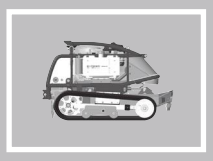
RADIO CONTROLLED GRASSLAND MOWER



BARBIERI GROUP

MADE IN ITALY

User Manual

MODEL: X-Rot 95 Evo

X ROT 95

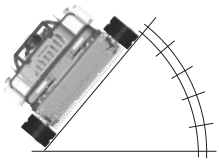
BHV
Barbieri Hybrid Vehicle

ENGLISH
Original Copy

Thank you for choosing our product

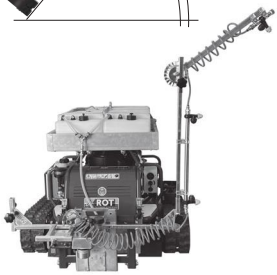
With this product you have chosen unique features, the value of which you can immediately appreciate and evaluate over time:

- The lightness of the machine allows it to work on slopes that are impossible for other machines



PRODU

- The available accessories increase the work opportunities



PRODUC

- With the COMPASS Servo Drive you can work more efficiently and safely

PRODUCTI

- The BeaConNet is a beacon on the machine that changes color to inform you of all dangerous situations and the status of the vehicle.

PRODUCTIVI

- The vibration of the radio control warns the operator of dangerous situations and alarms on the machine

PRODUCTIVITY

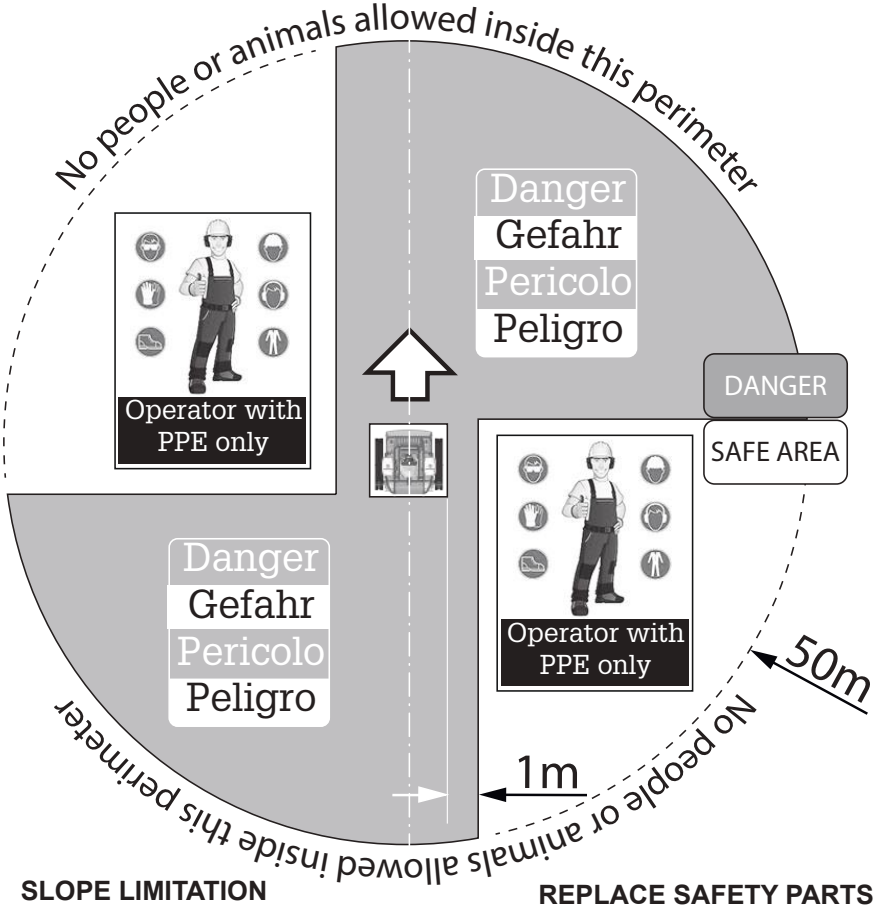
- The telematic connection of the machine to the web enables remote control of the machine parameters, fast remote diagnosis and automatic software updates.

PRODUCTIVITY

HAVE GOOD WORK !

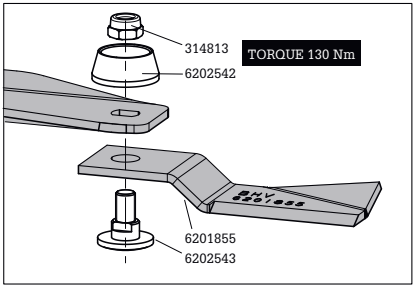
SAFETY QUICK REMIND

SAFE AND DANGER AREA



SLOPE LIMITATION

REPLACE SAFETY PARTS



A - INTRODUCTION

INTRODUCTION

This handbook must be considered as part of the machine. The seller of new and second-hand machines must record in the selling document that this booklet has been given along with the machine.

PICTURES USED IN THE HANDBOOK

Before starting use this machine, it is necessary to read carefully this handbook, learn and observe all the safety rules indicated with the following symbols.

DANGER

This symbol is used to highlight an important safety information. If this information is ignored, people are in danger either of possible injures - even serious ones - or death.

In these messages are also described the normal precautions which have to be taken to avoid the danger. Ignoring these precautions can cause serious damages to the machine.

ATTENTION

This warning is used in the handbook safety messages when the danger can cause minor or moderate damages and injuries.

The message can be used also for dangers which can cause damages to the machine or its components.

IMPORTANT

It is used for precautions which have to be taken to avoid operations which can shorten the life of the machine or of its component.

NOTE

This word is used to highlight information which refers to operations in progress.

Any time you see these symbols, whether on the machine or on the following of this manual you must pay attention to avoid danger to yourself and to other people.

Following some rules suggested by the common sense, you will avoid any break risk and your machine will function longer and more efficiently.

B - CONDITION AND PROPER USE

DEFINITION OF PROPER USE

- This machine have been designed for grass cutting and weed control in agriculture and public green, flat and sloped areas.
- The exact observance of use conditions, maintenance and reparation are the essential element for a correct use.
- The machine should be used, maintained and repaired only by people who have knowledge of the security rules.
- The general rules about accident prevention and public road circulation rules should be respected

IMPROPER USES

- Any other use is not allowed. The manufacturer is not responsible for damages caused by any use than the intended one. The user is fully responsible for any possible risk.
- Each arbitrary modification carried out on the machine could release the manufacturer from the responsibility for any damage or accident derived by the machine.

ONLY ONE OPERATOR

The machine was designed to be used by one operator only. The presence of other people in the closeness could be dangerous for the safety of both user and people. (see danger area in paragraph 5.12)

ACCESSORIES ON THE MARKET (ONLY IF AUTHORIZED)

Any use of accessories different from the authorized ones by the manufacturer is not allowed. For further applications different from the authorized one or in case of misunderstanding of this handbook, please contact the technical department of the manufacturer.

BARBIERI s.r.l. - Technical department
36040 SOSSANO - (VI) - ITALY
Tel: 0444/885722 - Fax: 0444/885482
e-mail support@barbieri-fb.com

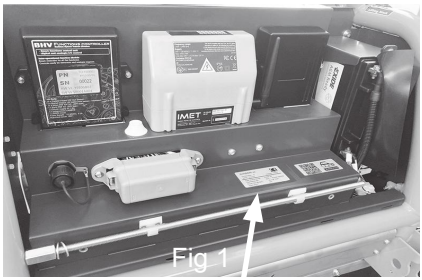
Descriptions, figures and technical features mentioned herein are non-binding for the Manufacturer. These are mentioned as mere information. The Manufacturer reserves the right to make any change at any time without notice, to improve the quality of the products without being bound to update this publication.

C - INDEX

D - IDENTIFICATION NUMBERS

In the event of a problem, before contacting the dealer for repairs or to order spare parts, the following identification numbers of the machine must be noted:

- Model and chassis number
- Engine type and serial number

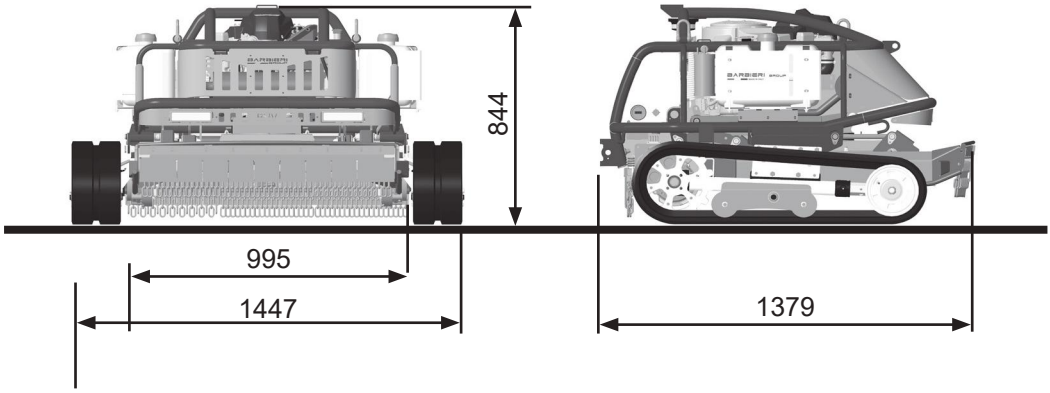


Chassis number Type and

number of the engine
(Kawasaki ENGINE)

Dimensions (mm)

Fig. 3



1 - TECHNICAL DATA

1.1 Technical data

ENGINE		GENERATOR	
Manufacturer	KAWASAKI	Generator 1	3 Phase 34VAC - 80A
Model	FS730V Electr.Fuel Injection	Generator 2	--
Engine type	Air cooling. 4S OHV Petrol.		
	Forced lubrication		
Net-Power	17.2 kW (23 PS) / 3 600 rpm	**CUTTING DEVICE**	
Max. Torque	50.4 Nm / @ 2.400 rpm	Type	Mulching back-discharge
Dispalacement	726 (2 cylinders) cm3	Blade	2 Swinging Blade-2600 rpm
Diameter x Stroke	78 x 76 mm	Working width	95 cm
Spark control	Electronic ignition	High adjustment.	30-150 mm electric - continue
Start system	Electric START	Transmission	By belt EM-Clutch (Ogura)
Air filter	Paper + Sponge		
Petrol tank	32 Lt	**RADIO CONTROL**	**2,4 GHz**
Fuel consumption	3.5 L/St - 3 000 U/min	Radio Technology	AFA (Aut. Freq. Eistellung)
Engine oil capacity	2 Lt	Joystick	Optic - berührungslos
Comm. Protocol	CAN SAE J1939	Range	200 m
Alternator	12V - 30A	Fulfilled Norms.	Rechtl. R&TTE 1999/5/CE 2006/42/CE PLe kategorie 4 /SIL 3 ISO 13849-1:2008 / EN62061:2005
		Weight	1,3 Kg
TRANSMISSION		**DIMENSION**	
Type	Hybrid-E-motors 48V with reductor gearbox with brakes	Overall dimension	1447 x 1379 x 995
Control	Continue electric	Weight	480 Kg
Speed	0-8 Km/h	Soil pressure	171 g/cm2
Slope	35°Frontalf - Lateral 45°	CSoil contact area	(17,5x80x2) = 2800 cm2
Degree / Gravity center	65° / 15cm		
E-Motor type	Brushless Perm.Magnete		
	3 Phase		
E - Motor power	4 kW		
Electronic control	BHV - 48V 100A		
Servodrive	Compass ServoDrive		

1.2 Noise

The noise level was obtained during the equipment in action, in neutral position and the results are the following:

Kawasaki Motor FS481V (4 strokes) with original muffler

- *Acoustic pressure level (LpAm) .... 94,6 dB(A)*
- *Acoustic power level (LwA).....107,5 dB(A)*

1.3 Vibrations

The vibrations level was obtained with the machine at work at 3060 rpm (85% of the nominal condition of 3600 rpm) and the results are the following:

- *Not applicable*

LABELS AND WARNINGS POSITION

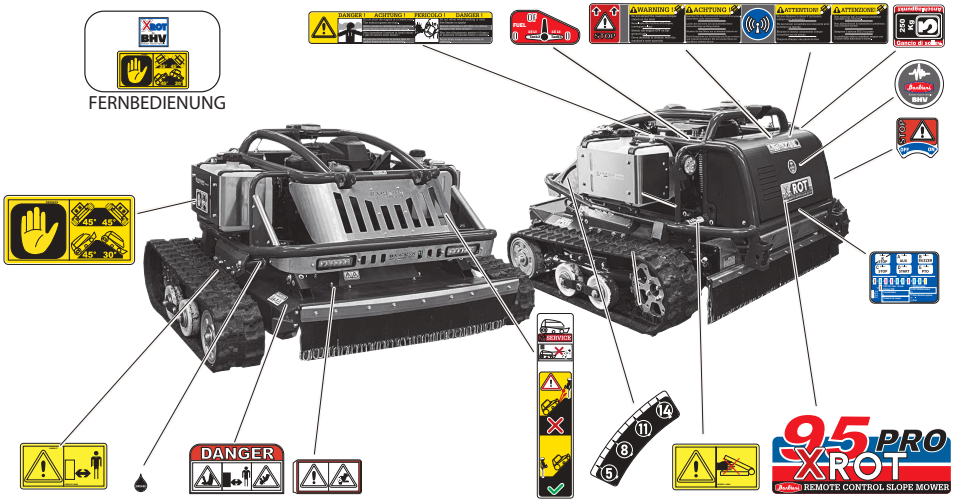


Fig. 4

2 - SAFETY NORMS

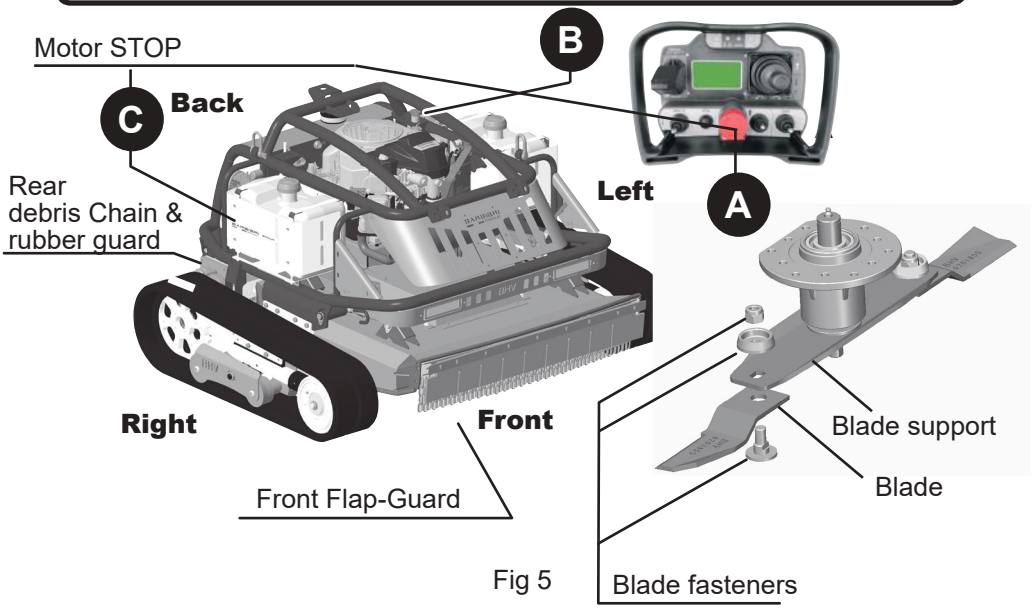


Fig 5

2.1 SAFETY DEVICES

The terms “FRONT” - “REAR” - “RIGHT” - “LEFT” used in this handbook and in the spare parts catalogue, are referred to the machine as shown in Fig. 5

SAFETY PARTS

The machine is equipped with a series of safety devices to comply with the Machinery Directive. All safety devices are necessary for the safe use of the machine and in case same of them are of missing, damaged or weared it is mandatory to replace them with genuine spare part. Do not attempt to repair a safety component.

DANGER

Do not use for any reason the machine with a wear, damaged, or missing safety element. Replace the safety component with genuine parts before to use the machine. The use of the machine without efficient safety element can cause injure or death.

In detail, the following devices are provided for safety:

1 - Engine-Stop devices (A) (B) and (C)(Fig.5)
2 - Automatic brake system in case of engine stop
3 - Front and rear shield to stop the objects throwed by the blade (Fig. 5)
4 - Blade and blade fasteners (Fig. 5)
5 - Engine stop in case of loss of the RadioControl signal
6 - Transmission belt's cover
7 - Warning labels

2.2 WARNING LABELS AND SAFETY ADVICES

The most important warning labels are placed near to the danger around the machine. Be sure to understand the meaning of the lables in order to use a proper behavior to avoid any danger action. These labels are very important for the safe use of the machine along the time. **Keep these lable clean and in a good condition. In case of damage or lack of such a lables it is mandatory to replace them with original ones.**

CAUTION LABEL AND WARNINGS

Besides CE mark, safety pictures and indications are applied on the machine and mentioned in the fig. 4.

WARNING: BEFORE SERVICING
Read the technical instructions in the operation manual before servicing the machine.

WARNING: RISK OF INJURY
Stay away of the discharge opening of the mower deck because stones or other hard objects ejected from the mower may hit you. Use visor to protect from flying object

WARNING: RISK OF ENTANGLEMENT
Stay clear of the belt while it is running
DANGER FOR HAND AND FEET:
Cutting blade: Keep hands and feet away.

WARNING:
Radio controlled machine.
Keep away if engine is running

WARNING:
Danger of hand crushing

WARNING:
Exhaust gases are poisonous!
Never start the engine in not ventilated room

WARNING:
Petrol gases are explosive.
Do not refueling with free flames, sparks or while smoking

ATTENTION:
Do not work in slopes over the limits
Stability and engine lubric. can be lost

DANGER : RISK OF INJURY
On a slope, stay below never above the machine.

1) Before starting the engine, be sure that the SAFETY DEVICES are well working and fitting. Without these cares the operator might work in a danger situation.

2) This machine has been designed and manufactured for being used by one operator only who hold the Radiocontrol. Any other use is not permitted!

3) It is important to ensure a safe distance between the operator and the machine in the Work Field (see cap.5.12)

4) Before the machine is operating, read the Use and Maintenance manual thoroughly, so that you are fully aware of all the operating controls and safety aspects of the machine.

5) No modification to the machine or use of not genuine spare parts can be done without the Manufacturer consent. This praxis can lead to very dangerous and unpredictable situation and will anyway nullify the warranty.

6) Do not under any circumstances transport people or objects on the machine.

7) Before use, check that all the controls and safety components are assembled and in good condition (see chapter 2.1)

8) Move the controls gradually; sudden engagement could cause the loose of stability of the machine.

9) Check anytime that all the parts all well fixed

10) This machine have not to be used by children or inexperienced persons. Operators that are not duly trained of people that are under effect of alcohol or other substances.

11) Before operating the machine, check that the area is clear and free of debris and that there are no people within the Work Field. The operator will be held responsible for the safety of third parties, if these are found within the Work Field. Stop work in these cases.

12) Do not use the machine when you are tired

13) Keep away from cutting blades at all times while the machine is in operation. Observe carefully to avoid the danger area (See chap. 5.12).

14) Use only genuine spare parts and accessories especially the safety parts (chap.2.1) to guarantee the safety and the function of the machine.

15) Stop engine before refuelling

16) Handle the fuel with care to avoid spilling on the machine; clean any spillage immediately.

17) Avoid overfilling the fuel tank

18) Plan well your work before starting

20) The area next to the engine exhaust will most likely reach temperatures above 80°.

ATTENTION! Danger of scalding.

21) Keep the area of work clear and clean.

22) Only use the machine in clear visibility.

23) If you hit any objects during the work, stop the machine and check for any damage immediately. For the blade and blade's fasteners integrity refer to par.7.1.6

24) It is advisable to keep a first aid kit handy.

25) The speed of the machine must be convenient to the environment conditions

26) Never do maintenance or cleaning works when the engine running.

27) When possible, avoid working up or down-hill. Always travel across the slope.

28) Do not work on very steep slopes more than 100% (max.45°).

29) During use, keep the hot sections of the engine (i.e. cylinder head, exhaust, etc.) clean to avoid a stack-up of debris that will overheat the engine.

30) Whenever possible, stop the machine on a flat ground.

31) Park the machine in an unaccessible place for children or unauthorized persons: stop the machine and remove the Start key from the dashboard.

32) Do not stop and leave the machine with the engine running. Reach a flat ground and stop the engine.

33) Follow carefully the maintenance instruction and replace always the damaged and worn parts with genuine spare part, if necessary.

34) Storage the machine after cleaning it, only.

35) If any, it is necessary to take heed of the specific safety norms in force in the Country where the machine is operating.

36) Never refuel in confined places, in vicinity of open flames or near the source of sparks. No smoking during fuel handling!

37) Never start the engine in a closed place. Exhaust fumes contain poisonous carbon monoxide, so sufficient ventilation should be provided when starting the engine indoors.

38) After storage of the machine for a long period, make a deep cleaning and lubricate the machine according to the lubrication program.

39) Pay particular attention to all safety screens (front and rear bulkheads). Damage or lack of them can cause serious accidents and even death.

DANGER
Do not attempt to use the machine if some safety protections are missing or damaged. Immediately restore these protections with original spare parts, before starting work.

3 - MACHINE PREPARATION

3.1 Endownment and unpacking

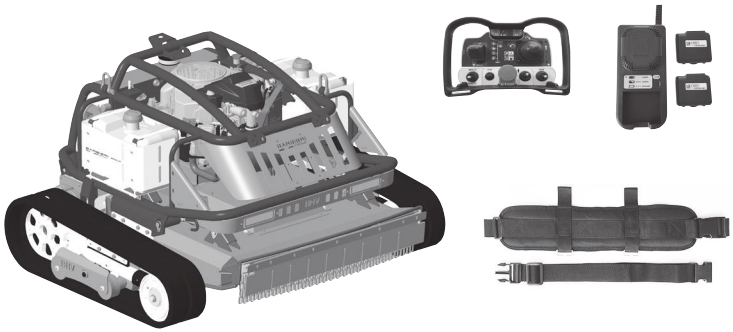


Fig. 6

The machine is supply with:
1 x Basic Unit X-Rot
1 x Radio Control
2 x Lithium battery for Radio control
1 x Battery charger
1 x Radio control's hanging belt
1 x User Manual & Engine user manual
1 x Rod (for crawler replacement)

Before operating the machine, check the fuel and engine oil levels and carefully read the operating instructions for safety regulations and procedures for starting and controlling the machine.

3.2 PRELIMINARY TESTS

Before to use the machine for the first time, it is necessary to verify:
- Engine oil level (see Cap. 7.1.1)
- Fuel level in the tank (see Cap. 7.1.3)
- Battery charge on the Radio receiver (see Cap. 7.1.5)

- The engine oil should be always on the mark of the upper level. Lack of oil will decrease the engine performance on the slope.
- The fuel level should be near to the max but not reaching the collar of the tank. In case of slope the fuel can spill out and create a danger of fire.
- The 2 battery set have to be charged before to start any work. One battery should be enough for one day operation but the 2nd one is required in case of need.

4 - COMPONENTS AND CONTROLS

4.1 NAME OF MAJOR COMPONENTS

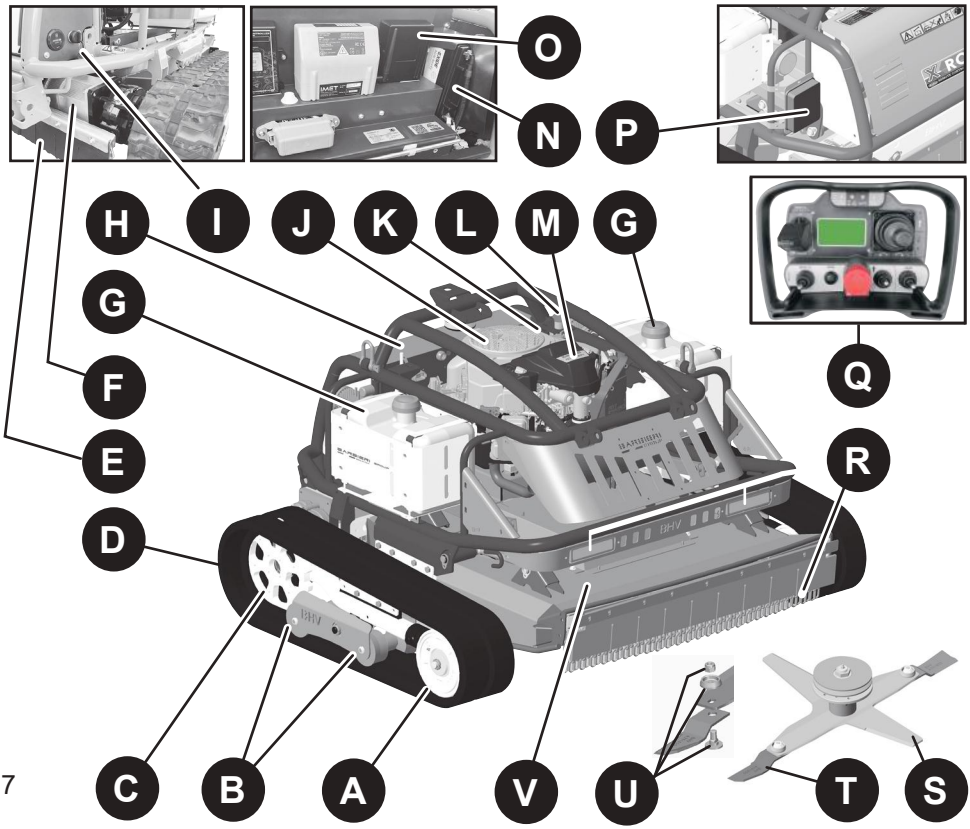


Fig 7

Basic Unit: Identification of the main components.

A) Tensor wheels
B) Crawler's roller
C) Drive wheel
D) Crawler Belt
*E) **Rear Flap-guard (*)***
F) Drive motors
G) Fuel tank
H) Electric cabinet
I) Power key
J) Engine - Air inlet
K) Oil deepstick
*L) **Emergency switch (*)***
M) Air filter
N) Battery
O) Servodrive
P) Antenna
Q) Remote control
*R) **Fron Flap-guard (*)***
S) Blade support
*T) **Blade (*)***
*U) **Blade Fasteners (*)***
V) Mower deck

(*) Safety Parts

4.2 ENGINE

The machine is equipped with a high-quality petrol engine from the USA, which guarantees the product a long service life. The engine is equipped with an innovative electronic control system (ECU) that constantly monitors the environmental conditions and engine performance in order to always offer the best and most economical performance. To start the engine, see chap. 5.2. Although the engine is equipped with forced lubrication in order to work on slopes, it is advisable not to exceed 35 °. The working limit angles are displayed on the machine and in the lower part of the remote control

IMPORTANT

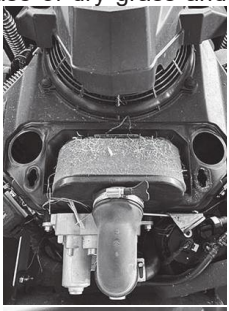
Do not leave the machine on a slope with the engine running. Lubrication without shaking can be insufficient and cause the engine to break. Also, avoid parking the machines on a slope to prevent engine fluids from spilling. Always drive the machine on level ground when parking and switching off the engine.

The first 50 working hours represent the run-in of the engine. During this first period we recommend not to use the machine at the full power.

It is also necessary to leave the engine running for few minutes at the idle speed for warming after starting. A sudden use at the max power just after starting cause a thermal shock to the engine components.

4.2.1 AIR FILTER

The engine is equipped for a filter for the inlet air. In the case of dry grass and congested areas, the air filter must be cleaned very often (every 2 hours). If dry blades of grass stick to the automatic openings of the engine's power generator (Fig. 7 - J), it is very likely that they are also in the air filter, which must be cleaned. (see Section 7.1.2). A clogging of the air filter can lead to a loss of engine performance. The filter should be cleaned daily under normal conditions.



4.2.2 FUEL TANK

The double tank holds 32 liters of petrol, which should guarantee 8 hours of work. Before starting work, remember to refuel. The fuel level in the second tank is 3 liters and is indicated by an indicator light on the remote control, which indicates that it is time to refuel. Interrupt the work and bring the machine to fill on level ground.

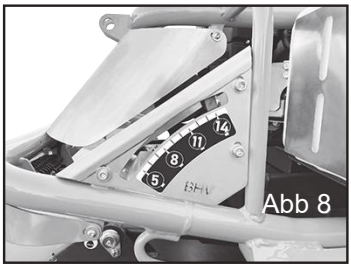
DANGER

Be careful when refueling: Petrol is highly explosive. Do not attempt to refuel if anyone is smoking or standing near sparks or open flames.

4.3 MOWER DECK

The cutting deck has a special shape to reduce the power requirement. The knife is driven directly from the motor via a belt that is connected to an electromagnetic (EM) clutch.

The knives are activated with a button on the remote control and electronically controlled depending on the engine status. (see chapter 5.7). The blades used are a compromise between cutting results and impact resistance to enable heavier work. **The knives and knife fastening screws as well as the chains and rubber guards on the mower deck are SAFETY COMPONENTS and must be checked regularly (see maintenance program in section 7.2.1.)** The cutting height can be set directly via the remote control and is indicated by the display on the right-hand side of the machine (see Figure 8). For maintenance of EM coupling, knives and belts see chapter 7.2.7.



4.4 ELECTRIC SYSTEM

The machine is driven electrically. 4 microprocessors control the functions of the machine to ensure maximum safety at all times. A motor-driven alternator generates a voltage of 48 V (Extra Low Voltage - ELV), which is safe from electrical hazards for people. The caterpillars are driven by 2 brushless motors that are electronically controlled by 2 inverters that run sophisticated software that makes the machine easy to use and flexible. The radio receiver and the fuse and relay box are easily accessible via the switch cabinet on the back of the machine (Fig. 9). The electrical system has protection class **IP 54**.

4.5 BEACONNET

The machine is equipped with a colored flashing light that can easily tell the operator the status of the machine: on, off, alarm, danger, PTO on, power steering, etc.

This simple tool is very effective and convenient for the operator who receives information simply by watching the machine in motion. (See Section 5)

4.6 TRANSMISSION

The power is transmitted to the tracks via two robust and low-noise spur gears. The portal shape of the drive enables a very low center of gravity, which is only 15 cm from the ground. The design technology of the motors ensures a high torque even at standstill. These two properties make the machine suitable for steep inclines, and in the event of a power failure, a passive braking system prevents the machine from being out of control and descend uncontrollably.

4.7 RADIO CONTROL

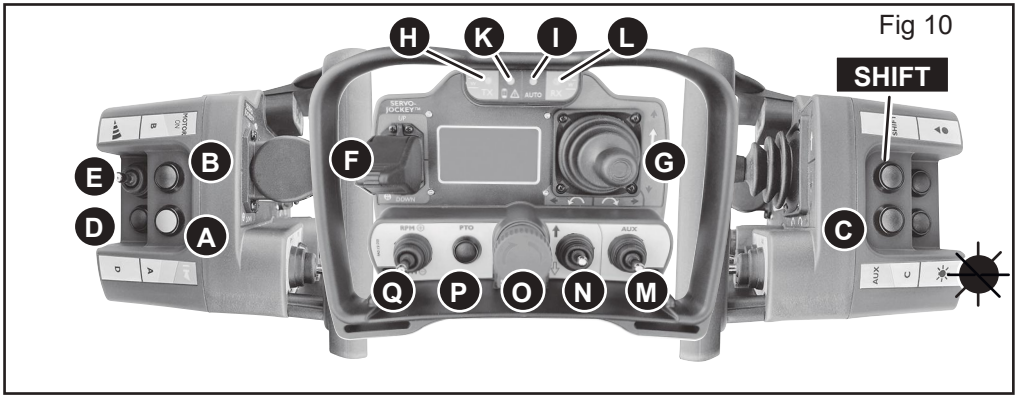
The remote control has robust and reliable electronics that allow the control of all movements of the machine. It works with a frequency of 2.4 GHz and AFA technology (Automatic Frequency Adjustment), which automatically searches for the freest transmission frequency in the event of interference.

Special Functions

The radio control is equipped with a display that allows the visualization of alarm messages with a code indicating the type of anomaly. In the event of an alarm, vibration attracts the operator's attention.

RADIO TRANSMITTER CONTROLS

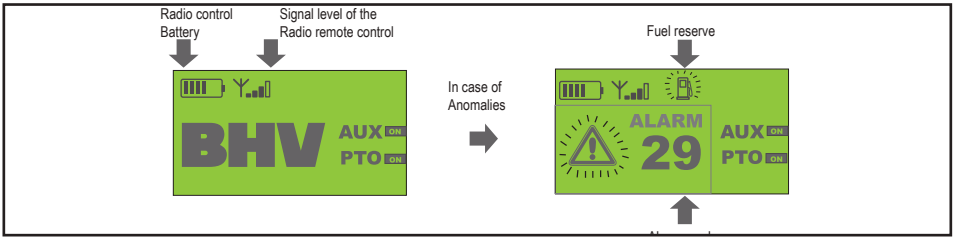
Fig 10



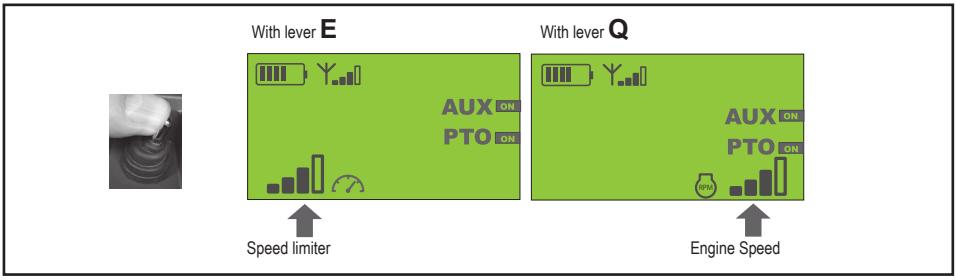
A	*Radio connect button*	**I**	*"Autopilot" ready*
B	*Engine start button (with (A))*	**L**	*Reception connected control light*
C	*Auxiliary socket switch*	**M**	*Setting lever for the auxiliary cylinder*
D	*D Button*	**N**	*Reference switch for the drive direction*
E	*Max Speed limiter*	**O**	*Alarm switch (engine stop)*
F	*Cutting height adjustment lever*	**P**	*PTO switch*
G	*Drive control F./R. - L/R*	**Q**	*engine throttle*
H	*Radio connection control light*	**SHIFT**	*2° Function*
K	*Low battery*	**j**	*Backlight*

REMOTE CONTROL FUNCTIONS

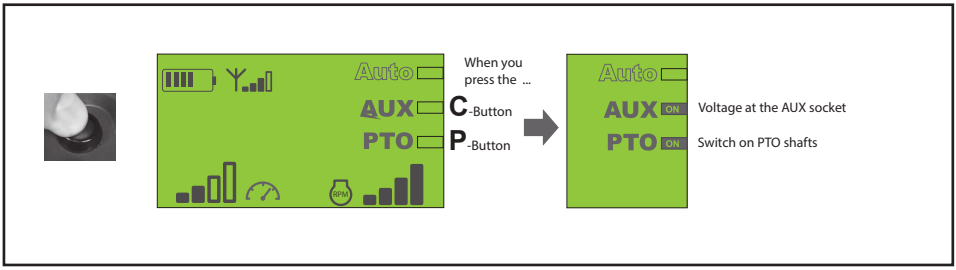
ALARM



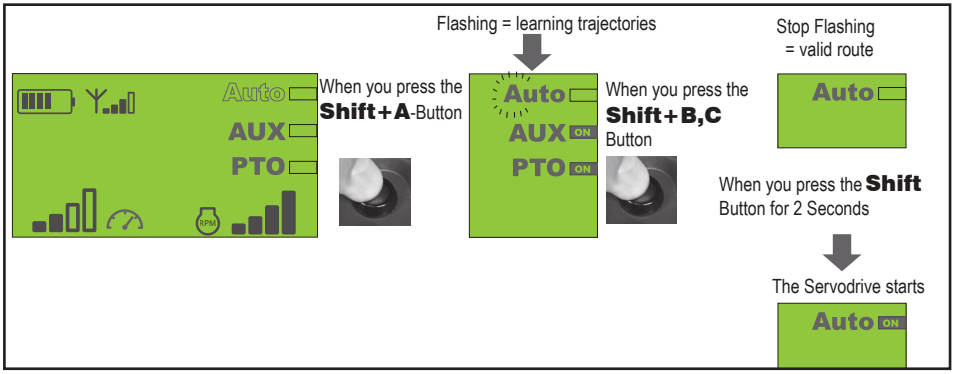
SPEED



PTO - EQUIPMENT START



SERVO DRIVE

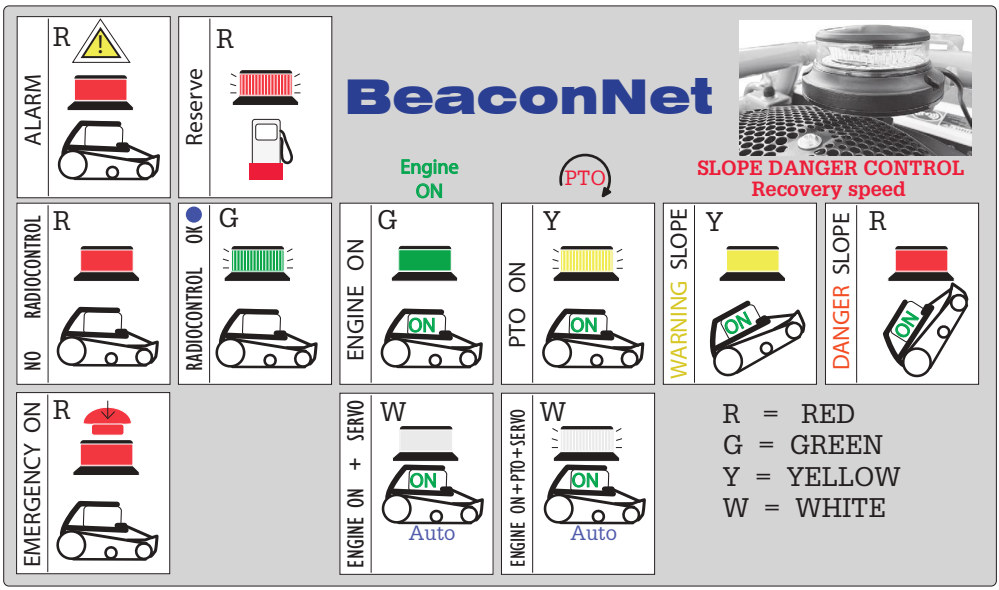


5 - SAFE USE

This section explains the various devices in the machine and shows the dangers or misuse that must be avoided. We recommend that you carefully read and become familiar with the procedures that will result in correct use of the machine in order to obtain maximum performance while minimizing intrinsic risks.

Beacon-net

The flashing light provides various information about the status of the machine. It will be useful to learn the key information presented in the diagram below.



5.1 CONNECTION OF THE RADIO CONTROL

Fig 11

Turn the ignition key to “ON”. An acoustic signal and the continuous red light from Beacon-net warn that the radio control is not connected.

To connect the radio control, press the green button A (Fig. 10) on the left and wait for the green light (H) and the blue light (L) to start flashing. When both lamps flash, press the green button A (Fig. 10) again for one second and then release it. Both lights stop flashing and the acoustic signal stops and the light turns green flashing: the radio control is connected. In the event of an error, repeat the process.

Fig 11 b

5.2 ENGINE START(Fig.10 - 11b)

Move the throttle lever up (Fig. 10 (Q)) to the maximum.

Keep pressed the button (A) and then press the button (B) (Fig. 10) until the engine starts.

Lower the throttle control to idle speed and allow the engine to warm up. The engine speed can now be set and the value is displayed by the bar chart (Fig. 12 (bottom-right)).

5.3 ENGINE STOP (Fig. 10)

To switch off the engine, press the red alarm button at any time (Fig. 10 (O)). The engine suddenly stops. Shortly after stopping, remember to release the alarm switch in its normal position. The engine can also be switched off by the alarm button on top of the machine (Fig. 7 (L)), by turning off the star key (Fig. 7 (I)) or anytime the radio connection with the remote control is interrupted.

Fig 12

NOTE: If the connection to the radio control is lost, the engine switches off.

NOTE: It is recommended that the machine be moved on level ground, whenever possible, before stopping the engine. In the event of an emergency stop, restart the engine as soon as possible and place the machine on a flat surface suitable for parking.

5.4 DRIVE (Fig.13)

Check that the lever (8) is set in the UPER position.
This lever reverse the motion. Move the Joystick (G Fig.10) FORWARD gradually and continuously. The machine will move ahead. The machine can be easily controlled by a finger that controls both speed and direction. It is possible to reverse the Joystick function when the machine moves forward and towards you (Fig 13).

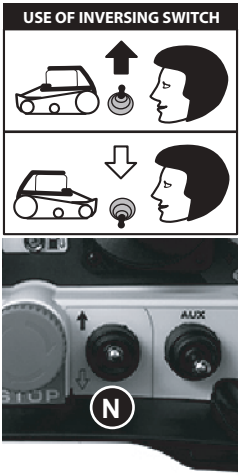


Fig 13

5.5 WORK IN THE SLOPE

It is advisable to work in the longitudinal way on slopes. At the end of the way there is no need to turn as the machine works in both directions. We therefore recommend the route shown in Fig. 14 on the right.
If it is necessary to work with the path shown on the left in Figure 14, the transmission components will overheat and the working speed will be significantly lower.

IMPORTANT:
When working on a slope, it is necessary to lock the track tensioner according to Chapter 7.2.9.

ATTENTION:
Do not excede the 45° when drive longitudinally and the 20° when drive downhill.

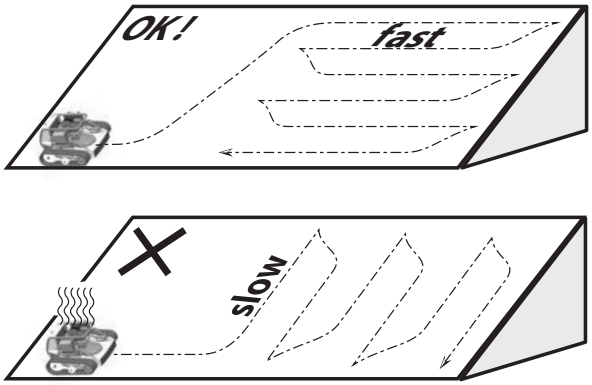


Fig 14

The machine is equipped with a tilt control that reduces the maximum speed. The driving speed is reduced on inclines of more than 35 °. The operator is warned by the vibration of the remote control and by the **BeaconNet** changing from flashing yellow to constant yellow. A further reduction takes place at angles over 45 °, which are displayed by the BeaconNet with a continuous red light. The normal driving speed can be restored with the lever button (E) of Fig. 10.

5.6 BRAKE SYSTEM AND PARKING

The machine is equipped with a passive brake which brakes the machine when it is stationary. This brake works even when the engine is off. The brake can hold the machine in extreme slopes, but it is advisable to stop the engine only after moving the machine on a flat ground. If this was not possible, stop across the slope so that the machine cannot move in the event of a brake fault.

5.7 PTO (Mowing Blade - Switching ON) (Fig 15)

When the machine is ready to drive, the power take-off (PTO) can be switched on, which activate the cutting knife. The knife rotation requires a lot of energy, so that an electronic control prevents the knife start if the engine speed drop abnormally. To start the PTO, press the button (P). The message **PTO "ON"** appears on the display, indicating that the knife is rotating. The BeaconNet also changes color from green to flashing yellow (warns that the machine is working). The knife electronic control can switch off the PTO if the knife is overloaded, which prevents abrupt stops of the engine.

DANGER
Before starting the PTO make sure you have taken all the precautions referred to in paragraph 5.10 in particular:
- the blade must be free (not in contact with the ground)
- There are no objects in the work area that the blade can hit
- there are no people or animals in the DANGEROUS AREA (see paragraph 5.12).

5.8 CUTTING HEIGHT ADJUSTMENT (Fig.15)

It is possible at any time to control the cutting height from the remote control. In thick, tall grass, it is recommended that the cutting deck be set 100mm from the ground to allow the grass to come out. If necessary, perform a second stage with a lower height setting. To raise the knife, move the control lever (F) up. To lower the mowing deck, move the control lever (F) down.

Fig.15

5.9 AUXILIARY SOCKET (Fig.15a)

The machine can be equipped with external devices such as spray pump, LED lights, rear power lift, etc. This accessory can be controlled from the remote control. Such a device must be plugged into the socket (2) and (3) in the rear wall of the engine compartment (Fig. 15a).

Fig 15a

From the left to the right in the Fig. 15-a the socket are:
- Battery 12V stabilized
- 12 V plug controlled by Radio Control (Aux) Fig.10 (C)
- Plug with switching polarity for electric actuator Fig.10 (M)

5.10 CHECKS DURING USE

The electric drive transmission have been design to be maintenance free. Nevertheless as the machine is equipped by one engine it is necessary to mantein it and to make some controls everytime you use it. These maintenance operations include safety **devices which are crucial to assure the safety**. Moreover this machine normally works in a inacessible areas and in case of undesired stop it can be hard to rescue and restore the machine.

Before to start any work, check:
- Anything that was abnormal in the previous operations.
- the level of the Fuel. Replenish it every time
- the level of the oil of the engine: (near to MAX)
- clean the cartridge of the air filter
- the charge of the battery of the remote control
- **the condition of the blades (see par.7.1.6), the blade bolts and the protection devices**
- Oil leakage from mower gear case
- Loosen, broken or lost parts (**especially safety shield on mower deck**), pins and clips
- deposits of grass and mud on the crawler's wheels.
- to reduce the fire hazard, and improve the cooling capacity, keep the engine, muffler (silencer), battery area, and fuel tank area free of debris
- After starting the engine **confirm the operation of safety switches**

5.11 ACCESS TO AND FROM THE WORK FIELD

Particular attention should be paid to transport and access to the work area. Every loading, transporting, unloading, crossing of streets, steps, stairs and bridges carries a risk of its own, to which special attention must be paid.

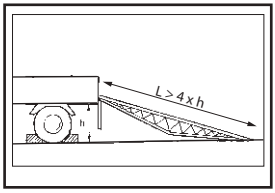
5.11.1 LOADING ONTO OR UNLOADING FROM A TRUCK

When loading the front mower onto a truck, turn off the truck's engine, apply the truck's parking brakes, and chock the wheels to avoid unexpected moving of the truck or trailer.

To load the machine onto a truck, fully lift up the mower deck and move straight forward at low speed. Drive on reverse when unloading it from the truck or trailer.

Use ramps with the same or better specifications mentioned below.

Fig 16



Specifications of the ramps
- Length: more than 4 times the height of the platform of the truck
- Width (effective width): more than 30 cm
- Required quantity: 2 ramps
- Capacity (one ramp): more than 250 kg
- Ramps should have: anti-skid surfaces.

Bind the machine to the truck or trailer using the hitch points shown in the picture Fig 17. The machine is provided by hanging hook to be placed on the working ground by a truck crane. The machine weight is more than 480 Kg. Be sure to use belts and hook with a proper loading capacity.

5.12 SAFETY IN THE WORK FIELD

It is mandatory to follow these rules to not create danger for the operator and for people, pets or things around the operation area.

a) Operate if you have a perfect control at your sight of the area of 50m radius around the machine, only. If the machine's moving area is not visible, change your position.

* Hitch Points

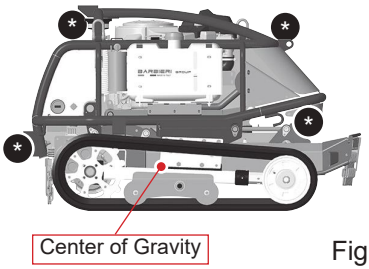


Fig 17

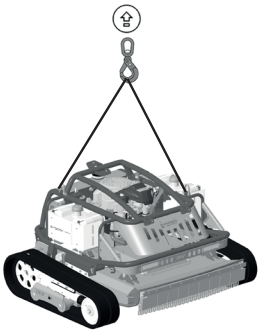


Fig 18

b) Do not allow any people or animal to approach the machine. A miscontrol of the drive can cause severe injury to the people or some object can be thrown out from the mower blade and hit somebody. The **danger area** is shown in Fig 19. **Only the operator is allowed to stay inside the perimeter of 50 m Radius inside the white area only if it wear the Personal Protective Equipment prescribed.**

DANGER

Do not allow for any reason the people to enter into the DANGER AREA. This reccomandation include also the operator. Launched objects can cause severe injury.

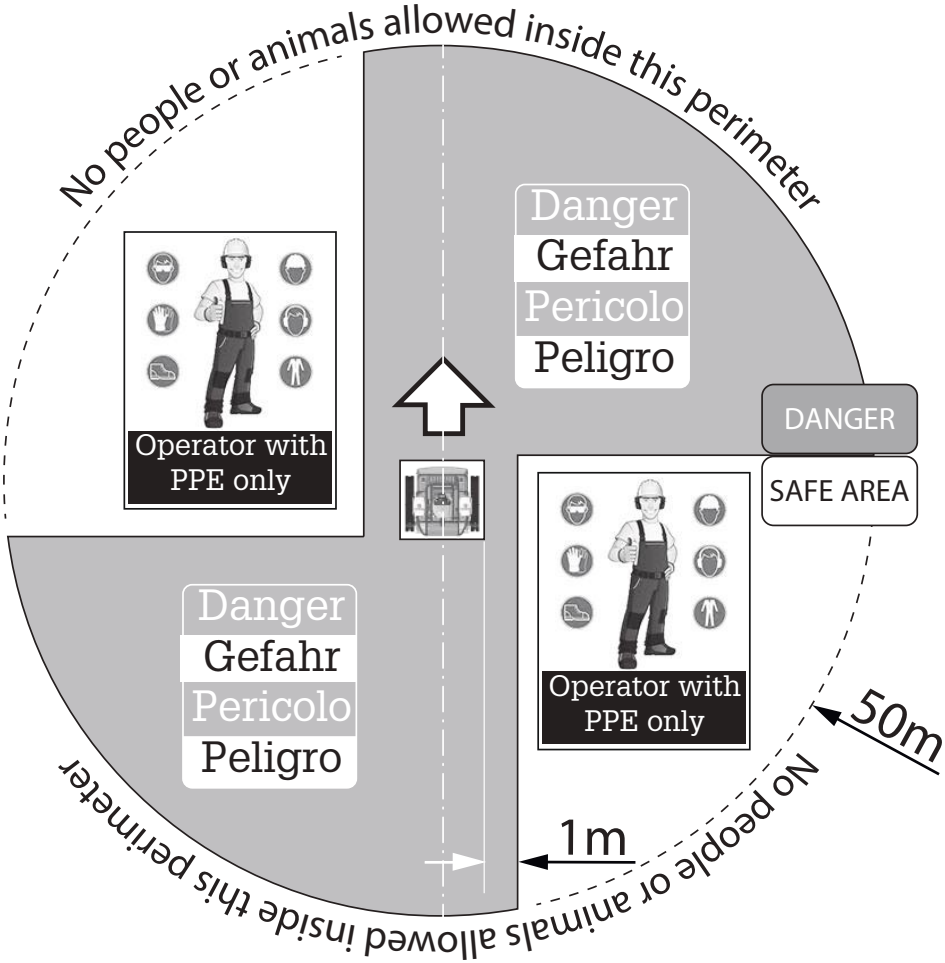
c) Check the working area to remove any object that can be danger for the machine.

d) Place some warning tape or sign to alert people not to enter into the working area.

e) Check the slopes and the soil conformation to identify some danger areas. Select the position to operate in order to have the best visibility and safer place.

f) Avoid to perform maintenance in the work field because it is a dusty place. Moreover you get the risk to do excessive efforts and you don't have the necessary tools.

Fig 19 - **DANGER AREA**



5.13 USE OF Compass Servo Drive (Optional)

The machine is equipped with a driver assistant, which makes the work much easier:

- increases the safety of the operator considerably, who is not forced to be near the machine and to work with it precisely.
- enables a minimal overlap of the passages, maximizes the effective cutting width and thus the productivity of the machine
- enables precise work even over large distances

The basic functions are explained below. Please refer to the Compass Servo Drive manual for advanced functions.

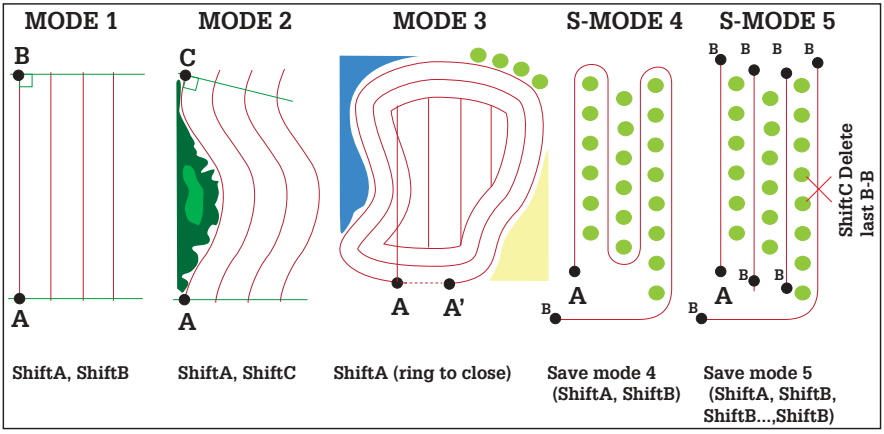
How to start the servo drive

To be able to work with the ServoDrive please follows these steps:

a) Define a valid path (see next section). When the route is defined, the yellow light on the radio control lights up and the message “AUTO” appears on the display
b) Move the machine inside the defined path.
c) Press the “SHIFT” button (Fig.10) for 2 seconds. The machine begins to follow the defined path
d) If the remote control joystick is touched, the ServoDrive disengages automatically and the operator regains control of the machine.
e) By moving the machine back in the defined path (the LED and the word “AUTO” reappear) and pressing the SHIFT key for 2 seconds, the machine resumes the work it had previously interrupted.

How to define a valid path (Fig. 10)

It is necessary to determine the appropriate mode for the work to be performed and to press the buttons in the order shown. The Shift, A, B and C keys are those shown in Figure 10.



Example:

For a rectangular field I choose mode 1.

I place the mower in the first left corner of the field. I press SHIFT + A. The yellow LED flashes to indicate that learning has started. I move the machine to the end left corner of the field and press **SHIFT + B**. The LED stops flashing and shows that we have defined a **VALID ROUTE**.

TROUBLESHOOTING

GROUP	PROBLEM	CAUSE	REMEDY
Remote Control	It is not possible to connect	The key on the machine is turned OFF	Turn the key ON
		The mushrum emergency switch is not armed	Arm the switch in the Remote control
		The remote control's battery is low	Replace the battery and charge this one.
		If leds on receiver in the machine don't light on, internal fuse may be burned out	Replace the internal fuse
Power supply	No Bip tune on switch key turn ON	- Battery fuse is burned out - Fuse 1 in Fuse case is burned out - Machine Battery is low	- Replace Battery fuse inside Battery Box - Replace Fuse 1 in Fuse Box - charge the battery
Engine	The engine don't start	The starter motor do not work - The Logicboard is not working - Fuse of starter (FUSE 1) is burned out	- Replace the Logicboard - Replace the Fuse 1
		The starter motor turn but engine do not start	- Check Fuel level - Check the spark on the spark plug - Check fuel circuit - Check the engine's oil level - Check and clean the Air filter
		No petrol in the circuit	- Defective fuel pump - Crushed fuel pipeline - loose clamp - Fuel tap in wrong position
	Throttle is not working	- Actuator is not working - Actuator is working - (Only EFI Motor) Tension stabilizer is not working - Failure in Logic Card	- Check the cable XC3 - Check fuse 5 and 6 - Actuator is defective - Check the connecting rod - Replace the stabilizer or the Logic card
	Engine grumbles and make smoke	Problem in the fuel	Check the fuel type or clearness
	Engine starts and stop - makes smoke	Oil level too hight	Check the oil level and in case drain oil out
Drive	Gerät reagiert nicht auf die Fernbedienung	Ein Treiber ist nicht mit dem anderen zu synchronisieren	Schlüsselstarter auf OFF und Neu Starten
	The machine do not move at all	Drivers or E-Motor defective	Check the Failure code
		Main Fuse (big ones) are melted	Replace the big Fuse in the lower part of the electric canbinet
		The E-Motor brakes are not connected	Connect the Brake cable plugs
High Adjustment	The Height adjustment doesn't work	- Actuator is not working - Actuator is moving	- Check the cable XC1 - Check fuse 3 and 4 - Actuator is defective - Check the connecting fork - Check the mechanical connection of the Actuator
Mower	High vibration and noise in the machine	The blade is broken or bended	Stop the machine and replace the blade and fasteners (See Par 7.1.6)

7 - MAINTENANCE

Main Maintenance points

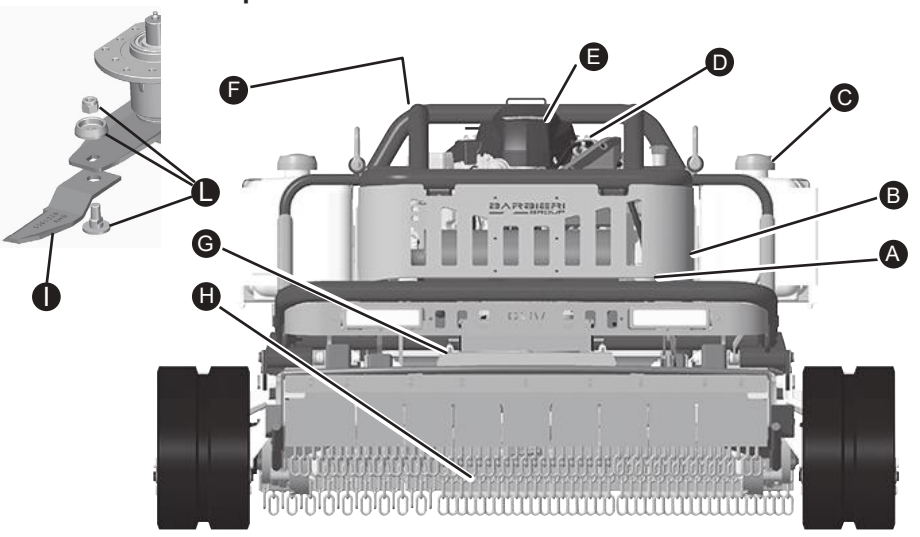
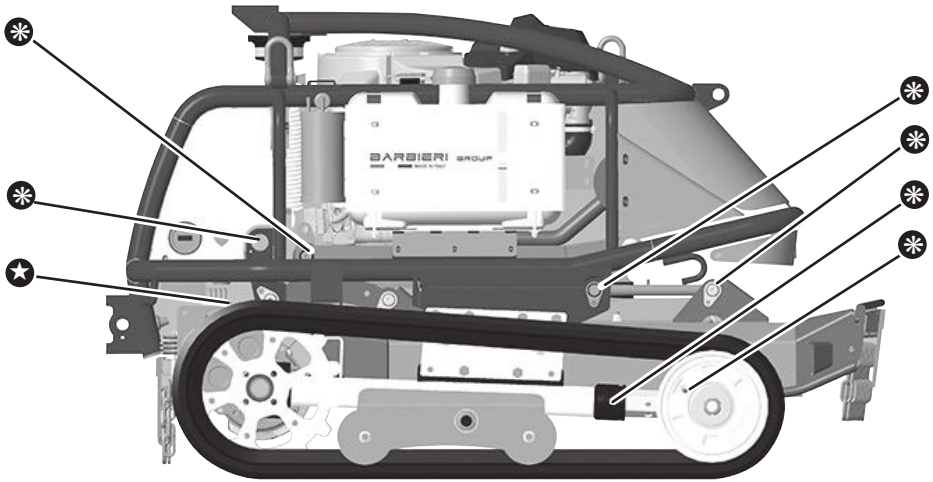


Fig 20

A) Engine oil drain cap
B) Fuel filter
C) Fuel tank cap
D) Engine oil filling cap
E) Air filter
F) Battery
G) Belt
H) Mower deck protection Fr.& Rear
I) Blade
L) Blade fasteners

Lubrication point



✳ Grease nipple
★ Reductor gear oil cap

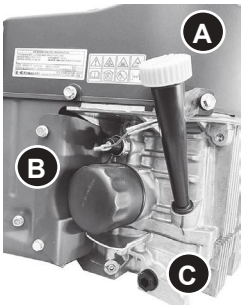
Fig 21

7.1 CHECKS BEFORE USE

7.1.1 Check of the engine oil (Fig 20 (E))

To check the engine oil it is necessary that the machine is on a flat hard ground. Remove the oil dipstick (A) and check that the oil level is near the upper mark. For more detail about engine lubrication please refer to the engine manual.

Fig. 22



IMPORTANT

The oil level should never be under the MIN mark and not exceed the MAX level on he dipstick. The oil over the max quantity can damage the engine.

7.1.2 Engine's air filter (Fig. 20 (D))

For the engine to function properly, it is important to check that the engine's air filter or cooling elements are free from clogged stubble in the airflow. Clean these items frequently if there are dry grass and fluttering debris.

To access the filter, open the suction compartment by turning the flaps (D) through 90 °. If it is dirty, loosen the clamp (E) and

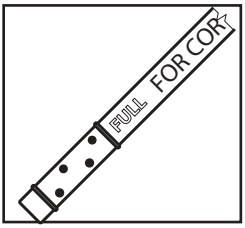
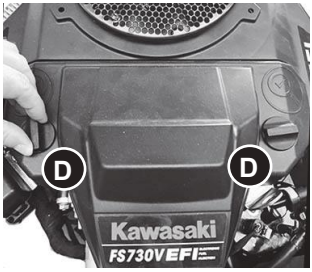
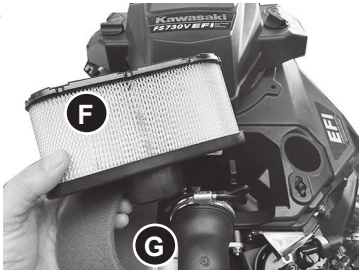


Fig. 23





take the filter out from the pipe. Then wash the sponge (G) and blow out the paper filter (F). If these items are damaged, replace them immediately. If the engine's suction air is not filtered, the engine can be irreversibly damaged.

7.1.3 Fuel tanks (For safety warnings see Par. 4.22)

Refueling is often not an easy and safe operation in the work area, so it is advisable to check the fuel level before starting the operation. A full tank allows 4 hours of autonomy, so fill both tanks and start with tank 1 by turning the tap to the correct position. See Fig. (24)

The reserve sensor is on tank 1 and is therefore only signaled when you should switch to the second tank. No further fuel level is provided.

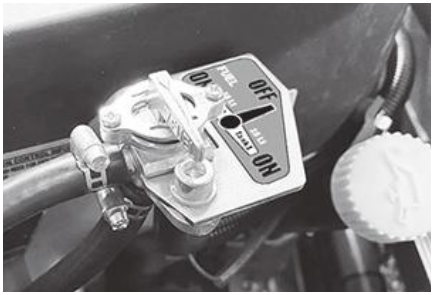
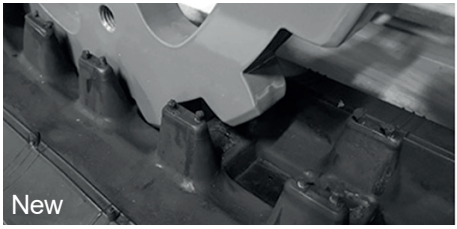
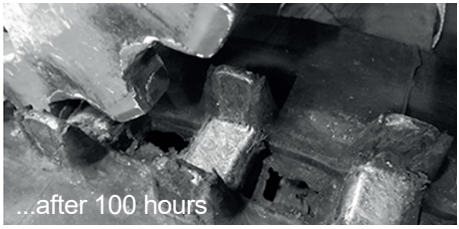


Fig. 24

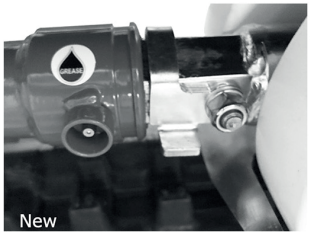
7.1.4 Check the crawler tension and their conditions

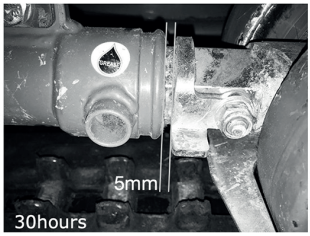
It is important to check the condition of the tracks to prevent them from coming out of the guides while you are working.

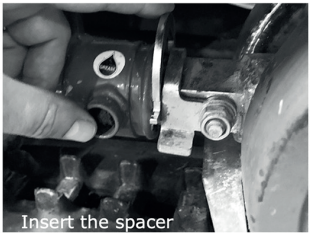




If their tension is not sufficient upon inspection, check that the tracks are not damaged or worn. A loose tracks can easily come out from its seat.







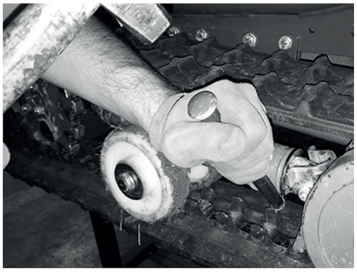
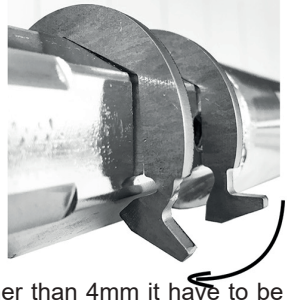


Fig. 25



If the play between the frame and the tensor lock is higher than 4mm it have to be compensated by the Compensating washer.

Compensating washers are supplied with the machine, which enable the clamping lock to compensate for the play and to perform its function again.

It is very easy to assemble and is shown in Fig. 25

7.1.5 Radio control's Battery charge

The radio control battery is a critical part of the machine. If the battery is weakly charged, the machine cannot be controlled. For this reason, 2 batteries are provided for safety. It is strongly recommended to charge both batteries before use.

ATTENTION

If the battery have low charge the engine will stop

7.1.6 Check the cutting blades

The blade rotates at high speed, so abnormal wear or damage to a blade can cause the machine to vibrate excessively. In addition, hitting a stone or other hard object lying in the field can make the blade lose its sharpness. For this reason, it is necessary to check the condition of the knife and especially the fasteners (screws, washers and bushings) before use. The reorder codes for the individual components are displayed to facilitate replacement.

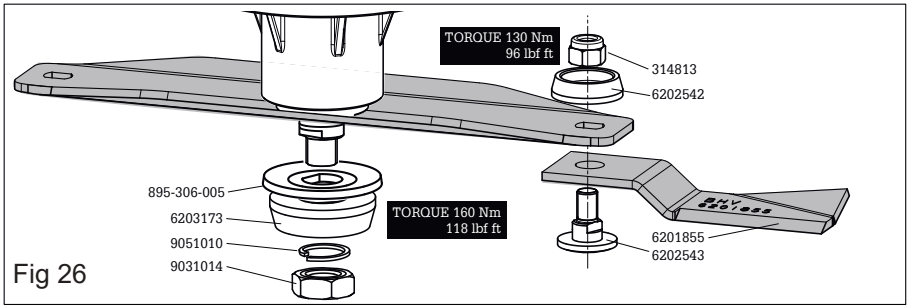


Fig 26

How to check the blade

The knife rotates at high speed, so abnormal wear or damage to a knife can cause severe vibrations to the machine. To check the knife, Park the machine in a flat ground; stop the engine and remove the starting key. Lift and secure the front of the machine in order to accede easely to the blades. **Avoid a precarious and unsafe position. If the machine falls, it could crush you and cause you serious injuries.**

- Check that the blade rest is straight and not bent.
- Check that the blades are regular and not deformed
- Check whether the fastening screws are properly tightened (do not exceed the maximum tightening torque of 130 Nm)
- Check that the blades are sharp enough.

To sharpen the blades, follow the instructions in section 7.2.7.
If the screws are loose, replace the knife fastening screws on both sides
If the knives are deformed, replace the knives and fastening screws immediately
If the blade holder is deformed, replace it with a new holder.

DANGER
Do not try to use the machine if the blade is not in good working order: Structural failure of the blades or their fastening systems can lead to serious and even fatal accidents

7.2 MAINTENANCE AND ADJUSTMENT

7.2.1 Maintenance schedule and lubrication program

See the Periodic Maintenance table on the next page.

7.2.2 Change engine oil and filter

For the engine oil, always observe the operating instructions of the engine manufacturer. The first oil change must take place after the first 50 hours of operation, which is the engine break-in time. This change removes the floating metallic particles created by the rotating parts. Let the engine run for a few minutes to warm up.

Abb. 27

Periodic Maintenace schedule	Before Operation	Initial 50h	every 50h	every 200h	every 500h	Long Parking	REMARKS
Engine Oil	❍	●		●	●	●	Mantein specific level
Air cleaner	◀	◀		●	●	◀	
Fuel	❍					❍	Keep fuel tank always full
Fuel filter					●		No dust or water inside
Battery condition			❍	❍		❍	
Rubber pipes				❍		❍	
Remote control battery	❍					❍	Charge every time
Cutting blade BELT		❍		❍	●	❍	Adjust tension
Cutting blade condition	❍		●	●	●	❍	See par.7.1.6
Cutting Blade fasteners	❍		●				See par.7.1.6
Front rear Flap-Guard	❍		❍	❍	❍	❍	See par.7.2.11
Transmission drive oil					✶		
Crawler condition	❍					❍	
Grease up		❍	❍	❍	❍	❍	
Bolts and nuts	❍	❍	❍	❍	❍	❍	Generic bolt fastening
Electrical apparatus			❍	◀		◀	
Safety switches	❍			❍		❍	

✶ Replacement or servicing at authorizedservice facility recommended
◀ Clean or wash
❍ Inspect replenish or adjust
● Replace

Before you start checking the level or changing the oil, carefully clean the area around the oil cap to prevent foreign bodies from getting into the housing.

Remove the plug with the dipstick (A) and remove the drain plug (C) if you do not have an oil suction pump. Collect the used oil in a pan. Put exhausted oil in a suitable container for disposal. Close the drain plug and add fresh oil to the correct level from the screw (A). For the general temperature, SAE 10W-30 is recommended.

Other viscosities shown in the table can be used if the average temperature in your area is within the stated range.

The engine oil type is (Agip Rotra MP) (SAE 10W / 30). The oil quantity is 2.2 Lt.

Check the oil level as described in chap. 7.1.1.

7.2.3 Checking and replacement of gear oil

The transmission oil must be replaced after 500 hours of operation, unless oil leaks occur in the transmission. In this case, the damaged seal must be repaired and the oil replaced. This repair must be done by an authorized dealer.

Fig 28

7.2.4 Lubrication of Joints and connections

According to the lubrication program, grease the joints and connection marked in Fig. 21 every 50 hours.

7.2.5 Cleaning of the air filter (See section. 4.2.1)

Always clean the engine air filter and air intake. This measure protects the service life of the engine and ensures greater efficiency and lower fuel consumption. For cleaning the filter, see chapter 7.1.2. Use compressed air to clean the paper filter while gently holding it. Apply compressed air from the inside out.

After cleaning, reinsert the element in the reverse order of disassembling.

IMPORTANT

Never hit the filter cartridge against a hard object such as a concrete wall. A Filter that has already been washed five times or is damaged should be replaced with a new one. Never attempt to start the engine without the air cleaner element. Such operation causes engine malfunction.

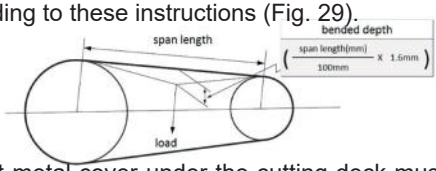
7.2.6 Adjustment of the Blade transmission belt

The knife V-belt can change its dimensions after a few hours, so it is recommended to adjust the belt tension according to the maintenance schedule in chap. 7.2.1 to set.

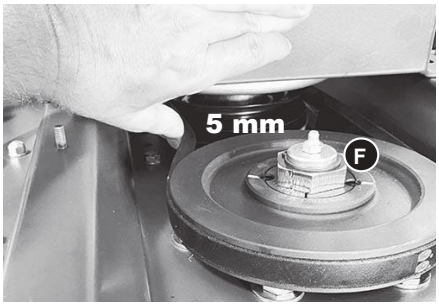
To adjust the belt, remove the belt cover (Fig.7 (U)). Check the tension with a force of 5 kg on the belt. The bending depth of the belt should not be more than 5 mm.

If necessary, adjust the belt tension according to these instructions (Fig. 29).

- Loosen the nuts (A) on the engine slides
- Loosen the lock nuts (B)
- Adjust the tension with the screws (C)
- lock the position with the nuts (B)
- Fix the position of the engine slides (A)



If the belt needs to be replaced, the sheet metal cover under the cutting deck must be removed (see Fig. 30).



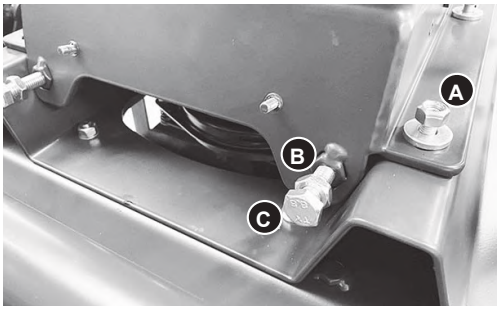


Fig. 29

7.2.7 Blade sharpeing and replacing

The blade of this mulching machine is turning very fast so that a small damage in one single blade can create an imbalance which turn in a strong noise and vibration. Anytime there is a un-normal noise it is reccomend to verify the condition of the blades. (see par. 7.1.6).

To check and remove the blade, Park the machine in a flat ground; stop the engine and remove the starting key. Lift by a crane the front of the machine in upright position. Secure the machine by a prop. in order to accede and remove easely the blades. **Avoid a precarious and unsafe position. If the machine falls, it could crush you and cause you serious injuries**.

Unscrew the center bolt to remove the blade support. If possible use a pneumatic tool or percussion screwdriver. Once you have removed the whole blade set, avoid to disassemble the blade from the blade support.

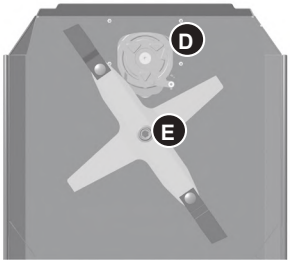


Fig 30

IMPORTANT
Whenever you hear unusual noises, it is mandatory to check the Condition of the blades. (See 7.1.6).

Loosen the center screw (E) to remove the blade holder.
- Make sure that the blade can be turned easily in the support.
- Sharpen the blade in the same way. Pay attention to maintaining the same weight for the two blades. Max sharpening 5mm - 30 °
- Refit the blade holder (Tightening torque 160Nm).

Carefully lay the machine on the floor.

NOTE
For easier loosening of the blade fixing screw (E) (Fig. 30) remove the belt guard (U) Fig. 7. Lock the nut (F) (Fig. 29) to prevent rotation of the pulley shaft.

DANGER
If the blades are removed from the blade support, the fastening screws must be replaced (tightening torque 130Nm).

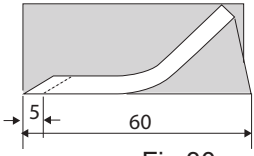


Fig 30

DANGER
The fastening screws of the blades are safety elements, so they must always be checked and if damaged, they must be replaced within the prescribed intervals (every 50 hours).

7.2.8 Change of rubber tracks

The rubber tracks are wearing parts and their service life depends on the environment in which the machine has been operated.

To replace the crawler belt, the tensioning block must be removed (see next paragraph), the machine raised and 4 wooden blocks placed under the deck to keep it raised. To loosen the rail, insert the threaded rod (available in the electrical cabinet) (Fig. 31) into the rail hole with a size 13 wrench, as shown in Fig. 32.

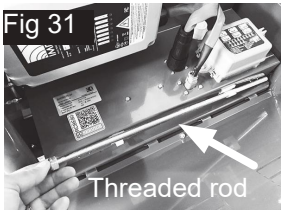


Fig 31

Screw the long bolt into the wheel mount.
Remove the outer wheel as shown and the crawler belt can be removed.

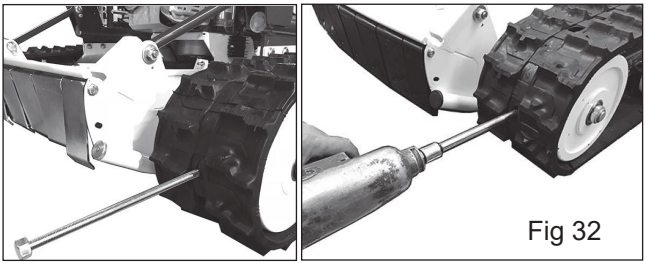
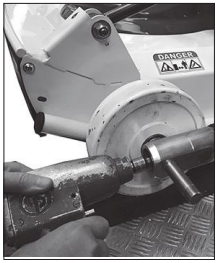
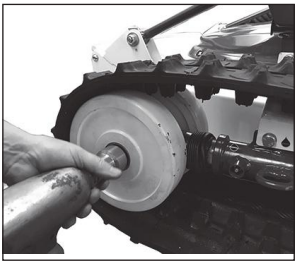
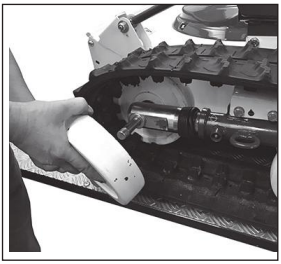
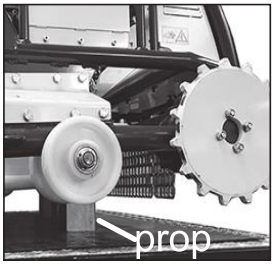


Fig 32









7.2.9 Use of the tensioner

It is very important to use the chain tensioner correctly. The tensioner must be adjusted according to the working conditions.

IMPORTANT
Incorrect adjustment of the tensioner can result in the machine stops while working, either due to the track block or from jumping out of their rail.

On the left, the work condition is on level ground, but with obstacles that can be trapped in the track which causes a drive stop.

In this situation, it is advisable to release the tensor by lifting the locking bracket. If an obstacle occurs between the track belt and the wheels, the wheel can slide and leave the obstacle to pass.

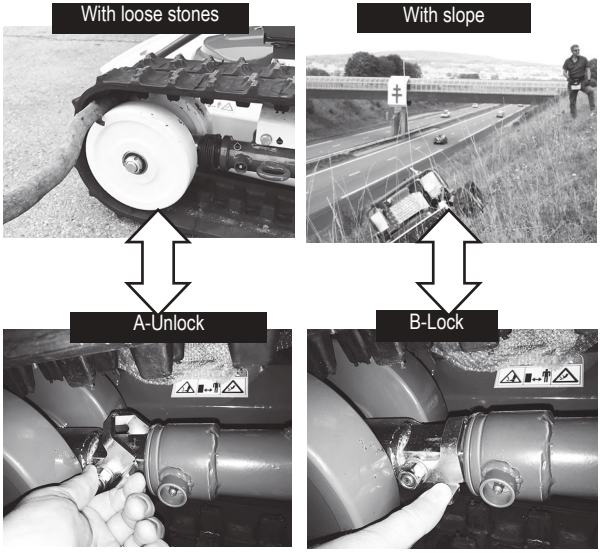


Abb 33

On the right is a steeply sloping job on a grassy floor. The rails are heavily pushed on the sides and tend to come out of the guides.

In this condition, it is advisable to insert the tensor lock by lowering the locking bracket. With a strong side-shift, the block does not leave any space between the rail and the wheels and does not allow the rail to come out of the guides.

7.2.10 Protection chain, rubber protection

The debris chains as well as the Rubber and Metal flap-guards which are in the front and rear side of the mower deck are **safety components**. They must be always efficient to assure the safety around the mower. They should be checked before starting the daily operations and in any case every 50 hours as recommended by the maintenance schedule. If any of those are bent or missing, they should be restored by the new original part before start working

DANGER
Do not attempt to start working without Chain, Rubber, and Metal flap-guards. The object launched by the blade could hit somebody and cause severe injuries and even death.

7.2.11 Battery and remote control

The radio transmitter is supplied with 2 Li-MH batteries. Even if one battery is enough for a day, it is recommended to charge both batteries before starting work. A battery charger is supplied with the radio control to charge the battery.

Technische Daten des Ladegeräts

Charger technical data

• Power supply voltage	230V AC
• Power demand	35mA AC/250mA DC (during charge)
• Charging current	650mA
• Battery	Ni-MH 3.6V 1.7 A/h
• Max. charging time	3 hours
• Type of charge	PVD
• Casing protection degree	IP30
• Operating t° (charge)	0°C ÷ +35°C

Fig 34

7.3 Notice for disposal

Li-NH Battery

The symbol of the crossed-out waste container on the device means that it must be handled separately from normal waste. The owner is responsible for handing over scrapped equipment to the designated points of collection for the recycling of electric or electronic waste material. Waste separation contributes to protecting the environment and facilitates recycling.

Pb Battery

Dispose the battery properly because the lead included in a battery is highly polluting.
Exhausted batteries should be disposed of at the specific points of collection, as required by law.

Exhaust oil

Never disperse the waste oil it is highly polluting. few drops can pollute high quantity of water. Gather the waste oil in suitable container and deliver to the recycling service.

8 - WARRANTY

SECTION 8 - COMPLAINTS AND WARRANTY

The basic principle of the guarantee provisions is compliance with and observance of the relevant operating instructions.

Never attempt unauthorized modification of the mower as this could be very hazardous. Damaged or worn parts should be replaced with manufacturer genuine spare parts. Unauthorized parts may cause breakdown of the mower, accidents, and manufacturer warranty to expire.

If in doubt on causes and possible solutions for a certain trouble, please, call our authorized dealer.

This should be absolutely done during the warranty period, since any repair made by non-authorized workshops makes this warranty null and void.

Bear always in mind that the authorized dealer has all special tools, technical specifications and spare parts necessary for properly fixing the machine.

The guarantee can be applied only to devices which are properly used as defined in the first pages of this manual, and are handled according to the operating instructions and the maintenance instructions contained therein. The guarantee refers to the elimination of design defects, material or manufacturing failure that have occurred within the warranty period.

Parts which have become unusable as a result of improper repair work or or which are subject to natural wear and tear (see instructions in the operating instructions) are excluded from the guarantee.

The warranty will be void if the device is repaired outside an authorized workshop if it has been resold if no original spare parts are used, and if unauthorized changes have been made to the device.

In the case of justified warranty claims, the Manufacturer grants a claim for free replacement, as well as removal and installation of the defective parts. Without prejudice to the statutory warranty claims, further guarantees can not be claimed. Work under the guarantee does not trigger a new beginning of the guarantee period.

8.1 DEFINITION

For guarantee it intends the substitution of any machine's component for whom is ascertained the defect, after a test executed by our Technical Department. The transport cost are expressively excluded from the guarantee and are on client's charge. Are also excluded trouble caused by carelessness and incompetence as well as bearing to external causes (atmospherics agent, fire); last but not list are out the elements which are in contact with the ground (blades, knives, bumper, tyres). The guarantee decays if on the machine there are accessories and spare parts not furnished or authorized by the manufacturer.

8.2 WARRANTY STARTS

The warranty period starts on the date the vehicle is delivered to the first retail purchaser or put in service by an authorized Dealer.

8.3 DURATION

The period of warranty is:
-24 months for private utilization of the machine;
-12 months for commercial - municipality or renting operation.
In this period value the guarantee terms as specified on paragraph 8.1.

8.4 ENGINE WARRANTY

The conditions and the terms of warranty are those conceded by the engine's manufacturer; the on guarantee assistance will have to be strictly executed in the Authorized service centres. For further information see the engine manual delivered with the machine.

8.5 CLAIM FORM

It is always necessary indicate always:
1- Machine's type
2- Machine serial number
3- Parts name and code number
4- Quantity required
5- Circumstances of failure
6- Working time

We recommend to write here below these data for future communication.

EC-Certificate of Conformity

This declaration of conformity is issued under the sole responsibility of the manufacturer and issued on a voluntary basis according to the European Directive 2006/42/CE ann.2A

Manufacturer and : depositary of the technical file	**BARBIERI Srl** - P.le Luigi Sturzo, 15 - 00144 Roma (RM) Italia having Production site in Via Seccalegno, 23 - 36040 Sossano (VI) Italia
Product:	**Radio Controlled Grassland mower**
Model:	**X-Rot 95 EVO**
Motor:	Kawasaki FS481 EFI
Power:	17,2 kW
Mass:	480 Kg.
ID Number.:	RC62E18***(Label on machine)
Year of Production:	2021

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

MACHINERY DIRECTIVE (MD) 2006/42/EC
ELECTROMAGNETIC COMPATIBILITY DIRECTIVE (EMC) 2014/30/EU,
RADIO EQUIPMENT DIRECTIVE (RED) 2014/53/EU
RESTRICTION OF HAZARDOUS SUBSTANCES (RoHS) Directive 2011/65/EU and amendment

Tested according to:

References to the relevant harmonised standards used or references to the other technical specifications in relation to which conformity is declared:

(MD)EN ISO 12100 , EN 12733:2018 Agric. and forestry mach. - Motor mowers - Safety
(EMC)EN ISO 14982:2009 Agric. and forestry machinery - Electromagnetic compatibility
((RED 3.1.A) EN 60950-1, EN 60950-22, EN 62311, EN 62209, EN 50566, EN 60529
EN 61000-6-2, ISO13849-1* - ISO 13849-2
(RED 3.1.B) EN 301 489-1, EN 301 489-17
(RED 3.1.B.2) EN 62209, EN 50566, EN 300 328
(RoHS) EN 50581:2012 CEI EN IEC 63000:2019

BARBIERI SRL - VIA SECCALEGNO 23 - 36040 SOSSANO (VI) Barbieri P.IVA 02402130245

Date: **14/07/2021**

Division Director, Product Services Operations

Barbieri POWER PRODUCT

BARBIERI GROUP

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