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MAGNUM

FLAIL MOWER/SHREDDER Models 130, 170, 190 & 225 *OPERATOR AND PARTS MANUAL*



IMPORTANT

VERIFICATION OF WARRANTY REGISTRATION



DEALER WARRANTY INFORMATION & REGISTRATION VERIFICATION

It is imperative that the selling dealer registers this machine with McConnel Limited within 7 days of delivery to the end user – failure to do so may affect the validity of the machine warranty.

To register machines go to the McConnel Limited web site at www.mcconnel.com, log onto 'Dealer Inside' and select the 'Machine Registration button' which can be found in the Service Section of the site. Confirm to the customer that the machine has been registered in the section below.

Should you experience any problems registering a machine in this manner please contact the McConnel Service Department on 01584 875848.

Registration Verification

Dealer Name:
Dealer Address:
Customer Name:
Date of Warranty Registration:/...../..... Dealer Signature:

NOTE TO CUSTOMER / OWNER

Please ensure that the above section above has been completed and signed by the selling dealer to verify that your machine has been registered with McConnel Limited.

IMPORTANT: During the initial 'bedding in' period of a new machine it is the customer's responsibility to regularly inspect all nuts, bolts and hose connections for tightness and re-tighten if required. New hydraulic connections occasionally weep small amounts of oil as the seals and joints settle in – where this occurs it can be cured by re-tightening the connection – *refer to torque settings chart below*. The tasks stated above should be performed on an hourly basis during the first day of work and at least daily thereafter as part of the machines general maintenance procedure.

TORQUE SETTINGS FOR HYDRAULIC FITTINGS

HYDRAULIC HOSE ENDS		
BSP	Setting	Metric
1/4"	18 Nm	19 mm
3/8"	31 Nm	22 mm
1/2"	49 Nm	27 mm
5/8"	60 Nm	30 mm
3/4"	80 Nm	32 mm
1"	125 Nm	41 mm
1.1/4"	190 Nm	50 mm
1.1/2"	250 Nm	55 mm
2"	420 Nm	70 mm

PORT ADAPTORS WITH BONDED SEALS		
BSP	Setting	Metric
1/4"	34 Nm	19 mm
3/8"	47 Nm	22 mm
1/2"	102 Nm	27 mm
5/8"	122 Nm	30 mm
3/4"	149 Nm	32 mm
1"	203 Nm	41 mm
1.1/4"	305 Nm	50 mm
1.1/2"	305 Nm	55 mm
2"	400 Nm	70 mm

EC DECLARATION OF CONFORMITY

*Conforming to EEC Machinery Directive 98/37/EC**

We,

McCONNEL LIMITED,

Temeside Works, Ludlow, Shropshire SY8 1JL.

Declare under our sole responsibility that:

The product (*type*) ..Tractor Mounted Flail Mower / Shredder.....

.....

Product Code ..MA13, MA17, MA19, MA225.....

Serial No. & Date Type

Manufactured by the above company/*

.....

(insert business name and full address if not stated above)*

Complies with the required provisions of the Machinery Directive 98/37/EC, * previously Directive 89/392/EEC as amended by Directives 91/368/EEC, 93/44/EEC and 93/68/EEC.

The machinery directive is supported by;

- BS EN ISO 12100:2003 Safety of Machinery. This standard is made up of two parts; Part 1 Terminology, methodology, Part 2 Technical Specifications.
- BS EN 1050 Safety of machinery - Principles of risk assessment.
- and other national standards associated with its design and construction as listed in the Technical File.

The Machinery Directive is fully implemented into UK law by means of the Supply of Machinery (Safety) Regulations 1992 (SI 1992/3073) as amended by The Supply of Machinery (Safety) (Amendment) Regulations 1994 (SI 1994/2063).

Signed 

on behalf of McCONNEL LIMITED

Responsible Person

Status: Chief Design Engineer

Date: 25th January 2005

CONTENTS	Page
1. GENERAL INFORMATION	2
1.1. Introduction.	2
1.2. Identifying the machine.	2
2. TECHNICAL FEATURES	3
2.1. General description.	3
2.2. Technical Specifications.	4
2.3. Width of cut.	4
2.4. Equipment.	4
3. SAFETY RULES	6
3.1. General safety rules.	6
3.2. Safety rules - concerning road traffic.	6
3.3. Safety rules - during use.	7
3.4. List of guards.	7
3.5. Description and location of safety decals.	8
4. INSTRUCTION FOR INSTALLATION AND HANDLING	9
4.1. Lifting and unloading.	9
4.2. Unpacking.	9
4.3. Attachment and detachment from the tractor.	9
4.4. Fitting the PTO shaft.	10
4.5. Tractor stability.	11
4.6. Parking.	11
5. ADJUSTMENT AND SETTING UP	12
5.1. Regulating the height of cut.	12
6. USE AND OPERATING RULES	12
6.1. Starting.	12
6.2. Working mode.	12
6.3. Side shift - Non hydraulic models	12
6.4. Side shift - Hydraulic models	13
6.5. Stopping.	13
6.6. Transport position.	13
7. MACHINE MAINTENANCE	14
8. TROUBLE SHOOTING	15
9. REPLACING PARTS	15
9.1. Flail replacement.	15
9.2. Belt replacement.	16
10. DEMOLITION & DISPOSAL	16
11. SPARE PARTS SECTION	17
Magnum 130	18
Magnum 170	22
Magnum 190 & 225	26

1. GENERAL INFORMATION

1.1 Introduction

This operation and maintenance manual is intended for the professional user. It is mandatory to follow these instructions in order to prevent events which could endanger the operator's and other people's safety, apart from the correct functioning of the shredder. In case of doubt, do not experiment, call McConnel after-sales service instead, or the specialised McConnel dealer.

1.2 Identifying the machine

Each shredder is fitted with an identification plate: both the data necessary to identify the model and the serial number to order spare parts or after-sales service are stamped on the plate.

It is strongly recommended to use genuine spare parts to avoid altering the technical features of the shredder. McConnel is not responsible for any damage or injuries to people due to unauthorized modifications or the use of non-genuine spare parts.

This machine is in conformity with the following provisions of law:

Directive Machine 89/392/CEE and following additions:

91/368/CEE, 93/44/CEE and 93/68/CEE;

Regulations UNI EN 292/1 and 292/2 (machinery safety).

2. TECHNICAL FEATURES

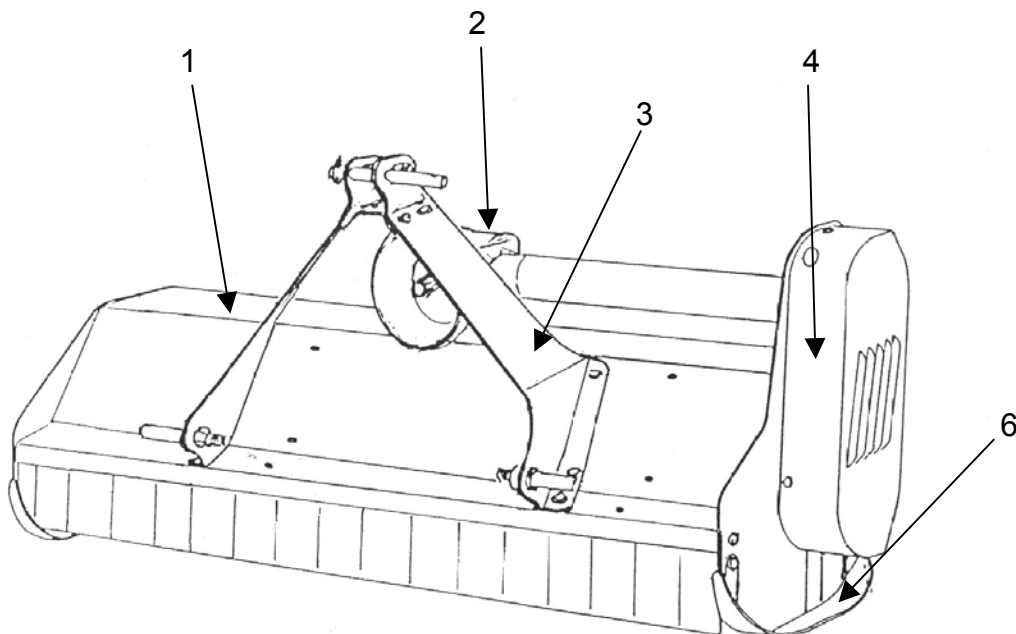
2.1. General description

The Magnum mower, from now also called machine, has been designed for cutting grass on amenity areas, in orchards and for cutting crop residues on small agriculture areas, for sticks and shrubs laying on the ground of up to 3 cm diameter (proper use)

Its light weight and low power requirement means that it is best suited to small tractors. Any other use is considered improper and the manufacturer disclaims all responsibility for any consequential injuries to people, or for damage to the machine. Proper use also refers to the safety and maintenance rules provided for by the manufacturer.

Technical names (*see diagram below*)

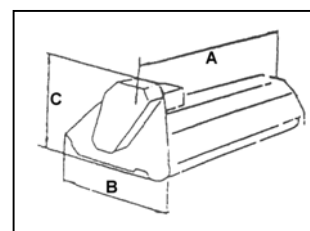
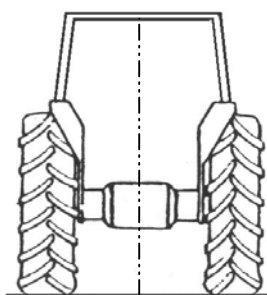
- 1 - frame
- 2 - gearbox
- 3 - connecting bow
- 4 - side transmission
- 5 - rear adjustable roller
- 6 - adjustable skids
- 7 - blades or hammers



2.2 Technical Specification

SPECIFICATION		130	170	190	225
Width of cut.	cm.	130	168	191	226
Min. req'd. tractor power.	KW/HP	23-27/30-35	30-38/40-50	34-38/45-50	42-45/55-60
PTO speed.	rpm.	540	540	540	540
Weight.	kg.	185	285	385	427
Tractor attachment.	Cat.	II	II	II	II
Flails.	No.	36	72	48	56
Scoop blades	N/A	N/A	36	N/A	N/A
Hammer blades.	No.	18	20	24	28
Width 'A'	cm.	145	188	208.5	243.5
Length 'B'	cm.	80	76	100	100
Height 'C'	cm.	80	80	100	100

2.3 Width of cut



65	65	130
80	50	
86	82	170
126	42	
110	82	190
150	42	
121	106	225
161	66	

2.4 Equipment

EQUIPMENT	130	170	190	225
Hammer.	Std.	-	Std.	Std.
Y-Blades, flails.	Opt.	Std.	Opt.	Opt.
Fine cut blades	-	Opt.	Opt.	Opt.
Rear roller.	Std.	Std.	Std.	Std.
Mechanical side movement 2 fixed positions.	Std.	Std.	Std.	Std.
Hydraulic side movement	-	Opt.	Opt.	Opt.
Skids	-	Opt.	Opt.	Opt.
Hydraulic rotary side cutter	-	Opt.	Opt.	Opt.

Std. = Standard Equipment

Opt. = Optional Equipment

FOR NOTES

3. SAFETY RULES

3.1 General safety rules:

- It is mandatory to read and follow the instructions for the use and maintenance manual before carrying out any operation or move with the shredder.
- Improper use or an incorrect move may seriously damage things and people.
- Both the operator and the maintenance fitter must know the shredder well, especially regarding dangers resulting from improper use or incorrect repairs.
- Before starting, checks on tractor and shredder, must be carried out as regards: functionality, road safety, accident prevention rules.
- Even when using the shredder correctly, stones or other objects may be thrown a long distance. Therefore nobody must stand within the danger area. Special attention must be paid when working near roads or buildings.
- Use tractor with cabs.
- The condition of flails and of all guards must be checked before beginning the daily work - they must be replaced if damaged or missing.
- During checks or repairs, make sure nobody could start the shredder by mistake,
- Never wear loose or fluttering clothes.
- Never carry passengers on the tractor.
- Never carry passengers on the shredder.
- Never connect the power takeoff with the engine running.
- Never approach the shredder until the rotor has completely stopped.
- Do not enter the working zone of the PTO shaft. It is dangerous to approach the rotating parts of the machine.
- Keep the PTO shaft guard in good order.
- Before starting check the surrounding area for the likely presence of children and/or animals.
- Do not stand in the range of the operation of the machine.
- The PTO shaft must be assembled and disassembled only with the engine stopped and the starting key removed.
- Before connecting the power takeoff, check that the speed and the rotational direction correspond to those of the shredder.
- Before leaving the tractor with the tool attached, proceed as follows:
 1. Disconnect the power takeoff,
 2. Put the machine steadily on the ground (with the hydraulic lift)
 3. Apply the hand brake and, if the ground is steeply sloping, wedge the tractor.
 4. Take out the starting key.
- Immediately replace any safety sign, or any missing or damaged decal.

3.2 Safety Rules concerning Road Traffic

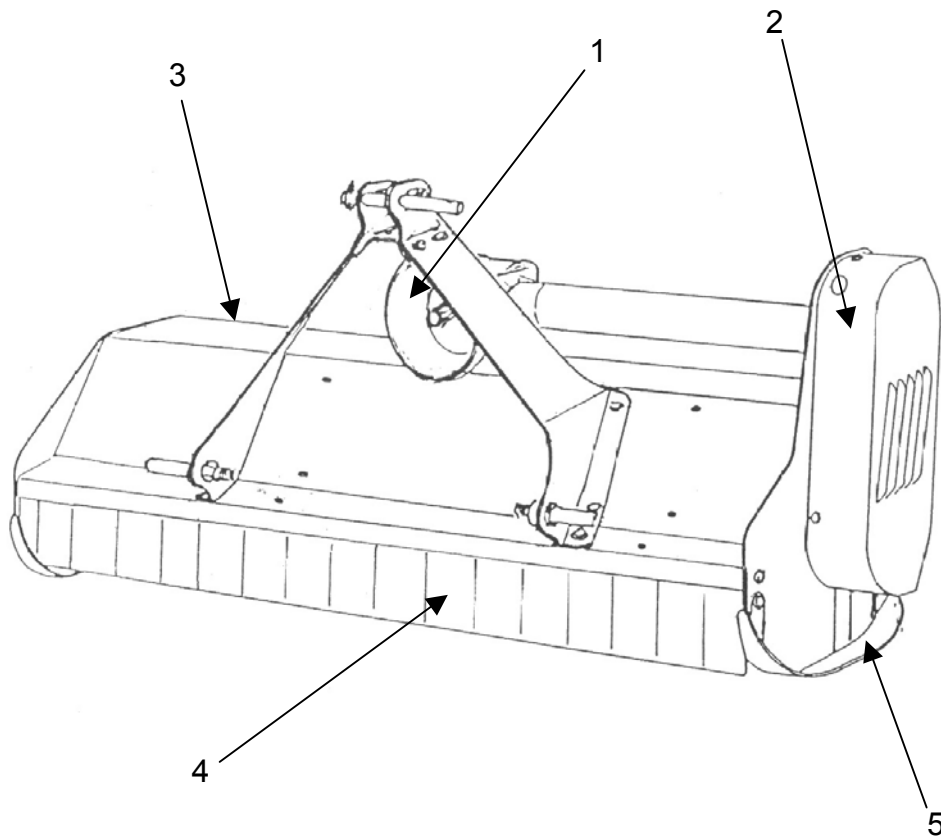
- In transport, reduce speed, especially on bumpy roads. The very weight of the shredder may render driving difficult and damage the shredder itself.
- Check moreover that the levers that operate the hydraulic lift are locked, to avoid the lowering of the machine during transport.
- When driving on public roads, respect all road rules in force.
- Never transport the shredder with the rotor moving, even for short distances.

3.3 Safety Rules during use

- Pay special attention when working with the machine, not to touch fixed objects, such as road drain, walls, shafts, kerbs, guard rails, tracks etc. This could cause the breakage of the flails, which would be thrown at very high speed.
- If wires, ropes or chains should get entangled in the rotor, stop immediately, to prevent damage or dangerous situations; stop the rotor and the tractor, take out the starting key. Put working gloves on, clear the rotor with the aid of pliers or shears. Do not try to disentangle by inverting the rotational direction of the rotor.
- Do not use the machine when there is vibration in the flail head, as this would cause breakage and serious damage. Find the cause of the vibration and eliminate it.

3.4 List of Guards fitted to the shredder (see diagram below).

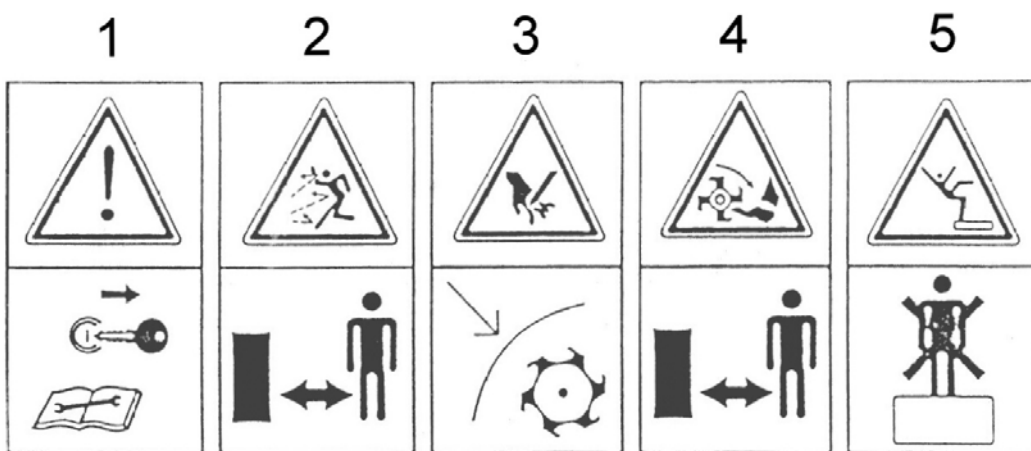
1. PTO shaft guard
2. Belt guard
3. Danger and warning decals
4. Front guard
5. Side guard-skids



3.5 Description and location of Safety decals

Carefully follow the instructions given on the decals (*see illustrations below*).

1. Always take the machine off the tractor and read the instructions carefully before starting servicing and/or lubricating operations.
2. Keep at a safety distance from the machine to avoid the risk of projection of objects.
3. Never remove the guards while the parts of machine are moving. It is dangerous and may cause injury to hands.
4. Keep at a safety distance from the machine to avoid the risk of cutting feet.
5. It is forbidden to mount on the machine because of the risk of fall.



4. INSTRUCTIONS FOR INSTALLATION AND HANDLING.

4.1 Lifting and unloading

To handle the shredder use a hoist or crane with a lifting capability suitable to the weight of the machine (*see technical specifications on page 4*).

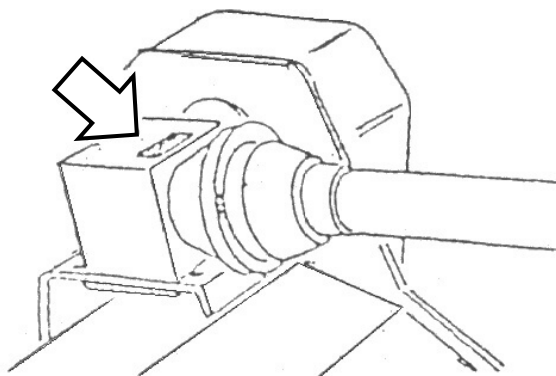
4.2 Unpacking

To make transport easier, the machine can be supplied with connecting bow split In this case use bolts, locknuts and washers enclosed to fix the bar and the flap on the machine.

4.3 Attachment to and detachment from the tractor

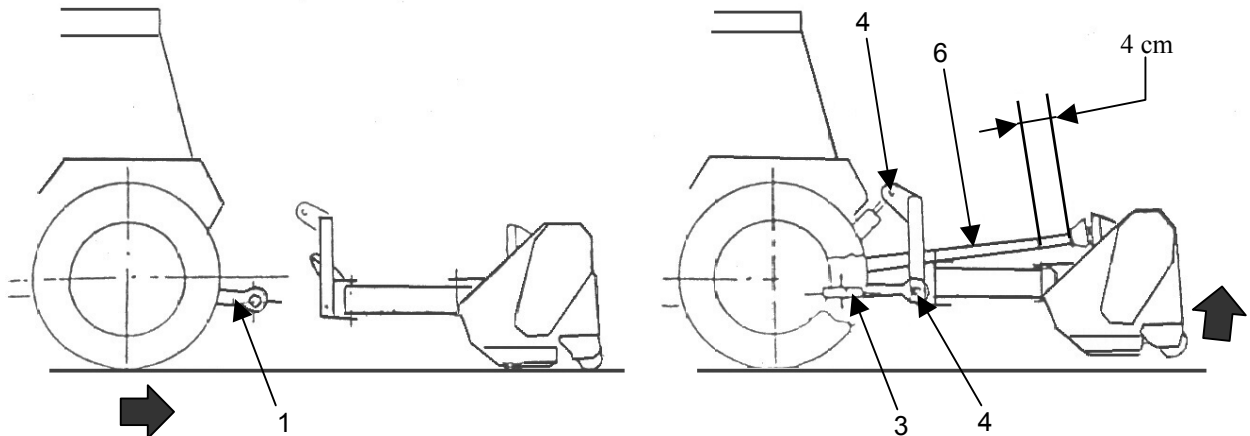
Before carrying out this operation and whenever the shredder is used, it is mandatory to:

- Visually check the machine in general.
- Check that all guards are fitted and in good condition.
- Confirm that all flails are fitted and in good condition.
- Grease the bearings and any other part as indicated by the decal.
- Check that the number or revolutions and the rotational direction of the power takeoff correspond to those required by the machine (*see diagram below*).



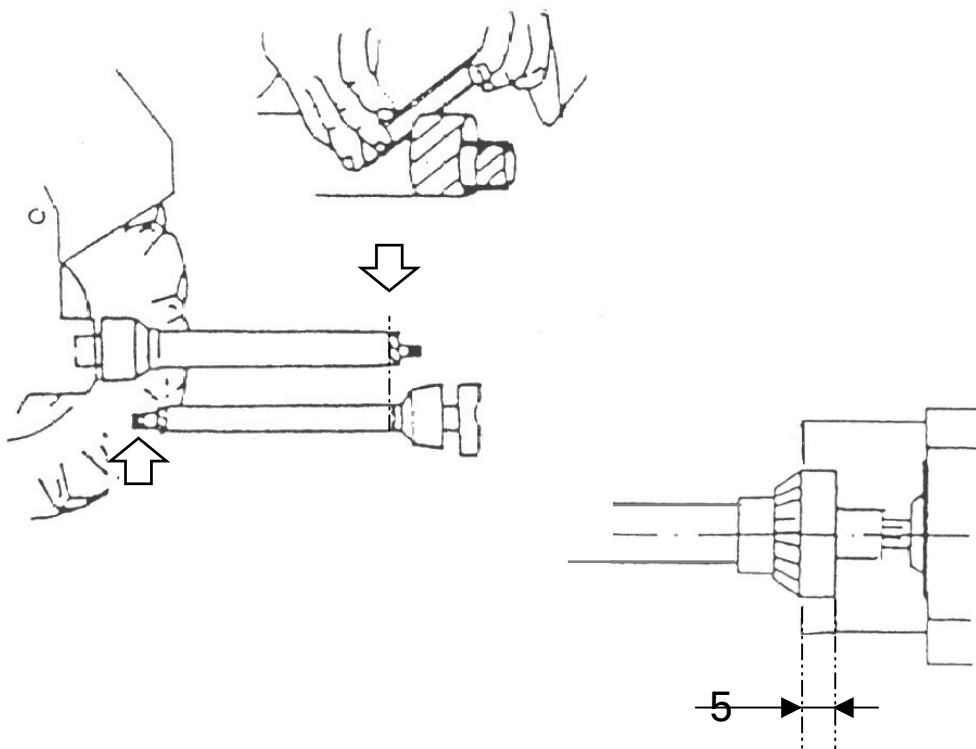
- To attach the machine to the tractor (*see illustration on page 10*) bring the tractor lower links (1) near the machine, to the points corresponding to the pins.
- Insert the pins (2) and secure them with the spring clips (3).

- Fit the top link (4), raise the machine to a perpendicular position with the ground. Adjust the two tractor lower linkage stabilizers (3) thus fixing the machine to the tractor in a central position.
- Proceed in reverse order to detach the shredder from the tractor.



4.4 Fitting the PTO shaft

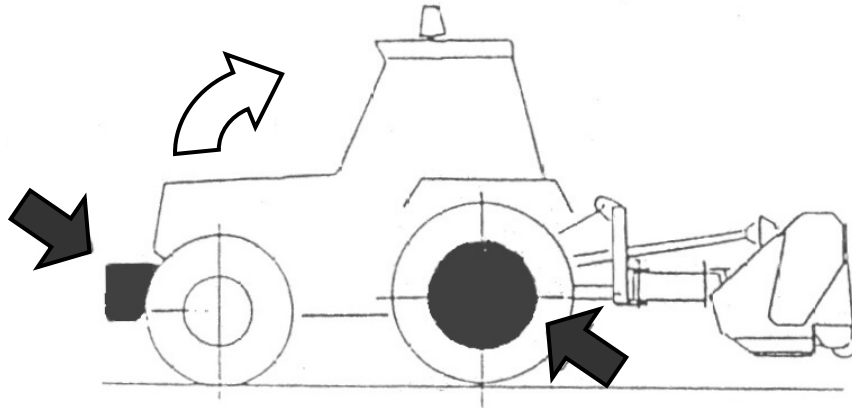
- Following the Instructions in 4.3 assemble the PTO shaft (6) and check that the overlap is not less than $\frac{2}{3}$ of L. Be sure to keep a 4 cm backlash (see illustration above) if it needs shortening, proceed as shown below (see illustration).
- The guards of the PTO shaft must be fixed to the machine and to the tractor with chains, to prevent rotation. The minimum overlap of the guard and the PTO shaft must not be less than 5 cm. (see illustration below).



4.5 Tractor stability

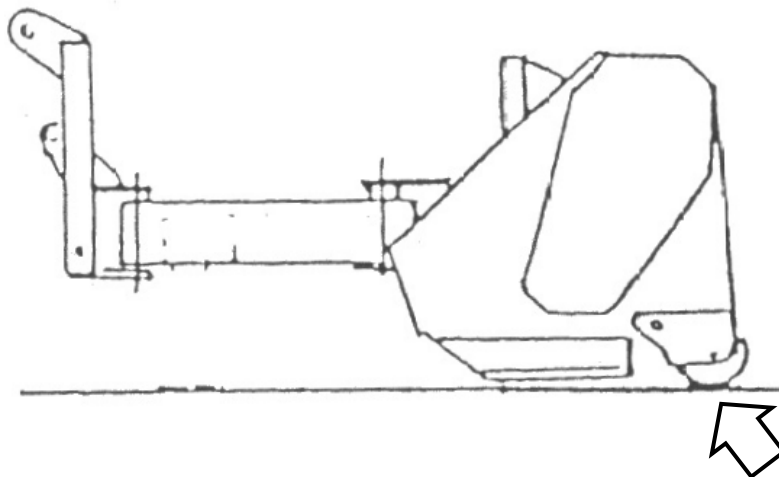
Due to the design of the mowers and the work they do, it is essential to ensure tractor stability, in order to eliminate any risk of imbalance or overturning.

- Lift the machine and check that the tractor does not mount up. In case it does, ballast the rear wheel of the tractor opposite to the extended machine and at the front of the tractor (*see illustration below*).



4.6 Parking

- Park the machine in a safe place, on flat and firm ground in order to prevent the risk of rolling over.
- Lower the shredder to the ground with the aid of the hydraulic lift of the tractor. (*see illustration below*).

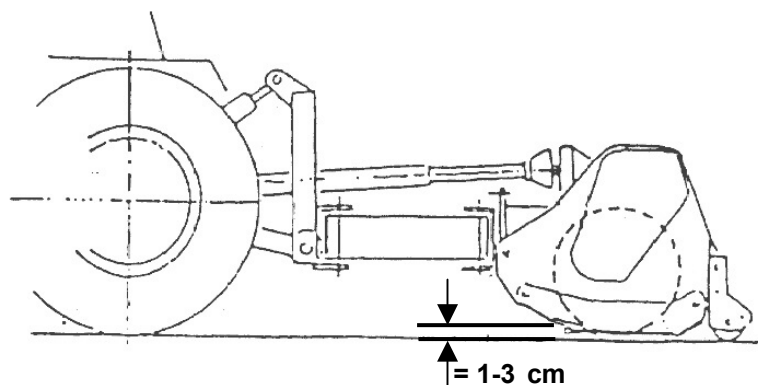


5. ADJUSTMENT AND SETTING UP

5.1 Adjustment

Adjustment of the height of cut is obtained by shifting the flail head roller in order to suit the material to be cut and the required degree of chopping (*see illustration below*).

IMPORTANT: *Flails must never touch the ground.*



6. USE AND OPERATING RULES

6.1 Starting

Before using the shredder check the tightness of all bolts and the integrity of all guards. Check that the number of revolutions and the rotational direction of the power takeoff of the tractor correspond to those required by the machine see decal on the gearbox (*see page 9*). Engage the power takeoff at low engine RPM to avoid damaging the transmission gearbox and belts.

6.2 Working mode

- Adjust the machine to suit the type of work to be done and the material to be cut: adjust the height of cut, as shown (*see illustration above*).
- Working speed is chosen to suit the material to be cut and the degree of chopping required. The optimum speed ranges from 3 to 8 km per hour.

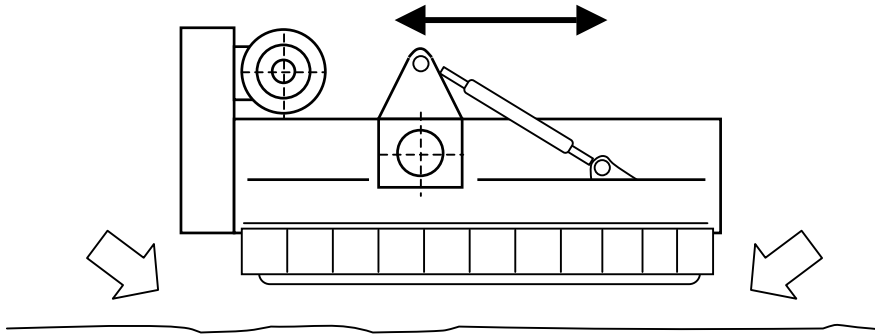
6.3 Side shift - Non-hydraulic models

IMPORTANT: if you want to move the machine from the central to side position proceed as follows:

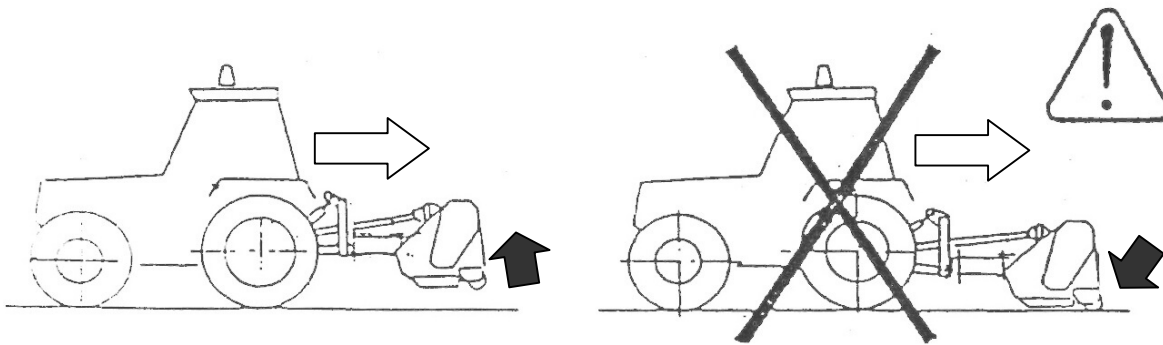
- Unscrew the connecting bow.
- Bore the holes on marked points. (*upper cover already has got the holes*).
- Put the connecting bow on the new position.
- Tighten the screws.

6.4 Side shift – Hydraulic models

IMPORTANT: Ensure that the machine is lifted clear of the ground before side moving, failure to observe this may result in damage to the frame.



IMPORTANT: During reverse movement lift the machine off the ground to avoid damaging the machine.



6.5 Stopping

- Close the arms and lower the machine to the ground.
- Disconnect the power takeoff.
- Stop the tractor, take out the starting key and apply the hand brake.
- If the ground is sloping, block the tractor wheels.

6.6 Transport position

For transport it is mandatory to:

- Observe all road transport requirements and note the necessary warning signs.
- Reduce speed especially on bumpy roads, The weight of the machine may render driving difficult and damage the machine itself.
- The power take off must be disconnected.

IMPORTANT: during transport on bumpy roads it is mandatory to move the machine into the central position.

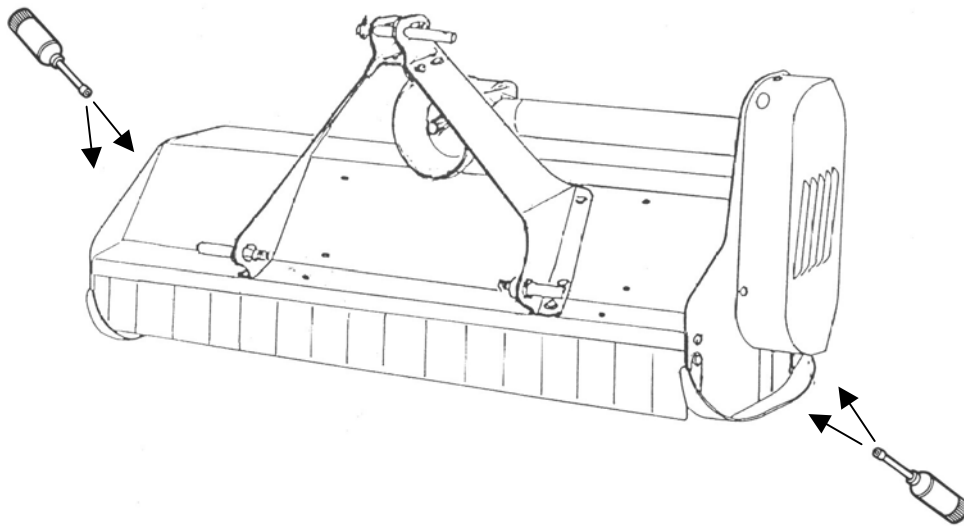
7. MACHINE MAINTENANCE

All maintenance, cleaning and repair operations must be carried out with the shredder firmly lowered to the ground and detached from the tractor, or with disconnected PTO, and the tractor engine switched off and starting key out.

After the first two hours operation from new (or after fitting new belts) check belt tension.

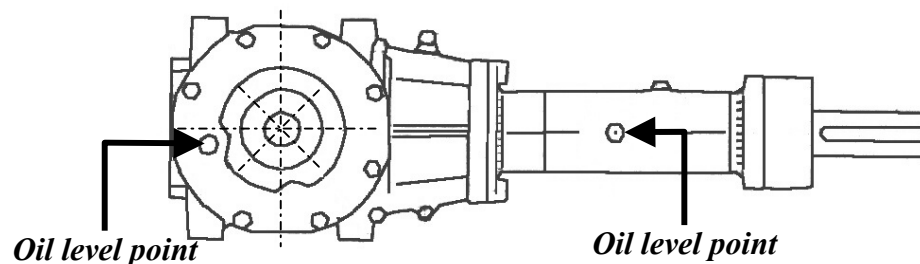
Regularly and after every 8 hours of machine operation:

- Tighten bolts and nuts.
- Check wear and condition of flails.
- Check the safety guards.
- Check belt condition.
- Visually check the frame to detect possible damage caused by earlier work.
- Check gearbox and extension lubricating levels.
- Grease the parts indicated on the appropriate decal. (*see below*).



This operation must be always carried out at the end of each working day. This facilitates the removal of mud or other material from the rotating parts (*bearing, pins etc.*) in order to avoid rust and possible seizure.

- Every 100 hours operation grease the moving parts of the PTO shaft, extracting the two parts of the shaft.
- After long inactivity, repeat the operation before re-using the machine.
- Use grease classification DIN 51825 (KR 2 K)
- For gearbox use compatible oils - classification ISO VG 220



8. TROUBLE SHOOTING CHART

PROBLEM	CAUSES	REMEDIES
Irregular cut	- Worn, bent or broken flails. - Machine is not in level with the ground. Clogged material due to excessive working speed.	- Replace. - Level. - Reduce working speed.
Machine noise	- Loose bolts. - Cracks or initiation of flail head.	- Tighten bolts. - Have it repaired in specialized workshops.
Gearbox noise	- Lack of oil. - Worn gears. - Worn bearings.	- Fill to level. - Replace. - Replace.
Vibration	- Broken or worn flails. - Unbalanced rotor. - Worn rotor bearings.	- Replace. - Replace in authorized workshops.
Premature flail wear	- Flails touching the ground.	- Adjust the height of cut.
Excessive backlash in joints	- Worn pins.	- Replace.
Breakage of roller bearings	- Violent impact on the ground when the machine is lowered. - Dirty or little greased bearings.	- Lower it gently. - Clean and grease.
Belts overheating	- Flails touching to the ground. - Working speed unsuitable to the amount of the material to be cut.	- Adjust the height of cut. - Reduce speed.

9. REPLACING PARTS

Before carrying out any work, it is mandatory to:

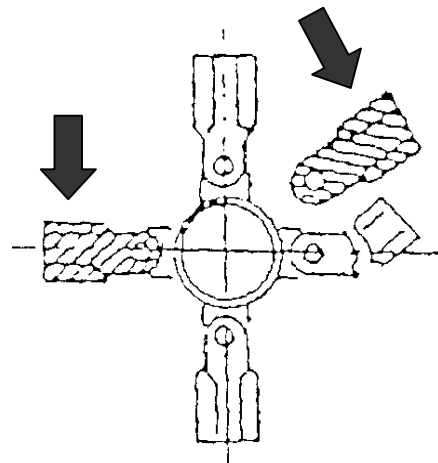
- Lower the machine to the ground
- Disconnect the power takeoff, stop the tractor and take out the starting key.
- Wear working gloves

9.1 Flail replacement

When the flails are worn, they must all be replaced.

In cases of a partially broken flail it is advisable to replace the broken one and the one diametrically opposite, in order to maintain the balance

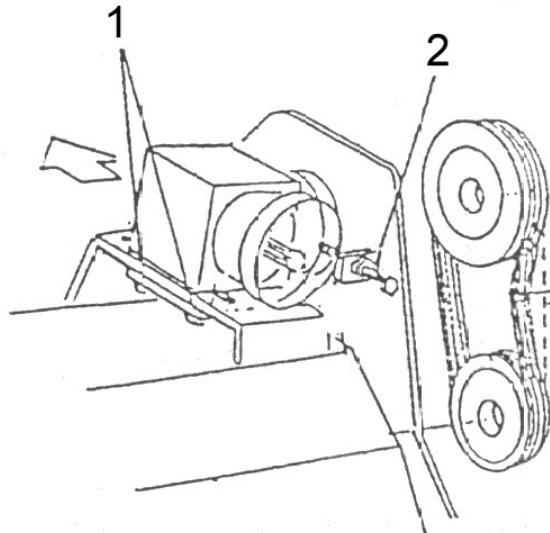
(see illustration opposite).



9.2 Belt replacement

- This operation must be carried out with the machine touching the ground, the power take-off disconnected and the starting key out.
- Remove the belt guard, slacken the screws (1) (*see diagram below*), unscrew the tightener (2), remove the belts and replace them with the same ones (dimension and type).

IMPORTANT: more complex operations must be done in authorised workshops.



10. DEMOLITION, DIFFERENTIATED DIVISION OF THE MATERIALS AND DISPOSAL

If the machine is out of order and requires disposal, all its parts that may cause danger have to be made inoffensive. The materials forming the machine that have to undergo a differentiated division are:

- Steel
- Mineral oil
- Rubber
- Plastic

All the above mentioned operations and the disposal have to be carried out in total respect of the present provisions of law on the subject.

We reserve right to modify the technical data and characteristics of the machines at any time without prior notice.

SPARE PARTS SECTION

For best performance...

USE ONLY GENUINE SERVICE PARTS

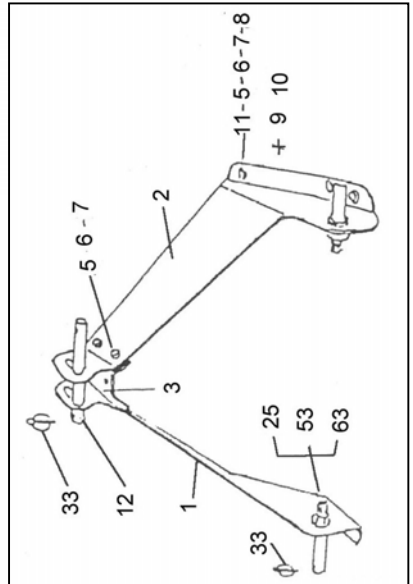
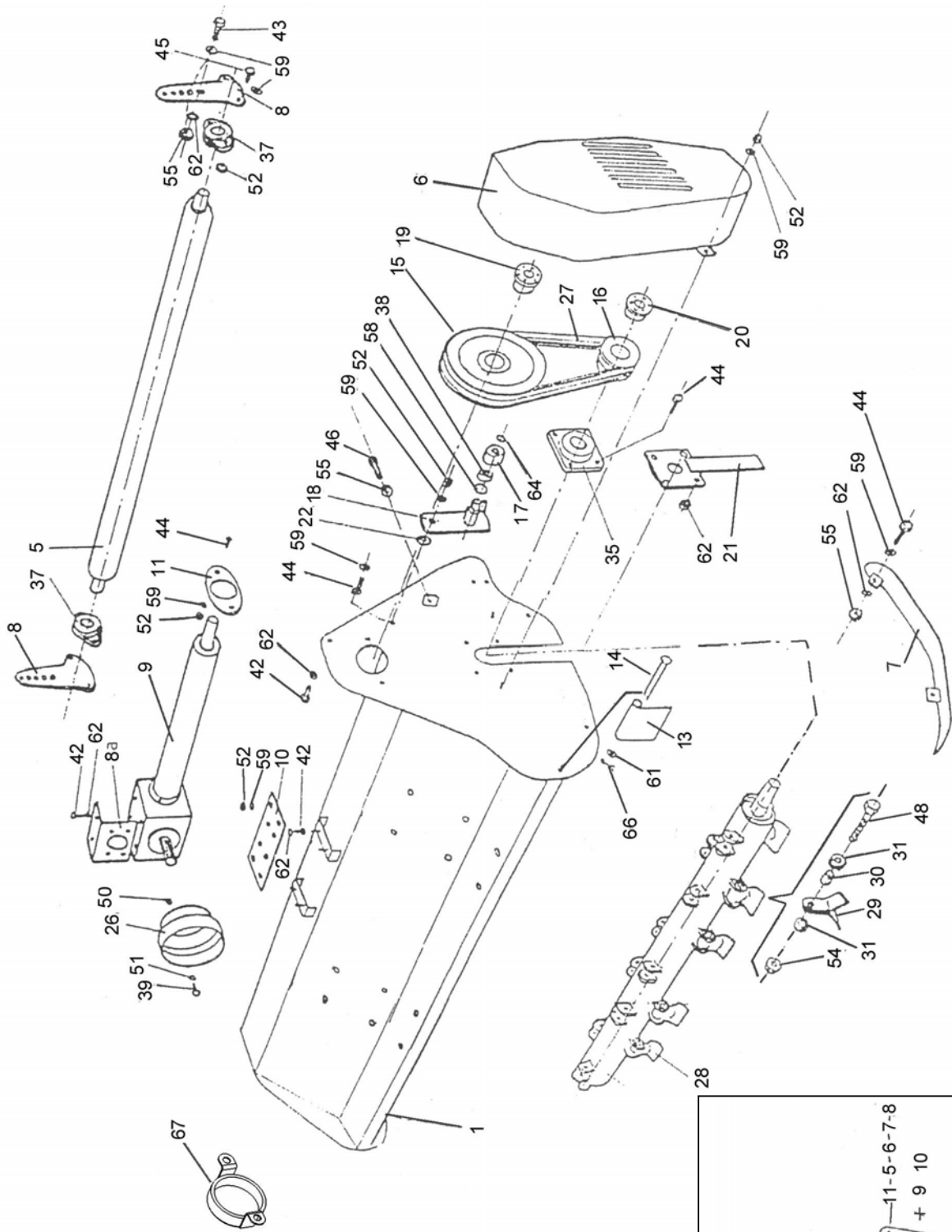
To be assured of the latest design improvements purchase your 'Genuine Replacements' from the Original Equipment Manufacturer through your local Dealer or Stockist.

Always quote:

- *Machine Type*
- *Serial Number*
- *Part Number*

Design Improvements may have altered some of the parts listed in this manual – The latest part will always be supplied when it is interchangeable with an earlier one.

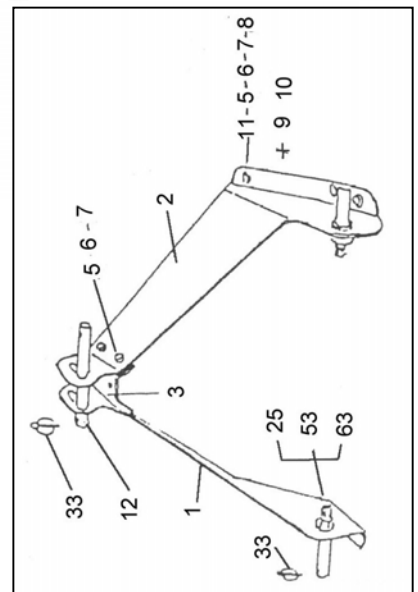
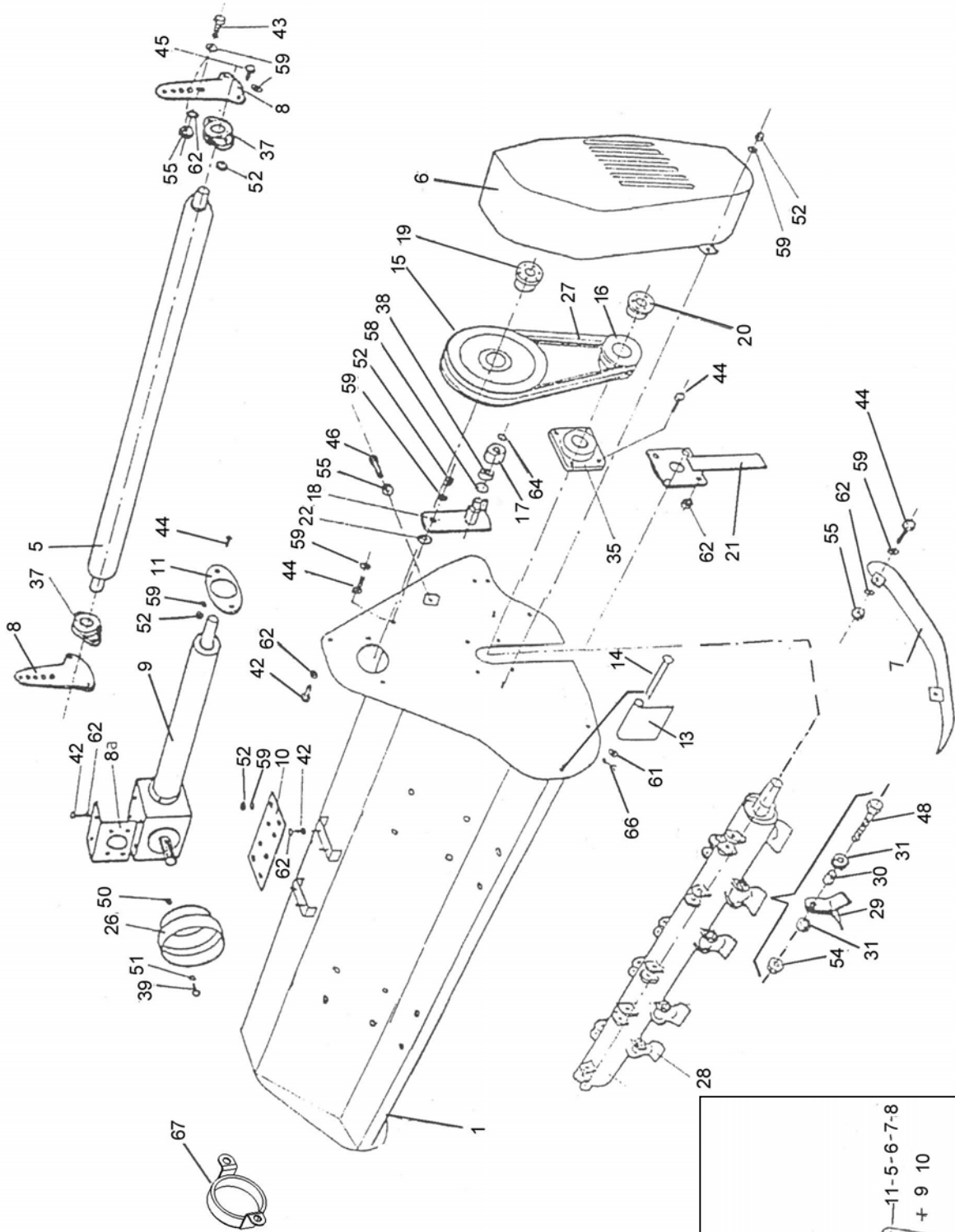
Magnum 130 Parts Diagram



Magnum 130 Parts List

Ref.	Description	Part No.	Qty.
1	Frame	1061043	1
2b	Connecting bow cpl./2001	1061001	1
4	Rotor - 130	1061002	1
5	Roller rear - 130	1061003	1
6	Belt shield	1061038	1
7	Skid left	1061004	1
	Skid right	1061005	1
8	Roller bracket	1061006	2
8a	PTO shield holder	1061007	1
9	Gearbox	1061008	1
10	Drive plate	1061044	1
11	Drive flange	1061009	1
13	Flap	1061010	7
	Flap	1061011	2
14	Flap rod	1061012	1
15	Pulley 200	1061013	1
16	Pulley 90	1061014	1
17	Strain pulley	1061015	1
18	Belt idler	1061016	1
19	Elve clutch 25	1061017	1
20	Elve clutch 30	1061018	1
21	Rotor Flange	1061019	2
22	Washer M10	9100105	1
23	Distant sleeve	1061020	1
24	Pivot pin 19	1061021	1
25	Pivot pin connect.24	1061022	2
26	Shaft shield	1061023	1
27	Belt 1060	1061032	2
28	Hammerblade	1061033	18
29	Y-blade	1061034	36
30	Y-blade sleeve	1061035	18
31	Y-blade distant sleeve	1061036	36
33	Safety pin 10	1061269	3
35	Bearing with casing 16206	1061024	2
37	Bearing with casing 16205	1061025	2
38	Bearing 6204	1061040	1
39	Bolt 8/15	1061090	4
42	Bolt 10/20	9213045	7
43	Bolt 10/25	9213055	4
44	Bolt 10/30	9213065	15
45	Bolt 10/40	9213085	4
48	Bolt 10/60	9213125	1
47	Bolt 12/30	9213066	2

Magnum 130 Parts Diagram

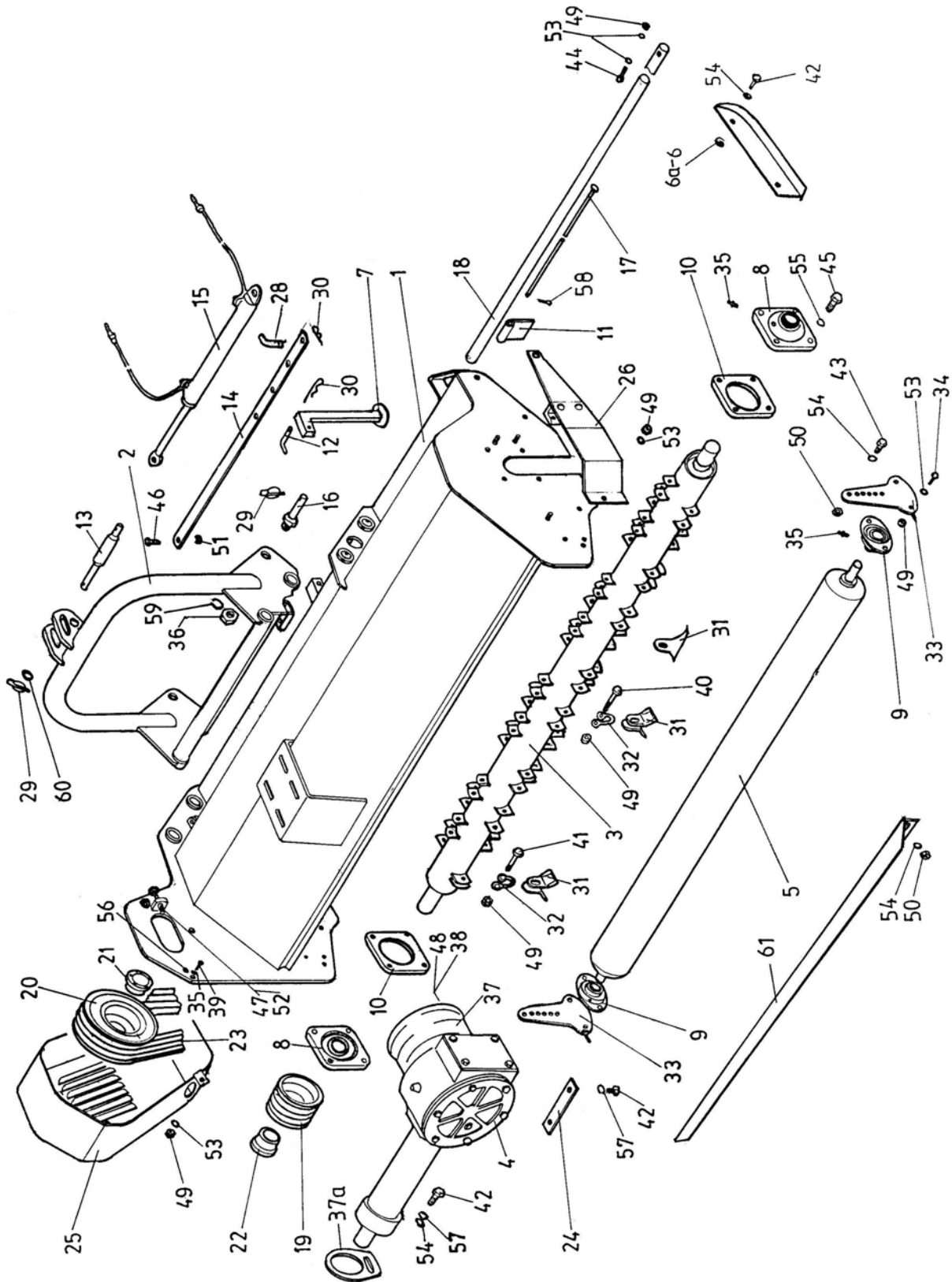



Magnum 130 Parts List

Ref.	Description		Qty.
48	Bolt 14/80	1061132	18
49	Bolt 14/90	1061145	1
50	Nut 8	9113004	4
51	Washer 8	9100104	4
52	Locknut 10	9143005	13
53	Locknut 12	9143006	2
54	Locknut	1061042	1
55	Nut 10	9113005	5
56	Nut 24	9113009	2
58	Slide piece	1061026	1
59	Washer 10	9100105	17
60	Washer 12	9100106	2
61	Washer 14	05.281.14	2
62	Spring washer 10	9100205	23
63	Spring washer 24	1061096	2
64	Slide piece	1061027	1
66	Split pin	1061077	1
67	End cover	45846.01	1

Connecting bow cpl./2001

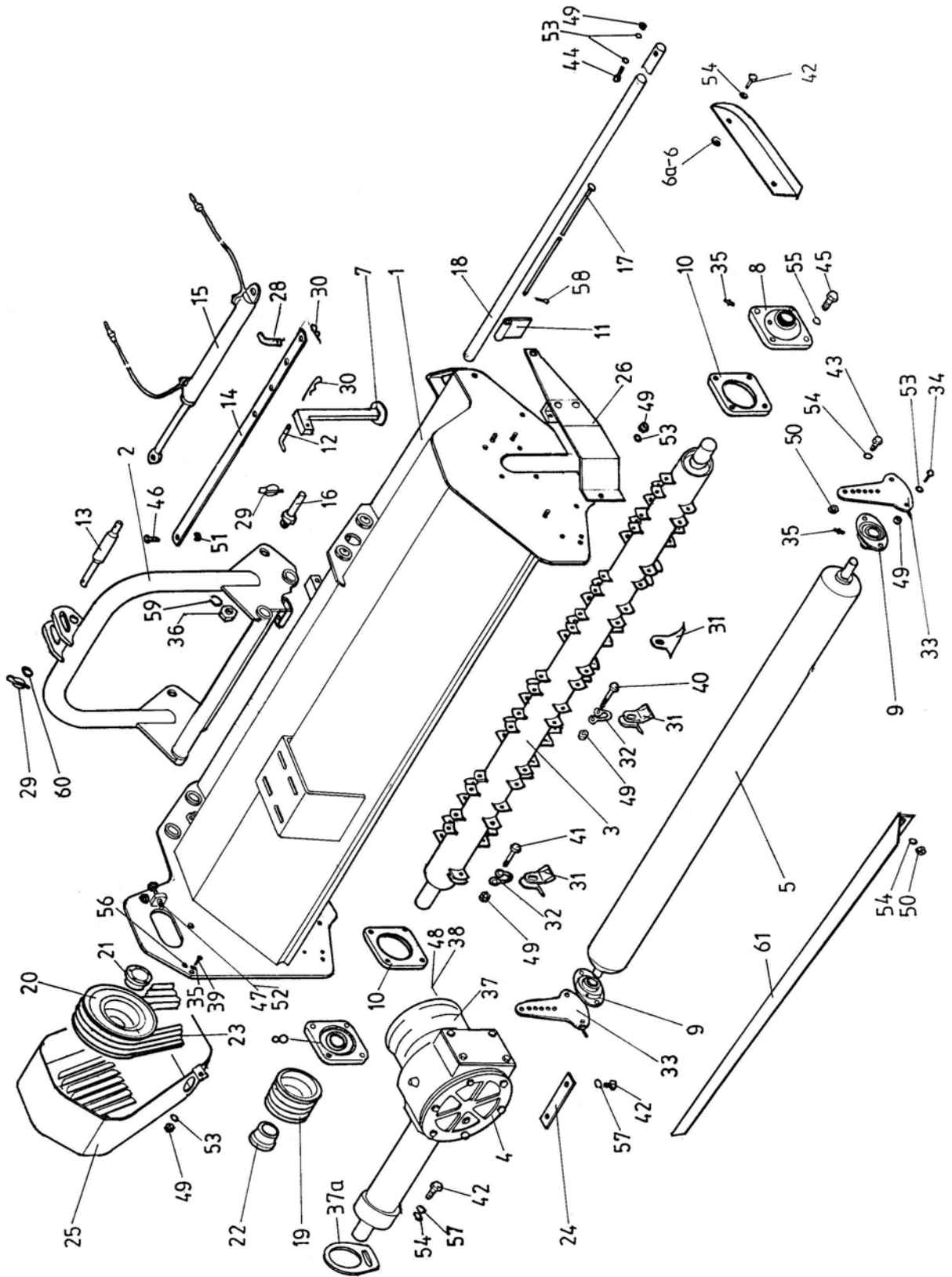
Ref.	Description		Qty.
1	Bow - right	1061028	1
2	Bow - left	1061029	1
3	Connecting part	1061030	1
5	Bolt 12/35	1061091	4
6	Locknut 12	9143006	4
7	Washer 12	9100106	14
8	Spring washer 12	9100206	6
9	Locknut 12	9143006	6
10	Washer 12	9100106	6
11	Bolt 12/30	9213066	6
12	Pivot pin connect.19/25	1061031	1





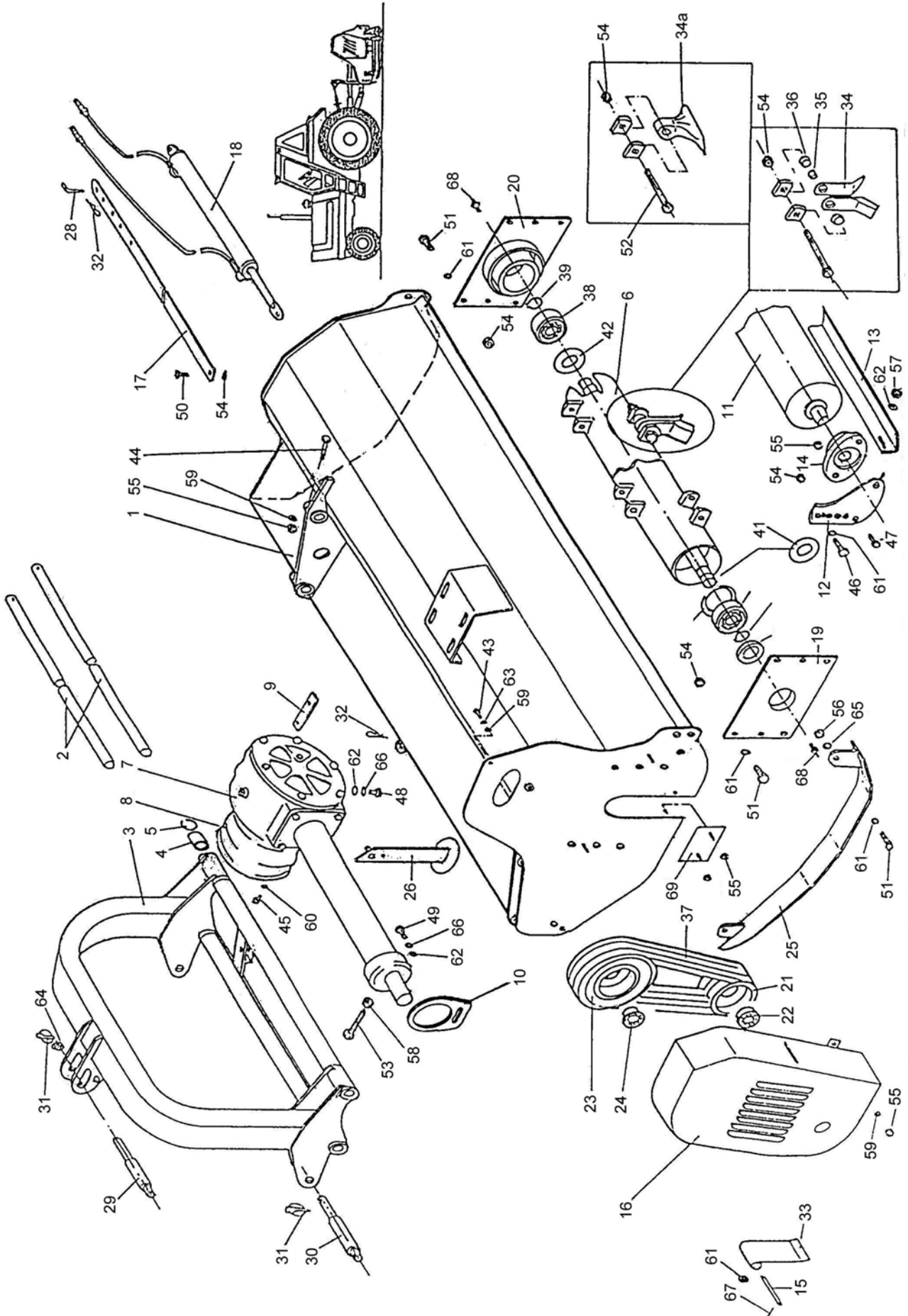
Magnum 170 Parts List

Ref.	Description	Part No.	Qty.
1	Frame - 170 R/H Build	1061052	1
	Frame - 170 L/H Build	1061089	1
2	Connecting Bow	1061053	1
3	Rotor	1061054	1
4	Gearbox - R/H Machines	1061055	1
	Gearbox - L/H Machines	1061085	1
5	Rear Roller	1061056	1
6	Skid - R/H	1061058	1
6a	Skid - L/H	1061057	1
8	Bearing c/w Casing 16209	1061059	2
9	Bearing c/w Casing 16205	1061025	2
10	Bearing Support Plate	1061060	2
11	Flap (140)	1061061	11
12	Pin	1061083	1
13	Pivot Pin	1061031	1
14	Blocking Rod - Mechanical	1061062	1
15	Hydraulic Cylinder cpl.	1061063	1
16	Pivot Pin	1061064	2
17	Flap Rod 170	1061065	1
18	Guide	1061066	2
19	Pulley - 130/3	1061162	1
20	Pulley - 180/3	1061164	1
21	Clutch Elve 80/40	1061165	1
22	Clutch Elve 80/45	1061163	1
23	Belt	1061069	3
24	Support Plate	1061070	2
25	Belt Shield - R/H Machines	1061071	1
	Belt Shield - L/H Machines	1061084	1
26	Side Protection	1061072	1
28	Pin	1061082	1
29	Safety Pin	1061097	3
30	Safety Pin	1061076	2
31	Y-Blade	1061050	72
	Fine Cut Blade (Scoop Hammer)	1061073	36
32	Shackle	1061074	36
33	Roller Bracket - R/H	1061086	1
	Roller Bracket - L/H	1061075	1



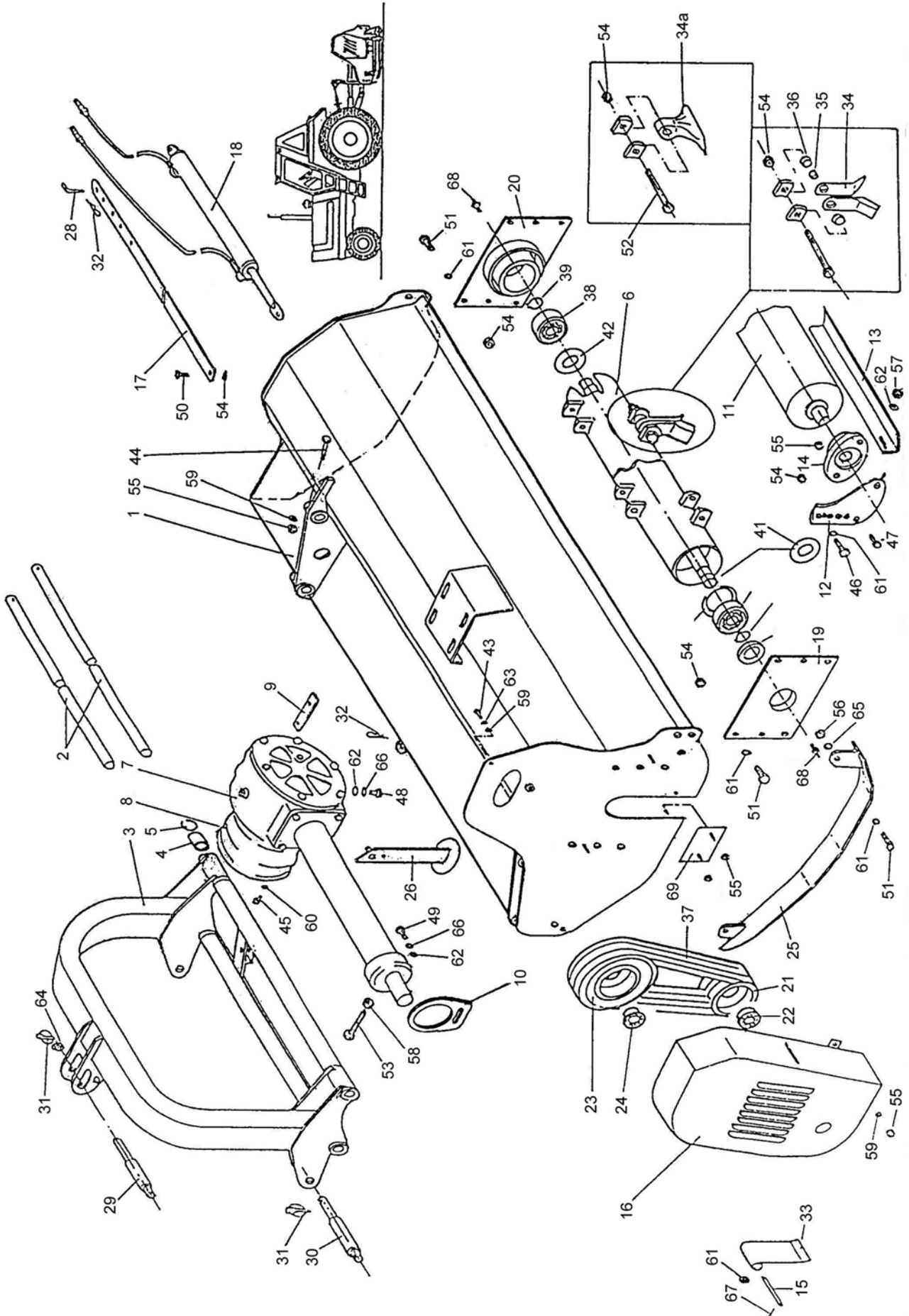

Magnum 170 Parts List

Ref.	Description	Part No.	Qty.
34	Bolt M10	9213075	4
35	Grease Nipple - Straight	0901161	3
	Grease Nipple - 90°	05.953.05	1
36	Nut	9117009	2
37	PTO Guard	1061105	1
37a	Gearbox Flange	1061087	1
38	Bolt	1061090	4
39	Bolt	9213065	1
40	Bolt	1061080	32
41	Bolt	1061081	4
42	Bolt	9213066	9
43	Bolt	1061091	4
44	Bolt	9213135	2
45	Bolt	1061092	8
46	Bolt	1061093	1
47	Bolt	9213167	1
38	Washer	9100104	4
49	Locknut	9143005	47
50	Locknut	9143006	4
51	Locknut	1061094	1
52	Nut	9113007	1
53	Washer	9100105	13
54	Washer	9100106	9
55	Spring Washer	05.282.08	8
56	Spring Washer	9100205	1
57	Spring Washer	9100206	5
58	Split Pin	1061095	1
59	Spring Washer	1061096	2
60	Washer	9100108	1




Magnum 190 & 225 Parts List

Ref.	Description	Part No.	190	225
1	Frame 190 - R/H Build	1061178	1	-
	Frame 190 - L/H Build	1061136	1	-
	Frame 225 - R/H Build	1061103	-	1
	Frame 225 - L/H Build	1061137	-	1
2	Guide - 190	1061179	2	-
	Guide - 225	1061102	-	2
3	Connecting bow	1061150	1	1
4	Guide Bushing	1061138	4	4
5	Spring Ring	1061139	4	4
6	Rotor 190	1061151	1	-
	Rotor 225	1061037	-	1
7	Gearbox 190 - R/H Machines	1061152	1	-
	Gearbox 190 - L/H Machines	1061140	1	-
	Gearbox 225 - R/H Machines	1061104	-	1
	Gearbox 225 - L/H Machines	1061141	-	1
8	PTO Guard	1061105	1	1
9	Underlay plate	1061070	2	2
10	Gearbox Flange	1061142	1	1
11	Rear Roller - 190	1061153	1	-
	Rear Roller - 225	1061107	-	1
12	Roller Bracket - L/H	1061143	1	1
	Roller Bracket - R/H	1061155	1	1
13	Scraper - 190	1061156	1	-
	Scraper - 225	1061108	-	1
14	Bearing with Casing	1061157	2	2
15	Flap Rod 190	1061158	1	-
	Flap Rod 225	1061109	-	1
16	Belt Shield - R/H Machines	1061110	1	1
	Belt Shield - L/H Machines	1061133	1	1
17	Blocking Rod - Mechanical	1061111	1	1
18	Blocking Rod - Hydraulic	1061112	1	1
19	Bearing Casing - Left	1061160	1	1
20	Bearing Casing - Right	1061161	1	1
21	Pulley (130/4)	1061113	1	1
22	Elve Rotor Clutch	1061163	1	1
23	Pulley (180)	1061114	1	1
24	Elve Drive Clutch	1061067	1	1
25	Skid - L/H	1061166	1	1
	Skid - R/H	1061167	1	1
26	Support	1061134	1	1
27	Washer	1061120	1	1
28	Safety Pin	1061082	1	1
29	Pivot Pin 19/25	1061031	1	1
30	Pivot Pin 22/28	1061169	2	2




Magnum 190 & 225 Parts List

Ref.	Description	Part No.	190	225
31	Spring Pin	1061135	3	3
32	Safety Pin R3	1061076	2	2
33	Flap 70	1061170	1	-
	Flap 130	1061098	-	2
	Flap 140	1061171	13	16
34	Y-blade	1061034	48	56
34a	Hammer blade	1061100	24	28
35	Y-blade sleeve	1061035	24	28
36	Y-distant sleeve	1061036	96	112
37	Belt XPB 1250	1061069	4	4
38	Bearing 1309	1061173	2	2
39	Slide pc 45 - ext.	1061174	2	2
40	Slide pc 100 - int.	1061175	1	1
41	Bearing Casing 1	1061176	1	1
42	Bearing Casing 2	1061177	1	1
43	Bolt 10/30	9213065	1	1
44	Bolt 10/65	9213135	2	2
45	Bolt 8/15	1061090	4	4
46	Bolt 14/40	1061092	4	4
47	Bolt 10/35	9213075	4	4
48	Bolt 12/30	9213066	4	4
49	Bolt 12/35	1061091	1	1
50	Bolt 14/50	1061093	1	1
51	Bolt 14/35	1061099	16	16
52	Bolt 14/80	1061132	24	28
53	Bolt 16/80	9213167	1	1
54	Locknut 14	1061094	41	45
55	Locknut 10	9143005	10	10
56	Nut 14	1061121	4	4
57	Locknut 12	9143006	2	2
58	Nut 16	9113007	1	1
59	Flat Washer 10	9100105	7	7
60	Flat Washer 8	9100104	4	4
61	Flat Washer 14	05.281.14	21	21
62	Flat Washer 12	9100106	9	9
63	Spring Washer 10	9100205	1	1
64	Flat Washer 20	9100108	1	1
65	Spring Washer 14	05.282.08	4	4
66	Spring Washer 12	9100206	5	5
67	Split Pin	1061077	1	1
68	Grease Nipple	1061079	2	2
69	Closing Plate	1061144	1	1



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