KAYHAN ERTUĞRUL
MAKİNA

ROW INDEPENDENT MAIZE CHOPPER

KE 125 ROW INDEPENDENT MAIZE CHOPPER

User and Service Manual

CONTENTS

1. GENERALINFORMATION

1.1.General Description

The KE 125 Row Independent Maize Chopper harvests corn and various feed plants in the height higher than 1 meter without any row dependence thanks to the wide drum and suits to the silage by its cutter blades.

1.2.Desired Usage

KE 125 Row Independent Maize Chopper has wide cutter drum, 12 cutter blades and 360 ° rotating chute. Thanks to its wide cutter drum, harvests corn and other feed crops (alfalfa, rapeseed, bean, sunflower etc.) higher than 1 meter without any row dependence, suits to the silage by its cutter blades and blows the silaged plants to any area by its chute with 360° rotation capacity.

1.3.General Information

1.3.1. General Information

This manual is valid for Row Independent Maize Choppers starting with serial number starting as KE 125.

KE 125 Row Independent Maize Choppers are guaranteed for 1 years.

1.3.2. Manufacturer's Address

KAYHAN ERTUGRUL MAKINA
Sanayi ve Ticaret A.S.
Organize Sanayi Bolgesi Burdur / TURKEY
Phone : +90 -248 -252 9705
FAX : +90 248 252 97 10
Web adresi : www.kayhanertugrul.com.tr
e-mail : **export@kayhanertugrul.com.tr**

1.3.3. Sertification

Certified with Quality management system K-Q TSE-ISO-EN 9001-2008.

1.3.4. Identification

The chassis plate with machine serial number is located on the tractor connection chassis. Figure 1 shows the visual image of the chassis plate..

Figure 1: Chassis Plate

1.3.5. Questions and Information required for orders

Do not forget to add the machine type, the machine identification number and the production year when asking questions about the machine.

1.3.6. Appropriate Operation for Correct Usage

The KE 125 Row Independent Maize Chopper is designed for standard agricultural use only.

Manufacturer will not be responsible for a damage caused by the usage at the operator's own risk.

Available silage materials: silage corn and various feed crops higher than 1 meter. The warranty conditions do not apply for other purposes and if used in improper products.

1.4.General Elements from the viewpoint of Environmental Science

- Earth, air, and water are the essential elements of agriculture and life in general. If the local legislation does not control the increasing of chemical substances as required by advanced technologies or remains incapable in the use and disposal of products derived from chemical and petrochemical substances you need to be discreet in its usage and disposal.

Some Useful Tips

- Avoid filling the warehouse using unsuitable containers or pressurized filling systems as they may spill into large areas and cause fluid leaks.
- As a general rule, prevent contact of all fuels, oils, acids, solvents etc. with your skin. Most of them contain chemical substances, which may be harmful to your health.
- Modern lubricants contain additives. Do not burn polluted fuels and / or used fuels in conventional heating systems, don't allow to use it for different purposes.

Useful suggestions.

- Learn and determine the relevant laws.
- If there is no law in force concerning waste management; learn about the effects of oils, filters, liquids, fuels, antifreeze, cleaning agents, etc. on humans and the environment and how to safely store, use and dispose of these substances.
- Avoid exposing the used radiator water, engine, transmission and hydraulic oils, brake fluid and other fluids to the surrounding area. Never mix used brake fluid or fuels with lubricants. Store them securely in accordance with the law or local regulations until a suitable disposal path is found.
- Modern radiator fluids, such as antifreeze and other additives, must be changed every two years. They should not be allowed to mix with the soil, but must be collected and disposed of properly.

2. TECHNICAL INFORMATION

2.1. Tractor Requirements

- Maximum allowed speed: 20 km/h
- For machines without brakes, the weight of the tractor must match the permissible specifications, or at least a weight in accordance with the weight of the maize chopper.
- Follow the conditions specified for machines with operating permission.
- The maize chopper should be arranged with balance weights when the tractor is connected.
- While driving on the road, remove the hydraulic hose connections from the tractor.

Minimum power requirement	**80<t2/> HP**
Tail axle rotation	**540 - 1000 rpm max.**

- **Tractor axle rotation should not exceed max.1000 rpm.**
- **The tail axle can be operated between 540-1000 rpm.**

	**Please read this Operation and Maintenance Handbook carefully and keep it handy as a quick reference..**

- Machine's speed should not exceed maximum speed when it connected to tractor. Bolts, nuts, washers on machine parts may loosen during passage from slope stone roads. This can lead to damage or malfunction during operation of the machine. The bolts and nuts should be checked and tightened every working day.

2.2. KE 125 Technical Specifications of the Row Independent Maize Chopper

Table 2.2.1 shows technical specifications of KE 125**.**

NOTE: Our company reserves the right to change the measurements without prior notice.

Table 2.2.1: KE 125 Technical Details

KE 125 ROW INDEPENDENT MAIZE CHOPPER		
TECHNICAL DETAILS		
Working Width	mm	1250
Weight	kg	1388
Tyres		165 SR13
Number of Flywheel Wings	pcs.	12
Number of chopper blades	pcs.	12
Average Length	mm	2850
Average Height (iş durumunda)	mm	3770
Average Width	mm	1820
Working Speed	Km/h	10 (max.)
Chopping Length	mm	4-8
Average Power Requirement	kW - HP	Min. 59 kW - 80 HP
Tail axle rotation	rpm	1000 (540 - 750 optional)
Hydraulic System Maximum Permissible Operating Pressure	bar	200
Distance between rows	cm	Row Independent
Tractor Working Positions		Front / Rear / Side
Working Capacity	Tons/Hour	40-50
OVERLOAD SAFETY COUPLING		
Clutch	Nm	1500

3. SAFETY

3.1. Specifying Safety Precautions in the Operational Manual

Before using the machine, be sure to read the Operation manual and follow the safety rules.

It is assumed that the consumer has read all the rules specified in the Operation manual.

3.2. Security Statements and Accident Prevention Regulations

Personal Security

In this Operation and Maintenance book and on the stickers on the machine you will find warnings that follow special instructions ("DANGER", "WARNING" and "CAUTION"). These warnings are for the personal safety of you and personnel working with you. Please take the time to read this warnings.

	The word "DANGER" indicates a dangerous situation which, if not avoided, could result in death or serious injury . RED color is associated with hazard.
	The word "WARNING" indicates a potentially dangerous situation which, if not avoided, could result in death or serious injury. ORANGE color is associated with the warning.
	The word "CAUTION" indicates a potentially dangerous situation which, if not avoided, could result in minor or moderate injury. YELLOW color is associated with the warning.

“Failure to follow the instructions starting with the words "DANGER", "WARNING " and "CAUTION" can result in severe injury or death.

3.3. Warnings and Precautions

The best user is careful user. Most accidents can be avoided by taking into account certain precautions. To help prevent accidents, read the following warning before using this equipment. The equipment must be used only by persons responsible for their use and trained..

Review this operation and maintenance manual with all users. It is important for all users to learn and follow safety warnings.

	In this manual he safety precautions, which may lead to personal injury, if not observed, are indicated by the general hazard symbol. The instructions attached to the machine must be observed and readable and understandable.

Most agricultural equipment accidents can be avoided by taking a few simple safety precautions.

1. Do not perform any cleaning, lubrication or any other adjustment on the machine while the Row Independent Maize Chopper is in action (moving) or when the tractor's engine is running. Listen and see if there are any rotating parts.
   Caution! When the machine stops, the blades continue rotating. After stopping the machine, do not approach for at least 2 minutes.
2. Before working on the machine, the tail axle must be deactivated and the tractor motor switched off, the key must be removed from the truck.
3. Do not engage the coupling unless everyone is away from your machine and you are sure that there are no repair kits on the machine.
4. Do not work around the Row Independent Maize Chopper with loose-fitting dress that can be trapped in moving parts.
5. Never stand in front of the machine section that takes the product in.
6. Never feed the machine by manual way.
7. During sharpening the blades; use protective equipment (glasses, earphones, gloves), stand on the side of the machine. Keep the upper body of the machine closed.
8. Make sure that the bolts of the cutting blades are well tightened.(130 Nm).
9. Make sure that the PTO shaft is well connected to the tractor tail axle.
10. Do not remove the protective equipment on the PTO shafts, connect the chain of guard equipment to the machine and the appropriate places on the tractor.
11. When the machine is running, there should be no one in the chute rotation area.
12. Before connecting the hydraulic hoses, make sure that there is no pressure in the system. In case of accidents that may occur, get medical support.
13. Use protective equipment when using the machine.
14. When any object enters the machine except the silage plant, stop the machine, stop the engine, wait for all moving parts to stop.
15. Before driving to the normal road, take the machine from the job position to the road position.
16. In road position the height of the machine should not exceed 4.3 meters. Power lines must be avoided.
17. Before connecting the trailer, lower the support outrigger.
18. If the machine creates imbalance in tractor weight, it should be balanced with additional weight. The balance must be specifically checked when the machine is running in the side position and on the slope.
19. Do not put fuel in the fuel tank while the engine of the tractor drawing the Row independent maize chopper is running.
20. Do not use the machine without all the guards in place.
21. Do not allow anyone to be found on the machine.

3.4.Staff Qualification and Training

The persons using, repairing or repairing the Row Independent Maize Chopper must be warned against the risks they may encounter during machine operation and must be trained beforehand. The operator should be responsible and observe the personnel. If the staff lacks the necessary knowledge, they should immediately take the necessary training and explanation. The operator must ensure that the contents of this manual are fully understood by the personnel.

Repair work not specified in this manual should only be performed by authorized service.

3.5.Failure in Implementing Safety Measures

If safety precautions are not taken into account, personal injuries and environmental hazards as well as damage to the machine may occur . Failure to observe safety precautions may result in the failure to take into account the entire claims for damages.

For example, if the safety precautions are not followed, the following hazards may arise:

- Risk of human error due to faulty work area protection
- Loss of important features of the machine
- Failure to implement recommended methods for repair and maintenance
- Risks due to mechanical and chemical effects
- Environmental damage due to hydraulic oil leakage

3.6.Working Safely and Consciously

- Comply with the safety precautions in this manual, existing accident prevention rules and any internal work, as well as the operating and safety rules set by the operator.
- Safety precautions and accidents prevention regulations of responsible professional connections must be observed.
- Safety precautions provided by the vehicle manufacturer should also be observed.
- Applicable traffic rules must be observed on public roads.

3.7.Safety Precautions and Accident Prevention Regulations

1. In addition to the safety precautions in this manual, please follow all general applicable safety and accident prevention regulations.
2. The warning and safety signs attached to the machines provide important information for safe operation. Pay attention to these issues for your own safety!
3. When approaching public areas, be careful to obey traffic rules!
4. Before starting to work with the machine, make sure you know all the functions as well as the whole equipment. Its too late to learn during operating!
5. Users should wear tight clothing. Don't wear large and loose clothing!
6. Leave the machine clean in case of fire hazard!
7. Make sure no one is around the machine before running or moving the machine (pay attention to the kids!). Make sure you have a clear view!
8. Passenger transportation, operation and transportation are not permitted.

9. Attach tools to the machine correctly! Attach tools only to specified devices and protect!
10. When inserting and removing tools, place support devices in the correct places.
11. Be very careful when removing or attaching tools from the tractor.
12. Always attach the balance weights properly to the fixed locations shown.
13. Observe the permissible axle loads, product weight and transport dimensions!
14. Plug in and check the transport equipment such as lighting, warning devices and any protective equipment!
15. Start-up mechanisms (cables, chains, connections, etc.) for remote control devices must be arranged such that no movement can be inadvertently activated during transportation or operation.
16. Make sure the tools are in the way they are needed for the road and close them in the places specified by the manufacturer!
17. Never leave the driver's seat when the vehicle is running!
18. Always drive at the correct speed for the required driving situations! Avoid sudden changes of direction as you travel on ramp, downhill or on a slope road!
19. Attached tools or ballast weights affect steering and the reaction of the machine to the break. Make sure you can use the brake and steering wheel as needed!
20. Keep in mind the skeeding when you are turning radius and / or corners!
21. Start the tools, only when all protective devices are attached and installed in the right places!
22. Always keep the machine's work areas open!
23. Don't stand in the area of tool's rotation!
24. Parts operated by external forces can cause overwhelming and damaging injuries!
25. **Before leaving the tractor, land the tools, turn off the engine and take the ignition key!**
26. No one should be between the tractor and the machine without the guarantee that the vehicle is definitely stopped.

3.7.1. Trailer Usage

- Protect tools against rolling hazard!
- Observe the maximum support load on the trailer, drawbar or connecting piece.
- If a drawer pair is used, make sure there is enough space at the junction!

3.7.2. Hydraulic System

1. The hydraulic system is pressurized, please be careful.
2. When making connections with hydraulic cylinders and motors, make sure hydraulic hoses are properly connected.
3. When connecting the hydraulic hoses to the tractor hydraulics, make sure both tractors and vehicle hydraulics are not compressed!
4. In the hydraulic connections between the tractor and the vehicle, the connecting sleeves and cables must be taken into account to ensure a proper connection. If the links will be reversed, the function will also be flipped. (eg. increase / decrease) - risk of accident!
5. Check the hydraulic hose lines regularly and replace if damaged or worn. The new hoses must meet the technical requirements of the vehicle manufacturer!
6. When looking for leakage, use appropriate tools to avoid the risk of injury!

7. Fluids leaking because of high pressure (hydraulic oil) can damage the body and cause some serious injuries! If you get injured, get medical help immediately! Risk of infection!

3.7.3. Tyres

1. When working on tires, be sure to protect the vehicle against landing and rolling hazard! If it is in a sloping place, block the machine by putting the wedge in front of the wheels on the side where it is inclined.
2. Attaching tires and wheels requires adequate knowledge and appropriate tools.
3. Repair work on tires and wheels must be carried out only by specially trained personnel using suitable installation tools.
4. Check tire pressure regularly! Bring the tires pressure to recommended level!

3.7.4. Safety During Maintenance

1. Always make sure that the motor and energy are off before performing any repairs, maintenance or cleaning!

   -Remove the ignition key. Remove the ignition key and take it with you!
   -Protect the engine flywheel with the handbrake!

2. Check regularly if the bolts and belts are properly seated and tighten if necessary!
3. Always take appropriate precautions against the danger of falling when performing maintenance work with high equipment!
4. Always wear suitable gloves and tools when replacing tools with cutting inserts!
5. Disposal of oil, grease and filters according to regulations!
6. Always disconnect the power supply before starting the electrical system!
7. In case of wearing of protective devices and protectors, check them regularly and replace with new ones on time!
8. When welding the tractor and attached vehicles, remove the alternator and battery cables!
9. Renewed sections must meet the technical requirements of the manufacturer. This can be realized by using original spare parts of the Kayhan Ertugrul Makine Sanayi.

3.8.Making Unauthorized Changes and Manufacturing Replaced Parts

Changes in the machine are only permitted with the manufacturer's approval. Original spare parts and additional units supplied by the manufacturer guarantee a safe use.

3.9.Prohibited Operation

Operational safety of the machine is available only if it used according to the intended use in the General Information section of the user manual. The value limits written in the information charts should never be exceeded.

3.10. Starting of KE 125

Kayhan Ertugrul Row Independent Maize Chopper is equipped with all necessary security devices. However, it is not possible to remove all potential hazards, as the protective equipment and equipment will damage the function and ability of the machine.

Appropriate warning signs on the machine warn of any danger!

	Safety precautions are given as pictorial diagrams. Important information about the locations of these safety signs and their mean is stated below!

3.11. Labels and Security Warnings on the Machine

The locations of the labels on the machine are given in Figures 3.11.1 and 3.11.2 and the explanations are given below.

Figure 3.11.1: Labels on the Machine

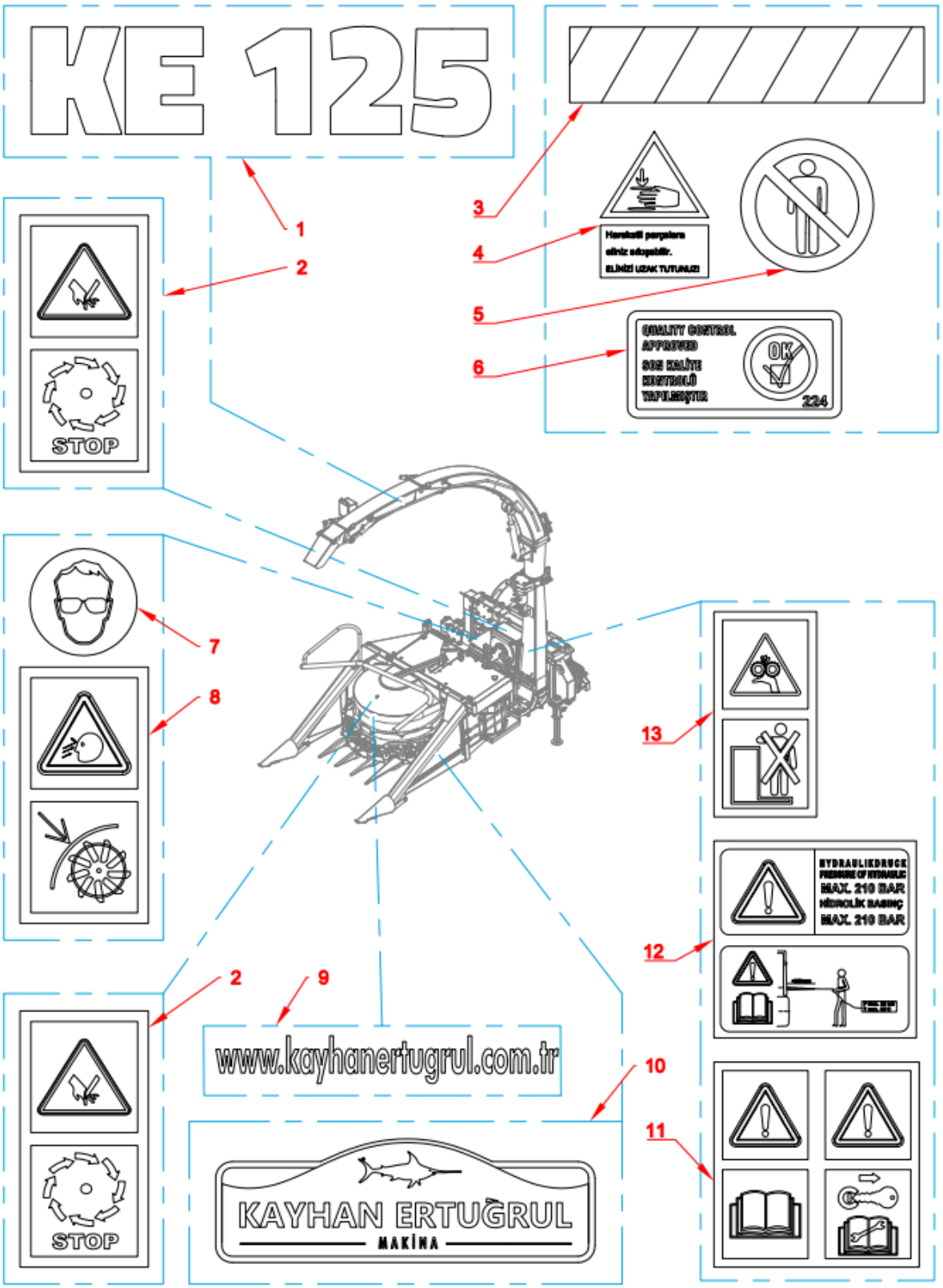
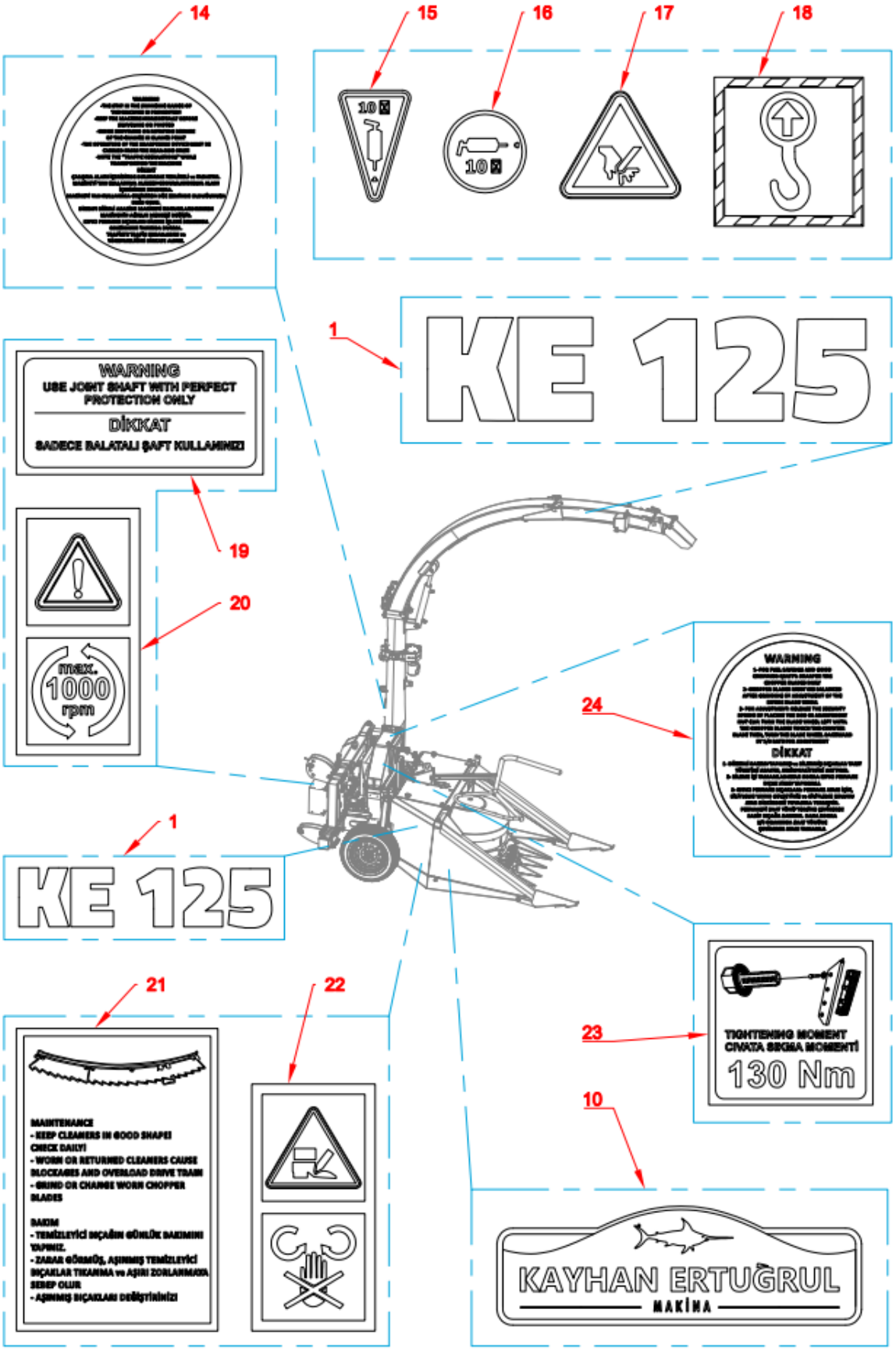
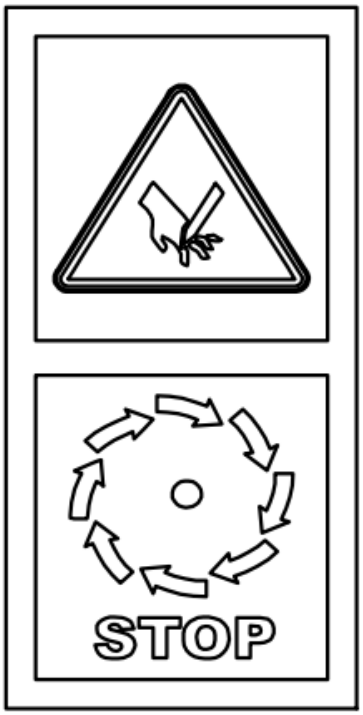
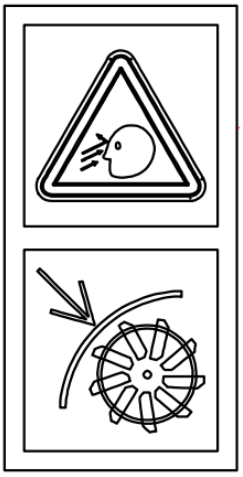
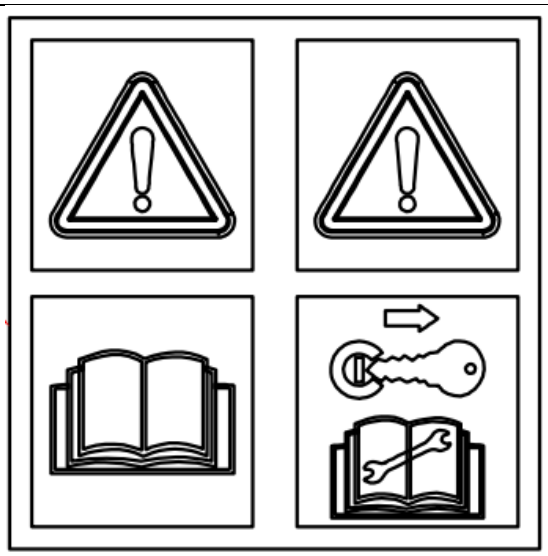


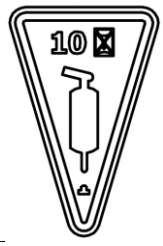
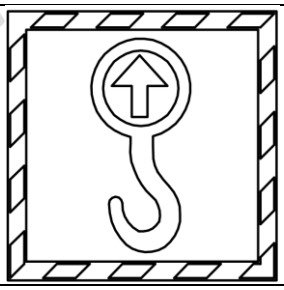
Figure 3.11.2: Labels on the Machine

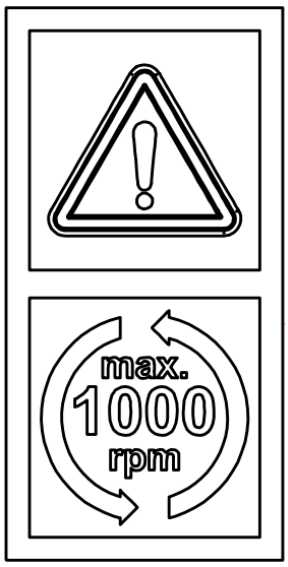
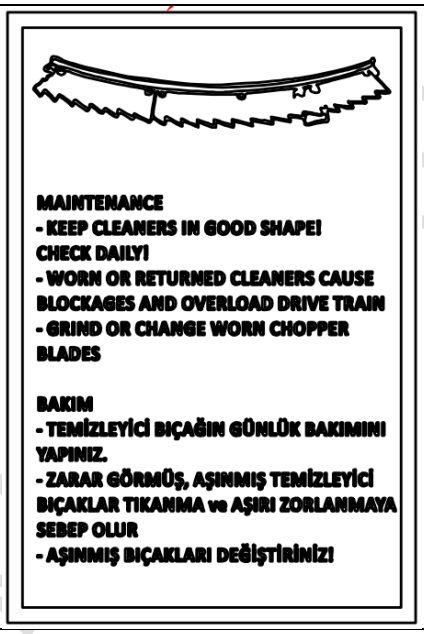


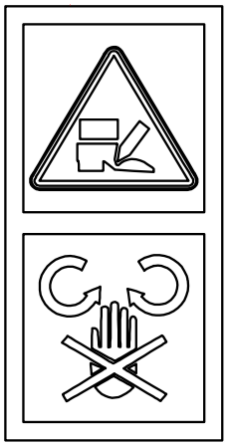
1	KE 125	KE 125 Row Independent Maize Chopper's Label
2		Wait for the machine to stop completely before touching the operating parts of the machine.
3		
4		Your hand may jam between moving parts.

5		Don't approach the machine while the machine is running.
6		Final quality control has been done.
7		Use protective equipment.
8		Sharpen the fan blades only with grinding stone. The chopping disc cover must be closed. Use protective equipment (gloves, glasses)
9	www.kayhanertugrul.com.tr	KAYHAN ERTUGRUL MAKINA web address label
10	KAYHAN ERTUĞRUL MAKİNA	KAYHAN ERTUGRUL MAKINA logo

11		Read the manual before using the machine. Before servicing the machine, turn off the engine and remove the ignition key.
12		Hydraulic pressure Max. 210 bar Washing water: Maks. Pressure 80 bar Maks. Temperature 50 °C
13		Stay away from the rotating pieces. Don't climb on the machine.

14		Attention Being in the work area is dangerous and prohibited. Stay away from the positioning area when switching the machine to side usage. Make sure that you stay on flat surface when switching the machine to side usage. Caution! Positioning the machine on a sloped surface changes the center of gravity of the machine. Do not stand beside the machine during sharpening blades. Consider traffic rules and regulations in traffic.
15		Apply grease after 10 hours of operation.
16		Apply grease after 10 hours of operation.
17		Do not touch the working parts of the machine.
18		Machine hanging points

19		CAUTION! Use only friction shaft.
20		Tractor tail axle rotation Max 1000 rpm
21		Maintenance - Maintain cleaning blade daily. - Damaged, worn cleaner blades cause clogging and excessive force. - Replace the worn blades!

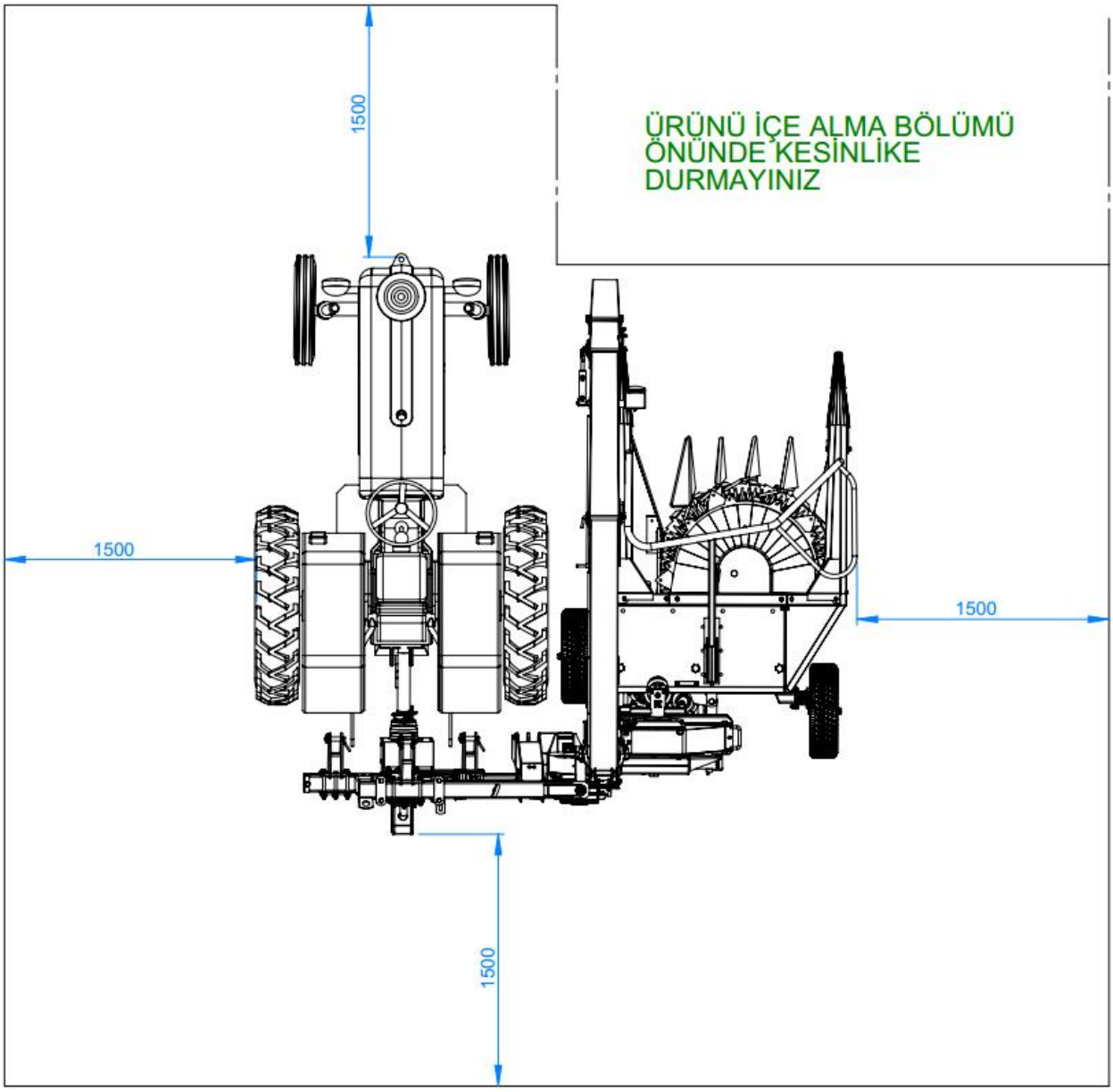
22		Stay away from the cutting blades.
23		Tighten the blades bolts to 130 Nm.
24		CAUTION 1- Regularly maintained and sharpened blades reduce fuel consumption and increase cutting quality. 2- After the grinding is completed, the chopper blade must be adjusted. 3- Chopper blades: for propeller adjustment, loosen the locking spring and place the locking lever in the groove on the setting disc. Turn the propeller counterclockwise to the fixed blade. Then complete the setting by turning 1/8.

3.12. Danger zone

While the machine is in operation, do not approach the machine more than the distances given in Figure 3.12.1 below. Otherwise you can cause serious business accidents.

Caution! Never stand in front of the machine section that takes the product in.

Figure 3.12.1: Hazardous Area Measures



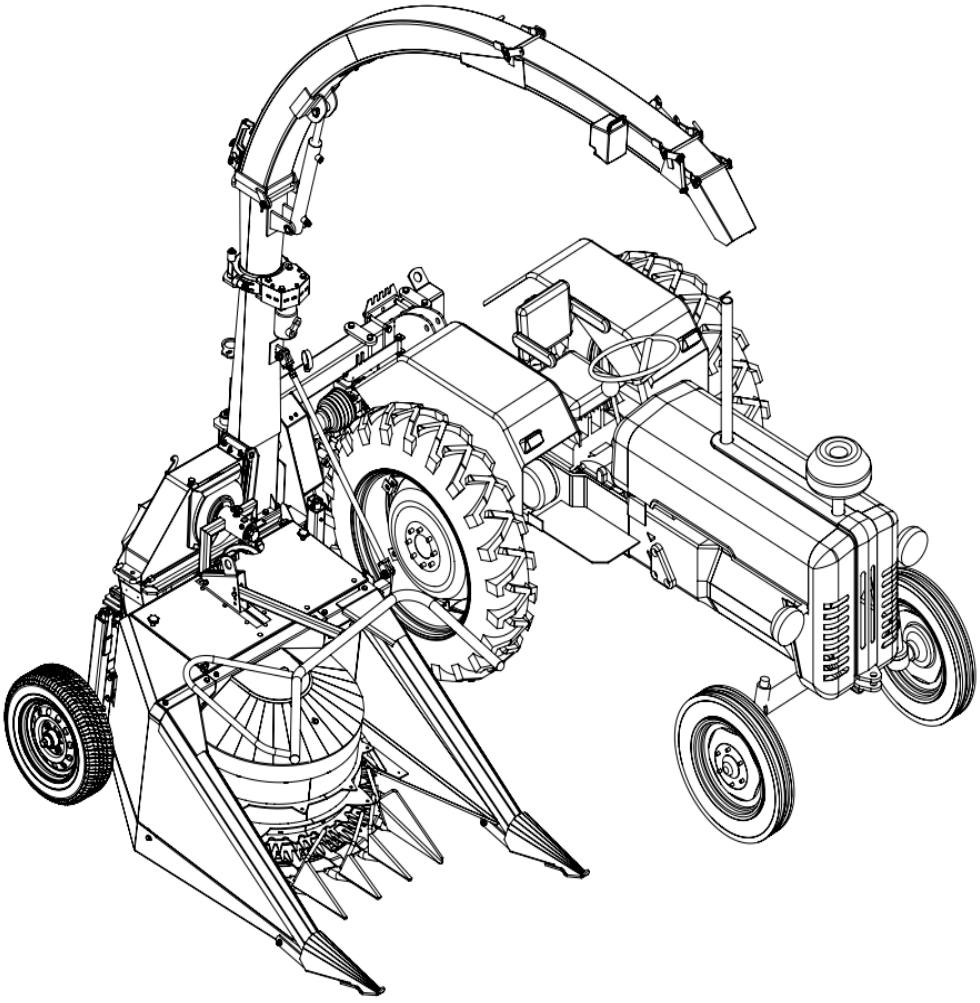
4. MACHINE OPERATING INSTRUCTIONS

4.1.Mounting

The machine is designed to be able to run from the side (when the machine is in the open position) and tractors with the front PTO feature (when the machine is in the closed position) by connecting behind the tractor. In addition, when the machine is in the closed position, it can also be used as hanging behind by turning back with the tractor. The machine must be transported closed in all cases when traveling on the road.

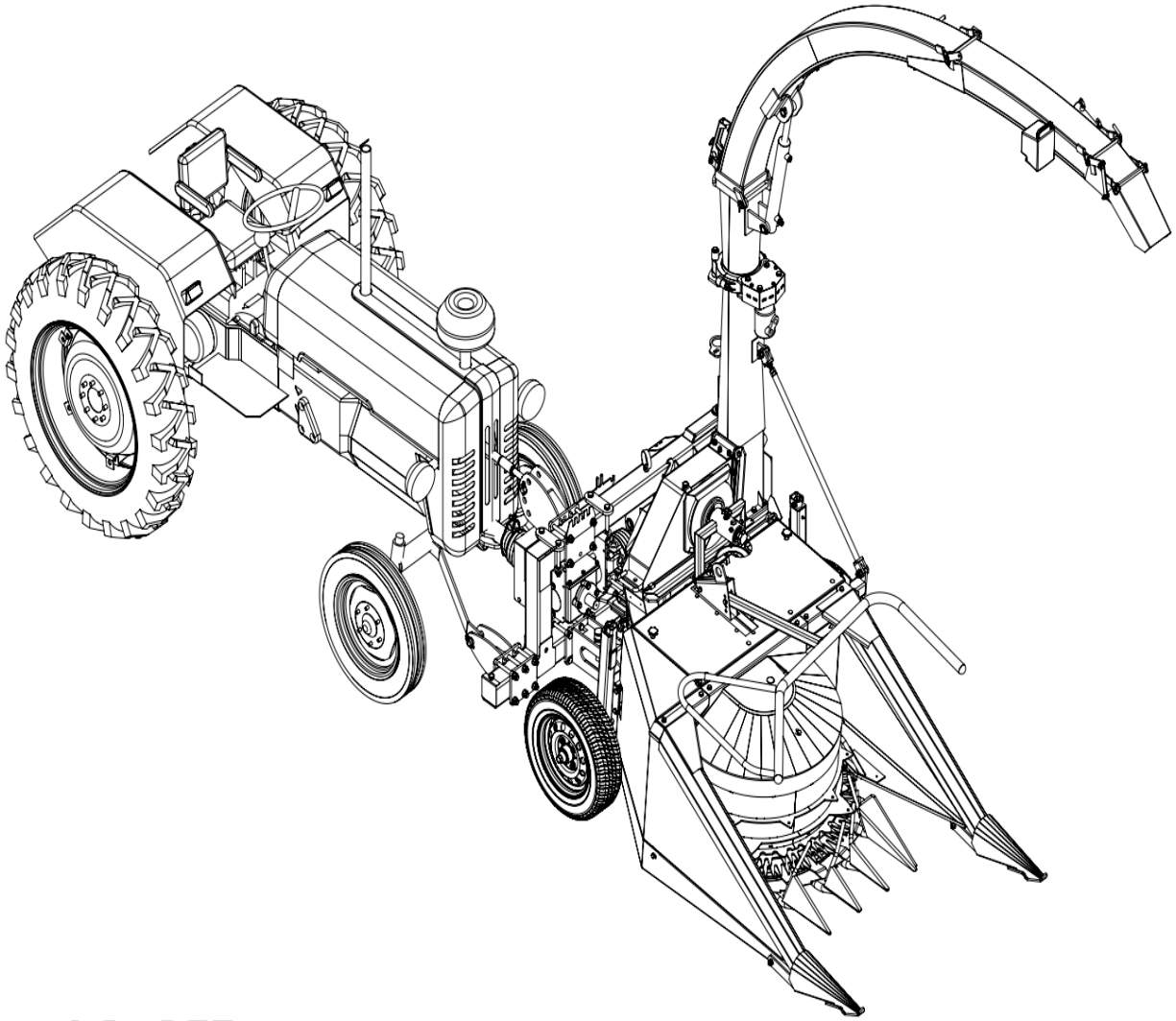
If the machine is to be used with side suspension, connect your machine to the tractor via three suspension systems. If the machine is in the on position, turn it off and move it to the area to be shaped in off position. Stop the tractor tail axle, stop the engine, bring the machine to the open position and connect the transmission shaft between the gears. Make the shaft connection to the machine tractor tail axle. You can silage the cutaway area without depending on the row. The view of the machine with side suspension is shown in Figure 4.1.1.

Figure 4.1.1: Side Mounting



If the machine is to be used with the front suspension, connect the machine to the front three suspension system of the tractor, stop the tail axle, stop the engine, connect the transfer shaft to the tractor front PTO tail shaft. You can silage the cutout area independent of the row. The visual appearance of the machine with front suspension is given in Figure 4.1.2.

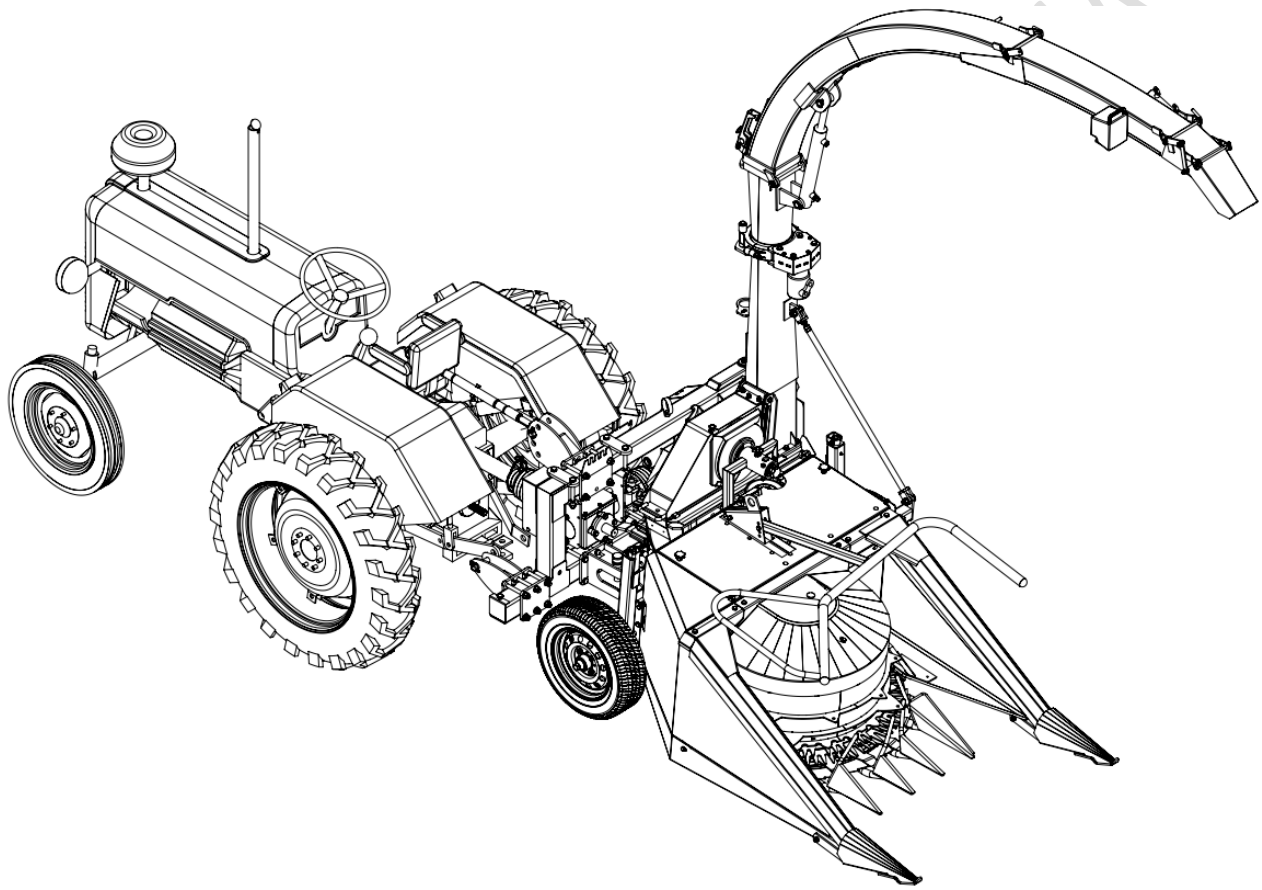
Figure 4.1.2: Front Mounting



If the machine is to be used from behind, connect the machine to the tractor via three suspension systems. If the machine is in the on position, turn it off and move it to the area to be shaped in off position. Stop the tractor tail axle, stop the engine, make the shaft connection to the tractor tail axle when the machine is in the closed position. You can silage without being dependent on the row in the cutaway area. The visual appearance of the machine rear suspension is shown in Figure 4.1.3.

Note: Mowing can be performed by turning the tractor back on while the machine suspension is in the rear position.

Figure 4.1.3: Rear Mounting



Note: Change the machine's open-close position on the flat surface. This allow you to make connections easier.

Special safety precautions

In addition to general safety precautions, other special safety precautions are also necessary for row-independent maize choppers.

The general safety precautions described apply to all maintenance, collection, repair and connection operations:

- Make the machine completely immobilized.
- Turn engine off
- Pull the ignition key.
- Protect your tractor and maize chopper against rolling danger!

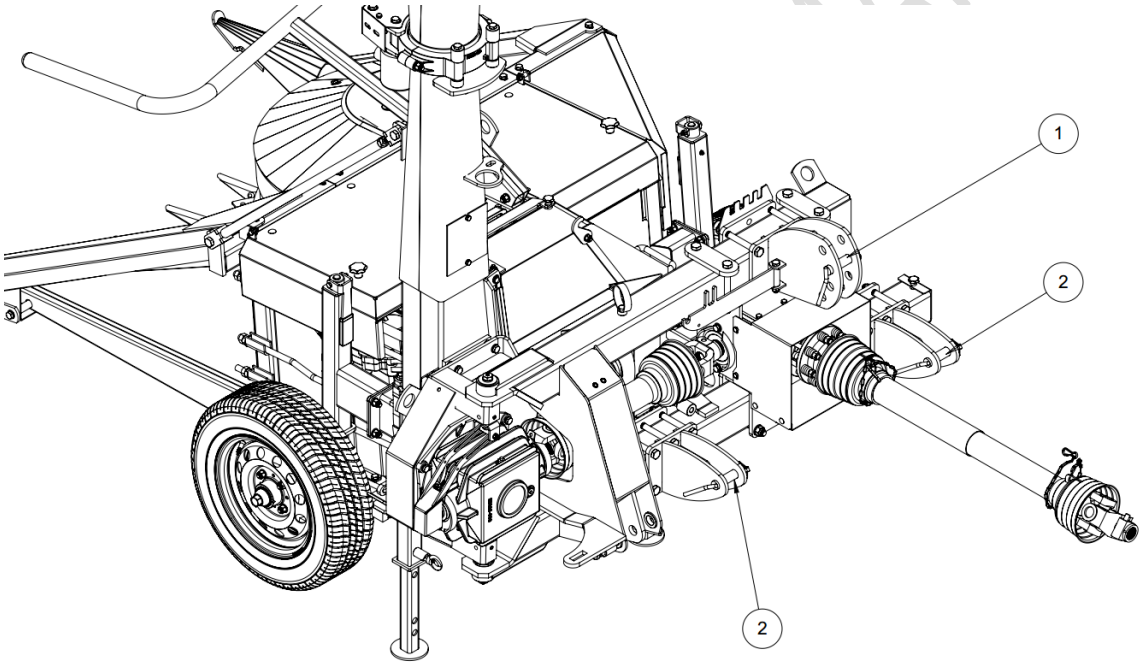
During operation, leave a suitable safe distance on all moving parts of the maize chopper. This is especially true for the cutting drum Remove hydraulic hoses only when the PTO is off and the engine is stationary.
Never stay in front of the machine mower unit!
If dangerous conditions arise, close the PTO immediately and immobilize the maize chopper. Shut-off the engine, remove the ignition key and disconnect the 12 V supply!
Never let the maize chopper run unless there's someone on the tractor!
Row independent maize chopper 1000 r.p.m. Can be operated with PTO speed.
There is a risk of injury from cutting blades in the cutting system!
Set the direction of the blow pipe and the gap for throwing into the filling area.
Never feed the mower manually.

4.2.Connection to tractor

Way of connection of row independent maize chopper to tractor;

The connection system of the row independent maize chopper is compatible with the category II, 3-point suspension system. In figure 2, levers numbered 2 are connected to tractor hydraulic levers by means of pins. Connection of the upper suspension lever to middle lever is shown by number 1. Adjust middle lever tension and side lever tensions. The parallelism of the machine to the ground is adjusted with the levers. If the machine is not operated, it must be transported in closed position.

	Sliding upper and lower suspension connections. In case if it doesn't fit to tractor category 2, it can be assembled by sliding. However, it is necessary to install it by providing weight balance on a flat surface.



Picture 2: Connection to the tractor

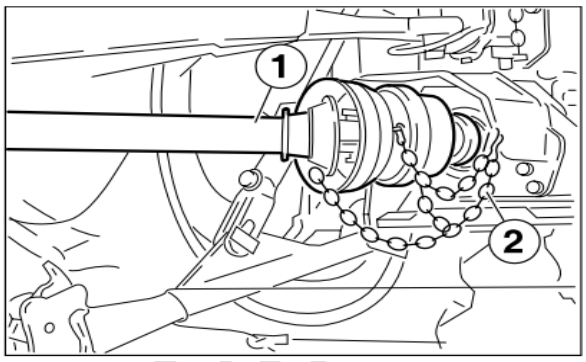
NOTE : The above mentioned category II describes the three point suspension system which is connected to the power of the tractor.

Category	HP Tractor
0	Up to 20
1	From 20 to 45
2	From 40 to 100
3	From 80 to 225
4	180 +

⚠	Check the maximum draw power that the tractor allows or supports!

4.2.1. Connection of PTO shaft

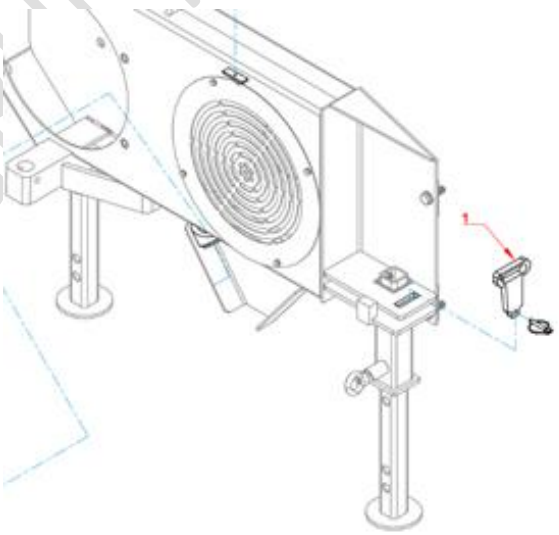
In Figure 3, push the PTO shaft (indicated by No.1) to the tractor shaft. The safety mechanism must be interconnected (see the operating instructions provided by the PTO shaft manufacturer). Check the PTO shafts protection (shown by number 2) holding the chains.



Picture 3: PTO Shaft

4.2.2. Connection change from rear to side

Attach machine to tractor 3 point suspension system and lift. Remove the lock bolt No.1 shown in Figure 4. Rotate the machine about its own axis and fit the lock bolt in the proper position.



Picture 4: Lock bolt

4.3.Road Drive

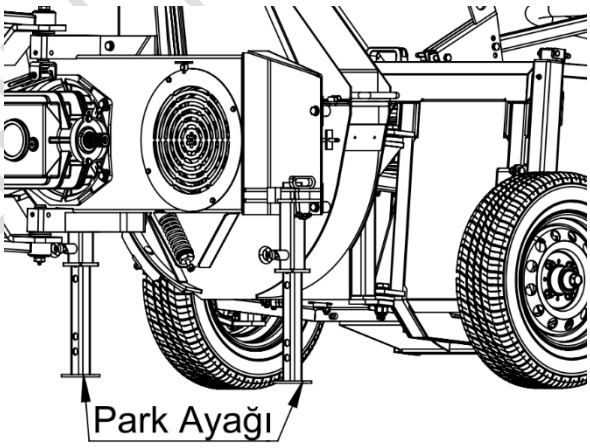
⚠	• Driving on public roads is allowed only if the maize chopper is closed and locked. • If the machine does not have a braking system, the weight of the tractor must be at least equal to the machine's empty weight. The empty weight of the machine is indicated in the 'Technical Data' section. • Maximum allowed speed: 20 km/h • Carriage of passengers is prohibited. • Check the road safety of the machine before leaving the public roads. Check the lighting elements and tires, make sure that the protective equipment is safe, make sure the lock bolt is locked! • Before you start, make sure you have an excellent field of view on the tractor and maize chopper! • When traveling on public roads, the machine must definitely be in the off position. It is strictly forbidden to travel while the machine is in the side position.

4.3.1. Park Stand

Before leaving lift the Park stand up.

Take the park stand to the upper position and secure it with the pin from the appropriate hole.

The Park stand is shown on Picture 5.

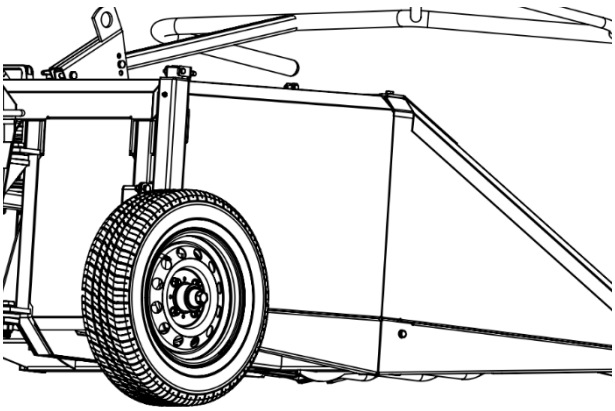


4.3.2. Wheel Height Adjustment

The wheels must be lifted up before leaving.

Raise the wheel by turning the arm on the wheel profile clockwise.

The image of the wheel height adjustment is shown in Picture 6.



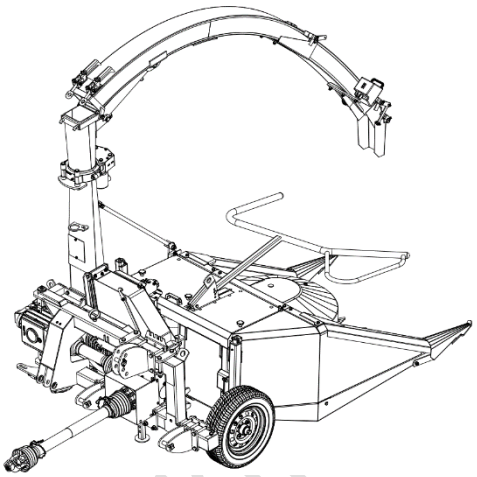
4.3.3. Machine Road Position

If the machine is in the open position, it must be closed before leaving.

Place the machine in the closed position, insert the lock bolt and secure it with the pin.

The image of machine in the closed position is as shown in Picture 7. For lock bolt see Picture 4.

Lower the chute and take precautions to avoid it's turning

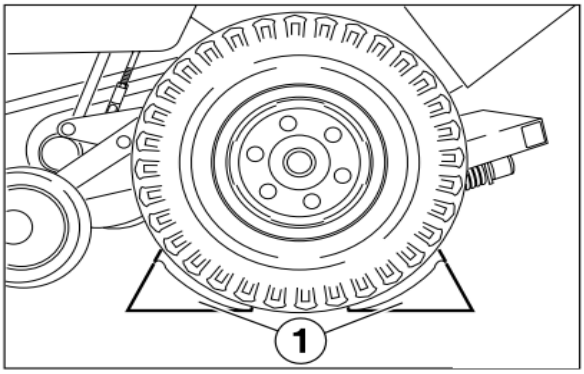


Picture 7: Machine Road Position

4.4.Removing machine from tractor

Park the maize chopper on a tight, flat surface. Put the wheel wedges under the wheels as shown by number 1 in figure 8, so that the machine does not move. Wedges must be found in both parts of the machine.

Take the machine's parking stand (Figure 5) in the down position and secure with the pin. Move the balance wheels (Figure 6) to the down position. Lower tractor hydraulic levers. Remove the three suspension system pins and separate the machine from the tractor.

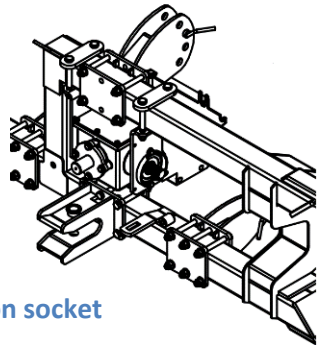


Picture 8: Wedge Placement

⚠	• Always park the silage machine on a hard, flat surface. • If parked on soft ground, increase the parking surface of the park stand. Put a wedge underneath • Use wheel wedges to avoid rolling danger of the maize chopper before unscrewing. • Be careful when you lower the parking stand on the ground! • There is a risk of collision! • When removing the hydraulic hoses, reduce the pressure on the hydraulic system. • Remove PTO shaft only when engin is off. • Remove the ignition key.

4.5.Trailer Connection

The connection of the transport trailer to the machine is provided by the trailer connection socket and pin on the machine. The trailer connection socket is shown in Picture 9



Picture 9: Trailer connection socket

5. USE OF THE MACHINE

5.1.Special safety precautions

In addition to general safety precautions, other special safety precautions are also necessary for row-independent maize choppers.

	The general safety precautions described apply to all maintenance, collection, repair and connection operations:<t0/><t1/> • Make the machine completely immobilized. • Turn engine off • Pull the ignition key. • Protect your tractor and maize chopper against rolling danger! • During operation, leave a suitable safe distance on all moving parts of the maize chopper. This is especially true for the cutting drum<t4/><t5/><t6/><t7/> Remove hydraulic hoses only when the PTO is off and the engine is stationary. • Never stay in front of mower unit ! • If dangerous situations arise, close PRO immediately and immobilize the maize chopper. Shut off the engine, remove the ignition key and disconnect the 12V feeding! • **Never let the maize chopper run unless there's someone on the tractor!** • Row independent maize chopper 1000 r.p.m. Can be operated with PTO speed. • There is a risk of injury from cutting blades in the cutting system! • Set the direction of the blow pipe and the gap for throwing into the filling area.

5.2.Settings Before Starting Work

Before you start to work, check and fulfill the following:

- Parallelism of machine to ground
- Machine height from the ground
- Shaft connections
- Hydraulic hoses and connection points
- Machine oil level

5.3. Driving Direction

The independent mowing technique of KE 125 Row Independent Maize Chopper allow to drive in any direction.

If the product is in the oblique position, the mowing can be made according to the most suitable result can be obtained by trial according to the direction of the product.

Note: The yield is higher when mowing direction is reversed to direction of product. However, it will be useful to try other ways.

5.4. Driving Speed

Driving speed should be adjusted relative to plant type, product efficiency and capacity of tractor.

If the product is short and inefficient, it will be better to increase the speed of driving. Otherwise, the machine will not work properly because the feed organs are not filled with enough product.r.

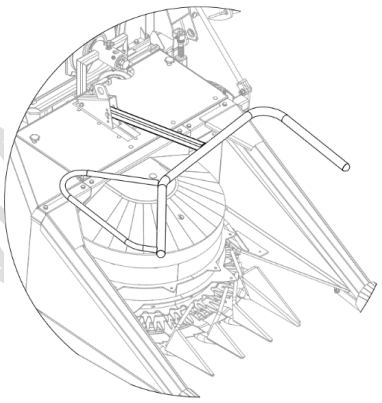
5.5. Working with Blind Blade

Never operate the machine with blind blades. When the machine works with a blind blade, the efficiency decreases, fuel consumption increases, and chopping quality decreases. In addition, working with a blind blade also causes damage to the machine.

5.6. For short corn harvesting

If the size of the corn to be harvested is short, the upper routing pipe at the front should be placed to the lower positions. The upper routing pipe is shown in Picture 1.

For short corn harvesting, the driving speed must be high to ensure good crop flow.



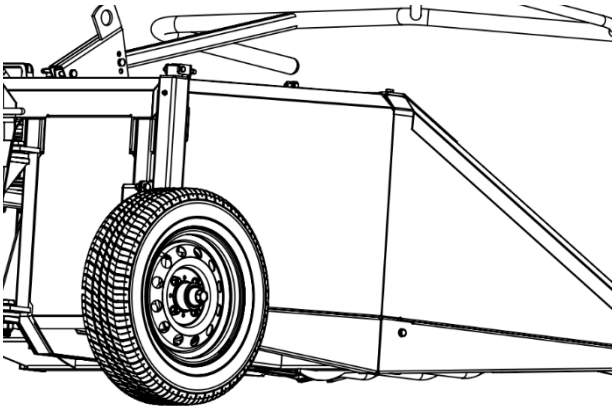
Resim 10: Yönlendirme Borusu

5.7. Wheel Height Adjustment

During the harvesting the mower should be parallel to the ground. This parallelism can be achieved by moving the wheel up and down.

To move the wheel down, turn the lever on the wheel profile counterclockwise and turn clockwise to move it up. The wheel image is given in Picture 11.

If the position adjustment is not sufficient with the wheel, adjust the center lever and the hydraulic side bolts so that the machine is parallel to the f



Picture 11: Wheel Adjustment

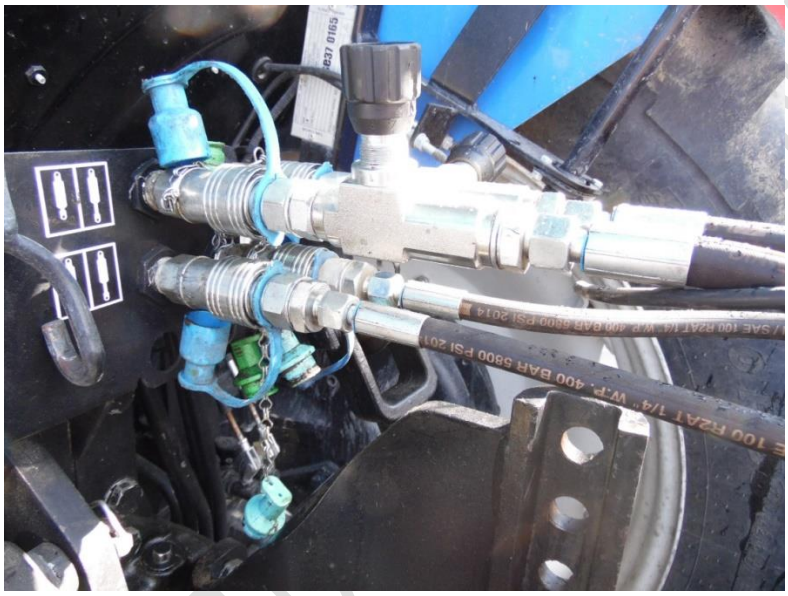
5.8. Choot Blockage

⚠	When the mower unit is blocked inside the choot or a foreign body is being searched; • Stop all mechanics, • Stop the engine and remove the ignition key! • Wait for all moving parts to stop. • Rotate the cutter disk backwards manually and provide removing of object.

5.9.Hydraulic hose connections

The tractor connection of the hydraulic hoses is done as shown in Figure 12. The speed of the system can be adjusted by the flow throttling valves located in the hydraulic hoses. The hose with flow restrictor valve from the hydraulic valve and the hose with flow restrictor valve from the hydromotor are pressure and return hoses.

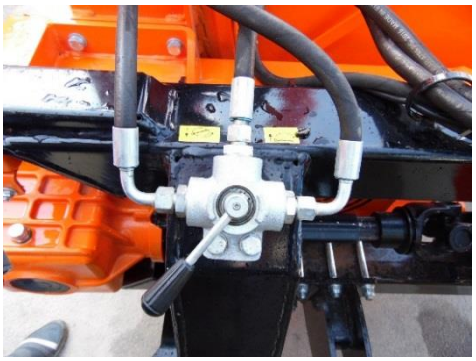
Likewise, one of the two hoses coming from the router is pressure hose, other one ise return hose. Connect according to these groups.



Picture 12: Hydraulic hose connections

5.10. Chute Position Setting

The rotation of the chute is provided by means of the hydraulic valve shown in Picture 13. When the lever is turned clockwise, the hydro motor is activated. The tractor can be turned to the left or right by lift levers. The chute lift cylinder will be activated when the hydraulic valve position is turned clockwise.



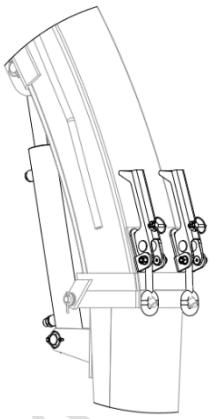
Picture 13: Hydraulic Valve

⚠	Be careful when turning the chute; • Be sure there are no any human or animal around the machine. • As the chute is long, be careful not to hit the surrounding objects when turning. • When turning the chute, hoses connecting to the cylinder lifting the chute and three routers should not be tighten. Other way these hoses can be damaged. • Protect yourself from pressurized oil, use personal protective equipment.

5.11. Lifting and Lowering the Chute

The lifting and lowering of the Chute is accomplished by a single action hydraulic cylinder which takes its power from the tractor. Turn the hydraulic valve position shown in Picture 13 to the left. The chute lift cylinder becomes active. The chute can be lifted and lowered by moving the lift lever which is connected to the tractor.

During the commissioning lift the chute. Attach the clamps shown in Figure 14 and prevent the chute from coming down. After fixing turn the hydraulic valve lever in Picture 13 to the right, so that the hydromotor that is rotating the chute will be active.

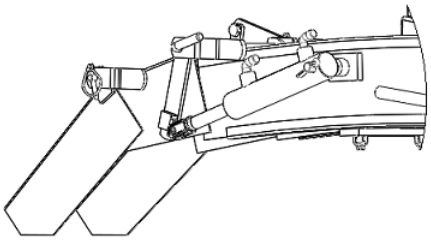


Picture 14: Chute

When the work is finished, remove the clamps and lower the chute. The chute must be in the down position during transport of the machine.

5.12. Chute End Router Setting

End router is controlled by lift levers on the tractor. If the router is lifted upwards, the product is throwed further. When it is down, the product is thrown closer. It should be adjusted according to the area to be discharged. The end router image is shown in Picture 15.

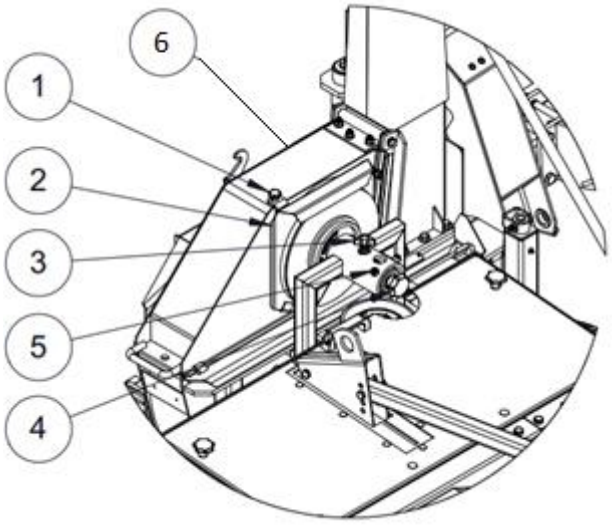


Picture 15: End Router

6. SETTINGS AND OPERATION

6.1. Sharpening of Cutter Fan Blades

Loosen lever 3 shown in Picture 16, withdraw grinder by turning lever 4 clockwise, remove lever 1 and release cover 2. Lift the cover 2 up and open the part where the blades are. Run the chopper disk at approximately 400 rpm. (When the tractor tail axle speed is approximately 340 rpm, the chopper disk's speed is 400 rpm.) Turn lever 4 clockwise to make the grinder approach the blades. The grinder will start turning when it comes into contact with the blades. When the grinder comes in contact with the blades, stop turning the lever 4. The blades will start to sharpen. When the sharpening of the blades starts, tighten the lever 3 to prevent the grinder from moving back and forward. During the sharpening make sure that the grinder touches all the blades. You can adjust the parallelism of the grinder using bolts 5. After sharpening, carefully retract the grinder.



Picture 16: Grinder

Close cover 2, place lever 1 and fix the lid. Move the grinder forward to make it face the cover 2. Tighten lever 3 and fix the grinder.

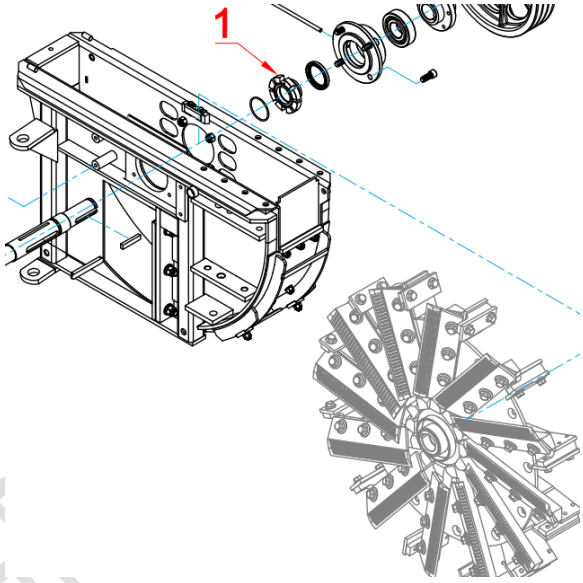
Note: The grinder is sensitive to severe impacts. Never interfere with the sharpening stone and mechanism with hammer, stone, and other hard objects. The cover 6 in Picture 16, should never be opened during blade sharpening.

6.2. Cutter Blade-Fixed Blade Distance Adjustment

As the cutting blades are frequently exposed to sharpen, the distance between the fixed blade increases with time. This distance should be 0,4-0,6 mm. For this reason, the setting must be performed.

To make this adjustment, stop the engine, remove the ignition key.

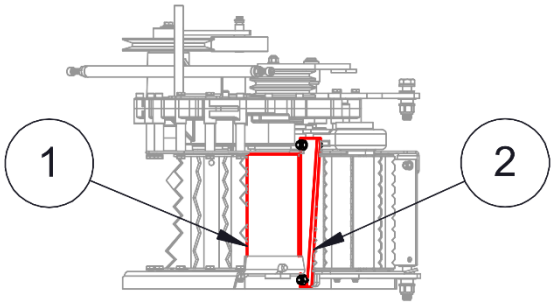
Slowly turn the adjusting nut 1 shown in Picture 1 clockwise. Rotate the fan blades manually to check if the blades have a rubbing noise. In case of rubbing noise, adjust the distance between the cutter blade and the fixed blade to 0.5 mm by turning the nut 1/8 turn counter-clockwise. Once the setting is done, turn the blades again at least one full turn to make sure the blades are not rubbing, make sure there is no rubbing!



Picture 17: Adjusting Nut

6.3. Scraper Blade Setting

There must be a gap of 0.5 mm between the flat feed roll 1 and the stripper blade shown in Figure 18. Loosen the 2 bolts that connect the blades to the body and adjust the upper and lower sides to be equal to 0.5 mm. Check the gap with the help of a centipede.

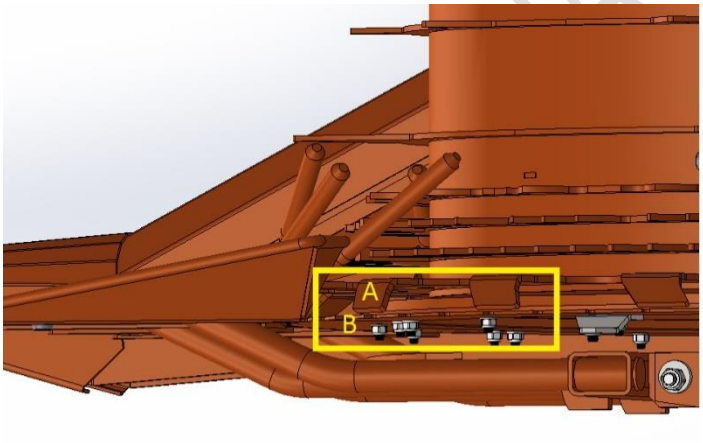


Picture 18. Scraper Blade Setting

6.4.Finger Plates Setting

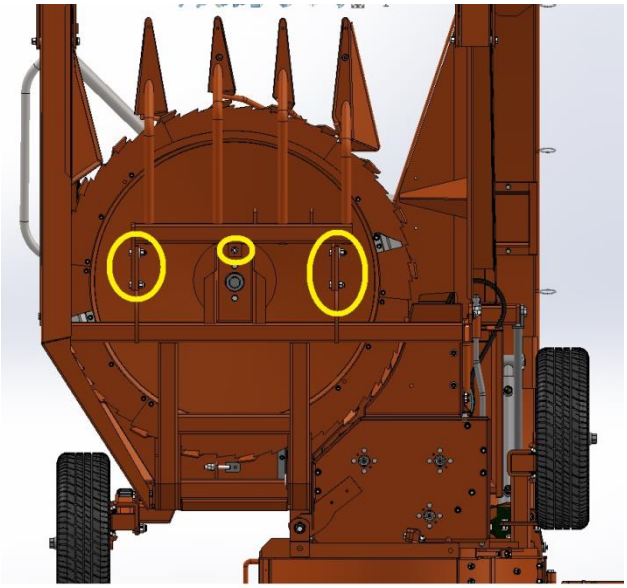
To set finger plate

Picture 18-A shows the setting that must be made for conveying finger plates A shown in the square in order to prevent the cutter blade B from hitting the finger plate during rotation.



Picture 18-A. Conveying Finger Plates and Cutter Blade

In picture 18-B, loosing bolts M12x40 in the big circle, among the nuts on the end of bolts M12x90 in the small circle, to lift it up upper nut should be loosed and lower nut should be tighten. To lower it, loosen the bottom nut and tighten the top nut.



Picture 18-B. Conveying Finger Plates and Cutter Blade

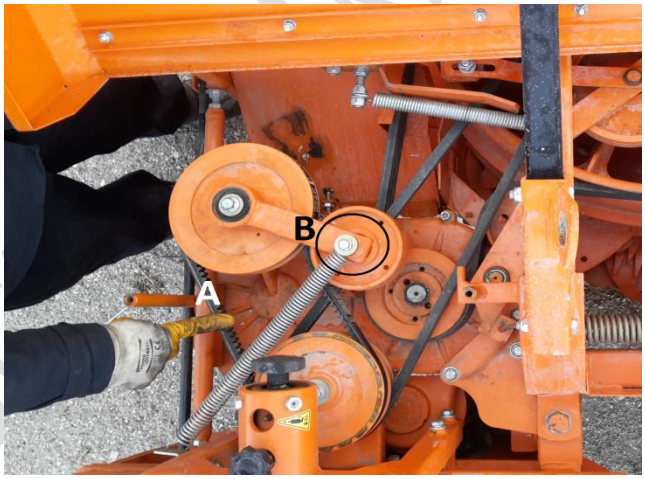
6.5. Belt Setting

For efficiently working, the tension settings of the V-belts must be set appropriately. V-belts must be checked after the first 1 hour of operation of the machine. The tension of the belts can be controlled manually.

To control and change the belts, they opened with 3 plastic handles enclosed in the circle shown in Figure 18-C.

Picture 18-C. Belt Protection Cover

To replace the roller transmission belt (shown in Figure 18D indicated by A), the tension spring is removed by unscrewing the M8x15 bolt indicated by B and the belt is loosened and removed.



Picture 18-D. Belt Protection Cover

⚠	Use the following safety precautions before checking the belt tension; • Stop the machine and make sure all moving parts are stopped. • Stop the engine, remove the ignition key • Use personal protective equipment (gloves) • There is a danger of finger jamming between the belt and pulley. When checking, do not move the pulleys and do not put your fingers between the belt and pulley..

After taking the necessary safety precautions, adjust the belt as described below;

- Open the pulley cover to be adjusted,
- Press one side of the belt with your finger,
- The belts should stretch about 1-2 cm,
- If there is more or less stretching, adjust the belt tensioner,
- Tighten fixing screws.

7. MAINTENANCE

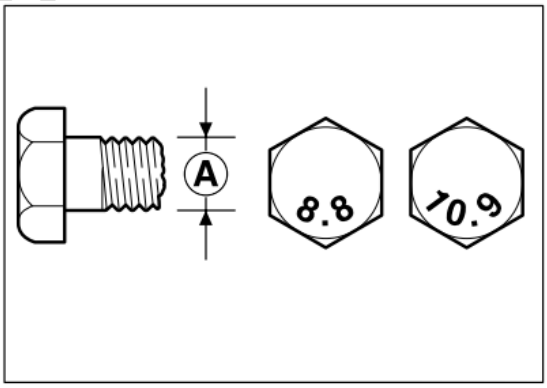
⚠	• For operations such as maintenance, cleaning or repair, the machine must be fixed and the tractor engine must be stopped. The 12V power supply cable must be disconnected. The ignition key must be removed. • The tractor and the machine must be protected against rolling.. • Replace all protective parts after maintenance work is completed. • If any damage is observed by hydraulic oil, immediately go to the nearest health facility.

7.1. General Maintenance Tasks

- Maintenance should be carried out at regular intervals to ensure trouble-free operation of the maize chopper and to minimize wear. This process consists of lubrication with grease and lubrication of parts.
- Check the nuts and screws regularly (about every 50 hours) and tighten with the torque key if necessary.
- Check tire inflation pressure according to usage
- Always check gearbox oil before starting to work.

Table 7.1.1. Tightening Torque Ratings

A / Ø	5.6	6.8	8.8	10.9	12.9
	M_A (Nm)				
M 4		2,2	3,0	4,4	5,1
M 5		4,5	5,9	8,7	10
M 6		7,6	10	15	18
M 8		18	25	36	43
M 10	29	37	49	72	84
M 12	42	64	85	125	145
M 14		100	135	200	235
M 14x1,5			145	215	255
M 16		160	210	310	365
M 16x1,5			225	330	390
M 20			425	610	710
M 24			730	1050	1220
M 24x1,5	350				
M 24x2			800	1150	1350
M 27			1100	1550	1800
M 27x2			1150	1650	1950
M 30			1450	2100	2450



Picture 19: Bolt and Bolt Measurements

The values shown on the table are general values and do not apply to the specific tightening values given in the user manual.

The cut-off safety bolts are designed with a special design. When these bolts are overloaded, they breaks. The broken bolts must be replaced with bolts with the same characteristics.

When replacing any bolts or nuts, they should be replaced with those of the same specification with higher quality. When higher quality bolts and nuts are fitted, they must be tightened according to the torque of the bolts and nuts that are installed in the original. Make sure that the screw holes are clean and that the screws that are inserted go in the normal way, without jamming.

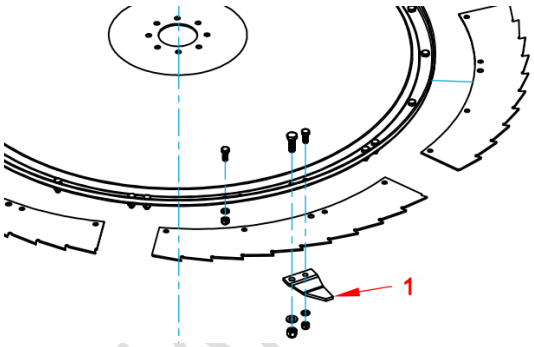
Half of the values in the table are used for the lock nuts.

7.2. Periodic maintenance

7.2.1. Daily Maintenance

There is some maintenance that needs to be done daily after the work is done. These are;

- Mowing drum and leaves, stalk, soil pieces etc. that accumulate around it should be cleaned.
- The blades (scraper) under the drum must always be checked. (Figure 20) Uncleaned or blinded cleaning blades cause clogging and force the system.
- Sharpen disc blades several times a day.
- The tightness of the M12 chopper blade fixation bolts should be checked to be 130 Nm with the torque wrench.



Picture 20: Cleaner (scraper) Blade

- The distance between the chopper disc and the fixed blade must be adjusted centrally. Even if sharpening is not done, this setting should be done at least twice.
- Drum blades must be checked, Foreign materials must be removed.
- The opposed (fixed) blade of the chopping disc should be visually inspected.
- Lubrication must be done according to the lubrication table. Check the gearbox and hydraulic system for oil leaks.
- Tichten all bolts again.

7.2.2. Weekly Maintenance

- Tighten all bolts on the chopper disk
- The fixed blade against the chopper disc should be checked.
- The power transmission arrangement (Shafts, Belts, Pulleys) should be checked.
- Lubrication must be done according to the lubrication table.

7.2.3. Yearly Maintenance

- Clean the machine and prepare the storage conditions.
- Change gearbox oil. The amounts of oil should be in the appropriate level.
- Check all parts for wear. Replace worn parts with original Kayhan Ertuğrul Machine spare parts.
- The belt pulleys and shafts should be checked.
- Check the hydraulic hose and connections.
- Check the feed rollers, the crushing rollers and their protection covers.

7.2.4. Maintenance and Control at the Beginning of the Season

- Read the Operation Manual again,
- Lubricate of all lubrication points on the machine
- Operate the machine idle for a while, make sure that there is no abnormality in the sound of the machine, check the heating of the bearings.
- Tighten all the bolts to the torque values. (Chopper blade M12 bolts will be tighten with 130 Nm torque.)
- Check all the blades on the machine.
- Check feed auxiliaries, stem cutter blades and separator tips on drums, replace if necessary.

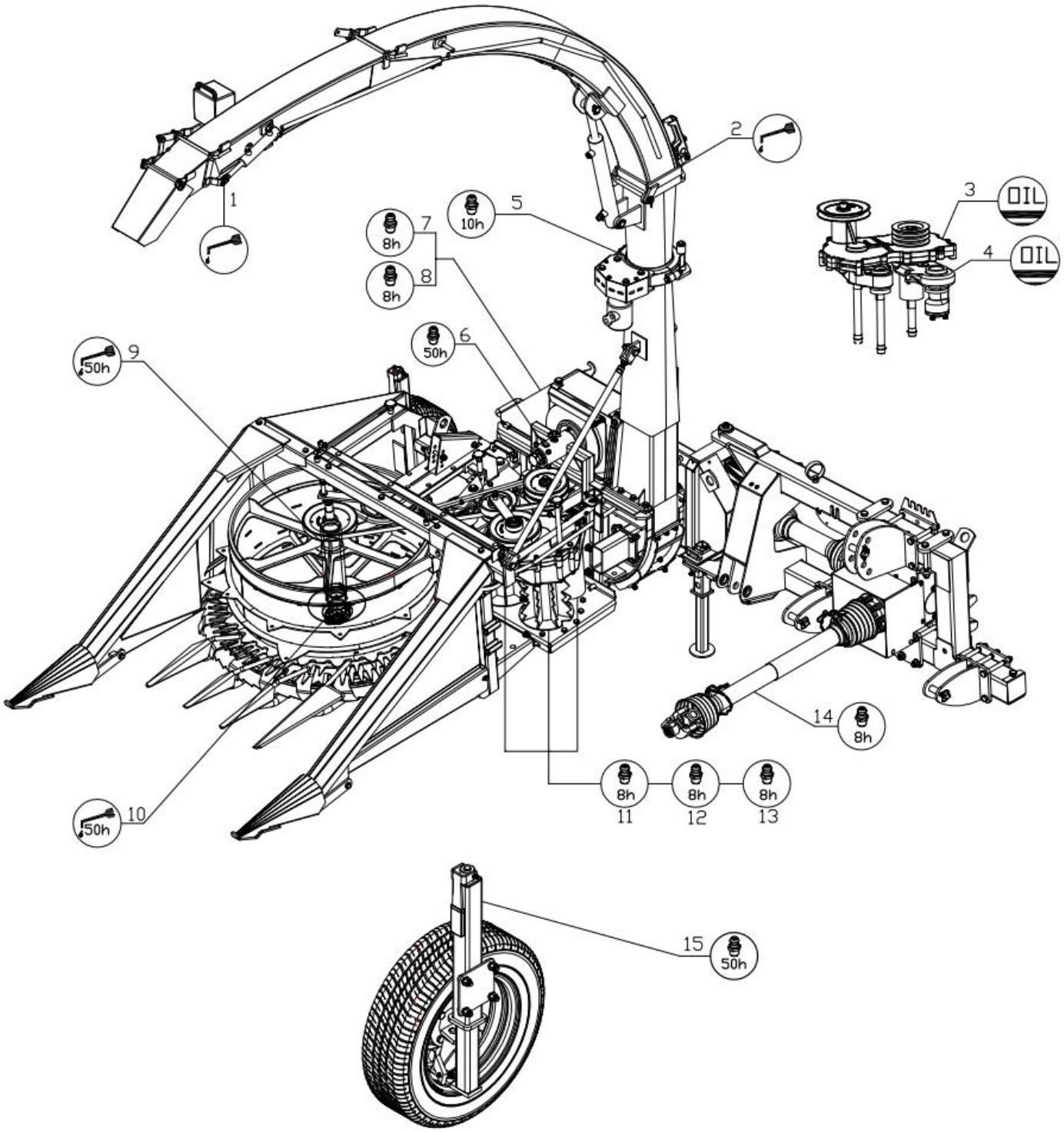
7.3. Other Important Maintenance and Controls

- Tighten the M12 bolts on the chopper disk to 130 Nm with the torque adjustment wrench. Standard M12 torque values do not apply to these special screws.
- Check the drum bearings.
- Make sure all blades and cleaners are adjusted. Replace the blades that need to be replaced with their equals and their opponents, so there will be no imbalance.
- Check the wheel bolts regularly.
- Check the condition of feed rollers and crushing rollers, bearings.
- Provide the control of the last flat feed roller and scraper blade, adjust the gap.
- The opposing blade should be checked daily.
- Make sure that the chopping blades are not blind and correctly assembled. Working with blind knife reduces the quality of mince, increases fuel consumption.
- Set the chopper disc from the center
- Make sure all hoses, valves and fittings in the hydraulic system are in good condition.
- The chute rotation and guide functions must be checked before starting work.

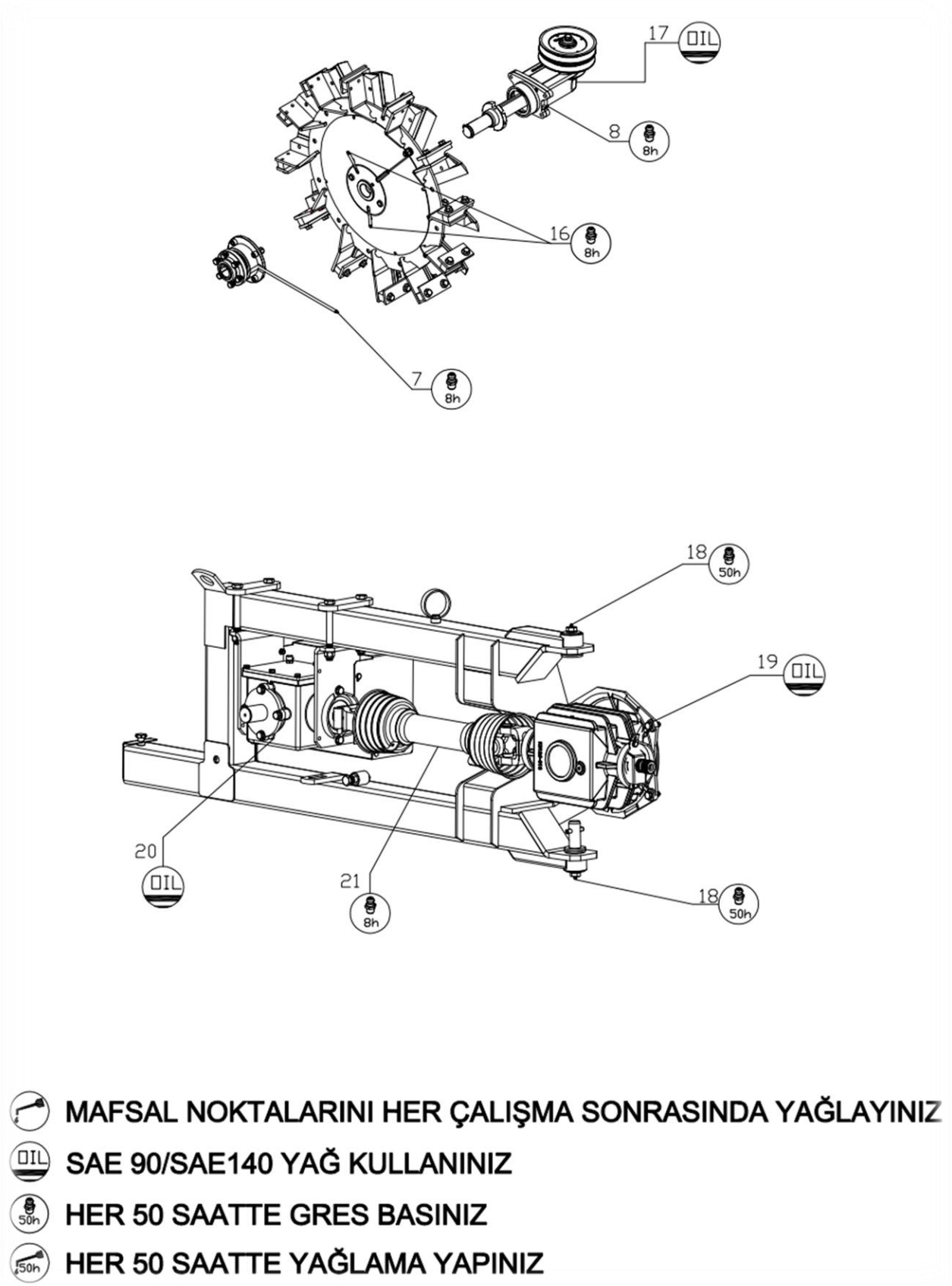
	Do not allow anyone to stay in the rotation area of your machine. Do not move the machine from the closed position to the side position or from the side position to the closed position. Sudden closing and opening may occur due to weight. Perform this operation on a flat surface.

7.4. Lubrication Points

Picture 7.4.1. Lubrication Table



Picture 7.4.1. Lubrication Table



Machine lubrication points and durations are given on Picture 7.4.1. and Picture 7.4.2. . Given values are the values which should be under normal usage conditions.

Lubricators should be checked at every lubrication. Inoperative lubricators should be replaced. Working with faulty lubricators means that lubrication can not be done.

It is beneficial to re-lubricate the machine before the start of the season outside of these periods and at the end of the season when the machine is finished.

The locations of the lubrication points are given below;

1- Guide joints
2- Chute lifting piston joints, chute joints, clamps
3- Roller upper gearbox
4- Roller lower gearbox
5- Chute rotation housing
6- Grinder housing
7- Chopper disk front housing
8- Chopper disk rear gearbox housing
9- Drum upper housing
10- Drum lower housing
11- Feeding roller housing
12- Feeding roller housing
13- Flat roller housing
14- Main shaft
15- Wheel housing
16- Chopper disk housing
17- Front group drive gearbox
18- Rotation axis housing
19- Direction changing gearbox
20- Ana giriş şanzımanı
21- Intermediate shaft

7.5. Protection of machine after en of season

Clean the inside and outside thoroughly before taking the maize chopper to the season end protection. If a high pressure cleaner is used, do not direct the water jet directly to the shaft spots and hoses. Lubricate all lubrication points after cleaning the machine. Do not clean the oil that leaks out of the bearings. This grease mud provides extra protection against moisture.

Do not allow the grinder to come in contact with oil in any way.

Check that all moving parts (such as drums, crushing rollers, chopper fan) move easily. If necessary; Remove it, clean it, refill it, then re-mount it. Replace it with another if necessary. Only use original spare parts of Kayhan Ertugrul Makina Sanayi.

Grease the inner and guard tubes of the main inlet shafts and intermediate shaft. Grease the bearing rings on the lubricating nip line and protective tubing on the cardan joint.

Store the maize chopper in a dry place away from artificial fertilizers and animal stables.

Cover the undamaged parts with anticorrosive material for the damaged paintwork.

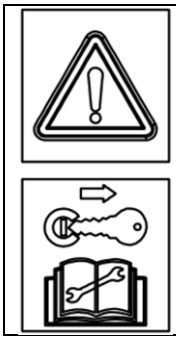
To prevent damage to the rubber, lift the machine with a jack and hang it with the help of wedges (damage to the tire may occur if the machine is left in the same position for a long time). Protect the tires against external influences (oil, grease, direct sunlight).

Complete the necessary repairs immediately after the harvest season. Take out a list of all the necessary spare parts. Systematic work in this way facilitates the operation of Kayhan Ertugrul Makine service and you will be sure that your machine is available in the best condition at the beginning of the new season.

	**Use the appropriate jack stand. Make sure the machine is in a safe position**

8. TROUBLESHOOTING

	• For operations such as maintenance, cleaning or repair, the machine must be stationary and the tractor motor must be stopped. The 12V power supply cable must be removed from the machine. • Protect tractor and machine against rolling • Replace all protective parts after maintenance work is completed. • Avoid skin contact with used oil.

	Before servicing the machine, turn off the engine and remove the ignition key.

	Fault	Probable Cause	Solution
1	Blockage in the chute	Leakage in belts Working at lower speeds	Set belt tension The work cycle should be 1000 rpm
2	Excessive power requirement	Blind blades Cleaner (scraper) incompatibility Blind fixed blade	Sharpen the blades Repalce cleaner plates Replace the fixed blade
3	The chopped product is longer than necessary	Cutter fan blades may be broken The distance between chopping fan-fixed blade may be too long	Check cutter fan blades and replace if necessary Set the chopper blade-fixed blade distance
4	Blockage in the receiving system	The drum may be dirty Pollution and blockage may occur in the receiving rollers.	Clear properly

5	Folding corn stems forward after cutting	Accumulation on separate ends Cleaner breakage	Clean the separator ends Replace cleaner with new
6	Chute doesn't rotate	Hydraulic connection may be interrupted Hydromotor failure	Check the hydraulic hose and connections. In case of hydromotor malfunction, contact authorized service
7	Cut stems' lengths are not the same	Cutter blades under feeding drum may be worn Overspeed	Check blades and change if necessary Decrease driving speed
8	The receiving drum is not spinning	Foreign object jamming Drum belt intake	Remove the foreign object Adjust belt tension
9	The tail axle rotates but the machine is not working	Clutch cam disc intakes Gearbox safety system started	Overload or blockage. Clean the receiving unit, chopper fan and chute. Reduce driving speed
10	Maize cobs and sweetcorns in chopped products are not well chopped	The gap between the cutting blade and the fixed blade is too large Low rate of chopper disk	Adjust the distance between the chopper blade and the fixed blade from the impeller hub Set the tail axle rotation rate as 1000 rpm
11	Shaft fracture	Lifting the machine on turnings while the tail axle is running	Replace shaft

9. SITUATIONS AND EQUIPMENT NOT COVERED BY THE GUARANTEE

Defects arising from damage that may occur due to use of the machine in products which are not suitable for the purpose of construction are outside the scope of the warranty. Suitable crops are: silage maize and various feed crops (alfalfa, rapeseed, beans, sunflower, etc.)

The warranty does not cover any malfunction or damage that may occur due to adjustments and maintenance that the customer must make.

Failure and damage caused by repair and maintenance other than original spare parts and authorized service are not covered by the warranty.

1- TYRE: Damage and failures arising from the use of missing or excess air from the recommended air pressure and the shape of the working ground (stony, rocky and marsh, etc.) are not covered by the warranty..

2- SHAFT: Failures caused by run of the machine out of recommended rotation , such as bending of the shaft caused by running the hydraulic system up or down outside of the parallelism during operation of the tailwheel while the machine is attached to the tractor are not covered by the warranty.

3- BLADE : Damage and malfunctions that may arise from defects of the shape of the land on which the machine is operated (stony, rocky, marsh, etc.), that may occur as a result of foreign matter being jammed inside the machine are not covered by the warranty.

4- ELECTRIC AND MOTOR FAILURE: If the voltage of the tractor power is high or low, malfunctions which is caused by faulty connections to the end or incompetent persons are not covered by the warranty.

5- BEARING, GEAR, BELT AND CHAIN: The warranty does not cover any errors or failures which may result from operating the machine at the lower or higher speed than specified in daily, seasonal grease and oil maintenance or in the manual of the machine. Belts are not covered by the warranty.

NOTES

FIRST RUNNING SAFETY INFORMATION FORM

SAFETY

Most agricultural equipment accidents can be avoided by taking a few simple safety precautions.

- Do not perform cleaning, lubrication or any other adjustments on the machine while the machine is in motion (moving) or when the tractor's engine is running. Listen and see if there are any rotating parts.
- Do not engage the coupləng unless everyone is away from your machine and you are sure that there are no repair kits on the machine.
- Do not work around the machine with loose-fitting clothes that can be jammed in moving parts.
- Do not feed manually while using the maize chopper.
- Do not put fuel in the fuel tank while the engine of the tractor that drives the machine is running.
- Do not use the machine without all the enclosures in place.
- Do not allow anyone to be on the machine..
- Do not disconnect any connections to the machine while it is running.
- Do not approach the machine for at least 2 minutes after stopping the machine. Wait for all the parts to stop.

Staff Qualification and Training

Those who use, care for, or repair machinery should be warned against the risks they may encounter during machine operation and must be trained first. The operator should be responsible and observe the personnel. If the staff lacks the necessary knowledge, they should immediately take the necessary training and explanation. The operator must ensure that the contents of this manual are fully understood by the personnel. Repair work not described in this manual should be performed only by authorized service personnel.

Failure in Implementing Safety Measures

If safety precautions are not taken into account, personal injuries and environmental hazards as well as damage to the machine may occur . Failure to observe safety precautions may result in the failure to take into account the entire claims for damages.

For example, if the safety precautions are not followed, the following hazards may arise:

- Risk of human error due to faulty work area protection
- Loss of important features of the machine
- Failure to implement recommended methods for repair and maintenance
- Risks due to mechanical and chemical effects
- Environmental damage due to hydraulic oil leakage

Work safely and consciously

- Comply with the safety precautions in this manual, existing accident prevention rules and any internal work, as well as the operating and safety rules set by the operator.
- Safety precautions and accidents prevention regulations of responsible professional connections must be observed.
- Safety precautions provided by the vehicle manufacturer should also be observed.
- Applicable traffic rules must be observed on public roads.

PROPER USE

KE 125 Row Independent Maize Chopper is designed only for standard agricultural use. It is not compatible with any other intended use. The manufacturer is not responsible for any damage caused by a use that is at the operator's own risk.

Warranty Terms

The warranty is not cover the faults caused by the customer's failure of the settings and maintenance that should be done and in case of malfunctioning due to the settings to be made.

Non original Kayhan Ertugrul spare parts and defects and damages caused by this usage are not covered by warranty.

It is presumed that the consumer have been read all the rules written in the user manual of the machine.

General Technical Information

- Road driving is allowed only if the machine is off.
- Maximum allowed speed: 20 km/h
- For non-brake machines, the empty weight of the tractor should match the permissible specifications, or at least it should be compatible with the maize chopper.

Minimum Power Requirement :80 HP
Tail axle rotation : 540 - 1000 rpm max.

MACHINE INFORMATION			
Machine Name:			
Year of production :			
Chassis number :			
AUTHORIZED SERVIS INFORMATION		**CUSTOMER INFORMATION**	
Service Name:		TR Identity No. :	
		Name &Surname :	
Contact No :		Contact No :	
Address :		Address :	
Statement		Statement	
SEAL AND SIGN:		SIGN :	

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