Jordfräs – LFM 105 / LFM 125

Svensk manual – montering, drift, transport och underhåll

Tillverkare: FPM Agromehanika, Boljevac, Serbien

Innehåll

1. Om manualen

Denna manual gäller jordfräsarna LFM 105 och LFM 125. Den beskriver säker användning, montering, drift, transport och underhåll.

Vissa tabeller/figurer och reservdelsbilder återges som referensbilder från originalmanualen i slutet av dokumentet (kan innehålla engelska).

2. Säkerhet

Följ alltid säkerhetsanvisningarna. Olyckor sker oftast vid drift, underhåll eller transport när rutiner inte följs.

2.1 Grundregler

- Läs igenom hela manualen innan jordfräsen används första gången.
- Använd åtsittande kläder och lämplig skyddsutrustning (glasögon, handskar, skyddsskor).
- Kontrollera före start att skydd, bultar och fästdetaljer är korrekt monterade och åtdragna.
- Håll händer, fötter och kläder borta från roterande delar. Ingen får vistas i arbetsområdet.
- Stäng av motor, ta ur nyckel och koppla ur kraftuttaget innan justering/smörjning/rengöring.
- Vänta tills alla roterande delar stannat helt innan du närmar dig jordfräsen.
- Transportera aldrig passagerare på traktor eller redskap.
- Använd endast original- eller av tillverkaren godkända reservdelar.

2.2 Till- och frånkoppling

- Spärra hydraulreglage före till- och frånkoppling så att oavsiktlig lyftning/sänkning förhindras.
- Kontrollera kompatibilitet mellan traktorns trepunktskategori och jordfräsens fästen.
- Stå aldrig mellan traktor och redskap vid användning av externa hydraulreglage.
- Säkra redskapet i transportläge före körning på väg.

2.3 Kraftöverföringsaxel

- Använd endast godkänd kraftöverföringsaxel.
- Skydd och kedjor ska vara monterade och oskadade; skyddet får inte rotera med axeln.
- Montering/demontering får endast ske med urkopplat kraftuttag och avstängd motor.
- Kontrollera röröverlappning och korrekt längd i både arbets- och transportläge.
- Håll arbetsvinkel så liten som möjligt. Byt skadade komponenter omedelbart.

3. Produktbeskrivning och användningsområde

Jordfräs LFM 105 / LFM 125 används för jordbearbetning och för att skapa en jämnare såbädd. Den drivs av traktorns kraftuttag och kopplas i trepunktsfäste.

4. Tekniska data

Exakta modell- och specifikationsdata (arbetsbredd, vikt, kraftbehov, varvtal, moment och dimensioner) finns i referensbilderna i slutet av manualen.

5. Montering och inställning

Montera jordfräsen på plan yta. Kontrollera att alla skydd och säkerhetsdetaljer är korrekt monterade. Följ moment- och monteringsanvisningar i referensbilderna. Efter första drifttimmen ska fästdetaljer efterdras.

6. Tillkoppling till traktor

Koppla jordfräsen i trepunktslyften. Justera topplänk så att jordfräsen står stabilt och horisontellt i arbetsläge. Anslut kraftöverföringsaxeln och kontrollera skydd, kedjor och arbetsvinkel. Stabilisera med traktorns stabilisatorstag/kedjor så att sidledsrörelser begränsas.

7. Kontroller före användning

- Kontrollera att skydd och kåpor är på plats.
- Kontrollera knivar: slitage, skador och infästningar.
- Kontrollera remmar/kedjor (om tillämpligt): skick och spänning.
- Kontrollera oljenivå i växellåda/sidoväxel där det är aktuellt.
- Smörj samtliga smörjpunkter enligt underhållsschema.
- Funktionstesta kort på låg belastning och lyssna efter onormala ljud/vibrationer.

8. Drift

Arbeta med körhastighet anpassad till jordtyp och arbetsdjup. Vid behov bearbeta ytan i två pass för att uppnå full arbetsdjup. Vid kraftiga vibrationer: stanna omedelbart och kontrollera knivar/rotor innan fortsatt drift.

9. Arbetsdjup och baklucka

Arbetsdjup ställs med jordfräsens inställning enligt referensbilderna. Bakluckan används för att styra jordflöde och finfördelning. Justera bakluckan för önskat resultat och för att undvika onödig belastning.

10. Transport

Säkra jordfräsen i transportläge. Följ gällande trafikregler och beakta redskapets bredd/höjd. Kontrollera att kraftöverföringsaxeln är säkrad i hållare när den inte används.

11. Underhåll och smörjning

Utför underhåll enligt intervaller: smörjning, efterdragning, kontroll av knivar, skydd och remmar/kedjor. Byt olja i sidoväxel/växellåda enligt tillverkarens intervall. Vid service: stäng av motor, ta ur nyckel och koppla ur kraftuttag.

12. Förvaring

Rengör jordfräsen efter säsong. Smörj samtliga punkter, kontrollera slitdelar och skydd. Förvara stabilt och torrt. Skydda exponerade ytor mot korrosion vid behov.

13. Reservdelar

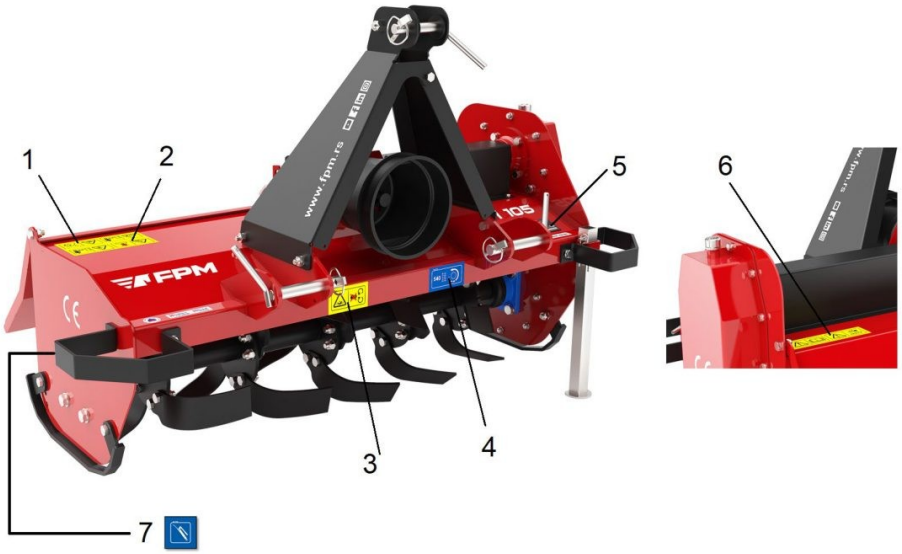
Vid beställning av reservdelar: ange modell (LFM 105/LFM 125) och serienummer (se märkskylt). Använd i första hand originaldelar. Sprängskisser och reservdelslistor finns i referensbilderna.

Referensbilder från originalmanualen

Följande sidor är utdrag ur originalmanualen och innehåller etiketter, tabeller, moment, PTO-information och reservdelsbilder. De kan innehålla engelsk text.

WARNING LABELS

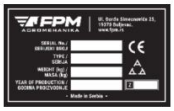
The following warning labels are placed on your trinket for your safety and the safety of the people working with you. With this manual in hand, walk around the machine and check those warning labels and manual instructions. Labels must be legible, if not replace them.



The identification of the rotary shredder is done via the name plate (sticker number 5) located on the console - pyramid on its front side. The plate contains the following markings:

— In the field marked with the letter "Z" - the number of the certificate (document) on occupational safety is entered.
— In the "MASS/WEIGHT" field - the weight of the product is entered.
— In the "YEAR" field - year of production (last two digits).
— In the "SERIES/TYPE" field - series designation and commercial designation of the product.
— In the field » № « is written the number of the rotary mower, which consists of nine digits and has the following meaning:

- **first digit - year of production**
- **second and third - manufacturer's code**
- **the other six digits - serial number of the product from the day of production.**

	Sticker	Description
1.		Rotating elements! Keep feet and hands away from rotating elements.
2.		Never transport other persons on the tool. Other persons must stand at a safe distance from the machine.
3.		Rotating elements! Keep feet and hands away from rotating elements.
4.		The number of revolutions of the output shaft on the tractor
5.		Identification plate
6.		Before working with the machine, read the manual carefully. During any adjustment, lubrication or cleaning of the implement, turn off the tractor and wait for all moving parts to stop.
7.		The place where the grease gun is located! Mandatory, daily, lubrication before starting work.

ATTENTION: THIS TRIANGLE SYMBOL IS USED WHEREVER YOUR SAFETY, THE SAFETY OF OTHER PERSONS, AND YOUR LITTLE THINGS ARE REQUIRED FROM RISKS.
THEREFORE, CAREFULLY READ THE WARNING WHICH MENTIONS THESE SIGNS.

WEAPON DESCRIPTION

ROTARY trinkets:	LFM 105	FPM 619.403 - working width 1,05m
	LFM 125	FPM 619.404 - working width 1,25m

They represent a family of tillage machines in the production program of FPM Agromehanika DOO Boljevac.

The concept of the technical system of rotary tillers for tillage is modular and consists of the following modules:

I - Supporting structure with a system for connecting and regulating the working depth

I - 1 - Main support - welded assembly
2 - Pyramid – assembly
3 - Cover
4 - Support slipper

II - Transmission part with safety elements.

II - 5 - Cardan shaft – assembly
6 - Reducer – assembly
7 - OK shaft with protection
8 - Chain side gear

III - Working module - rotor with cutting elements, hoes.

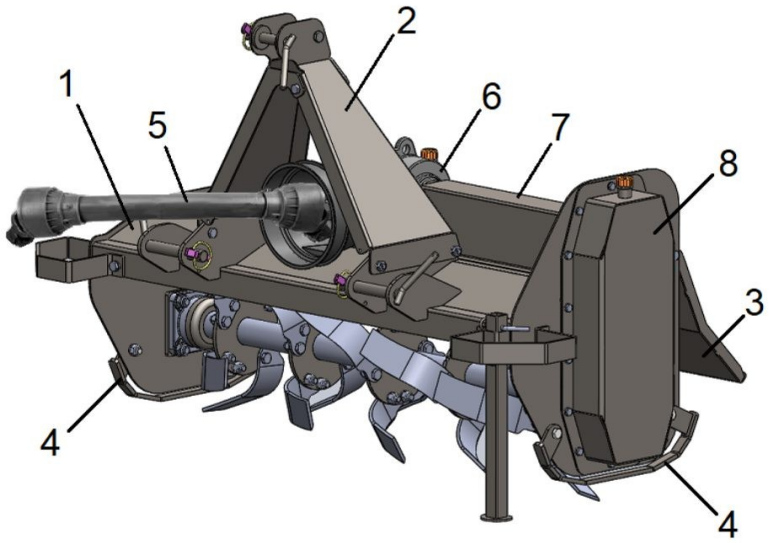


Figure 1 - Rotary grinder

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SPECIFICATION OF TECHNICAL CHARACTERISTICS

	m	m	min KW(HP)	cat	RPM	RPM	mm		cm	Kg
LFM 105	1,05	1,2	11(15)	1 N, I, II	540	231	42	4 / 20	18	126
LFM 125	1,25	1,4	15(20)					4 / 24	18	140

HANDLING OF THE ROTARY TILLER

BEFORE USE:

Check that all parts (nuts, screws, etc.) are sufficiently tightened, especially fix the blades on the rotor, the ends of the rotor for the supports, the lower pins for the supports and the pyramid for the grinder body.

- Knives and their parts used for fixing (nuts, screws, etc.) if they are worn or damaged, immediately replace them with original parts of FPM AGROMEHANIKA DOO BOLJEVAC.

a) Mandatory when working with small items, it is necessary to use stabilizer bars (figure 2) or stabilizer chains (figure 3). Attaching the stabilizer bars to the tractor is done as follows (see figure 2).
b) Fasten the left support of the stabilizer bar (fig. 2, pos. 1) under the housing of the left rear half-axle, and the right one under the housing of the right rear half-axle of the tractor (fig. 2, pos. 2), by means of screws.

NOTE: Place the supports of the stabilizer bars so that the pins for connecting the stabilizer bars on them are facing each other, that is, towards the central axis of the tractor.

c) Place the stabilizer bars on the support axles so that the slightly bent ends of the bars are facing the center line of the tractor.
d) Secure the installed stabilizer levers with safety pins.

2. If your tractor is equipped with stabilizer chains, the installation procedure is shown in Figure 3, the installation sequence is the same as for the installation of stabilizer bars (see under point 2).
3. Lubricate all places on the rotary grinder that are intended for lubrication.

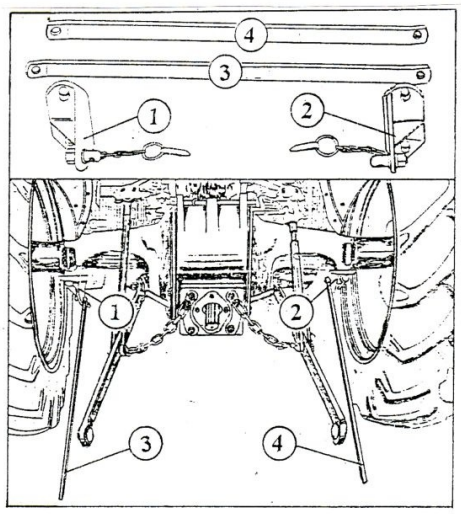


Figure 2. Placement of stabilizer bars

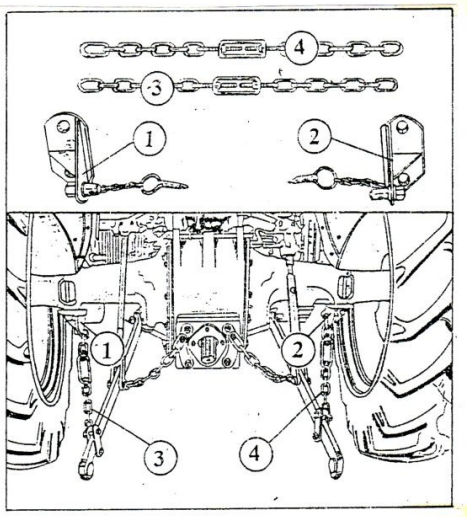


Figure 3. Placement of stabilizer chains

THE PROCEDURE OF AGGREGATING A ROTARY TILLER TO THE TRACTOR

DANGER: Attaching a tractor to a tractor can be a very dangerous operation. Pay special attention and strictly follow the instructions.

DANGER: Use a tractor whose configuration can meet the needs of your rotary shredder.

Aggregation of the rotary shredder should always be done on a flat surface in the following way.

1. First, remove the paint from the connecting sleeves of the grinder.
2. Slowly drive the tractor to place it at an angle of 90º in relation to the rotary shredder, using the hydraulic lever, lower the lower tractor levers to the height of the axis of the attachment points of the shredder, turn off the tractor.

IMPORTANT: If the tractor is misaligned, it is much easier to drive the tractor back and forth again than to try to use your own labor to bring the rotary shredder to the tractor levers.

Fasten the upper tractor lever - topling to the support of the upper point on the rotary tiller (figure 4, item A).

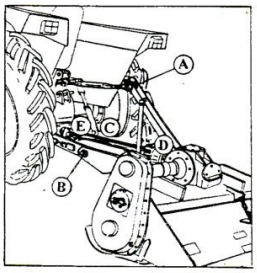


Figure 4. The process of aggregating small particles.

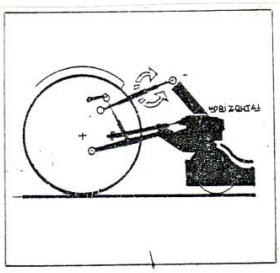


Figure 5. The correct position of the rotary shredder when it is attached to the tractor.

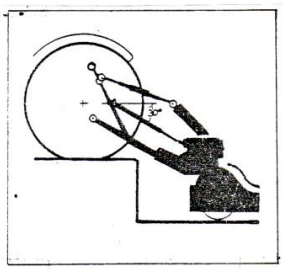


Figure 6. Checking the function of the gimbal returned with change in the lowest position.

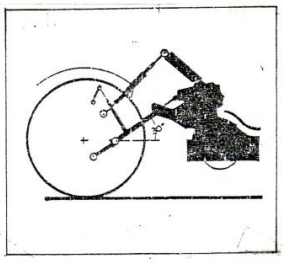


Figure 7. The maximum breaking angle of the cardan shaft.

3. Attach the left lower tractor lever (and also the stabilizer lever, if you use it) to the left sleeve of the rotary shredder and secure it in that position with the existing pins (figure 4, item B).
4. Attach the right lower tractor lever (and also the stabilizer lever, if you use it) to the right sleeve of the rotary shredder, and secure it in that position with the existing pins (figure 4, item C).
5. Attach the front end of the cardan shaft (the end of the shaft on which the friction clutch is located) to the input shaft of the rotary grinder and secure it in that position (Fig. 4, item D).

- Connect the other end of the cardan shaft to the PTO of the tractor and secure it in that position.

CAUTION: Protection must be installed on the cardan shaft, so install it before you connect the cardan shaft to the tractor's PTO shaft.

6. Then from the tractor seat and with the hydraulic control lever in the down position on the quadrant, slowly drive the tractor forward or backward until it is possible to attach the front end of the upper tractor link (topling) to the tractor, and secure it in that position with the existing pins.
7. When you have attached the tool to the tractor in the previous way, you need to bring the axis of the reducer housing to a horizontal position, by extending or shortening the upper tractor lever (topling) as shown in Figure 4.

IMPORTANT: The sequence of attachment of implements to the tractor should always be carried out in the same way:
a) left lower tractor lever
b) right lower tractor lever
c) upper tractor lever

8. If necessary, you can extend the lifting arms of your tractor to the appropriate length, thus ensuring that your implement is not raised too high from the ground, when the tractor arms are in the lowest position. With this, you have prevented possible damage to the drive mechanism.

IMPORTANT: After you have finished bringing the grinder into a horizontal position, you can access the other settings necessary for the normal functioning of the rotary grinder.

9. With the help of hydraulics, carefully raise the small machine so that the angle of breaking of the cardan shaft is not too large. When you have raised the tool to the highest position in this way, check the following:

    a) whether the cardan shaft rotates freely and whether its joints are not stuck somewhere.
    b) whether the cardan shaft is not stretched too far.
    c) check that the cardan guard rotates freely.
    d) attach the cardan protection to the existing chains from the cardan shaft.

    Repeat the same procedure with the tractor positioned so that the implement hangs in the lowest position. You can achieve this by forcing the tractor with the implement attached to the ramp so that the implement hangs in the lowest position, while its lowest point is significantly lower than the tractor's lowest point, as shown in Figure 6.

WARNING: If the cardan shaft in the lowest position of the tool does not work properly, you need to shorten the lifting levers of the tractor.

CAUTION: The maximum breaking angle of the cardan shaft is 30º (see figure 26). If this angle is exceeded during operation, serious damage may occur to the cardan shaft or the tractor's PTO shaft. In particular, take care that the cardan joints do not get stuck anywhere.

WARNING: Failure to comply with the basic requirements for working with the cardan shaft will result in a broken cardan or damage to the rotating gear.

10. Adjust the lower tractor arms (and stabilizer arms, if you use them) so that you limit the lateral swing of the implement to only 5 to 10 cm.
11. When working on sloping ground, this swaying of the implement must be avoided, so it is mandatory to use stabilizer bars, or secure the tractor bars with tension chains.
12. All these positions of the small parts on the tractor are marked so that when the implement is attached to the tractor in the future, these settings can be avoided, and the implement will still work properly.

All rotary shredders produced by FPM Agromehanika DOO Boljevac are designed so that they can be attached to all tractors that have a three-point suspension system, regardless of whether they are category I or II tractors.

CAUTION: When attaching implements to the tractor, take care and strictly follow the instructions given in this manual.

ATTENTION: You have correctly attached the rotary shredder to the tractor if you have met the following conditions:

1. If you have brought the shaft in the reducer housing to a horizontal position and the blades on the rotor are almost touching the ground.
2. When the distance between the tractor and the shredder is the shortest, the cardan shaft elements can be stretched to such an extent that its elements do not completely fit into each other.
   When the trinket is raised to the highest or lowest position, the cardan shaft elements must not fall out of each other.
3. When the trinket is raised to the highest or lowest position, the joint elements do not touch each other.

4. If you have brought the tiller to the side horizontal position (it is achieved by adjusting the lower tractor levers, lifting levers and leveling lever.

KNIVES AND QUICK CHANGE ROTORS

The rotors and cutting knives are manufactured to a very high quality. The knives are made of special alloy steel that is tough and wear-resistant, so they have a long service life.
The knives are made for the conditions that correspond to the existing condition of the driving machines (tractors) and the conditions in which these machines should work, namely:

- speed of work within 0.6 - 1.0 m/s
- the length of the section within the limits of 0.05 - 0.10 m, maximum up to 0.15 m, which, depending on the type and condition of the soil, humidity and the purpose of the surface being cultivated, gives a good quality of cultivated soil.
- work without impact, vibration and tractor overload.
- rotation speed of the rotor with knives 200 min-1

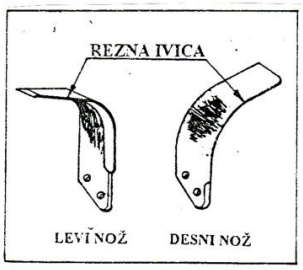


Figure 8. Left and right knife

The blades must be properly adjusted. If this is not the case, the knife wears quickly and the quality of the tool's work is lower. Knives that are damaged during operation should be replaced.

The rotary chopper is supplied with the blades correctly positioned on the rotor. However, if the need arises that the knives must be attached to their supports on the farm itself, the procedure should be carried out in the following way.

Determine which are the left and which are the right knives (see figure 8). Then fasten them to their supports with screws. Each section carries 2 left and 2 right knives, (figure 9, arrangement of knives on the rotor supports).

DANGER: Changing the cutting blades is a dangerous operation, be careful.

ATTENTION: In order not to damage or break the cutting knives, limit the speed of the tractor during operation to 6 ÷ 8 km/h.

DANGER: The knives catch pebbles and other foreign objects during operation, so children or domestic animals must not be near the saw.

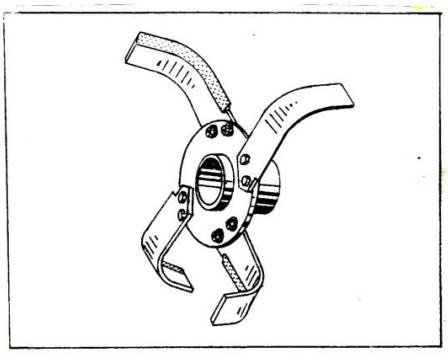


Figure 9. arrangement of knives
2L + 2D

When the blades are properly attached to their mounts then all the left blades are moved forward a certain distance. In this way, the knives are arranged in the form of a single spiral, as can be seen from Figure 10. The arrangement of the knives on the rotor (spiral), the shape and size of the knives, affect (with regard to the angle of entry into the soil) the resistance and uniformity of tillage across the width and in depth, as seen in Figure 10.

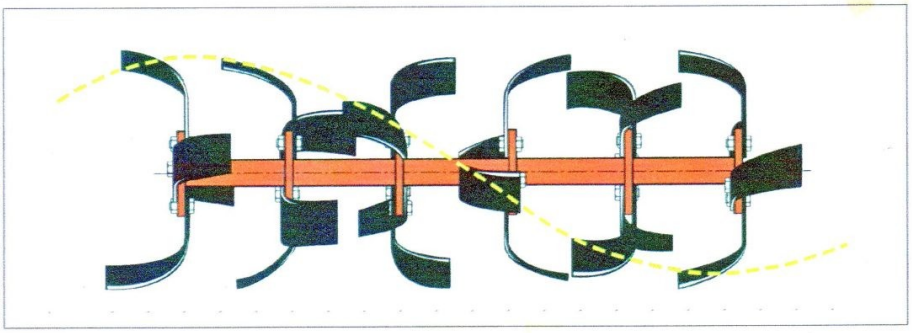


Figure 10. Knives arranged in a spiral

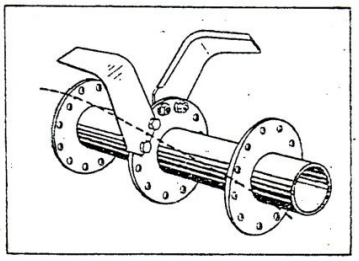


Figure 11. Screw heads

WARNING:
When installing the blades, the screw heads should rest against the blades and the spring washers should be under the nuts on the opposite side of the blade carrier (as shown in Figure 11).

IMPORTANT:
Use only original bolts of strength class 10.9 and tighten them with a torque of 120 Nm and secure them with glue.

CHANGING THE OIL IN THE SIDE TRANSMISSION

P After every 500 hours of operation of the rotary grinder, remove the cover from the transmission housing and clean it thoroughly. First, remove all the screws that secure the case cover to your back panel. At the same time, it is possible to drain the oil from this housing, since there is no special opening for draining the oil. Carefully remove the housing cover, taking care not to damage the seal. Then rinse the housing well with petroleum. Also wash the chain and sprockets well. When you have finished all this, you should attach the cover to its back plate again, making sure that dust and dirt do not get inside the case. To make it easier to put the seal when attaching the cover, coat the seal with technical grease. Then, pour 0.8 liters of oil through the filling hole (see figure 12, hole A), so that the oil level reaches the oil control (see figure 12, hole B).

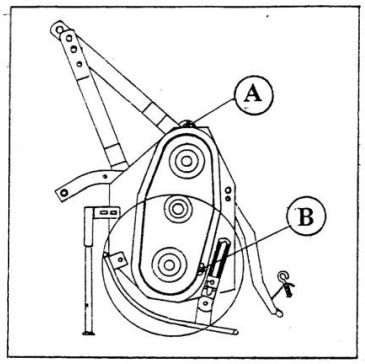


Figure 12. Transmission housing
A - Hole for pouring oil
B - Oil level control

OIL CHANGE IN THE REDUCER

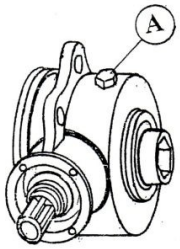


Figure 13. Gear box
A - Hole for pouring oil (measuring stick)

First, unscrew the plug (fig. 13, item A) that is used for pouring and draining the oil, which allowed the oil to flow out of the reducer housing. It is best to drain the oil immediately after the tool is finished, since the oil is still warm and the sediment in it has not yet settled. Before putting the cap back in its place, it is necessary to pour 0.4 liters into the housing. oil.

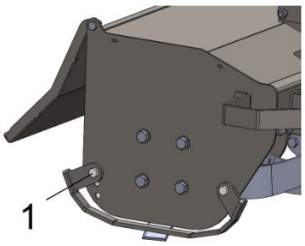
USE FOR OIL CHANGE

MANUFACTURER'S NAME	OIL MARK
LUBRICANT FACTORY KRUSEVAC	FAMHIPO 90 EP
BELGRADE REFINERY	HIPOL B
SHELL	E.P.80
AGIP ROTRA	MP SAE 85W/140

or oil from other manufacturers that meet the specification

- MIL - L 21 05 B
- API - Service GL 5
- JUS B. H3: 303 MP - 5

DEVICE FOR ADJUSTING THE WORKING DEPTH



To adjust the working depth, the left and right shoes are used (see figure 14).
Remove the adjustment screw (fig. 14, item 1), raise or lower the shoes to the desired height, then reinsert and tighten the adjustment screw.
When adjusting the height using the shoes, both the left and right shoes must be set at the same height.

Figure 14. Setting the working depth

WORKING WITH A ROTARY TILLER

When the shredder is properly attached to the tractor and the prescribed lubrication is carried out, it is completely ready for work and you can put it into operation.
Raise the shoes for adjusting the working depth so that you achieve the desired working depth of the tool for the first pass. Start the tractor engine, lift the implement from the ground with the hydraulics. Then engage the PTO of the tractor, let the rotor rotate for some time at a low number of revolutions to allow the oil to spread in the reduction housing and in the side gear.
Before starting work, increase the number of revolutions of the shaft to 540 min-1.

ATTENTION: BEFORE YOU START WORK, REMOVE STONES AND HIDDEN OBSTACLES FROM THEM.

Then select a lower gear, drive the tractor slowly forward, simultaneously lowering the tool, using the hydraulic control lever, into the working position. The tractor drives like this for a few meters and then stops it. Immediately switch off the PTO. Look at the quality of the tool's work and determine whether the desired depth of work has been achieved. If you are not satisfied, adjust the appropriate working depth using the left and right shoes (see figure 14).
Also, look and determine the quality of the soil compaction and, if necessary, adjust the position of the trailer to achieve the appropriate sizes of soil particles.

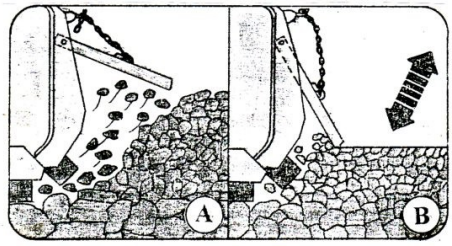
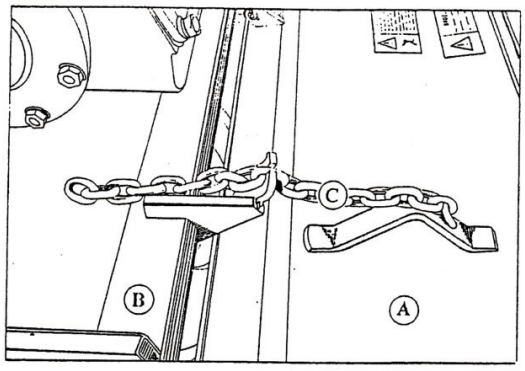


Figure 15. Different position of the trailer of the trinket different degrees of soil compaction are achieved



The adjustable trailer has other tasks besides protecting the driver. The trailer (A) is hung on the upper lining (B) from the back of the small box (see figure 16), it has a chain holder (C in figure 16). This chain is used to adjust the height of the trailer.

Figure 16. Adjustable trailer

ADJUSTABLE COUPLER

The ability to place the trailer in the desired position ensures the following:

1. Realization of different coarseness of soil particles is the first advantage of this trailer. When using a trailer for this purpose, the type and structure of the soil must also be taken into account. With the help of the chain, the trailer is raised to different heights, but you must know the following:
   a) The higher the trailer is raised (see Figure 15 - A), the larger the soil particles. On clay soil types, this position of the trailer prevents the soil from sticking around the rotor and on the inside of the trailer.
   b) The lower the trailer is (see Figure 15 - B), the finer the soil particles become, since the soil gripped by the knives hits the inside of the trailer with greater force.
   c) Sometimes the affected layer of soil makes two circles around the rotor before it is folded back onto the ground. This enables better aeration of the soil even when processing frozen soils.
   d) If you work with the trailer raised, the tractor requires less power. If you simultaneously increase the number of revolutions of the rotor, you ensure a thicker layer of cultivated soil. The soil layer prepared in this way is particularly suitable for accumulating moisture in the soil from precipitation in the winter months or for removing the bad consequences of soil erosion.
2. When the trailer is completely lowered, very fine soil particles are created and the soil prepared in this way is very suitable for sowing small vegetable seeds. You achieve this position by hanging the trailer by the rear link of the chain from the carrier. With such a position of the trailer, the treated surface is also level (see Figure 15. A and B).
3. The raised trailer in the highest position allows for repairs, adjustments, easier cleaning and similar work.

DANGER: Never attempt to clean or remove material from the grinder, or make adjustments while the grinder is in operation. Turn off the tractor and wait for the rotor to stop.

ATTENTION: Stop and think: the rotating elements (the rotor and the blades on it) can cause serious bodily injury.

LUBRICATION

This section is of great importance and should therefore be studied well. If you regularly maintain and lubricate your tools, you ensure economical operation and high performance.

CAUTION: Before undertaking any interventions on the tool, stop the engine, and only then approach lubrication and maintenance

IMPORTANT: It is very important to properly lubricate the transmission elements in order to meet the strict requirements for work even in the most difficult conditions. Change the oil after every 500 hours of operation, or at least once a year. To change the oil, see the recommendations given in the section "reducer oil change" (page 21).

LUBRICATION: The rotor shaft assembly should be regularly lubricated with a Tekalemit pump filled with SAE 90 oil (see figure 18, item A). Before starting lubrication with the grease nipples, you need to remove the dust from them with a cloth.

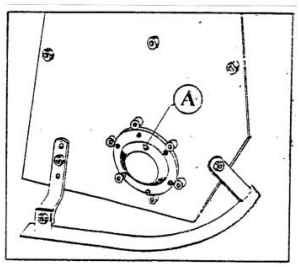


Figure 18. Lubrication of the rotor shaft

Before you use the new tool for work for the first time, you should check the oil level in the housings, if there is too much, drain it to the specified level. At the same time, the rotary chopper should be on a flat surface, the tips of the knives should only lightly touch the surface, and the shafts of the reducer should be in a horizontal position.

LUBRICATION

Control the lubrication of places with built-in grease nipples and other sliding surfaces.
A good degree of lubrication is achieved every eight hours of operation. Before you lubricate, wipe the surfaces of dirt and dust. Lubricate rotating and articulated parts every fifty hours. Lubricate also all parts that move within each other (telescope) as needed.

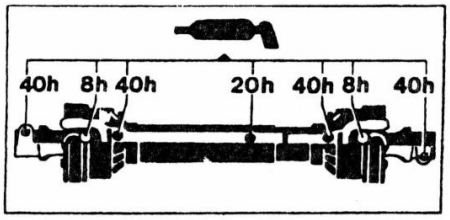


Figure 19.

1. Lubricant on the front joint - every 8 hours
2. Rotating part of the lining on the front part of the cardan - every 40 hours
3. The inner telescopic part of the tube - every 20 hours
4. Rotating part of the lining on the rear part of the cardan - every 40 hours
5. Lube on the back joint - every 8 hours
6. Locking pin on the front and rear - every 40 hours
7. Clean all parts of the shaft when it has been out of use for a long time

If you follow this lubrication plan, you will achieve a longer shaft life. Careful maintenance avoids malfunctions, which can occur due to bearing heating, bearing damage or increased axial force. Lubricate the cardan shaft in the marked place, only with high-quality grease.

LUBRICATE ALL SWITCHING, SLIDING AND JOINT JOINTS ON THE FRAME OF THE LITTER

WARNING: ALWAYS KEEP IN MIND THAT YOU SHOULD USE THE PRESCRIBED QUALITY OF OIL, SO THAT THE MACHINE DOESN'T DAMAGE AGAINST YOUR WILL. PROPER AND REGULAR LUBRICATION WILL ENSURE SMOOTH AND SAFE WORK WITH YOUR LITTLE ONE.

ADJUSTMENT AND MAINTENANCE

Check the tightness of all screws on the blades and, if necessary, tighten with a torque of 85 Nm. Regularly check the tightness of all screws and nuts on the transmission housing, on the tool pyramid and on the frame of the rotary grinder.

Replace broken or damaged blades.

Sharpen the damaged cutting edges of the knives. Sharpening of the cutting edges of the knives is possible as long as the hardened blade lasts, with the fact that the intended angle of the cutting edge should be maintained.

Worn and damaged parts must be replaced with original FPM Agromehanika DOO Boljevac parts, thereby ensuring high quality and accurate assembly during replacement

REQUIRED TORQUE OF TENSION

	6.6	**8.8**	**10.9**	**12.9**
M 8x1	15	26	36	44
M 10x1,25	30	52	74	88
M 12x1,25	51	91	127	153
M 14x1,5	81	143	201	241
M 16x1,5	120	214	301	361
M 18x1,5	173	308	433	520
M 20x1,5	242	431	606	727
M 22x1,5	321	571	803	964
M 24x2	411	731	1028	1234

DANGER: Use original parts produced by FPM Agromehanika DOO Boljevac.

CAUTION: Before performing any adjustment or adjustment work on the implement, turn off the PTO shaft and turn off the tractor.

CAUTION: REGULARLY CHECK THE TIGHTNESS OF ALL SCREWS, NUTS, ESPECIALLY ON THE ROTOR WITH KNIVES.

CAUTION

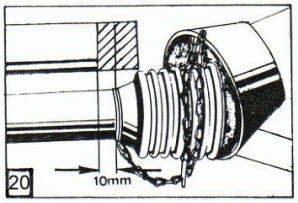
1. **IT IS YOUR CONCERN TO PROTECT AND KEEP YOUR LITTLE THINGS, THAT'S WHY IMMEDIATELY REPLACE ALL WORN AND DAMAGED PARTS WITH ORIGINAL PARTS OF FPM AGROMEHANIKA DOO BOLJEVAC.**
2. **ALL WORK ON LUBRICATION, CLEANING, ADJUSTMENT AND ADJUSTMENT MUST BE PERFORMED ONLY WHEN THE TRACTOR IS SWITCHED OFF AND THE PTO SHAFT IS DISCONNECTED.**
3. **WAIT FOR ALL MOVING ELEMENTS TO STOP, THEN PROCEED TO SERVICING THE ROTARY TOOL.**
4. **KEEP YOUR HANDS, FEET AND CLOTHING AWAY FROM MOVING PARTS.**
5. **THINK OF THE CONSEQUENCES OF IRRESPONSIBLE WORK BECAUSE THEY ARE IRREGULAR.**
6. **BEFORE STARTING THE TRACTOR AND BEGINNING WORK, MAKE SURE THAT OTHER PERSONS AND ANIMALS ARE NOT IN THE WORKING AREA OF THE TOOL.**

ATTENTION: STOP AND THINK! ROTATING ELEMENTS CAN CAUSE SERIOUS INJURY.

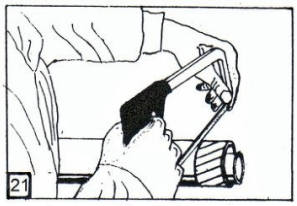
JOINT - DRIVE SHAFT

It is very important that the cardan shaft, when attaching the small implement to the tractor, is correctly adjusted. It must not be allowed that the cardan joints, when the tool is raised to the highest or lowest position, get stuck together. The cardan shaft has a friction (lamellar) coupling. During assembly, make sure that the coupling is on the side of the grinder so that the grinder can be put into operation.
To the extent that you maintain that the cardan shaft is longer and cannot be attached to the tractor, it is necessary to shorten it. The following figures show an example of shortening the cardan shaft.

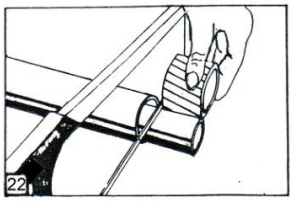
1. Connect one half of the cardan shaft to the tractor and to the shredder, keep the halves next to each other, and by adjusting the tractor and shredder, determine the length of 10 mm and mark it on the protector (figure 20).



2. Cut off the protective lining, see figure 21.

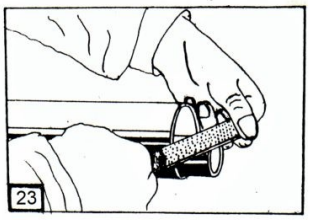


3. Cut the profile pipe, figure 22. Further modifications on the coating or profile pipe are not allowed.

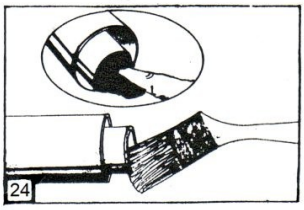


WARNING: FAILURE TO FOLLOW THE BASIC REQUIREMENTS FOR WORKING WITH THE DRIVE SHAFT WILL RESULT IN A BROKEN DRIVE SHAFT OR DAMAGE TO THE ROTARY WHEEL

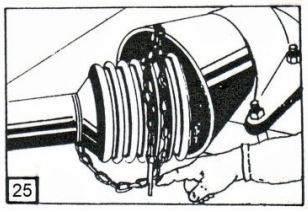
4. Cut off the sharp end edges, figure 23.



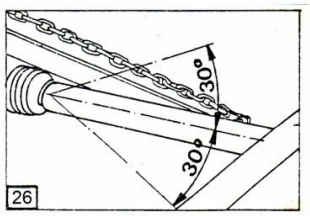
5. Clean and lubricate, figure 24. Connect the cardan into each other and it's done.



6. Under no circumstances should the cover of the cardan be removed, nor should it be turned during operation. Hang the lining retaining chain on the grinder shaft protector, figure 25.



7. The maximum permissible angle of the cardan shaft must be less than 30º, figure 26.



CAUTION: ALWAYS BE CAREFUL WHEN HANDLING THE PTO SHAFT ON A ROTARY TOOL.

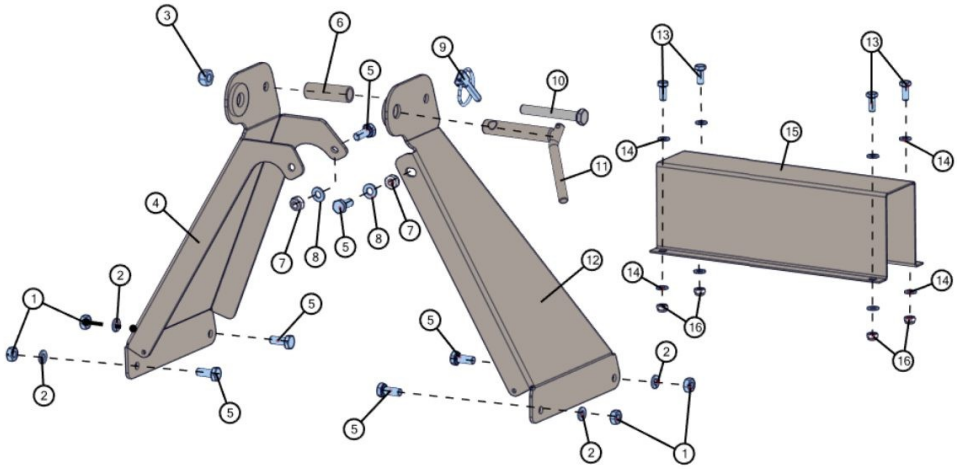
LIST OF SPARE PARTS
- Instructions for handling and maintenance -

DNO	**Dodatna neobavezna oprema**
:	**For....**
< >	**Except....**
>	**From .... to ...**
Zam	**Replaces....**
ø	**Diameter**
> I <	**Strength (thickness)**
T1N	**For vineyard tractors**
T1	**For tractors cat. I**
T2	**For tractors cat. 2**
T3	**For tractors cat. 3**

Q	**Number of pieces (quantity) as needed**
*	**See note**
	**Direction of movement**
	**Direction of rotation**
	**Parts & components package**
ZA	**It is replaced by one or more parts**
D.P	**Pad thickness**
DPS	**The thickness of the washer to reduce the gap.**

Referens – original sida 32

LIST OF SPARE PARTS



Picture 1

No	Naziv	Oznaka	Ident	Kol.
1	NAVRTKA M10-6H	020.06.010	61	4
2	PODLOŠKA B10	021.22.005	71	4
3	NAVRTKA M12-6H	020.06.011	44667	1
4	DESNA BOČNA STRANA - Z. S.	619.81.833	101997	1
5	VIJAK M10x25	020.00.001	2191	6
6	ČAURA	619.81.847	102014	1
7	NAVRTKA M10-6H	020.06.010	43068	2
8	PODLOŠKA A10	021.20.001	2493	2
9	OSIGURAČ 12 x 45	611.20.010	23897	1
10	VIJAK M12 x 90	020.00.001	52	1
11	TREĆA PRIKLJUČNA TAČKA FM - Z. S.	619.81.863	111717	1
12	LEVA BOČNA STRANA - Z. S.	619.81.831	101998	1
13	VIJAK M 8x 20-6g	020.00.001	9985	4
14	PODLOŠKA A8	021.20.001	65	8
15	ZAŠTITNI LIM FM 1,05m	619.81.820	111692	1
15*	ZAŠTITNI LIM FM 1,25m	619.81.871	111731	1
16	NAVRTKA M8-6H	020.06.010	36648	4

* LFM 125

Table 1

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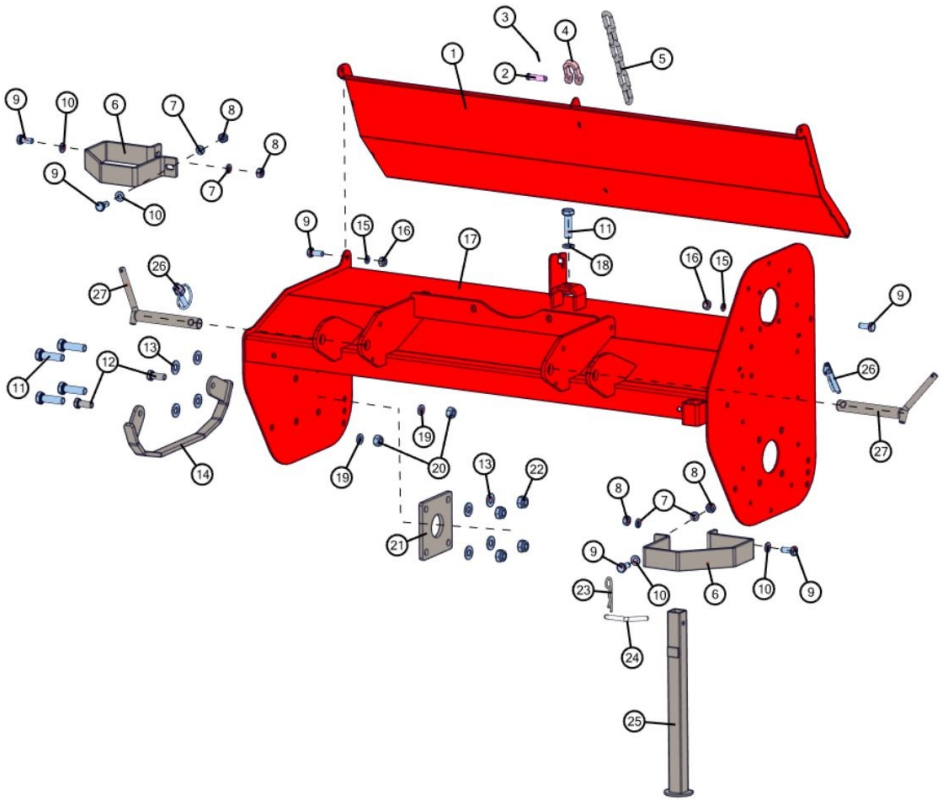
Referens – original sida 33



Picture 2

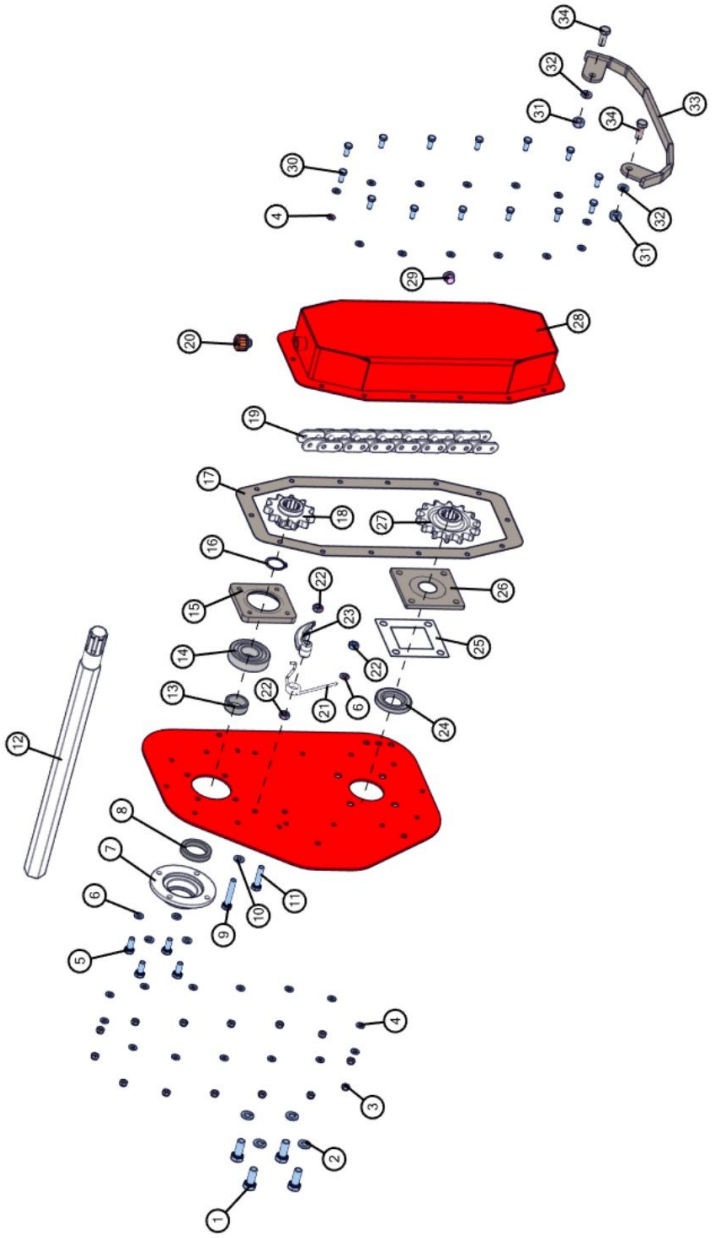
Referens – original sida 34

No	Naziv	Oznaka	Ident	Kol.
1	POKLOPAC - z.s. - 1,05m	619.81.842	111725	1
1*	POKLOPAC - z.s. - 1,25m	619.81.870	111730	1
2	OSOVINICA	627.13.883	46617	1
3	RASCEPKA 3.2 X 20	021.13.001	2466	1
4	TELO ŠKOPCA	627.13.882	17433	1
5	LANAC 7; L=440 - 20 karika	619.81.850	110970	1
6	CE ZAŠTITA	619.81.828	102010	2
7	PODLOŠKA B10	021.22.005	71	4
8	NAVRTKA M10-6H	020.06.010	61	4
9	VIJAK M10x25	020.00.001	2191	6
10	PODLOŠKA A10	021.20.001	2493	4
11	VIJAK M14x 50-6g	020.00.001	5339	5
12	VIJAK M12 x 30	020.00.001	4570	2
13	PODLOŠKA A14	021.20.001	67	8
14	SAONIK - Z. S.	619.81.846	102005	1
15	PODLOŠKA A8	021.20.001	65	2
16	NAVRTKA M10-6H	020.06.010	43068	2
17	FM 105 - Z. S.	619.81.810a	111690	1
17*	FM 125 - Z. S.	619.81.867a	111727	1
18	PODLOŠKA B14	021.22.005	20783	1
19	PODLOŠKA A12	021.20.001	66	2
20	NAVRTKA M12-6H	020.06.011	44667	2
21	ODSTOJNA PLOČA ROTORA	619.81.849	102018	1
22	NAVRTKA M14-6H	020.07.005	44551	4
23	OSIGURAČ-R 4X64	627.12.857	4977	1
24	ZABRAVLJIVAČ STOPE	619.81.881	111767	1
25	STOPA - Z. S.	619.81.837	101987	1
26	OSIGURAČ 12 x 45	611.20.010	23897	2
27	PRIKLJUČNA TAČKA FM - Z. S.	619.81.860	111714	2

* LFM 125

Table 2

Referens – original sida 35



Picture 3

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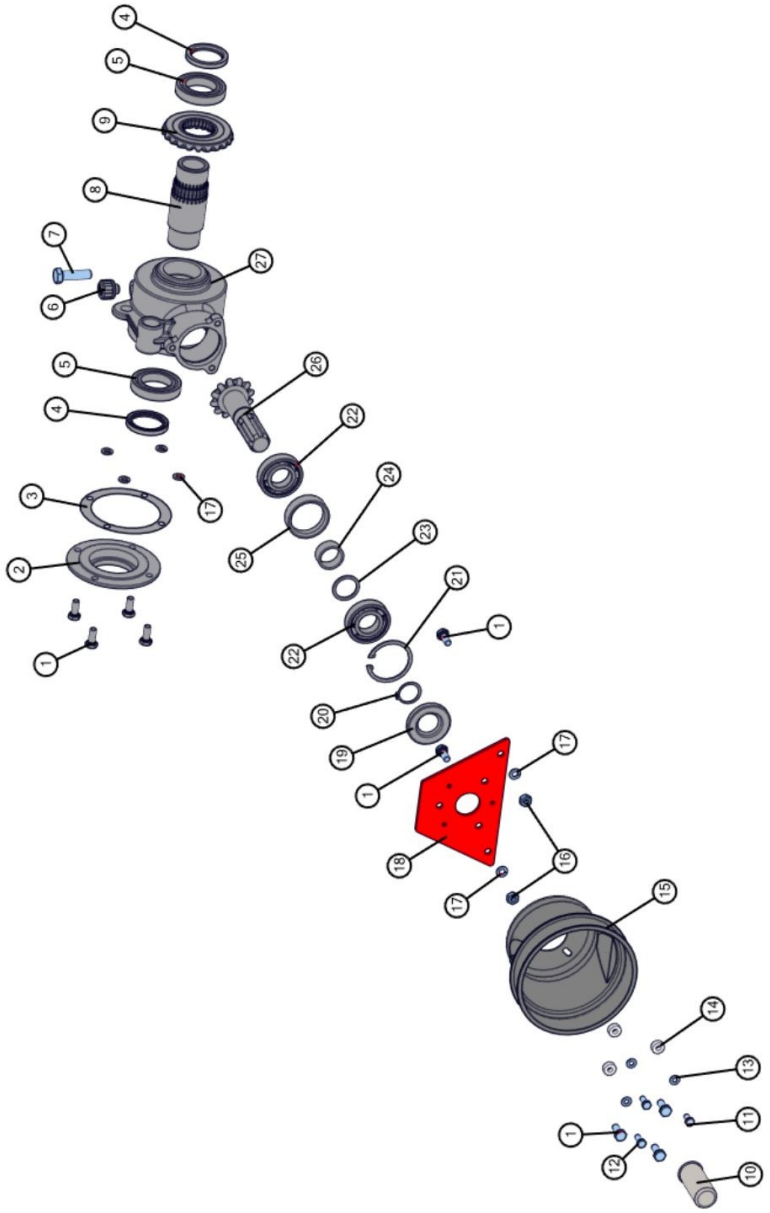
Referens – original sida 36

No	Naziv	Oznaka	Ident	Kol.
1	VIJAK M14x 35-6g	020.00.001	12907	4
2	PODLOŠKA B14	021.22.005	20783	4
3	NAVRTKA M8-6H	020.06.010	36648	14
4	PODLOŠKA A8	021.20.001	65	28
5	VIJAK M10x25	020.00.001	2191	4
6	PODLOŠKA B10	021.22.005	71	5
7	KUĆIŠTE VRATILA	619.81.053	27398	1
8	SEMERING 45 X 60 X 10	023.83.002	27068	1
9	VIJAK M10x60-6g	020.00.001	15042	1
10	PODLOŠKA A10	021.20.001	2493	1
11	VIJAK M10x45-6g	020.00.001	12882	1
12	OK VRATILO-1,05	619.81.071	42634	1
12*	OK VRATILO-1,25	619.81.069	42633	1
13	ČAURA	619.81.036	27446	1
14	LEŽAJ 6307 35 X 80 X 21	020.31.001	6309	1
15	KUĆIŠTE LEŽAJA	619.81.821	111679	1
16	USKOČNIK 35	021.23.002	88	1
17	ZAPTIVKA B. POKLOPCA FM	619.81.880	111262	1
18	POGONSKI LANČANIK - P27403	619.81.062	93580	1
19	LANAC VALJ.JEDNOR. 25,4 X 15,88 X 15,87	619.81.868	110965	1
20	ODUŠAK M18X1.5	020.03.007	42597	1
21	OBRTNA OPRUGA 619 81 076	619.81.076	27458	1
22	NAVRTKA M10-6H	020.06.010	61	3
23	ZATEZAČ LANCA - OTKOVAK	619.81.074	111471	1
24	SEMERING SA ZAŠ.USNOM 35 x 72 x 7	023.83.002	63887	1
25	ZAPTIVKA FM	619.81.848	111261	1
26	ZAPTIVNA PLOČA ROTORA	619.81.851a	111711	1
27	GONJENI LANČANIK	619.81.063	93579	1
28	BOČNI POKLOPAC FM - Z. S.	619.81.826a	111702	1
29	ČEP SA NAVOJEM R 3/8"	020.00.094	3131	1
30	VIJAK M 8 x 20-6g	020.00.001	9985	14
31	NAVRTKA M12-6H	020.06.011	44667	2
32	PODLOŠKA A12	021.20.001	66	2
33	SAONIK - Z. S.	619.81.846	102005	1
34	VIJAK M12 x 30	020.00.001	4570	2

* LFM 125

Table 3

Referens – original sida 37



Picture 4

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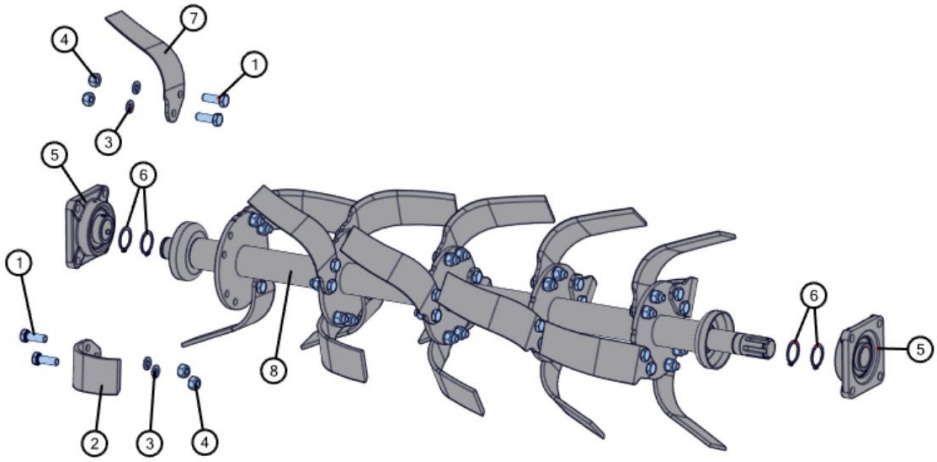
Referens – original sida 38

No	Naziv	Oznaka	Ident	Kol.
1	VIJAK M10 x 25	020.00.001	2191	9
2	POKOPAC REDUKTORA	619.81.084	27404	1
3	ZAPTIVKA D18 x24	023.82.001	7989	1
4	SIMERING 619.81.042 50x68x8	023.83.002	27440	2
5	LEŽAJ 6010 619.81.014	022.31.001	7417	2
6	ODUŠAK M18X1.5	020.03.007	42597	1
7	VIJAK M14x 50-6g	020.00.001	5339	1
8	VRATILO	619.81.083	27409	1
9	GONJENI ZUPČANIK	619.81.107	27388	1
10	POKLOPAC KARDANSKOG VRATILA	627.15.130	37132	1
11	VIJAK M 8X16	020.00.001	10080	1
12	VIJAK M 8x 20-6g	020.00.001	9985	2
13	PODLOŠKA A8	021.20.001	65	3
14	PODLOŠKA	619.81.878	111739	3
15	ZAŠTITNIK KARD. VRATILA-MANJI	000.00.000	59035	1
16	NAVRTKA M10-6H	020.06.010	61	2
17	PODLOŠKA B10	021.22.005	71	6
18	NOSAČ REDUKTORA	619.81.877	111738	1
19	SEMERING 619.81.043	023.83.002	27438	1
20	USKOČNIK 35	021.23.002	88	1
21	USKOČNIK 72	021.23.005	4233	1
22	LEŽAJ 6207 627.14.773	022.31.001	25580	2
23	DISTANTNA PODLOŠKA	619.81.016	27442	1
24	ČAURA	619.81.017	27441	1
25	ČAURA	619.81.152	28648	1
26	POGONSKI ZUPČANIK	619.81.103	27387	1
27	KUĆIŠTE REDUKTORA	619.81.131	27436	1

* LFM 125

Table 4

Referens – original sida 39



Picture 5

No	Naziv	Oznaka	Ident	Kol.
1	VIJAK-SPEC. M12x1,25x35	619.81.456	45750	40
1*	VIJAK-SPEC. M12x1,25x35	619.81.456	45750	48
2	MOTIČICA LEVA	619.81.894	101967	10
2*	MOTIČICA LEVA	619.81.894	101967	12
3	PODLOŠKA B12	021.22.005	72	40
3*	PODLOŠKA B12	021.22.005	72	48
4	NAVRTKA - SPEC. M12x1,25	619.81.457	45751	40
4*	NAVRTKA - SPEC. M12x1,25	619.81.457	45751	48
5	LEŽAJ UCF 207	U000.00.000	110163	2
6	USKOČNIK 35	021.23.002	88	4
7	MOTIČICA DESNA	619.81.893	101966	10
7*	MOTIČICA DESNA	619.81.893	101966	12
8	ROTOR FM 105 (SA PRIRUBNICAMA) - Z. S.	619.81.857	111708	1
8*	ROTOR FM 125 (SA PRIRUBNICAMA) - Z. S.	619.81.865	111724	1

* LFM 125

Table 5

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