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1. Introduction.

This edition of the manual is intended for buyers of a SAMON Onion Harvester. It contains information for the use and maintenance of this machine.

When this guide was compiled the utmost care was taken to ensure that the illustrations and technical data are correct and current for this manual.

Ellens Landbouwtechniek BV recommends users to carefully read this manual, instructions, directions and comments before using the machine.

References to the left or right side of the machine are determined based on the driving direction of the machine.

Ellens Landbouwtechniek BV reserves the right to change the content of this manual without notice.

This machine was designed in accordance with the provisions of the machinery directive 89/392/EEC + amendments.

2. Warranty and liability.

2.1 Warranty.

SAMON agricultural machinery comes with a warranty period of 1 season.

SAMON Onion Lifters are designed and intended for harvesting onions.*

If the SAMON Onion Lifter is used in a manner other than intended such will be considered to be improper use.

* For harvesting any other types of deciduous species and crops, always first check with your Samon dealer.

This warranty is provided on construction defects in the machine encountered during normal use.

Parts that are subject to wear are not covered by this warranty, these are:

- Sprockets, chains, guide wheels,
- Sieve belts
- Harvest shafts,
- Bearings,
- Tillers,
- Coulter disks,
- Other parts subject to wear.

The Warranty on hydraulic components, PRO shafts and gear drives is given only on construction defects of the components, which result in failure, in the opinion of the producer.

This warranty lapses in the following instances:

- Constructive adjustments and changes to the machine without permission from Ellens Agricultural Engineering BV.
- Installation and use of components on or to the Onion Lifter that has an adverse impact on the solidity of the construction.
- Failure of components due to maintenance intervals not being observed.
- Changes to or non-adherence to adjustments and settings prescribed, which could result in damage.

Our dealers and manufacturing service points are all available to provide information and guidance.

2.2 Liability.

Ellens agricultural engineering BV is not liable for damage to Samon agricultural machinery; tractors; machines of third parties; injuries to humans, animals and products as a result of:

- improper use.
- not following instructions and instructions described in the manual.


NOTE!!!

The SAMON Onion Lifter must be operated, maintained and repaired by persons who are familiar with the machine and its safety procedures.

3. Safety and the environment.

3.1 General safety.

NOTE!!!

 Make sure that all persons that work with the SAMON Onion Lifter and/or that perform maintenance on it read this manual carefully and take the required precautions for their own safety and others in the area while operating the SAMON Onion Lifter.


Always keep the following points in mind when working with or on the SAMON Onion Lifter.

- The SAMON Onion Lifter must only be operated, maintained and repaired by persons who are familiar with the machine and who are familiar with the safety procedures.
- When performing inspections and maintenance on the SAMON Onion Lifter always switch the tractor engine off and remove the key from the ignition.
- The SAMON Onion Lifter is equipped with rotating sieve belts that can entrap body parts. Never come close to a SAMON Onion lifter while in operation.
- Always wait until the sieve belts have come to a complete halt before approaching the machine.
- Keep in mind that the sieve belts will keep turning for a while after the SAMON Onion Lifter has been switched off.
- Keep away from the SAMON Onion Lifter while it is in operation.
- When an object is hit, switch off the SAMON Onion Lifter and check for damage before switching back on again.
- The SAMON Onion Lifter contains a number of parts that are fitted locking pins and safety belts and/or chains. These must always be connected.
- Damaged and broken safety devices and locking agents must be replaced immediately.
- Protective covers, sleeves and rubber flaps must always be undamaged. Always replace when dented or cracked.
- Always use original SAMON parts as they are specifically designed for the Samon Onion Lifter.

3.2 Environment.

For ecological reasons cleaning and maintenance to the SAMON Onion Lifter must take place on a hard, liquid-proof floor.

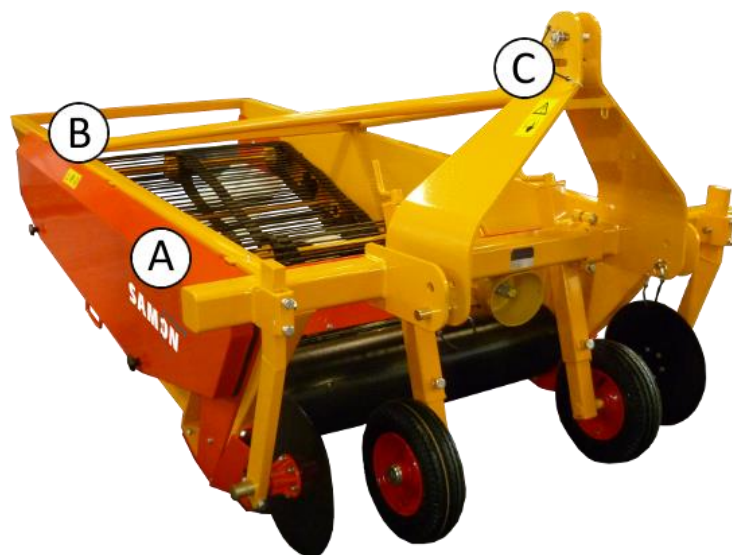
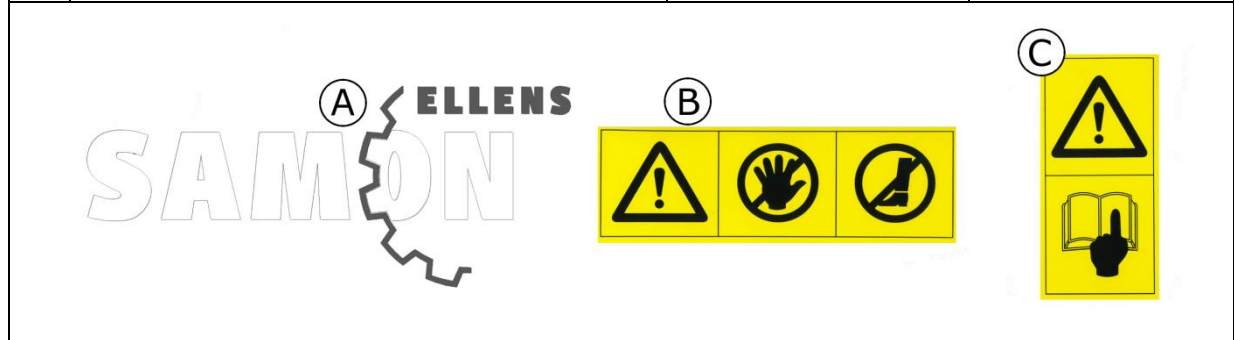
NOTE!!!

 Dispose of used lubricants in an environmentally friendly manner. We recommend delivering old oil in a closed tank at a recycling centre or a collection point. Never dispose of old oil in a ditch, drain or sewer or on the soil.

3.3 Warning labels and pictograms.

Each SAMON Onion Lifter is fitted with the following stickers and warning pictograms:

	Description:	Measurements.: (w x h)	Order no.
A:	"Samon" sticker	24.8 x 7.8	TL6304
B:	"Be careful with your hand/foot" sticker	19.3 x 6.4	TL6309
C:	"Check the manual" sticker	13.3 x 6.4	TL6310



Onion Lifter stickers.

If any of these stickers should be missing or illegible you can order a replacement at your SAMON dealer.

4. Inspect before and after use.

WARNING!!!

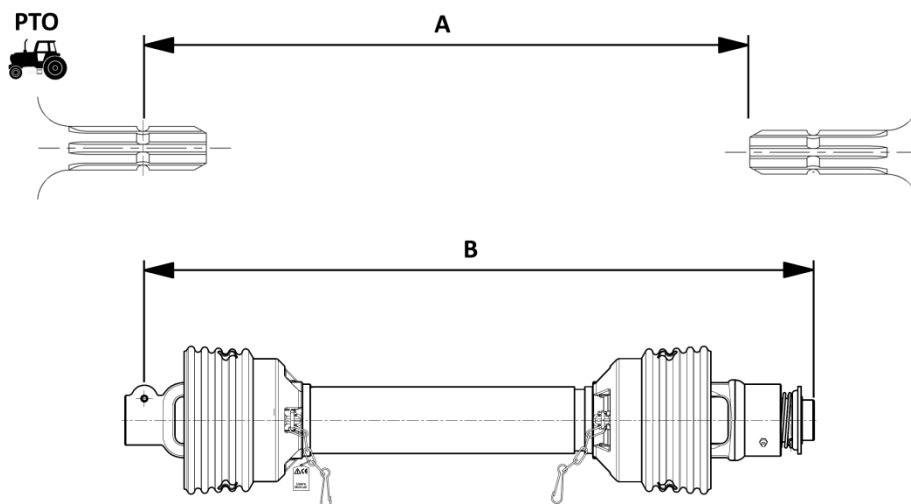
When performing maintenance on the SAMON Onion Lifter always switch the tractor engine off and remove the key from the ignition.

4.1 Checks to be performed before use.

- Check the gear drive for leaks.
- Check the tire pressure. (4.5 Bar)
- Check the length of the PTO shaft (see 4.2)
- Check the protective cover of the PTO shaft for cracks.
- Check that the safety chains of the PTO shaft are mounted.
- Check if the locking clips and safety cords are in place.
- Check the drive chain for cracks and tears.
- Check the tension of the drive chain and do so regularly while in use.
- Check the harvest shaft for damage and wear.
- Check the sieve belt and drive wheels for damage and wear.

4.2 Shortening the PTO shaft.

If it should appear during inspection that the PTO shaft is too long, it can be shortened as follows:



- Connect the machine to the tractor
- Position the PTO shafts together as short as possible.
- Measure distance "A" of the PTO shafts.
- Measure distance "B" of the PTO shafts.
(See the illustration for the measuring points)
- Subtract length "A" from length "B"
- Shorten the PTO shaft with the result (see example)

Calculation example:

A=400 mm
B=450 mm

$B(450) - A(400) = 50 \text{ mm} + 10 \text{ mm}$
Trimming length = 60 mm

4.3 Connecting the SAMON Onion Lifter.

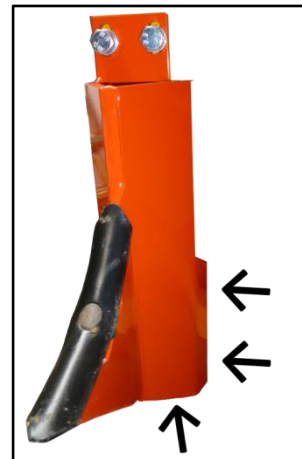
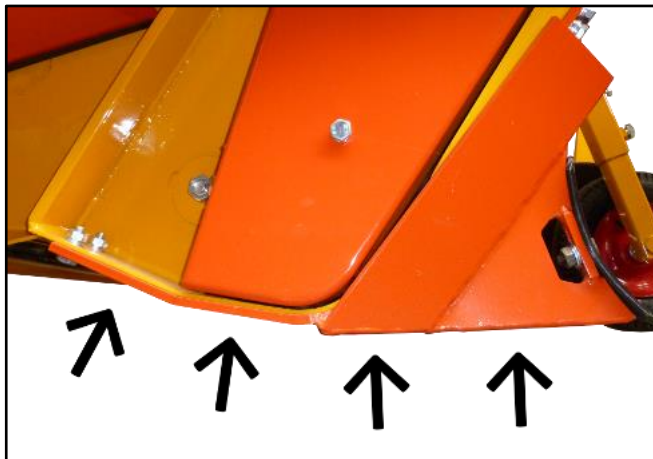
- Connect the machine to the tractor
- Attach the mechanical pins and confirm with the locking clips.
- Check that the top rod is free.
- Mount the PTO shaft (540 PTO).
- Put the safety chains of the protective cover of the PTO.

4.4 Inspection after \pm 5 metres.

- Check if the depth of the harvest shaft is correct.
- Check if the onions are damaged.
- Check if the collecting trays are adjusted correctly.
- Check if the coulter disks are adjusted correctly.
- Check that the top rod is free.

4.5 Inspection and maintenance after \pm 5 ha.

- Inspect the sieve belt for cracks and tears.
- Check the tension of the drive chains and adjust if necessary.
- Check the tiller ends and the tillers for wear, particularly the bottom and inner sides. The tillers are there to protect the frame of the SAMON Onion Lifter, so make sure to replace early to prevent damage to the frame or bearings.



WARNING!!!

Due to the various compositions of soil types it is possible that the tillers could wear out faster. Inspect them regularly to prevent damage to the SAMON Onion Lifter.

5. Maintenance.

WARNING!!!

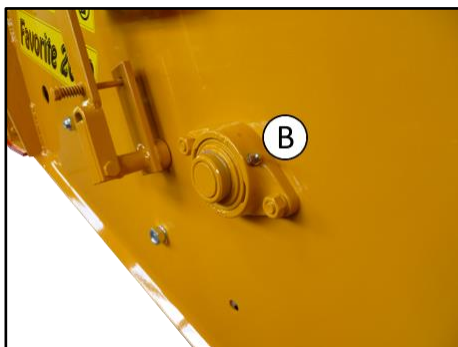
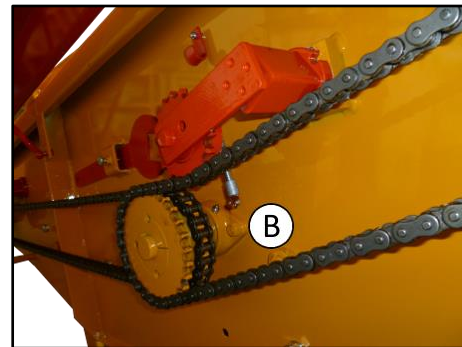
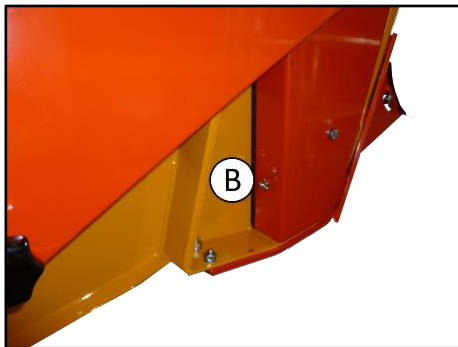
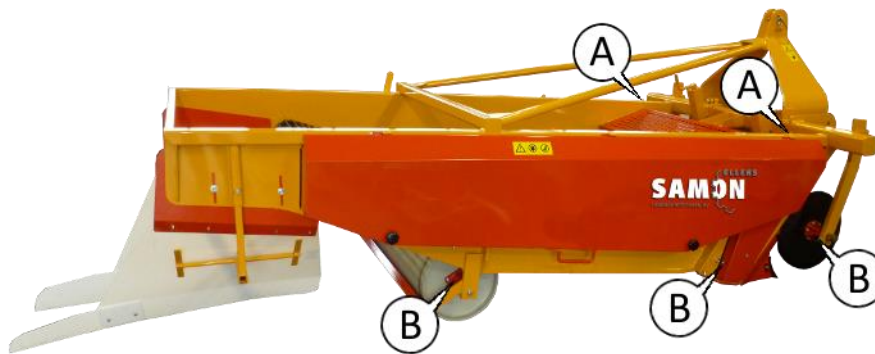
When performing maintenance on the SAMON Onion Lifter always switch the tractor engine off and remove the key from the ignition.

5.1 Lubrication schedule.

Lubricate periodically to ensure that the SAMON Onion Lifter works optimally.

Schedule for lubricating the Samon Onion Lifter.

Lubricating point:	Interval:	Item:
A	3 hours	Harvest shaft
B	8 hours	Bearings, coulter disks, chains, chain tensioner, wheels, pressure rollers.
C	50 hours	PTO shaft.



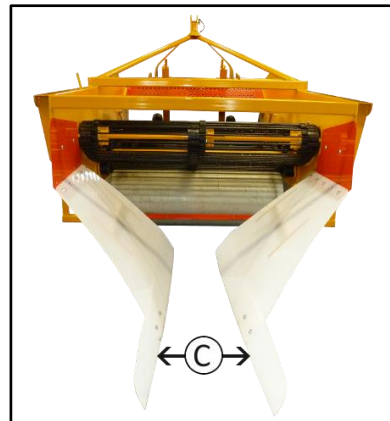
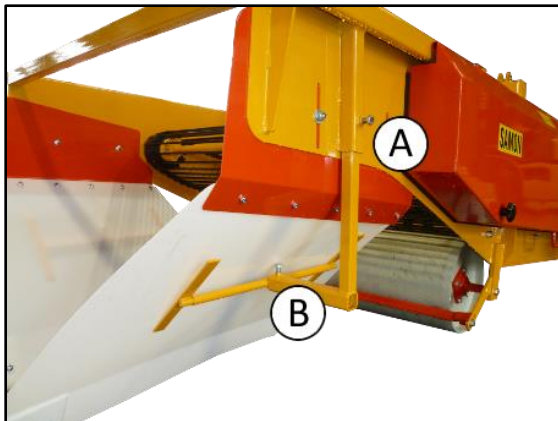
5.2 Adjusting the shakers.

The shakers can be adjusted on the sieve belt by turning the handles on the side of the SAMON Onion Lifter. Turn the handle to the left to increase the intensity of shaking.



5.3 Setting the collecting trays.

For adjusting the collecting trays.



- The space between the collecting trays can be adjusted by setting the collecting tray holder.
- Use bolt "A" to adjust the height of the collection tray holder.
- Use bolt "B" to adjust the angle of the collecting trays.
- Normally space "C" is about:
 - Track 1.5 m = 60 cm
 - Track 1.8 m = 70 cm
- Secure the bolts properly after completing the settings.

5.4 Gear drive maintenance.

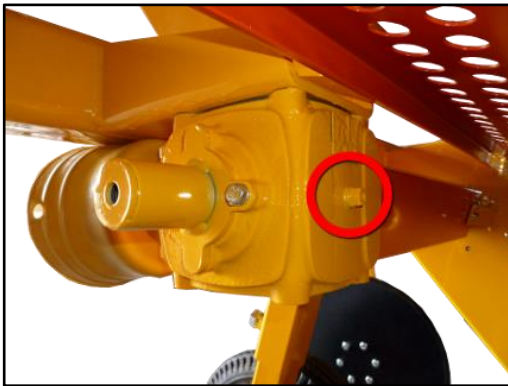
The gear drive is filled in the factory with gearbox oil (SAE 90).

NOTE!!!

The gearbox oil must be replaced every 2 years.

5.4.1 Topping up the gear drive oil.

- Make sure the SAMON Onion Lifter is standing on a flat, level surface.
- Remove the PTO shaft.
- Remove the plug at the rear of the gear drive.
- Fill the gear drive with oil (SAE 90) until oil starts coming from the plug.
- Put the plug back in place.
- Mount the PTO shaft



5.4.2 Replacing the gear drive oil.

- Remove the PTO shaft.
- Remove the drive shaft.
- Remove the gear drive from the frame.
- Remove the plug at the rear of the gear drive.
- Drain the gear drive and collect the oil in a container - make sure to dispose of it in ecologically responsible manner.
- Put the gear drive back in the frame.
- Fill the gear drive with oil (SAE 90) until oil starts coming from the plug.
- Mount the plug.
- Mount the drive shaft.
- Mount the PTO shaft

6. Transport and storage.

6.1 Transport by transport vehicles.

- When transporting the machine, make sure that it is firmly secured with rope or tensioning belts.
- Block the wheels and pressure rollers with wheel blocks.

6.2 Transport by tractor.

- Take local traffic rules into account when taking your SAMON Onion Lifter onto a public road with a tractor.
- Before lifting the SAMON Onion Lifter with a lifting device, make sure that it is switched off and that the sieve belts are not running.
- When driving, keep in mind that the SAMON Onion Lifter has a tail swing.
- Also keep in mind that the sight of the driver is limited when the SAMON Onion Lifter is connected to a tractor.

6.3 Storage.

- Clean the machine properly.

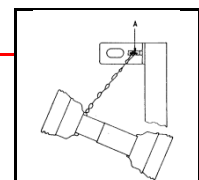
NOTE!!!

When using a high pressure cleaner, do not spray directly on/in the bearings or any electronics.

- Check the tire pressure and inspect for damage. (4.5 Bar)
- Check the drive chains.
- Check the harvest shaft and other parts subject to wear and replace in time.
- Check all bearings and replace when clearance is excessive.
- Inspect the sieve belt for damage and cracks.
- Inspect the intake roller for damage and cracks.
- Check the pressure roller for cracks and tears.
- Lubricate the machine as a whole (see Lubrication for more details).
- Check the oil level in de gear drive and top up if necessary.
- Check the cross connections and the turning parts of the PTO shaft for wear.
- Lubricate the cross connections and the turning parts of the PTO shaft.
- Check the protective cover of the PTO shaft for cracks.
- Check the safety chains of the PTO shaft.

NOTE!!!

When the machine is not in use (also for shorter periods of time) and the PTO shaft is left in the machine, attach the safety chain to the eye on the machine reserved for that purpose to prevent damage to the protective cover and the cross connection.



- Inspect the safety cords and locking clips for damage and cracks.
- Store the machine dry.

7. Technical data.

SAMON Onion Lifter "SU2M"					
Belt width:	1.00 m	1.15 m	1.25 m	1.35 m	1.45 m
Type:	Harvest shaft				
Drive:	Mechanical				
PTO shaft:	540 PTO				
Gear drive oil:	SAE.90EP / 2.5 l				
Measurements: (LxWxH) cm*	375x165x150	375x180x150	375x200x150	375x200x150	375x200x150
Number of sieve belts:	2				
Weight: *	855 kg	880 kg	900 kg	920 kg	940 kg

SAMON Onion Lifter "SU2M"					
Belt width:	1.50 m	1.65 m	1.75 m	2.00 m	
Type:	Harvest shaft				
Drive:	Mechanical				Mechanical + hydraulic discs
PTO shaft:	540 PTO				
Gear drive oil:	SAE.90EP / 2.5 l				
Measurements: (LxWxH) *	375x230x150	375x230x150	375x240x150	375x265x150	375x270x150
Number of sieve belts:	2				
Weight: *	980 kg	1020 kg	1120 kg	1250 kg	1260 kg

* Depending on options and additional extras.

8. Ordering parts.

Follow the instructions below for ordering parts to ensure quick and correct delivery.

1. Only order parts from official SAMON dealers.
2. Include the type, model and serial number of your machine as stated on the type shield. The type shield is located on the frame of the PTO shaft.
3. Measure the width of the SAMON Onion Lifter as many parts are dependent on the width of the sieve belt.
4. Always state the part number and the description thereof in full.



9. Troubleshooting.

General troubleshooting.

Defect:	Cause:	Solution:
The lifter does not want to go into the ground.	The tiller ends are worn.	Replace the tiller ends.
	Harvest shaft worn.	Replace the harvest shaft.
	The top rod is too long.	Adjust the top rod.