

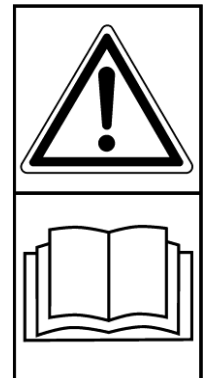


Valid as from serial number: 15465001



Instructions for Use and Maintenance

Chain mulcher M1250, M1650, M2000



Note!
Read instructions before use



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SAFETY SYMBOLS

NOTE! This warning symbol is shown in several parts of this instruction manual and the main idea is to draw your attention to the safety instruction you, your employees, and other persons in contact with the vehicle must follow. Failure to follow these instructions can result in serious injury and even death.

This symbol stands for:



WARNING!
LOOK OUT!
YOUR SAFETY IS AT RISK!

Safety words

Pay attention to the words **WARNING!** and **NOTE!** in the safety texts. The words stand for the following guidelines:



WARNING! Indicates dangerous situations that can result in serious injury or even death, unless the situation is avoided. These include also hazards that can occur when protective equipment and/or protective screens are removed. The safety words can also be used to warn for dangerous usage.



NOTE! Indicates risky situations that can result in light or mild personal injury, unless the situation is avoided. Warns also that if instructions are not followed it can result in machine damage.

Dear customer!

Thank you for choosing an TREJON OPTIMAL product and we hope you will be satisfied.

By reading this manual and following the recommendations you ensure the longest possible durability and effective operation of the machine.

We have compiled this manual, so you can get a good overview of how the machine operates and which safety and maintenance instructions must be followed while operating the machine. You are always welcome to contact us if you have any questions about operating the machine or about this manual.

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Delivery control checklist:

Check for any delivery damages. Notify the delivery company.	
Check that PTO shafts are enclosed and of correct length.	
Check that the 13 mm. chains are enclosed.	
Check the gearbox oil level. See section 4.4.	
Perform functions control.	
Fill in the Proof of Warranty with the customer and register at trejon.se .	

Fill in the machine's serial number in this field	S/N:
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1 Introduction

1.1 Introduction

Thank you for choosing this TREJON OPTIMAL chain mulcher. We have produced a powerful and good machine that will keep going for many years. Since the machines life span is not entirely up to us but also you, we have compiled an instructions manual which describes the correct maintenance and operation of the machine. Read the entire manual carefully. Always contact the retailer you purchased the machine from in you need spare parts or other services. When ordering spare parts always check that you have the correct model, type, and serial number, see the machine plate attached to the chassis.

1.2 Description

This machine is for cutting grass, brushwood, and bushes on roadsides, ditches, fields, and other surfaces. The integrated lateral displacement on the machine makes it relatively light and the drive shaft operation combined with the arms design make it possible to turn on the other side of the crash barrier. Depending on the work the cutter head can be equipped with different tools. The table below will give you guidance on how to choose the right tool for the job.

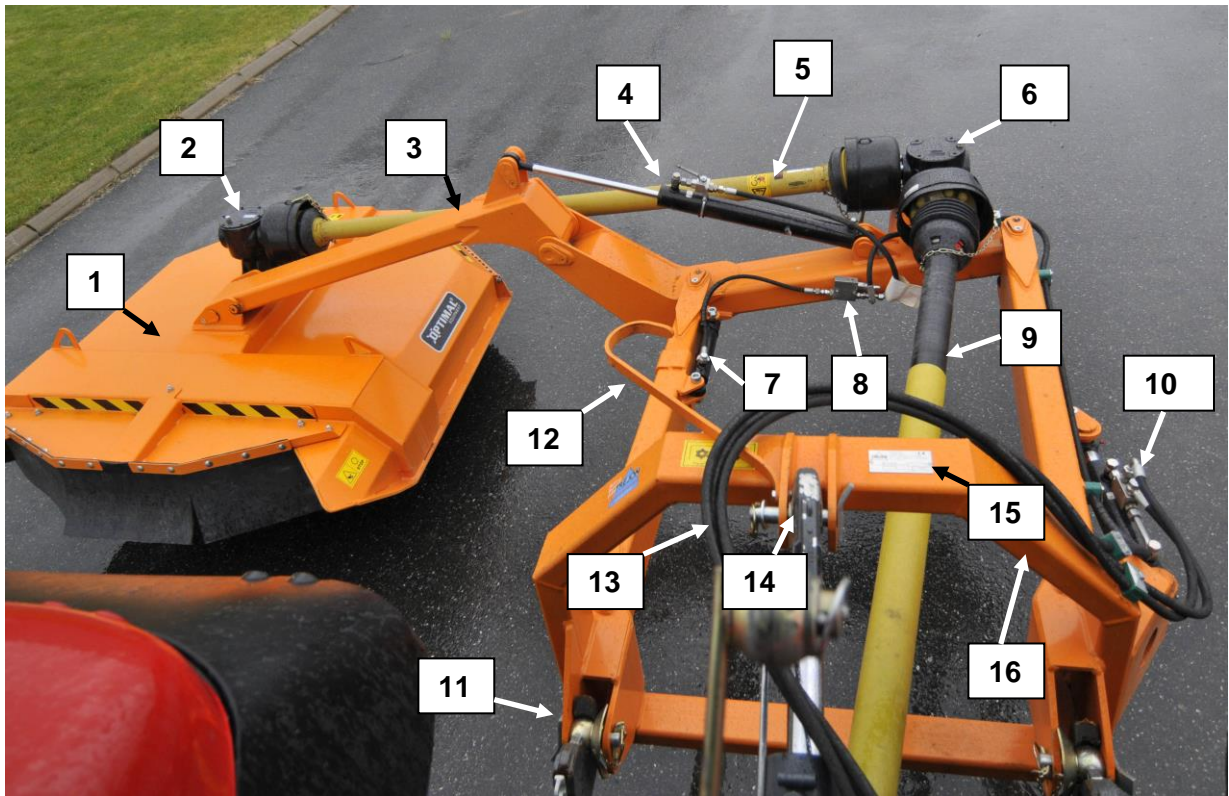
Type of material	Tool		
	Chain 10 mm.	Chain 13 mm. (standard)	Knives (M1250, M1650)
Fallow fields, fields (no stones)	0	-	+
Old fields	0	0	-
Old fields with small bushes	+	+	-
Bushes and brushwood	0	+	-
Roadsides and ditches	+	+	-
Stony/uneven	+	+	-

+: Recommended, **0**: Will function, **-**: NOT recommended

Model M1250, M1650, M2000 is intended for installing on category II three-point hitch. The mulcher is installed on the rear of the tractor (pulling).

The transmission is operated by the tractor's power take-off at 540 rev/min.

1.3 Parts description M1250, M1650, M2000



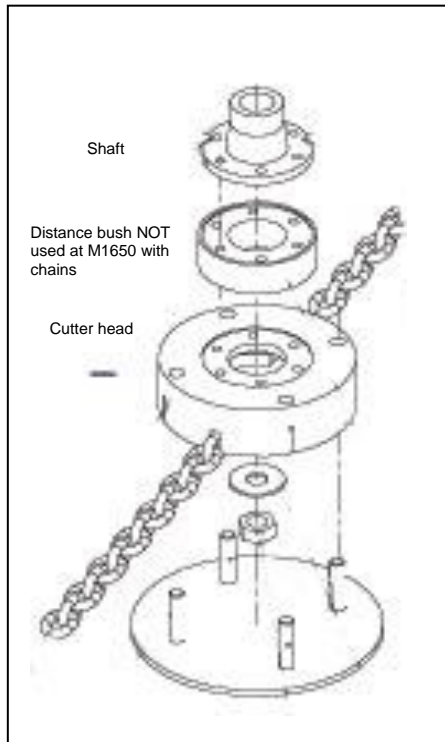
1. Cutter head	11. Three-point linkage, lower
2. Gearbox, cutting deck	12. Power take-off drive shaft's hook
3. Control arm, cutting deck	13. Hydraulic hoses (3 pc.)
4. Lift cylinder (with a tap that is turned to closed position during transportation)	14. Top link bracket
5. Transmission shaft, cutting deck	15. Type plate
6. Gearbox frame	16. Three-point frame
7. Cylinder, obstruction removal	
8. Valve, obstruction removal	
9. Power take-off drive shaft, tractor	
10. Cylinder lateral displacement	

1.4 Technical specifications

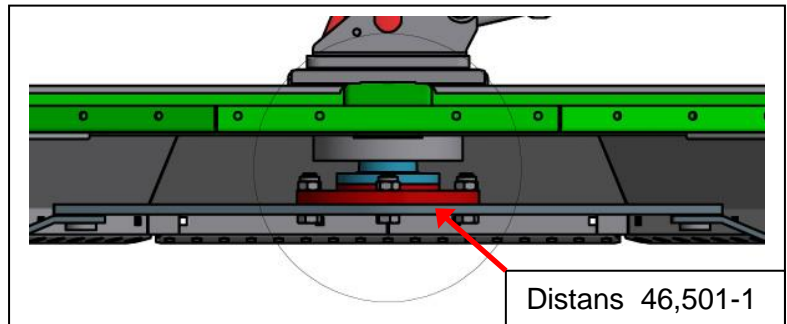
Specifications/Model	M1250	M1650	M2000
Working width, ~cm	125	165	200
Chains/knives, amount	2	2	2
Cutting head lift, std. Type	Hydraulic	Hydraulic	Hydraulic
Hydraulic connection	1 single acting, 1 double acting	1 single acting, 1 double acting	1 single acting, 1 double acting
Weight, base unit, kg	715	780	860
Three-point hitch	Cat. II	Cat. II	Cat. II
Number of revolutions PTO, rev/min.	540	540	540
Installation options	Pulling	Pulling	Pulling
Transmission	2 pc. PTO drive shafts + 2 pc. angle gearboxes	2 pc. PTO drive shafts + 2 pc. angle gearboxes	2 pc. PTO drive shafts + 2 pc. angle gearboxes
Range from the centre of the tractor, max. (cm)	400	420	440
Range from the centre of the tractor, min. (cm)	272	292	307
Hydraulic lateral displacement (cm)	128	128	128
Largest angle of the control arm during operation (degrees)	55	55	55
Collision protection	Hydraulic	Hydraulic	Hydraulic

Due to constant product development the technical specifications in the documentation are not conclusive and can be modified without prior notice. The specifications in the table above can even present non-standard equipment. The equipment level can vary from country to country.

1.5 Tools



Chains



When using the knife kit must cut his head replaced with spacer 46.501-1 (optional)

Knife unit

Chain 10 mm. tempered, class 8 (can be ordered as optional equipment)
 Chain 13 mm. tempered, class 8 (installed to the machine when delivered)

Knife unit (optional equipment for green areas)



WARNING! Knife kit may be used only at guaranteed stone-free surfaces.

1.6 Right and left side

Right and left side in this instruction's manual are as seen from the rear of the tractor or from the rear towards the machines direction of travel.

2 Safety instructions



2.1 Safety regulations

Main safety regulations must be followed during operation, adjustment, and maintenance of the machine.

When the machine's user has not read or followed the rules below, the risk of causing damages to both people and property is very high. The machine is intended only for outdoor use.



WARNING!

NO PEOPLE OR ANIMALS ARE ALLOWED TO STAY CLOSER THAN 100 M FROM THE MACHINE DURING OPERATION. WHEN CLEARING DENSELY BUILT AREAS THE PEOPLE WITHIN THE RISK ZONE HAVE TO BE WARNED.

THE DRIVER CAN NOT UNDER ANY CIRCUMSTANCES LEAVE THE DRIVERS SEAT BEFORE THE POWER TAKE-OFF (PTO) AND THE TRACTOR'S ENGINE HAVE BEEN SWITCHED OFF.

THE ROTATING PARTS OF THE MACHINE CAN NEVER BE HANDLED BY ANY BODYPART OR PERSON WHEN THE POWER TAKE-OFF (PTO) AND THE TRACTOR ENGINE ARE RUNNING.

THERE IS RISK OF FIRE WHEN CLEARING DRY AREAS.

Special attention must be shown to the rules below:

- Read and fully understand the entire contents of this manual on using the machine.
- Learn and practice the machine's course of operation and regulations before using it.
- Check, adjust, and maintain the machine according to instructions.
- The machine must be placed on a firm and flat surface for maintenance and adjustment.
- The tractor engine must be turned off and the handbrake pulled on during cleaning, adjustment, maintenance, and repair.
- The machine can only be operated when the all the manufacturers original covers for moving mechanisms are in place and no unauthorised persons, especially children, are near of the work area.
- When working in the dark the work area must be illuminated.

- When vibrations occur, the machine must immediately be turned off for further inspection.
- Be careful when lifting and lowering the cutter head.
- When the machine's cutter head is lifted for cleaning, maintenance, inspection or repairing, it is necessary to prevent it from lowering/falling. A tap is placed on the machine's lift cylinder, which must be turned off to restrain the cutter head in lifted position.
- The machine can not be operated with a tractor that does not have sufficient weight over the front shaft which can affect the tractor's steering and stability. Install ballast weights, if necessary, read the tractor's instruction manual.

Attention must be shown also to the following:

- Unauthorised persons, especially children, can not be near of the machine during operation or repairing.
- It is forbidden to operate the machine under the influence of alcohol or drugs.
- It is forbidden for people without category T (tractor) driver's license to operate the machine.
- It is forbidden to operate the machine if the moving parts covers, power take-off cover, or shaft covers are removed.
- It is forbidden to use damaged or defective power take-off covers.
- It is forbidden to use defective power take-off shafts that do not meet the specifications.
- It is forbidden to adjust the machine or remove material from the cutter head/chain rotor when the tractor engine is turned on.
- Be careful when working on uneven terrain, reduce operating speed.
- Clean the machine carefully before repairing and storing.
- Protect the hydraulics and bearings during welding.
- Ensure that nobody is near of the machine's work area.
- During all cleaning processes or controls the power take-off and tractor engine must be turned off. The tractor's brakes must be firmly put on and the cutter head lowered to the ground. Ensure that all moving parts have stopped.

Use only original spare parts.

In case you have any questions about the machine or its functions contact your retailer.

2.2 Description of symbols

The symbols on the right stand for:



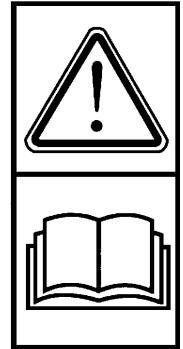
Warning!
Study the instructions manual carefully before operating the machine so the user knows the machine well.



Warning!
Keep hands and feet clear of the machine's moving parts. Do not stay close to the power take-off when the machine is operating. Failure to follow this can result in life threatening injuries and even death.



Warning!
Flying objects such as stones and splinters can be ejected from the machine during operation. Do not stay near of the machine. Remain at a distance of at least 100 meters from the working machine during operation. The user must have good overview of the machine's work area, operating in an area where there are persons, animals or property should be avoided.





Warning!
Crush hazard! Keep hands and arms clear of moving parts.



The machine must be operated by the tractor's power take-off at 540 rev/min.



Turn off the tractor engine and engage the parking brake during cleaning, adjusting, maintaining, and repairing!



This is the machine plate with the CE marking. Also, the machines serial number and model denotation are indicated.



3 Operating the machine

3.1 Assembly



NOTE!

A qualified technician with sufficient knowledge must assemble the machine upon delivery before taking it into use. See the attached assembly instructions.

The length of power take-off drive shaft to the tractor must be checked and adjusted before turning the machine on. A power take-off drive shaft that is too long can damage both the tractor and the machine.

3.2 Before turning on the machine

Before operating the machine, the following points must be checked on the machine:

- That all screws and bolts are tightened (check and retighten the screws and bolts after the first 4 hours of operation, afterwards after every 40 hours of operation).
- That all chains/knives have the same dimensions and length, check also the condition of the various parts.
- Check the oil level in the angle gearbox; the level must be above the mark on the dipstick at the very top of the box. See chapter "Maintenance".

3.3 Installation options

M1650 machine is constructed to be attached to a tractor with at least category II three-point hitch.

3.4 Attaching the machine to a tractor



WARNING!

The machine can only be operated with a tractor that has sufficient weight over the front and rear shaft respectively, so that the tractor's steering and brakes function when the machine is attached. Install ballast weights if necessary, read the tractor's instruction manual.

The length of power take-off drive shaft to the tractor must be checked and adjusted before turning the machine on. A power take-off drive shaft that is too long can damage both the tractor and the machine.

To make the attaching easier it is recommended to park the machine and support the left lift arms linkage, so the arm is lower than the right one.

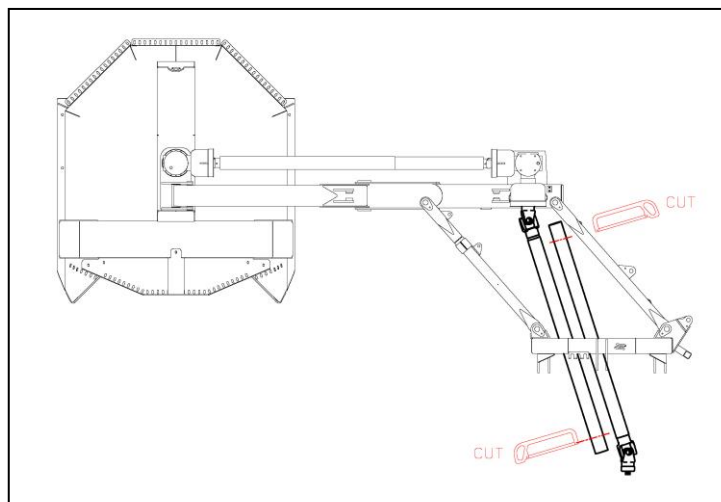
- Attaching the machine to a tractor can only take place on a firm and flat surface.
- Attach the tractor's left lift arm to the machine, lift it up and connect the right lift arm.
- Adjust the tractor's lift arms so the frame of the machine with three-point linkage is levelled.
- Stop the tractor and engage the parking brake.
- **Adjust the power take-off shaft to correct length. See instruction in next page.** See also the instructions of the shaft producer.
- Lubricate and assemble the power take-off drive shaft. Ensure that the shaft locking pin locks properly. Fasten the power take-off shaft's covers with chains so these do not rotate.
- The machine has two positions for the top link of which one is with clearance.
- Install the top link between the tractor and the machine. Adjust the length of the link so the front part of the machine is 30-50 mm. above ground (recommended height for cutting bushes/brushwood is 50-150 mm), depending on ground conditions.
- After attaching the machine to the tractor, it must be locked sideways with a stabilising strut on the tractor's three-point hitch.
- Connect the hydraulic hose for raising/lowering the cutter head to a single acting take-off on the tractor. Use this cylinder to raise and lower the cutter head during operation.
- Check that no objects are wrapped around the machine's moving parts.

Adapting the PTO shaft length

PTO-shaft between the tractor and the machine must be adapted with the correct length to the customer tractor, follow the instructions below carefully.

1. Connect the machine to the tractor's three-point hitch and connect the hydraulic hoses, without the PTO-shaft connected.
2. Side shift the machine fully to the right in the direction of travel, see picture.
3. Mount the respective PTO-shaft to tractor and the other to the machine gearbox (PTO-shafts shall be separate acc. picture)
4. Raise the machine to find the closest distance between the machine gearbox and the tractor PTO drive shaft. The length of the top-link will also affect the length of the PTO-shaft.
5. Mark with a pencil where the shaft is to be cut. There should be a margin of at least 50 mm so that PTO-shaft may NOT be bottoming. Also see the instructions provided by the manufacturer out of the PTO-shaft attached to the PTO-shaft cover.

IMPORTANT! If this is not done correctly there is a risk that the machine, PTO-shaft or tractor will be damaged. This damage can not be covered by warranty.



Cut both shaft halves equally



The picture shows an example where the PTO-shaft is not cut.

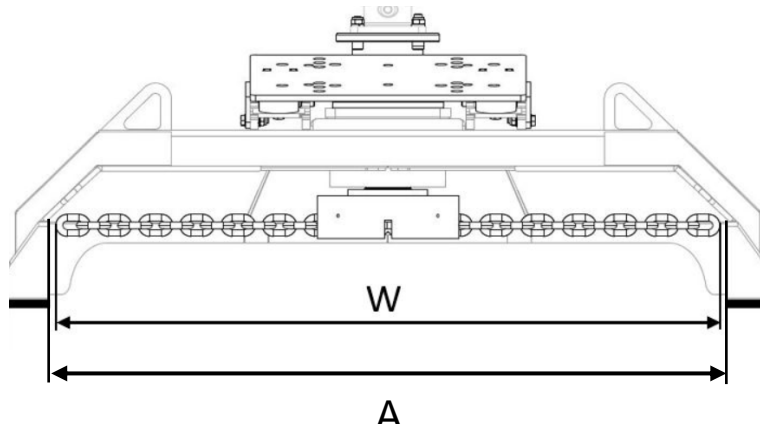
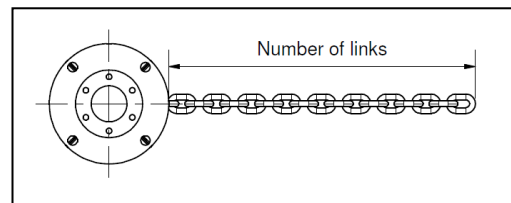
3.5 Adjusting and changing the cutter head's chains

The machine is delivered with 13 mm chains, (10 mm chains can be ordered as an option).

The chains outside the chain magazine must be of equal length. With new chains the chain magazine can have a number of reserve links inside the magazine. When one or several links are missing on a chain, the chain can be repositioned inside the magazine so the two chains outside are of equal length. When there are no links left inside the magazine to draw out, new chains must be installed.

The producer installs the chains in the magazine as follows:

Number of links outside magazine		
Modell	Links 13mm chain – 46504	Links 10mm chain – 46505 (Option)
M1250	12	16
M1650	17	22
M2000	22	



Specification / Model	M1250	M1650	M2000
A (mm)	1360	1701	2090
W (mm)	1255	1645	2035



Warning!

The length of the chain (W) shall never exceed the internal dimensions of the cutting head (A), $W < A$

If the chain takes inside the cutting head, the work must be immediately stopped!

The measure (W) can be customized in 2 ways:

1. Loosen the cover plate of the magazine, detach the chain from the tray and short 1 link on each chain (**see section 3.6**)
2. Cut off the outermost chain link with a cap pad.

When the chains wear out, you have to reduce the number of protruding links so that they do not touch the chassis. When the length of the chain (W) becomes too long, it takes the inside of the chassis. This is noticeable when the chain link starts to strike inside the cutting head (A). This will cause an INCREASED and abnormal wear of the cutting head. The wear of the cutting head is NOT covered by any warranty.

The chains are changed or adjusted as follows:

Turn the cutter head to transport position, close the tap, and secure the machine so it can not fall. Set the hydraulic lever to neutral in the cab.

Knock in the 4 locking pins on the sides of the chain magazine with a mandrel for 6 mm. locking pins. The locking pins must be knocked in the chain magazine entirely.



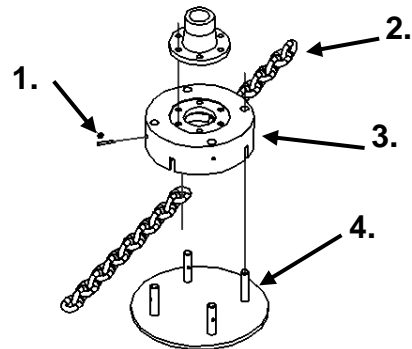
Lift the cover of the chain magazine.

Draw out new chain links until the chains are of equal length or change the chains.



Place the cover on the chain magazine and ensure the chains are in correct position.

Knock in 4 **NEW 6x40 mm. locking pins (1)** to lock the magazine.



- 1 – Locking pins 6x40 mm
- 2 – Chain
- 3 – Chain magazine
- 4 – Cover



WARNING!

**ALWAYS USE NEW LOCKING PINS!
NEVER REINSTALL USED LOCKING PINS!**

THE CENTRIFUGAL FORCE CAN CAUSE USED LOCKING PINS TO COME LOOSE RESULTING IN LOOSENING OF THE COVER AND CHAINS.

Length of new chains:

13 mm. chain – 25 chain links, 2 chains are delivered with a new machine.

10 mm. chain – 50 chain links – optional equipment at M1250 and M1650



NOTE!

During adjusting or changing the chains thoroughly check the condition of the chain magazine's parts. Worn out or damaged parts must be replaced with new.

Chains must be of equal length. Change the chains when there are no reserve links left in the chain magazine.

Only use chains approved by the producer.

After adjusting the chains check that they rotate without coming in contact with the machine's cassis.

3.6 Installing the knife unit M1250, M1650 (optional equipment for green areas)

The machine can be delivered with a knife unit for cutting green areas etc.

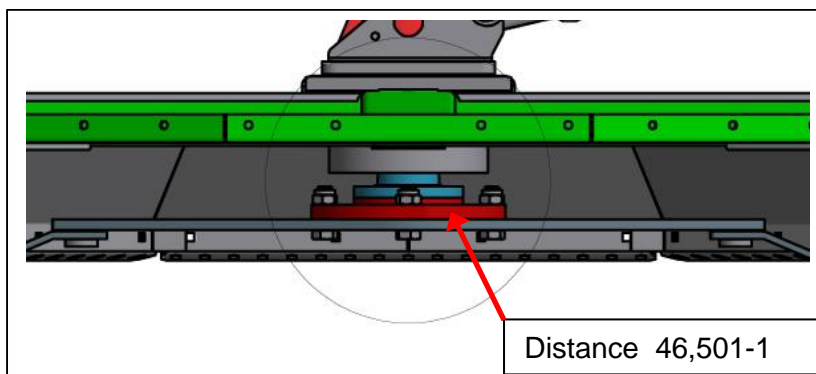
The knife unit is installed as follows:

Remove the chain magazine's cover and take out the chains, also remove chain magazine.

First mount the distance (red) to spline flange (blue) with 6pcs MC6S12X60 screws and M12 Nyloc nuts.

Thereafter mount knife holder (grey) to distance with 6pcs M6S 20X60 screws and M20 Nyloc nuts.

Tighten all fastening screws properly. Check that the knives' fastening screws are properly tightened.



Changing the knives:

When knives are worn out so that the cutting results deteriorate the knives have to be replaced. When a knife is missing, a new knife has to be installed immediately.

Remove the fastening screws and bolts holding the knife.
Place a new knife in the magazine and reinstall screws and bolts.
Tighten the knives fastening screws properly.



WARNING!: Knife kit may be used only at guaranteed stone-free surfaces.



NOTE!
During changing the knives thoroughly check the condition of the knife magazine's parts. Worn out or damaged parts have to be replaced with new.

Only use original knives approved by the producer.

3.7 Transporting the cutter head

During transport of the cutter head it has to be raised to transport position and secured by closing the lift cylinders tap (see the image below). Set the hydraulic lever to “neutral” in the cab.



Lift cylinder's security valve in transport position.



Draw in the side displacement arm so the transport width is minimised.



NOTE!

Observe the transport height of the cutter head when folded behind the tractor.

When the cutter head is folded behind the tractor the tractor's centre of gravity is moved upwards which makes the tractor less stable sideways. Adjust the speed according to the terrain, drive carefully in curves.

3.8 Cutting height and choice of tools

Type of material	Tool		
	Chain 10 mm.	Chain 13 mm. (standard)	Knives (M1250, M1650)
Fallow fields, fields (no stones)	0	-	+
Old fields	0	0	-
Old fields with small bushes	+	+	-
Bushes and brushwood	0	+	-
Roadsides and ditches	+	+	-
Stony/uneven	+	+	-

+: Recommended, 0: Will function, -: NOT recommended



NOTE!

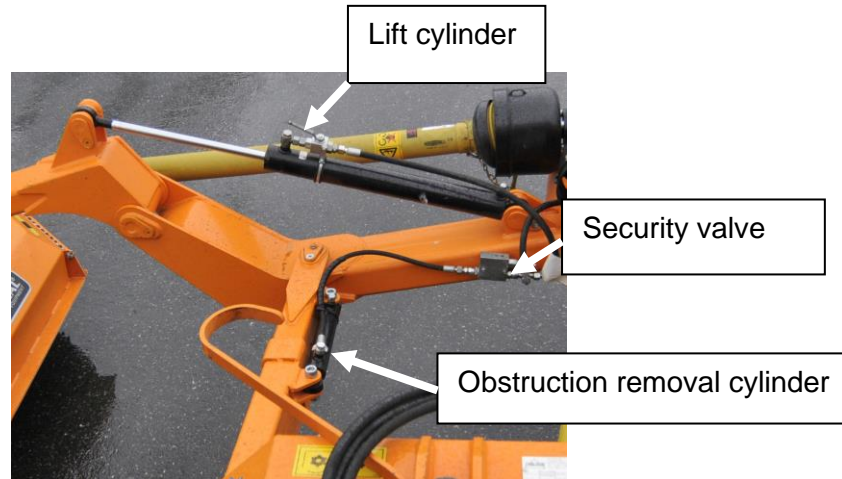
Always use chains with no distance bush when driving on stony terrain.

Cutting height: Chain 10/13 mm.
Knives

approx. 10 cm.
approx. 10 cm.

3.9 Collision protection

The machine is equipped with a hydraulic collision protection. When the cutter head bumps with an obstacle, the collision protection allows it to move backwards at the same time when oil from the obstruction removal cylinder is moving to the lift cylinder so that the cutter head raises. The device is constructed so it returns to previous work settings after passing the obstacle or raising the cutter head.



NOTE!

THE COLLISION PROTECTION IS NO GUARANTEE THAT THE MACHINE DOES NOT OBTAIN DAMAGES WHEN COLLIDING WITH FIRM OBJECTS. ALWAYS ADJUST THE FORWARD DRIVING SPEED TO PREVENT DAMAGING THE MACHINE AND THE TRACTOR.

3.10 Operating the machine



WARNING!

NO PEOPLE OR ANIMALS ARE ALLOWED TO STAY CLOSER THAN 100 M FROM THE MACHINE DURING OPERATION. WHEN CLEARING DENSELY BUILT AREAS THE PEOPLE WITHIN THE RISK ZONE HAVE TO BE WARNED.

THE DRIVER CAN NOT UNDER ANY CIRCUMSTANCES LEAVE THE DRIVERS SEAT BEFORE THE POWER TAKE-OFF (PTO) AND THE TRACTOR'S ENGINE HAVE BEEN TURNED OFF.

THERE IS RISK OF FIRE WHEN THE MACHINE CLEARING DRY AREAS.

Hydraulics

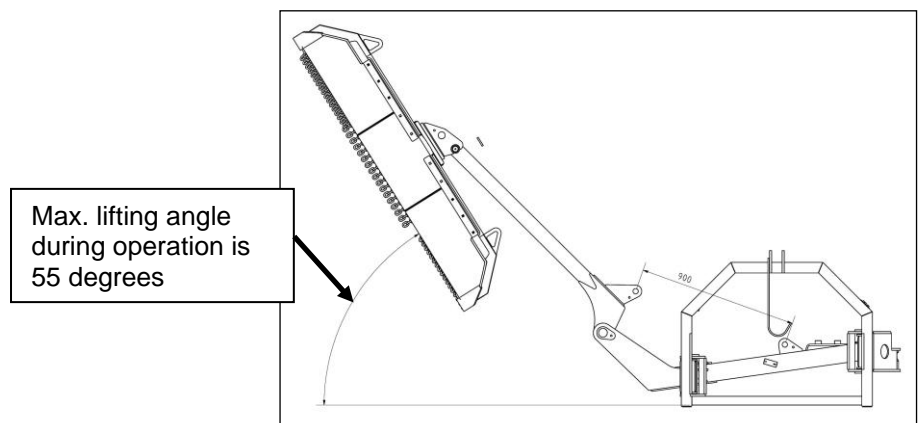
The machines cutter head is raised by a single acting hydraulic cylinder. Use the hydraulic lever in the tractor's cab to manoeuvre the cutter head's hydraulic cylinder. The cutter head will fall down by itself since the lift cylinder is single acting. It can therefore be problematic to lower the cutter head from transport position on hillsides. When this happens drive the tractor to level ground or turn it so that the hillside helps the cutter head to fall down. The hydraulic cylinder has a throttle at the hose connection which reduces the oil flow and with that also the cylinders speed. The purpose of the throttle is to soften the cutter head's movements and make it easier to manoeuvre.

Power take-off PTO revolutions per minute (rpm.)

While operating the machine the recommended PTO rpm. is 540 rev/min.

Working the machine in ditches and on roadsides

- Position the three-point frame to a height suitable to the ground conditions; ensure the angle of the power take-off shaft is not too large, max. 35 degrees.
- Use the cutter head's lift cylinder to change the machines height; do not change the height of the three-point hitch during operation.
- Try to keep the cutter head as close to the ground as possible for the best possible cultivation of the material. To lessen the wear on outriggers the machine has to be carried during operation and the outriggers are seen as security measure to avoid contact between the rotor and ground.
- During operation the cutter head can not be lifted up in an angle larger than 55 degrees (see the image below). Exceeding the angle will damage the joints of the cutter head's power take-off drive shaft.



- When driving on ditch sides observe

that the cutter head does not get caught and cause damage to the machine's chassis and the cutter head etc.

- When clearing thicker bushes it is recommended to drive several times with the cutter head high from the ground. This is to get good results and avoid the chain stopping and causing high wear on the transmission etc.



Working the machine on fields

- Position the three-point frame to a suitable height so the cutter head is levelled to the ground.
- Use the cutter head's lift cylinder to raise the machine; do not change the height of the three-point hitch during operation.
- Try to keep the cutter head as close to the ground as possible for the best possible cultivation of the material.



NOTE!

THE OBSTRUCTION REMOVAL DEVICE IS NO GUARANTEE THAT THE MACHINE DOES NOT OBTAIN DAMAGES WHEN COLLIDING WITH FIRM OBJECTS.

3.11 Parking and storing the machine

Park the machine on a firm and flat surface with the cutter head lowered. Drop the support, position it so the left lift arm linkage is lower than the right one. This makes turning the machine on and off easier.

The machine should preferably be stored under a roof. When the machine is stored outdoors in a lowered position for a longer period of time, grease has to be applied over the hydraulic cylinder's piston rod.

4 Service and maintenance



When service or maintenance has to be performed on the machine, ensure the machine is stopped and the tractor's engine turned off. Remove the key from the ignition switch.

Lower the cutter head to the ground.

Ensure that no unauthorised people are in proximity that can be injured.

4.1 Tightening torque for bolting

Table 1 – Tightening torque for bolting

Diameter	Class 8.8		Class 10.9	
	Nm	lb.ft.	Nm	lb.ft.
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	215	155	305	225
M18	295	217	420	309
M20	420	302	590	438

Increase torque by 5% when using locknuts.

4.2 Check-ups and maintenance during first hours of operation

After first 4 hours of operation:

- Check and, if necessary, retighten the bolted joint of the machine.

After first 8 hours of operation:

- Perform the service and maintenance of the first 8 hours of use according to the schedule below.

4.3 Maintenance schedule

Point of maintenance	Interval	Lubrication	*Measure	Lubricant	Remark
Power take-off drive shaft PTO "universal joints"	Every 8 hours	Yes	C	Grease NLGI 2	See the PTO shaft instructions
Power take-off drive shaft PTO "profile tubes"	Every 8 hours	Yes	C	Grease NLGI 2	See the PTO shaft instructions
Power take-off drive shaft PTO "freewheels"	Every 8 hours	Yes	C	Grease NLGI 2	See the PTO shaft instructions
Power take-off drive shaft PTO "locking pins"	Every 8 hours	Yes	C	Oil	See the PTO shaft instructions
Plain shaft bearings at the pivot point	Every 8 hours	Yes	C	Grease NLGI 2	
Collision protection	Every 8 hours	Yes	A/C	Grease NLGI 2	
Bolting	Every 40 hours	-	C/A		
Chains/chain magazine	Every 40 hours	-	C/A/CI	-	
Angle gearboxes	Every 40 hours	-	C	SAE 80W90 API GL4/GL5	
Angle gearboxes	First 50 h, then after every 500 h.	Oil change	R	SAE 80W90 API GL4/GL5	1.7 litres
Angle gearbox frame fastening screws M12 4+4 pc.	First 8 h, then after every 40 h.	-	C/A		Tightening 120 Nm
Angle gearbox cutter head fastening screws 6 pc.	First 8 h, then after every 40 h.	-	C/A		Tightening 120 Nm

***Measures: A=Adjust, C=Control, CI=Clean, R=Replace**

For lubrication use good quality NLGI 2 grease with EP characteristics.

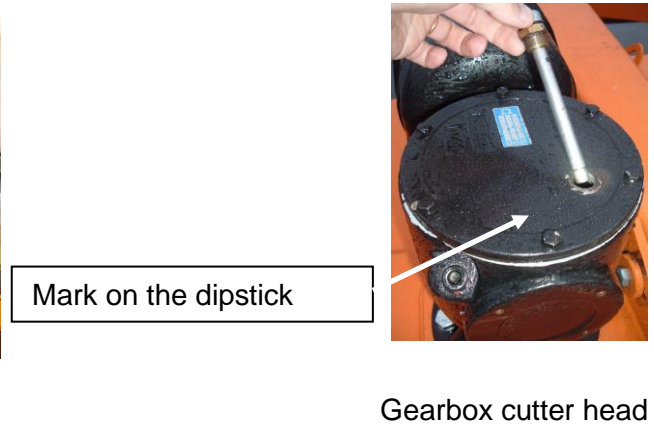
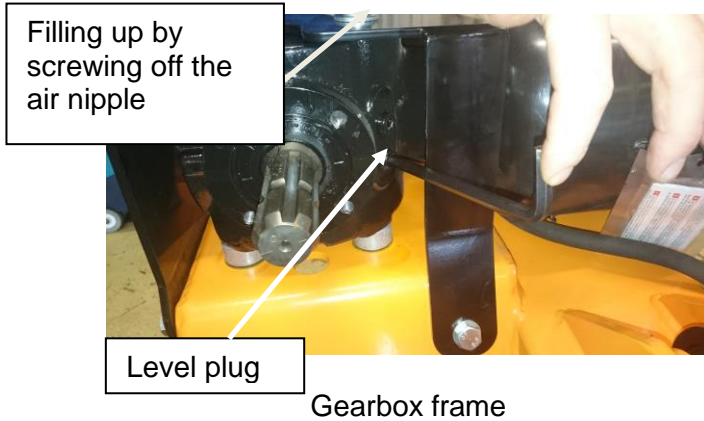
Do not use the so called "graphite grease" for ball bearings. Pneumatic grease gun should not be used for lubricating sealed bearings; the sealing can come loose or get damaged.

These are intervals to be followed with normal operation, for continuous operation lubricate more often. Always lubricate after cleaning with water.

4.4 Checking the oil level

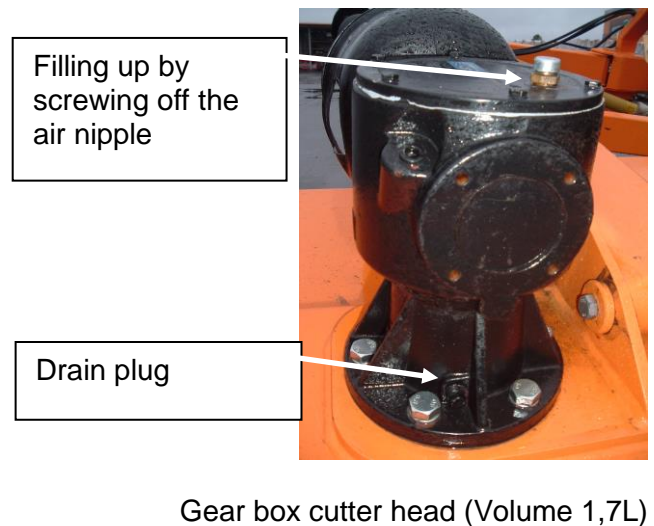
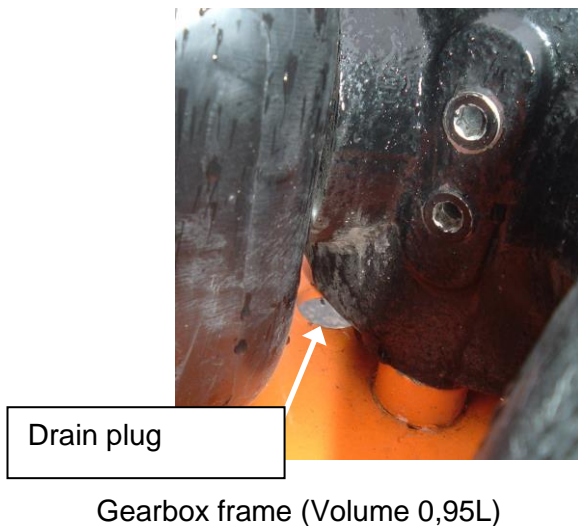
The oil level is checked when the gearboxes are cold and have been stored in a lowered position on level surface.

The oil level in the gearboxes is checked with an oil level plug or a dipstick (see images below). The gearboxes are filled with transmission oil SAE80W90 API GL4/GL5. Fill up with oil through the air nipple on the upper side of the gearbox if necessary. To reach the oil level plug it might be necessary to screw off the oval black cover.



4.5 Oil change in the angle gearbox

Oil in the gearbox has to be changed after the first 50 hours of operation, then after every 500 hours or at least once a year.



Oil: SAE80W90 API GL4/GL5.

Activate the power take-off and drive the machine until the gearbox is warm. Turn off tractor/machine. Screw off the air/fill nipple on the upper side of the gearbox. Drain the oil in a container through the drain plug on the lower side of the gearbox, fasten the plug. Fill up with oil from top until the oil level reaches the oil level plug or mark on the dipstick. **Wait and allow the oil to sink in the gearbox bearings before reading the correct level.** When the oil level is correct, tighten the air/fill nipple and clean off any spillage.

NOTE! Utilise the used oil in an environmentally friendly way according to regulations in effect!

4.6 Before the start of the season

All points above have to be reviewed. The machine's durability will be significantly longer and the operation more trouble-free when serviced properly.

4.7 After the end of the season

The machine has to be cleaned thoroughly, lubricated, and serviced. When the machine is dry we recommend that you spread a thin layer of oil on the spots where the paint is worn off.

5 Troubleshooting

Problem	Likely cause	Measure
Poor results with installed chains.	PTO number of rotations too low. Chain is worn, links missing. Chain is too light for the vegetation. Operation speed too high.	Keep PTO rotation at 540 rev/min. Change the chain or adjust the length. See chapter 3,5. Use 13mm. for bush/brushwood. Choose a lower gear or keep the cutter head higher and drive several times.
Poor results with installed knives.	PTO number of rotations too low. Knife is worn, knife missing. Vegetation is too heavy. Operation speed too high.	Keep PTO rotation at 540 rev/min. Change knives, check that both are installed. See chapter 3,6. Use the chain instead. Choose a lower gear or keep the cutter head higher and drive several times.
Vibrations during operation.	Chains are of different length. Knives are missing or damaged. The angle of the PTO power take-off drive shaft is too large.	Adjust the chains to equal length. Install new knives. Lower the tractor's three-point to reduce the angle of the universal joints.

6 Spare parts

6.1 Use original spare parts

You have the choice between “original” and “copy”!

Often the price makes the choice for you. A “cheap” purchase can become very expensive in the end.

Here are some reasons why you should choose TREJON's original parts:

- Quality and fit
- Reliable function
- Longer durability and with that more economic operation
- Guaranteed availability through TREJON's sales partners

TREJON's original parts and optional equipment is constructed specially for these machines. Installing and/or using parts that are not original can negatively alter the technical characteristics of your machine. The producers warranty does not apply to damages caused by not using original parts or original optional equipment.

The warranty does not apply to arbitrary alterations performed on the machine.



When you want to order spare parts or need other type of service, contact the retailer that sold you the machine.

When ordering spare parts always check that you have the correct model, type, and serial number, see the machine plate attached to the chassis.



CE conformity certificate

According to the directive 2006/42/EC

We **TREJON FÖRSÄLJNING AB**
 (the tender's name).....

SE-911 35 Vännäsby, Företagsvägen 9

 (complete company address – in case of an empowered EC registered co-partner also the producer's company name and address are stated)

declare under our sole responsibility that the product

**Chain mulcher TREJON OPTIMAL
 M1250, M1650, M2000**

 (product, type)

to which this certificate relates to, meets the effective, basic security and health protection regulations according to CE directive 2006/42/EC,
 (if applicable)
 and meets the requirements of other effective EC directives.

— — —

 (title and/or number, and date of publication of other CE directives)

(if applicable)

Following norm(s) and/or technical specification(s) are the basis of the professional imposition of the security and health protection regulations stated in the CE-directives:

EN ISO 12100-1 : 2010 EN ISO 12100-2 : 2010

 (title and/or number, and date of publication of norm(s) and/or technical specification(s))



**Henrik Johansson
 Managing Director**

Vännäsby, 1st of January 2018

 Issued (location/date)

.....
 (name, position, and signature of the authorised co-worker)

Guarantee- /assignment certificate

- Guarantee terms** - Valid between retailer (Trejon AB dealer) and machine purchaser.
- General about guarantee** - In order to obtain valid guarantee terms set forth below, and the specific guarantee terms set by each provider. These are attached to the user manual for each machine, as appropriate.
- Validity of guarantee** - The guarantee is 12 months from date of purchase.
In some cases, the guarantee can be limited by running time.
- The guarantee covers** - Damaged parts, which have broken down because of defective production operations of materials in course of normal use of the machine.
- Only the labor cost for replacement of defective warranted part.
- The guarantee does not cover** - Transport costs applicable to the machine or the parts.
- Travel costs.
- Any resulting costs incurred as a result of damage to the machine.
- If the machine has been modified by the owner.
- Damage due to normal wear and tear of the machine – Not related to manufacturing defects, poor service, user inexperience or use of spare parts that are not original.
- Excessive or inappropriate use of the machine.
- The guarantee is not applicable to parts which are subject to wear, for example hoses, sealing, oil, belts, batteries, chains, knives, glass panes etc.
- The guarantee period for replaced parts during the guarantee period expires with the machine's guarantee.
- Normal adjustments, maintenance or supervision
- Guarantee procedures** - Contact place of purchase as soon as any damage or malfunction is detected. Do not use the machine if the damage can be worse.
- Guarantee repairs must be performed by Trejon AB approved workshop.

ATTENTION!

The guarantee shall enter into force provided that the machine **GUARANTEE/ ASSIGNMENT CERTIFICATE** has been fully completed and signed by both parties (archived by the seller), and recorded on the Trejon web portal no later than 14 days from date of sale (the seller is responsible for this happening).

Assignment certificate:

Machine Buyer shall confirm with his signature that he had received manual containing operating instructions, and received information about the operating, security and maintenance requirements described in this and made the final inspection of the machine.



PLEASE FILL IN!

Product: _____	Serialno. _____
Salesman: _____	Company: _____
Signature of salesman: _____	Date of purchase: _____
Name of buyer: _____	Telephone: _____
E-mail: _____	
Address: _____	Zipcode: _____
City: _____	Country: _____
Date: _____	Signature of buyer: _____

We store personal data, see our privacy policy: <https://www.trejon.se/enu/Dataskyddspolicy/>

TREJON AB reserves the right to change or improve the indicated models with technical or commercial motivation, without requirements to perform the changes on already delivered machines. The images in the instruction manual do not necessarily portray the delivered machine.

Technical specifications, measures, and weights are pertinent. Mistakes reserved.

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