance on the battery while smoking or in the vicinity of open flames or sparks. This can cause the battery to explode and cause serious injuries.



- Make sure all nuts and bolts are tightened correctly and that the equipment is in good condition.
- Do not modify safety equipment. Check regularly to be sure it works properly. The machine must not be driven if protective plates, protective covers, safety switches or other protective devices are not fitted or are defective.
- Observe the risk of injury caused by moving or hot parts if the engine is started with the engine cover open or protective covers removed.
- Do not change governor settings. If you run too fast, you risk damaging the machine components, see "Technical Data" on page 45 for highest permitted engine speed.
- Never use the machine indoors or in spaces lacking proper ventilation. Exhaust fumes contain carbon monoxide, an odourless, poisonous and highly dangerous gas.



- Stop and inspect the equipment if you run over or into anything. If necessary, make repairs before starting.
- Never make adjustments with the engine running.
- The machine is tested and approved only with the equipment originally provided or recommended by the manufacturer.
- The blades are sharp and can cause cuts and gashes. Wrap the blades or wear protective gloves when handling them.
- Check the parking brake's functionality regularly. Adjust and maintain as required.
- Reduce the risk of fire by removing grass, leaves and other debris that may have fastened in the machine. Allow the machine to cool before putting it in storage.



Transport

IMPORTANT!

The parking brake is not sufficient to lock the machine during transport. Ensure you secure the machine firmly to the transporting vehicle.

- The machine is heavy and can cause serious crushing injuries. Be extra cautious when it is loaded on or unloaded from a vehicle or trailer.
- Use an approved trailer to transport the machine.
- To secure the machine on the trailer, two approved tension belts and four wedge shaped wheel blocks should be used.

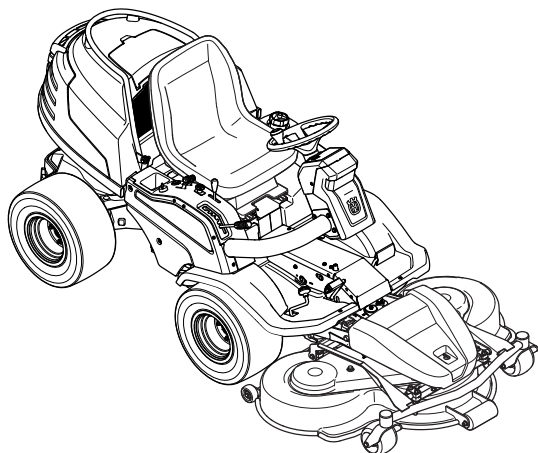
Engage the parking brake and tie the tension belts around stable parts on the machine, e.g. frame or rear wagon. Secure the machine by tensioning the belts towards the back and the front of the trailer respectively.

Place the wheel blocks in front of and behind the rear wheels.
- Check and abide by local traffic regulations before transporting or driving the machine on any road.

PRESENTATION

Presentation

Congratulations on your choice of an excellent quality product that will give you great pleasure for many years. This operator's manual describes P524. The machines are equipped with a four-stroke V-Twin engine from Kawasaki.

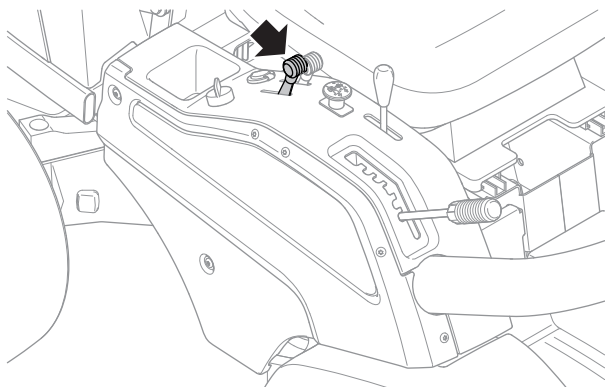


The four-wheel drive machine is equipped with servo steering and hydraulic lifts.

The power transmission from the engine is handled by a hydrostatic gearbox, which allows variable variation of the speed by using the pedals. One pedal to drive forwards and one pedal to reverse.

Throttle control

The throttle is used to control the speed of the engine and thereby also the rotation speed of the blades.

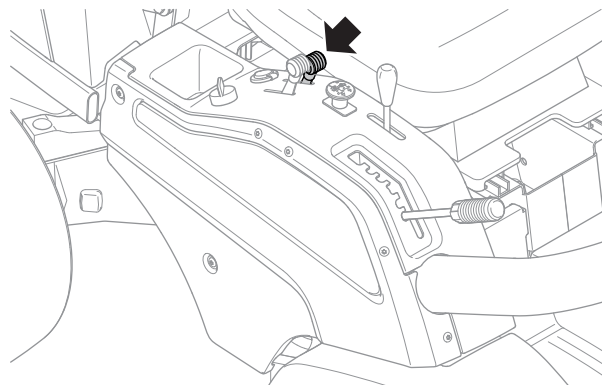


In order to increase or decrease the engine speed, the control is moved forwards or backwards respectively.

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

Choke Lever

The choke lever is used for cold starts in order to provide the engine with a richer fuel mixture.

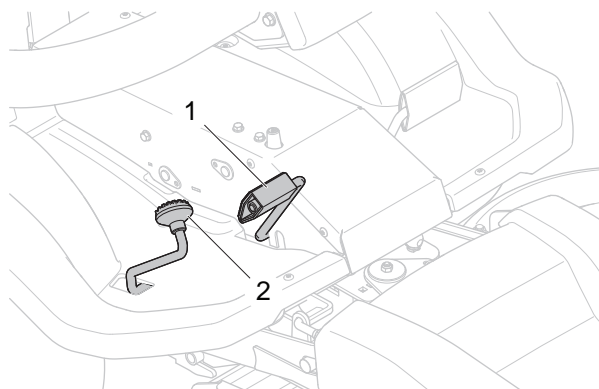


For cold starts, the lever shall be moved backwards to its endpoint.

IMPORTANT! If the temperature is below 0° C the machine must be warmed up for at least 10 minutes to heat up the hydraulic oil and the transmission. Otherwise there is a risk that the transmission breaks and the service life is reduced.

Speed control

The speed of the machine is variably controlled using two pedals. Pedal (1) is used to travel forwards and pedal (2) to reverse.



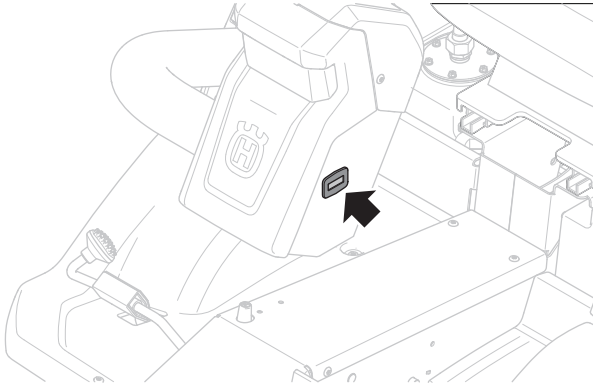
WARNING!

Make sure that no branches can interfere with the pedals when mowing under bushes. Risk for unintentional manoeuvring.

PRESENTATION

Chronometer

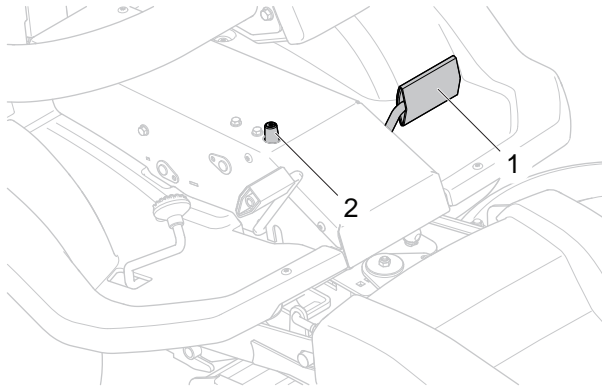
The chronometer shows how many hours the engine has been running.



Any time when the engine is not running but the ignition is switched on is not registered. The last digit shows tenths of an hour (6 minutes).

Parking brake

The parking brake is activated as follows:

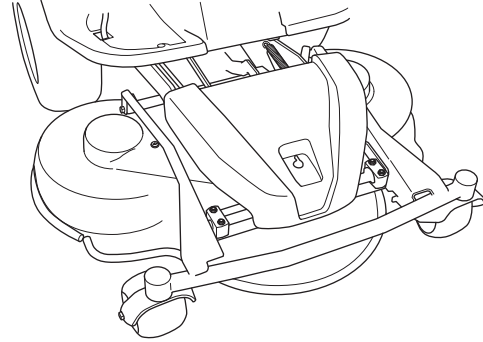


- 1 Press down the parking brake pedal (1).
- 2 Press in the lock button (2) on the frame plate.
- 3 Release the parking brake pedal while keeping the button pressed in.

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

Cutting deck

P524 can be fitted with the Combi 112 and Combi 122 cutting decks.



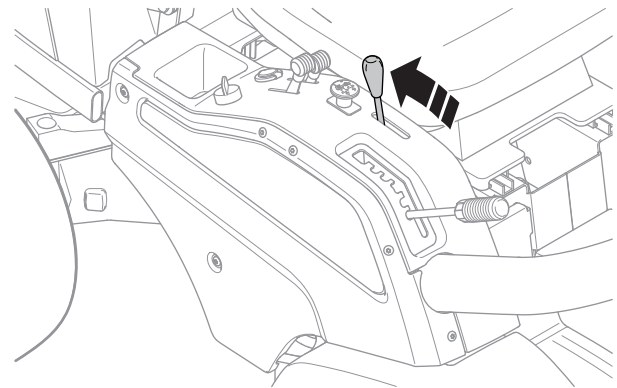
The Combi-unit, equipped with a CombiClip plug, finely chops the cuttings to fertiliser. Without the CombiClip plug the unit works in the same way as a rear ejection unit. The rear ejector ejects the clippings behind the unit without finely chopping them.

Lever for hydraulic lift of attachments

The lifting lever is used to put the cutting deck in either the transport or mowing position when hydraulic pressure is available.

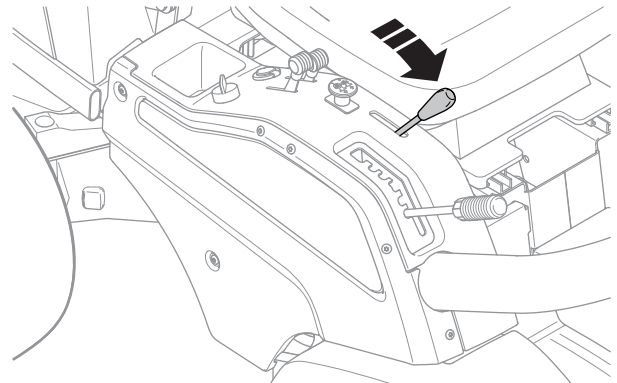
Lifting the cutting deck (transport position)

Pull the lever backwards to engage the transport position.



Lowering the unit (mowing position)

Move the lifting lever forwards to engage the cutting position. The deck is then lowered.

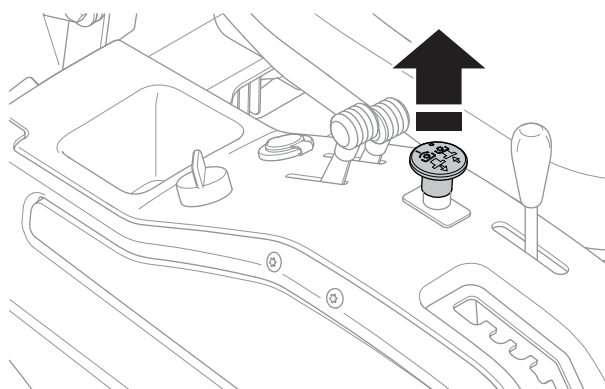


In order to ensure that the hydraulic cylinder is in the outer position, hold the lever in the forward position for one to two seconds after the cutting deck has hit the ground.

PRESENTATION

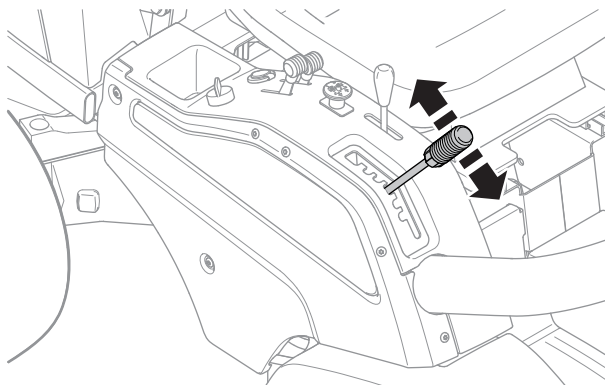
PTO blades on/off

To make the cutters rotate the cutting deck must be lowered in the mowing position and the "PTO" button activated (pulled up).



Cutting height adjustment lever

Using the lever, the cutting height can be adjusted to 6 different positions.



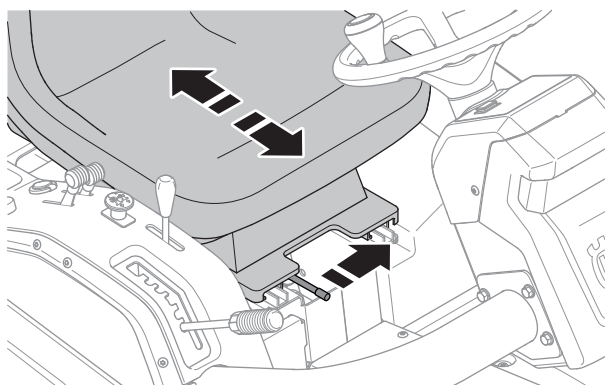
In order to obtain an equal cutting height, it is important that the air pressure is the same in both front wheels.

Seat

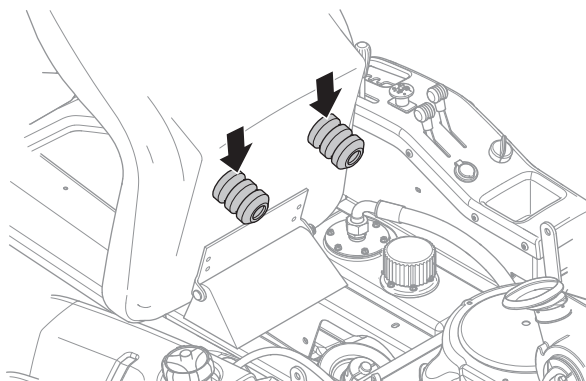
The seat has a hinged mounting on the front edge and can be folded forwards.

The seat can also be adjusted lengthways.

When making adjustments, the lever under the front edge of the seat is moved to the left, after which the seat can be moved backwards or forwards to the desired position.



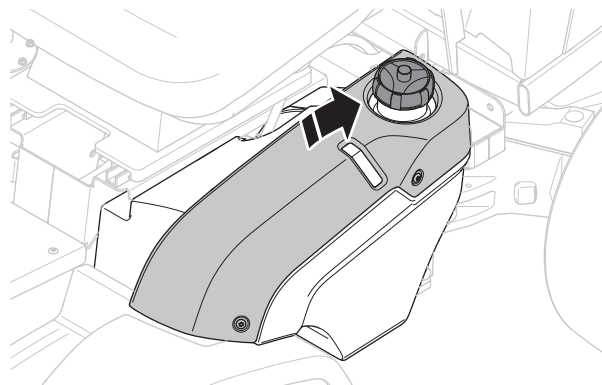
The seat springs can be adjusted by moving the rubber blocks in their brackets on the underside of the seat. Set both blocks in the front, centre or rear positions.



Refuelling

The engine should be run on 95-octane unleaded petrol (not mixed with oil). It can be beneficial to use environmentally adapted alkylate petrol. (max. methanol 5%, max. ethanol 10%, max. MTBE 15%)

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



WARNING!

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

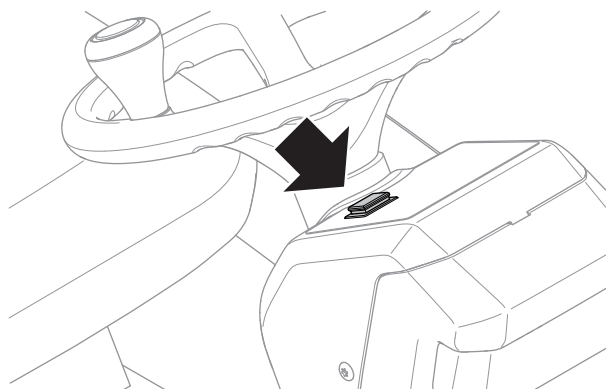
IMPORTANT!

Do not use the fuel tank as a support area.

PRESENTATION

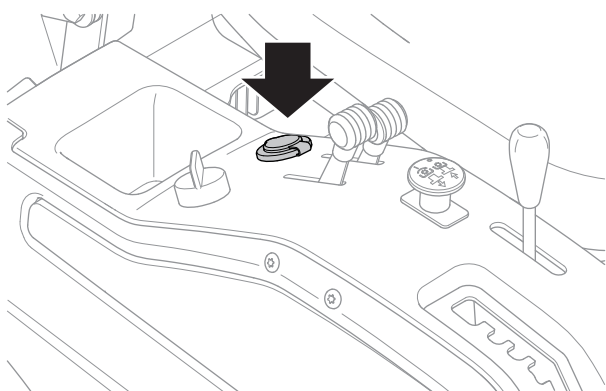
Lights and power outlet

Lights



The lights are switched on and off using the switch on the control panel.

Power outlet



A seat heater or mobile phone charger are examples of articles that can be connected to the power socket.

The voltage is 12 V.

The electrical outlet socket is fuse protected by its own fuse, which is located below the control panel.

Bypass valves

The hydraulic pressure must be released in order for the machine to be moved when the engine is shutoff.

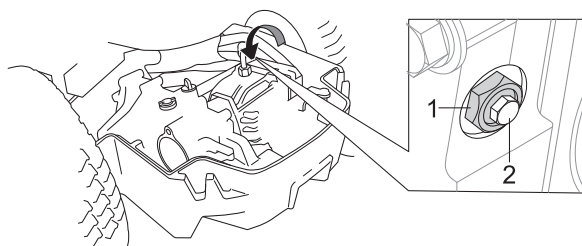
The hydraulic pressure is opened and closed using a bypass valve.

Should you attempt to drive the machine without hydraulic pressure it will not move. The drive on the axle is disengaged when one of the valves is open.

P 524 has 2 valves, one for the front axle and one for the rear axle.

IMPORTANT! Always run the machine with both valves closed.

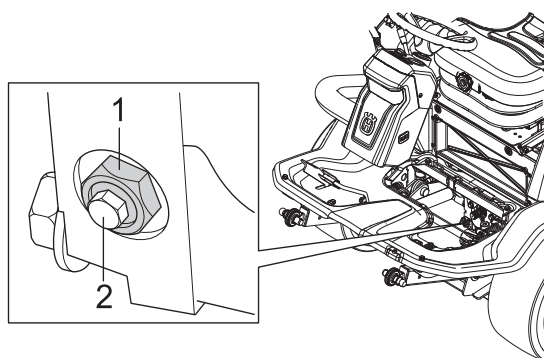
- Rear axle bypass valve



- The hydraulic pressure is released by opening the locking nut (1) 1/4-1/2 turn counter clockwise and then opening the bypass valve (2) two turns.

- The hydraulic pressure is shut down by closing the valve. Close the valve nut (2) tightly before the locking nut (1) is screwed in place.

- Front axle bypass valve

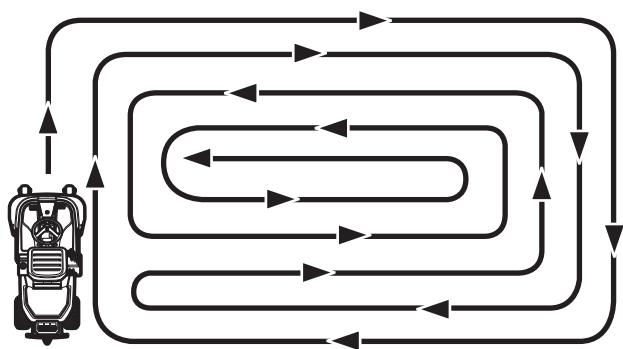


- The hydraulic pressure is released by opening the locking nut (1) 1/4-1/2 turn counter clockwise and then opening the bypass valve (2) two turns.

- The hydraulic pressure is shut down by closing the valve. Close the valve nut (2) tightly before the locking nut (1) is screwed in place.

DRIVING

Mowing Tips

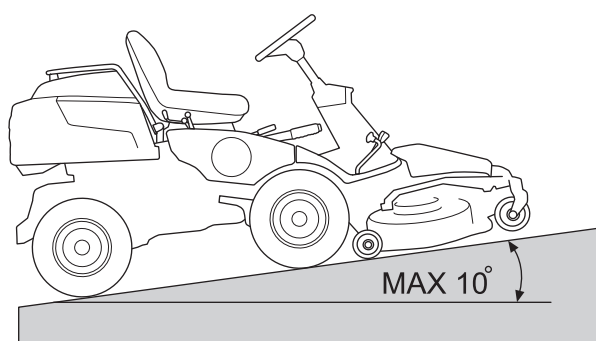


WARNING!
Clear the lawn of stones and other objects that can be thrown out by the blades.

- Localise and mark large rocks and other fixed objects in order to avoid collisions.
- Begin with a high cutting height and reduce it until the desired mowing result is attained.
- The mowing result will be best with the highest permitted engine speed, see technical data, (the blades rotate rapidly) and low speed (the Rider moves slowly). If the grass is not too high and thick, the driving speed can be increased without noticeably depreciating the mowing result.
- The finest lawns are obtained by mowing often. Mowing will be more even and the clippings will be more evenly distributed across the area. The overall mowing time will not be longer as higher driving speeds can be selected without impairing the mowing result.
- Avoid mowing wet lawns. The mowing result will be poorer as the wheels will sink into the soft lawn.
- Hose down the cutting deck with water underneath each time it is used. The cutting deck should then be put in the service position.
- When the BioClip function is used, it is very important that the mowing interval is not too long.



WARNING!
Never drive the machine on terrain that slopes more than 10°. Mow upwards and downwards on slopes, never sideways. Avoid sudden directional changes.

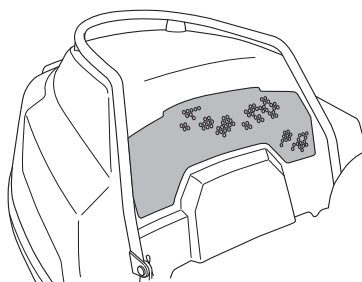


Before Starting

- Read the safety instructions and information concerning the placement of controls and functions before starting.
- Perform daily maintenance before starting as set out in the Maintenance schedule.

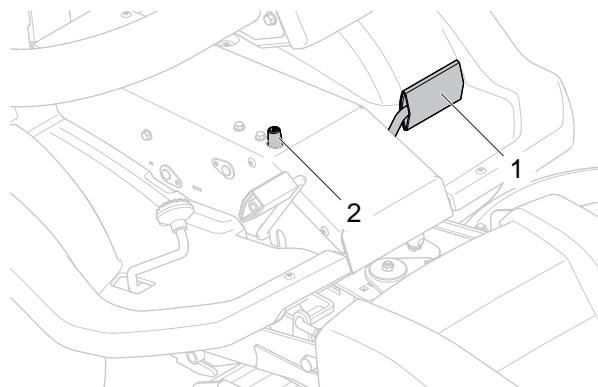
IMPORTANT!

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

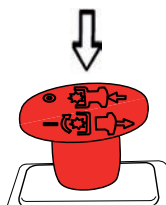


Starting the engine

- 1 Make sure the bypass valves are closed on each axle.
- 2 Engage the parking brake.



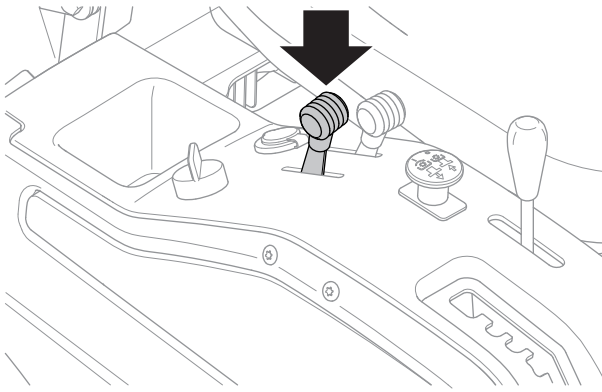
- 3 Press down the PTO button (blades shut off).



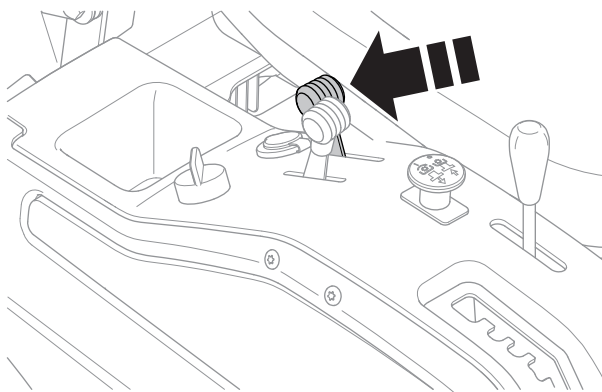
The engine cannot be started if the parking brake is not pressed down and the blades are shut off.

DRIVING

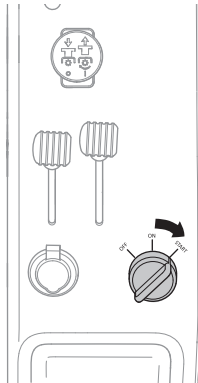
- 4 Move the throttle to the middle position.



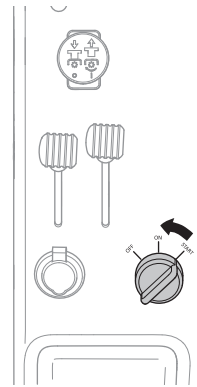
- 5 If the engine is cold, the choke control shall be moved backwards to its end position.



- 6 Turn the ignition key to the start position.



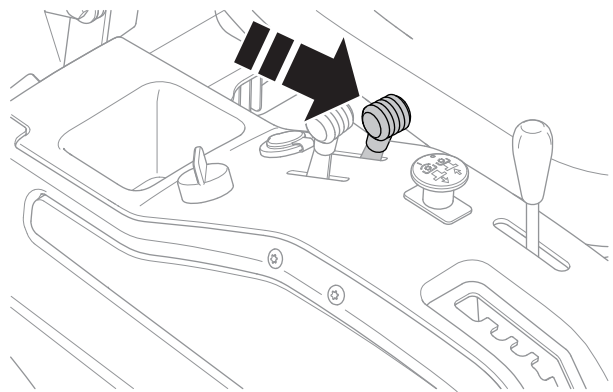
- 7 When the engine starts, immediately release the ignition key so that it returns to the neutral position.



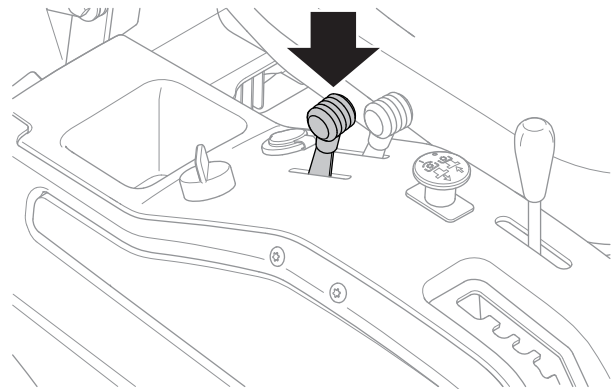
IMPORTANT!

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

- 8 Move the choke lever gradually forward once the engine has started.



- 9 If the engine is cold, let it run at moderate speed or half throttle for 3-5 minutes before subjecting it to a heavy load.



- 10 Set the desired engine speed with the throttle.



WARNING!

Never run the engine indoors, in enclosed or badly ventilated areas. Engine exhaust fumes contain poisonous carbon monoxide.

DRIVING

IMPORTANT! If the temperature is below 0° C the machine must be warmed up for at least 10 minutes to heat up the hydraulic oil and the transmission. Otherwise there is a risk that the transmission breaks and the service life is reduced.

Starting the engine with a weak battery



WARNING! Lead-acid batteries produce explosive gases. Avoid sparks, open flames and smoking close to batteries. Always wear protective glasses in the vicinity of batteries.

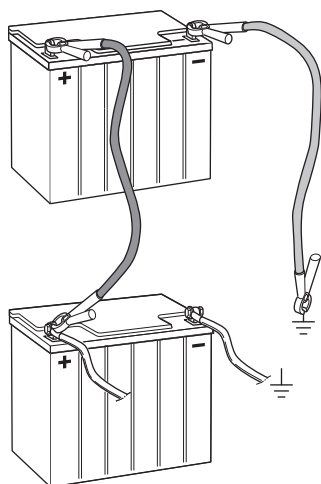
If the battery is too weak to start the engine, it should be recharged.

When jump leads are used for emergency starting, follow the procedure below:

IMPORTANT!

Your Rider is equipped with a 12-volt system with negative earth. The other vehicle must also have a 12-volt system with negative earth. Do not use your Rider battery to start other vehicles.

Connecting the jump leads



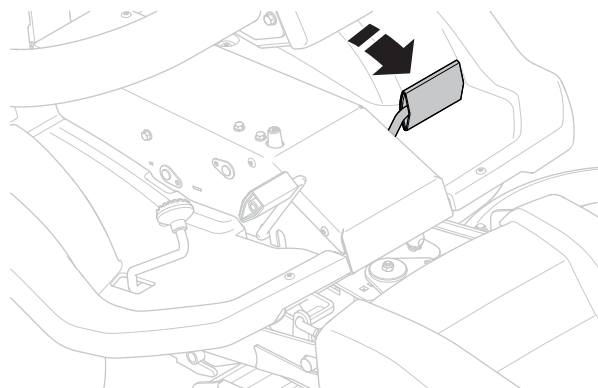
- Connect each end of the red cable to the POSITIVE pole (+) on each battery, exercise care not to short circuit any of the ends against the chassis.
- Connect one end of the black cable to the NEGATIVE pole (-) on the fully charged battery.
- Connect the other end of the black cable to a good CHASSIS EARTH, away from the fuel tank and the battery.

Remove the cables in the reverse order

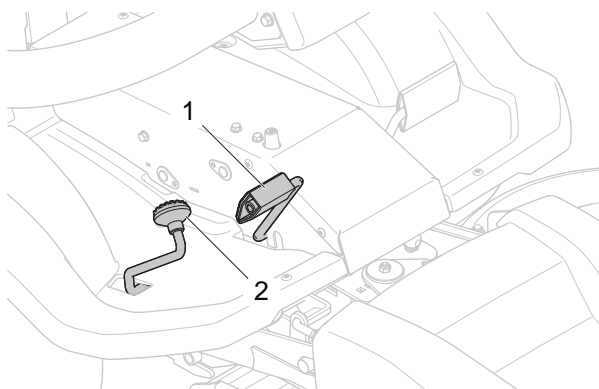
- The BLACK cable is removed from the chassis and then the fully charged battery.
- Finally the RED cable from both batteries.

Driving the Rider

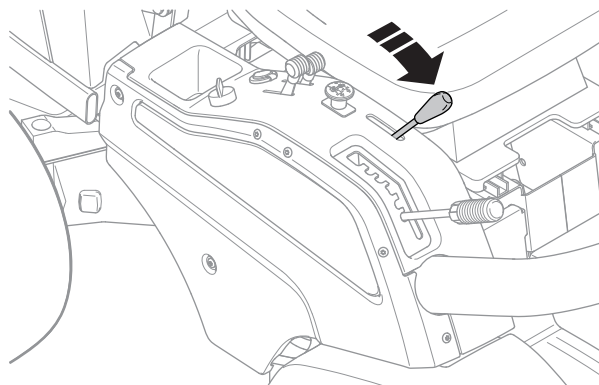
- 1 Release the parking brake by first pressing down the parking brake pedal and then releasing it.



- 2 Carefully press down one of the pedals until the required speed is attained. Pedal (1) is used to travel forwards and pedal (2) to reverse.

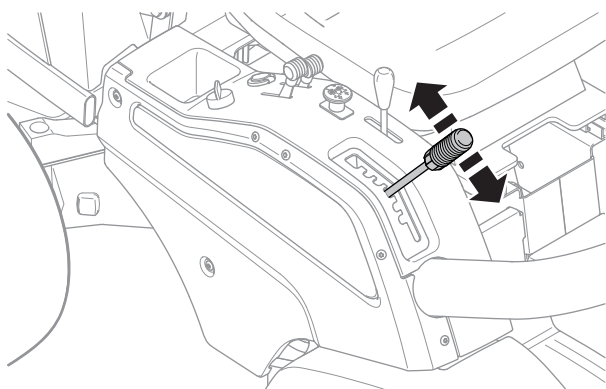


- 3 Lower the cutting deck completely with the lifting lever. In order to ensure that the hydraulic cylinder is in the outer position, hold the lever in the forward position for one to two seconds after the cutting deck has hit the ground.

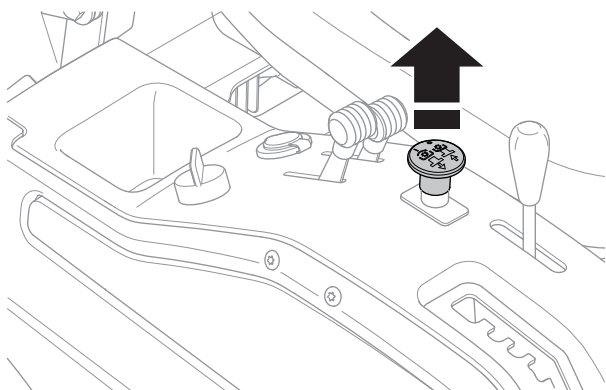


DRIVING

- 4 Select the required cutting height (1-6) using the cutting height lever.



- 5 Start the blades by activating the PTO button.



In order to obtain an equal cutting height, it is important that the air pressure is the same in both front wheels.

IMPORTANT!

The life span of the drive belts is increased significantly if the engine runs at a low speed when the blades are engaged. Therefore apply full throttle first when the cutting deck has been moved to the mowing position and the blades are engaged.

IMPORTANT! If the temperature is below 0° C the machine must be warmed up for at least 10 minutes to heat up the hydraulic oil and the transmission. Otherwise there is a risk that the transmission breaks and the service life is reduced.

Braking

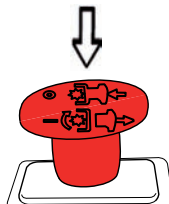
Release the drive pedals. The machine slows and is stopped by the drive system. Do not use the parking brake as the drive brake.

Quicker braking is possible if you press down the drive pedal for the opposite direction.

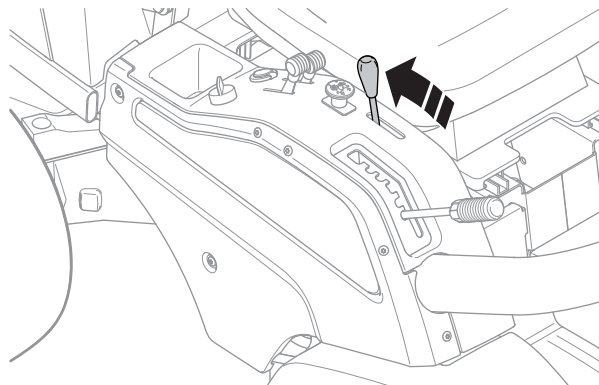
Stopping the Engine

If the engine has been worked hard, it is preferable to let the engine idle for a minute so it is running at its normal working temperature when it is stopped. Avoid idling the engine for long periods, as there is a risk of carbon build-up on the spark plugs.

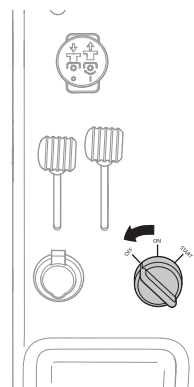
- 1 Shut off the blades with the PTO button



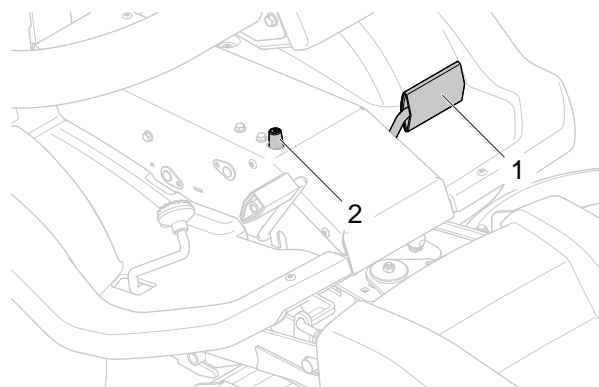
- 2 Lift the cutting deck using the lifting lever.



- 3 Move the throttle control to the "MIN" position. Turn the ignition key to "STOP".



- 4 When the Rider is at a standstill, hold down the parking brake pedal (1) and press in the release button (2).



MAINTENANCE

Maintenance schedule

The following is a list of maintenance procedures that must be performed on the rider. For those points not described in this manual, visit an authorised service workshop.

Maintenance	Daily maintenance before starting	Weekly maintenance ³⁾	At least once a year	Maintenance interval in hours			
				10	40	100	200
Check and clean the cooling fins in the hydraulic oil cooler when required	X						
Cleaning	X						
Check the engine oil level	X						
Check the engine's cooling air intake	X						
Check the fuel pump's air filter	X						
Check the battery acid level	X						
Check the safety system	X						
Check nuts and screws	O						
Check for fuel and oil leakage	O						
Clean around the silencer	O						
Start the engine and blades, listen for unusual sounds	O						
Clean the transmission's cooling air intake	X			X			
Lubricate according to maintenance schedule, under the "LUBRICATION" heading					X		
Change the engine oil ¹⁾			X			X ¹⁾	
Check the cutting deck	X			X			
Inspect the blades	X						
Clean under the cutting deck	X						
Check the air pressure in the tyres 100 kPa / 1.0 bar / 14,5 PSI				X			
Lubricate the belt tensioner (nipple)		X		X			
Lubricate the driver seat		X					
Lubricate all cables		X					
Lubricate joints in the cutting deck		X					
Clean the frame tunnel		X					
Lubricate the pedal system in the frame tunnel		X					
Lubricate the hydrostatic cable with links		X					
Check the parking brake	X						
Lubricate the parking brake wire		X					
Lubricate the throttle		X					
Lubricate the choke control		X					
Lubricate the guide chain in the frame tunnel		X					
Clean thoroughly around the engine		X					
Clean thoroughly around the transmission		X					
Check the V-belts				O			
Checking the transmission oil level		X					
Checking and adjusting the choke cable					X		

MAINTENANCE

Maintenance	Daily maintenance before starting	Weekly maintenance ³⁾	At least once a year	Maintenance interval in hours			
				10	40	100	200
Tighten the nuts and screws						O	
Checking and adjusting the throttle cable					X		
Clean the air filter.			X	X			
Check/adjust the cutting height			X		X		
Check/adjust the parking brake			X		X		
Clean the engine's cooling fins ²⁾					O		
Change the air filter							X
Replace the fuel filter						X	
Replace the spark plug						X	
Check the need of an oil change ⁴⁾ and filter replacement ⁴⁾ in the gearbox			O				
Change the engine's oil filter			X			X	
Replace the suction filter in the hydraulic tank ⁴⁾			O				
Check the synchronisation between the front and rear wheels			O				
Perform the 200-hour service ⁴⁾							O

¹⁾ First change after 25 hours. When operating with a heavy load or at high ambient temperatures, replace every 50 hours. ²⁾ In dusty conditions, maintenance and cleaning are required more often. ³⁾ With daily use, the rider should be lubricated twice weekly.

⁴⁾ Performed by an authorised service workshop.

X = Described in this operator's manual

O = Not described in this operator's manual



WARNING!

No service operations may be performed on the engine or cutting deck unless:

The engine is stopped.

The parking brake is actuated.

The ignition key has been removed.

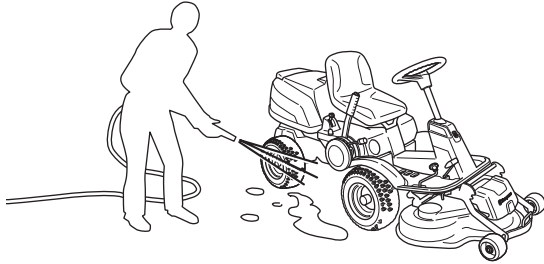
The cutting deck is disengaged.

The ignition cables have been removed from the spark plugs.

MAINTENANCE

Cleaning

Clean the machine directly after use. It is much easier to wash off grass cuttings before they dry.



Oily dirt can be removed using a cold degreasing agent. Spray on a thin layer.

Rinse at normal water pressure.

Do not direct the jet towards electrical components or bearings.

Do not rinse hot surfaces such as the engine and exhaust system.

It is recommended that you start the engine and run the mower for a short period after cleaning, so that any remaining water is blown off.

Lubricate the machine if necessary after cleaning. Carry out extra lubrication when the bearings have been exposed to a degreaser or a water jet.

IMPORTANT!

Avoid using a high pressure washer or a steam cleaner.

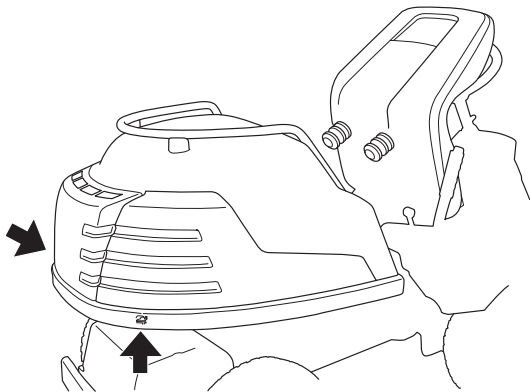
There is a major risk of water penetrating into bearings and electrical connections. Corrosion attack can result, which will lead to running problems. Cleaning additives generally aggravate the damage.

Dismantling the Rider covers

Engine cover

Pull the seat forward to its foremost position. Fold up the seat.

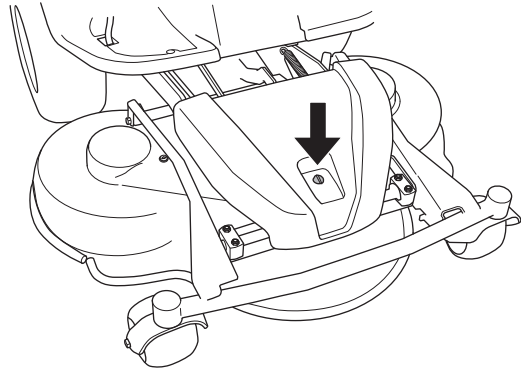
Pull the snap catches on the engine cover backwards. The snap catches are located on the inside of the engine frame.



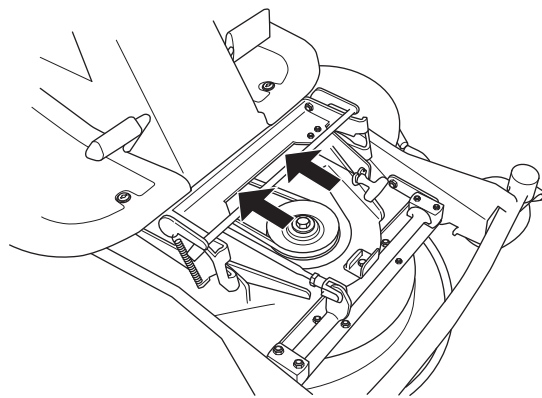
Open the engine cover forwards.

Front cover

Loosen the lock with the back of the ignition key or other tool and remove the front cover.

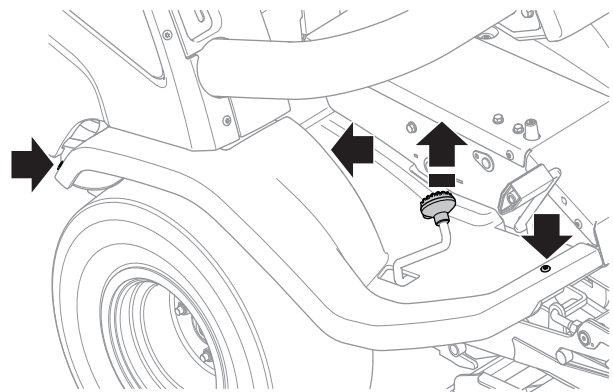


The front cover is secured to the unit frame with two hooks.



The right-hand wing cover

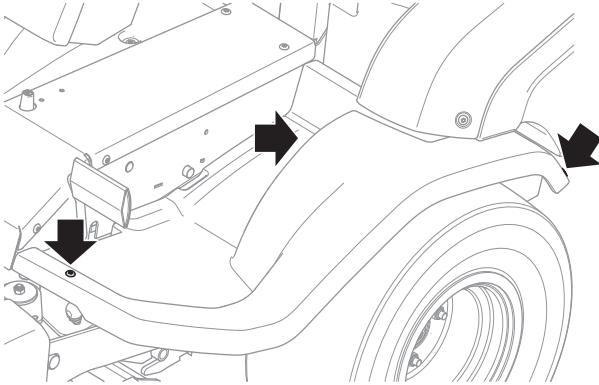
Remove the accelerator knob and bolts, and lift off the cover.



MAINTENANCE

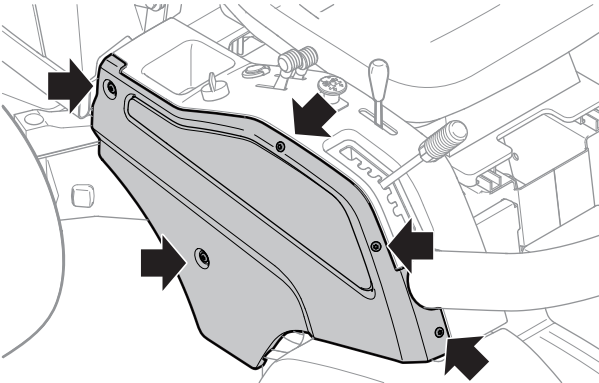
Left-hand wing cover

Remove the bolts holding the wing cover and lift off the cover.



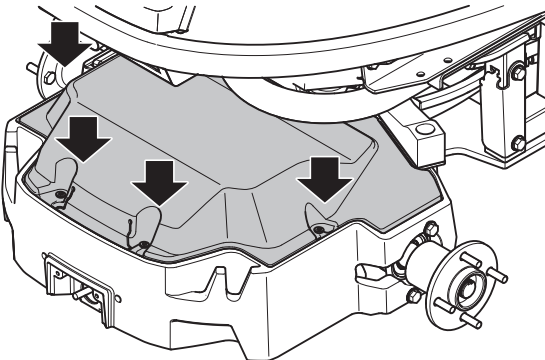
Right side cover

Remove the bolts holding the right side cover and lift off the cover.



Rear cover

Loosen the screws and lift off the cover.



Adjusting the parking brake

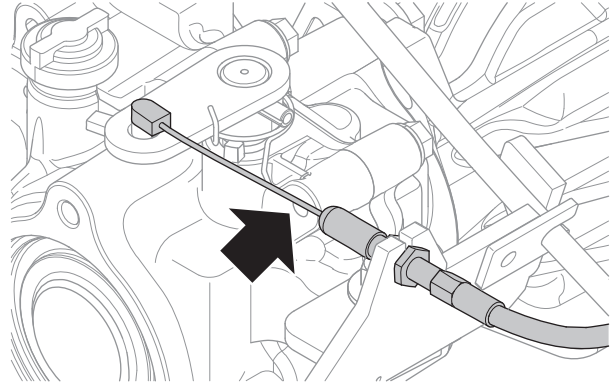


Check that the parking brake is adjusted correctly by placing the machine on a slope.

Apply and lock the parking brake. When the machine does not stand still, the parking brake should be adjusted according to the following.

- 1 Place the machine so it is flat.
- 2 Check that the parking brake is not engaged.

- 3 Remove the left-hand wing cover, see "Left-hand wing cover" on page 24.
- 4 Loosen the locking nuts.
- 5 Adjust the play between the casing and the adjustment screw to 1 mm (0.040") when pulling the casing. This gives a play on the pedal of approximately 40 mm.



- 6 Tighten the nuts moderately to avoid damaging the threads.
- 7 The brake should be checked again after the adjustment has been made.
- 8 Put the left-hand wing cover back in place.

Checking the throttle cable

Check that the engine responds to throttle increases and that a good engine speed is attained at full throttle.

If doubts arise, contact your service representative.

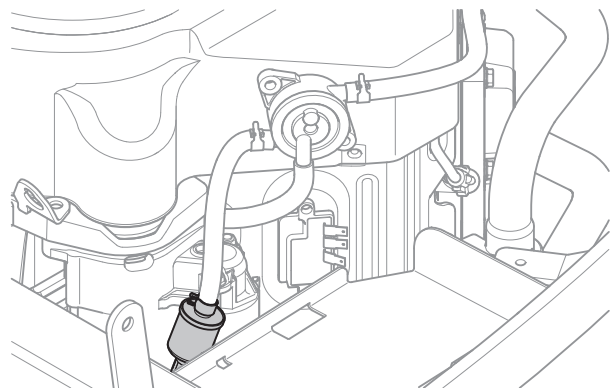
Checking the choke cable

If the engine produces black smoke or is difficult to start, this can be because the choke cable is incorrectly adjusted (upper cable).

If doubts arise, contact your service representative.

Replacing the fuel filter

Replace the fuel filter mounted on the supply line after every 100 hours (once per season) or more frequently if it is clogged.



Replace the filter as follows:

- 1 Open the engine cover.
- 2 Move the hose clamps away from the filter. Use flat-nosed pliers.
- 3 Pull the filter loose from the hose ends.

MAINTENANCE

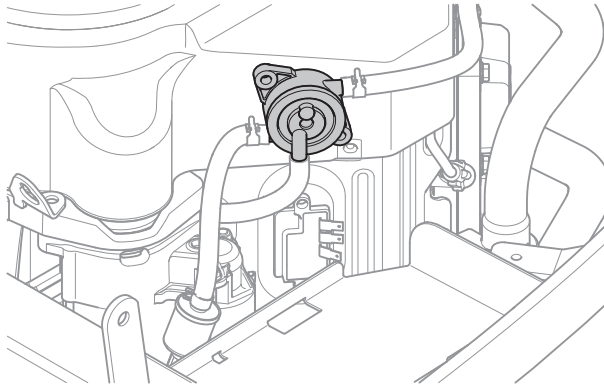
- 4 Push the new filter into the hose ends. If necessary, a soap solution can be applied to the ends of the filter to simplify assembly.
- 5 Move the hose clamps back toward the filter.

Checking the fuel pump's air filter

Check regularly that the fuel pump's air filter is not clogged by dirt.

The filter can be cleaned using a brush, if necessary.

- Remove the screws and open the pump, no hoses need be removed.



- Replace the pump on the console.

Replacing the engine's air filter

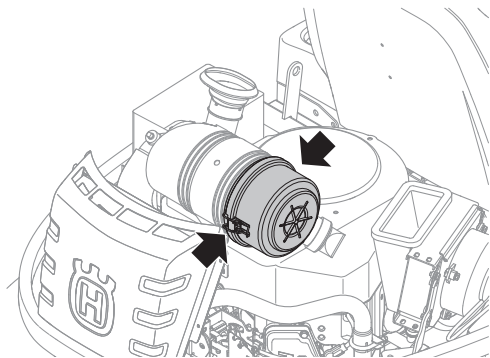


WARNING!
The exhaust system is hot. Let it cool before starting to replace the air filter.

If the engine seems to lack power or does not run smoothly this may be because the air filter is clogged. For this reason, it is important to replace the air filter regularly (see "Maintenance schedule" on page 21 for the proper service interval).

Replacement of the air filter is carried out as follows:

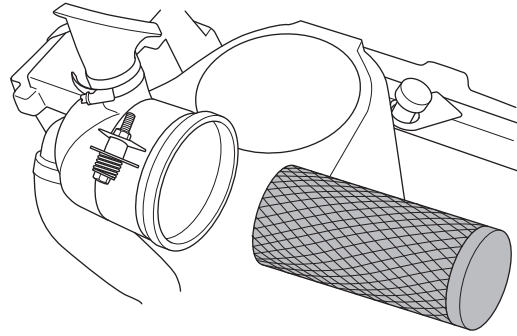
- 1 Open the engine cover.
- 2 Loosen the two fasteners holding the filter cover and remove it.



IMPORTANT!

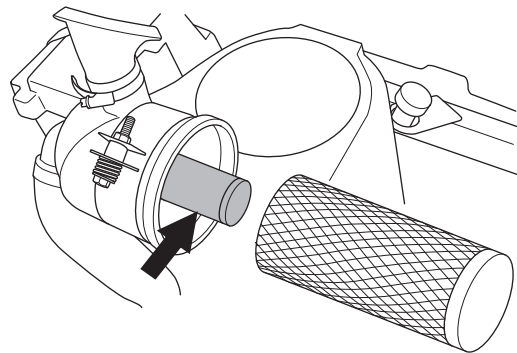
Never run the engine when the air filter has been removed.
Filters should not be oiled. They must be fitted dry.

- 3 Remove the filter cartridge from the filter housing.

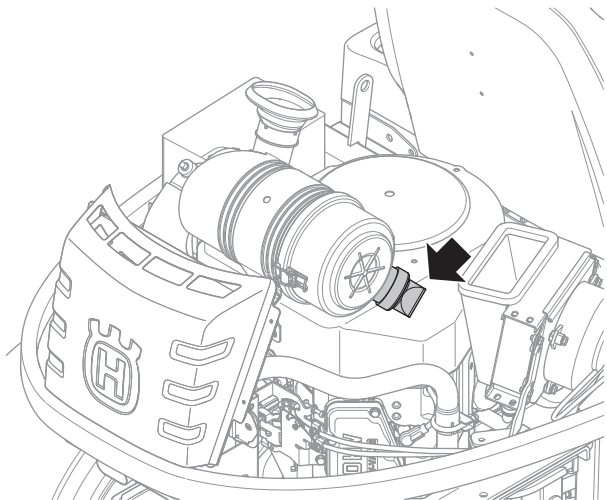


- 4 Clean the filter by knocking the filter against a hard surface and blow with compressed air from the inside. Never brush the dirt away. Change air filter if it is very dirty.

P524 has an extra filter that is fitted inside the filter cartridge. Clean the filter by knocking it with care against a hard surface. Do not use compressed air for this filter.



- 5 Replace the filter cartridge. Make sure the filter cartridge is correctly fitted over the air intake in the filter housing.
- 6 Replace the air filter cover, ensure that the particle collector is facing downwards.



MAINTENANCE

Ignition system

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

Recommended spark plug, see "Technical Data" on page 45.

IMPORTANT!

The wrong spark plug type can damage the engine.

Replacing the spark plug

- 1 Remove the ignition cable shoe and clean around the spark plug.
- 2 Remove the spark plug with a 3/4" (19 mm) spark plug socket wrench.
- 3 Check the spark plug. Replace the spark plug if the electrodes are burned or if the insulation is cracked or damaged. Clean the spark plug with a wire brush if it is to be reused.
- 4 Measure the electrode gap with a gapping tool. The gap must be 0,75 mm/ 0.030". Adjust as necessary by bending the side electrode.
- 5 Reinsert the spark plug, turning by hand to avoid damaging the threads.
- 6 Tighten the spark plug, once it touches the seating, with the spark plug spanner. Tighten the spark plug so that the washer is compressed. A used spark plug should be turned 1/8 of a turn from the seated position. A new spark plug should be turned a 1/4 turn from the seated position.
- 7 Replace the ignition cable shoe.

IMPORTANT!

Inadequately tightened spark plugs can cause overheating and damage the engine. Over-tightening of the spark plug can damage the threads in the cylinder head.

Cleaning the engine and muffler

Keep the engine and muffler free from grass cuttings and dirt. Grass cuttings steeped in petrol or oil on the engine can increase the fire risk and impair cooling.

Allow the engine to cool before cleaning. If the dirt is mixed with oil dissolve it with degreasing agent, otherwise just with water and brush.

Grass cuttings around the muffler dry quickly and constitute a fire risk. Brush or wash them off when the muffler is cold.

Checking the safety system

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

The engine must only be possible to start when the following conditions are met:

- Blades shut off, PTO not activated.
- The parking brake is applied.

The engine must stop under any of the following conditions:

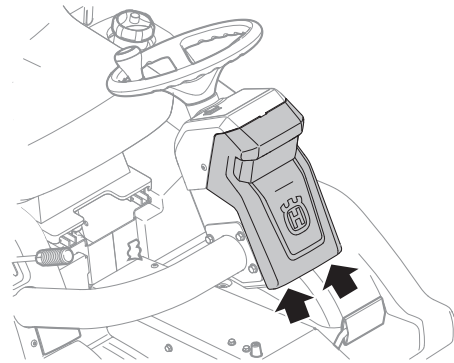
- The cutting deck is lowered and the driver stands up.
- The cutting deck is raised, the parking brake is not engaged and the driver stands up.

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

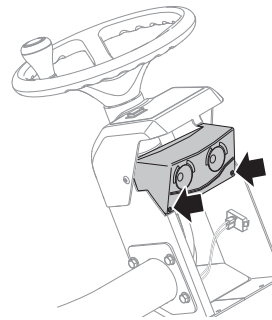
Replacing the light bulbs

For information about the bulb type, see "Technical Data" on page 45.

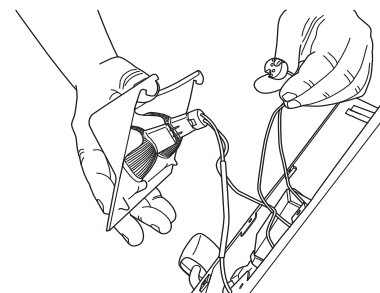
- 1 Unscrew the four screws holding the front cover of the control panel in place.



- 2 Unscrew the two screws holding the lamp insert.

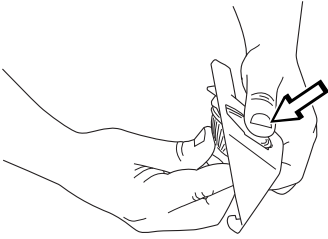


- 3 Lift out the lamp insert.
- 4 Disconnect the cables from the bulbs.



MAINTENANCE

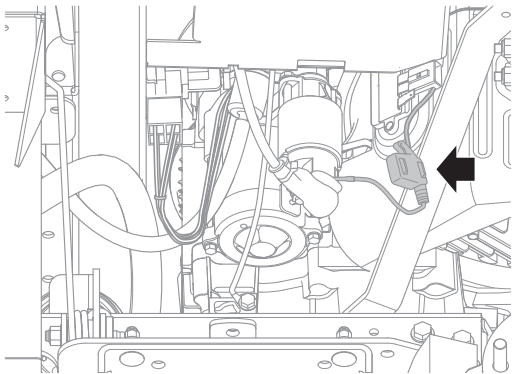
- 5 Lift out the bulbs from the insert.
- 6 Insert the new bulbs. Make sure you use your thumb to support the front.



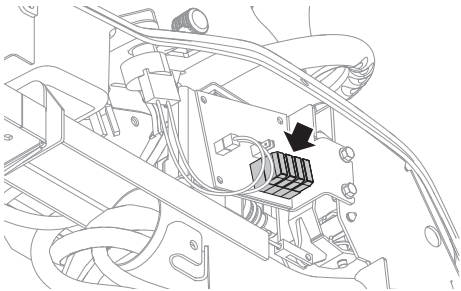
- 7 Refit the cables, lamp insert and the cover in the reverse order.

Main fuse

The main fuse is placed in a detachable holder under the battery. Type: Flat pin fuse, 20 A.



The fuse for the power outlet is placed under the control panel. Type: Flat pin fuse, 5 A.



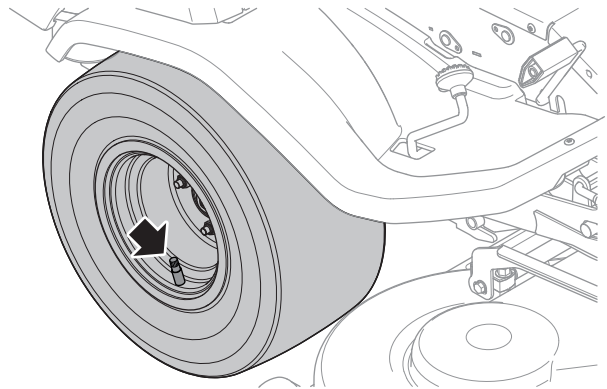
Do not use any other type of fuse when replacing.

A blown fuse is indicated by a burnt connector. Pull the fuse from the holder when replacing.

The fuse is there to protect the electrical system. If it blows again shortly after replacement, it is due to a short circuit, which must be fixed before the machine can be put into operation again.

Checking the tyre pressures

The tyre pressure must be 100 kPa / 1.0 bar / 14.5 PSI for the front and rear wheels.



IMPORTANT!

Different air pressure in the front tyres will result in the blades mowing the grass at different heights.

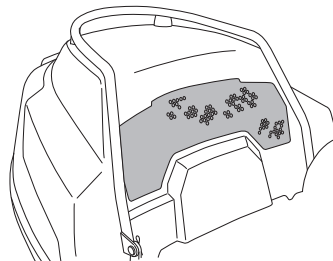
Checking the engine's cooling air intake.



WARNING!

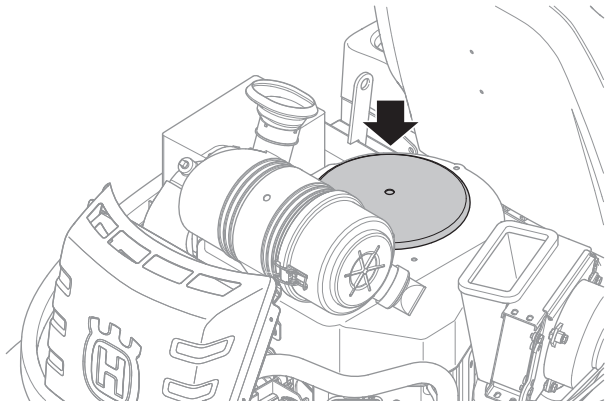
The cooling air intake rotates when the engine is running. Watch your fingers.

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



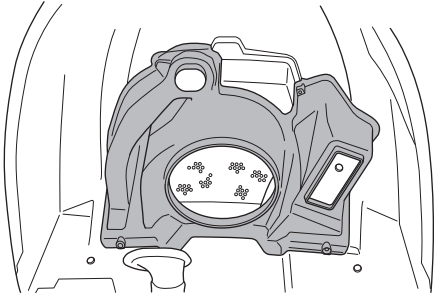
Open the engine cover.

Check that the engine cooling air intake is free of leaves, grass, and dirt.



MAINTENANCE

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



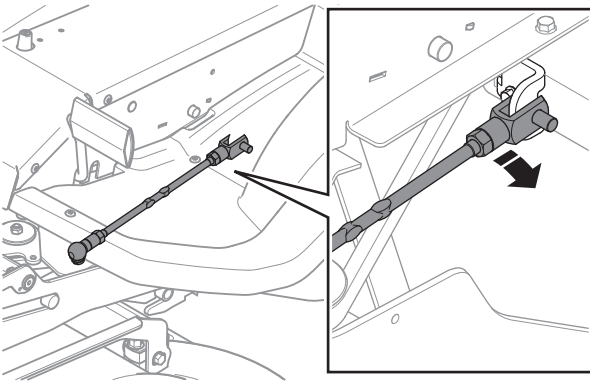
A clogged air intake grille, air duct or cooling air intake impairs the cooling of the engine, which may result in engine damage.

Replacing the cutting belt

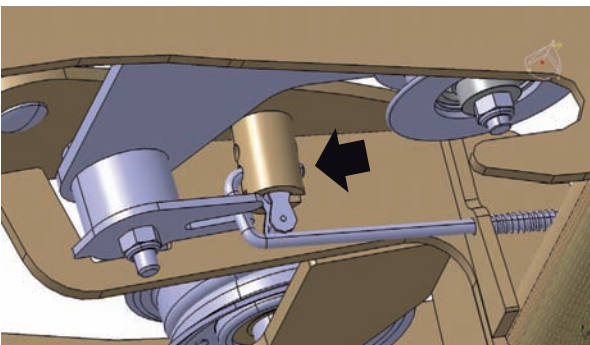
Dismantling

The entire cutting deck belt is removed according to the following when a snow blade is to be attached to the machine.

- 1 Loosen the automatic belt tensioner rod.



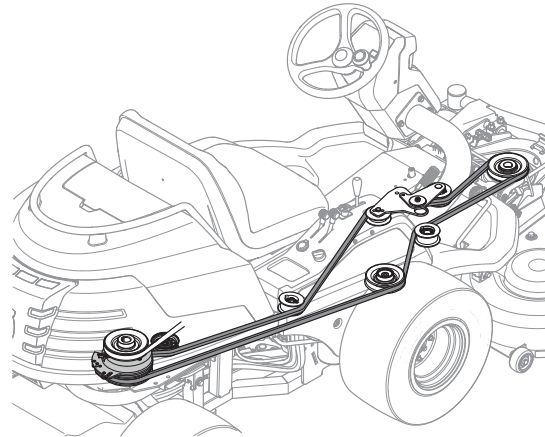
- 2 Pull the spring rod from the lifting chain.



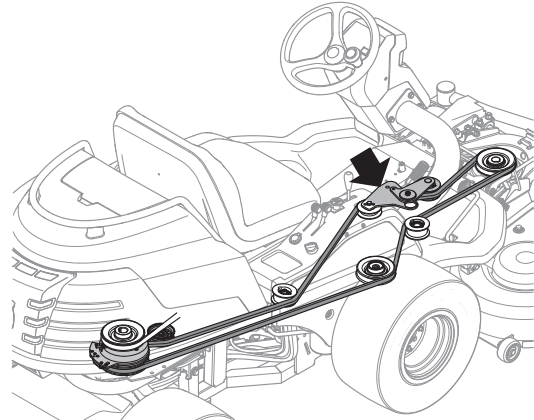
- 3 Remove the cutting deck belt.

Assembly

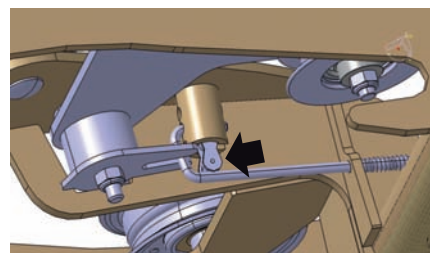
- 1 Fit a new cutting deck belt according to the belt position diagram.



- 2 Assemble in the reverse order. Make sure the cutting deck belt sits correctly in the adjuster pulley.



- 3 Reinsert the lifting chain and lock it with the rod so that one chain link is visible.



- 4 Reset the cutting deck from service position to mowing position.

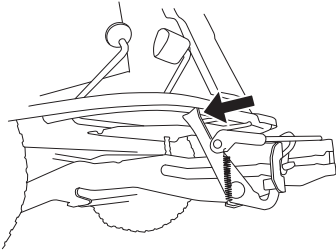
MAINTENANCE

Assembling the cutting deck

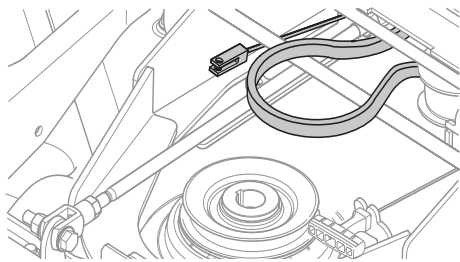


WARNING!
Wear protective glasses when assembling the cutting deck. The springs that tension the belt can fly off and cause personal injury.

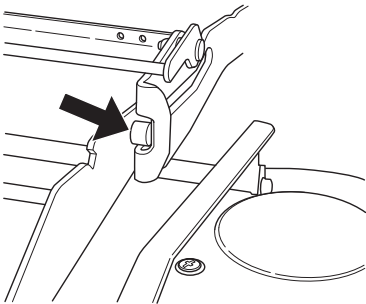
- 1 Place the machine on a flat surface and apply the parking brake. Check that the lever for setting the cutting height is in the lowest position, position 1.
- 2 Push the equipment frame down and place the catch against the frame.



- 3 Place the belt and the cable in such a way to prevent them from being crushed.

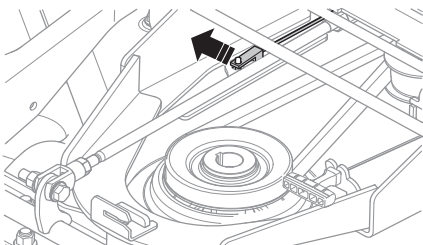


- 4 Slide in the cutting deck and put the guide plugs in the grooves on the equipment frame, one on each side.

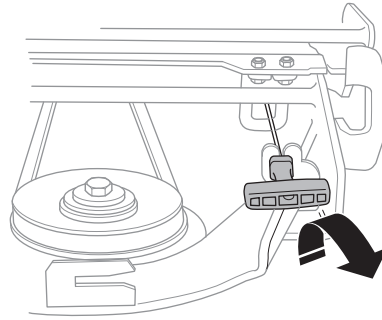


WARNING!
Observe caution to avoid trapping your hand.

- 5 Slide in the cutting deck so that the interior plugs touch the bottom of the equipment frame's grooves.
- 6 Place the cutting deck belt around the cutting deck drive pulley. Hook in the height adjustment cable.



- 7 Secure the springs on the adjuster pulley.



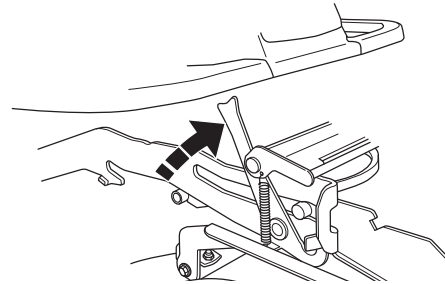
Fit the front cover.

Removing the cutting deck

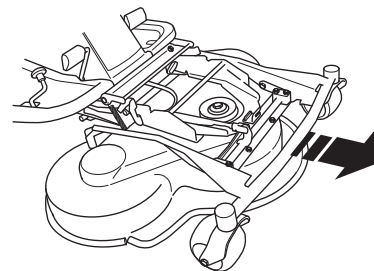


WARNING!
Wear protective glasses when dismantling the cutting deck. The springs that tension the belt can fly off and cause personal injury.

- 1 Put the cutting deck in the service position and lift off the cutting deck drive belt, see "Placing in the service position" on page 30.
- 2 Fold up the cutting deck lock.



- 3 Pull out the cutting deck.



WARNING!
Observe caution to avoid trapping your hand.

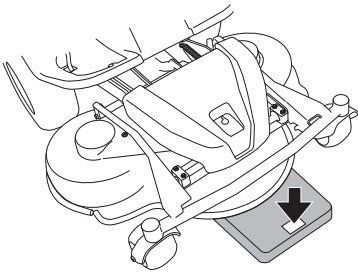
MAINTENANCE

Checking and adjusting the cutting deck's ground pressure

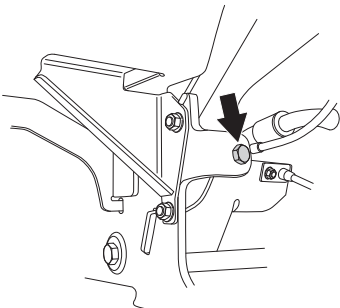
In order to achieve the best mowing result the cutting deck should follow the ground without touching it too heavily.

Pressure is adjusted using a screw and spring on each side of the Rider.

- 1 Check the air pressure in the tyres, 200 kPa/ 2 bar/ 30 PSI at the front and 160 kPa/ 1.6 bar/ 24 PSI at the rear.
- 2 Place the Rider on a flat surface.
- 3 Lower the cutting deck to the mowing position.
- 4 Place a set of bathroom scales under the cutting deck's frame (on the front edge) so that the cutting deck rests on the scales. If necessary a block can be placed between the frame and the scales so that the anti-scalp rollers do not support any weight.



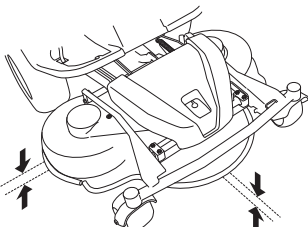
- 5 Adjust the cutting deck's ground pressure by screwing the adjuster screws, which are located behind the front wheels on both sides, in or out. The ground pressure should be between 12 and 15 kg (26.5-33 lbs) and the springs tensioned equally.



Checking the parallelism of the cutting deck

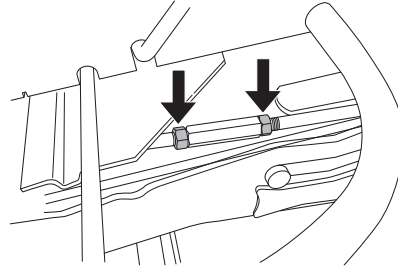
Check the cutting deck's parallelism as follows:

- 1 Check the air pressure in the tyres
- 2 Place the Rider on a flat surface.
- 3 Lower the cutting deck to the mowing position. The cutting height must be at lowest position, position 1.
- 4 Measure the distance between the ground and the front and back edges of the unit's cover. The cutting deck should have a slight slant, with the rear edge 2-4 mm (1/8") higher than the front edge.



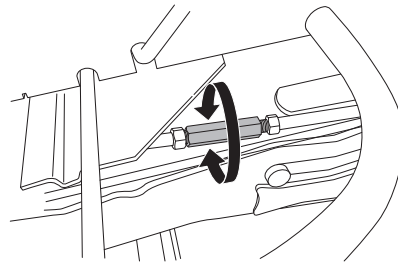
Adjusting the parallelism of the cutting deck

- 1 Remove the front cover and the right-hand wing cover, see "Dismantling the Rider covers" on page 23.
- 2 Loosen the nuts on the parallel strut.



- 3 Screw out (extend) the strut to raise the rear edge of the cover.

Screw in (shorten) the strut to lower the rear edge of the cover.



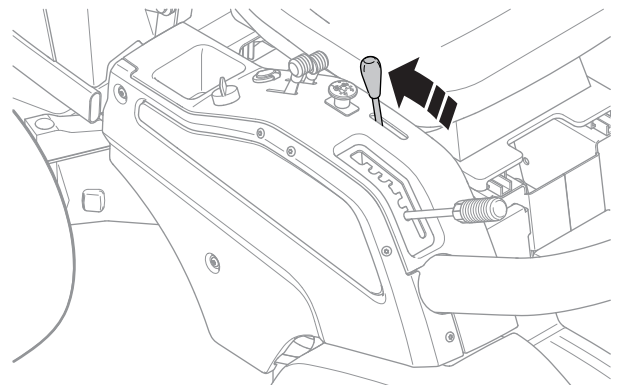
- 4 Tighten the nuts after adjustment.
- 5 The parallelism of the cutting deck should be checked again after the adjustment has been made.
- 6 Attach the front cover and the right-hand wing cover.

The cutting deck's service position

In order to provide good accessibility for cleaning, repair and servicing, the cutting deck can be set in the service position. The service position means that the cutting deck is raised and locked in the vertical position.

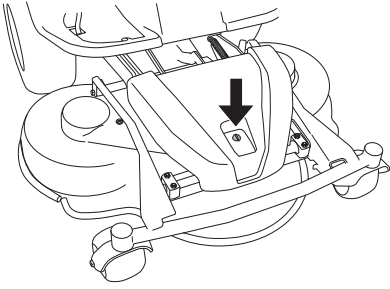
Placing in the service position

- 1 Place the machine so it is flat. Engage the parking brake.
- 2 Make sure the cutting deck is in the raised position.



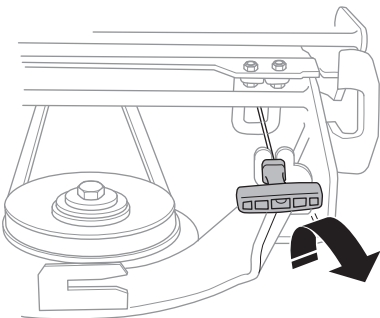
MAINTENANCE

- 3 Remove the front cover by loosening the pin. (Complete instructions for the service position can be found on the inside of the front cover).

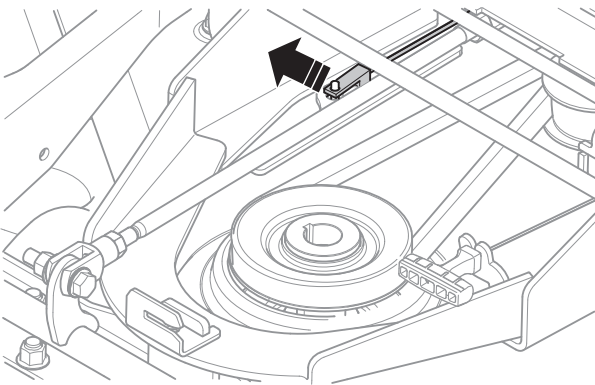


WARNING! Wear protective glasses when dismantling the cutting deck. The springs that tension the belt can fly off and cause personal injury.

- 4 Loosen the spring on the cutting deck's belt idler.

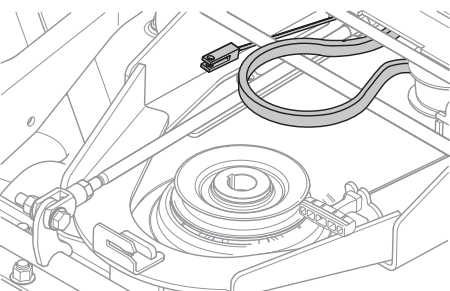


Loosen the cutting height cable and insert the holder.

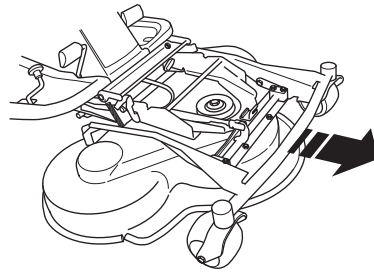


WARNING! Observe caution to avoid trapping your hand.

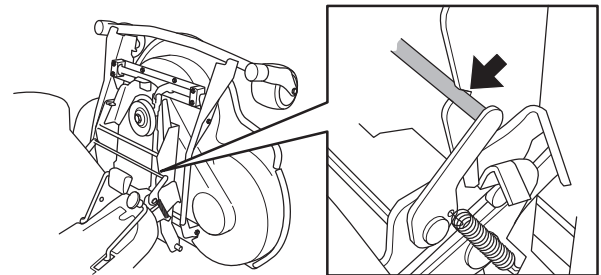
- 5 Remove the cutting deck's drive belt. Place the belt in such a way to prevent it from being crushed.



- 6 Grip the front edge of the cutting deck and pull forwards until it stops.

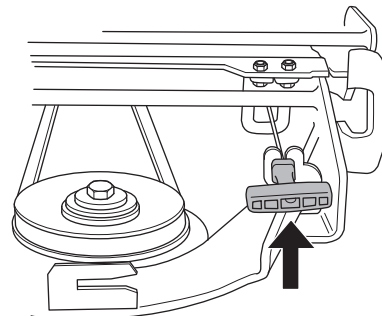


- 7 Lift the cutting deck until it stops and a clicking sound is heard. The cutting deck locks automatically in the vertical position.



Releasing the service position

- 1 Grip the front edge of the cutting edge and loosen the lock. Lower and slide in the cutting agent.
- 2 Replace the cutting height cable and the cutting deck belt.
- 3 Tension the cutting deck belt with the belt adjuster. Make sure the belt sits on the right side on the belt pulley.



- 4 Fit the front cover.

Replacing the cutting deck's belts



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

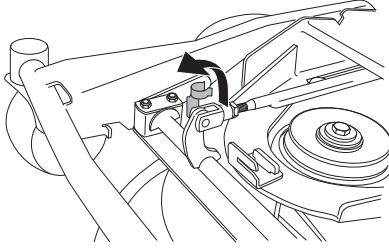
There is a risk of crush injuries when working with the belt.

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

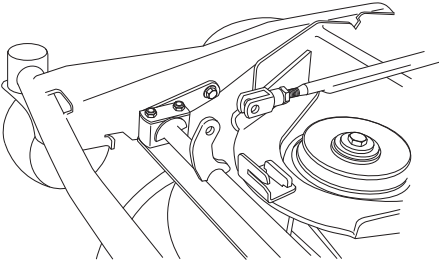
- 1 Dismantle the cutting deck, see "Removing the cutting deck" on page 29.

MAINTENANCE

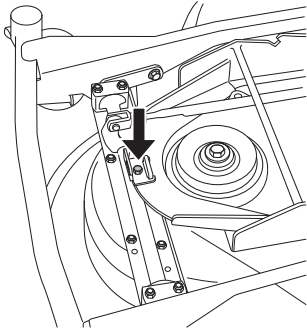
- 2 Open the lock for the track rod bolt.



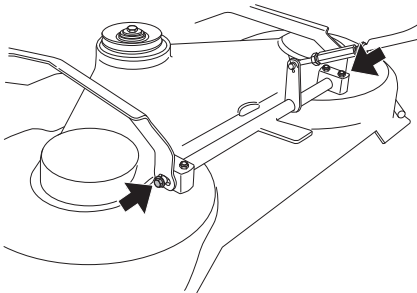
Remove the bolt so the track rod is released in one end.



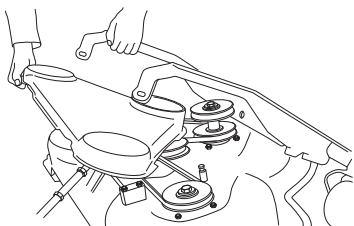
- 3 Unscrew the bolt holding the cutting deck frame bracket.



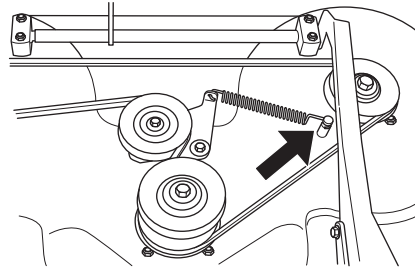
- 4 Remove the lock and draw out the cutting deck frame.
- 5 Remove the two bolts on the cutting deck frame.



- 6 Remove the screws on the cutting cover. Lift the cutting deck frame and remove the cutting deck cover.



- 7 Loosen the spring that tensions the V-belt and wriggle the belt off.

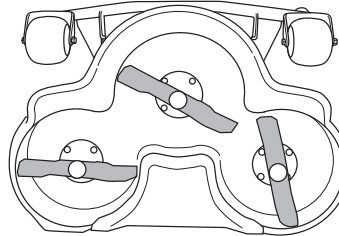


Attach a new belt in the reverse order.

Inspecting the blades

It is important that the blades are undamaged and well-ground to give the best mowing result.

Check that the blades' mounting bolts are tightened.



IMPORTANT!

Replacement or sharpening of the blades should be carried out by an authorised service representative.

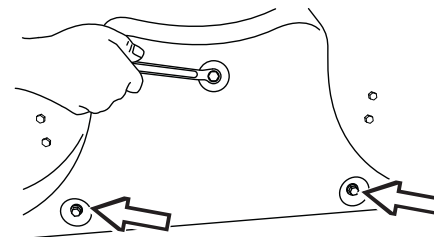
The blades should be balanced after sharpening.

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.

Removal of the CombiClip plug

To change a Combi unit from the CombiClip function to a cutting deck with rear ejection, remove the CombiClip plug, which is located under the unit, attached with three screws.

- 1 Put the cutting deck in service position, see "Placing in the service position" on page 30.
- 2 Remove the three screws holding the CombiClip plug, and remove the plug.



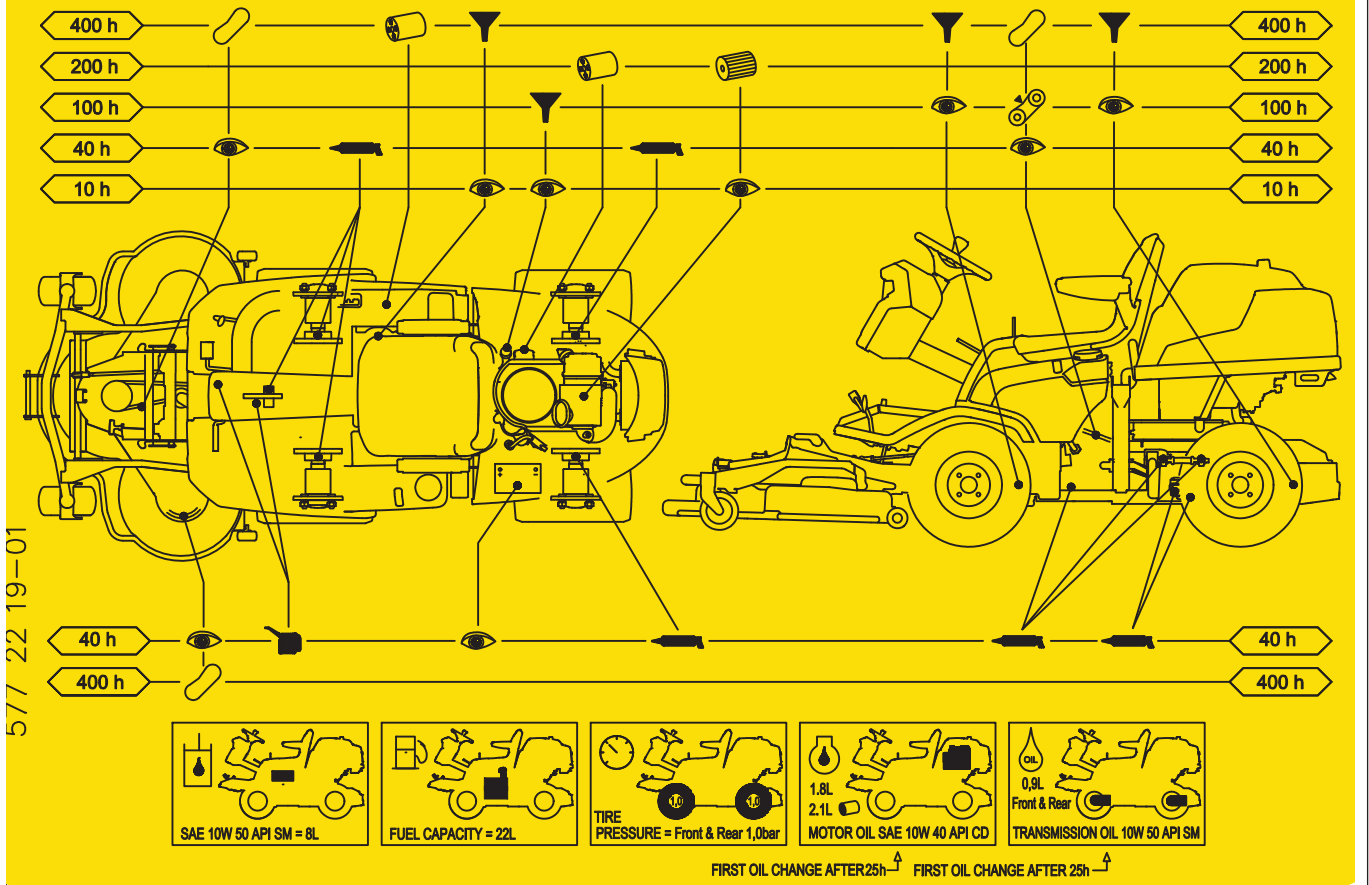
- 3 Tip: Fit three full-thread screws M8x15 mm in the screw holes to protect the threads when removing the CombiClip plug.

- 4 Return the cutting deck to the normal position.






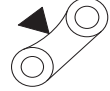

Fit the CombiClip plug in the reverse order.

LUBRICATION

QUICK MAINTENANCE GUIDE FOR P 524



Key to symbols in lubrication chart

- Filter replacement 
- Oil Change 
- Level check 
- Grease nipple 
- Oil can 
- Check state and tension of belts 
- Belt replacement 

General

Remove the ignition key to prevent unintentional movements during lubrication.

When lubricating with an oilcan, it ought to be filled with engine oil.

When lubricating with grease, unless otherwise stated, grease 503 98 96-01 or another chassis or ball bearing grease offering good corrosion protection shall be used.

With daily use, the Rider should be lubricated twice weekly.

Wipe away excess grease after lubrication.

It is important to avoid getting lubricant on the belts or the drive surfaces on the belt pulleys. Should this happen, attempt to clean them with spirits. If the belt continues to slip after cleaning with spirits, it must be replaced.

Petrol or other petroleum products must not be used to clean belts.

LUBRICATION

Accessories

Lubrication or other maintenance of optional equipment or accessories is not described in this manual. This equipment too, naturally, requires maintenance. See the manuals for the respective accessories for instructions.

Lubricating the cables

Grease both ends of the cables and move the controls to end stop positions when lubricating.

Re-attach the rubber covers on the cables after lubrication.

Cables with sheaths will jam if they are not lubricated regularly. A jammed cable may cause malfunction, such as the parking braking being applied. If a cable binds, remove the cable and hang it vertically. Lubricate it with thin engine oil until the oil begins to escape from the bottom.

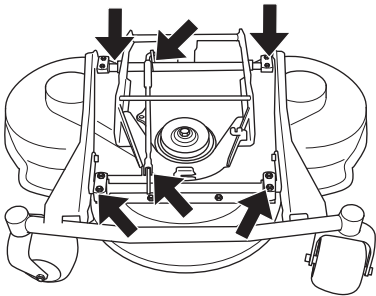
Tip: Fill a small plastic bag with oil and tape it so that it seals against the casing and allow the cable to hang vertically from the bag overnight. If you do not succeed in lubricating the cable, it must be replaced.

Cutting deck

Remove the front cover, see "Dismantling the Rider covers" on page 23.

Lubricate using an oilcan.

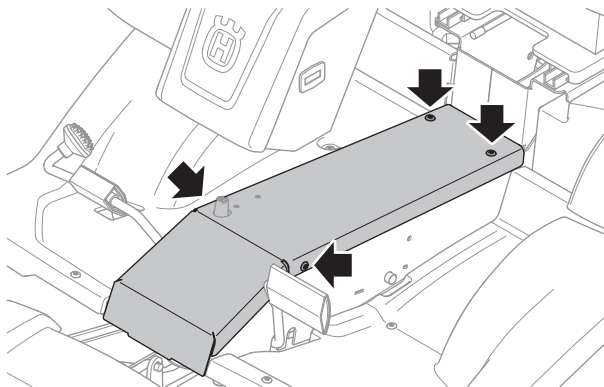
- Joints and bearings



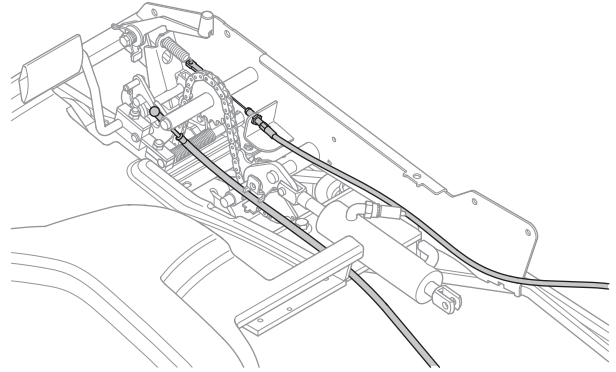
Pedal system in the frame tunnel

Lubricate the pedal system in the frame tunnel.

- Remove the frame plate by loosening the four screws.

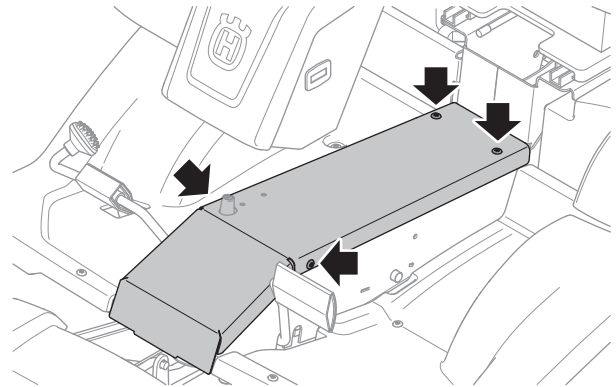


- Work the pedals and lubricate the moving parts with an oil can. Lubricate the cables to the brake and drive pedals with an oil can.

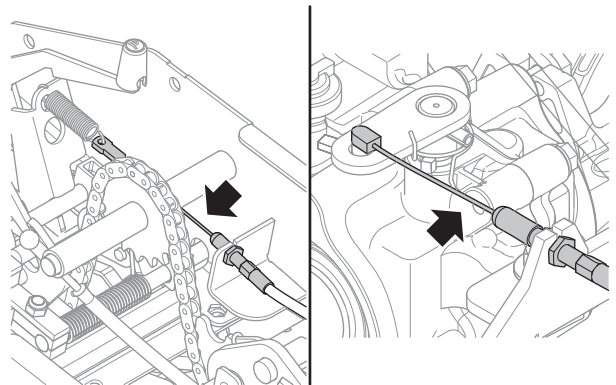


Parking brake wire

- Remove the frame plate by loosening the four screws.



- Remove the left-hand wing cover, see "Dismantling the Rider covers" on page 23.
- Lubricate both ends of the cable.



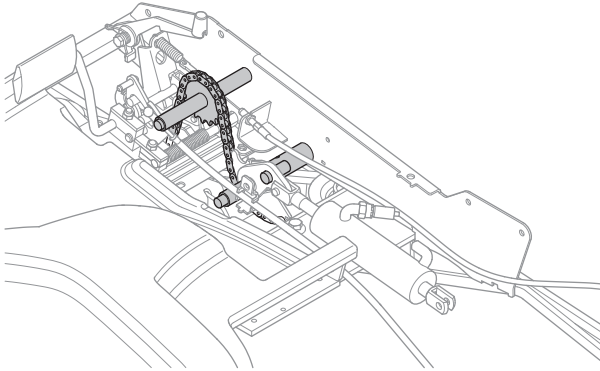
- Remove the cable's rubber casing when lubricating.
- Lubricate the cable with an oil can, press the parking brake pedal a few times and lubricate again.
- Refit the frame plate and wing cover.

LUBRICATION

Chain in the frame tunnel

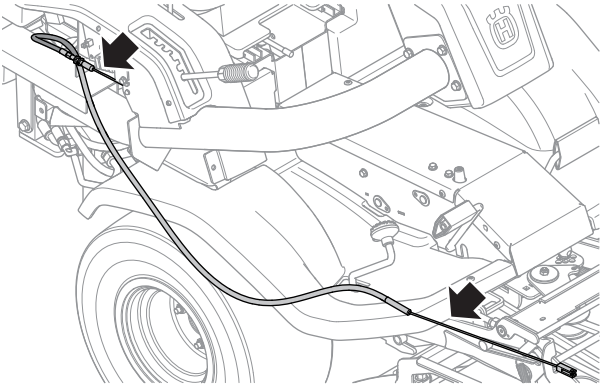
Remove the frame plate by loosening the four screws.

Lubricate the chain in the frame tunnel with an oil can or chain lubricant spray for motorcycles.



Links and joints in the cutting adjustment

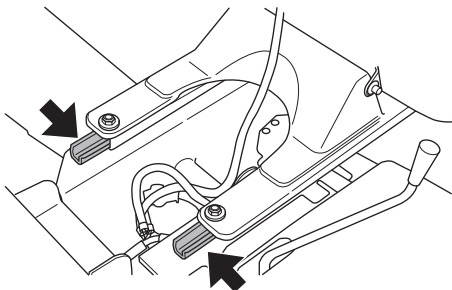
Lubricate the links and the joints for the cutting height adjustment cable behind the right front wheel. Lubricate using an oil can.



Driver's seat

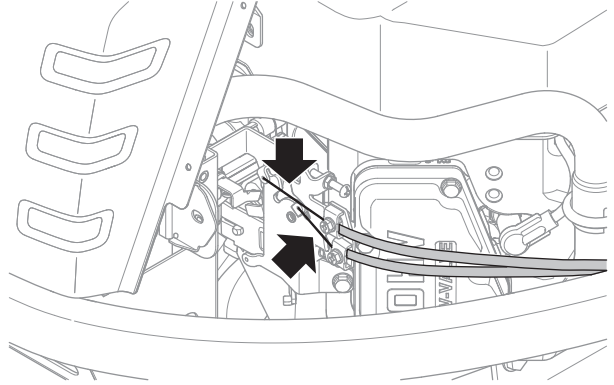
Fold up the seat.

Lubricate the lengthways adjustment runners with the oil can.

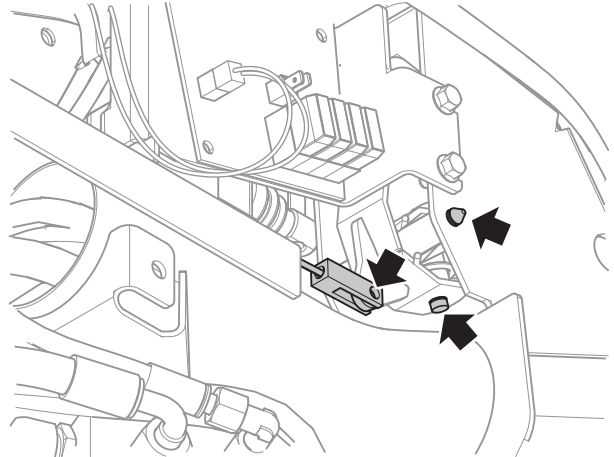


Throttle and choke cables, lever bearings

- Remove right wing cover, see "Dismantling the Rider covers" on page 23. Open the engine cover.
- Lubricate the cables' free ends with the oil can, even those by the engine.
- Move the controls to the end points and lubricate again.



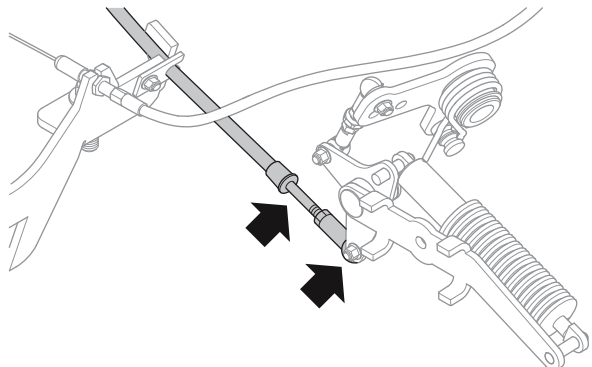
- Lubricate the joints, catches, and bearings for the cutting deck's control levers with an oil can.



Put back the right wing cover.

Lubricate the hydrostatic cable with links

Lubricate the joints and bearings on the left side with an oil can. Remove the rubber casing and lubricate the hydrostatic transmission cable with an oil can.



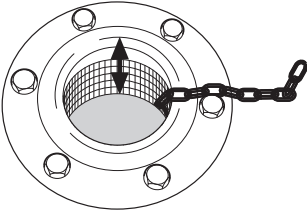
Depress the pedal a few times, lubricate again, and put back the rubber casing.

LUBRICATION

Checking the hydraulic system's oil level

The oil and filter should be changed by an authorised service representative, as described in the Workshop Manual. Work on the system entails particular demands on cleanliness and the system must be vented before the machine is used.

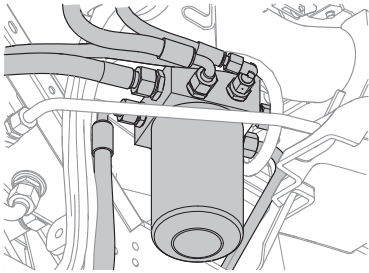
- Fold up the seat.
- Remove the filler cap. The level must be 40 to 60 mm from the upper edge of the screen.



- Refill if needed with a fully synthetic 10W/50 API SM oil or better

Hydraulic oil filter, change

- Turn the old oil filter anti-clockwise to remove. If necessary, use a filter remover.



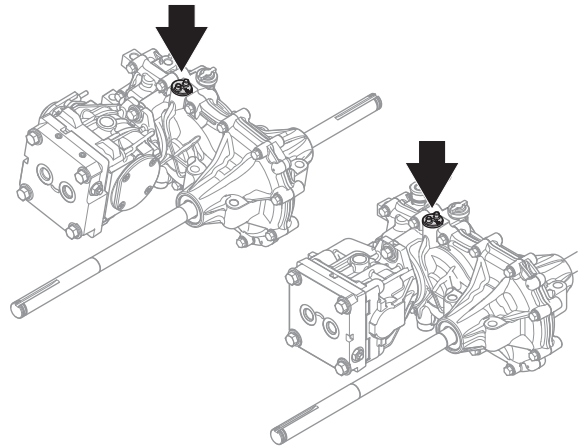
- Lightly lubricate the rubber seal on the new oil filter using new oil.
- Mount the filter by hand with + 3/4 turn. Fill the transmission's oil tank with approx. 0.3 litres of oil. Be observant when running the engine as described below and fill so that the tank is not emptied.

Run the engine, manipulate the servo steering, and then check that there are no leaks around the oil filter seal.

- Check the oil level in the transmission, top up if necessary. The oil filter holds 0.3 litres of oil.

Checking the oil level in the transmission

- Check that there is oil in the transmission with the dipstick.



- The oil level should be between the markings on the dipstick.



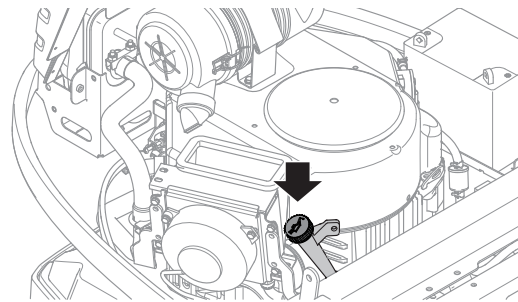
- Refill if needed with a fully synthetic 10W/50 API SM oil or better.

Checking the engine's oil level.

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

Open the engine cover.

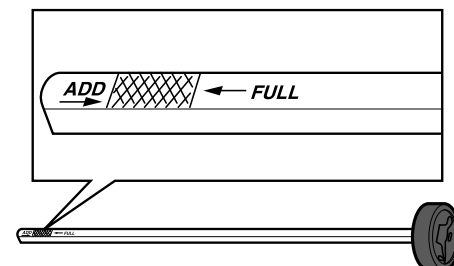
Loosen the dipstick, pull it up and wipe it off.



Now insert the dipstick again, **without tightening it**.

Pull the dipstick out again and read the oil level.

The oil level should be between the markings on the dipstick. If the level is approaching the ADD mark, top up the oil to the FULL mark on the dipstick.



The oil is topped up through the hole the dipstick sits in. Fill the oil slowly.

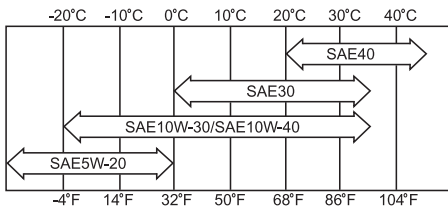
LUBRICATION

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

The following oil classes are recommended:

- API Service Class: SF, SG, SH and SJ

Choose an oil with viscosity according to the temperature ranges in the figure:



Do not mix different types of oil.

Caution when using oils such as 5W-20, 10W-30 and 10W-40 the engine's oil consumption increases. If these oils must be used, check the oil level frequently.

Replacing the engine oil

Open the engine cover.

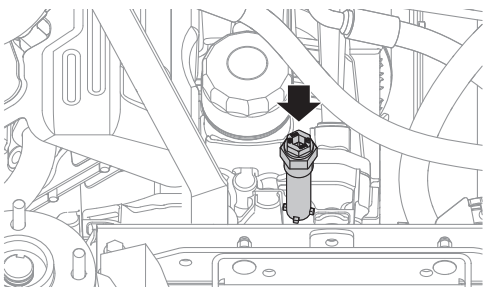
The engine oil should be changed the first time after 8 hours running time. It should then be changed after every 100 hours of running time.

When operating with a heavy load or at high ambient temperatures, replace every 50 hours.



WARNING!
Engine oil can be very hot if it is drained directly after stopping the engine. Allow the engine to cool somewhat first.

- 1 Place a container underneath the engine's left oil drain plug.



- 2 Remove the dipstick. Remove the drain plug from the engine's left side.
- 3 Let the oil run out into the container.
- 4 Fit the drain plug and tighten it.
- 5 If necessary fill so that the oil comes up to the FULL mark on the dipstick. The oil is topped up through the hole the dipstick sits in.
- 6 Run the engine warm, then check that there is no leakage from the oil plug.

Check the oil level in the engine, top up if necessary.

IMPORTANT!

Used engine oil is a health hazard and must not be disposed of on the ground or in nature; it should always be disposed of at a workshop or appropriate disposal location.

Avoid skin contact; wash with soap and water in case of spills.

Changing the oil filter

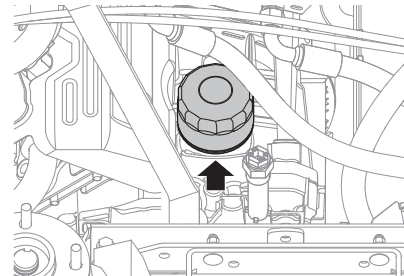


WARNING!

Engine oil can be very hot if it is drained directly after stopping the engine. Allow the engine to cool somewhat first.

Open the engine cover.

- Turn the old oil filter anti-clockwise to remove. If necessary, use a filter remover.



- Lightly lubricate the rubber seal on the new oil filter using new oil.
- Fit the oil filter by turning clockwise. Turn by hand until the rubber seal is seated. Now tighten a further half turn.
- Start the engine and let it idle for about 3 minutes. Now stop it and check for signs of leakage.
- Check the oil level in the engine, top up if necessary.

IMPORTANT!

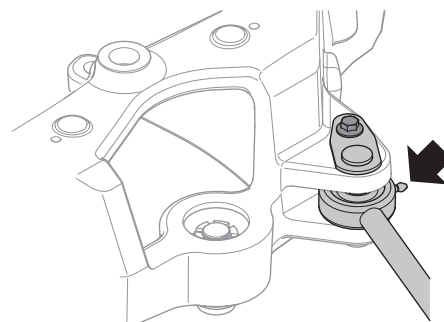
Used engine and transmission oil is health-impairing and must not be disposed of in the ground or in nature.

Replaced filters must be handed in to the workshop or other allotted place for disposal.

Avoid skin contact; wash with soap and water in case of spills.

Control cylinder

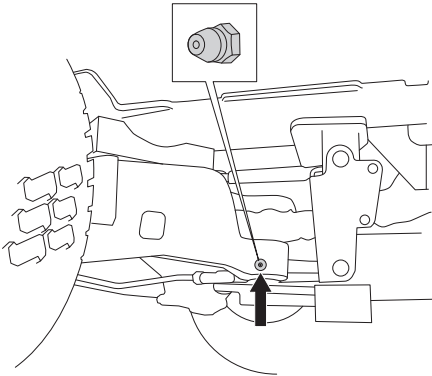
The control cylinder has two grease nipples at each end. Lubricate with grease gun until grease appears.



LUBRICATION

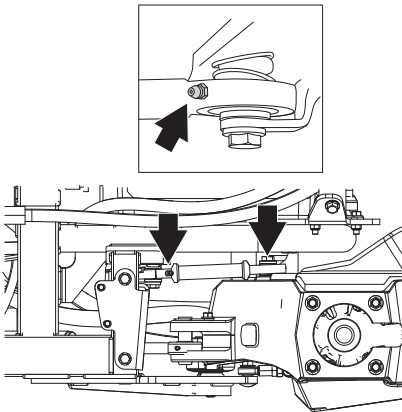
Joint bearing

Lubricate the joint bearing at the centre. Lubricate with grease gun until grease appears.



Connecting rod

- 2 grease nipples, one on each side. Lubricate with grease gun until grease appears.

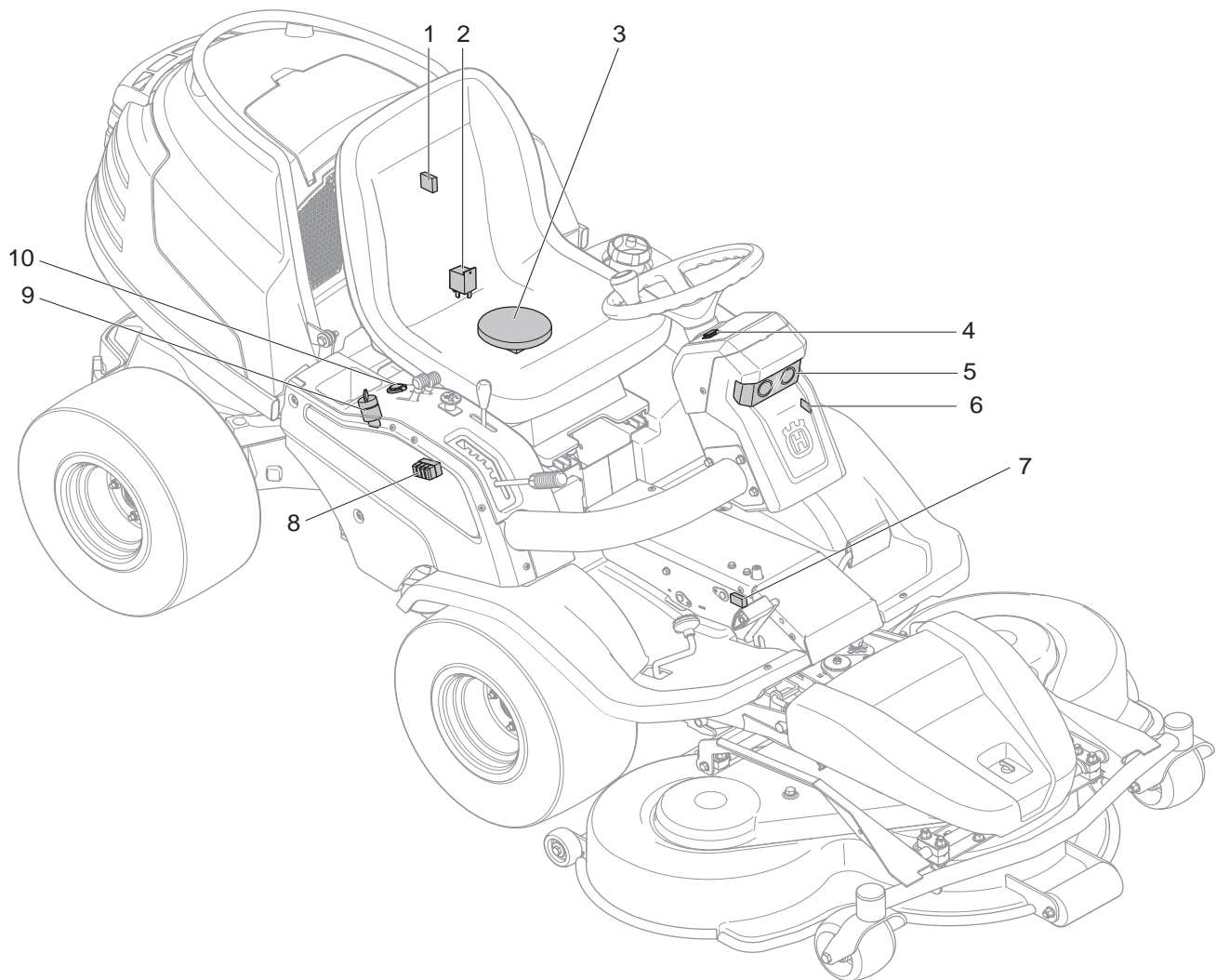


TROUBLE SHOOTING CHART

Problem	Cause
Starter turns but the engine does not start	Fuel tank empty
	Faulty spark plugs
	Faulty spark plug connections or interchanged cables
	Dirt in the carburettor or fuel line
	Fuel filter blocked
Starter does not turn the engine	Discharged battery
	Bad contact between the cable and battery
	Main fuse blown. The fuse is located under the battery
	Faulty ignition lock
	Brake not activated
	Faulty starter motor
	Blades activated (PTO button activated)
The engine runs erratically	Faulty spark plug
	Incorrect carburettor setting
	Clogged air filter
	Blocked fuel tank ventilation
	Incorrect ignition setting
	Dirt in the carburettor or fuel line
	Choking or incorrectly adjusted choke cable
The engine lacks power	Clogged air filter
	Faulty spark plug
	Dirt in the carburettor or fuel line
	Incorrect carburettor setting
	Choking or incorrectly adjusted choke cable
Engine overheating	Engine overloaded
	Air intake or cooling fins clogged
	Damaged fan
	Too little or no oil in the engine
	Faulty pre-ignition
	Faulty spark plug
Battery does not charge	Faulty battery
	Poor contact on the battery terminal cable connectors
	Main fuse blown. The fuse is located under the battery
	Power consumption too high, max 20 A
The Rider vibrates	The blades are loose
	The engine is loose
	One or more blades unbalanced, caused by damage or poor balancing after sharpening
Uneven mowing results	Blades blunt
	Cutting deck set incorrectly
	Long or wet grass
	Grass build-up under the cover
	Different air pressure in the front right and left tyres
	Driving speed too high
	Engine speed too low
Drive belt slips	

ELECTRICAL AND HYDRAULIC SYSTEMS

Electrical system

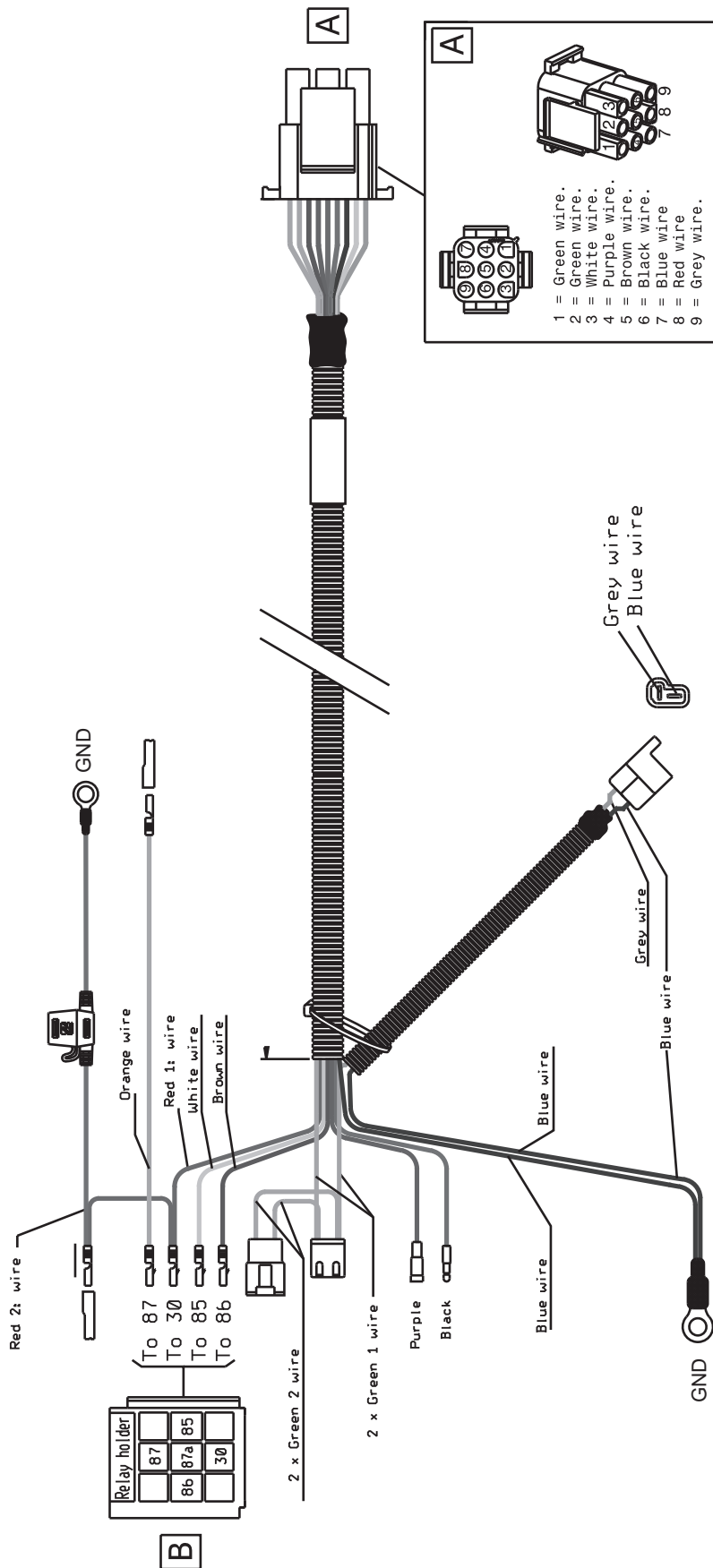


Numbers correspond to:

- 1 Main fuse 20 A
- 2 Start relay
- 3 Microswitch, seat
- 4 Switch for the lights
- 5 Lights
- 6 Hour meter
- 7 Microswitch, hydrostatic transmission
- 8 Fuse holder
- 9 Ignition lock
- 10 Power outlet

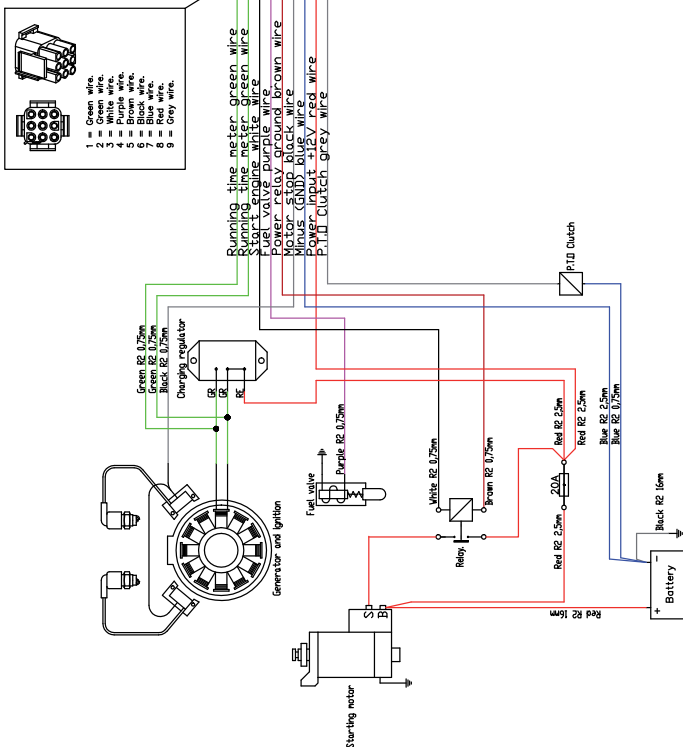
ELECTRICAL AND HYDRAULIC SYSTEMS

Wiring diagram



ELECTRICAL AND HYDRAULIC SYSTEMS

Wiring engine and battery, Husqvarna 577 20 50-01.



Circuit board

- 1 = Green wire.
- 2 = White wire.
- 3 = Purple wire.
- 4 = Brown wire.
- 5 = Red wire.
- 6 = Blue wire.
- 7 = Black wire.
- 8 = Grey wire.

- 1 = Orange wire.
- 2 = Blue wire.
- 3 = Green wire.
- 4 = Yellow wire.
- 5 = Grey wire.
- 6 = Blue wire.
- 7 = Yellow wire.

- 1 = Running time meter green wire
- 2 = Running time meter white wire
- 3 = Start engine brown wire
- 4 = Power relay ground brown wire
- 5 = Motor stop black wire
- 6 = Minus (GND) blue wire
- 7 = P110 clutch grey wire
- 8 = P110 clutch grey wire

- 1 = +12V when P110 on grey wire
- 2 = Minus (GND) blue wire
- 3 = Light power orange wire
- 4 = Running time meter green wire
- 5 = Running time meter green wire
- 6 = Minus (GND) blue wire

- 1 = Grey wire 1.
- 2 = Red wire 2.
- 3 = Pink wire 3.
- 4 = Grey wire 4.
- 5 = Grey wire 5.
- 6 = Blue wire 6.

- 1 = Start engine grey wire
- 2 = Power input yellow wire
- 3 = Power input grey wire
- 4 = Engine stop black wire
- 5 = Minus (GND) blue wire

- 1 = Start engine orange wire
- 2 = Minus (GND) grey wire
- 3 = Start engine P110 switch of orange wire
- 4 = Engine stop if P110 switch on grey wire
- 5 = P110 +12 if P110 switch on yellow wire

- 1 = Orange wire 1.
- 2 = Grey wire 2.
- 3 = Yellow wire 3.
- 4 = Grey wire 4.
- 5 = Grey wire 5.
- 6 = Yellow wire 6.

Wiring key switch, light and running time meter at steering column.
Oil cooler fan with thermostat.

- 1 = Light wire, Husqvarna 576 46 85-01.

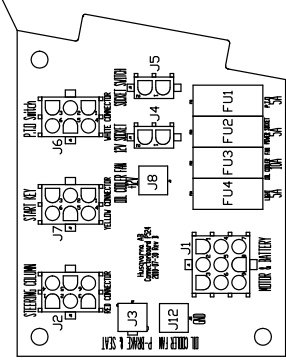
Start key switch, Husqvarna 577 20 96-01.

- 1 = Start engine grey wire
- 2 = Power input yellow wire
- 3 = Power input grey wire
- 4 = Engine stop black wire
- 5 = Minus (GND) blue wire

Start key switch, Husqvarna 577 20 46-01.

- 1 = Start engine orange wire
- 2 = Minus (GND) grey wire
- 3 = Start engine P110 switch of orange wire
- 4 = Engine stop if P110 switch on grey wire
- 5 = P110 +12 if P110 switch on yellow wire

Connector board, no active component at the circuit board.



Electrical connections on P524.

Wiring p-brake and seat switch, Husqvarna 577 20 51-01.

Mounted parts at controlpanel.

Control panel

- 1 = Power switch, Husqvarna 577 20 46-01.

Power socket, Husqvarna 577 20 47-01.

Power switch, Husqvarna 577 20 46-01.

Power socket, Husqvarna 577 20 47-01.

Seat switch.

Yellow wire

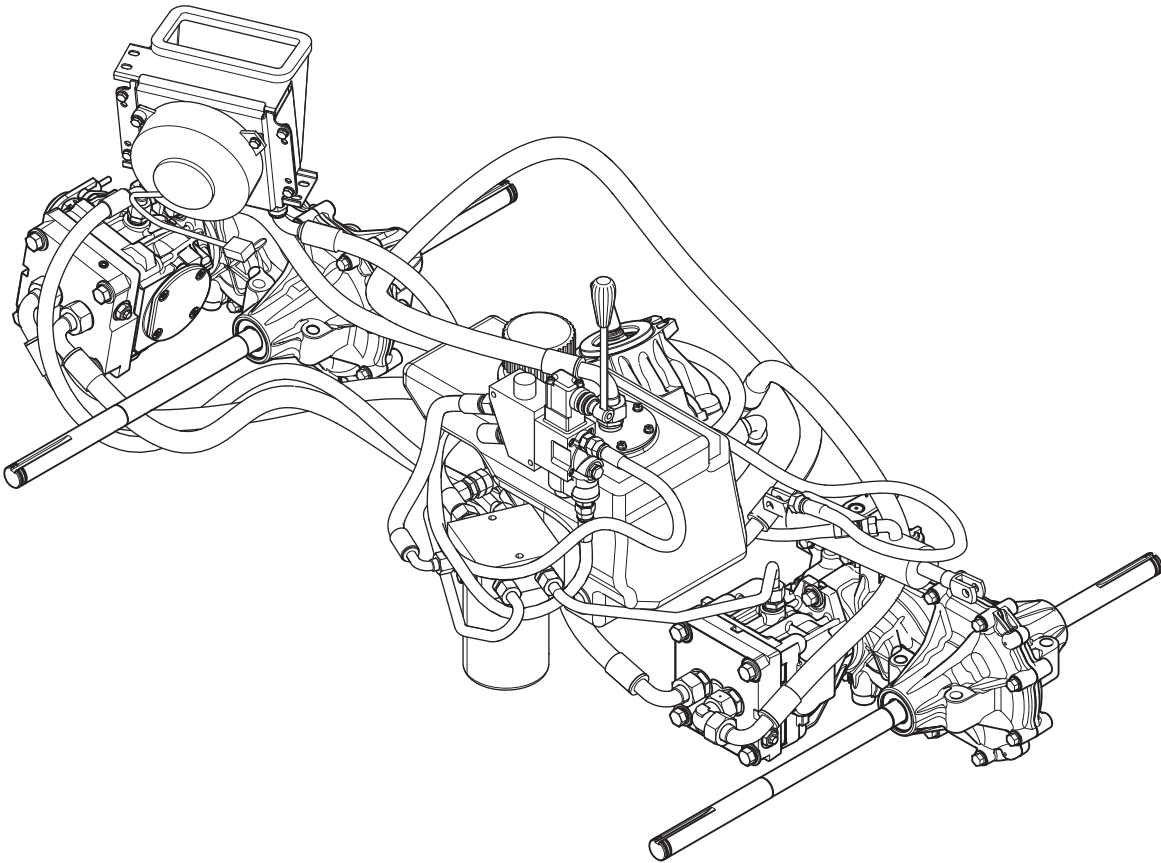
Black wire

P-brake switch

Black wire from wire

Blue wire

Hydraulic System



Keep the hydraulic system clean. Remember to:

- Thoroughly clean before the top-up cap is opened or any connector loosened.
- Use clean containers when topping up the oil.
- Only use pure oil that has been stored in a sealed container.
- Do not reuse drained oil.
- Change the oil and filter according to the intervals specified in Maintenance Schedule.

In order for a hydraulic system to function without problem, it must be free from foreign objects. When used, the system produces particles, which can cause both wear and abnormal function. In order to remove these particles, the system contains filters. The filters are sized so as to capture the produced particles, but if contaminants are introduced from outside the system, the filters can quickly become clogged and fail to function as intended. If there are contaminants in the system, further contamination will be produced in a self-propagating cycle. The result will be operating disruptions and much work to clean the system.

STORAGE

Winter storage

At the end of the mowing season, the Rider should be readied for storage, likewise if it will not be in use for more than 30 days. Fuel allowed to stand for long periods of time (30 days or more) can leave sticky residues that can clog the carburettor and disrupt engine function.

Fuel stabilizers are an acceptable option as regards sticky residues during storage. If alkylate petrol is used, stabilisers are unnecessary because this fuel is stable. However, you should avoid switching between standard and alkylate petrol as sensitive rubber components can harden. Add stabiliser to the fuel in the tank or in the storage container. Always use the mixing ratios specified by the manufacturer of the stabiliser. 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 the carburettor if you have added stabiliser.



WARNING!

Never store an engine with fuel in the tank indoors or in poorly ventilated spaces where fuel vapour can come in contact with open flames, sparks, or a pilot light such as in a boiler, hot water tank, clothes drier, etc. Handle the fuel with care. It is very flammable and careless use can cause serious personal injury and property damage. Drain the fuel into an approved container outdoors and far away from open flames. Never use petrol for cleaning. Use a degreaser and warm water instead.

To ready the Rider for storage, follow these steps:

- 1 Clean the Rider carefully, especially under the cutting deck. Touch up damaged paint to prevent rust.
- 2 Inspect the machine for worn or damaged parts and tighten loose screws and nuts.
- 3 Change the engine oil; dispose of properly.
- 4 Empty the fuel tank. Start the engine and let it run so that even the petrol in the carburettor is emptied.
- 5 Remove the plugs and pour about a tablespoon of engine oil into each cylinder. Turn over the engine so that the oil is evenly distributed and then refit the spark plugs.
- 6 Lubricate all grease nipples, joints and shafts.
- 7 Remove the battery. Clean, charge, and store in a cool place.
- 8 Store the Rider in a clean, dry place and cover it for extra protection.

Guard

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

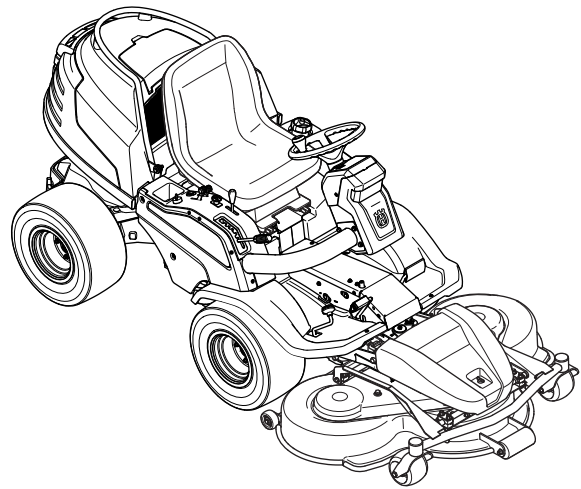
Service

Low season is the most suitable time to perform a service or overhaul of the machine in order to ensure high function safety during high season.

When ordering spare parts state your machine's purchase year, model, type, and serial number.

Always use genuine Husqvarna spare parts.

An annual check-up or trimming at an authorised service representative is a good way to ensure that your Rider performs at its best the following season.



TECHNICAL DATA

Technical Data

Dimensions	P 524
Length without cutting deck, mm/ft	2050/6.73
Width without cutting deck, mm/ft	980/3.22
Height, mm/ft	1150/3.77
Operating weight without cutting deck, kg/lb	385/849
Wheel base, mm/ft	1000/3.29
Track width, front, mm/ft	765 / 2,5
Track width, rear, mm/ft	765 / 2,5
Tyre dimensions	18 x 8.5 - 8
Air pressure, front, kPa/bar/PSI	100/1.0/14.5
Air pressure, rear, kPa/bar/PSI	100/1.0/14.5
Engine	
Brand / Model	Kawasaki / FX 691V-KME09023
Nominal engine output, kW (see note 1)	13.9
Displacement, cm ³ /cu.in	726 / 43.3
Fuel, minimum octane grade lead-free	95 (max. methanol 5%, max. ethanol 10%, max. MTBE 15%)
Tank volume, litres/USqt	22 / 23
Oil, class SF, SG, SJ, SL	SAE 10W/40
Oil volume incl. filter	2.1 / 2.2
Oil volume excl. filter, litres/USqt	1.8 / 1.9
Starting	Electric start
Max.motor speed, r/min	3000 ± 75
Electrical system	
Type	12 V, negative grounded
Battery	12 V, 24 Ah
Spark plug	NGK BPR4ES
Electrode gap, mm/inch	0.75 / 0.030
Main fuse, Flat pin, A	20
Bulbs, halogen	2x12V 20W
Hydraulic System	
Max. working pressure, bar/ (psi)	120 / 1740
Hydraulic tank volume, l/USqt	8/8,5
Hydraulic system volume, l/USqt	13/13.7
Transmission	
Brand	Kanzaki KTM 23
Oil, class API SM, ACEA A3/B4	SAE 10W/50 Synthetic
Oil volume, front gearbox, l/USqt	0.9
Oil volume, rear gearbox, l/USqt	0.9
Cutting deck	
Model	C 112
	C 122

Note 1: The power rating of the engine indicated is the average net output (at specified rpm) of a typical production engine for the engine model measured to SAE standard J1349/ISO1585. Mass production engines may differ from this value. Actual power output for the engine installed on the final machine will depend on the operating speed, environmental conditions and other values.

TECHNICAL DATA

Technical data concerning the cutting deck		
Cutting deck	C 112	C 122
Cutting width, mm/inch	1120 / 44.1	1220 / 48
Cutting heights, 7 positions, mm/inch	25-80/0.98-3.15	25-80 / 0.98-3.15
Blade length, mm/inch	420 / 16.5	454 / 17.9
Width, mm	1220 / 48	1330 / 52.4
Weight, kg/lb	56 / 123.5	64 / 141

Technical specifications for sound and vibration levels		
	P 524	
	C 112	C 122
Noise emissions (see note 2)		
Sound power level, measured dB(A)	99	102
Guaranteed sound level dB(A)	100	104
Sound level (see note 3)		
Noise pressure level at the operator's ear, dB(A)	85	89
Vibration levels (see note 4)		
Vibration level in steering wheel, m/s ² .	1.7	1.7
Vibration level in seat, m/s ² .	0.7	0.7

Note 2: Emission of noise to the surroundings measured as sound power (L_{WA}) in accordance with the EU directive 2000/14/EC.

Note 3: Noise pressure level according to EN 836. Reported data for noise pressure level has a typical statistical dispersion (standard deviation) of 1.2 dB(A).

Note 4: Vibration level according to EN 836. Reported data for vibration level has a typical statistical dispersion (standard deviation) of 0.2 m/s² (Steering wheel) and 0.8 m/s² (seat).

IMPORTANT!

When this product is spent and is no longer used it should be returned to the dealer or other authority for recycling.

IMPORTANT!

In order to introduce improvements the specification and design are subject to alteration without prior notice.

Note that no legal demands whatsoever can be made with the support of the information in this operator's manual.

Only use original spare parts with repairs. The use of other parts invalidates the warranty.

TECHNICAL DATA

EU Declaration of Conformity (only applies to Europe)

Husqvarna AB, SE-561 82 Huskvarna, Sweden, tel.: +4636146500, declares under sole responsibility that Husqvarna P 524 Riders dating from 2011 serial numbers and onwards (the year is clearly stated on the rating plate, followed by the serial number), complies with the requirements of the COUNCIL'S DIRECTIVE:

of May 17, 2006 "relating to machinery" **2006/42/EG**

of December 15, 2004 "relating to electromagnetic compatibility" **2004/108/EG**.

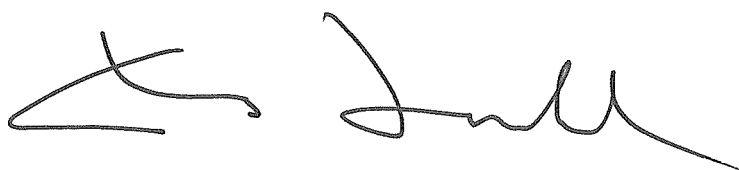
of May 8, 2000 "on the noise emission to the environment" **2000/14/EG**.

The following harmonised standards have been applied: **EN ISO 12100-2, EN-836**.

Notified body: **0404, SMP Svensk Maskinprovning AB**, Fyrisborgsgatan 3, SE-754 50 Uppsala, Sweden, has issued reports regarding the assessment of conformity according to annex VI of the COUNCIL'S DIRECTIVE of May 8, 2000 on the noise emission in the environment" 2000/14/EC.

The certificates are numbered: 01/901/141, 01/901/142

Huskvarna 29 March, 2011



Claes Losdahl, Development Manager/Garden Products (Authorized representative for Husqvarna AB and responsible for technical documentation)

**Original Operator' s manual
1153985-26**



2011-04-19