

Users Manual

Flail mower

EFCG 105 – 125 – 145 – 155 – 165 – 175
EFGCH 105 – 125 – 145 – 155 – 165 - 175

Illustration 1:



Dear Customer

We thank you for selecting the GEO flail mower. The GEO flail mower is of the highest quality. If you maintain the machine regularly, it will last for many years.

Whether you are an experienced user or not. For safety reasons you must read and understand this user manual, before using the machine for the first time. If you follow the rules for maintenance and use as described in this manual, there is a minimum risk of injury.

The machine is designed and tested in Italy. It is designed and tested according to European directives and standards.

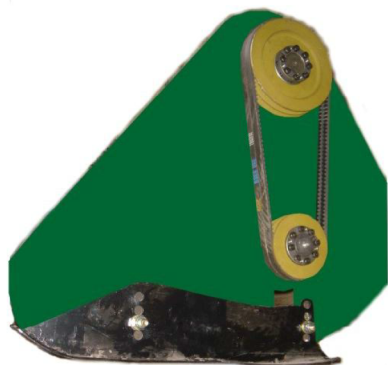
In this manual you will find information about how to use, starting up and how the machine may not be used.

This user manual is valid for the EF and EFG machines.

You will find information about how to maintain the machine, how to change spare parts and how to test that the machine is safe to use before starting up.

Description and use of the machine

The flail mower is designed to be attached to the three point hitch behind the tractor. The Machine is very suitable for very rough terrain where the quality of cutting is not the most important thing. It is also suitable for area where space is limited. The machine is standard delivered with Y-blades, but pruning hammers can be fitted. The Y-blades are the best for cutting grass, and the pruning hammers are best for very rough work.



The model EF is suitable for cutting medium long, not very dense growth grass. The model EFG is suitable for very long and very dense growth grass. Do not start the machine when it is lifted from the ground. The machine must be hanging in three point hitch. The base plates (1) must be close to the ground, when the machine is started up or operating. See illustration 02

Limitation on use:

1. The machine is designed to be attached to the three point hitch behind a tractor and may only be used this way.
2. The machine is very suitable for rough terrain, but remove stones, and other hard objects before starting up.
3. When cutting very long grass, we have seen operators cutting grass when the flail mower was lifted from the ground. This is not allowed. Objects can be thrown out under the machine and cause serious injury to people or animals.
4. Has the grass become too long, you must slow down speed and perhaps cut the grass two times to get a quality cut
5. By using the machine for purpose, which it is not intended, the machine can get overloaded. This could cause the lifetime of the machine to be decreased essential.
6. Do not overload the machine. It could cause damage of the machine immediately. This type of damage is not covered by the warranty. Overloading the machine could cause a safety hazard and serious injury to people or animals.
7. The machine may not be used for towing or pulling other objects, or transport of goods or personnel.
8. The machine is designed to 540 rpm PTO only, and may not exceed.

Starting up for the first time

Before starting up, the following points must be checked

1. Check oil level on the gearbox
2. Check and fit the length of the PTO shaft
3. Adjust the cutting hight
4. Check if bolts are tighten
5. Check the bolts of the blades

Fitting the length of the PTO shaft

Attach the finishing mover to the three point hitch of the tractor. Elevate the machine to the level, where the PTO shaft must have the shortest length. To avoid trapping under the machine, keep the machine in this position by safety stands or pieces of wood, underneath the machine

1. Pull the two halves apart, and mount one of them on the machine, and the other halv on the tractor.

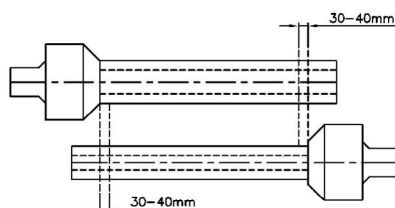


Illustration 3:

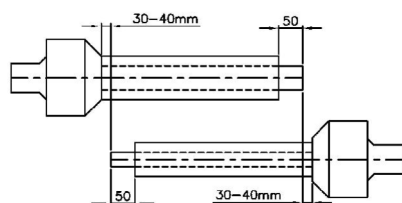


Illustration 4:



Illustration 5:

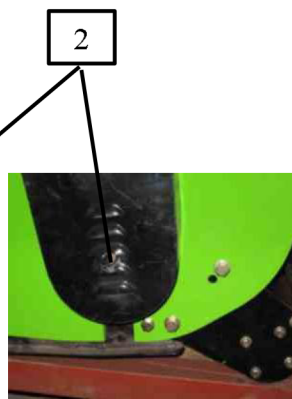


Illustration 6:

2. Make a mark on the two parts as shown on illustration no. 3. There must be a clearance of minimum 30 – 40 mm . See illustration no. 3.
3. In case, the shaft is too long. Remove by saw og grinder
4. The plastic cover must be shorten as shown on illustration no. 4. 50 mm clearance
5. Clean and remove all cuttings.
6. Lubricate with grease and assemble the two parts and attach it to the tractor and the machine.
7. When attaching the Shaft to the tractor and the machine, it is important that the spring locking pin is seated on the PTO shaft groove. Check this carefully
8. Lubricate all grease nipple with grease including the PTO shaft.

It is very important that the bearings of the blade axle, and the roller are lubricated with grease as scheduled, to avoid impurity comming in to the bearings. See the maintenance chart .

Starting up the machine

1. Before starting up, you must be aware that the safety and periodical inspections have been made.
2. If you do not perform the scheduled inspections, it can reduce the lifetime of the machine essential. In case of very bad maintenance, parts can be thrown out from the machine and cause serious injury to people or animals.
3. If you have checked that the periodical inspections have been made, you can now attach the finishing mover to the three point hitch behind the tractor. Be aware that the pins are secured by the lock pins. (3)



Illustration 7:

4. When attaching the cardan shaft to the tractor and the machine, be aware that the spring locking pin is seated on the PTO shaft groove.
5. The chain of the protective parts must be in good condition and attached (4), to avoid rotation of the protective parts.
6. The topline must be adjusted to keep the machine horizontal leveled.
7. The baseplate and the roller must be adjusted to the same height in both sides.
8. It must be checked that the cardan shaft can telescope freely in the hole working range. If the cardan shaft do interfere with either the machine or the tractor, the working range must be limited.
9. If point 1 – 8 are full filled you can prepare to start.
10. The operator must be aware that the safety distance to bystanders or surroundings are full filled, before starting up. The finishing mover may only be started up or operated, when the operator is positioned at the drivers seat of the tractor. Before the operator leave the drivers seat again, the finishing mover must be stopped.

Safety distance to bystanders or surroundings:

When the finishing mover is operating, objects can be ejected from the machine and can cause serious injury to people or animals.

Be aware that people or animals do not exceed the safety distance. See illustration 8

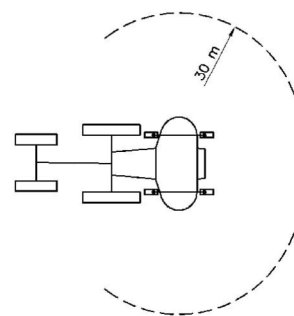


Illustration 8:

Adjusting the machine

Adjusting the cutting hight

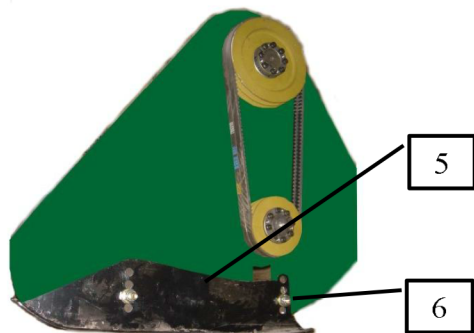


Illustration 9:

Lift the machine to the highest level possible, when attached to the three point hitch of the tractor. The parking brake must be engaged. Keep the machine in this position by safety stands or pieces of wood, underneath the machine in both sides.

Adjustment of the cutting hight is done by moving the baseplate (5) and the roller to other holes (6). See illustration (9)

The Flail mover must, when it is started up or opperating, be hanging in the three point hitch of the tractor. The baseplates (5) must be close to the ground to protect against ejection of objects. The baseplates and the roller will lift the machine from the ground, when hitting hard object on rough terrain.

It is very important, that the base plates and the roller are adjusted correct. this will reduce the risk of ejection of objects.

When the base plates and the roller are adjusted correct, it also reduces the risk from hitting objects with the blades of the machine.

The cutting hight must be selected according to the terrain that must be cut. On rough terrain, the cutting hight must be adjusted to a high level.

On very smooth terrain, the cutting hight can be adjusted to a low level.

Adjusting the belts

Adjustment of the belts must be checked as scheduled. See the work schedule for service and maintenance. Before this work can be done, the tractor must be stopped and the parking brake engaged.

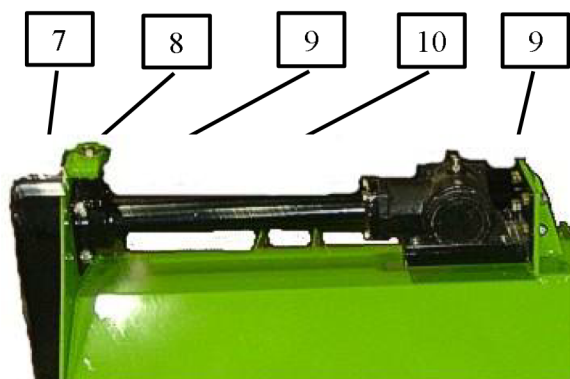


Illustration 10:

1. Remove the belt guard (7)
1. Unfasten the 8 pcs. of bolts (9) and adjust the belts by the adjusting bolt (8). After adjusting the belts, the bolts (9) must be fasten again. Be aware that the shaft (10) is horisontal.
2. Adjustment of the belts must be done by experienced personal. If the belts are too tight, the bearings could be overloaded. The lifetime of the gearbox and bearing

can be reduced essential. If the belt are tighten too little, the belts will slip. The belts could thereby be destructet in a very short time. This could happen in just a few minutes.

3. After adjusting the belts, the belt guards must be fitted again . Do never start up the machine without the guards installed.

Check and maintenance

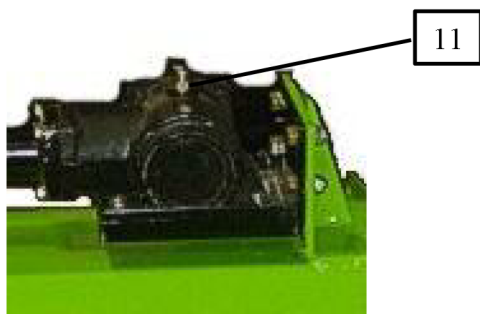


Illustration 11:

Check the oil level of the gearbox

The oil level can be checked by removing the plug (11). Measure with a piece of metal wire. The gearbox must be half filled.

Fill oil to specified level, by removing the ventilation plug (11). The oil quality must be as specified in the maintenance chart.

Maintenance chart for safety

Interval →	Daily	20 hour	40 hour	100 hour
Emne ↓				
Check the protective parts and the safety chain of the cardan shaft.	X			
Check wear or damage of the blades				X
Fasten the bolts of the blades			X	
Fasten all bolts				X
Check all safety guards of the machine and the cardan shaft.	X			
Starting up for the first time. All bolts must be fastened after one hour operating.				

If faults are found by this check, it is not allowed to start up the machine, before all faults are repaired.

Maintenance chart. Normal check

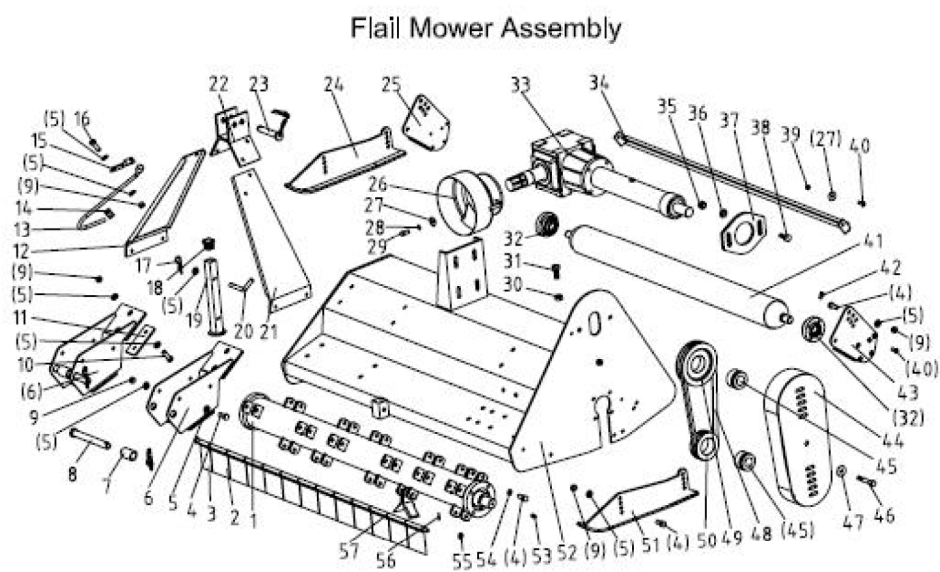
Interval →	Daily	20 hour	40 hour	100 hour	once a year
Subject ↓					
Check oil level of the gear box				X	
Lubricate with grease. All grease nipples		X			
Change oil of the gearbox					X
Check for oil leakage	X				
Check adjustment of the belts			X		

Only use oil of specified quality or better.

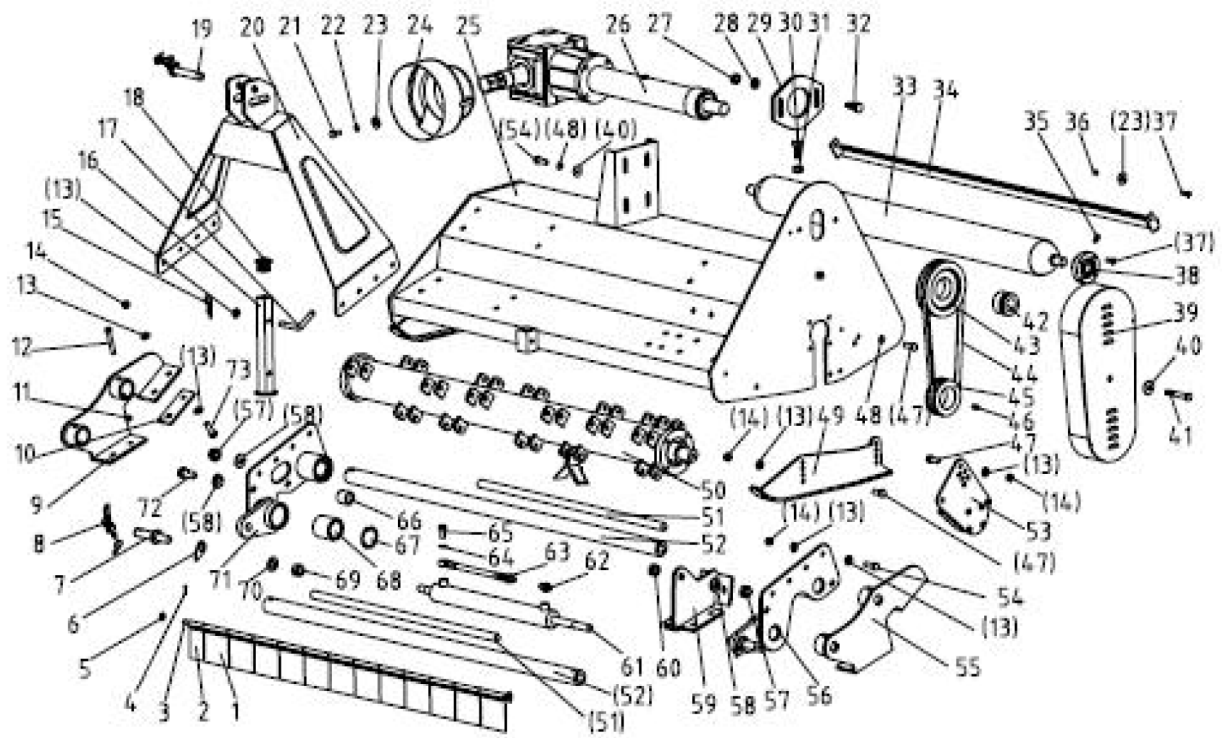
Gearbox: API GL-5, viscosity 80W-90

Spareparts

Illustration 12:



Flail Mower Assembly



The Type plate

The Machine has a type plate with information of: Year of manufacturing, type- and serial no. and weight.

When ordering spare parts, please always state the serial- and the type no.

 	
Costigliole Asti Italy	
Type	
Ser.Nr.	
Max Kg	
Max rpm	
Year	

Data list sheet, max hp power allowed

Machine type	EFGC 105	EFGC125	EFGC 145
Cod. no	3.24.105	3.25.125	3.16.145
Working width (cm)	105	125	145
Total width (cm)	115	135	260
Weight (kg)	196	230	190
power recommended (hp)	20	25	25
<i>max</i> power allowed (hp)	50	50	50

Machine type	EFGC 155	EFGC 165	EFGC 175
Cod. no	3.27.155	3.28.165	3.29.175
Working width (cm)	155	165	175
Total width (cm)	165	175	185
Weight (kg)	290	335	375
power recommended (hp)	30	30	30
<i>max</i> power allowed (hp)	50	50	50

Machine type	EFGCH 105	EFGCH G125	EFGCH 145
Cod. no	3.30.105	3.31.125	3.32.145
Working width (cm)	105	125	145
Total width (cm)	115	135	155
Weight (kg)	216	230	260
power recommended (hp)	25	30	30
<i>max</i> power allowed (hp)	50	50	50

Machine type	EFGCH 155	EFGCH 165	EFGCH175
Cod. no	3.33.155	3.34.165	3.35.175
Working width (cm)	155	165	175
Total width (cm)	165	175	185
Weight (kg)	310	335	365
power recommended (hp)	30	30	30
<i>max</i> power allowed (hp)	50	50	50

Safety signs



This safety alert symbol indicates important safety messages in this manual. When you see this symbol, carefully read and understand this message that follows and be alert to the possibility of personal injury or death.

If you do not understand the message, you are not allowed to use the machine. You must contact the supplier of the machine to get the required information.

Read and understand the safety rules and follow them.

This manual was intended to learn the operator to use and service the machine, without risk of injury.

The safety information given in this manual does not replace any safety codes, insurance needs, federal, state and local laws. Make sure your machine has the correct equipment required by your local laws and regulations.

YOU are responsible for the **SAFE** operation and maintenance of your Finishing mower. **YOU** must ensure that you and anyone else, who is going to operate, maintain or work around the Finishing mower be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be adhered to while operating the Finishing mower

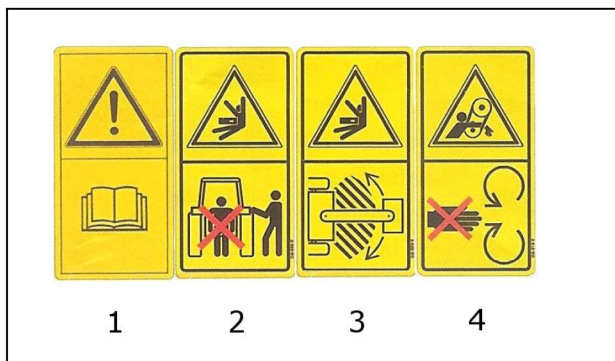
Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

The owners of this machine must give operating instructions to operators or employees before allowing them to operate the machine.

The most important safety feature on this equipment is a **SAFE** operator. It is the operator's responsibility to read and understand **ALL** Safety and Operating instructions in the manual and to follow these. **All** accidents can be avoided.

Person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator makes himself and bystanders to possible serious injury or death. Do not modify the equipment in any way. Unauthorized modification may weaken the function and/or safety and could affect the life of the equipment.

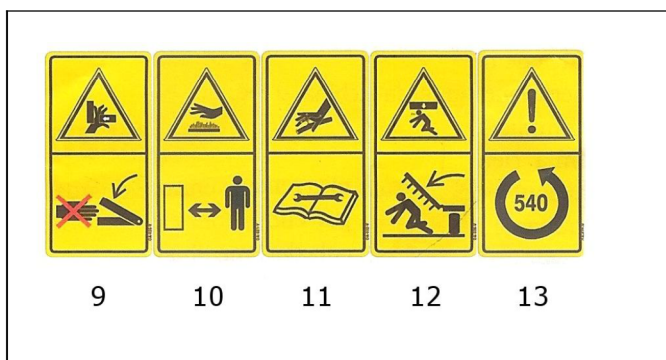
Think **SAFETY!** Work **SAFELY!**



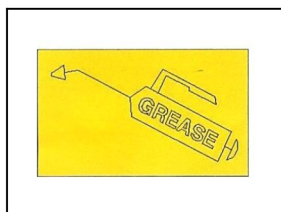
- 1) READ AND THEN COMPLY WITH THE OPERATING MANUAL
- 2) DON'T STOP BETWEEN THE MACHINERY AND THE TRACTOR
- 3) DANGER OF CRUSHING, CONSEQUENTIAL DANGEROUS ZONE FROM THE MOVE OF THE MACHINERY
- 4) DANGER OF ENTRAPMENT OF THE LIMBS, NOT TO APPROACH THE HANDS Á. THE ORGANS IN MOVEMENT



- 5) DANGER OF ENTRAPMENT OF THE LIMBS, NOT TO APPROACH THE HANDS Á. THE ORGANS IN MOVEMENT
- 6) DANGER OF THROWING OF OBJECTS, TO REMAIN SAFETY -. DISTANCE
- 7) BEFORE TO MAKE IOPERATION ON THE MACHINERY, TO STOP THE MOTOR OF THE TRACTOR AND TO EXTRACT THE KEY OF TRACTOR
- 8) DANGER OF FALL, NOT TO CLIMB AND NOT TO MAKE TO BE TRANSPORTED BY THE MACHINERY



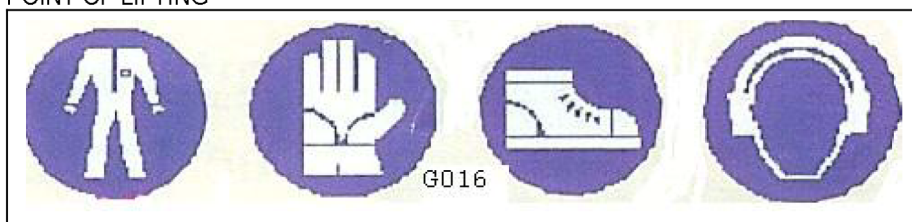
- 9) DANGER OF CRUSHING NOT DO APPROACH THE HANDS
- 10) DANGER OF BURNS TO REMAIN SAFETY Á. DISTANZA
- 11) DANGER OF FERIMENTO DI LIQUIDATES IN PRESSURE, TO REMAIN SAFETY - DISTANCE.
- 12) DANGER OF FALL OF SUSPENDED LOADS, NOT TO STOP UNDER PARTS LIFTED OF THE MACHINERY
- 13) TO VERIFY THE TURNS AND THE SENSE OF ROTATION OF THE PTO BEFORE TO PTO



FLUIDS AND LUBRICANTS



POINT OF LIFTING



Protective devices

Do not operate the machine without protective devices.