



# **BELT RAKE**

## **TBR-210**



# **Operator Manual**

## **Parts Breakdown**

Tar River Implements  
P.O. Box 8164  
Rocky Mount, NC 27804  
Tel: 252-442-0700  
Web: [www.br-equipment.com](http://www.br-equipment.com)

## TABLE OF CONTENTS

INFORMATION-WARNING SIGNS.....	2
1. SAFE WORK PRINCIPLES.....	5
3. OPERATION MANUAL.....	6
3.1. Machine intended use.....	6
3.2. Technical characteristics .....	6
3.3. Construction and operation principle. ....	6
4. PRINCIPLES OF USE AND SUPPORT SERVICES. ....	8
4.1 Machine aggregation and preparation for work. ....	8
4.2 Adjustment and setting of the rake tedder. ....	8
4.3 Field operation. ....	8
4.4. Rake tedder transportation. ....	9
5. LUBRICATION, MAINTENANCE AND STORAGE.....	9
5.1 Lubrication.....	9
5.2 Maintenance and storage.....	10
6. DISASSEMBLY AND WRITING OFF.....	11
7. RESIDUAL RISK.....	11
7. SPARE PARTS CATALOGUE.....	12
MACHINE HANDING OVER PROTOCOL.....	<b>Error! Bookmark not defined.</b>
DECLARATION OF CONFORMITY .....	<b>Error! Bookmark not defined.</b>
GUARANTEE CARD .....	<b>Error! Bookmark not defined.</b>

**The instruction manual constitutes a basic equipment of the machine.**

**ATTENTION!**

**The Factory reserves itself the right of construction and technological changes and updates in the equipment, which will be introduced in the instruction in real time.**

**If any difficulties in understanding of the instruction or trouble with starting up occur, we kindly request you to contact the seller or the manufacturer.**

## INFORMATION-WARNING SIGNS.



### Symbol meaning:

1. Read the operation manual.
2. Switch off the engine and remove the ignition key before starting service activities.
3. There is the risk of ejection of hard elements - keep the safe distance.
4. Do not touch the machine elements before all the units are stopped
5. Do not take place near jack pull rods while operating the jack.
6. Marking of sling attachment points.
7. WOM (power take-off shaft) rotation value and direction
8. Marking of lubrication points.

Warning signs 1 ÷ 4 are placed on the front and back guard of the raking mechanism - on the left side.

Sign 5 is located on the front guard of the raking mechanism near the Input shaft.

Sign 6 on the tower and on the back of the frame on both sides.

Sign 7 determining the value and direction of shaft rotations is located over the WOM guard and sign 8 near the lubrication points.

### ATTENTION!

**The user of the rake tedder is obliged to take care during the whole period of use for legibility of the symbols and warning inscriptions located on the machine. In case of their damage or destruction they should be renovated or replaced with new ones. Stickers with symbols can be purchased at the machine manufacturer.**

**All other use of the machine than the use included in chapter 3.1, e.g.: for transport of people, animals and other cargo, as cranes, supporting and jacking devices and execution of work in other places than farmlands - is forbidden and results in guarantee loss.**

## **INTRODUCTION.**

### **1. Read the operation manual.**

This instruction manual is supplied with the machine and constitutes the basic equipment of the machine. Before commencing work the purchaser is obliged to familiarise with this instruction manual, which in clear way demonstrates all the issues related to correct use and operation of the particular machine.

The instruction of use and operation is intended for the machine user in order to familiarise with:

- machine construction,
- correct exploitation,
- safe work regulations

If the information included in this instruction manual is not comprehensive, we kindly request you to contact the seller or the manufacturer.

### **2. Rake tedder identification**

Each tedder has its unique Serial number plate.

The rating plate is located on the machine in such place, that it is easy to find and to read.

Please jot down this information, and keep it handy for future reference, in case it become illegible on the machine.

## 1. SAFE WORK PRINCIPLES.

Operation of the rake tedder and preparing it to work as well as maintenance and repairs should be performed upon prior familiarising with this instruction manual. During machine exploitation general occupational safety of work rules and the following recommendations must be met:

1. The rake tedder can be operated by an adult person holding license allowing to operate agricultural tractors.
2. Operation of the machine by persons under influence of alcohol or other intoxicating substances is forbidden.
3. Warnings before hazardous places should be observed at starting the machine.
4. During preparation of the machine for work and at connecting and disconnecting it with the tractor special attention must be kept.
5. After suspending the machine of the tractor - check the condition of pins and securing cotters and their correct placement. To secure all the pins included in the tractor-machine unit typical security cotters should be used.
6. Prior to each starting up of the machine check if there are no bystanders nearby, and children especially.
7. Check if all the mechanism guards and fixed correctly.
8. Operation without the drive guard is forbidden.
9. Check if the telescopic-articulated shaft is connected correctly with the WOM of the tractor and WPM (power take off shaft) of the machine.
10. The agricultural tractor should have a functional power hydraulic and braking system.
11. The speed of drive should always be adapted to the conditions of the environment. Sharp turning should be avoided at riding on mountains and in valleys and across hill slopes.
12. Machine inertia should be considered when driving in curves.
13. The permissible slope inclination for work and transport driving is 8.5°.
14. During transport on smooth roads do not exceed the speed of 25 km/h, and on field roads, curves and bumps - up to 15 km/h, the end of the machine should be marked with a reflective triangle and warning plates.
15. Check tightness of all the bolts and nuts after one hour of operation.
16. The machine should be lifted and lowered gently.
17. It is forbidden to use the machine, which demonstrates the signs of mechanical damage.
18. It is forbidden to work after raised elements of the machine.
19. Dysfunctions of the machine elements should be removed only with the tractor engine switched off and with the ignition key removed.
20. The raking device is protected with guards, but its resilient tines protrude outside the guards, therefore, getting close to their range during operation is forbidden and results in hazards.
21. Prior to each starting up of the agricultural tractor and switching on the machine mechanisms, a warning signal must be sounded for the persons nearby.
22. During a break in work or longer stoppage the machine should be left and the engine stopped.
23. Prior to leaving the tractor stop the engine and take of the ignition key. Engage the hand brake and secure the machine.
24. Nobody can stay between the tractor and the machine before the tractor engine is put off.
25. Transport of persons on the machine construction is forbidden.
26. After work the tool cannot be left on the place, in which it could cause injuries of people or animals.
27. The rake tedder disconnected from the tractor should be supported and the brake of the supporting wheel should be engaged.

### 3. INSTRUCTION MANUAL

#### 3.1. Machine intended use.

The tines belt rake tedder is a machine suspended on agricultural tractors featuring power 18 ÷ 48 kW (e.g. C-330, C-355, C-360, MF-235, MF-55) powered from the PTO of the tractor - via the PTO Drive shaft to the Input shaft of the machine. It is used to spread, and rake mowed low stem plants and to rake semi-dried and dried hay into long banks on terrain with inclination to 12° (22%).

**Use of the machine in other objectives is strictly prohibited and results in guarantee loss!**

#### 3.2. Technical characteristics.

Table 1 Technical data

Parameter name		Measure-	Parameter size	Remarks
Working width	of ventilating	m	2.1	
	raking	m	2.8	
Output	of ventilating	ha/h	1.8	
	raking	ha/h	1.4	
WOM rotary speed		rev./min.	max. 540	
Working speed	of ventilating	km/h	up to 12	
	raking	km/h	up to 8	
Transport speed		km/h	up to 25	
Transport clearance		mm	400	
Service		persons	1	tractor
Screen adjustment range		mm	0-900	
Pneumatic supporting wheels		mm	400x100	
Dimensions	height	mm	1110	
	width without the	mm	2450	
	length	mm	1600	
Mass		kg	190-204	
Telescopic articulated shaft:				
- rated Torque		Nm	400	
- rated Transferred power		kW	22	
-min. Shaft length		mm	560	
- no. of keys from the tractor / machine side		pc	6 / 6	
- marking with a safety sign		-	CE	
Noise level		Below the noise emitted by the tractor		

#### 3.3. Construction and operation principle.

**Frame** - Item 1 constitutes a construction welded from pipes, on which all the remaining subassemblies are suspended.

**Raking unit** item 2 comprises two V-belts - surrounding belt wheels - connected with hangers, on which three double resilient tines are fixed. Hangers - fixed in bearings screwed to belts - connected with fittings, which control movement of the resilient tines on the circumference of belt wheels and keep the perpendicular position of tines to the field surface.

**Tighteners:** Left - item 3 and right - item 4 are fixed with screw connections to the frame. This construction enables adjustment of bearing belt tightening.

**Supporting wheels** - item 5. are pneumatic wheels with tyres 4.00 x 8, fixed to the frame with a screw connection.

They are self-setting - they rotate on slide bearings. The screw connection enables adjustment of the machine working clearance.

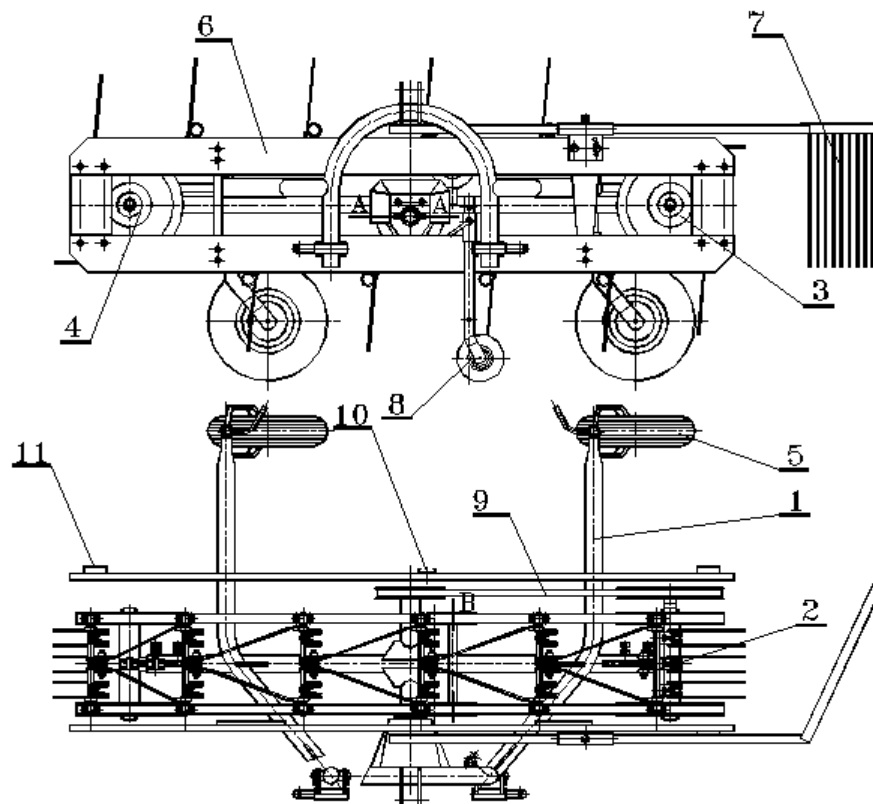
**Guards unit** - item 6 comprises two bottom guards, two upper guards and connectors. They shield the raking unit and belt drive partially, therefore special caution should be kept when operating the machine. Warning plate and slow motion vehicle distinguishing plate holders are fixed on the back connectors.

**Screen** - item 7 is fixed with a screw connection to the frame. It features the possibility of vertical and horizontal adjustment.

**Support** - item 8. - fixed to the frame hoop stick is used to support the machine after taking it off the three point suspension system of the tractor. The support features an additional vertical adjustment and a supporting wheel enabling manoeuvring the machine during suspending it on the tractor.

**ATTENTION: Block the brake of the supporting wheel in order to prevent the machine from moving by itself after disconnecting it from the tractor.**

The WOM drive from the tractor - is transferred via the telescopic articulated shaft to the WPM of the tedder and then via the belt gear - item 9 on the left tightener - item 3.



Dwg 1 Tines belt rake tedder

1 - frame, 2 - raking unit, 3 - left tightener, 4 - right tightener, 5 - pneumatic supporting wheel, 6 guards set, 7 -screen, 8 - support, 9 - belt gear, 10 - place for slow motion vehicle distinguishing plate, 11 - place for warning plate

## **4. PRINCIPLES OF USE AND SUPPORT SERVICES.**

### **4.1 Machine aggregation and preparation for work.**

The rake tedder can be aggregated with an agricultural tractor with power 18-48 kW.

The machine is suspended on the tractor three point suspension system. After suspending the machine adjust the length of the upper connector so as the position of the resilient tines of the raking mechanism was in parallel with the surface. Chains of the bottom pull rods of the agricultural tractor should be adjusted so as the side inclinations of the machine from the tractor axis were minimal. Then put the telescopic articulated shaft on the tractor WOM and the machine WPM and lift the support (item 8 dwg 1) to the upper position.

Use the telescopic articulated shaft for drive of the rake tedder with the parameters listed in table 1.

Check the following prior to commencing exploitation of the machine:

- tightening of all the nuts and bolts
- tightening of the V-belts of the rake mechanism and the drive belt - fixing of guards
- replace damaged parts (e.g. resilient tines) with new ones
- perform a trial run of the prepared machine when stopped and during driving checking operation of the particular mechanisms.

### **4.2 Adjustment and setting of the rake tedder.**

Adjustment of belt tightening Adjustment of tightening of the rake mechanism tines and drive belt is performed as follows:

- at first the belt of the belt gear drive is tightened - item 9 dwg 1 by moving to the left, using the tightening screw, so bending of the left V-belt tightener would be 2-3 cm at pressing force of 100N, Then lock the tightener with the side screws
- then rake mechanism V-belts are tightened by moving to the right of the right tightener with the right tightener screw, so bending of the belts would not exceed 8 cm at pressing force of 150 N, then lock the wheels with side screws. The side and tightening screws to be secured with counter nuts.

#### **Adjustment of working clearance.**

Setting of the machine for work is done by changing of the position of the working part in respect to the supporting wheels. The adjustment is executed manually by screw connection of the vertical axle of the wheel with the frame. The adjustment is executed for each wheel separately depending on the kind of executed agro-technical treatment. So:

- for raking of the tips of the raking tines they should be set in parallel with the field surface.
- for spreading the banks the tips of the raking tines on the right side should be placed ab. 4 cm over the field surface and on the left ab. 20 cm,
- for tending the tips of the raking tines on the right side should be placed ab. 2 cm over the field surface and on the left ab. 16 cm,

#### **Screen adjustment**

In order to adjust the position of the working screen in respect to the machine the tightening screw must be loosened. Then fix manually the screen to the desired distance from the machine, depending on the requested width of the bank to be formed. Tighten the screw after completing the setting.

Vertical-angular setting of the screen is executed by loosening of the left screw fixing the holder and removing the right screw. Then set the holder of the screen with the desired hole on the hole in the guard and fix the screw.

### **4.3 Field operation.**

Before commencing work, the machine should be adjusted and set relevantly to the condition of the meadow and the kind of the agro technical operation to be performed. Correct adjustment and setting of the machine guarantees good quality and safety of work.



## **Spreading and tedding of the swath grass.**

Before commencing tedding or spreading of swaths the working clearance of the machine should be set correctly i.e. the height of the tips of the resilient tines of the raking mechanism over the field surface must be adjusted - see point 4.2. The tractor WOM rotary speed should be 350-400 rev./min. The tractor should not be operated at the top engine rotary speed. The working speed at tedding should be 5-8 km/h and at spreading banks it should be slightly lower 4-7 km/h. The screen should be taken out from the machine and after turning for 180° - with the tines up - it should be reinstalled, pushing inside as much as possible, or operate the machine without the screen.

## **Raking.**

In order to perform raking the machine must be set in parallel with the surface of the field so as the working clearance would be even. The resilient tines should not scratch the soil, they should rake the stubble field. Usually it is enough to set the tips of the resilient tines on the height ab. 2 cm over the field surface. Too low setting of the resilient tines causes pollution of the raked mowed hay with the soil and burdens unnecessarily the machine mechanism. At raking of the leguminous plants and other easily rushing plants, use smaller linear speed of the raking mechanism. It can be achieved by diminishing the rotary speed of the WOM to 300-320 rev./min.

The working speed at raking crushing plants should be 4-6 km/h. The screen should be set in the working position on the requested distance depending on the width of the bank formed.

## **4.4. Rake tedder transportation.**

The rake tedder is adapted for transport on public roads on the three-point hitch system (TUZ) of the agricultural tractor. For the time of transport it should be lifted using the TUZ of the tractor so as the clearance under it was min. 25 cm, the support and supporting wheel should be set in the upper position. The screen should be removed from its holder and inserted on the other side with the raking tines directed upwards.

The portable lighting-warning device should be used to mark the rake tedder, comprising two warning plates with white position lights directed to the front and rear combined lamps (position, stop and indicator lights) and reflective lights directed to the back.

The warning plates should be inserted into the holders located on the machine and protected against falling off with cotters and then electric wires should be connected by plugging in a plug to the tractor socket.

<b>ATTENTION! Check matching of the indicator lamps on the machine and on the tractor.</b>
--

The plate distinguishing the slow motion vehicle (being a part of the tractor equipment) should be taken from the tractor to the holder attached in the centre of the machine.

During transport of the rake tedder on the 3 pt of the tractor special attention must be paid, the space around the unit should be devoted special care, safe drive speed must be observed - up to 15 km/h on field roads, max. 25 km/h on asphalt surface roads.

For additional price the manufacturer of the rake tedder - upon a request of the purchaser - will supply a portable lighting - warning device requested for its marking.

## **5. LUBRICATION, MAINTENANCE AND STORAGE.**

### **5.1 Lubrication.**

Prior to commencing lubrication activities the lubrication place must be cleaned thoroughly. Covered bearings that do not require lubrication are applied in the machine. The remaining lubrication points are given in the table 2.

Table 2.

No.	Lubrication place	Number of points	Kind of lubricant	Lubrication system	Lubrication frequency	Consumption
1.	Input power take-off shaft end	1	STP	Surf.	1 (once) in the season	0.01
2.	Threads of tightening screw and tightening locking screws	6	Graphite	Surf.	1 (once) before the season start	0.01
3.	Suspension articulation	2	STP	Surf.	as required	0.01
4.	Bearing of raking mechanism rack and connector	72	STP	Surf.	50 h	0.08
5.	Screw connection of the wheel axle with the frame	2	Graphite	Surf.	as required	0.02
6.	Wheel vertical axle slide bearing	2	STP	Filling up	as required	0.01
7.	Threads of screen fixing screws	2	Graphite	Surface	as required	0.005

## 5.2 Maintenance and storage.

During exchange of bolts and nuts care should be taken to use relevant parts of the same or higher quality. Bolts and nuts of higher class should be tighten with the same torque as previously applied.

Make sure that used bolts are correct and their threads are not dirty as it prevents damages at tightening.

The requested torques are indicated in table 3.

The bolts strength indicator is extruded on the bolt head

A - thread size

SW- spanner opening dimension (mm)

MA- tightening torque (Nm)

Tightening torques values

Table 3

		Strength indicator			
A	SW	6.8	8.8	10.9	12.9
		MA(Nm)			
M5	8	4.5	5.9	8.7	10.0
M6	10	7.6	10	15	18
M8	13	18	25	36	43
M10	17	37	49	72	84
M12	19	64	85	125	145
M14	22	100	135	200	235
M16	24	160	210	310	365
M18	27	220	300	430	500
M20	30	310	425	610	710
M22	32	425	580	820	960
M24	36	535	730	1050	1220
M27	41	640	870	1210	1440
M30	46	755	1010	1420	1690
M33	51	870	1160	1590	Pilzno 1890.
M36	56	980	1290	1790	2020

1. After the end of the season the whole machine should be cleaned thoroughly and dried and then the unpainted spots should be protected using a brush with the “Anytkor 1” dry coat lubricant warmed up to temperature of 60 °C.

2. Spot paint coat damages should be completed by recoating with paint.

3. Loosen the V-belt tightening of the drive and raking mechanism.

4. Store the rake tedder under roofing on hard surface, lowered on the supporting wheels and the support, so the resilient tines do not touch the surface.

Care for relevant lubrication, maintenance and storage will ensure the user many years of machine trouble free operation.

**ATTENTION!**

**To secure the bottom tie-rods on journals of the rake tedder and of the upper connector pins the typical protections - cotters - should be used. It is forbidden to use substitutive protections, such as: bolts, rods, wires, etc. which during operation or transport can be cut or can fall out, thus, becoming the cause of damaging of the tractor and machine.**

## **6. DISASSEMBLY AND WRITING OFF**

During machine disassembly and writing off, the following principles should be met:

- steel parts should be collected and segregated in one place, useless or not fit for use ones should be supplied to junk yards,
- the parts made from plastic should be stored separately in order to subject them to recycling,
- the rubber parts should be stored separately in order to subject them to recycling,
- plastic and rubber parts need not be burnt.

Disassembled and segregated by categories parts - to be utilized in containers specially marked for the particular material type.

## **7. RESIDUAL RISK.**

### **Description of the residual risk.**

Even though the manufacturer takes the responsibility for construction and marking of the Z222 rake tedders in order to eliminate hazards during operation as well as their servicing and maintenance, certain risks elements are unavoidable.

The residual risk results from faulty or incorrect behaviour of the machine operator.

The largest hazard occurs at performing the following, forbidden activities:

- operation of the machine by non-adult persons as well as by persons not familiarised with the instruction manual or not holding licenses to drive agricultural tractors,
- operation of the machine by persons under influence of alcohol or other intoxicating substances, performance of repairs under lifted and unsecured machine units,
- climbing the machine during operation and stoppage,
- staying between the rake tedder and the tractor when the engine is on,
- performance of the activities related to operation and adjustment of the machine when the engine is on.

At presentation of the residual risk, the Z222 rake tedders are treated as machines, which from the moment of starting production were designed and executed according to the current state-of-the-art in technology.

### **Assessment of the residual risk.**

When meeting the recommendations such as:

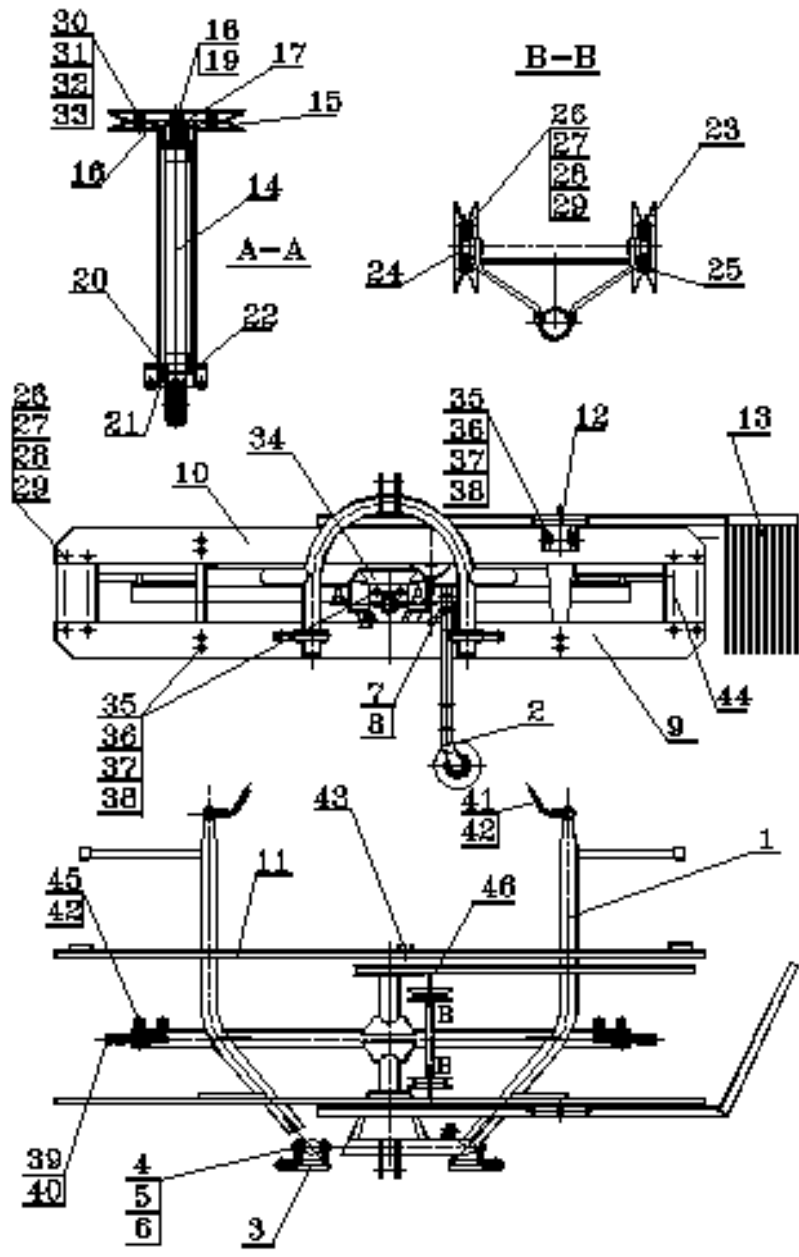
- careful reading of the instruction manual,
- prohibition of presence of people on the machine during operation and during drives, prohibition of presence of people between the tractor and the machine during engine operation,
- prohibition of putting hands into inaccessible and forbidden places,
- adjustment of machine operation only in the instance of the tractor engine switched off,
- maintenance and repairs of the machine only by the persons trained in the relevant way,
- operation of the machine by persons holding licenses to drive agricultural tractors and familiarised with the instruction manual,
- preventing access of the children to the machine,

the residual risks can be eliminated during use of the Z222 rake tedders both for the people and the environment.

**ATTENTION!**

**There exists the residual risk in case of non-compliance with the indicated recommendations and hints.**

**7. SPARE PARTS CATALOGUE.**



**TABLE 1**

POSITION	PART NUMBER	DESCRIPTION	QTY
1	TBR-T101	Frame	1
2	TBR-T102	Support	1
3	TBR-T103	Suspension Articulation	2
4	TBR-T104	Suspension Pin	2
5	FW2000000	Washer 20	2

6	FM10059	Pin S5x45	2
7	TBR-T107	Pin Cotter	1
8	TBR-T108	Pin A60 (safety pin 3/8)	1
9	TBR-T109	Bottom Guard	2
10	TBR-T110	Upper Front Guard	1
11	TBR-T111	Upper Back Guard	1
12	TBR-T112	Screen Holder	1
13	TBR-T113	Screen	1
14	TBR-T114	Power Uptake Shaft	1
15	TBR-T115	Small Drive Wheel	1
16	TBR-T116	Drive Wheel Hub	1
17	TBR-T117	Special Washer	1
18	BM10153500	Bolt M10x35-5.6-B	1
20	B60072RS	Bearing 6007 2RS	2
21	SRE35000	Spring Retaining Ring Z35	1
22	TBR-T122	Spring Retaining Ring W62	1
23	TBR-T123	Supporting Wheel Disc	4
24	SRE25000	Spring Retaining Ring Z25	2
25	B62052RS	Bearing 6205 2RS	2
26	BM06101600	Bolt M6x16-5.6-B	24
27	LNM0600000	Nut M6-4-B	24
28	FW0600000	Washer 6.4	24
30	BM0812520	Bolt M8x20-5.6-B	22
31	LNM0800000	Nut M8-4-B	21
32	FW0800000	Washer 8.4	24
34	TBR-T134	Drive Guard	1
35	BM121752500	Bolt M12x25-5.6	3
36	LNM1200000	Nut M12-4-B	3
37	FW120000	Washer 13	2
39	TBR-T139	Special Bolt	2
40	TBR-T140	Cover Plate M20-4-B	6
41	TBR-T141	Tightening Bolt	2
42	NM1620000	Nut M16-4-B	6
43	TBR-T143	Distinguishing Plate Holder	3
44	TBR-T144	Guard Connector	5
45	BM16204000	Bolt M16x40-5.6	4
46	TBR-T146	V-Belt C2800	1

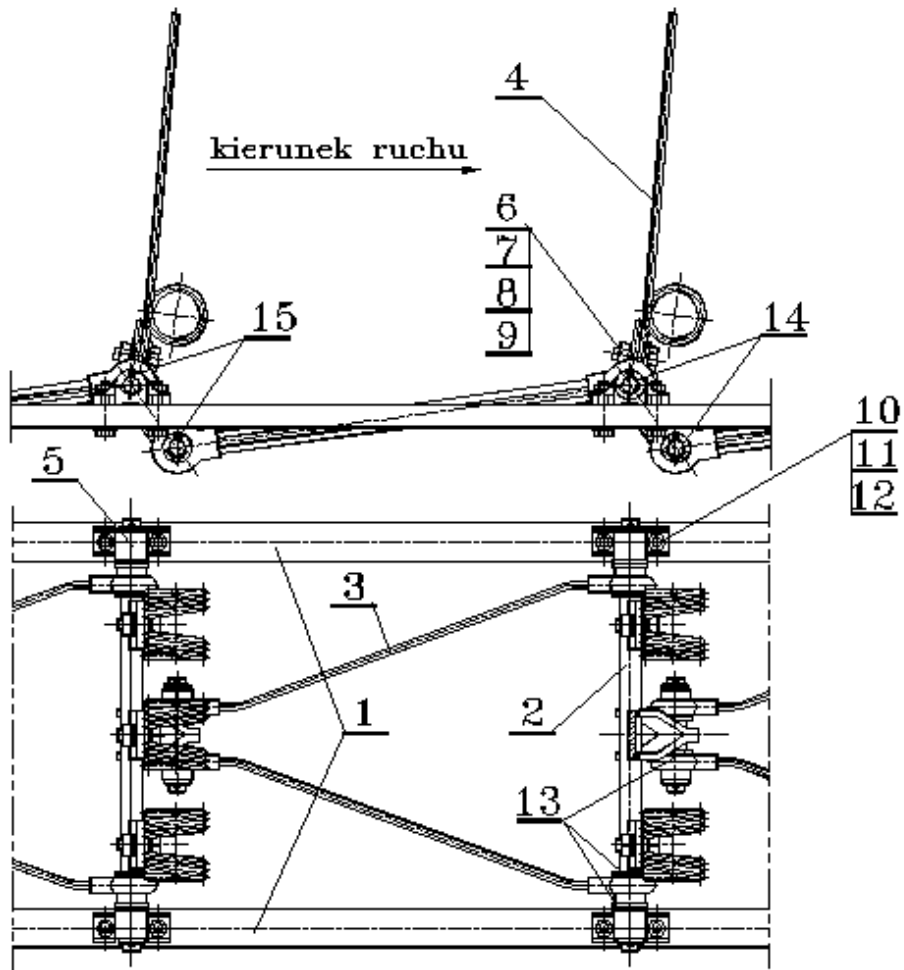


TABLE 2

POSITION	PART NUMBER	DESCRIPTION	QTY
1	TBR-T201	Bearing Belt Unit	1
2	TBR-T202	Rake	12
3	TBR-T203	Connector	24
4	TBR-T204	Raking Tine	36
5	TBR-T205	Bearing	24
6	BM101530	Bolt M10x30-5.8-B	36
7	NM101500F0	Nut M10x30-5.8-B	36
8	NM101500F0	Shim Surf. 10.5	36
9	NM101500F0	Spring Washer 10.2	36
10	BM06104000	Bolt M6x40-5.8	48
11	SLN06100000	Nut M6-5-8 with Polyamide	48
12	FW0600000	Washer 6.4	48
13	TBR-T213	Washer 15	96
14	TBR-T214	Washer 14	48
15	TBR-T215	Cotter Pin 4x35	48

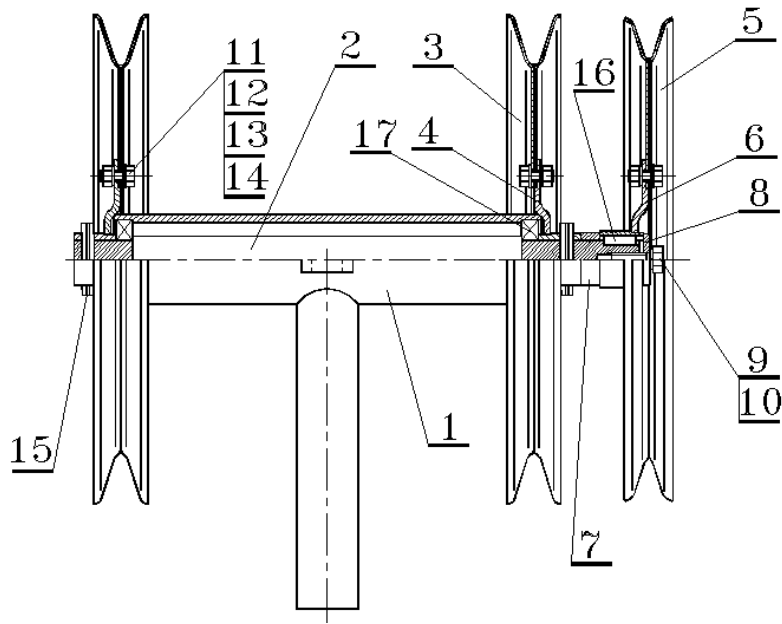


TABLE 3  
POSITION

POSITION	PART NUMBER	DESCRIPTION	QTY
1	TBR-T301	Tightener Body	1
2	TBR-T302	Long Tightener Shaft	1
3	TBR-T303	Belt Wheel	2
4	TBR-T304	Belt Wheel Hub	2
5	TBR-T305	Drive Wheel Large	1
6	TBR-T306	Drive Wheel Hub	1
7	TBR-T307	Distance Bush	1
8	TBR-T308	Special Washer	1
9	BM10153500	Bolt M10x35-5.6	1
10	FW1000000	Spring Washer 10.2	1
11	BM0812520	Bolt M8x20-5.6-B	18
12	NM08000F0	Washer 8.4	18
13	NM08000F0	Spring Washer 8.2	18
14	NM08000F0	Nut M8-8-B	18
15	EP308-0128 (10x60)	Resilient Stud 10x55	2
16	KM100830	Prism Key A8x7x30	1
17	EP122-40102	Bearing 60062 RS	2



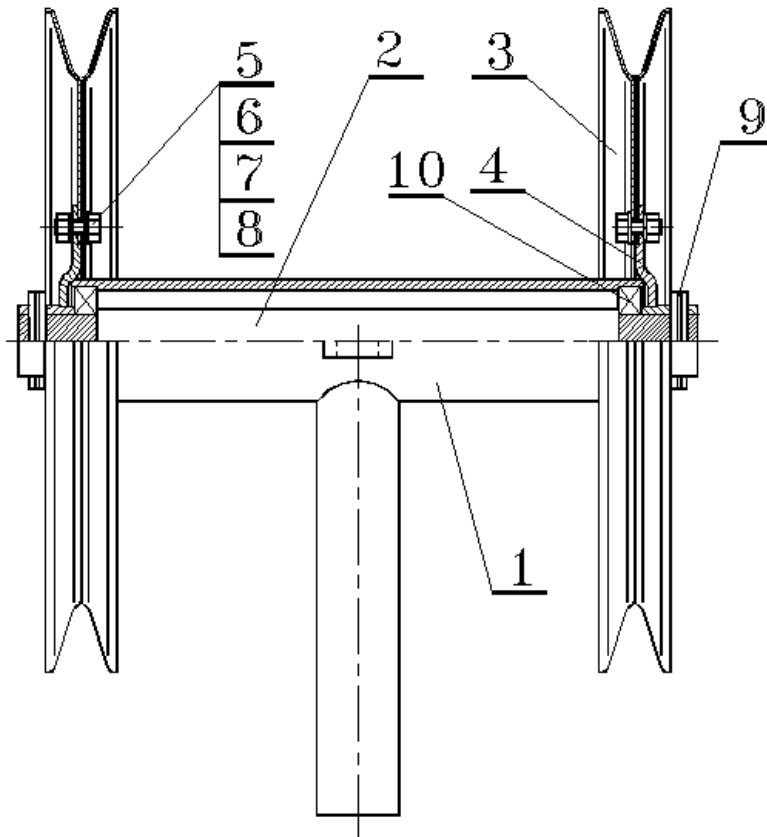


TABLE 4

POSITION	PART NUMBER	DESCRIPTION	QTY
1	TBR-T401	Tightener Body	1
2	TBR-T402	Tightener Shaft	1
3	TBR-T403	Belt Wheel	2
4	TBR-T404	Belt Wheel Hub	2
5	BM0812520	Bolt M8x20-5.6	12
6	NM08000F0	Washer 8.4	12
7	NM08000F0	Spring Washer 8.2	12
8	NM08000F0	Nut M8-8-B	12
9	EP308-0128 (10x60)	Spring Pin 10x55	2
10	EP122-40102	Bearing 6006 2RS	2

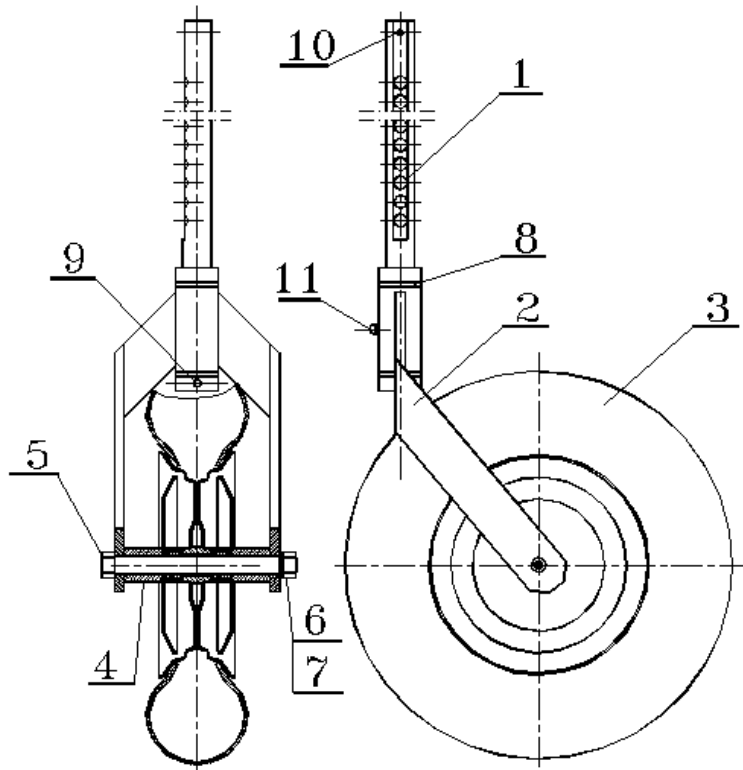


TABLE 5  
POSITION

POSITION	PART NUMBER	DESCRIPTION	QTY
1	TBR-T501	Vertical Axle	1
2	TBR-T502	Wheel Arm	1
3	TBR-T503	Complete Wheel	1
4	TBR-T504	Distance Bush	2
5	BM122018000	Bolt M12x180	1
6	LNM1220000	Spring Washer 12.2	1
7	LNM1220000	Nut M12	1
8	TBR-T508	Bearing Bush	2
9	TBR-T509	Rolled Pin 6	1
10	TBR-T510	Pin S 6.3x50	1
11	TBR-T511	Nipple Mb/1	1



Tar River Implements  
P.O. Box 8164  
Rocky Mount, NC 27804  
Tel: 252-442-0700  
Web: [www.br-equipment.com](http://www.br-equipment.com)