

# Spearhead

**3000-4W**

**Operator's & Parts  
Manual**

*Second edition  
November 1999*

***Important*** - The information contained in this manual is correct at the time of publication. However, in the course of constant development, changes in specification are inevitable. Should you find the information given in this book different to the machine relates to please contact the "After Sales Department" for advise.

## **Important**

*The purchaser should ensure that this manual is handed to the operator before using the machine for the first time and should be satisfied that the operator fully understands the contents of this manual before being allowed to proceed. If the machine is resold the Operators Manual must be given to the new owner.*

*The operator must be a skilled and a proficient tractor driver with experience in operating grass cutting machinery. If there is any doubt in the operation for safety concerning any aspect of this machine do not hesitate to contact your dealer for advice.*

*Fill in the details below, you will find it useful to refer to when ordering spare parts.*

Serial No. ....

Date of Delivery .....

Dealer's Address .....

.....

.....

.....

Telephone No. ....

### **Spearhead Machinery Limited**

*Pershore Trading Estate, Pershore,  
Worcestershire WR10 2DD*

**Tel: 01386 556748 Fax: 01386 561398**

**e-mail: [enquiries@spearhead.uk.com](mailto:enquiries@spearhead.uk.com)  
visit our web site: [www.spearhead.uk.com](http://www.spearhead.uk.com)**



## Safety

- Never operate the machine with other people present, as it is possible for debris, including stones, to be discharged from the front and rear of the main deck.
- Always ensure all safety guards are in place and all tractor windows closed.
- Never allow an inexperienced person to operate the machine without supervision.
- Never allow children to play on or around the machine at any time.
- Never attempt any maintenance or adjustment without first disengaging the p.t.o., lowering to the ground, stopping the tractor engine and applying the tractor parking brake.
- Before leaving the tractor cab always ensure that the machine is firmly on the ground, and the rotor has stopped spinning.
- Never stop the engine with the p.t.o. engaged.
- Always check that all guards are properly fitted, check there are no damaged or loose parts. Particular attention should be given to the blades to ensure they are not damaged, cracked or missing.
- Never operate with damaged blades.
- Always operate p.t.o. at recommended speed.
- Always inspect work area for wire, steel posts, large stones and other dangerous materials and remove before starting work.
- Never operate with wire around the rotor. Stop immediately.
- Never attempt to use the machine for any purpose other than that it was designed for.
- Ensure that all warning labels are always visible and that they are not damaged, defaced or missing.
- Never transport with the p.t.o. engaged.
- When parking up always lower to the ground.
- Where applicable, check condition of tyres and that wheel nuts are tight.
- During transport, ensure linkage stabilisers are fully tightened and observe public highway regulations.





# Contents

<i>Introduction</i> .....	1
<i>Safety First</i> .....	1
<i>Tractor requirements</i> .....	1
<i>Attaching to the tractor</i> .....	2
<i>Setting up and adjustment</i> .....	3
<i>Machine protection</i> .....	3
<i>Operation</i> .....	4
<i>Transportation</i> .....	4
<b>Servicing &amp; Maintenance</b>	
<i>Safety first</i> .....	5
<i>Servicing and maintenance</i> .....	5
<i>Daily/Every 8 hours</i> .....	6
<i>Every 20 hours</i> .....	6
<i>Regularly</i> .....	6
<i>Blades</i> .....	7
<i>Skids</i> .....	7
<i>Storage</i> .....	7
<i>After storage</i> .....	8
<i>Trouble shooting guide</i> .....	8
<i>Ordering parts</i> .....	9
<b>Parts lists</b>	
<i>Main body assembly</i> .....	10,11
<i>Drive &amp; blade carrier assembly</i> .....	12,13
<i>Wheel assembly</i> .....	14,15
<i>Centre gearbox assembly</i> .....	16,17
<i>Gearbox assembly</i> .....	18,19
<i>P.t.o. shaft</i> .....	20,21
<i>Roller assembly (optional)</i> .....	22,23
<i>Stickers</i> .....	24,25
<i>EC declaration</i> .....	26
<i>Warranty</i> .....	27,28



## ***Introduction***

The Spearhead 3000-4W is a very robust high capacity Rotary Cutter that is easy to operate and maintain. To ensure trouble-free operation this manual should be carefully studied.

## ***Safety First***

Do not start the machine until you fully understand operation and safety precaution requirements. Always ensure the operators are proficient with the operation of this type of machine.

## ***Tractor requirements***

- Spearhead strongly recommend 75hp-plus tractor with category 2 rear linkage.
- Ensure there is sufficient weight on front wheels of tractor for safe transport and stability.
- P.t.o. must be independent live drive to enable continuous p.t.o. drive even when tractor clutch is pressed down.
- Before hitching ensure position control is selected. **Do not** attempt to hitch in draft control.
- Check chains and stabilisers must be in good working order to hold the machine firmly. Do not operate with out checking chains and stabilisers are tight.
- Spearhead particularly recommend "turn buckle" type check chains.
- Set linkage lift rods to an equal length.

## ***Attaching to the tractor***

Fit the machine to the tractor in the standard way ensuring the correct match of linkage (category 2). Check that the top link is in good order and threads are well lubricated. Use stabilisers to take any free movement out of the lower link arms. Before fitting the machine to the tractor linkage you should ensure there is sufficient front weight to ensure the front wheels are always in contact with the ground. This is most important for safe transport and stability when turning on slopes.

Before fitting the p.t.o. for the first time it may be necessary to adjust the length. There should be maximum engagement of the sliding tubes without bottoming at the sortest operation position. To check first connect the mower to the tractor. Pull the p.t.o. shaft apart and connect to the tractor p.t.o. output shaft and the gearbox input shaft. Hold the half shafts next to each other in the shortest working position. If necessary shorten the inner and outer guard tubes equally (Fig. 1). Shorten the inner and outer sliding profiles by the same length as the guard tubes. File all sharp edges and remove burrs. Grease sliding profiles.



Insert  
as 1500

To fit the p.t.o. first clean and grease press pins on the yoke and simultaneously push the p.t.o. drive shaft onto p.t.o. shaft of the tractor until pins engage.

The p.t.o. shaft is fitted with a non-rotating safety guard. It should be secured to the machine and tractor with the two retaining chains provided.



## ***Setting up and adjustment***

**Height** Cutting height adjustment is achieved by raising or lowering the outer skid plates and wheels. Lowering the outer skid plates and wheels produces a longer cut, raising the skid plates and wheels leaves a shorter cut. Always set skids level and to equal holes front to rear and side to side and the wheels. The weight of the machine should be equally distributed between the skids and the wheels. When set properly this should prevent scalping.

## ***Machine protection***

To prevent gearbox damage the p.t.o. is fitted with a shear bolt or optional knocking clutch. When cutting in extreme conditions where solid objects are likely to be found it is recommended the operator reduces the engine revs to allow the blades to pivot more easily when striking solid objects, and proceed with caution.

The shear bolt or clutch settings should not be altered without reference to the Spearhead Service Department. Never operate without protection this could result in severe damage to the gearbox and drive lines, as well as infringing to the warranty.

## ***Operation***

Engage the p.t.o. only when the tractor engine is at low revs to prevent shock damage to the machine slowly increase the engine revs to achieve the standard 540 /1000r.p.m p.t.o. speed. ***If at any time serious vibration occurs, stop the engine immediately and check that no blades are missing - following all safety precautions.*** The cause must be found and rectified immediately or other components may be affected.

When in work, lower the machine to the ground carrying all its weight on the skids and wheels, allowing the machine to follow the contours of the ground and ensuring there is sufficient slack in the wire ropes. Select a sensible forward speed bearing in mind the density of growth, the terrain, and the available horsepower, taking extra care when turning, particularly on slopes. When turning, it is not necessary to lift the machine off the ground but instead allow sufficient room to turn in a large radius. The machine only needs to be raised when turning in a tight corner or to reverse over dense undergrowth or when operating on the front linkage. The machine is fitted with as standard 4 high lift blades complete with fin, and with the adjustable rear flaps for control of spreading/mulching.

Quality of finish is determined by the forward speed i.e. a slow speed will produce a high quality of cut, whereas faster forward speeds are used when high output is first priority.

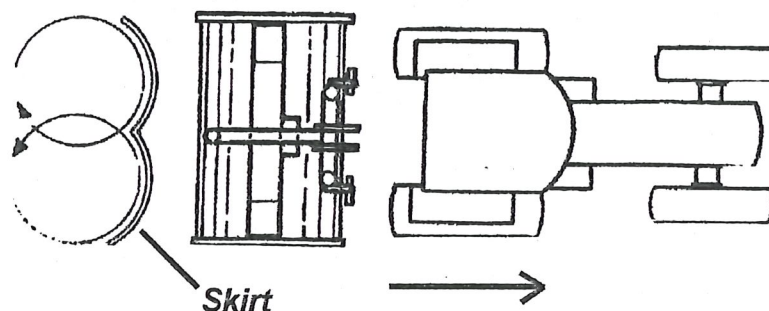
When operating particularly in confined areas it is possible to cut going backwards but it is advisable to slightly raise the machine particularly if in dense growth where there is a risk of hitting hidden solid obstacles obscured by dense undergrowth.

Always exercise particular care when operating over uneven ground surfaces. Do not allow the blades and blade holders to frequently hit the ground.

## ***Transportation***

Please observe Public Highway Regulations, concerning the towing of implements, and securely attach a registration and lighting board. Take care to slow when travelling over rough ground avoid bouncing machine on linkage causing unnecessary strain.

### ***Direction of blades for machine with skirts***





## ***Servicing & Maintenance***

### ***Safety first***

- Never leave the tractor seat without first disengaging the p.t.o. and stopping the engine.
- Ensure all rotating objects have stopped turning.
- Never attempt any repairs, maintenance, service or any other checks with the machine carried on the tractor hydraulics.
- Always fully lower to the ground, or securely prop the machine on substantial servicing stands.
- Always replace all guards and retaining chains after servicing/ maintenance is completed.

***Important*** - *On delivery of your machine check that the Dealer has completed the P.D.I. form, ensure the warranty registration form in this manual is completed and returned.*

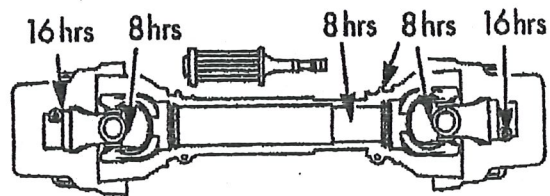
### ***Servicing and maintenance***

It is imperative that the following checks are carried out in order not to invalidate your warranty, these are carried out before the first operation, after the first hour, then after 4 hours. These checks are:

- wheel nuts and tyre pressure,
- gearbox bolts,
- blade bolts are fully tightened and in particular the castle headed nut on the blade rotor,
- retaining bolts on the drive shaft,
- grease all points.
- After the first 50 hours drain and replace the gearbox oil. Replace with EP90 Gear oil.
- It is your responsibility to maintain to ensure a long reliable working life.

**Daily / Every 8 hours**

- Grease all grease points, including p.t.o.
- Check condition of blades and blade bushes ensure all retaining bolts are fully tight.
- Check gearbox oil, replenish with EP90 gear oil as necessary to the correct level line on the dip stick, level plug, provided with each gearbox.

**Fig. 2**

- Dismantle and clean p.t.o. sliding surfaces and re-grease. Grease universal joints. (Fig 2)

**Every 20 hours**

- Grease p.t.o inner tube and push pins (Fig 2)

**Regularly**

- Check there is no wrapping of string, plastic, grass or other debris between rotor boss and blades.
- Inspect gearbox seals for leaks.
- Regularly check the rotor boss retaining castle nut for tightness (part no. 5771409). First remove the split pin, select the correct size socket in 3/4" drive and fully tighten the nut. When replacing the split pin, do not slacken the nut to align the hole, always tighten. Failure to regularly check this nut will result in serious wear to hub, which is expensive to repair.
- It is most important that all gearbox and blade bolts are regularly checked to be very tight. **When the machine is new there will be a 'bedding in' period where very frequent checking is important.**



## Blades

**Caution!** When carrying out maintenance work on or near the blades be careful of free-swinging blades over-centring and falling. It is recommended that protective headgear, gloves and goggles are worn.

The blades can be re-sharpened by grinding the cutting edges, care must be taken that the blades are of the same weight and length after grinding. Do not over heat when grinding as this will affect the hardness of the blades.

All the blades are free swinging and swivel on hardened steel bushes which are easily replaced. When replacing blades, it is important that blades are replaced in sets, in order to retain balance of the rotor. Bushes must be replaced when new blades are to be fitted.

If the blades are showing any signs of severe wear, damage or cracking, they must be replaced immediately. Never attempt to weld the blades, this will make them very brittle thus extremely dangerous. Do not take risks with the cutting blades - if in doubt, replace.

**Note -** The shear bolt / clutch is there to protect gearbox if the blades strike large obstickle they may get damaged or break avoid these conditions.

The two rotor blade carriers are timed to ensure the blades do not clash, ensure timing is correct after carrying out any maintenance to drive line.

## Skids

When operating on abrasive soils, particularly in stubbles and similar conditions with thin ground cover, excessive skid wear may be expected. To provide extra protection and to prolong life of the skids, special hard facing rods are available.

If working in wet and muddy conditions, ensure that mud thrown from tractor wheels is not allowed to build up between the deck.

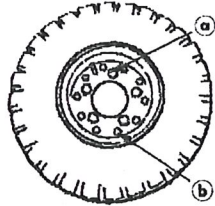
## Wheels



**Warning:** Heavy duty industrial tyres have been fitted to ~~450-9S~~ for convenience of tyre removal, the wheel rims are of the split rim type.

When removing the wheels only remove the five larger hub nuts. **Never** undo the smaller outer nuts (which are painted red for danger) when removing the wheel.

The outer nuts must not be loosened until the valve has been removed and the inner tube is entirely deflated. ***Then, and only then may the outer bolts can be loosened. Failure to observe these precautions could seriously injure and could even result in loss of life.*** If in any doubt consult a tyre repair specialist or Spearhead's Service Department.



**Fig. 10 Wheel**

- a** Hub nuts  
**b** outer nuts (painted red)

## Storage

Before storing away, thoroughly wash the machine removing all faces of grass and dirt. Great care must be taken when washing with high pressure hoses, do not hold the water jet close to the paintwork. Use steam cleaners with caution, be sure to remove all detergents to avoid any discolouring or damage to paint. Grease all grease points until fresh grease shows. Store P.t.o. shaft in a dry place.

traces

## After storage

Check condition of the tyre (where applicable) and then follow the maintenance procedure covered in the servicing part of this manual. Pay particular attention to the condition of guards and blades.

Remember the 3000-4W is designed to withstand the most rigorous conditions and, with a little care and attention, will give many years of trouble free service. So as not to invalidate the warranty and to avoid problems, use only genuine parts and make sure the machine is not driven at a speed in excess of 540/1000 r.p.m. on the p.t.o.

## Parts lists

### Ordering parts

When ordering parts please refer to your parts list to help your dealer with your order. Please provide the following:

- Model no.
- Part no. and quantity
- Description
- Serial number of machine
- Delivery instruction (e.g. next day)



Delivery is normally via carrier direct to your dealer. Services that are currently available are Next Day with the additional option of before 9am, 10.30am or Noon. Carriers also offer a 2-3 day service for heavier items. For light and small parts, these can be posted first or second class mail.

Spearhead factory works with in normal factory working hours  
Monday - Friday 8:30am to 5:00pm. The factory is closed at weekends and Bank Holidays.

Please speak to your dealer to ensure for additional cover over weekends etc. if this is necessary.



## Trouble shooting guide



### Broken or damaged blades

- 1 Raise cutting height
- 2 Avoid obstacles *obstacles*
- 3 Timing incorrect
- 4 Ensure a steady feed into drive (Do not snatch the P.t.o.)

### Damage blade holder

- 1 Raise cutting height
- 2 Avoid obstacles *obstacles*
- 3 Failure to keep centre retaining nut tight

### Gearbox overheating

1. Incorrect oil level
2. Incorrect grade of oil
3. Incorrect operating speed
4. Machine overloaded
5. Rubbish around the gearbox reducing air circulation

### Shear bolt failure

- 1 Machine overloaded
- 2 P.t.o. engaged with too much power / revs
- 3 Blades hitting the ground

### Damage to rubber boded Yoke

- 1 Shock loading from either poor start-up or blades hitting something

### Damage to P.t.o. shaft

- 1 Seized slip clutch
- 2 Telescopic tube bottoming out
- 3 Engaging drive with too much power / revs
- 4 Lifting machine too high
- 5 Not enough overlap
- 6 Lack of grease

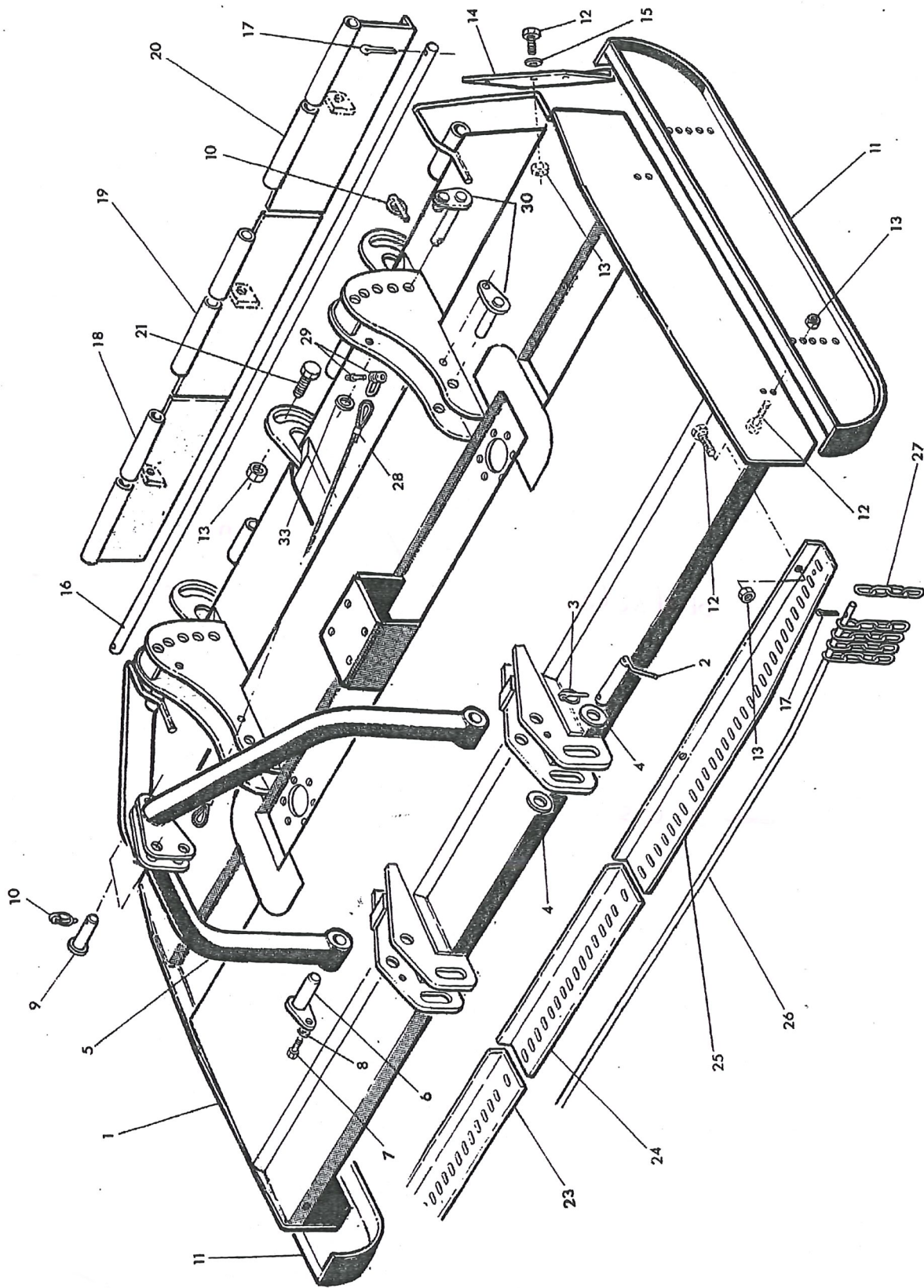
### Damage gearboxes

- 1 Seized slip clutch.
- 2 Telescopic shafts bottoming out
- 3 Engaging drive with too much power / revs
- 4 Lack of grease on sliding tubes of drive shaft

### Metal fatigue on frame

- 1 Too fast a travelling / operating speed for conditions
- 2 Wings not floating i.e. following the ground contours (check detent)

*Machine not floating ie not following the ground contours (check position of lower & top link use slotted hole).*

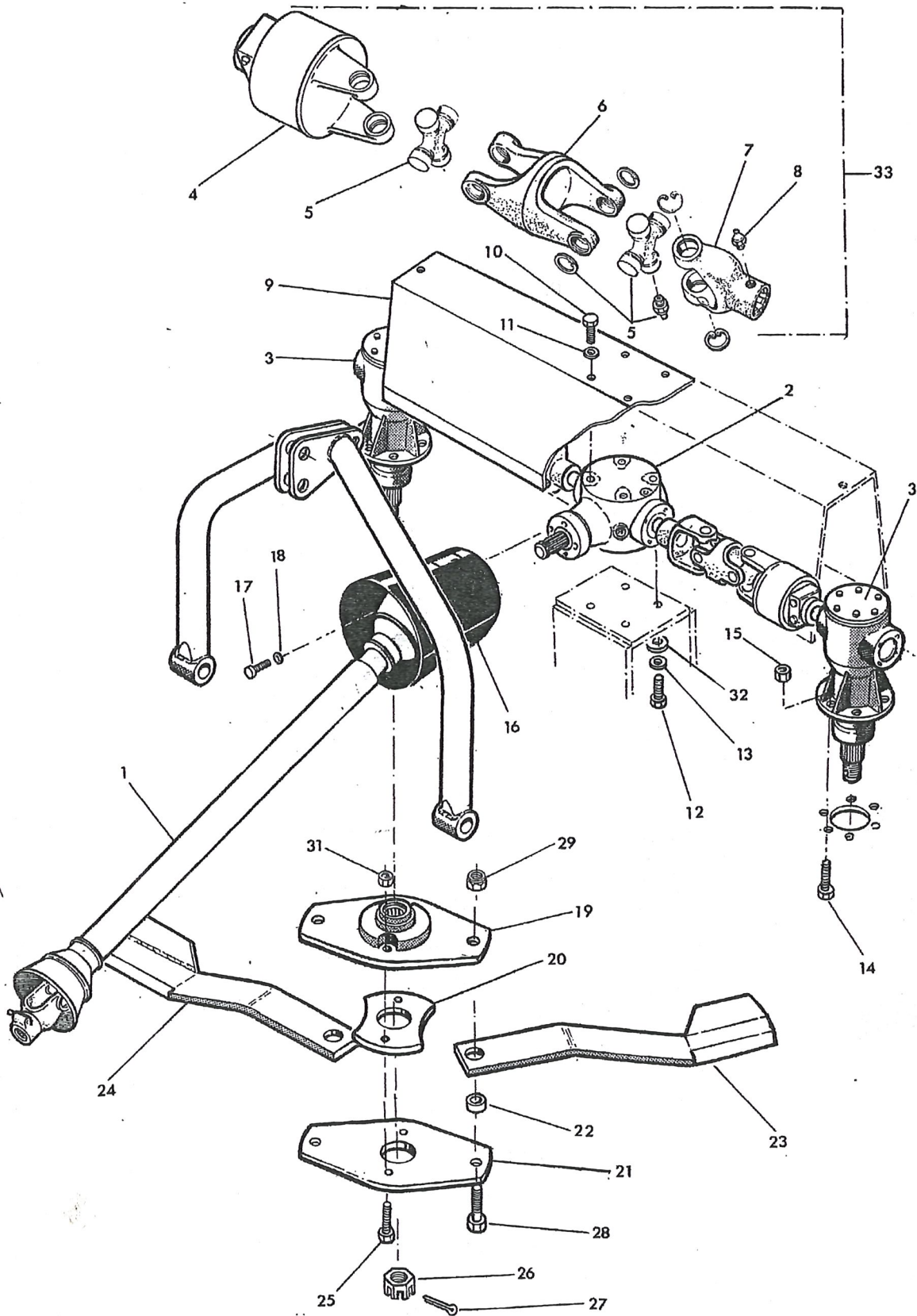


**Main Body Assembly**



**Parts list - Main body assembly**

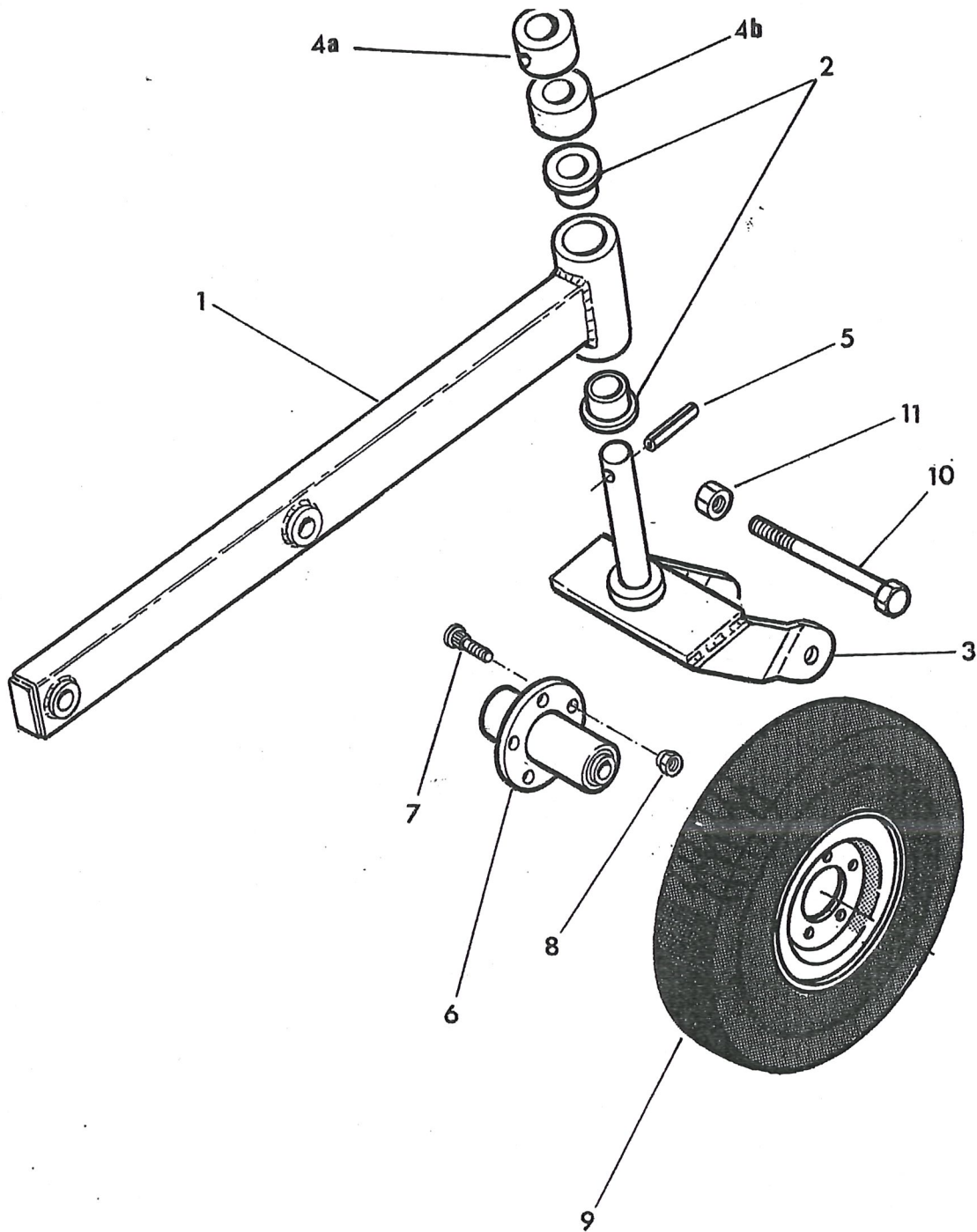
<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1	1770400	Main body
2	6310208	Pin
3	6310206	Lynch pin
4	2770470	Washer
5	1777613	Headstock
6	1777611	Pin
7	2770407	Setscrew
8	2770434	Washer
9	6310203	Top link bracket
10	6310206	Lynch pin
11	1560102L	Left hand skid
	1560102R	Right hand skid
12	2770420	Bolt
13	2770417	Nut
14	1770410	Side flap
15	2770436	Washer
16	1770406	Hinger bar
17	2770513	Split pin
18	1770409	Adjustable flap
19	1770409	Adjustable flap
20	1770409	Adjustable flap
21	2770443	Bolt
22	1770634	Pin
23	1770404	Right hand chain guard
24	1770450	Centre chain guard
25	1770403	Left hand chain guard
26	1770405	Chain retaining bar
27	8770621	Skirt chain
28	6770916	Wire rope
29	6777575	Shackle
30	1770634	Pin
33	2770552	Flat washer



**Drive & Blade Carrier Assembly**

**Parts list - Drive and blade carrier assembly**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1	5770061	540rpm 6 spline c/w knock-in-clutch
	5770088	540rpm 6 spline c/w shear bolt
	5770060A	1000rpm 6 spline c/w knock-in-clutch
	5770060	1000rpm 21 spline c/w knock-in-clutch
2	5769996	Gearbox - 540rpm
	5769997	Gearbox - 1000rpm
3	5769998	Gearbox
4	5770056	Rubber bonded yoke
5	5771301	Cross journal
6	5770092	Back to back yoke
7	5771296A	Yoke
8	2770467	Grease nipple
9	1770411	Guard
10	2770473	Setscrew
11	2770454	Washer
12	2770425	Bolt
13	2770456	Spring washer
14	2770423	Bolt
15	2770447	Nut
16	5770106	Cone
17	2770418	Setscrew
18	2770434	Washer
19	1770398	Blade carrier
20	1770396	Spacer
21	1770397	Lower blade plate
22	7770707	Bush
23	7770703	Blade left hand c/w fin
24	7770702	Blade right hand c/w fin
25	OPT0012	Chain kit
26	5771409	Castle nut
27	2770477	Split pin
28	2770413	Bolt
29	2770414	Nut
30	2770404	Bolt
31	2770447	Nut
32	2770454	Washer
33	5770059	Coupling

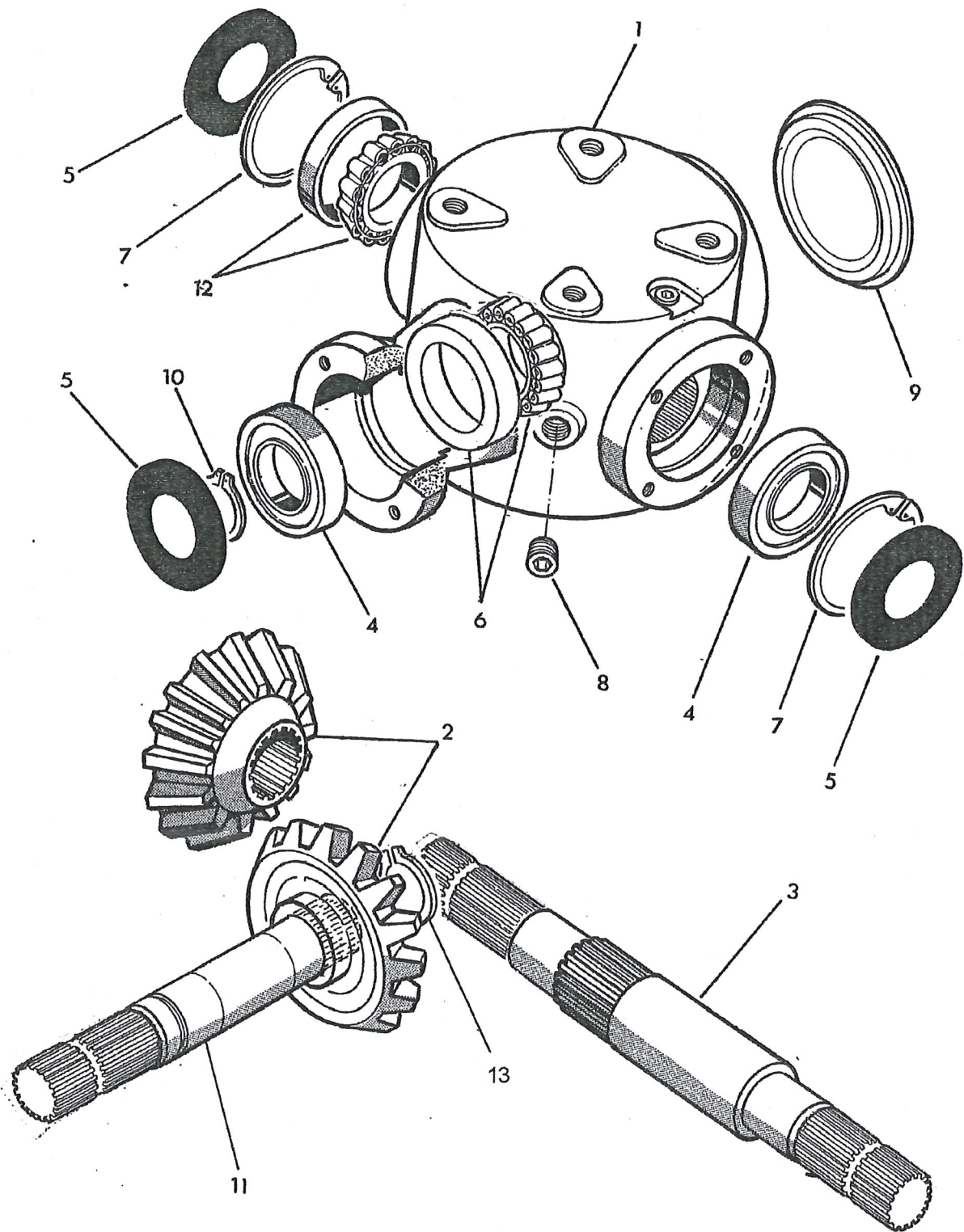


**Wheel Assembly**



**Parts list - Wheel assembly**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1	1770401	Wheel arm
2	4600127	Bush
3	1770399	Wheel yoke
4a	1777700	Bush
4b	1777524	Spacer - height adjuster
5	2770479	Roll pin
6	6770676	Hub
7	6770676	Stud
8	6770678	Nut
9	6770646	Complete wheel
10	2770538	Bolt
11	2770409	Nut



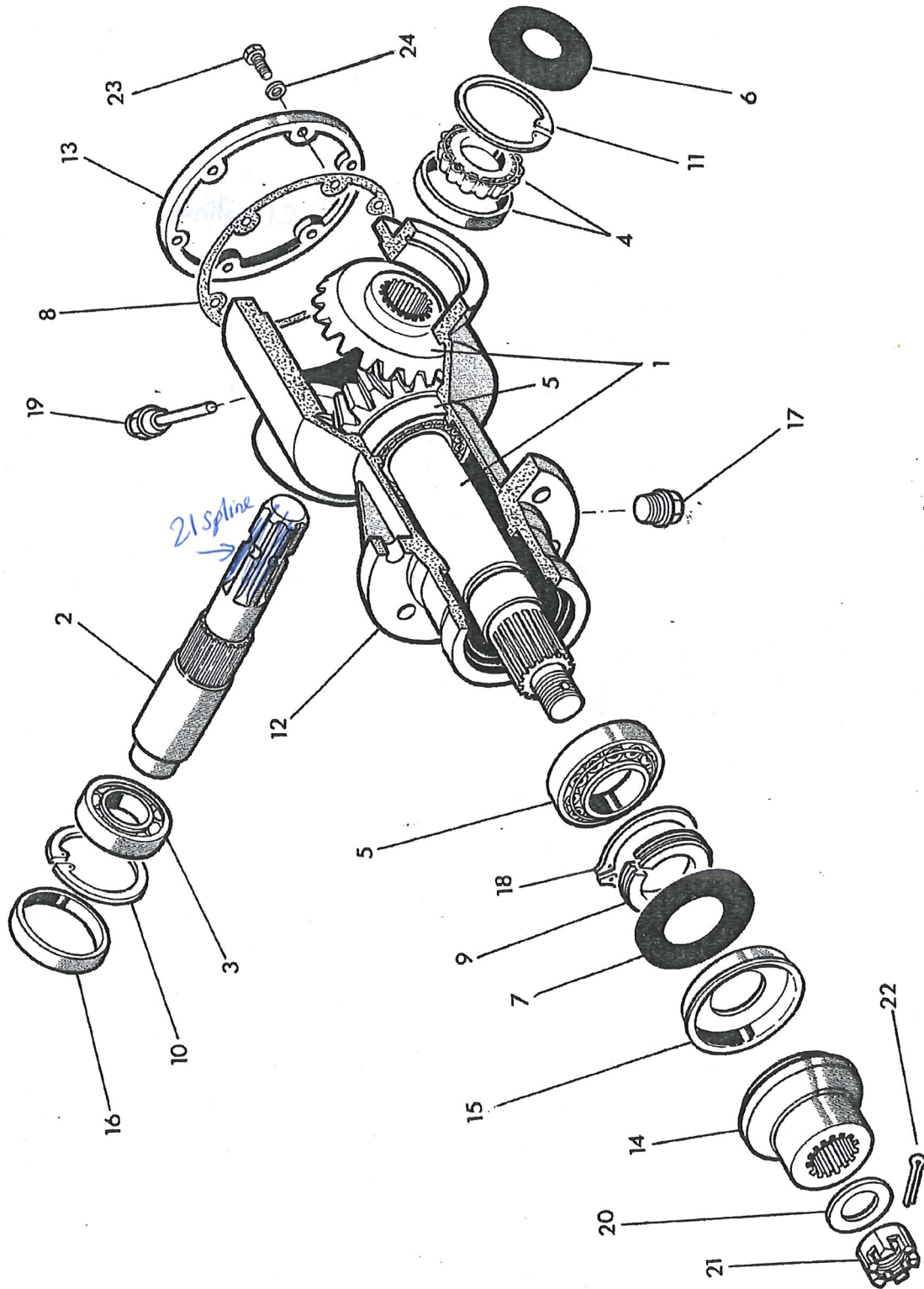
**Centre Gearbox Assembly**

**Parts list - Centre gearbox assembly**

Fig. Ref	Part number		Item description
	540rpm	1000rpm	
1	5771500	5771500	Casing
2	5771501	5771501	Gearset
3	5771506B	5771506B	Shaft
4	4771599	4771599	Bearing
5	4771507	4771507	Seal
6	4770660	4770660	Bearing
7	2777517	2777517	Circlip
8	5777208	5777208	Plug
9	5771507	5771507	Cover
10	2777518	2777518	Circlip
11	5771424	5771424	Input shaft
12	5772341	5772341	Bearing
13	5772349	5772349	Circlip

*21 spline*





**Gearbox Assembly**

**Parts list - Gearbox assembly**

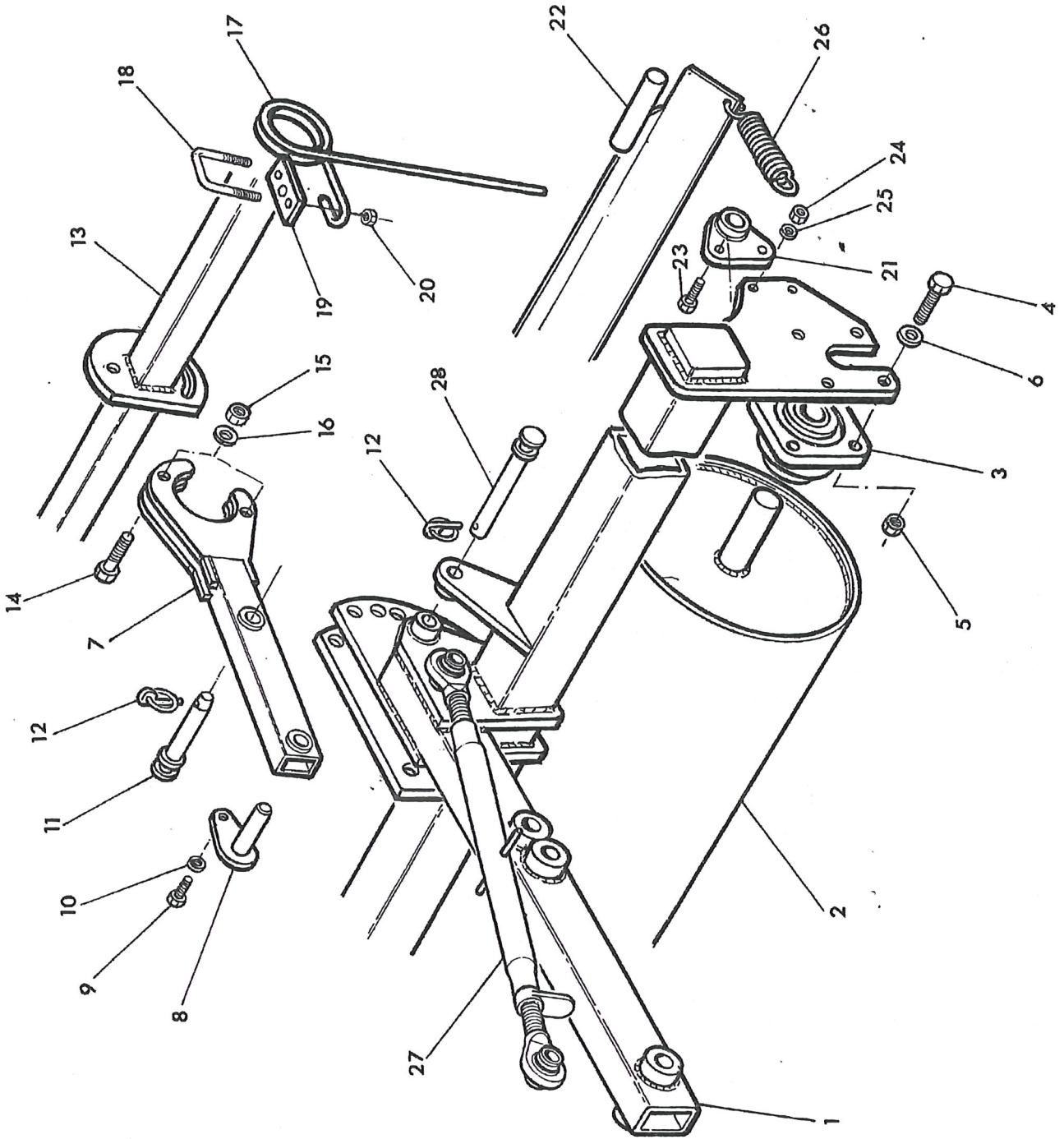
Fig. Ref	Part number	Item description
	5769998	
	<del>5770004</del>	Rotor gearbox assembly
1	5771418 <sup>9</sup>	Gear set
2	5771403 <sup>BD</sup>	21 spline Input shaft
3	4777600	Bearing
4	4771601	Bearing
5	4771602	Bearing
6	4771124	Seal
7	4771500	Seal
8	5771405	Gasket
9	5771422	Collet
10	2771108	Circlip
11	2771129	Circlip
12	5771402	Casing
13	5771401	Lid
14	NA	See Blade carrier
15	5771402	Cover
16	4771503	End seal
17	5771415	Oil plug
18	2771600	Circlip
19	5771416	Dipstick
20	5771410	Washer
21	5771409	Nut
22	2770477	Split pin
23	5771407	Screw
24	2771408	Washer





**Parts list - P.t.o. shaft assembly**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
	5770088	Complete P.t.o. shaft - Shearbolt protection 6 spline
	5770088A	Complete P.t.o. shaft - Shearbolt protection 21 spline
	5770060	Complete P.t.o. shaft - Knocking clutch protection 21 spline 1000rpm
	5770060A	Complete P.t.o. shaft - Knocking clutch protection 6 spline 1000rpm
	5770061	Complete P.t.o. shaft - Knocking clutch protection 6 spline 540rpm
1	5771332	Complete guard
2	5771020	Retaining chain
3	5771299	Quick release yoke 6 spline
	5771298	Quick release yoke 21 spline
4	5771023	Push button assembly
5	5771301	Cross journal
6	5770095	Outer tube yoke
7	5772277	Outer tube
8	2770542	Roll pin
9	5771308	Outer guard bearing
10	5772278	Inner tube
11	5770096	Inner tube yoke
12	2770542	Roll pin
13	5771313	Inner guard bearing
15	5770154	Yoke c/w shearbolt protection
18	2770412	Shear bolt nut
19	2770578	Shear bolt
20	5770153	Knocking clutch 540rpm - 2500Nm
	5770152	Knocking clutch 1000rpm - 1700Nm

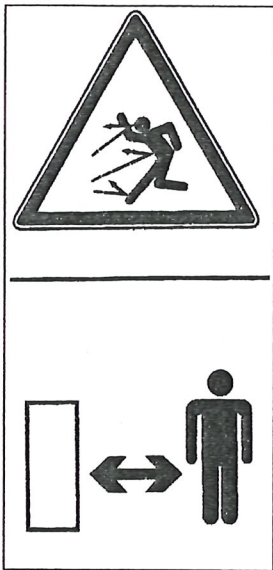


**Roller (Optional) Assembly**

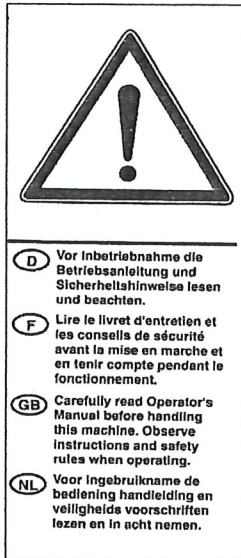
**Parts list - Roller assembly (Optional)**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1	1770023	Roller frame
2	1770024	Rear roller
3	4770873	Bearing
4	2770450	Bolt
5	2770417	Lock nut
6	2770436	Flat washer
7	1770026	Tine bar adjuster arm
8	1777226	Pin
9	2770444	Bolt
10	2770436	Washer
11	6310202	Pin
12	6310206	Lynch pin
13	1770027	Tine bar
14	2770450	Bolt
15	2770417	Nut
16	2770444	Washer
17	7770721	Finger tine
18	2770566	U bolt
19	1770029	Plate
20	2770438	Nut
21	1770028	Scraper bar retainer bar
22	1770025	Scraper bar
23	2772284	Bolt
24	2770412	Nut
25	2770434	Washer
26	6310209	Spring
27	6310193	Top link
28	6310202A	Pin

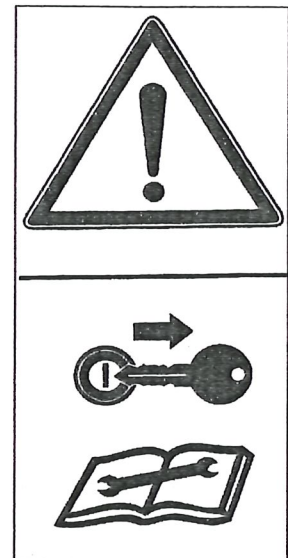




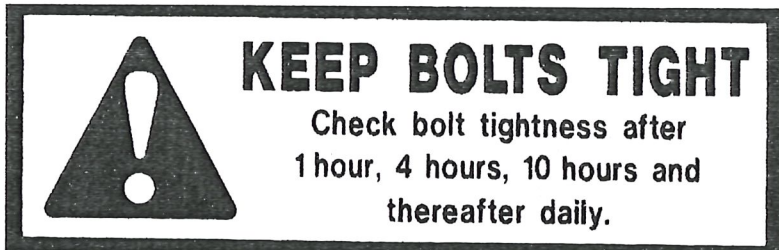
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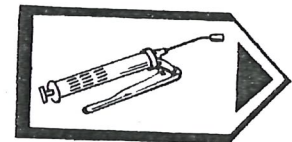
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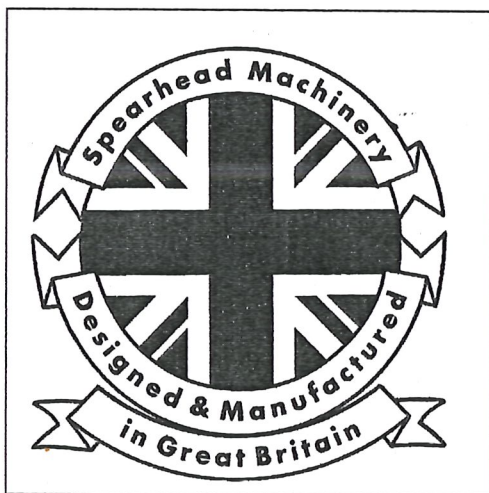
3



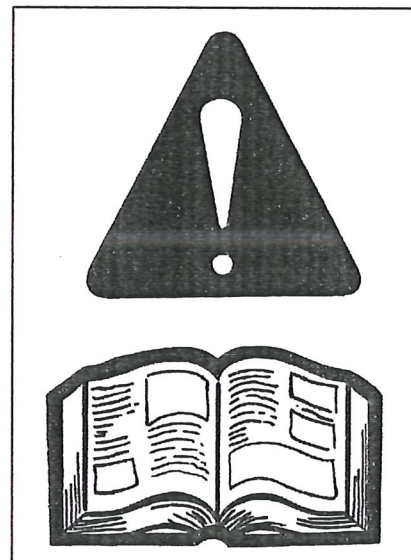
4



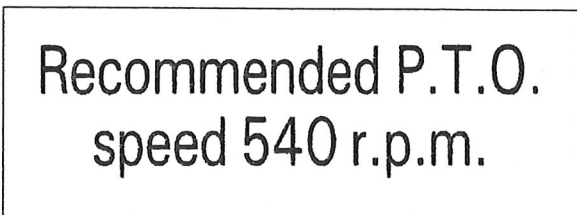
5



6



7



8



9

**Stickers Assembly**

**Parts list - Stickers**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1	8770357	"Keep safe distance when machine is running" sticker
2	8770363	"Read manual" sticker
3	8770358	"Shut off engine remove key" sticker
4	8770306	"Keep bolt tight" sticker
5	8770322	"Grease point" sticker
6	8770307	"Manufactured in Great Britain" sticker
7	8770340	"Read manual" sticker
8	8770305	"Recommended P.t.o. speed 450r.p.m." sticker
9	8770323	"Recommended P.t.o. speed 1000r.p.m." sticker

# Spearhead

## EC declaration of conformity, conforming to EEC directive 89/392/EEC

We, Spearhead Machinery Ltd, Pershore Trading Estate, Pershore, Worcestershire WR10 2DD declare under our sole responsibility that the

product .....

product code .....

serial no. & date .....

type .....

Manufactured by the above company complies with the required provisions of the directive 89/392/EEC, and AMD 91/368/EEC, AMD 93/44/EEC, AMD 93/68/EEC and conforms with European norm. BSEN 292; Part 1: 1991 safety of machinery - Terminology, methodology; Part 2; 1991 Safety of machinery - Technical specifications and other national standards associated with its design and constructions as listed in the Technical File.

Signed .....

on behalf of Spearhead Machinery Ltd

Status .....

Date .....



### The Spearhead Warranty

Spearhead warrants that the Spearhead machine referred to in the Warranty Registration Form will be free from defects in materials and workmanship for a period of 12 months from the date of sale. This warranty does not affect your statutory rights, but merely adds to them. Should you have a problem within 12 months from the date of sale please contact your original Spearhead dealer, or Spearhead's Service Department. Any part found to be defective during this period will be replaced or repaired, at Spearhead's discretion, by the dealer or a Spearhead Service Engineer.

### Spearhead Warranty Conditions

- 1 The Warranty Registration Form must be completed and returned to Spearhead within 30 days of the date of sale.
- 2 This warranty does not cover defects arising from fair wear and tear, wilful damage, negligence, misuse, abnormal working conditions, use in competition, failure to follow Spearhead's instructions (oral or written, including all instructions and recommendation made in the Operator's Manual) or alteration or repair of the machinery without Spear head's approval.
- 3 The machinery must have been serviced in accordance with the Operator's Manual and the Service Log must have been kept up to date and made available to the dealer should service, repair or warranty work be undertaken.
- 4 This warranty does not cover claims in respect of wearing parts such as blades, flails, paintwork, tyres, belts, hydraulic hoses, bearings, bushes, linkage pins, top links, ball ends unless there is a manufacturing or material defect or the cost of normal servicing items such as oils and lubricants.
- 5 This warranty does not cover any expenses or losses incurred whilst the machinery is out of use for warranty repairs or parts replacement.
- 6 This warranty does not extend to parts, materials or equipment not manufactured by Spearhead, for which the Buyer shall only be entitled to the benefit of any such warranty or guarantee given by the manufacturer to Spearhead. Only genuine Spearhead replacement parts will be allowable for warranty claims.
- 7 All parts replaced by Spearhead under warranty become the property of Spearhead and must be returned to Spearhead if Spearhead so request. Such parts may only be disposed of after a warranty claim has been accepted and processed by Spearhead.
- 8 Spearhead is not liable under this warranty for any repairs carried out without Spearhead's written consent or without Spearhead being afforded a reasonable opportunity to inspect the machinery the subject of the warranty claim. Spearhead's written consent must, therefore, be obtained before any repairs are carried out or parts replaced. Use of non-Spearhead parts automatically invalidates the Spearhead Warranty. Failed components must not be dismantled except as specifically authorised by Spearhead and dismantling of any components without authorisation from Spearhead will invalidate this warranty.
- 9 All warranty claims must be submitted to Spearhead on Spearhead Warranty Claim Forms within 30 days of completion of warranty work.

### **Extended Warranty**

As an extension to the 12 month warranty set out above, Spearhead will provide an additional 12 month warranty cover subject to the Spearhead Warranty Conditions above and the Extended Warranty Conditions below.

#### **Extended Warranty Conditions**

- 1 The extended warranty applies to hydraulic pumps, motors, valves and gearboxes only. It does not apply to other parts, to consumables such as lubricants, seals or filters or to labour charges.
- 2 The machinery must have had an annual service carried out by an Authorised Spearhead Dealer or a Spearhead Service Engineer within 1 month of the first anniversary of the date of sale and the Service Report form must have been completed and stamped by the servicing dealer or Spearhead Service Engineer and sent to Spearhead within 14 days after the first annual service.
- 3 The extended warranty does not cover costs of transportation of the machinery to or from the dealer or Spearhead or the call out costs or travelling expenses of on-site visits.

#### **Transfer of Warranty**

The Spearhead warranty may be transferred to a subsequent owner of the machinery (for use within the UK) for the balance of the warranty period subject to all of the warranty conditions and provided that the Change of Owner form is completed and sent to Spearhead within 14 days of change of ownership.

**Spearhead reserves the right to make alterations and improvements to any machinery without notification and without obligation to do so.**