



FLAIL MOWER

USER GUIDE



 **ALPLER**

ATTENTION



**DO NOT
OPERATE THE MACHINES
BEFORE READING THIS MANUAL!**

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WARNING SIGNS & MEANINGS



CAUTION

This sign warns that the operations described could cause damage to machine, if they are not carried out correctly.



READ MANUAL FIRST

Read the "Operating and Maintenance Manual" carefully before first start and keep the manual nearest.



WARNING

This sign warns that the operations described could cause serious lesions or long term health risks, if they are not carried out correctly.



KEEP CHILDREN AWAY

This symbol expresses to keep the children away against any risk.



Be careful against danger of entrapment.



DO NOT STAND NEAR THE MACHINE WHILE IT IS WORKING

This symbol expresses not to stand near the machine while it is working to avoid any injury.



Do not carry people or loads on the plough.



REVOLVING DEVICE

Stay clear of mower knife area as long as tractor engine is running



Do not open or remove safety shields while the engine is running



Shut off engine and remove key before performing maintenance or repair work.

1. INTRODUCTION

Dear Farmer,

Firstly, we congratulate you for your correct preference on the way to efficiency by selecting the brand "ALPLER". As your agricultural partner, we offer you our product in which we combined high quality, low operational cost and effective after-sale service concept.

All of "ALPLER" products are designed for the most efficient and the safest use and tested accordingly in cooperation with the relevant university departments, agricultural establishments and farmers. We request you to read the user manual before the first operation in order to use our product in a more effective manner as well as for product and your own safety. The failures that may result from using the product beyond the instructions for use specified in this manual are not covered by "ALPLER" warranty. "ALPLER" products are manufactured for agricultural utilization purposes only, and our company does not assume any liability against the conditions arising from misuse. Maintenance, repair and operation of our products must be carried out by those who were informed on the relevant and possible dangers.

Enjoy your new product and we wish you productive and fruitful years.

We hope to serve you for a long time...



CAUTION

If the product owner changes in the future, please submit this manual to the new owner of the product and inform on safety measures.

2. SAFETY RULES

2.1. GENERAL SAFETY INFORMATION

Note the use of the signal words Danger, Warning and Caution with the Safety messages.

The appropriate signal word each has been selected using the following guidelines:



DANGER!

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components, which, for functional purposes, cannot be guarded.



WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.



CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



This symbol takes place in the various parts of user guide and indicates the specific adjustments and transactions to observe during the operation of machine.

Safety of the operator is one of the main concerns when designing and developing a new piece of equipment. You, the operator, can avoid many accidents by observing the following precautions in this section.

- Replace any **CAUTION, WARNING, DANGER** or instruction safety decal that is not readable or is missing.
- Do not attempt to operate this equipment under the influence of drugs or alcohol.
- Review the safety instructions with all users.

This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with the equipment and its operation. Do not allow persons to operate this unit until they have developed understanding of the safety precautions and of how it works.

2. SAFETY RULES

- To prevent injury or death, use a tractor equipped with a Roll Over Protective System (POPS). Do not paint over, remove or deface any safety signs or warning decals on your equipment, Observe all safety signs and practice instructions on them.
- Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question – Don't try it.
- Remember - Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or function you do not understand, contact your local dealer or manufacturer.
- If you have questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or ALPLER company.

2.2. INTENDED USE OF MACHINE FOR AGRICULTURAL PURPOSES

Machine is intended to be used only for agricultural purposes. If it is misused for any purpose, manufacturing firm can't be hold responsible for the accidents caused by it, in this case user bears the whole responsibility for the matter concerned.

All instructions on basic rules of using and maintenance which are recommended by the manufacturing firm and should be followed are intended for the benefit and safety of user and should be accepted unconditionally.

All adjustments, operation, use and maintenance-repair of the machine should be carried out by the specialists in their fields.

All relevant safety rules should be observed, current technical safety measures should be taken completely on the machine and recommended occupational safety and health measures should be taken by the user during the operation.

User is responsible for the accidents to arise out as a result of any modification performed on the machine without taking the permission of manufacturing firm. In this case manufacturing firm can't be hold responsible for the matter concerned!

2.3. SAFETY TRAINING

All machines have stickers glued on. In this stickers machine type, address of manufacturer, machine serial number, model of the machine is prescribed.

- Make sure you get familiar with all devices and elements for handling and with the functions before starting with the work.
- Avoid wearing loose-fitting clothes.
- Clohets should fit tight to the operators body.
- Implements should be connected acorring to the instructions, fastened to the prescribed devices and secured.
- Never left the driving seat during driving.
- Starting devices for remote control shoul be secured in a way that, they can not be unintentionally reliased during transport or work.
- When disconnecting the machine from the tractor, place it on the flat ground.
- Never jump, sit or climb on the machine while it is connected to the tractor.
- Stopping or operating the machine must be done by the driver.
- No one may drive the tractor except the driver.
- Use protection for hearing and glasses while working with the machine if the tractor does not have a closed cabin.

2. SAFETY RULES

2.4. SAFETY MEASURES AND ACCIDENT PREVENTION INSTRUCTIONS

- Please read carefully the user guide provided to you in order to use the machine in accordance with the intended targets and rules previously for your life's safety, environment and safety of the creatures in the environment. Please consider the relevant instructions and warnings.
- Safety and warning labels (pictograms) suited on the machine include important remarks for accident protection and safe work. To consider these warnings serve yo your safety and interest. Replace the damaged safety and warning labels immediately.
- Machine shouldn't be operated when operator is tired, sleepy, diseased or influenced by alcohol and drugs! In such case Operator i.e. the person operating new machine or tool keep not only himself/herself but also the person or people around him in danger!
- Ensure that the person to operate the machine is well trained on it before allowing him to operate it!
- Follow the traffic rules and related laws while using the public roads open to traffic!
- Know all safety mechanisms and moving elements on the machine and be well acquainted with their positions and functions before work; otherwise you may very late for the accidents which may occur during operation!
- Operator should make sure that his/her clothes worn should be tight and close-fit during operation. Avoid baggy and loose clothes!
- Keep clean the machine against the risk of fire. Clean the machine after every operation as recommended!
- Make sure that there is no adult, children or living creature exist between tractor and machine and within the unsafe limits around the machine and that your view is clear while operating and stopping the machine!
- It is forbidden and undesirable to transport people or animals on the machine!
- Ensure that all connections are established in accordance with the relevant instructions and make sure that all security mechanisms are fixed to the prescribed points!
- Place the machine on a smooth and plain surface before attaching the machine to tractor. Support the machine and tractor with braking mechanisms or wedges in order to eliminate sliding risk!
- Attachment of machine to tractor or detachment of it from tractor contains a number of transactions which require special attention and should be performed by the experts!
- Obey the rules on permissible load, axle load and transport dimensions!
- Check transport, traffic lighting, warning and protection systems on the machine and fasten them as recommended before every operation!
- If there are chains, wires, rods and elements hanging down from tractor, they should be secured during operation and transport!
- Take all safety measures on machine in accordance with the instructions of manufacturing firm before moving on the road!
- Never leave the driver's cab during operation!
- Regulate the speed in accordance with working conditions and status of working area during operation with machine. Avoid cornering sharply at downhill, uphill or inclined locations!
- Performance and turning skills change when machine is attached to tractor. Make sure that sufficient turning and braking skills are applicable!
- When turning, consider the forces other than center of gravity and/or constant weight of machine!
- Attach the machine to tractor only when all safety mechanisms are in place and all safety measures are taken!
- Get away from oscillation or turning site of machine!
- All hydraulic components on the machine can move only if there is no one in oscillation area!
- Place the machine on ground before leaving the tractor, stop the engine, pull out the ignition key and disengage the PTO shaft!

2. SAFETY RULES

- Make sure that there is no one between tractor and machine unless no measure was taken by supporting it with braking mechanisms or wedges in order to eliminate sliding risk!
- Crushed and cut places may occur in cutting parts or organs driven by spring force. Pay attention to them.
- Get on and off the tractor when hydraulic system is turned off.
- Keep away the foreign substances which may harm the machine from the operation site of machine!
- Don't climb on the machine when it is attached to tractor!
- Machine can be operated and stopped only by tractor driver!
- Wear noise protector headphones and safety glasses if the tractor that you use with machine doesn't have any driver's cab and wear mask if powder or fume is released during operation!

2.5. WHEN ATTACHED TO TRACTOR

- Support and secure the machine with braking mechanisms or wedges in order to eliminate sliding risk!
- Tow bar, tow hook or tow pin etc. and allowable maximum load limits should be considered in the mechanisms ensuring connection and make sure that there is sufficient elasticity at the said connection!

2.6. POWER TRANSMISSION WITH P.T.O SHAFT (Only for the machines driven by tail spindle)



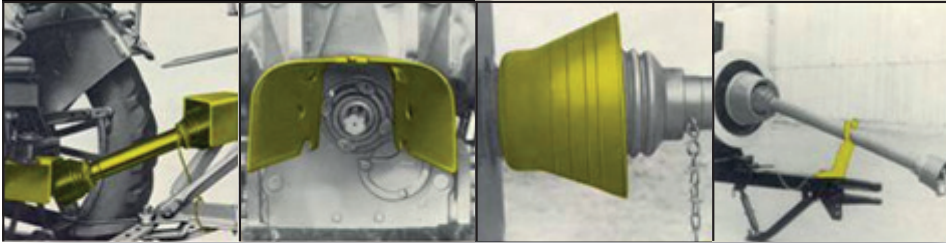
ATTENTION!

A shaft rotating at 540 rpm per minute rotates at 9 rps and may wind anything captured up to 1.5m. Thus make sure that it is enclosed. It is not sufficient that shaft is enclosed but enclosure should be certainly fixed to an appropriate place with chains.

- Please use the original shaft recommended by manufacturer! Manufacturing firm can't be held responsible for the accidents caused by the use of another shaft!
- Make sure that shaft is mounted and secured appropriately!
- Affix the shaft and tractor's tail spindle also and protective pipe and protective funnel of transmission output shaft at the machine and position them in accordance with the rules!.
- Protective sheet for tail spindle and protective pipe of transmission output shaft and shaft joints should be enclosed up to the midline from both sides!
- Make sure that shaft is hanged on as recommended in transport and operation modes!

2. SAFETY RULES

- Make sure that protective pipe covering is affixed to contain the joints and secured by a chain for stability! (See Picture 1).



Picture 1: Protecting shaft casing with joint and chain

- Place machine on the ground, stop the engine and pull out the ignition key and disengage the PTO shaft always before attaching and detaching the shaft.
- When the shafts with overrunning clutch are used, the said clutches should be suited at machine side.
- Check whether RPM and rotation direction of PTO shaft are suitable for the machine and ensure that it reaches appropriate RPM for machine before running PTO shaft!
- Make sure that there is no adult, children or living creature within the unsafe limits around the machine before running PTO shaft!
- Ensure that there is no one at the operation site of PTO shaft
- Make sure that it doesn't run when the angle of deviation which is the angle between the axis of tractor's tail spindle to which shaft is connected and tail spindle of machine's transmission through which power is transmitted increases or where unnecessary (Angle of deviation mustn't exceed 30°).
- The fact that machine may operate for a while after stopping PTO shaft. Don't be close to the machine at that time. When rotation stops completely, you may approach the machine!
- Repair all failures of shaft before running machine!
- Adjustment, cleaning, maintenance, lubrication etc. for the machines driven by PTO shaft may be performed only when the engine is stopped, ignition key is pulled out and PTO shaft is disengaged!
- When shaft is not used or disconnected, shaft should be fitted only on tow bar or any holder prescribed on machine for this purpose. In this way shaft is prevented from touching ground and being damaged!
- When tail spindle of shaft is disconnected, install tail spindle cup and cover always!
- Insert the side bearing tractor Picture to tail spindle while attaching PTO shaft!
- Covering distance for shaft clearance should be at least 10-15 cm for 1-meter shaft!
- Periodical maintenance and lubrication for jointed shaft shouldn't be neglected and should be performed regularly.

2.7. HYDRAULIC COMPONENTS

- Hydraulic components are the elements working under high pressure!
- Make sure that hydraulic hose is fitted as prescribed while fitting hydraulic cylinder and pump!
- Make sure that hydraulic systems of both machine and tractor are not under pressure while fitting hydraulic hose to tractor's hydraulic outlet!
- It is vitally important for junctions and jacks to be colored or marked correspondingly in order to prevent any failure in the hydraulic connections between tractor and machine.

2. SAFETY RULES

- Check hydraulic components continuously, replace the ones damaged, broken or worn. All parts to be used in this replacement must be original spare parts recommended by manufacturer; otherwise manufacturing firm can't be hold responsible for the accidents and injuries which may occur!
- Use appropriate tools while determining the leaking points during periodic maintenance and repair in order to prevent the accidents and injuries!
- Hydraulic oils under high pressure may penetrate the skin and cause severe injuries in case of leakage! In case of injury seek to medical assistance immediately! Infection risk!
- Place machine on the ground, stop the engine and pull out the ignition key and disengage PTO shaft before working on hydraulic components.

2.8. MAINTENANCE

- Place machine on the ground, stop the engine and pull out the ignition key and disengage PTO shaft before proceeding to repair, maintenance, cleaning etc.
- Call authorized service or manufacturing firm's technical service for your all questions on the maintenance and repair of your machine!
- Please make sure that ground is dry after cleaning the service area where maintenance and repair is carried out. Don't delay to check power outlet and electrical appliances.
- Keep first aid kit and fire extinguisher available in the service area where maintenance and repair are carried out!
- If machine is lifted for maintenance and repair, only recommended lever and appropriate ropes, chains etc. should be used.
- Spare parts to be used in the repair of treated machine must be original spare parts in accordance with technical specifications recommended by manufacturer and repair should be carried out safely with appropriate tools! Otherwise manufacturing firm can't be hold responsible for the accidents and injuries which may occur!
- Wear gloves and use appropriate tools while replacing the parts which may have cutting parts and performing relevant maintenance works.
- Machine should be stored on a rigid and flat ground in a dry, closed place. Moreover it should be supported with braking mechanisms or wedges in order to eliminate rolling and rollover risks.
- Please make sure that equipments and tools used aren't left on the machine following your applications on the machine!
- Check all screws and bolts and tighten the loose ones following first 3-hour operation and then periodically.
- Store transmission and grease oils appropriately. Follow the instructions on the package about usage and storage conditions!
- Disconnect battery and generators circuits during welding works in tractor and machines connected to tractor!
- Safety mechanisms on the machine should be controlled regularly and the ones which have lost their functions should be replaced!
- Only use original spare parts, it prolongs the life of your machine!

3. SETTINGS

- Adjustments for preparing ALPLER Vertical Mulcher (Flail Mower) for operation and operating it are very easy and may be performed by just one person.

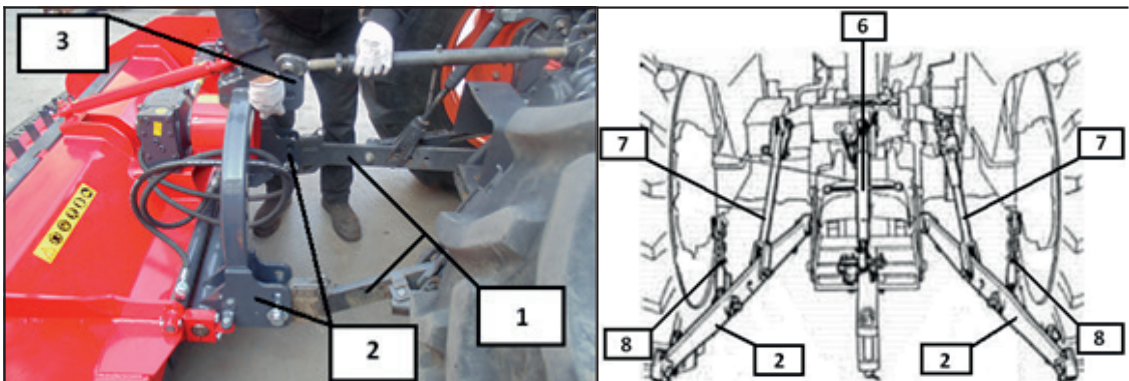
3.1. SPECIAL SAFETY INSTRUCTIONS



- Place the machine on the ground, stop the engine and pull out the ignition key and disengage the PTO shaft before proceeding to repair, maintenance, cleaning etc. as well as attachment of machine to and detachment from tractor! Make sure that there is no one between tractor and machine unless no measure was taken by supporting it with braking mechanisms or wedges in order to eliminate sliding risk!
- Check the lighting, warning systems and security mechanisms of the machine, intended for the transport on highways and replace the missing and lost ones as well as the ones that have lost its function before using public roads open to traffic and running it with tractor.
- Maximum allowable PTO rate is 540 min⁻¹(rpm) for the vertical mulcher attached safely.
- Make sure that there is no adult, children or living creature exist between tractor and machine and within the unsafe limits around the machine before running PTO shaft !
- All hydraulic components on the machine (blades , arms etc.) may be operated only where there is no one within the oscillating area!
Machine may be operated and stopped only by tractor driver! Never leave the driver's cab during operation!

3.2. ATTACHMENT TO TRACTOR

- Attachment of machine to tractor contains a number of transactions which require special attention and should be performed by the experts!
- While attaching the machine to tractor, make sure that there is no adult, children nor living creature exist between tractor and machine and within the unsafe limits around the machine
- Ensure that all connections are established in accordance with the relevant instructions and make sure that all security mechanisms are fixed to the prescribed points!



Picture 2 - Picture 3: Three Point Hitch System

3. SETTINGS

- Place the machine on a smooth and plain surface before attaching the machine to tractor. Stop the engine and pull out the ignition key and remove the power take-off in the meantime! Support the machine and tractor with braking mechanisms or wedges in order to eliminate sliding risk!
- First place lower hydraulic linking rods of tractor (1) to the connection points at lower linking rods of machine tow (2) while attaching Vertical Mulcher to the three point hitch system of tractor and fix both of them with hairpin following the safety pins
- Align left and right lines in parallel for the machine that you have connected to lower linking rods by the use of right and left hanging rods (7). (Only right hanging rod is aligned in some old-fashioned tractors. They may be aligned with the adjustment rods suited on both hanging rods in new model tractors.)
- Right and left stabilizer chains (8) prevent machine or related tools from being shaken and rubbing against the tires while moving them. Loosen the stabilizer chains while working on the field; but make sure that they are loosened up to a distance of four fingers' length!
- Place upper linking rod (6) of tractor to the corresponding hole on the upper fishplate (3) for upper connection following the lower connection of machine and fix it with hairpin following the safety pins. Upper linking rod of tractor allows aligning front and back lines in parallel for the machine attached by being shortened and extended. A gap should be available between round journals in the holes at the side where upper linking rod is connected to both machine and tractor and shafts attached to the said journals!
- Check the lighting, warning systems and security mechanisms of the machine, intended for the transport on highways and replace the missing and lost ones as well as the ones that lost its function.



- Ensure that lower and upper connections of the machine are established as recommended and make sure that vertical and horizontal lines are aligned in parallel! Don't allow the machine to move left/right and up/down
- Choose upper and lower connection safety pins with appropriate diameters for the category of your tractor, which are used while Vertical Mulcher is attached to tractor with three-point hitch system!
- Vertical Mulcher is intended to be used for Category II. Check whether the sizes of upper and lower safety pins are in accordance with the values stated in Category II (See Table 1).

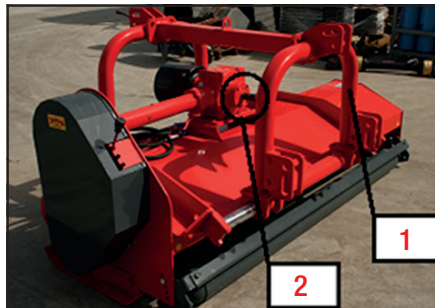
Category	Maximum Bollard Pull (HP)	Linking Pin Diameter for Lower Hydraulic Rod Ø (mm)	Linking Pin Diameter for Upper Hydraulic Rod Ø (mm)
I	<47,6 (35 kW)	21,79-22	19,3-19,51
II	40,8-102,0 (30-75 kW)	27,79-28	25,7-25,91
III	95,2-183,6 (70-135 kW)	36,4-36,65	32-32,25
IV	183,6-408,0 (135-300 kW)	49,7-50,8	45,2-45,5

Table 1: (TS 660 Standard has been taken as reference)

3. SETTINGS

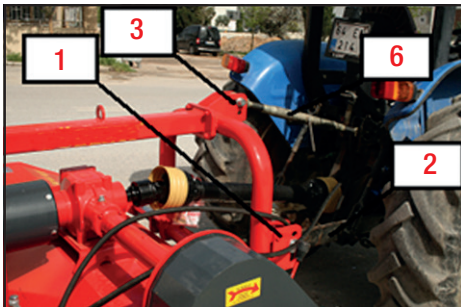
3.2.1. ATTACHMENT OF OPTIONAL BIDIRECTIONAL HITCH SYSTEM TO TRACTOR

- If you have a machine equipped with optional bidirectional hitch system to tractor which allows moving both forward and back (see Picture 4) and if tractor will be driven forward, attach the machine to tractor as detailed in section 3.2.
- If vertical mulcher with bidirectional hitch system should be operated backward, you should use second tow (1) and second PTO shaft (2) on the machine (see Picture 4).

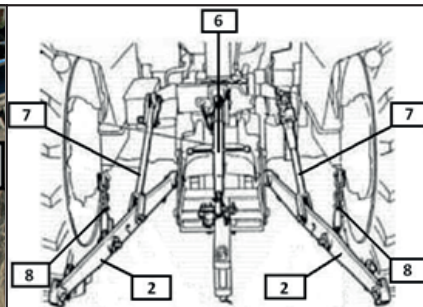


Picture 4

- First place lower hydraulic linking rods of tractor (1) to the connection points at lower linking rods of machine tow (2) while attaching your machine to the three point hitch system of tractor and fix both of them with hairpin following the safety pins.



Picture 5



Picture 6: Three-Point Hitch System of Tractor

- Align left and right lines in parallel for the machine that you have connected to lower linking rods by the use of right and left hanging rods (7). (Only right hanging road is aligned in some old-fashioned tractors. They may be aligned with the adjustment rods suited on both hanging rods in new model tractors).
- Right and left stabilizer chains (8) prevent machine or related tools from being shaken and rubbing against the tires while moving them. Loosen the stabilizer chains while working on the field; but make sure that they are loosened up to a distance of four fingers' length!
- Place upper linking rod (6) of tractor to the corresponding hole on the upper fishplate (3) for upper connection following the lower connection of machine and fix it with hairpin following the safety pins. Upper linking rod of tractor allows aligning front and back lines in parallel for the machine attached by being shortened and extended. A gap should be available between round journals in the holes at the side where upper linking rod is connected to both machine and tractor and shafts attached to the said journals!

3. SETTINGS

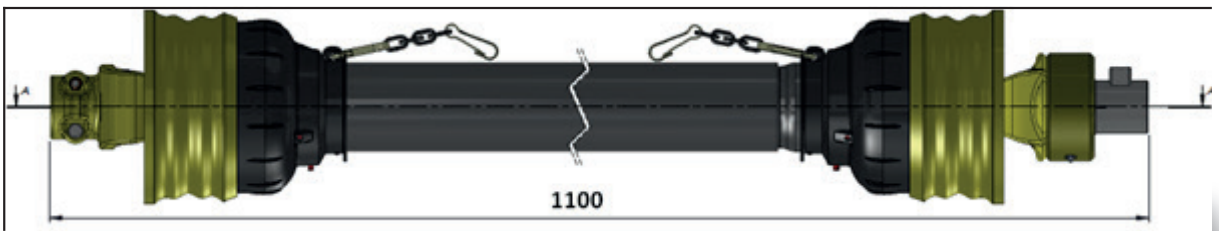
- Finally complete the attachment of machine to tractor by connecting PTO shaft; clean and grease tail spindle and transmission output shaft of machine. After that, scroll it on PTO shaft until pin fits completely. Sliding gap for shaft should be minimum 5 cm and maximum 15 cm.
- Check the lighting, warning systems and security mechanisms of the machine, intended for the transport on highways and replace the missing and lost ones as well as the ones that lost its function.

3.3. PTO SHAFT

3.3.1. GENERAL



- Place PTO shaft on the ground, stop the engine and pull out the ignition key and disengage PTO shaft before proceeding to calibration, maintenance, cleaning, greasing etc. as well as attachment to and detachment from tractor! Make sure that there is no one between tractor and machine unless no measure was taken by supporting it with braking mechanisms or wedges in order to eliminate sliding risk!
- Never operate the PTO shaft in case of transport while attached! Material damage and risk to drop and to be lost are in question!



Picture 7: PTO Shaft

PTO shaft which transmits the movement from tail spindle of tractor to machine's transmission is equipped with the joint which should be fixed to machine side and has an overrunning clutch (provided with machine and shaft recommended in case of need: EGE ŞAFT, Series 6, Overrunning clutch, 1100mm closed joint total length) See Picture 7.

Overrunning clutches protects the shaft against the inverse power occurring due to high inertia of rotating parts.



- These safety arrangements are made up of ratchet ball suited on the shaft fork, ratchet pipe and ratchet spring inserted in the holes on ratchet ball and ratchet lock.


When a running tractor is stopped or rotating speed is reduced, agricultural machine continues to work at high rpm. This sudden stop or slowdown will harm the machine or tractor. Nevertheless ratchet part of the shaft attached to the machine rotates independently from the shaft due to the movement of machine. In this way risk is eliminated. Overrunning clutch of the shaft is attached to machine side.

3. SETTINGS

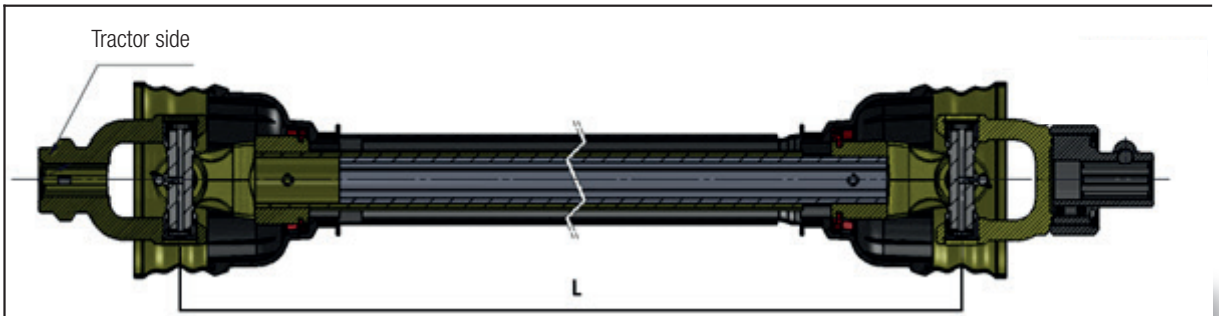
3.3.2. FITTING AND ASSEMBLY



- If the length of the shaft that you use while attaching your tractor to machine is long, shaft bends while lifting and operating the machine. Adjust appropriate shaft length as recommended!
- Shafts used in agricultural machines are manufactured with joint and adjustable length.
- You should complete the attachment of machine to tractor as recommended first with three-point hitch system in order to adjust the length of shaft. If attachment of machine to tractor is ok, take following steps respectively!

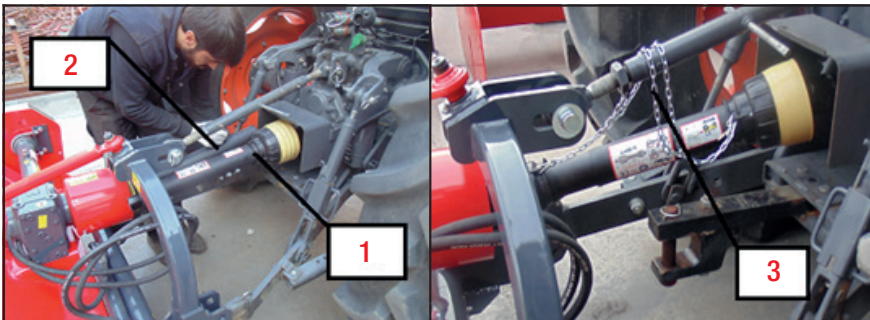
 • First measure the distance between the extreme point of tractor's tails spindle and extreme point of machine's transmission output shaft. Note the related value.

- Second measure the distance between the pins which are available at the both sides of shaft and ensures that it is fixed when placed to both tractor and machine sides as seen in Picture 8. Note this L value.



Picture 8: PTO Shaft

- The distance between the extreme point of tractor's tail spindle and extreme point of machine's transmission output shaft and value (L) recorded should be equal. If L value is higher, shaft should be cut to appropriate size in order to achieve the said equality.
- Pull and remove it by holding the shaft with both sides of junction before cutting it. So shaft is divided in two parts.
- Insert the side bearing tractor picture and the side with overrunning clutch to tails spindle (2) and Machine (1) respectively and take both halves side by side and mark them with both sides (See Picture 9).



Picture 9 - Picture 10

3. SETTINGS

- It is necessary to cut the shaft at both sides as much as the difference between both values! (See Picture 11A/B/C).

For instance; let's say that the distance between the extreme point of tractor's tail spindle and extreme point of machine's transmission output shaft is 100 cm and that Length L, the distance between left and right pins of the shaft is 110cm. In this case you cut the shaft 10 cm at the both sides that you divide in two parts. (It should be noted that the said shortening shall be reduced to 10cm since one of these two parts are placed within the other one even though it seems that it should be cut 20 cm totally!



Picture 11A

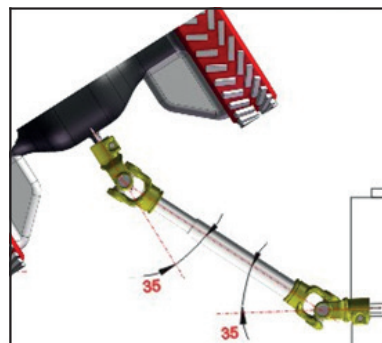


Picture 11B



Picture 11C: Cutting of the shaft to appropriate length

- Finally complete the attachment of machine to tractor by connecting PTO shaft; clean and grease the transmission output shaft of machine and tail axle for this purpose. After that, scroll it on PTO shaft until pin fits completely. Sliding gap for shaft should be minimum 5 cm and maximum 15 cm.
- Affix the shaft and tractor's tail spindle at the same time and protective pipe and protective funnel of transmission output shaft at the machine and position it in accordance with the rules! Make sure that protective pipe covering is affixed to contain the joints and secured by a chain for stability! (3) (See Picture 10).
- When the angle of deviation which is the angle between the axis of tractor's tail spindle to which shaft is connected and tail spindle of machine's transmission through which power is transmitted increases, running of shaft is of danger. In this case operation should be ended! (angle of deviation mustn't exceed 30° !)
- Tractor should be stopped and operation should be ended, when the angle of shaft junctions exceed 35°. Only the junctions in wide-angle shafts may operate at up to 70°-80° based on their types (See Picture 12).



Picture 12



Please read the user guide provided by manufacturer with shaft since it includes more complicated information about shaft.

3. SETTINGS

3.4. DETACHMENT FROM TRACTOR



- Place the machine on a smooth and plain surface before detaching the machine from tractor. Stop the engine and pull out the ignition key and disengage the PTO shaft in the meantime! Make sure that there is no one between tractor and machine unless no measure was taken by supporting it with braking mechanisms or wedges in order to eliminate sliding risk!
- Make sure that there is no adult, children or living creature exist between tractor and machine and within the unsafe limits around the machine while lifting or lowering the machine with three-point hitch system or detaching it from tractor!



Please follow the following safety instructions while detaching machine from tractor!

- Machine should be stored on a rigid and flat ground in a dry, closed place.
- Take the machine down and make sure that you have grounded it steadily. Support and secure it with wedges against the risks of rolling and rollover.
- Disengage PTO shaft and fix the shaft in appropriate place on the machine.
- First disconnect upper rod and then lower rod contrarily to attachment, while detaching the machine from tractor's three-point hitch system.

4. GENERAL ADJUSTMENTS



- Stop the engine and pull out the ignition key and remove the power take-off drive always before proceeding to adjustments, maintenance, lubrication, cleaning etc!

4.1. GENERAL POSITION ADJUSTMENTS

4.1.1. CONNECTION SETTINGS



Picture 13

- Make sure that machine is positioned with tractor on a smooth and plain surface in order to carry out connection settings.



- Adjust the height by setting tractor's hydraulic control level to position control.

When you move the hydraulic lever slightly in position control mode, machine rises up and stops at a certain level, when you move the lever again, it rises up a little bit higher and stops again; so it doesn't reach the highest point as in tow control mode.

Note: It is kept at a certain level by taking up the hydraulic lifting-landing arm. In this case tool and machine rises up completely, preselection lever is in "TOW CONTROL" mode. If tool and machine don't rise up fully but to a certain level, it is in "POSITION CONTROL" mode. Position control mode ensures that machine operates on ground by keeping the machine at certain level.

While the machines like vertical mulcher are operated, preselection lever should be in position control mode.

- It should be parallel to soil surface while machine is running. Right-left and front-back lines should be aligned very well in parallel for a balanced operation before running the machine.




- Align left and right lines of your machine in parallel by the use of right and left hanging rods suited on the hydraulic three-point hitch system in order to ensure parallel alignment of main body of your machine.

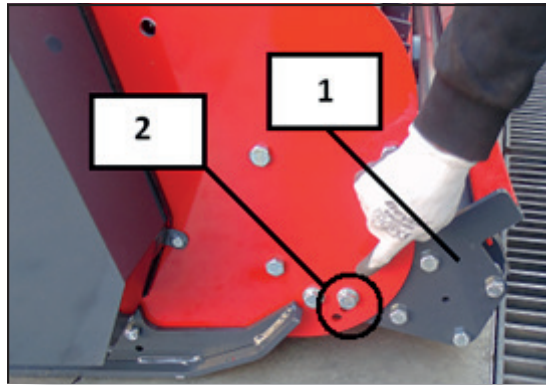
- Upper linking rod of tractor allows front-back parallel alignments for the machine attached by being shortened and extended. A gap should be available between round journals in the holes at the side where upper linking rod is connected to both machine and tractor and shafts attached to the said journals!

4. GENERAL ADJUSTMENTS

4.1.2. CYLINDER ADJUSTMENT

Cylinder should be adjusted before working with machine; in this way cutting/mulching height should be adjusted in most appropriate way for the working area and product.

 • 3-stage holes on the side panel sheet (2) are used for this purpose. When the adjustment hole on the cylinder connection plate (1) is set side by side with the appropriate one from the holes on side panel sheet, adjustment will have been completed by fixing them with bolts at both sides in same way (See Picture 14).

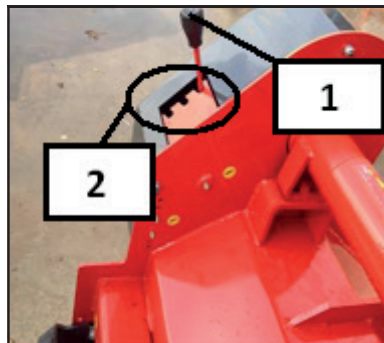


Picture 14

4.2. BELT TENSION ADJUSTMENT

(It is available in bidirectional tension system, automatic tension mechanism exists in the unidirectional machines)

Heat released during the operation with machine causes expansion in the belts in the belt mechanism. Loose belts should be tightened. Thus tension of the belts adjusted be made by taking belt tensioning lever (1) to one below the highest notch on the tensioning levels as shown in Picture 15.



Picture 15

4. GENERAL ADJUSTMENTS

4.3. SETTINGS FOR TRANSPORT/CARRYING AND OPERATION MODES



- Make sure that there is no adult, children or living creature exist between tractor and machine and within the unsafe limits of oscillating area of moving components of machine while setting machine to transport or operation mode!
- It is forbidden and undesirable to transport people or animals on the machine!
- Never operate the PTO shaft in case of transport while attached! Material damage and risk to drop and to be lost are in question!
- Check transport, traffic lighting, warning and protection systems on the machine and take all security measures in accordance with the instructions of manufacturing firm before moving on the road!
- Performance and turning skills change during operation with machine or in transport mode. Make sure that sufficient turning and braking skills are applicable at hairpin corners and inclined roads! Rollover Risk!

4.3.1. HOW TO SET IT TO TRANSPORT/SHIPPING MODE



- Run the tractor first for about one minute before going to the field to be processed. Lift the machine with main hydraulic lever. Attach safety lock in order that hydraulic components aren't damaged by the vibrations on the road. Tighten the tension rings and prevent it from moving or becoming loose on the road.
- Machine should be lifted and control lever should be locked in order to prevent it from dropping down before moving on the road.



Picture 16



- Obey the traffic rules and related laws while using public roads open to traffic!
- Obey the rules on dimensions while moving on the road!
- Consider centrifugal force at hairpin corners and inclined roads!

4. GENERAL ADJUSTMENTS

4.3.2. HOW TO SET IT TO OPERATION MODE



- Remove the safety lock and take down the machine with main hydraulic lever when start to work on the field.
- Loosen the tension chains in accordance with the working conditions on the field but make sure that they are loosened up to a distance of four fingers' length.
- Run the PTO shaft after taking down the machine.



Picture 17



- Machine is intended to be used only for agricultural purposes. If is misused for any purpose, manufacturing firm can't be hold responsible for the accidents arising out, otherwise user bears the whole responsibility for the matter concerned.
- All transactions for the adjustment, operation, use and maintenance-repair of the machine and operation of vertical mulcher should be carried out at sufficient daylight and traffic rules should be followed on the roads open to traffic.
- Machine should be lightened in accordance with traffic rules especially in the night. We recommend using cat eye reflectors for this purpose.
- It is dangerous to work with tractor on an inclined land. Nevertheless if you need to work on an inclined land, you should work carefully and avoid cornering sharply. Make sure that tractor is equipped with an additional weight in order to ensure safety movement stability and to process an inclined working area.

5. WORKING WITH FLAIL MOWER



- Make sure that there is no adult, children or living creature exist between tractor and machine and within the unsafe limits around rotating and oscillating components of machine (at least 5m) during the operation of machine!
- It is dangerous and forbidden to climb over the machine while machine is attached to tractor!
- Know all safety systems and moving elements on the machine and be well acquainted with their positions and functions before work; otherwise you may very late for the accidents which may occur during operation!
- Ensure that all connections are established in accordance with the relevant instructions and make sure that all security mechanisms are fixed to the prescribed points!
- Regulate the speed in accordance with working conditions and status of working area during operation with machine. Avoid cornering sharply at downhill, uphill or inclined locations! Performance and turning skills change during operation with machine or in transport mode. Make sure that sufficient turning and braking skills are applicable at hairpin corners and inclined roads! Rollover Risk!
- It is forbidden to work by driving back! Material damage risk!

ALPLER FAIL MOWER is an important equipment that is driven by the tractor tail spindle and connected to it with three point hitch system, operates vertically on the soil surface and cuts the stalks of the plants such as wheat, sunflower, cotton, unshelled rice, tobacco and thicket and the branches of the pruned fruit trees and vine shots, recycles them to organic fertilizer, is able to maintain the cutting height, strength of the blades and balance sensitivity thanks to its skids on the sides and its cylinder at the back even if soil surface is uneven (See Picture 18).



Picture 18

5. WORKING WITH FLAIL MULCHER



- Maximum allowable PTO rate is 540 min⁻¹(rpm)
- Wear noise protector headphones and safety glasses if the tractor that you use with machine doesn't have any driver's cab and wear mask if powder or fume is released during operation!



Take the steps which are detailed in user guide where all machine adjustments are explained and call your attention with the following sign:

“  ” as recommended in order to achieve maximum productivity and work most appropriately.

6. TRANSPORT OF MACHINE



Transport by Forklift Truck: Choose an appropriate forklift in accordance with machine weight. Lift the machine from the closest point to the center of gravity so that machine is parallel to ground. Transport the machine safely by threading the load safety rope from handling points and affixing its ends to lifting hook as seen in Picture 19.



Transport by Crane: It is as same as transport by forklift. Transport the machine safely by threading the load safety rope from handling points and affixing its ends to lifting hook. Make sure that hook lock of crane is operable.



Transport by Palette: Choose an appropriate palette for the dimensions of machine. Make sure that palette is reliable! Transport the machine safely by threading the ends of carrier from the appropriate gaps under the palette.



Picture 19



- Don't get under the machine during transport!
- Don't allow no one to get under or approach to the machine in the area where it is transported by forklift truck, crane and palette!
- Please make sure that hooks and ropes of cranes and forklifts are safe during transport!

7. PERIODIC MAINTENANCE AND REPAIR OF MACHINE

7.1. SPECIAL SAFETY INSTRUCTIONS



- Place machine on the ground, stop the engine, pull out the ignition key and disengage the PTO shaft always before proceeding to periodic repair, maintenance, cleaning etc.
- Please make sure that ground is dry after cleaning the service area where maintenance and repair is carried out. Don't delay to check power outlet and electrical appliances.
- If machine is lifted for maintenance and repair, only recommended lever and appropriate ropes, chains etc. should be used.
- Machine should be stored on a rigid and flat ground in a dry, closed place. Moreover It should be supported and secured with wedges against the risks of rolling and rollover
- Use appropriate tools while determining the leaking points during periodic maintenance and repair in order to prevent the accidents and injuries! Hydraulic oils under high pressure may penetrate the skin and cause severe injuries in case of leakage! In case of injury seek to medical assistance immediately! Infection risk is available!

7.2. GENERAL



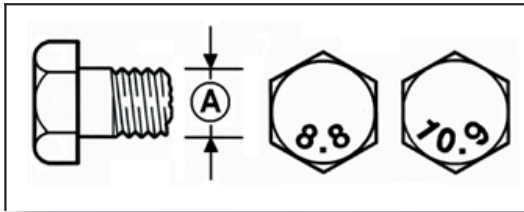
- Call authorized service or manufacturing firm's technical service for your all questions on the maintenance and repair of your machine!
- Keep first aid kit and fire extinguisher available in the service area where maintenance and repair are carried out!
- Spare parts to be used in the repair of treated machine must be original spare parts in accordance with technical specifications recommended by manufacturer and repair should be carried out safely with appropriate tools! Otherwise manufacturing firm can't be hold responsible for the accidents and injuries which may occur!
- Machine should be stored on a rigid and flat ground in a dry, closed place. Moreover It should be supported and secured with wedges against the risks of rolling and rollover!
- Please make sure that equipments and tools used aren't left on the machine following your applications on the machine!
- Safety systems on machine should be controlled regularly and the ones which have lost their functions should be replaced!
- Only use original spare parts, it prolongs the life of your machine!
- Follow the instructions on periodical maintenance and repair unconditionally in order to ensure that machine operates perfect and minimize the wearing!

7. PERIODIC MAINTENANCE AND REPAIR OF MACHINE

7.3. TIGHTNESS CONTROL OF BOLTS AND SCREWS

Check all screws and bolts and tighten the loose ones following first 3-hour operation and then periodically (approximately once in 50 hours).

Tightening Moment of Bolts and Screws M_A



A= Nominal Diameter

A Ø	8.8	10.9	12.9
	$M_A(N_m)$		
M 5	5,9	8,7	10
M 6	10	15	18
M 8	25	36	43
M 10	49	72	84
M 12	85	125	145
M 14	135	200	235
M 16	210	310	365
M 20	425	610	710
M 24	730	1050	1220
M 27	1100	1550	1800
M 30	1420	2100	2450

Table 3



- Checking the tightness of the screws and bolts and tightening them as required constitute an important periodical maintenance. To neglect it may pose many risks like dropping and missing machine parts, any part which come away and may cause an accident or cause a great damage on machine!
Attention!

7. PERIODIC MAINTENANCE AND REPAIR OF MACHINE

7.4. LUBRICATION

Places on the machine where grease nipples are located and points which should be greased once in 30 hours are shown in details in Picture 20-26. Periodic lubrication shouldn't be delayed and performed regularly in order to ensure that machine operates perfect and minimize the wearing and prolong its operating life!



- Perform the lubrication checks for your machine while the tractor's engine is stopped, ignition key is pulled out and PTO shaft is disengaged!

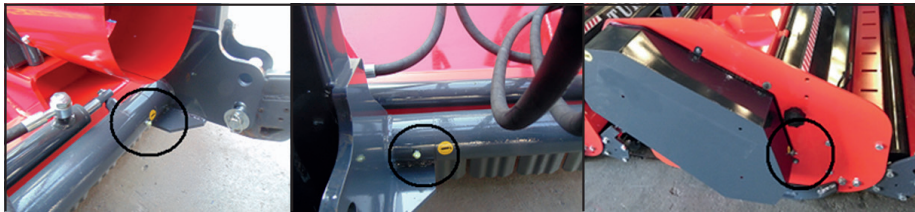


Picture 20

Picture 21

Picture 22


Picture 23

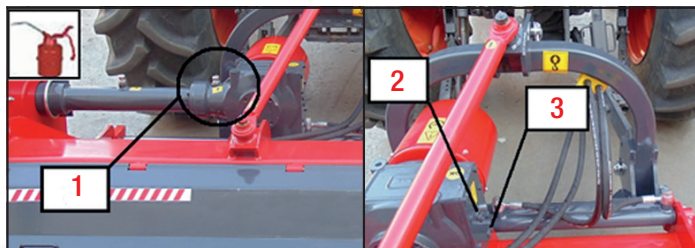


Picture 24

Picture 25

Picture 26

 Check the oil in transmission as shown in Pictures 27 and 28 before running the machine. Oil level should be at the level of oil plug (2) as shown in Picture 28.



Picture 27

Picture 28

7. PERIODIC MAINTENANCE AND REPAIR OF MACHINE

If oil level decreased, replenish it with SAE140EP/3.5 (1) (Oil No. 141) (as a standard) from oil filler plug (See Picture27).

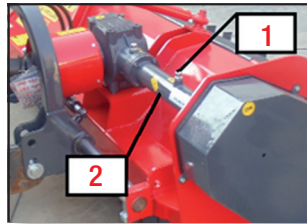
Drain and change the transmission oil from drain plug (3) for the possibility of contaminated oil at least once in a year (See Picture 28).

Position	Oil Type	Filling Quantity (L)	Periodical Control	Change Frequency
Transmission	SAE140EP/3.5	2,25 Liters	100 Hours	At least once in a year

Table 4



Check the oil in transmission pipe as shown in Pictures 29 before running the machine. Oil level should be at the level of oil plug (2). If oil level decreased, replenish it with SAE140EP/3.5 (1) (Oil No. 141) (as standardized) from oil filler plug.



Picture 29

Position	Oil Type	Filling Quantity (L)	Periodical Control	Change Frequency
Transmission pipe	SAE140EP/3.5	0,3 Liter	100 Hours	At least once in a year

Table 5

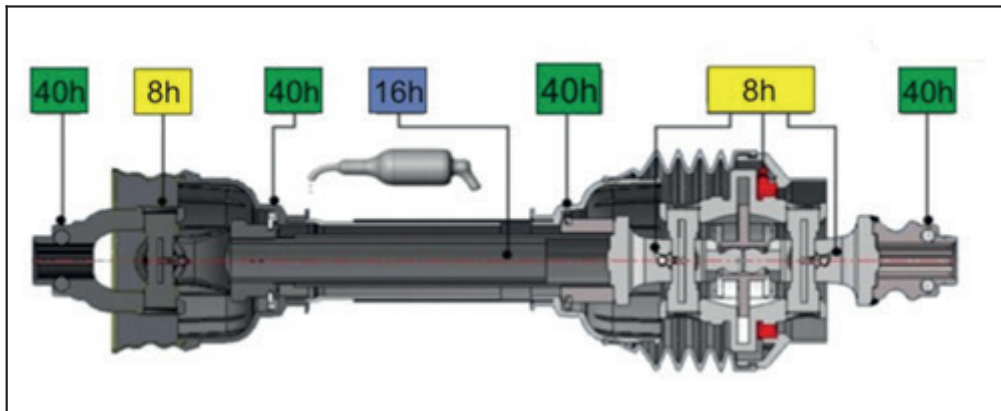


- Store transmission and grease oils appropriately. Follow the instructions on the package about usage and storage conditions!
- Pay attention to the use of vegetable-oil based Grease!
- Periodic lubrication shouldn't be delayed and performed regularly in order to ensure that machine operates perfect and minimize the wearing and prolong its operating life! When there is no oil, it goes down or it is contaminated especially in the elements containing gear pairs like transmissions and side gear case, they don't operate productively and your machine breaks down! Attention!

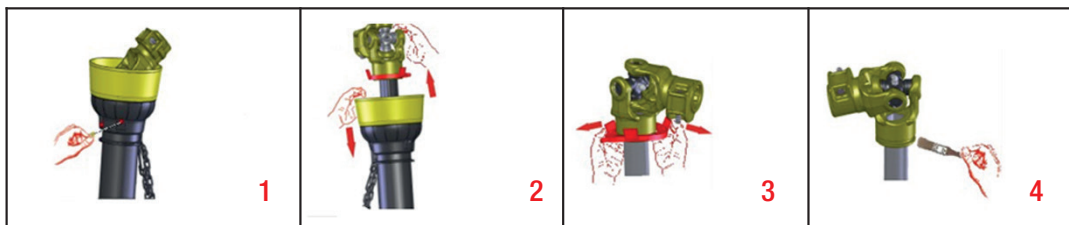
7. PERIODIC MAINTENANCE AND REPAIR OF MACHINE

7.5. P.T.O SHAFT PERIODIC MAINTENANCE

Lubricate the shaft with grease at the points shown in Picture 30 periodically at the prescribed hour(h) frequency.



Picture 30



Picture 31-1

Picture 31-2

Picture 31-3

Picture 31-4

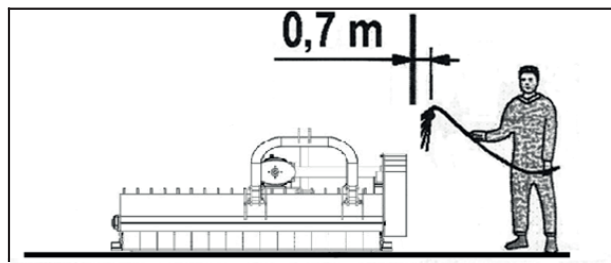


- Push the ring groove with a screw driver at the points shown in Picture 31-1.
- Jacket going out as shown in Picture 31-2 is drawn to arrow direction.
- Ring as shown in Picture 31-3 is drawn to arrow direction and removed from the channel.
- Lubrication is done while the ring is separated from the channel as shown in Picture 31-4.



- Periodic maintenance and lubrication of PTO shaft shouldn't be neglected and should be performed regularly!
- Please use the original shaft recommended by manufacturer! Manufacturing firm can't be hold responsible for the accidents caused by the use of another shaft!

8. CLEANING AND STORAGE CONDITIONS AFTER OPERATION



Picture 32



- Take down the machine and make sure that it is placed steadily at the end of work. Support and secure it with wedges against the risks of rolling and rollover.
- It is recommended washing your machine with plenty of water (not high-pressure). Otherwise it causes humidity and corrosion.
- It is not recommended using high-pressure water while cleaning the machine; but if machine will be cleaned with high-pressure water; 0,7 m should be kept between the head of sprinker and you!
- Check the elements, blades, cylinder flanges and cylinder junctions etc. which may contain plant residues and clean the same, if necessary. Enzymes which may be released during corrosion may damage the surface of machine.
- When the cleaning of machine is over, grease all lubrication points as shown and detailed in lubrication part.
- Clean the PTO shaft as recommended and grease all necessary points as described.
- Determine the worn parts on the machine and replace them with original spare parts if necessary.
- If paint is damaged, touch it up. Cover the shiny surfaces with corrosion protector.
- Machine should be stored on a rigid and flat ground in a dry, closed place.
- List the necessary spare parts and order them from the authorized service, dealer of ALPLER or directly manufacturing firm, so your needs may be met on time and your machine becomes ready for the following season.

9. PREPARATION FOR NEW SEASON



- Clean the greases and oils used for its position as required by storage conditions for some surfaces and elements.
- Grease all points of machine as recommended.
- Check the oil level in transmission, gear case, oil tank etc. and replenish it, if necessary.
- Check all screws and bolts and tighten them as required.
- Make all adjustments of machine as described in detail.
- Ensure that all connections are established in accordance with the relevant instructions and make sure that all security mechanisms are fixed to the prescribed points!
- Check the metal parts of the P.T.O. shaft with friction clutch safety mechanism, which slide into each other, tighten them, if loose.
- Read once again the sections on general safety instructions and preparation of machine to operation carefully.

10. INFORMATION ON PRODUCTIVE USE IN TERMS OF ENERGY CONSUMPTION

ALPLER Flail Mower falls within the group of “Harvesting Machinery” in the list annexed to “Regulations on After-sale Services for Industrial Goods” issued based on Consumer Protection Law no. 4077 and its lifetime is stated to be 10 Years as determined by the ministry.

PRODUCTS	NUMBER OF SERVICE STATIONS	LIFETIME
10- AGRICULTURAL AND FARMING EQUIPMENT AND MACHINERY		
A- Sowing-planting and fertilizing machinery	At least 1 service station	10 years
B- Harvesters	Total 5 service stations in 5 geographical areas	10 years
C- Harvesting Machinery	At least 1 service station	10 years
D-Livestock Machinery	At least 1 service station	10 years
E-Pest Control Equipments and Trailers	At least 1 service station	10 years
F- Tillage Machines	At least 1 service station	10 years
G-Lawn Mowers	At least 1 service station	10 years
H- Bush trimmers, chain saws, wood chipper machines and such	At least 1 service station	10 years

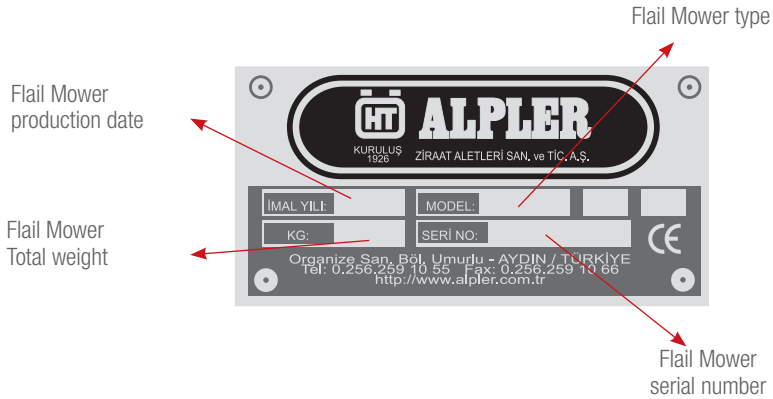
Table 6: List of the Products for Which Service is Requested Pursuant To Consumer Protection Law No. 4077



In order to use machine more productively in terms of power consumption;

- First make sure that minimum power requirement of machine is suitable for tractor.
- Check all screws and bolts and repeat it periodically.
- Replace the damaged or broken parts on the machine with original spare parts if necessary.
- Perform all periodic lubrications of machine regularly without any delay as recommended.
- Leave the machine clean after every operation in order to prevent any jamming of rotating elements and over loading and excess energy consumption.
- Regulate the operation depth and rate of your machine in accordance with soil conditions and the area processed.

11. WARRANTY



Use original spare parts in ALPLER branded products. The customer will be responsible for the problems that occur due to not using original spare parts. The Flail Mower will not be covered by the warranty when non-original parts are installed on the Flail Mower, additional equipment is attached on the Flail Mower or it is used after removing standard parts.

While ordering spare parts, for the codes beginning with '0', machine serial number together with the part code should be provided. For other codes, it is not necessary to provide the Flail Mower serial number.

Label information is important for identifying the Flail Mower and for spare part orders. As a measure against the illegibility of the label due to deformation or its loss, label information on the Flail Mower should be written literally in the corresponding fields of the following label picture, and it should be retained.

Our Flail Mowers are **warranted for 2 years** for faults that may occur due to material, workmanship and mounting errors.

Faults resulting from improper use are not covered by the warranty. The average lifetime is 10 years.

11. WARRANTY



WARRANTY CERTIFICATE

Warranted by ALPLER for a period of two years

BRAND: ALPLER

PRODUCT TYPE:

MODEL:

SERIAL NUMBER:

DATE OF PRODUCTION:

Seller's

Title:.....

Address:.....

Phone:.....

Fax:.....

Invoice Date:.....

Signature & Seal





Exports to 75 countries
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 **ALPLER**



Manufacturer: Alpler Agricultural Machinery Organize Sanayi Bölgesi, Umurlu - AYDIN / TURKEY

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