FiMAKS

DRUM MOWER

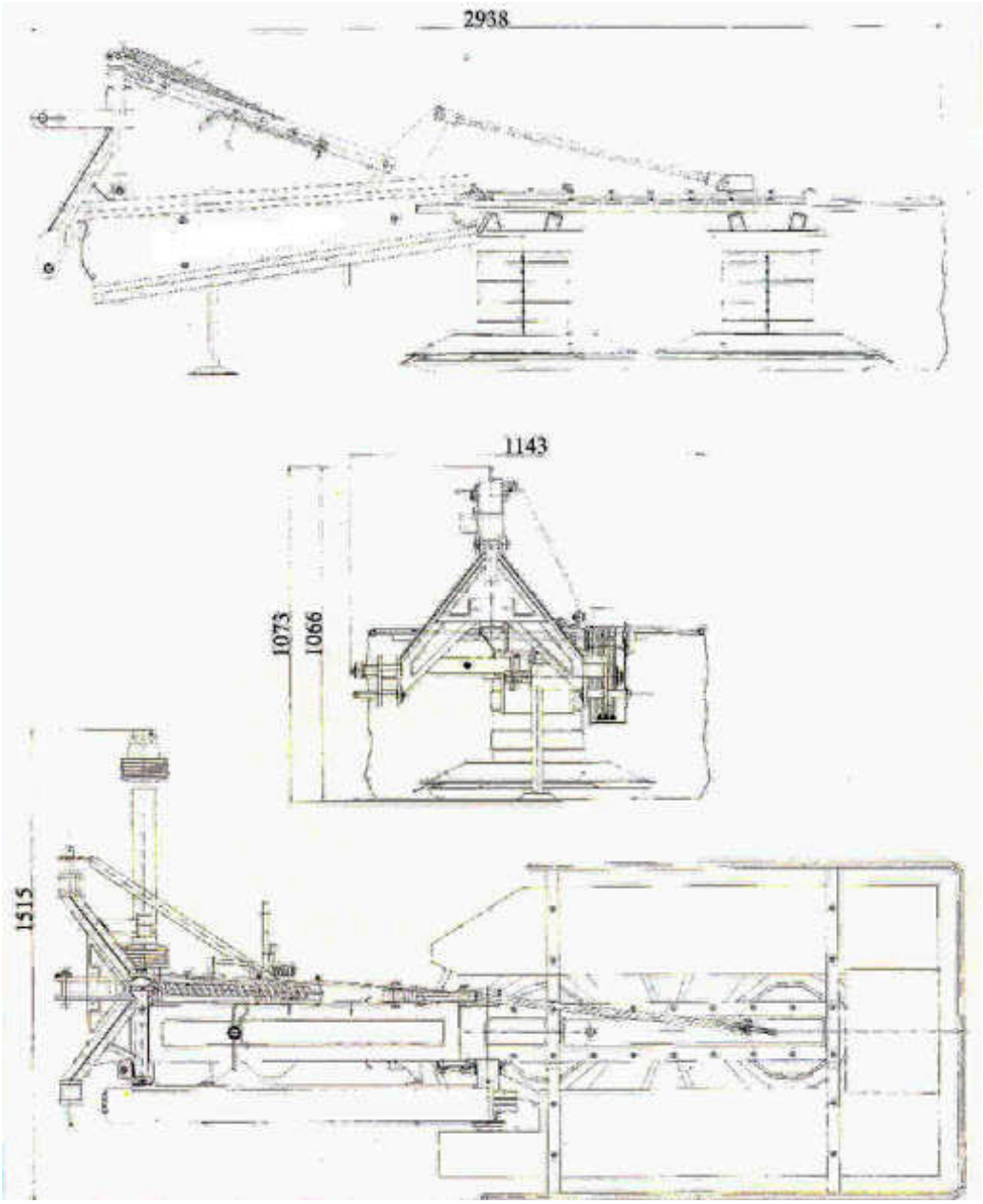
USER'S MANUAL

APPENDICES

02-) INTRODUCTION

Drum mower is a kind of grass cutting machine which moved from tractor back pivot axle, free rotary cuttered, and can be hanging type.

03-) *MACHINE DIMENSIONS*



04-) WORKING AND TECHNICAL SPECIFICATIONS

A-) WORKING SPECIFICATIONS

It cuts the crops requested height through cutters are located on reverse rotary pulleys and it has 3or4 times powered work value than its equal typed machine.

The biggest characteristic is putting down the crops over the floor regularly even by lower powered tractor and even if the crops are wet or bended through clearing drum dimensions and available free revolving of bottom ashtrays.

B-) TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

MODEL/TYPE	ST165
PULLEY NUMBER	2
CUTTER NUMBER	6 and 8
CUTTING WIDTH	165cm
BACK PIVOT AXLE REVOLUTION	540 rpm
PULLEY REVOLUTION	1920rpm
REQUIRED TRACTOR OUTPUT POWER	25 HP
TOTAL WEIGHT	370kg

05-) MAIN INFORMATIONS FOR MACHINE

It is connected with a three pointed hanging system to tractor and it is specified as pulleyed, rotary cuttered, free cutting possibility.

There are three pointed hanging system, gear box, V belt-pulley system, two of cutter pulley, 6 of leaf cutter, jointed axle to move carrying bars connected to three pointed hanging system and carrying chassis on the Drum Mower.

The machine is designed as two different chassis. Both three pointed hanging system and belt-pulley system from the first chassis of the machine. The gear box is the second chassis which bear the drums at the same time. The gear box and first chassis are connected to each other with two piece of slider bearing by the side of machine.

The drum activate to gear is formed by bearing. Furthermore two of chassis are connected to three pointed hanging system with two of parallel steel bar which has spring pressed, and this causes to adjust the length of machine.

The drum mower is activated from upper side of machine. The first movement is transmitted from tractor back pivot axle to three grooved V belt-pulley system, then it is transmitted to gear box and pulley axle through gears and last of all movement is transmitted to cutter disks. At the first step, movement is transferred with belt-drum system and at the second step it is transferred to gear box then to cutter disks.

Fill up the gearbox with suitable oil. Oil leakage is obtained with a joint. There are double of gear which increase the movement comes from drum and two of double gear which transfer the movement to cutter disks in the gear box. There are totally three-double gears in the gear box.

The movement is transmitted to conical gear of | second drum by a metal bar dimensioned as 1070mm, 25 mm. This metal bar is beared as three point over it. The conical gears are settled reverse sided on that metal bar. So there is designed a grass barrel on the middle of the system.

There are spring pressed cutter on each of disks. Both two side of cutter has cut featured. The cutter can be use for others when it wears because of disks revolve opposite side. The cutters can be changed easily with a special spanner without disks pull out.

The working safety of drum mower is kept with spring pressed safety system. Also | there is a spring safety coupling in main axle which movement transmitted from tractor pivot axle.

06.) THE MATTERS BEING CAREFUL DURING TRANSPORT

- The machine must be kept from hard blows and frictions during transport.
- The machine must be fix to flour to not move during transport.

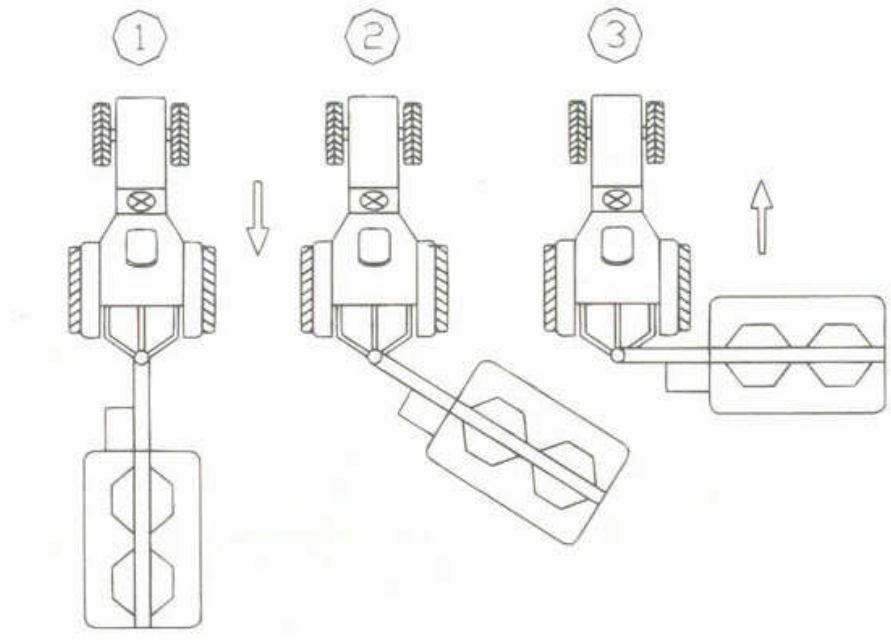
07.) ASSEMBLY AND WORKING WITH THE MACHINE

A-) ASSEMBLY

Bring the tractor near machine to fix all parts of machine. Firstly fix left bottom connection bar, secondly right bottom connection bar then the top connection bar to machine. Lift up the support leg of machine and loose strength bar of tractor.

Take down the machine on a smooth place as being 5 cm diameter between continuation of middle point of inside lag and outside of tractor rear right wheel, and tighten strength bars. Right bottom connection bar must be as obtain that cutters are parallel to earth.

Follow same way before machine start-up.



POSITION 1: Take the machine right position. Approach the tractor to machine. Connect the machine to tractor with three point after distance is adjusted. Connect the clutch of shaft to tractor pivot axle.

POSITION 2: Open the pad lock after machine fix to tractor. Obtain the back movement of tractor for cutting position.

POSITION 3: When the angle is 90 between machine and tractor that mean is cutting position, fix it for cuffing position as automatic arm interlaces pad pin.

B-) SAFE START-UP

Before using machine, the oil named SAE 140 must be filled up to not overflow from container which the plug near of gear box. At the end of each cut of grass, machine must be cleaned, controlled oil lever, kept in a suitable place.

The cutters of disks must not be missed. Always equal sized cutters must be used for machine. If cutter sizes are different, the balance of disks can be spoilt, can-cause breakdown and machine life can be decrease. Keep the tractor revolution lower at the first start-up. After than increase the revolution up to max 540 rpm.

Set the forward speed according to situation of crop and field. If disks experience any difficulty, that cause to readjust strength for working situation so stop the tractor immediately in this condition and get speed gear empty position. Abolish the difficulty and set the machine to start up again.

C-) CHANGING CUTTERS

The wore cutters can be change easily with a cutter dismantle spanner. It must be lifted up to cutter fix pin gets free when the cutters dismantled. When mantle of new cutters, be careful to be cutting side is bottom.

08-) SAFE OPERATING INSTRUCTIONS

1. Stop the machine when setting and oiling.
2. Change the plastic protection of shaft if it is damaged.
3. Put on extra weight on the front of the tractor to balance between front side and rear side.
4. Put on the protection screen before the cutting operation.
5. Put on the shaft protection chain to side lifting bar, so shaft would not be turn because of

protection.

6. Get the machine parallel to earth before start-up.

7. There must not be any living creature between tractor and machine to start-up machine.

8. Turn the machine to side after machine is parallel to earth.

9. Do not over revolution as 540 rpm as stated in operating instructions.

10. Be careful that cutters are true settled after changing operation.

11. Use original cutters if olds are not run well.

12. Do not approach to machine without stopping the tractor.

13. Keep the machine transfer position when you do not use it.

14. Do not allow the persons to approach to machine, because the machine can throw some stones or hard things to people.

15. Before cutting operations, the field or area must be cleaned from stones or hard things. These can damage the machine.

16. Take care when you work in path or stony roads.

09-) MAINTENANCE INSTRUCTIONS

1. DAILY MAINTENANCE

a. Use the lubricating grease after every cutting operation.

b. Check the cutters and belts after cutting operations.

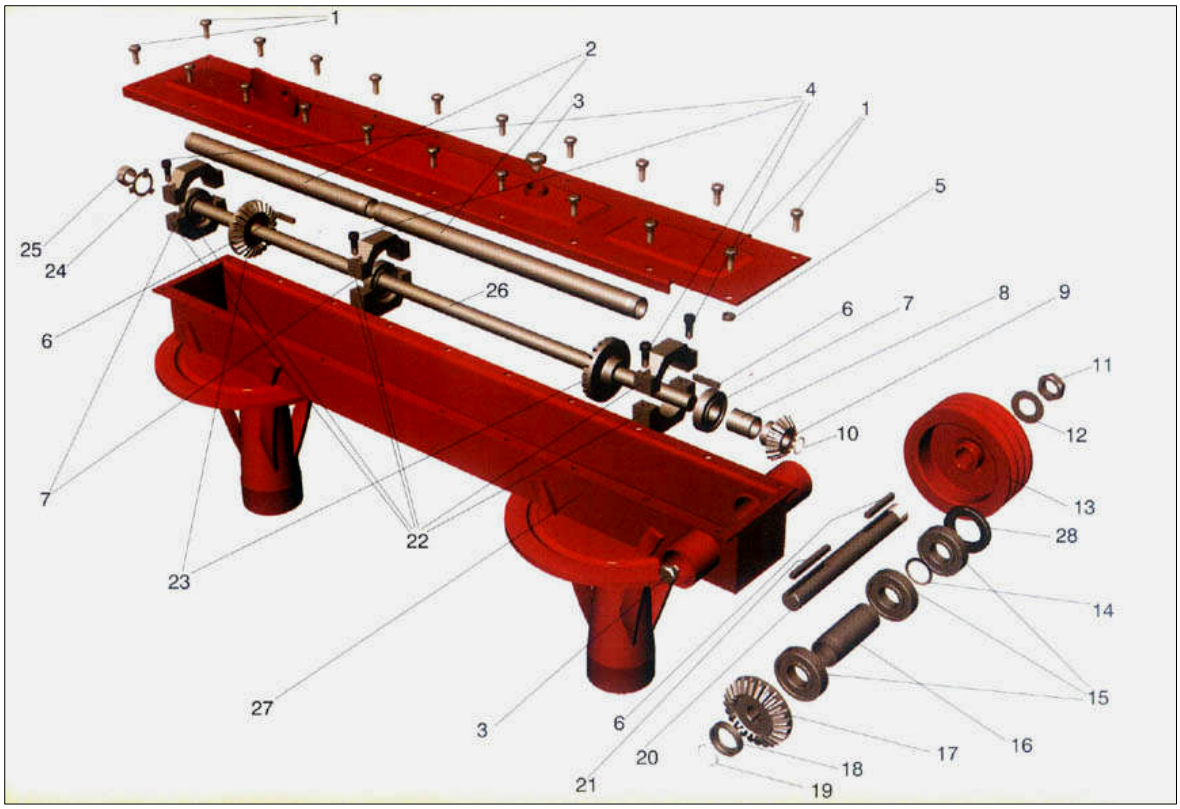
2. ANNUAL MAINTENANCE

a. Make a general cleaning at the end of reaping season.

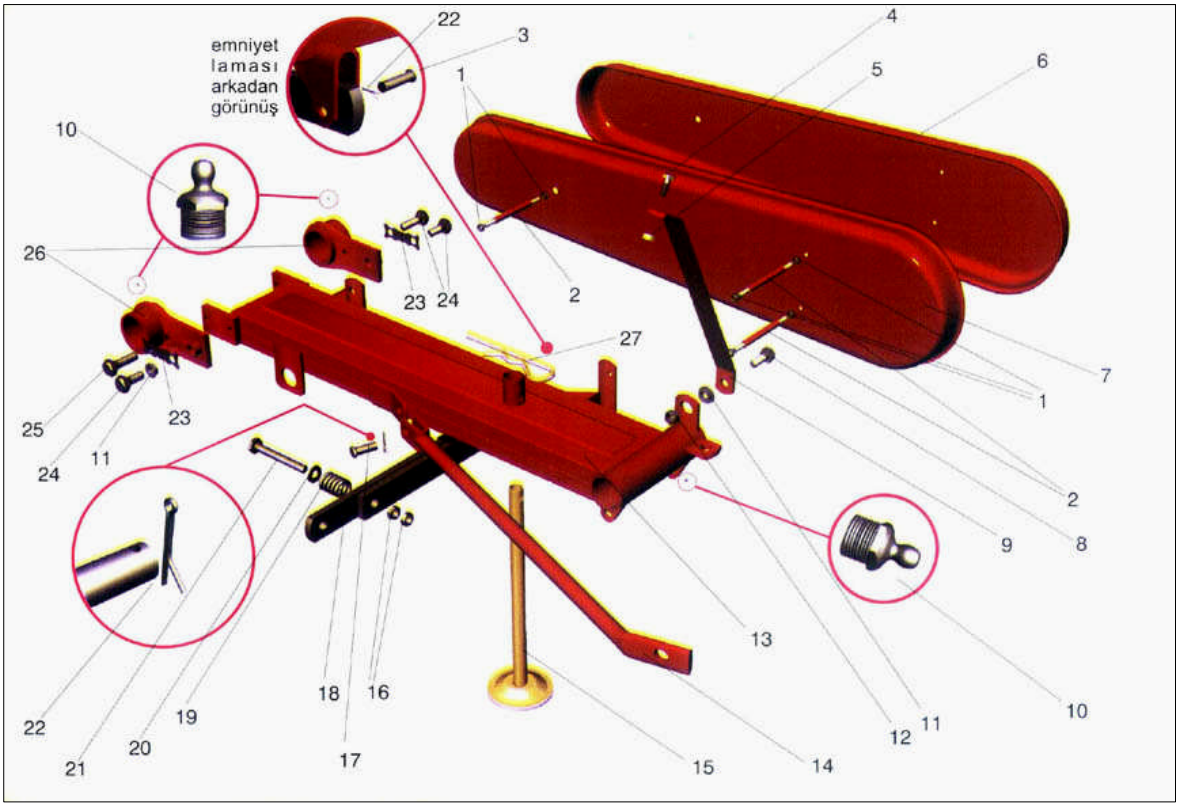
b. Check the all parts of machine. Renew the damaged ones or unusable ones.

c. Use the lubricating grease to lubricate all of lubricating hole.

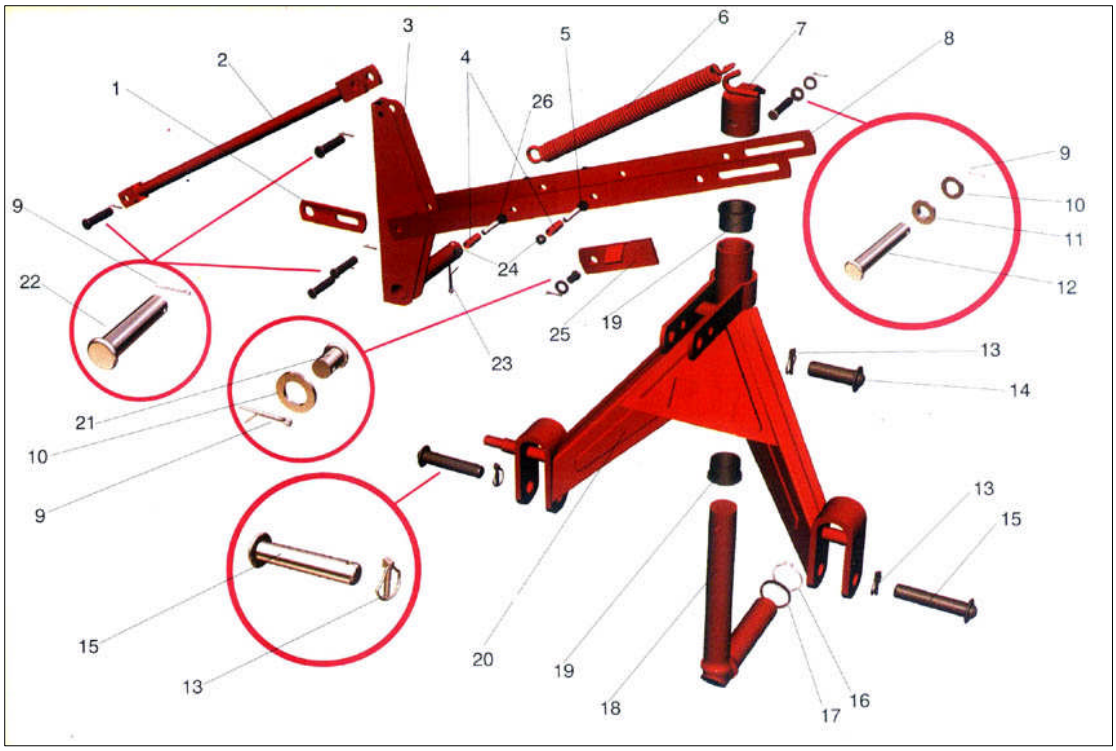
d. Keep the machine in a covered place after cleaning.



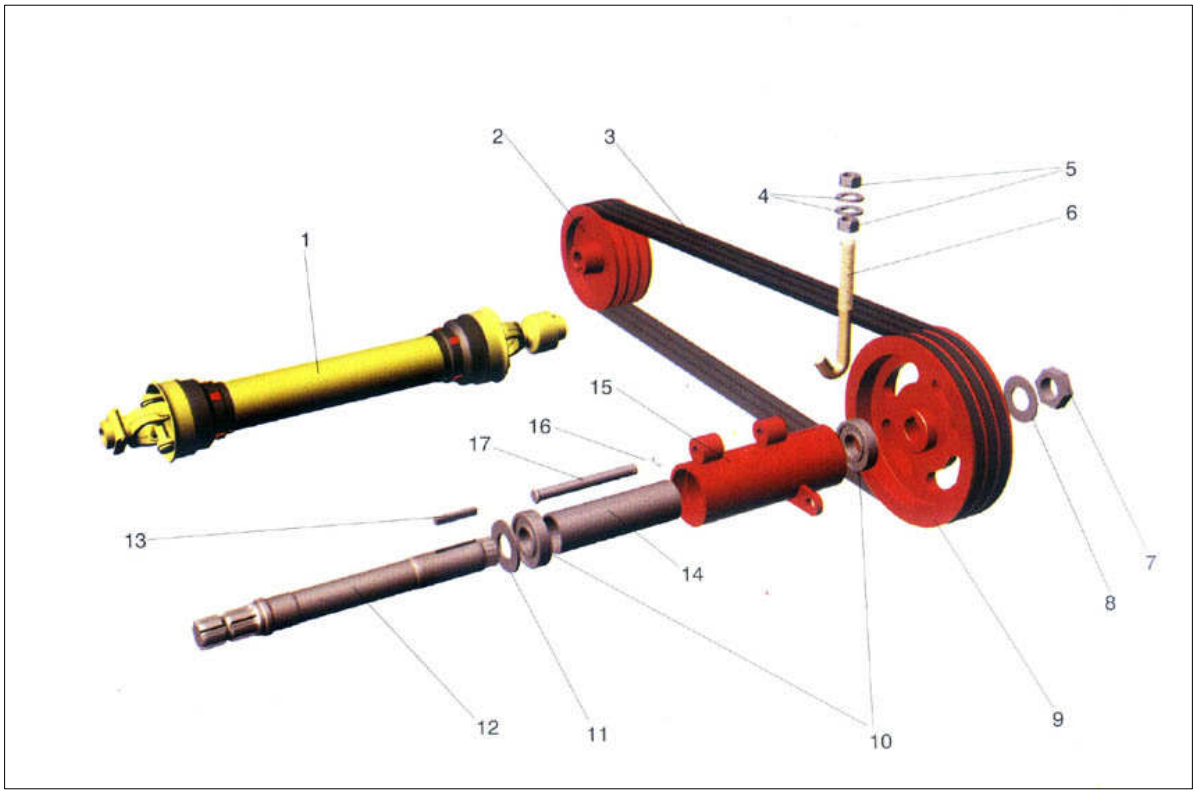
Ref.	Description	Code	Quantity
1	*Bolt*	ST M10x25	20
2	*Spacing Tube*	ST 101	2
3	*Plug*	ST 102	2
4	*Alien Screw*	ST M10x25	6
5	*Nut*	ST M10	20
6	*Key*	ST 103	3
7	*Ball Bearing*	ST 6305 2RS	3
8	*Spacing Tube*	ST 104	1
9	*Bevel Gear*	ST 105	1
10	*Circlip*	ST 25x2	1
11	*Nut*	ST 30x1.5	1
12	*Tab Washer*	ST 106	1
13	*V-pu/ley*	ST 107	1
14	Raynel	ST 30x0.25	1
15	*Ball Bearing*	ST 6206 2RS	3
16	*Spacing Tube*	ST 108	1
17	*Bevel Gear*	ST 109	1
18	Segman Yatagi	ST 110	1
19	*Circlip*	ST 28x2	1
20	*Input Shaft*	ST 111	1
21	*Key*	ST 112	2
22	Rulman Yatagi	ST 113	3
23	*Bevel Gear*	ST 114	2
24	*Tab Washer*	ST 115	1
25	*Nut*	ST 24x1.5	1
26	*Drive Shaft*	ST 116	1
27	*Main Frame*	ST 117	1
28	*Oil Seal*	ST 45x62x8	1



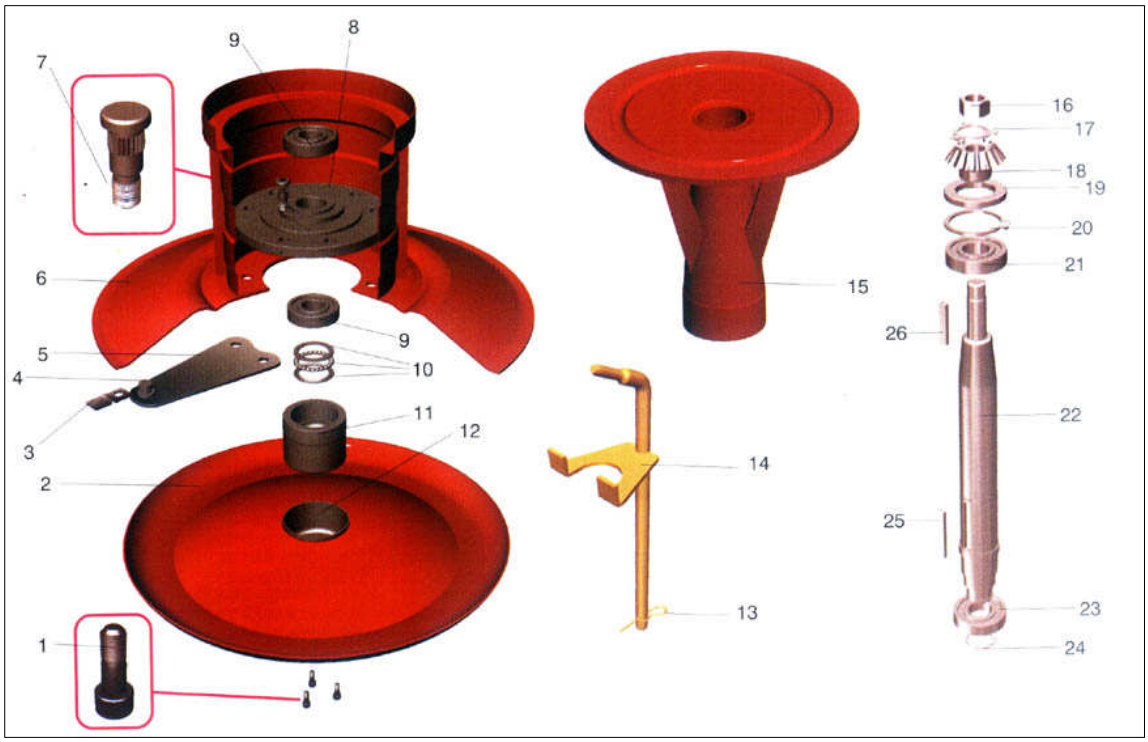
Ref.	Description	Code	Quantity
1	*Nut*	ST M10	6
2	Muhafaza Baglanti Vidasi	ST 118	3
3	*Pin*	ST 119	1
4	*Bolt*	ST M10x25	1
5	*Nut*	ST M10	1
6	*Lid for Pui/ey Guard*	ST 120	1
7	*Pulley Guard*	ST 121	1
8	*Bolt*	ST M16x35	1
9	*Lift Link*	ST 122	1
10	*Grease Nipple*	ST 5/16	3
11	*Spacer*	ST 123	2
12	*Nut*	ST M16	1
13	*Sub frame*	ST 124	1
14	*Transport Tube*	ST 125	1
15	*Jack Stand*	ST 126	1
16	*Nut*	ST 1/2	2
17	*Pin*	ST 127	1
18	*Slide for Breakaway*	ST 128	1
19	*Spring*	ST 129	1
20	*Washer*	ST 130	1
21	*Bolt*	ST 1/2x175	1
22	*Cotter Pin*	ST 4/30	2
23	*Tab Washer*	ST 131	2
24	Bolt	ST M16x30	3
25	*Bolt*	ST M16x45	1
26	Ana Govde Baglanti Kolu	ST 132	2
27	*Spring Clip*	ST 133	1



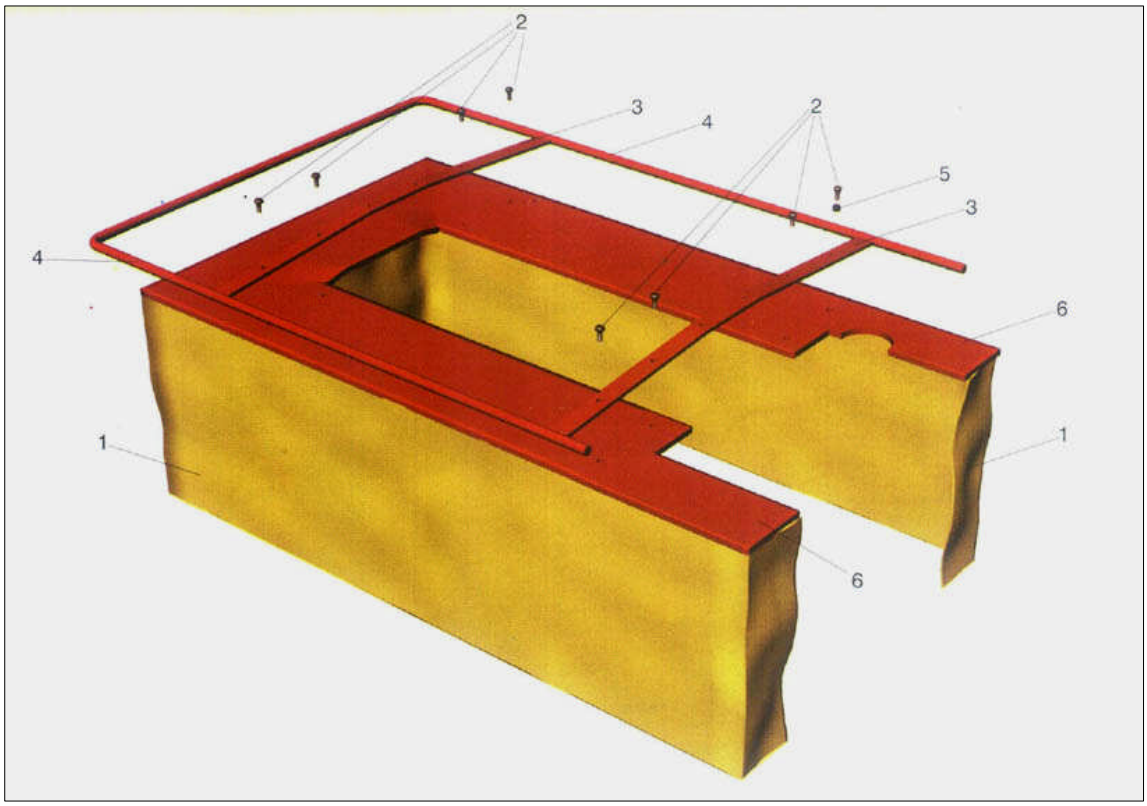
Ref.	Description	Code	Quantity
1	Lift Link	ST 134	1
2	Ana Govde Baglanti Borusu	ST 135	1
3	Lift Pivot Bracket	ST 136	1
4	Spacer	ST 137	2
5	Bolt	ST M10x85	1
6	Spring	ST 138	1
7	Cap	ST 139	1
8	Lift Link	ST 140	2
9	Cotter Pin	ST 4x30	3
10	Washer	ST 141	2
11	Spacer	ST 142	1
12	Pin	ST 143	2
13	8 mm Yayli Pim	ST144	1
14	Kot Pimi	ST 145	3
15	Kol Pimi	ST 146	1
16	Circlip	ST 60x2	2
17	Washer	ST 147	1
18	Pivot	ST 148	1
19	Sleeve	ST 149	1
20	Hitch Frame	ST 150	2
21	Pin	ST 151	1
22	Pin	ST 152	2
23	Cotter Pin	ST 6/60	1
24	Nut	ST M10	2
25	Lock Lever	ST 153	1
26	Bolt	ST M10x75	1



Ref.	Description	Code	Quantity
1	Shaft	ST 154	1
2	Small V-pulley	ST155	1
3	V-belt	ST 17x2850	3
4	Washer	ST156	2
5	Nut	STM16	2
6	Tension Bolt	ST 158	1
7	Nut	ST 30x1.5	1
8	Tab Washer	ST159	1
9	Large V-pulley	ST160	1
10	Ball Bearing	ST 6207 ZZ	2
11	Tab Washer	ST 161	1
12	Drive Shaft	ST162	1
13	Key	ST 163	1
14	Spacer	ST164	1
15	Housing	ST165	1
16	Cotter Pin	ST 4x30	1
17	Pin	ST 166	1



Ref.	Description	Code	Quantity
1	Alien Screw	ST M 10x30l	6
2	Saucer	ST 167	2
3	Blade	ST 168	6
4	Percin	ST 169	6
5	Blade Holder	ST 170	6
6	Drum	ST 171	2
7	Bijon	ST 172	12
8	Hub	ST 173	2
9	Ball Bearing	ST 6210 2RS	4
10	Ball Bearing	ST 51109	2
11	Dokum Rulman Yatagi	ST 174	2
12	Celik Tas	ST 175	2
13	3 mm Klip	ST 176	1
14	Spring Clip	ST 177	1
15	Hub	ST 178	2
16	Nut	ST 24x1.5	2
17	Tab Washer	ST 179	2
18	Bevel Pinion	ST 180	2
19	Oil Seal	ST 40x62x10	2
20	Circlip	ST 62x2	2
21	Ball Bearing	ST 6305 ZZ	2
22	Drum Shaft	ST 181	2
23	Ball Bearing	ST 6207	2
24	Circlip	ST 35x2.5	2
25	Key	ST 182	2
26	Key	ST 183	2



Ref.	Description	Code	Quantity
1	*Protection Cover*	ST 184	1
2	Bo/f	ST M3/8x20	8
3	*Strip for Protection Guard*	ST 185	2
4	*Guard Tube*	ST 186	1
5	*Nut*	ST M3/8	8
6	*Protection Guard*	ST 187	2