

Lexecon



Please fill in the general details below (Where applicable)

MODEL	
WIDTH	
MOUNTED/TRAILED	
HOPPER TYPE	
SPECIAL	

Please fill in Serial plate details: Serial plate is located on headstock or drawbar

MODEL NO.	
SERIAL NO.	

CE



DECLARATION OF CONFORMITY

Simba International Limited hereby declare that the Product described in this Operators Manual, and defined by the Serial Number Plate attached to the Chassis of the Machine (a part copy of which is detailed overleaf and must be completed indicating the relevant machine details), conforms with the following Directives and Regulations, and has been certified accordingly.

EC Machinery Directive 89/392/EEC, as amended by 91/3688/EEC, 93/44/EEC, and 93/688/EEC.

In order to fulfill the requirements of health and safety described in the EC Directive, the following standards and technical specifications have been taken into account:

**EN 292 - 1
EN 292 - 2**

THE MANUFACTURER

Simba International Limited
Woodbridge Road
SLEAFORD
NG34 7EW
Lincolnshire
NG34 7EW
England.

Telephone 01529 304654.

CERTIFIED ON BEHALF OF SIMBA INTERNATIONAL LIMITED.

Philip J. Wright. BSc (Hons) C Eng. MI Agr.E
Technical Director.



WARRANTY
TERMS AND CONDITIONS
2004

In this warranty Simba International Ltd., is referred to as "the Company".

1. Subject to the provisions of this warranty the Company warrants each new machine sold by it to be sold free from any defect in material or workmanship for a period of 12 months from date of receipt by the end-user.

Some specific items have additional warranty over and above the standard 12 months. Details of these can be obtained upon request directly from the distributor or Simba International Ltd.

2. If the machine or part thereof supplied by the Company is not in accordance with the warranty given in clause 1 the Company will at its option:

- (a) make good the machine at the Company's expense, or
- (b) make an allowance to the purchaser against the purchase price, or
- (c) accept the return of the machine and at the buyers option either:
 - I) repay or allow the buyer the invoice price thereof, or
 - II) replace the machine as is reasonably practical.

3. This warranty shall not oblige the Company to make any payment in respect of loss of profit or other consequential loss or contingent liability of the Purchaser alleged to arise from any defect in the machine or impose any liability on the Company other than that contained in clause 2.

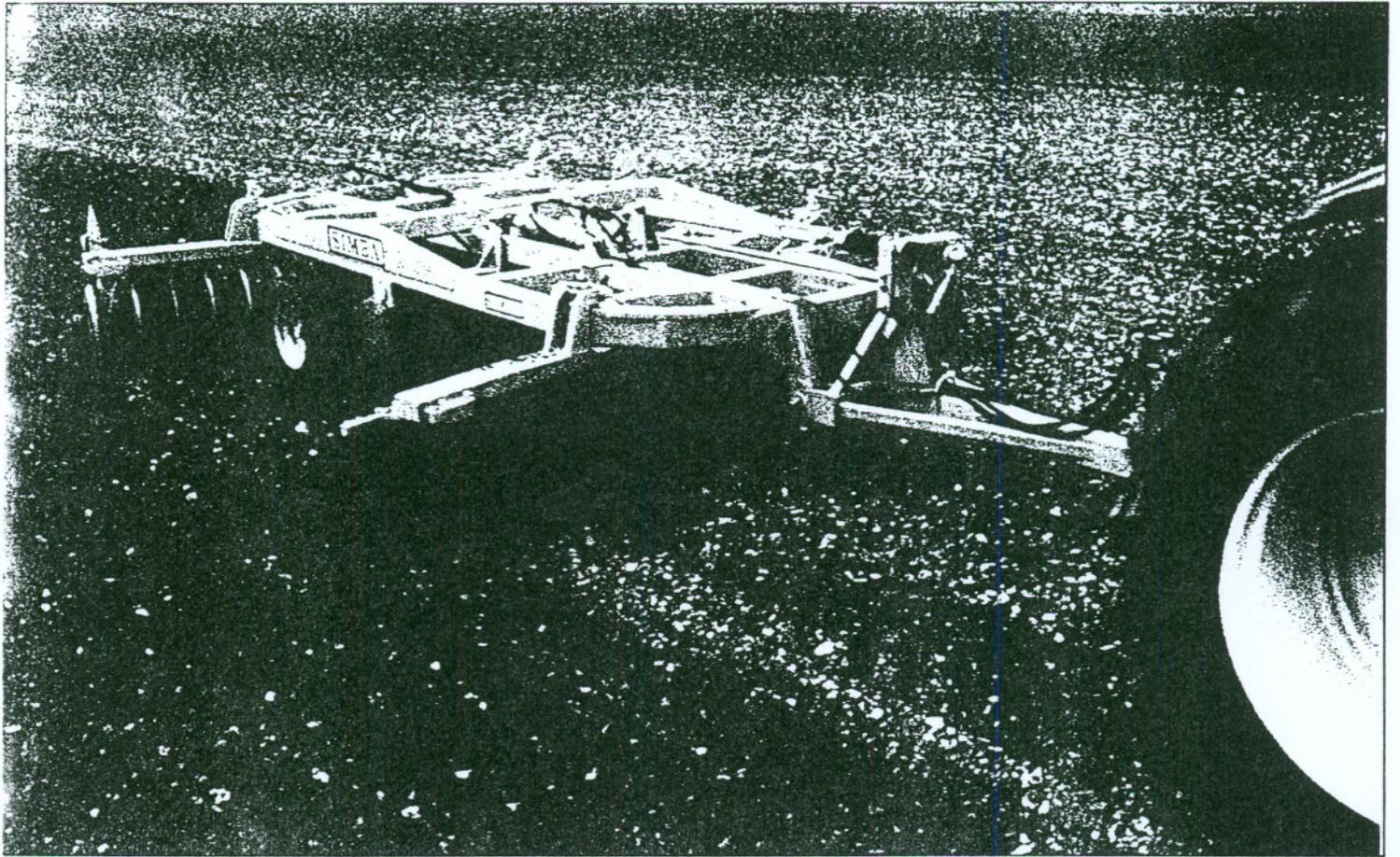
4. Any claim under this warranty must be notified to the Company in writing specifying the matters complained of within 12 months from the date of receipt by the Purchaser or his nominee of the machine.

5. Any claim under this warranty must be made by the original purchaser of the machine and is not assignable to any third party.

6. If the purchaser hires out the machine to any third party the warranty shall apply only to matters notified to the Company in writing within 90 days of the date of delivery and clause 4 shall be read as if the period of 90 days were substituted for the period of 12 months.

7. The warranty will cease to apply if:

- (a) any parts not made, supplied or approved in writing by the Company are fitted to the machine or
- (b) any repair is carried out to the machine other than by or with the express written approval of the Company or
- (c) any alterations not expressly authorized by the Company in writing are made to the machine or
- (d) the machine is damaged by accident or
- (e) the machine is abused or overloaded or used for a purpose or load beyond its design capabilities, or used in conjunction with a tractor whose power output capability exceeds the stated implement power requirement by more than 40%.
- (f) the machine is operated as part of a 'cultivation train' where more than one implement is being towed, without the express written approval of Simba International Ltd.
- (g) any maintenance is not carried out in accordance with the service schedules in the operator's manual.
- (h) the Installation and Warranty Registration Certificate is not received by Simba International Ltd., Service Dept., Woodbridge Road, Sleaford, Lincs. England. NG34 7EW, **within 7 days** of installing a new machine.



1. GENERAL INTRODUCTION

APPLICATION , PROPER USE

SIMBA LEXECON DISC HARROW – is a trailed tandem disc with rigid top frame and lateral fold wings fitted with transport wheel support. The robust frame and large diameter cutaway disc blades enable the disc good cultivation in the most difficult of conditions. The machine is suitable for breaking down to achieve autumn and spring ploughed land, for seedbed preparation, breaking up stubble and for weed control. It is suitable to incorporate large amount of maize trash without blockage after harvest. The disc can be used for shallow primary cultivation instead of ploughing and can be used as a tillage train together with a Simba Uni-Press or CultiPress.

2. SAFETY GUIDELINES

It is the responsibility of the operator to ensure that the following essential safety requirements are adhered to at all times.

- !- Never work on/or under machine unless it is fully supported.
- !- As with any hydraulic system never place hands over suspected leaks, high pressure oil can penetrate skin.
- !- Check Hydraulic hoses for signs of damage especially where movement is involved e.g.. pivot points.
- !- Check wheels and tyres for pressure / condition and bolt tightness.
- !- Check all nuts and bolts regularly for tightness and signs of wear.

3. TECHNICAL DETAILS

	3,2 M	3,6 M	4,0 M
• Weight/kg/ :	3440	3640	3840
• Weight with rear drawbar /kg/:	3550	3750	3950
• Width at widest work position /mm/:	3782	4242	4702
• Width at transport /mm/:	2800	2800	2800
• Total length without rear drawbar /mm/:	7200	7200	7200
• Total length with rear drawbar /mm/:	8375	8375	8375
• Max height in transport position /mm/:	1620	1620	1620
• Max height at work /mm/:	1300	1300	1300
• Ground clearance from the bottom in max lift position /mm/	310	310	310
• Static axle load in transport position /kg/:			3740
• Min drawbar height at transport position /mm/:	350	350	350
• Max drawbar height in transport position /mm/:	680	680	680
• Hitch hole diameter /mm/:	Ø52	Ø52	Ø52
• Rear hitch hole diameter /mm/:	Ø52	Ø52	Ø52
• Max transport speed on road /km/h/:	20	20	20
• Working speed /km/h/:	7-14	7-14	7-14
• Area performance /ha/h/:	2,2-4,4	2,5-5	2,9-5,8
• Required pulling capacity /kW/:	90	100	110

4. TECHNICAL DESCRIPTION, DRAWING

Main units of the machine on appendix 01.

- 4.10. main frame
- 4.11. front drawbar
- 4.12. rear drawbar
- 4.20. front gang assembly RH
- 4.21. front wing RH
- 4.30. front gang assembly LH
- 4.31. front wing LH
- 4.40. rear gang assembly RH
- 4.41. rear wing RH
- 4.50. rear gang assembly LH
- 4.51. rear wing LH
- 4.60. bearing pillar
- 4.70. wheels
- 4.71. axle lift system
- 4.80. hydraulic system

4.10. Main frame

The main frame was made from fabricated hot rolled steel sections, which is connected to the following components:

4.11. Front drawbar

The front drawbar joins to the main frame directly with the two pivoting points. The top pivot point joins to the lift axle through the transfer rod and cushioning springs. This mechanism ensures the machine is level both in transport and in the working position as well. These cushioning springs reduce and take dynamic load away from the tractor linkage on higher speed road transport. These help maintain the level of the disc in work and reduce the bouncing effect which may result from an uneven soil surface. The position of the drawbar and the load on the spring can be adjusted by the transfer rod.

Further adjustment is possible with the 3 positions of the hitch on the front drawbar. Normal setting is in the central hole. For extremely hard conditions or worn blades blades move to the tophole and in light/soft conditions move to the lower hole.

4.12. Rear drawbar

This is strong enough and suitable to pull rolls, presses and operate as a tillage train. There are 2 pairs of hydraulic outlets for towed machines. This drawbar is fitted with a hitch, which has got 3 positions.

4.20.

4.30. Front gangs

Gangs are fitted to the main frame middle sections with a pivoting pin. Locking positions are on the side of the main frame. Gangs have 5 positions, and locked by a locking bolt. There are 5 positions for work and 1 for transport. Always ensure the gangs are locked tightly in the work setting to minimise wear.

4.40.

4.50. Rear gangs

Same as the front gang. These are fitted with plain blades, which gives a levelled finish. To avoid deep furrows at the edge of each pass the outer blades are smaller. (24" and 22")

4.60. Bearing pillars

The bearing is fitted to the pillar with a single U-bolt. A remote greasing unit is fitted inside of the pillar.

4.70. Wheels

The machine is supported by a pair of twin axles. The disc harrow could be lifted or lowered by hydraulic system. The transport unit is suitable for depth control in work by using the shims on the hydraulic lift cylinder rod.

4.71. Transport wheel lift axle

Transport wheel lifting and lowering is operated by a hydraulic ram operated lift axle and transfer rods. The main lift axle is bolted to the main frame and fitted with split nylon bush. This lift axle is connected to the front drawbar levelling rod.

4.80. Operating hydraulic system

Lift axle is operated by a double action ram. There is a shut-off valve in the system to lock the ram in transport position safely. The ram is fitted with depth control shims which are suitable to relieve the load from the hydraulic system in work and give alternate depths as required.

The lift circuit has 1 pair of outlets to the rear for towed implements.

5. TRANSPORT

COUPLING DISC TO TRACTOR:

1. Raise drawbar jack to match tractor drawbar clevis height, fit correct pin and secure using lynch pin .
2. Retract jack
3. Connect hydraulic services.

WORK TO ROAD:

1. Raise disc fully clear of the ground.
2. Put gangs in the transport position.
3. Ensure lift cylinder is fully isolated in the fully open position.

ROAD TO WORK:

1. Ensure machine is fully raised with cylinder isolated.
2. Swing gangs to their work setting to the desired work angle.
3. Open the cylinder isolator tap ensuring the hydraulics are connected to the tractor and the spool is in **NEUTRAL (LOCK) NOT FLOAT**.
4. The machine is now ready for work.

WARNING: TO PREVENT SERIOUS DAMAGE DO NOT OVER PRESSURISE MACHINE TO LOWER WITH TRANSPORT STRAPS ENGAGED.

USING DISC WITH PRESS ROLL

COUPLING THE DISC HARROW TO THE PRESS ROLL

1. Ensure the disc is fully raised and the tractor hydraulics are in NEUTRAL (LOCK). Open the shut off valve.
2. Reverse the disc up to the press roll, ensuring that the drawbars are correctly aligned allowing a slight clearance to enable the machines to be coupled together.
3. Lower the disc harrow to the ground.
4. Attach the hydraulic hoses between the disc and the press roll.
5. Open the taps on the press roll drawbar.
6. Raise the press roll drawbar to approximately 300mm above the disc drawbar clevis.
7. Close the press roll drawbar taps.
8. Raise the disc to the same height as the press roll drawbar, then reverse the disc to couple the two machines together.
9. Open the taps on the press roll drawbar.
10. Fully raise both machines into the road transport position.
11. Close the taps on the press roll drawbar and fit the disc axle cylinder.

CHANGING FROM ROAD TRANSPORT TO WORK POSITION

1. Ensure both machines are fully folded and fully raised. Open the disc isolator tap and ensure tractor spool is in neutral (lock). Remove the wing transport straps on the press roll.
2. Open the taps on the press roll drawbar cylinder.
3. Remove the drawbar locking pin (if fitted).
4. Unfold both machines with reference to item 2 "Road To Work" , and continue to activate the unfolding hydraulics to ensure that the press roll wing frames are horizontal, in line with the centre frame.
5. Lower both the disc and press roll to the ground. Continue to activate the hydraulics until the press roll drawbar cylinder is fully retracted. Single or Double press axles are horizontal to tail low slightly.
6. Close the taps on the press roll drawbar cylinder and the wing cylinders. Ensure that the drawbar cylinder is fully closed.
7. Raise the disc harrow and swing the gangs into their work positions. Ensure all gangs are clamped tightly in their work settings to minimise wear.
8. The disc / press combination is set for work. Operating in this mode with the press isolated ensures the disc can be adjusted on the move for gang angle, and wings repressurised as required.

CHANGING FROM WORK TO ROAD TRANSPORT POSITION

1. Open the taps on the press roll drawbar and wing cylinders
2. Fully raise and then fold both machines, then attach the wing transport straps to both the disc and the press roll.
3. Close the taps on the press roll drawbar.
4. Fit the press roll drawbar safety pin, if applicable, (single press models only) and the disc transport straps.
5. Adjust disc hydraulic angling (if app.) to minimise offset in transport. Remember to reset prior to work next time.

6.0 INITIAL SETTINGS

1. All references to "left" and "right" hand are when standing behind the disc harrow, with the machine moving away.
2. When attempting work adjustments, alter one setting at a time, then drive forward sufficiently to ensure that the disc has achieved a stable working position after each adjustment.
3. The addition of an implement (e.g. press roll) to the rear of the disc will generally alter the operation and require adjustments to be made to the disc. Ensure any such implement is attached prior to adjusting as outlined in the subsequent sections.

TRACTOR

The tandem configuration ensures a central pull and minimal side draft. Ensure the tractor drawbar is pinned in the mid-position.

DRAWBAR - HEIGHT ADJUSTMENT

Alternative drawbar height settings are available to match the implement to the tractor drawbar height.

1. The standard drawbar setting is in the central hole.
2. When in work the drawbar should be inclined upwards and be between 50 to 100mm higher at the tractor end.
3. Adjustment from this setting should not be necessary except in the following circumstances:-

Adjust to the **TOP** hole for:-

- Excessively high tractor drawbars.
- Extreme conditions to increase penetration.

b) Adjust to the **BOTTOM** hole for:-

- Low tractor drawbars.
- Light land conditions - primary or secondary cultivations to lessen penetration

GANG ADJUSTMENT

Ensure gangs are adjusted to same settings each side. Front and rear settings can vary relative to each other according to the ground conditions. Depth is controlled by the shims on the axle lift cylinder.

1. Increasing front gang angle increases the amount of soil residue which is cut, thrown and mixed, which is especially useful where the aim is to cultivate to limited a depth.
2. Reduced rear gang angle reduces re-inversion of incorporated matter from the front gang but maintains the chopping and consolidating effect.
3. Minimising both gang angles imparts a "chopping" and breaking action as a secondary cultivation without raising large amounts of wetter material from below, to the surface.
4. A typical preliminary setting as a proportion of maximum would be:-

Primary Cultivations

Front 3/5 Rear 2/5 to 3/5

Secondary Cultivations

Front 2/5 Rear 1/5 to 2/5

DEPTH CONTROL

Adjust via shims on the axle lift cylinder. A typical initial setting would be with the discs on a flat surface, the wheels should be between 50mm and 75mm clear of the ground.

PITCH ADJUSTMENT

Adjustment of the linkage between drawbar and axle system enables the balance of weight between the front and rear gangs to be varied. With the machine hitched up to the tractor. on a level surface, the unit should be set so the shackle contacts the tractor lower drawbar clevis plate. With the machine raised, adjust spring compression to level the pitch of the disc between horizontal and marginally tail high.

NOTE:

When working in conjunction with a trailing press it is likely that the pitch adjustment assembly will need to be set shorter to pull weight onto the front gang. This will compensate for the weight of the press on the rear of the disc.

OPERATIONAL ADJUSTMENTS

As a general guide the disc harrow should be initially set prior to work as outlined in the preceding sections. It should then be possible to adjust to the specific conditions by reference to the fault/remedy guide.

The most common method of straw incorporation is to use the disc harrow in conjunction with a press roll, ahead of a subsurface cultivator, or alternatively ahead of the plough, or a heavy disc. In both cases, the method of work is the same.

1. One or two passes with the disc harrow (and suitable press roll) to cut and mix the straw and soil to a depth of 75 to 125 mm, leaving a consolidated finish to encourage volunteer germination and provide weather insurance if wet or dry.

NOTE: In wetter years the use of a following press roll may not be required. Reduced gang angles and working depths may be appropriate on the first pass to ensure trafficability in later passes.

2. Possible subsurface cultivation to eliminate any problem areas of compaction. Ensure a consolidating roll is used in conjunction with the subsurface cultivator.

3. Kill germinated volunteers/weeds prior to drilling.

Generally a forward speed of 5/7 M.P.H. (8/11 K.P.H.) will achieve optimum results, maximising inversion and burial. Speeds in excess of those stated above will tend to give a deterioration in the quality of the work. This may be seen as a ridge and trough effect across the work surface due to soil being thrown too far by the leading discs, the rear discs then are unable to turn enough soil back.

IMPORTANT - NEVER turn with the machine in work.

TROUBLE SHOOTING

SYMPTOM	CAUSE	REMEDY
DISC LEAVES TROUGH (LESS SOIL) IN CENTRE	INSUFFICIENT SOIL RETURNED BY REAR GANGS	INCREASE REAR GANG ANGLE INCREASE REAR GANG WEIGHT
	TOO MUCH SOIL THROWN BY FRONT GANGS	REDUCE FRONT GANG ANGLE REDUCE FRONT GANG WEIGHT
DISC LEAVES HIGH RIDGE (MORE SOIL) IN CENTRE	EXCESS SOIL RETURNED BY REAR GANGS	REDUCE REAR GANG ANGLE REDUCE REAR GANG WEIGHT
	INSUFFICIENT SOIL THROWN BY FRONT GANGS	INCREASE FRONT GANG ANGLE INCREASE FRONT GANG WEIGHT
	SPEED VARIATION - GENERALLY WHEN SLOWING DOWN	MAINTAIN CONSTANT SPEED
GANGS BLOCK - REAR	SOIL TOO LOOSE FOR REAR GANGS -TOO DEEP -TOO LOOSE -TOO WET	REDUCE DEPTH REDUCE FRONT GANG ANGLE DELAY OPERATION UNTIL DRY
		OPERATE AT REDUCED GANG ANGLE BOTH FRONT AND REAR

7. MAINTENANCE

WARNING - WHEN WORKING ON MACHINES IN THE RAISED TRANSPORT POSITION ALWAYS ENSURE THAT THE TRANSPORT STRAPS ARE FITTED AND SHUT-OFF VALVES CLOSED.

WARNING - WHEN WORKING UNDER MACHINES ALWAYS ENSURE THAT THEY ARE FULLY SUPPORTED AND WILL NOT TIP UP SHOULD THE BALANCE OF WEIGHT BE MOVED (FOR EXAMPLE - SHOULD A GANG BE DETACHED).

Any disc axle nuts must be checked daily as if they are allowed to work loose, damage to the discs, spools and bearings may occur.

NEW MACHINES

On a new machine tighten all nuts and bolts after 5 hours work and again after 15 hours. This also applies to parts that have been moved or replaced. After the initial 15 hours of work a once a week check is sufficient.

NOTE: When tightening the main axle nuts, loosen the bearings to avoid preloading the bearings, housings and pillars.

DAILY SERVICE

1. Grease disc axle bearings until grease shows. Use a standard agricultural grease. Greasing these bearings flushes the old grease and contaminants out of the bearing.
2. Grease axle plunger blocks until grease shows.
3. Grease axle to drawbar linkage pivot points.
4. Check disc blades for damage. Damaged discs may lead to damage or failure of other components.
5. Check hydraulic connections for leaks.

WEEKLY SERVICE

1. Tighten all nuts and bolts including wheel nuts. Vibration through the machine may cause the nuts and bolts to work loose leading to wear.

IMPORTANT: - Never use a hammer to assist tightening of nuts and bolts.
- Using an incorrect size or grade of bolt may result in damage to the implement.

MAXIMUM NUT AND BOLT TORQUES

M16 GRADE 8.8 - 24 KG.M. (176 lb.ft.)
M20 GRADE 8.8 - 48 KG.M. (352 lb.ft.)
M24 GRADE 8.8 - 80 KG.M. (587 lb.ft.)
M30 GRADE 8.8 - 150 KG.M. (1100 lb.ft.)
M36 GRADE 8.8 - 280 KG.M. (2055 lb.ft.)

WHEEL NUT TORQUES

5 STUD HUBS M18 - 20.7 KG.M. (150 lb.ft)

2. Check axle tightness and retighten if necessary.
3. Check tyre pressures. Running the implement with tyres at the incorrect pressure may cause excessive wear, overheating and possible failure.

<u>TYRE SIZE</u>	<u>MAX. P.S.I.</u>	<u>MAX. BAR</u>
10/75-15.3	50	3.5

END OF SEASON SERVICE

1. Grease all disc axle bearings to flush any soil away from the bearing.
2. Grease all pivot points (see Daily Service Section).
3. Grease any exposed bolt threads especially the levelling bar linkage to ease adjustment.
4. Grease any exposed areas of hydraulic cylinder rods to prevent them from becoming pitted.
5. Strip and grease all toplinks.
6. Wheel bearings are prepacked with grease at the factory but should be inspected and regreased.
7. Check for worn or damaged components. Replace if necessary to avoid damaging other components.
8. Tighten all nuts and bolts. (see Weekly Service section)
9. Disc gang bearings, if disassembled for inspection, should be retightened by the adding or removal of shims. The bearings should then be able to turn when a torque of 7 - 12 ft. lbs. is applied to the sleeve, with the cap bolts tightened to 50ft. lbs.

NOTE:- In the absence of torque setting equipment, it should be just possible to rotate the spacer collar, (pressed onto the sleeve) by one hand, with the cap bolts fully tightened.

WEARING PARTS

Any wearing parts must be replaced as necessary or damage to a more expensive item may occur.

AXLE TIGHTENING PROCEDURE

Check all disc axles are tight. If the disc axles are allowed to run loose the discs will become worn in the centre and may wear into the disc axle. If this occurs the axle will not be able to be tightened correctly. Carry out the following procedure if a disc axle requires tightening.

a) On axles with two bearings loosen the bearing mounting bolts on one pillar. On axles with three bearings loosen the mounting bolts on the outer pillars.

NOTE: This is to allow the bearing to move slightly when tightening the axle. This ensures that the bearings are not preloaded, which could lead to early failure.

NOTE: When the axle needs tightening again, on two bearing axles loosen the bearing that was not loosened the previous time.

b) Undo and remove the locking plate bolt and plate.

c) Loosen axle slightly and spin discs relative to each other / spools and bearings.

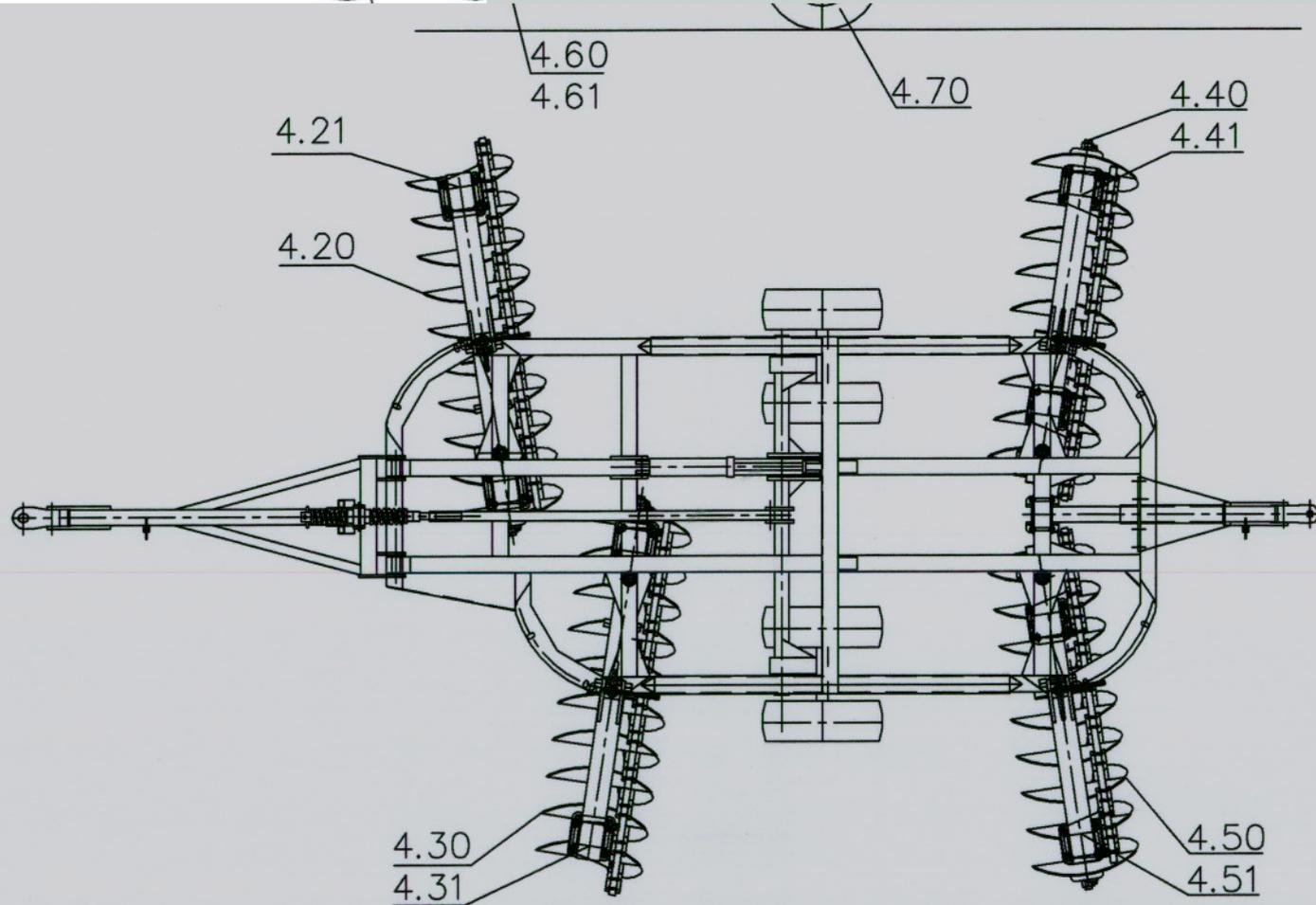
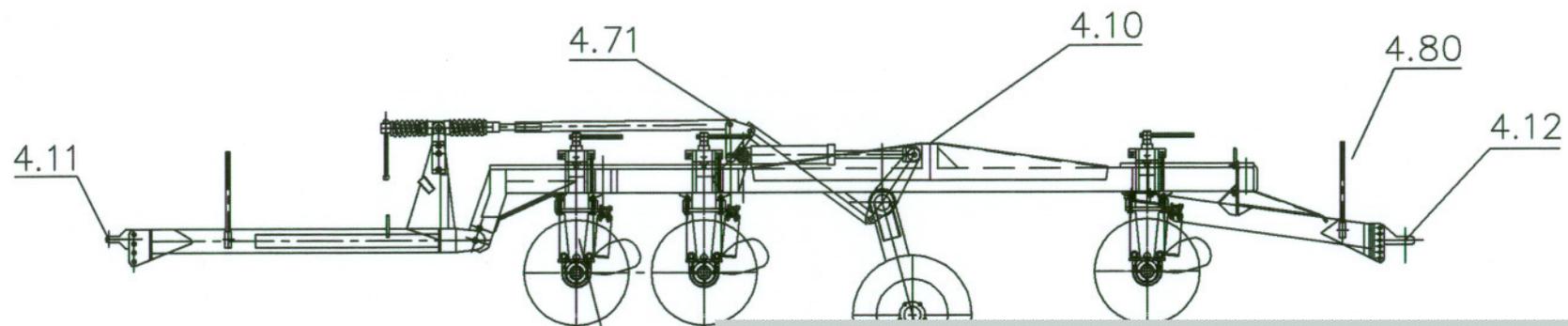
d) Fit one of the disc axle spanners onto the nut at the opposite end of the gang that is being tightened. The spanner should be jammed onto the ground to prevent it from slipping when the axle is tightened.

e) Tighten the axle. Continue to tighten the axle until the locking plate can be refitted. **DO NOT** back the nut off to allow the plate to be fitted.

f) Refit and tighten the locking plate bolt.

g) Tighten the bearing bolts.

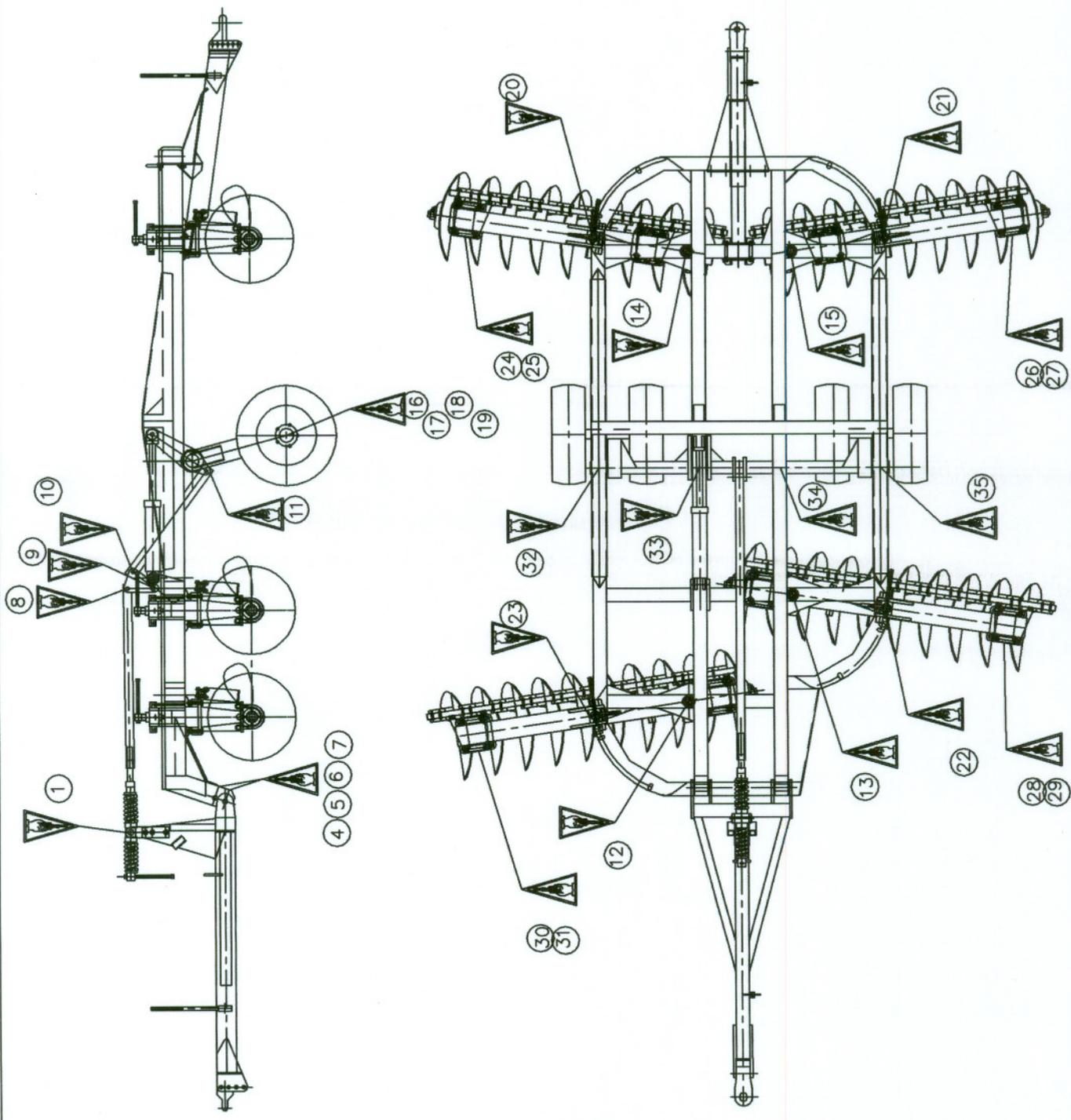
8. SPARE PARTS

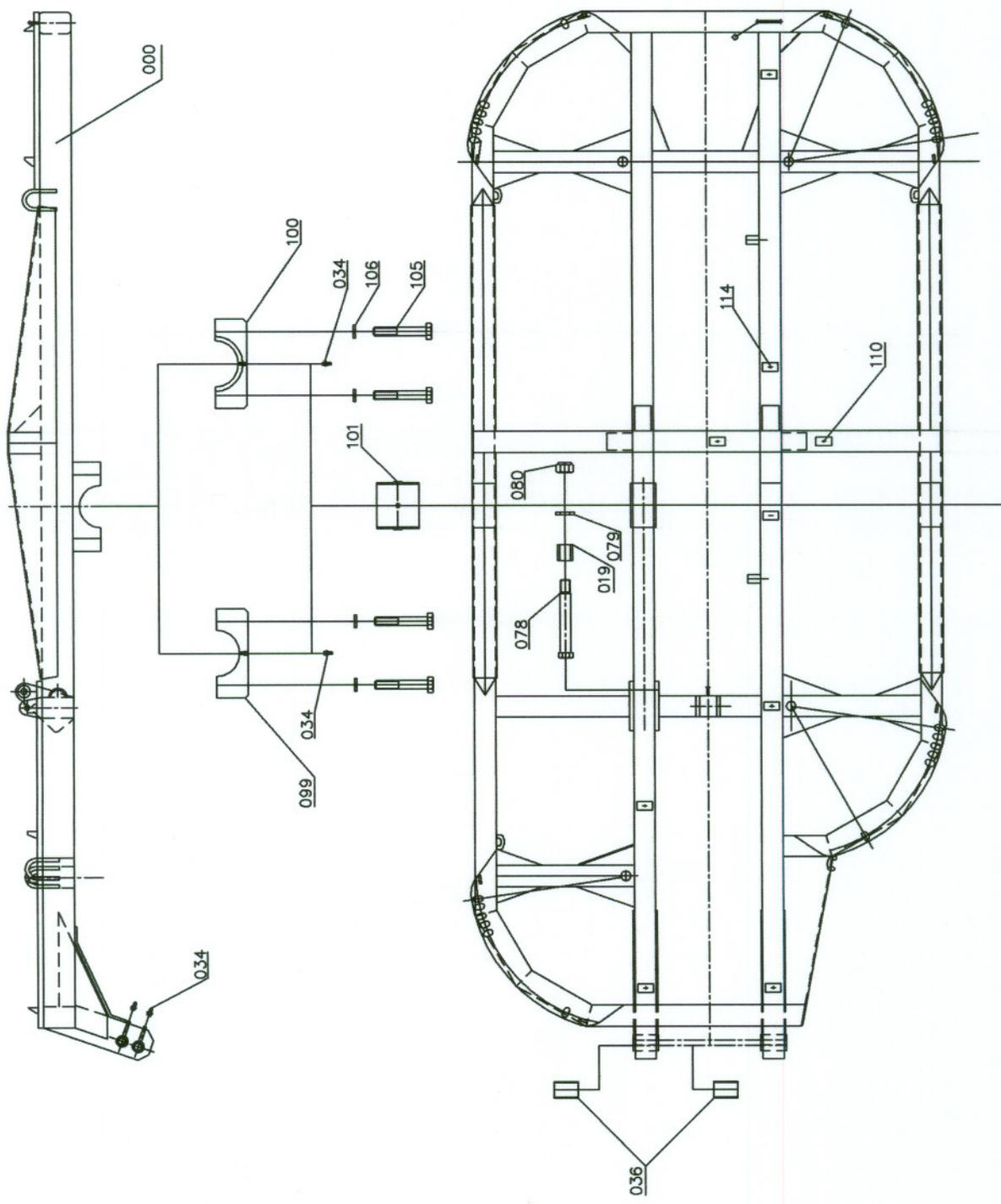


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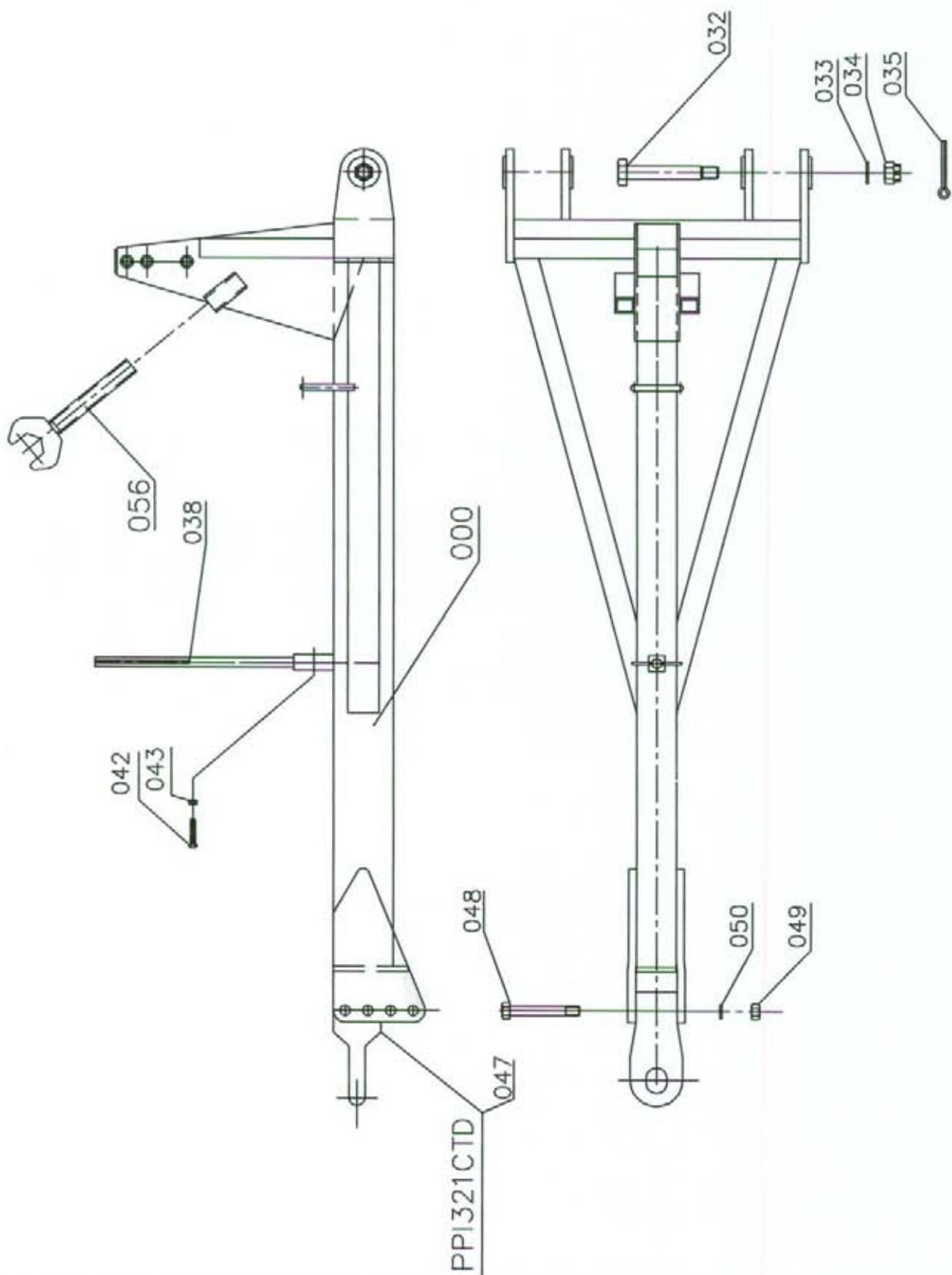
SXT4 nehéztárcsa körvonalrajz





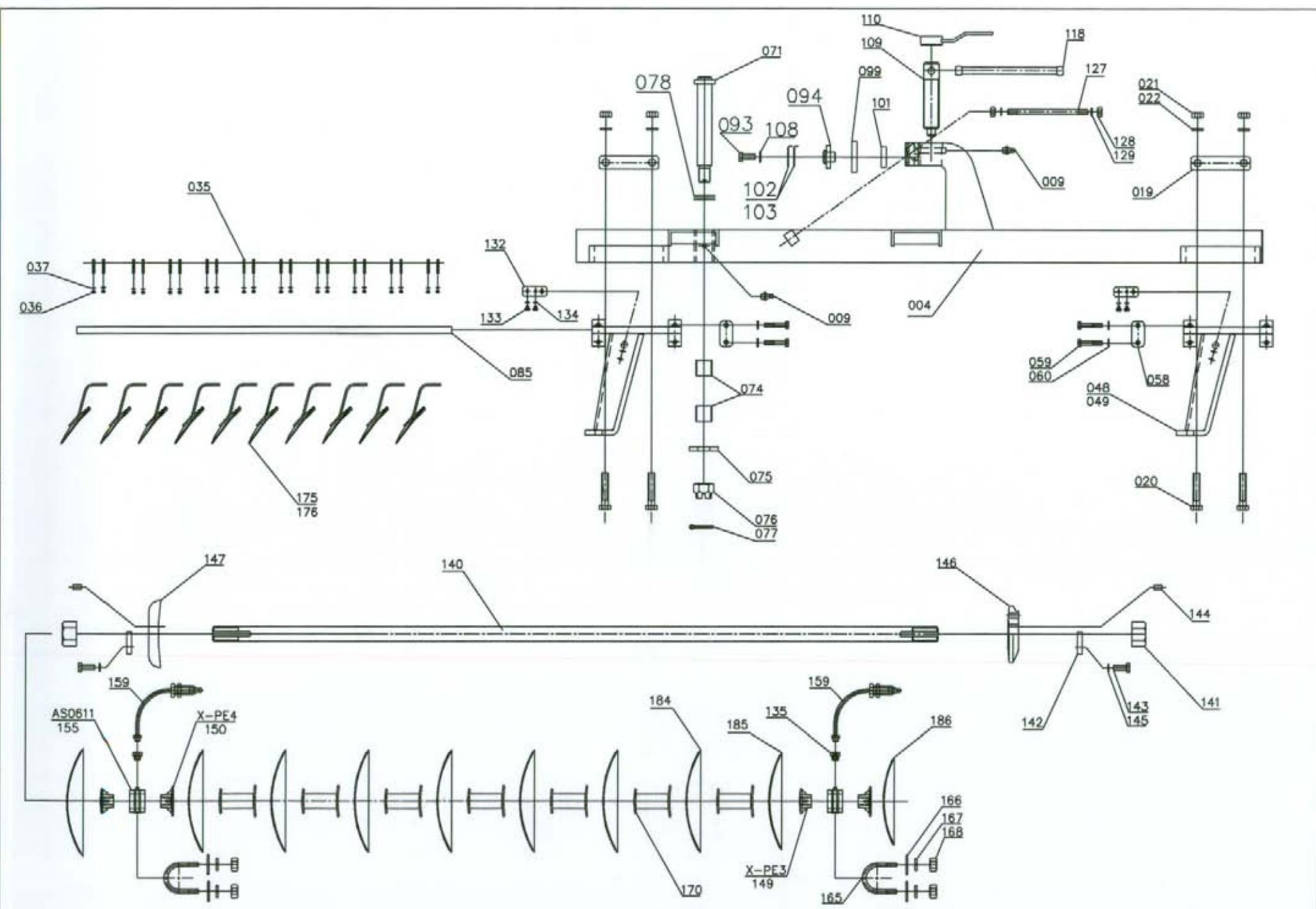
03. APPENDIX cont.
MAIN FRAME ASSEMBLY
SIMBA DISC PART LIST

No	Item no.	Part number	Part description, dimension	Qty. per machine		
				3,2 M	3,6 M	4,0 M
1.	034	09750	grease nipple M8x1	8	8	8
2.	036	09751	plastic bush	8	8	8
3.	078	09752	bolt	1	1	1
4.	079	09753	flat washer	1	1	1
5.	080	09754	self lock nut M22x1,5	1	1	1
6.	099	09755	plummer block lower	3	3	3
7.	100	09756	plummer block lower mid	1	1	1
8.	101	09757	lift axle	4	4	4
9.	105	09758	bolt M20X120	8	8	8
10.	106	09759	spring washer 20 N	8	8	8
11.	114	09760	steel pipe clamp AMA 2553	9	9	9
12.	000	09854	main frame	1	1	1



04. APPENDIX cont.
FRONT DRAWBAR
SIMBA DISC PART LIST

No	Item number	Part number	Part description, dimension	Qty. per machine		
				3,2 M	3,6 M	4,0 M
1.	032	09761	pin	2	2	2
2.	033	09762	washer	2	2	2
3.	034	09763	castle nut M30x1,5	2	2	2
4.	035	09764	split pin Ø6x60	2	2	2
5.	038	09765	Hydr. hose mast	1	1	1
6.	042	09766	bolt M12x55	1	1	1
7.	043	09767	nut M12	1	1	1
8.	047	-	perfect hitch PPI321CTD	1	1	1
9.	048	09768	bolt	2	2	2
10.	049	09769	bolt M24	2	2	2
11.	050	09770	spring washer 24 N	2	2	2
12.	056	09771	spanner.	2	2	2
13.	000	09855	front drawbar	1	1	1

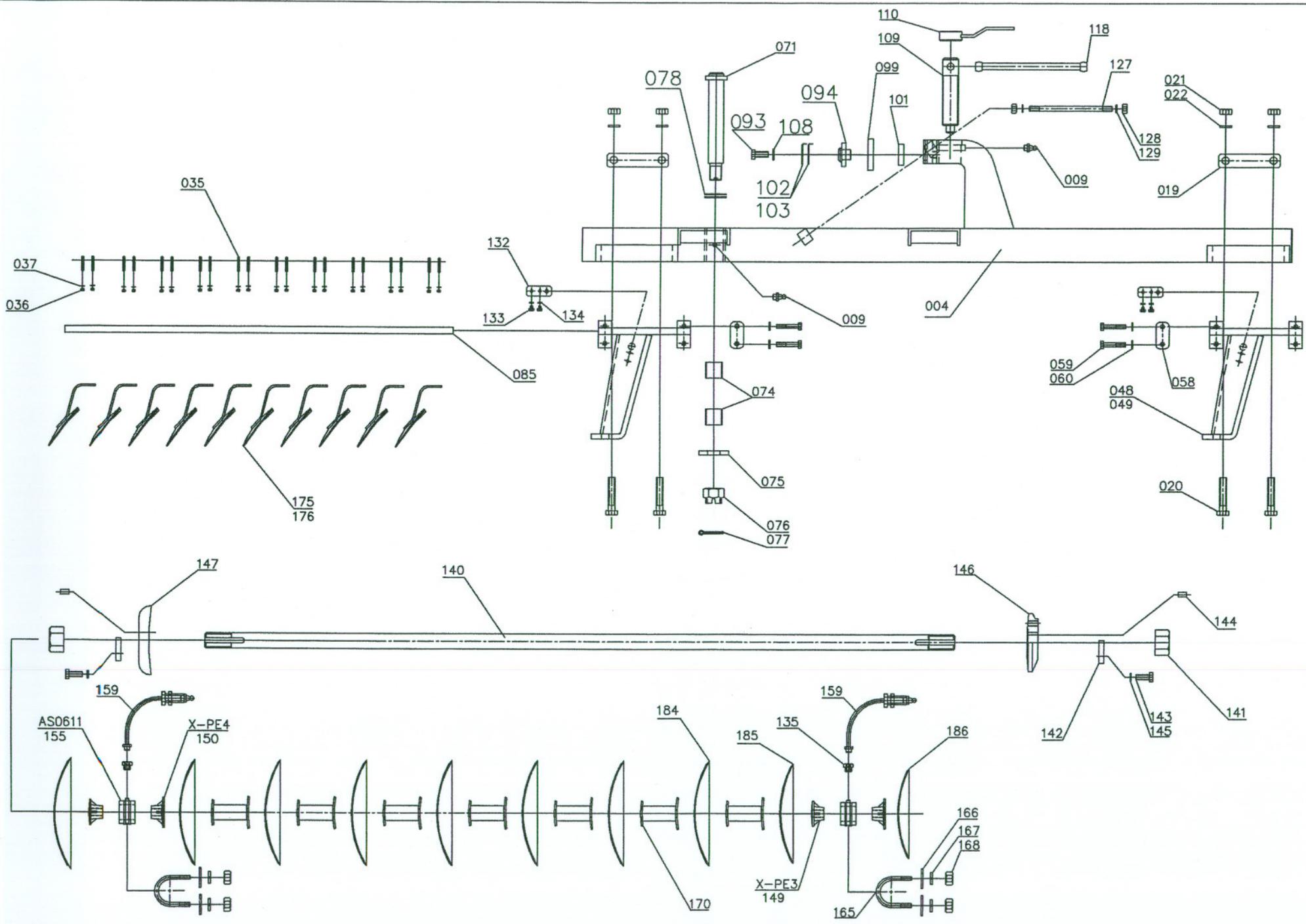


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05. APPENDIX cont. 05/1.
FRONT WINGS LH AND RH
SIMBA DISC PART LIST

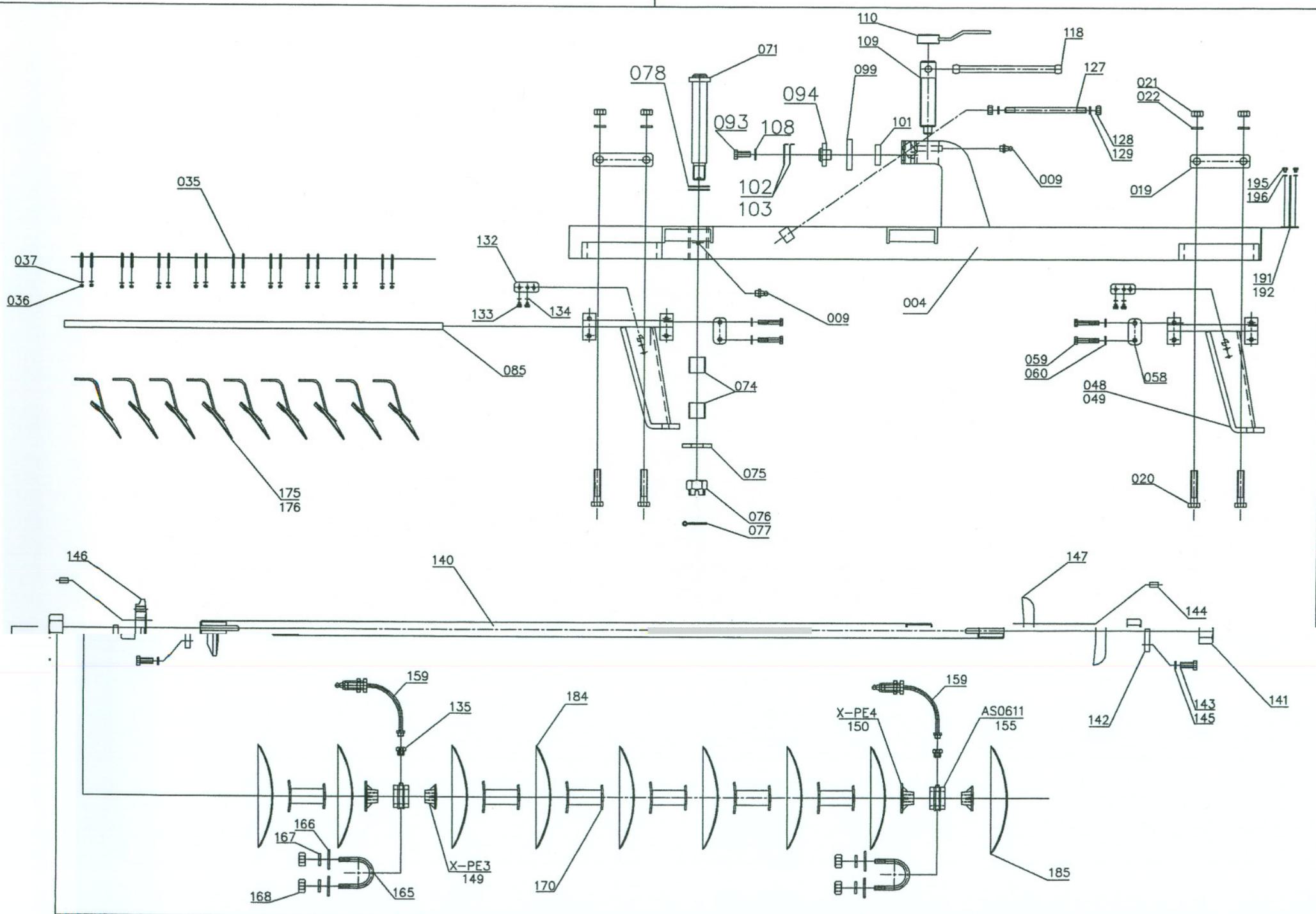
No	Item number	Part number	Part description, dimension	Qty. per machine		
				3,2 M	3,6 M	4,0 M
1.	004	09772	lateral fold wing	2	2	2
2.	009	09750	grease nipple straight M8x1	4	4	4
3.	019	09773	washer	8	8	8
4.	020	09774	bolt M20x100	16	16	16
5.	021	09775	nut M20	16	16	16
6.	022	09759	spring washer 20 N	16	16	16
7.	035	09776	bolt	40	40	40
8.	036	09777	self lock nut M12	80	80	80
9.	037	09778	washer $\varnothing 13 \times \varnothing 29 \times 2,5$	80	80	80
10.	048	09779	bearing pillar RH	2	2	2
11.	049	09780	bearing pillar LH	2	2	2
12.	058	09781	retaining plate II.	8	8	8
13.	059	09782	bolt M12x70	16	16	16
14.	060	09783	spring washer 12 N	16	16	16
15.	071	09784	wing bolt	2	2	2

16.	074	09785	nylon bush	2	2	2
17.	075	09786	washer	2	2	2
18.	076	09787	castle nut M36x2	2	2	2
19.	077	09788	split pin $\varnothing 6 \times 70$	2	2	2
20.	085	09789	scraper rail front	2	2	2
21.	099	09790	outer roll	2	2	2
22.	100	09791	pin axle	2	2	2
23.	101	09792	bearing 6206 2Z	2	2	2
24.	109	09793	positioning bolt	2	2	2
25.	110	09794	nut with handle	2	2	2
26.	118	09795	turning bar	2	2	2
27.	127	09796	holding bar	2	2	2
28.	128	09797	nut M16	4	4	4
29.	129	09798	spring washer 16 N	4	4	4
30.	132	09799	remote grease plate	4	4	4
31.	133	09800	bolt M8x15	8	8	8
32.	134	09801	spring washer 8 N	8	8	8
33.	135	09802	adaptor	4	4	4
34.	140	09803	disc axle	2	2	2



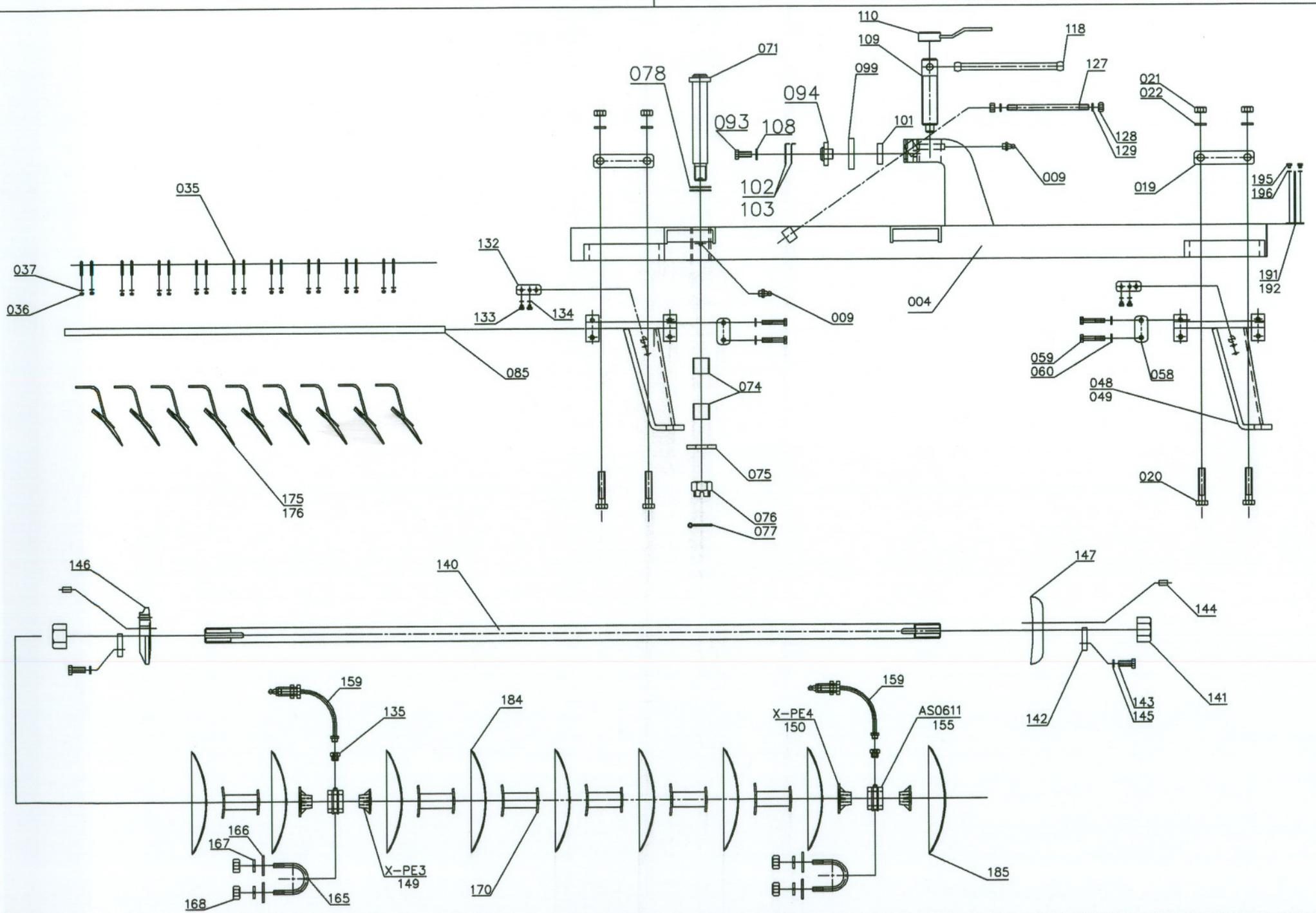
05. APPENDIX cont. 05/2.
FRONT WINGS LH AND RH
SIMBA DISC PART LIST

35.	141	09804	axle nut 1 3/4"	4	4	4
36.	142	09805	locking plate	4	4	4
37.	143	09806	bolt M16x40	4	4	4
38.	144	09807	retaining pin	4	4	4
39.	145	09798	spring washer 16 N	4	4	4
40.	146	09808	convex end cap I.	2	2	2
41.	147	09809	concave end cap II.	2	2	2
42.	149	09810	cast spacer outer R X-PE3	4	4	4
43.	150	09811	cast spacer inner R X-PE4	4	4	4
44.	155	-	beraring assembly	4	4	4
45.	159	-	remote greasing unit	4	4	4
46.	165	09812	U-bolt	4	4	4
47.	166	09813	washer Ø25xØ60x5	8	8	8
48.	167	09770	spring washer 24 N	8	8	8
49.	168	09769	bolt M24	8	8	8
50.	170	09814	fabricated spool	10	12	14
51.	175	09815	scraper RH.	8	9	10
52.	176	09816	scraper LH	8	9	10
53.	184	-	disc blade cutaway 26"	12	14	16
54.	185	-	disc blade cutaway 24"	2	2	2
55.	186	-	disc blade cutaway 22"	2	2	2



06. APPENDIX cont. 06/1.
REAR WING LH AND RH
SIMBA DISC PART LIST

No	Item number	Part number	Part description, dimension	Qty. per machine		
				3,2 M	3,6 M	4,0 M
1.	004	09817	wing	2	2	2
2.	009	09750	grease nipple straight M8x1	4	4	4
3.	019	09773	washer	8	8	8
4.	020	09774	bolt M20x100	16	16	16
5.	021	09775	nut M20	16	16	16
6.	022	09759	spring washer 20 N	16	16	16
7.	035	09776	U bolt	36	36	36
8.	036	09777	self lock nut M12	72	72	72
9.	037	09778	washer $\varnothing 13 \times \varnothing 29 \times 2,5$	72	72	72
10.	048	09779	bearing pillar RH	2	2	2
11.	049	09780	bearing pillar LH	2	2	2
12.	058	09781	Felfogólap II.	8	8	8
13.	059	09782	bolt M12x70	16	16	16
14.	060	09783	spring washer 12 N	16	16	16
15.	071	09784	axle	2	2	2
16.	074	09785	plastic bush	4	4	4
17.	075	09786	washer	2	2	2
18.	076	09787	crown nut M36x2	2	2	2
19.	077	09788	split pin $\varnothing 6 \times 70$	2	2	2
20.	085	09818	scraper rail	2	2	2
21.	093	09898	M12x35	4	4	4
22.	099	09790	roll	2	2	2
23.	100	09791	pin	2	2	2
24.	101	09792	ball bearing 6206 2Z	2	2	2
25.	109	09793	locking bolt	2	2	2
26.	110	09794	nut with handle	2	2	2
27.	118	09795	handle welded	2	2	2
28.	127	09819	spanning bar	2	2	2
29.	128	09797	bolt M16	4	4	4
30.	129	09798	spring washer 16 N	4	4	4
31.	132	09799	greasing unit plate	4	4	4
32.	133	09800	bolt M8x15	8	8	8
33.	134	09801	spring washer 8 N	8	8	8
34.	135	09802	adaptor	4	4	4

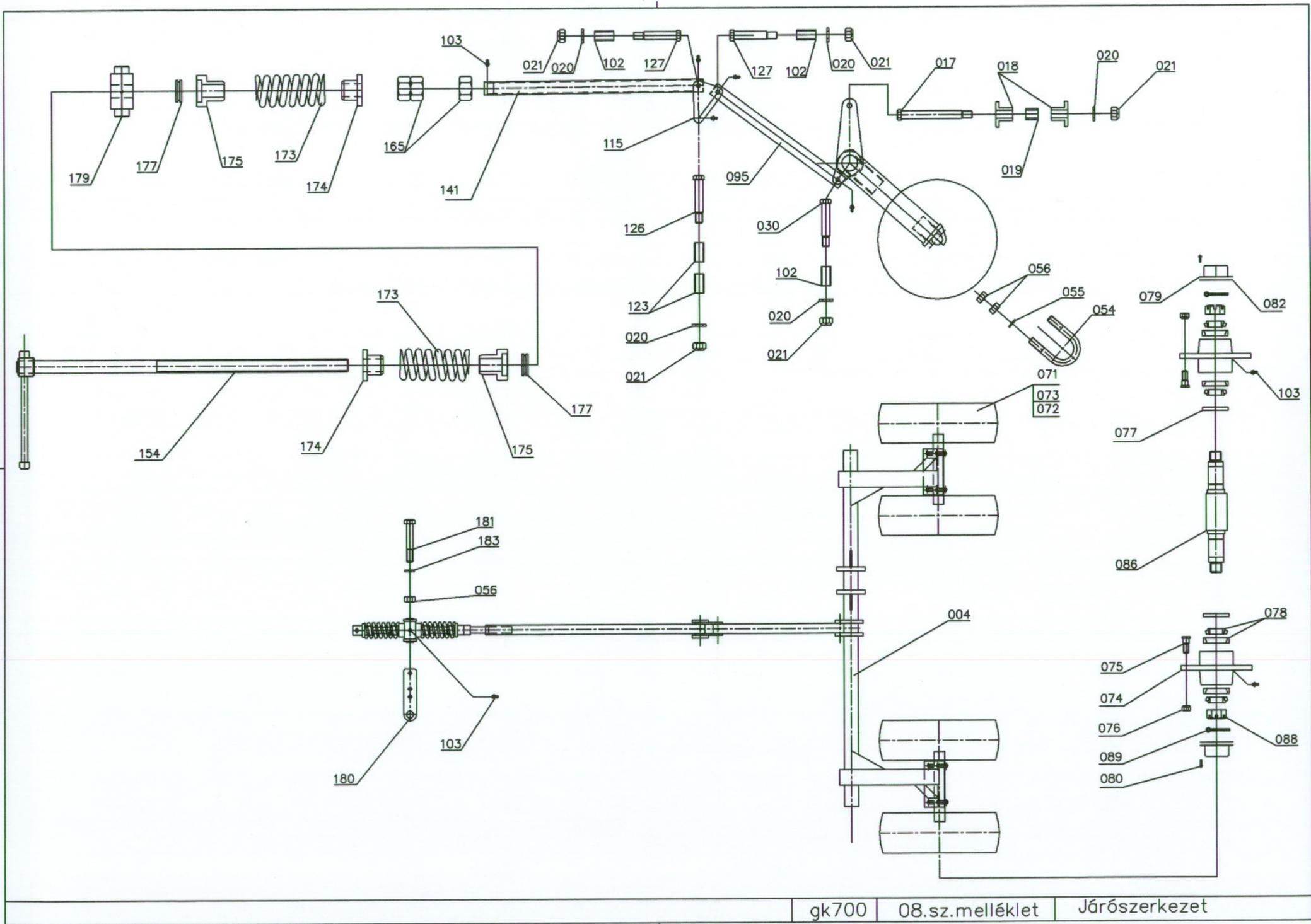


06. APPENDIX cont. 06/2.
REAR WING LH AND RH
SIMBA DISC PART LIST

35.	140	09820	disc axle	2	2	2
36.	141	09804	nut 1 3/4"	4	4	4
37.	142	09805	locking plate	4	4	4
38.	143	09806	bolt M16x40	4	4	4
39.	144	09807	safety pin	4	4	4
40.	145	09798	spring washer 16 N	4	4	4
41.	146	09808	axle end cap I.	2	2	2
42.	147	09809	axle end cap II.	2	2	2
43.	149	09810	cast spool outer R X-PE3	4	4	4
44.	150	09811	cast spool inner R X-PE4	4	4	4
45.	155		bearing assembly	4	4	4
46.	159		remote grease unit pipe	4	4	4
47.	165	09812	U- bōlt	4	4	4
48.	166	09813	washer Ø25xØ60x5	8	8	8
49.	167	09770	spring washer 24 N	8	8	8
50.	168	09769	nut M24	8	8	8
51.	170	09814	spool welded	8	10	12
52.	175	09815	scraper RH	7	8	9
53.	176	09816	scraper LH	7	8	9
54.	184		cutaway disc blades 26"	12	14	16
55.	185		cutaway disc blades 24"	2	2	2
56.	191	09821	light bracket RH	1	1	1
57.	192	09822	light bracket LH	1	1	1
58.	195	09823	bolt M10x25	4	4	4
59.	196	09824	spring washer 10 N	4	4	4

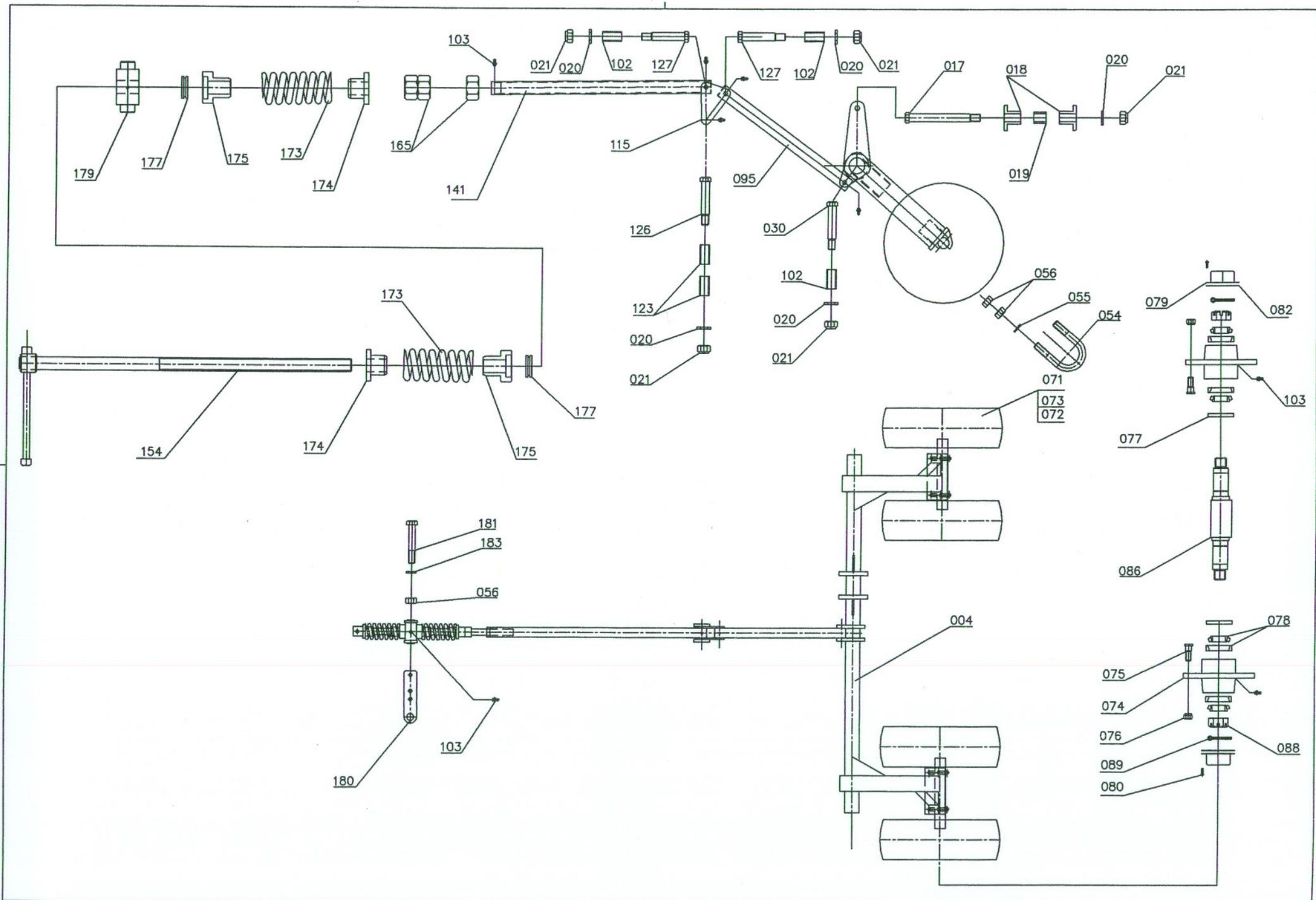
07. APPENDIX cont.
BEARING ASSEMBLY
SIMBA DISC SPARE LIST

No	Item number	Part number	Part description, dimension	Qty. per machine		
				3,2 M	3,6 M	4,0 M
1.	156		bearing	8	8	8
2.	157		locking ring	32	32	32
3.	158		seal ring	16	16	16
4.	160		bearing house	8	8	8



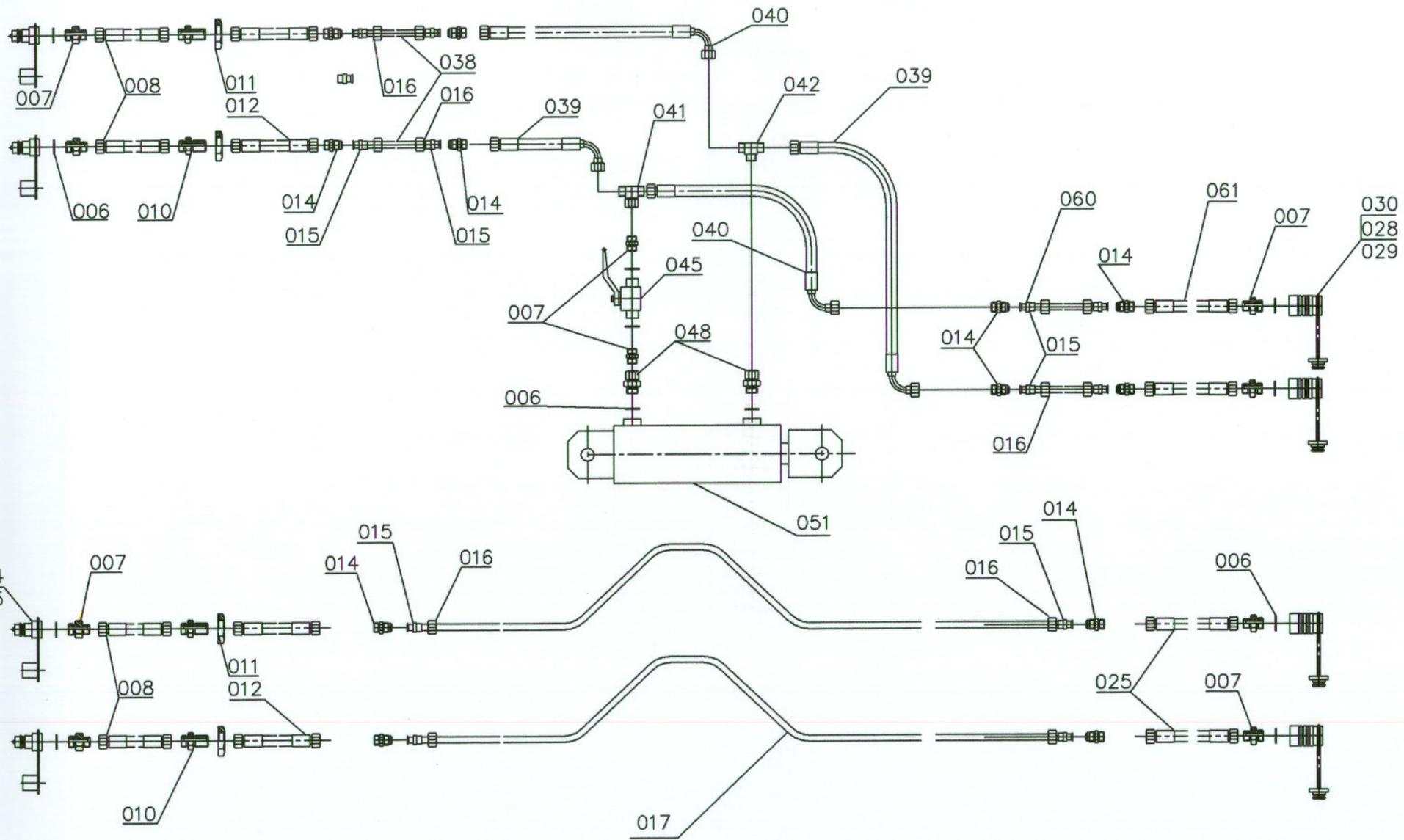
08. APPENDIX cont. 08/1.
CARRIER UNIT
SIMBA DISC PART LIST

No	Item number	Part number	Part description, dimension	Qty. per machine		
				3,2 M	3,6 M	4,0 M
1.	004	09825	transport unit assembled	1	1	1
2.	017	09826	bolt	1	1	1
3.	018	09827	bush	2	2	2
4.	019	09828	spacer	2	2	2
5.	020	09753	washer	5	5	5
6.	021	09754	self locking nut M22x1,5	5	5	5
7.	030	09829	bolt	1	1	1
8.	054	09830	U-bolt	4	4	4
9.	055	09831	flat washer M20	8	8	8
10.	056	09775	nut M20	19	19	19
11.	071	09832	tyres 10/75-15.3	4	4	4
12.	072	09833	inner tube	4	4	4
13.	073		wheel rim 9x15,3	4	4	4
14.	074	09834	wheel hub	4	4	4
15.	075	P00707	stud 5/8"	20	20	20
16.	076	P00448	wheel nut 5/8"	20	20	20
17.	077	P00439	spring seal	4	4	4
18.	078	P00440	tapered bearing	8	8	8
19.	079	P00445	dust cap	4	4	4
20.	080	P00446	D.head bolt M5x15	12	12	12
21.	082	P00444	paper seal	4	4	4
22.	086	09835	stub axle	2	2	2
23.	088		crown nut 1 3/8"	4	4	4
24.	089	09788	split pin \varnothing 6,3x70	4	4	4
25.	095	09836	transport rod	1	1	1
26.	102	09837	plastic bush	2	2	2
27.	103	09750	grease nipple M8x1	10	10	10
28.	115	09838	transfer triangle	1	1	1
29.	123	09839	plastic bush	2	2	2
30.	126	09840	bolt I.	1	1	1
31.	127	09841	bolt II.	2	2	2
32.	141	09842	pushing rod	1	1	1
33.	154	09843	levelling bar with threat	1	1	1
34.	165	09844	hexagonal nut	3	3	3



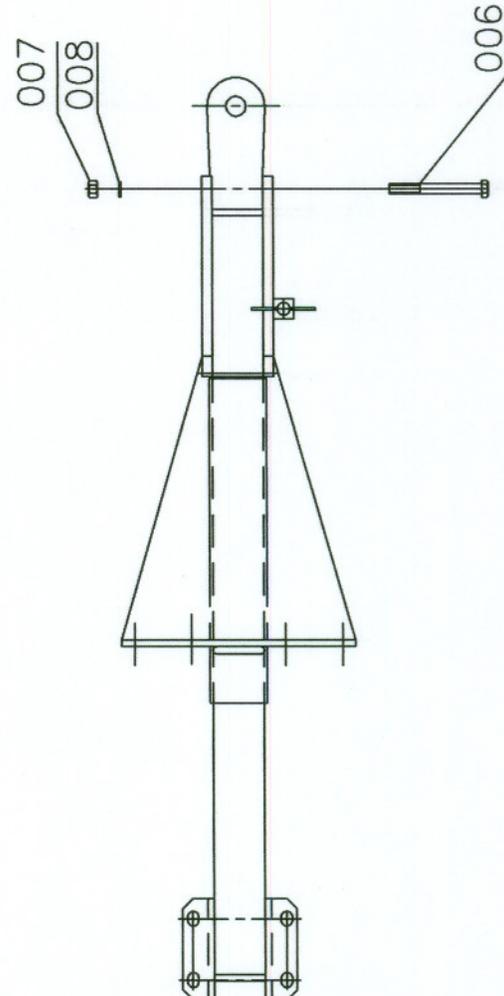
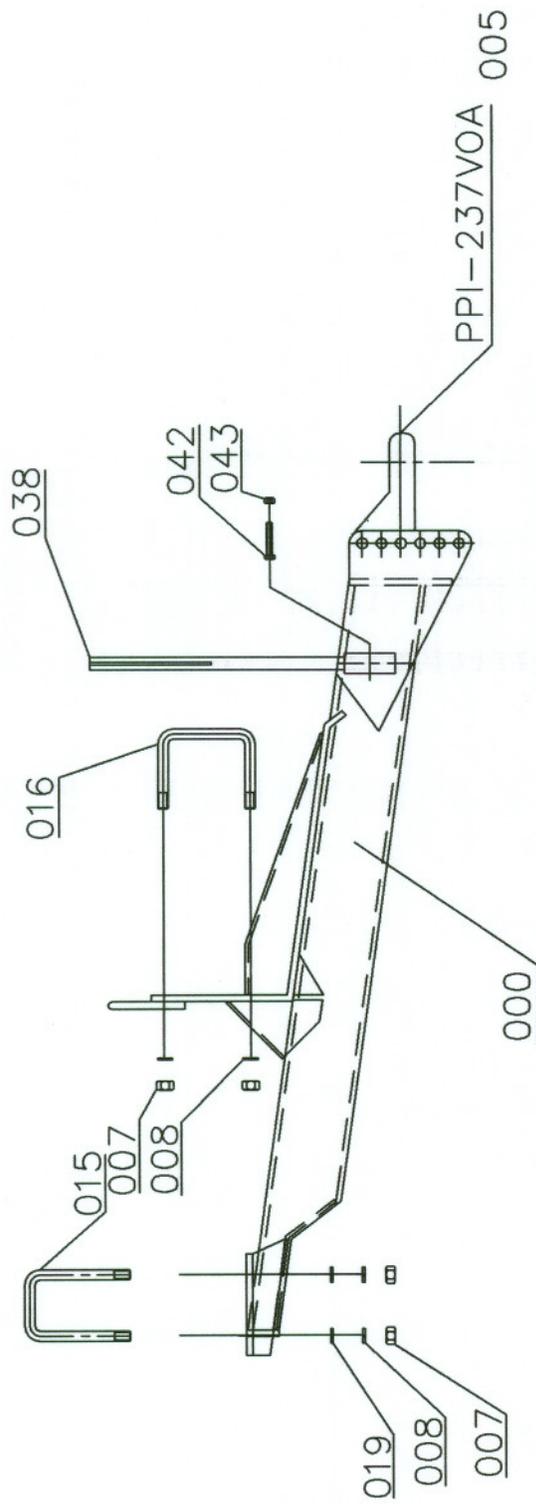
08. APPENDIX cont. 08/2.
CARRIER UNIT
SIMBA DISC PART LIST

35.	173		spring	2	2	2
36.	174	09845	spring retaining washer I.	2	2	2
37.	175	09846	spring retaining washer II.	2	2	2
38.	177	09847	bearing 51208	2	2	2
39.	179	09848	cross	1	1	1
40.	180	09849	clamp plate	2	2	2
41.	181	09758	bolt M20x120	3	3	3
42.	183	09759	spring washer 20 N	3	3	3



09. APPENDIX cont.
HYDRAULIC LAYOUT
SIMBA DISC PART LIST

No	Item number	Part number	Part description, dimension	Qty. per machine		
				3,2 M	3,6 M	4,0 M
1.	004	09857	QRC 1/2"	4	4	4
2.	005	09858	protecting cup	4	4	4
3.	006	09859	seal washer	10	10	10
4.	007	09860	adapter	8	8	8
5.	008	09861	pipe EE 1/2"x1700	4	4	4
6.	010	09862	adapter	4	4	4
7.	011	09863	locknut	4	4	4
8.	012	09864	pipe E-90° 1/2" x1800	4	4	4
9.	014	09865	adapter 1/2"x9/16	12	12	12
10.	015	09866	locking ring Ep	16	16	16
11.	016	09867	pipe joint nut Ep	16	16	16
12.	017	09868	bent steel pipe Ø15x1,5	2	2	2
13.	025	09869	pipe EE 1/2"x800	2	2	2
14.	028	09870	QRC inner	4	4	4
15.	029	09871	locking ring on axle	8	8	8
16.	030	09872	protecting cap	4	4	4
17.	038	09873	steel pipe Ø15x1,5	2	2	2
18.	039	09874	hydr pipe E-90° 1/2"x600	2	2	2
19.	040	09875	hydr pipe E-90° 1/2"x1000	2	2	2
20.	041	09876	T adapter	2	2	2
21.	042	09877	T adapter	1	1	1
22.	045	09878	ball valve inner threat	1	1	1
23.	048	09879	adapter	2	2	2
24.	051	09880	Hydraulic ram	1	1	1
25.	060	09881	steel pipe Ø15x1,5	2	2	2
26.	061	09882	Hydr. pipe EE 1/2"x1500	2	2	2
		09883	Hydraulic kit			



10.APPENDIX cont.
REAR DRAWBAR
SIMBA DISC PART LIST

No	Item number	Part number	Part description, dimension	Qty. per machine		
				3,2 M	3,6 M	4,0 M
1.	005		perfect hitch PPI-237VOA	1	1	1
2.	006	09850	bolt M20x170	3	3	3
3.	007	09775	nut M20	15	15	15
4.	008	09759	spring washer 20 N	15	15	15
5.	015	09851	U-bolt	2	2	2
6.	016	09852	U-bolt	4	4	4
7.	019	09831	flat washer M20	4	4	4
8.	038	09853	pipe bracket	1	1	1
9.	042	09766	bolt M12x55	1	1	1
10.	043	09767	nut M12	1	1	1
11.	000	09856	rear drawbar	1	1	1

