



CYCLO MOWER

CM 100 • CM 140

USER MANUAL



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ENG | ENGLISH

TRANSLATION OF THE ORIGINAL MANUAL

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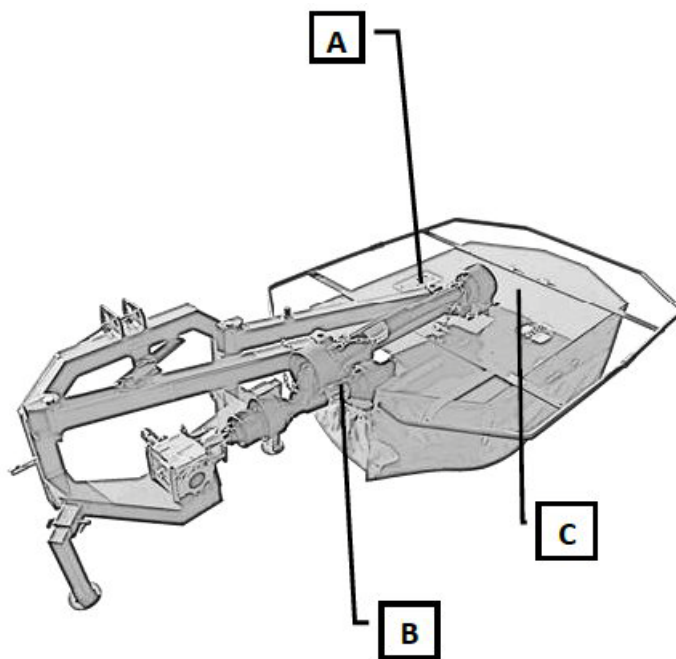
1. TECHNICAL CHARACTERISTICS



		CM 100	CM 140
3-point hitch	cat.	1	
Speed	rpm	540	540
Required power	hp	10 - 35	25 - 40
Max. transportation width	mm	1300	1650
Max. transportation length	mm	1000	1200
Standard weight	kg	140	210
Blade speed	m/s	65	70
Rotor speed	rpm	1200	1200
Transmission		Gear	
Moving height adjustment		Manual	
Protective cover		Fastening using bolts	
Number of blades		6	






2. SYMBOL DESCRIPTION AND POSITIONING





Warning decals and their positioning are indicated on the drawings below. The decals are not shown using their true size and are only provided for illustration purposes.

If decals are unreadable, damaged or no longer present, you must order new ones immediately from your supplier and replace the old or missing ones.



LOCATION	SYMBOL	DESCRIPTION
		<p>The machine operates in offset and may swerve. Stay at a safe distance.</p> <p>If there are people around the machine, switch off the machine or tractor.</p>
A		<p>To carry out repairs or maintenance, always switch off the engine and remove the ignition key from the ignition.</p>

LOCATION	SYMBOL	DESCRIPTION
A		Carefully read the maintenance book and safety instructions before starting the machine and bear the information in mind when using the machine.
A		Maintain sufficient distance from the work zone of the mower when the engine is running.
A		Only touch machine components when they have come to a complete stop.
A		Do not grab into the work zone because you can be injured by sharp/moving parts.
A		Stay at a safe distance from flying objects.




LOCATION	SYMBOL	DESCRIPTION
A		Do not transport people or animals on the machine.
A		Always stay out of reach from the lifting range of the three-point hitch.
A - B		Do not grab into moving parts or the rotating power take-off shaft.
c		The machine has been dimensioned for 540 rpm. The correct power take-off shaft must be used.

3. SAFETY INSTRUCTIONS

Most accidents happen by not observing the safety instructions or due to incorrect operation. This means that the machine operator must pay careful attention at all times, must put the machine into operation in the correct manner and must prevent that he/she or others are exposed to unnecessary risks.

- This machine has only been designed for mowing grass and similar activities. Any other use is not permitted.
- Even if you have operated a comparable machine before, you must read this manual.
- The machine operator must make sure before putting it into operation that the tractor and machine meet the general work-related legislation and that traffic regulations can be complied with.
- Make sure that the tractor is suitable for the mower's technical characteristics.
- Always disconnect the drive, engage the tractor's handbrake and switch off the engine of the tractor before lubricating, cleaning, adjusting or removing a part of the machine.
- Before you clean or put the machine into storage, you must make sure that the machine is on a level and robust surface. Make sure that the machine cannot cause damage during maintenance and use the correct support material or transportation protection.
- Never work under a lifted machine unless the lifting equipment of the tractor has been secured in place by using a safety chain or similar.
- Before putting into operation, check whether all screws and bolts have been tightened correctly and all protections are in good conditions. Do not change anything in relation to the protections and do not work with the machine if a protection is missing.
- If you are mowing in verges or alongside ditches, protections may become damaged because of the rough terrain and due to stones flying off. Always therefore check the protections before and after carrying out the work.
- Before putting into operation, check the rotating parts (blades, blade bolts, disks and drums). If parts have been damaged (bent or ruptured), are worn or are missing, they must be immediately replaced. You must only use original parts when replacing them.
- Use a CE certified power take-off shaft that cannot rotate when being installed thanks to the special chains.
- You must check whether the revolutions per minute of the tractor matches that of the machine during the installation of the power take-off shaft.
- Pay particular attention to whether someone is near the machine or touches it in any way before raising or lowering the machine with the lifting equipment of the tractor.
- Check whether all tools have been removed from the machine before you start the tractor.
- Do not come near the protection of the mower and do not lift it before all rotating parts have stopped moving. Do not position yourself either between the tractor and the machine when coupling or uncoupling the machine.
- Only start the tractor when all people are at a safe distance from the tractor.
- When working with the machine, people must also be at a safe distance of 10 meters (32.81 feet) from the machine.
- Do not work with the mower if there are children in the vicinity.
- Do not transport people or animals on the machine.
- Never leave the machine unattended when running.
- The field must be free from stones and foreign objects.

If in any doubt, always contact your dealer.

	<p>Always use protective workwear during maintenance, carrying out repairs and activities.</p> <p>Do not wear wide-fitting clothing because it may be caught between the rotating parts of the machine.</p>
	<p>Use hearing protection if the noise of the machine is irritating or if you work for a longer period with the machine.</p>
	<p>Always use suitable work gloves when performing maintenance or activities with regard to the mower.</p>

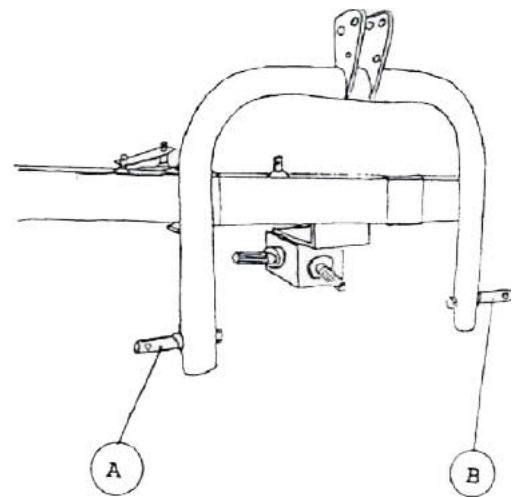
4. ATTACHING/STARTING

Before attaching the mower to the tractor, the mower must first be checked entirely. Be sure to also check:

- The oil level
- The lubrication points
- All of it on defects in relation to the safety provisions

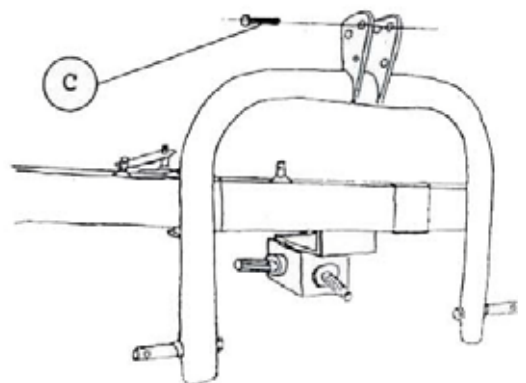
Make sure that there are no people between the tractor and the machine when coupling and uncoupling. People may become trapped because of an unexpected movement with the tractor.

- Check the stability of the mower. Position the mower on a flat and robust surface.
- Position the tractor close to the mower. The mower is built for using in front or behind the tractor.
- Attach the mower using A and B (Drawing 1).
- Check this attachment.



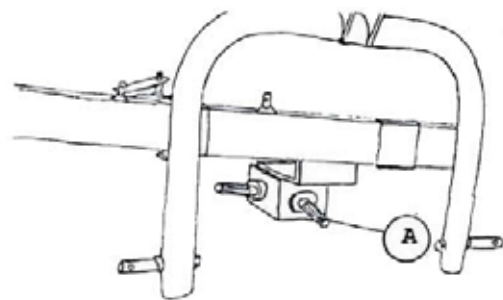
Drawing 1

- Connect the 3-point hitch of the tractor with the mower by using the special C hook (Drawing 2).
- Check this attachment.
- Switch off the engine.



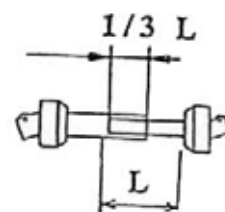
Drawing 2

- Attach the power take-off shaft (Drawing 3).
- Check this attachment.



Drawing 3

- Make sure that you use a suitable power take-off shaft (Drawing4).



Drawing 4



CAUTION

Maintain sufficient distance from the 3-point hitch when the machine is up.

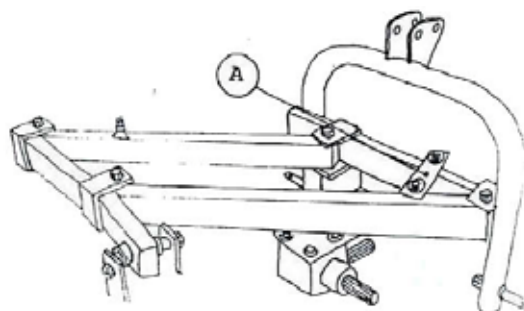


IMPORTANT

Make sure that a suitable power take-off shaft is used.

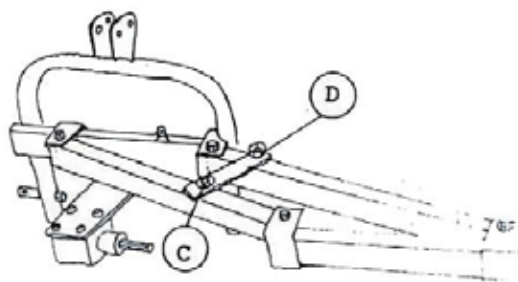
Once you have carefully performed the items from chapters 1 and 2, you can start the tractor.

- Lift the mower.
- Switch off the engine and stop the tractor.
- Move the mower sideways by using A (Drawing5).



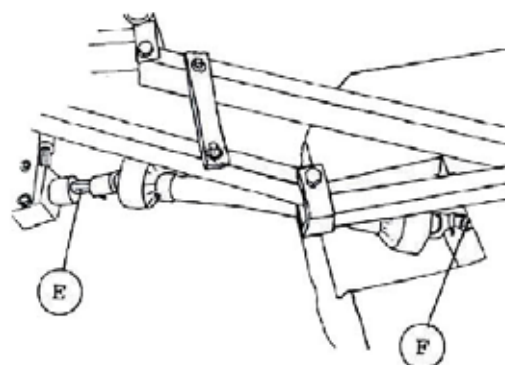
Drawing 5

-
- Place the mower in its position by using C and D (Drawing6).



Drawing 6

- Attach the power take-off shaft at E and F (Drawing 7).
- Make sure that a suitable power take-off shaft is used.
- Refer to the manual of your tractor for actuating the PTO.
- Bring the mower to the correct speed.
- Place the mower on the ground.



Drawing 7

Now, the machine is ready to be used. When you collide with something while driving during your work, you must immediately stop and check the machine.

Follow the above instructions in the reverse order to transport the mower.



CAUTION

If you move the mower sideways, this may cause an unbalance.

HEIGHT ADJUSTMENT

- Only use the 3-point hitch.
- Switch off the engine and lift the mower.
- Adjust the height by using the 3-point hitch.



CAUTION

The blades must not touch the ground when working in order to prevent their fast wear and damage to the lawn.

5. WORKING METHOD/USE

If all protections are where they should be and the machine is in its operating position, you can start to use the machine.

Before using the machine, you must check whether:

- The power take-off shaft of the tractor has the correct speed.
- The machine and the power take-off shaft are kept well-maintained.
- The protection of the power take-off shaft with chains has been installed.
- All blades are present.
- The drive with the lowered machine is coupled.
- The drive to the machine at a low engine speed is actuated.
- Cloths and protections must be positioned at their proper locations.
- The machine is free of parts that are lying around separately.
- There are any people within a distance of 30 meters (98.42 feet).

Carefully connect the drive and allow the engine to run for a few minutes at a low speed. If you do not hear any strange noises or see any strange vibrations, the speed can be increased to the normal one.

Nobody may be in the vicinity of the machine except the operator.

All machines are checked on vibrations and leaks before they leave the factory. This is an important part of quality control. Despite this, you must regularly check whether the machine is not showing any vibrations or leaks.

The speed of the tractor must always be adjusted to the circumstances such as the crop and substrate.

The operator of the machines must always have sufficient control over the tractor and must be able to see and avoid irregularities and obstacles in the field on time.

Drive slower than normal if:

- The substrate is uneven.
- The crop is flat.
- The crop is high and compact.

Conversely, you must increase the speed if:

- The crop is low and spread out.
- The crop is of a mixed kind or has hard stalks.

You must pay extra attention when the terrain is uneven because foreign objects such as concrete elements, tires and stones can damage the parts of the machine. It is important that you pay attention to sudden shocks against the cutting tools. If necessary, decrease the speed or stop working to check whether the machine has been damaged.

6. FAULTS

Fault	Cause	Solution
Extreme vibrations.	Broken or worn blades	Replace the blades
	The blades have become detached from the shaft	Clean and lubricate the spindle
	The bearings of the disks are worn	Replace the bearings and gaskets
Poor mowing	Worn blades	Replace or grind blades
Overheating of the perpendicular transmission	Too little oil	Top up
	Old oil	Refresh
Fast wear of the blades	Blades are touching the ground	Adjust the mowing height
Oil leak	Wear or rupture in the oil line	Replace the oil line

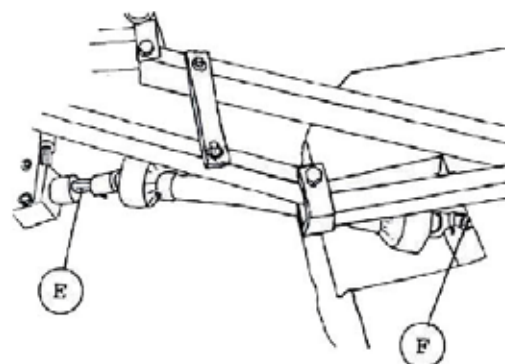


CAUTION

Contact your dealer for repairs!

7. MAINTENANCE

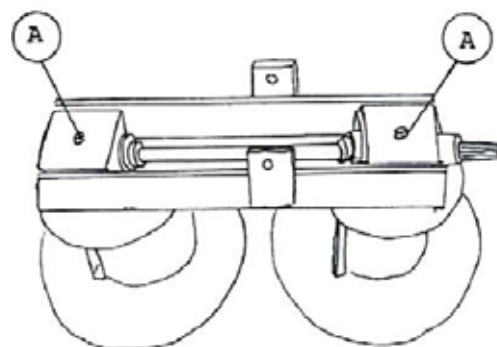
- Uncouple the mower.
- Position the mower horizontally in the machine; take off the machine cover by using bolts A (Drawing 9).



Drawing 9

OIL CHECK

- Unscrew plugs A from the transmission gearboxes (Drawing 10)



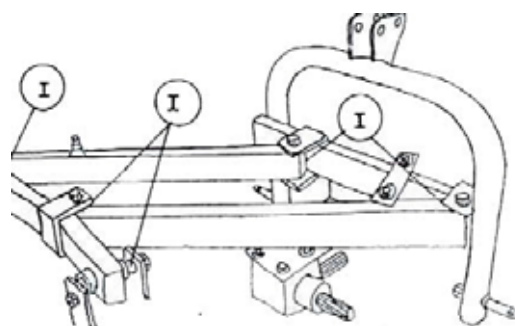
Drawing 10

- Check the oil level using a clean dipstick. Make sure that the oil level is 5 cm (2"); Drawing 11).
- If the oil level is insufficient, top it up.
Use GL5 - 85W 90 oil.



Drawing 11

- Lubricate nipples I (Drawing 12)
- Use suitable grease.
- Reinstall the protective cover.



Drawing 12

BLADE CHECK

- Lift the mower and check the condition of the blades.
- Replace or grind the blades if required.
- The blades may only be ground by authorized personnel. The blade holders and blades are made of high-alloy hardened materials. A special heat treatment produces a very hard and strong material that can resist extreme loads. When blades or blade holders are damaged, you must not try to weld them. The heat development will undo the material characteristics and you and others will therefore run a greater risk.

Blades must be immediately replaced if:

- The blade is bent or broken.
- The blade width is less than 33 mm (1.30 inches).
- The blade hole becomes larger and therefore it is no longer correctly attached.



CAUTION

Always use the correct tools and observe the safety instructions!

MAINTENANCE INTERVAL

Oil check	Lubrication check	Blade check	Safety check
Type	Type	Type	
GL5 - 85W	Standard grease	Original blades	N/A
Every 16 hours	Every 16 hours	Every 48 hours	Before starting

CLEANING

The entire machine must be regularly cleaned. This means a quick clean after every workday and a thorough clean after every season and before the next season starts. You can use a high-pressure cleaner for this. However, make sure that you do not get too close to bearings and seals. It is important that you regularly remove earth and crop residue from the space in-between the disks. Dry earth can lead to unintended wear of blade holders and, in some cases, may lead to an imbalance.

8. STORAGE AND MOVING

STORAGE

- When the season has ended, you must prepare the machine for winter storage. First, thoroughly clean the machine since dust and dirt will absorb moisture and this may lead to corrosion.
- Make sure regular maintenance is performed. Check the machines on wear and other defects.
- Disassemble, clean and lubricate the power take-off shaft. Do not forget to grease the profile pipes. Always keep the power take-off shaft at a dry location.
- If required, remove any rust from the frame. You can, if required, spray the machine with a thin layer of anti-corrosion oil.
- Store the mower in a dry covered area. First, perform regular maintenance on the machine before starting it after a storage period. When everything is found to be correct after your check, the machine is again ready for use.

MOVING

- A tractor or trailer can be used to transport the machine. Observe the applicable traffic rules before transporting the machine using public roads. This, of course, means that tractor lighting and signaling must not be impeded by the machine.
- Limit the transportation speed to 30 km/h (18.64 miles per hour) at most if a different maximum permitted speed is not specified on the machine.

9. TECHNICAL DRAWINGS

