



MOTOCULTIVATOR

FPM 408 D
FPM 410 DS
FPM 414 DS
FPM 414 DE

№ 42681



12.2010

INSTALLATION/HANDLING/MAINTENANCE LIST OF SPARE PARTS

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Serbia

WARNING FOR YOU, USER

By purchasing this machine, you made a wise choice. It is the result of many years of contemplation, research and development. You, like thousands of other users, will realize that you own the best that the technique, knowledge and testing in the field has created. You bought a reliable machine, but only if you use it properly, you can expect a good performance and a long service life.

This manual gives you all the information you need to achieve the best possible efficiency with your machine. This effect largely depends on how well you read and understand this manual and apply this knowledge. It's a simple machine, but often you can overcome the defects that are obvious and prove to be bad work, which is often due to neglecting the natural wear of parts or the fact that the machine is not well tuned. Therefore, do not pretend to know how the machine is used and maintained before you read this manual, which you need to keep at hand.

Our service dealers and sales service centers with their trained staff can offer you all the original parts of tractor mowers for servicing. These parts are manufactured and carefully inspected in the same factory where the mower is made, in order to ensure high quality and precise assembly at each replacement.

MOTOCULTIVATOR FPM 410DS/414DS/414DE IS MANUFACTURED BY: FPM AGROMEHANIKA AD BOLJEVAC.

The FPM 410DS / 414DS / 414DE motocultivator as a traction machine for agriculture and transport and meets the criteria prescribed by the Machinery Safety Regulation ("Official Gazette of the Republic of Serbia", No. 13/2010), especially regarding the stability and protection of parts and assemblies which by their function and shape could endanger the safety of the operator.

TRAINING: FPM constantly strives to improve its products and therefore reserves the right to make changes or improvements when needed, without any obligation to modify or supplement previously manufactured or sold equipment.

The information in this manual is correct at the date of issue.

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THE CERTIFICATE ON OCCUPATIONAL SAFETY MEASURES IS A CONSTITUENT OF THE INSTRUCTIONS FOR HANDLING AND MAINTENANCE

CERTIFICATE ON OCCUPATIONAL SAFETY MEASURES AND DECLARATION OF COMPLIANCE
98/37 / EC WITH THE SAFETY REQUIREMENTS REFERRED TO BY THE EUROPEAN DIRECTIVE
ARE INTEGRAL PART OF INSTRUCTIONS FOR HANDLING AND MAINTENANCE



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This machine meets the safety requirements of the European Machine Directive.



THE OPERATOR SHOULD COMPLY WITH THE SAFETY AND HEALTH PROTECTION REGULATIONS, AS WELL AS THE RULES ON ROAD TRAFFIC. IN THE OBJECTIVE OF YOUR OWN SECURITY USE THE ORIGINAL PRODUCTS PRODUCED BY FPM AGROMEHANIKA AD BOLJEVAC. THE MANUFACTURER IS NOT RESPONSIBLE FOR THE CONSEQUENCES OF INCIDENTAL USE OR NON-COMPLIANCE WITH RECOMMENDATIONS IN THIS

READ CAREFULLY!

In this manual and on the machine you will find warning labels, "WARNING" "CAUTION" and "DANGER". Warnings aim to draw attention to the personal caution and caution of those who work with you because they also need to read it.

PERSONAL SAFETY

WARNING: The word "WARNING" is used where you need to be careful to protect the operator and other persons from an accident.

CAUTION: The word "CAUTION" indicates the possibility of serious injury to the operator and personnel that may occur suddenly. It is a commonly used word as a warning to the operator and other people to prevent surprises in using the mower.

DANGER: The word "DANGER" denotes what can not be done because it entails a risk.

THERE ARE ADDITIONAL WARNINGS SUCH AS "RECOMMENDED" AND "IMPORTANT", DENOTING SPECIAL INSTRUCTIONS WITH REGARD TO THE SAFETY OF THE MOTOCULTIVATOR.

SAFETY OF THE MOTOCULTIVATOR

NOTE: THIS WARNING DENOTES THE POSSIBILITY OF DAMAGE TO MOTOCULTIVATOR, IF YOU DO NOT COMPLY WITH THE INSTRUCTIONS.

IMPORTANT: THE READER IS INFORMED ON WHAT THEY SHOULD KNOW TO PREVENT MALFUNCION OF THE MOTOCULTIVATOR, IN CASE THEY MISS IT.

LIMITED WARRANTY

The factory provides a warranty in accordance with the Law on Standardization, the Rulebook on the Safety of Machines ("Official Gazette of the Republic of Serbia", No. 13/2010) for each original piece of the motocultivator delivered to the user by the sales network FPM Agromehanika AD Boljevac, which guarantees at the time of delivery, that every part of the motocultivator is new, free of material defects, and that the motocultivator is given a warranty for a period of one year from the date of delivery to the

user, provided that the machine is used and serviced in accordance with the recommendations in this INSTRUCTION MANUAL for maintenance and handling.

EXCEPTIONS:

1. Parts not manufactured by FPM Boljevac (tires, plastics, belts, etc.) are not covered by this warranty, but by the manufacturer's warranty.
2. Parts that are normally consumed in exploitation: wedge belts, bulbs, etc.
- 3.- This warranty is invalid in case of poor use, incorrect or careless use or damage to an accident. The warranty ceases to be valid due to the use of non-original parts, and the factory is not responsible for the damage resulting from the transport.

THE FACTORY IS NOT RESPONSIBLE FOR THE LOSS OF PROFIT IN CASE OF MALFUNCTION OF THE FPM 410DS / 414DS / 414DE MOTOCULTIVATOR OR FAILURE OF THIRD PARTIES, NOR FOR ADDITIONAL COSTS OF WORK ON REMOVAL AND REPLACEMENT OF PARTS.

The buyer is responsible and bear the costs of the following:

1. Normal maintenance, such as lubrication, oil retention, minor adjustments, and the like.
2. Transport of the motocultivator where the service is performed in the warranty period and return.
3. Time of travel of the authorized service to the owner of the motocultivator and return, or delivery and return of the motocultivator from the workshop after the repair.

This warranty does not apply to the motocultivator which has been modified without our explicit permission, or if it was performed by someone else, outside the authorized service.

The warranty is related to strict adherence to the warning:

- all the instructions in this manual must be respected and all shields are regularly reviewed and replaced as needed.

No warranty is given for products that are not new.

The people who just work in our factory are not officially representatives of the factory and do not have the right to assume any obligation on its behalf.

No warranty covers product equipment that is larger than that given, so the factory is not responsible for any injuries caused by such use

1. INTRODUCTION

The motocultivator is a robust, modern, high quality and universal traction and propulsion machine in agriculture, especially in viticulture, fruit growing, greenhouses, nurseries, municipal works, transportation and more. This machine was created in close cooperation with practice and research, in this class it represents the highest degree of safety, economy and durability. The purposeful design and layout are complemented by a modern seven-speed, high-speed seven-speed high-speed synchronous exit shaft (with 4,138 min-1 output shafts for a single reversing wheel - valid for every speed of

movement) and a lower shaft with an independent speed of 818 min⁻¹ at 3000 engine rotations, which allows each work to be performed with the most economical speed.

The universal gearbox can be used to aggregate gamma connection devices as follows:

- transmission with rotors
- universal connection for connection:
 - plough
 - reversible plough
 - ridger
 - two-sided ridger
 - liner (working grasp 0.70 - 1.25 m)
 - potato machines
 - rotary plow with a drive
from the output shaft to the tool
- drive mechanism for mower cutting machines, working grasp 1.05 m; 1.30 m and 1.60 m.
- rotary mower for parks (Ø 800 mm)
- strips
- irrigation pump
- rotary adjustable brush (1.25 m)
- snow throwing dredger (1.25 m)
- snow thrower (working width 0,80 m)
- caravan trailer for transport of cargo (carrying capacity 1000 kg)
- cutting knife sharpener
- drive pulley to drive stationary terminals
- sprayer
- atomizer

The aggregation of connecting tools is simple and quick, and can be performed by one person.

Prior to using the motocultivator, it is advisable for the users to carefully examine all the INSTRUCTIONS from this manual. Only good knowledge and practical application of these instructions allows the motocultivator to always be ready and safe to use and operate and its lifetime is long.



SAFETY



Most accidents occur during operation, maintenance, and transportation as a result of failure to comply with basic safety requirements. For this reason, you are the most important person for the operation and maintenance of your machine and attachment tools, whether you are working with your family members or other persons, be sure to read and respect the basic procedures with the motorcultivator that you and others should hear. Additionally, the motocultivator has labels with warnings that should draw your attention to compulsory safety compliance.

- Before the start of operation, the operator must be absolutely familiar with the functioning of all parts of motocultivator - during the course of operation, it can be too late.
- The stated instructions for handling, maintenance and safety at work must be unconditionally complied with.

- Persons under the age of 16 shall not be allowed to operate the motocultivator.
- Before starting the engine, make sure that the lever for changing the gear is in stand by.
- Every time before using the motocultivator, check that all parts (nuts, bolts and other) are sufficiently tightened.
- All parts that have been damaged, and their elements for fastening (nuts, screws, etc.) in case of damage must be immediately replaced by the original parts of FPM Boljevac.
- The working linkage of the motocultivator is attached to the basic machine only to the original link elements.
- Before starting to adjust, lubricate or clean the drive or connecting parts, stop the motocultivator and wait for the rotary parts to stop.
- When changing the workplace, and for the shortest distance, it is mandatory to switch off the control lever drive of a working tool.
- During operation with the rotary mower, the protective sheet must be installed and you can not work without it.
- You can not clean the mower rotor and knives with your bare hand, but with an object for that purpose.
- IMPORTANT: Do not work on stony soil, to avoid the risk of an accident, due to the rejection of the stone to objects and persons and possible breakage of cutting knives.**
- In no case should you work with the rotor, which is not all attached with anticipated knives. The lack of a certain number of knives on the rotor causes uneven operation and vibration, which can lead to major damage to the tool.
- When working with the motocultivator on larger lateral slopes, an assistant is needed, who will use a lever or rope to hold on the machine.
- Only attach the trailer to the motocultivator with the original pin (wedge).
- The brakes on the trailer must be correct.
- In order to easily and safely manage the tractor with a trailer, the pressure of the tires of the drive wheels will be the same.
- It is mandatory to take into account the prescribed load capacity of the trailer.
- The load in the box of trailers is evenly distributed within the box size.
- The motocultivator aggregated with a trailer can only be driven with the correct steering wheel and the right braking device.
- It is mandatory to reduce turnaround speed, in order to avoid overturning, especially when driving with trailer.
- In transport, the slope never drives with the engine off.
- When they require special occasions, indicate lightening danger if not prohibited by traffic rules.
- Before you start driving on public roads, a tractor with a trailer must be secured for safe driving, and you should respect the rules of conduct in public transport.
- Do not pour fuel into the tank when the engine is running. Leave the engine cool down about two minutes before charging.
- Spilled fuel to parts of the engine or motocultivator must be wiped out due to danger from a fire.
- When pumping fuel into the tank, smoking, ignition of matches, lighters or the like is forbidden.
- If possible, the fuel is filled outdoors or only in well-ventilated areas.
- Do not store or use fuel near an open flame or devices that can cause a spark.
- Do not use the engine without exhaust cistern. Check it periodically and replace if necessary.
- Do not touch the warm exhaust pipe, cylinder or engine ribs, as you can get burns.
- The starter should be pulled firmly to prevent injury to the hand, arm and back.
- After completion of work with the cultivator, an authorized service technician should look at your machine, bring it to the correct state, especially the engine, and fix all the tightening parts (screws, nuts and other).



YOU MUST NEVER NEGLECT THESE WARNINGS



WARNING: THIS SYMBOL IN A TRIANGLE SHAPE IS USED IN EVERY CASE WHERE YOUR SAFETY IS NECESSARY, AS WELL AS SAFETY OF OTHER PERSONS, AND IN ORDER FOR YOUR MOWER TO BE PROTECTED FROM RISK. REMEMBER TO READ WARNING WHEN YOU SEE THESE SIGNS.

TECHNICAL DATA

A - For the basic machine of the motocultivator

- Dimensions of the motocultivator
- Maximum length 1750 mm
- Maximum width 600 mm
- Highest height 1100 mm
- Pivot shaft height (for operating the tool) from the floor 280 mm
- Weight of the motocultivator (with tires 5.00x12 ") 195 kg
- Weight of extra weights for wheels 25 kg
- 7-speed gearbox (5 for forward driving, 2 for rear-wheel drive)
- Wheel roller with a differential, an unlocking device that can be turned on while the motocultivator is in motion - using a lever on the control levers

Brakes

mechanical at both points with individual or joint operation using the lever on the control handles.

Drive

possible through the lower and upper shafts

upper shaft: synchronous output shaft 4.138 min⁻¹ for one axis of rotation

lower shaft: independent engine speed of 818 min⁻¹ at 3000 min⁻¹ engine

Handles for mangement: adjustable in height in 6 different positions, width in 6 different positions and rotating 180 degrees.

Wheels with tires 5.00x12 "

Safety mechanism -built "engine stop"

Accessories - weights for wheels 5.00-12 "

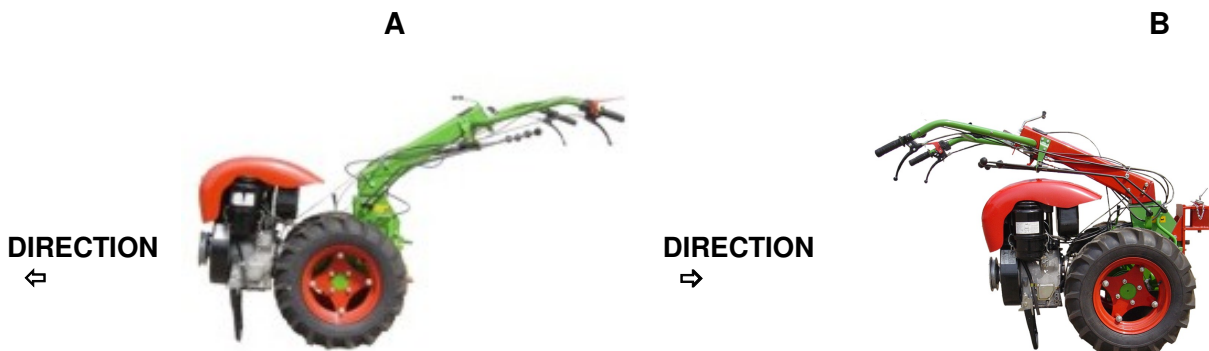
- wheel extensors

- connector for trailer
- universal connector for attachment of the tools
- claws for wheels

B – For diesel engine

- Manufacturer and type "21 MAJ" Belgrade	3DM 515	3 LD 450
- Cooling	air	air
- Type	diesel	diesel
- Number of cylinders	1	1
- Broj taktova	4	4
- Number of tactics	3000 min ⁻¹	3000 min ⁻¹
- Nominal speed- (DIN 70020)	9,2 KW (12,5 KS)	7,30 KW (10 KS)
- Working volume	515 cm ³	454 cm ³
- Compression ratio	17.5 : 1	17.5 : 1
- Cylinder diameter	85 mm	85 mm
- Piston stroke	91 mm	80 mm
- Fuel consumption in force N_A	280 gr/KWh	280 gr/KWh
- Engine weight	max 63 kg	max 60 kg
- Engine start	Manual via starter	Manual via starter
- Fuel tank volume	5.5 l	5.5 l
- Oil tank volume	1.75 l	1.75 l
- Fuel	D2	D2
- Permissible engine noise acc.to ISO R362	84 dB	84 dB
- Air purifier	oil	oil
- Coupler - clutch	two-part dry	two-part dry

MOVEMENT SPEED OF THE MOTOCULTIVATOR



A) - Position of the steering column is such that the engine is forward (viewed from the movement direction)

TRANSMISSION DEGREE	RUBBER WHEEL 5.00-12" Km/h	NUMBER OF ROTATIONS OF THE CONNECTING DOORS AND ROTATION DIRECTION WHEN TRAVELLING FORWARD	
TRAVEL - FORWARD		UPPER	LOWER

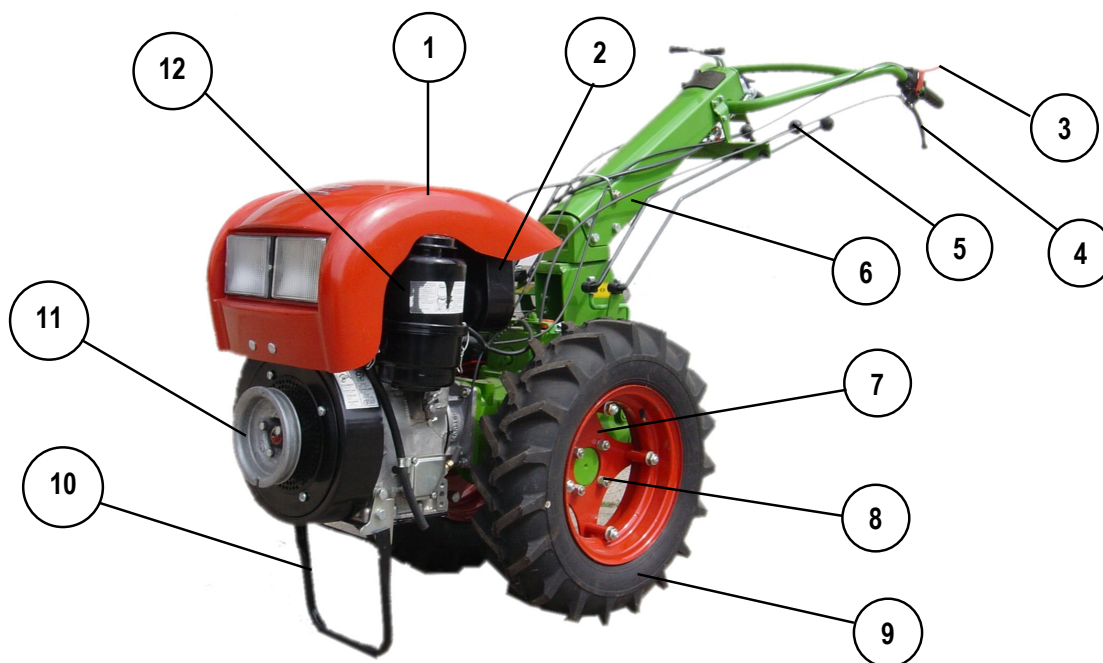
1-slow travel	1.32	4.136 min ⁻¹ for one rotation of the axle point	818 min ⁻¹ for 3000 min ⁻¹ engine rotations
1- fast travel	2.71		
2-slow travel	3.41		
2-fast travel	7.12		
3-	17.81		
TRAVEL - BACKWARD		LEFT	RIGHT
R slow travel	1.63		
R fast travel	4.16		

B) - Položaj stuba upravljača je takav da je motor nazad (posmatrano u smeru vožnje)

TRANSMISSION DEGREE	RUBBER WHEEL 5.00-12" Km/h	NUMBER OF ROTATIONS OF THE CONNECTING DOORS AND ROTATION DIRECTION WHEN TRAVELLING FORWARD	
TRAVEL - FORWARD		UPPER	LOWER
R - slow travel R - fast travel	1.63 4.16	4.136 min ⁻¹ for one rotation of the axle point	818 min ⁻¹ for 3000 min ⁻¹ engine rotations
TRAVEL - BACKWARD	1.32 2.71 3.41 7.12 17.81		
1-slow travel 1- fast travel 2-slow travel 2-fast travel 3-		RIGHT	LEFT

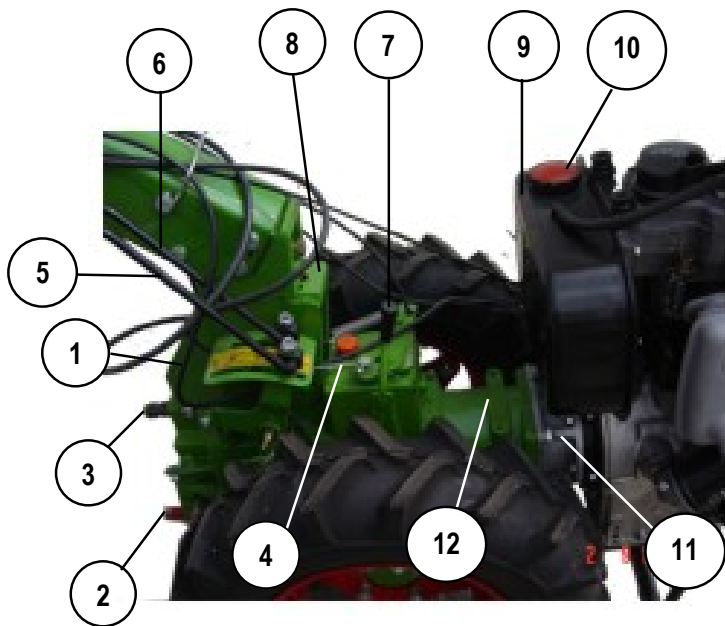
The speed of the motocultivator and the output shaft speeds at 3000 rpm

MARKS OF THE MOST IMPORTANT PARTS OF THE MOTOCULTIVATOR



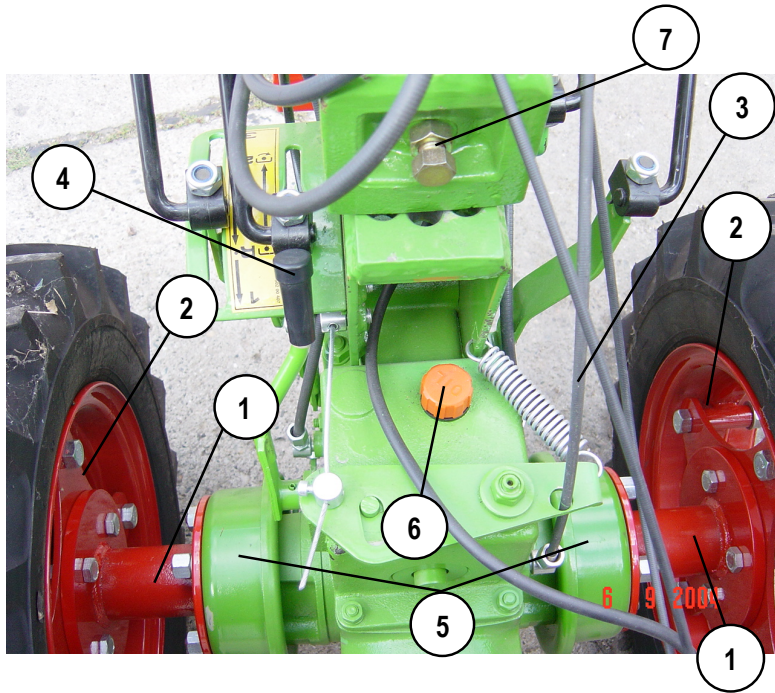
Picture 1

1. Mask
2. Fuel tank
3. Safety device "MOTOR STOP"
4. Clutch control knob
5. Lever for slow-speed travel
6. Steering wheel column
7. Flange point
8. Point and half-link connection nut
9. Rubber wheel 5.00 - 12 "
10. Motocultivator support
11. Engine starting pulley
12. Oil filter for air



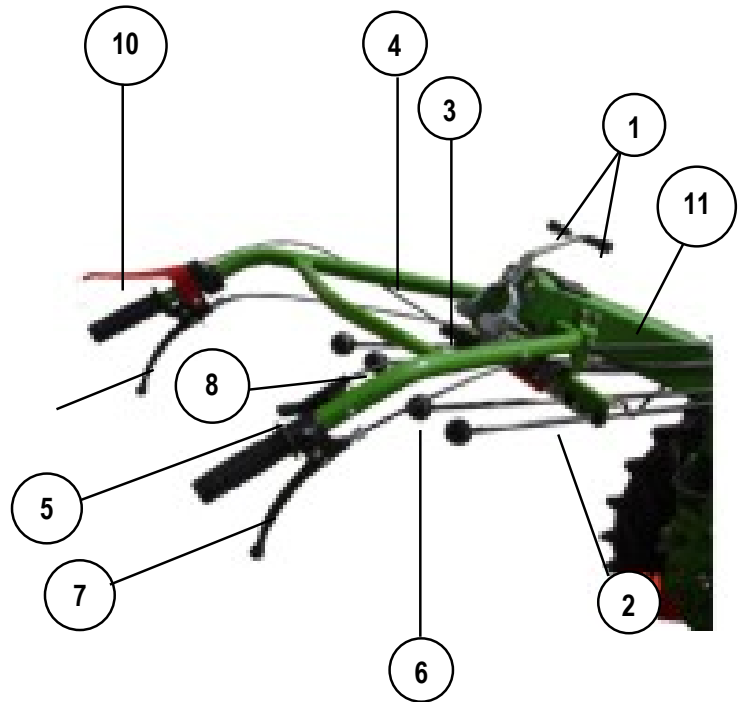
1. Brake cable
2. Screw attachment
3. Upper output shaft
4. Wheels blocker
5. Inclusive speed lever
6. Shaft locking lever
7. Lever for the upper synchronous shaft
8. Lever assembly carrier
9. Fuel tank
10. Fuel tank cover
11. Clutch coupling housing
12. Gearbox housing

Picture 2



- 1. Intermediate-expander point (additional optional equipment)
- 2. Flanges of wheels
- 3. Clutch cable (clutch)
- 4. Upper synchronous shaft lever (caravan)
- 5. Dust brake
- 6. Oil scrubbing plug
- 7. Steering wheel fixing bolt

Picture 3



- 1. Wheel brakes
- 2. Speed limiter
- 3. Differential blocker
- 4. Steering wheel
- 5. Gas Command
- 6. Lever for turning the shaft to drive the tool
- 7. Handle cord for turning the steering column for 180°
- 8. Lever for "fast-slow" travel
- 9. Engine clutch levers
- 10. Safety lever "MOTOR-STOP"
- 11. Steering wheel

Picture 4

DESCRIPTION OF THE MOST IMPORTANT PARTS OF THE MOTOCULTIVATOR

Before starting work with the motocultivator, it is necessary for the operator to get acquainted with the motocultivator, that is, the engine, the schedule of the controls, the manner of their use and the manner of handling and maintenance.

ENGINE

The FPM 408DS motocultivator is equipped with air-cooled four-stroke, single cylinder diesel engine, type 3LD450, factory "21 MAJ" Belgrade, power of 7.3 kW (10 hp according to DIN 70020) at 3000 min⁻¹, and in FPM 414DS, FPM 414DS 3DM515 , factory "21 MAJ" Belgrade, power 9.2 KW (12,5 hp according to DIN 70020).

You will only have the correct work and long engine life if you handle it properly and maintain it. Therefore, before starting the engine, you should carefully read the instructions in the "USE AND MAINTENANCE" booklet and act according to the instructions given in it.

ELECTRICAL DEVICES ON THE MOTOCULTIVATOR

The engine is fitted with an alternator whose current is used to illuminate the two-wheel motocultivator on the motor mask, as well as to illuminate the trailer and its signaling devices. The alternator provides AC voltage 24 V.

The illumination unit on the motocultivator consists of the following elements: two lamps with one bulb with a voltage of 12V, a power of 21W, a regular connection, a pull-out switch and a liaison for the connection.

IMPORTANT: In case one bulb "burns", then the other does not light up. Immediately replace the faulty bulb with another correct bulb.



The procedure for removing and replacing the damaged (burnt) bulb is

NOTE

- If you have purchased a machine that has no built-in alternator, then the headlights and illumination installation are not fitted on the mask.

COUPLING (CLUTCH) OF THE ENGINE

The motocultivator has two lamellar dry clutch, which allows a soft (no-fault) operation to be removed from the site. The actuation of this clutch is achieved through the engine clutch lever (Pic. 4, Number 9 on page 12) on the left side of the handles of the steering wheel, and over the wire rope - the cable that can be adjusted at the handle. When the handle of the command is withdrawn, the coupling is separated, i.e. the engine does not drive the machine.

The clutch must never slip when it is running, the control lever is adjusted to the size of approximately 3 ÷ 5 mm (from the stop to the pressure point) in the factory. As with vehicles, it should be avoided for the machine to run for a longer period of time with an engagement gear and a clutch pulled out, as there will be excessive wear. Therefore, the lever is set to the idle speed, ie the position, "0", to change the gear ratio, and then release the clutch lever.



DANGER: The attachment to the coupling (clutch) is left only to a qualified person at an authorized service center.

TRANSMISSION MECHANISM - GEARSHIFT

The motor cultivator has multiple gears for moving forward as well as backward. Gears located in the gearbox are made of special alloy steel which is tough and wear-resistant, immersed in oil, and therefore have a long service life. In view of the work to be done, certain transmission stages have the following positions:

A



A - The position of the steering column is such that the engine is FORWARD:

(for example, when driving a trailer, working with a rotary mower, working with earthwork tools, a plug, a sparrow, a starter, etc.) 5 forward gear for moving forward and 2 for moving backward.

B



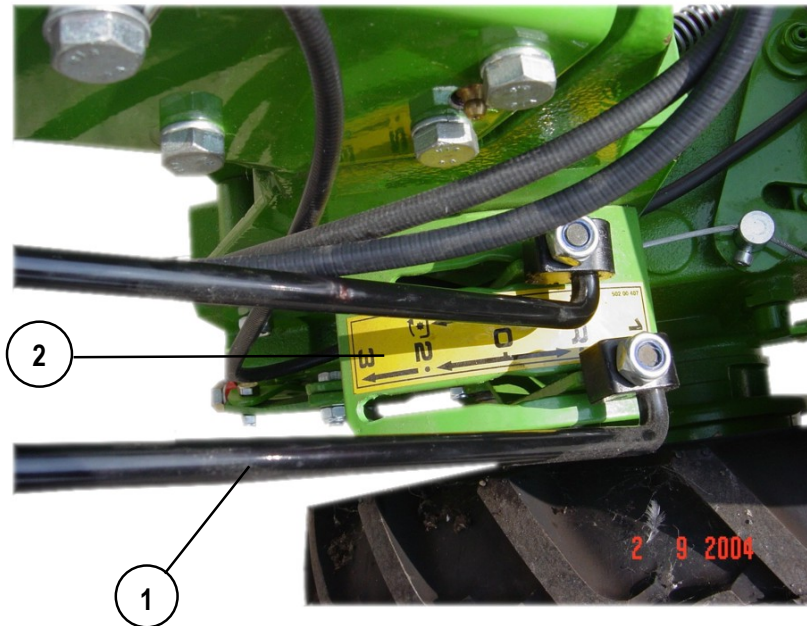
B - The position of the steering column is such that the engine BACKWARD:

(for example: for mowing, haymaker work, snow blower, snow thrower, rotary brush) 2 forward gear for forward movement and 5 for moving

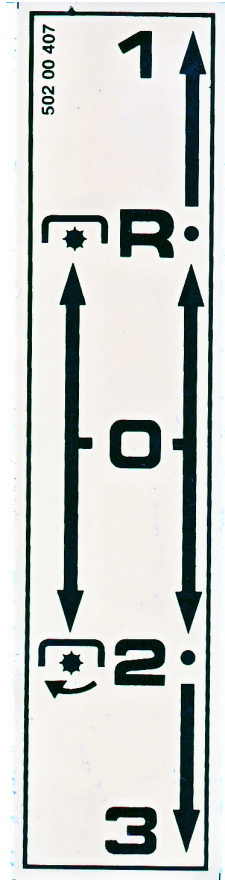
Movement speeds are shown in the table on page 11.

TRANSMISSION DEGREE CHANGE

Transmission rates: 1 - R - 2 - 3 can be switched on and off via the gear shift lever (page 15, position 1, Picture 7) located on the right of the steering wheel when the steering column is such that the engine is **ADVANCED**. This change in the degree of transmission is carried out according to the description on the label affixed to the gear shift lever bay (see Picture 7, page 15, position 2), and in the following way:



Picture 7



- 1. Lever for speeding
- 2. Speed change sticker

- 1. TRANSMISSION DEGREE: pull the handle forward completely
- R. TRAVEL BACKWARD: pull the handle one position backwards
- A. POSITION: zero position – stand by position
- 2. TRANSFER STAGE: pull the handle one position backwards
- 3. TRANSMISSION STAGE: pull the handle completely backwards

Between each gear, there is an idle position (a notch is felt), and in the middle of the lever handle is marked "O".

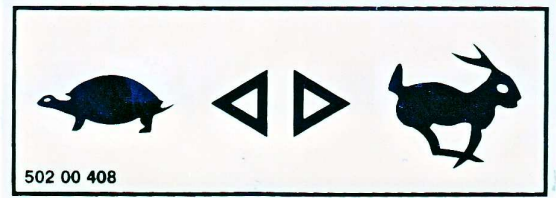
This label data is also used when the steering column is turned (such that the engine is **BACK**) only then the gear shift lever is located left on the steering wheel.

Switching the gearbox from the "fast travel" movement to the "slow travel" movement is achieved through the lever (see Picture 8, Position A). When the steering column is such that the engine is FORWARD (as in Picture 7), pull the lever forward for slow travel, and when the lever is pulled back, "fast travel" is included.

Some positions of this handle can be seen on the label attached to the gearbox next to the lever for turning on "fast and slow" travel (see the label Picture 8).



Picture 8



MOVEMENT DIRECTION LABEL "
SLOW TRAVEL – FAST TRAVEL "

If this lever is between these two positions, the gearbox is switched off and the drive wheels are in standby mode.

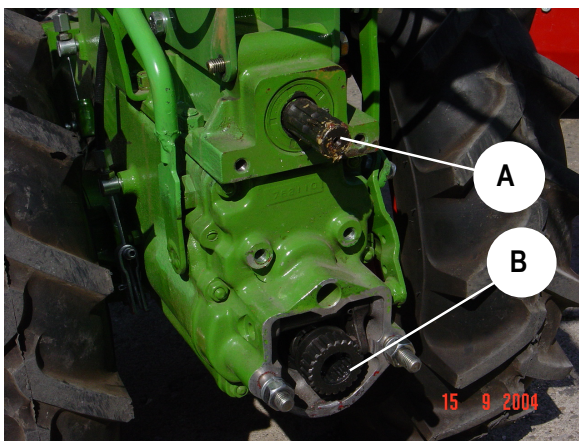
If the steering column pivots, and the engine is BACKWARD, looking in the direction of the machine movement, then the "fast travel - slow travel" change lever is located on the right side of the gearbox, as follows:

- 1 - the handle of the command is pulled forward for "fast travel"
- 2 - the handle of the command is pulled backwards for "slow travel"

Bear in mind that the machine, in addition to the included gear, is only driven when the direction-shift lever is set "slow-fast" in one selected position.

CONNECTED SHAFTS

On the opposite side of the engine there are two connecting shafts:



Picture 9

A - Upper synchronous output shaft IS used to drive a trailer with drive wheels (see Pic. 9, pos. A) The speed is 4.138 min-1 for one rotation of the wheel axis.

Switching on and off is done using the upper synchronous shaft switch (item 7, Picture 2, page 11).

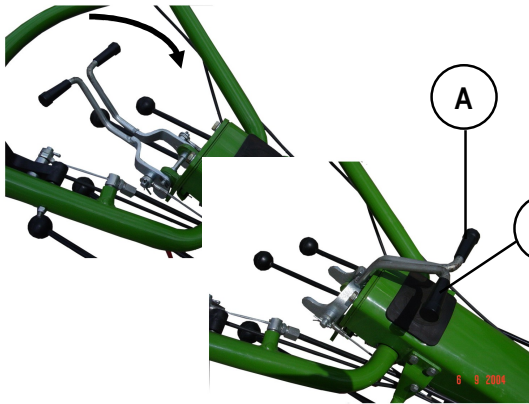
If the shaft activation lever moves in the direction of the engine, then the shaft is ON; and in the opposite direction, the upper synchronous shaft is OFF.

B - The lower coupling shaft serves to transfer power from the motocultivator to the drive attachment devices (see Picture 9, Item B)

The drive shaft is independent of the gear and rotates from the rear of the machine when moving forward (see "A" on page 10) to the right (or see Picture 7, with the label on page 15). The shaft rotation speed is 818 min-1. If the steering column rotates by 180°, so that the engine is in the rear when viewed in the direction of travel, then the pivot shaft from the rear of the machine turns to the left.

IMPORTANT: If the drive shaft should be switched on for stationary operation, the gear shift lever (see Picture 7, page 15) must be set to stand by, i.e. to "0". Also, due to the safety lever, switch on the slow travel - fast travel speed in the neutral position (see Picture 8, Item A).

WHEEL BRAKES



Picture 10

This machine is equipped with brakes which are at the same time parking brake. The brakes are equipped with internal brake shoes which act simultaneously at both drive points, if you activate simultaneously the two brake levers.

CAUTION

:

IN DRIVING WITH THE TRAILER, INDEPENDENT ACTIVATION OF ONE FROM THE OTHER POWER POINTS IS FORBIDDEN.

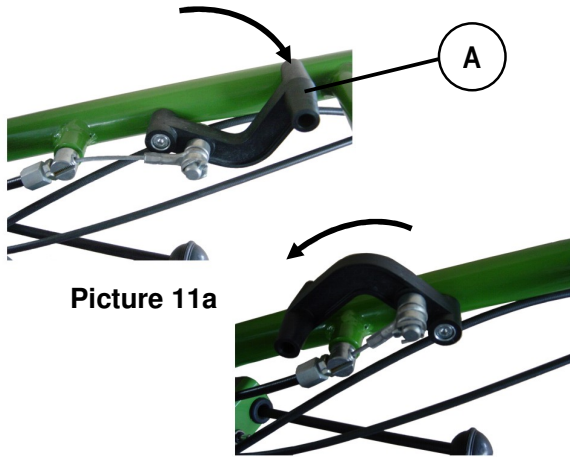
Activating the brakes independently one from the other is achieved via the brake lever (see Pic. 10, pos. A and pos. B), which is mounted on the steering wheel, and via the control cables. The lever is not activated when in the forward position (see arrow, Pic. 10), while pulling the lever towards the operator (downwards) activates the brake shoes on the drum.



CAUTION: THE BRAKE HANDLE SHOULD BE PULLED CAREFULLY TO PREVENT SURPRISES IN THE USE OF THE MOTORCULTIVATOR.

WHEEL BLOCKERS

The motocultivator machine is equipped with a wheel blocker, i.e. each wheel can be specifically disconnected from the drive. This is important when turning the machine. Activating the blocker is achieved via the wheel blocker (see Pic. 11, item A).



Picture 11a

Picture 11b

A few important notes:

a) - If the lever is released, pulled forward, (indicated by the arrow in Picture 11b), then both of the drive wheels receive a drive.

b) - If the handle is tensioned, pulled backwards (indicated by the arrow, Pic. 11a), then only one wheel gets the drive. This position is useful when driving a motocultivator with a trailer.

c) - If the engine is forward and the left (A) brake lever is pulled out (Pic. 10), then the machine turns to the left.

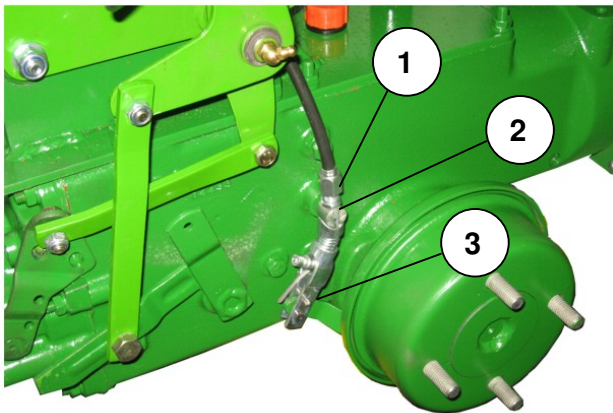
- If the right (B) brake lever is pulled out (Pic. 10), the machine turns to the right.

d) - If the engine is in the rear, then the pull of the left brake lever acts on turning the machine to the right, and when the right brake lever is pulled to the left (this change is conditioned by the turn of the steering column).

NOTE: (applies to points c and d): When turning on the reverse, the rotation of the machine is contrary to the foregoing.

ATTENTION: A short exercise according to the foregoing points allows you to quickly become acquainted with the mode of action of the wheel blocker.

CORRECT SUBSEQUENT SETTINGS OF THE WHEEL BRAKE CABLE



Picture 12

1. SCREW FOR SETTING
2. "COUNTER" NUT
3. BRAKE SHOE

1. Release (pull back) handle of the brake blocker.

2. Slowly pull the lever backwards, making sure that the corresponding wheel slowly tightens (brakes) and at the lower end of the brake lever. You can easily control this by moving the machine forward and backward.

3. If the drive wheel is not blocked at a given moment, then the "counter" nut (Pic. 12, Item 2) is disconnected and then the screw removal (Pic. 12, Item 1) is done by adjusting the brake force, after which securing a "counter" nut is repeated.

4. The same procedure applies to the other wheel of the wheel brake point.

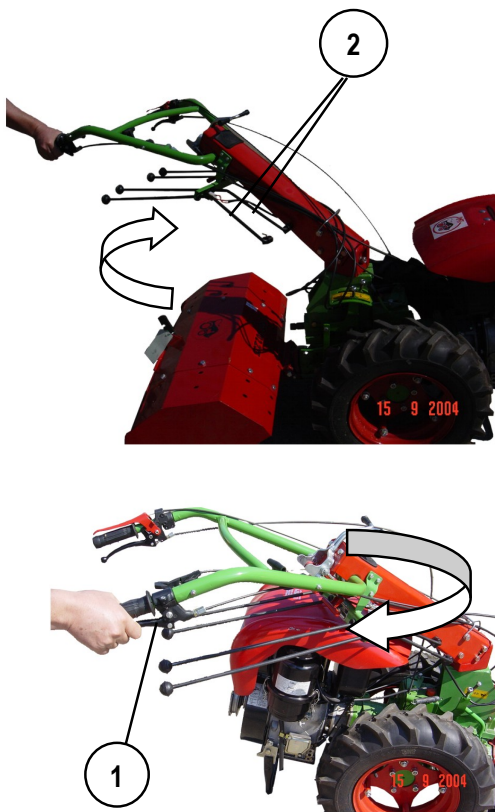
5. Inflexible adjustment of the brake cables

causes difficulties in working with the machine. For this, pay attention to these instructions.



CAUTION: We recommend that when you need to adjust the brake cables for the first time, your FPM AGROMECHANIKA AD Boljevac service provider should explain and show the correct adjustment of the cables.

TURNING THE COLUMN OF THE STEERING WHEEL



Picture 13

The entire steering column can be turned and placed on the left or right side, and in addition to be turned 180° and positioned for both operating directions of the machine.

CAUTION: Turning the steering column can only be done by turning to the opposite side of the one on which the exhaust pot is located (according to the label on the mask).

Turning the steering column for 180° is done as follows:

- Set the lever to the "0" position.
- Pull out fuses and levers (Pic. 13, Item 2) from the speed change lever, the shaft lever and the slow-fast travel switch, and push these levers backwards.
- The handle on the steering wheel (item 1, Picture 13) for adjusting the steering column should be squeezed by hand.
- Rotate the steering column. You can take a 180° turn around only on the side of the machine on which the air purifier is located, in order to prevent the twisting and damage of the cables of the command.

- Release the handle now. 1, Picture 13) on the steering wheel.
- Reinstall the lever to »slow fast travel« and coupling ball bar to the appropriate brackets and secure them with fuses.
- After fastening all the control levers, you should know that now, in the direction of travel, the gear shift lever comes to the opposite side of the steering wheel (left side), and the handle for the command "slowly" comes to the right side of the steering wheel.

ADJUSTING THE STEERING WHEEL TO A PRACTICAL WORKING HEIGHT

You can adjust the steering wheel to the required working height using the handle on the steering column (Pic. 14, Item 1). Moving the handle

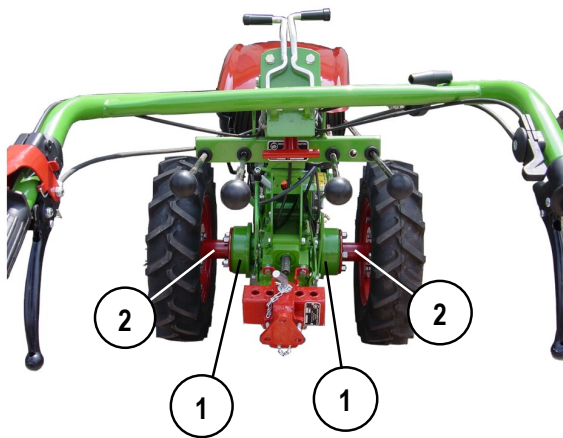


Picture 14

downwards releases the tooth on the steering wheel from its tray, the steering wheel moves to the desired position. Then return the lever (item 1, Pic. 14) to the original position and the steering wheel is blocked.

IMPORTANT: You can adjust height in 6 different positions.

MOUNTING OF THE RUBBER DRIVE WHEELS



Picture 15

Rubber drive wheels can be mounted or fixed in two ways:

- a) - directly on the hubs (brake drums) of the wheels (Picture 15, Item 1)
- b) - through wheel extensors (Pic. 15, Item 2), which are fastened to the hub of the machine.

With the use of the aforementioned mounting methods

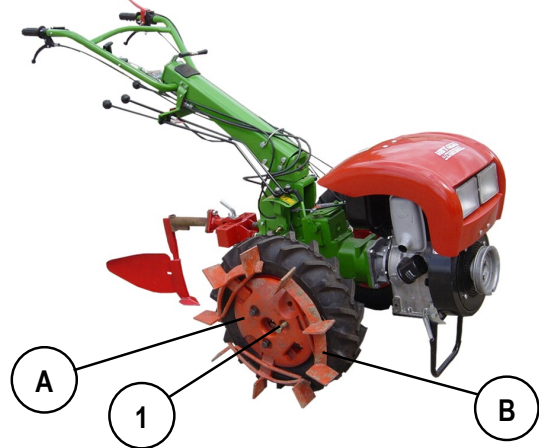
the rubber drive wheels can be mounted in 4 different combinations in terms of space

DRIVE WHEEL	RUBBER 5.00 - 12 am Ident:	
	WHEEL GAP IN mm FROM THE CENTRE TO THE CENTRE OF THE WHEEL	WHEEL WIDTH IN mm - GAP BETWEEN OUTER EDGES OF THE WHEEL
Vent inside	385	530
Vent outside	415	560
	Mounting via wheel extensors	
Vent inside	595	740
Vent outside	625	770



CAUTION: As a rule, wheels with tires are mounted so that the tops of the tire profile are turned in the direction of travel. This is definitely necessary when you want to achieve the full pulling power of the machine at work.

You can also change the wheel spacing separately for each side separately. It is not necessary to remove both of the drive points at the same time for this way of installation.



Picture 16

WARNING: Both sides of the wheels on the rims of the wheels are used to fasten additional weights for the wheels (see Pic. 16, item A).

INSTALLING THE CLAWS

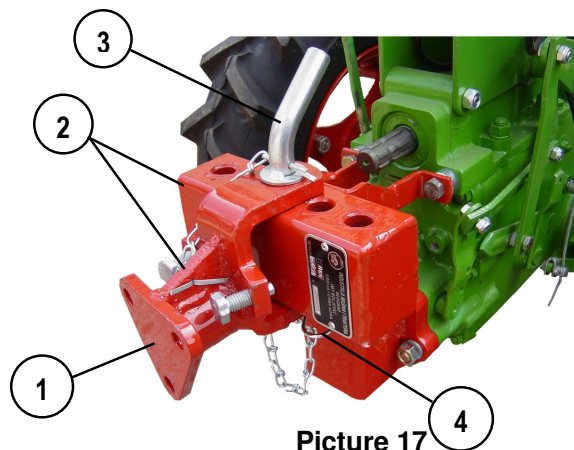
The claws are pushed into the weights of the wheels (see Picture 16, item B) and fastened with screws (Pic. 16, Item 1).



DANGER:

The claws are only intended for work in the field and you should not use them when driving on roads.

UNIVERSAL CONNECTOR FOR THE ATTACHMENT OF COUPLINGS



Picture 17

All traction couplings are connected to the base machine in such a way that it joins with the corresponding part (see Pic. 17, Item 1) on the universal connector with its corresponding front part in the shape of a three-hole triangle (Pic. 17, Item 2). Securing the screws that are mounted on the connector and tighten with the necessary torque. Setting the tool (center - left - right) is done by moving the locking pin (Pic. 17, Item 3). After adjusting the tool, the shaft is secured with a fuse (Picture 17, item 4). Setting the free tool (left-right) is done by unscrewing and screwing the screws (Pic. 17, Item 5).

HANDLING THE MOTOCULTIVATOR

ELABORATION

You will do the best if you follow the following recommendations:

- During the first 50 hours of operation, the cultivator should only be used for easier work.
- During the first 50 hours of operation, you must not exceed the engine speed 2/3 of the maximum.
- It is useful to occasionally intervene after every 10 hours of work, the motocultivator is loaded with maximum load, but this does not last longer than 5 to 10 min.
- During the development period, and afterwards, avoid high speeds ("tuning"), as this can only damage the engine.
- After the first 25 hours of operation, replace the oil in the engine. Further oil replacements must be made according to the recommendations given in the section on "maintenance".
- After the first 25 hours of operation, replace the oil in the sweeper.
- Keep in mind that you always need to control the screws and nuts and, if necessary, tighten them with the necessary tightening torque.
- Before starting the machine, check the oil level in the engine and the air purifier pot. The oil in the air purifier pot changes depending on the condition of the dirt.

PREPARATION AND STARTING THE ENGINE

Before starting the machine, i.e. before starting the engine, you should check the following:

- Does the tank have enough fuel (see Picture 2, items 9 and 10).

- Is the engine oil level within the prescribed limits - filled to the predicted notches on the meter stack.
- Is there enough oil in the transmission
- Is there enough oil in the oil purifier oil tank and according to the label on the container.
- Whether the cooling system, the ribs on the head and the engine block are clean.
- Whether the drive is turned off.
- Is the lever to change the direction of movement "fast" slowly "placed in the middle - neutral position.
- Is the command to change the gear in neutral position - position "0".
- In addition to the above, you should know that when you start the engine first after repair, or after a break in the fuel supply, you must release the air from the fuel supply. That's why you need to pay attention that the fuel tank is never completely empty.

NOTE: When dispatched from the factory, the air inlet is empty and there is a small amount of fuel in the tank.

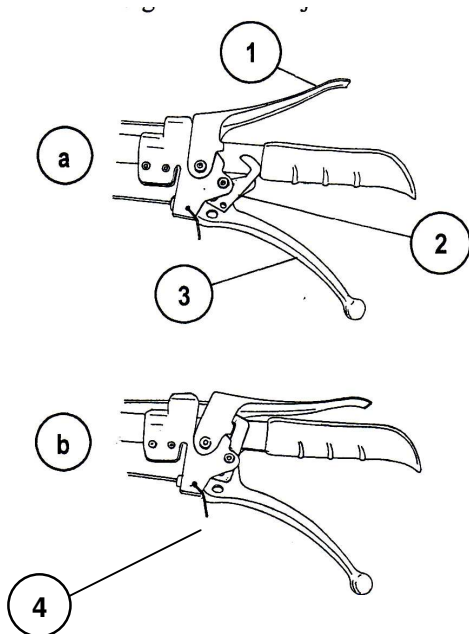
If it is still necessary to drain the air from the fuel supply system, you should do this in the way shown in the booklet "Use and Maintenance of the Engine" and following the instructions.

- Finally, check that the safety lever is in the starting position.

CAUTION: The FPM 410DS / IMT 414DS / IMT 414DE motocultivator is equipped with a single safety device - a safety handle located on the left side of the steering wheel.

The safety device ensures greater safety and security for the operator as well as the persons that can be found in the field of operation of the motocultivator.

Safety device - The lever is located on the left side of the motocultivator and has the following parts:



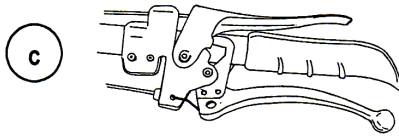
- a) - 1. Safety lever
 2. Lever handle
 3. Clutch handle - coupling
 4. Handle locker

b) - STOP POSITION - When the lever is released, there is a break in the fuel supply and the engine is switched off.

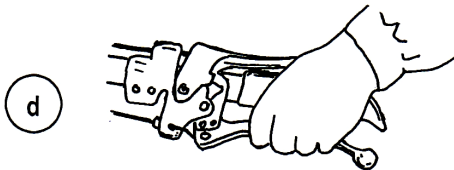


CAUTION: It may happen that the engine is still running for a short time due to the

grounding masses and then it will stop.



- a) **START POSITION** - Press the safety lever (Pic. 19, pos.1) and start the clutch lever (Pic. 19, Item 3), and lock with the locking device (Pic. 19, Item 4).



- b) **OPERATING POSITION** - For operation with the cultivator, the safety lever (Pic. 19, Item 1) must be pressed downwards - grasp by hand.



DANGER: Do not bind the safety lever.

The safety lever also serves as an off-switch (engine switch) in case of danger. Then you need to release the safety lever and it will come to the "STOP" position itself.



CAUTION: After each intervention on the engine, it is necessary to perform, checking the function of the safety lever. Checking is done as follows.

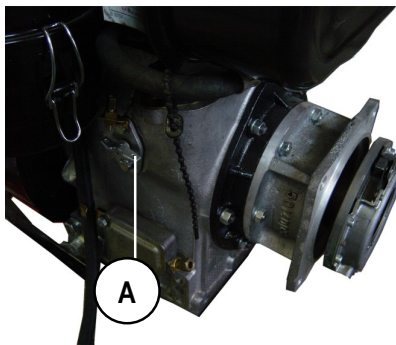
- When the safety lever is released, the engine will not start.
- When the engine is in operation and you release the safety lever, the engine must be off.
 - - Be sure to check the correctness of the lever function and, if necessary, replace the torn and damaged parts.

STARTING THE ENGINE

- **STARTING THE COLD ENGINE** -

After doing the previously described actions, you can start the engine. In order for the engine to start easily, it is necessary to:

- set the gas lever (Picture 4, item 5) to the position of 2/3 of full gas.
- withdraw the Extra Charging Command (see Picture 20, Item A)
- wrap the rope for starting on the belt (see Pic. 21), in the direction of the arrow on the belt.



Picture 20



CAUTION: Slightly pull the cord and bring the belt to the starting position (bring the arrow on the belt into the box marked with red), and re-thread the cable into the belt.



Picture 21

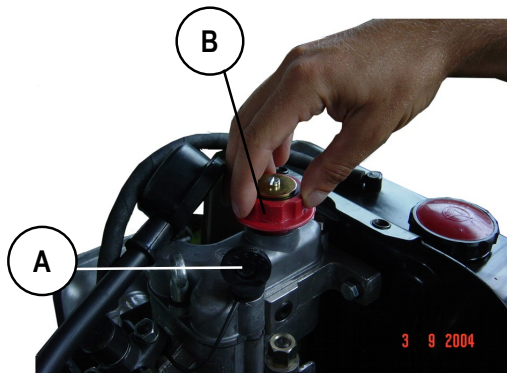
- sharply pull the rope to start in the direction of the arrow displayed on the belt
- If the engine does not start immediately, try again
- When the engine starts, leave it to work for about 5 minutes at a lower speed to ensure the necessary lubrication
- the motocultivator is ready to work

- STARTING THE ENGINE AT LOWER EXTERNAL TEMPERATURES -

Once again, you should know that in cold weather, and with the use of too much viscous oils, it is very difficult to start the engine. Therefore, remember:

- For outdoor temperatures below 0°C, you should use SAE 10W viscosity oil.

To start the engine at low outside temperatures, you can use the following as your own choice:



Picture 22

- a) - remove the rubber stopper (see Pic. 22 pos. A) and fill in 2 - 3 cm³ of the lubricating oil SAE 10 W, or a mixture of lubricating oil and fuel in the ratio 1:1 in the openings.
- return the plug again to its place.
- NOW start the engine.



Picture 23

- b) - To facilitate the start of the engine, you can use the "start spray" supplied in pressure bottles.

If you use it properly, and in accordance with the instructions given on the bottle itself, the contents of one bottle can be 80 to 100 start-up of the engine.

Immediately before or during startup, this liquid should be dispersed for 1-2 seconds directly to the suction port or air purifier (see Pic. 23).

- STARTING THE HEATED ENGINE -

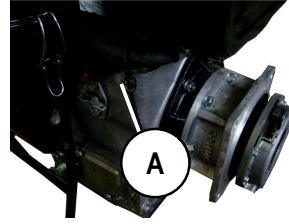
To start a hot (heated) engine, proceed as stated in the "starting the cold engine" section without the need to pull the extra charge control.

STARTING THE ENGINE WITH FPM 414DE ELECTRIC MOTOR

- STARTING THE COLD ENGINE

After you have done all the preparations for starting the engine described on pages 22 and 23, you can start the engine. In order for the engine to start easily, it is necessary:

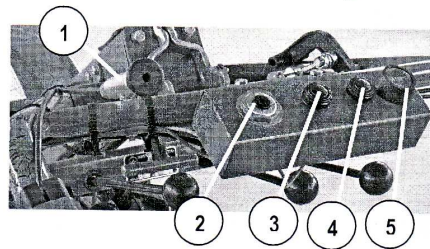
- The gas handle (fig. 20.1) is positioned between ½ and max. gas.
- You need to withdraw the Extra Charging Command (see Figure 20, Item A).
- Put the key in the ignition switch (figure 20.2, item 2).
- Pull the handle of the decompressor and keep it in tension (fig. 20.2, item 1).
- Press the "START" button (figure 20.5, item 5) until the end, after 3 to 4 seconds, release the handle of the decompressor.
- As soon as the engine is turned on, let the "START" button return to



Figure



Figure



Figure



IMPORTANT:

1. Start with an electric starter should not be longer than 10 seconds. If the engine does not turn on, wait 10 - 15 seconds and repeat the procedure. If after 2 - 3 attempts of starting the engine is not put into motion it is not necessary to continue with the further switching of the starter, but first of all need to look for causes of failure (fuel supply and similar).
2. Control the engine operation, the engine oil pressure indicator (Pic. 20.2, Item 4), and the battery charging indicator light (Pic. 20.2, Item 3). When the engine does not work both lamps are lit, and as soon as the engine is turned on, they must be off. If the battery charge lamp is faulty, charging is stopped (replace the incorrect light bulb immediately).
3. The ignition key must not be pulled out while the engine is running because it stops charging the battery.

STARTING THE HEATED ENGINE

To start a warm (heated) engine, proceed as stated in the "starting of the cold engine" section, but you do not need to pull the extra charge control and the decompressor handle.

ELECTRICAL EQUIPMENT

Electrical equipment has 12V voltage, and includes normal or regular electrical equipment of the engine and special lighting equipment. All consumers are secured through soluble 8A fuses, and the entire installation is via the main fuse 25A. The fuse box is located below the sub-cultivator of the motocultivator. To allow access to fuses, first remove the protective cover.

ACCUMULATOR

The power source for all electrical equipment is a 45 Ah battery and a 12 V battery. It is located under the motor protection cover and the battery cover. In terms of maintenance, it is necessary to take care that the electrolyte level in the battery should be 10 mm above the block: make sure that the cells are not packed. The cleats should be clean, if clean, if they are oxidized carefully, clean

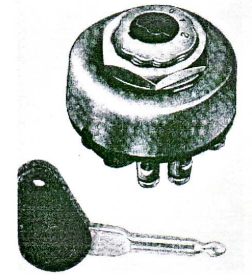
them well, tighten them tightly on the poles of the battery and lubricate them with technical vaseline (no other lubricant can be used).

When removing the battery, first remove the clamp of the negative pole (connected to the ground) and then the clamp of the positive pole. When placing the battery, first connect the clamp of the positive pole, then connect the terminal pole - ground terminal.

MAIN SWITCH WITH A KEY

It is located on the instrument box (Picture 20.2, Item 2). The bottom plate shows the connections at different key positions.

KEY POSITION	KEY PRESSED - placed in the circuit of the current -	KEY PULLED OUT
0	Signal oil pressure lamps and battery chargers, electric starter.	Circuit is broken
1	As in position 0 and: headlights	
2		
3		

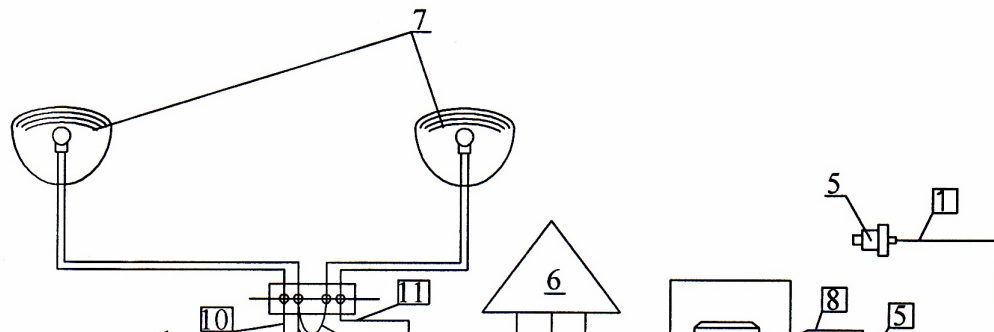


To operate this switch, a special key (see picture right) is required, which is supplied with the FPM 414 DE motocultivator.

By placing the key in the zero position (key pressed), turning on the wheel of the circuit will illuminate on the control panel the oil pressure indicator and charging the battery, and the starter.

Turning the key to the right side of the "1" position lights the headlights, and all the elements from the zero position have been switched on in the circuit.

Turning the key to the right side to position "2" and position "3" all other elements in the circuit of circuits are turned on as in the "1" position.



NOTE

ELECTRIC INSTALLATION SCHEME FOR MOTOCULTIVATOR FPM 414 DE WITH ELECTRIC POWER MACHINE:

1. Mass
2. Battery
3. Electric starter
4. Voltage regulator
5. Oil pressure gauge
6. Alternator 7. Headlamps
8. Main switch with key (Contact lock)
9. Start switch
10. Battery charging indicator light
11. Oil pressure indicator lamp
12. Heat insurers

The numbers entered in □ are installed at the ends of the conductor.

MOVING AND DRIVING

- Hold the safety handle (see Pic. 24) and at the same time tighten the clutch lever (clutch)



- Turn on the desired transfer rate
- Coupling handle - Clutch should be slowly released while simultaneously adding gas.
- The motorcycle or the engine will work as long as you hold the safety lever with your hand, which is the working position of the safety handle.

Picture 24

DANGER: You must hold the safety lever during operation only by hand. Any binding of the handle is strictly forbidden.

NOTE: YOU CANNOT CHANGE THE TRANSMISSION DEGREE DURING DRIVING. CHANGING TRANSMISSION DEGREE IS ONLY POSSIBLE WHEN THE MACHINE IS NOT MOVING.

ENGINE STOPPING

- Set the gas command to a minimum.
- Allow the engine to run for about 5 minutes (to cool the engine) and thus prevent the injection nozzle from burning.
- The gear knob is set to neutral position - position "0".
- Release the safety lever - the engine stops.

ENGINE DEVELOPMENT

The lifetime and working safety of the engine depend to a large extent on engine development. During the first 50 hours of operation, the engine should be loaded with about 50%, which means that the lever for regulating the speed must be opened only up to half of its course. The cold engine should run for 10 minutes, and for the next 5 minutes without load with a half-open lever to regulate the speed. After 50 - 100 working hours you can increase the load to about 3/4 of the full available power of the machine.

CARE AND MAINTENANCE OF THE MOTOCULTIVATOR

You bought a reliable machine, but only if you properly nourish it and conserve it, can you expect a good performance and a long service life.

This chapter provides all the necessary information that the operator of the motorcycle needs to know and adhere to, as well as explanations for performing the most basic settings for which the need may be indicated during work.

MAINTENANCE OF THE BASIC MACHINE

- a) - Before each use of the motocultivator, check the oil level in the gearbox housing. Check is made on the control plug located on the right side of the gearbox housing.
- b) - Regularly change the oil in the gearbox housing, and keeps the oil drain plug and oil pan and its environment clean, so that dust and dirt do not get into the interior.
 - The first oil change takes place after 25 working hours
 - The following replacements are made after every 100 hours of operation. For this you need 2 liters of SAE 80 lubricating oil, for example. UMOL 80 REFINERY "INA" or TRAKTOL 80 refinery "MODRIČA"
 - Replace the oil only when the machine is heated to working temperature.
- c) - Keep the parts that are important for the functioning of the machine and keep them clean as well as the entire machine.
 - regularly check the tightening of the bolts and nuts, and, if necessary, tighten them with the necessary tightening torque.
- d) - Regularly lubricate all moving parts with oil, or technical lubricant, such as the cables of the individual controls (pour a little oil into the shroud of the cable control).
- e) Check the air pressure in the drive wheels tires, which should be 2.25 bar. Make sure that both tires have equal air pressure, allowing easier driving or control.
- f) - The braking device, both for driving and for parking, should be controlled in terms of proper functioning.
 - The brake system should be adjusted regularly, even if it is currently operating.
 - At least every 6 months, you need to decompress and clean the braking device. This is best done by an expert of the IMT Boljevac service.

STORAGE OF THE MOTOCULTIVATOR

PREPARATION FOR STORAGE:

- 1.- If you do not use the motocultivator for a longer period, clean it thoroughly.
- 2.- The machine should be washed after cleaning.
- 3.- Release the oil from the gearbox and the engine and then fill it with clean oil to the proper level.
- 4.- Remove all excess oil carefully with a cloth.
- 5.- Replace all damaged or worn parts.
- 6.- Tighten all screws and nuts on machine.
- 7.- Clean rusted surfaces and bare spots and shade them with protective paint.
- 8.- Lift the machine to the wooden stand, making sure that the rubber wheels do not lie on the ground. (tires will become unusable in the shortest possible time when they are without air, and under load).



NOTE: MOTOCULTIVATOR SHOULD NOT BE STORED:

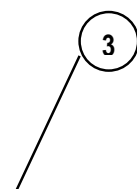
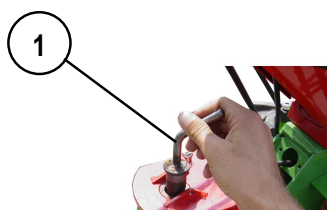
- IN HUMID SPACE
- IN PLACES WHERE MINERAL FERTILIZERS ARE STORED
- IN STABLES OR ADDITIONAL ROOMS
- IN ALL THESE AREAS, THE MACHINE WILL CORRODE STRONGLY

PREPARATION OF THE MACHINE FOR WORK

(in spring when field works begin)

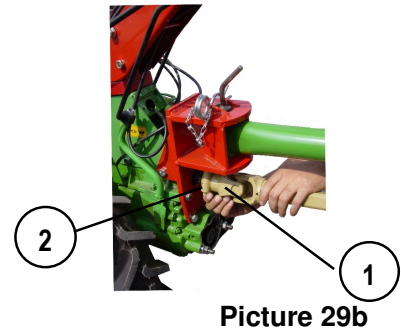
1. Lubricate all moving parts with oil and technical lubricant.
2. Check and clean (if necessary):
 - the gas tank
 - all the fuel lines through the purifier fuel to fuel injection pump
3. Do not forget to release air from the fuel supply (if necessary).
4. Check the air pressure in the tires.

DRIVING WITH A TRAILER WITH DRIVE WHEELS



Picture 29

Figure 29a



Picture 29b

For safe driving with a trailer, the following necessary:

- a) - 1 pair of drive rubber wheels with tires 5.00x12 "
- b) - 1 pair of wheel extensors, Art. number 501 93 110
- c) - 1 pair of extra weights for wheels, art. number 501 93 111
- d) - trailer for articulated trailer. number 502 20 060
- e) - trailer with drive wheels FPM 807 232

INSTALLATION

- 1. - Adjust the steering column so that the engine moves forward, viewed in the direction of travel.
- 2. - Attach drive wheels to wheel extensors (wheel distance 625 mm).
- 3. - Connect the machine to the trailer with drive wheels.

CAUTION: Fixing pin (see Pic. 29a, item 1), must be correctly positioned in its place and secured by a spring plug - fuse (see Pic. 29b, item 3).

- 1. Pull the universal joint to the pivot shaft (see Pic. 29b, item 1), whereby the button for securing (locking) should be pressed (see Pic. 29b, item 2). Then release this button and push the cardiac wrist so far until the guard shaft comes up (what can you hear). In order to connect the cardan shaft more easily, move the steering wheel arms to one side or the other, and pull out the cardan shaft slightly.
- 2. Release the trailer support (stop) and position it in the upper position, return the shaft to its place and secure it with a fuse.
- 3. The trailer is ready to ride.

DRIVING

The drive axle of the trailer serves to increase tractive power in difficult conditions, for example: in arable or damp forest and field roads.

DANGER: FOR SAFETY, WITH INCLUDED LOCKING EFFICIENCY, YOU CAN DRIVE ONLY IN FIRST AND SECOND GEAR AND BACKWARD.

The use of trailer in the third level of transmission is uneconomical and harmful.

A) - Drive with off drive axle.

- 1. - Pull the wheel lock lever (Pic. 11a, pos. A) to the rear, (according to the operator), allowing the wheels to turn freely
- 2. - Set the change lever to position "0".
- 3. - Start and warm the engine (see "Starting the engine" section).
- 4. - Turn on 1 - R - 2 - 3 gear:

- a) - pull the clutch lever handle, adjust the gas
 - b) - Turn on the transfer rate
 - c) slowly release the engine clutch lever, and at the same time add the gas
5. - Stopping.
- a) - pull the clutch lever handle, adjust the gas
 - b) - set the transmitter lever to position "0"
 - c) - Release the clutch lever
 - d) - pull the parking brake on the trailer and the motocultivators

DANGER: Always bear in mind the load capacity of the trailer, avoid overloads that damage the trailer and the machine.

The air pressure in the trailer tires should be 2.25 · 1010 Pa.

CAUTION: NEVER DRIVE WITH THE POWER BLOCKER ON.

NOTE: THE POSITION OF THE SPEED GEARBOX CAN CHANGE ONLY WHEN THE MOTOCULTIVATOR IS STILL, IE. YOU MUST NOT MOVE, AND AT THE SAME TIME THE CLUTCH MUST BE SEPARATED.

CAUTION: EXCLUSION OF THE CLUTCH IN THE SPEED OF THE MOTOCULTIVATOR IS ESPECIALLY FORBIDDEN ON STEEP TERRAIN IN ORDER TO INCREASE THE SPEED.

If the operator of the machine (driver) does not follow these warnings, there may be major breaks in the use of the gearbox.

B - Drive with the drive shaft turned on

1. - Pull the handbrake handle towards the rear, (according to the operator), allowing the wheels to turn freely.
 2. - Set the change lever to position "0".
 3. - Put the lever on the trailer drive shaft in the neutral position.
 4. - Start and warm the engine (see section "Starting the engine").
 5. - Turn on the lever (Pic. 2, Item 7) to drive the trailer shaft.
 6. - Turn on 1 - R - 2 gear.
 - a) - Pull the clutch lever handle, adjust the gas
 - b) - Turn on the transfer rate
 - c) - Slowly release the engine clutch lever, and at the same time add the gas
7. - Stopping
- a) - Pull the clutch lever, adjust the gas, and attach the trailer until the vehicle stops
 - b) - Set the transmitter lever to position "0"
 - c) - The drive shaft switch is placed in neutral position
 - d) - Release the engine clutch lever
 - e) - Pull the parking lever on the trailer and on the base machine

NOTE:

1. - You can only use the trailer drive in I and II transmission level and travelling backward. The use of III level of transmission is harmful and uneconomical.
2. - You can turn on and off the drive shaft drive only in place, with the gearshift lever in the neutral position.
3. - When moving on public roads (regardless of steering difficulties), the wheel locking lever must always be positioned backwards, according to the operator.
4. - If the trailer wheels slip (sludge, soft soil, wet grass), then you can turn on the drive of trailer wheels.

5. - FPM Boljevac does not guarantee the characteristics and safety of the trailers of other manufacturers.

CARE AND MAINTENANCE OF THE TRAILER

1. Lubrication

On the trailer, the following parts are lubricated:

- Drive shaft with LUMA 2 lubricant, repeatedly during the season, and after two years completely replace all the lubrication. Occasionally lubricate the grooved portion of the output shaft;
- Lubricate the ore of the trailer through a lubricant placed on the upper side of the ore with LUMA 2 lubricant, twice a year;
- The telescopic part of the shaft shaft should be lubricated several times during the year;
- Lubricate the joints with LUMA 2 lubricant using the decalemate of the grease, the lubricants should be placed on the joints. The lubrication time is usually after 10 operating hours.
- Regularly check the oil level in the gear unit using the meter;
- The oil change in the gearbox is carried out after two years, and the oil HIPOL-B SAE 90 is used;
- Make the first oil change in the differential after 50 - 60 hours. The following changes are made after 2 years. For this purpose, use HIPOL-B SAE 90 oil.

2. General maintenance:

- Regularly tighten all nuts and bolts, especially when the trailer is new, and especially pay attention to the nuts and bolts that secure the wheels, differential and gearbox;
- The tire pressure of both trailers must be the same and it is $2.25 \cdot 10^{10}$ Pa;
- Do not allow tires to come into contact with oil, fuel or lubricating grease, acids, anti-corrosive agents, etc. because their effect on the tire is detrimental;
- When the trailer has been out of use for a long period of time, remove it under the roof and lift it to suitable pads), which will relieve the tires.

WORKING WITH THE TRAILER

The trailer is designed so that it can load the maximum speed achieved by the batcher under full load. Connected exclusively to the cultivator.

The trailer can be driven with the drive shaft turned on or off.

The trailer box is 1950 x 1450 x 300, and it is constructed in such a way that the load can be shaken. Load capacity is 1000 kg. For the transport of bulky cargo (hay, bundle, etc.), there are grid sides and tubes for the extension of the platform, the installation of which is easy and simple.

NOTE: Do not use the hammock sides of the trailer to transport the material, for example, wood, stone, and the like.

ROTARY MOWER WITH RIGID BLADES



Figure 30

For working with rotary mower with rigid blades, the following connecting devices are required:

- a) - 1 drive part of the rotary mower
art. no. FPM 802 230
- b) - 1 pair of working bodies - rotor with tin,
art. no. FPM 802 235
- c) - 1 pair of extra weights for wheels,
art. no. 501 93 111
- d) - 1 claw set,
art. no. 501 93 141 (depending on
land conditions)

NOTE

- If you have purchased the drive part of the rotary mower with tin as one assembly unit art. no. FPM 802 245 then you do not need circuits listed under a) and b).

INSTALLATION

1. Position the steering column position in such a way that the engine is FORWARD, viewed in the direction of travel.
2. Secure the additional weights of the wheels on the drive wheels (see Pic. 16)
3. Push the claw into the weights of the wheels and fasten the screws (see description on page 21, Pic. 16)

DANGER: Claws are only intended for work in the field, and you should not use them when driving on the road.

4. Remove the rear cover from the mower.
5. Center - fasten the transmission flange of the rotary mower to the motocultivator flange.

IMPORTANT: Make sure that the connection surfaces are clean. Tighten the tensioning nuts together evenly.

6. Adjust the height of the cover and guide blade.
 - a) - Lid regulation: Place the raised sheet in the upper support (notch), when you want to work deeper, and in the lower support (notch) when you want to work at a small depth.
 - b) - The cutting angle is adjusted using two blades - the working body as follows:
 - In heavy soil, move the lath for regulation to the top, so that the knives are working organs pull in the ground;
 - in the case of light soil, the regulation latch moves downwards

Both blades - working organs have a significant influence in terms of achieving good and accurate work with the rotofreza,

therefore, you need to pay special attention to the correct adjustment.

7. If the rotary mower is delivered without the workpieces installed, place the working organs on both ends of the rotary mower shaft. Depending on the work you want to accomplish, you need to assemble the required number of hoes (for a grip of 50 cm, 60 cm, 70 cm or 80 cm).

8. Install the protective cover.

- First place the middle part, and then the side panels that are adjusted according to the required

working width. Then tighten the adjustment screws.

WARNING: The operating depth is adjusted to the 4-way cover upwards (4 inches - maximum working depth)

WORK

1. Place the transmitter lever in the "0" position.
2. The wheels of the wheel blocker release are released, so that both wheels receive a drive.
3. Start and warm the engine.
4. Push the engine clutch lever, pull the shaft lever to engage the shaft and the shaft back towards you.

WARNING: If the lever does not respond, do not move forward, then gently lower the clutch lever with a slight pressure on the lever so that the coupling teeth engage the teeth on the rotary mower shaft. Always press the lever to turn it on.

5. Switch gear to first gear.

6. Lower the clutch handle slowly and simultaneously add the gas.

WARNING: The machine moves forward, and the work organs – the rotary mower blades turn.



CAUTION: Before starting setting, lubricating or cleaning the tool, turn off the engine and turn off the pivot shaft.



CAUTION: Cleaning is never done with hands, but using a suitable item.

AFTER FINISHING WORK:

1. Disassemble in reverse order from the one described for assembly.

WARNING: Make sure that there is enough oil in the rotary mower housing. The required amount of oil is 0.5 l, for example; "FAMHIPO 90 EP" FUEL MACHINE KRUŠEVAC, or "HIPOL B" REFINERY BELGRADE, or E.P.80 manufacturer SHELL, or oil of other manufacturers that suits JUS B.H3.303 MP-5.

MAKING FURROWS (RIDGING)

For this purpose, you need the following connecting devices:

- a) One runner with a deck
art. FPM 803 247
- b) Universal plug for the cultivator
FPM 804 228
- c) 1 pair of extra weights for the wheels
art. number 501 93 111
- d) 1 pair of claw sets,
art. number 501 93 141 (depending on
land conditions)



INSTALLATION

1 - 4. The same mounting procedure as with the rotary mower (see page 31).

5. Center - fasten the flange of the universal connector to the flotation flange of the motocultivator.

IMPORTANT: Make sure that the connection surfaces are clean. Tighten the tensioning nuts together evenly.

6. Connect: grate for the body of the universal connector.

1. Secure the body of the molding that is attached to the bracket holder with the screws at the desired working depth of the draft.

WORK

1 - 3. The same as when working with a rotary mower (page 31)

4. Switch gear to first gear.

5. The engine clutch handle slowly lowers and simultaneously adds the gas, the machine moves forward, and the working organs of the ridger penetrate the ground, the boards move the earth and ridge, making furrows.

AFTER FINISHING WORK

1. The dismantling of the tools is in reverse order than when it was installed.

2. Install the cover on the rear of the machine (on the flange of the output shaft).

PLOUGHING

For this purpose, you need the following connecting devices:

- a) - 1 plough with special attachment piece
art. number FPM 803 249
- b) - universal connector for the motocultivator
art. number FPM 804 228
- c) - 1 pair of wheel extensors
art.no. 501 93 110
- d) - 1 pair of extra weights for the wheels
art.no. 501 93 111
- e) - 1 pair - set of claws art. number 501 93 141
(depending on the land conditions)



INSTALLATION

1. Adjust the position of the steering column so that the engine moves forward, viewed in the direction of travel.
2. Secure the drive wheels on wheel extensors and with a wheel spacing of 595 mm and 625 mm (see technical data on page 20).
3. Install the additional weights of the wheels and fasten them.
4. Clamp the claws into the weights of the wheels and fasten the screws.

DANGER: Claws are only intended for work in the field, and you should not use them when driving on the road.

5. Remove the rear cover from the motocultivator (shaft guard).
6. Center - secure the flange of the universal connector on the flotation flange.
7. Connect the dongle plug to the universal connector body.
8. Place the fuse stop on the universal connector in the appropriate hole.
(MIDDLE = NORMAL PLOUGHING, LEFT AND RIGHT = EDGE PLOUGHING)

WORK

1. Place the transmitter is placed in the "0" position.
2. Release the wheels of the wheel blocker lever so that both wheels are powered.
3. Start and warm the engine.
4. Pull the engine clutch lever and engage 1 degree of transmission, release the brake block lever (Pic. 11b).
5. Release the engine clutch handle slowly and at the same time give the gas.
6. During the first few meters of work, adjust the depth of plowing and lateral boundaries.
7. For turning at the ends of the furrow, use the wheel blocking lever (see description on page 18, Pic. 11a, b).

AFTER FINISHING PLOUGHING

The disassembly is done in the order opposite to that of the assembly.

PLOUGHING WITH A ROTARY PLOUGH

For this purpose, you need the following connecting devices:

- a) - Handpiece with special attachment piece



- art. number FPM 803 250.
- b) - Universal plug for the cultivator
art. number FPM 804 228.
- c) - 1 pair of wheel extensors
art. number 501 93 110.
- d) - 1 pair of extra weights for the wheels,
art. number 501 93 111.
- e) - 1 pair of claw sets
art. number 501 93 141
(depending on the land conditions)

INSTALLATION

- 1 - 6. As with regular ploughing (see page 32 ÷ 33).
- 7. Connections - the universal plug connector for the body is attached.
- 1. Place the fuse stop on the universal connector in the appropriate hole.
(MIDDLE = NORMAL ORANGE, LEFT AND RIGHT = EDGE PLOUGHING)

WORK

- 1-7. As with regular ploughing (page 32 ÷ 33).
- 8. Ploughing in 1 gear.
- 1. Turning the machine at the end of the furrow:
 - a) Pull the engine clutch lever, set the gear lever to the "0" position, pull the blocking lever.
 - b) Turn the rotary plug.
 - c) When ploughing to the left, pull the right wheel locking lever.
 - d) When ploughing to the right, remove the left hand wheel locking lever.
 - e) Pull the engine clutch lever, turn on the gear for reverse gear, adjust the gas so that the engine does not extinguish when the engine clutch lever is released.
 - f) Hold the rotary plug with the right hand, release the clutch gently and go backwards with the machine until this comes in the direction of the furrow.
 - g) pull the clutch handle, pull down the plug, turn on the 1st gear, enter the furrow.
 - h) Hold the plug, release the lever, twist the plug into the furrow, and release the pulled-out wheel retainer lever.

AFTER FINISHING WORK

- 1. Dismantle in the order opposite to that in assembly.
- 2. Place the rear cover of the machine

POTATO EXTRACTION

For this purpose, you need the following connecting devices:

- a) – 1 potato machine
art. number FPM 804 147.
- b) - Universal plug for the cultivator
art. number FPM 804 228.
- c) - 1 pair of extra weights for the wheels
art. number 501 93 111.
- d) - 1 pair - claw set
art. number 501 93 n141
(depending on the land conditions).

INSTALLATION

- 1 ÷ 6. The same mounting procedure as when using a regular plough (see description on page 32 ÷ 33).

7. Connect the potato machine to the body of the universal connector.

WORK

- 1 - 5. As with regular ploughing (page 32 - 33)
1. During the first meters of working with the machine, adjust the working depth of the potato machine.
2. For turning at the ends, using the wheel block lever (see description on page 18, Pic. 11).

AFTER FINISHING WORK

1. Disassemble in the order opposite to that when mounting.
2. Install the cover on the rear of the machine (on the flange of the output shaft).

WORKING WITH A CULTIVATOR WITH A RIGID HOE

(for cultivating soil until sowing and planting)

For this purpose, you need the following connecting devices:

- a) - One cultivator with rigid hoes (for processing land until sowing and planting)
art. number FPM 803 247
- b) - Universal plug for the cultivator
art. number FPM 804 228
- c) - 1 pair of extra weights for the wheels
art. number 501 93 111
- d) - 1 pair of claw sets
art. number 501 93 141 (depending on the land conditions).



INSTALLATION

- 1 - 6. The same mounting procedure as with regular ploughing (see description on page 32 - 33).
7. Connect the cultivator with rigid hoes to the body of the universal connector.

WORK

- 1 - 5. As with regular ploughing (pages 32 - 33).
6. During the first few meters of work, a cultivator with rigid hoes (for cultivating soil till sowing and planting) to the required working depth, and in addition to adjust the lateral range.

AFTER FINISHING WORK WITH THE CULTIVATOR

1. Dismantling shall be done in the order opposite to that of the assembly.
2. Place the cover on the rear of the machine (on the flange of the output shaft).

WORKING WITH THE MOWER

For this purpose, you need the following connecting devices:

- a) - The drive mechanism of the mower
art. number IMT 804 231
- b) - 1 cutting machine with setting guides,



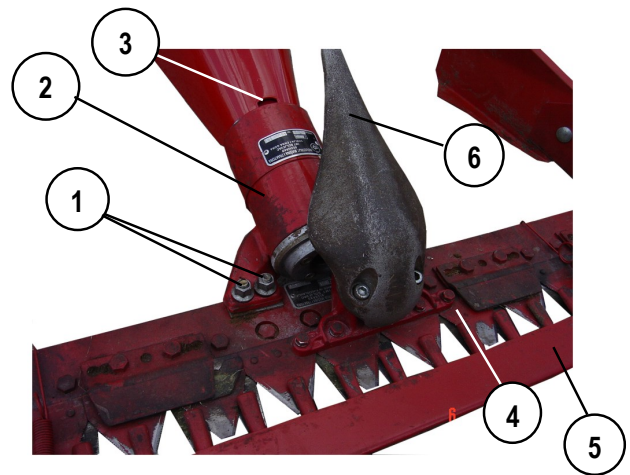
- art. number FPM 804 131 - working grasp 1.05 m, or
- art. number FPM 804 129 - working grasp 1.30 m,
- art. number FPM 804 130 - working grasp 1.60 m.
- c) - 1 pair of wheel extensors
art. number 501 93 110

INSTALLATION

1. Pre-assemble - connect a single-piece drive mechanism with a cutting device:

WARNING: You only have to do the following with a new mower, since you will later remove the drive mechanism along with the cutting machine.

- a) - Remove the protective sheet (number 5).
- b) - Move the cutting rod to one side
- c) - Attach the cutting machine to the drive mechanism of the mower using the 4 screws, and tighten the nuts with a wedge.
- d) - Cut the knife back to its place, so that the stone is lying between the panels on the back of the wall. The masonry on the stone must be facing upwards.
- e) - Secure the spreader on the cutting edge of the slit.
- f) - Tighten the sheets to guide cutting on the cutting machine.



1. Fixing nuts
2. Drive mechanism
3 Front fixing
protective sheet

4. Cutting
machine
5. Protective
sheet
6. Cutting
distributor

1. Mount the drive wheels on wheel extensors, with a 595 mm clearance for operation on flat terrain, with a 625 mm clearance for working on sloping terrain.
2. Rotate the steering wheel handles on the machine so that the engine is backward when viewed in the direction of travel.
3. Remove the cover on the machine (from the flange of the output shaft).
4. Secure the drive mechanism. Take care of both surfaces (clean and without lubrication on the cultivator and on the drive mechanism, and the nuts are tightened on both sides evenly).
5. Install the additional weight and tighten the screw.
6. Insert the protective sheet into the front fixing (No. 3, page 36). and push the back support to the intended location.

WORK

1. As with regular ploughing (page 32).
2. Pull the engine clutch lever and turn on R1 or R2 gear.

3. Release the engine clutch handle slowly and simultaneously add the gas.
4. When turning, use the locking lever arm (see description on page 18).
5. For stand by, R1 or R2 can be switched on.

When you finish mowing, or if the mower is jammed, the gear change lever is set to "0". In doing so, the cultivator stands in place, and the cutting mower is still moving. So clean the hair knife carrier.

CAUTION: When cleaning the cutting machine during mowing, then, for safety reasons, it is mandatory to stop the engine.

REMEMBER:

After about half a mowing time, pull all the bolts and nuts on the drive mechanism of the mower and on the cutting machine, (in particular, the connection of the mower and the drive mechanism, the connection of the double fingers and blades).
Approximately after every 2 hours of mowing, use a manual press to lubricate the nozzle on the oscillator, the sliding parts on the side, and the sliding parts of the cutting machine.

AFTER FINISHING WORK

1. You can disassemble the mowing device in reverse order than when installing. However, it is advisable that the drive mechanism and the cutting machine remain an unsettled whole, in order to save unnecessary assembly work.
2. The mowing device, especially the cutting machine, should be washed immediately with water, cleaned, and oiled.
3. Place the cover on the front of the machine (on the flange of the output shaft).

IRRIGATION

For this purpose, you need the following connecting devices:

- a. 1. Irrigation pump
art. number FPM 805 159
- b. 1. Suction hose with suction basket.

INSTALLATION

1. Position the steering column position in such a way that the engine is moving forward in the direction of travel.
2. Remove the rear cover on the machine (from the flange of the output shaft).
3. Secure the irrigation pump.

Before attaching, check that the pump shaft turns easily.

After prolonged standing out of use, corrosion of the pump circuit can occur, whereby you have to count with disturbances and thin layers of corrosion (rust), as the distance between the rotating parts and those that stand is very little. It is therefore necessary to fill the pump with hot water, open the plug on the pump, and then turn the pump shaft sharply (striking).

NOTE: In no event should you plug the pump into the motocultivator before performing this test.

4. Connect the pressure line.

WORK

1. Place the shift lever in position "0" for safety, and set the "slow-fast" travel to position "0".
2. Connect the suction line.

Pre-check the functioning of the valve at the bottom by starting the suction hose in the water up - down. Fill the hose with water. The suction line must be sealed and positioned to climb towards the pump. Sharp bends should be avoided. In addition, attention should be paid to the valve in the suction basket which should be approximately 20 cm above the bottom of the basin or well, and the other side while reducing the water level in the well does not absorb air into the suction pipe. When pumping out of the pond or holes (channels), the suction basket is lowered with the help of a protective basket.

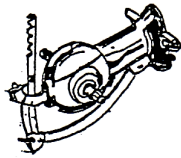
3. Fill the pump body with water in the manner provided.
4. Pull the engine clutch lever, and start the engine.
5. Switch on the lever to drive the connecting tool.
6. Release the engine clutch handle slowly and at the same time to give the gas. The irrigation pump is now in operation.

Ručicu za promenu stepena prenosa postavi u položaj "0" zbog sigurnosti i ručicu za "spori - brzi" hod

AFTER FINISHING WORK

1. Pull the engine clutch lever off, turn off the irrigation pump, remove the intake hose from the water, let the water drain out of all hoses.
2. The disassembly is done in the order opposite to the one in the assembly.
3. Place the cover on the rear of the machine (on the flange of the output shaft).

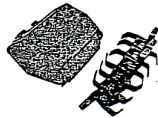
CONNECTING TOOLS



FPM 802 230



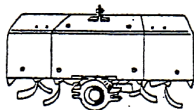
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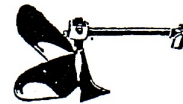
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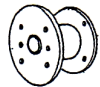
FPM 803 247



FPM 802 245



FPM 803 246



501 93 110



FPM 804 231



501 93 141



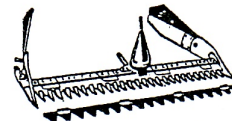
FPM 805 253



**501 93 111
ident: 29592**



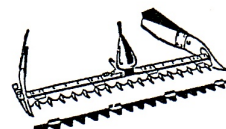
FPM 803 91 070



FPM 804 131



FPM 804 228



FPM 804 129

502 20 060

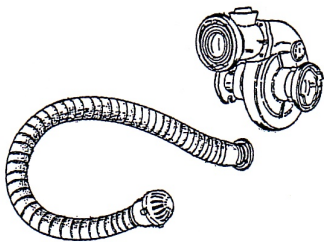
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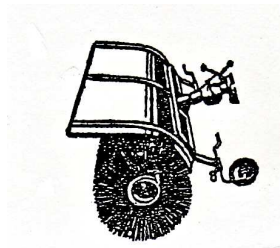
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FPM 803 250

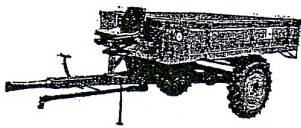
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FPM 805 159



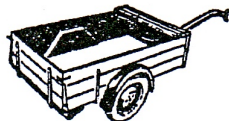
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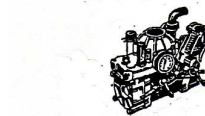
FPM 807 232



FPM 808 256



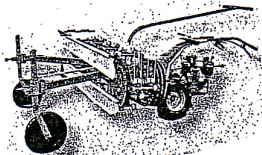
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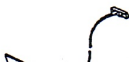
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FPM 805 252



FPM 804 238



FPM 805 229

FPM 805 160

FPM 807 167

str





FPM AGROMEHANIKA AD
BOLJEVAC

Form 1

No: 1162

2003

CERTIFICATE

OCCUPATIONAL SAFETY MEASURES ON THE MOTOCULTIVATOR WERE APPLIED

Type, series and purpose: Motocultivator FPM 408D / FPM 410DS / FPM 414DS / FPM 414DE,
agricultural activity

Year of manuf.: 2003

Technical data: Power of 7.30KW (according to DIN 70020) at 3000 min⁻¹, single cylinder motor, four stroke, air cooled, 454 cm³ working capacity of 9.20 kW (according to DIN 70020) at 3000 min⁻¹, single cylinder engine , four-stroke, air-cooled, operating volume 515 cm³, 7 gear (4 for driving forward, 3 for driving backward) max speed 17.81 km / h with tires 5.00x12 ".

Supplied documentation: Instructions for handling, maintenance and safe operation and warranty card.

NOTE: Use the motocultivator according to the instructions for handling and maintenance. Persons or animals must not be exposed to the area of work. It is absolutely forbidden for unskilled persons to use the motocultivator, or people who do not possess adequate psychophysical traits.

Authorised person



FPM AGROMEHANIKA AD
Đorđa Simeonovića 25
19370 Boljevac – Serbia

DECLARATION OF CONFORMITY 98/37/CE

We hereby declare, within our responsibility, that the product

Type: Motocultivator

Model: FPM 408D (5.5 KW - 7.5 HP)

FPM 410DS (7.3 KW - 10 hp)

FPM 414DS / DE (9.2 KW - 12.5 hp)

Year of manufacture: 2003

is in accordance with the safety requirements established by European Directive 98/37 / CE.

The product is in compliance with the following standards:

DESCRIPTION	STANDARD
Safety of machinery - Basic concepts, general principles for construction - Part 1: Basic terminology and methodology	EN 292-1:1996
Safety of machinery - Basic concepts, general principles for construction - Part 2: Technical principles and specifications	EN 292-2:
Safety of machinery - Safety limits that define hazard zones in machines	EN 294:1995
Machines in agriculture and forestry - self-propelled motocultivators with rotary rotors (hoes) - Safety	EN 709:1997 709/A1:1999
Machines in agriculture and forestry - self-propelled mowers - Safety	EN 12733:2001
Vibration - Laboratory measurements on handles and machine controls - General.	EN 1033:1995
Noise - Laboratory measurements.	EN ISO 3744

In Boljevac,

26.03.2004

Authorised person signature:
Branislav Rajić, mech.eng.

LIST OF SPARE PARTS - Handling and maintenance instructions -

- For ordering spare parts or components contact the sales department - spare parts.
- Optional equipment or accessories, whose identification number starts with 1, as well as instructions for installation and use, must be ordered from the department of machine sales.

Existing images in the following sheets show machine parts that are numbered.

The text next to the picture states: the serial number of the machine part, its identification number, the quantity within the motocultivator and, if necessary, the dimensions, the standard or the required tightening moment.

This list of spare parts is made for two series of motocultivators and therefore pay attention when ordering parts to order them for the motocultivator that you own.

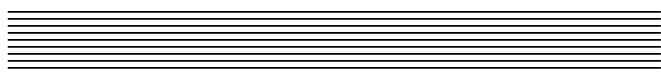
Pay attention to additional tags on the sheets.

In order to avoid misunderstandings and wrong delivery when ordering spare parts, be sure to indicate:

- mark and number of the machine (series, №)
- number and name of spare part (to be found in this list)
- quantity of required spare parts
- the desired delivery method (mail, express, etc.)
- full address of the contracting authority (with postal code)

On your machine on the tile shown in the picture, the series and the factory number are printed. Guarantees and other issues can not be solved without the serial and factory numbers.

Please provide these numbers immediately after the delivery of the machine here in the original.



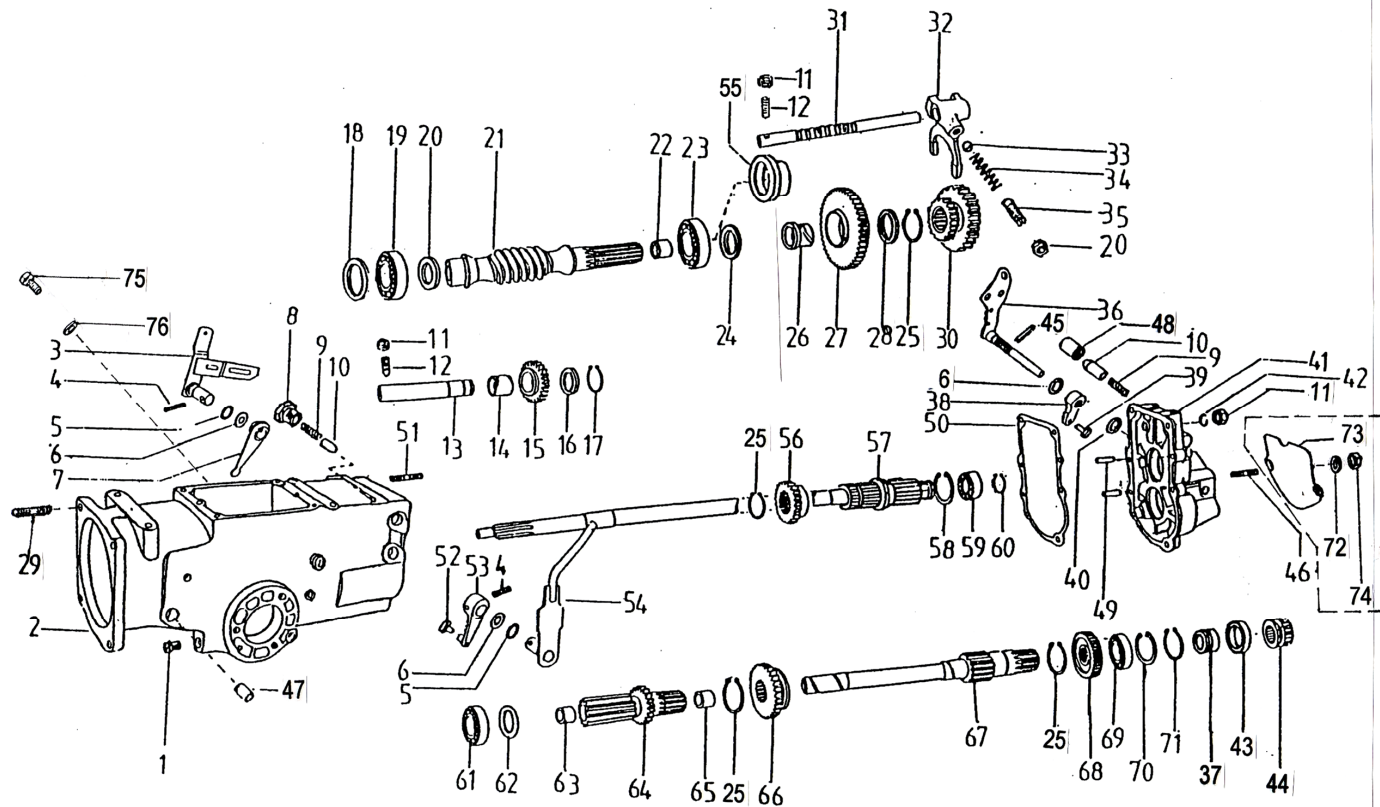
APPROVED SYMBOLS FOR ABBREVIATED MARKING

DNO	Additional optional equipment
:	for
< >	except
>	from to ...
Zam	replaces
∅	diameter
> <	Strength (thickness)
T1N	For vineyard tractors
T1	For tractors cat. 1
T2	For tractors cat. 2
T3	For tractors cat. 3

Q	Number of pieces (quantity) needed
*	See the note
	Movement direction
	Turning direction
	Package of parts & components
ZA	Replaced by one or multiple parts
D.P	Pad thickness
DPS	Pad thickness to reduce gap

GEAR BOX

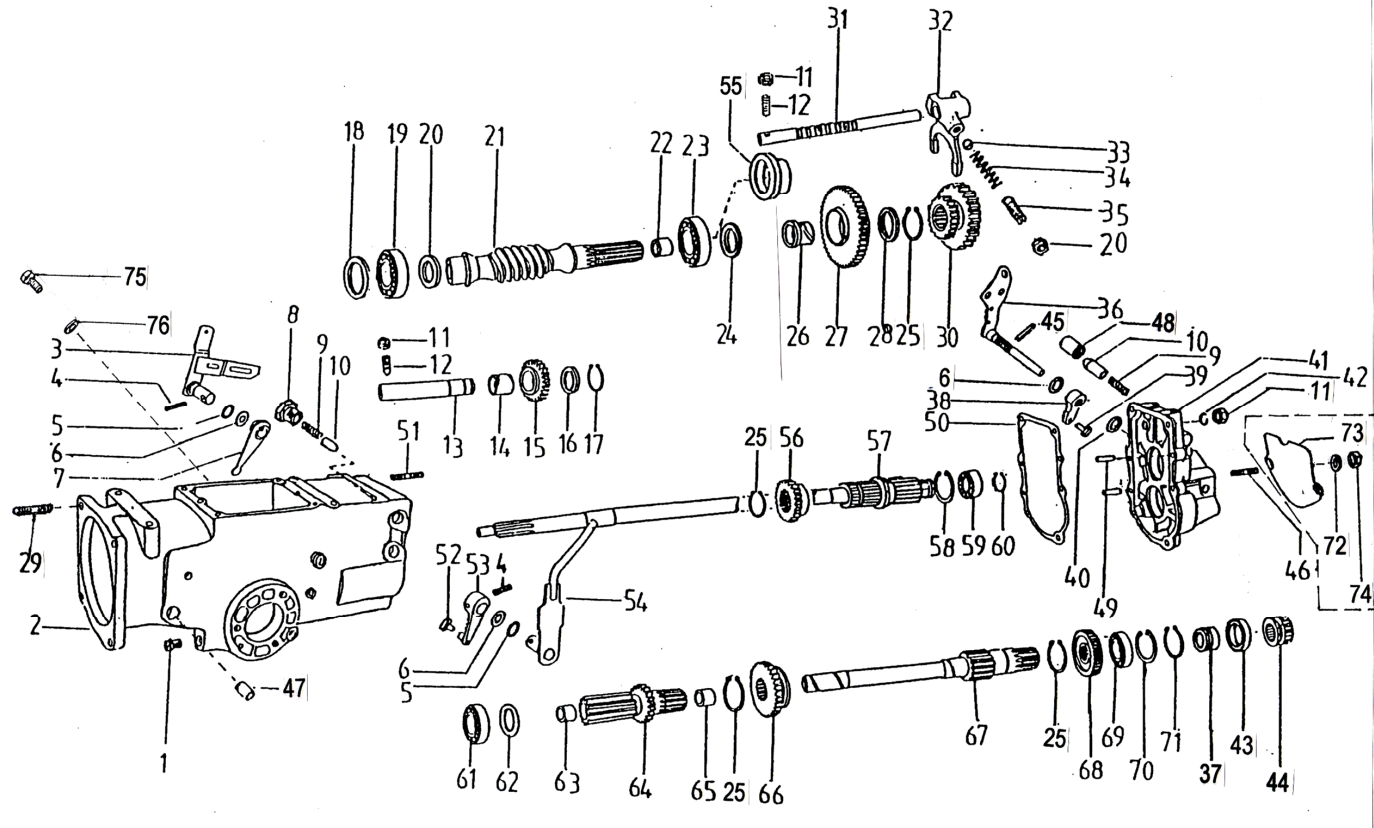
strana 45



IDENTIFICATION NUMBER FOR ORDERING			
1	501 31 009	1	R1/2"
2	501 30 935	1	
3	501 30 990	1	
4	000 10 691	2	6x30
5	501 31 016	2	12x3,5
6	000 40 195	2	18
	501 31 047	pp	18,5x25,5x1
	501 31 038	pp	18,5x25,5x0,4
7	501 30 998	1	
8	501 31 021	1	M18x1,5
9	501 31 023	2	8,5x26,5x1,5
10	501 31 022	1	
11	000 00 060	15	M8
12	000 42 591	1	M8x45
13	501 30 937	1	
14	501 31 024	1	18x24x20
15	501 30 951	1	Z=24
16	501 31 046	1	18x31x1
17	000 24 231	1	18
18	501 31 050	pp	51,5x61,5x0,2
	501 31 051	pp	51,5x61,5x0,4
19	000 39 037	1	32006
20	501 31 040	pp	48x54,5x1
21	501 30 973	1	
22	501 31 034	1	17x22x20
23	000 07 771	1	30206
24	501 31 048	1	30x41,5x1,25
25	000 05 578	1	30
26	501 31 025	1	
27	501 30 967	1	Z=44
28	501 31 049	1	31,5x41,5x2
29	501 31 026	4	M10x20x25
30	501 30 947	1	Z=36
31	501 30 994	1	
32	501 30 907	1	
33	501 31 011	1	6,5
34	501 31 012	1	6x28x1,3
35	000 40 168	1	M8x15
36	501 30 995	1	

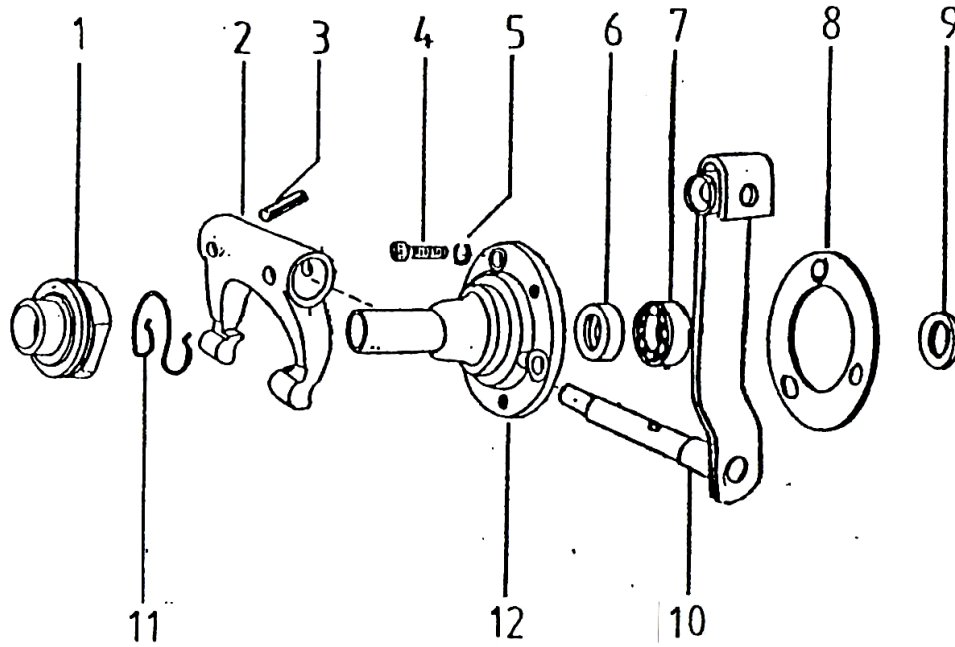
GEAR BOX

strana 46



IDENTIFICATION NUMBER FOR ORDERING			
37	501 31 020	1	
38	501 30 905	1	
39	501 31 060	1	
40	501 31 043	pp	14x20x0,2
41	501 30 931	1	
42	000 00 070	6	B8
43	000 41 634	1	35x52x8,5
44	501 30 887	1	
45	000 00 078	1	4x18
46	502 20 021	2	M12x1,5x67
47	501 31 035	1	1620-P20
48	501 31 063	1	1220-P20
49	501 31 055	2	8x42
50	501 30 974	1	0,3
51	501 31 027	6	M8x14x22
52	501 31 059	1	
53	501 30 901	1	
54	501 31 061	1	
55	501 31 014	1	
56	501 30 953	1	Z=23
57	501 31 064	1	Z=12
58	000 03 049	1	47
59	000 02 443	1	6204
60	000 02 451	1	20
61	000 07 518	1	6302
62	501 31 045	pp	15x20x1
	501 31 044	pp	15x20x0,4
63	501 31 033	1	1515-P20
64	501 30 941	1	Z=12/20
65	501 31 032	1	1825-P20
66	501 30 955	1	Z=33
67	501 30 943	1	
68	501 30 927	1	Z=44
69	000 01 888	1	6205
70	000 00 738	1	52
71	000 00 071	1	25
72	000 00 072	2	B12
73	501 50 925	1	
74	000 00 062	2	M12
75	000 12 927	1	M8x10
76	501 10 421	1	A8x12

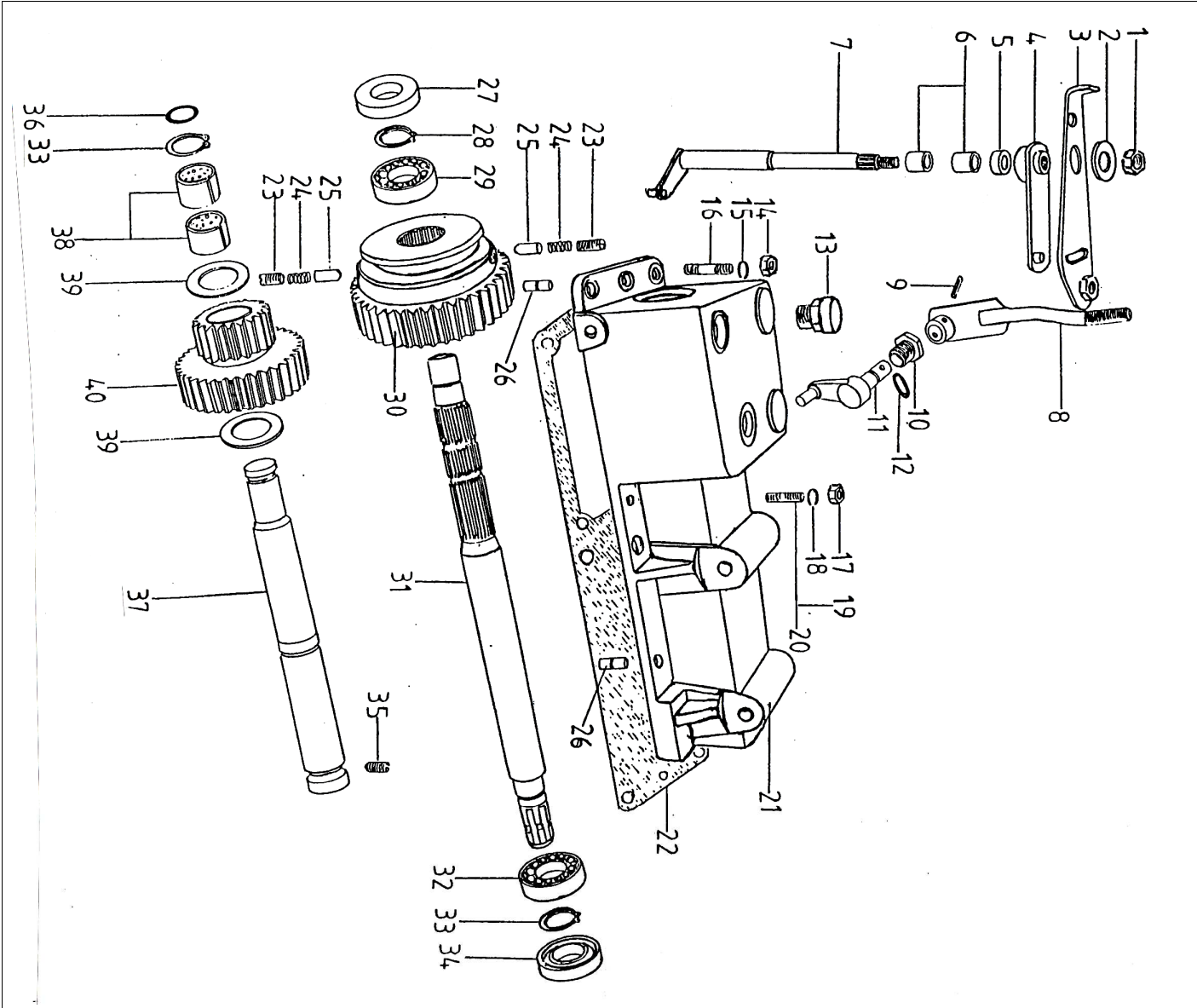
CLUTCH LEVER



IDENTIFICATION NUMBER FOR ORDERING

1	501 31 018	1	
2	501 30 903	1	
3	000 00 080	1	5X24
4	000 09 863	3	M8X30
5	000 00 070	3	B8
6	000 19 480	1	17x28x7
7	000 07 519	1	6303 2Z
8	501 31 007	1	0,3
9	501 30 040	pp	48x54,5x1
	501 30 041	pp	48x54,5x0,4
	501 30 042	pp	48x54,5 0,2
10	501 30 975	1	
11	501 31 019	1	
12	501 30 911	1	

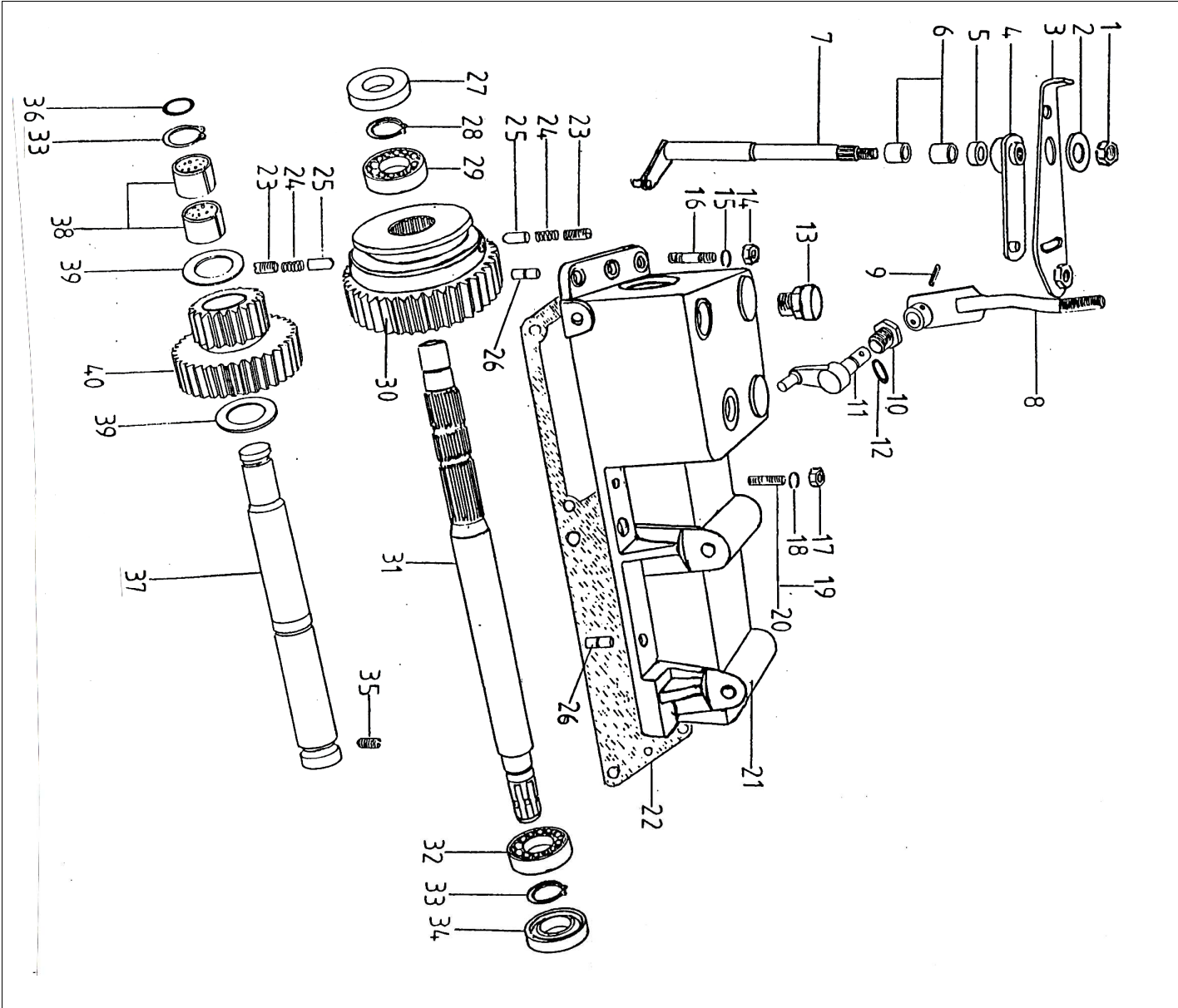
COVER SYNCHRONIZED P.T.O for FPM 410D/414D



IDENTIFICATION NUMBER FOR ORDERING

1	000 02 208	1	M10
2	501 31 010	1	10,5x30x5
3	501 30 979	1	
4	501 30 981	1	
5	000 40 169	1	15x22x7
6	501 31 036	2	15x20x15
7	501 31 001	1	
8	501 30 986	1	
9	000 02 664	1	4x24
10	501 31 013	1	M18,5x24
11	501 30 919	1	
12	627 13 971	1	9,3x2,4
13	000 40 202	1	18x1,5
14	000 00 060	4	M8
15	000 00 070	4	B8
16	501 31 027	2	M8x14x22
17	000 00 062	4	M12
18	000 00 072	4	B12
19	501 31 071	2	M12x23,5x40
20	501 31 028	2	M12x23,5x26
21	501 30 933	1	
22	501 31 004	1	0,3
23	000 40 170	2	M6x10
24	501 31 053	2	5x10x0,8
25	501 31 057	2	4,7
26	501 31 056	2	8x24
27	000 22 774	1	20x47x10
28	000 02 451	1	20
29	000 02 443	1	6204-2RS
30	501 30 949	1	Z=42
31	501 30 972	1	
32	000 01888	1	6205-2RS
33	000 00 086	1	25
34	000 40 171	1	25x52x12
35	000 40 172	1	M10x12
36	501 31 015	1	Ø16x2,5

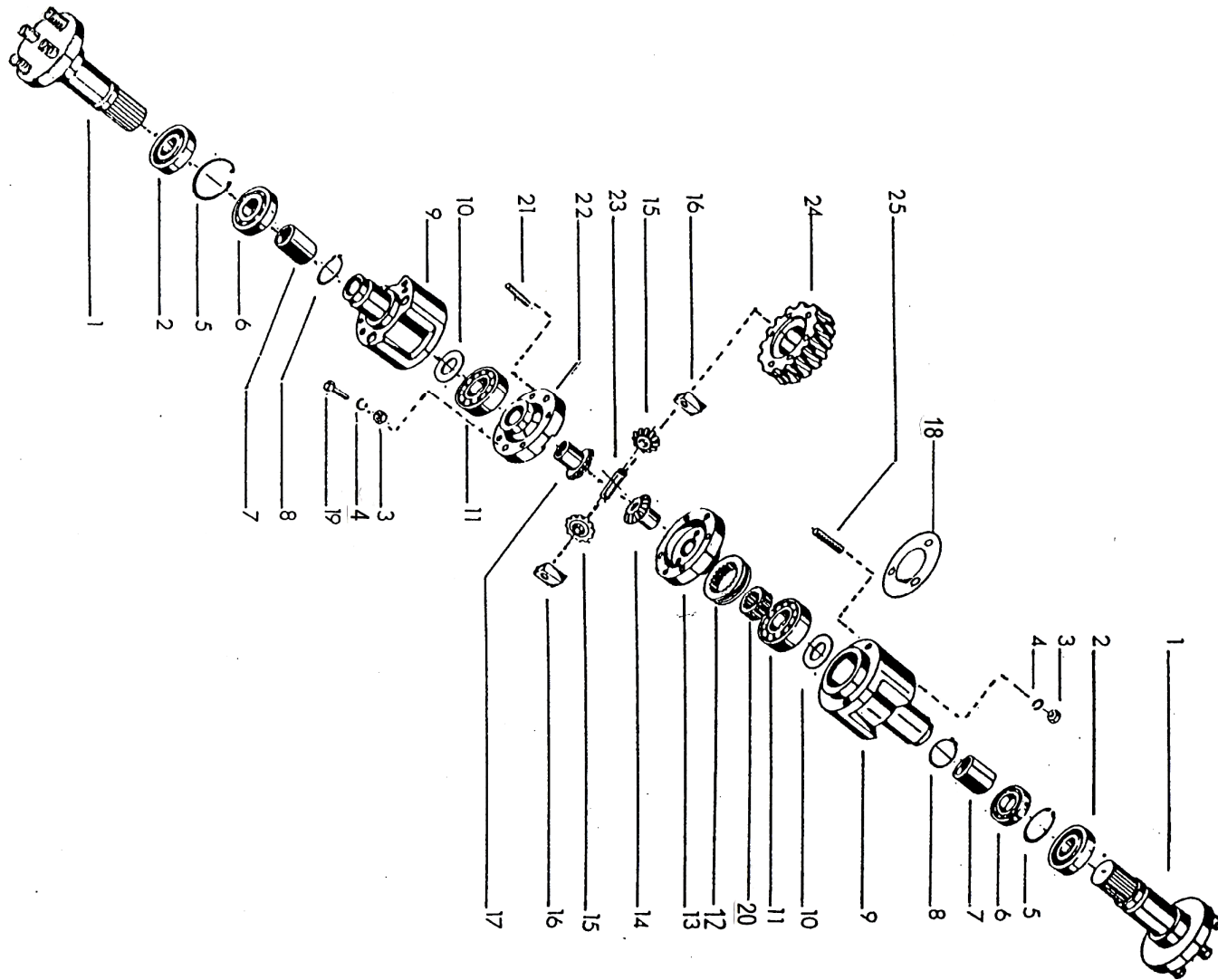
COVER SYNCHRONIZED P.T.O for FPM 410D/414D



IDENTIFICATION NUMBER FOR ORDERING

37	501 31 008	1	
38	501 31 031	2	25x28x25
39	810 02 124	pp	25x34,5x0,2
	810 02 125	pp	25x34,5x0,4
40	501 31 207	1	25x34x4,5
	501 30 945	1	Z = 21/37

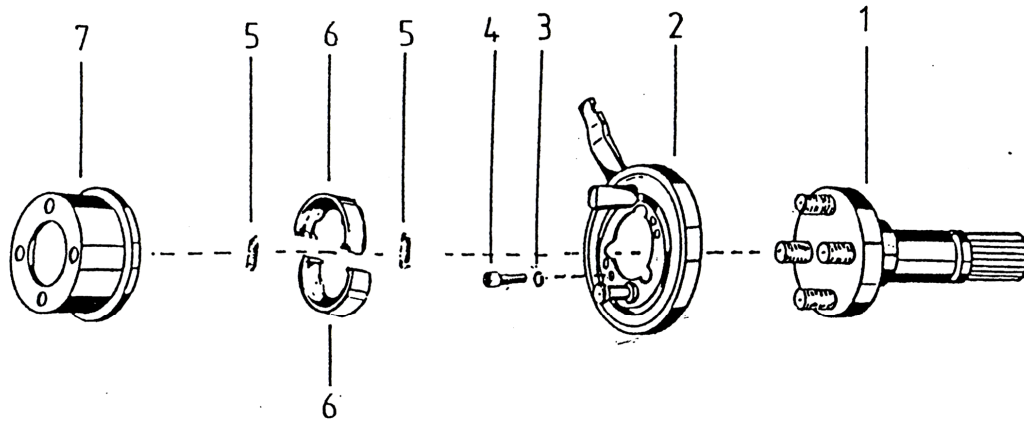
DIFFERENTIAL AND AXLES



IDENTIFICATION NUMBER FOR ORDERING

1	501 30 915	2	
2	000 41 635	2	40X55X10
3	000 00 060	6	M8
4	000 00 070	6	B8
5	000 09 896	2	55
6	000 07 412	2	6006
7	501 30 938	2	
8	000 05 578	2	30
9	501 30 929	2	
10	501 31 050	pp	51,5x61,5x0,2
	501 31 051	pp	51,5x61,5x0,4
	501 31 052	pp	51,5x61,5x1
11	000 10 557	2	6305
12	501 30 940	1	
13	501 30 923	1	
14	501 30 959	1	Z=14
15	501 30 963	1	Z=10
16	501 31 005	2	
17	501 30 965	1	Z=14
18	501 31 058	1	0,3
19	000 40 173	4	M8x40
20	501 30 939	1	
21	000 36 731	4	8x28
22	501 30 925	1	
23	501 31 006	1	
24	501 30 961	1	
25	501 30 030	6	M8x16,5x30

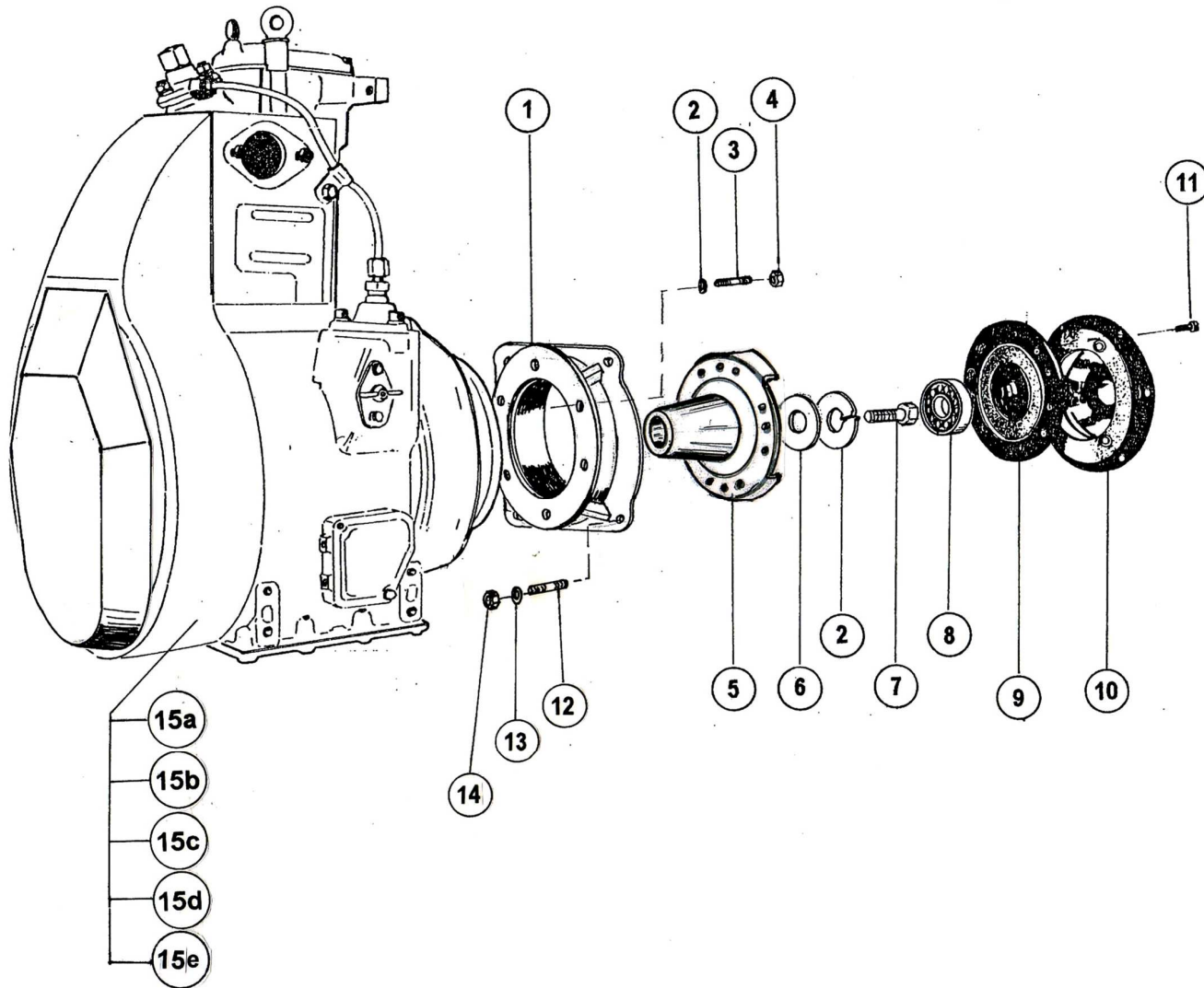
BRAKES



IDENTIFICATION NUMBER FOR ORDERING

1	501 30 915	2	B8 M8x15
2	501 93 119	1	
	501 93 134	1	
3	000 00 070	8	
4	000 29 157	8	
5	501 31 054	4	
6	501 93 107	2	
7	501 93 108	2	

ENGINE JOINT AND CLUTCH HOUSING

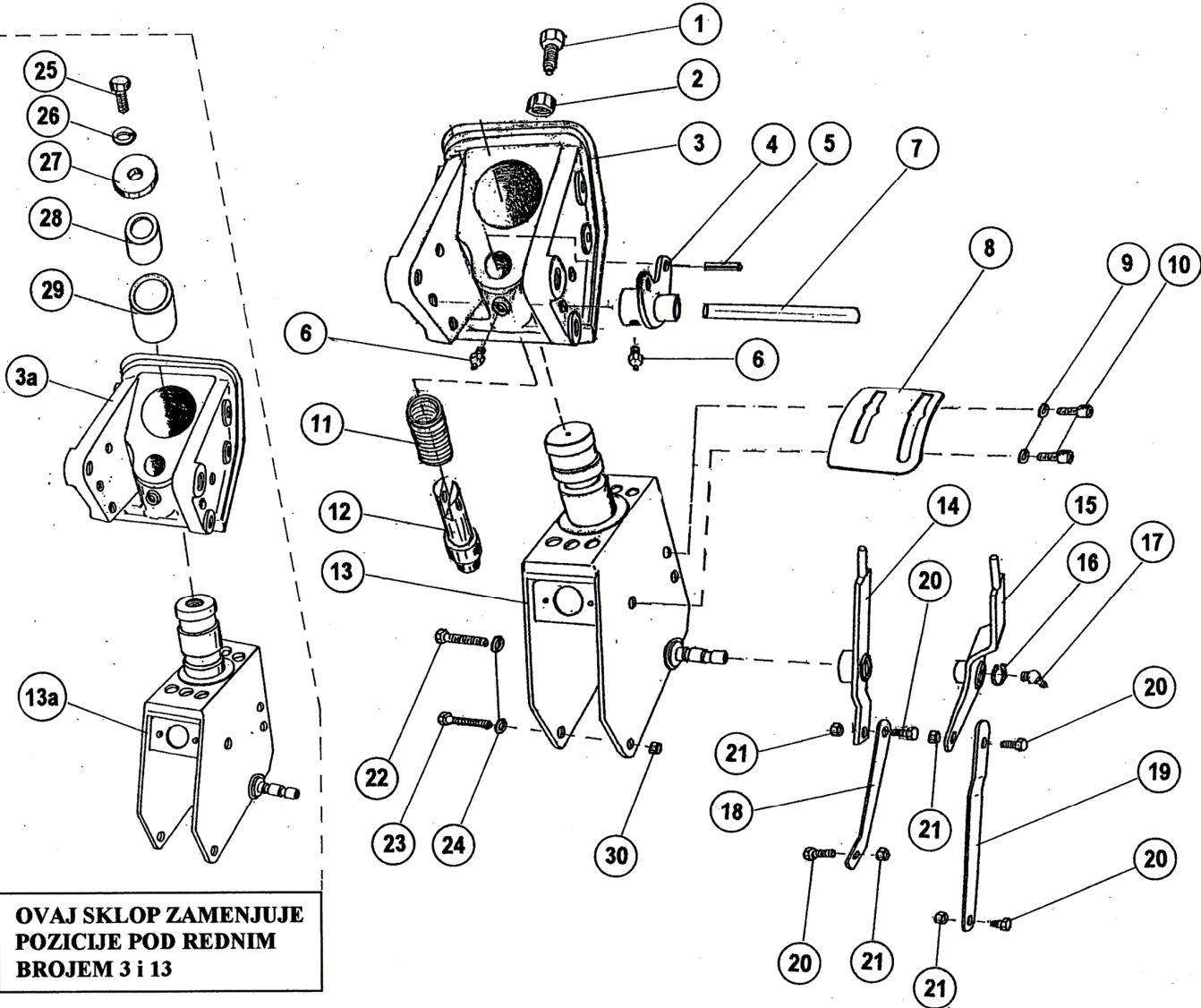


IDENTIFICATION NUMBER FOR ORDERING

1	501 40 032	1	
2	000 10 622	7	A8
3	000 29 776	6	M8x25
4	000 00 060	6	M8
5	501 31 070	1	
6	501 40 043	1	
7	000 04 217	1	M8x25
8	501 40 037	1	6300 2RS
9	501 40 039	1	
10	000 39 028	1	
11	000 29 630	6	M5x10
13	000 10 679	4	A10
14	000 00 061	4	M10
15a	000 29 221	1	3LD 450 Modul 343
15b	000 36 710	1	3LD 450 Modul 390
15c	000 35 952	1	3DM 515 Modul 380
15d	000 36 772	1	3DM 515 Modul 384
15e	000 38 786	1	3DM 515 Modul 385 sa elektro- pokretačem

HANDLE LOCKER

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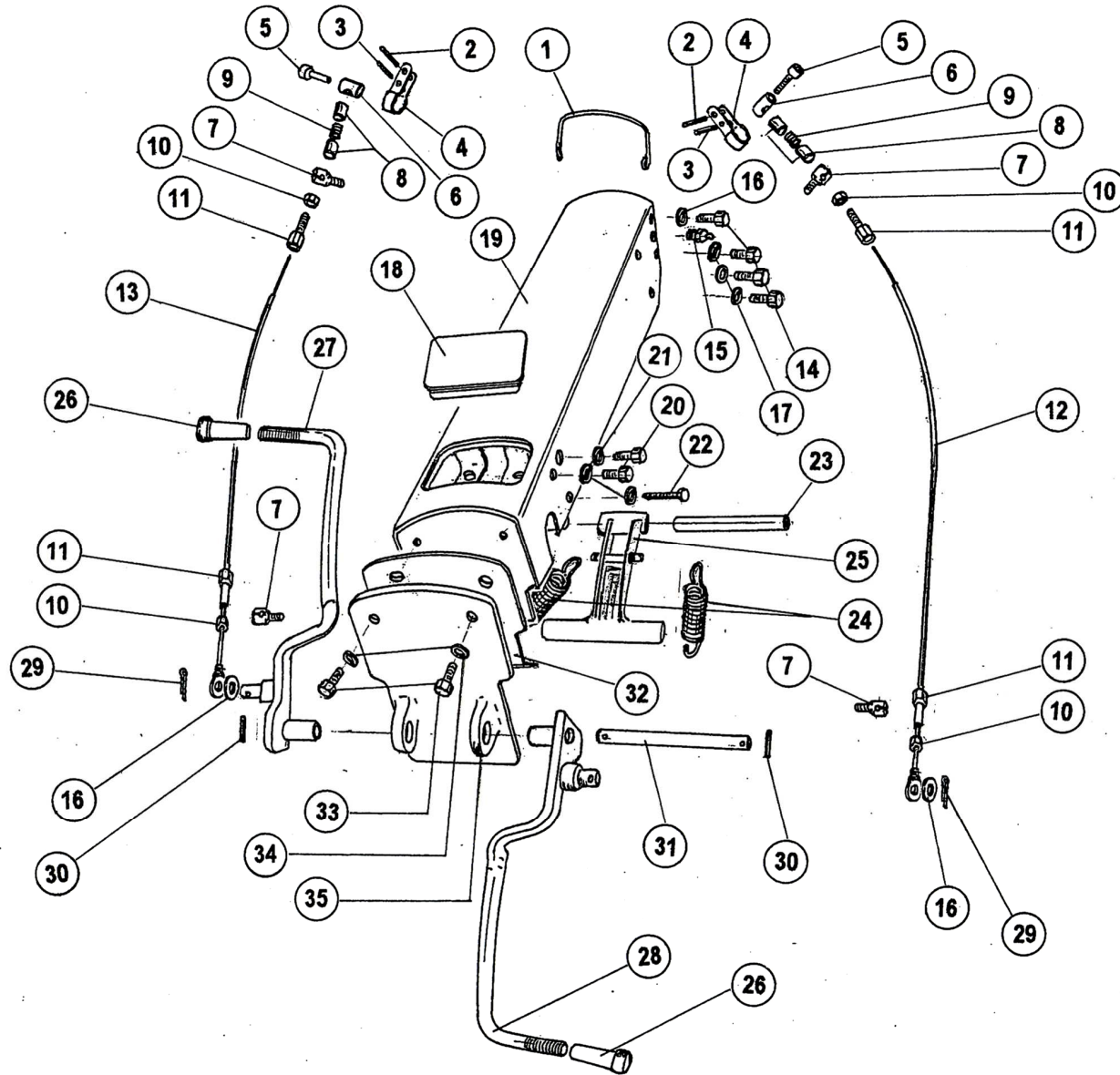


**OVAJ SKLOP ZAMENJUJE
POZICIJE POD REDNIM
BROJEM 3 i 13**

IDENTIFICATION NUMBER FOR ORDERING

1	000 29 365	1	M12X30
2	000 00 062	1	M12
3	501 50 816	1	
3a	501 51 004	1	Zam. 3
4	501 50 835	1	
5	000 00 080	1	Ø5x24
6	000 05 808	2	AM8x1
7	501 50 836	1	
8	501 50 840	1	
9	000 00 070	2	8
10	000 04 738	2	M8x20
11	501 50 901	1	
12	501 50 837	1	
13	501 50 892	1	
13a	501 51 006	1	Zam. 13
14	502 10 046	1	
15	502 10 050	1	
16	000 04 158	1	16
17	000 09 947	1	BM6
18	502 10 049	1	
19	502 10 048	1	
20	000 02 919	4	M8x20
21	000 02 444	4	M8
22	000 29 711	1	M10x95
23	000 12 920	1	M10x100
24	000 10 679	2	A10
25	000 10 078	1	Zam. 3;13
26	000 00 071	1	Zam. 3;13
27	501 51 002	1	Zam. 3;13
28	501 51 001	2	Zam. 3;13
29	501 51 003	2	Zam. 3;13
30	000 02 208	1	M10

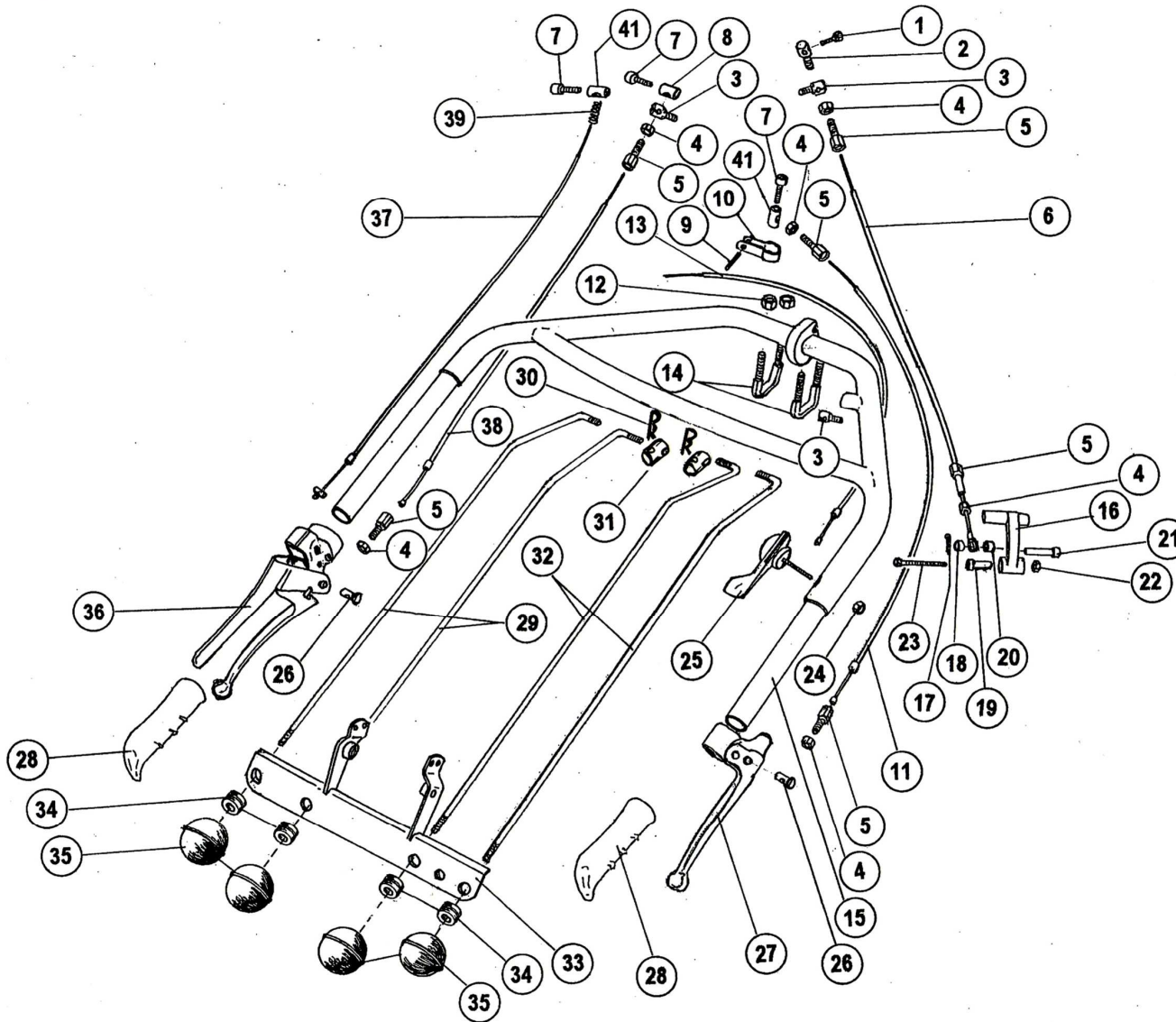
POWER SUPPLIER



IDENTIFICATION NUMBER FOR ORDERING

1	501 50 865	1	
2	000 05 278	2	6X18
3	000 02 466	2	3,2X20
4	501 50 942	2	
5	000 18 524	2	M5X15
6	501 50 946	2	
7	501 50 857	2	
8	501 51 013	4	
9	505 05 201	2	
10	000 09 535	4	M8
11	501 50 864	4	
12	501 51 881	1	
13	501 51 882	1	
14	000 04 636	8	M10x20
15	000 05 808	1	AM8x1
16	000 02 493	6	A10
17	000 10 679	4	A10
18	501 50 909	1	
19	501 50 900	1	
20	000 07 799	4	M6x15
21	000 05 272	6	6
22	000 18 521	2	M6x30
23	501 50 871	1	
24	501 50 904	2	
25	501 50 887	1	
26	501 50 903	2	
27	501 50 923	1	
28	501 50 922	1	
29	000 02 466	2	3,2x20
30	000 23 531	2	3x20
31	501 50 912	1	
32	501 50 866	1	
33	000 09 985	2	M8x20
34	000 10 622	2	8
35	501 50 921	1	

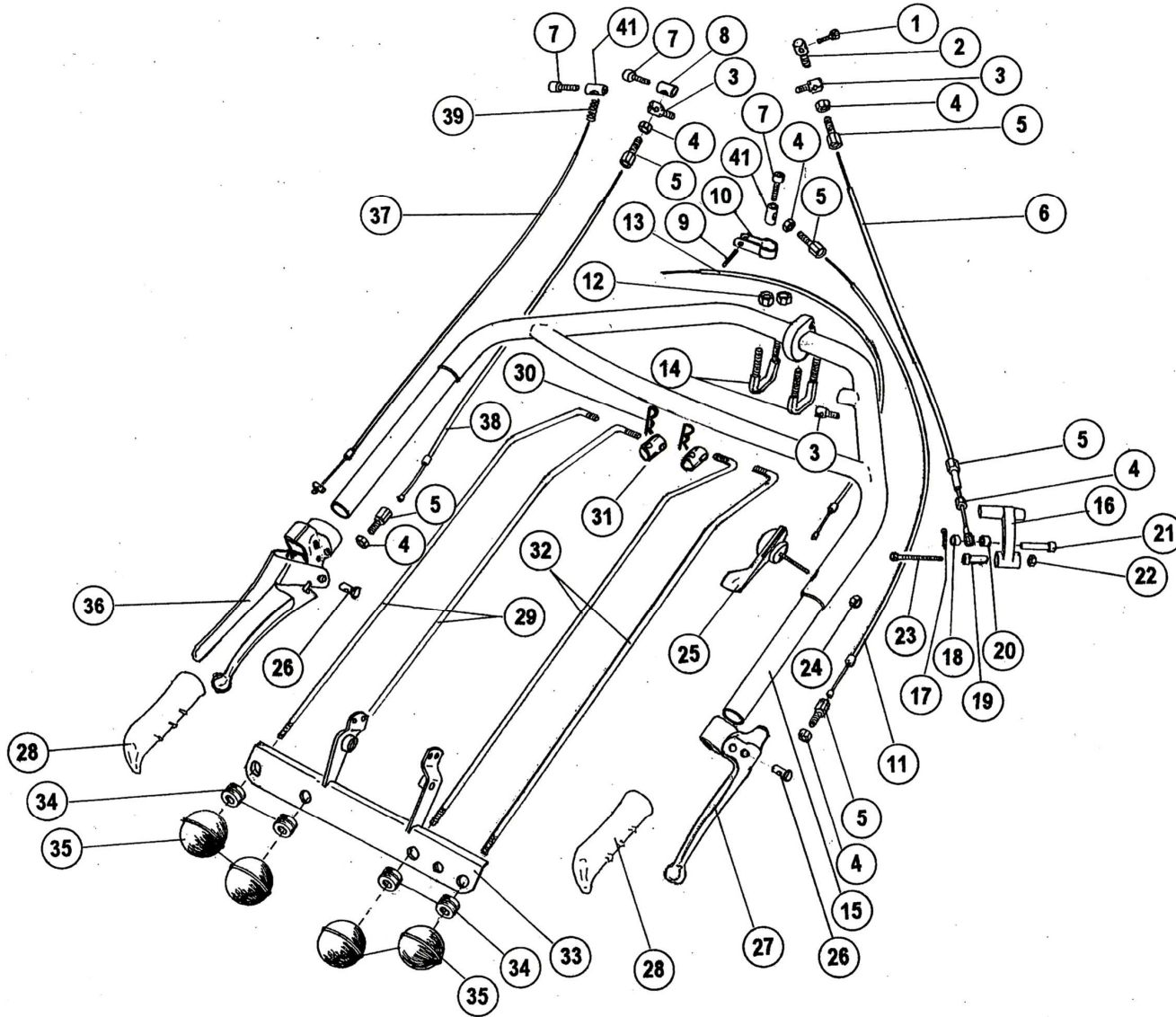
HANDLES



IDENTIFICATION NUMBER FOR ORDERING

1	000 29 630	1	M5x10
2	501 50 856	1	
3	501 50 857	3	
4	000 09 535	6	M8
5	501 50 864	6	
6	501 50 879	1	
7	000 18 524	3	M5x15
8	501 50 946	1	
9	000 00 080	1	Ø5x24
10	501 50 943	1	
11	501 50 880	1	
12	000 02 444	4	M8
13	501 50 883	1	
14	501 50 867	2	
15	501 50 825	1	
16	501 50 873	1	
17	000 02 466	1	3,2x20
18	501 50 830	1	
19	501 50 861	1	
20	501 50 831	1	
21	627 13 883	1	
22	000 20 025	1	M6
23	000 29 576	1	6x60
24	000 20 025	1	M6
25	501 50 938	1	
26	501 50 828	2	
27	501 50 936	1	
28	501 50 935	2	
29	501 50 838	2	
30	501 51 032	4	
31	501 51 054	4	
32	501 50 839	2	
33	501 50 868	1	

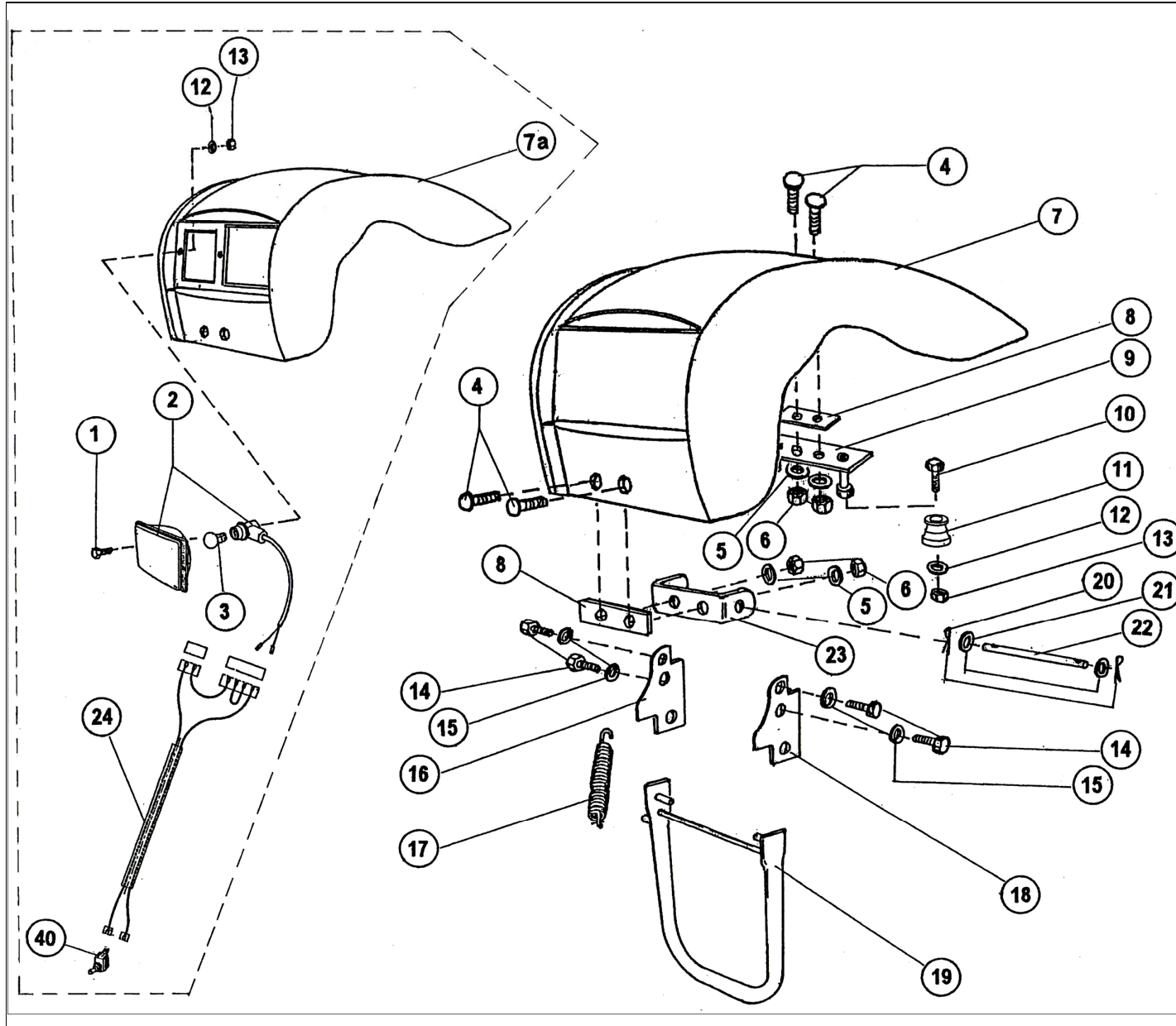
HANDLES



IDENTIFICATION NUMBER FOR ORDERING

34	501 50 850	4
35	505 05 711	4
36	501 50 937	1
37	501 50 884	1
38	501 50 878	1
39	805 41 037	1
41	501 50 945	1

ENGINE FLOOR, MOTOCULTIVATOR SUPPORT



IDENTIFICATION NUMBER FOR ORDERING

WITH NO LIGHTING

4	000 05 347	4	M8x20
5	000 00 070	4	B8
6	000 00 060	4	M8
7	502 00 475	1	
8	501 50 941	2	
9	501 50 934	1	
10	000 29 384	2	M5x25
11	502 00 333	2	
12	000 04 603	2	B5
13	000 04 602	2	M5
14	000 04 636	4	M10x20
15	000 00 071	4	A10
16	502 00 573	1	
17	627 12 482	1	
18	502 00 572	1	
19	502 00 570	1	
20	000 02 917	2	2x15
21	000 10 568	2	6
22	805 41 255	1	
23	501 50 931	1	

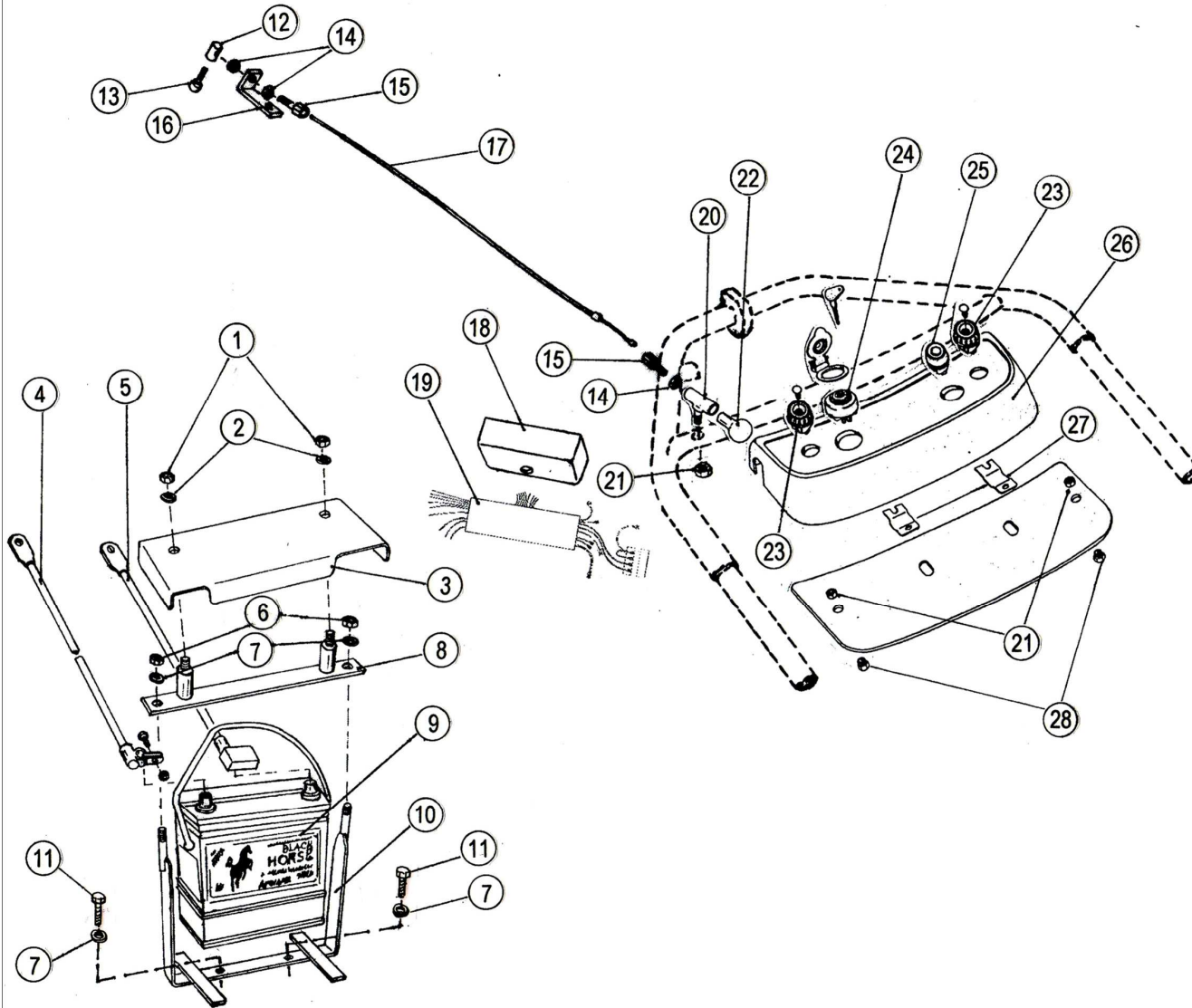
IDENTIFICATION NUMBER FOR ORDERING

WITH LIGHTING

1	000 36 325	4	M5x20
2	501 80 530	2	
3	000 21 186	2	
7a	502 00 405	1	
12	000 04 603	4	B5
13	000 04 602	4	M5
24	501 80 620	1	
40	501 50 630	1	

ELECTRICAL SET for FPM 414DE

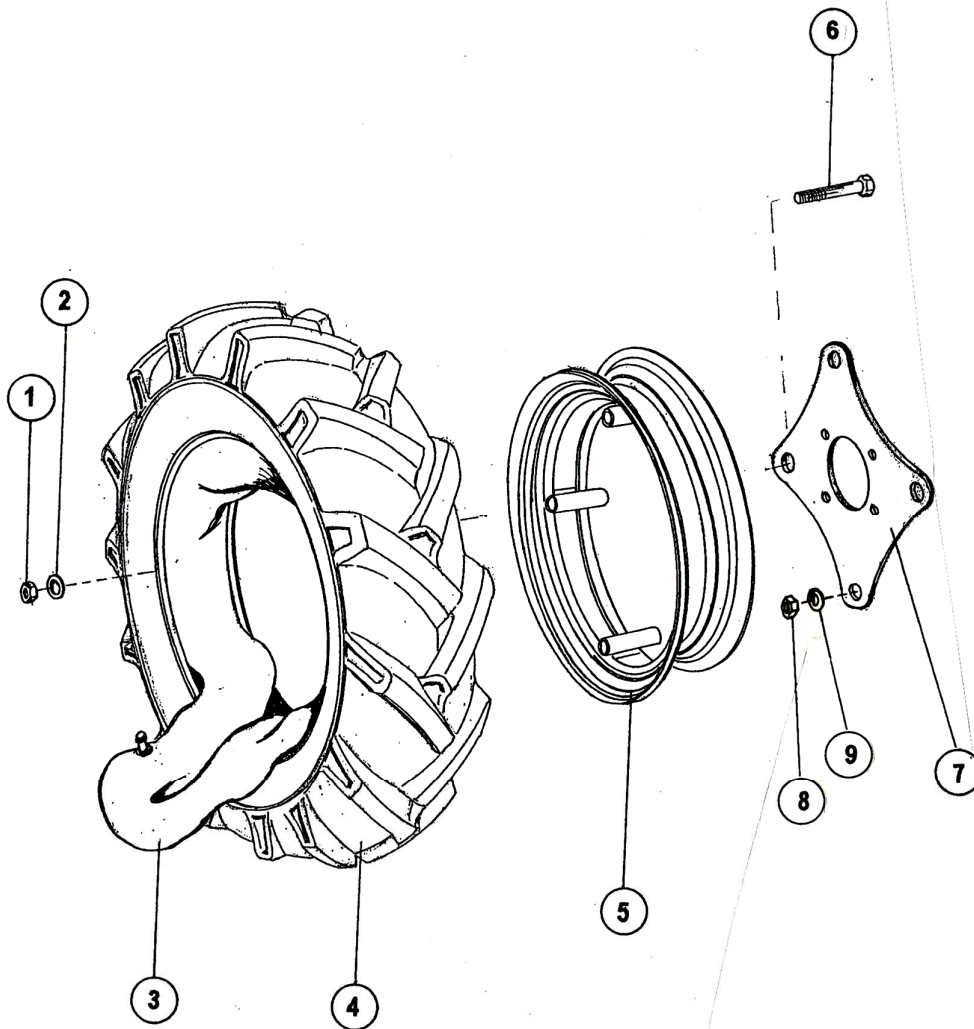
strana 58



IDENTIFICATION NUMBER FOR ORDERING

1	000 04 330	2	M6
2	000 19 099	2	B6
3	501 51 037	1	
4	501 80 650	1	
5	501 80 660	1	
6	000 00 060	2	
7	000 10 622	2	A8
8	501 51 038	1	
9	000 38 065	1	12V-45Ah
10	501 51 034	1	
11	000 02 919		
12	501 50 945	1	
13	000 18 524	1	M5x15
14	000 09 535	3	M8
15	501 50 864	2	
16	501 51 031	1	
17	501 50 878	1	
18	501 80 665	1	
19	501 80 640	1	
20	501 51 030	1	
21	000 02 025	1	M6
22	501 51 028	1	
23	501 80 662	2	
24	501 80 663	1	
25	501 80 661	1	
26	501 51 105	1	
27	501 51 103	2	
28	000 42 682	2	M6

ADAPTER, WHEELS

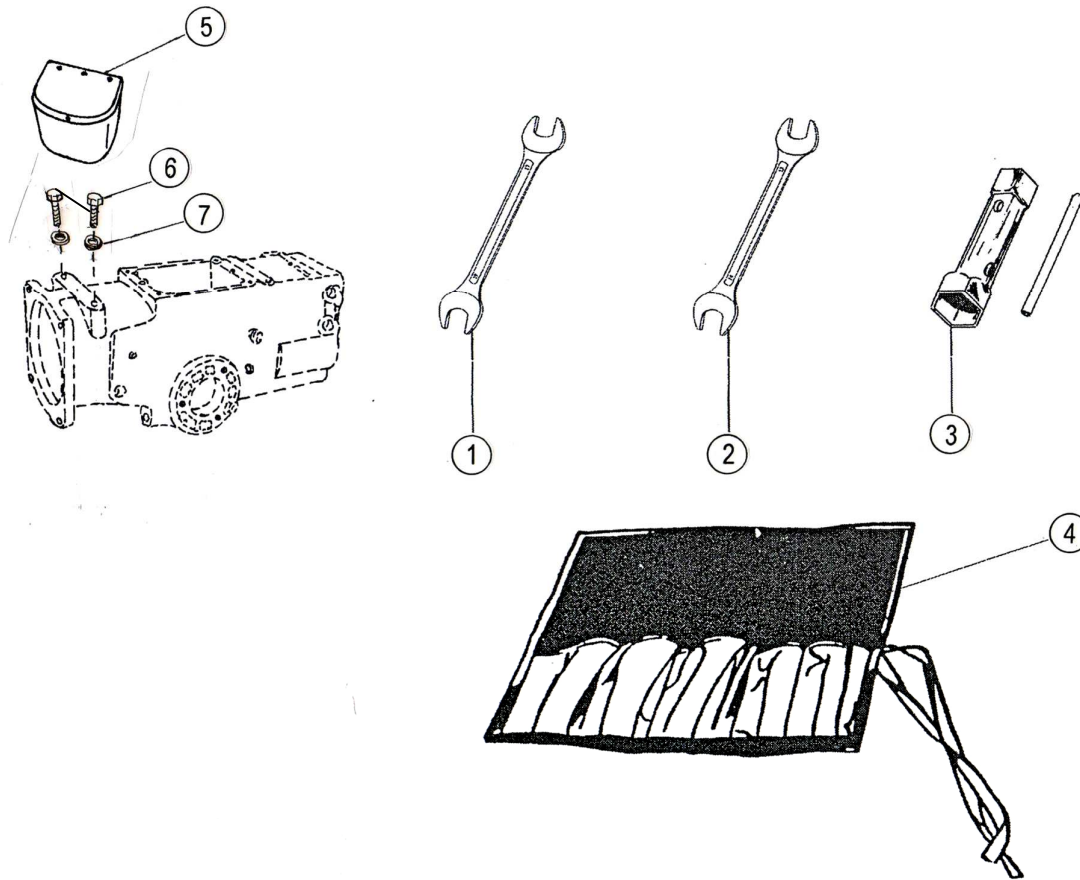


IDENTIFICATION NUMBER FOR ORDERING

1	000 05 340	8	M14
2	000 00 067	8	A14
3	501 93 101	2	
4	501 93 102	2	5.00-12
5	501 93 099	2	
6	000 29 213	8	M14x80
7	501 93 095	1	
8	533 01 407	8	
9	000 00 072	8	12

TOOLS

strana 60

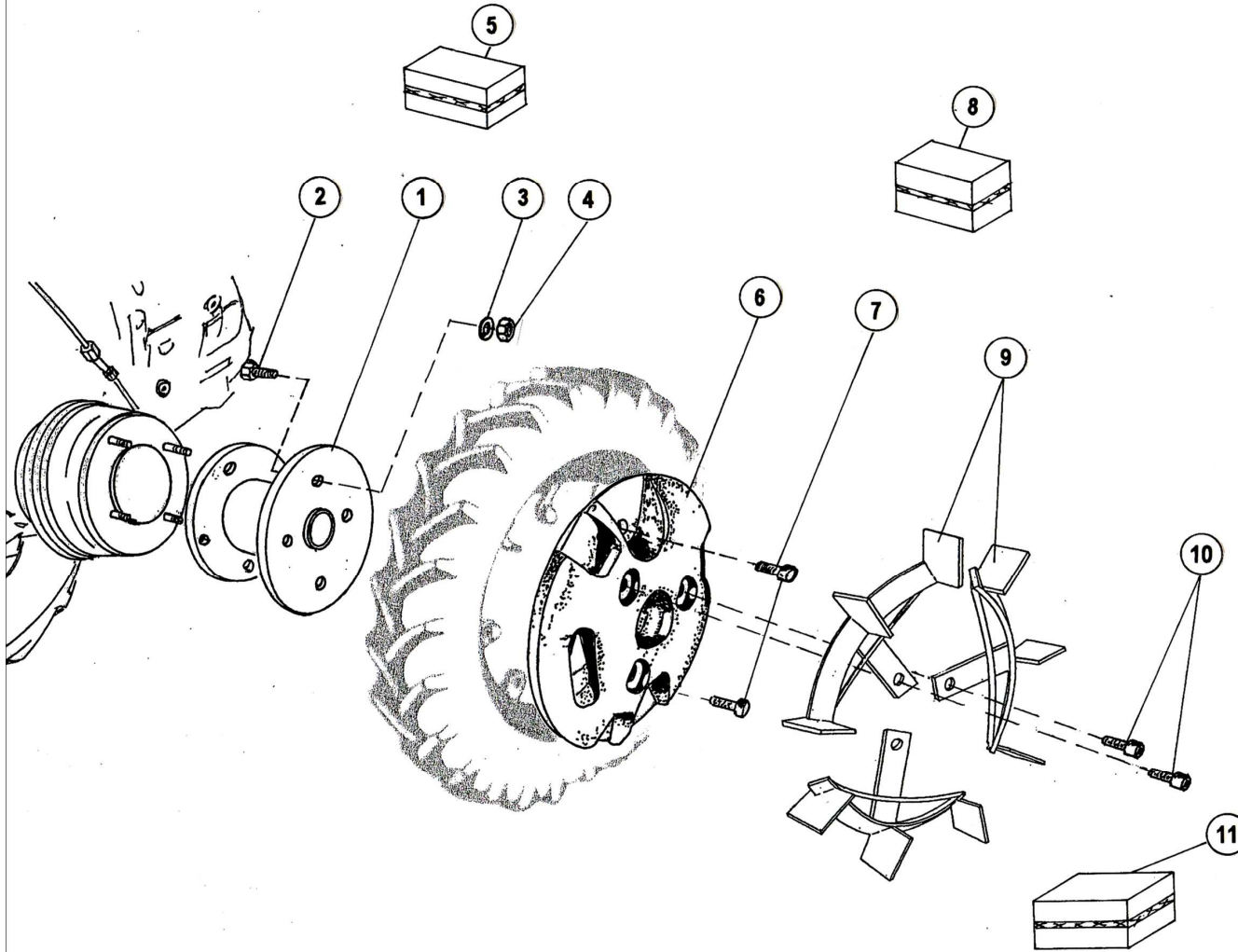


IDENTIFICATION NUMBER FOR ORDERING

1	000 37 614	1	19 - 17
2	000 37 615	1	13 - 14
3	000 37 616	1	19 - 22
4	505 13 110	1	
5	000 40 651	1	
6	000 35 848	2	M8x40
7	000 11 224	2	B8

WHEEL WIDENERS, WHEEL WEIGHTS. WHEEL CLAWS

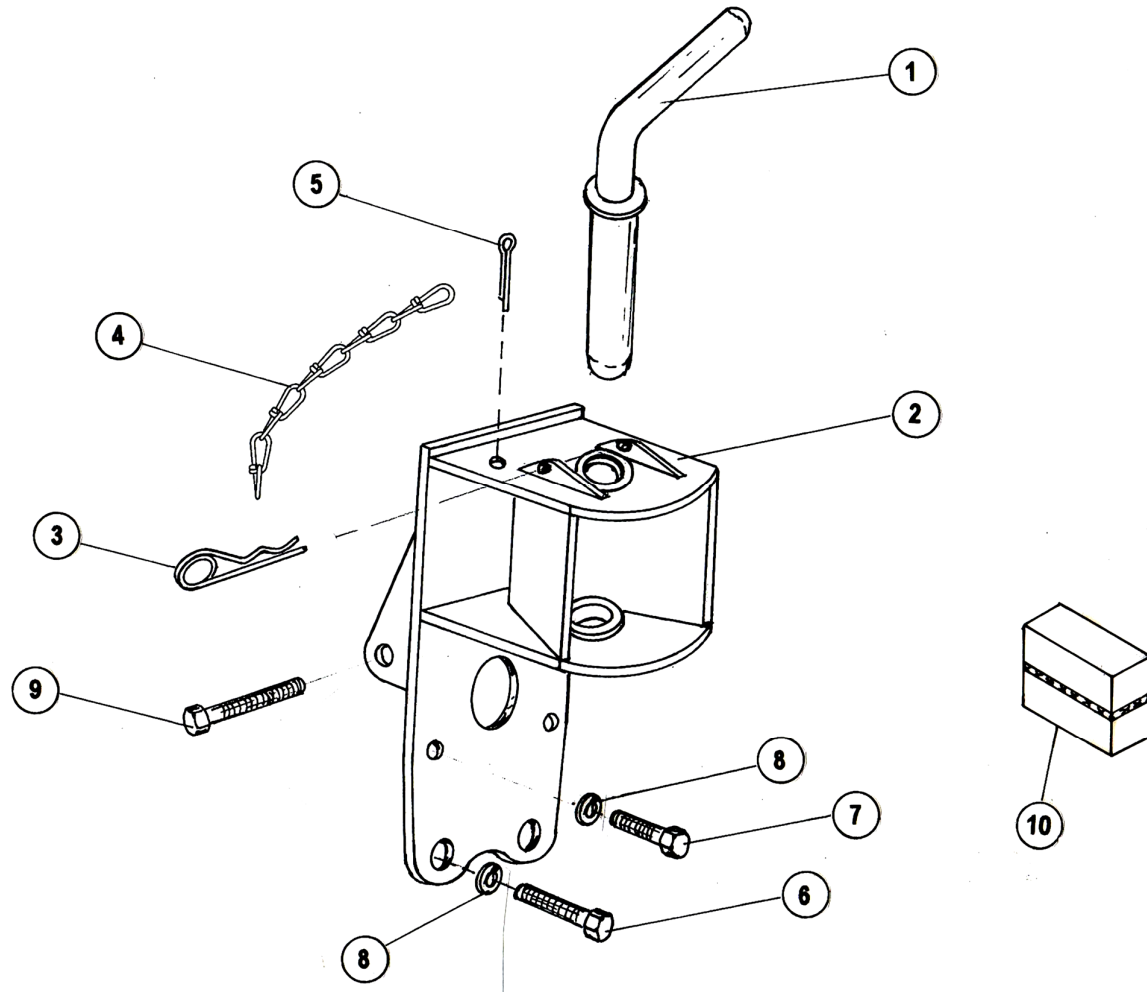
strana 61



IDENTIFICATION NUMBER FOR ORDERING

1	501 93 091	2	
2	612 01 587	8	
3	000 00 072	16	12
4	533 01 407	16	
5	501 93 110	1	1 > 4
6	501 93 111	2	
7	000 29 775	4	
8	501 93 147	1	6 > 7
9	501 93 112	6	
10	000 29 760	6	M16x40
11	501 93 145	1	9 > 10

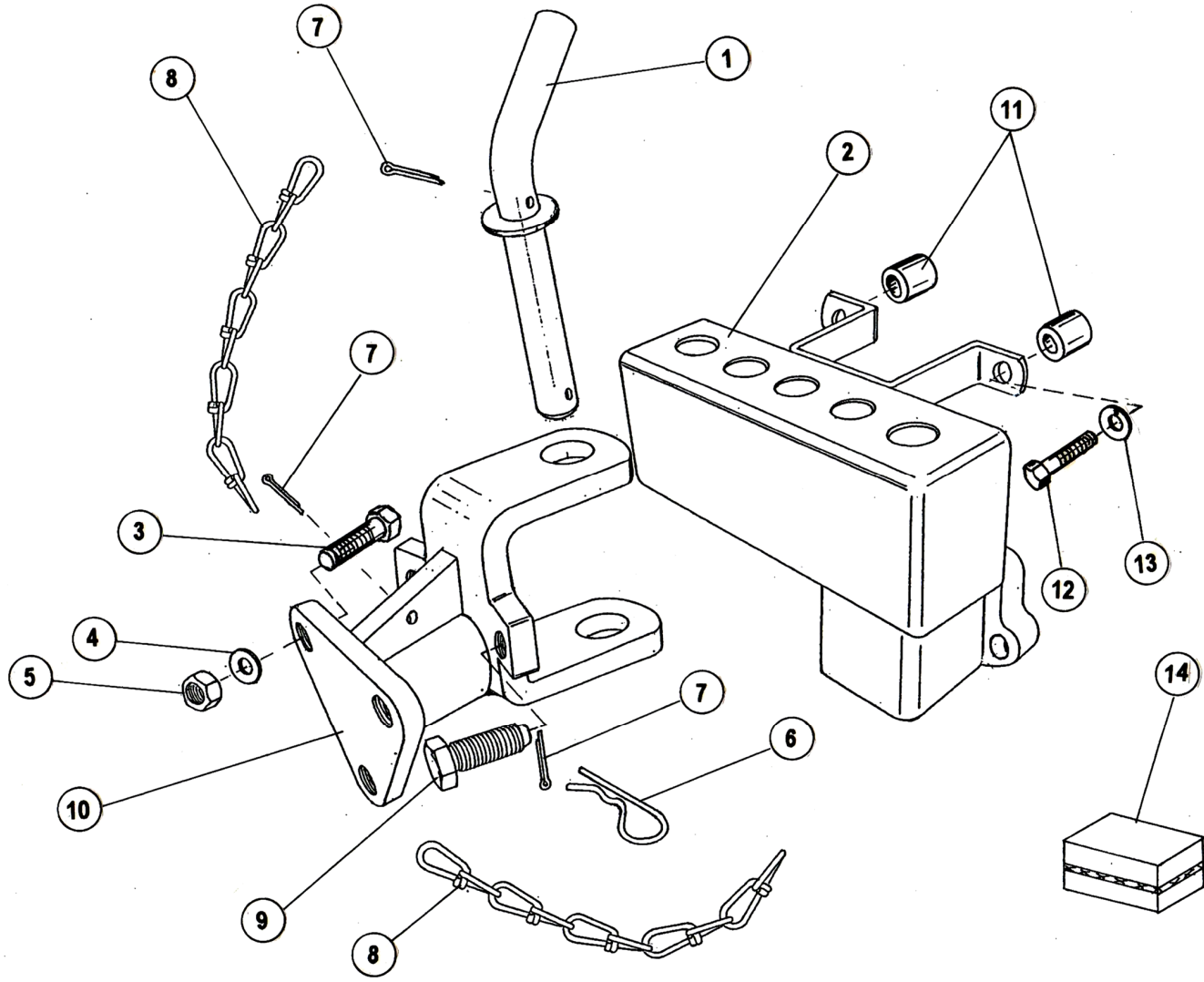
CONNECTION FOR THE TRAILER



IDENTIFICATION NUMBER FOR ORDERING

1	502 20 032	1	
2	502 20 022	1	
3	501 10 578	1	
4	627 10 472	1	
5	000 05 727	1	4X25
6	000 10 078	2	M10X30
7	000 09 875	2	M10x40
8	000 10 679	4	A10
9	000 29 393	1	M10x120
10	501 93 126	1	1 > 9

UNIVERSAL CONNECTOR



IDENTIFICATION NUMBER FOR ORDERING

1	804 91 296	1	
2	804 91 308	1	
3	000 05 346	3	M12X40
4	000 00 066	3	12
5	000 00 062	3	M12
6	627 12 857	1	
7	000 00 073	3	4x30
8	627 10 472	2	
9	000 18 918	2	M12x35
10	804 92 004	1	
11	627 12 607	2	
12	000 10 078	2	M10x30
13	000 10 679	2	A10
14	500 50 228	1	1 > 11



IMT AGROMEHANIKA AD
Đorđa Simeonovića 25
19370 Boljevac – Srbija

IZJAVA O USAGLAŠENOSTI 98/37/CE

Ovim izjavljujemo, u okviru naše odgovornosti, da je proizvod

Tip: Motokultivator

**Model: IMT 408D (5,5 KW – 7,5 KS)
IMT 410DS (7,3 KW - 10 KS)
IMT 414DS/DE (9,2 KW - 12,5 KS)**

Godina proizvodnje: 2003

u saglasnosti sa bezbednosnim zahtevima utvrđenim od strane Evropske Direktive 98/37/CE.

Proizvod je u saglasnosti sa sledećim standardima:

OPIS	STANDARD
Bezbednost mašina - Osnovni pojmovi, opšti principi za konstruisanje - Deo 1: Osnovna terminologija i metodologija	EN 292-1:1996
Bezbednost mašina - Osnovni pojmovi, opšti principi za konstruisanje - Deo 2: Tehnički principi i specifikacije	EN 292-2:
Bezbednost mašina - Bezbednosne granice koje definišu zone opasnosti kod mašina	EN 294:1995
Mašine u poljoprivredi i šumarstvu - samohodni motokultivatori sa okretnim rotorima (motičicama) - Bezbednost	EN 709:1997 709/A1:1999
Mašine u poljoprivredi i šumarstvu - samohodne motokosačice - Bezbednost	EN 12733:2001
Vibracija - Laboratorijska merenja na ručicama i komandama mašina - Uopšteno.	EN 1033:1995
Buka - Laboratorijska merenja.	EN ISO 3744

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U Boljevcu,

26.03.2004.



Potpis odgovorne osobe:
za Branislav Rajić, maš.ing.

Branislav Rajić

strana 44



IMT AGROMEHANIKA AD
BOLJEVAC

Obrazac: 1.

Broj: 1162
2003

UVERENJE

PRIMENJENE SU MERE ZAŠTITE NA RADU NA MOTOKULTIVATORU

Vrsta, tip, serija i namena: Motokultivator IMT 408D/ IMT 410DS/ IMT 414DS/ IMT 414DE poljoprivredna delatnost

Godina proizvodnje: 2003 god.

Tehnički podaci: Snaga 7,30KW (prema DIN 70020) pri 3000 min⁻¹, motor jednocilindrični, četvorotaktni, vazduhom hlađen, radne zapremine 454 cm³, ili motor snage 9,20KW (prema DIN 70020) pri 3000 min⁻¹, motor jednocilindrični, četvorotaktni, vazduhom hlađen, radne zapremine 515 cm³, 7 stepena prenosa (4 za vožnju napred, 3 za vožnju nazad) max brzina 17,81 km/h sa gumama 5.00x12".

Priložena dokumentacija: Uputstvo za rukovanje, održavanje i bezbedan rad i garantni list.

NAPOMENA: Motokultivator koristiti prema uputstvu za rukovanje i održavanje, u zoni rada ne smeju da se nalaze lica i životinje. Apsolutno je zabranjeno da motokultivatore koriste nestručne osobe, ili osobe koje nisu sa adekvatnim psihofizičkim osobinama.



Ovlašćeno lice

[Signature]

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