

SPECTRUM

Products

Ride-on Lawnmower

DCT38M-RDM



Your riding mower has been engineered and manufactured to our high standard for dependability, ease of operation, and operator safety. When properly cared for, it will give you years of trouble-free use.

⚠ WARNING: To reduce the risk of injury, the user must read and understand the operator's manual before using this product.

Thank you for your purchase.

Contents

Introduction.....	2	Troubleshooting schedule.....	33
Safety.....	6	Transportation, storage and disposal.....	35
Assembly.....	12	Technical data.....	38
Operation.....	16	Service.....	39
Maintenance.....	21	Declaration of Conformity.....	40

Introduction

Product description

This is a lawn tractor with the cutting deck installed between the front and rear axles. It has a 4-stroke engine that uses fresh, unleaded fuel, preferably E5.

Intended use

This product is only used to cut grass in private gardens and on private garden slopes with not more than 10° slope. It is not to be used in public parks, sports grounds, in farming or in forestry. Attach an optional accessory to use the product for other tasks. Only use the product with accessories that are approved by the

manufacturer. Speak to an approved service agent for more information.

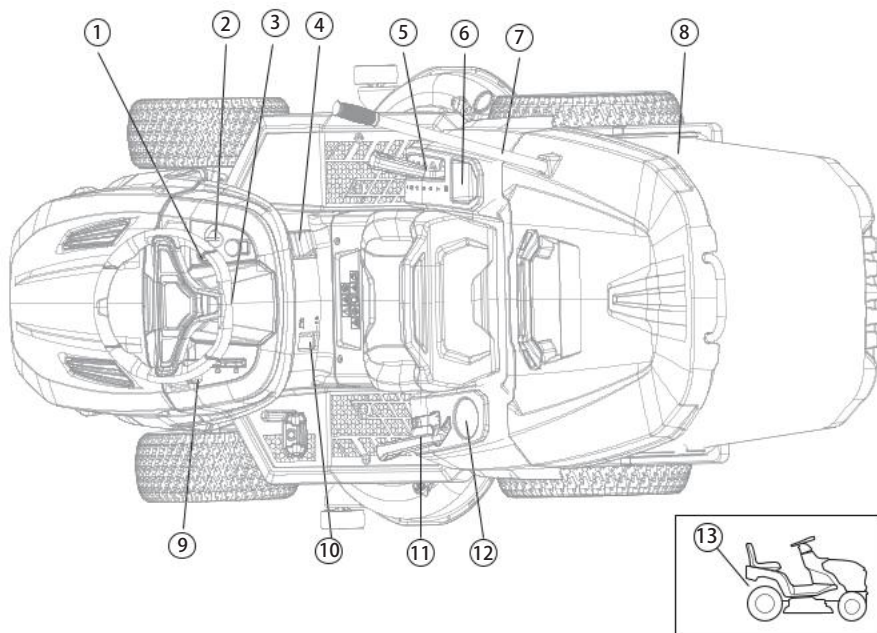
To use the product differently is incorrect use. It will void your warranty and reject the responsibility for damage to the user of third parties on the part of the manufacturer.

Refer to local directives for the operation of lawn mowers.

Insure your product

Make sure that you have insurance coverage for your new product. Speak to your insurance company if you are not sure. We recommend a fully comprehensive insurance that includes third party, fire, damage, theft and liability.

Product overview



Product overview

1	Light switch	After the machine is powered on, press once, the lights turn on, press again, the lights turn off.
2	Ignition lock	Insert the key to start and stop the riding mower.
3	Steering wheel	Control the direction of the riding lawn mower.
4	Parking brake lock	Apply the parking brake;See page 18.
5	Cutting height lever	Adjust the mowing height.
6	Miscellaneous slot	Can be used to place miscellaneous items.
7	Grass catcher handle	Discharge grass from one side of the lawn mower
8	Side discharge	Collect the cut grass.
9	Throttle control	Control the air damper and engine speed.
10	Fuel observation window	Observe the fuel level in the tank.
11	Manual transmission	Manual transmission: (neutral&forward&backward), the operating lever is in forward gear, and the lawn mower moves forward at this time; The operating lever is in reverse gear, and the lawn mower moves backwards at this time; The center of the control lever is in neutral position, at which point the lawn mower stops moving forward or backward
12	Water cup holder	Place a water cup or other items.
13	Lever to engage or disengage the drive	Coupling or decoupling drive system;See page 17-18.

Operator Presence Control (OPC)

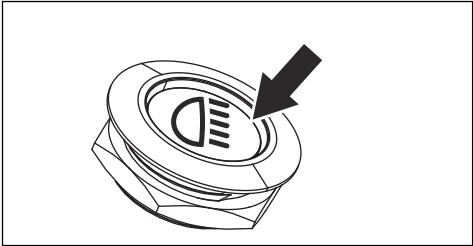
The OPC engages when the operator lifts from the seat. The OPC disengages the drive of the blades. The OPC stops the engine if the parking brake is not applied.

Grass catcher presence control

The product has a grass catcher presence control that engages when a grass catcher or other accessory is installed. The blades stop if the grass catcher or other accessory is removed. Refer to *Operation conditions on page 9*.

Work light

The product has work light. Push the power switch to make the work light come on or go off.



Symbols on the product



WARNING: This product can be dangerous and cause serious injury or death to the operator or others. Be careful and use the product correctly.



Read the operator's manual carefully and make sure that you understand the instructions before you use this product.



Choke



Fast



Slow



Engage the drive system.

Disengage the drive system.



Engine off



Engine on



Engine start



Parking brake



Cutting height



Reverse operation system (ROS)



Work lights on/off



Fuel



Max. ethanol 10%



Motor oil



Ear protection is recommended.



Wear eye protection.



The blades are disengaged.



The blades are engaged.



Keep body parts away from rotating parts.



Keep body parts away from rotating blades.



Look out for ejecting objects and ricochets.



Do not cut grass across a slope. Do not cut grass on ground that slopes more than 10°.



Cutting of fingers or hand.



Never carry passengers on the product or equipment.



Keep bystanders away.



No step



Disconnect the spark plug cap before you do maintenance on the product.



Noise emission to the environment label as per EU and UK directives and regulations, and New South Wales legislation "Protection of the Environment Operations (Noise Control) Regulation 2017". The guaranteed sound power level of the product is specified in *Technical data on page 39* and on the label.



The product agrees with the applicable EC directives.



Apply and release the parking brake.

Note: Other symbols/decals on the product refer to market specific legal requirements.

Label on the product



DANGER – Keep hands and feet away.

Product damage

We are not responsible for damages to our product if:

- the product is incorrectly repaired.
- the product is repaired with parts that are not from the manufacturer or not approved by the manufacturer.
- the product has an accessory that is not from the manufacturer or not approved by the manufacturer.

- the product is not repaired at an approved service center or by an approved authority.

Euro V Emissions

WARNING: Tampering with the engine voids the EU type-approval of this product.

Safety

Safety definitions

Warnings, cautions and notes are used to point out specially important parts of the manual.

WARNING: Used if there is a risk of injury or death for the operator or bystanders if the instructions in the manual are not obeyed.

CAUTION: Used if there is a risk of damage to the product, other materials or the adjacent area if the instructions in the manual are not obeyed.

Note: Used to give more information that is necessary in a given situation.

General safety instructions

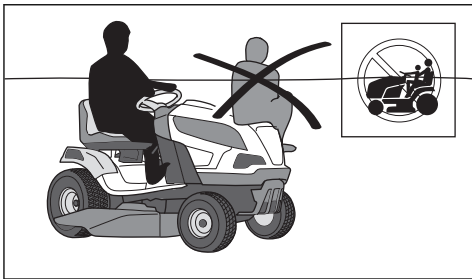
WARNING: This product can cut off hands and feet and throw objects. Serious injury or death may occur if you do not obey the safety instructions.

WARNING: Do not continue to use a product with damaged cutting equipment. Damaged cutting equipment can throw objects and cause serious injury or death. Replace damaged blades immediately.

WARNING: This product 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 product.

WARNING: Read the warning instructions that follow before you use the product.

- Always be careful and use your common sense. Avoid all situations which you consider to be beyond your capability. If you feel uncertainty about the operating procedures after you read the operator's manual, consult an expert before you continue.
- Read and understand the operator's manual and the instructions on the product carefully before you start the product.
- Learn how to use the product and its controls safely and learn how to stop the product quickly.
- Learn to recognise the safety decals.
- Keep the product clean to make sure that you can clearly read signs and stickers.
- Clean fuel or oil spillage on the product before you operate the product and before you put the product in storage.
- Keep in mind that the operator will be held responsible for accidents that involve other persons or their property.
- Do not put hands or feet near parts that rotate.
- Do not put hands or feet below the product.
- Keep away from the discharge opening at all times.
- Always stop the blades when you operate the product on gravel surfaces.
- Do not operate the cutting deck if the grass catcher, discharge chute, or other safety devices are missing or defective.
- Always disengage the blades when you do not mow.
- Make sure that grass or other unwanted materials cannot touch hot exhaust or hot parts of the engine.
- Do not transport passengers. The product must only be used by one person.

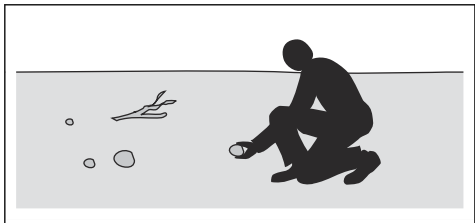


- Stop the engine and make sure that all parts have stopped before you remove the grass catcher or remove blockage in the discharge chute.
- Let the product become cool before you put it in storage.

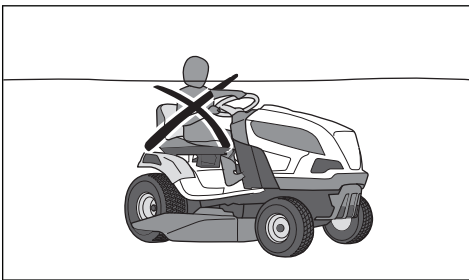
Safety instructions regarding children

WARNING: Read the warning instructions that follow before you use the product.

- Do not let the product stay unsupervised with the engine on. Always stop the blades, apply the parking brake, stop the engine and remove the ignition key before you let the product stay unsupervised.
- Only use the product in daylight or in other well-lit conditions. Keep the product at a safe distance from holes or other irregularities in the ground. Look out for other possible risks.
- Do not use the product in bad weather, for example in fog, in rain, moist or in wet locations, strong winds, intense cold, risk of lightning, etc.
- Find and mark stones and other fixed objects to prevent collision.
- Clear the area of objects such as stones, toys, wires, etc. that may become caught in the blades and be thrown out.



- Serious accidents can occur if you are not on your guard for children in the vicinity of the product. Children can be attracted to the product and to mowing. It is very possible that children do not stay where you last saw them.
- Keep children away from the area to be mowed. Make sure that an adult is responsible for the children.
- Keep an eye out and stop the product if children enter the work area. Be very careful near corners, bushes, trees or other objects that prevents a clear view.
- Before and while you move the product in reverse, look behind you and look down to make sure there are no small children in the vicinity of the product.
- Do not let children ride along. They can fall off and get seriously injured or prevent safe maneuvering of the product.
- Do not let children operate the product.



Safety instructions for operation

WARNING: Do not touch the engine or exhaust system during or directly after operation. The engine and the exhaust system become very hot during operation. Risk of burn injuries, fire and damage to property or adjacent areas. When you operate the product, keep away from bushes and other objects.

WARNING: Read the warning instructions that follow before you use the product.

- Always look down and behind you before and while you move in reverse. Look out for large and small obstacles.
- Decrease the speed before you turn around a corner.
- Stop the blades when you move across areas that you do not cut.

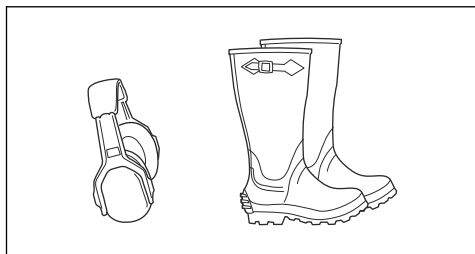
CAUTION: Read the caution instructions that follow before you use the product.

- Before you operate the product, clear the cold air intake of the engine from grass and dirt. If the cold air intake is blocked, there is a risk of engine damage.
- Move around stones and other larger objects carefully and make sure that the blades do not hit the objects.
- Do not operate the product across objects. Stop and examine the product and cutting deck if you operate the product across or into an object. If it is necessary, make repairs before you restart.

Personal protective equipment

WARNING: Read the warning instructions that follow before you use the product.

- Use approved personal protective equipment when you use the product. Personal protective equipment cannot fully prevent injury but it decreases the degree of injury if an accident does occur. Let your dealer help you select the right equipment.
- Use approved hearing protection. Long-term exposure to noise can result in permanent hearing impairment.
- Use heavy-duty slip-resistant boots or shoes. Steel toes are recommended. Do not use open shoes or go with bare feet.



- Use protective gloves when necessary, for example when you attach, examine or clean the cutting equipment.
- Do not wear loose-fitting clothing, jewelry or other items that can get caught in moving parts.
- Keep first aid equipment and fire extinguisher near.

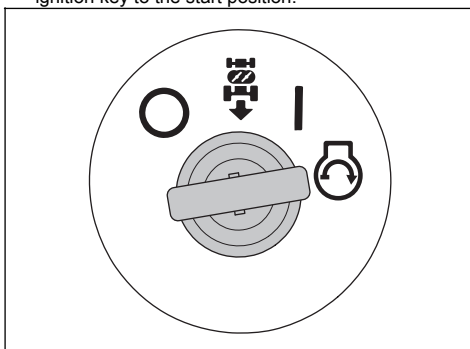
Safety devices on the product

WARNING: Read the warning instructions that follow before you use the product.

- Do not use a product with safety devices that are damaged or do not operate correctly. Do a check of the safety devices regularly. If the safety devices are damaged, speak to your service agent.
- Do not make modifications on safety devices. Do not use the product if protective plates, protective covers, safety switches or other protective devices are not attached or are damaged.

To do a check of the ignition lock

- Start and stop the engine to do a check of the ignition lock. Refer to *To start the engine on page 17* and *To stop the engine on page 20*.
- Make sure that the engine starts when you turn the ignition key to the start position.



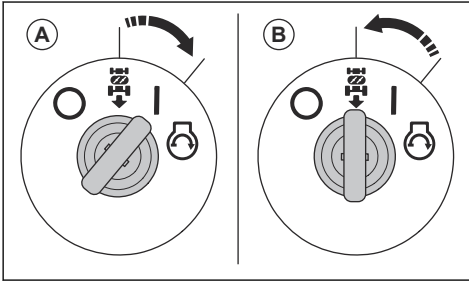
- Make sure that the engine stops immediately when you turn the ignition key to the stop position (O).

To do a check of the reverse operation system (ROS)

If the reverse operation system (ROS) does not operate correctly, speak to an approved service agent.

1. Start the product. Refer to *To start the engine on page 17*.
2. Engage the cutting deck. Refer to *To engage and disengage the cutting deck on page 18* or *To engage and disengage the cutting deck on page 18*.

- With the ignition key in the on position (A), push down on the reverse pedal. The engine must stop when you push down on the reverse pedal.



- Start the product and engage the cutting deck again.
- Turn the ignition switch to the ROS on position (B).
- With the ignition key in the ROS on position, push down on the reverse pedal. The engine must not stop when you push down on the reverse pedal.

Operation conditions

These conditions are necessary to start the engine:

- The parking brake is applied.
- The drive of the blades is disengaged.
- The forward pedal and the rearward pedal are in their neutral position.

The engine must stop in these situations:

- The parking brake is not applied and the operator lifts from the seat.
- The cutting deck is engaged and the operator lifts from the seat.
- The cutting deck is engaged and the rearward pedal is pushed down but the ROS is disengaged.

The drive of the blades must stop in these situations:

- The parking brake is applied and the operator lifts from the seat.
- The PTO button is pushed in .
- The grass catcher or other accessory is removed.

Try to start the engine without one of the conditions. Change the conditions and try again. Do this check daily.

To do a check of the forward pedal and rearward pedal

- Start the product. Refer to *To start the engine on page 17* .
- Make sure that the forward pedal and rearward pedal are not blocked and can be operated freely.
- Slowly push the forward pedal to move forward.
- Release the forward pedal to brake. Make sure that the brake engages when the forward pedal is released.

Note: The product has an automatic brake that engages when you release the pedals.

- Do the same procedure for the rearward pedal.
- Make sure that the product does not move when the pedals are in their neutral position.

Parking brake

WARNING: If the parking brake does not work, the product can start to move and cause injury or damage. Make sure that the parking brake is regularly examined and adjusted.

Refer to *To do a check of the parking brake on page 25* .

Muffler

The muffler keeps the noise levels to a minimum and sends the exhaust fumes away from the operator.

Do not use the product if the muffler is missing or damaged. A damaged muffler increases the noise level and the risk of fire.

WARNING: The muffler becomes very hot during and after use and when the engine operates at idle speed. Be careful near flammable materials and/or fumes to prevent fire.

To do a check of the muffler

- Examine the muffler regularly to make sure that it is attached correctly and not damaged.

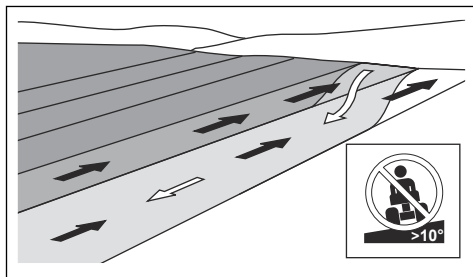
Protective covers

Missing or damaged protective covers increase the risk of injury on moving parts and hot surfaces. Do a check of the protective covers before you operate the product. Make sure that the protective covers are correctly attached and do not have cracks or other damages. Replace damaged covers.

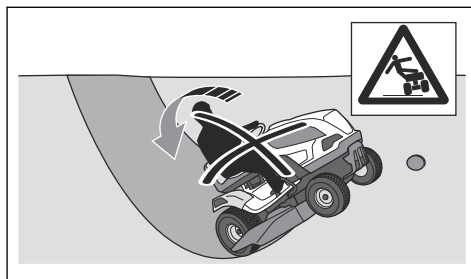
To cut grass on slopes

WARNING: Read the warning instructions that follow before you use the product.

- To cut grass on slopes increases the risk that you can not control the product and that it overturns. This can cause injury or death. It is necessary to cut the grass carefully on all slopes. If you cannot reverse up a slope or if you do not feel safe, do not cut it.
- Remove stones, branches and other obstacles.
- Cut up and down the slope, not from side to side.
- Do not operate the product on ground that slopes more than 10°.



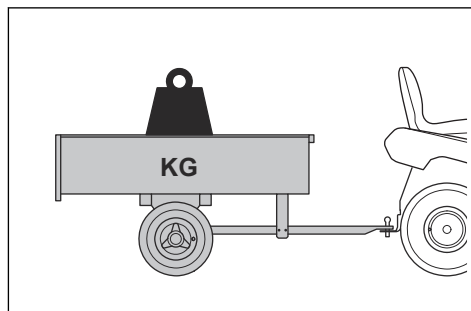
- Do not start or stop on a slope.
- Move smoothly and slowly on slopes.
- Do not make sudden changes in speed or direction.
- Do not turn more than necessary. Turn slowly and gradually when you move down a slope. Move at low speed. Turn the wheel carefully.
- Look out for and do not move across furrows, holes and bumps. There is a higher risk that the product overturns on ground that is not flat. Long grass can hide obstacles.
- Do not cut grass near edges, ditches or banks. The product can suddenly overturn if a wheel moves across the edge of a steep slope or a ditch, or if an edge gives way. If the product falls into water, there is a risk of drowning.



- Do not cut wet grass. It is slippery, and tyre can lose their grip so that the product skids.
- Do not put your foot on the ground to try to make the product more stable.
- Move very carefully if an accessory or other object is attached that can make the product less stable.
- Follow the manufacturer's recommendations for wheel weights or counterweights.

Tow safety

- Use the tow bar to attach the equipment.
- Do not tow equipment that is heavier than the maximum permitted tow equipment weight. Refer to *Technical data on page 38*.



- Make sure that no other persons are near the product when you tow equipment.
- Be careful when you tow equipment on slopes or rough ground.
- Operate the product at low speed when you tow equipment.

Fuel safety

WARNING: Be careful with fuel. It is very flammable, and can cause injury and damage to property.

WARNING: Read the warning instructions that follow before you use the product.

- Do not fill the fuel tank indoors.
- petrol and petrol fumes are poisonous and very flammable. Be careful with petrol to prevent injury or fire.
- Do not remove the fuel tank cap or fill the fuel tank when the engine is on.
- Let the engine become cool before you refuel.
- Do not smoke when you fill fuel.
- Do not fill fuel near sparks or naked flames.
- If there are leaks in the fuel system, do not start the engine until the leaks are repaired.
- Do not fill above recommended fuel level. The heat from the engine and the sun makes the fuel expand and the fuel overflows if the tank is filled too much.
- Do not fill too much. If you spill fuel on the product, clean up the spill and wait until it is dry before you start the engine. If you spill on your clothing, change it.
- Store fuel in approved containers only.
- Store the product and fuel in such a way that there is no risk that fuel leaks or fumes can cause damage.
- Drain off the fuel in an approved container outdoors and away from naked flames.

Transport safety

- Use an approved transport vehicle for transportation of the product.
- The product is heavy and can cause crush injuries. Be careful when you load it onto or off a vehicle or trailer.
- A markets national or local regulations can set limit to the transportation of the product.
- The operator of the transport vehicle is responsible to attach the product safely during transport. Refer to *To safely attach the product for transportation on page 36*.

Battery safety

WARNING: A damaged battery can cause an explosion and cause injury. If the battery has a deformation or is damaged, speak to an approved service agent.

WARNING: Read the warning instructions that follow before you use the product.

- Use protective glasses when you are near batteries.
- Do not wear watches, jewelry or other metal objects near the battery.
- Keep the battery out of reach for children.
- Charge the battery in a space with good airflow.
- Keep flammable materials at a minimum clearance of 1 m when you charge the battery.

- Discard replaced batteries. See *Disposal on page 37*.
- Explosive gases can come from the battery. Do not smoke near the battery. Keep the battery away from open flames and sparks.

Safety instructions for maintenance

WARNING: The product is heavy and can cause injury or damage to property or the adjacent area. Do not do maintenance on the engine or the cutting deck without these conditions:

- The engine is off.
- The product is parked on a level surface.
- The parking brake is applied.
- The ignition key is removed.
- The cutting deck is disengaged.
- The ignition cable is removed from the plug.

WARNING: The exhaust fumes from the engine contain carbon monoxide, an odourless, poisonous and very dangerous gas. Do not run the product in closed spaces or spaces with not sufficient air flow.

WARNING: Read the warning instructions that follow before you use the product.

- For best performance and safety, do maintenance on the product regularly as given in the maintenance schedule. Refer to *Maintenance schedule on page 21*.
- Electrical shocks can cause injuries. Do not touch the cables when the engine is on. Do not do a function test on the ignition system with your fingers.
- Do not start the engine if the protective covers are removed. There is a high risk of injury caused by moving or hot parts.
- Let the product become cool before you do maintenance near the engine.
- The blades are sharp and can cause cuts. Wind protection around the blades or use protective gloves when you do work on the blades.
- Do not park the product near the edge of a ditch or slope to get access to the cutting deck.

CAUTION: Read the caution instructions that follow before you use the product.

- Do not turn over the engine if the spark plug or ignition cable is removed.

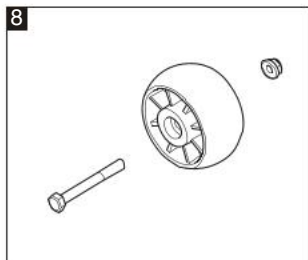
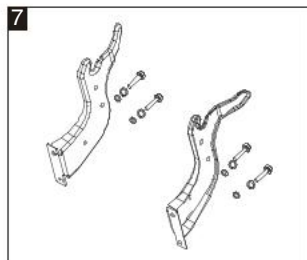
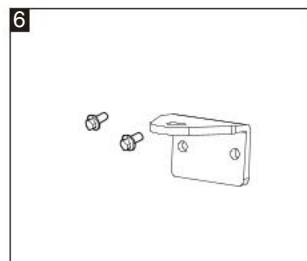
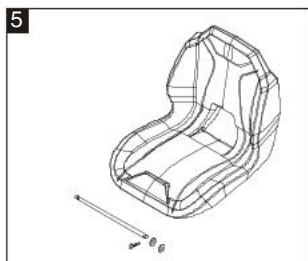
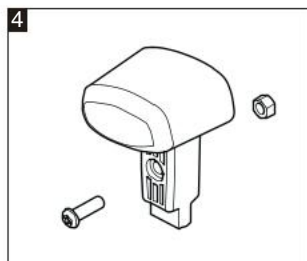
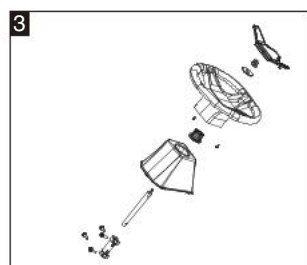
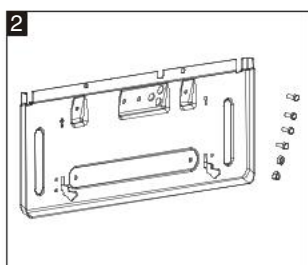
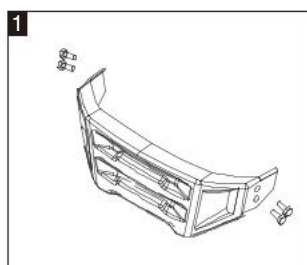
- Make sure that all nuts and bolts are tightened correctly and that the equipment is in good condition.
- Do not change the adjustment of governors. If the engine speed is too high, the product components can become damaged. Refer to *Technical data on page 38* for highest permitted engine speed.
- The product is approved only with the equipment supplied or recommended by the manufacturer.

Assembly

Introduction

WARNING: Read and understand the safety chapter before you assemble the product.

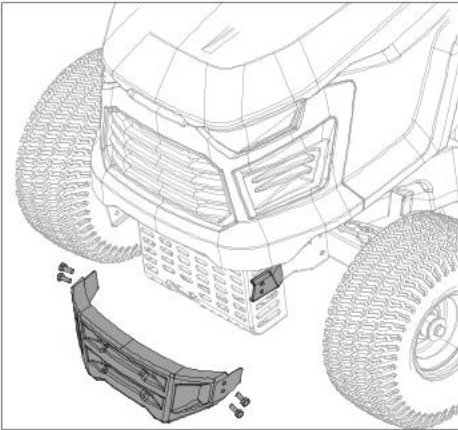
Assembly overview



Install the bumper

Refer to *Assembly overview* on page 12 for the correct fasteners for this task.

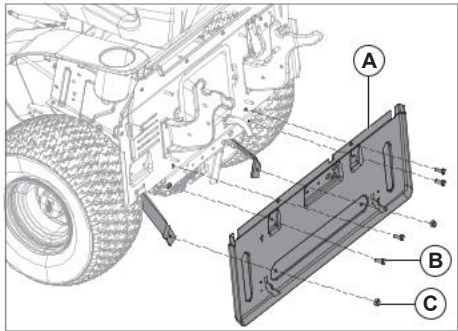
1. Attach the bumper to the bumper bracket with four M8 bolts and tighten.



Install the grass catcher cover plate

Refer to *Assembly overview* on page 12 for the correct fasteners for this task.

1. Install the grass catcher cover plate (A) on the frame using four M8 bolts (B) and two nuts (C), and tighten.

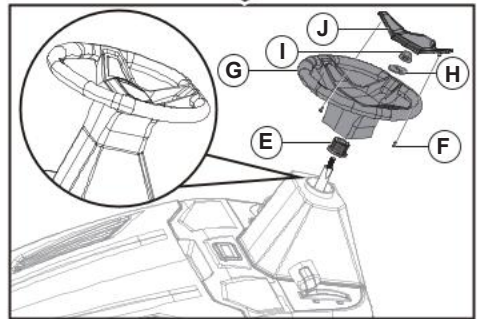
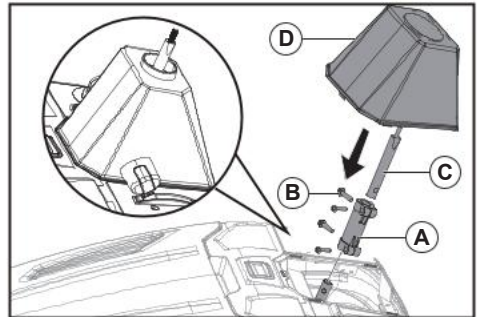


To install the steering wheel

Refer to *Assembly overview* on page 12 for the correct fasteners for this task.

1. Insert the fixed sleeve (A).
2. Insert the direction extension rod (C) into the center of the fixed sleeve (A); secure the direction extension rod and the fixed sleeve with four M8 bolts (B).

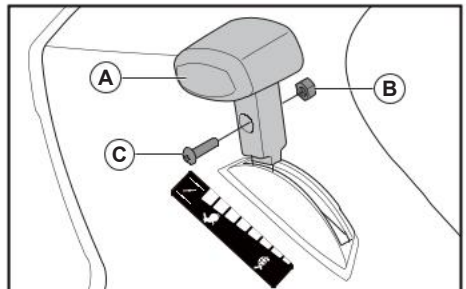
3. Snap the cover (D) onto the machine.
4. Install the steering shaft limit (E), steering wheel (G), and washer (H) on the steering extension rod (C) in sequence, and secure them with an M12 nut (I), tightening the nut to 24Nm.
5. Use two screws (F) to secure the steering wheel trim cover (J) to the steering wheel.



To install the knob on the throttle control

Refer to *Assembly overview* on page 12 for the correct fasteners for this task.

1. Put the knob (A) onto the throttle control lever.

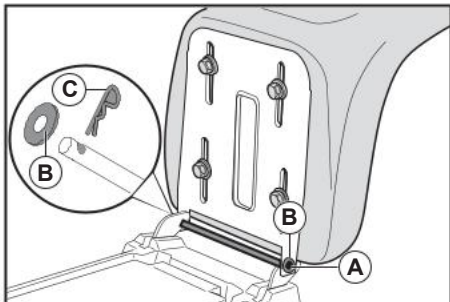


2. Install the nut (B) and the screw (C).

To install the seat

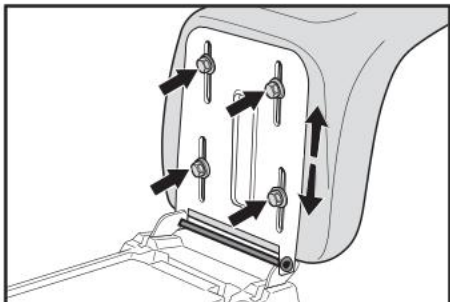
Refer to *Assembly overview on page 12* for the correct fasteners for this task.

1. Insert a washer (B) onto the end of shaft (A), then insert shaft (A) sequentially into the seat assembly and the seat mounting hole;
2. Insert a washer (B) onto shaft (A) and then insert a cotter pin (C) into the hole in shaft (A) to secure it.



To adjust the seat

1. Fold the seat forward.
2. Loosen the four fixing bolts and slide it along the slots.

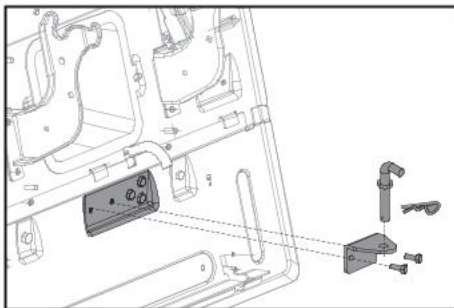


3. Move the seat until it is in a position where you can push the pedals down fully.
4. Tighten the bolt completely.

To install the tow bar

Refer to *Assembly overview on page 12* for the correct fasteners for this task.

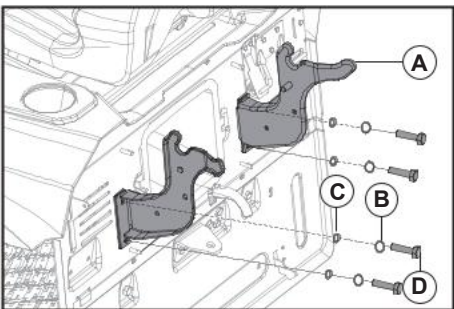
- Install the tow bar with the 2 screws.
- Insert the trailer tongue into the trailer hitch and secure it with a cotter pin.



To install the brackets for the grass catcher

Refer to *Assembly overview on page 12* for the correct fasteners for this task.

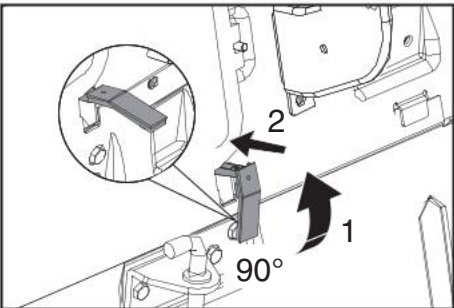
1. Use four M8 bolts (D), four spring washers (B), and four washers (C) to secure the grass box bracket (A) to the vehicle frame.



Adjust the switch for the grass full material

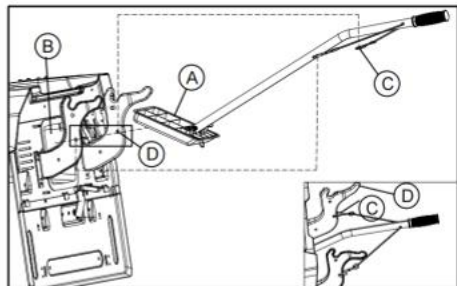
Adjust the switch upwards by 90°, then move it forward to the bottom.

The grass collection switch has 5 positions, users can make reasonable adjustments according to their usage (pulling outwards makes it easier to trigger the switch).



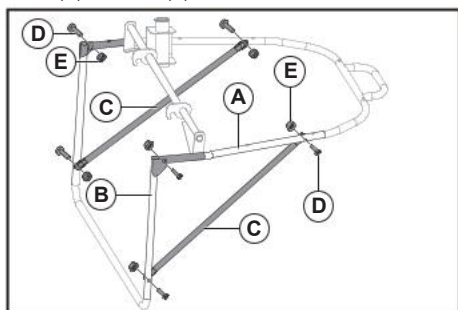
Installation of mulching plug

1. Place the board (A) of the mulching plug into the rear airduct (B) of the lawn tractor. When installing, be sure to align the installation direction of this board (A) with the indication diagram below. After installation, please ensure that it completely covers the airduct (B) without any obvious gaps.
2. Hang the two hooks (C) on the rod onto the holes on the grass box hanging ears (D).

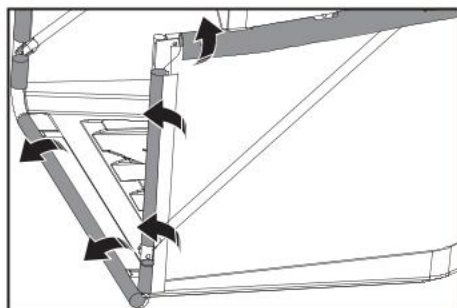


To assemble the grass catcher

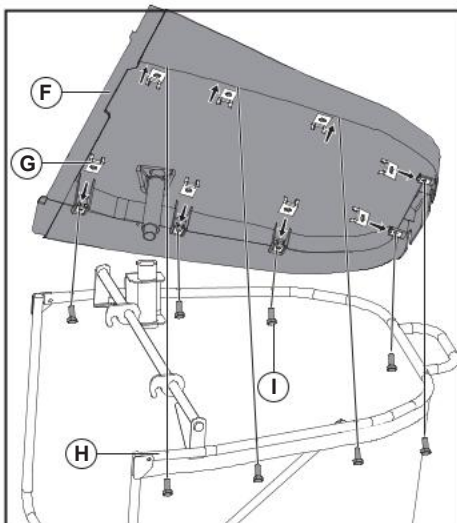
1. Install the front frame (B) on the top frame (A), securing each side with a bolt (D) and a nut (E).
2. Install the side support rod (C) on the front frame (B) and the top frame (A), securing each side with two bolts (D) and nuts (E).



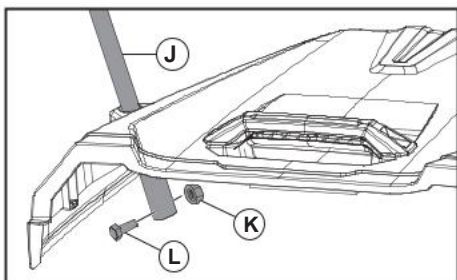
3. Attach the rubber tube elements to the front frame.



4. Insert the bolt clip (G) into the grass box lid (F), and secure the grass box lid (F) to the grass box frame (H) with eight bolts (I).

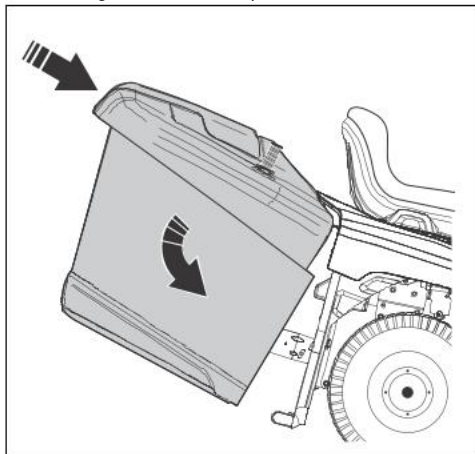


5. Install the screw (L) and the nut (K) in the tube of the grass catcher handle (J).



To install and remove the grass catcher

1. Tilt the grass catcher and put it on the 2 brackets.

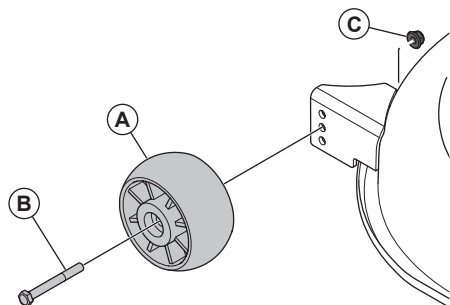


2. Release the grass catcher and let it move into position. Make sure that the latches in the bottom lock the bottom part of the grass catcher in position.
3. To remove the grass catcher, move the grass catcher handle until the latches release the bottom of the grass catcher. Lift the grass catcher from the brackets.

To install the anti-scalp wheels

Refer to *Assembly overview on page 12* for the correct fasteners for this task.

- Install the anti-scalp wheel (A), the bolt (B), and the nut (C) in 1 of the 3 holes.



To connect the battery



WARNING: Risk of electric shock. Make sure that the ignition switch is in the off position and that the ignition key is removed.

MOUNTING AND CONNECTING

The battery (A) is installed under the seat and is secured by a belt (B).

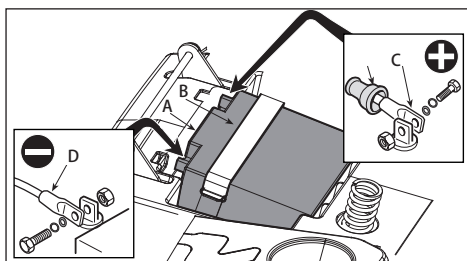
1. First connect the red wire (C) to the negative pole (–) and then the black wire (D) to the positive pole (+), using the screws supplied as shown.

2. Apply silicone grease to the terminals and check that the protective cap for the red wire (E) is in place.

IMPORTANT: Always fully charge the battery.

according to the instructions in the battery book-let.

IMPORTANT: To prevent the safety device in the electronic circuit board from cutting in, never start the engine until the battery is fully charged!



Operation

Introduction



WARNING: Read and understand the safety chapter before you use the product.

To fill fuel



WARNING: Petrol is very flammable. Be careful and refuel outdoors, refer to *Fuel safety on page 10*.



WARNING: Do not use the fuel tank as a support area.



CAUTION: Incorrect type of fuel can result in engine damage.

The engine runs on fresh, unleaded fuel with a minimum octane rating of 91 RON (87 AKI), not mixed with oil. We recommend biodegradable alkylate petrol (such as Aspen) however, E5 petrol is a suitable alternative.

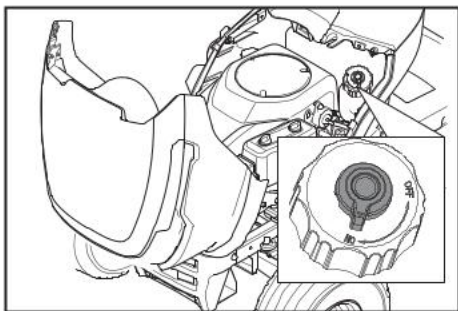
- Do a check of the fuel level before each use and refuel if it is necessary.
- Do not fully fill the fuel tank. Keep a space of a minimum 2.5 cm.

To do before you start the product



WARNING: Before you operate the product, carefully read and understand the safety instructions and the operation instructions.

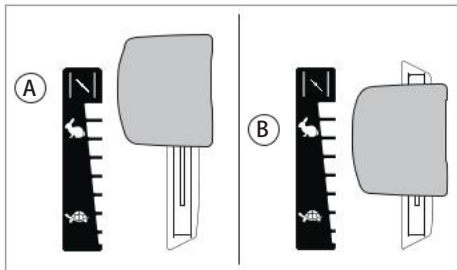
1. Do a check of the engine oil level. Refer to *To do a check of the engine oil level on page 31*.
2. Fill the fuel tank with fuel. Refer to *To fill fuel on page 16*.
3. Turn the switch on the fuel tank cap to the "ON" position.



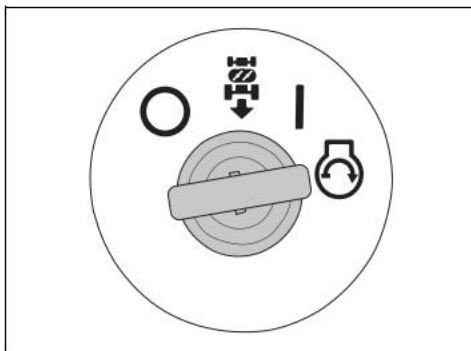
4. Make sure that the drive system is not engaged. Refer to *To engage and disengage the drive system on page 17*.
5. Put the cutting deck in the highest position. Refer to *To set the cutting height*.

To start the engine

1. Make sure that the cutting deck is disengaged. Refer to *To engage and disengage the cutting deck*.
2. Sit in the seat in work position.
3. Apply the parking brake. Refer to *To apply and release the parking brake*.
4. Push the throttle control lever to position (A) to close the choke.

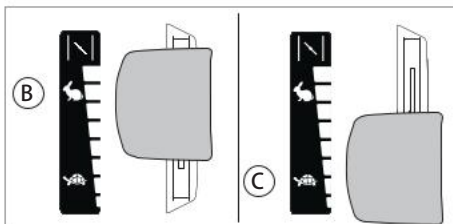


5. Turn the ignition key to the start position. When the engine starts, immediately release the ignition key. The ignition key goes back to the ON (I) position automatically when you release it.



CAUTION: Do not operate the starter for more than 5 seconds at a time. If the engine does not start, wait 15 seconds before you try again.

6. After the machine starts, quickly push the throttle control lever to the full throttle (B) position.
7. Let the engine run at half throttle for 1 minute before applying heavy load.
8. Push the throttle control to the full throttle position (B).



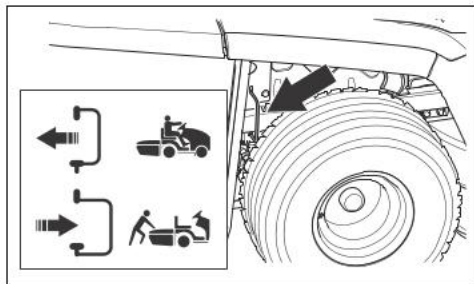
CAUTION: The throttle control lever must not be set to position (C) when adding load to the machine (such as mowing or walking), otherwise it is likely to stall. To engage the cutting deck when the engine is at full speed causes strain on the drive belts. Engage the cutting deck before you put the throttle control in the full throttle position.

To engage and disengage the drive system

To move the product with the engine off, the drive system must be disengaged.

CAUTION: Make sure that you fully pull out or push in the lever. Do not use middle positions.

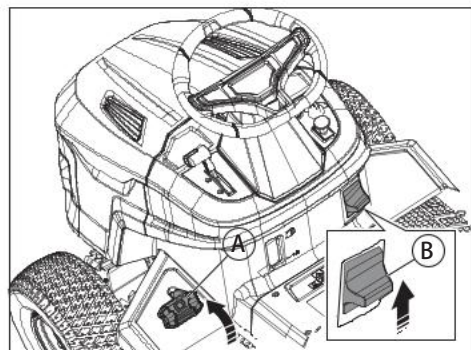
The lever to engage or disengage the drive system is found behind the right rear wheel.



- Push the lever in fully to engage the drive system.
- Pull the lever out fully to disengage the drive system.

To apply and release the parking brake

- To apply the parking brake, do the steps that follow.
 - a) Push down the parking brake pedal (A) fully and pull up the parking brake lock (B).

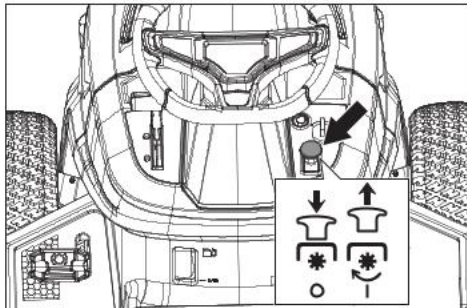


- b) Release the parking brake pedal.
- To release the parking brake, push down on the parking brake pedal and release it.

To engage and disengage the cutting deck

WARNING: Do not operate the cutting deck without a grass catcher or other accessory installed to the grass discharge.

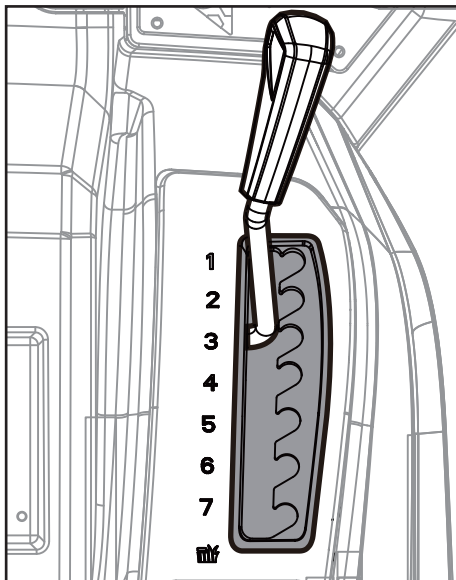
- Pull out the PTO button to engage the cutting deck.



- Push in the PTO button to disengage the cutting deck.

To set the cutting height

- Pull the cutting height lever in the direction of the seat and put it in 1 of the notches for the correct cutting height.

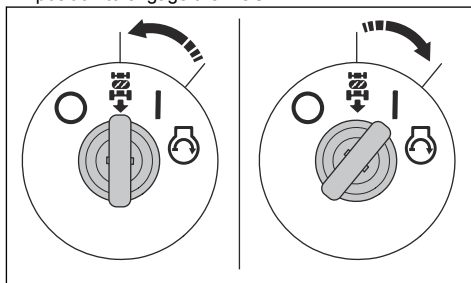


To use the reverse operation system (ROS)

Note: If you try to go rearward with the product when the cutting deck is engaged, the engine stops immediately. Engage the ROS to go rearward with the product when the cutting deck is engaged.

WARNING: Before and while you operate the product rearward, look down and behind the product for the safety of others.

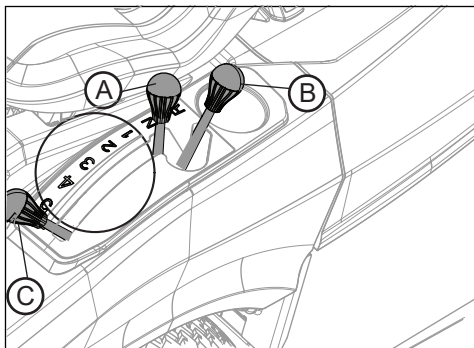
1. Turn the ignition key counterclockwise to the ROS position to engage the ROS.



2. Slowly push down the rearward pedal to start movement.
3. Turn the ignition key clockwise to the engine ON (I) position to disengage the ROS.

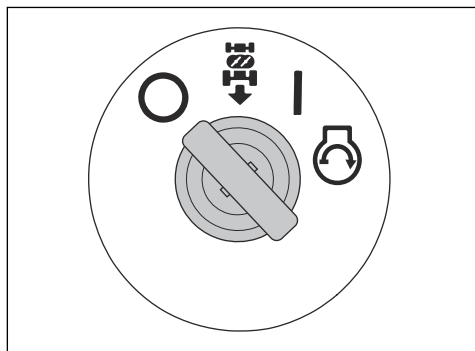
To operate the product

1. When the operating lever is placed at position (A), the lawn mower will be in neutral gear.
2. (B) is reverse gear, when the operating lever is placed at B, the lawn mower will reverse.
3. (C) is the maximum speed forward gear. Push the control lever to the number inside the circle, where different numbers represent different forward speeds. The larger the number, the higher the corresponding forward speed of the lawn mower, reaching the maximum forward speed at point (C).



To stop the engine

1. Disengage the cutting deck. Refer to *To engage and disengage the cutting deck* .
2. Turn the ignition key to the OFF (O) position.



3. When the product stops, apply the parking brake. Refer to *To apply and release the parking brake* .

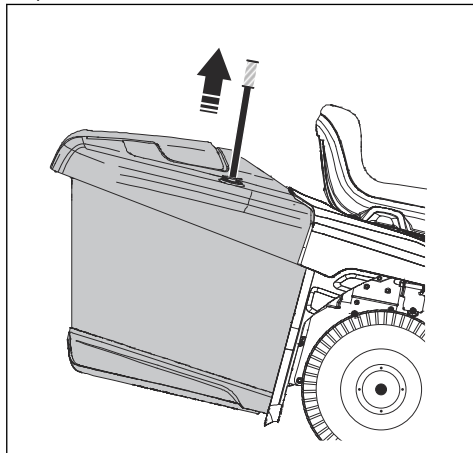
To get a good cutting result

- For best performance, do maintenance on the product regularly as given in the maintenance schedule. Refer to *Maintenance schedule* .
- Do not cut a wet lawn. Wet grass can give a bad cutting result.
- Do not use tyre chains when you operate the product with a cutting deck.
- Make sure that the cutting deck is level. Refer to *To adjust the parallelism of the cutting deck* .
- If the grass is high, start with a high cutting height and decrease it gradually.
- Move the product forward at low speed if the grass is high and thick.
- Use full throttle when you cut the grass.
- Cut the grass in an irregular pattern.
- To get the best cutting result, cut the grass frequently.

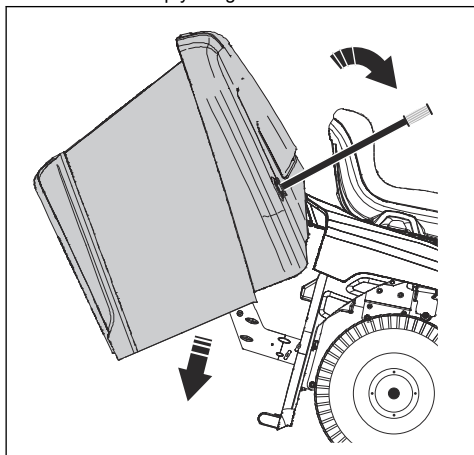
To empty the grass catcher

The product has an alarm that goes off if the grass catcher is full. To stop the alarm, disengage the cutting deck. Refer to *To engage and disengage the cutting deck* .

1. Move the product to a location where you can empty the grass catcher.
2. Make sure that the pedals are in the neutral position and engage the parking brake.
3. Pull up the grass catcher handle to the highest position.



4. Pull the grass catcher handle forward to tilt the grass catcher and empty the grass.



5. Push the grass catcher handle rearward to lower the grass catcher. Make sure that the grass catcher is fully lowered and that the latches lock the lower part of the grass catcher in position.

Maintenance

Introduction

WARNING: Before you do any maintenance work you must read and understand the safety chapter.

Maintenance schedule

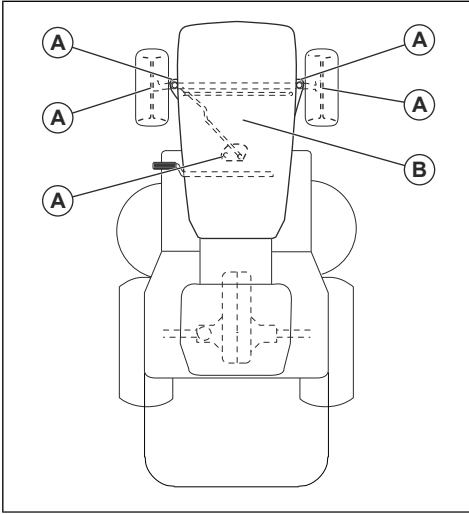
X = The instructions are given in this operator's manual.

O = The instructions are not given in this operator's manual. Let an approved service agent do the maintenance.

Maintenance schedule		Before each use/ weekly	Every 50 h or an- nually
General	Clean the battery and the terminals.		O
	Do a check of the battery level. Charge the battery if it is necessary.		X
	Examine all belts and pulleys for wear and damage. Replace worn or damaged parts.		O
	Clean the engine and the transmission.	X	X
	Examine all wires for damage.		O
	Lubricate the product. Refer to the lubrication over- view.		X
	Make sure that all fasteners are tightened correctly.		O
	Make sure that the tyre pressure is correct in all tyres.	X	X

Maintenance schedule		Before each use/ weekly	Every 50 h or an- nually
Engine	Examine the fuel hose for wear and damage. Re- place the fuel hose if it is necessary.		O
	Replace the fuel filter.		X
	Clean the air filter.	X	
	Replace the air filter.		X
	Examine the muffler and the heat deflector.	X	X
	Do a check of the engine oil level. Fill with engine oil if it is necessary.	X	
	Replace the engine oil.		X
	Replace the engine oil filter.		X
	Replace the spark plug.		X
	Do a check of the engine speed. Adjust the engine speed if it is necessary.		O
Transmission, con- trols and drive sys- tem	Examine the transmission cooling fan.	X	X
	Remove the wheels and lubricate the axles.		O
	Make sure that the product does not move when the pedals are in the neutral position.		X
	Do a check of the forward and rearward drive at different speeds.		O
	Do a check of the switch for the blade engagement control.		X
	Do a check of the switch for the cutting height lever.		X
	Do a check of the switches for the forward pedal and rearward pedal.		X
	Do a check of the parking brake.	X	
	Do a check of the operator presence control (OPC).	X	
Cutting equipment	Clean the cutting deck, below the belt covers and below the cutting deck.		X
	Do a check of the parallelism of the cutting deck. Adjust the cutting deck if it is necessary.		X
	Examine the cutting deck belt for wear and dam- age.		O
	Examine the blades for wear and damage. Sharpen or replace the blades if it is necessary.		X
	Do a check of the blade brakes (if equipped).		O
	Examine the grass catcher and the switches for the grass catcher (TC models only).		X

Lubrication schedule



A. General lubrication. Lubricate the spindle grease connection and the gear teeth of the sector gear and the steering column.

B. Engine lubrication. Refer to *To do a check of the engine oil level on page 31*.

To clean the product

CAUTION: Do not use a high-pressure washer or a steam cleaner. Water can go into bearings and electrical connections and cause corrosion which causes damage to the product.

Clean the product immediately after use.

- Do not clean hot surfaces such as the engine, muffler and exhaust system. Wait until the surfaces are cool, then remove the grass or dirt.
- Before you clean with water, clean with a brush. Remove grass cuttings and dirt on and around the transmission, the transmission air intake, and the engine.
- Clean the top of cutting deck, below the belt covers and below the cutting deck. To clean the cutting deck, refer to *To clean the cutting deck on page 23*.
- Use running water from a hose to clean the product. Do not use high pressure.
- Do not point the water at electrical components or bearings. Detergent usually increases the damage.
- When the product is clean, start the cutting deck for a short period to blow off remaining water.

To clean the engine and the muffler

Keep the engine and muffler free from grass cuttings and dirt. Grass cuttings soaked in fuel or oil on the engine can increase the fire risk and the risk that the engine becomes too hot. Let the engine cool before it is cleaned. Clean with water and a brush.

Grass cuttings around the muffler dry quickly and are a fire risk. Use a brush or remove the grass cuttings with water when the muffler is cold.

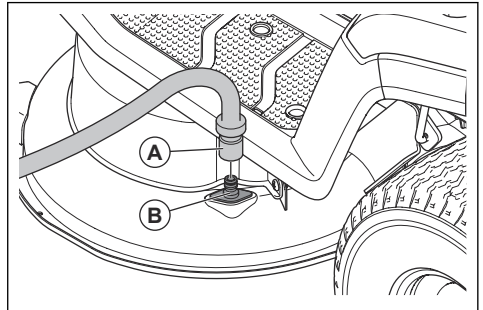
To clean the cutting deck

WARNING: Do not use the product with a broken or missing deck washout port. There is a risk of thrown objects. Replace a broken or missing deck washout port immediately.

1. Park the product in a clear area on your lawn that is near a water source with a garden hose.

CAUTION: Do not point the discharge chute of the product in the direction of buildings or vehicles.

2. Make sure that the cutting deck is disengaged. Refer to *To engage and disengage the cutting deck*.
3. Stop the engine. Refer to *To stop the engine*.
4. Apply the parking brake. Refer to *To apply and release the parking brake*.
5. Connect a garden hose (A) to the deck washout port (B) and start the water supply.



6. Sit in the seat and start the engine. Refer to *To start the engine*.

CAUTION: Examine the area again to make sure that the area is clear before you start the engine.

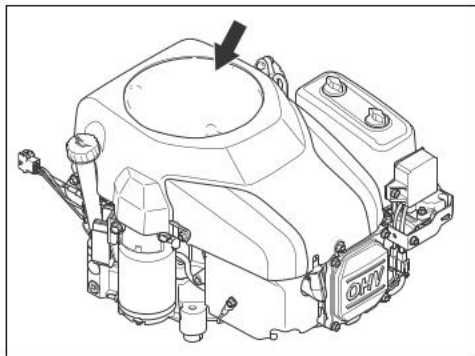
7. Engage the cutting deck and let it operate at full throttle until the cutting deck is clean. Refer to *To engage and disengage the cutting deck*.
8. Disengage the cutting deck and stop the engine. Refer to *To engage and disengage the cutting deck*.

9. Stop the water supply and disconnect the garden hose from the deck washout port.
10. Move the product to a dry area.
11. Sit in the seat and start the engine. Refer to *To start the engine on page 17*.
12. Engage the cutting deck and let it operate until the cutting deck is dry.

To clean the air intake of the engine

WARNING: Stop the engine. The air intake has rotating parts which can cause injury to your fingers.

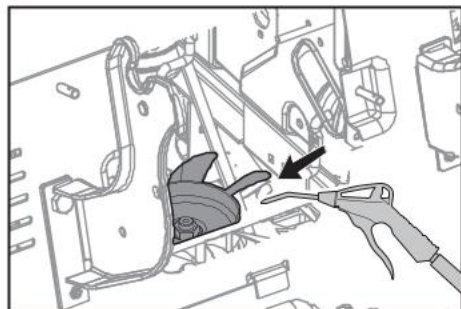
- Open the engine cover. Make sure that the air intake on the engine is not blocked. Remove grass and dirt with a brush.



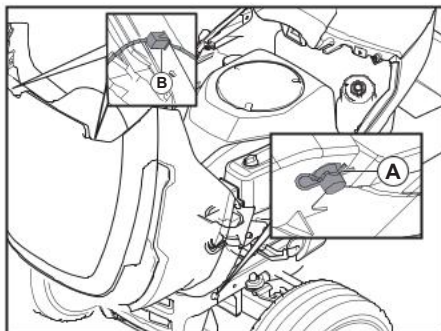
To clean the cooling fan on the transmission

WARNING: Stop the engine. The cooling fan rotates and can cause injury to your fingers.

1. Remove the center chute. Refer to *To remove and install the center chute on page 29*.
2. Clean the cooling fan on the transmission with compressed air.

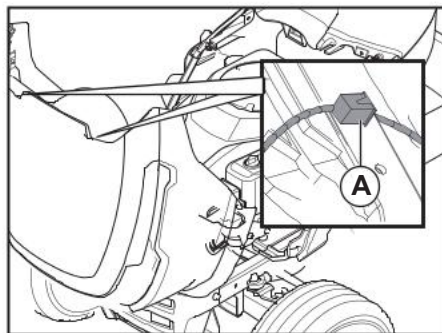


To remove and install the bonnet



1. Open the bonnet.
2. Disconnect the headlight wire connector (B) (there are two places; press the trapezoidal part on the surface of the connector and apply a little force to disconnect it);
3. Remove the retaining pins on both sides of the lawn mower, first pull out the R-type pin, then remove the cotter pin (A);
4. Install the bonnet in the reverse order.

To Replace the headlight assembly



1. Open the bonnet;
2. Disconnect the wiring connectors (A) for the left and right headlights;
3. Remove the headlight that needs to be replaced and install the new one;
4. Reconnect the headlight wiring in reverse order and close the bonnet.

To do a check of the parking brake

1. Park the product on a hard surface that slopes.

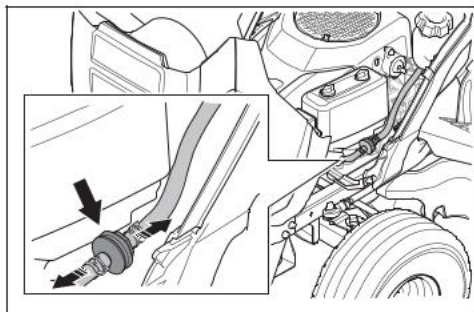
Note: Do not park the product on a grass slope when you do a check of the parking brake.

2. Apply the parking brake. Refer to *To apply and release the parking brake on page 18*.
3. If the product starts to move, let an approved service agent adjust the parking brake.
4. Push the parking brake pedal again to release the parking brake.

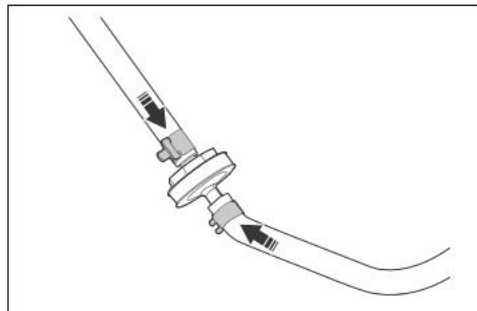
To replace the fuel filter

Note: The illustration shows one type of fuel filter. The fuel filter on your product can be different, but the procedure is the same.

1. Open the engine cover to get access to the fuel filter.
2. Compress the fuel tank hose to prevent leakage.
3. Move the hose clips away from the fuel filter with a pair of flat pliers.
4. Pull the fuel filter from the hose ends. A small quantity of fuel can leak.

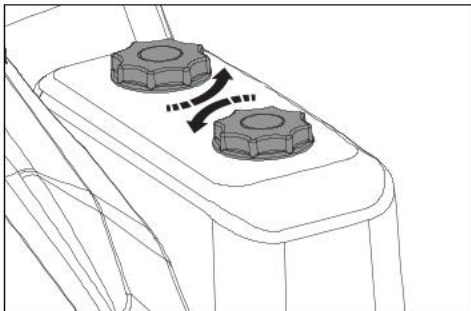


5. Push the new fuel filter into the hose ends. Apply liquid detergent to the ends of the fuel filter to make the connection easier.
6. Push the hose clips against the fuel filter.

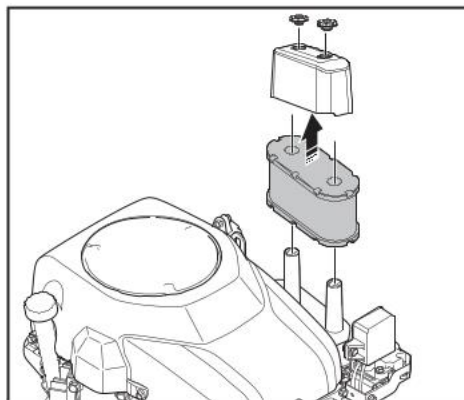


To clean and replace the air filter

1. Open the engine cover.
2. Loosen the knobs that hold the air filter cover and remove the cover.



3. Remove the air filter cartridge from the filter housing.



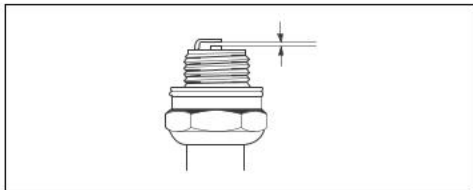
4. To clean the foam air filter, do the steps that follow.
 - a) Remove the foam air filter from the air filter cartridge.
 - b) Clean the foam air filter with a weak detergent.
 - c) Let the foam air filter become dry.
 - d) Install the foam air filter around the air filter cartridge.
5. To clean the paper air filter, do the steps that follow.
 - a) Hit the paper air filter against a hard surface.
 - b) Blow with compressed air from the inner side of the paper air filter.

CAUTION: If the paper air filter does not become clean, the paper air filter must be replaced.

6. Install in the opposite sequence.

To examine and replace a spark plug

1. Open the engine bonnet.
2. Remove the spark plug cap and clean around the spark plug.
3. Remove the spark plug with a spark plug wrench.
4. Examine the spark plug. Replace it if the electrodes are burned or if the insulation has cracks or damages. If the spark plug is not damaged, clean it with a steel brush.
5. Measure the electrode gap and make sure that it is correct. Refer to *Technical data on page 38*.



6. Bend the side electrode to adjust the electrode gap.
7. Put the spark plug back in and turn it by hand until it touches the spark plug seat.
8. Tighten the spark plug with the spark plug wrench until the washer is compressed.
9. Tighten a used spark plug $\frac{1}{8}$ of a turn more, and a new spark plug $\frac{1}{4}$ turn more.

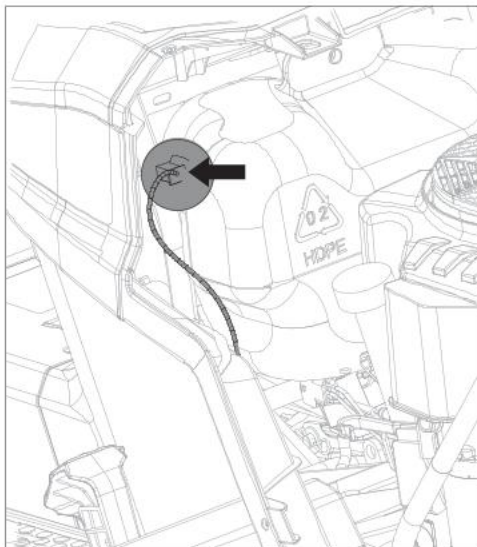
CAUTION: Spark plugs that are not tightened correctly can cause damage to the engine.

10. Attach the spark plug cap.

CAUTION: Do not try to start the engine if the spark plug or ignition cable is removed.

To replace the main fuse

Replace the main fuse: A 20A fuse is used to protect the circuit. If it is damaged, the machine will have startup issues. Important reminder: Broken fuses must always be replaced with fuses of the same type and rated current, and must never be replaced with fuses of other rated currents. If you don't understand why the fuse is damaged, please contact your dealer



CAUTION: If the machine is not used for a long time, the positive and negative wires of the battery must be removed; It is recommended not to leave the battery for more than 3 months as it may affect the normal startup of the machine

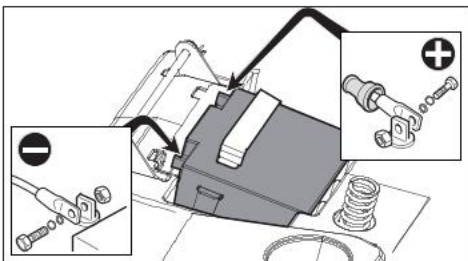
To replace the battery

WARNING: Risk of electrical shock and burn injuries. Do not use metal wristbands or other metal accessories. Metal items that touch the battery terminals can cause burn injuries, electrical shock, and short circuit of the battery.

1. Remove the strap and the battery cover.

Note: The battery is located behind the seat

2. Remove the terminal cover on the black battery cable.
3. Remove the screw, the nut, and the black battery cable from the negative (-) terminal on the battery.
4. Remove the terminal cover on the red battery cable.
5. Remove the screw, the nut, and the red battery cable from the positive (+) terminal on the battery.
6. Carefully remove the battery from the product.
7. Put a new battery in position.
8. Attach the black cable to the negative (-) terminal on the battery and install the nut, the screw and the terminal cover.
9. Install the terminal cover on the red battery cable.
10. Attach the red battery cable to the positive (+) terminal on the battery and install the nut and the screw.
11. Install the battery cover and the attach the strap.



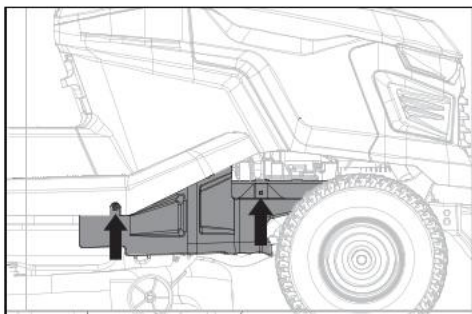
Tyre pressure

Make sure that the tyre pressure is correct in all 4 tyres. Refer to *Technical data on page 38*.

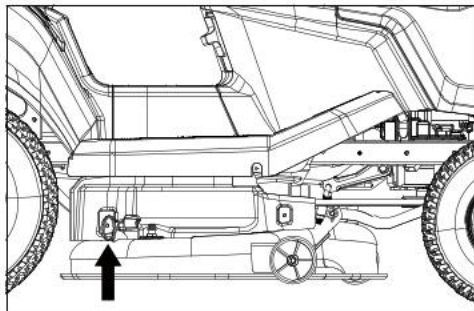
Cutting deck

To remove and install the cutting deck

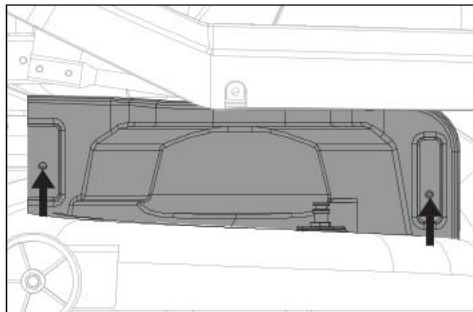
1. Disengage the cutting deck and stop the engine.
2. Put the cutting deck in the lowest position.
3. Remove the bolts on the skirt edge as shown in the diagram, two on each side, for a total of four bolts, and take out the skirt edges on both sides of the machine.



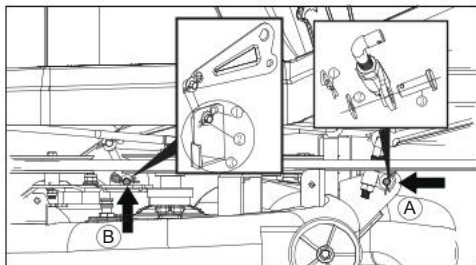
4. Disassemble the tension spring of the cutterhead belt as shown in the diagram, and separate one end of the spring from the hook on the cutterhead.



5. Remove the bolts of the belt cover as shown in the diagram, two on each side, for a total of four bolts, and take out the belt covers on both sides of the machine.



6. Remove the drive belt from the engine pulley.
7. Remove the two R-pins (forward and reverse gear side) and the washers and pins in the picture, totaling 2 R-pins, 2 washers, and 2 pins.

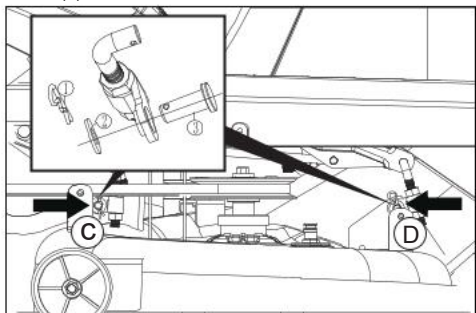


8. Remove the two R-pins, as well as the gasket and pin, from the brake gear side in the picture, totaling 2 R-pins, 2 gaskets, and 2 pins.

WARNING: Removing the pin may cause the cutterhead to fall rapidly. Please place a support under the cutterhead before removing the pin; Do not place your hands or feet under the blade before unplugging the pin.

WARNING: The cutting deck is heavy. Use a crowbar or equivalent below the cutting deck to hold the weight of the cutting deck when you disconnect the 2 rear links.

- a) Remove the clip (1), the washer (2) and the pin (3) from the left rear link.



- b) Disconnect the cutting deck from the left rear link.
c) Pull and hold the cutting height lever in the lowest position with one hand. Remove the clip, the washer and the pin from the right rear link.

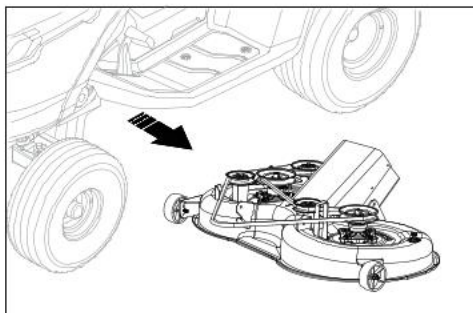
WARNING: Do not release the cutting height lever. The mechanism for the cutting height adjustment is spring-loaded. The force from the spring can cause crush injury if you do not pull and hold the cutting height lever.

- d) Disconnect the cutting deck from the right rear link.
e) Carefully release the cutting height lever.

WARNING: The mechanism for the cutting height adjustment is spring-loaded. The force from the spring can cause crush injury. Keep body parts away.

9. The above diagram illustrates the ACD. The three assembly structures are shown in the diagram. ① is the R-pin, ② is the gasket, and ③ is the pin. Remove the ①② from the ACD and then pull out ③ to remove the cutterhead.

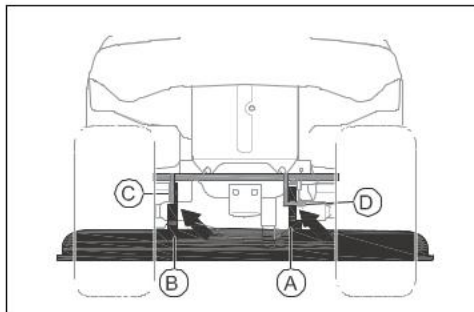
10. After opening the four pins of ABCD mentioned above, take out the cutterhead from the side.



11. Install the cutting deck in the opposite sequence.

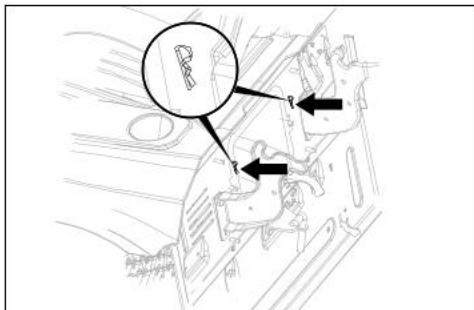
CAUTION: Make sure that the drive belt is installed correctly and does not get compressed when you install the cutting deck.

1. When installing the cutterhead, please ensure that the bracket is in the connected position, and the mounting plate (A) on the right cutterhead should be on the right side of the assembly plate (D) on the entire machine; The mounting plate (B) on the left cutterhead should also be on the right side of the assembly plate (C) on the entire machine.



To remove and install the center chute

1. Disengage the cutting deck and stop the product.
2. Set the power switch in the off (O) position and remove the power switch key.
3. Remove the grass catcher.
4. Pull out the R-shaped pin.



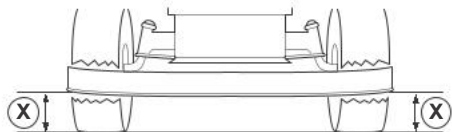
5. Pull out the center chute.
6. Install the center chute in the opposite sequence.

To adjust the parallelism of the cutting deck

To do a side-to-side adjustment of the cutting deck

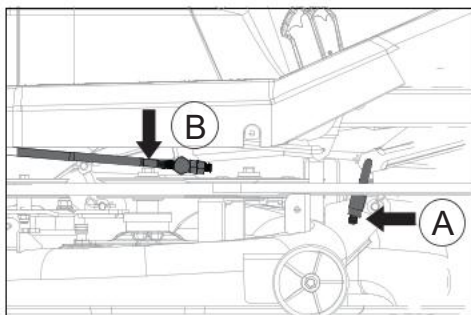
If the cutting height is different between the right and left side, the cutting height can be adjusted.

1. Make sure that the tyre pressure is correct in all 4 tyres. Refer to *Tire pressure* on page 27 .
2. Park the product on a level surface.
3. Put the cutting deck in the highest position.
4. Measure the distance (X) from the bottom edge of the cutting deck to the ground on the left and right side. The distance must be the same on the 2 sides.



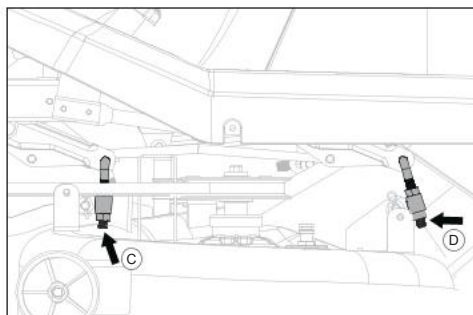
WARNING: The blades on the cutting deck are sharp and can cause injury. Use protective gloves.

5. Loosen the outer anti loosening nut at point B and unscrew it to a certain distance from the inner nut. By rotating the inner nut to control the overall lifting and lowering of the cutterhead, the ground clearance behind the cutterhead (forward and reverse gear sides) is controlled at 28 * 32mm. At this point, do not tighten the inner nut. Finally, tighten the outer anti loosening nut tightly against the inner nut and tighten it.



Note: The cutting height stays are behind the cutting deck, in front of the rear wheels.

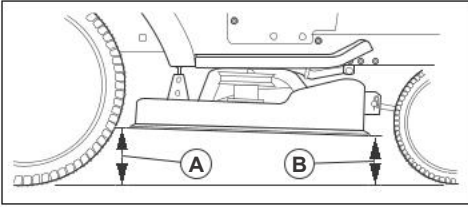
6. The adjustment method for A, C, and D is the same. If it is necessary to raise the cutterhead, loosen the upper anti loosening nut and screw it to the appropriate height. Then, screw the other nut below upwards until it fits the upper part and locks it. b: If it is necessary to adjust the cutterhead downwards: Loosen the lower anti loosening nut and screw it to a suitable low position, then screw the other upper nut downwards until it fits the lower part and locks it. Attention: It is recommended to adjust the heights of the cutter heads ABCD in the order of B → C → D → A. Ultimately, it should be ensured that the ground clearance at the edge of the rear single disc is 28*32m, and the optimal ground clearance at the edge of the front cutter disc is 20-23m. Please note that the ground clearance between the left and right cutterheads should be consistent.



To do a front-to-rear adjustment of the cutting deck

The cutting deck must be level side to side before you do front to rear adjustment. Refer to *To do a side-to-side adjustment of the cutting deck* on page 29 .

1. Make sure that the tyre pressure is correct in all 4 tyres. Refer to *Tire pressure* on page 27 .
2. Park the product on a level surface.
3. Put the cutting deck in the highest position.
4. Measure the distance from the bottom edge of the cutting deck to the ground at the rear (A) and at the front (B). The distance at the front must be 5–10 mm lower than at the rear.

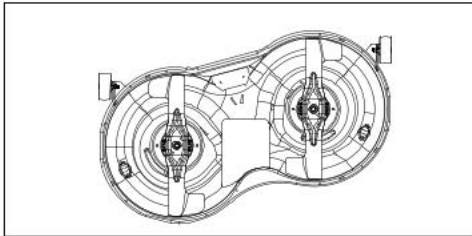


WARNING: The blades on the cutting deck are sharp and can cause injury. Use protective gloves.

To examine the blades

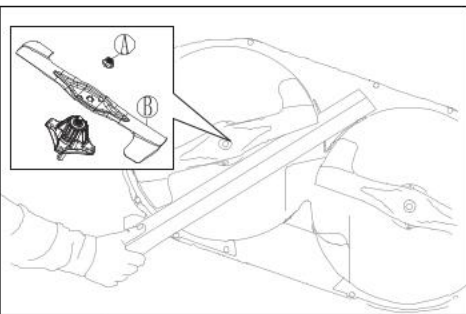
CAUTION: Damaged or incorrectly balanced blades can cause damage to the product. Replace damaged blades. Let an approved service agent help you sharpen and balance blunt blades.

1. Remove the cutting deck. Refer to *To remove and install the cutting deck on page 27*.
2. Look at the blades to see if they are damaged and if it is necessary to sharpen them.



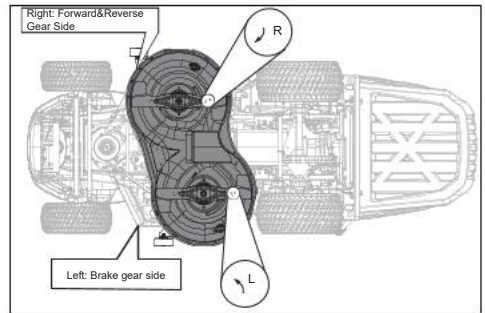
To replace the blades

1. Lock the blades with a wooden block.



CAUTION: Both blades are twisted counterclockwise.

2. Remove the nut (A) and blade (B).
3. As shown in the figure, place the blade with the arrow facing the ground. The blade arrow on the forward gear side of the lawn mower rotates clockwise, and the blade arrow on the brake gear side of the side lawn mower rotates counterclockwise.



CAUTION: The blades have different direction of rotation. The right blade must be installed on the right side and the left blade must be installed on the left side.

WARNING: Incorrect blade type can cause objects to eject from the cutting deck and cause serious injury. Use only the blades given in *To remove and install the cutting deck on page 27*.

4. Make sure that the bent ends on the blades point in the direction of the cutting deck.
5. Torque the bolts to 100 Nm.

To replace the cutting deck belt

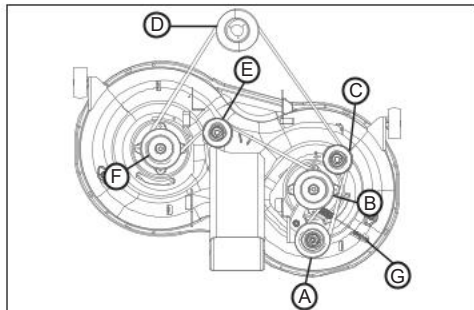
1. Remove the cutting deck. Refer to *To remove and install the cutting deck on page 27*.
2. Remove the dirt and grass around the bearing housings, blade pulleys and from the top surface of the cutting deck.

WARNING: Incorrect blade type can cause objects to eject from the cutting deck and cause serious injury. Use only the blades given in *To remove and install the cutting deck on page 27*.

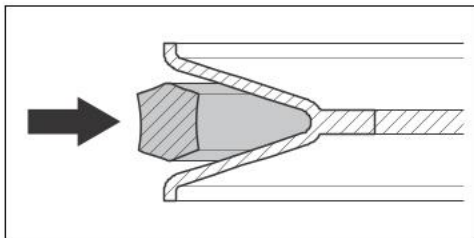
3. Make sure that the bent ends on the blades point in the direction of the cutting deck.
4. Torque the bolts to 100 Nm.

To replace the cutting deck belt

1. Remove the cutting deck. Refer to *To remove and install the cutting deck* on page 27.
2. Remove the dirt and grass around the bearing housings, blade pulleys and from the top surface of the cutting deck.
3. When disassembling the belt, the tension spring at point G should be loosened first, and then the belt should be disassembled in the order of A-B-C-F → E>D to remove and replace it. Install in the reverse order of disassembly.



4. Install a new cutting deck belt in the opposite sequence.
 - a) Make sure that the cutting deck belt is in the correct position in all belt pulleys.

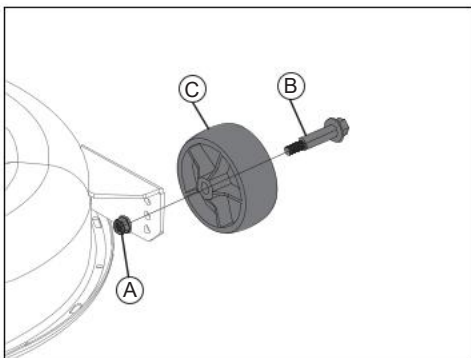


CAUTION: Make sure that the cutting deck belt is not twisted. Refer to the belt routing decal on the cutting deck.

To adjust the anti-scalp wheels

The anti-scalp wheels keep the cutting deck in the correct position on the ground and prevent lawn scalping in most terrain conditions. The anti-scalp wheels are adjusted correctly when they are slightly off the ground when the cutting deck is at the necessary cutting height.

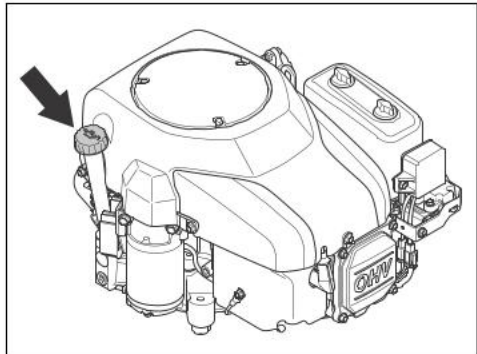
1. Park the product on a level surface and stop the engine.
2. Put the cutting deck in the necessary cutting height. Refer to *To set the cutting height*.
3. Remove the nut (A), the bolt (B), and the anti-scalp wheel (C).



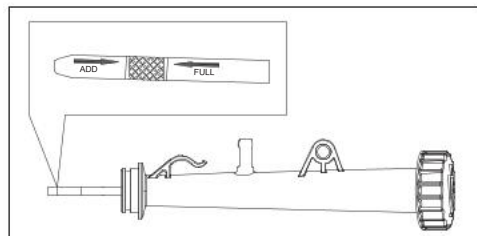
4. Install the anti-scalp wheel, the bushing, the bolt, the washer, and the nut in 1 of the 3 holes.
5. Adjust all anti-scalp wheels in the same procedure.

To do a check of the engine oil level

1. Park the product on level ground and stop the engine.
2. Open the engine cover.
3. Loosen the dipstick and pull it out.



4. Clean the oil from the dipstick.
5. Put the dipstick back in and tighten it.
6. Loosen and pull the dipstick out and read the oil level.
7. The oil level must be between the marks on the dipstick. If the level is near the ADD mark, fill oil to the FULL mark.



- Fill the oil through the hole that the dipstick sits in. Fill the oil slowly.
- Tighten the dipstick correctly before you start the engine. Start and idle the engine for approximately 30 seconds. Stop the engine. Wait 30 seconds and do a check of the oil level again.

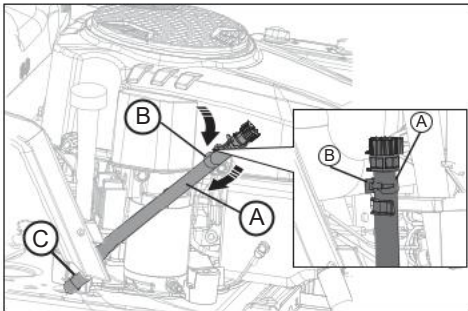
To replace the engine oil

If the engine is cold, start the engine and let it operate for 1–2 minutes before you drain the engine oil. This makes the engine oil warm and faster to drain.

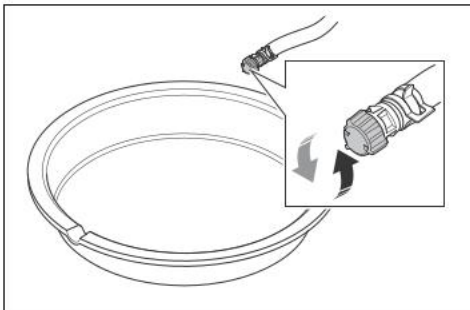
WARNING: Do not operate the engine for more than 1–2 minutes before you drain the engine oil. The engine oil becomes very hot and can cause burn injuries. Let the engine become cool before you drain the engine oil.

WARNING: If you spill engine oil on your body, clean with soap and water.

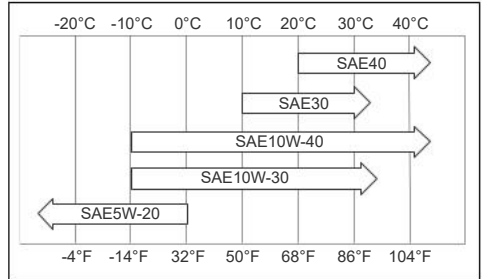
- Remove the oil drain hose (A) from the holder (B) and put the oil drain hose through the gap (C).



- Put a container below the oil drain plug.
- Remove the dipstick.
- Remove the end cap on the oil drain valve on the oil drain hose and let the engine oil drain into the container.



- When all oil is drained, install the end cap on the oil drain valve.
- If the engine has an oil filter, replace the oil filter. Refer to *To replace the oil filter*.
- Fill the oil slowly through the hole for the dipstick. Use an oil with viscosity that agrees with the temperature ranges in the figure. Refer to *Technical data*.



CAUTION: Do not mix different types of oil.

- Install the dipstick.
- Discard the used engine oil.

To replace the oil filter

WARNING: Use protective gloves. If you spill engine oil on your body, clean with soap and water.

- Drain the engine oil. Refer to *To replace the engine oil on page 32*.
- Turn the oil filter counterclockwise to remove it.
- Lightly lubricate the rubber seal on the new oil filter with new engine oil.
- Turn the oil filter clockwise by hand until the rubber seal is in position, then tighten a half turn more.
- Fill the engine with new engine oil. Refer to *To replace the engine oil on page 32*.
- Start the engine and let it operate at idle speed for 3 minutes.
- Stop the engine and make sure that there is no oil leakage from the oil filter.
- Fill with engine oil to make up for the oil held in the new oil filter.

We recommend 10w30 oil to be used in this machine.

Troubleshooting schedule

If you cannot find a solution to your problems in this operator's manual, speak to your servicing dealer.

Problem	Cause	Action
The starter motor does not crank the engine.	The parking brake is not applied.	Apply the parking brake. Refer to <i>To apply and release the parking brake on page 18.</i>
	The cutting deck is engaged.	Disengage the cutting deck. Refer to <i>To engage and disengage the cutting deck on page 18.</i>
	The main fuse is blown.	Replace the main fuse. Refer to <i>To replace the main fuse on page 26.</i>
	The ignition lock is broken.	Speak to your servicing dealer.
	The connection between the cable and the battery is bad.	Make sure that the battery is connected correctly. Refer to <i>To connect the battery on page 16.</i>
	The battery is too weak.	Refer to page 23 for battery replacement
	The starter motor is damaged.	Speak to your servicing dealer.
The engine does not start when the starter motor cranks the engine.	There is no fuel in the fuel tank.	Fill the fuel tank with fuel. Refer to <i>To fill fuel on page 16.</i>
	The spark plug is damaged.	Examine the spark plugs. Replace the spark plugs if it is necessary. Refer to <i>To examine and replace a spark plug on page 26.</i>
	The ignition cable is damaged.	Speak to your servicing dealer.
	There is dirt in the carburettor or fuel line.	Speak to your servicing dealer.
	The fuel filter is clogged.	Replace the fuel filter. Refer to <i>To replace the fuel filter on page 24.</i>
The engine does not run smoothly.	The spark plug is damaged.	Examine the spark plugs. Replace the spark plugs if it is necessary. Refer to <i>To examine and replace a spark plug on page 26.</i>
	The carburettor is incorrectly set.	Speak to your servicing dealer.
	The air filter is clogged.	Clean or replace the air filter. Refer to <i>To clean and replace the air filter on page 25.</i>
	The fuel tank vent is blocked.	Speak to your servicing dealer.
	There is dirt in the carburettor or fuel line.	Speak to your servicing dealer.
	The fuel filter is clogged.	Replace the fuel filter. Refer to <i>To replace the fuel filter on page 25.</i>

Problem	Cause	Action
The engine has no power.	The air filter is clogged.	Clean or replace the air filter. Refer to <i>To clean and replace the air filter on page 25</i> .
	The spark plug is damaged.	Examine the spark plugs. Replace the spark plugs if it is necessary. Refer to <i>To examine and replace a spark plug on page 26</i> .
	There is dirt in the carburettor or fuel line.	Speak to your servicing dealer.
	The throttle cable is incorrectly adjusted.	Speak to your servicing dealer.
The engine stops when you try to operate the product rearward.	The reverse operation system (ROS) is not engaged.	Engage the reverse operation system (ROS). Refer to <i>To use the reverse operation system (ROS) on page 19</i> .
The transmission does not have sufficient power.	The transmission air intake or the cooling fins are blocked.	Speak to your servicing dealer.
	The fan on the transmission is damaged.	Speak to your servicing dealer.
	There is no oil in the transmission or the oil level is too low.	Speak to your servicing dealer.
	The drive system is disengaged.	Engage the drive system. Refer to <i>To engage and disengage the drive system on page 17</i> .
The battery does not charge.	The battery is damaged.	Replace the battery. Refer to <i>To replace the battery on page 27</i> .
	The connection at the battery terminals is bad.	Make sure that the battery is connected correctly. Refer to <i>To connect the battery on page 16</i> .
There is vibration in the product.	The blades are loose.	Tighten the blades.
	The blades are incorrectly installed.	Make sure that the blades are installed correctly. Refer to <i>To examine the blades on page 30</i> .
	The blades are not balanced.	Examine the blades for wear and damage. Refer to <i>To examine the blades on page 30</i> .
	The engine is loose.	Speak to your servicing dealer.
	The belt pulleys are skew or loose.	Speak to your servicing dealer.

Problem	Cause	Action
The cutting result is unsatisfactory.	The blades are blunt.	Examine the blades for wear and damage. Refer to <i>To examine the blades on page 30</i> .
	The grass is long or wet.	Refer to <i>To get a good cutting result on page 20</i> .
	The cutting deck is not parallel.	Adjust the parallelism of the cutting deck. Refer to <i>To adjust the parallelism of the cutting deck on page 29</i> .
	There is grass blockage in the cutting deck.	Clean the cutting deck. Refer to <i>To clean the cutting deck on page 23</i> .
	The air holes in the cutting deck are clogged.	Clean the cutting deck. Refer to <i>To clean the cutting deck on page 23</i> .
	There is dirt around the blade pulleys.	Clean the cutting deck. Refer to <i>To clean the cutting deck on page 23</i> .
	The tyre pressure is different on the right and left sides.	Make sure that the tyre pressure is correct in all 4 tyres. Refer to <i>tyre pressure on page 27</i> .
	The product is operated at a too high speed.	Refer to <i>Technical data on page 38</i> .
	The engine speed is too low.	Refer to <i>Technical data on page 38</i> .
	The cutting deck belt slips.	Speak to your servicing dealer.
	The cutting deck belt is worn or damaged.	Replace the cutting deck belt. Refer to <i>To replace the cutting deck belt on page 31</i> .
The blades of the cutting deck does not start to rotate when the cutting deck is engaged.	There is no grass catcher, or other accessory, installed to the grass discharge (if applicable).	Install the grass catcher, or other accessory, to the grass discharge (if applicable).

Transportation, storage and disposal

Transportation

- The product is heavy and can cause crush injuries. Be careful when you load it onto or off a vehicle or trailer.
- Use an approved trailer for transportation of the product.
- Make sure that you have knowledge of local road traffic regulations before transportation of the product in a trailer or on roads.
- To make it easier to load the product onto a trailer, put the cutting deck in the highest position.

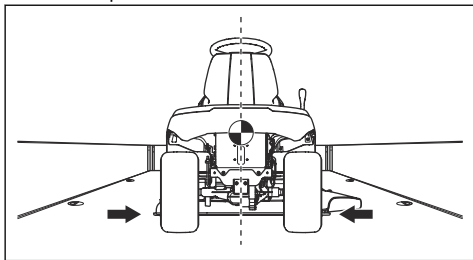
To safely attach the product for transportation

WARNING: Before you attach the product, you must read and understand the safety chapter. Refer to *Safety on page 6*.

WARNING: The parking brake is not sufficient to lock the product during transportation. Attach the product tightly to the load area.

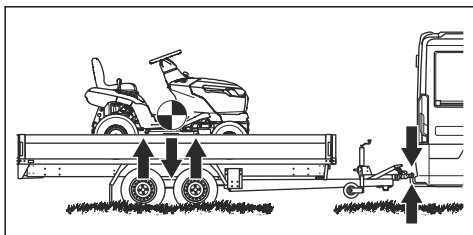
Equipment: 2 approved straps and 4 chocks.

1. Park the product in the center of the load area.

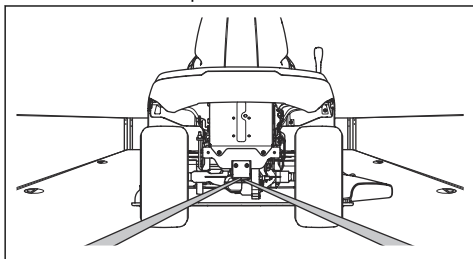


CAUTION: For transportation in transport vehicles with a cover, let the product become cool before you put it below the cover.

2. Make sure that the center of gravity of the product is above the wheel axle of the transport vehicle. If a trailer is used for transportation, make sure that the vertical force on the tow bar is correct.

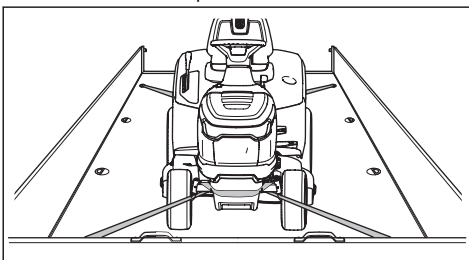


3. Apply the parking brake.
4. Remove all loose objects.
5. Attach the first strap to the tow bar.

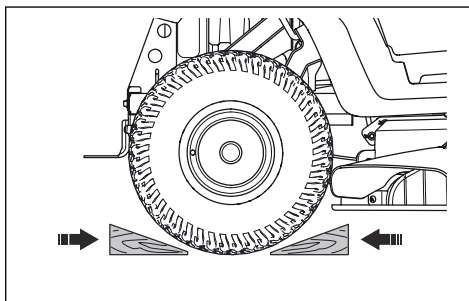


6. Tighten the strap rearward to attach the product to the load area.

7. Put the second strap around the front axle.



8. Attach the strap to the load area.
9. Tighten the strap in the direction of the front of the load area to attach the product to the load area.
10. Put the chocks in front of and behind the rear wheels.



Storage

Prepare the product for storage at the end of the season, and before more than 30 days of storage. If you keep fuel in the fuel tank for 30 days or more, tacky particles can cause blockage in the carburettor. This has a negative effect on the engine function.

To prevent tacky particles during storage, add a stabiliser. If alkylate petrol is used, stabiliser is not necessary. If you use standard petrol, do not change to alkylate petrol. This can cause sensitive rubber parts to become hard. Add stabiliser to the fuel in the tank or in the container used for storage. Always use the mixing ratios given by the manufacturer. Run the engine for a minimum of 10 minutes after you add the stabiliser until it flows into the carburettor.

WARNING: Do not keep the product with fuel in the tank in an indoor location or in locations with bad airflow. Risk of fire if fuel fumes come near open flames, sparks, or pilot lights in for example boilers, hot water tanks and clothes dryers.

WARNING: Remove grass, leaves and other flammable materials from the product to decrease the risk of fire. Let the product become cool before you put it in storage.

- Clean the product, refer to *To clean the product on page 23*. Repair paint damages to prevent corrosion.
- Examine the product for worn or damaged parts and tighten loose screws and nuts.
- Remove the battery. Clean it, charge it, and keep it cool during storage.
- Change the engine oil, and discard the waste oil.
- Empty the fuel tank. Start the engine and let it operate until there is no remaining fuel in the carburettor.

CAUTION: Do not empty the fuel tank and carburettor if a stabiliser has been added.

- Close the fuel shut-off valve.
- Remove the spark plugs and put approximately a tablespoon of engine oil into each cylinder. Manually turn the engine shaft to apply the oil and put the plugs back on.
- Lubricate all grease nipples, joints and axles.
- Keep the product in a clean and dry area and put a cover on it for more protection.
- A cover for protection of your product during storage or transportation is available at your dealer.

Disposal

- Chemicals can be dangerous and must not be discarded on the ground. Always discard used chemicals at a service center or an applicable disposal location.
- When the product is worn out, send it to the dealer or to an applicable recycling location.
- Oil, oil filters, fuel and the battery can have negative effects on the environment. Obey the local recycling requirements and applicable regulations.
- Do not discard the battery as domestic waste.
- Send the battery to service agent or discard it at a disposal location for used batteries.

Technical data

Technical data

Dimensions	
Wheel base, mm	1170
Track width, front, mm	900
Track width, rear, mm	900
Tyre pressure, front, bar	1.5
Tyre pressure, rear, bar	1.8
Max. tow equipment weight, at 10° gradient, kg	100
Front tyres	15x600-6
Rear tyres	18x850-8
Max , permitted vertical force on the tow bar , N/kg	250/25
Max , permitted horizontal force on the tow bar , N/kg	250/25
Maximum inclination angle , °	10
Vehicle dimensions, including cutterhead, grass box, length * width * height, mm	2360*1040*1100
Net weight, kg	200
Engine	
Brand / model	DV452
Nominal engine output, kW	9.2
Max. speed, rpm	2800
Displacement, cm ³	452
Fuel tank volume, liters	7.5
Start motor	Electric start, 12V
Oil volume, liters	1.2
Displacement	452
Fuel , lead-free , maximum ethanol/minimum octance grade	E10/92
Oil	SAE 15W40-SJ (-15°C SAE 10W40-SJ)
Electrical system	
Battery	12V, 18Ah
Spark plug	F7TC/F7RTC
Electrode gap, mm	0.7–0.8
Cutting deck	
Cutting width, mm	980
Cutting height, 7 positions, mm	30–90
TRANSMISSION	
Type	Manual
MAX Speed forward	8.2km/h
MAX Speed reverse	2.8km/h

Technical data

Noise emissions	
Measured sound power level L_{WA}	97.96dB(A)
Guaranteed sound power level, L_{WA}	100dB(A)
Sound levels	
Sound pressure level at operator's ear L_{PA}	86.3dB(A)
Vibration levels	
Whole-body vibration	0.302m/s ²
Hand-arm vibration	3.209m/s ²
Uncertainty K	1.500m/s ²

WARNING: Use only the cutting decks that are specified in this manual. Cutting decks that are not approved for this product can cause objects to eject at high speed and cause serious injury.

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 product will depend on the operating speed, environmental conditions and other values.

Service

Service

Do a yearly check at an authorised service center to make sure that the product functions safely and at its best during high season. The best time to do a servicing or overhaul of the product is low season.

When you send an order for the spare parts, give information about the purchase year, model, type, and serial number.

Always use original spare parts.

Declaration of Conformity

Product Name: Ride-on Lawnmower
Product Model: DCT38M-RDM

is herewith confirmed to fulfill all the relevant provisions of

- Machinery Directive: 2006/42/EC

and the following harmonized standard have been complied with:

- EN ISO 5395-1: 2013+A1
- EN ISO 5395-3: 2013+A1+A2

is herewith confirmed to fulfill all the relevant provisions of

- Electromagnetic Compatibility Directive: 2014/30/EU

and the following harmonized standard have been complied with:

- EN ISO 14982:2009

is herewith confirmed to fulfill all the relevant provisions of

Noise Emission Directive :Conformity assessment method to Annex VI Directive 2000/14/EC amended by 2005/88/EC

- Measured sound power level 97,96 dB(A)
- Guaranteed sound power level 100 dB(A)

The notified body involved:

No. 0197-TUV Rheinland LGA Products GmbH
Tillystraße 2 - 90431 Nürnberg – Germany

Responsible for marking this declaration is the:

Manufacture's Name: Compass and Spectre Ltd

Address: 60 Sunderland Road. SANDY. Beds. SG19 1QY

Person responsible for compiling the technical files established within the EU

Name ,Surname: Andrew Gunn

Address: 60 Sunderland Road. SANDY. Beds. SG19 1QY. UK.

Person responsible for making this declaration

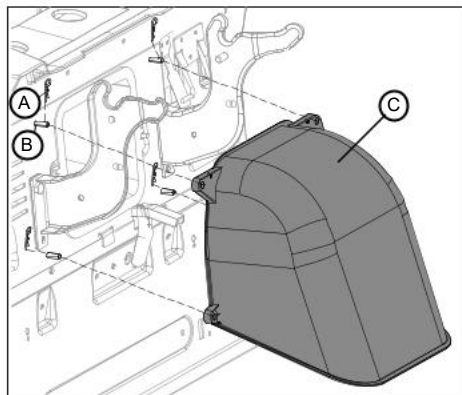
Name ,Surname: Andrew Gunn

Position /Title: Managing Director

Date: 2025/11/1

Rear installation

1. Insert the four holes on the rear seat (C) into the cylinder (B) (four in total) as shown in the diagram;
2. Insert the R-shaped pin (A) into the holes of the cylinder (four in total). Attention: This part is an optional accessory and may not be included in your machine. When using this part, do not install a grass catcher.
3. After installing this component, the grass from the lawn mower will be discharged from this component.



Installation of plug

1. Place the board (A) on the plug into the rear air duct (B) of the lawn mower. Note that when placing it, the board (A) should be placed at the angle shown in the diagram, and at the same time, ensure that the board (A) blocks the internal space of the air duct (B) without gaps;
2. Hang the hooks (C) on the rod (two in total) into the holes on the grass box hanging ears (D). Attention: This part is an optional accessory and may not be included in your machine. When using this part, a grass catcher must be installed.
3. After installing this component, the lawn mower will break the grass and the broken grass will be discharged from the inside of the cutterhead.

