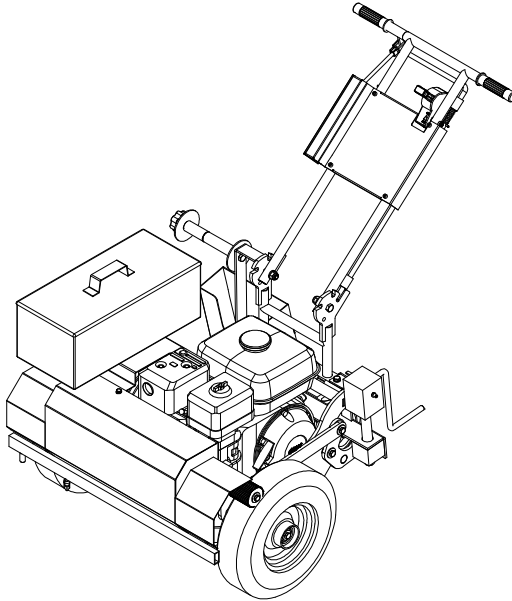


**USE AND MAINTENANCE INSTRUCTION MANUAL**

**CABLE-LAYING MACHINE**

# **Autocable Drop-in 6**



**TRANSLATION OF THE ORIGINAL INSTRUCTIONS**

**BEFORE USING THE MACHINE, READ THE INSTRUCTION  
MANUAL.**

[www.Autocable.be](http://www.Autocable.be)

# DECLARATION OF CONFORMITY



The Company  
**CARAVAGGI Srl**

REGISTERED OFFICE, FACTORY AND ADMINISTRATION :  
**20, Via Monte Adamello, 25037 Pontoglio (BS), ITALY**

Declares under its own responsibility that the  
**CABLE-LAYING MACHINE DROP-IN**

Model **Drop-In 6 petrol**

Serial number: **see rating plate**

Year built: **see rating plate**

**Complies with all the provisions regarding the following European Directives:**

**Machinery Directive 2006/42/CE** as an amendment to Directive 95/16/CE  
**And since the machine has been adapted to the following harmonized standards and specifications, where applicable:**

**UNI EN ISO 12100-1-2:** Machine safety – Basic concepts, general design principles, basic terminology, methodology, technical principles.

**UNI EN ISO 4254-1:** Farming machinery - Safety - Part 1: General requirements.

**UNI EN 13683:** Garden machines - Shredders / Chippers with built-in motor - Safety.

**ISO 11684:** Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Safety signs and hazard pictorials – General principles.

Person authorised to draw up the declaration of conformity: **Valerio Gianpaolo Caravaggi**

**The Legal Representative**  
( Valerio Gianpaolo Caravaggi )

  
**CARAVAGGI s.r.l.**  
Via Monte Adamello, 20  
25037 PONTOGGIO (Brescia)  
Telefono 030.7476464  
Partita IVA 01743270883

Pontoglio, 01 / 01 / 2015

# 1. HAZARD PICTORIALS



**Warning!**  
Wear a hard hat, hearing protectors and protective glasses or goggles.



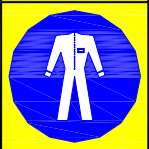
**Warning!**  
Wear protective gloves.



**Warning!**  
Wear safety shoes.

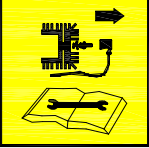


**Warning!**  
Wear clothes that are suitable for work on machines with moving parts.

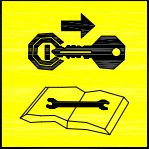




**Warning!**  
Remove the engine spark plug before carrying out any maintenance.



**Warning!**  
Switch off the engine before carrying out any maintenance.



**Hazard!**  
Projection of splinters. Keep to a safety distance from loading and unloading equipment.



**Hazard!**  
Keep fingers well away from cutting elements.





**Hazard!**

**Make sure the blades have stopped completely before approaching.**



**Caution!**

**Only one person must operate the machine.**



**Caution!**

**Do not use petrol engines in closed environments. Risk of intoxication.**



**Caution!**

**Machine lifting point.**



## **2. HOW TO USE AND KEEP THE INSTRUCTION MANUAL**

This instruction manual is aimed at the user of the machine, the owner, the maintenance cleaning operator and the repair technician and must always be available for consultation.

The instruction manual shows the user for which the machine was designed and the machine's technical characteristics. It also supplies instructions for transport, cleaning adjustment, use, personal information maintenance, spare parts ordering and residual risk, and warnings with regard to operations that must be carried out with particular care.

The machine is for professional use, so the instruction manual can never be a substitute for suitable user experience.

The manual should be considered a part of the machine and must be kept for future reference until the machine is demolished.

The instruction manual must always be available for consultation and must be kept in a dry, protected place.

In the case of loss or damage the user may request a replacement from the manufacturer, quoting the series reference, type and year of construction which are shown on the plate fixed to the Autocable machine (section 6).

The manufacturer reserves the right to update production and manual without the obligation to update earlier production and manuals.

The manufacturer is relieved from all responsibility in cases of:

- improper use of the Autocable machine;
- uses not conforming with what is expressly specified in this documentation;
- serious deficiencies in prescribed and recommended maintenance;
- unauthorised modifications or interferences;
- use of spare parts that are not original or model specific;
- total or partial failure to follow the instructions;
- force major;

### 3. IDENTIFICATION OF MAIN PARTS

- |                               |                  |
|-------------------------------|------------------|
| 1. Handle                     | 6. Blade         |
| 2. Position handle adjustment | 7. Cable housing |
| 3. Regulating working depth   | 8. Graduated rod |
| 4. Set screw                  |                  |
| 5. Engine                     |                  |

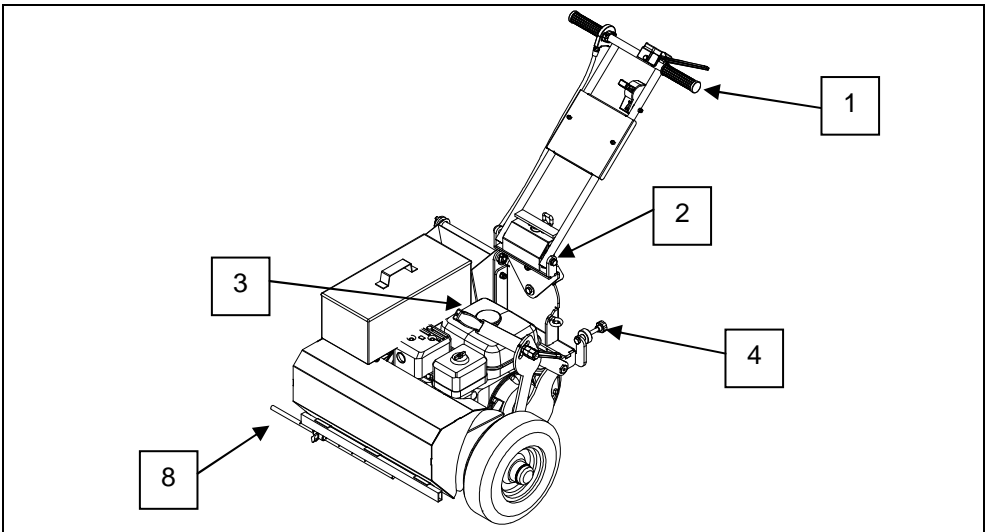


Fig. 1a

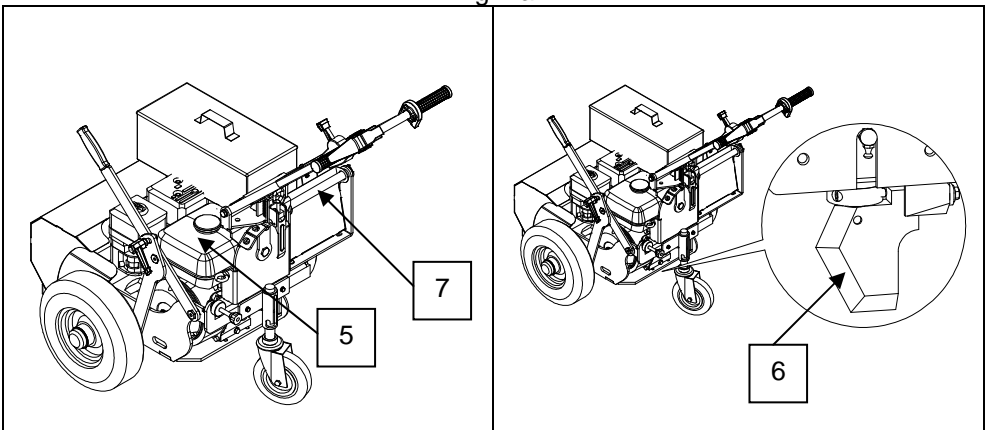


Fig. 2a

Fig. 2b

## 4. CORRECT USE OF THE MACHINE

This machine must be used by a single operator, who must remain in his work position at the control handle during operation.

The operator must have read and fully understood the instructions in this manual in order to use the machine correctly.

The operator must ensure that person or animals do not come within the field of action while the machine is running.

The Autocable machine was built to bury the wire guide robotic mower underground gardens.

The machine is not suitable for use in locations other than those listed above.

To work with other products, contact the machine manufacturer or authorised dealers.

The operator must be aware of all the instructions given in the instruction manual.

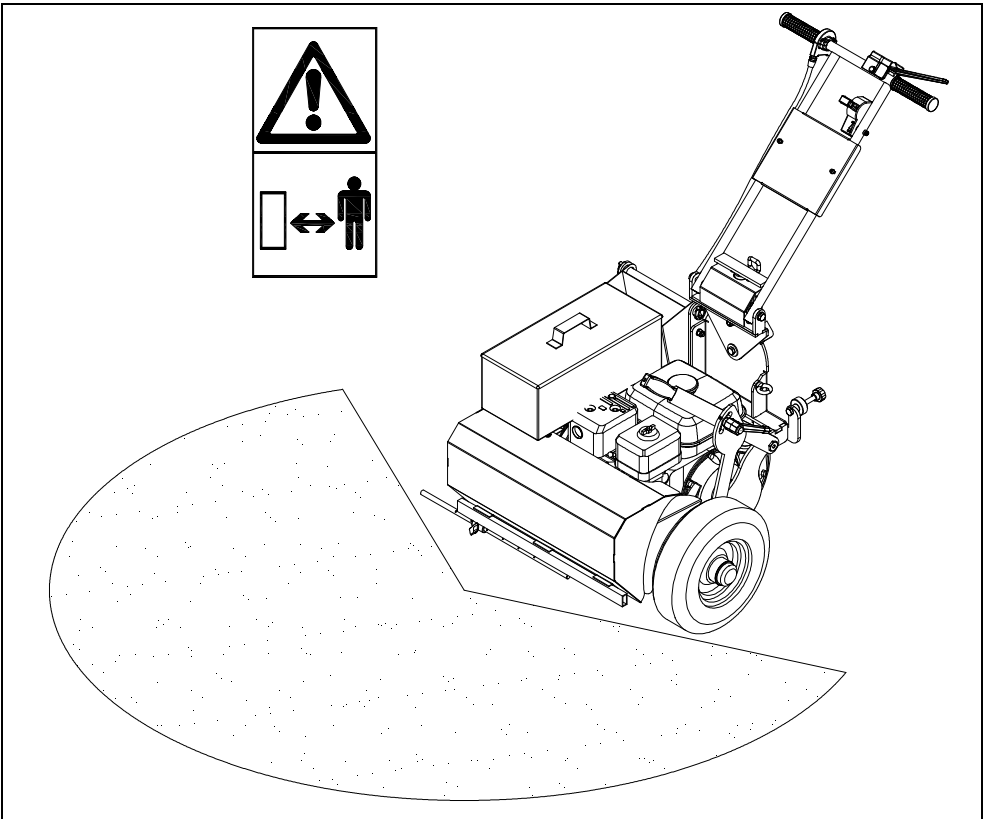


Fig.3



## 5. UNPACKING AND PREPARATION

The Autocable machine is delivered partially dismantled. Can be supplied assembled or packaged in cardboard to facilitate the operations of handling and transport before the operation by the user.

To transport the machine in these conditions it is indispensable to use a transpallet or similar with a load capacity of around 100 kilos.

Avoid:

- hoisting the autocable machine with ropes or unsuitable hoists;
- drag Autocable machine with the device in contact with the burial ground;
- bumps or shocks;
- exposing the machine to rain, frost or any bad weather.

On taking delivery check that the contents correspond with the delivery note.

Should damage or deformity due to transport be noted, make an immediate complaint to the carrier and advise the authorised dealer or the manufacturer. In particular, check that:

- there are no dents, signs of bumps or deformations;
- there are no damp areas or signs that may lead to suppose that the pack has been exposed to foul weather;
- there are no signs of tampering;

After checking that transport has been carried out correctly, proceed to assembling the machine as shown in figures 5a/b/c.

- Open the box, making sure that the card is oriented in the right direction.
- Remove the machine from packing.
- Place the handle in the transport position and lock it securely.

All the machines can be lifted and transported by means of cranes or winches, using hooks and cables, which must be approved and of an adequate capacity. Hook up to the lugs, as shown in the pictogram affixed to the machine.

Only safe hooks, such as snap hooks, must be used for lifting. Take great care and exercise extreme caution when loading and unloading the machine. These operations must only be carried out by qualified personnel (slingers, truck operators, etc.). Never pass or stand underneath the machine when it has been raised off the ground.

To transport the machine, grasp the handle and push in the desired direction with the engine switched off.

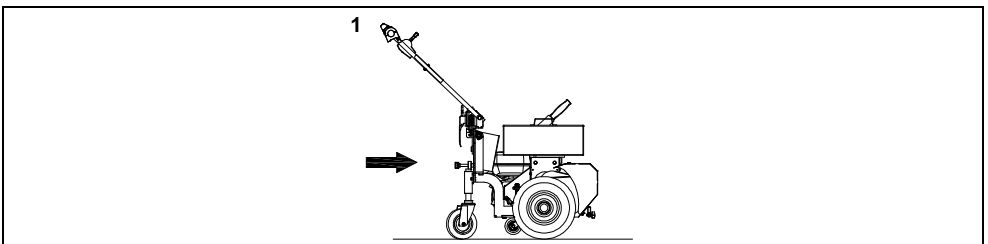


Fig.4

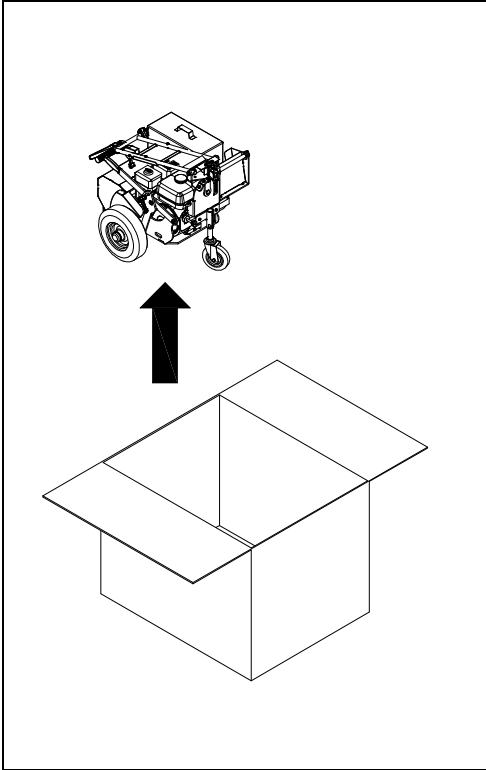


Fig. 5a

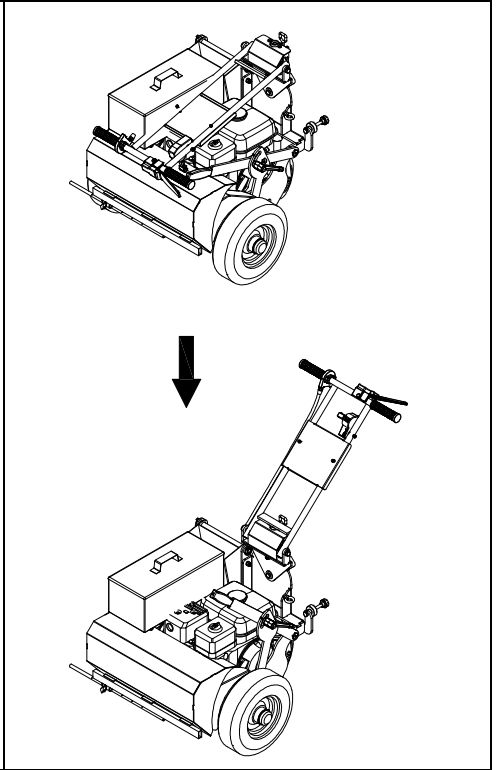


Fig. 5b

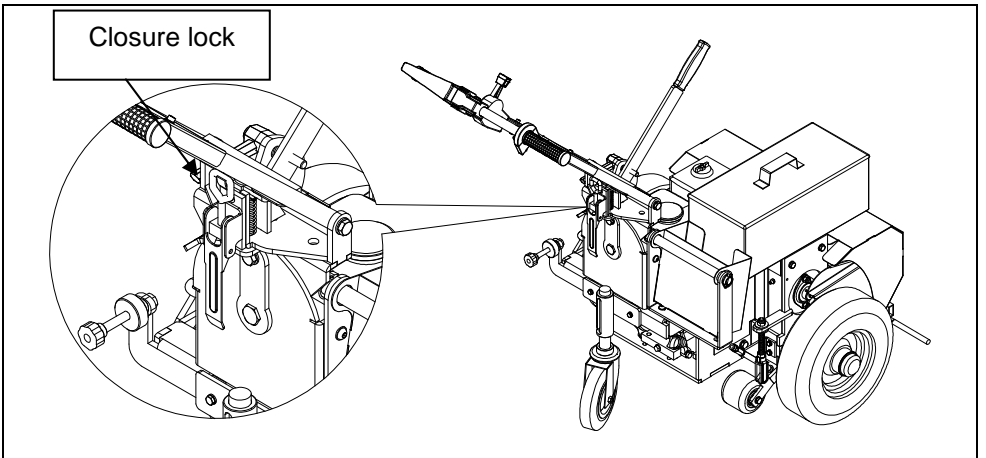


Fig. 5c

## 6. TECHNICAL CHARACTERISTICS

The EC identification plate is clearly visible on the Autocable Machine Drop-In 5 (fig. 6).

In all communications with the manufacturer state the serial number on the identification plate.

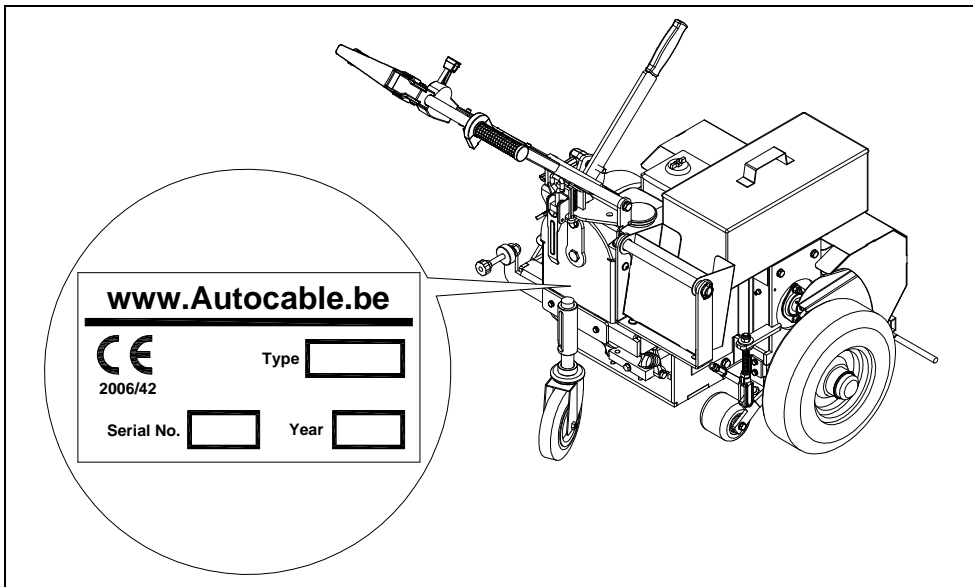


Fig. 6

Version	Power HP (kw)	Supply
Autocable DROP-IN 6	5.5 (4.1)	Petrol

## 6.1 Overall dimensions

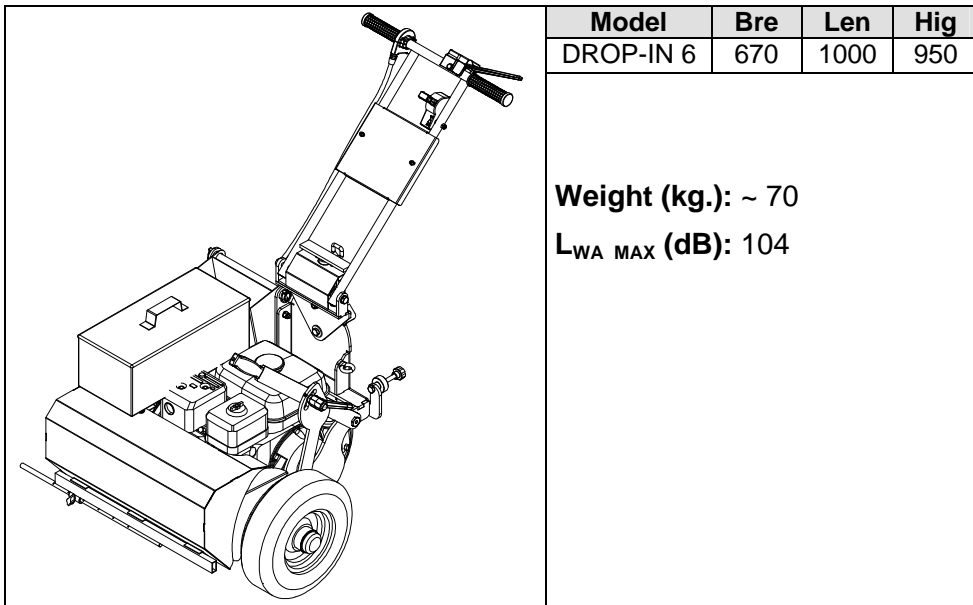


Fig. 7

## 7. SAFETY RULES

This handbook contains rules on how to use the machine properly and details of the hazards that may be encountered. Besides following the rules, the operator should use the machine sensibly, based on his experience, and adopt all the necessary precautions to prevent accident or injury.

The manufacturer cannot be held liable for any alterations to the machine that are not authorised in advance in writing.

This machine is only designed for laying boundary cable in the ground in stone-free gardens and lawns. It must never be used for any other purposes.

The machine must only be operated by a fully qualified person who is authorised to do so and is thoroughly acquainted with the operating principles and the inherent hazards.

Read through the manual before setting to work. The machine must not be operated by children.

### 7.1 GENERAL SAFETY AND ACCIDENT PREVENTION RULES

- **Basic rules:** check the machine carefully each time before starting up.
- Besides following the recommendations contained in this handbook, it is important to follow the general safety and accident-prevention rules. Before using the machine, the operator must be fully acquainted with its features, devices, controls and functions.
- Before starting working, make sure the blades are firmly secured to the vanes. If they look damaged, they need to be sharpened or replaced. Mount the blades as instructed and only use original spares supplied by the manufacturer (or an authorised dealer).
- Before and after each work session, check that the guards, covers and safety devices are correctly installed and integral, and are properly secured with nuts and bolts.
- The notices on the machine provide a series of important instructions. They are there to enable you to work in complete safety. Read all the safety stickers on the machine and follow the instructions on them. If they become damaged or unreadable, they need to be cleaned or replaced in the exact position as described in the relevant section.
- The machine must only be used in an open space, on flat, firm ground that is free from obstacles.
- Do not use the machine in the rain.

- Anyone approaching the machine enters the danger area and hence becomes an EXPOSED PERSON. It is up to the operator to prevent other people from entering the danger area and he himself must act with extreme caution. Stop the machine immediately if anyone enters the danger area.
- Caution: the blades continue to turn for several seconds after the engine has been switched off.
- Keep the handbook readily available so that you can consult it for details of the operating cycle and maintenance instructions. If it gets lost or damaged, a replacement copy can be obtained from the manufacturer.
- This machine must be used by a single operator, who must remain in his work position at the control handle.
- Do not wear items of clothing that are likely to get caught up in the mechanism, such as long wide sleeves, belts, and necklaces.
- Hearing protectors and protective goggles must always be worn when operating the machine.
- Do not leave the machine unattended while it is running.
- Do not place any tools or other objects on the machine as they could damage it or injure the operator.
- Use only original spares.

### **Safety rules during operation**

- Before setting to work, check there is enough cable in the housing and the laying device.
- Keep the face and arms well away from the cable-laying device.
- Make sure there are no stones or rocks in the way, as they would blunt the blades.
- Try to maintain an even balance while operating the machine.
- In the event of a malfunction, excessive vibration or strange noises, switch off the engine. Disconnect the power supply (remove the sparkplug) and establish the cause of the problem.

## **7.2 SPECIFIC SAFETY AND ACCIDENT PREVENTION RULES**

### **7.2.1 Petrol version**

- If there is a malfunction, and prior to any maintenance, adjustment and cleaning operations (e.g. removing foreign bodies from the blades), switch off the motor and remove the spark plug cable.
- Before setting to work, read through and follow the instructions in this handbook and the accompanying engine handbook.
- Never use the machine in enclosed or poorly ventilated areas (even if the doors and windows are open), as the exhaust fumes are toxic.
- Avoid smoking and lighting flames when filling with petrol.
- Always fill the fuel tank in an open area with the engine switched off. Remember that petrol is highly flammable and explosive under certain conditions. Fuel must be stored in suitable canisters.
- Never place anything on the engine as it could catch fire.
- Never remove the fuel tank cap or top up with petrol with the engine running or when it is still hot.
- If any petrol gets spilt, do not attempt to start the engine immediately.
- The exhaust pipe gets very hot when the engine is running and remains hot for some time after it is switched off. Never touch the exhaust pipe. Keep to a safety distance.

## 8. START-UP

**Caution!** Before starting up the engine/motor check that the Autocable machine is on a stable surface and that there are no animals or unauthorised persons in the work zone.

- Read the engine manufacturer's instruction book carefully.
- Check that there is oil and fuel in the tank. Fill if necessary.
- Adjust the control handle in the most appropriate, the relevant working the lever.
- Adjust the height of the wheel from the ground, acting in the relevant handle clamping.
- Hold the safety lever (Fig. 8c) and grasp the starting knob (fig.8a / 8b) and pull the cord without force until you feel the resistance caused by compression, release the knob and then give a sharp tug to start the engine. The release of safety lever will cause the engine to stop.
- Before beginning work let the engine idle for about 1 minute then take it to maximum revs (using accelerator lever) and proceed with normal use, after grip and turn the knob to the start of self-propelled.

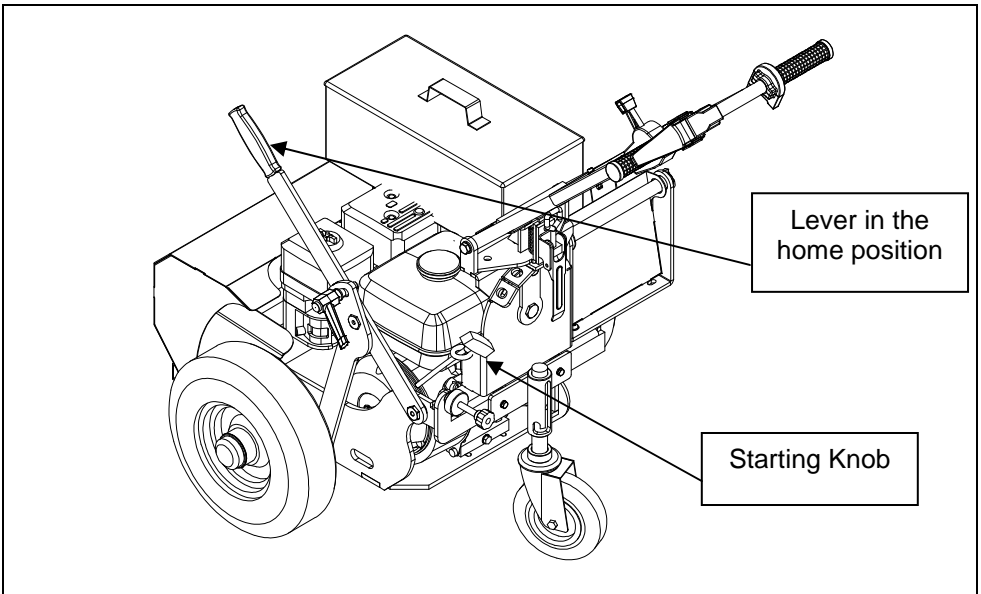


Fig. 8a



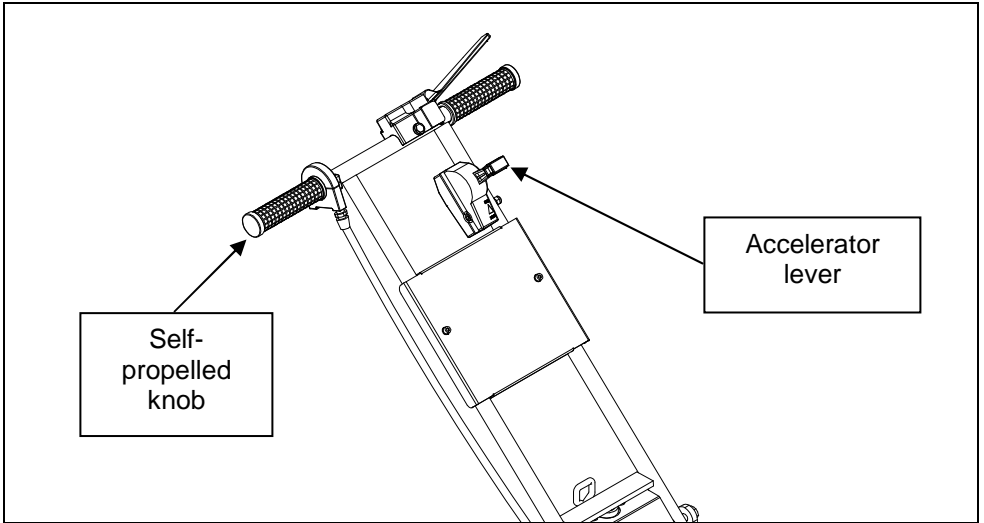


Fig. 8b

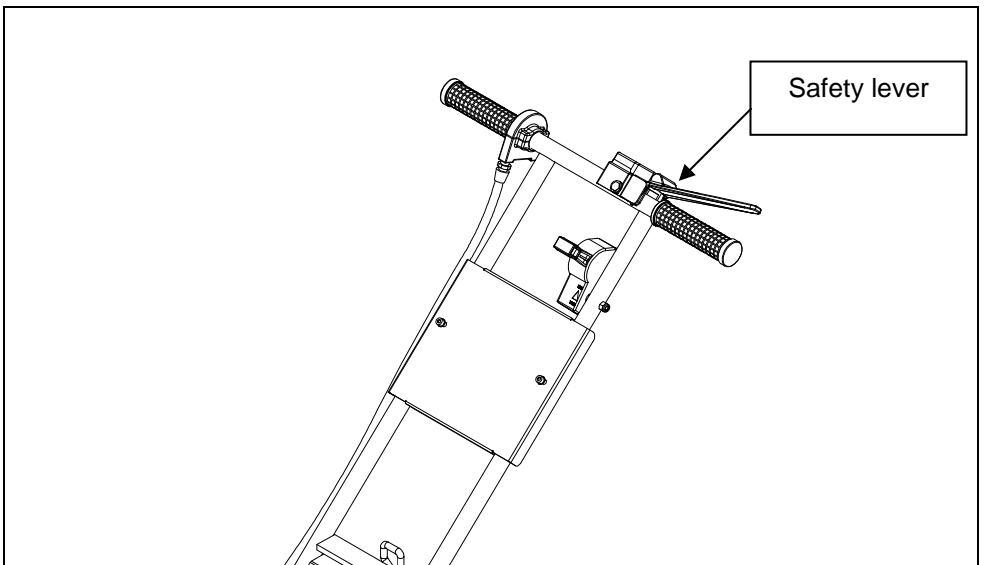


Fig. 8c

**IMPORTANT!**

**To stop the engine, even in emergency conditions, release the safety lever.**

## 8.1 Use of the machine

- This machine is designed to work at a depth of 3-5 cm. The precise depth can be regulated via the lever.
- Adjust the depth of the blades, the relevant action lever.
- Regulate the set screw to record the lever position, and hence the working depth. The purpose of this is to optimise and speed up the cable-laying operation.
- Regulate the graduated rod to set the distance between cables (see 8.1.1).

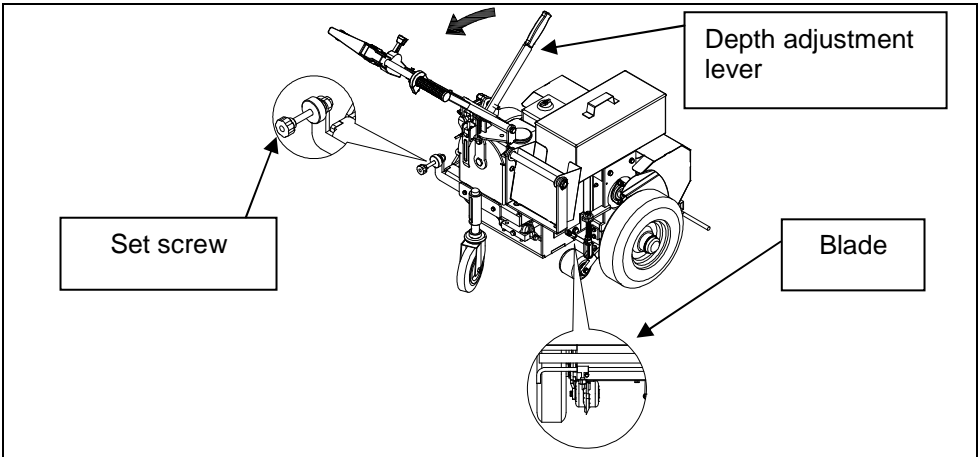


Fig. 9a

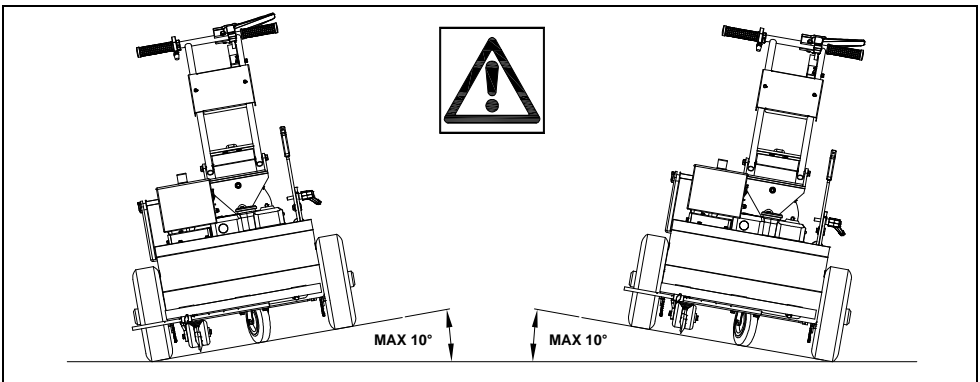


Fig. 9b

### **IMPORTANT!**

**Never exceed an angle of inclination of 10°, otherwise the blades or the transmission unit could get damaged.**

### 8.1.1 Adjusting the graduated rod

- Loosen the wing nut on the graduated rod.
- Pull the rod out the required distance.
- Tighten the wing nut to secure the rod.

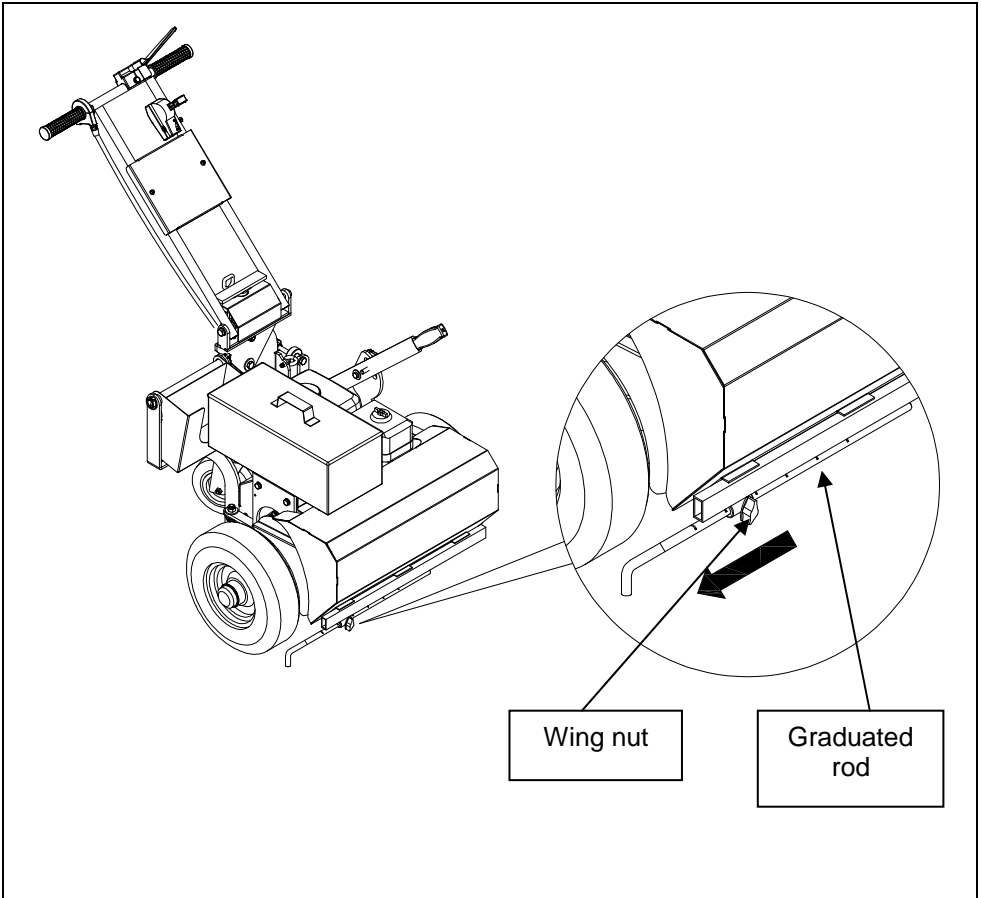


Fig. 10

### 8.1.2 Operation

- Grasp the handle and regulate the speed control knob as required.

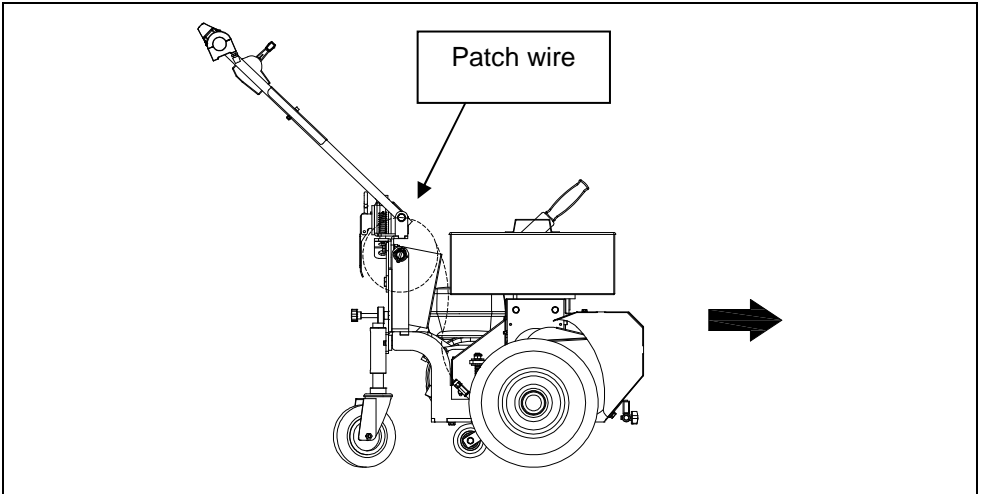


Fig. 11

- When using close to trees, hedges or fences, the handle can be tilted by raising and then moving to the left. Return the handle to the most comfortable work position and secure.

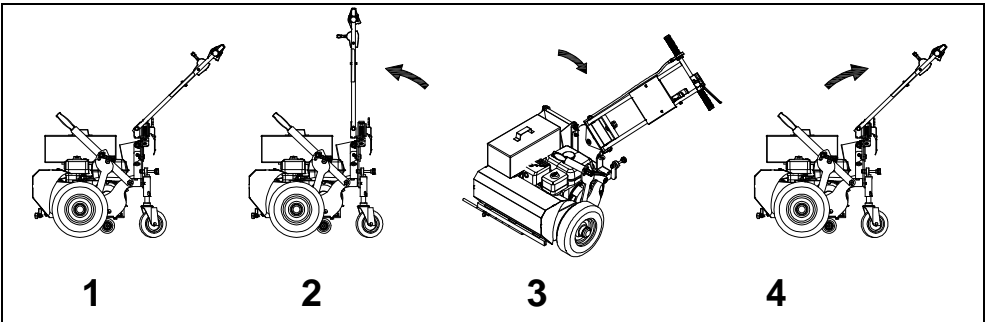


Fig. 12

### **IMPORTANT!**

**In order to avoid a rupture of the blades or the transmission, you must use the machinery on land and gardens free of rocks in the subsurface.**

## 9. MAINTENANCE

**Caution!** Before proceeding with any maintenance operation switch off the engine / motor and in any case ensure that there is no possibility of the machine functioning. Suitable gloves are obligatory for all maintenance operations.

### 9.1 Replacing the blade

- Unscrew the screw and remove the blade.
- Replacing the blade.
- Fit and tighten the screw.

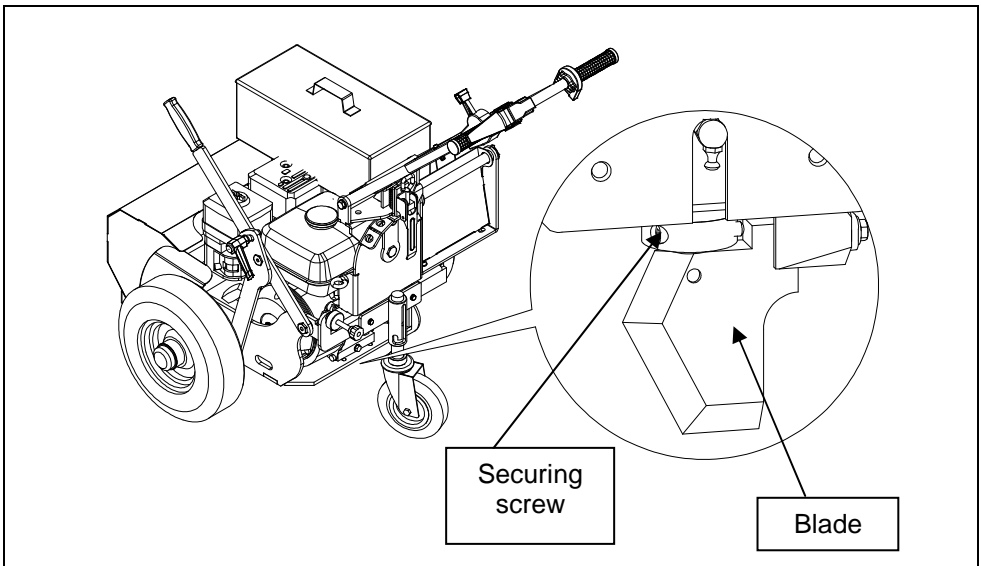


Fig. 13

## 9.2 Tensioning the drive chains

- Remove the front guard.
- Tighten the eccentric hex pin to get the optimal chain tension.
- Remount the guard.

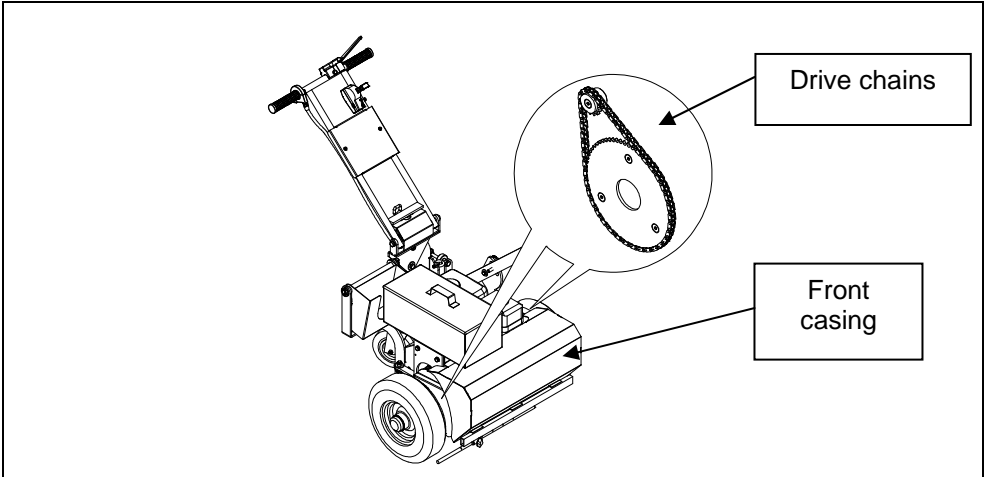


Fig. 14

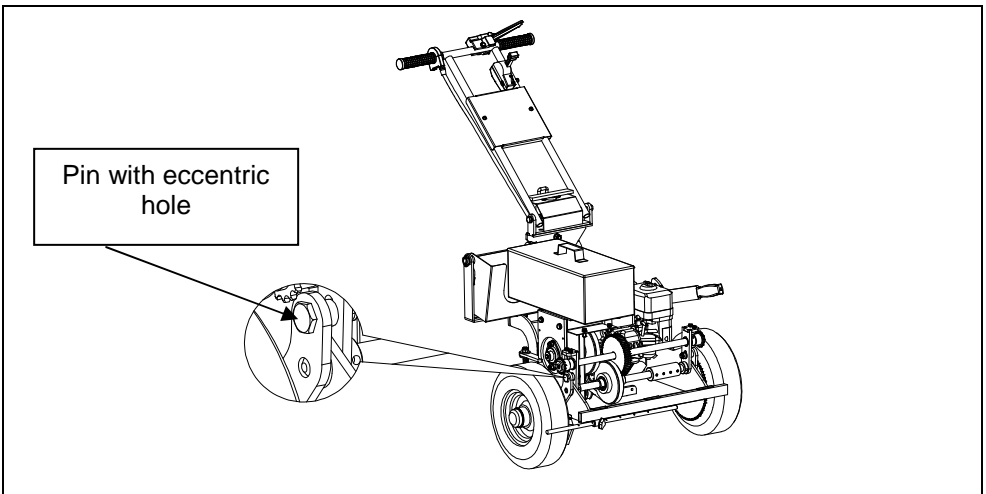


Fig. 15

### 9.3 Tensioning the drive belts

- Remove the front guard.
- Loosen the screws securing the engine to the base and adjust the engine to get optimal belt tension.
- Tighten the screws and remount the guard.

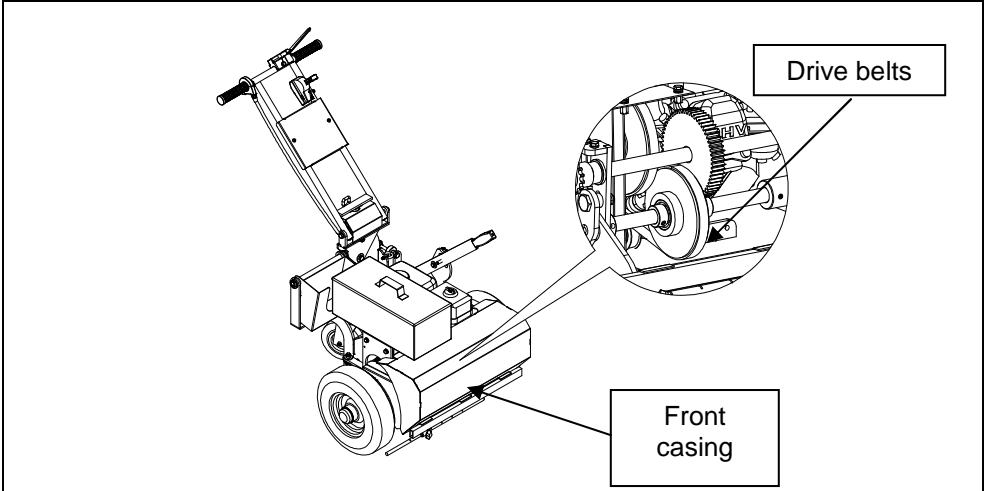


Fig. 16

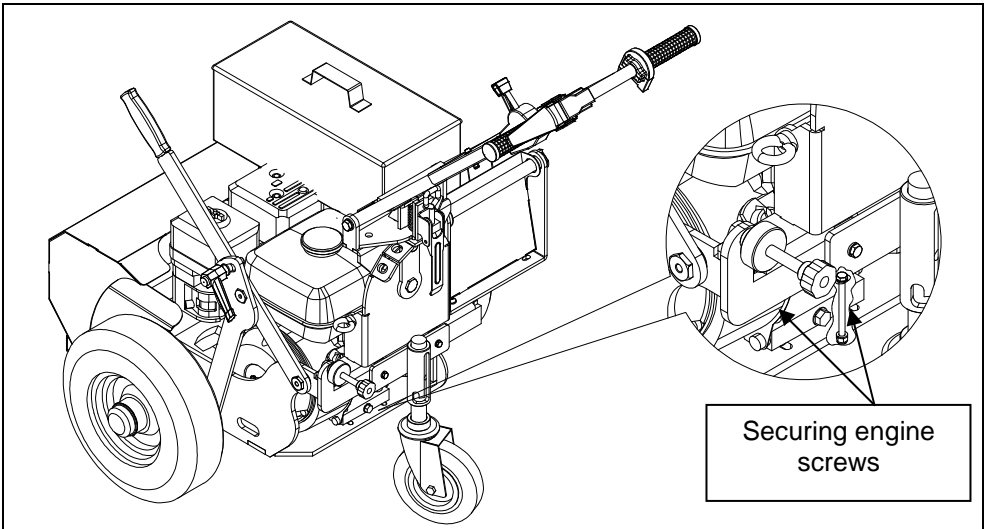


Fig. 17

## 9.4 Routine maintenance

	Beginning of season	Before each job	End of season
Check engine oil level	See booklet	See booklet	See booklet
Check screws, tightness, casing, etc.	◆	◆	
Check belts tension and state of wear	◆	◆	
Check chains tension and state of wear	◆	◆	
Check wear on blade	◆	◆	
Clean machine			◆
Greasing transmission group with fat Texaco Metalgrease AC (fig. 18).	◆		◆

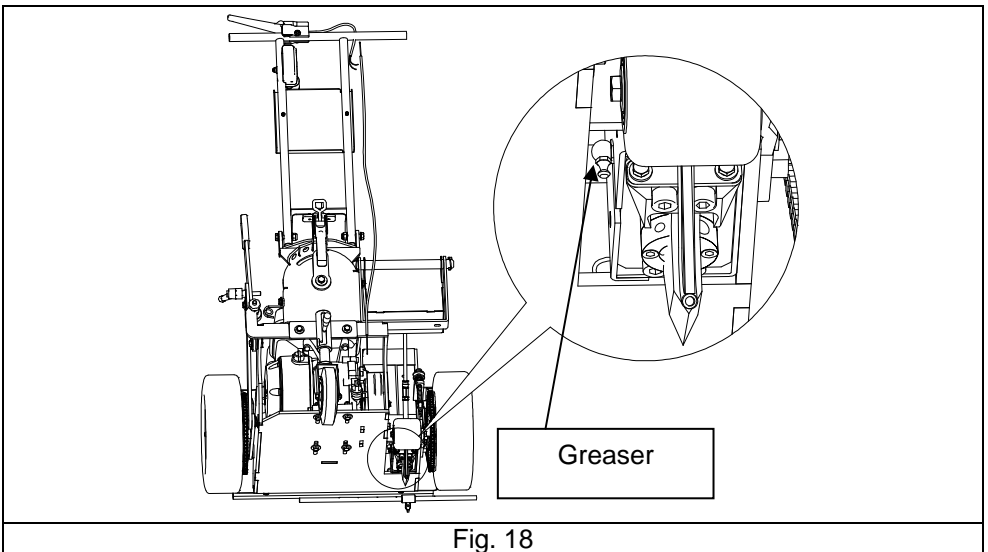


Fig. 18



## 10. TROUBLESHOOTING-REMEDIES

Troubleshooting	Remedies
Abnormal noise	Check cutters and transmission group. Cleaning and greasing of the machine in the group of transmission.
The machine does not start	Check cutters and transmission group. Check state of engine/motor (consult the instruction manual supplied).
Difficult start-up or loss of power	Check state of engine/motor (consult the instruction manual supplied).
The machine loses revs and functions irregularly	Check cutters and transmission group. Check state of engine/motor (consult the instruction manual supplied).
Excessive vibration	Check cutters and transmission group.

## **11. GUARANTEE**

1. The Manufacturer hereby guarantees its Autocable machines against breakage caused by faulty materials or workmanship.
2. This warranty is valid for the first owner only for 12 months as from the date of purchase and/or delivery.
3. The Manufacturer is entitled to inspect the Autocable machine and any components for which a claim has been made under the guarantee, in order to determine the validity of the claim.
4. This warranty covers replacements free of charge only of components found to be defective due to faulty materials or workmanship under the guarantee period.
5. This warranty does not cover reimbursement for labour, consumables or transport charges for repairs under guarantee.

### **THIS WARRANTY DOES NOT APPLY IN THE FOLLOWING CASES**

1. The Manufacturer may in no way held liable for general damage, including damage or injury, loss due to halts in production, loss of earnings, leasing costs or any moral or commercial damage.
2. All claims concerning motors or engines mounted on Autocable machines will be handled by the relevant Manufacturers' after-sales service.
3. This warranty does not cover damage caused by misuse, abuse, insufficient maintenance, accident or damage caused during transport.
4. Parts which are subject to wear, such as blades, etc. are not covered under this guarantee.
5. All expenses for setting the machine to work will be charged to the distributor or dealer.
6. This warranty is not valid if the repairs, maintenance or modifications are performed by an unauthorised persons or dealers.
7. The owner is responsible for routine maintenance and settings, which are thus excluded herefrom.
8. The use or fitting of components and accessories that are not original will immediately invalidate this warranty.

### **PROCEDURE FOR MAKING CLAIMS UNDER THIS WARRANTY**

If the Autocable machine is found to be defective due to faults material or workmanship, you are required to send the Manufacturer a written claim and proceed as follows:

1. The machine must be returned to the Seller or the authorised importer.
2. You are required to present the guarantee duly filled in or the bill, if this is not available.
3. The claim will be completed by the Dealer, who will forward it to the Manufacturer.

The Manufacturer alone reserves the right to determine whether to accept the claim or otherwise.



**[www.autocable.be](http://www.autocable.be)**

Rev.1-2015