Przedsiębiorstwo Produkcyjno –Usługowo –Handlowe
"AKPIL" PILZNO
39-220 Pilzno, ul. Witosa 11, 21 tel./fax: (014) 6722550,
tel. (014) 6722551
www.akpil.com.pl
e-mail: akpil@akpil.com.pl

Soil Miller

TYPE:
U533 U533/1 U533/2

Instruction Manual, Spare Parts Catalogue and Warranty
Instruction in English

KTM 0821-411-153-300 for U533
KTM 0821-411-153-313 for U533/1
KTM 0821-411-153-326 for U533/2

Type .....
Factory Number .....
Year of Production .....
Warranty Number .....
Quality Check Mark .....

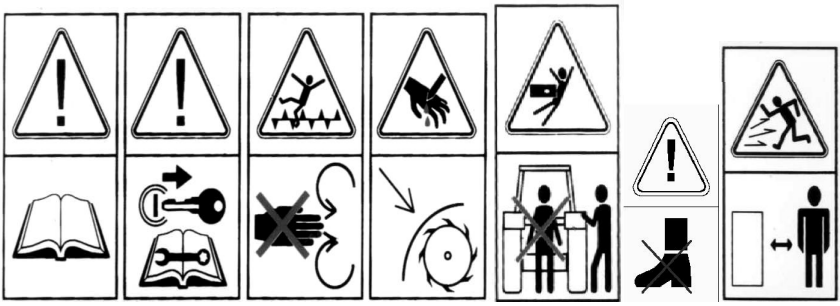
Pilzno 2004.
Edition IV

Contents

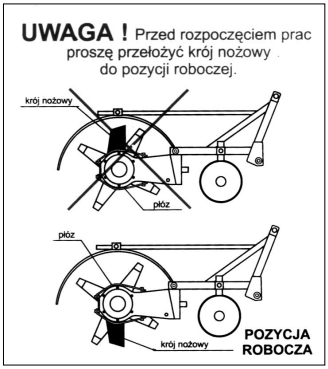
A copy of the instruction manual is supplied with each machine.

Caution !
The manufacturer reserves the right to make structural and technological changes to the product itself, and any additional accessories.
Changes will be introduced to manual as they appear.

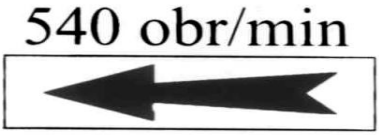
Information and warning signs.



1 2 3 4 5 6 7



8



9

10

Meaning of symbols:

1. Read instruction manual.
2. Stop engine and remove ignition key before servicing the machine.
3. Do not open and do not remove safety shields.
4. Leave the shield in place while blades are rotating.
5. Do not stay near the lifter springs while operating the lifter.
6. Do not climb on machine while it operates.

7. There is a danger of throwing hard objects – keep a safe distance.

Warning signs 1-4, 6-7, and sticker 8 are located on the shield of the working assembly. Sign 5 is located on the turret, on both sides of the machine.
Sticker 9, stating speed and direction of shaft rotation, is located on machine frame, above the shaft shield. Sticker 10, indicating lubrication points, just next to these points.

Caution !

The user of the soil miller is obliged to take care of legibility of warning symbols and inscriptions located on the machine, during the whole period of machine operation. In case of damage or destruction, they should be restored or replaced. Stickers with warning symbols can be purchased at the manufacturers sales department.

1. Principles of safe operation

1. Act carefully when connecting machine to tractor.
2. Lift and lower the soil miller gently and without jerking.
3. Transport the soil miller to or from field lifted on three-point suspension system of tractor.
4. During transport or operation, do not exceed permissible speed limits.
5. Do not drive backwards and do not turn the tractor round with the soil miller in the working position.
6. All repairs, adjustments, greasing should be done when engine is stopped.
7. It is forbidden to seat on working assembly shield while machine operates.
8. Cleaning the soil miller of soil and leftovers of plants should be done when engine of tractor is stopped and soil miller is placed on ground.
9. Before driver gets off the tractor, the soil miller should be always lowered to the ground.
10. Operation on terrain with an inclination greater than 12° and driving into unevenness or slopes is forbidden.
11. The machine can only be operated by tractor driver after familiarization with this manual.
12. It is forbidden to operate the soil miller near to other people, because it can throw heavy objects.
13. To power the soil miller, a telescopic joint shaft should be used, having parameters stated in table 1 and equipped with complete, fully operational and intact shield.
14. When work is done, disconnect the power shaft from the tractor and fasten it to holder on soil miller.

2. General information for purchaser

2.1. Delivery of the Soil Miller

The soil miller is delivered by the manufacturer in a complete, assembled state. The machine is set to transportation mode. Before starting to operate the machine, the knife coulder should be placed in the working position (for transportation purposes knife coulder is raised).
Operation of soil miller with knife coulder in transport position is forbidden.
Purchaser should check the technical condition of the soil miller himself.

2.2. Warranty terms

Purchaser of the soil miller receives a warranty card with complaint coupons, instruction manual and spare parts catalogue.
There is a year's guarantee for the soil miller. During this period all malfunctions resulting from manufacturing faults are removed for free.
Execution of warranty rights is made on the basis of warranty coupons attached to warranty card.
It's the duty of the person operating the soil miller to be aware of the contents of this manual. Disobeying the rules for proper utilization of the machine leads to lowering of its efficiency, failures and voiding of warranty.
In case of damage of machine having a valid factory warranty, any warranty claims should be made at the place of purchase. Spare parts for the soil miller are stocked at branches of "Przedsiębiorstwo Handlu Sprzętem Rolniczym "Agroma"" and the manufacturer.
The purchaser should insist on precise filling in of the warranty card and warranty coupons by the salesman. Lack of a date of sale or stamp of outlet, for example, will cause the purchaser risk voiding the warranty.

3. Technical and trade data

The main technical and trade details are shown in following table:

Table 1

No.	Item	Unit	Data		
1.	Symbol of machine	-	U533	U533/1	U533/2
2.	Symbol KTM	-	0821-411-153-300	0821-411-153-314	0821-411-153-326
3.	Symbol PKWiU	-		29.32.22 - 50.12	
4.	Type	-		suspended	
5.	Working width	mm	1600	2100	1800
6.	Efficiency	ha/h	0,24÷0,7	0,27÷0,8	0,25÷0,75
7.	Working depth	mm		do 150	
8.	External dimensions:				
	- length	mm	1400	1400	1400
	- width	mm	2000	2500	2200
	- height	mm	930	930	930
9.	Total weight of soil miller	kg	300	350	330
10.	Distance between centre of gravity to suspension axle	mm		600	
11.	Speed: - work	km/h		up to 5	
	- road	km/h		up to 15	
12.	Ground clearance	mm		300	

13.	Interacting tractor				
	- power of engine	kW	30	40	35
	- category TUZ	-	2	2	2
14.	Power demand on shaft	kW	18	25	21
15.	Shaft speed	rpm		540	
16.	Working assembly:				
	- knife drums:				
	- number	pcs	2	2	2
	- speed	rpm	152	185	185
	- diameter	mm	540	540	540
	- number of knife disks	pcs	8	10	9
	- number of knifes				
	- left hand	pcs	24	30	27
	- right hand	pcs	24	30	27
17.	Beam wheels:				
	- kind	-		steel	
	- number	pcs		2	
	- diameter / width	mm		390 / 80	
18.	Number of persons to operate			1 (tractor driver)	
19.	Telescopic joint shaft:				
	- nominal torque	Nm		400	
	- nominal transferred power	kW		22	
	- minimal length of shaft	mm		560	
	- number of inlets from tractor / machine	pcs		6 / 6	
	- lables with safety signs	-		Placed on machine	

4. Applications

The soil miller is a substitute for the operation of a plough, cultivator and harrow, which shows how useful it is for farmers eveywhere.

The soil miller is designated for the loosening and mixing soils of different consistencies. For example, the cultivation of fields left after perennial planting, and after ploughing of meadows or pastures, is possible in very short time. The machine can also be used for mixing herbicides and mineral fertilizers into the soil. The soil miller is designed to be used with tractors of 18 to 48 kW engines, such as the Ursus C330, C360, C385, and MF-235.

Using the soil miller for purposes other than soil cultivation is not recommended and results in voiding of any warranty.

5. Construction and principle of operation.

Fig. 2. Suspended soil miller

The soil miller can be used for forward operation, where the direction of rotation of the working drum is the some as the movement of the machine, and for backward operation, where the direction of rotation of the working drum is opposite to the movement of the machine. (fig. 3).

The soil miller, as delivered by the manufacturer, has the forward operation of the working shaft. To obtain backward operation, one should unscrew the four nuts (fig. 4) fastening the layshaft to the frame, turn the layshaft through half a turn (180°), next turn the frame half a turn (180°) and reconnect them together using the nuts unscrewed before.

The change of location of the layshaft against the working drum results in a reversal of the rotation of the drum against the direction of machine movement. During this operation it is not necessary to detach the soil miller from the tractor. It would be enough to unscrew the screws fastening frame to layshaft, next to lift the frame and cover up using hydraulic lifter, throw layshaft to the other side then drive the tractor with frame to the other side of machine. After setting the frame down it is enough to fasten it again to layshaft. When changing the direction of rotation of working drum it is necessary to swap the places of the cover of the layshaft and knife coulder. This means that the cover should be mounted in place of the knife coulder and vice versa.

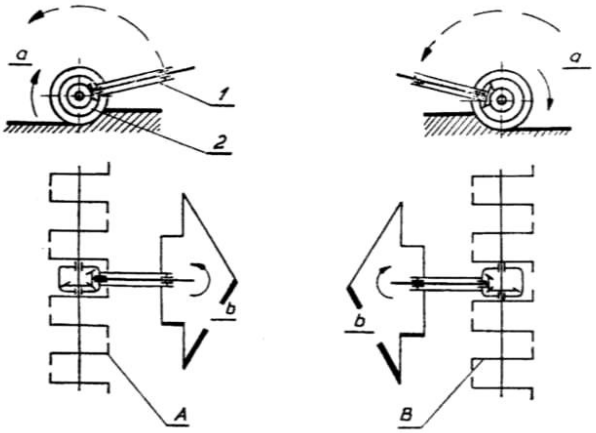


Fig. 3. Re-assembling the soil miller to obtain reversed direction rotation of working drum.

1 - layshaft, 2 – working drum, A – forward rotation of working drum, B – backward rotation of working drum, a – rotation of working drum, b – direction of movement

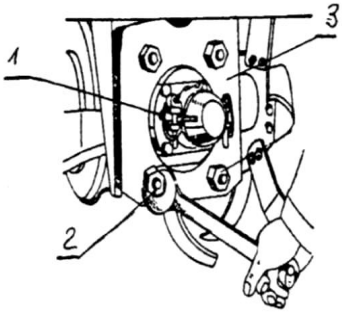


Fig. 4. Unbolting the layshaft from frame.

1 - layshaft
2 - nut
3 - frame

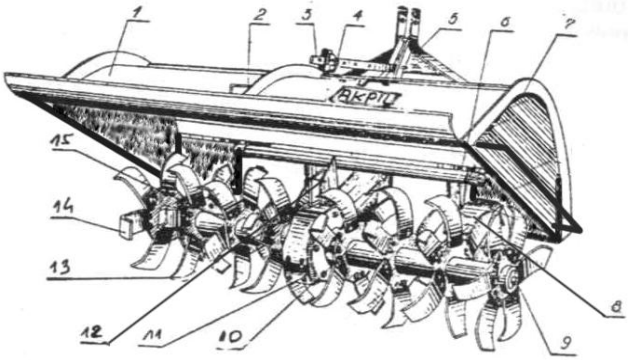


Fig. 5. Suspended soil miller

1 - shield, 2 - hanger, 3 –shield adjuster, 4 - stopper, 5 - frame, 6 – plough frog, 7 - hinge, 8 – supporting wheel, 9 – pulling rod, 10 – working drum, right-hand, 11 –layshaft cover, 12 - knife coulder in transport position, 13 – knife, left-hand, 14 – knife, right-hand, 15- working drum, left-hand.

The frame of the soil miller lies on two supporting wheels (fig. 5), placed on plough frogs, to which scrapers are fixed. The task of the scrapers is cleaning the wheels of any soil sticking to them.

The depth of work of the soil miller can be adjusted by repositioning the frame. This can be done by adjustment of the supporting wheels, with the adjustment openings located in the plough frogs.

The frame is welded from flat bars and structural sections. The plough frog runners are welded on both sides of the frame, and the stand is also welded to the frame. Two pivots (fig. 6) are designed for suspending the soil miller on the hydraulic lifter. The openings on the ends of the pivots are used for inserting the stopper plugs and protecting the hydraulic lift springs against falling out.

The third point of the soil miller suspension is the opening in the stand, which is designed for installing the upper connecting rod of the tractor.

The working drum of the soil miller is covered by a special shield (fig. 5), protecting the driver of the tractor against soil or stones being thrown up. The drum shield is fastened to the frame at three points; the two lower points create the hinged suspension, allowing for rotation of the shield round the beam of the frame. The third point of suspension is the shield adjuster, allowing for positioning the shield against the working drum.

Adjustment of shield position is done by means of the stopper plug and adjuster, with a series of openings to select from (fig. 5).

The layshaft is fastened to the frame by means of screws. Rotary movement is transferred from the output shaft of the tractor, through a telescopic joint shaft, via a pair of gears, to the working drum.

Layshaft is filled up with gear oil Hypol 15 in volume approx. 1.5 l, greasing the gears and bearings. It can be poured into the layshaft through the inlet, protected by a sealed cap.

The layshaft is equipped with knife coulder and cover (fig. 5), which are fastened

to it by means of screws. The cover's task is to protect the box of layshaft against damage. The knife coulder is used for cultivating the middle line of soil, which would be left unattached by the soil miller.

Soil millers are mounted in transport with the knife coulder in the upper position. Before operating the machine, one should swap the places of the knife coulder and cover. The maximum depth of knife coulder operation is 12 cm.

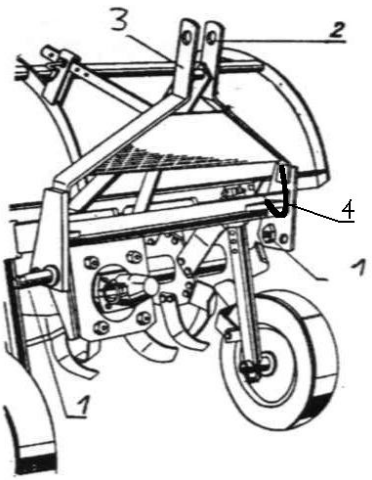
The working drum assembly of the soil miller consists of two parts: the left-hand and right-hand drum. Each of the drums consists of knife disks fastened to a tube, inside which a conical sleeve is located. The sleeve connects the drum with the shaft. Depending on the cultivated soil, four or six knives can be fastened to each of the disks. For firm soil four knives should be used, for average firm soil six knives should be used.

The assembly diagram of the disks with knifes is shown on the assembly drawing of the working drum (fig. 15). Four and six knife arrangements are shown.

Soil millers delivered by factory are assembled in with the six knife arrangement.

Fig. 6. Soil miller stand

1 – suspension pivots
2 – opening for upper connecting rod fastening
3 – stand
4 – shaft handle



6. Preparing the soil miller for operation

Before starting the operation of the soil miller, the mechanical condition of machine should be checked:

a) swap places of knife coulder and cover,
b) suspend soil miller on tractor, but do not connect the telescopic joint shaft.
c) provisionally level the soil miller in the transverse direction, using the crank of the right-hand stand of the tractor, and in the longitudinal direction by adjusting the upper connecting rod,
d) check screw joints of the soil miller, ensure all the screws and nuts are tight,
e) grease the soil miller, see fig.7,
f) Unscrew the control plug and check if the gear is filled up with Hypol 15 (1.5 l). Oil should flow out of the plug opening, if not top the oil up to the required level. During this test the soil miller should be located on flat, horizontal ground,
   - the oil level should be checked before each field operation and in case of need, it should be replaced or topped up,
   - oil replacement should be done after operation of the machine, when the oil is warm,
   - after draining out of old oil, wash the layshaft box using gear oil, turning the working drum manually,
g) start the tractor engine, lift up the soil miller to the transport position than stop the engine again, securing the machine against falling by using the support and taking proper precautions,
h) check the mechanical condition of the knives and in case of damage replace with new ones,
i) turning manually the working drum, check if rotation is smooth and free of jamming,
j) check if shield cover can be easily raised and lowered,
k) check if support wheels can be easily raised and lowered,
l) remove securing support and slowly set the soil miller down,
m) connect the soil miller with tractor, using telescopic joint shaft,
n) after starting the engine of tractor and after lifting the soil miller to transport position, and taking the utmost care, turn on machine drive and check it's operation.
o) check raising and lowering of the soil miller.

Caution. Connecting the telescopic joint shaft should not be done before checking the mechanical condition of the soil miller.

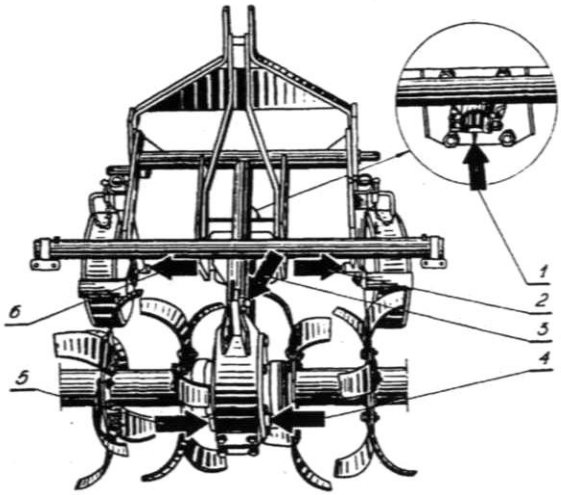


Fig. 7. Soil miller lubrication points

1 – head of layshaft, one greasing point – ŁT-42 grease – during operation grease every 10 hours,
2 & 6 – supporting wheel axle, two greasing points – STP grease - during operation grease every 10 hours
3 - layshaft, oil inlet - Hypol 15 (1.51) gear oil
- 1st replacement - after 20 hours of operation
- 2nd replacement – after next 40 hours of operation
- 3rd and next replacements – after each 200 hours of operation
4 – oil level in layshaft check
5 – oil drain in layshaft

7. Operating the soil miller

During the first working drive one should:
- set supporting wheels on required working depth,
- level precisely the soil miller (fig. 8).

In order to remove play between shaft and working drum, after about 15 minutes of first operation discontinue further work with the soil miller. Stop the engine of the tractor and screw firmly the pulling rod (fig. 9) and secure the screw on the left-hand and the right hand working drum. Tighten all screws, paying special attention to screws fastening the knifes.

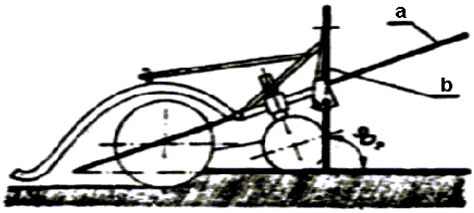


Fig. 8. Soil miller in use
a – location of the frame, b – plane of suspension points (vertical, to ground)

Pulling rod and securing screw of right drum (looking from the back of the tool) have left-hand threads, while the same parts of the left drum have right-hand threads.

When operating the soil miller one should avoid violent jerking. When the soil miller is in working position, do not drive backwards. To avoid blocking the working drums, first clean the field of long, loose leftovers of plants (after harvest).

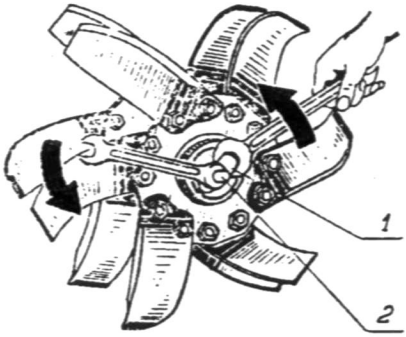


Fig. 9. Tightening of the right working drum
1 – securing screw, 2 – pulling rod

During replacement of screws and nuts, take care to use the proper spare parts, of the same or higher quality. Regardless of the quality of screws, use the same tightening torque as before.

Make sure that screws are of the proper kind, and threads are not contaminated, to prevent damage during fixing.

Required values of torque are stated in table 2.

Strength index of screw is imprinted on its head.

A – size of thread

SW- span of wrench (mm)

MA- tightening torque (Nm)

Values of tightening torque Table 2

A	SW	Strength index 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	1890
M36	56	980	1290	1790	2020

8. Adjustment of working depth

Working depth of soil miller can be adjusted gradually, in 2.5 cm steps (fig. 10) up to maximum value of 12 cm.

Changes of working depth are made by re-adjusting both supporting wheels.

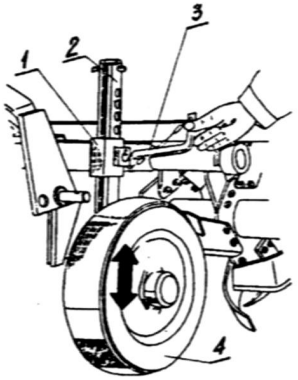


Fig. 10. Adjustment of working depth
1 –frog runner, 2 – wheel frog, 3 - stopper, 4 - wheel

9. Adjustment of shield positioning

Adjustment of the positioning of the working drums should be made during operation, depending on agro-technical conditions: for light soils the shield

should be positioned high, for heavy, damp soils the shield should be also positioned high because of a risk of sticking. However, for heavy, dry soils the lower rim of the shield should touch the ground, for light soils with fine stones, for the sake of safety, the shield should be positioned low. When leveling of machined soil is required, the shield should be positioned in lowest possible position.

10. Turning around

During turning around, the soil miller should be lifted up to the transport position and drive of the working drum should be disconnected.

Turning backwards during work, with knifes immersed in soil should never be attempted.

11. Transporting the soil miller

During transport, the soil miller should be lifted high enough to obtain 300 mm road clearance. The telescopic joint shaft should be disconnected and transported in the cabin. The machine should be marked with a warning plate (white – red diagonally striped) and with red sidelight. The plate distinguishing slow vehicles re-position from tractor to the hanger located on the soil miller frame.

Pay special attention to the free space around tractor with soil miller when maneuvering.

During transport the driving speed should not exceed:

- even surface roads (asphalt), up to 15 km/h
- country road or pavement, up to 6-10 km/h
- uneven roads, up to 5 km/h

12. Maintenance and servicing of the soil miller

Each time, after finishing the work, the soil miller should be cleaned of soil, then service of all joints, parts and units should be performed. Worn parts should be replaced, damaged parts should be repaired, and broken knifes should be replaced. Play in screw joints should be removed by tightening.

After finishing the working season, the soil miller should be cleaned carefully, the working surfaces of knives, stoppers and pivots should be washed with kerosene, then protected against rust by brush coating with protective grease, warmed up to temperature 60^{o}. Furthermore, lubrication of the soil miller should be performed.

The telescopic joint shaft should be removed from the machine and stored in a closed, dry room.

The tip of the spline shaft should be also washed with use of kerosene, coated with ŁT-42 grease and shaft cover should be fitted.

The soil miller should be stored under a roof. If between operation of the soil miller it is kept outside then from time to time, when rain washes the grease out,

regreasing should be performed. Local damage to the paint should be repaired by coating with new paint.

Caution!
For protection of lower springs and pivots of upper connecting rod, normal protective covers should be used. Never use substitute protection, like screws, rods, wires etc. which might get caught or fall out during transport. Substitute protection might also damage the soil miller or tractor.

13. Spare parts catalogue

1. Information about principles of use of catalogue:

Parts of soil miller are shown in catalogue in assembled arrangement and in drawings.

A text box is attached to each of the drawings. Each text box shows:

- in 1st column – number of position according to symbol in box
- in 2nd column – the name of part
- in 3rd column – catalogue number
- in 4th column number of pieces in one unit

2. How to order spare parts:

Each order should include:

- address of person ordering the parts
- exact address of delivery (location of machine parking or of reception)
- factory number of machine and year of production (according to name plate of machine)
- exact name of spare part
- catalogue number or norm number
- number of pieces of spare part required
- terms of payment

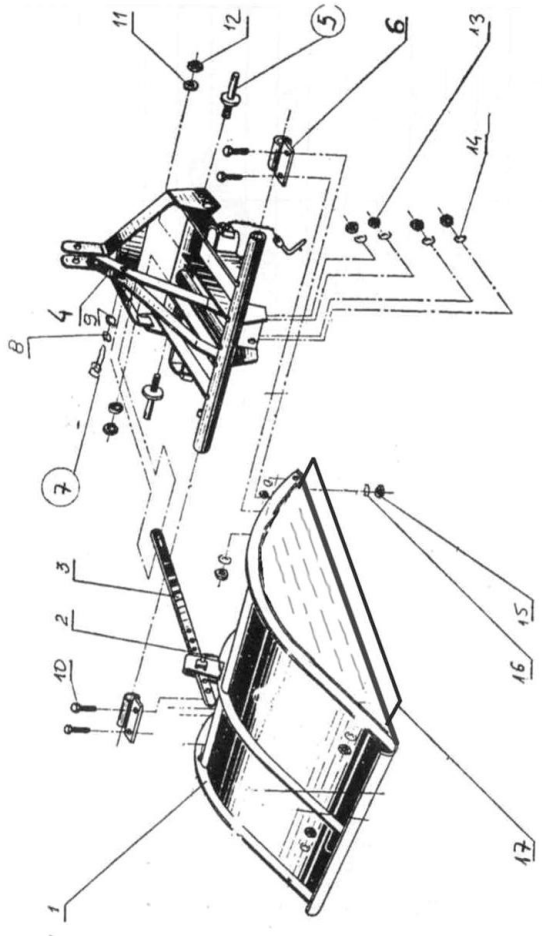


Fig. 11. Frame with shield – Table 3

Frame with shield – Table 3

Nr Poz.	Nr KTM Lub nr normy	Liczba sztuk w maszynie			
		FREZA16	FREZA21	FREZA18	FREZA125
1	UG1-7	1			
	UG1-7/a		1	1	
	UG1-7/b				1
2	UG-1-19	1	1	1	1
3	UG1-3	1	1	1	1
4	UG1-2	1	1	1	1
5	UG1-5	2	2	2	2
6	UG1-21	2	2	2	2
7	PN-74/M-82105	1	1	1	1
8	PN-90/M-82004	2	2	2	2
9	PN-73/M-82144	1	1	1	1
10	PN-74/M-82105	8	8	8	8
11	PN-65/M-82008	2	2	2	2
12	PN-73/M-82144	2	2	2	2
13	PN-74/M-82155	4	4	4	4
14	PN-65/M-82008	4	4	4	4
15	PN-73/M-82144	8	8	8	8
16	PN-65/M-82008	8	8	8	8
17	UG1-30	2	2	2	2

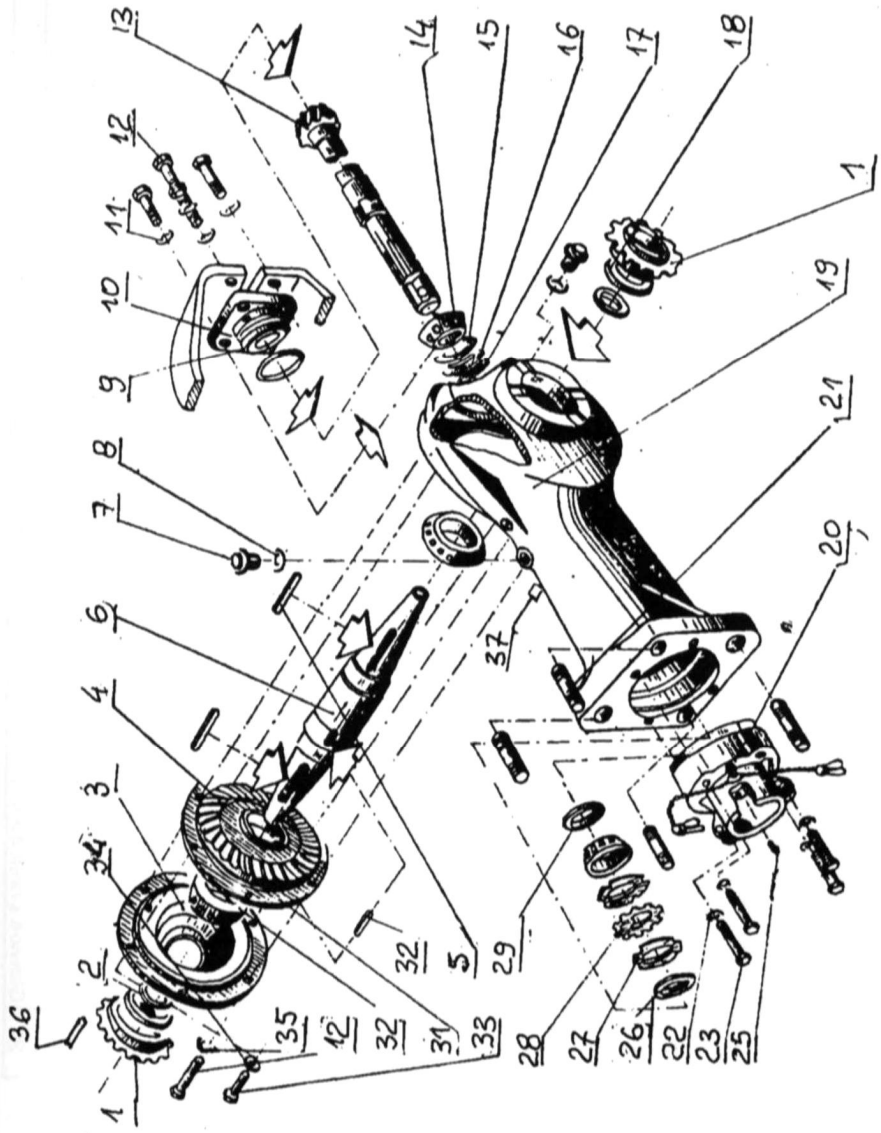


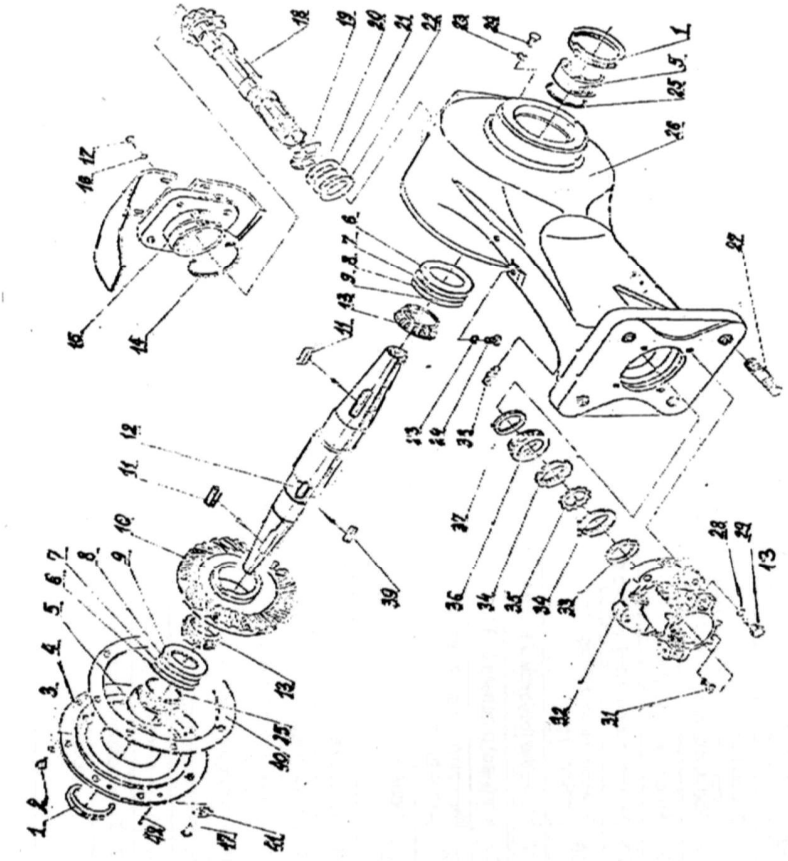
Fig. 12.
Layshaft 041-9/32. U533 – table 4

Layshaft 041-9/32. U533 – table 4

Nr poz.	Nr fabryczny części	Liczba sztuk w maszynie
1	GZG-042	2
2	PN-72/M-86964	2
3	GZG-112	1
4	UG1-1/6a	1
5	GZG-199	2
6	GZG-155	1
7	PN-71/1092-21	2
8	GZG-70	1
9	PN-60/M-86961	1
10	GZG-71	1
11	PN-76/M-82005;82008	4+4
12	PN-85/M-82105	4
13	UG1-1/8a	1
14	PN-86/M-86220	2
15	GZG-109	wg potrzeb
16	GZG-102	wg potrzeb
17	GZG-103	wg potrzeb
18	PN-60/M-86961	2
19	GZG-111	1
20	GZG-97	1

Nr poz.	Nr fabryczny części	Liczba sztuk w maszynie
21	PN-85/M-82105	4
22	PN-72/M 82008	4
23	PN-85/M-82105	4
25	PN-76/M-86007	1
26	PN-72/M-86964	1
27	PN-77/M-86478	2
28	PN-75/M-86482	1
29	PN-72/M-86964	1
30	PN-70/M-85005	1
31	GZG-113	1
32	PN-86/M-86220	2
33	PN-85/M-82105	1
34	GZG-13	1
35	PN-82/M-82021	6
36	E2.0002.933.871.00	1

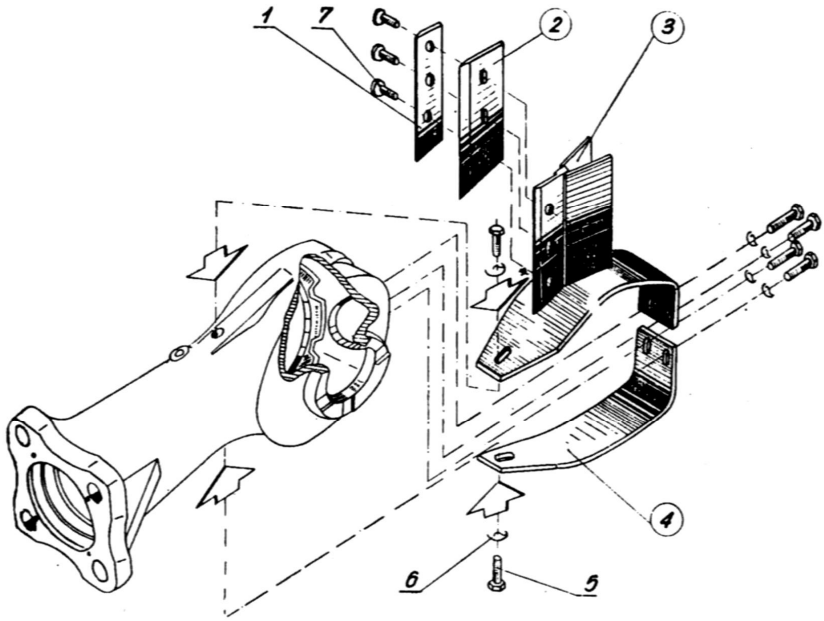
Layshaft fit.13 041-11/32. U533/1 –
table 5



Nr poz.	Nr fabryczny części	Liczba sztuk w maszynie
1	GZG-042	2
2	PN-85/M-82105	1
3	GZG-13	1
4	GZG-72	1
5	GZG-76	wg potrzeb
6	GZG-81	wg potrzeb
7	GZG-82	wg potrzeb
8	GZG-83	wg potrzeb
9	GZG-87	wg potrzeb
10	UG2-1/6a	1
11	GZG-199	2
12	GZG-155/A	1
13	PN-86/M-86220	2
14	PN-60/M-86961	1
15	GZG-162	1
16	PN-76/M-82005;82008	4
17	PN-85/M-82105	4
18	UG2-1/8a	1
19	PN-86/M-86220	1
20	GZG-157	wg potrzeb

Layshaft fit 13.041-11/32. U533/1 – table 5

Nr poz.	Nr fabryczny części	Liczba sztuk w maszynie	Uwagi
21	GZG-158	wg potrzeb	
22	GZG-159	2	
23	GZG-70	2	
24	PN-71/1092-21	2	
25	PN-60/M-86961	1	
26	GZG-65	4	
27	PN-85/M-82105	4	
28	PN-77/M82008	1	
29	PN-85/M-82105	1	
31	PN-76/M-86007	1	
32	GZG-97	1	
33	PN-72/M-86964	2	
34	PN-82/M-86478	1	
35	PN-82/M-86478	1	
36	PN-82/M-86220	1	
37	PN-72/M-86964	1	
38	E2-002-933-871.00	1	
39	PN-70/M-85005	1	
40	GZG-86	1	
41	PN-82/M-82021	8	



Rys.14. Knife coulder and layshaft cover - table 6

Table 6 – Knife coulder and layshaft cover

No	Name of part or set	No KTM or norm	Number of pieces in U-533 U-533/1/2	Remarks
1	Cover	UG1-18	1	
2	Knife	UG1-17	1	
3	Knife support	UG1-9	1	
4	Cover	UG1-10	1	
5	Screw M12x30-3.6-111	PN-74/M-82105	2	
6	Spring washer 12.2	PN-65/M-82008	2	
7	Screw M8x16-5.8-ll	PN-74/M-82227	3	

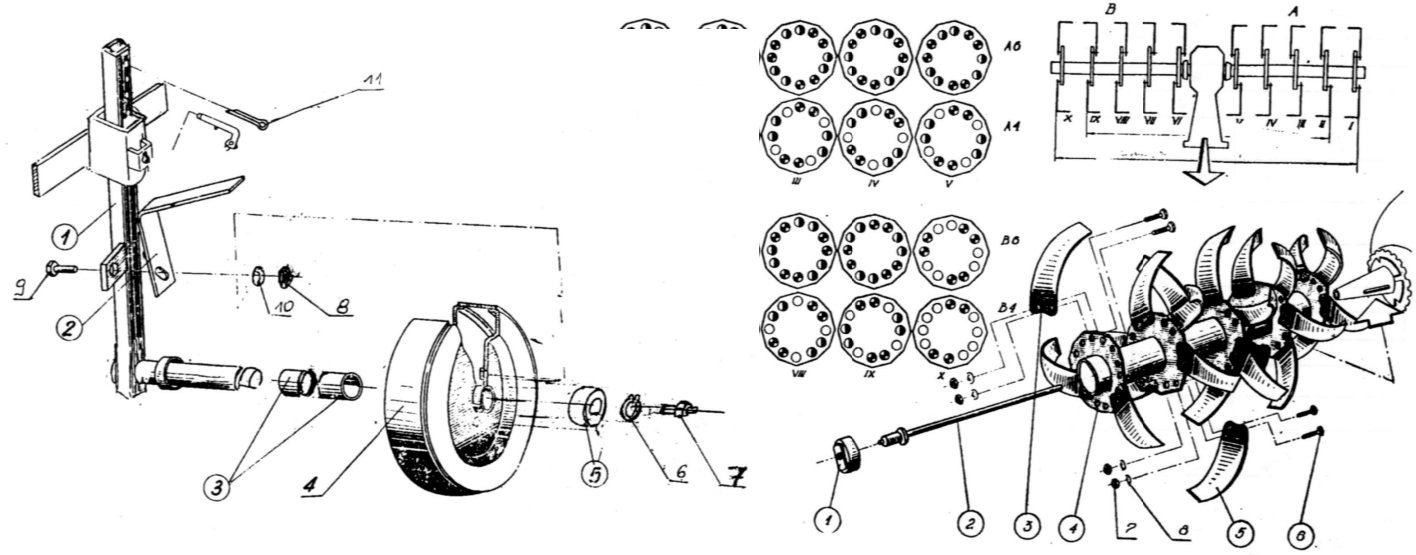


Fig. 15. Working drums – table 7

A – left drum, B- right drum, A6 – 6-knife set of left hand drum, A4 – 4-knife set of left-hand drum, B6 – 6-knife set of right-hand drum, B4 – 4-knife set of right drum,

a – left-hand knife, b – right-hand knife

Fig. 16. Supporting wheel – table 8.

Notes:

Declaration of Conformity
Nr U533 / … / ….

Przedsiębiorstwo Produkcyjno – Usługowo – Handlowe „AKPIL”

We declare at our own, exclusive responsibility, that the machine:

Soil Miller U-533 ...
Factory number ……

fulfils the security, health and environment regulations, included in:

- Directive 98/37/WE concerning machines and security elements.
- Harmonized norms:
  PN-EN 292-1;2:2000
  PN-EN 349: 1999
  PN-EN 708: 2000/A1:2002U
  PN-EN 1553: 2002

In case of any changes to the machine, done without agreement of PPUH „AKPIL”, the present declaration expires.

Pilzno ……. Signature: ……
(Name and Surname of authorized person)

Delivery Acceptance Act

The delivery acceptance act is an integral part of the warranty card.
Lack of properly filled Delivery Acceptance Act results in voiding of warranty rights.
Date of filling in of the Delivery Acceptance Act is considered as the date of production of machine.

Parties signing the present act (salesman and purchaser) declare as follows:

- The machine is delivered to purchaser in assembled and ready to operate state.
- The machine described below was activated by the salesman in purchaser's presence, according to manufacturer advice.
- The purchaser was informed by the salesman about proper treatment of the machine, about its operation and maintenance and about safety regulations currently in force, in accordance with the received instruction manual.

The purchaser was informed by the salesman about terms of the factory warranty. Przedsiębiorstwo Produkcyjno – Usługowo – Handlowe

„AKPIL" PILZNO

Salesman		**Purchaser**	
Surname:		Surname:	
Street:		Street:	
Place:		Place:	
……		……..	
Date	Signature	Date	Signature

39-220 Pilzno, str. W. Witosa 21
Tel. (0-14) 672-25-51, tel./fax. (0-14) 672-25-50

Warranty Chart
Soil Miller

Type..... Factory number..... Year of production .....
Date sale (in words) .....
Warranty is valid for 12 month from sales date.
Warranty service in the name of manufacturer is held by:

.....
(filled in by salesman)

.....
(signature and stamp of salesman)

Complaint coupon number 1

Cultivation aggregate ..... In working order
Factory number..... Received after repair:
No of complaint protocol .....
Warranty prolonged ..... Date .....

Purchase date: ....
(signature of user)

Complaint coupon number 2

Cultivation aggregate ..... In working order
Factory number..... Received after repair:
No of complaint protocol .....
Warranty prolonged ..... Date .....

Purchase date: ....
(signature of user)

During complaint, warranty chart should be presented.

General principles of warranty proceedings

1. Warranty covers defects and damage resulting from manufacturing error, structural defects, incorrect processing or assembly.
2. Within the confines of the warranty, the manufacturer or authorized service station, in case of recognizing the complaint, is obliged to give:
    - free repair of complaint with soil miller
    - free replacement of entire soil miller
    - free delivery of new, properly manufactured parts
3. Warranty does not cover parts mentioned in the instruction manual which physical wear as a result of normal operation, and need replacement before expiry of warranty period.
4. User should submit the complaint immediately, within 14 days from date of appearance of the fault.
5. Warranty is prolonged for a period, when the equipment was repaired.
6. Warranty will expire in case of making any unauthorized technical changes or repairs to the equipment, or of improper storage or maintenance, or in case of improper use.
7. If upon user's opinion, a justified warranty claim was unfairly done negatively, the user has right to turn to the salesman, with the demand of considering the case again, and with the participation of an expert.