FR13

Operator's Manual



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

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IMPORTANT INFORMATIO8

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

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

EXPLANATION OF SYMBOLS

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



Read the operator's manual



Reverse | Neutral | Fast | Slow | Engine off | Battery | Choke | Fuel



Oil pressure | Cutting height | Backwards | Forwards | Ignition | Use eye and hearing protection



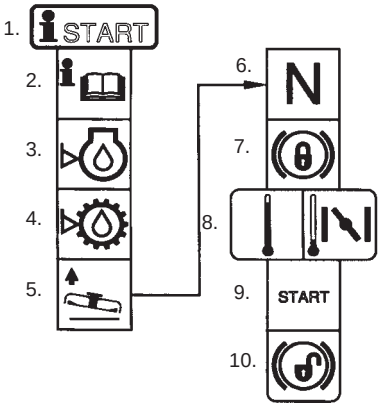
Clutch in | Clutch out | Parking brake | Brake | Clutch | Warning



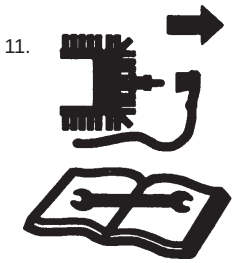
Soundlevel | Warning! Rotating blades. | Warning! Risk that the machine can tip over | Never drive across a slope | European standard for machine safety



Never use the machine if persons, especially children, or animals, are in the vicinity. | Never carry passengers on the machine or equipment. | Keep hands and feet away from under the hood when the engine is running. | Drive very slowly without the cutting unit.



1. Starting instructions
2. Read the instructions
3. Check the engine's oil level
4. Check the hydrostat's oil level
5. Lift up the cutting unit
6. Put the gear shift/hydrostat pedal in neutral
7. Brake
8. If the engine is cold use the choke
9. Start the engine
10. Release the parking brake before driving



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

SAFETY INSTRUCTIONS

These instructions are for your safety. Read them carefully.

⚠ 1. Safety rules for USA ⚠

Safe operation practices for ride-on mowers

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

I. General operation

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

II. Slope operation

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

DO

Mow up and down slopes, not across.
Remove obstacles such as rocks, tree limbs, etc.
Watch for holes, ruts or bumps. Uneven terrain could overturn the machine. *Tall grass can hide obstacles.*
Use slow speed. Choose a low gear so that you will not have to stop or shift while on the slope.
Follow the manufacturer's recommendations for wheel weights or counterweights to improve stability.
Use extra care with grass catchers or other attachments. These can change the stability of the machine.
Keep all movement on the slopes *slow* and *gradual.* Do not make sudden changes in speed or direction.
Avoid starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly *straight* down the slope.

DO NOT

Do not turn on slopes unless necessary and then, turn slowly and gradually downhill, if possible.
Do not mow near drop-offs, ditches or embandments. The mower could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
Do not mow on wet grass. Reduced traction could cause sliding.
Do not try to stabilize the machine by putting your foot on the ground.
Do not use grass catcher on steep slopes.

III. Children

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

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

IV. Service

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



Danger, keep hands and feet away

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

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

Intended use
This machine is designed solely for cutting grass on conventional lawns and other cleared and leveled ground without obstacles, as rocks, stumps etc., and, in conjunction with accessories supplied by the manufacturer even for other special tasks for which instructions are delivered with the accessory. Use in any other way is considered as contrary to the intended use. Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements of the intended use.
This machine should be operated, serviced and repaired only by persons who are familiar with its particular characteristics and who are acquainted with the relevant safety procedures.
Accident prevention regulations, all other generally recognised regulations on safety and occupational medicine, and all road traffic regulations must be observed at all times.
Any arbitrary modifications carried out to this machine may relieve the manufacturer of liability for any resulting damage or injury.

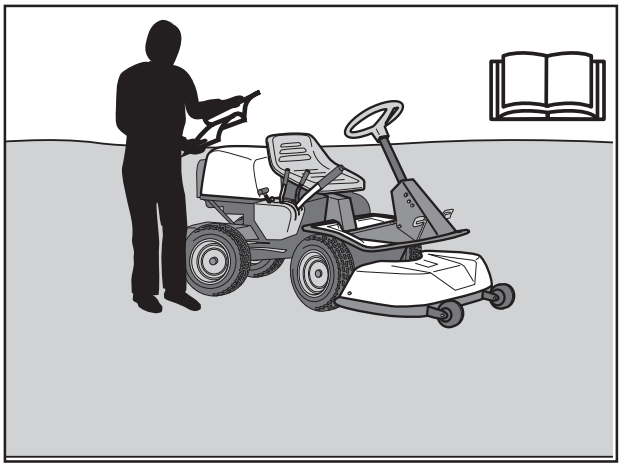
Safe operation practices for Ride-On Mowers
Before starting cutting operations, train different driving operations on an open ground without people nearby until you feel familiar with handling the equipment. This is particularly important if you have no or little prior experience of driving a vehicle.
Data indicates that operators, age 60 years and above, are involved in a large percentage of riding mower-related injuries. These operators should evaluate their ability to operate the riding mower safely in order to protect themselves and others from serious injury.
Never carry children, even with the blades off. They may fall off and be seriously injured or interfere with safe machine operation.

SAFETY INSTRUCTIONS

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

General use:

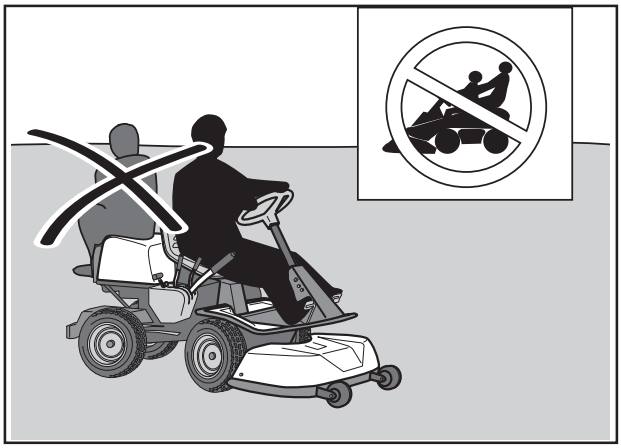
- Make yourself familiar with the controls and how to stop quickly.
- Read all the instructions in Operator's Manual and on the machine before starting it. Make sure you understand them, and then follow them.
- Only allow adults who are familiar with the machine to use it.
- Wear approved protective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



Read the instructions before starting the machine.



Clear the area from stones etc. before cutting.



Never carry passengers.

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

- Watch out for traffic when working close to a road, or crossing one.
- Be careful when rounding a fixed object so that the blades do not hit it. Never drive intentionally over a foreign object.
- The machine is heavy and can cause very severe crush injuries. Be extra careful when loading it on a trailer or truck.
- Be careful when pulling a load or using heavy equipment.

  a. Only use approved tow hooks.

  b. Limit the load to what you can manage safely.

  c. Do not make sharp turns. Be careful when reversing.

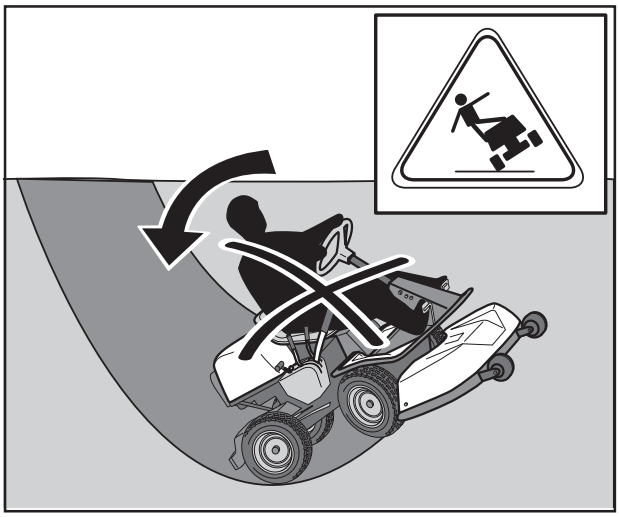
  d. Use counterweights or wheel weights when indicated in the instructions.

Driving on slopes

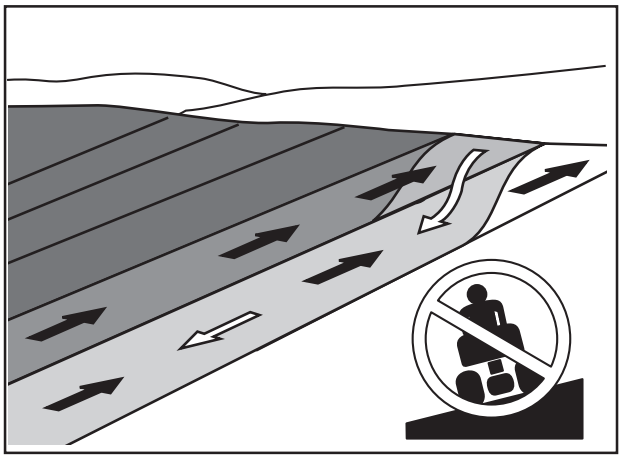
Driving on slopes is one of the situations where there is the most serious risk that the driver can loose control or that the machine tips over, which can cause severe injuries or be fatal. All slopes require extra care. If you cannot reverse up the slope or if you feel uncertain avoid cutting it.

Do as follows:

- Remove obstacles such as stones and branches etc.
- Cut upwards and downwards, not sideways.
- Look out for and avoid driving over furrows, holes or mounds. On uneven surfaces it is easier for the machine to tip over. High grass can conceal obstacles.
- Drive slowly. Select a low gear to avoid having to stop and changing gear. It is also easier to use the gear to brake in a low gear.
- Follow the manufacturer's recommendations on wheelweights or counterweights to increase stability.
- Take special care with accessories that can alter the stability of the rider mower.
- Always drive smoothly and slowly on slopes. Avoid sudden changes of speed or direction.
- Avoid starting or stopping on a slope. If the tyres begin to skid switch of the blades and drive slowly down the slope.
- Avoid unnecessary turns on slopes, and if turning is necessary turn slowly and gradually, downwards if possible.



Be extra careful when driving on slopes.



Cut slopes upwards and downwards, not sideways.

- Do not cut close to edges, ditches or banks. The machine can suddenly tip over if a wheel goes over the edge of a drop or a ditch, or if a bank gives way.
- Do not cut wet grass. It is slippery and the tyres can loose their grip so that the machine slides.
- Do not try to stabilise the machine by placing one foot on the ground.

Children

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

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

Maintenance

- Petrol/gasoline and petrol/gasoline fumes are toxic and highly inflammable. Be extra careful when handling petrol/gasoline.

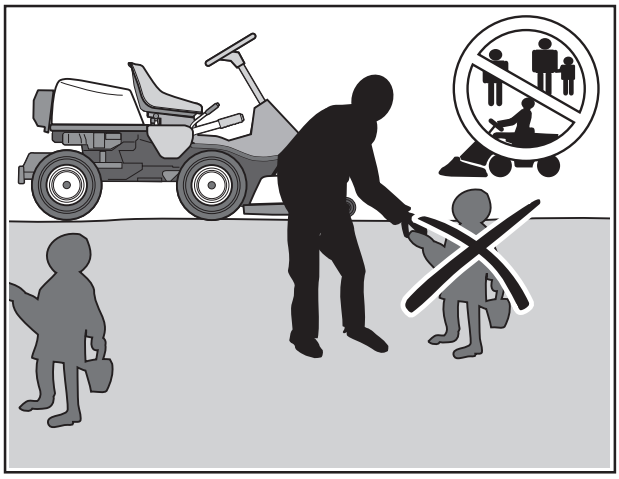
  a. Store the fuel in containers approved for this purpose.

  b. Never fill up the machine with fuel when the engine is running. Let the engine cool before filling up with fuel. Do not smoke, or fill up with fuel in the vicinity of naked flames or sparks.

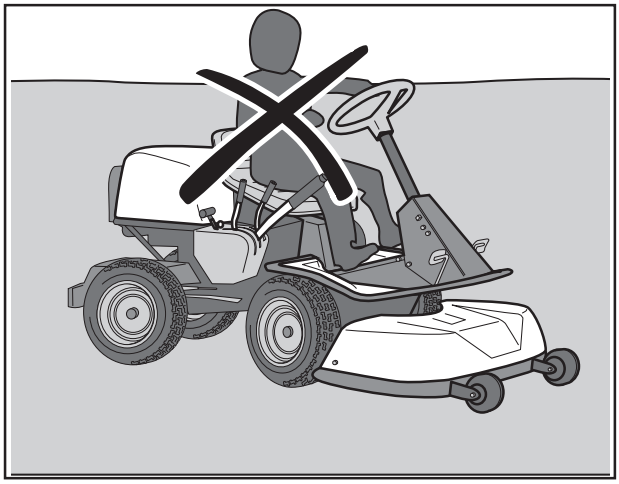
  c. Never fill up with fuel indoors.

  d. If leakage has occurred in the fuel system the engine must not be started until this is rectified.

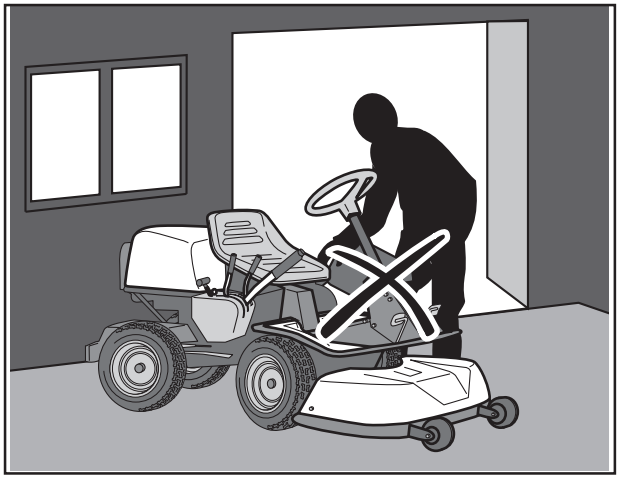
  e. Never store the machine or fuel containers indoors if there are naked flames, such as in a boiler room or where there is electrical equipment which can emit sparks.
- Check the fuel level each time before using the machine, and leave space for the fuel to expand since the heat from the engine and hot sun can cause the fuel to run over.



Keep children away from the mowing area.

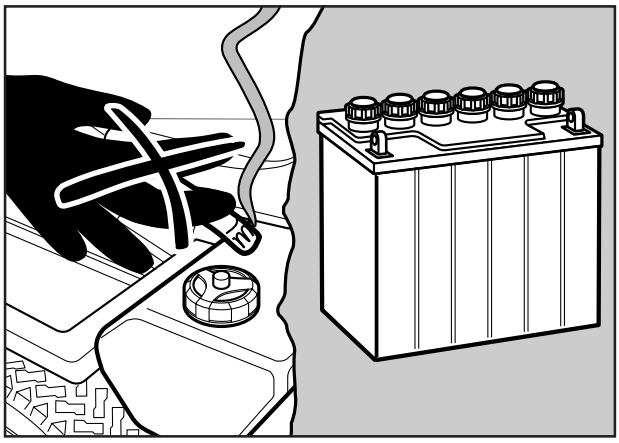


Never allow children to drive the machine.

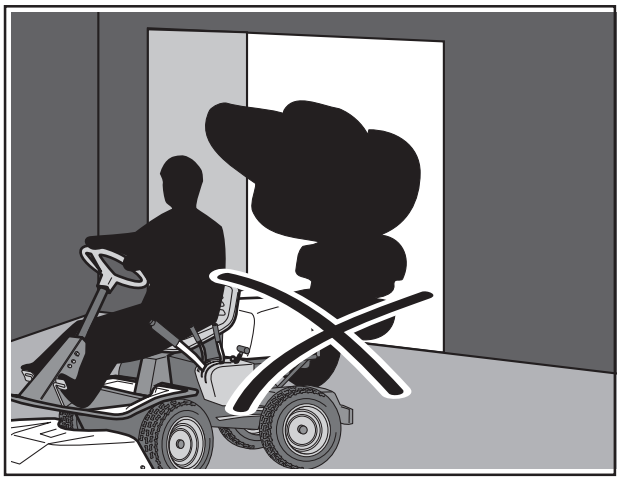


Never fill up with fuel indoors.

- Avoid overfilling. If fuel has been spilt on the Rider wipe it up and wait until it has evaporated before starting the engine. If fuel is spilt on clothes, change them.
- Be extra careful when handling battery acid. Spilling acid on the skin can cause severe burn injuries. Rinse immediately with water. If acid gets into the eyes this can cause blindness. Contact a doctor.
- Be careful with the maintenance of the battery. Explosive gas is formed in the battery. Never handle the battery when smoking or in the vicinity of naked flames or sparks. Otherwise the battery can explode and cause severe injuries.
- Never drive the machine in an enclosed space. The exhaust fumes contain carbon monoxide, an odourless, non coloured, toxic and fatal gas.
- Make sure that bolts and nuts, especially attachment bolts for the blade units are properly tightened and that the equipment is in good order.
- Never alter the safety devices. Check regularly that they function. The machine must not be driven with defective or unmounted safety devices.
- Do not alter the setting of the governor and do not race the engine.
- Reduce the fire risk. Keep the machine clean from grass, leaves and other refuse which fastens in it. Allow the machine to cool before placing it in the storage area.
- Stop and inspect the equipment if you drive over an object. If necessary repair the machine before starting.
- Never make adjustments with the engine running.
- The machine is tested for safety and approved only for equipment supplied or recommended by the manufacturer.
- The blades are sharp and can cause cutting injuries. Wrap over the blades or use protective gloves when handling them.
- Check the functioning of the brakes regularly. Adjust and maintain them as necessary.



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



Never drive the machine in an enclosed space.



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

PRESENTATION

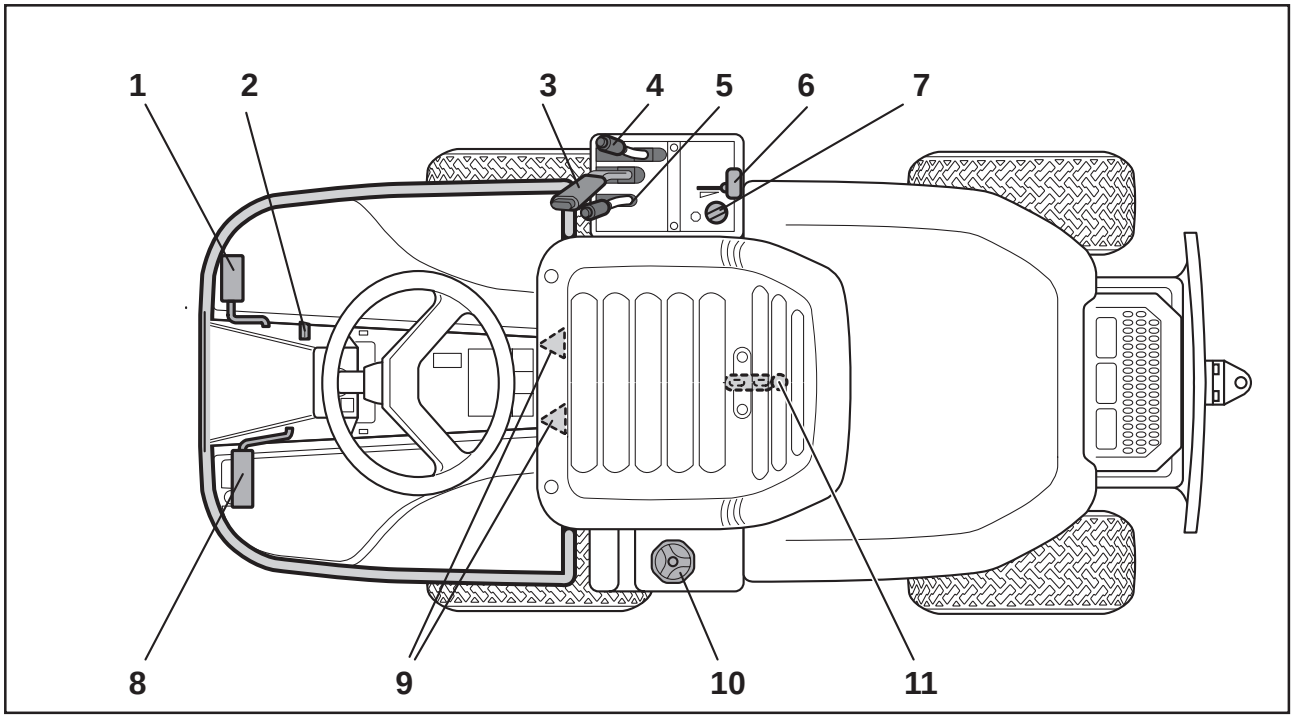
Presentation

Congratulation on your choice of a first-class quality product.

These instructions describe the Jonsered FR 13. This rider mower is equipped with a 12,5 horse-power Briggs & Stratton engine.

FR 13 has an in-line gearbox with five forward gears and one reverse gear.

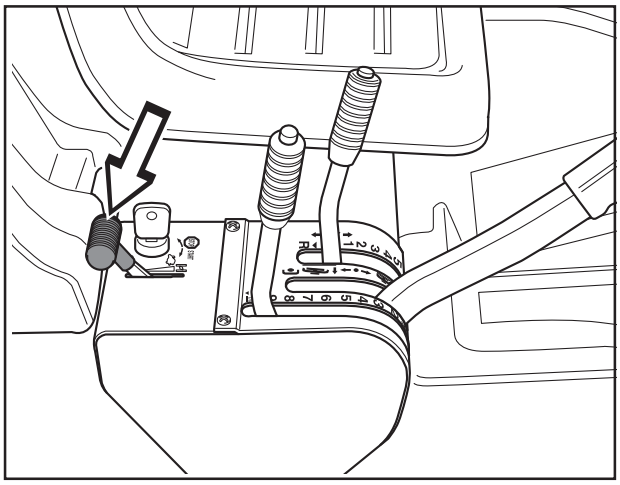




Location of the controls

1. Parking brake
2. Lock button for parking brake
3. Lifting lever, cutting unit
4. Adjustment of cutting height
5. Gear lever
6. Throttle/Choke lever
7. Ignition lock
8. Clutch pedal
9. Seat adjustment
10. Fuel tank cap
11. Main lock (under seat)

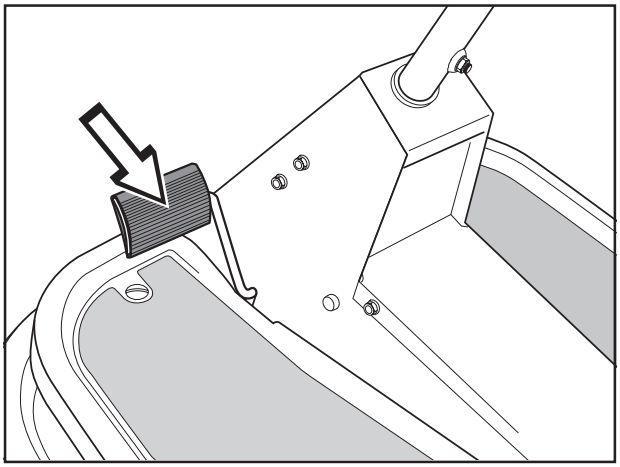
Throttle and Choke lever



The engine speed is adjusted with the throttle control, and thereby also the rotation speed of the blades.

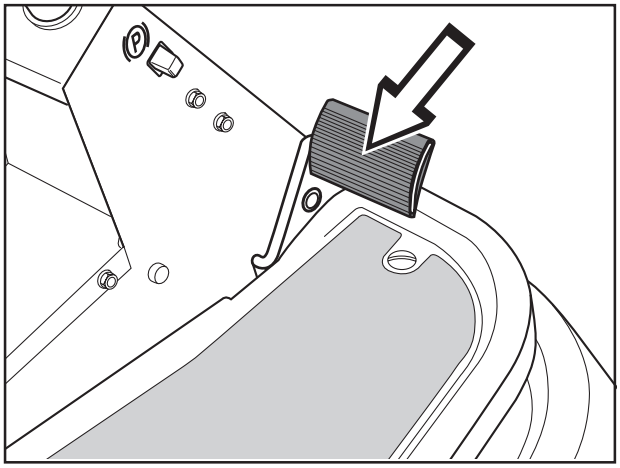
The control is also used to activate the choke function. When the choke is used the engine receives a richer mixture of fuel and air, which simplifies cold start.

Clutch pedal



The clutch pedal disengages the engine and stops forward movement.
The blades are *not* affected by the clutch pedal.

Brake pedal / Parking brake

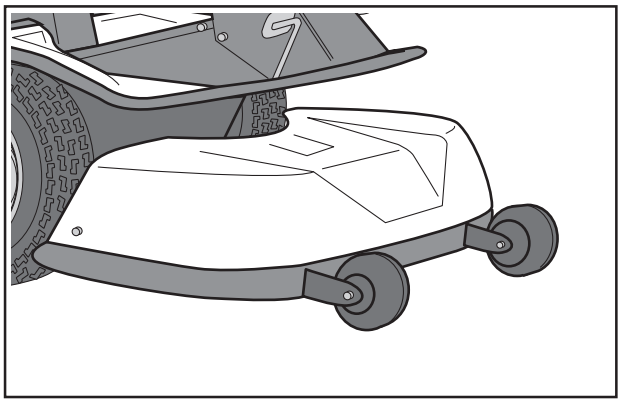


The brake pedal activates a disc brake which is placed on the gearbox and brakes the drive wheels. When braking the clutch pedal should also be pushed down to achieve best braking power.

The brake pedal also operates as a parking brake if the lock button is pressed in when the pedal is pressed.

Cutting unit

FR 13 have a cutting unit with rear ejection, i.e. the grass cuttings are thrown out behind the cutting unit.



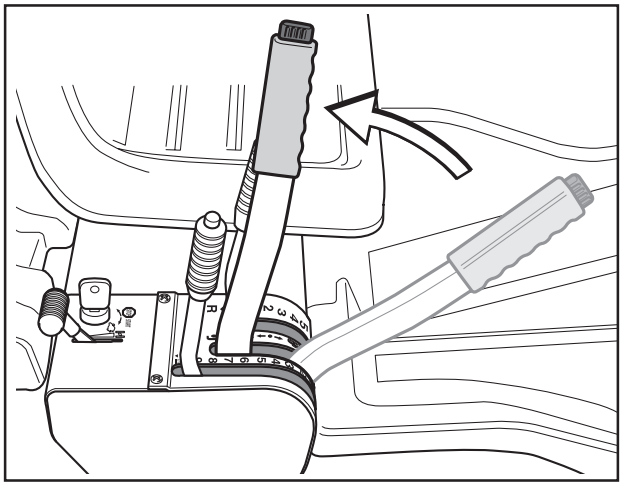
Lift lever for cutting unit

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

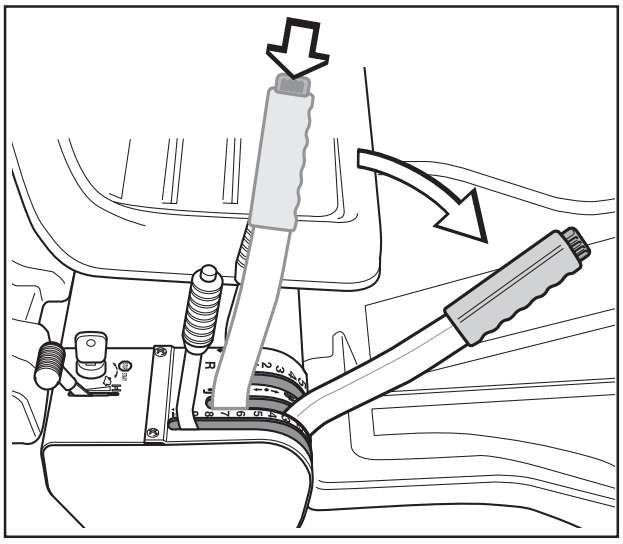
If the lever is pulled back the unit will lift up and the blades will automatically stop rotating (transport position).

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

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



Lifting of the cutting unit (transport position)

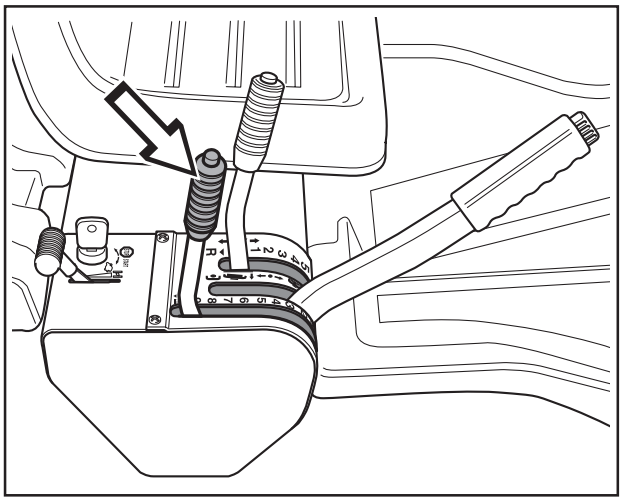


Lowering of the cutting unit (cutting position)

Lever for adjustment of cutting height

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

Cutting unit with rear ejection, 40-90 mm cutting height.



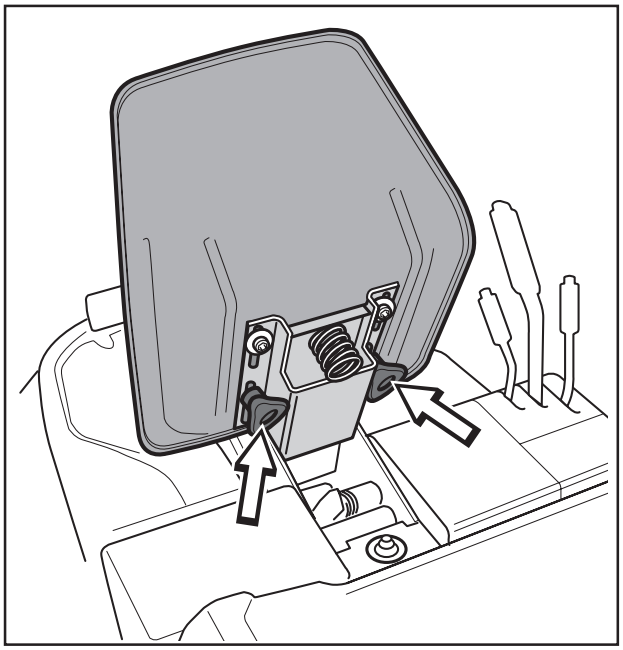
Seat

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

The seat can also be adjusted lengthways.

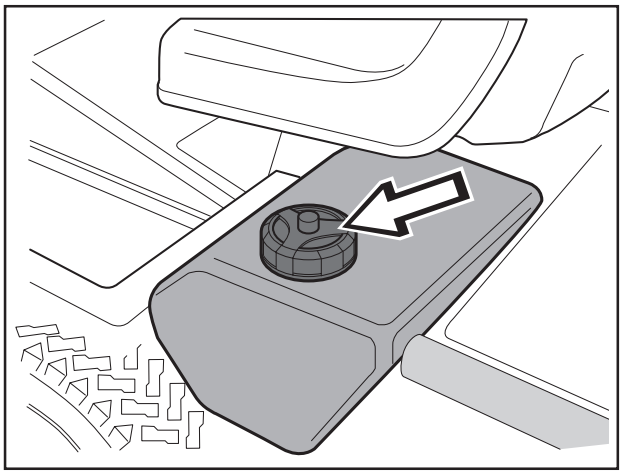
Release the knobs/lever under the seat and adjust it forwards or backwards to the required position.

Lock the adjustment with the wheels.



Fuelling

The engine should be run on 85 octane (or higher) unleaded petrol/gasoline (no added oil). Environmentally adapted alkylate fuel, such as Aspen, is also recommended.



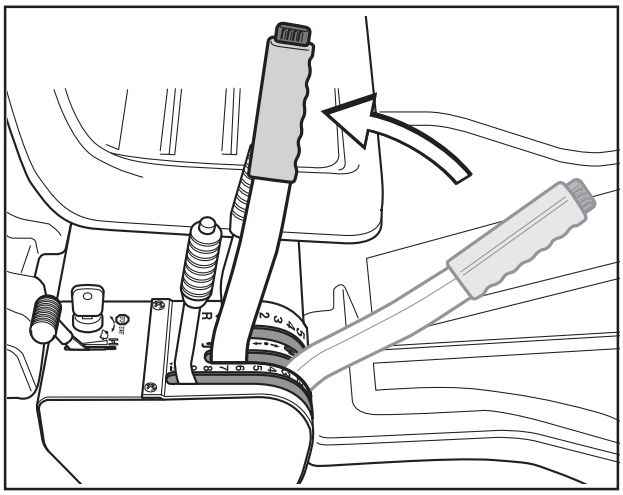
WARNING!
Petrol/gasoline is highly inflammable. Observe care and fill up with fuel outdoors (see safety instructions).

Before starting

- Read the safety instructions and information on the location and function of the controls before starting (see pages 3–12).
- Conduct daily maintenance before starting (see maintenance schedule on page 18).
  Adjust the seat to the required position.

Starting the engine

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

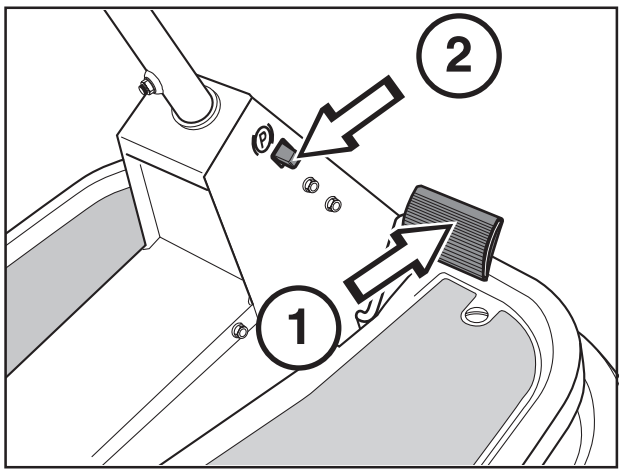


2. Apply the parking brake. This is done as follows:

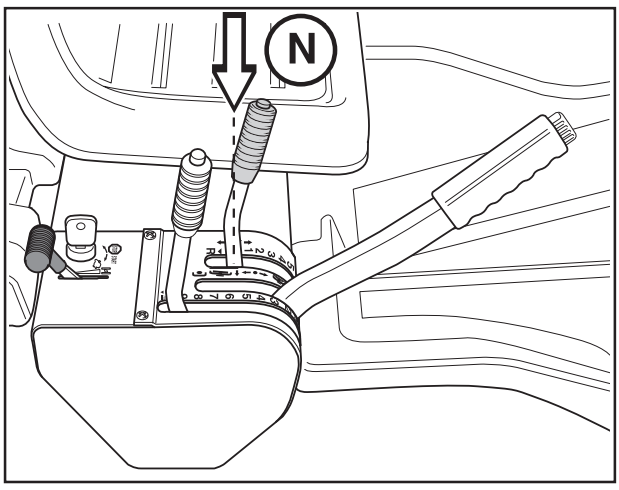
- Press down the brake pedal (1).
- Press in the lock button on the steering column (2).
- Release the brake pedal while the button is held pressed.

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

On the FR 13 the brake pedal and lock button are on the right side.

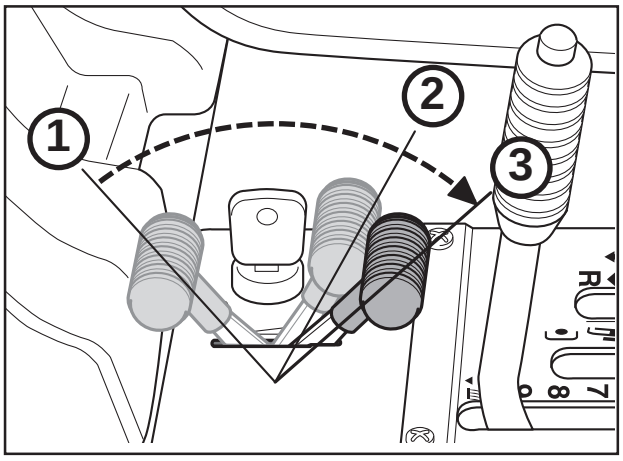


3. Set the gear lever to position “N” (neutral).



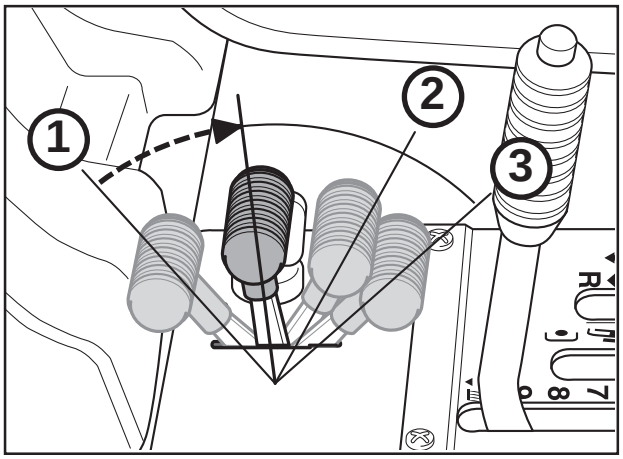
Cold engine:

4. Push the throttle control to position 3 (choke position). In this position the engine receives a richer mixture so that the engine starts more easily.

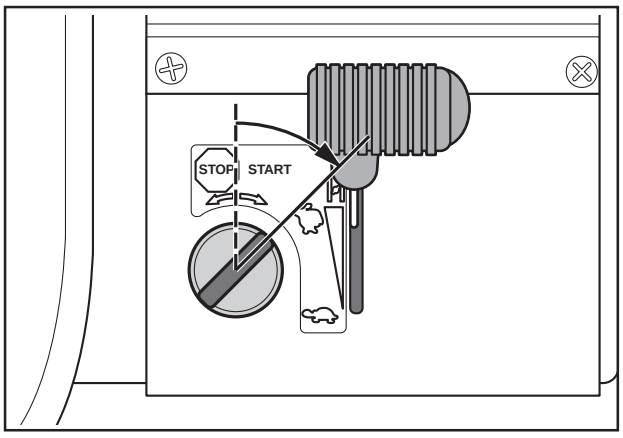


Warm engine:

5. Set the throttle control midway between position 1 and 2.



6. Turn the ignition key to start position.

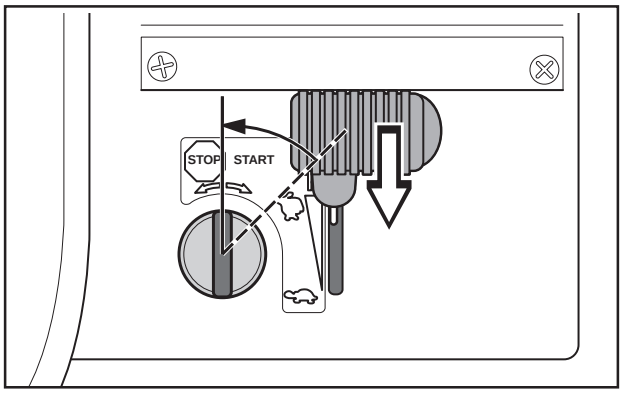


IMPORTANT INFORMATION

Do not run the starter for more than about 5 seconds at a time. If the engine does not start, wait about 10 seconds before trying again.

7. When the engine has started release the ignition key to neutral position.

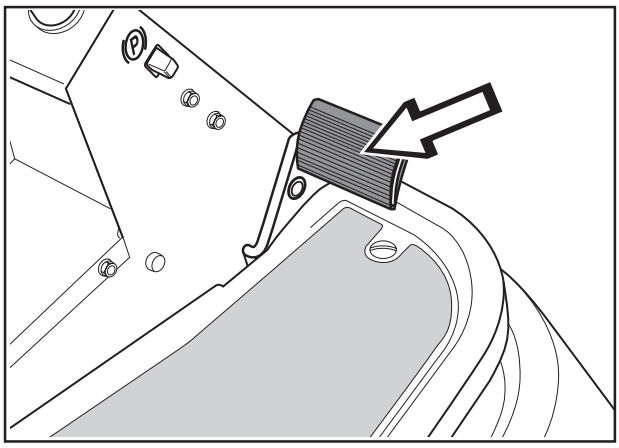
Push the throttle control to the required speed. For cutting 3/4 to full throttle.



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

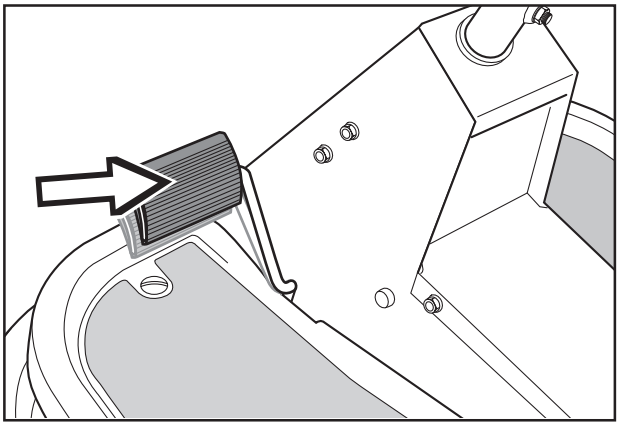
Driving the machine

1. Release the parking brake by pressing down the brake pedal.



2. Press the clutch and engage the required gear. To engage reverse gear the lock button must be pressed down.
- Gears 1–4 are used for mowing.
- Gears 4–5 are used for transport.

Starting is possible irrespective of which gear is engaged.



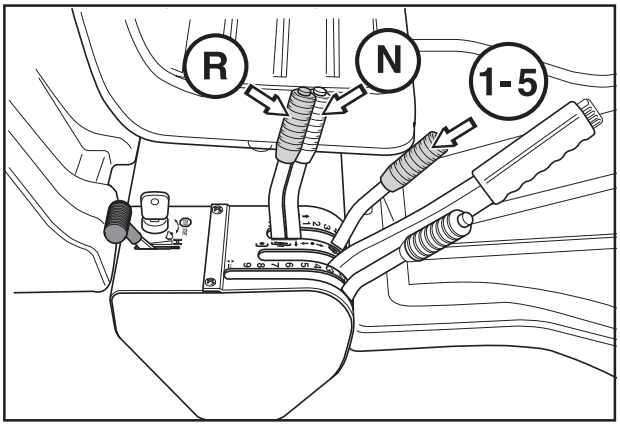
IMPORTANT INFORMATION

Do not change gear from forward drive to reverse while the machine is moving.

The clutch must be used for each gear change.

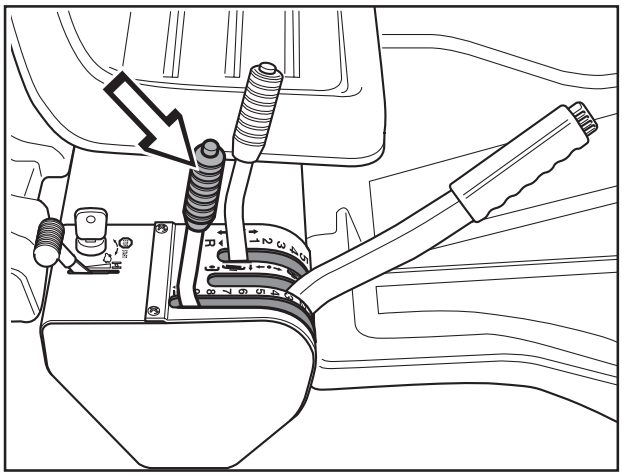
Stop the machine before changing for forward drive to reverse, otherwise the gearbox can be damaged.

***Never* use force to engage a gear. If a gear will not engage directly release and push down the clutch again, and then try to engage the gear again.**

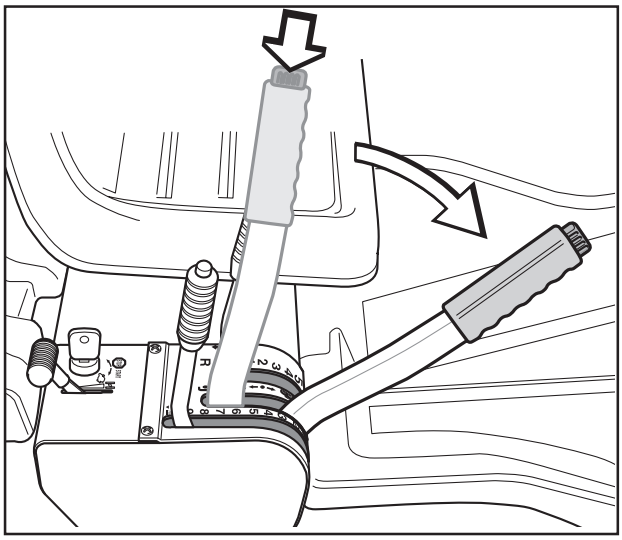


3. Select the required cutting height (1-9) with the cutting height lever.

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



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

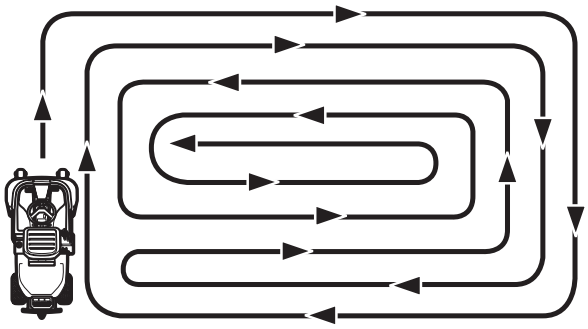


IMPORTANT INFORMATION

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

Cutting tips

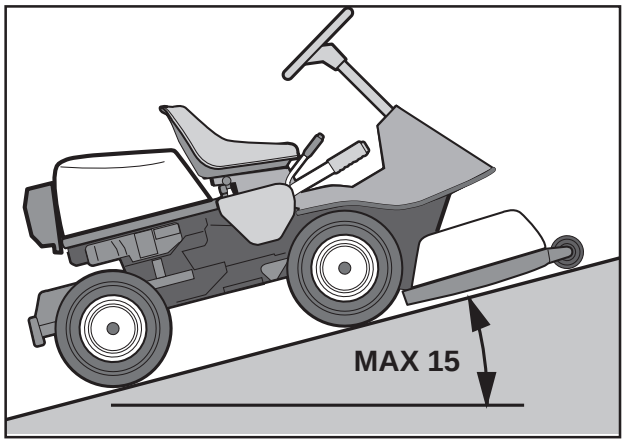
- Localise and mark stones and other fixed objects to avoid collision.
- Start with a high cutting height and reduce down until the required cutting result are obtained.
- The cutting results are best with a high engine speed (fast rotating blades) and low driving speed (slow moving machine). If the grass is not too high and thick the driving speed can be increased or the engine speed reduced without noticeably affecting the mowing results.
- The best lawns are achieved if the grass is cut often. Mowing becomes more uniform and the grass cuttings become more evenly distributed over the surface. The total time consumption is not greater since it is possible to select a higher driving speed without inferior mowing results.
- Avoid mowing a wet lawn. The mowing results are inferior since the wheels sink down into the soft lawn.
- Hose down the cutting unit with water underneath each time it is used.



Mowing pattern

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

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



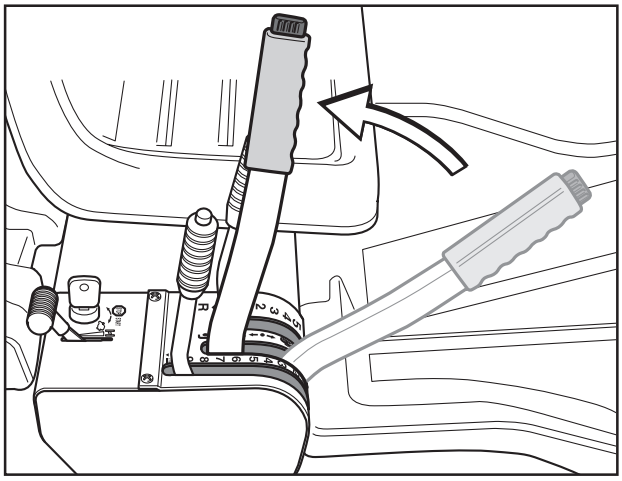
Hill start, manual gearbox

1. Press down the parking brake.
2. Push the throttle control to 3/4 position to full throttle position.
3. Push down the clutch and engage first gear.
4. Carefully release the clutch.
5. When the engine starts to pull, release the parking brake.

Stopping the engine

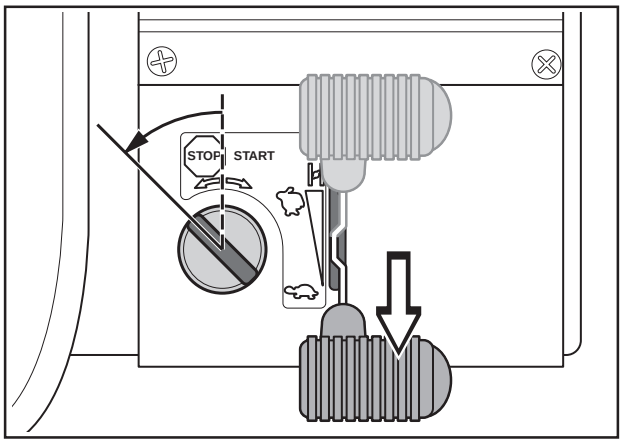
Preferably allow the engine to idle for a minute to obtain normal working temperature before stopping it if it has been working hard.

1. Lift up the cutting unit by pulling the lever back to the end position.



2. Pull back the throttle lever and shift the gear lever into neutral “N”. Turn the ignition key to the “STOP” position.

3. When the rider mower is stationary, hold down the parking brake and push in the lock button.



MAINTENANCE

Maintenance schedule

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

Maintenance	Page	Daily maintenance before start	Maintenance interval in hours		
			25	50	100
Check the engine's oil level	20	●			
Check the engine's cooling air inlet	20	●			
Check the fuel pump's air filter	20	●			
Check the steering wires	21	●			
Check the brakes	22	●			
Check the battery	22	●			
Check the safety system	22	●			
Check screws and nuts	–	❍			
Check for fuel and oil leakage	–	❍			
Clean the air filter's pre-filter (foam plastic) [2]	23		●		
Check the cutting unit	24		●		
Check the tyre pressures (60 kPa)	24		●		
Change the engine oil [1]	25		●		
Adjust the brakes	22		●		
Check the V-belts	–		❍		
Lubricate joints and shafts [3]	25			●	
Check and adjust the throttle wire	26			●	
Clean the cooling flanges on the engine and transmission [2,4]	–			❍	
Replace the air filter's pre-filter and paper filter [2]	23				●
Replace the fuel filter	26				●
Replace the plug	–				❍

[1] First change after 5 hours. [2] During dusty conditions cleaning and replacement should be more frequent. [3] For daily use of the machine lubrication should be conducted twice a week. [4] Conducted by authorised service workshop.

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

WARNING!

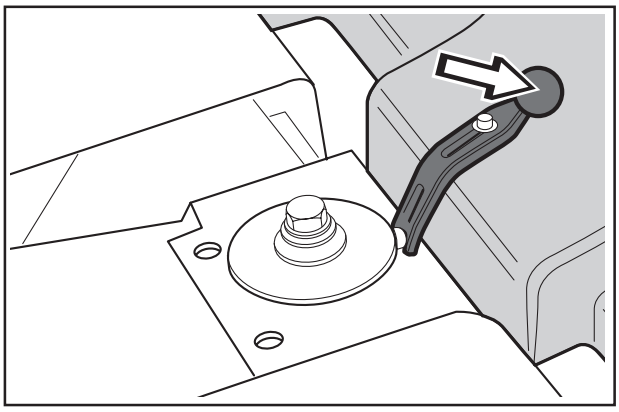
No service procedures must be conducted on the engine or cutting unit unless:

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

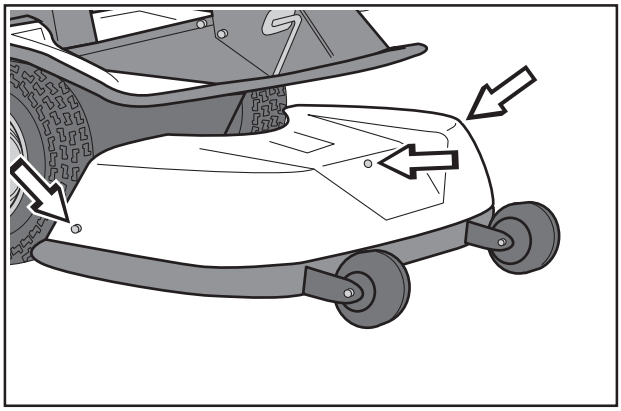
Dismantling of the machine hoods

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

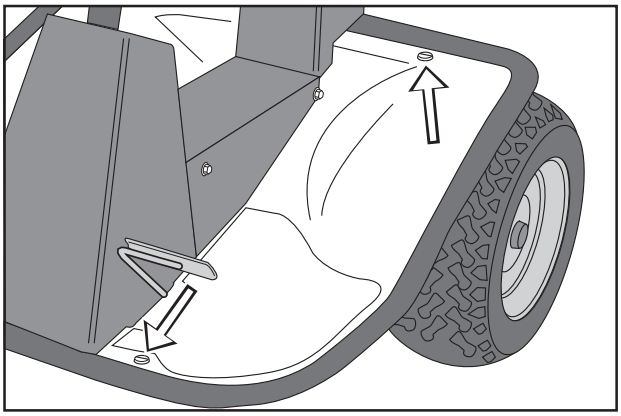
Tilt the seat forward, release the rubber strap under the seat, and tilt the hood backwards.



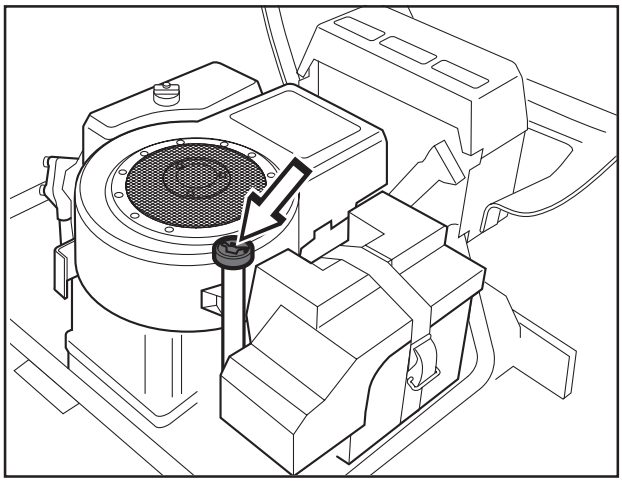
Front hood
Release the screws in the front hood (3) and lift off the hood.



Fender
Release the screws in the fender and lift off the fender.



Check the engine's oil level



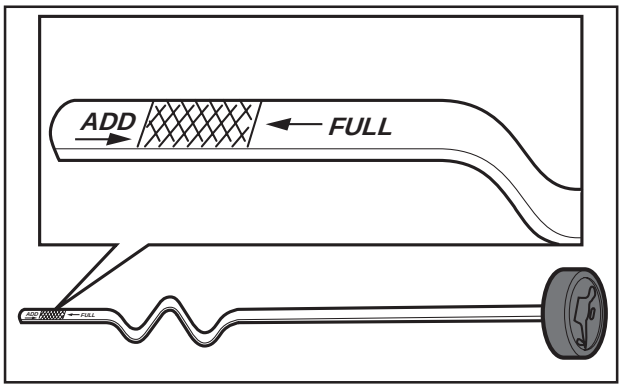
Check the oil level in the engine when the machine is horizontal.

Raise the engine cover as described on page 19.

Release the dip stick and pull out. Wipe off the oil and insert again.

The dip stick must be fully screwed down.

Now release the dip stick again and pull out. Check the oil level.



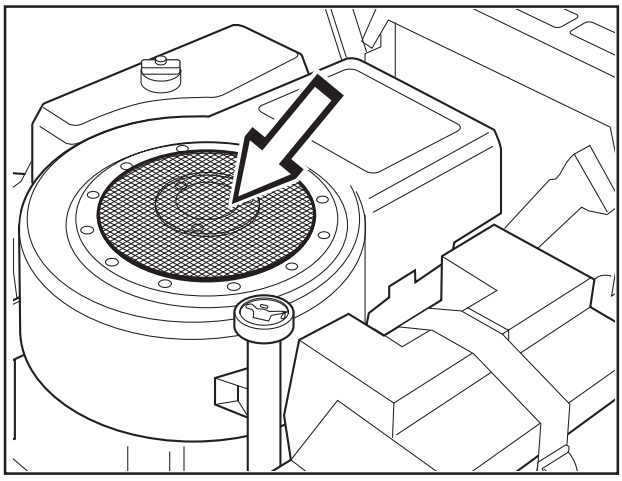
The oil level should lie between the markings on dip stick. If the level approaches the "ADD" mark, top up with oil to the "FULL" mark.

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

Use engine oil SAE 30 or SAE 10W/30, class CD–SF.

The total oil volume in the engine is 1.4 litres.

Check the engine's cooling air intake

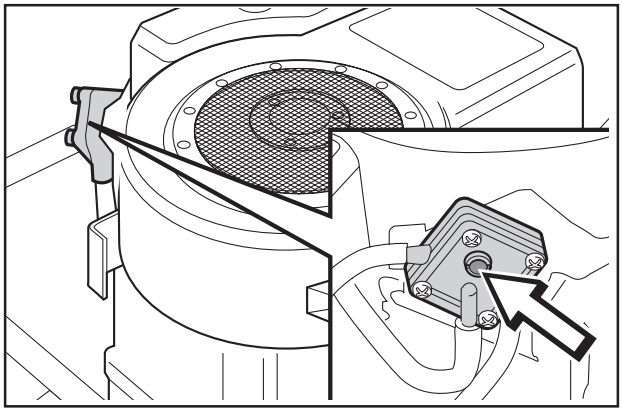


Raise the engine cover as described on page 19.

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

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

Checking of the fuel pump's air filter



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

The filter can when necessary be cleaned with a brush.

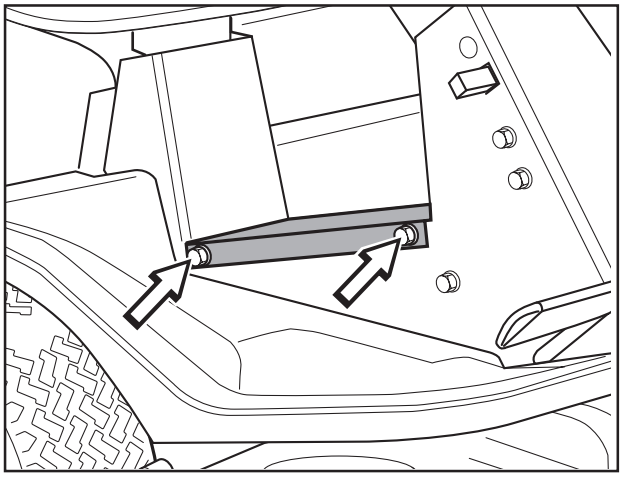
Checking and adjustment of the steering wires

The steering is controlled by means of wires.

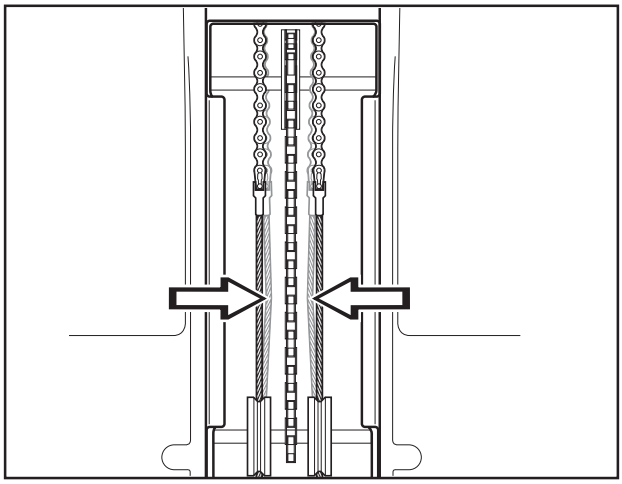
These can in time become slack, which implies that the adjustment of the steering becomes altered.

Check and adjust the steering as follows:

1. Dismantle the frame-plate by releasing the screws (two on each side).



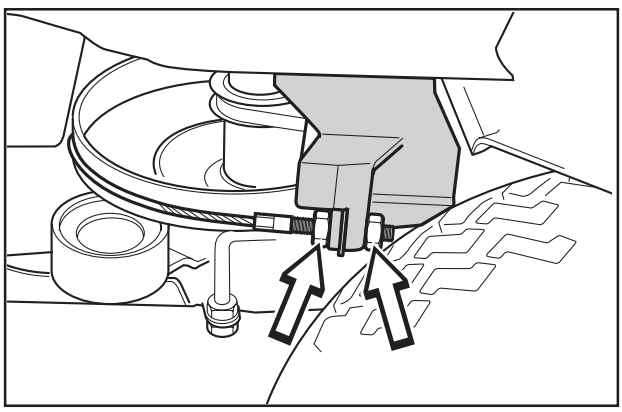
2. Check the tension of the steering wires by pushing them together as shown in the diagram. It should be possible to push them together so that the distance between them is half as much, without using unnecessary force.



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

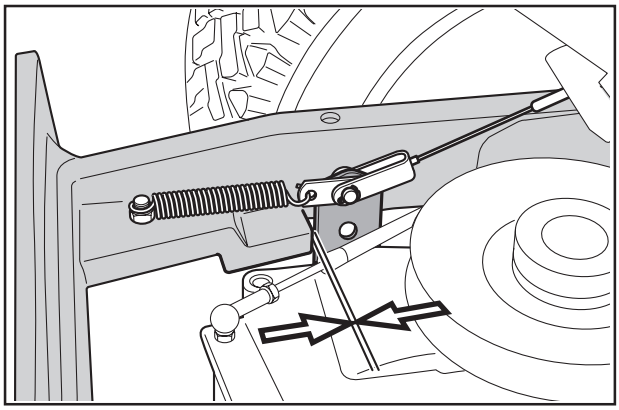
Do not tension the wires too tightly, they should only be *tightened* up to the steering rim.

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



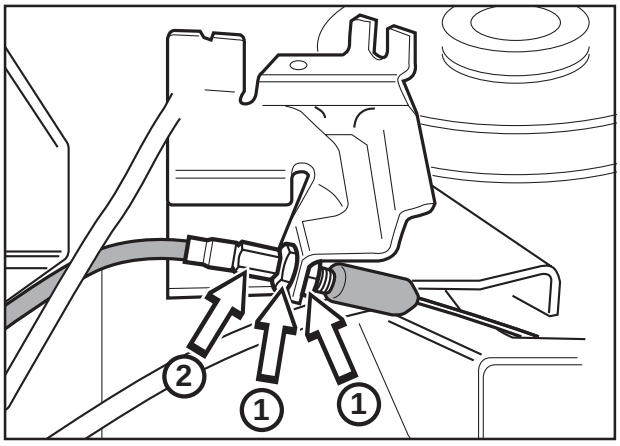
Checking the brake

The brake is of the disc brake type and is fitted on the gearbox.
Check that the brake is correctly adjusted by measuring the distance between the brake lever and the front edge of the recess on the chassis. The distance should be 0–1 mm when the brake is not applied.



Adjusting the brake

1. Release the lock nuts (1).
2. Tension the wire with the adjusting screw (2) so that the distance between the brake lever and the front edge of the recess on the chassis is 1 mm.
3. Tighten the lock nuts (1) after adjustment.



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

Check the level of the battery acid

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

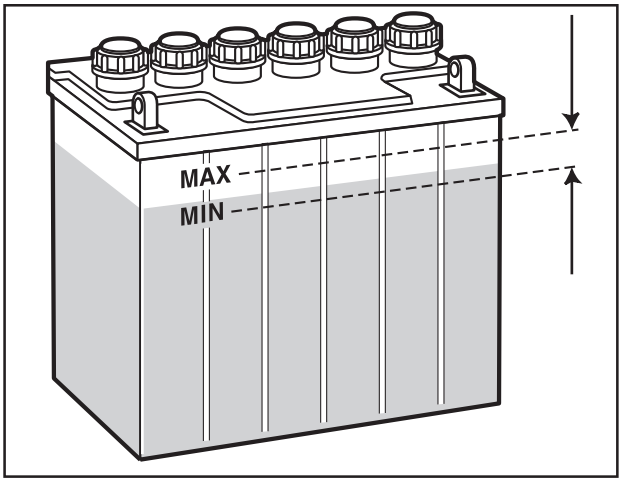
WARNING!
Procedures on contact with acid

External: Rinse well with plenty of water.

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

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

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



Check the safety system

The machine is equipped with a safety system which prevents starting the cutting unit or driving the machine unless someone is sitting in the seat.

Check daily the safety system functions.

This check is carried out by applying the parking brake and raising the cutting unit into the transport position. Start the engine and get off the machine. When the cutting unit is lowered into the cutting position the engine should stop.

Replacing the air filter

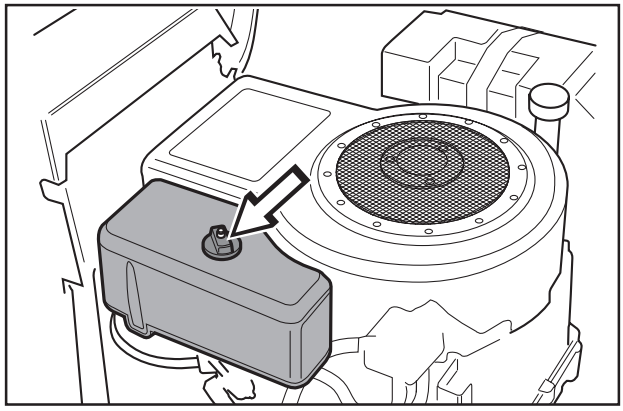
If the engine seems to lack power or goes irregularly the reason may be that the air filter is clogged.

It is therefore important to replace the air filter at regular intervals (see maintenance schedule on page 16 for correct service interval).

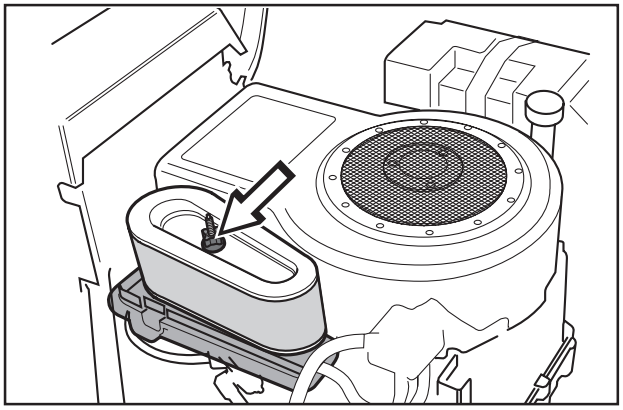
The air filter is replaced as follows:

1. Raise the engine cover as described on page 19.

2. Remove the air filter housing's plastic cover by releasing the wing-nut.



3. Remove the wing-nut on the air filter and lift off the paper filter with pre-filter.



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

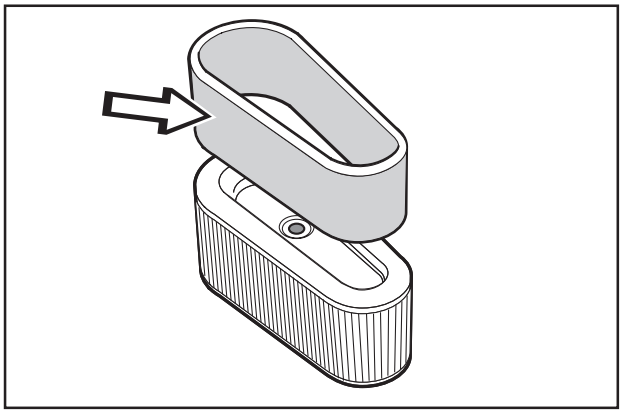
Squeeze it dry in a clean cloth.

Drench it with new engine oil. Wrap the filter in an absorbent cloth and squeeze out excess oil.

Replace the paper filter if it is clogged with dirt.

IMPORTANT INFORMATION

Do not use compressed air to clean the paper filter.

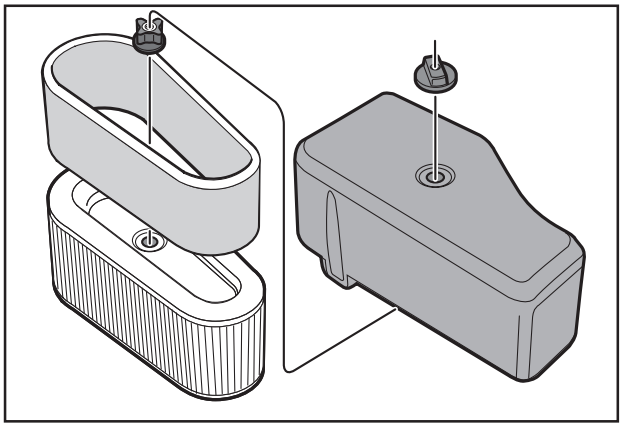


5. Fit the air filter as follows:

Push the pre-filter over the paper filter.

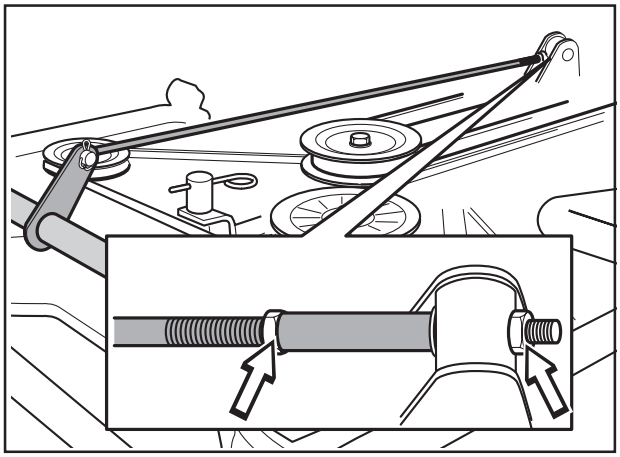
Fit the paper filter with pre-filter in the air filter housing and tighten the wing-nut.

Replace the plastic cover oven the air filter housing and tighten the wing-nut.



Adjustment of the cutting unit's parallelism

1. Dismantle the front hood and right-hand fender as described on page 19.
2. Vertical adjustment of the cutting unit is made with the adjusting nuts on the back edge of the lift-strut.
3. Raise the cutting unit at the front edge by shortening the lift-strut.
   Lower the cutting unit at the front edge by lengthening the lift-strut.
4. Tighten the nuts against each other after the adjustment.
5. On completion of the adjustment the unit's parallelism should be re-checked.
   Fit the right-hand fender and the front hood.



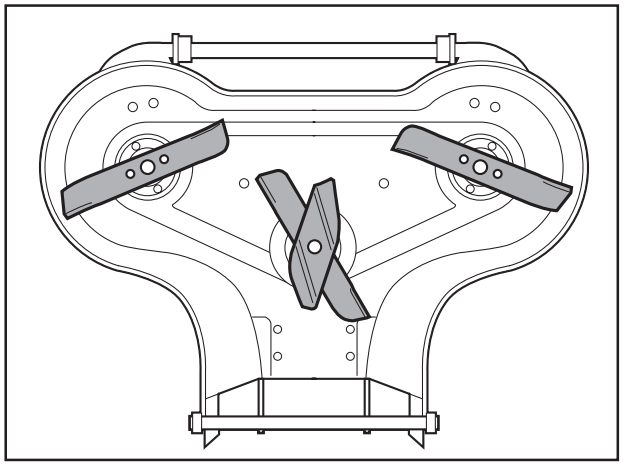
Checking the blades

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

Check that the blades' attachment screws are tight.

IMPORTANT INFORMATION

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



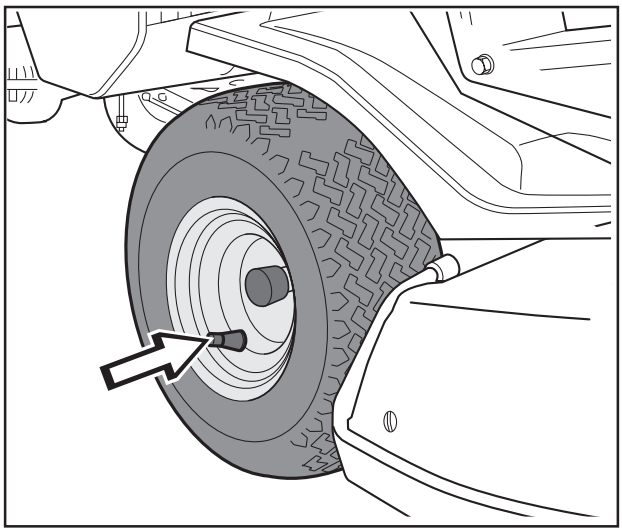
Cutting unit (rear ejection)

Checking the tyre pressure

The tyre pressure should be 60 kPa (0.6 kp/cm^2) all round.
To improve driving the pressure on the rear tyres can be reduced to 40 kPa (0.4 kp/cm^2).
The maximum tyre pressure is 100 kPa (1.0 kp/cm^2).

IMPORTANT INFORMATION

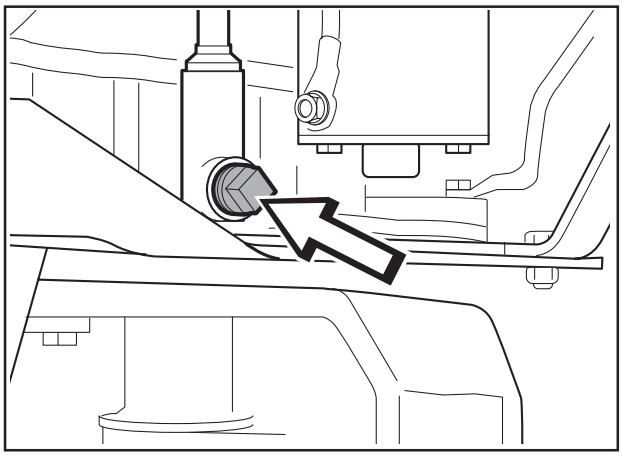
Different tyre pressures on the front tyres will result in the blades cutting the grass at different heights.

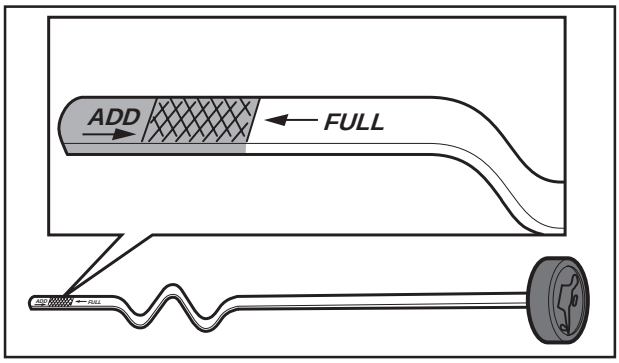


Changing the oil

The oil should be changed for the first time after 5 hours of running time. Thereafter it should be changed every 25 hours of running time.

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





1. Place a receptacle under the engine's drain plug, located on the left-hand side of the engine.
2. Remove the dip stick and drain plug.
3. Let the oil run out into the receptacle.
4. Fit the drain plug and tighten.
5. Fill up with oil to the "FULL" mark on the dip stick. The oil is filled in the same hole for the dip stick.
   Use engine oil SAE 30 or SAE 10W/30, class CD–SF.
   Use engine oil with min. API SF quality and SAE 30 or SAE 10W/30 viscosity grade. The oil volume in the engine is 1.4 litres.
6. Run the engine warm and then check that there is no leakage from the drain plug.

IMPORTANT INFORMATION

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

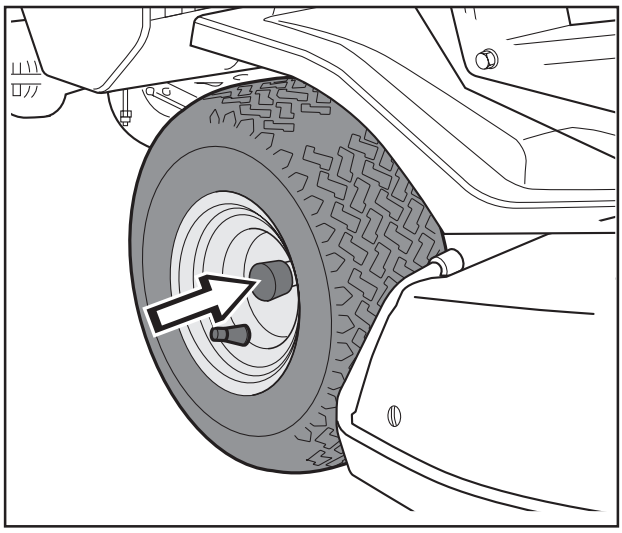
Lubrication

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

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

Lubrication of front wheel bearings

1. Remove the plastic cover on the hub.
2. Remove the lock-ring and washer on the front wheel axle.
3. Lift off the wheel.
4. Grease the axle journal with molybdenum sulphide grease.
5. Assemble the parts in the reverse order.



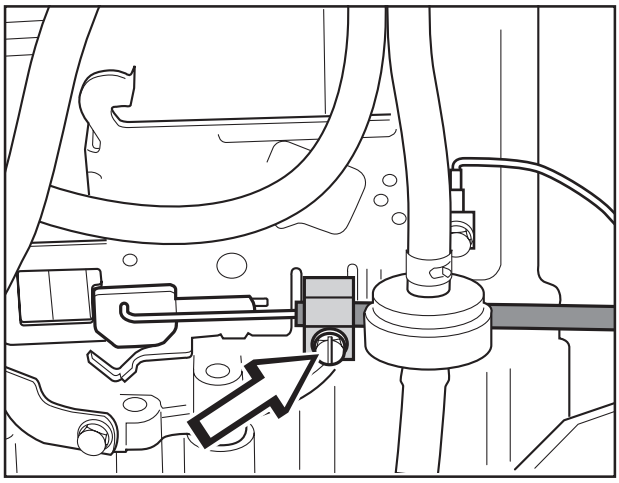
IMPORTANT INFORMATION

Check that the lock-ring is correctly positioned in the slot.

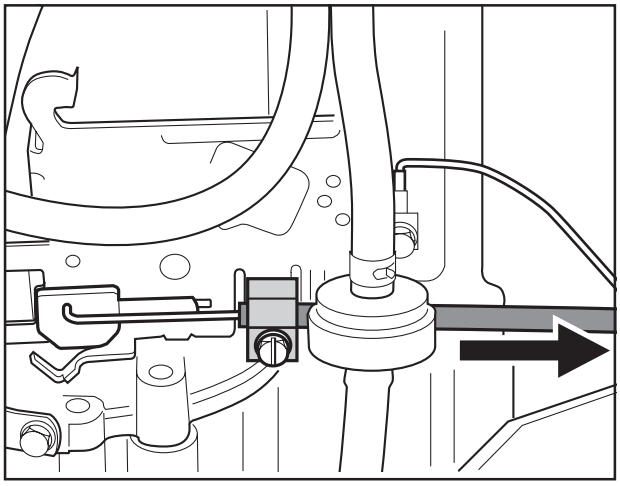
Checking and adjustment of the throttle wire

If the engine does not respond as it should do when the throttle lever is moved or if the top speed is not reached, the throttle wire may need adjusting.

1. Release the clamping screw (see arrow) and push the throttle control to full throttle position.



2. Pull the throttle wire's outer casing to the far right and tighten the clamping screw.

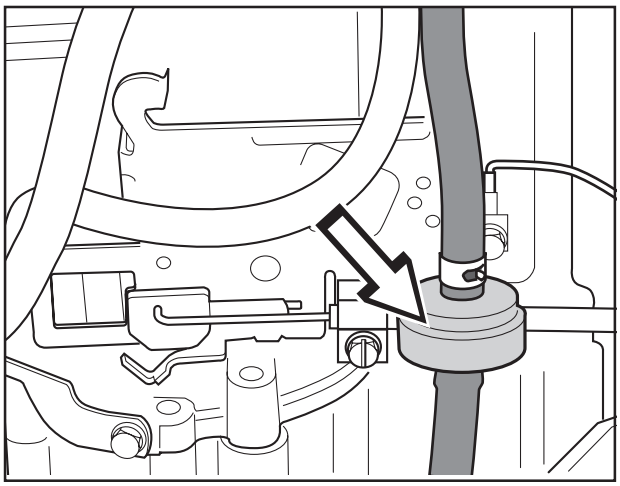


Replacement of the fuel filter

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

Replace the filter as follows:

1. Raise the engine cover as described on page 19.
2. Move the hose clips away from the filter. Use a pair of flat pliers.
3. Pull off the filter from the hose ends.
4. Press in the new filter on the hose ends. If necessary soap solution can be applied on the filter ends to simplify fitting.
5. Push the hose clips back on the filter.



TROUBLE SHOOTING SCHEDULE

Problem	Procedure
Engine will not start.	• Fuel tank empty. • Plug defective. • Plug connection defective. • Dirt in carburettor or fuel pipe.
Starter does not pull round engine.	• Battery flat. • Bad contact between cable and battery terminal. • Lift lever for cutting unit in wrong position. • Main fuse blown. The fuse is placed in front of the battery, under the battery cover. • Ignition lock faulty. • Gear shift not in neutral.
Engine does not run smoothly.	• Wrong gear, too high. • Carburettor incorrectly set. • Air filter clogged. • Fuel tank vent blocked. • Ignition setting defective. • Dirt in fuel pipe.
Engine seems to have no power.	• Air filter clogged. • Plug defective. • Dirt in carburettor or fuel pipe. • Carburettor incorrectly set.
Engine overheats.	• Engine overloaded. • Air intake or cooling flanges blocked. • Fan damaged. • Too little or no oil in engine. • Ignition defective. • Plug defective.
Battery does not charge.	• One or more cells faulty. • Bad contact between battery terminals and cables.
Machine vibrates.	• Blades are loose. • Engine is loose. • Imbalance on one or more blades, resulting from damage or inferior balancing after sharpening.
Uneven mowing.	• Blades blunt. • Cutting unit skew. • Long or wet grass. • Grass blockage under hood. • Different tyre pressures on right and left sides. • Over-speeding. • Drive belts slipping.

STORAGE

Winter storage

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

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

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

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

1. Carefully clean the machine, especially under the cutting unit. Touch-up paint damage to avoid rust.
2. Inspect the machine for worn or damaged parts and tighten loose screws and nuts.
3. Change the oil, and take care of the waste oil.
4. Empty the fuel tank. Start the engine and run it until the carburettor is emptied of fuel.
5. Remove the plug and pour in a tablespoon of engine oil in each cylinder. Pull round the engine to distribute the oil and screw the plug back on.
6. Grease all grease nipples, joints and axles.
7. Remove the battery. Clean it, charge it, and store it is a cool place. Protect the battery from low temperatures (below freezing point).
8. Store the machine is a clean and dry place and cover it over for extra protection.

Service

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

Always use genuine parts.

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



TECHNICAL DATA

Dimensions	**FR 13**
Length	2000 mm
Width	960 mm
Height	1060 mm
Unladen weight	225 kg
Wheel base	820 mm
Track	610 mm
Tyre size	16 x 6.50 x 8
Tyre pressure, front & rear	60 kPa (0.6 kp/cm^2)
Max. gradient	15°

Engine	
Manufacture	Briggs & Stratton model 28N707
Power	7.7/12.5 kW/h.p.
Displacement	465 cm^3
Fuel	minimum 85 octane unleaded
Tank volume	7 litres
Oil	SAE 30 or SAE 10W/30 class CD–F
Oil volume	1.4 litres
Start	Electric starter

Electrical system	
Type	12 V, negative earth
Battery	12 V, 24 Ah
Spark plug	Champion CJ8 or J8 electrode gap = 0.7–0.8 mm

Transmission	
Manufacture	Peerless typ MST 205
No. of forward gears	5
No. of reverse gears	1
Speed in forward gears	1.85-8.9 km/h
Speed in reverse	2.5 km/h

Cutting unit	
Type	3-blade unit with rear ejection
Cutting width	850 mm
Cutting height	9 pos. 40–90 mm
Blade diameter	304 mm

NOISE LEVEL	100 dB(A)

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

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

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

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

EU declaration of conformity (Only applies to Europe)

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

We, **Husqvarna AB,** S-561 82 Huskvarna, Sweden, tel. +46 36-146500, declare under sole responsibility that the **rider mowers Jonsered FR 13** from 1998's serial numbers and onwards (the year is clearly stated in plain text on the type plate with subsequent serial number), is in conformity with the following standards or other normative documents following the provisions in the COUNCIL'S DIRECTIVES:

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

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

Huskvarna October 16, 1998



Bo Andréasson, Development manager

Jonsered

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