



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

English

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Operator's Manual for Rider 155 and Rider 155 AWD

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WARNING!

Failure to follow cautious operating practices can result in serious injury to the operator or other persons. The owner must understand these instructions, and must allow only trained persons who understand these instructions to operate the mower. Each person operating the mower must be of sound mind and body and must not be under the influence of any mind altering substance.



WARNING!

Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.



WARNING!

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

Introduction

Congratulations

Thank you for purchasing a Husqvarna ride-on mower. This machine is built for the greatest efficiency and rapid mowing primarily of large areas. Controls in one place and a hydrostatic transmission regulated by steering controls also contribute to the machine's performance.

This manual is a valuable document. Following the instructions (use, service, maintenance, etc.) by all who operate this machine can considerably increase the lifespan of your machine and even increase its resale value. It is also very important to follow the instructions for the safety of you and others.

If you sell your machine, be sure to give the operator's manual to the new owner.

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

General

In this operator's manual, left and right, backward and forward are used in relation to the machine's normal driving direction.

Continuous dedication to improve our products require that specifications and design are subject to change without notice.

Driving and Transport on Public Roads

Check applicable road traffic regulations before transporting on public roads. If the machine is transported, you must always use approved fastening equipment and ensure that the machine is well anchored. DO NOT operate this machine on public roadways.

Towing

Do not tow this machine, it may cause damage to the drive system. Do not tow any trailers, etc with this mower. They may jackknife or overturn causing damage to the mower and possibly serious injury to the operator.

Operating

This machine is constructed only for mowing grass on lawns and other free and even ground without obstacles such as stones, tree stubs, etc. The machine can also be used for other tasks when equipped with special accessories provided by the manufacturer, for which the operating instructions are provided in conjunction with delivery. All other types of use are incorrect. The manufacturer's directions concerning operation, maintenance, and repairs must be carefully followed.

Lawnmowers and all power equipment, can be potentially dangerous if used improperly. Safety requires good judgement, careful use in accordance with these instructions and common sense.

The machine must only be operated, maintained, and repaired by persons that are familiar with the machine's special characteristics and who are well versed in the safety instructions. Use only approved repair parts to maintain this machine.

Accident prevention regulations, other general safety regulations, occupational safety rules, and traffic regulations must be followed without fail.

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

INTRODUCTION

Good Service

Husqvarna's products are sold all over the world and only in specialized retail stores with complete service. This ensures that you as a customer receive only the best support and service. Before the product is delivered, the machine has, for example, been inspected and adjusted by your retailer, see the certificate in the Service Journal in this operator's manual.

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

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

Manufacturing Number

The machine's manufacturing number can be found on the printed plate affixed to the left in the engine compartment. Stated on the plate, from the top are:

- The machine's type designation (I.D.).
- The manufacturer's type number (Model).
- The machine's serial number (Serial no.)

Please state the type designation and serial number when ordering spare parts. The engine's manufacturing number is stamped on one of the valve covers. The plate states:

- The engine's model.
- The engine's type.
- Code

Please state these when ordering spare parts. The Hydro Drive IZ gears have a barcode decal affixed to the rear of the gears.



These instructions are for your safety. Read them carefully.

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.
- 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. Slow down before turning.
- 8. Never leave a running machine unattended. Always turn off blades, set parking brake, stop engine and remove keys before dismounting.
- 9. Turn off blades when not mowing.
- 10. Mow only in daylight or good artificial light.
- 11. Do not operate the machine while under the influence of alcohol or drugs.
- 11. Watch for traffic when operating near or crossing roadways.
- 13. Use extra care when loading or unloading the machine into a trailer or truck.
- 14. Always wear eye protection when operating machine.

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 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.

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.
- 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.
- 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.
- 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. Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves and use extra caution when servicing them.
- 9. Check brake operation frequently. Adjust and service as required.
- 10. Maintain or replace safety and instruction labels, as necessary.



Danger, keep hands and feet away

Safe handling of gasoline

To avoid personal injury or property damage, use extrem care in handling gasoline. Gasoline is extremely flammable the vapors are explosive

- 1. Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- 2. Use only an approved gasoline container.
- 3. Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling.
- 4. Never fuel the machine indoors.
- 5. Never store the machine or fuel container where there is an open flame, spark or pilot light such as on a water heater or other appliances.
- 6. Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Allways place containers on the groundaway from your vehicle before filling
- 7. Remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from a gasoline dispenser nozzle.
- 8. Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until the fueling is complete. Do not use a nozzle lock-open device.
- 9. If fuel is spilled on clothing, change clothing immediately.
- 10. Never overfill fuel tank. Replace gas cap and tighten securely.





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 of the machine

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.

- 1. Tow only with a machine that has a hitch designed for towing. Do not attach towed equipment except at the hitch point.
- Follow the manufacturer's recommendation for weight limits for towed equipment and towing on slopes.
- 3. Never allowe children or others in or on towed equipment.
- 4. On slopes, the weight of the towed equipment may cause loss of traction and loss of control.
- 5. Travel slowly and allow extradistance to stop.

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.

EXPLANATION OF SYMBOLS AND DECALS

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



WARNING! Xxxxxxx xxxx xxxxxxxx xxx x Xxxxx xxxxxx xx. xx xxxxxxx xxx xxx xx.

Used in this publication to notify the reader of a risk of personal injury or death, particularly if the reader should neglect to follow instructions given in the manual.

IMPORTANT INFORMATION

XXXXXXX XXXX XXXXXXXX XXX XXX

XXXX XXXXXX XX.

Used in this publication to notify the reader of a risk of material damage, particularly if the reader should neglect to follow instructions given in the manual. Used also when there is a potential for misuse or misassembly.



EXPLANATION OF SYMBOLS AND DECALS

Placards



8009-442

Safety Instructions

These instructions are for your safety. Read them carefully.



WARNING!

This symbol means that important safety instructions need to be emphasized. It concerns your safety.



WARNING!

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.

General Operation

- Read, understand, and follow all instructions on the machine and in the manual before starting.
- Do not put hands or feet near rotating parts or under the machine. Keep clear of the discharge opening at all times.
- Only allow responsible adults, who are familiar with the instructions, to operate the machine.
- · Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blades.
- Be sure the area is clear of bystanders before operating. Stop machine if anyone enters the area.
- Never carry passengers. The machine is only intended for use by one person.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Stop the blades when crossing gravel surfaces.
- Do not operate machine without the entire grass catcher, discharge guard, or other safety devices in place and working
- Slow down before turning.
- Never leave a running machine unattended. Always turn off blades, set parking brake, stop engine, and remove keys before dismounting.



Read the operator's manual before starting the machine.



Clear the area of objects before mowing.



Never carry passengers.

- Disengage blades when not mowing. Shut off engine and wait for all parts to come to a complete stop before cleaning the machine, removing the grass catcher, or unclogging the discharge guard.
- Operate machine only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.
- Watch for traffic when operating near or crossing roadways.
- Use extra care when loading or unloading the machine into a trailer or truck.
- Always wear eye protection when operating machine.
- 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 enough to protect themselves and others from serious injury.
- Follow the manufacturer's recommendation for wheel weights or counterweights.
- Never allow children or other persons not trained in the use of the machine to use or service it. Local laws may regulate the age of the user. Anyone who operates this machine should first read and understand this Operator's Manual.
- Keep machine free of grass, leaves or other debris build-up which can touch hot exhaust / engine parts and burn. Do not allow the mower deck to plow leaves or other debris which can cause build-up to occur. Clean any oil or fuel spillage before operating or storing the machine. Allow machine to cool before storage.



WARNING! Engine exhaust and certain vehicle components contain or emit chemicals considered to cause cancer, birth defects, or other reproductive system damage. The engine exhaust contains carbon monoxide, which is a odorless, colorless, poisonous gas. Do not use the machine in enclosed spaces.

Personal Safety Equipment



WARNING!

When using the machine, approved personal protective equipment (shown in illustrations) shall be used. Personal protective equipment cannot eliminate the risk of injury but it will reduce the degree of injury if an accident does happen. Ask your retailer for help in choosing the right equipment.

- Make sure that you have first aid equipment close at hand when using the machine.
- Never use the machine when barefoot. Always wear protective shoes or boots, preferably with steel toecaps.
- Always wear approved protective glasses or a full visor when assembling or driving.
- · Always wear gloves when handling the blades.
- Never wear loose clothing that can get caught in moving parts.
- · Use ear protectors to avoid damage to hearing.



Personal protective equipment.



Mow upwards and downwards on slopes, not sideways.

Slope Operation

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

- Mow up and down slopes (10 degrees maxium), not across.
- Watch for holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Choose a low ground speed so that you will not have to stop while on the slope.
- Do not mow on wet grass. Tires may lose traction.
- Avoid starting, stopping, or turning on a slope. If the tires lose traction, disengage the blades and proceed slowly straight down the slope.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction, which could cause the machine to roll over.

WARNING!

Do not drive up or down hills with slopes greater than 10 degrees. And do not drive across any slopes.

- Use extra care while operating machine with grass catchers or other attachments; they can affect the stability of the machine. Do not use on steep slopes.
- Do not try to stabilize the machine by putting your foot on the ground.
- Do not mow near drop-offs, ditches, or embankments. The machine could suddenly roll over if a wheel is over the edge or if the edge caves in.



Be especially careful when driving on slopes.

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.

- Keep children out of the mowing area and in the watchful care of a responsible adult other than the operator.
- Be alert and turn machine off if a child enters the area.
- Before and while backing, look behind and down for small children.
- Never carry children, even with the blades shut off. They may fall off and be seriously injured or interfere with safe machine operation. Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the machine.
- Never allow children to operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child.



Never allow children to operate the machine.



Keep children away from the area to be mowed.

Maintenance

WARNING!

The engine must not be started when the driver's floor plate or any protective plate for the mower deck's drive belt is removed.

Safe Handling of Gasoline

To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive.

- Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- · Use only approved gasoline container.
- Never remove gas cap or add fuel with the engine running. Allow engine to cool at least two (2) minutes before refueling.
- · Never fuel the machine indoors.
- Never store the machine or fue container where there is an open flame, spark, or pilot light such as on a water heater or other appliances.
- Never fill containers inside a vehicle or on a truck or trailer bed with plastic liner. Always place containers on the ground away from your vehicle when filling.
- Remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from a gasoline dispenser nozzle.
- Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lockopen device.
- If fuel is spilled on clothing, change clothing immediately.
- Never overfill fuel tank. Replace gas cap and tighten securely.
- · Do not start the engine near spilled fuel.
- · Never use gasoline as a cleaning agent.
- If leaks arise in the fuel system, the engine must not be started until the problem has been resolved.
- Check the fuel level before each use and leave space for the fuel to expand, because the heat from the engine andthe sun may otherwise cause the fuel to expand and overflow.



Never fill the fuel tank indoors.



WARNING! The engine and the exhaust system, become very hot during operation. Risk for burns if touched. Allow engine and exhaust system to cool at least two (2) minutes before refueling

General Maintenance

- Never operate machine in a closed area.
- Keep all nuts and bolts tight to be sure the equipment is in safe working condition.
- Never tamper with safety devices. Check their proper operation regularly.
- Keep machine free of grass, leaves, or other debris build-up. Clean oil or fuel spillage and remove any fuel-soaked debris. Allow machine to cool before storing.
- If you strike a foreign object, stop and inspect the machine. Repair, if necessary, before restarting.
- Never make any adjustments or repairs with the engine running.
- Check grass catcher components and the discharge guard frequently and replace with manufacturer's recommended parts, when necessary.
- Mower blades are sharp. Wrap the blade or wear gloves, and use extra caution when servicing them.
- Check brake operation frequently. Adjust and service as required.
- Maintain or replace safety and instruction labels, as necessary.
- Do not modify safety equipment. Check regularly to be sure it works properly. The machine must not be driven with defective or unmounted protective plates, protective cowlings, safety switches, or other protective devices.
- Do not change the settings of governors and avoid running the engine with overly high engine speeds. If you run the engine too fast, you risk damaging the machine components.
- Be very careful when handling battery acid. Acid on skin can cause serious corrosive burns. If you spill battery acid on your skin, rinse immediately with water.



WARNING!

The battery contains lead and lead compounds, chemicals that are considered to cause cancer, birth defects, and other reproductive system damage. Wash your hands after handling the battery.



Never run the machine in an enclosed area.

- Acid in the eyes can cause blindness, contact a doctor immediately.
- Be careful when servicing the battery. Explosive gases form in the battery. Never perform maintenance on the battery whe smoking or near open flames or sparks. The battery can explode and cause serious injury/damage.
- Ensure that nuts and bolts, especially the fastening bolts for the blade attachments, are properly tightened, torqued and that the equipment is in good condition.
- Do not modify safety equipment. Check regularly to be sure it works properly. The machine must not be driven with defective or unmounted protective plates, protective cowlings, safety switches, or other protective devices.
- Do not change the settings of governors and avoid running the engine with overly high engine speeds. If you run the engine too fast, you risk damaging the machine components.
- Sparking can occur when working with the battery and the heavy cables of the starter circuit. This can cause battery explosion, fire or eye injury. Sparking in this circuit can not occur after the chassis cable (normally negative, black) is removed from the battery.



WARNING! Avoid electrical sparking and its consequences by the following routines:

- Use protective goggles.
- Ensure that the fuel filler cap is mounted tightly and no flammable substance is stored in an open vessel.
- Never work with the starter circuit if there is spilled fuel.
- Disconnect the chassis cable from the battery first and reconnect it last.
- Do not make a bridge short circuit across the starter relay to run the starter.
- Never use the machine indoors or in spaces lacking proper ventilation. The exhaust fumes contain carbon monoxide, an odorless, poisonous, and lethal gas.
- Stop and inspect the equipment if you run over or into anything. If necessary, make repairs before starting.



Do not smoke when performing maintenance on the battery. The battery can explode and cause serious injury/damage



Risk of sparking



Always use protective glasses when handling the battery.

- Never make adjustments with the engine running.
- The machine is tested and approved only with the equipment originally provided or recommended by the manufacturer. Only use approved repair parts for the machine.
- The blades are sharp and can cause cuts and gashes. Wrap the blades or use protective gloves when handling them.
- Check the parking brake's functionality regularly. Adjust and service as necessary.
- The mulch blades should only be used in familiar areas when higher quality mowing is desired.
- Reduce the risk of fire by removing grass, leaves, and other debris that may have accumulated on the machine. Allow the machine to cool before putting it in storage.
- Regularly clean deck and underside of deck, avoid spraying engine and electrical components with water.

Transport

- The machine is heavy and can cause serious crushing injuries. Be extra cautious when it is loaded on or unloaded from a vehicle or trailer.
- Use an approved trailer to transport the machine. Activate the parking brake, turn off the fuel supply, and fasten the machine with approved fastening devices, such as bands, chains, or straps, when transporting.
- · Do not operate this machine on public roadways.
- Check and abide by local traffic regulations
 before transporting the machine on any road.
- Do not tow this machine, it may cause damage to the drive system.
- Do not tow any trailers, etc. with this mower. They may jackknife or overturn causing damage to the mower and possibly serious injury to the operator.

IMPORTANT INFORMATION

The parking brake is not sufficient to lock the machine in place during transport. Ensure that the machine is well fastened to the transport vehicle. Always reverse the machine onto the transport vehicle to avoid tipping it over.



Clean the machine regularly

Customer responsibilities

- · Read and observe the safety rules.
- Follow a regular schedule in maintaining, caring for and using your mower.
- Follow the instructions under "Maintenance" and "Storage" sections of this owner's manual.
- This machine has no brain. Use yours!



WARNING!

This mower is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, bush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator

A spark arrester for the muffler is available through your authorized Husqvarna dealer.

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

This operator's manual describes Rider 155 and Rider 155 AWD. The machines are equipped with a 15.5 horse power engine from Kohler.

Rider 155 AWD also features all wheel drive.

The power transmission from the engine is handled

by a hydrostatic gearbox, which allows variable variation of the speed by using the pedals.

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



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.



Speed limiter

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



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



6017-214A

Parking brake

The parking brake is activated as follows:

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

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



Cutting unit

Rider 155 and Rider 155 AWD are equipped with a cutting unit.

Combi - 1030 mm/41"

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



6017-214

Lift lever for the 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.

Combi,

40-90 mm (1 9/16" - 3 9/16")

IMPORTANT INFORMATION

In order to obtain an even cutting height it is important that the air pressure in all four tires is the same 8,5 psi (0,6 bar).

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 under the seat and adjust it forwards or backwards to the required position.

Lock the setting with the knobs.

Refueling

The machine has one fuel tank, just behind the seat. The tank capacity is 1,8 gallons (7 liters). The engine will run on a minimum of 85-octane unleaded gasoline (no oil mix). Environmentally adapted alkylate gasoline can be used. See also Technical Data concerning ethanol fuel. Methanol fuel is not allowed.



WARNING!

WARNING! The engine and the exhaust system, become very hot during operation. Risk for burns if touched. Allow engine and exhaust system to cool at least two (2) minutes before refueling.

Gasoline is highly flammable. Observe caution and fill the tank outdoors (see the safety rules).



WARNING!

Fill to bottom of filler neck. Do not overfill. Wipe off any spilled oil or fuel. Do not store, spill or use gasoline near an open flame.

When operating in temperatures below 32° (0° C.), use fresh, clean winter grade gasoline to help insure good cold weather starting.





6004-014H



6004-015

IMPORTANT INFORMATION

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

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

Before starting

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



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

Rider 155 AWD. The engine can not be started if the parking brake is not pressed down.

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

Cold engine:

3. 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.







6017-011

8009-431



Warm engine:

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



5. Turn the ignition key to start position.



Do not run the starter for more than about 10 seconds at a time. If the engine does not start, wait about 60 seconds before trying again.



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

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

WARNING! Engine exhaust and certain vehicle components contain or emit chemicals considered to cause cancer, birth defects, or other reproductive system damage. The engine exhaust contains carbon monoxide, which is an odorless, colorless, poisonous gas. Do not use the machine in enclosed spaces.



To start an engine with a weak battery



WARNING! Lead-acid batteries generate explosive gases. Keep sparks, flame and smoking materials away from batteries. Always wear eye protection when around batteries.

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

If "jumper cables" are used for emergency starting, follow this procedure:

IMPORTANT INFORMATION

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

To attach jumper cables

- Connect each end of the RED cable to the • POSITIVE (+) terminal on each battery, taking care not to short against chassis.
- Connect one end of the BLACK cable to the NEGATIVE (-) terminal of the fully charged battery.
- Connect the other end of the BLACK cable to a good CHASSIS GROUND, away from the fuel tank and battery.

To remove cables, reverse order

- BLACK cable first from chassis and then from the fully charged battery.
- RED cable last from both batteries.



Jumper cables connection

Running

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



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

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



6017-214A

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

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



6007-008H

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

IMPORTANT INFORMATION

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



WARNING! Ensure that no one is near the machine when engaging the blades.

Moving tips

- Localise and mark stones and other fixed objects to avoid collision.
- Start with a high cutting height and reduce down until the required cutting result are obtained.
- The cutting results are best with a high engine speed (fast rotating blades) and low driving speed (slow moving machine). If the grass is not too high and thick, the driving speed can be increased without noticeably depreciating the mowing result.



Mowing pattern

- The best lawns are achieved if the grass is cut often. Mowing becomes more uniform and the grass cuttings become more evenly distributed over the surface. The total time consumption is not greater since it is possible to select a higher driving speed without inferior mowing results.
- Avoid mowing a wet lawn. The mowing results are inferior since the wheels sink down into the soft lawn.
- Wash down the underside of the cutting unit with water after use. Do not use a high pressure jet. Put the cutting unit in the service position while doing this.
- If you use the BioClip unit it is important to mow the grass regularly.



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 10°. Mow slopes upwards and downwards, never across. Avoid sudden changes in direction.

Operating on hills

Read the Safety Instructions "Driving on Slopes" in the "Safety Instructions".

- The slowest speed possible should be used before starting up or down hills.
- · Avoid stopping or changing speed on hills.
- If stopping is absolutely necessary engage the parking brake.
- To restart movement, release the parking brake.
- · Make all turns slowly.



6017-247

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 control and turn the ignition key to the STOP position.
- 3. When the Rider is at a standstill, press down the parking brake and push in the locking button.



Release lever

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



Pro 155 AWD has one control for the front axle and one control for the rear axle.

Pull the controls to their end positions. Do not use an intermediate position.

Rear Axle

Front Axle

front wheel.

engaged.

The control is positioned on the inside of the left rear wheel.

• Control pulled out, drive system disengaged.

The control is positioned on the inside of the left

· Forward control (pushed in), drive system

• Rear control (pulled out), drive system disengaged.

• Control pushed in, drive system engaged.



Rider 155 AWD rear

6021-028



Rider 155 AWD front

6021-

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. An annual service carried out by an authorized service workshop is recommended to maintain your machine in the best possible condition and to ensure safe operation.

Read "Maintenance" in the Safety Instructions section.

		Daily mainte-	At least once	Maintenance interval in hours			
Maintenance	Page	nance before start	a year	25	50	100	200
Cleaning	27	•					
Check the engine's oil level	45	•					
Check the engine's cooling air inlet	36	•					
Check the steering wires	29	•					
Check the battery	33	•					
Check the safety system	35	•					
Check screws and nuts	-	0					
Check for fuel and oil leakage	-	0					
Clean around the silencer	-	0					
Check the silencer	31						
Change the engine oil 1)	45			•1)	● 1)		
Replace the air filter's prefilter ²⁾	32						
Check the cutting unit	38						
Check the tyre pressures 60 kPa//8.5 PSI	36						
Lubricating the belt adjuster ³⁾	47						
Lubricate joints and shafts ³⁾	47						
Check the V-belts	-			0			
Check the hydrostat's cooling fins	-			0			
Check the transmission's oil level	46	•					
Adjust the parking brakes	30						
Check and adjust the throttle wire	31						
Clean the engine's and hydrostat's cooling flanges 2,4)	-				0		
Replace the air filter's pre-filter and paper filter ²⁾	32						
Replace the fuel filter	32						
Replace the plug	34						
Check the need of an oil change ^{4,5)} in the gearbox/hydraulic system	_		0				0

¹⁾ First change after 5 hours. Replace after every 25 hours with heavy loads or high temperatures.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.⁵⁾ Rider 155 AWD only. Replace first after 8 hours.

• = Described in these instructions.

O = 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.

Note: Specific written instructions shall be provided with the equipment for servicing operations, recommended by the manufacturer, that shall be performed with the engine running.

Cleaning and washing

60

Clean the machine directly after use.

It is much easier to wash off grass cuttings before they dry.

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

Rinse at normal water pressure.

Do not direct the jet towards electrical components or bearings.

Do not rinse hot surfaces, for example, the engine and exhaust system.

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

Lubricate the machine if necessary after cleaning.

Carry out extra lubrication when the bearings have been exposed to a degreaser or a water jet.

IMPORTANT INFORMATION

Avoid using a high pressure washer or a steam cleaner

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



8009-741

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.



6008-001

Front hood

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



Right-hand fender

Left-hand fender

fender.

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

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



6017-003

6017-013

Checking and adjustment of the steering wires

The steering is controlled by means of wires.

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

Check and adjust the steering as follows:

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





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

Support the wire so it does not twist.

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

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



Adjusting the parking brake

The parking brake is adjusted as follows:

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



WARNING!

A poorly adjusted parking brake can result in reduced braking ability and cause an accident.



Adjusting the Parking Brake Rider 155 AWD

Check that the parking brake is adjusted correctly by placing the machine on a slope with the front and rear axles disengaged. Apply and lock the parking brake. When the machine does not stand still, the parking brake should be adjusted according to the following.

- 1. Remove the left-hand wing cover.
- 2. Loosen the locking nuts (1).
- 3. Tension the cable using the adjuster screw (2) until the play in the cable is taken up.
- 4. Tighten the locking nuts (1).
- 5. The parking brake should be checked again after the adjustment has been made.
- 6. Assemble the left-hand wing cover.



WARNING! A poorly adjusted parking brake can result in reduced braking ability and cause an accident.





Adjusting 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. Loosen the clamping screw (by the arrow), and slide the throttle to the choke position.
- 2. Pull the throttle wire's casing as far as possible to the right and check that the choke is fully actuated.
- 3. Tighten the clamping screw.

4. Pull back the throttle to the full throttle position and check that the choke is no longer actuated.







Inspecting the muffler

Check regularly that the muffler is complete and secured correctly.

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



WARNING!!

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


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

Replacing the air filter

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" for correct service interval).

1. Fold open the engine cover.

Unscrew the wing nut (A) on top of the air filter and remove the cover.

3. Carefully remove the precleaner. Wash and reoil the precleaner every 25 hours of operation. Wash the precleaner in warm water with detergent. Rinse precleaner with clear warm water. Squeeze water out (do not wring to avoid tearing). Allow to dry before lightly oiling with fresh engine oil and installing it over the paper filter.

IMPORTANT INFORMATION

Do not use compressed air to clean the paper filter.

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

4. Replace the paper filter every 100 hours or if it is clogged with dirt. Unscrew the wing nut (B) and remove the paper filter.



WARNING! The engine and the exhaust system, become very hot during operation. Risk for burns if touched. Allow engine and exhaust system to cool at least two (2) minutes before refueling.









5. The paper filter may be carefully tapped on a hard surface to remove dust. Do not try to wash or blow it with compressed air.

- 6. Insert the paper filter and check that it is correct sealed to its seat. Tighten the paper filter wing nut and install the precleaner over the paper filter.
- 7. Fit the air filter cover and tighten its wing nut.





Check the level of the battery acid



Always use protective glasses when handling the battery.

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.

WARNING!

Do not short battery terminals by allowing a wrench or any other object to contact both terminals at the same time. Before connecting battery, remove metal bracelets, wristwatch bands, rings, etc. Positive terminal must be connected first to prevent sparks from accidental grounding.



Ignition system

The engine is equipped with an electronic ignition system. Only the spark plug requires maintenance.

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

IMPORTANT INFORMATION

Fitting the wrong spark plug type can damage the engine.

- 1. Remove the ignition cable shoe and clean around the spark plug.
- 2. Remove the spark plug with a 5/8" (16 mm) spark plug socket wrench.
- 3. Check the spark plug. Replace the spark plug if the electrodes are burned or if the insulation is cracked or damaged. Clean the spark plug with a steel brush if it is to be reused.
- 4. Measure the electrode gap with a gapping tool. The gap should be 1,02 mm/0.040". Adjust as necessary by bending the side electrode.
- 5. Reinsert the spark plug, turning by hand to avoid damaging the threads.
- 6. After the spark plug is seated, tighten it with 38-43 Nm (28-32 lbft).
- 7. Replace the ignition cable shoe.

IMPORTANT INFORMATION

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

IMPORTANT INFORMATION

Do not turn over the engine if the spark plug or ignition cable has been removed.

Checking the safety system

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

Rider 155. The engine should only be possible to start when the cutting unit is in its raised position and the hydrostat pedals are in the neutral position.

Rider 155 AWD The engine should only be possible to start when the cutting unit is in its raised position and the parking brake is applied.

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

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



Main fuse

The fuse is located in a loose holder under the battery case cover, in front of the battery. Type: Flat-blade mounting, 15 A. Do not use any other type of fuse when replacing. A blown fuse indicates that the mounting has burnt off. Pull the fuse out of the holder when replacing. The fuse is used to protect the electrical system. If it blows again shortly after replacing this is due to a short circuit, which must be rectified before the machine is used again.

Checking the tire pressure

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

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

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

IMPORTANT INFORMATION

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

Check the engine's cooling air intake

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

Fold open the engine cover.

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

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

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



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







Air intake grille



Cooling air intake

8009-470

WARNING!

Before performing any service or

- adjustment checklist:
- Engage the parking brake.
 Place the Blade-switch in the disengaged position.
- Turn ignition switch to "OFF" position and remove the key.
- position and remove the key.
 4. Make sure the blades and all moving parts have completely stopped.
- 5. Disconnect the spark plug wire from all spark plugs and place the wire where it cannot come in contact with the plug.

Fitting the cutting unit

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

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

- 2. Grasp the handle at the front (BioClip 90) or hold the frame of the cutting unit (2) and slide the unit underneath the rider mower, making sure that the tongue on the cutting unit (3) engages correctly.
- 3. Insert the bolt and secure it with a locking pin.



WARNING! Observe caution to avoid trapping your hand.

- 4. Press down the frame and insert the pin. Fit the drive belt around the drive wheels of the cutting unit.
- 5. Hook up the height adjustment strut.
- 6. Fit the front cover.
- 7. Secure the collet's spring, see ring in the diagram below.









Checking and adjustment of the cutting unit's ground pressure

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

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

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

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







Checking the cutting unit's parallelism

Check the parallelism of the cutting unit as follows:

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



6021-005

Adjusting the parallelism of the cutting unit

- 1. Remove the front hood and the right-hand fender, as described on page 21.
- 2. Undo the nuts on the lift strut.
- 3. Screw out (extend) the stay to raise the rear edge of the cover.

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

- 4. Tighten the nuts after adjustment.
- 5. On completion of the adjustment the unit's parallelism should be re-checked.
- 6. Fit the right-hand fender and the front hood.



6017-018

Removing the cutting unit



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

- 1. Carry out points 1-9 to put the cutting unit in the service position, see "Service position for the cutting unit" on page 33.
- 2. Remove the bolt (3) and lift off the cutting unit.

Fitting of the cutting unit takes place in the reverse order to removal.

When assembling: Make sure that the unit's "lug" enters the loop correctly on the underside of the machine.





8009-123

Belt replacement on the cutting unit

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

- 1. Remove the cutting unit, see page 38.
- 2. Undo the bolt on the lift strut and the two screws on the cover. Lift the cover off the cutting unit.
- 3. Loosen the spring that tensions the V-belt and pry off the belt.

Simply reverse the procedure to fit the new belt.

Service position for the cutting unit

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

Placing in service position

- Position the machine on flat ground. Apply the parking brake (A). Adjust the cutting unit to the lowest cutting height and lower the cutting unit (B).
- Remove the front hood by removing the pin. (There are complete instructions on using the service position inside the front hood).









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



6017-220

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



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



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



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



8009-122



6017-223



WARNING! Observe caution to avoid trapping your hand.

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



8. Pull the frame forwards and refit the pin.



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

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



6017-227

Restoring from service position

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



Checking the blades



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

Check that the blades' attachment screws are tight.

IMPORTANT INFORMATION

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

The blades should be balanced after sharpening.

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



WARNING!

Blades are sharp. Protect your hands with gloves and/or wrap blades with a heavy cloth when handling.



Combi 103

Removal of BioClip plug (Combi)

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

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

Fit the BioClip plug in the reverse order.



Service position



Removal of BioClip plug

8009-289

LUBRICATION

Check the engine's oil level

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

Fold open the engine cover.

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 be 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 as for the dip stick.

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

First and foremost use synthetic engine oil class SJ-CF 5W/30 or 10W/30 for all temperature ranges. Mineral oil SAE30, class SF–CC can be used at temperatures > $+5^{\circ}$ C (40°F).

Do not mix different types of oil.

Changing the oil

The oil should be changed for the first time after 5 hours of running time. Thereafter it should be changed every 50 hours of running time.

With heavy loads or high temperatures replace the oil after every 25 hours.



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 (A).
- 3. Let the oil run out into the receptacle.
- 4. Fit the drain plug and tighten.
- Fill up with oil to the FULL mark on the dip stick. The oil is filled in the same hole for the dip stick. See "Checking the engine's oil level" above for filling instructions. The engine holds 1.9 litres (1.8 USqt) of oil.
- 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.

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LUBRICATION

Change of oil filter

Replace oil filter every 200 operating hours. Drain oil first using the plug on the filter base. Remove the old filter using an oil filter tool. Lightly coat rubber gasket with new oil, then install filter by turning it to the right until hand tight. Tighten the filter an additional 1/2 turn. Check that the drain plug is reinstalled before starting the engine.

Start engine and check for leakage.

Check the transmission's oil level

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





Rider 155 AWD



2. Check that there is oil in the transmission's oil tank. Fill if necessary with engine oil. Rider 155: SAE 10W/30 (class SF-CC). Rider 155 AWD: SAE 10W/40 (class SF-CC).

The oil should be changed by an authorised service workshop, and is described in the Workshop Manual.

The filter is replaced at the same time as changing the oil.

Work on the system entails particular demands on cleanliness and the system must be vented before the machine is used.

LUBRICATION

Lubricating the belt adjuster

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

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

With daily use lubrication should be conducted twice a week.

General Iubrication

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

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

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



TROUBLE SHOOTING SCHEDULE

Problem	Procedure
Engine will not start.	 Fuel tank empty. Spark Plug defective. Spark 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/hydrostat pedal not in neutral. Hydrostat pedals not in the neutral position
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. Choking or incorrectly adjusted throttle cable
Engine seems to have no power.	 Air filter clogged. Spark Plug defective. Dirt in carburettor or fuel pipe. Carburettor incorrectly set. Choking or incorrectly adjusted throttle cable
Engine overheats.	 Engine overloaded. Air intake or cooling flanges blocked. Fan damaged. Too little or no oil in engine. Ignition defective. Spark Plug defective.
Battery does not charge.	 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.

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 gasoline fumes can come into contact with naked flames, sparks or pilot flames in boilers, hot water heaters, or drying cabinets, etc. It is very flammable and careless usage can cause serious person injury and property damage. Drain off the fuel in an approved container outdoors and well clear of naked flames. Never use gasoline for cleaning purposes. Use degreasing agents and hot water instead.

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

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

Cover

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

Service

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

Always use genuine parts.

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



TECHNICAL DATA

Dimensions

Length without cutting unit Width without cutting unit Height Service weight

Wheel base Track Front Track Rear Tyre size Tyre pressure, front & rear

Max. gradient

Engine

Manufacture Power Displacement Fuel

Tank volume Oil synthetic

Oil volume Start

Noise emissions and cutting width

Measured noise level Guaranteed noise level Cutting width

Electrical system

Type Battery Spark plug

Transmission

Manufacture Oil

Rider 155

2020 mm/6.61 ft 880 mm/2.89 ft 1060 mm/3.52 ft including unit 247 kg/ 543 lb 855 mm/2.8 ft 715 mm/2.34 ft, 625 mm/2.05 ft 16 x 6.50 x 8 60 kPa (0.6 kp/cm²/8.5 PSI)

15°

Kohler Engines model CV15 11.4/15.5 kW/h.p. 426 cm³/26 cuin Min. 87 octane unleaded (Research min 90 octane) (Gasohol < 10% etyl alcohol or MTBE < 15% by volume) 7 litres/7.4 USqt SAE 10W/30 (SAE 5W/30 below freezing point) class SG or SH 1.9 litres/1.8 USqt Electric starter

99 dB(A) 100 dB(A) 1030 mm/40.5"

12 V, negative earth 12 V. 24 Ah Champion QC12YC electrode gap = 1,02 mm/0.040"

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

Rider 155 AWD

2020 mm/6.61 ft 880 mm/2.89 ft 1060 mm/3.52 ft including unit 302 kg/ 666 lb 855 mm/2.8 ft 715 mm/2.34 ft 625 mm/2.05 ft 16 x 6.50 x 8 60 kPa (0.6 kp/cm²/8.5 PSI)

15°

Kohler Engines model CV15 11.4/15.5 kW/h.p. 426 cm³/26 cuin Min. 87 octane unleaded (Research min 90 octane) (Gasohol < 10% etyl alcohol or MTBE < 15% by volume) 7 litres/7.4 USqt SAE 10W/30 (SAE 5W/30 below freezing point) class SG or SH 1.9 litres/1.8 USqt Electric starter

99 dB(A) 100 dB(A) 1030 mm/40.5"

12 V, negative earth 12 V. 24 Ah Champion QC12YC electrode gap = 1,02 mm/0.040"

Tuff Torq SAE 10W/40, class SF-CC

Cutting unit

-	
Туре	3-blade hood Combi 1030 mm
Cutting width	1030 mm/40.5" (Combi)
Cutting heights	9 positions, 40-90 mm/1 9/16"-3 9/16"
Blade diameter	410 mm/16 1/4" (Combi 103)

TECHNICAL DATA

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

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

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

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

SERVICEJOURNAL

Work done	Date, mileage, stamp, sign
Pre-delivery service	
1. Top up battery with acid and recharge for four hours.	
2. Fit steering wheel, seat and any optional equipment.	
3. Adjust cutting unit:	
Adjust the lifting springs (the "weight" of the cutting unit should be 12-15 kg/26.5-33 lbs). Only applies to BioClip.	
Adjust cutting unit so that rear edge is about 2–4 mm/1/8" higher than front edge.	
Adjust cutting unit height setting so that cutting height limit is 5 mm/3/16" above the frame of the unit at the lowest cutting height.	
4. Check that engine has correct amount of oil.	
5. Check that the right amount of oil is in the transmission.	
6. Check and adjust tyre pressure (60 kPa/0.6 bar/8.5 PSI).	
7. Connect battery.	
8. Fill with fuel and start engine.	
9. Check that machine does not move in neutral.	
10. Check:	
Forward drive.	
Reverse drive.	
Operation of blades.	
Seat safety switch.	
Lift lever safety switch.	
Safety switch for the hydrostat pedals.	
11. Check engine revs 2 900±100rpm.	
12. Check the screws on the muffler. (10Nm)	
13. Tell customer about:	
Need and benefits of following the service schedule.	Pre-delivery service carried out.
The need and advantages of leaving the machine for regular service.	No outstanding problems. Certified:
The effects of maintenance on the machine's second hand value.	
Range of applications for BioClip.	
14. Complete proof of sale, etc.	
After first 5 hours	
1. Change engine oil.	

SERVICEJOURNAL

Work done	Date, mileage, stamp, sign







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