

REMOTE CONTROLLED MOWER SPIDER



OPERATOR'S MANUAL

SPIDER CROSS LINER and SPIDER CROSS LINER lite

EDITION 4 – 2020



Product's production number	
Engine type	
Engine's production number	
DVOŘÁK – svahové sekačky s.r.o. Pohled 277, 582 21 Pohled, Czech Republic +420 564 036 099, info@spider-cz.com, www.spidermower.com	

Notes:

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INTRODUCTION

OPERATING INSTRUCTIONS

This manual is an integral part of the mower, keep it clean and in good condition. In case of loss or damage, replace it immediately. Always keep it available with the machine and, if handed over to another owner/operator, please provide the manual as well.

Read these operating instructions carefully, if you do not understand some point, contact your supplier or the manufacturer to clarify. Do not operate the mower without proper understanding of the operation manual.

Improper use, maintenance or operation may result in serious injury or even death or to you or others.

This machine is intended for mowing grass under normal conditions. Any other use is contrary to the intended use of the machine. Strict compliance with the conditions of use, maintenance and repair as prescribed by the manufacturer also forms an integral part of the intended use of the machine.

Accident prevention, occupational safety and health as well as all traffic rules and regulations must always be followed.

The manufacturer disclaims any liability for modifications, changes made to the product that are not carried out and approved by the manufacturer, non-compliance with the instructions for use, as well as the consequences of damage to property or the health of the operator or other people.

USED SYMBOLS



Warns of a very likely risk of serious or life-threatening injury if the relevant instructions are not followed.



Provides helpful information.

1 INSTRUCTIONS

SERIAL NUMBER

In this manual you will find information about the **SPIDER CROSS LINER** and **SPIDER CROSS LINER lite**
Applies to all models starting with serial number.....

MANUFACTURER'S ADDRESS

DVOŘÁK – svahové sekačky, s.r.o.,
Pohled 277
582 21 Pohled, Czech Republic
www.spidermower.com

MOWER DELIVERY

Before putting the mower into operation for the first time, each owner is obliged to ensure the proper technical and practical training of his staff - the operation and the basic maintenance of the mower. Training and practical training will be carried out by a sales representative - a product specialist, a service worker of the manufacturer or supplier of the mower when putting the mower into operation.

The training will be registered by the manufacturer's or distributor's / dealer's representative with a written record of all trained personnel. Trained staff must sign the protocol.

Manufacturer representative is:

IDENTIFICATION OF COMPONENTS AND PRODUCT

MOWER

The mower serial number is marked on the label located on the mower.

ENGINE

Important engine information and serial number can be found on the rear of the engine block.



Engine name plate

Mower production label

Figure 1 – Identification of the mower

2 EC/EU DECLARATION OF CONFORMITY

Manufacturer:	DVOŘÁK – svahové sekačky s.r.o.
Address:	Pohled 277, 582 21 Pohled, Czech Republic
ID:	26013797
Name and address of the person authorised to compile the technical file (according to 2006/42/EC) and the name and address of the person who keeps the technical documentation (according to 2000/14 / EC, NV No. 9/2002 Coll.)	Pavel Vondráček, DiS. DVOŘÁK – svahové sekačky s.r.o. Pohled 277, 582 21 Pohled, ČR
Product (Machine) – Type:	Mower SPIDER CROSS LINER
Serial number:	
Description:	SPIDER CROSS LINER is a remote-controlled mower designed for mowing and mulching grasslands on normal and sloping terrain.
We declare that the machinery fulfils all the relevant provisions of the mentioned Directives (Government Provisions):	Directive 2006/42/ES, NV č. 176/2008 Sb. Directive 2014/30/EU, NV č. 117/2016 Sb. Directive 2000/14/ES, NV č. 9/2002 Sb.
The harmonized technical standards and the technical standards applied to the conformity assessment:	ČSN EN ISO 12100, ČSN EN ISO 5395-1, ČSN EN ISO 5395-2, ČSN EN ISO 4413, ČSN EN ISO 13857, ČSN EN ISO 14982:2009, ČSN EN ISO 11201, ČSN EN ISO 3744.
Persons participating conformity assessment:	Notified Body No. 1016. The Government Testing Laboratory of Machines., Joint-stock company. Třanovského 622/11, 163 04 Praha 6–Řepy, Czech Republic
	Final Report No.: 38 223
Used conformity assessment procedure:	On the basis of Directive 2000/14/EC, Annex VIII.
Measured sound power level:	$L_{WA} = 95,8 \text{ dB}$
Guaranteed sound power level:	$L_{WA,G} = 98 \text{ dB}$

Note: All regulations were applied in wording of later amendments and modifications valid at the time of this declaration issue without any citation of them.

Place and date of issue:

Pohled, 3.6.2019

Signed by the person entitled to deal in the name of producer::

Lubomír Dvořák, MBA.

Name:

Lubomír Dvořák, MBA.

Grade:

CEO

Signature:



 **spider** [®]
DVOŘÁK - svahové sekačky s.r.o.
Pohled 277, 582 21 Pohled
IČ: 26013797, DIČ: CZ26013797

3 SAFETY

Each mechanism is potentially dangerous. However, if you operate the product properly and keep it in good working condition, working with it will be completely safe. If you operate it carelessly or neglect the basic maintenance, it can be dangerous for you (the operator) as well as others.

You will find warnings in this manual and on the product, read them and follow them. The manual will alert you to potential hazards and advise you on how to avoid them. If you do not understand the warning messages, ask your employer or SPIDER distributor / dealer for an explanation.

Please be aware that security is not just a matter of responding to a given alert. You must keep in mind the possible hazards and try to avoid them for the duration of the work on or with the product.

Do not start working with the mower until you are sure that you can operate it properly.

Do not start working with the mower until you are sure it is safe for you and others around you.

If you are unclear about the product or work, ask someone who can properly inform you. Do not assume anything.

3.1 SAFETY WARNINGS

Safety instructions are provided in this manual and on the product. Each notification is indicated by a signal word. The meanings of the signal words are given below.

The words: '**DANGER**', '**WARNING**', '**CAUTION**' are to be taken seriously. They indicate the likelihood of serious injury or danger to life if the relevant instructions are not followed.



This safety symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of injury, carefully read the message that follows, and inform other operators.

3.2 SAFETY INSTRUCTIONS

- Do not enter or reach under the machine if it is lifted and not sufficiently supported. The machine should be supported on places marked by the symbol of a lifting jack.
- If the engine stops on a slope, it is necessary to secure the wheels against movement (for example with wooden wedges)
- The mower should only be transported in a container or on a trailer.
- Check bolt torques at regular intervals. The first check should be done after 8 operating hours. Pay attention to the attachment of the cutting blade and the proper bolt torque.
- The attaching flange of the blades or the bolts must not show sign of damage or wear. The bolts must be complete. The blade must be undamaged, evenly worn and adequately sharp.
- If you are driving the machine outside of the working area, always turn off the mowing blades and set the maximum mowing height, otherwise the blades may get damaged.
- Keep the product clean after use. Do not use gasoline or similar oil products for cleaning.
- Do not reach into the space under the mower with your hands or feet. Do not reach under the engine cover or into the gear mechanism.
- If you are forced to reach under the machine, wait until all rotating parts stop. Attention, it takes some time before blade runs down! The run-down time depends on the state and wear of the brake/clutch. Have the brake checked at regular intervals at an authorized servicing facility.
- While operating, wear closed shoes and work clothing. Do not wear loose clothes that could get caught by the machine, short trousers or light shoes.
- It is strictly prohibited for the operator to wear loose clothing.
- A local risk assessment should determine the need for a face shield.
- Do not operate the machine after drinking alcohol or using medication influencing perception.
- Before starting the engine, make sure that the mower blade is disengaged. If the blade switch is in the ON position, the machine cannot be started. When engaging the mower blade, step aside far enough to be protected against object accidentally thrown from the mower and to be able to stop the mower in case of an emergency. Do not enter the path of the mower.
- While operating the mower make sure that the mower is clearly visible at all times and within the range of the remote-control unit and that you can clearly recognize dangerous situations and react to them properly. Do not abuse the maximum reach of the remote control.
- When using the mower, follow all general work safety regulations.
- Work with the mower may only be started if the mower is not damaged by previous operation.
- Do not change the engine tuning, especially the engine speed regulator. Do not modify the exhaust pipe.

- Do not use the mower if there is less than 20% of fuel in the fuel tank.
- Do not move the mower by means of towing it behind another machine.
- The machine should only be used by persons over 18 years of age, who have been acquainted with the machine and the user's manual. The remote control (further referred to as "RC") is considered as a part of the machine
- The user's manual must be stored in a place permanently accessible to the operator and must be available to him at all times.
- Do not allow children or unauthorized persons use the product.
- Before starting to operate the machine, you have to be familiar with all the symbols next to the controls and indicators used on the mower and the RC.
- Pay special attention to the stopping and shutting-off of the engine and to the emergency shutting-off of the mower.
- Before using the mower on a slope, make sure you test and practice your mower-control skills on flat and level ground, which is sufficiently free and spacious. Master how to control the movement on a surface, to mow around bushes, trees and other terrain elements and obstacles.
- When operating the mower on slope, make sure that the engine revolutions are set to maximum speed. If you stop the mower on a slope, position the wheels across the slope.
- While operating or transporting the mower, the operator must always have the mower in their view. The maximum distance between the operator and the mower is 50 m/165 ft.
- While using the mower follow all safety regulations given in this manual and respect local regulations and provisions concerning noise-emissions, especially when using in hospitals, spas and other sensitive areas.
- The operator must pay attention to the area into which the mulched grass may be thrown. Neither the operator, nor any other persons, children nor animals should be allowed to enter this area. If mowing uneven terrain, the ejection and throwing of undesirable objects becomes more probable due to the displacement of the mowing device (tilt of one side of the machine) while crossing the edges of different terrain.
- The operator of the machine may be responsible for any damage caused to third parties by operating the machine.
- The mower may be used on dry surface on slopes listed in chapter 4.3. On wet or moist surfaces, the mowed slope should not exceed 20 degrees when using the machine without use of the integrated stabilizing winch.
- Before operating the machine, make sure you remove all loose stones, sticks, glass, wire, bones, branches and all other objects that can be picked up by the blades and thrown or that could damage the mower from the mowing area.
- While operating the mower avoid obstacles, do not drive over higher obstacles (such as stones, stumps, brick), near precipices, on unstable soil or in places where the mower could fall down or flip over.
- When operating pay attention to electric power lines especially when driving beneath electric wires where the radio signal may be lost. In such case the mower immediately shuts off the internal combustion engine and stops all movements.
- When using the machine near busy thoroughfares make sure that the mower does not endanger (by throwing undesirable objects) passers-by or their property. Choose a suitable working procedure (see chapter: Operating the mower).
- The operator/user is responsible for the safety of persons that enter the working area of the machine. Stop your work if these persons enter the working area.
- The transportation of persons, animals or loads on the mower is prohibited.
- Do not place any objects or tools on the product.
- While operating, especially in windy conditions, choose the operator's position carefully so as to keep the operator away from the stream of exhaust gas, dust or mulched grass.
- Stop work and clean the machine and its cooling surfaces several times while working in dusty conditions to avoid over-heating during operation. If necessary, clean the machine and its cooling surfaces several times while working. The dust layer must not exceed 1 mm.
- Refuel only when the machine is off – before operating, if possible – and the fuel tank is cold. Always keep at least 30% of the fuel in the tank. If you need to refuel during your work, do not fill the fuel into a hot tank or while the engine is still hot. Let the machine cool down.
- Before refueling push the STOP button on the control panel of the mower.
- Never refuel while the engine is running.
- Do not start the engine if you find spilled fuel, open vessels with fuel or other combustible objects or gases in the immediate proximity of the mower.
- Do not refuel near open fire.
- Do not place this product near open fire or other sources of heat.
- While operating or immediately after shutting the machine off do not touch those parts of the machine that heat up during operation. This concerns mainly the engine exhaust pipe, metal parts of the hydraulic drive and metal parts of the internal combustion engine.
- While operating do not touch the high voltage conductor leading to the sparking plug.
- After starting the engine, test the correct functioning of the emergency engine stop on the radio transmitter. This function should be checked at least once during every shift and every time you enter a new area for mowing or mulching.
- Before starting your work test the correct functioning of the safety components (EMERGENCY STOP...) on the mower and the RC.
- Never leave the engine running without supervision.

- If the engine is running, do not put aside the transmitter and do not touch or move any parts of the machine.
- Always stop the engine when leaving the machine, secure it against starting by pushing the red EMERGENCY STOP button on the control panel of mower and by removing the key. Never leave the transmitter next to the mower, but put it in a different, properly secured place inaccessible to third persons.
- Do not engage the mowing blade until immediately before mowing.
- Turn off the mowing mechanism, shut off the engine and remove the key from the ignition every time:
 - You remove dirt from the mowing mechanism (grass or debris).
 - You run over an unknown object and need to check for possible damage or to repair it
 - The machine unusually intensively vibrates and you need to find the cause
 - You repair the engine or other parts of the mower (also unplug cables from sparking plugs)
- While operating, avoid mole-hills, concrete bases, guard-stones, stumps, loose stones and curbs. These must not come into direct contact with the blade as they could cause serious damage. These may also compromise the mower stability.
- Do not drive the mower into heaps of sand, gravel or similar materials
- The mower may only be operated during daylight or under very good artificial light conditions.
- Do not use the mower in limited visibility (dusk, fog, heavy rain etc.)
- Do not let the engine run in enclosed spaces. The exhaust gases contain CO₂. They damage health and can ultimately cause death.
- The engine should only be started and operating in open spaces. If the engine is started and operated in enclosed spaces, the exhaust gases must be conducted away by the means of prolonging the exhaust pipe outside the enclosed space. Proper ventilation and fresh air supply must be secured in order to prevent the accumulation of CO₂.
- Before storing the machine in a closed space, let the engine and the hydraulic drive of the machine cool properly.
- Regularly remove all combustible objects (dry grass, leaves...) from the areas around the exhaust pipe, engine, and battery.
- Always control the machine from a working station, which gives you a perfect view of the whole working area and of the machine.
- While working, change your working position to have a perfect view of the mower at all times.
- When operating the mower on slopes never enter the space directly below or above the mower.
- The working position should be far enough (maximum 50 m / 165 ft.) to prevent the operator from getting hit by objects that may be accidentally thrown by the mower.
- Do not operate the mower if you cannot see it (behind terrain obstacles, corners of buildings, hidden in grass etc.)
- Before starting the mower, check the state of the safety labels. If any labels are damaged or missing, contact your dealer and replace such labels on the machine. Get thoroughly acquainted with these labels. The placement of the labels on the machine is obligatory.
- Do not remove or damage any of the safety labels.
- Do not remove any covers or safety elements. They are for your protection.
- Do not use the machine if any of the protecting devices or covers is damaged or missing.
- Keep the machine and its accessories clean and in a good technical condition at all times.
- It is strictly prohibited to make any changes or modifications to the machine that were not previously approved by the manufacturer. Any modification to the machine may lead to a hazardous situation or injury. If these instructions are not followed, the manufacturer does not bear any liability for the machine and the terms of warranty may be invalidated.
- The machine must always be equipped with all covers and protective elements.

3.3 SAFETY LABELS

Safety labels are strategically placed around the perimeter of the product to remind you of potential risks.

If you need reading glasses, you must wear them when reading safety labels. Do not overestimate your strength when reading safety labels. If you do not understand the danger shown on the safety label, refer back to: [Safety Label Identification](#).

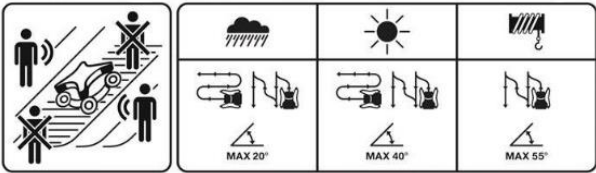
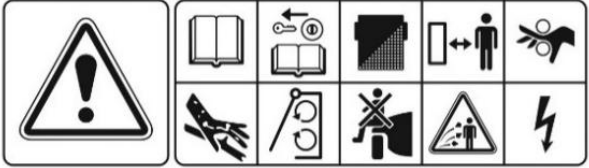
Keep all safety labels clean and readable. Replace any damaged or lost safety labels. Make sure that the spare parts also contain safety labels if necessary.



WARNING

Safety labels on the mower warn against a specific hazard. Failure to follow safety instructions may result in injury.

SAFETY LABEL IDENTIFICATION

Item	Part No.	Description	Quantity	Label
1	SXP-010	Height of cut label	1	
2	SXP-012	Fuel label	1	
3a	SXP-006	Safe operating distance	4	
3b		Danger of being hit by flying objects		
3c		No manipulation with moving parts until the whole system is stopped		
3d		Warning, do not use your hands as protection when changing the cutting blade		
3e		Attention, danger of being injured by rotating blade		
3f		Attention, do not open or detach the covers while the mower is in use		
3g		Attention, flammable substance, danger of fire		
4a	SXP-005	Danger zone	1	
4b		Climbing ability		
5a	SXP-004	Read the manual prior to usage	1	
5b		When performing maintenance, repair or any intervention on the machine, follow the instructions for use, remove the ignition key		
5c		Wear protective equipment; eye protection		
5d		Keep a safe distance		
5e		Risk of dragging fingers and hand palm into the machine		
5f		Risk of injury from high pressure fluid		
5g		Close all guards before starting up		
5h		Transport of persons on the machine is prohibited		
5i		Hazard warning of flying objects		
5j		Caution electric accumulator		

6a	SXP-001*	Correct winding direction of the rope	1	
6b		Wrong direction for rope winding		
6c		When winding / unwinding, keep the rope tightened		
7a	SXP-002	Read the manual before handling	1	
7b		Risk of dragging fingers and hand palm into the machine		
7c		Warning: Do not open, do not remove cover when machine is running		
7d		Switching the machine on / off		
8	SXP-003*	Turning the winch on / off by turning the lever	1	

* Not included in lite version

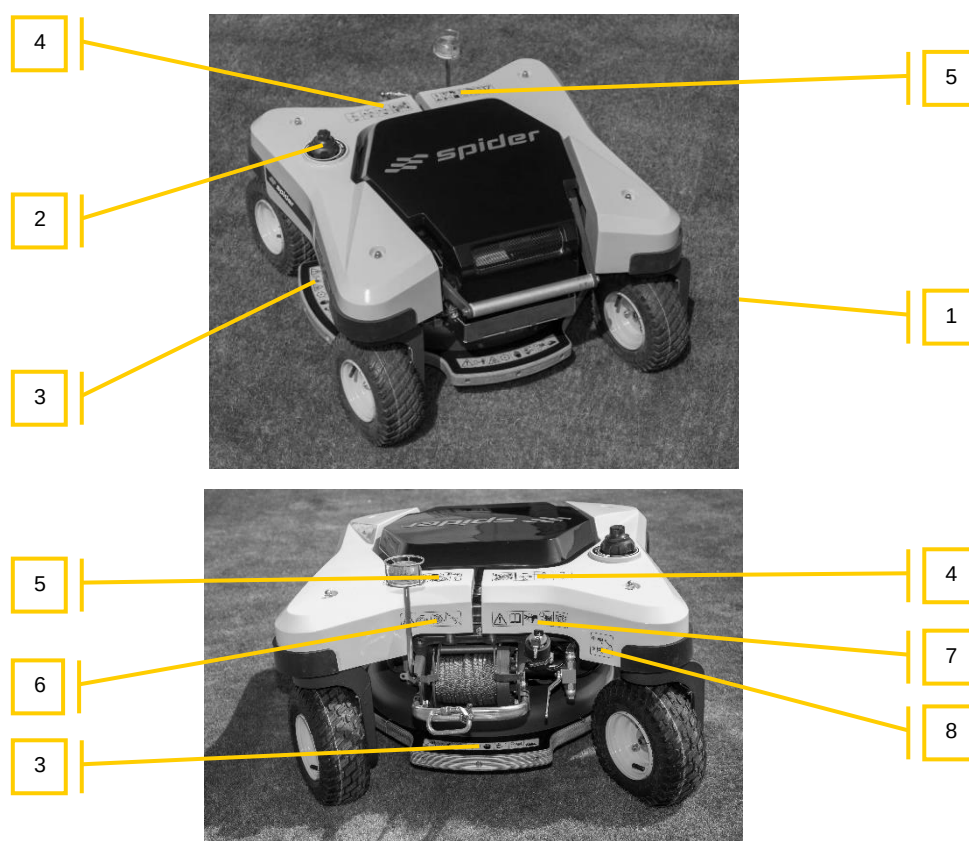


Figure 6 - Safety labels

4 ABOUT THE PRODUCT

4.1 MAIN COMPONENTS LOCATIONS

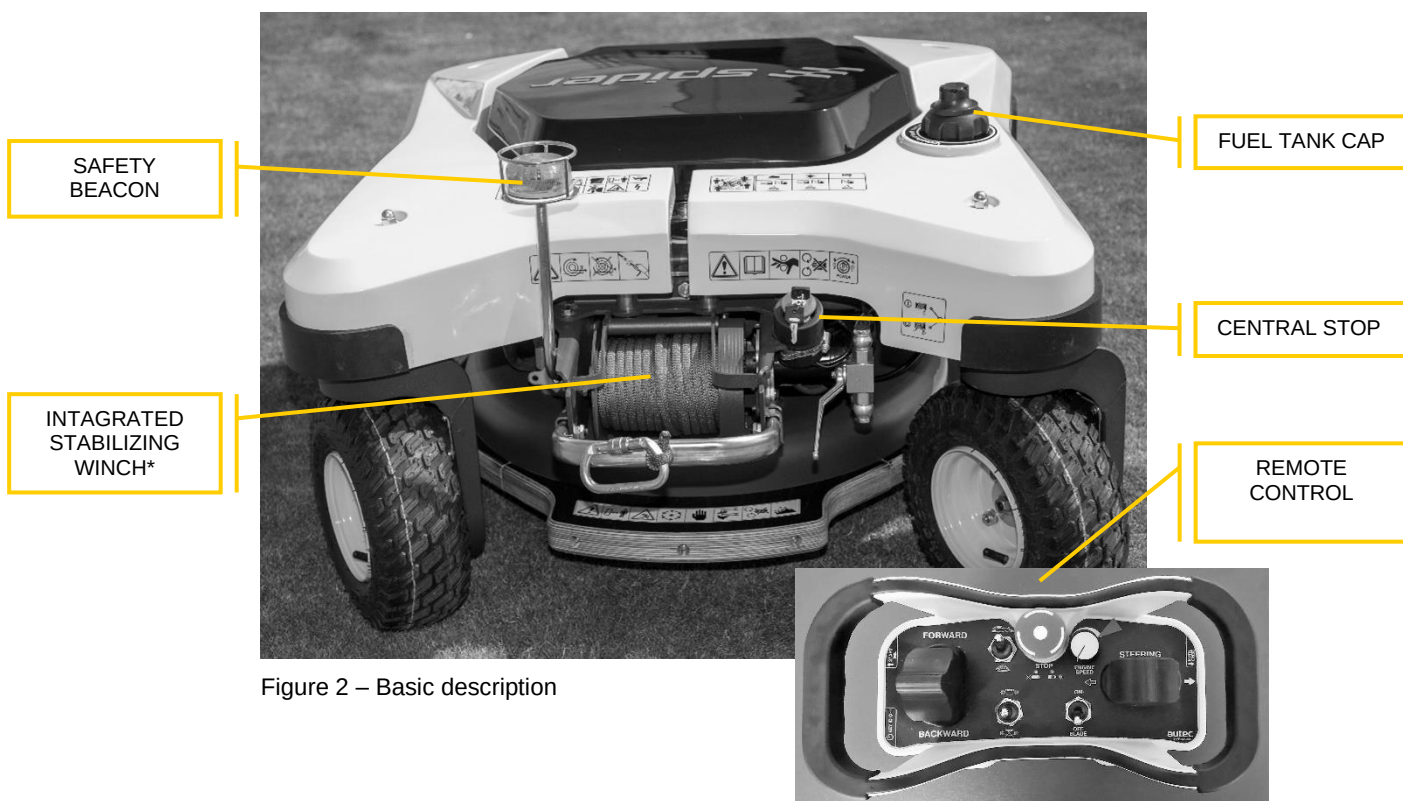


Figure 2 – Basic description

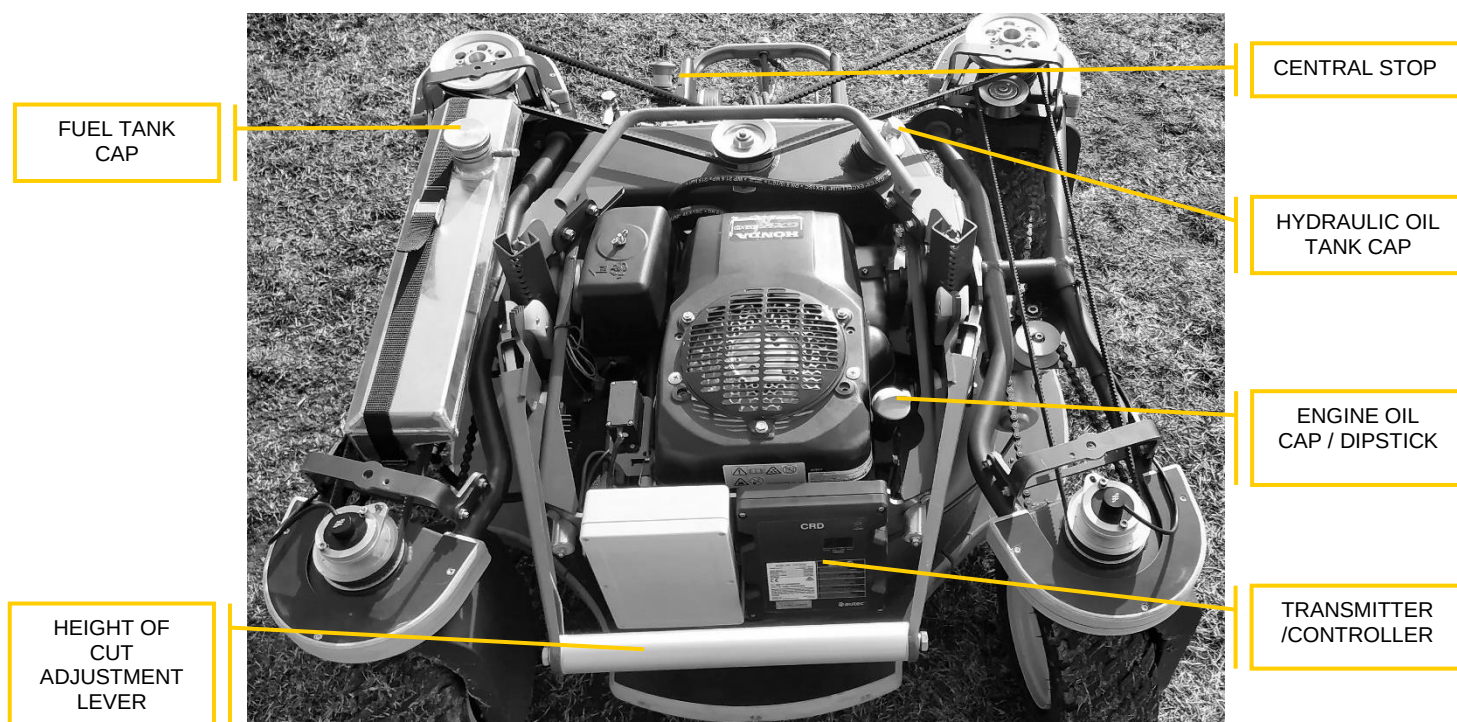


Figure 3 – Basic description

* Not included in lite version

4.2 USE OF THE MOWER

The mower is designed to be used for **mowing grasslands on flat and sloping terrain under normal conditions**. The mower's work normally involves mowing or mulching while driving forward, backward and turning. The mower is **operated by one person via a remote radio controller**.

Applications may include mowing and mulching grass on well-maintained but also unmaintained or only occasionally mowed areas. **The mower is not intended for mowing trees, bushes or similar.**

Only authorized, responsible, physically and mentally qualified persons over the age of 18 who have mastered the procedures for proper and safe use and maintenance of the lawnmower and are familiar with applicable regulations and safety and health regulations described in this manual, may use and repair the mower.

Before using the mower while driving it, it is necessary to assess its suitability for the intended use (mower size, performance, technical parameters, etc.). It is necessary to consider the potential hazard properly and to monitor it continuously during operation.

4.3 MAXIMAL SLOPE INCLINE

DRY WEATHER CONDITIONS:

Cutting across a slope:	Maximum slope is 40°
Cutting up and down a slope:	Maximum slope is 40°
Using hydraulic winch	Maximum slope is 55°

WET CONDITIONS:

All areas	Maximum slope is 20°
Using hydraulic winch	Maximum slope is 55°

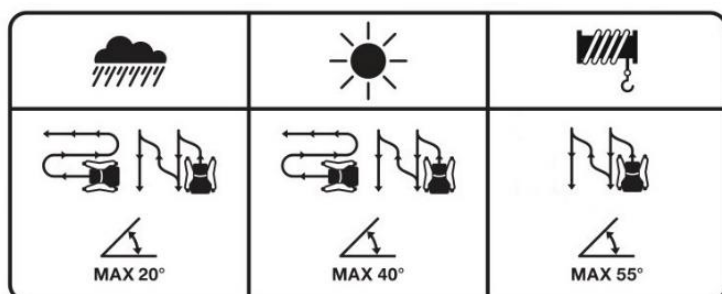


Figure 4 – Maximum slope

Version SPIDER CROSS LINER lite:

DRY WEATHER CONDITIONS:

Cutting across a slope:	Maximum slope is 35°
Cutting up and down a slope:	Maximum slope is 35°

WET CONDITIONS:

All areas	Maximum slope is 20°
-----------	----------------------

4.4 PROHIBITED USE

- The mower must not be used for any purpose other than that for which it is intended.
- The mower must not be used on areas with glass particles, stones, iron or other unwanted objects that may be thrown by the rotating blade or which may damage the mower.
- The mower can be used on slopes exceeding 20 ° however, in wet, damp or fog conditions, where the slope availability and stability of the mower is adversely affected by adhesion to the substrate, regardless of the type of mowed area you must make use of the stabilizing winch.
- The mower must not be used if people, children or animals are within 15 meters of the machine / mowed area.
- Under no circumstances should the mower be used unless you have thoroughly familiarized yourself with the terrain, in particular the appearance of undesirable terrain irregularities, protrusions, stumps, unbearable spots, marshes, holes, etc.
- The mower must not be used on slopes with a higher slope than specified above.
- The mower must not be used as a towing or transport vehicle.
- It is strictly forbidden to drive the mower on public roads.
- It is strictly forbidden to increase the maximum engine speed or power beyond the manufacturer's specified limits, and to make any other modifications to the machine design or engine settings. The manufacturer bears no responsibility for damages and injuries resulting from such interventions and changes.
- It is strictly forbidden to use the machine after using alcohol or perceptive medication or drugs.
- It is strictly forbidden to drive the mower into piles of sand, gravel and similar materials, stumps, stones, building elements or other obstacles that may cause machine instability.
- It is strictly forbidden to use the machine in poor visibility (twilight, fog, heavy rain, etc.).

4.5 HAZARDOUS ZONE

A hazardous area is any area around the mower where the person is at risk from a health and safety perspective. **Keep all persons away from the hazardous area while operating the mower.** People in the danger zone could be injured.

Ensure that the machine operates safely before starting any maintenance procedure - i.e. stopping the mower and turning off all control and safety elements.

The machine operator is trained, responsible and is obliged to evaluate how dangerous the hazardous zone is. In the event of any risk of falling, overturning or similar situations due to the condition of the ground, climate, etc., the operator is obliged to secure or mark a dangerous zone (space strips, warning signs or another trained person who watches the designated area). However, the machine operator is always responsible for the safety around the machine.

The safety distance between the operator and machine is minimum 5 meters. If the situation requires less distance from the machine, especially when driving or loading on a transport trailer or driving the machine precisely, the operator is obliged to act with utmost caution and observe all safety regulations!

The safety distance of other persons is minimum 15 meters. No persons or operators must be in a danger zone!

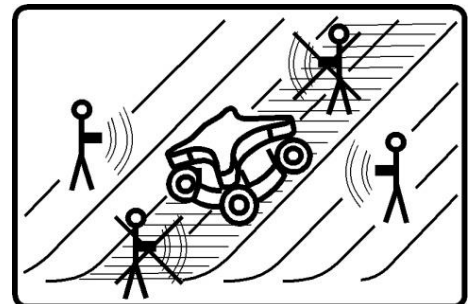


Figure 5 – Hazardous Zones

4.6 REMOTE CONTROLLER (RC)

CENTRAL STOP

Two red colored **CENTRAL STOP** buttons are used to switch the mower off.

One is located on the mower (1), the other on the remote control (RC) (2).

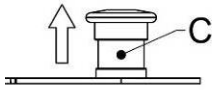


1 – CENTRAL STOP on the mower

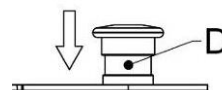


2 – CENTRAL STOP on the RC

Both buttons have the same function. **CENTRAL STOP** is a two-position switch. Switching on the mower is done using the key. Pressing the button down turns off all devices.



POSITION C: ON



POSITION D: OFF

SHUTTING OFF

For standard switch off the mower press the **CENTRAL STOP** button on the mower and **turn the remote control off** with the **main switch***.

EMERGENCY SHUTTING OFF

The **CENTRAL STOP** on the remote control is used for the **emergency stop** of the mower. Always use this type of shutdown when you are unable to approach the mower fast enough or it is generally not safe to approach the mower*.

*The RC must always be switched off separately, otherwise the battery will be discharged. Switching off is done by turning the blue main switch on the remote side. (see picture below)

REMOTE CONTROLLER

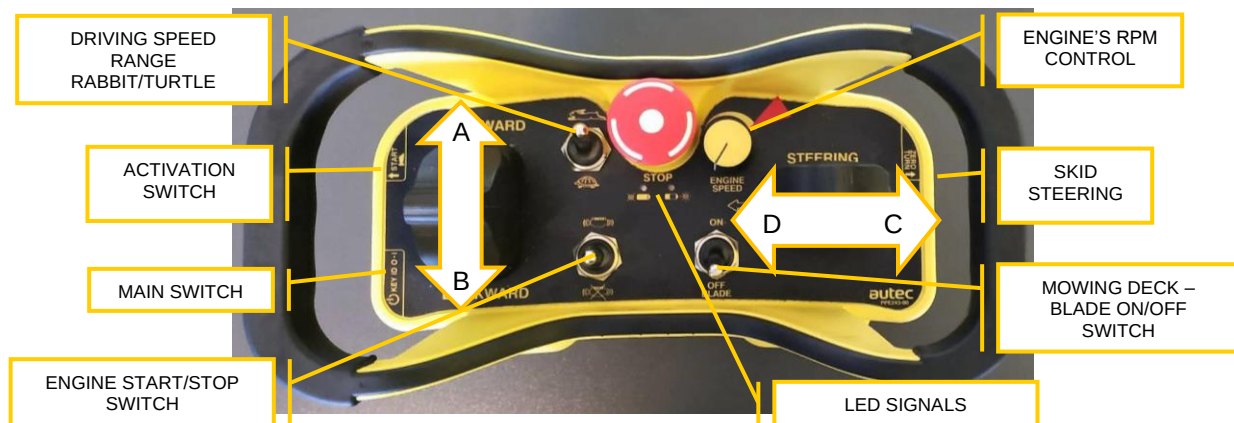
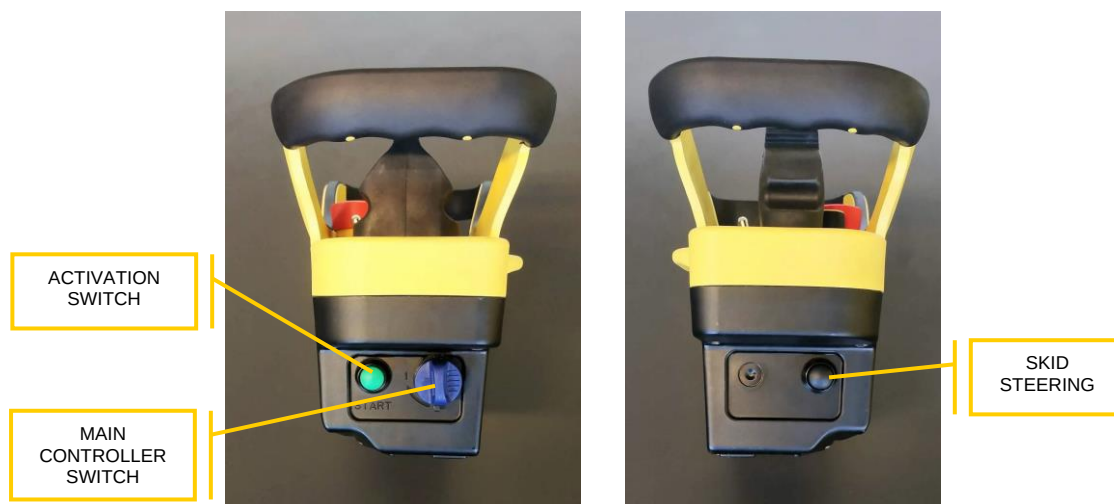
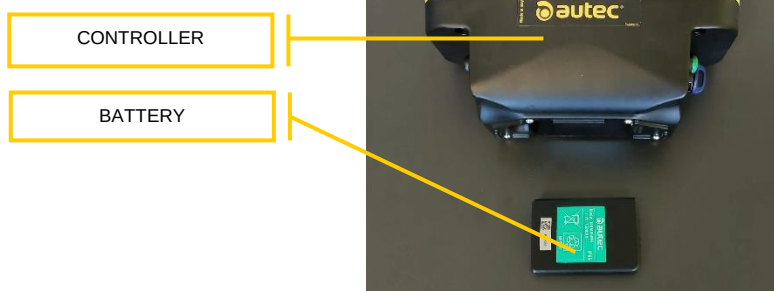


Figure 7 – Remote controller



BATTERY

The controller's battery is shown in the figure.
Remove the battery from the controller to recharge it.



LIGHT SIGNALS

The remote radio has two LEDs near the STOP button.



LED GREEN	LED RED	MEANING
OFF	OFF	Controller is OFF
Flashing intensively	OFF	Controller and receiver are not connected.
Repeats sequentially: flashing + pause	OFF	Controller is ON and units are communicating on the frequency 863-870MHz.
Repeats sequentially: 2 flashes + pause	OFF	Controller is ON and units are communicating on the frequency 915-928MHz.

LED faults are described in the maintenance chapter See also: [REMOTE CONTROL TROUBLESHOOTING](#)

5 OPERATION

The aim of this handbook is to guide the operator get familiarized, step by step with the use of the mower so that it can work efficiently and safely. **Read the OPERATION chapter from start to finish.**

The operator must always have an overview of events taking place in or around the mower. Work safety is the most important factor when working with the mower.

Before using the mower, first verify your ability to operate the mower on a sufficiently free and spacious area. Learn to perfectly control the movement around the area, around bushes, trees and other terrain elements and obstacles.



The user / **operator is the person responsible for the safety** of persons located in or entering the working area of the mower. When any person enters the work area, interrupt the work. The user / operator is **responsible for any damage caused to third parties** when operating the mower.

The mower may be used to work on slopes that are inclined as described in the [ABOUT THE PRODUCT > USE OF THE MOWER](#) when the ground is dry. If the ground is wet or damp, the slope on which the mower is moving should not exceed 20°.

Before operating the mower for the first time, each owner is obliged to ensure the general training and practical skills training of his / her staff - the operators in the control of the mower. General training and practical skills training will be carried out by the sales representative - the product specialist of the mower supplier when put into operation

Always remember:

BE CAREFUL.

BE ALERT.

WORK SAFELY.

5.1 WORK SAFETY

Before using the mower, the operator is required to undergo practical training in operating the mower. Read this instruction manual carefully, become familiar with the safety instructions and basic maintenance of the mower. Always practice your mower skills until you are familiar with the controls and mower's behavior. A well-prepared operator can work safely and efficiently with the mower. Behavior of unprepared and inexperienced operators can be dangerous. Do not threaten yourself or the lives of other people with irresponsible behavior.

Fuel

Fuel is flammable, protect the fuel system from open flames. If you suspect a fuel leak, stop the engine immediately. Do not smoke when refueling or working on the fuel system. Do not refuel while engine is running. Wipe any spilled fuel as it may cause a fire. Failure to observe these precautions may result in fire or injury.

Mower condition

A damaged mower can cause injury to you or others. Do not operate the mower that has damaged or missing parts. Ensure that the maintenance procedures outlined in this manual are performed before using the mower.



WARNING

Do not step in or reach under the mower if it is raised and not properly supported.

Before starting work, test the safety shut-off features on the mower.

Mower performance limits

Exceeding the suggested limits may damage the mower and cause injury during operation. Do not exceed the specified limits when working with the mower. Do not attempt to improve performance of the mower with unapproved modifications.

Engine / steering failure

If there is a fault in the engine or steering, stop the mower as quickly as possible. Do not operate the mower until the fault has been corrected.

Exhaust gases

Exhaust gases from the mower can hurt or cause death to you or others when inhaled. Do not operate the mower in a closed space without ensuring that it is well ventilated. If you start feeling drowsy, stop the mower immediately.

Hot parts

Contact with hot surfaces can cause skin burns. The engine and mower components will be hot after operating. Allow the engine and components to cool before servicing. Do not expose / park the mower near open flames or sources that emit heat. Allow the mower engine and hydraulic drive to cool down properly before placing it in a confined space.

Workplace

Workplaces can be dangerous. Before starting work, your work area will need to be properly examined. You could be seriously hurt or even killed if the soil had slipped under the mower. Find out if there are any potholes, hidden debris, wood, tree stumps, stones, wires, glass or other similar objects. Any of the above may cause loss of control over the mower or could be propelled when using the mower or even damage the mower.

See also: [USE OF THE MOWER > HAZARDOUS ZONE](#)



Keep a safe distance when operating the mower!

The surface on embankments and in ditches can cause the machine to slip. Do not work in proximity of embankments and ditches where there is a risk of slipping and do not drive on them. Look out for power lines while working. Especially when driving underneath them may cause radio interference. In such cases, the mower shuts off the engine immediately and stops all movements. If you are using the mower on busy roads, make sure that the mower does not endanger those who pass by or their property, by potentially throwing unwanted objects. Choose an appropriate working distance.

Parking

An incorrectly parked mower may spontaneously move in the absence of a driver. Follow the instructions in the operating instructions for properly parking the mower.

Sparks

Sparks from the exhaust or electrical system can cause an explosion or fire. Do not use the mower in confined spaces containing combustible materials, vapors or dust.

Dangerous environments

This mower is designed to work under normal outdoor atmospheric conditions. It must not be used in confined spaces without adequate ventilation. Do not use the mower in potentially explosive atmospheres, ie with explosive vapors, gases or dust, without consulting with your Spider distributor / dealer.

Regulations

Comply with all laws and local labor requirements applicable to you and the mower.

Mower Safety

Stop work immediately if a malfunction occurs. Abnormal noises and odors can be signs of a problem. Check for any issues and repair before resuming work.

Driving at high speeds

Driving at high speeds can lead to accidents. Do not move the joystick as far as possible. Always drive at a safe speed that suits your working conditions.

Slopes

Operating on slopes can be dangerous if appropriate measures are not taken. Soil conditions can change by rain, erosion, etc. Carefully inspect the work area. Never enter the area under the mower or above the mower if you are working on a slope. Before working on a slope, ensure that no one is moving under the mower or under the area where you drive. Do not endanger other people by driving the mower above them.

Visibility

Do not operate the mower with poor visibility. When using the mower remotely or transporting the mower, the operator must always be in the field of vision. The maximum safe operating distance from the mower is 50 m. Never leave the mower unattended when the engine is running. Always operate the mower from a working position that gives you a perfect view of the entire work area and the mower and is not dangerous for you. When working remotely, change the work area as needed to always have a perfect view of the mower. Do not operate the mower if you do not see it (behind terrain obstacles, around the corner of the building, etc.).

Hands and legs

When using the mower, keep hands and feet away from moving parts. Keep a safe distance when operating the mower.

Control

Attach the controller around the waist when operating the mower. Correct position of the controller will prevent unwanted movement of the levers on the controller. If the mower engine is running, do not put the controller down and do not move or touch any parts of the mower. Even when leaving the mower for a short time, always switch off the engine and press the red STOP button on the mower control panel and then remove the key to prevent it from starting. Do not leave the controller with the mower, but in a properly secured place that is unavailable to unauthorized persons.

Co-drivers

It is forbidden to transport persons, animals or loads on the mower. They can cause accidents and damage to the covers, including overloading the mower.

Rollover protection

The mower is structurally and technically prepared for work on slopes. Keep a safe distance away from the mower and also keep in mind the maximum slope accessibility. Make sure that no people are standing under or above the mower when working on slopes.

Fire

Regularly remove flammable substances (dry grass, leaves) from the exhaust, engine and battery compartment. Do not extinguish any engine fire with water, as this may cause burning oil to spread or electric shock. Use carbon dioxide, dry ice or foam fire extinguishers. Contact the nearest fire station as soon as possible. Firefighters must use closed-circuit breathing apparatus.

Risk assessment

It is the duty of the persons in charge to plan work and to operate the lawn mower safely by considering specific working conditions and the use of the mower

at a particular moment. It is important to assess all potential risks. After assessing any occupational hazards, the operator must comply with all safety requirements. If you are uncertain about the use of the mower on a particular job, please contact your local SPIDER distributor / dealer who will be happy to provide you with the necessary information. Below is an example of some aspects that need to be taken into account in the risk assessment. Other risks that are not listed may also need to be considered. Proper risk assessment depends on operator training and experience. Do not endanger your life or the lives of others.

Workers

- Are all those involved in the operation sufficiently trained, experienced and competent?
- Are they fit and relaxed? A sick or tired operator is a dangerous operator.
- Is there a need for helpers or observers to work in addition to the mower operator?

Mower

- Is the mower in good working order?
- Have any reported faults been corrected?
- Have all prescribed daily checks been performed?
- All tires have constant pressure, are in good condition and there is enough fuel in the tank to complete the job.

Workspace

- Does the ground have enough bearing capacity?
- How rough is the terrain? Are there sharp projections on the ground that could damage the mower and especially its tires?
- Are there obstacles in the area, such as potholes, hidden debris, wood, tree stumps, stones, wires, glass and other similar objects?
- Is there enough space to maneuver the mower safely?
- Is there a likelihood that other persons or mowers will enter the work area when the mower is operating?
- Does the climbing ability of the mower match the working environment?

Mower driving path

- What is the strength of the ground and will the ground provide the mower with enough strength-load capacity for wheel engagement and braking?
- How steep are all the slopes when driving up / down / across? Driving across the slope is particularly dangerous, are you as the operator endangering yourself or other people in the surroundings?

Weather

- What is the ground condition where the mower is driving?
- Is it raining or will it rain? The same terrain, which is dry and smooth when dry, can be uneven and slippery in rain so it does not provide the same conditions for wheel engagement, braking and steering.

5.2 MOWER CHECK UP

The following checks must be carried out after each prolonged break with the mower. They are also recommended for longer continuous work with the mower, i.e. to stop the mower from time to time and carry out the check.

Control operations concern the readiness of the mower to operate and ensure the safety while working with it. If defects or malfunctions occur during the inspection, they must be repaired and corrected.

CLEANLINESS OF THE MOWER

- Remove dirt and debris, especially near the joints, pins and near the exhaust.
- Clean all safety labels with instructions. Replace any missing or unreadable labels.
- Perform a thorough inspection to identify any defects or deficiencies.

OPERATING FLUIDS

- Check the engine and hydraulic oil levels
- Check the fuel level (if less than 20% of the tank is in the tank, refuel immediately)
- Check for leaks underneath the mower
- Ensure that all filler caps are properly installed and closed.

TIRES

- Check the tire pressures and their overall conditions.

STABILIZING WINCH (not incl. in lite version)

- Check the condition of the winch rope and rope placement on the winch.
- Check the condition of the carabiner.

MOWING SYSTEM

- Check the condition of the blade (The blade must be sharpened and free from any deformation).
- Check the blade screw for tightness.

SAFETY ELEMENTS

- Check the function of both CENTRAL STOP buttons, remote control and signal transmission.
- Visually inspect the bolts and nuts for tightness.
- Check that all safety labels are readable on the machine.

5.3 STARTING THE ENGINE



WARNING

Before starting the engine, a check-up of the mower must always be performed. This is important both in terms of safety (yours and others) as well as to ensure maximum durability of the mower.

- 1) Turn the controller on with the controller main switch into position 1.

MAIN SWITCH



- 2) Activate the CENTRAL STOP on controller (by turning the CENTRAL STOP clockwise).

CENTRAL STOP

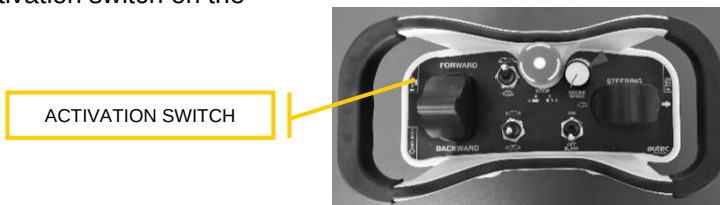


- 3) Unlock the CENTRAL STOP on the mower to the ON (clockwise) position.

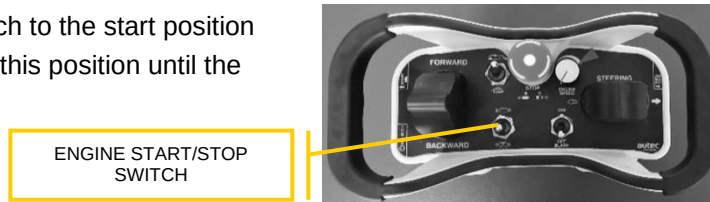
CENTRAL STOP



- 4) Press the activation switch on the controller.



- 5) Hold the switch to the start position and hold it in this position until the engine starts.



- 6) After starting the engine, set the engine speed to maximum.

If the engine does not start, the mower functions are blocked. In this case, you must press the CENTRAL STOP on the controller and repeat the starting procedure from the first point.

If any of the warning lights stop signaling while the engine is running or does not shut down properly, stop the engine as soon as it is safe.

The mower is equipped with an automatic choke for cold starts. After starting the engine, leave the mower in position for about 2 minutes without the mowing mechanism switched on.

5.4 STOPPING AND PARKING



WARNING

An incorrectly parked mower may spontaneously move in the absence of the operator. Follow the instructions in the operating instructions for proper parking methods.

Stop the mower on dry and level ground, where the mower will not pose a risk and / or danger. If you must stop the mower on a slope and take any action, interrupt work or switch off the engine, etc., **turn the wheels perpendicularly to the slope**. This will prevent the mower from moving down the slope.

- 1) Reduce the pressure on the travel joystick gradually so that the mower stops smoothly - the joystick will be in the neutral position.



- 2) Reduce engine speed.



- 3) Switch the cutting deck switch to "OFF BLADE".



- 4) Hold the switch to the engine OFF position.

ENGINE STOP



- 5) Press the CENTRAL STOP on the mower.

CENTRAL STOP



- 6) Switch off the remote controller by turning the main switch.

MAIN SWITCH



EMERGENCY STOP

For emergency shutdown use the CENTRAL STOP button on the controller. Use the CENTRAL STOP on the mower only when the mower is stable and on a level ground or you are in the immediate vicinity of the mower making sure it does not pose any risk to you or others.

[See also: REMOTE RADIO CONTROLLER > CENTRAL STOP](#)



WARNING

The CENTRAL STOP buttons on the controller and on the mower should be used whenever an emergency stop is required.

5.5 DRIVING THE MACHINE

When driving, always keep the mower under control. It is necessary to pay attention to any obstacles and always watch out for potentially dangerous situations.

Description of mower controls can be found on chapter: [2.4. REMOTE CONTROLLER \(RC\)](#)

Drive the mower slowly so that you can react to the direction the mower will move into.

When descending a slope, a suitable speed should be selected beforehand. Select a speed taking any risks into account.



WARNING

Beware when moving the forward / reverse drive joystick while driving as it can cause injury to you and others. The mower can change direction suddenly and without warning. The lever must be handled exactly as instructed.



WARNING

It is forbidden to drive the mower (without doing any work) with the mowing mechanism switched on.

SPEED SELECTION

Always choose a suitable driving speed that will allow for a satisfactory mowing quality. When selecting a speed, always go from lower to higher speeds, not vice versa.

THERE ARE TWO METHODS TO SELECT SPEED:

Swiveling the joystick

- The mower is stationary in the neutral position.
- The greater the deflection, the higher the mower speed.

Changing the turtle / rabbit switch

- Shifting the lever to rabbit mode increases the speed / in turtle mode speed is decreased by half
- This function is effective when the travel joystick is depressed.



WARNING

Never reduce speed by reducing engine speed! The speed always changes only by pressing the drive joystick.



WARNING

Change the speed mode (rabbit/turtle) only when the machine is stationary!

SPIDER MODE

The mower is equipped with a unique SPIDER mode control system (also known as the “dance step”), thanks to which all 4 wheels turn at full 360°, so there is no need to rotate the machine if you need to change direction.

SKID-STEERING

Skid-steering is used to rotate the machine around its vertical axis. You will appreciate it especially when cutting around various obstacles and when approaching a transport trailer or vehicle.

To skid the mower:

- 1) Stop the mower on a flat surface and turn the wheels straight in the direction of the winch
- 2) Hold the skid turn switch so that the wheel pair on the right side rotates in 180 °
- 3) At the same time move the joystick forward (or backward) to rotate the mower around its vertical axis to the desired position



WARNING

Always skid-steer on a level, firm and horizontal surface. Skid-steering can cause unwanted terrain erosion.



WARNING

Skid-steering serves only for minor corrections to the mower's direction. Gears and tire tread suffer when skid-steering too often.

5.6 CUTTING BLADE ON/OFF

To switch on the cutting deck, set the blade on / off switch to ON.

To turn off the cutting deck, set the blade on / off switch to OFF.



WARNING

Keep the blade switched on when you are mowing. Always switch off the blade when moving between mowed areas.

MOWING BLADE ON / OFF
SWITCH



5.7 MOWING HEIGHT ADJUSTMENT

The machine has 4 cutting height adjustment positions. The mowing height can be set as standard in the range between 40 - 110 mm.

To set the cutting height:

- 1) Stop the mower on a horizontal surface and turn off the mowing deck.
- 2) Hold the lift handle in the locked position (See also: [USE OF THE MOWER > MAIN COMPONENTS LOCATIONS](#)).
- 3) Turn the handle according to the pictogram and set the desired cutting height.
- 4) Release the handle to secure the desired height.

WARNING



The mowing platform system is supported by strong springs that reduce the force required to change the mowing height. The cutting height can only be changed when the mower is firmly standing on all wheels. When the cutting height lever is unlocked at another position of the mower, the lever may be ejected upwards.



For high or wet grass, select a higher mowing position.
The lowest position is used when mowing flat and well-kept areas.

5.8 DRIVING ON SLOPES

Driving on slopes creates several demands on the operator. You must constantly evaluate the information regarding the mower's movement on slope and the terrain conditions. It is especially important to evaluate the grip of the wheels on the grass or other ground and the angle of inclination of the mower. Pay attention to climatic conditions.

The performance of the mower will vary considerably on a dry, damp or wet slope substrate!

ESSENTIAL RULES FOR DRIVING ON A SLOPE

- When working on a slope, start from the bottom and work your way to the top. Only select a top-to-bottom mowing procedure in exceptional circumstances and only on well-known terrain.
- Always start on a lower slope angle. This will allow you to better evaluate slope conditions and choose the correct work approach. If you work on a slope with a steeper angle, the mower may slide due to unfavorable adhesion conditions. Due to the dynamic effects, the mower can also overturn.
- If the mower starts slipping, do not attempt to stop or access the mower, especially not below or directly above it.
- Do not touch or approach the mower if the wheels have been raised off the ground or the mower is tilted excessively or is in an unstable position or is already overturning.

AVOID

- Sudden changes with steering or braking
- Steep inclines, braking on a slope or sudden change of direction
- High speed driving
- Uneven substrate or ground
- Variable adhesion (shifting from sunny to shady places, etc.)
- Travel along the cut material
- Stop on the slope and stop the engine



WARNING

If the slope surface is wet or damp, the maximum slope inclination permitted to work on is 20°.

5.9 HYDRAULIC STABILIZING WINCH*

The mower is equipped with an integrated stabilizing hydraulic winch (hereinafter referred to as "winch"), which is designed as a stabilizing device and improves the mower stability on slope. It also prevents the mower from sliding downhill and reduces soil erosion.

There must not be any obstacles that could jam or damage the rope – such as trees, bushes, etc. – in the operating area between rope and mower.

IT IS FORBIDDEN TO USE THE WINCH

- If any parts of this equipment are **damaged or show considerable wear**, e.g.: rope, carabiner, etc.
- **For purposes other than stabilizing the SPIDER XLINER.**
- **For removing objects**, securing people or objects on a slope.
- On slopes **where there are terrain obstacles** and there is a possibility of damaging the rope or getting caught on a slope.
- In places where the **anchoring point is not strong** enough and can be loosened after anchoring and working with the mower.

SAFETY INSTRUCTIONS

- Always keep the winch and its accessories clean and in good condition. After finishing work, clean it by sweeping and wiping. Do not use gasoline or similar petroleum products for cleaning.
- Do not pull / anchor the winch rope over roads, sidewalks, and people's spaces.
- When working with the winch, select the working position so that you do not move under or directly above the machine and do not cross the rope path. There is a risk of injury when the machine slips or the operator may slip and fall under the mower.
- Use the winch only for stabilization with the engine speed set to maximum.
- Do not reach into the winding drum with any part of your body in order to straighten the rope. The rope is wound up along its current position on the winding drum.
- The carabiner must not strike or be subjected to additional external forces (pull only).
- Follow the procedure for attaching the winch rope to an anchoring point.
- The carabiner must always be properly closed (locked) with a locking segment - the carabine can only work safely with the lock properly tightened.
- Check the mowing area carefully. Orient yourself, assess the situation and test the possibilities of the terrain. Do not take chances. It is necessary to inspect the terrain thoroughly before starting work.
- Work on a slope from the bottom towards the top. You will work, generally, from a lower to a higher incline, which will give you a better chance to evaluate the climbing ability and make the right decisions concerning further work. Be aware of the dynamic effects of the mower while mowing, which can cause considerable strain on the winch rope and anchoring points.
- If the mower slips, do not try to stop it and do not approach the mower, especially in the area under or above the mower.
- Always stand aside while operating, never directly above or below the mower.
- Before working on a slope, ensure that no one is moving beneath the mower or in the general mowing area. Do not endanger third parties or property with the machine.
- Choose your operator's position outside the area where the mower can slide / fall or the mowed grass is ejected. The direction of the ejected grass may change with respect to the direction of travel during machine operation.

WHILE WORKING WITH THE MOWER YOU SHOULD AVOID

- sudden sharp steering or braking
- driving too fast
- unstable soil and driving on uneven surfaces
- changing wheel adhesion (driving from areas exposed to sun to shade etc.)
- driving on the grass that has already been cut

*not included in lite version

MAIN COMPONENTS

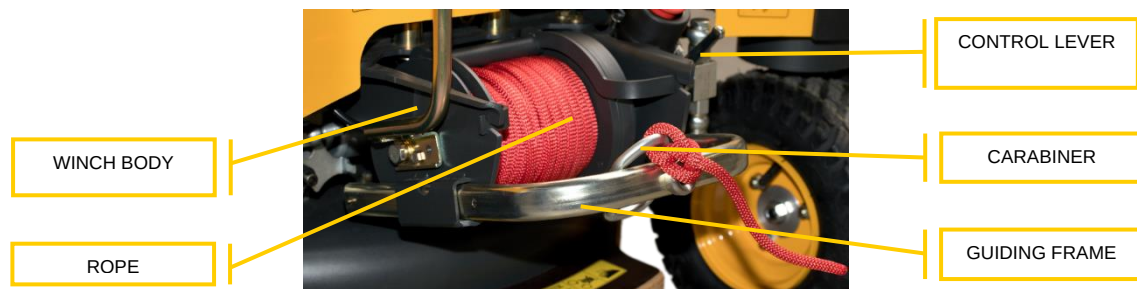


Figure 8 – main components of the hydraulic winch

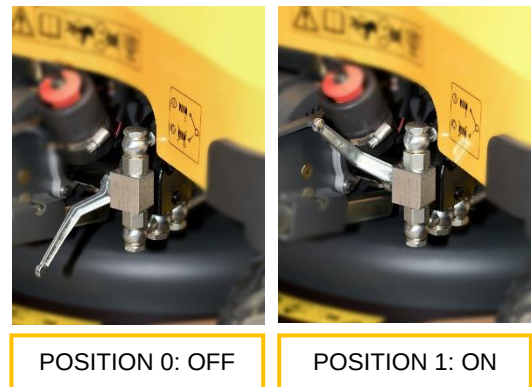
WINCH CONTROL

POWER ON

To switch the winch on, set the valve lever to position 1 to activate the hydraulic oil inlet to the winch hydraulic motor.

POWER OFF

To turn the winch off, move the valve lever to position 0, further rotation of the winch drum is stopped.



WARNING

Only approach the mower if the cutting blade is switched off and the engine speed is set to the minimum.

ANCHORING

For best use of the winch and optimum tension force on the rope, it is necessary to choose a fixed point to which you can anchor the end of the rope with the carabiner. Attach the rope end (carabiner) to the anchoring element at a height of approx. 30 cm. Never anchor the rope directly to the ground.



WARNING

The operator is responsible for selecting a suitable anchoring point.

SELECT THE ANCHORING POINT SO THAT:

- There are no objects, trees, bushes, etc. in the area of the mower and rope movement that could be affected or damaged by the rope or damage the rope.
- The surface of the anchoring point is smooth without sharp edges and the rope with the carabine stays in the set position for the whole duration of the operation.
- The anchor point was sufficiently strong.

WINCH ANCHORING PROCEDURE

- 1) Transport the mower to the chosen area and place it on a level ground under the slope you intend to mow, directly below the anchoring point
- 2) Turn the mower wheels perpendicular / across to the slope.
- 3) Make sure the mowing blade is switched off and set the engine speed to minimum.

- 4) Set the valve lever to position 1 (ON).
- 5) Slightly deflect the driving joystick on the remote controller in the direction in which the rope starts to unwind from the drum.
(The winch is pre-set to unwind when the driving joystick is deflected in the BACKWARD direction – towards the operator. In case the rope winds up instead of unwinding, deflect the joystick in the opposite direction.)
- 6) Mount the rope around the fixed anchoring point, release the screw lock on the carabine, lock the carabine to the rope and secure it properly by fastening the screw lock.
- 7) Deflect the drive joystick in order to wind in the loose rest of the rope. The rope on the winch drum should be slightly tight.
- 8) Increase the engine speed from idling to operating revolutions.
- 9) Turn the wheels of the mower up the slope (FORWARD) and slightly deflect the driving joystick on the remote controller forward i.e. in the direction when the mower starts driving up the slope. If the rotation of the wheels of the mower and the direction of the rope winding correspond (i.e. the rope is winding up when the mower is driving up the slope) you can start mowing.
(In case the winch rope is unwinding when the mower is driving up the slope it is necessary to stop driving and turn the wheels by 180 degrees. Then you can start mowing up the slope.)
- 10) Make sure and constantly check that the rope is properly wended on the drum of the winch and that it is not lose or tangled. In this case it is prohibited to use the mower on slopes.

MOWING WITH THE USE OF WINCH

WARNING



Driving on slopes is very demanding for an operator, as he has to constantly evaluate information on the movement of the machine and the character of the terrain. Especially important is the wheel adhesion to the grass or other surface and the angle of the mower.

Pay attention to climatic conditions. Do not rely on securing the mower to the rope. The climbing ability of the mower will be radically different on dry, wet or moist grass slopes.

Climbing ability and the mower's behavior will also depend on the ground's conditions. On a newly built slope, the probability of slipping will be significantly higher than on a hard ground.

METHOD TO MOVE THE MACHINE ON THE SLOPE

When working with the stabilizing winch up the slope, the **mower must always run in accordance with the winch function** to maintain the winch stabilizing ability – when traveling up, the winch drum is winding up the rope. Otherwise, the rope will loose on the drum and the winch will stop maintaining the STABILIZATION function.

WARNING



Do not drive the mower into bushes or similar obstacles (even when driving off a slope) that you would like to mow because the mower may stop or pause and the rope will become loose and tangled. **The rope must always be tightened.**

In case the wheels lose contact with the ground, the winch will not be able to stabilize the mower.

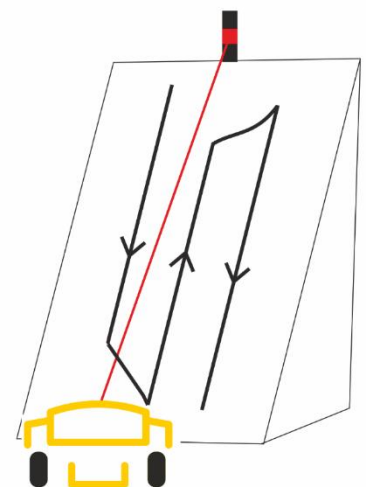


Figure 9 – method of mowing on the slope with use of the winch

EMERGENCY SITUATIONS WHEN WORKING ON THE STABILIZING WINCH

EMERGENCY SITUATION	RECOMMENDED SOLUTIONS
A rope or anchor is suddenly released	Turn the wheels immediately so that they are perpendicular to the slope (across to the slope), stop the movements. Find a new anchor point. Press the STOP button on the remote control.
Rope breaks	Turn the wheels immediately so that they are perpendicular to the slope, stop the movements. Press the STOP button on the remote control. Use the new rope. Adding any extensions to the rope is prohibited.
Bursting the carabiner	Turn the wheels immediately so that they are perpendicular to the slope, stop any movements. Press the STOP button on the remote control. Replace defective parts.
Speed reduction, the mower starts to move uncontrollably and spontaneously	Immediately increase the engine speed to max., Turn the wheels perpendicular to the slope, stop the movements. Press the STOP button on the remote control.
Hydraulic hose breaks	Turn the wheels immediately so that they are perpendicular to the slope (across to the slope), stop the movements. Press the STOP button on the remote control.
Unwinding the entire rope length from the winding drum and winding in the opposite direction on the drum	Turn the wheels in 180 ° and continue working or unwind the rest of the rope, let the winch drum rotate and wind the rope back in the right direction. Continue working.
Malfunction of the winding drum drive sprocket mechanism.	Immediately turn the running wheels perpendicular to the slope, stop the movements. Press the STOP button on the remote control. Repair the sprocket mechanism.
Engine stops	Turn the wheels perpendicular to the slope, press the STOP button on the remote control.
Roll over the machine	Press the STOP button on the remote control immediately.
Loss of wheel contact with ground	Press the STOP button on the remote control immediately.
Lack of fuel in the fuel tank	Turn the wheels immediately so that they are perpendicular to the slope (across to the slope), stop the movements. Press the STOP button on the remote control and refuel.

5.10 REFUELING THE MACHINE**ATTENTION**

Spilled fuel can cause an accident. Clean all spilled fuel immediately. Do not use fuel to clean the mower. Choose a well-ventilated area to refuel.

**WARNING**

Fuel is flammable, so protect the fuel system from open flames. If you suspect a fuel leak, stop the engine immediately. Do not smoke when refueling or working on the fuel system.

**WARNING**

Do not refuel while the engine is running. Failure to observe these precautions may result in a fire or injury.

**WARNING**

Turn off your mobile phone before entering a potentially explosive environment. Sparks in such areas could cause an explosion or fire resulting in serious injury or even death.

NOTE: No liability will be assumed in the event of equipment failure caused by the quality and type of fuel used.

See also: [FLUIDS, LUBRICANTS AND FILLING VOLUMES](#). If you use the wrong type of fuel or fuel that is dirty, the fuel system may get damaged.



Always fill the fuel tank at the end of the work shift. This will prevent condensation on the tank walls.

FILLING THE FUEL TANK

- 1) Secure and turn off the mower engine by pressing the CENTRAL STOP.
- 2) Remove any unwanted material from around the fuel cap.
- 3) Remove the fuel cap.
- 4) Add fuel with the filler neck as required.
- 5) Install the fuel cap. Make sure it is properly tightened.

5.11 OPERATING CONDITIONS

Observe the following precautions. It will make it easier for you to start operating and prevent possible damage to the mower.

The mower is designed to operate under atmospheric temperatures **between -20° C and 46° C**.

BASIC MEASURES

- Use lubricating oils with the correct viscosity. See also: [FLUIDS, LUBRICANTS AND FILLING VOLUMES](#)
- Use hydraulic fluid with the correct viscosity. See also: [FLUIDS, LUBRICANTS AND FILLING VOLUMES](#)
- Keep the battery fully charged.
- Always fill the fuel tank at the end of the work shift. This will prevent condensation on the tank walls.
- Protect the mower while it is out of service. Park the mower inside of a building or cover it with a tarpaulin. Ensure the engine is cold when covering.
- Check the air vents. Make sure that the air vents leading to and from the engine compartment are not blocked.

OPERATION IN DUSTY OR SANDY AREAS

- Check the air filter regularly, clean or replace the relevant parts as needed, regardless of the inspection interval.
- Tighten the hydraulic tank filler cap tightly to prevent sand and dust from entering the hydraulic system. See [MOWER MAINTENANCE PLAN](#)
- Check for dirt accumulation in the engine and exhaust compartment.

OPERATION ON WET OR SOFT TERRAINS

- Clean the mower. Moisture or dirt can damage paint, electric and hydraulic lines or metal parts. When operating the mower, keep it as dry as possible and lubricate the mower regularly.
- Check for dirt accumulation in the engine and exhaust compartment.

6 STORAGE

6.1 CLEANING



WARNING

When using cleaning fluids, solvents or other chemicals, you must follow the manufacturer's instructions and precautions.



WARNING

Wear protective gloves when handling hot parts to prevent burns. To protect your eyes, wear eyeglasses when cleaning parts with a wire brush.

NOTE: Cleaning metal parts with incorrect solutions may cause corrosion. Use only recommended cleaners and solvents.

NOTE: Never use water or steam to clean the area around electrical components. The use of water or steam could damage the control unit and the mower could be inoperable. Remove dirt with a brush or cloth.

Do not allow mud, dirt, etc. to accumulate on the mower.

When removing parts, pay attention to dirt and foreign objects. Cover all openings and remove sediments before proceeding.

See also individual cleaning procedures in the Maintenance section. See also: [MOWER MAINTENANCE PLAN](#)

Always observe the local waste disposal regulations before cleaning the product.

6.2 STORAGE

If you are not going to use the mower for a long time, you must store it properly. If you prepare the mower carefully and take care of it continuously, you can prevent deterioration and damage to the mower during storage.

PREPARING THE MOWER FOR STORAGE

- 1) Clean the mower and remove any unwanted material or corrosive products.
- 2) Dry the mower to remove solvents and moisture.
- 3) Apply grease to the moving parts.
- 4) Check that there are no worn or damaged parts on the mower. Replace if necessary. Pay attention to belt distributions
- 5) Check the levels of all fluids. Top off if necessary.

STORAGE

- 1) Park the mower on a firm, level surface. Park where the mower is easily accessible.
- 2) Make sure all caps are closed.
- 3) Remove the key from the CENTRAL STOP button.
- 4) Remove the battery from both the mower and the RC.
 - Keep the battery dry and warm.
 - Charge the battery periodically.
- 5) If you are keeping the mower in the open area, cover it with a tarpaulin.

SEASON PREPARATION

- 1) Check all fluid levels. If necessary, top off to the recommended level.
- 2) Clean the mower and remove any unwanted material and corrosive products. Dry the mower to remove solvents and moisture.
- 3) Install fully charged batteries.
- 4) Check the condition of the belts.
- 5) Start the engine.
- 6) Test the controller for proper operation.

6.3 MOWER TRANSPORTATION

The mower is transported on a trailer or other suitable means of transport.



WARNING

Driving on public roads is prohibited.

Before proceeding with the transport of the mower, make sure that you do not violate local laws or regulations on all areas you will be travelling through.



ATTENTION

Before loading the mower on the trailer, make sure that there is no oil, grease or ice on the trailer or ramps. Remove any oil, grease or ice from the mower tires. Make sure the mower is not loaded on the ramp / trailer at an inappropriate angle.

Check the condition of the transport vehicle before loading the mower onto the trailer.

When loading or unloading from a trailer, make sure that the edge - formed by the trailer floor and the ramps - is not an obstacle for the mower with its accessories. Otherwise, you must use longer ramps to decrease the angle.

Make sure that the ramps have enough load capacity. The load capacity must correspond with the weight of the mower listed on the production plate.

Do not allow any person to stand on or close to the ramps when loading.

Make sure that the transport vehicle is suitable for the size and weight of the mower. See also: [TECHNICAL DATA](#).

TRANSPORT ANCHORING POINTS

The mower must be properly secured for a safe transport. Use the points marked with the chain symbol to secure the mower.

For fastening, thread the securing strap around the engine girder and hook the strap to the anchoring loop (see Figure 10). Fasten both sides of the mower.



ATTENTION

Take extra care around the exhaust pipe before passing the clamping strap. If the engine is still warm, it may cause burns to limbs or strap!

ENGINE GIRDER



Figure 10 – transport anchoring points

7 MAINTENANCE

The Spider XLINER has been designed to work safely in harsh environments, efficiently and economically. Before leaving the production line, the mower has passed a final inspection. To maintain the best possible condition, service repairs must be carried out by a DVOŘÁK – slope mowers' service specialist. It is necessary to use original parts as well as to adhere to the prescribed service terms in this manual.

This manual describes the service operations required to maintain your Spider XLINER. It is evident from the mower maintenance chart that some service operations can only be performed by a DVOŘÁK service specialist. Service technicians have enough equipment to perform the necessary maintenance and service operations.

It is necessary to keep a record sheet or service book after each service. You will have a perfect overview of the maintenance and servicing performed. It is also necessary to always fill out the date and name of the technician. Ensure greater reliability with proper maintenance and service.

OWNER / OPERATOR SUPPORT

The manufacturer's goal is customer satisfaction with their mower. In the event of a problem, you can contact the service or after-sales care department at DVOŘÁK - slope mowers.

When handing over a new mower and training with it, you will get the names of the relevant contact persons for service from your dealer.

Provide the following information and data for effective contact with after-sales service or service:

1. Your name, address and phone number.
2. Mower model and mower serial number.
3. Date of purchase and hours worked.
4. The nature of the problem.

INITIAL SERVICE AND INSPECTION

The manufacturer recommends performing a warranty inspection after 200 hours of operation. This inspection is usually requested by the mower's owner with the local Spider supplier. This is a condition for maintaining the validity of the warranty.

SPARE PARTS

By using non-original spare parts and consumables, you expose the operator to health and safety risks, and at the same time this can cause the mower to malfunction.

DVOŘÁK – svahové sekačky s.r.o. spare parts catalog has been prepared in the partner zone website, where you will find individual spare parts and aids that you can order from your local Spider dealer for your mower type.

When ordering spare parts, you must tell our representative exactly the model of the mower and its serial number. See also: [IDENTIFICATION OF COMPONENTS AND PRODUCT](#)

The data table includes the engine serial number as well.

7.1 MAINTENANCE SAFETY

Compressed air

Compressed air is dangerous. Always wear personal protective equipment. Never aim the compressed air nozzle at yourself or others.

Springs

Always wear personal protective equipment when removing assemblies containing spring-loaded components. This will protect you from potential eye injuries caused by flying parts.

Metal chips

You may be injured by flying metal chips when pulling out or inserting metal pins. Use a soft surface hammer or a copper mandrel for insertion or removal i.e. pulling out metal pins. Always wear personal protective equipment.

Repairs

In the event of a fault or malfunction of the mower, have the fault repaired immediately. Neglecting the necessary repairs could lead to an accident or adversely affect your health. Do not perform any repairs or maintenance work that you do not understand. Get the job done by an expert to prevent injury or damage to the mower. Electric arc welding on the mower is prohibited.

Hydraulic pressure

Hydraulic fluid under pressure can hurt you. Before connecting or disconnecting any hydraulic hose, the hose must be free of any hydraulic pressure. Secure the mower so that it cannot be started when the hoses are open.

O-rings, gaskets and gaskets

Poorly fitted, damaged or blistered O-rings and gaskets may cause leaks and accidents. In case of damage, replace them if no other instructions have been given. Do not use trichloroethane (TCA) or paint thinners near 'O' rings and seals.

Soft soil

The mower can sink into a soft soil.

Hot parts

Contact with hot surfaces can cause skin burns. The engine and mower components will be hot after

operation. Allow the engine and components to cool down before servicing.

Lifting the mower

Under no circumstances should the engine run while lifting the mower. If the joystick is inadvertently moved, stability may be at risk

Hygiene

Excessive or prolonged contact of lubricants with the skin can remove natural fats from the skin, causing dryness and irritation.

Fluids and lubricants

The oil is poisonous. If you swallow oil, do not induce vomiting, but seek medical attention. Used engine oil contains harmful fumes that can cause skin cancer. Do not handle used oil more than necessary. Always use a protective cream or wear gloves to avoid contact with the skin. Wash the oil-stained skin thoroughly with warm soapy water. Do not use gasoline, diesel fuel or paraffin to clean the skin.

Fluid under pressure

Thin jets of fluid escaping from the nozzles at high pressure can penetrate the skin. Protect your face and hands from fluid under pressure and wear personal protective equipment. Hold cardboard where you suspect a leak, and then check for any traces of hydraulic fluid. Seek medical advice immediately if hydraulic fluid penetrates the skin.

Fuel

Fuel is flammable, so protect the fuel system from open flames. If you suspect a fuel leak, stop the engine immediately. Do not smoke when refueling or working on the fuel system. Do not refuel while engine is running. Clean any spilled fuel as it may cause a fire. Failure to observe these precautions may result in fire or injury.

Storage

Lubricants should always be stored so that children do not have access to them. Never store the lubricant in open or unlabeled containers.

FIRST AID – OIL

Eyes

If you get oil in your eyes, it should be washed with water for about 15 minutes. If irritation persists afterwards, seek medical attention.

Ingestion

If you accidentally swallow oil, do not try to induce vomiting. Check with your doctor.

Skin

In case of excessive skin contact with oil, wash with water and soap.

Oil spill

Allow spilled oil to soak into sand or absorbent granules that are allowed in the area. The stains should then be scraped off and disposed in an appropriate waste container or landfill.

MANIPULATION WITH OILS



ATTENTION

The hydraulic oil temperature will be high right after the engine stops. Wait until it has cooled down before starting maintenance.

New oil

There are no special precautions necessary for handling or using new oil in addition to routine care and hygiene procedures.

Used oil

The following precautions should be taken when handling used engine oil in order to protect your health:

- Avoid prolonged, excessive or repeated skin contact with used oil
- Lubricate your hands with a protective cream before handling these oils.
- Observe the following guidelines when removing oil from the skin:
 - Wash your skin thoroughly with soap and water
 - It is useful to use a nail brush
 - Use special hand cleaners to clean them properly
 - Do not use gasoline, diesel or paraffin to clean the skin
 - Avoid skin contact with oil-soaked clothing
- Do not wear oil-stained rags in your pockets
- Wash contaminated clothing before reuse
- Dispose oil-soaked shoes

WASTE DISPOSAL



WARNING

It is forbidden to pollute bodies of water, sewers or soil. Remove all spills and / or lubricants.



WARNING

Damaged or burnt accumulators, as well as charred debris in the event of fire and fluid leakage, should be placed in a sealed, acid-resistant container and disposed of in accordance with local waste disposal regulations.

All waste products must be stored in accordance with all applicable regulations. Collect and dispose of used oil in accordance with local regulations. Under no circumstances should the used engine oil be poured into the sewers, ditches or the soil.

7.2 MAINTENANCE SCHEDULE

The maintenance schedule is based on the number of hours the mower is running, except for daily maintenance. It is therefore necessary to regularly check the number of hours worked and to determine service intervals accordingly.



If the machine's operating hour meter is not installed, use an equivalent calendar time to determine service intervals.



WARNING

Do not operate the mower that has not undergone the scheduled service checks. If any defects are found during regular inspections, they must be repaired immediately.

Perform service tasks at intervals:

- Hours worked
- Calendar equivalents

Whichever one occurred **earlier decides**.

The intervals specified in the timetable must not be exceeded.



If the mower operates in difficult conditions (high temperature, dust, water, etc.), shorten the intervals.

MOWER MAINTENANCE CHART

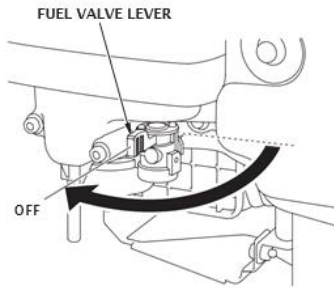
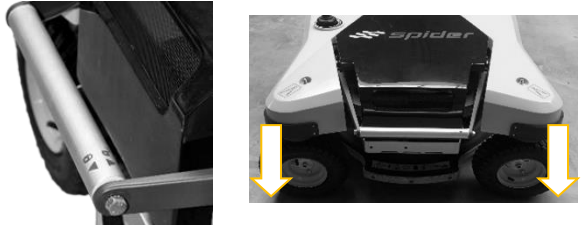
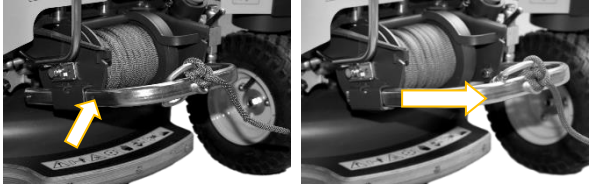
X = Operator S = Authorized service * = in dusty condition to be performed more often	Every 8 hrs. or daily	After first 10 hrs.	Every 50 hrs. or once per year	Every 100 hrs. or once per year	Every 200 hrs. or once per year	Once per year
Visually check for oil leakage from engine and hydraulic systems	X					
Check the tire pressure	X					
Visually check the tension of travel V-belts		X				
Visually check the tension of the steering chain		X				
Check the mower battery state of charge			X			
Check electronic and safety devices (emergency stop, steering, signal etc.)	X					
Check for loose screws and nuts (visually check daily)	X		X			
Check blade sharpness and deformations	X					
Check for loose blade bolts	X					
Visually check hydraulic hoses, fuel hoses, cables – replace if necessary						X
Check and adjust wheel geometry					X	
Adjust the neutral position of the machine drive (hydraulic pump)					S	S
Change the hydraulic oil and filter					S	S
Check, adjust and refill the wheel suspension					S	S
Check the blade deceleration					S	S
Check drive belts and replace if necessary					X	
Check and clean the mowing mechanism			X			
Check safety decals on the machine	X					
Check the bearings on the mowing device					S	
Engine oil exchange		X		X		
Check and add engine oil	X					
Clean the engine cooling system, exhaust hood, alternator, starter, hydraulic pump and controls	X					
Clean air filter and rough filter	X					
Change the air filter					X *	
Change the spark plugs						X
Changing the fuel and vent filter, cleaning the fuel tank						X *
Checking the valve clearance if necessary						S
Check the towing rope	X					
Check the winding drum state			X			
Check the snap hook	X					
Check the winch fixing					X	

7.3 MOWER SERVICE POSITIONS

VERTICAL SERVICE POSITION

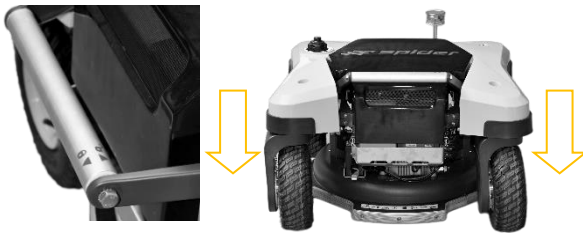
The vertical service position is used for cleaning and maintenance of the cutting device. The mower must be placed in this position on a firm and level surface only for the duration of the service.

PROCEDURE:

1	Place the mower on a level and solid surface.	
2	Rotate the wheels so the portals are aligned with the cutting height adjustment lever.	
3	Switch off the mower and the remote control.	
4	Check and make sure the fuel and oil tank caps are closed tight.	
5	Turn the fuel valve off.	
6	Set the height of cut to the third position from the top.	
7	Pull the winch guide towards you. It will partially eject. (NOTE: If winch rope is too tight, winch guide won't pull out. Loosen winch rope)	
8	Lift the mower on the winch side by the winch guide until the mowing height handle rests on the ground.	

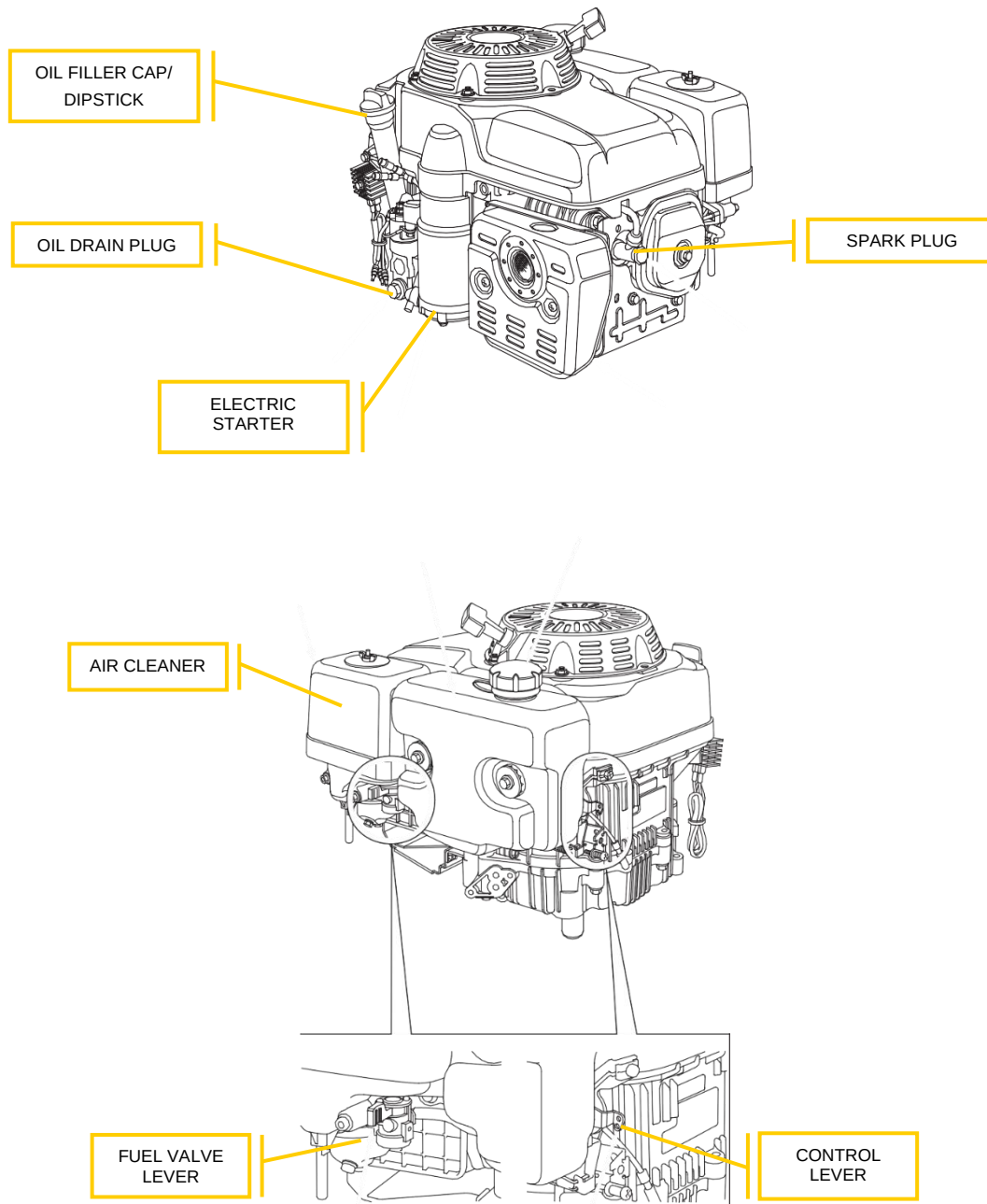
HORIZONTAL SERVICE POSITION

PROCEDURE:

1	Place the mower on a level and solid surface.	
2	Switch off the mower and the remote control.	
3	Unlock and adjust the cutting height lever to the lowest possible level so that the mowing platform pushes against the floor and lifts the wheels off the ground, then secure the lever again. (see pictogram on the handle) Tip: for easier working on the machine, support the mowing deck (e.g. with wooden beams)	
4	Check the stability of the machine.	

7.4 SERVICE POINTS

ENGINE AREA



WARNING



Dust particles in the air or light explosive material (e.g. straw, grass, sawdust, etc.) must not accumulate in the engine and exhaust area. Inspect these places regularly and clean them before each shift, or more often than required. Before opening the engine cover, make sure there are no coarse dirt on it.

WARNING



The motor has uncovered rotating parts. Switch off the engine before working in the engine compartment. Do not start the engine with the engine cover open.

SERVICE POINTS – MOWER

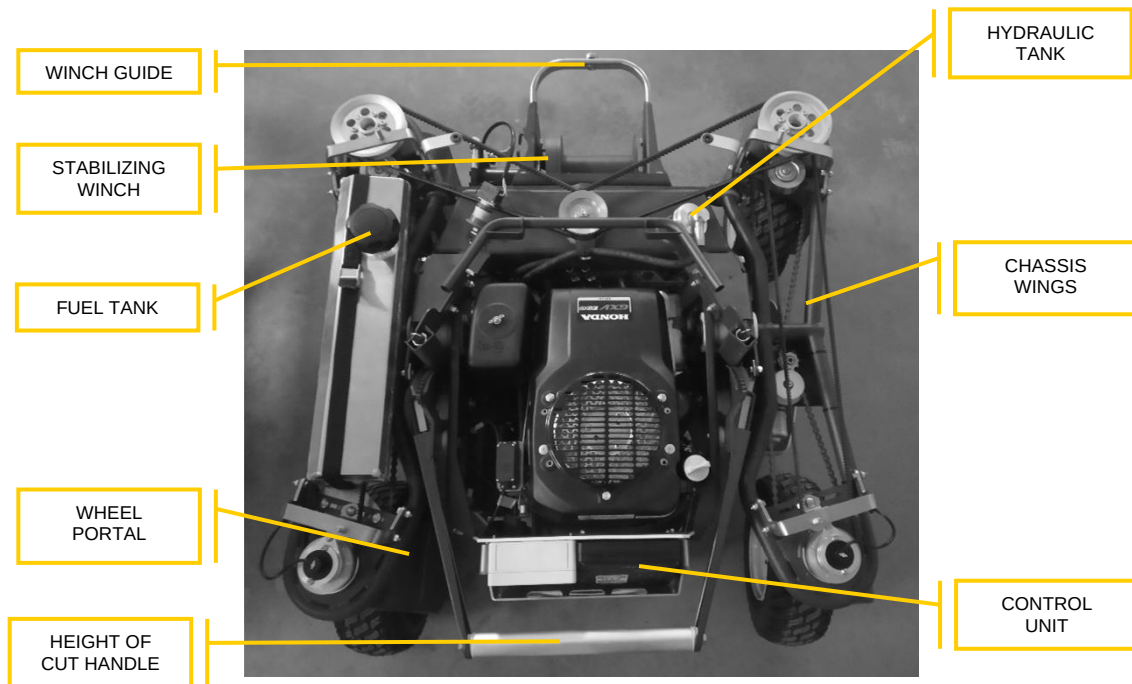


Figure 12 – Service points - mower

To get access to the engine compartment and chassis wings:

- 1) Place the mower on a level and solid surface.
- 2) Switch off the mower using the CENTRAL STOP button and remove the key. Switch off the remote control.
- 3) Unscrew the 4 bolts on top of the chassis wings covers (17 mm socket wrench with extension to prevent damage to the fairing). Tip: when removing the screws, use an extension to avoid damaging the paint on the fairing.
- 4) Remove engine and chassis wing covers.

To get access to the cutting device:

- 1) Place the mower on a level and solid surface.
- 2) Switch off the mower using the CENTRAL STOP button and remove the key.
- 3) Place the mower in [the vertical service position](#).
- 4) Remove the cutting blade (19mm wrench).
- 5) Remove the four screws on the mowing mechanism cover (10 mm wrench).



WARNING

In the area of the mowing mechanism, the grass cuts continuously. Make sure that the area is always cleaned.



WARNING

Ensure that all access panels are properly closed or installed before operating the mower.

7.5 GEOMETRY ADJUSTMENT

The geometry is adjusted mechanically. The mower operator evaluates whether the geometry needs to be adjusted or not.



If you do not have the necessary equipment and experience, have this work done by a specialist.

INSPECTION

Checking the geometry alignment is done by placing a straight lath on the rubber side of the tires or the chain covers.

In case of deviations, follow the procedure below.



GEOMETRY ADJUSTMENT PROCEDURE

- 1) Place the mower on a [horizontal service position](#) so that the body is in contact with the floor and the wheels are lifted free from the ground.
- 2) Hold down the skid-steering switch button so that the wheels slightly deflect, then release the button - the wheels return to the initial adjustment position. Turn off engine but keep remote connection to machine on.
- 3) Remove the engine and side chassis covers.
- 4) Begin adjusting one side first, then continue with the remaining side.
- 5) Loosen the two bolts on the front wheel sensor. (3mm Allen key)
- 6) Loosen the 3 screws on the portal sprocket (13mm key)
- 7) Place the straight lath on the wheel portals on the left and right side and adjust the wheels so that they are parallel.
- 8) Turn the front wheel gently to rotate the wheel so that it is parallel. Then manually align the rear wheel.
- 9) Once both wheels are parallel, tighten the bolts on the sensor and then the bolts on the sprocket.
- 10) Adjust the remaining side wing in the same way. The machine is ready for further use.



7.6 ENGINE MAINTENANCE

The activities listed below are considered workshop maintenance and should only be performed by trained personnel.

Before starting any maintenance work on the mower, **switch off the engine** and **allow it to cool down**, press the CENTRAL STOP emergency button on the mower and **remove the key**. Also turn the remote control off using the CENTRAL STOP on the remote control.

To prevent the engine from starting unexpectedly, **disconnect the negative (-) terminal on the battery**.

The engine should only be repaired by an authorized dealer / service center with the appropriate tools, suitable spare parts and expertise.

Follow the original engine operating instructions included in this technical manual package for repair, maintenance and cleaning.

ENGINE CLEANING

Do not allow dirt to accumulate in the engine area. Pay special attention to the exhaust area, remove any combustible material. It is forbidden to use high-pressure washing systems to clean the engine. This may damage the engine. Do not attempt to clean any part of the engine while it is running. Stop the engine and allow it to cool down.

If you notice the following, contact your service mechanic:

- Excessive smoke
- Excessive vibration
- Excessive noise
- Overheating
- Unusual odors.

OIL LEAKAGE CHECK

Check the mower for any oil leaks before starting it:

- 1) Ensure that the mower operates safely.
- 2) Arrange for access to the engine area (if necessary)
- 3) Check the engine and area under the engine for any oil leaks.
- 4) Close the engine cover (if necessary).

OIL CHECK (LEVEL)

NOTE: Operating the engine with insufficient oil can cause serious engine damage.



WARNING

If you cannot provide enough engine oil for any reason, do not continue driving. Switch off the engine and consult a specialized service center. There is a risk of serious engine damage.

Engine Oil Level Check:

- 1) Ensure that the mower is on a level surface
- 2) Stop the engine and allow it to cool down.
- 3) Open the bonnet and pull out the dipstick.
- 4) Wipe the dipstick with a clean cloth and push it back into the inspection hole as far as it will go.
- 5) Pull out the dipstick out again and read off the oil level.
- 6) If the level is near or below the lower limit mark, top off the recommended oil to the upper limit mark.
- 7) Slide the oil dipstick back and tighten.

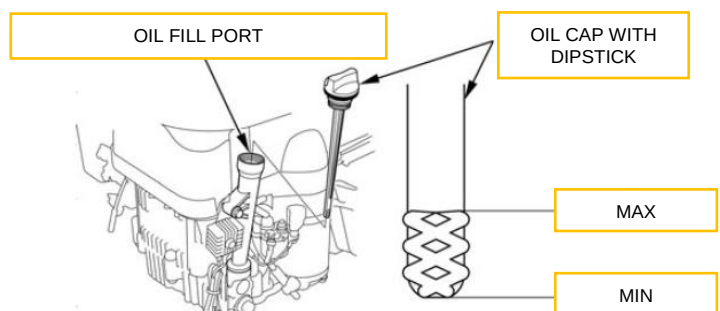


Figure 13 – Engine oil dipstick

**WARNING**

When topping off, the oil must not get on hot parts of the engine - risk of fire.
Read and follow the warnings before working in the engine area.

ENGINE OIL CHANGE

Engine oil must be replaced at the intervals specified in the engine maintenance schedule. See also: [ENGINE MAINTENANCE SCHEDULE](#)

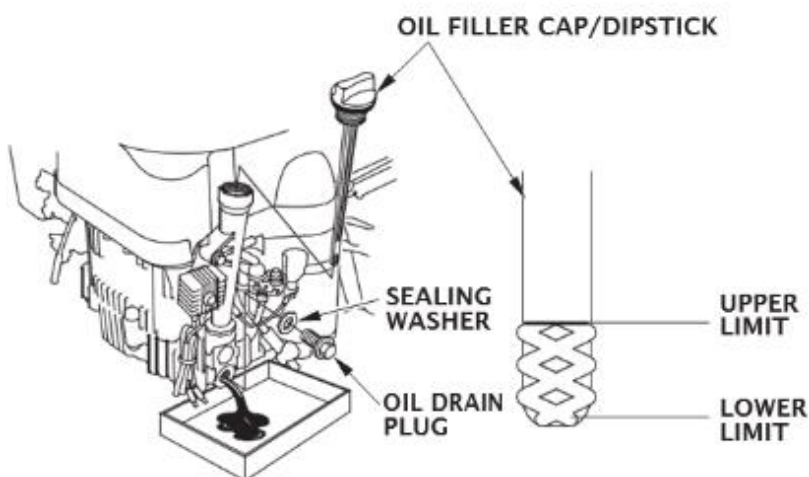
**WARNING**

You can replace the engine oil only if you have the necessary expertise!



Drain the used oil when the engine is warm. Warm oil drains quickly and completely.

- 1) Place a suitable container below the engine to catch the used oil, then remove the oil filler cap/dipstick, oil drain plug and washer.
- 2) Allow the used oil to drain completely, then reinstall the oil drain plug and a new washer, and tighten the oil drain plug securely. Please dispose of used motor oil in a manner that is compatible with the environment. We suggest you take used oil in a sealed container to your local recycling center or service station for reclamation. Do not throw it in the trash, pour it on the ground, or pour it down a drain.
- 3) With the engine in a level position, fill to the upper limit mark on the dipstick with the recommended oil.
- 4) Screw in the oil filler cap/dipstick securely.

**WARNING**

Running the engine with a low oil level can cause engine damage. This type of damage is not covered by the Distributor's Limited Warranty.

ENGINE AIR FILTER

A dirty air cleaner will restrict air flow to the carburetor, reducing engine performance. If you operate the engine in very dusty areas, clean the air filter more often than specified in the MAINTENANCE SCHEDULE.



ATTENTION

Operating the engine without an air filter, or with a damaged air filter, will allow dirt to enter the engine, causing rapid engine wear. This type of damage is not covered by the Distributor's Limited Warranty.

INSPECTION

Remove the air cleaner cover and inspect the filter elements. Clean or replace dirty filter elements. Always replace damaged filter elements.

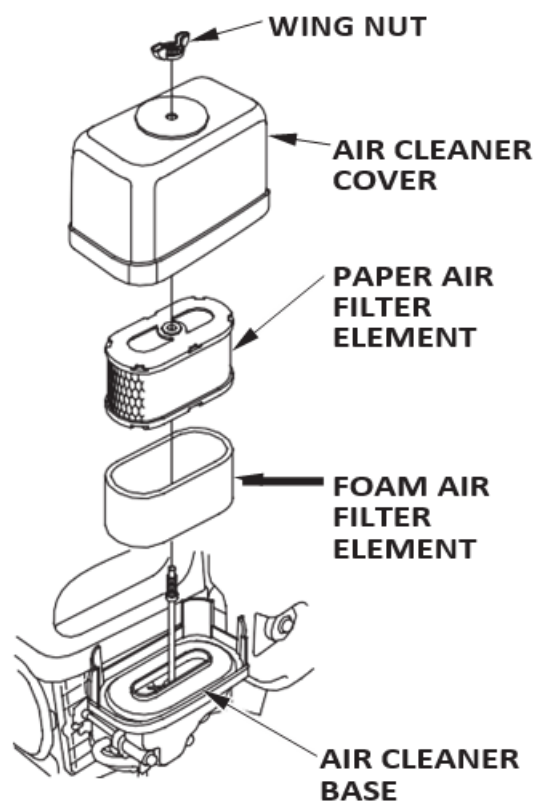
CLEANING

- 1) Unscrew the wing nut from the air filter cover, and remove the cover.
- 2) Pull out the air filter elements.
- 3) Remove the foam air filter element from the paper air filter element.
- 4) Inspect both filter elements and replace if damaged. Change the paper filter cartridge according to the MAINTENANCE SCHEDULE.
- 5) Clean the air filter elements if they are to be reused.

Paper air filter element: Tap the filter element several times on a hard surface to remove dirt, or blow compressed air [not exceeding 207 kPa (2.1 kg/cm, 30 psi)] through the filter element from the inside. Never try to brush off dirt; brushing will force dirt into the fibers.

Foam air filter element: Clean in warm soapy water, rinse, and allow to dry thoroughly. Or clean in non-flammable solvent and allow to dry. Dip the filter element in clean engine oil, then squeeze out all excess oil. The engine will smoke when started if too much oil is left in the foam. Use a damp cloth to wipe away dirt from inside of the air filter bed and from the air filter cover. Make sure that no dirt gets into the air intake that leads to the carburetor.

- 6) Wipe dirt from the inside of the air cleaner case and cover using a moist rag. Be careful to prevent dirt from entering the air duct that leads to the carburetor.
- 7) Place the foam air filter element over the paper element, and reinstall the assembled air filter.
- 8) Install the air cleaner cover, and tighten the wing nut securely.



SPARK PLUG

Recommended Spark Plug: BPR5ES (NGK)



ATTENTION

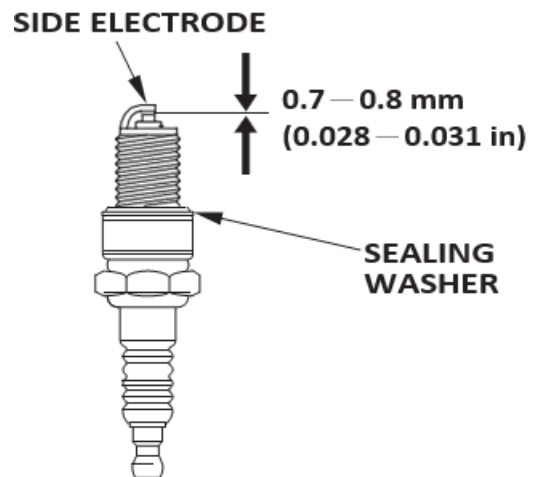
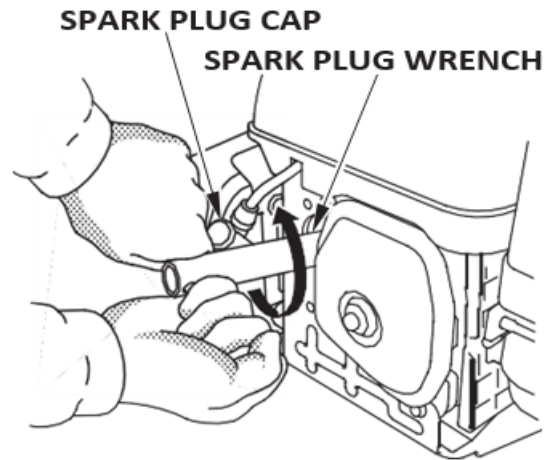
An incorrect spark plug can cause engine damage.

For good performance, the spark plug must be properly gapped and free of deposits.

- 1) Disconnect the spark plug cap, and remove any dirt from around the spark plug area.
- 2) Remove the spark plug with a 13/16-inch spark plug wrench.
- 3) Inspect the spark plug. Replace it if damaged or badly fouled, if the sealing washer is in poor condition, or if the electrode is worn.
- 4) Measure the spark plug electrode gap with a wire- type feeler gauge. Correct the gap, if necessary, by carefully bending the side electrode.

The gap should be: 0.7—0.8 mm (0.028—0.031 in)

- 5) Install the spark plug carefully, by hand, to avoid cross-threading.
- 6) After the spark plug is seated, tighten with a 13/16-inch spark plug wrench to compress the sealing washer.
When installing a new spark plug, tighten 1/2 turn after the spark plug seats to compress the washer.
When reinstalling the original spark plug, tighten 1/8—1/4 turn after the spark plug seats to compress the washer.



ATTENTION

A loose spark plug can overheat and damage the engine. Overtightening the spark plug can damage the threads in the cylinder head.

- 7) Attach the spark plug cap to the spark plug.

7.7 FUEL SYSTEM

CLEANING THE FUEL TANK

While the mower is in use, dirt may accumulate in the fuel tank, which may cause the fuel system to clog up when the mower is operating. The tank may only be emptied by suctioning petrol, taking all precautions when handling fuel. The fuel tank venting system is integrated into the tank cap, where it is ended by a flip valve closing the venting system when the mower is overturned.



WARNING

Do not smoke or handle open flames near gasoline when working with gasoline.

REPLACING THE FUEL FILTER

The fuel filter is replaced every 200 hours of operation.

- 1) Ensure safe operation of the mower
- 2) Turn off the engine and mower.
- 3) Arrange access to the engine area.
- 4) Remove the old fuel filter.
- 5) Install new fuel filter.

7.8 MOWING BLADE

Check the condition of the blade regularly:

- Cannot bear traces of damage such as bending, or other deformations.
- It must be securely fastened to the flange with fixing screws.
- Must be sharp.
- The fastening screws must be free of any damage.

If the blade is damaged, it is forbidden:



- Straightening the blade
- Heating the blade
- Welding and surfacing the blade
- Reinforcement and other interventions in its construction

When replacing worn parts, observe the following:

- **Maximum allowed blade wear is 12 mm.** If the mowing blade is worn beyond the permitted wear, the blade must be replaced.
- If the mowing unit **starts vibrating** after starting up the engine and engaging the blade, **do not continue working with the mower**, turn it off and contact your dealer.
- The **blade cannot be refurbished**.
- When replacing the blade, **use new fastening screws** if the existing ones show signs of damage. Only steel, high-strength screws can be used as fasteners. The use of other screws is strictly prohibited.
- Use the **table torques for tightening**.
- Blade **balance must be checked after sharpening**
- Wear gloves when changing blades.

CHANGING THE BLADE

- 1) Place the mower on a firm, level surface.
- 2) Stop the engine, press CENTRAL STOP on the controller and the mower.
- 3) Disconnect the battery.
- 4) Raise the mower to the service position and secure it against tipping over.
- 5) Loosen the blade retaining screws. Remove the screws and washers. Note that when removing the screw, the blade may fall to the ground.
- 6) Follow the reverse procedure when mounting the blade.

GRINDING AND INSPECTION OF THE CUTTING BLADE

To check the blade geometry:

- the blade must not be bent
- never straighten a bent blade, USE NEW!
- the ends of the knife must be flush (test whether the whole surface is on a flat surface)

Grinding:

- grind **only 100 mm sharp part** of the blade
- grinding is carried out at an **angle of 45 °**
- grind **both sides** of the knife **evenly** (up to a **maximum depth of 12 mm**)
- after sharpening **check the balance** of the blade!

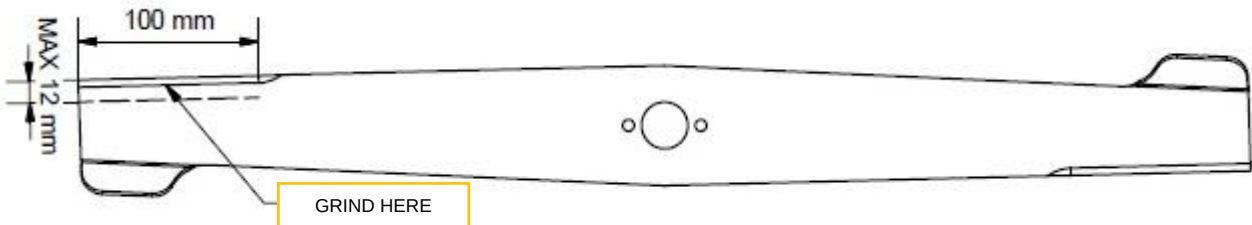


Figure 14 – Blade grinding

7.9 HYDRAULIC SYSTEM

Maintenance of the hydraulic drive must be done by properly trained service personnel.



WARNING

Damaged hoses can cause fatal accidents. Check the hoses regularly. Do not use the mower if the hoses or their fittings are damaged.



WARNING

Thin jets of fluid escaping from the nozzles at high pressure can penetrate the skin. Protect your face and hands from fluid under pressure and wear personal protective equipment. Hold cardboard where you suspect a leak, and then check for any traces of hydraulic fluid. Seek medical advice immediately if hydraulic fluid penetrates the skin.

CHECK THE HOSES REGULARLY FOR:

- Damaged hose ends
- Worn external covers
- Concave outer covers
- Tangled or crushed parts
- Stripped reinforcement in outer covers
- Extruded hose fittings
- Worn casing or hose guard breaks

Exchange of the hydraulic hoses must be done only by the authorized service center.

CHECKING FOR OIL LEAKAGE

Check the hydraulic hoses for damage. Check all hydraulic functions. In particular, check the speed of operation, vibrations and abnormal sounds. Do not use the mower where one or more of these defects appear.

HYDRAULIC OIL LEVEL CHECK

- 1) Make sure the mower is on a level surface.
- 2) Stop the engine and allow to cool off.
- 3) Remove the engine and side covers.
- 4) Remove the hydraulic oil tank cap.
- 5) Visualize the oil level. The oil level must reach at least (A = 10mm) from the top of the tank.
- 6) If the level is below the specified mark, add the recommended hydraulic oil.
- 7) Tighten hydraulic tank cap and place covers back on machine.

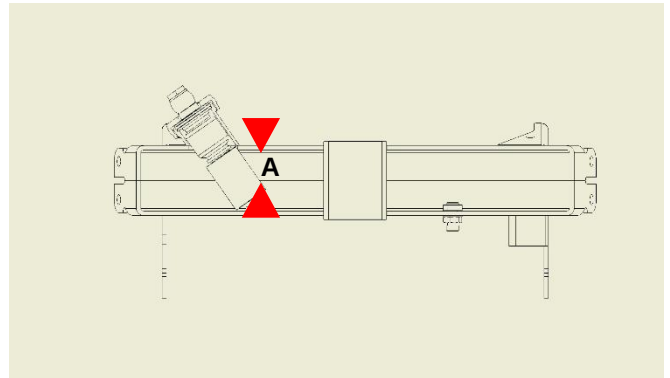


Figure 15 – Hydraulic oil level check

7.10 HYDRAULIC STABILIZING WINCH***ROPE MAINTENANCE**

Before each shift, check the condition of the rope, especially if you have been working in terrain where unwanted objects, sharp edges, etc. were present.

After 20 hours of operation, pull the entire rope out of the winch and check its condition thoroughly for any damage.

**WARNING**

If the surface layer of the rope is damaged, replace the entire rope or shorten it if its shortened length suits you. The use of a damaged rope is strictly prohibited.

**WARNING**

Do not directly expose the tow rope to hot / warm objects.

MOUNTING THE CARABINE

Lead the rope through the lashing ring, write an eight figure around the fixed end and thread it through as shown in the picture.

MOUNTING THE ROPE

Mounting the new rope must be done only by the authorized service center.



Figure 16 – mounting the carabine

WINCH CLEANING

After each shift, remove any dirt from the surface of the winch as well the hydraulic hoses. A clean surface helps improve the cooling of the hydraulic oil as well as to detect faults. Remove any dirt by brushing with a broom. Do not use pressured water. If water is used, the sprocket mechanism should be dried immediately. Do not use gasoline or other petroleum products for cleaning.

7.11 ELECTRICAL SYSTEM

CHARGING THE RC BATTERY

1. Slide the battery from the controller
2. Connect the charger to the car cigarette lighter socket.
3. Insert the battery into the charger (the green and orange LEDs lights are on and the battery is charging).
4. When charging is complete, the orange LED turns off.

NOTE:

Leave the battery in the charger as needed (the charger monitors the battery and does not overcharge the battery). If the battery used in the controller is low, replace it with a charged battery.



Figure 17 – Battery Charger

FUSES

Electrical circuits are protected by a fuse (32V, 40A). If the fuse blows, find out why this occurred before installing a new one. The fuse and spare fuse are located in the control unit.



WARNING

Use only fuses with the specified ampere rating. This will prevent damage to the electrical system.

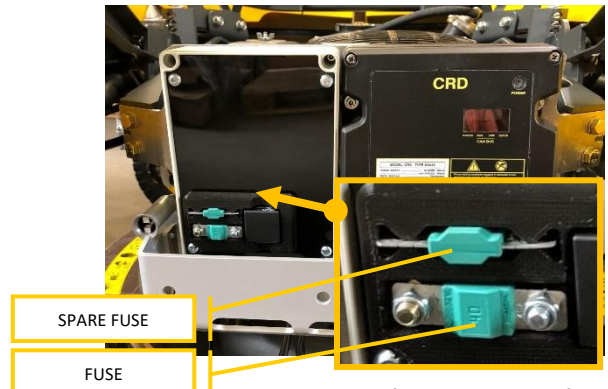


Figure 18 – Fuse box

BATTERY MAINTENANCE

Check the battery cleanliness at regular intervals.

Keep terminals and clamps clean of dust and corrosion. Terminal corrosion may affect battery performance and may pose a safety hazard. If you notice corrosion, disconnect the battery, loosen and remove the clamps, and remove the corrosion by spraying the terminals and clamps with a weak solution of baking soda and water (sodium bicarbonate). Apply the anti-corrosion emulsion again before reconnecting the clamps. Always keep proper records of maintenance.

DO NOT REMOVE THE BATTERY SAFETY VALVE UNDER ANY CIRCUMSTANCES AND NEVER ADD WATER.

HOW TO MAINTAIN THE BATTERY

To achieve maximum storage battery life, the average annual storage temperature must be 15 ° C. Short-term temperature may not exceed 25 ° C, otherwise the battery life may be affected.

- 1) Remove the battery from the mower.
- 2) Find a cool and dry place to store the battery.
- 3) Make sure the battery is fully charged and recharge it approximately every two months.

HOW TO DISCONNECT THE BATTERY

- 1) Ensure safe operation of the mower. See also: [SERVICE POSITION](#)
- 2) Check the access to the battery.
- 3) Turn off the power switch.
- 4) Disconnect the battery terminals. First, disconnect the ground terminal (-).



WARNING:

Do not disconnect the battery while the engine is running, as this may damage the electrical circuits.

HOW TO CONNECT THE BATTERY

- 1) Ensure safe operation of the mower
- 2) Arrange access to the battery.
- 3) Connect the battery terminals. Connect the ground terminal (-) last.
- 4) Secure the battery against movement using a tie-down strap

BATTERY TESTING

The best and easiest way to test the battery is to use a voltmeter or a multimeter to measure the resting voltage. If you know the exact voltage, use the table below to determine the charge.

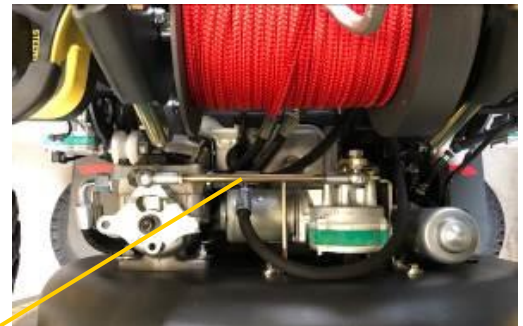
Make sure that the battery is fully charged so it can provide enough starting energy. The recommended charging current is 10% of the nominal capacity in amperes, i.e. 1.0A [ampere]). To ensure long life, we recommend that the battery be fully charged before installation.

7.12 NEUTRAL POSITION ADJUSTMENT

During the use of the mower, the neutral position of the servomotor may be off-center, and the mower will start to drive automatically. In this case, it is necessary to adjust the neutral position.

PROCEDURE:

- 1) Place the mower on a flat firm surface.
- 2) Raise the mower to the [horizontal service position](#) so that the machine mowing deck touches the ground and the wheels are clear off the ground.
- 3) Start the engine.
- 4) Loosen the lock nuts (13mm wrench) on the traction actuator linkage.
- 5) Adjust the tightening of the joints so that the wheels do not move forward or backward once in the neutral position.
- 6) Tighten the lock nuts.



ACTUATOR TRAVEL
ROD

Figure 19 – adjustment of the neutral position actuator

7.13 DRIVE BELTS AND CHAINS

HYDRAULIC PUMP AND MOWING UNIT BELTS



WARNING

Make sure the engine is switched off before changing the belt. Remove the key from the CENTRAL STOP before checking the belt tension.

INSPECTION

- 1) Place the mower on a level and firm surface. Remove the key from the CENTRAL STOP button.
- 2) Move the mower to the vertical service position.
- 3) Remove the blade (19 mm wrench).
- 4) Loosen 4x screw (10 mm wrench) and remove the cutting deck cover.
- 5) Check the pulley's brake belt for wear, the belt for wear, and the nuts and bolts for proper tightening.
- 6) If the tension is insufficient or the belts and the braking belt are worn, have the belt replaced or the tensioning mechanisms adjusted by an authorized dealer or service center.

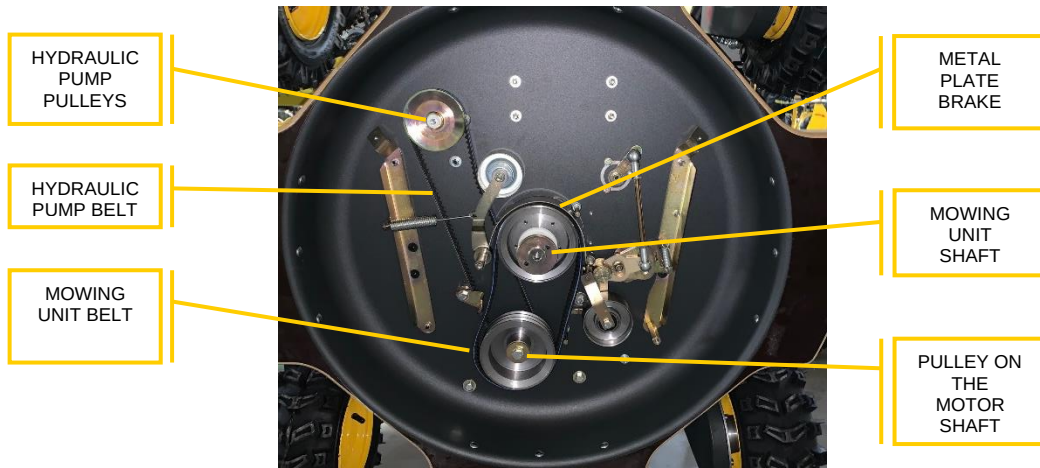


Figure 20 – Mowing device

DRIVE AND STEERING BELTS

INSPECTION

- 1) Place the mower on a flat and firm surface, press CENTRAL STOP on both the controller and the mower and remove the key.
- 2) Remove the engine cover and the side covers (4x screw - use a 17 mm socket with an extension).
- 3) Check the chain tension by applying a slight thumb pressure in the middle of the branch. Deflection should be within 2 cm.
- 4) If the tension is insufficient, loosen the belt tensioner pulley nuts and refill.
- 5) After tensioning, tighten the screws.
- 6) If any part is damaged or worn, replace it.

TENSIONING

• DRIVE BELT

Tensioning is carried out with the belt tensioner (Loosen the nut, tension the belt and again tighten the nut.)

• STEERING CHAIN

Tensioning is carried out with the chain tensioner.

TIP: For better access to belt and chain tensioner on the left, unlock the tank strap and tilt the tank. Carry out maintenance on the belt and fasten the tank properly back in place. Make sure that no fuel leaks when handling the tank.

• TRACTION DRIVE BELT

These are maintenance-free belts, in case of excessive tension, have the belt replaced by an authorized service center.

EXCHANGE

Damaged and worn chains / belts must be replaced immediately. Have the replacement carried out by an authorized service center.

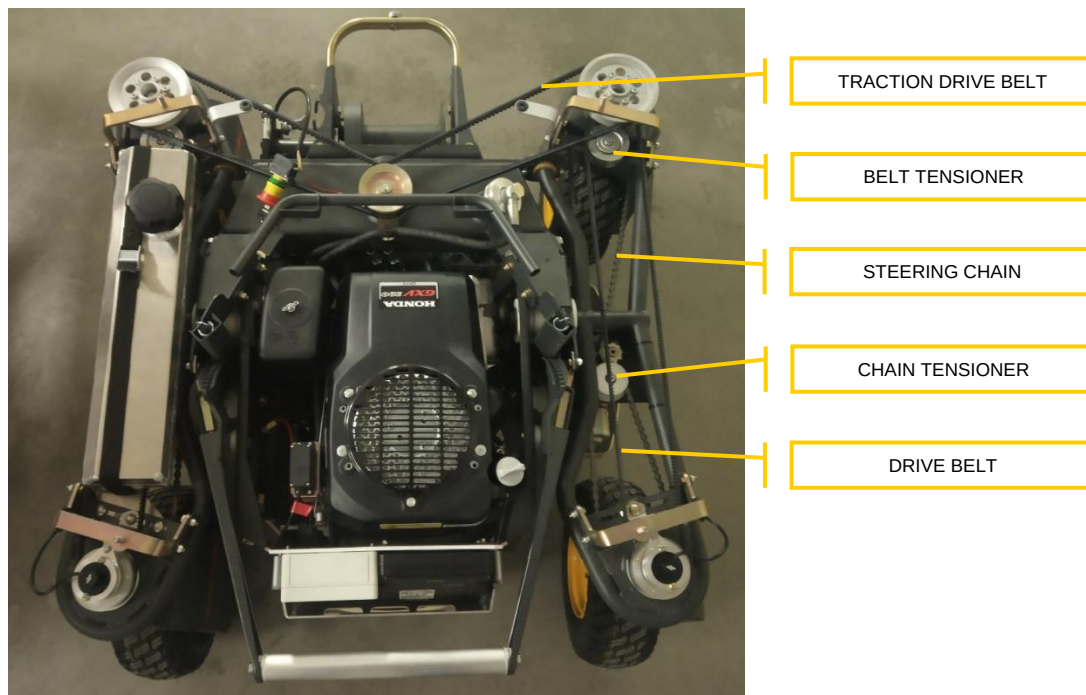
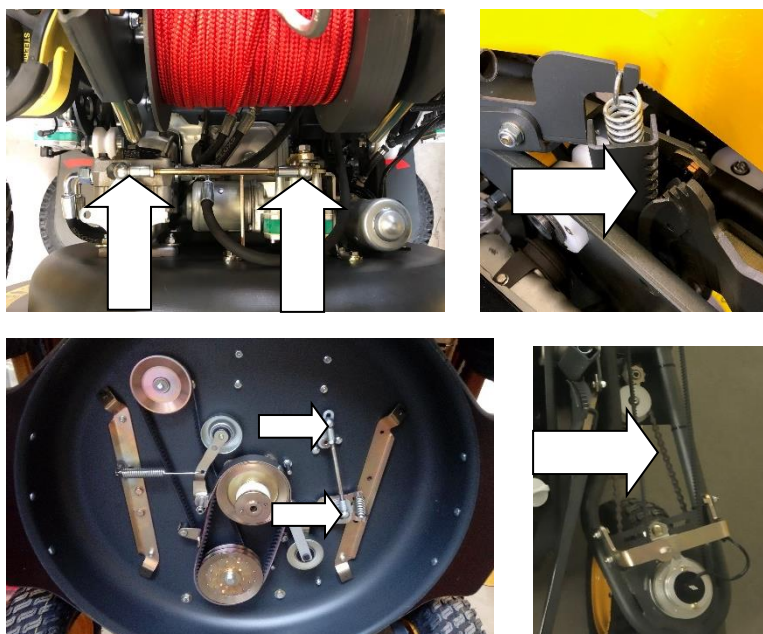


Figure 22 - Drive

7.14 LUBRICATION

Apply a reasonable amount of lubricant to the parts to be lubricated. Excessive amounts of lubricant cause leakage and contamination of the mower and the environment. Insufficient quantity requires more frequent lubrication and can lead to damage.

We recommend using Interflon chain spray for lubrication. Regular lubrication requires a chain of steering wheels. For post-season maintenance, also lubricate the gear in the winch body and stroke (see pictures below)



7.15 TIRE PRESSURE

Observe the recommended tire pressure. Other values may adversely affect handling, especially on slopes. In some cases, you may also lose control of the mower.

Recommended tire pressure:

Turf tires: max. 200 kPa – 2,0 bars

X-track tires: max. 150 kPa – 1,5 bars.

7.16 TIRE REPLACEMENT

- 1) Place the mower on a flat and solid surface.
- 2) Turn the wheels so that the mounting nuts are accessible from the outside.
- 3) Stop the engine, remove ignition key from the CENTRAL STOP button.
- 4) Secure the machine against movement.
- 5) Lift the mower and place a service block under the mowing deck. (Ensure that the machine is securely supported before working on it.)
- 6) Loosen the retaining nuts, remove the tire.

To replace the tire, follow the reverse order.

7.17 MOWING HEIGHT ADJUSTMENT

Keep rack and lift lever parts clean, undamaged and without excessive play.

The control cords must be slightly overstretched. Replace the cord if it is damaged.

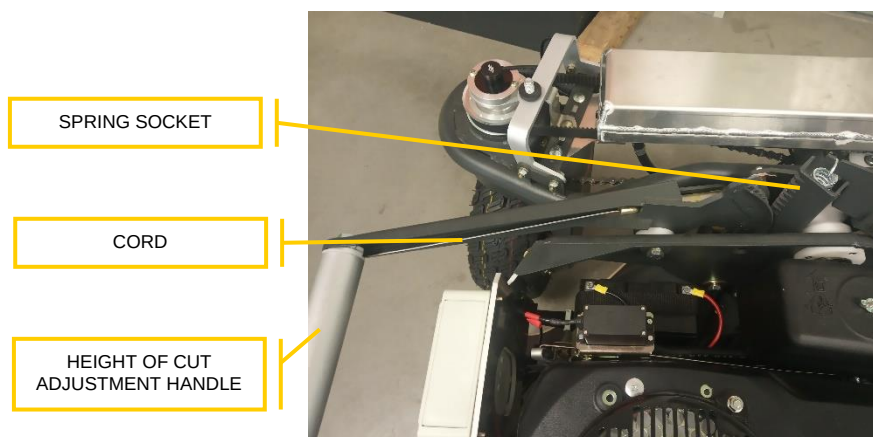


Figure 22 – Mowing height adjustment

8 TECHNICAL DATA

8.1 FLUIDS, LUBRICANTS AND FILLING VOLUMES


WARNING

In the event of any unauthorized fuel types (or their equivalents) being used at any time, the producer rejects any liability for engine failure.

Item	Fluid/Lubricant	Volume
Fuel tank	Petrol 95 octane	3,5 l
Engine oil	SAE 10W-30 API classification SJ, SL or equivalent	1,1 l*
Hydraulic oil	ATF Q8 AUTO14	3,5 l*
Wheel portal	Mobilux EP 004	0,3l
Grease	Mobilgrease XHP 222	

* When refilling the operating fluids, always respect recommended volumes.

8.2 TECHNICAL DATA

The mower is a self-propelled all-wheel-drive machine controlled by a remote control.

Parameter	Measure	CROSS LINER	CROSS LINER lite
Dimensions (l x w x h)	mm	980 × 1110 × 600	
Mowing width	mm	650	
Height of cut	mm	45–110	
Weight	kg	175	163
Speed	km/h	0–6	0–4,8
Cutting deck	-	One (single) blade	
Hydraulic drive pump	-	Hydro Gear 6 ccm	
Hydraulic drive motor	-	Sauer Danfoss OMM 32	M + S Hydraulic
Drive	-	4 × 4	
Wheels	inch	13×5.00-6 (x-track)	13×5.00-6 (TURF)
Battery		12 V, 10 Ah, gel	
Fuel	-	Unleaded petrol – natural 95	
Fuel tank volume	l	3.5	
Motor	-	Air cooled 4-stroke single valve Honda GXV390	
Cubic capacity	cm ³	389	
Performance	kW	7,6	
Engine Rpm	1/min	3600	
Ignition	-	Electric	
Starter	-	Electric	
Winch rope - diameter	mm	6	Not included
Winch rope - length	m	25	
Minimum carabine strength	kN	20	
Winch hydro motor		Sauer Danfoss OMM 32	
Frequency range EU and USA	MHz	(863-870) EU - (915-928) US + Australia	

NOISE EMISSIONS

The mower emits the following noise: Sound power LWA = 95,8 dB

Guaranteed sound power level LWA = 98 dB

The measurement was carried out according to ISO 3744

9 TROUBLESHOOTING

9.1 MOWER TROUBLESHOOTING

Failure	Probable cause	Repair
Engine doesn't start	Pressed CENTRAL STOP button	Release the CENTRAL STOP button by turning it
	Empty fuel tank	Refuel
	Discharged battery in the RC	Recharge the battery / replace with the charged battery
	Discharged battery in the mower	Recharge the battery
	Disconnected battery	Check/exchange harness
	Spark plug doesn't work	Clean / replace the spark plug
	Fuel filter clogged	Exchange filter
	No connection between the controller and receiver	Check the receiver, move closer to the mower
	Electricity wire disconnection	Check the connection/contact your dealer
	Lack of hydraulic oil	Add oil
	Not enough engine oil	Add oil
Mower drive is not enough or slow	Overheated oil	Clean the cooling fan, wait until the system cools down
	Lack of hydraulic oil	Add oil
	Loose hydraulic drive belt	Tighten / Exchange
	Clogged hydraulic oil filter	Exchange
	Wear of the hydraulic circuit components	Exchange
	Worn V belts	Exchange
Mower does not drive up the slope	Not sufficiently tightened V belts	Tighten
	Drive servo malfunction	Exchange
	Worn V belts	Exchange
Mower vibrates when started	Blade is loose	Change the blades securing bolt and properly tighten
	Damaged or unbalanced blade	Exchange blade
	Blade carrier shaft is bent	Change the shaft
Cutting quality not satisfactory	High mowing speed	Slow down
	Blade is not sufficiently sharp	Sharpen or change blade
	Wet grass	Wait until the grass is dry
	Overgrown grass	Mow grass that is at most three times higher than the stubble height; we recommend mowing the grass, let the mow grass to dry out and mow it again
The cut grass is caught inside the mowing deck	Wet grass	Wait until the grass is dry
Not able to change the cutting height	Adjusting cords are loose	Tighten or replace
Not able to turn on the blade	Loose cutting belts	Check the condition of the belts or replace / consult a service center
Not able to turn the blade off	Worn or non-trimmed mower deck drive elements	Consult a service center

9.2 WINCH TROUBLESHOOTING

Failure	Probable cause of failure	Repair
The drum is not rotating	Lack of oil in the hydraulic system of the machine	Add hydraulic oil
Jerking motion of the drum	Lack of oil in the hydraulic system	Add hydraulic oil
The drum rotates only until the oil gets warm	Low engine speed	Increase the engine RPM to maximum
	Worn hydraulic motor	Replace the hydraulic motor
The winch is too noisy	Worn bearings of the winch drum	Replace the bearings

9.3 REMOTE CONTROL TROUBLESHOOTING

The table below lists malfunctions that are signaled by LEDs on the Transmitting Unit and the solution to those malfunctions. If the problem persists after attempting the suggested solution, contact the support service of the Machine Manufacturer.

Failure	Probable cause	Repair
The green LED blinks fast. The red LED ¹ blinks for 3.5 minutes.	The battery is not sufficiently charged or the Transmitting Unit has been on for eight hours ² .	The battery needs to be replaced with a charged one
The green LED repeats one of the following sequences: ONE or TWO blinks and a pause. The red LED ¹ blinks for 3.5 minutes.		
The green LED repeats the sequence: three blinks and a pause. The red LED ¹ blinks for 3.5 minutes.	The Transmitting Unit has been on for eight hours ²	You need to switch off the Transmitting Unit and start the Radio Remote Control again.
The green LED is off. The red LED ¹ has ONE very long blink.	The Transmitting Unit does not work correctly.	Contact the support service of the Machine Manufacturer.
At Radio Remote Control start up, the green LED is off and the red LED ¹ has ONE long blink ³ .	The STOP pushbutton is pressed.	Unlock the STOP pushbutton.
At Radio Remote Control start up, the green LED is off and the red LED ¹ has TWO	The Transmitting Unit does not work correctly.	Contact the support service of the Machine Manufacturer.

long blinks ³ .		
At Radio Remote Control start up, the green LED is off and the red LED has THREE long blinks ³ .	The battery is very low.	The battery needs to be replaced with a charged one
At Radio Remote Control start up, the green LED is off and the red LED ¹ has FOUR long blinks ³ .	The SAFETY command is activated	Bring the actuators to the rest position.
At Radio Remote Control start up, the green LED is on and the red LED ¹ has ONE to FOUR long blinks and some short blinks ³ .	At least one of the actuators corresponding to commands is activated.	Bring the actuators to the rest position. If necessary, it is possible to identify the activated command

¹. Whenever the red LED illuminates, the acoustic signal device activates.

². After this signal, the Transmitting Unit switches off.

³. Press START pushbutton and hold it down until the Transmitting Unit automatically switches off.

Whenever the red LED lights up, the acoustic signaling device is activated.

10 WARRANTY CONDITIONS

LIMITED WARRANTY FOR NEW SPIDER EQUIPMENT

GENERAL PROVISIONS – The warranties described below are provided by DVOŘÁK – svahové sekačky s.r.o. ("Spider") to the original purchaser of new equipment from Spider or authorised Spider Distributors/Dealers. Under these warranties Spider will repair or replace, at its opinion, any covered part which is found to be defective in material or workmanship during the applicable warranty term. Warranty service must be performed by a Distributor/Dealer or service centre authorised by Spider to sell and/or service the type of equipment involved, which will use only new or remanufactured parts or components furnished by Spider. Warranty service will be performed without charge to the purchaser for parts and labour. The purchaser will be responsible, however, for any service call and/or transportation of product to and from the Distributor's/Dealer's or service centre's place of business, for any premium charged for overtime labour requested by the purchaser, and for any service and/or maintenance not directly related to any defect covered under the warranties below, including the necessity to clean the machine.

1. Spider provides Warranty:
 - 36 months for the Distributor/Dealer from the day the Product was delivered to the Distributor/Dealer
 - 24 months/800 working hours, whichever happens first, for the Customer after purchase and registration of the following products: Spider CROSS LINER, Spider ILD01, Spider ILD02, Spider 2SGS, Spider 3RIDER.
 - 12 months/400 working hours, whichever happens first for the Customer after purchase and registration of the following product: Spider CROSS LINER lite when used commercially. For any natural person the warranty has to comply with local legislation.
 - 3 months for new Spare Parts delivered outside the Product Warranty from the day these were delivered to the Customer, but only under the condition that these were installed and mounted by an authorized service Distributor/Dealer. Otherwise the Warranty is forfeit.
 - For new spare parts delivered under Warranty the Warranty period expires together with the Warranty period of the whole Product
2. The Distributor/Dealer is obliged to ensure performance of warranty inspections on the Product as prescribed in the Operator's Manual.
3. In order for a warranty claim to be acknowledged, the purchaser must have had all prescribed warranty inspections performed and recorded.
4. In case of defects reclaimed by the Customer in terms of the warranty period, the Distributor/Dealer assesses and determines whether this concerns a defect in the warranty period, which can be acknowledged (acknowledged warranty) or not and ensures repairs are carried out.
5. If the Distributor/Dealer assesses the defect as one that can be acknowledged (acknowledged warranty), they are obliged to request in writing that Spider acknowledges such warranty repair at the latest within one month after the end of the month in which such warranty repair was performed. This can only be done through a standard "Warranty Claim Report" form. Such request will include all information about the method of assessment and solution of the warranty (description of defect, identification of defect, description of repair, list of defective parts, hourly work by the service centre, specification of costs for repair, photo/video documentation of the repaired part). Spider is obliged after investigation, to make a decision on this request as whether to acknowledge the warranty or not.
6. Spider will make a decision about the acknowledgement of the warranty claim without unnecessary delay, latest within 60 days since the warranty claim is filed.
7. If the warranty is acknowledged, Spider will write out a credit note to the Distributor/Dealer for costs connected with the warranty repair – i.e. the cost of spare parts and the hourly rate for service work according to the valid repair norms.
8. Spider is entitled to reject such warranty claim if the warranty was acknowledged by the Distributor/Dealer in conflict with the warranty conditions. In such a case, Spider is not obliged to reimburse the Distributor/Dealer for costs for performance of such warranty repair work.

9. Acknowledged warranty repairs of commercial models (Spider CROSS LINER, Spider ILD01, Spider ILD02, Spider 2SGS, Spider 3RIDER) up to the level of EUR/USD 100.00 (one hundred EUR/USD) per case are not covered by Spider, costs connected with such repairs are covered by the Distributor's/Dealer's profit margin.
10. The Distributor/Dealer is obliged to ensure clear marking and storage of damaged spare parts, which were replaced under warranty for the period of min. 12 months, as well as of all-important documents pertaining to such warranty repair.
11. The selling Distributor/Dealer has no authority to make any warranty, representation, condition or promise on behalf of Spider, or to modify the terms or limitations of this warranty in any way and makes no warranty on any other item unless it delivers to the purchaser a separate written certificate specifically warranting the item.
12. Spider is not responsible for the following: (1) Used equipment; (2) Any equipment that has been altered or modified in ways not approved by Spider, including, but not limited to, setting injection pump fuel delivery above Spider specifications; (3) Depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow operation instructions, misuse, lack of proper protection during storage, or accident; (4) Any repairs done by the Customer; (5) Normal maintenance parts including blades, hydraulic hoses, belts, bearings, spark plugs, filters, chains, tires, winch ropes etc. and service.
13. To secure warranty service, the purchaser must (1) Report the product defect to an authorised Distributor/Dealer and request repair within the applicable warranty term, (2) Present evidence of the warranty start date, and (3) Make the equipment available to an authorised Distributor/Dealer or service centre within a reasonable period of time.
14. Every Distributor/Dealer must ensure that the Product is registered by the Customer on www.slope-mower.com/machine-registration/ within seven (7) days after delivery in order to receive the full warranty of 24 months/800 working hours, whichever happens first.
15. All Demo units will be registered by Spider on the date of delivery to the Distributor/Dealer. All Demo units will be appointed by Spider.

In Pohled, April, 2020

Shortcuts:

RRC (RC)	Radio Remote controller
Mower	Spider XLINER

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