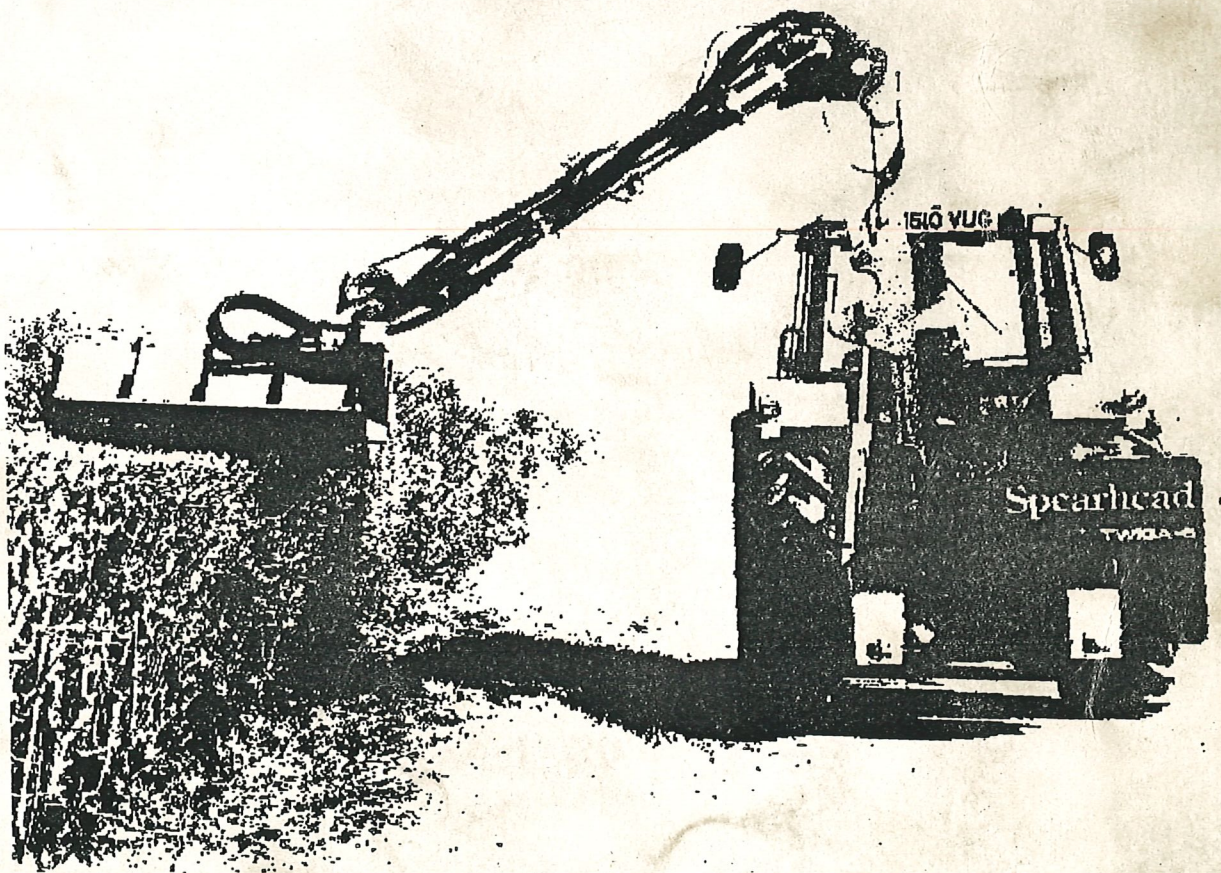


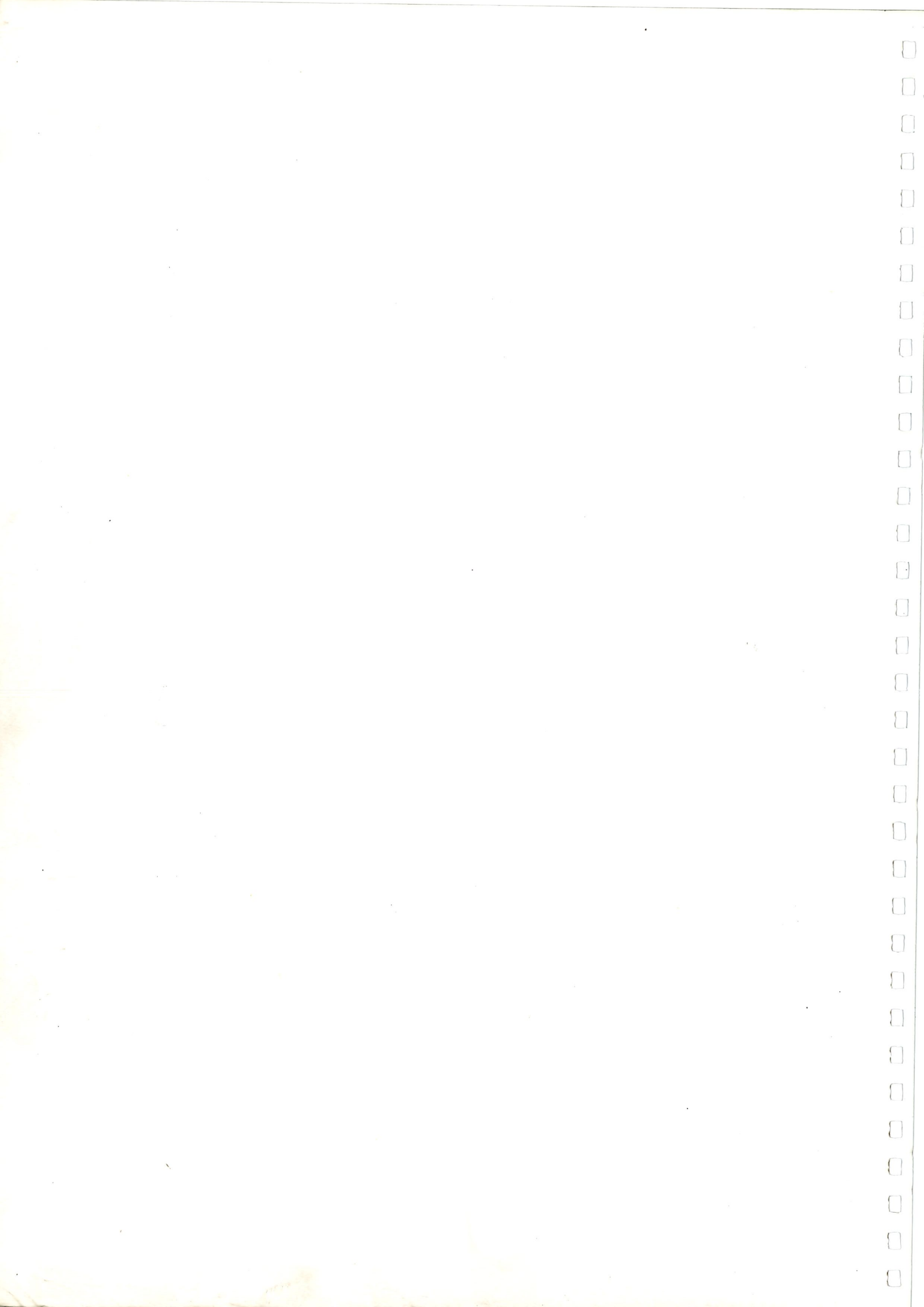
# TWIGA-6

reach mower

Operator's manual & parts lists



Spearhead



# Spearhead

**TWIGA-6**

**Operator's manual  
& parts lists**

*Third edition*

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## **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.

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



## **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 flail head.
- Always ensure all cab 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 the head to the ground, stopping the tractor engine and applying the tractor parking brake.
- Before leaving the tractor cab always ensure that the flail head is firmly on the ground, no weight is on the machine's hydraulics 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 flails to ensure they are not damaged, cracked or missing.
- Never operate with flails missing.
- Always inspect work area for wire, steel posts, large stones and other dangerous materials and remove before starting work.
- 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.



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### **EC Certificate**



## Introduction

The Twiga-6 is a very robust high capacity reach mower that is easy to operate and maintain. To ensure trouble-free operation this manual should be carefully studied.

The term Left and Right hand applies to the machine when coupled to the tractor and viewed from the rear, this also applies to the tractor.

## Tractor requirements

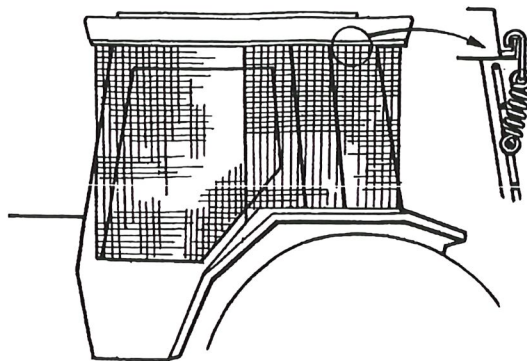
- Spearhead strongly recommend 90–120hp tractor with a substantial rear linkage.
- Minimum tractor weight including ballast must be 4500kg
- Linkage category 2.
- Pt.o. must be independent live drive to enable continuous pto drive even when tractor clutch is pressed down.
- Before hitching ensure position control is selected. Do not attempt to hitch in draft control.
- Set wheel width as wide as possible.
- Ballast weight is to be fitted within tractor manufacturer's recommended requirements.
- Check chains and stabilisers are in good working order to hold the machine firmly.

## Operators guard

Use only tractors with safety glass windows, if windows are not laminated safety glass, polycarbonate glazing must be fitted between operator and cab meshing.

Shape mesh to cover all windows that the driver will look through to view flail head in any operating position.

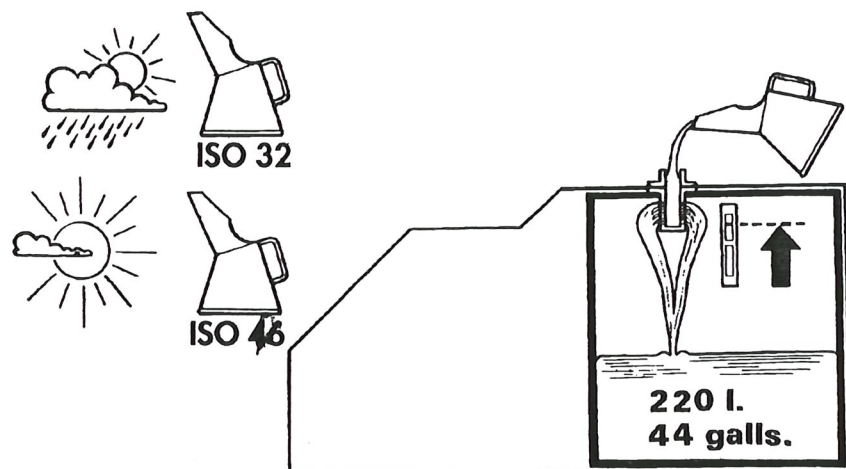
Meshing can be retained by springs and clips supplied, but it is the operators responsibility to ensure guarding is firmly in place.



## Oil requirements

Fill the tank to 25mm below top of sight guage with approximately 220 litres of *B.P, Energol HLP-HM46* or equivalent oil.. Do not over fill.

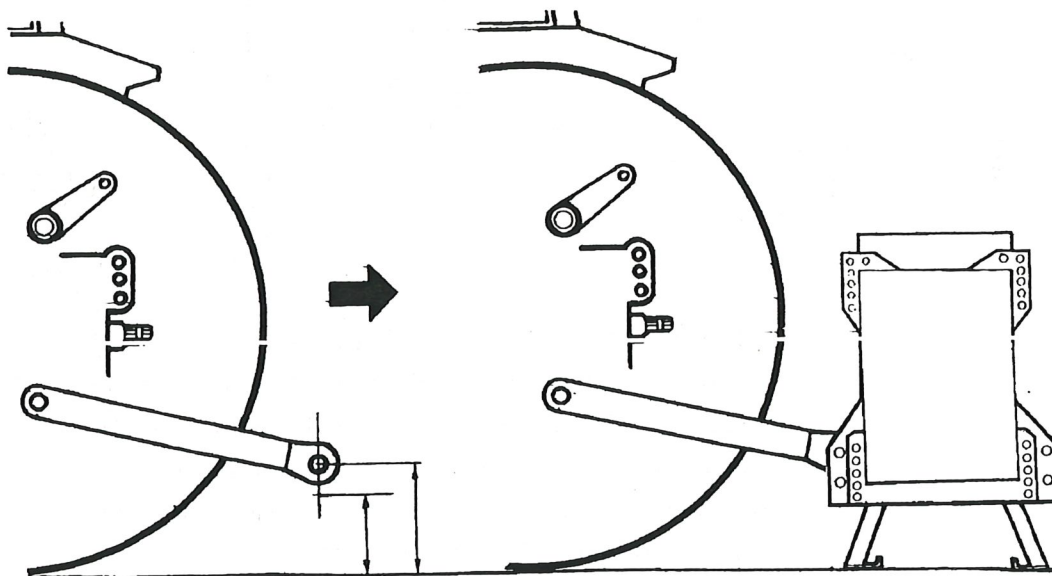
Check gearbox oil level is to centre level plug, replenish with E.P. 90.



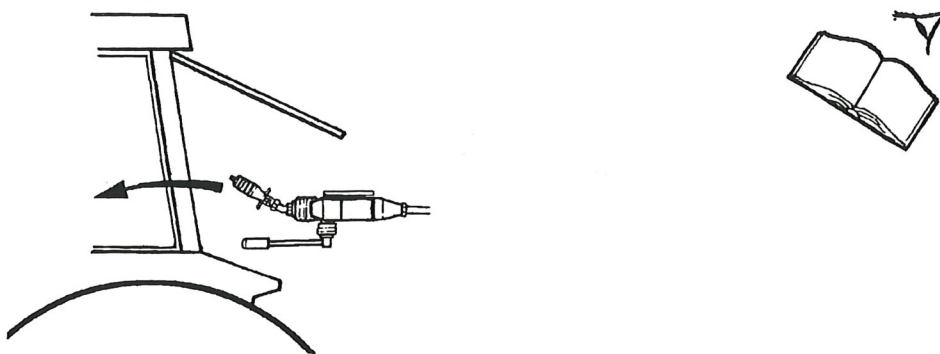
## Attaching to Tractor

Always be sure to select a level firm surface, such as concrete before attaching to the tractor.

### 1 Reverse tractor and attach lower link arms

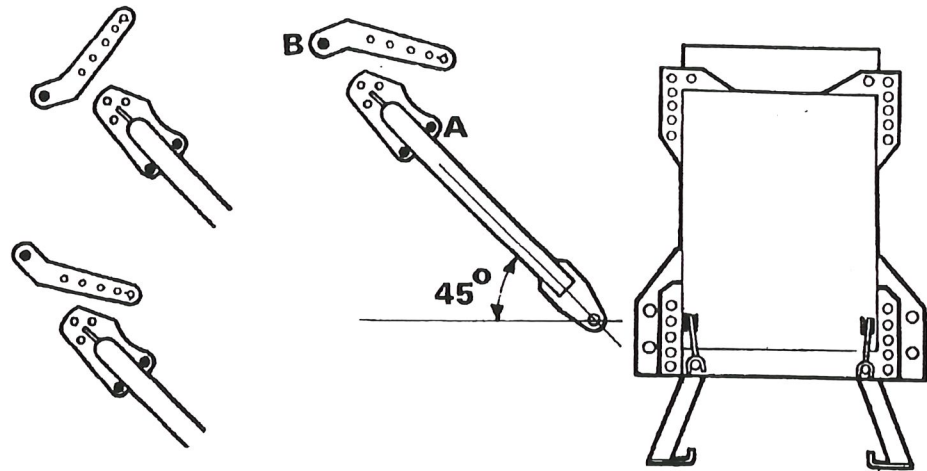


### 2 Fitting control unit to cab

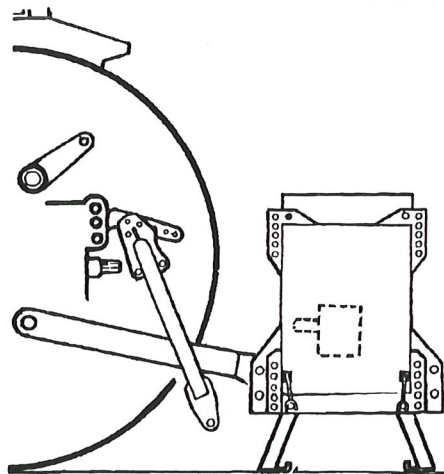


Spearhead strongly recommend mounting the control unit to the seat in place of the arm rest to the head side of the tractor. Modification and additional bracket will possibly need to be fabricated. Consult your local dealer for advice.

An electronic 12 volt supply cable will be needed from a fused source which is controlled by the tractor's ignition key.

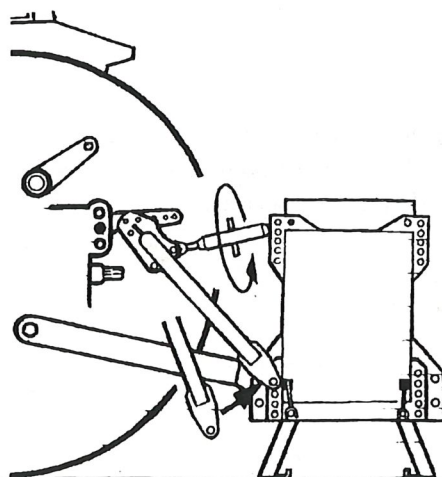
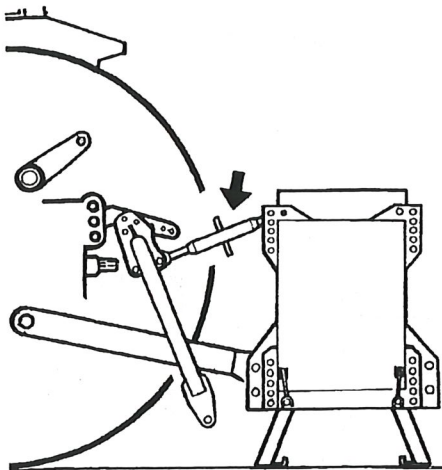
**3 Fit stabilizer**

Offer up the stabiliser such that it lies forward at approximately  $45^\circ$  with hole **A** facing uppermost. Bolt the tongue in such a position that the  $45^\circ$  angle is retained, the stabiliser does not foul any part of the tractor and hole **A** is below hole **B** when line is taken to the chosen top line mounting hole on the machine.

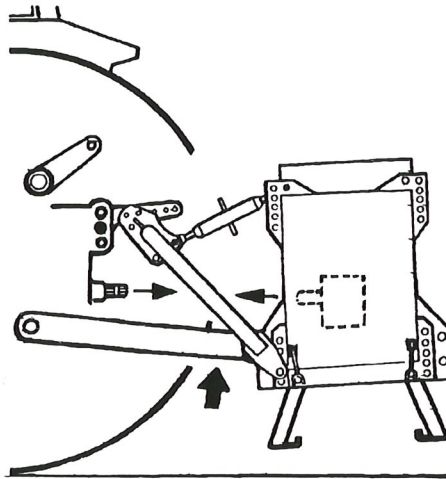
**4 Fit stabiliser assembly into the tractor's top hitch.**

**5 Fit top link.**

Shorten top link until stabiliser jaws pivot rearward bridging the mounting lugs and contacting the tank.



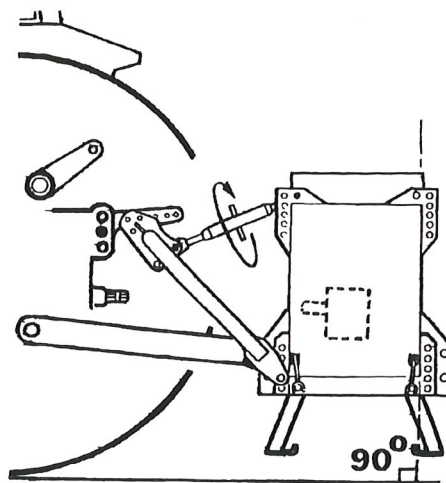
Raise the machine on the tractor's linkage and align the stabiliser jaw holes with the suitable hole in the tank lugs which allows the tractor pto shaft and gearbox input shaft to be nearly in line. Preferably select as low as possible for increased stability. Fit both lower stabiliser retaining pins.



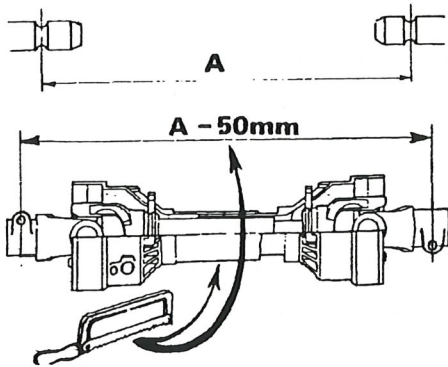
**WARNING**— When operating the tractor's or machine's controls do so only when seated in the tractor cab. Do not allow anyone to stand on or amongst linkage for any reason during these operations

Lower linkage and allow all the weight of the machine to be carried by the stabiliser frame.

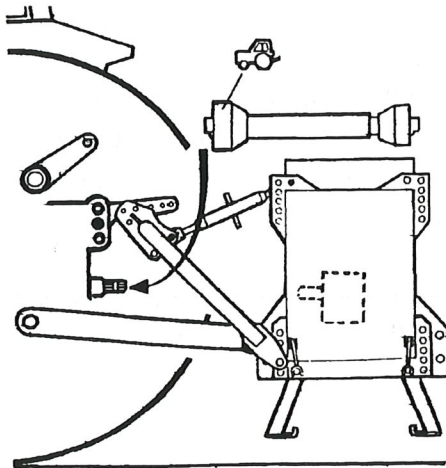
Fully tighten the tractor's stabiliser and check chains.



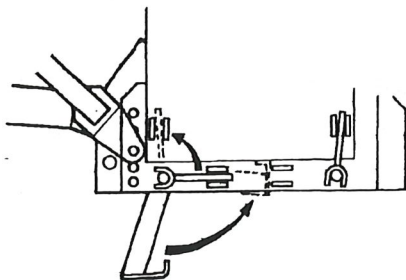
**6 Check p.t.o. is cut to sufficient length**



**7 Fit p.t.o.**



**8 Fold up parking stands and fully secure.**



## Running up

Engage p.t.o. into 540r.p.m. and run machine at half revs allowing oil to circulate for about 5 minutes before operating arms.

Re-check oil level, – check against oil leaks.

Operate the arms through the full amount of travel, check all movements are functioning correctly.

Place flail head to ground in a safe position and with tractor revs low, select 'start' position for the flail motor. Once rotor is settled, slowly increase revs of p.t.o. to 350 and run for a further 5 minutes. Slowly reduce revs and then disengage p.t.o..

Check all hoses for kinks, pinching, chafing and leaks. It is recommended to liberally apply grease at top and bottom of main arm where hoses pass through to reduce any risk of chafing. Re-check oil level.



**WARNING** – The rotor will take a long time to stop. Never leave the cab until pto is disengaged, engine stopped and rotor has stopped spinning.

## Removing from tractor

Select a level firm site such as a concreted surface.

Lower stands and secure. Place flail head on ground approximately 2m out from machine main tank assembly.

Disengage p.t.o.

Slightly raise lower links arm with great care only to carry sufficient weight to remove both stabiliser lower retaining pins.

Lower all weight securely onto parking stands.

Stop engine, ensure all weight is off the tractor and machine hydraulics by operating the levers in all directions.

Remove top link, lower link pins, p.t.o. shaft and cab control unit from cab.

Drive tractor away.



## Operation

**Care and attention.** Adhere to the following points.

### Cavitation

Cavitation (suction of air) is the main reason for pump and motor failure.

#### *To avoid cavitation:*

**Never run out of oil.**

**Never run a cold machine straight up to speed.**

**Never increase and decrease engine speed quickly.**

**Never stop or start rotor at high engine speed.**

**Never transport with pto in gear.**

**Never operate at 1000 r.p.m. p.t.o.**

**Regularly check condition of suction line pipe.**

**Check pump fittings to be tight.**

**If any strange noise occurs from the hydraulics, stop immediately and investigate.**

Remember pump and motor warranty is limited to replacement due to faulty materials or manufacturer. Cavitation is very easily detected on pump inspection.

**Warranty will not be considered if fault is due to misuse.**

Never drive the tractor with arm out stretched (except when cutting). When moving at work always first retract arms. Transport with care. Metal fatigue is always caused by careless transportation. If ground is uneven or bumpy **slow down.**

Read operator's manual and be fully familiar with all operational and safety procedures.

Practice in open space without rotor running until familiar with controls. **Take care working the head close to the tractor as it may be possible to strike the tractor.**

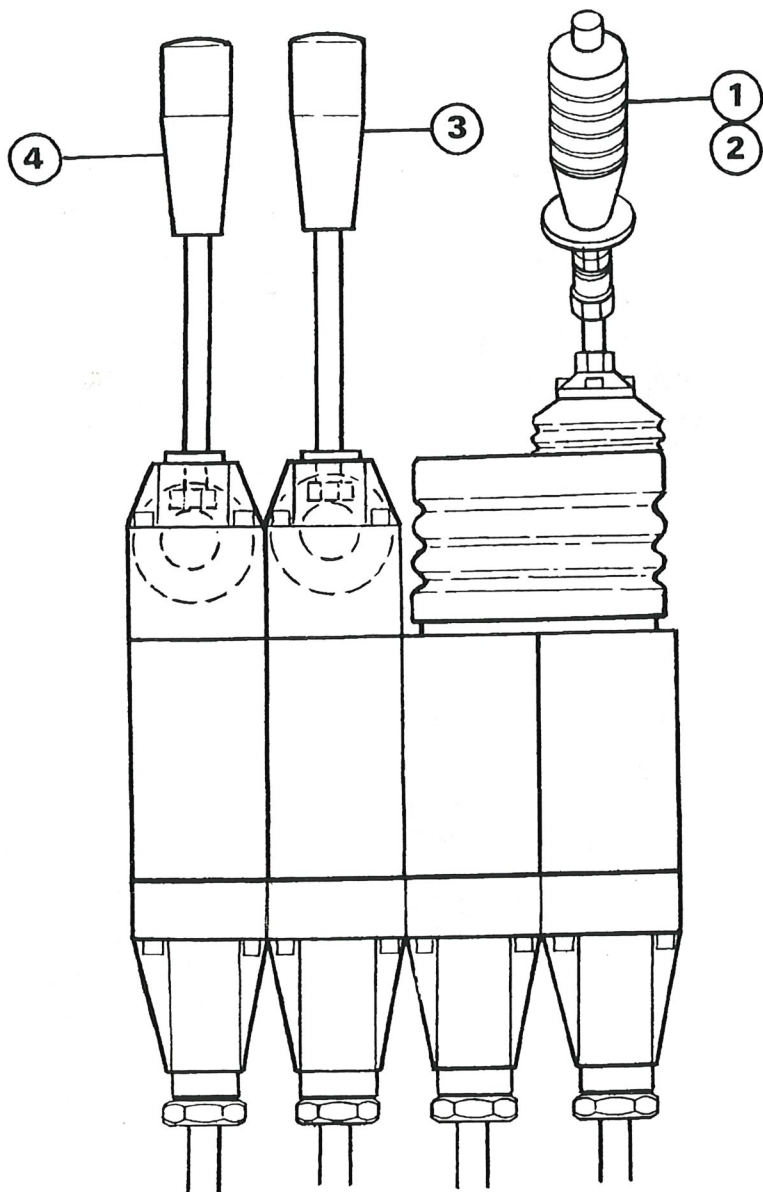


**PLEASE READ**

## Variable forward reach

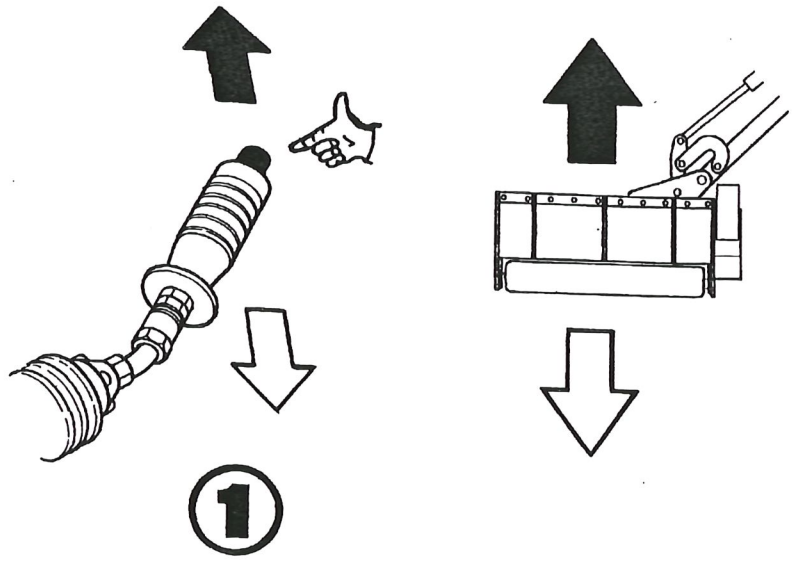
This useful feature provides extra visibility particularly when topping a hedge, or verge mowing. Before operating the arm, ensure the head is one metre off the ground and at least two metres away from the tractor. To operate the arm with the joystick controls simultaneously hold back the switch on the control panel and press the button at the end of the hand piece and then push the lever forward. This will push the head forward. Likewise with the button pressed and the lever gently pulled back, the head will retract backwards. When operating the cutting head close to the tractor extreme care must be taken to avoid contact with the cab. **Never attempt** transport position without first fully retracting the variable forward reach arm

### Machine controls

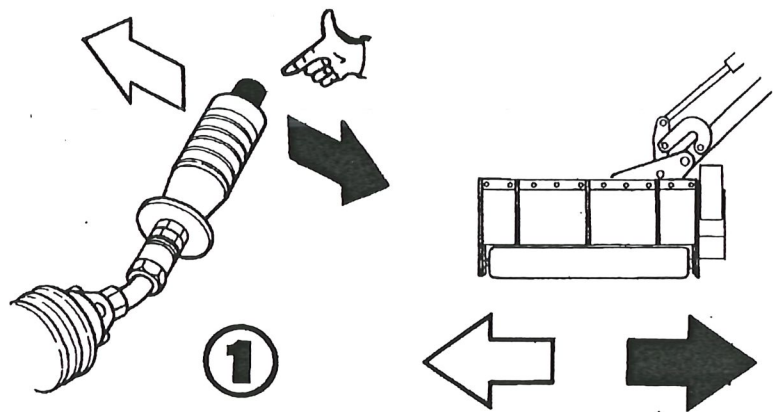


- 1 Arm control
- 2 Head control (Button pressed)
- 3 Base plate control
- 4 Rotor on/off

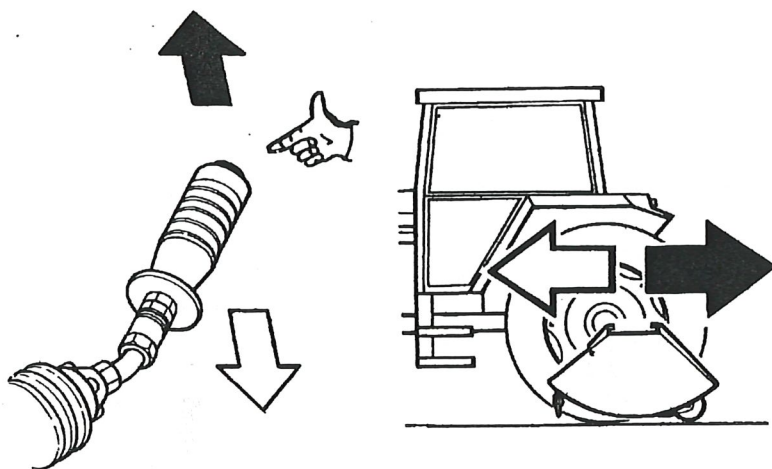
**Main arm up and down**



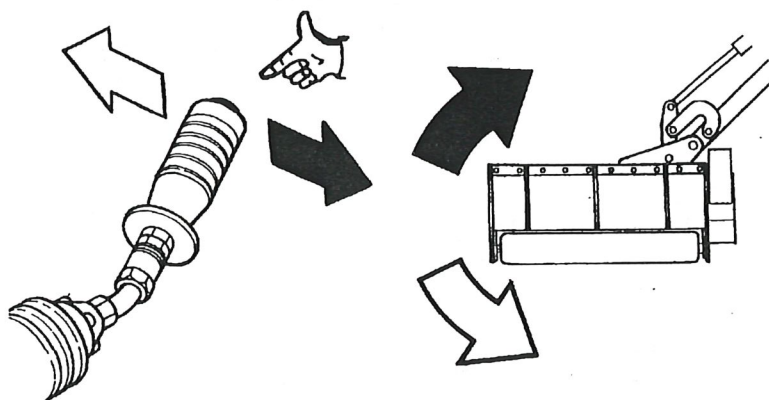
**Dipper arm in and out**

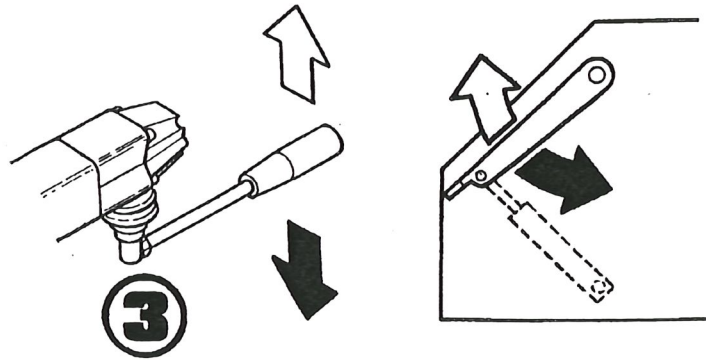
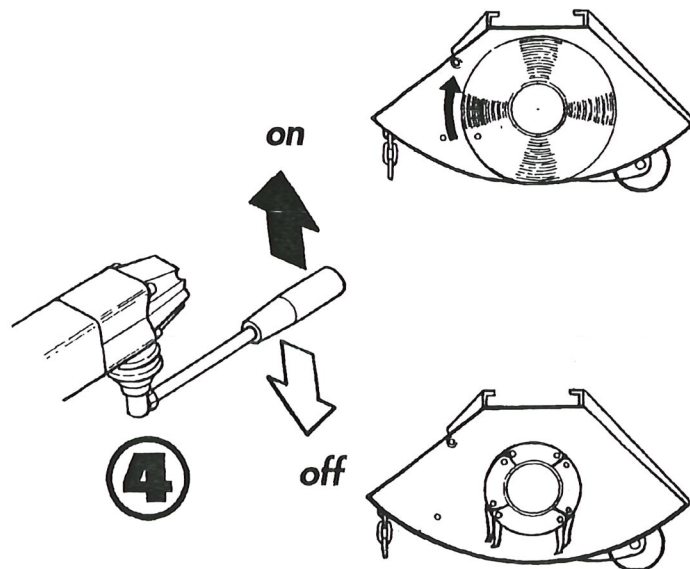


Head control



2



**Base plate control****Rotor on/off****Engaging head drive**

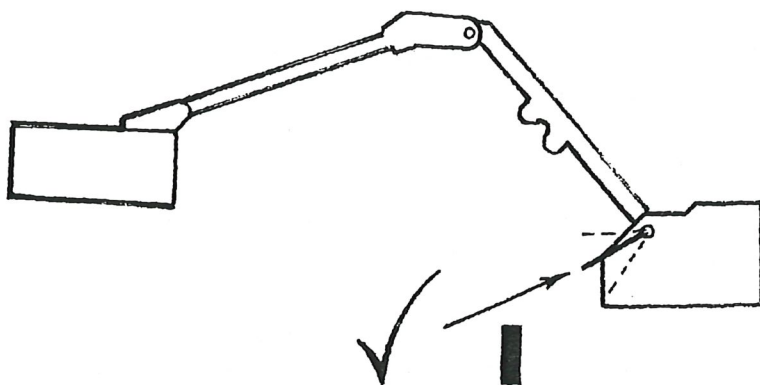
- Select 540r.p.m. p.t.o. and run with low engine revs.
- With flail head in safe position move Rotor control lever (4) to 'on'.
- After 10 seconds slowly increase engine revs to obtain correct pto speed, 540r.p.m..
- Never attempt to start rotor while under load.

- **Cold start** – it is important not to run at full speed with cold oil. Run at half speed for 5 minutes to allow oil to warm up.

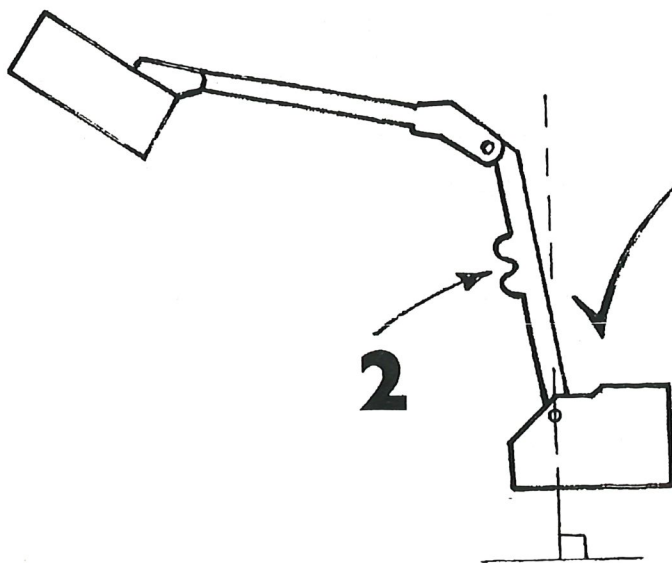
### Disengage head drive

- Position head in safe position i.e. horizontally at ground level.
- Slowly decrease engine revs to a fast idle.
- Move Rotor control lever (4, page 14) to 'off'.
- Never increase or decrease p.t.o. speed rapidly, this could seriously damage pumps and motor.

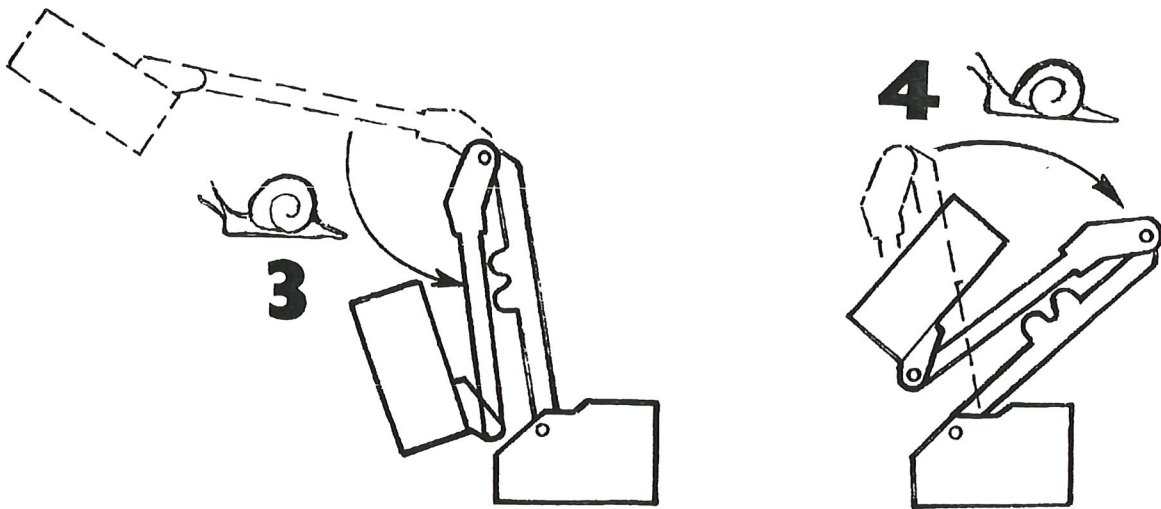
### Moving into transport position



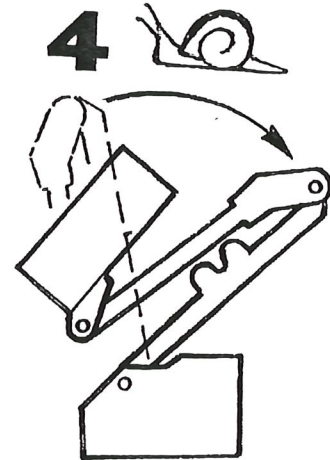
- 1 Disengage head motor drive. Position base plate at half travel.**



- 2 Set main arm a few degrees before vertical**



**3 Slowly operate dipper arm towards stop on main arm until fully closed**

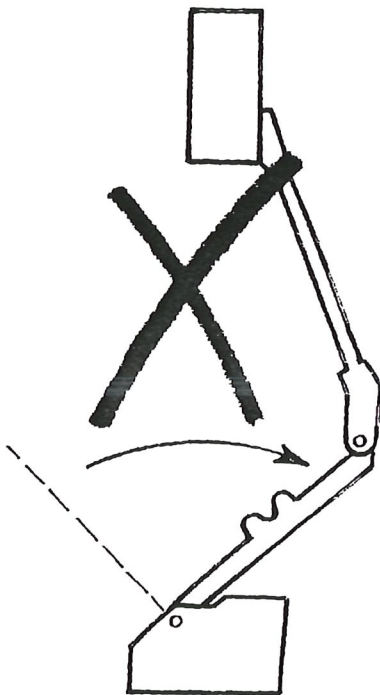


**4 Fully raise base plate, main arm, and slowly close head ram.**

Finally disengage p.t.o. drive.

When in transit the pto must be fully disengaged. Always check lights are in good working order.

**WARNING** – Never transport with pto still in gear. This will very quickly increase oil temperature and cause oil to froth. Oil overheating and air in oil are the two main reasons for pump and motor failure.



**To avoid severely damaging the dipper arm, never fully close main arm and drop dipper arm quickly.**

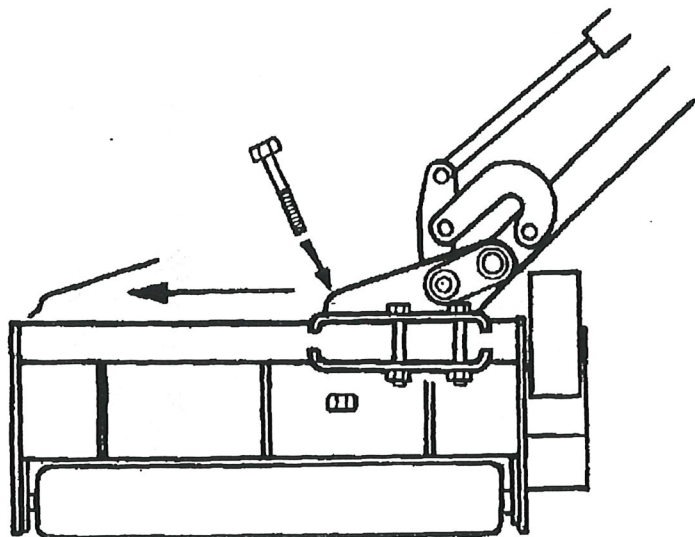
#### Transport to work position

- Ensure motor valve lever is off, engage pto at 540r.p.m..
- Position head 45° to the dipper arm – lever (2, page 13)
- Position base plate at halfway position – lever (3, page 14)
- Lower main lift ram only until main arm is vertical – lever (1, page 12).



- Extend head outward - lever (1, page 12)
- Position head till horizontal, just above ground level.

### Sliding head

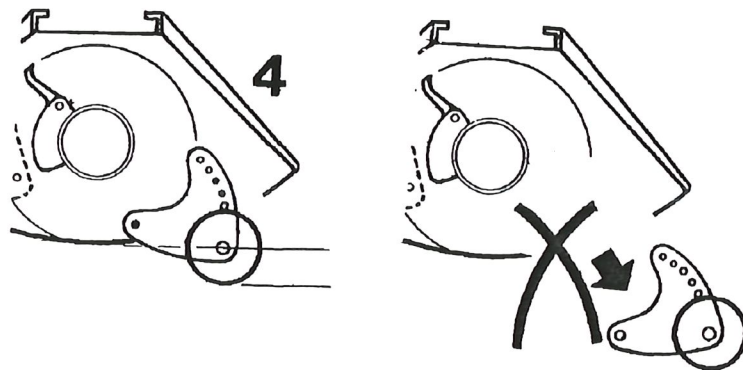
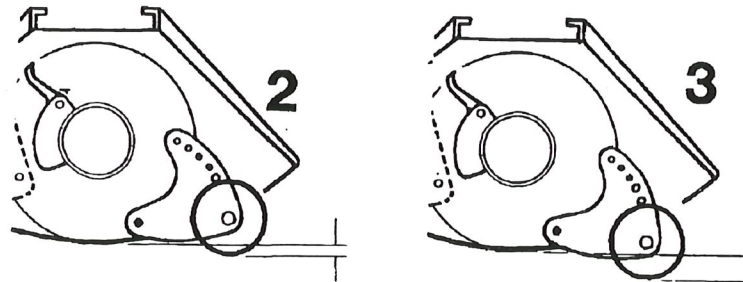
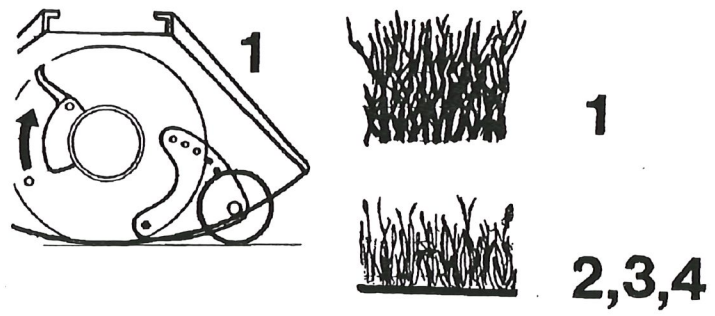


The head mounting bracket is retained by six bolts, once the bolts are removed the head may be altered in relation to the pivoting bracket.

With the head mounting bracket in a central position it will maximise head control by putting less strain on the hydraulic crowd ram. Central mounting is particularly recommended when verge mowing, specially if angle float is to be used properly.

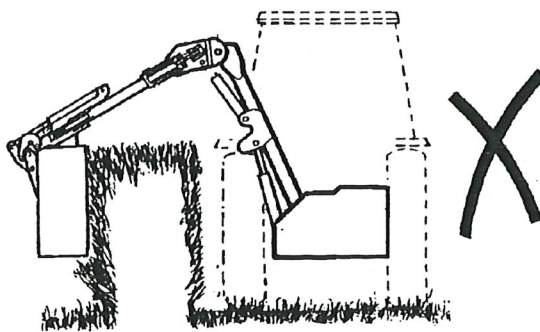
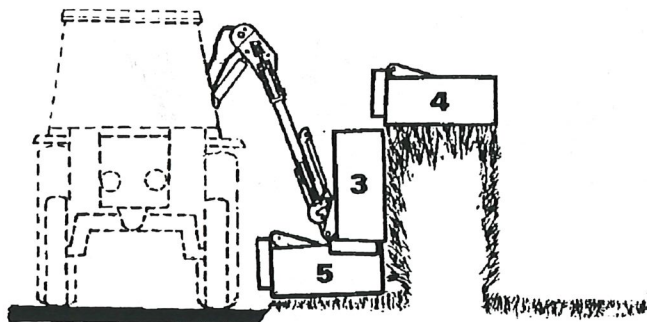
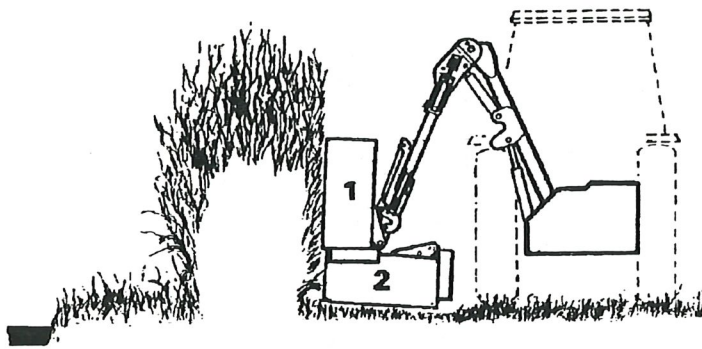
When the head is slid furthest away from the tractor, it has the advantage of maximising both reach and head revolving angle – up to 240°, although head control may be less sensitive.

The standard dual purpose head has another advantage of being able to mount the bracket in front or behind the dipper arm. In front, this will give a more forward position, however with the bracket mount behind the arm, it will allow for a fully compact transport position without the increased risk of hitting the cab when in the forward position.

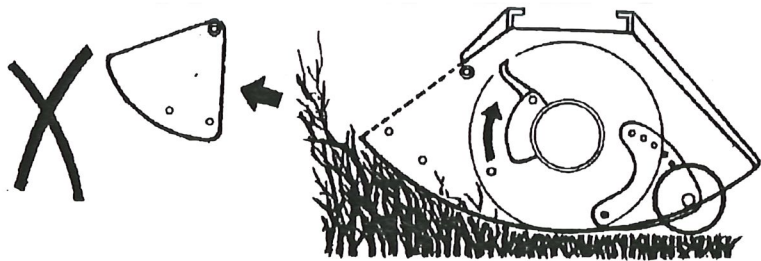
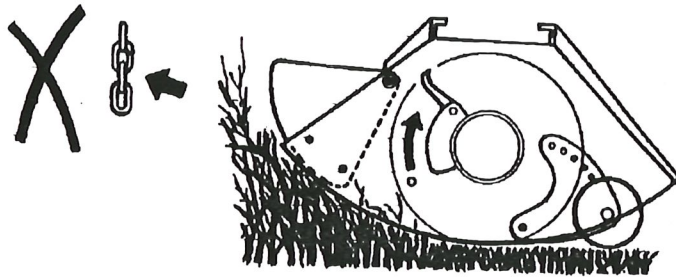
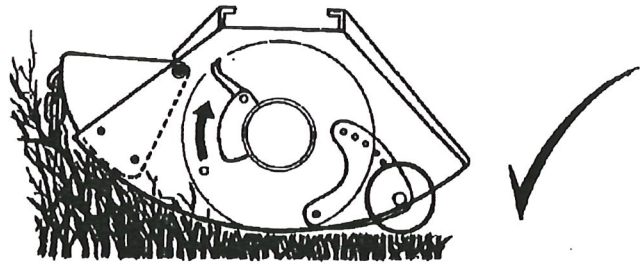
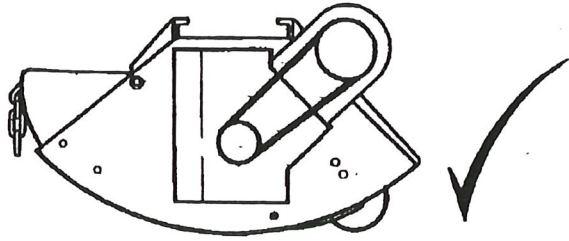


**Flail head**

Roller must be set to suit the type of mowing conditions, i.e. Hedge cutting as position 1 or verge mowing as positions 2, 3, or 4.(see above).

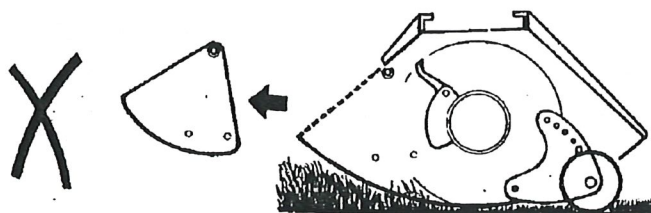
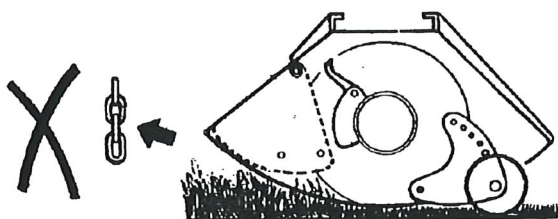
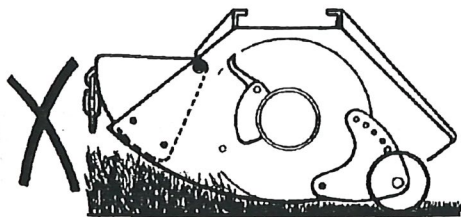
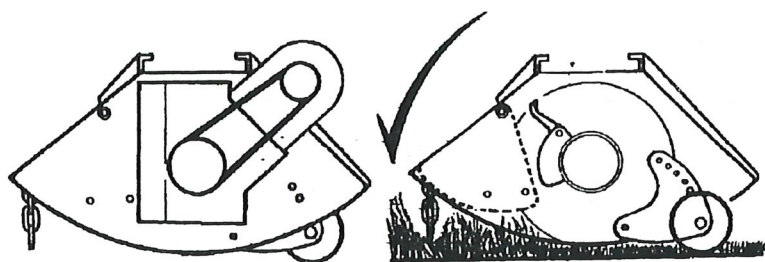


**Cutting sequence**



### Hedge cutting

- Rear roller must be fully raised. (position 1 page 18)
- Rotor speed 3000 r.p.m. – smaller pulley on rotor shaft. Front hood raised position to allow a better bite' at the more ridged growth.
- Never operate with chains or hood missing.

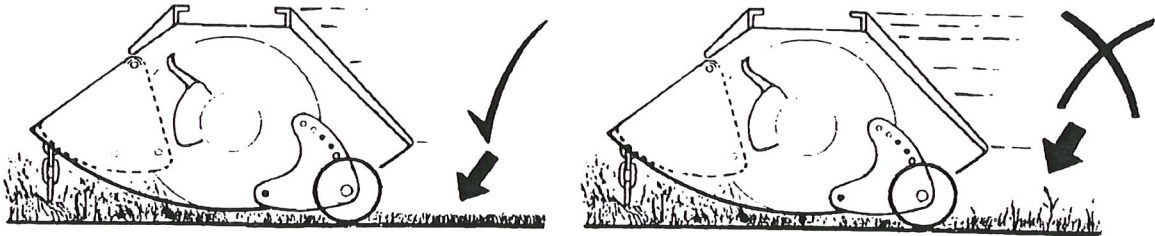


### Verge mowing

- Rear roller must be in lowered position (position 2, 3, or 4, page 18)
- Never remove rear roller
- Rotor speed reduced to 2400 r.p.m. –larger pulley on rotor shaft.
- Front hood in lowered position, reduced risk of flying debris and generates better suction.
- Never operate with chains or hood missing.

### Tractor forward speed

A too high forward speed will impair the finish, leaving it looking ragged, a slower forward speed increases the standard of the finish.



### Head float

This is only to be used in verge mowing set up, which will reduce weight on rear roller allowing head to move easily, following the ground contours.

To select head float first lower cutting head to the ground, disengage p.t.o. and stop tractor engine. Directly under gearbox base plate is situated the float on/off tap. Turn tap in line for 'on' float. Main Lift control lever (1) should be operated to take a proportion of the flail head weight off the rear roller. This is important, as too little weight on the rear roller will leave uncut area's of grass, while with too much weight on the roller it will cause scalping in places and increase flail wear and damage.

It is important to achieve the correct weight transfer with the base plate remaining in central position. Adjust Base-plate control lever (3) to re-align base plate.

As the head is pushed further out more weight will be applied to the accumulators causing the base plate to drop, reset with control lever. It is important to have the base plate in the central position allowing sufficient travel in either direction.

### Wire trap

- This is located under the front hood. It must not be interfered with in any way.
- Any wire must be removed immediately
- Select Rotor control lever to 'off' and wait until rotor stops spinning. Lower rotor to ground, dis-engaged pto and stop engine before leaving cab.

**WARNING** – Wire is extremely dangerous and must be avoided at all times. Inspect work area before commencing, removing all loose wire and clearly marking fixed wire.

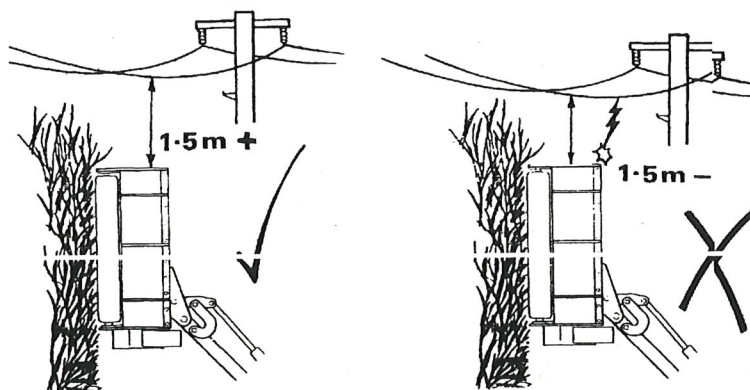


### Important

Never attempt to operate the machine while going backwards. It will immediately damage the arms and possibly the flail head. If variable forward reach is fitted, reversing the machine when in work will bend the adjusting tie-bar. Remember, before selecting reverse gear always lift the flail head out of work and retract the arm towards the tractor.

### High voltage cables

**WARNING** – Always be very aware of overhead cables. Between poles wires can be well within reach of the machine. If in any doubt of the danger, consult your local electricity company regarding a safe procedure for work



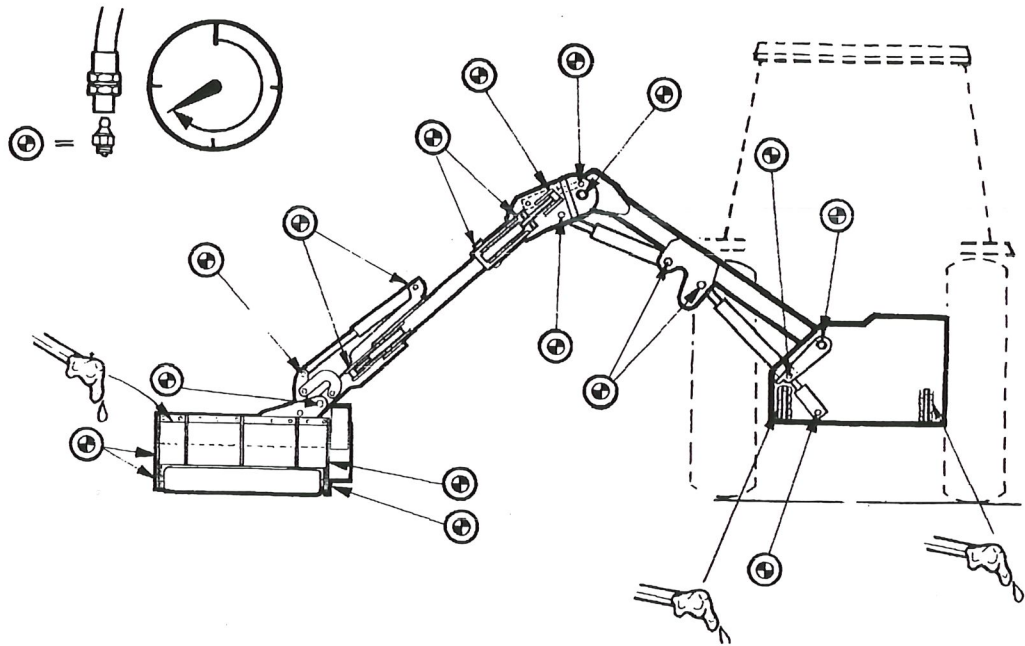
## Servicing and maintenance

### Gearbox

- Before first use check gearbox oil level, thereafter check every 8 hours.
- After the first 50 hours drain and replace the gearbox oil, thereafter annually. Replace with EP90.
- Regularly inspect gearbox seals.
- Check gearbox and pump bolts are fully tightened.

### Greasing

Daily grease all points shown in the diagram below



### Pto

- Dismantle, clean the input drive shaft sliding surfaces and re-grease, failure to do this will result in serious damage to the gearbox.



### Oil supply

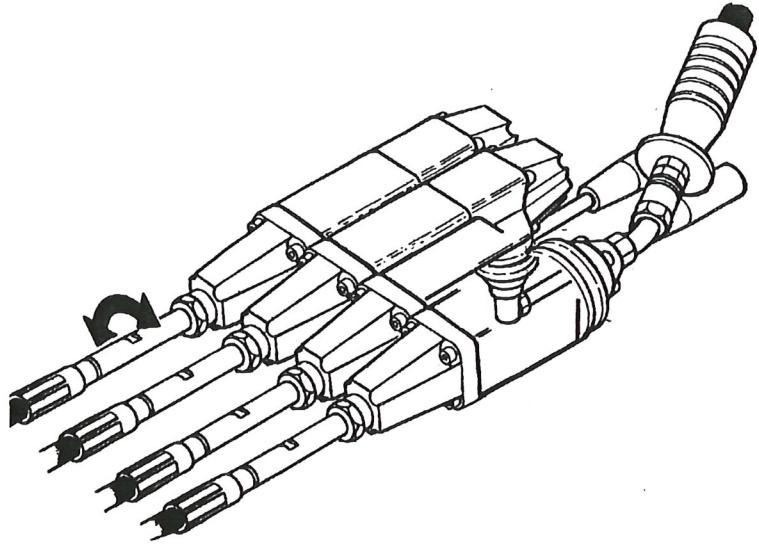
- It is a good practice to constantly keep an eye on the tank level gauge, (this can be seen from the tractor seat) as a pipe burst could empty the tank within minutes.
- A pump or motor, starved of oil will be damaged beyond repair.
- Daily before starting up check oil level in reservoir.
- Replace oil if signs of contamination occur i.e. darkening in colour, thickening, or water contamination (oil will look white in colour).
- Contamination can be reduced by:
  - Thoroughly cleaning around reservoir cap before removing
  - Using clean container when replenishing the system.
  - Regularly servicing the filtration system.
  - Storing machine under cover.
  - Never allowing oil level to fall low.

### Filtration maintenance

The machine is protected by two suction strainers and a low pressure full flow return line filter.

- 1 The two suction filters are permanently fixed in the reservoir tank. Should symptoms of pump cavitation or spongy operation occur the tank must be drained and thoroughly cleaned and dried before refilling with clean oil.
- 2 The filter element should be replaced after the first 50 hours and thereafter at 350 hour intervals, or when green indicator turns to red. It is most important to replace filter within these intervals because once blocked oil will by-pass filter element unfiltered.

**Cables**

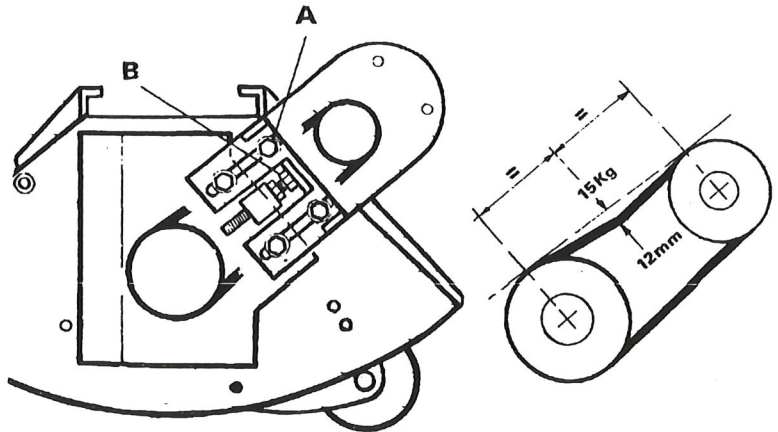


- Care should be taken during installation and operation to ensure the cables are not trapped or kinked.
- Correctly adjusted cables will position the lever with equal amount of travel in either direction from neutral.
- Do not over grease cables, one pump once a year is sufficient. Any more grease will cause the spools to 'hydraulic' and lock up.

**Flail head (Daily)**

- Check the condition of drive belt ensuring they are aligned and properly tensioned to avoid any unnecessary belt wear.

**Tensioning Drive belts**  
 Slacken A (4 bolts 19mm socket spanner) lengthen B until correct belt tension is obtained. Tighten locknut and the 4 motor plate bolts.



- It is imperative that the grub screws are checked to be tight on the bearing and taper locks. (Once bedded in Loctite may prove useful).
- Check there is no wrapping of string, plastic, grass or other debris on rotor shaft and rear roller bearing.
- Check the condition of flails and ensure all retaining bolts are tight. When flails are replaced care must be taken to maintain balance of rotor shaft.
- Flail retaining bolt and nut torque setting is 100lbs/ft.
- Never operate with any flails missing. This will cause severe vibration and lead to rapid bearing wear and quickly cause the head to crack.
- Blunt flails leave an untidy finish and absorb excessive power, when re-sharpening always wear protective clothing and goggles.
- When flails are showing severe wear, damage or cracking, they must be replaced immediately. Never attempt to weld the flails this will make them very brittle this extremely dangerous. Do not take risks with the cutting flails, if in doubt replace.
- When replacing flails always replace bolts, nuts, washers and bushes for new.
- Regularly check all rotor bearing bolts and hydraulic motor returning bolts are tight.

### Hydraulic hoses

- Carefully check condition of all hoses during routine service paying particular attention to chafed outer casing. Securing wrap with waterproof adhesive tape to stop the metal braid from rusting.
- Hoses with damaged metal braid should be replaced.
- When replacing hoses quote number stamped on fitting at one end. Spearhead hydraulic system works at very high pressure, when replacing hoses use only genuine hoses, a burst hose could be very dangerous.

- When replacing hoses use two spanners to slacken and tighten to avoid twisting fittings.
- Avoid twisting hoses. At main access points to top and bottom of main arm, liberally apply grease to avoid chafing.
- Hose warranty is limited to replacement of hoses due to faulty materials or manufacture. Warranty will not be considered on hoses damaged by chafing, abrasion, cuts or pinching while in work, or to damaged threads due to over tightening.

### **Pins and bushes**

All main pivot points and hydraulic rams are furnished with replaceable bushes. If there are any signs of wear these must be replaced. All bushes are available from Spearhead Service Department.

**Remember regular maintenance will greatly increase the life of the machine.**

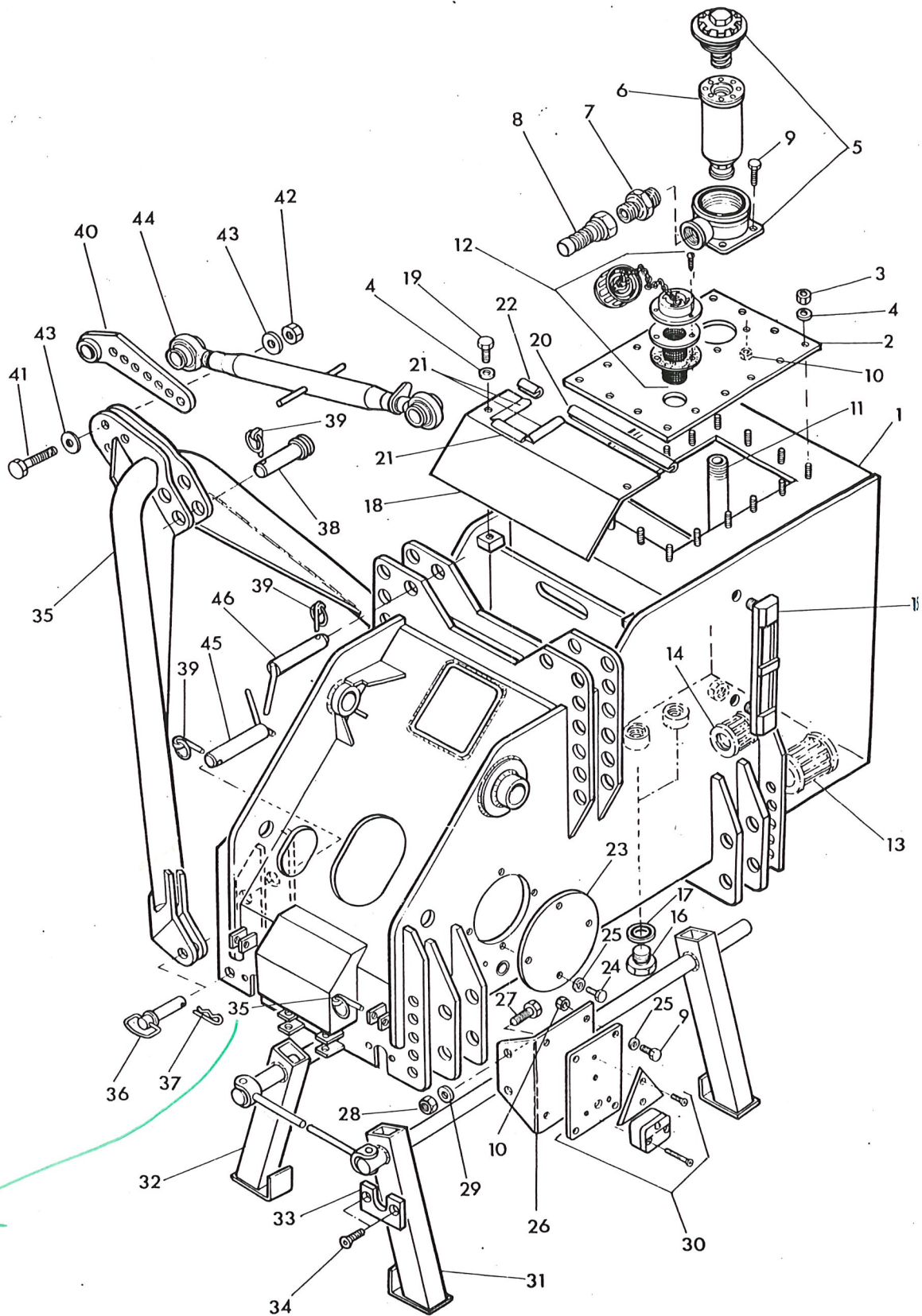
### **Storage**

Before storing away, thoroughly wash the machine removing all traces of grass and dirt. Grease all grease points until fresh grease shows. Slacken rotor drive belts. It is important where possible to store undercover to protect against rain and sunlight. Always ensure a firm level surface. Control levers must be wrapped in plastic sheeting and taped over to keep dry.

Great care must be taken when washing. Do not use high pressure hoses, do not hold the water-jet close to the paintwork. Do not use steam cleaners and be sure to remove all detergents to avoid and discolouration or damage to paintwork.

Remember the TWIGA-6 is a well engineered machine that with care and attention, will give many years 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 540r.p.m. at the pto.

<b>Servicing checklist</b> <i>(see relevant sections for full details)</i>	
<b>Regularly</b>	<p>Gearbox: Inspect seals, check bolts for tightness (p.24).</p> <p>Pump: check bolts for tightness (p.24).</p> <p>Flail head: check condition of drive belts, check bearing and taper lock grub screws for tightness, check condition of flails, check retaining bolts for tightness, check rotor bearing bolts for tightness (p.26).</p> <p>Hoses: check condition of hoses especially for chafing (p.27)</p> <p>Pins and bushes (p.28)</p>
<b>Every 8 hours</b>	<p>Check gearbox oil level (p.24)</p> <p>Grease p.t.o. shaft (p. 24)</p>
<b>Daily</b>	<p>Grease all points as shown in diagram p.24</p> <p>Check oil level in reservoir (p.25)</p>
<b>Every 350 hours</b>	<p>Replace return line filter element (p.25)</p>
<b>Every year</b>	<p>Drain and replace gearbox oil with EP90 (p.24)</p> <p>Grease cable (p.26)</p>



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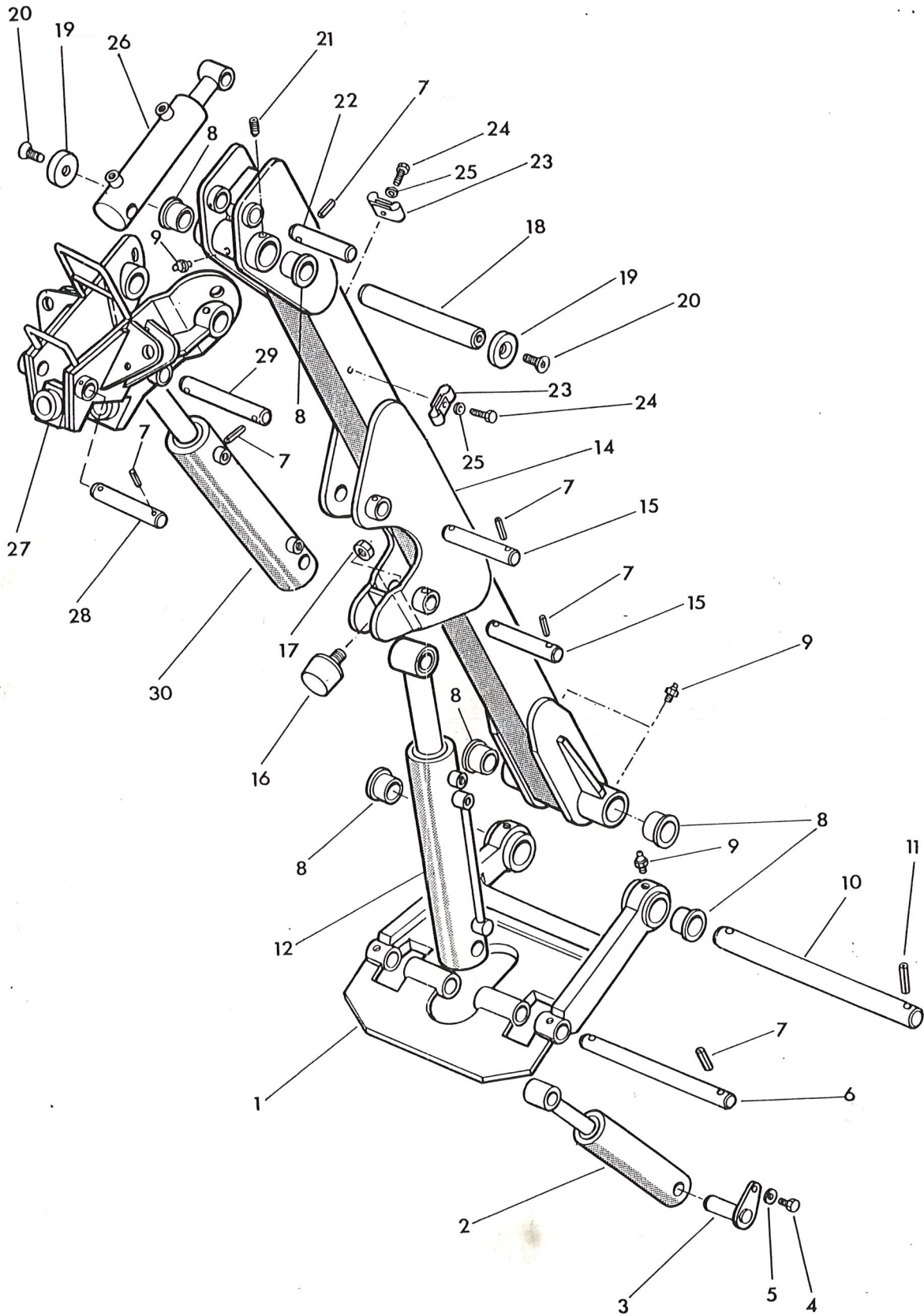
## Parts list - Main tank and frame assembly

Fig. Ref	Part number	Item description
1.	1777100	Main Tank
2.	1777103	Tank lid
3.	2770438	Nut
4.	2770434	Flat washer
5.	3900051A	Filter Housing (Pre '96)
	3900051	Filter Housing (Post '96)
6.	3900056	Filter cartridge (Pre '96)
	3900060	Filter element (Post '96)
7.	3260075	Bonded Seal
8.	3761002	Male hose insert
9.	2770396	Bolt
10.	2770412	Nyloc Nut
11.	1777136	Filter extension pipe (Pre '96)
	3710112	Filter extension pip (Post '96)
12.	3900050	Tank filler
13.	3900053	1 1/2" Strainer
14.	3900052	3/4" Suction strainer
15.	3900054	5" Tank level guage
	3900044	10" Tank level guage
16.	3460106	Plug
17.	3260073	Bonded Seal
18.	1777105	Valve inspection plate
19.	2770418	Bolt
20.	8550125	Rubber strip per/metre
21.	8550125	Rubber strip per/metre
22.	8550125	Rubber strip per/metre
23.	1777106	PTO blanking plate
24.	2770402	Bolt
25.	2770433	Spring washer
26.	1777139	Rear light bracket
27.	2770472	Bolt
28.	2770447	Nyloc Nut
29.	2770454	Flat washer
30.	8770638	Rear light kit
31.	1777101	Leg assembly L.H.
32.	1777101R	Leg assembly R.H.
33.	1777102	Leg retaining bracket
34.	2770483	Counter sunk screw
35.	1777107	Stabiliser frame
36.	6310215	Pin with handle c/w retaining pin
37.	N/A	
38.	6310203	Top link pin
39.	6310206	Lynch pin
40.	1777108	Stabiliser tongue
41.	2770550	Bolt
42.	2770409	Nyloc nut
43.	2770517	Flat washer
44.	6310198	Cat 2 top link
45.	6310208	Lower link pin

TANK FITTINGS

1/2" M INSERT 3761006 x 1  
 3/4" M x 3/4" M ADAPTOR 3360090 x 1

SPEARHEAD TWIGA-6 PARTS LIST

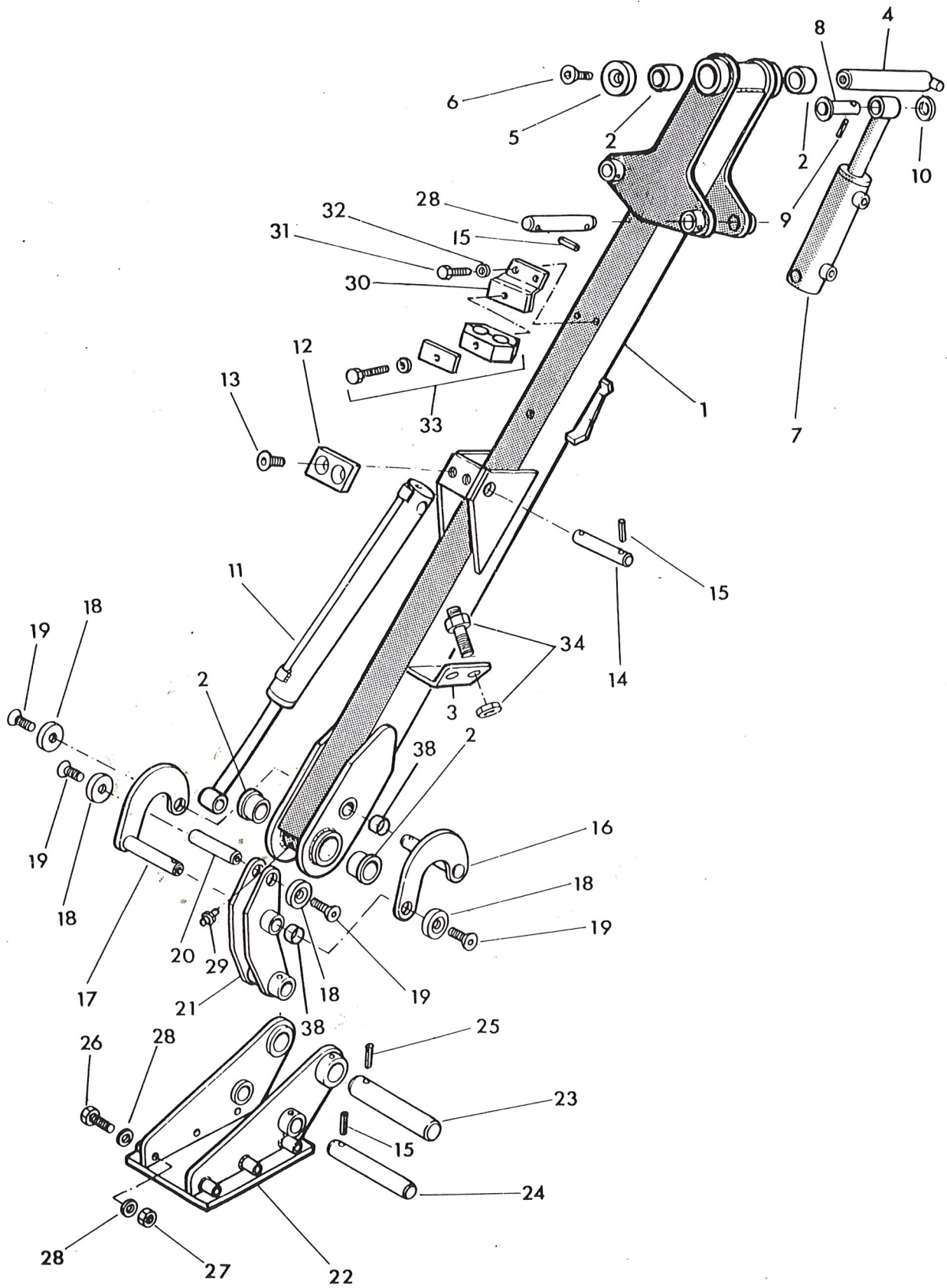




## Parts list - Main arm Twiga-6 and Twiga-7

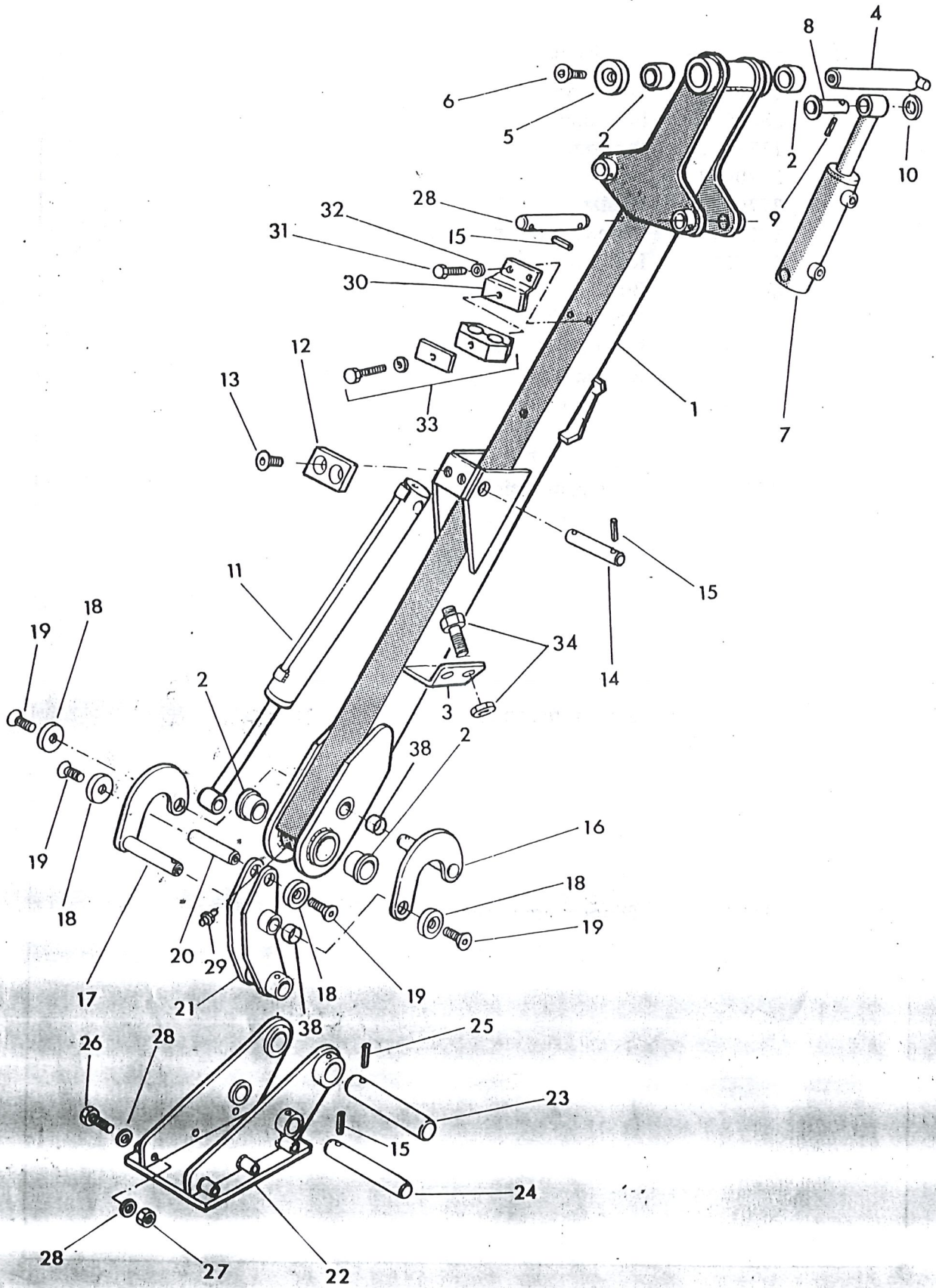
Fig. Ref	Part number	Item description
1.	1777110	Base plate
2.	3580642	Base plate ram
3.	1777151	Pear pin
4.	2770420	Bolt
5.	2770436	Washer
6.	1777216	Main ram rod dipper base pin
7.	2770514	Roll pin
8.	4600128	Bush
9.	2770467	Grease nipple
10.	1777210	Main arm bottom pin
11.	2770516	Roll pin
12.	3580648	Main ram
13.	N/A	
14.	1777111	Main arm Twiga-6
	1777111L	Main arm Twiga-7
15.	1777215	Main ram - bore pin 500
16.	8770644	Bump stop
17.	2770447	Nut
18.	1777211	Main arm top pin
19.	1777207	Pin retaining washer
20.	2770398	Screw
21.	2770555	Grub screw
22.	1777220	Slave ram rod pin
23.	3580108	P clamp
24.	2770418	Bolt
25.	2770434	Flat washer
26.	3580645	Slave ram
27.	1777112	Main knuckle
28.	1777221	Slave ram base pin
29.	1777217	Dipper ram rod pin
30.	3580649	Dipper ram 460

SPEARHEAD TWIGA-6 PARTS LIST





SPEARHEAD TWIGA-6 PARTS LIST



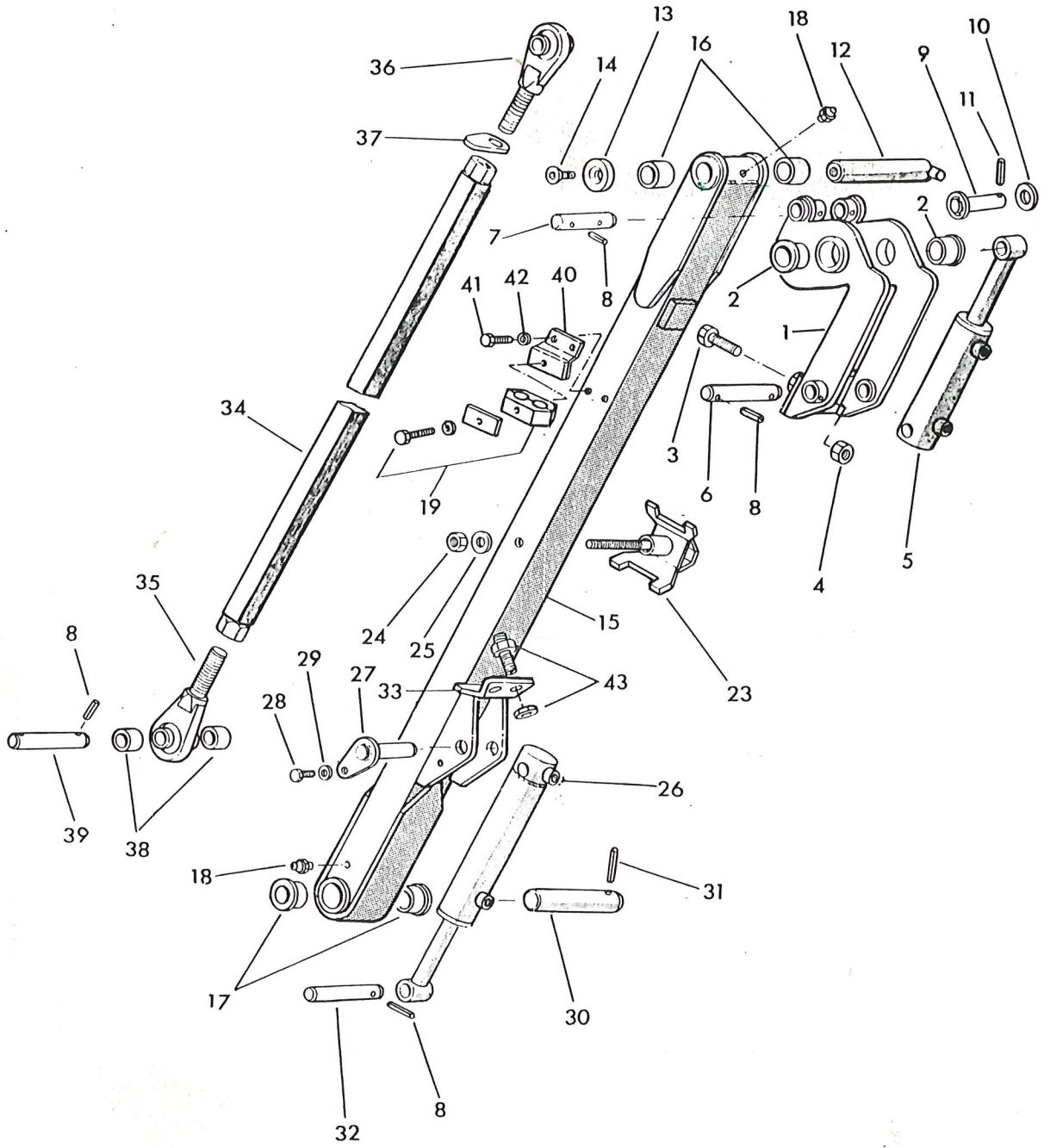
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## Parts list - Dipper arm Twiga-6 and Twiga-7

Fig. Ref	Part number	Item description
1.	1777138	Dipper arm Twiga-6 Std
	1777114L	Dipper arm Twiga-7
2.	4600127	Bush
3.	1777069	Bulkhead bracket
4.	1777212	Dipper arm top pin
5.	1777208	Pin retaining washer
6.	2770398	Bolt
7.	3580643	Break back ram
8.	1777150	Pin
9.	2770475	Roll pin
10.	2770552	Flat washer
11.	3580644	Head crowd ram
12.	8770643	Bump stop
13.	2770422	Bolt
14.	1777278	Head ram base pin
15.	2770514	Roll pin
16.	1777117R	Curved link R.H.
17.	1777117L	Curved link L.H.
18.	1777209	Pin retaining washer
19.	2770398	Bolt
20.	1777226	Crowd link pin
21.	1777116	Head crowd link bracket
22.	1777118	Head slide bracket
23.	1777214	Head pivot pin
24.	1777219	Head crowd pin
25.	2770479	Roll pin
26.	2770381	Bolt
27.	2770417	Nut
28.	2770436	Washer
29.	2770467	Grease nipple
30.	1777041	Hose clamp support bracket
31.	2770431	Bolt
32.	2770432	Washer
33.	3580108	Double hose clamp
34.	3460115	Bulk head union
	2770355	"U" Bolt
	2770417	Nut
38	4600124	Bush

SPEARHEAD TWIGA-6 PARTS LIST

(1)



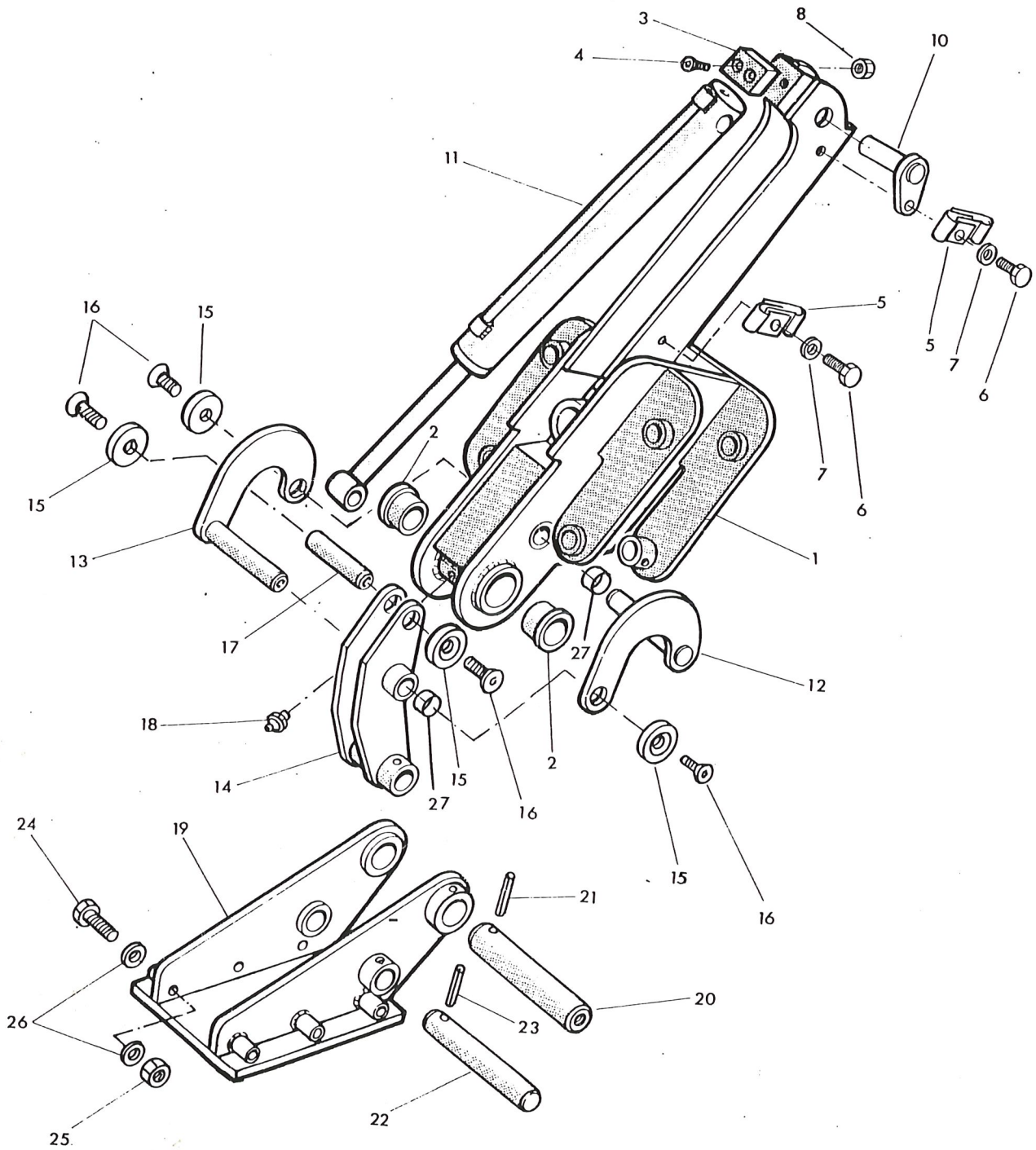
## Parts list – Dipper arm Twiga-6 Variable Forward Reach

Fig. Ref	Part number	Item description
1.	1777113	Break back plate assembly
2.	4600126	Bush
3.	2770551	Bolt
4.	2770460	Nut
5.	3580643	Break back ram
6.	1777227	Break back ram base pin
7.	1777222	Tie bar top pin
8.	2770514	Roll pin
9.	1777150	Washer pin
10.	2770552	Flat washer
11.	2770475	Roll pin
12.	1777212	Dipper arm top pin
13.	1777208	Pin retaining washer
14.	2770398	Screw
15.	1777114	Forward reach dipper arm
16.	4600125	Sleeve
17.	4600127	Bush
18.	2770467	Grease nipple
19.	3580108	Double pipe clamp
20./21./22.	N/A	
23.	1777137	Bump plate
24.	2770447	Nut
25.	2770454	Washer
26.	3580646	Variable forward reach ram
27.	1777152	Pear pin
28.	2770484	Bolt
29.	2770436	Washer
30.	1777213	Dipper arm bottom pin
31.	2770479	Roll pin
32.	1777224	Variable forward reach ram rod pin
33.	1777069	Bulk head bracket
34.	1777135	Tie bar
35.	6770638	Link end L.H.
36.	6770631	Link end R.H.
37.	6310216	Locking collar
38.	1777228	Spacer
39.	1777223	Tie bar bottom pin
40.	1777041	Hose clamp support bracket
41.	2770431	Set screw
42.	2770432	Flat washer
43.	3460115	Bulk head union

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SPEARHEAD TWIGA-6 PARTS LIST





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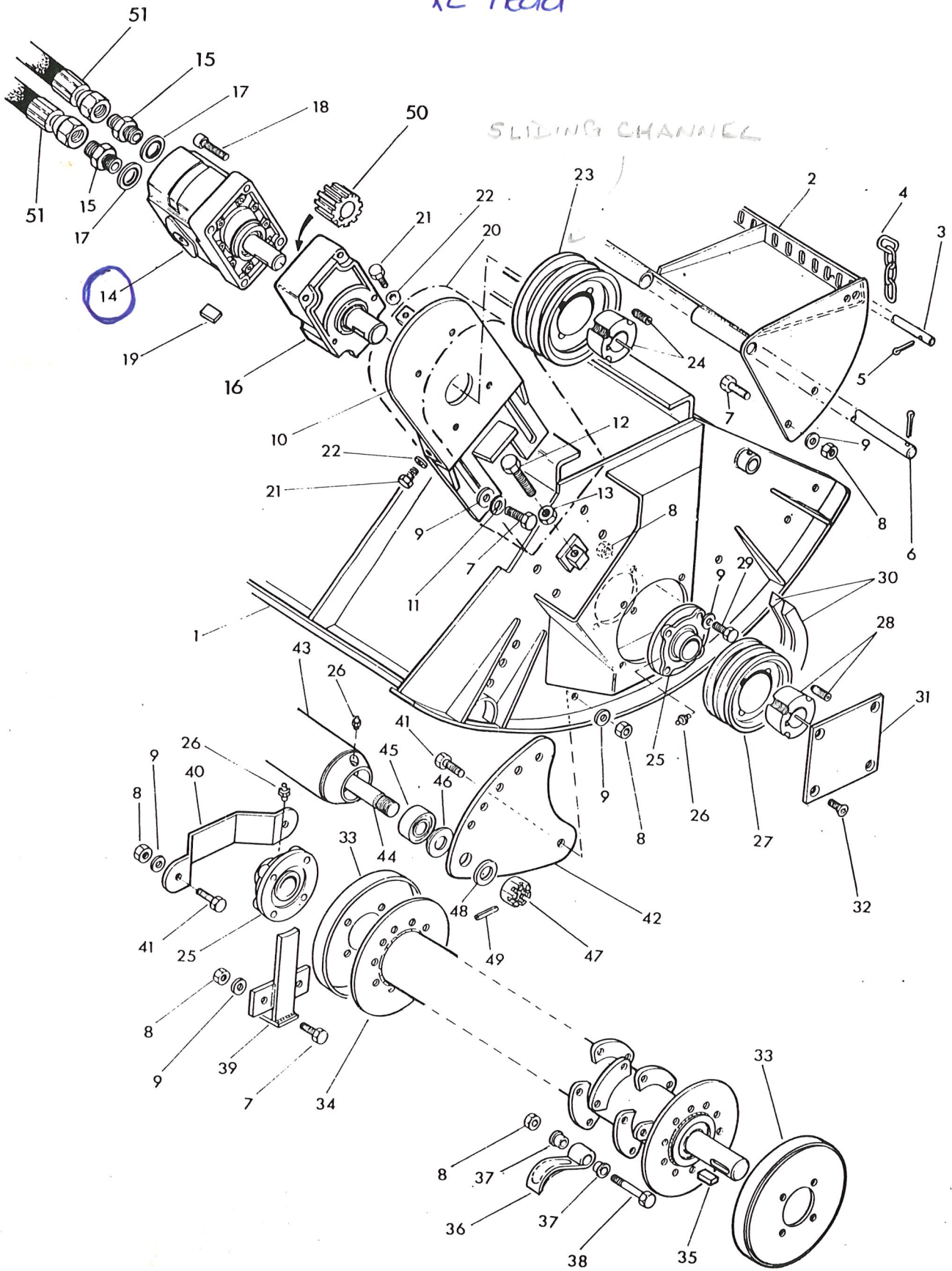
## Parts list - Variable Forward Reach Arm

Fig. Ref	Part number	Item description
1.	1777115	Forward reach arm
2.	4600127	Bush
3.	8770643	Bump stop
4.	2770422	Bolt
5.	3850103	Hose clip
6.	2770418	Bolt
7.	2770434	Flat washer
8.	2770412	Nyloc nut
9.	N/A	
10.	1777152	Pear pin
11.	3580644	Head crowd ram
12.	1777117L	Curved link L.H.
13.	1777117R	Curved link R.H.
14.	1777116	Head link bracket
15.	1777209	Pin retaining washer
16.	2770398	Bolt
17.	1777226	Head crowd pin
18.	2770467	Grease nipple
19.	1777118	Head slide bracket
20.	1777214	Head pivot pin
21.	2770479	Roll pin
22.	1777219	Head Crowd pin
23.	2770514	Roll pin
24.	2770381	Bolt
25.	2770417	Nut
26.	2770436	Washer
27.	4600124	Bush

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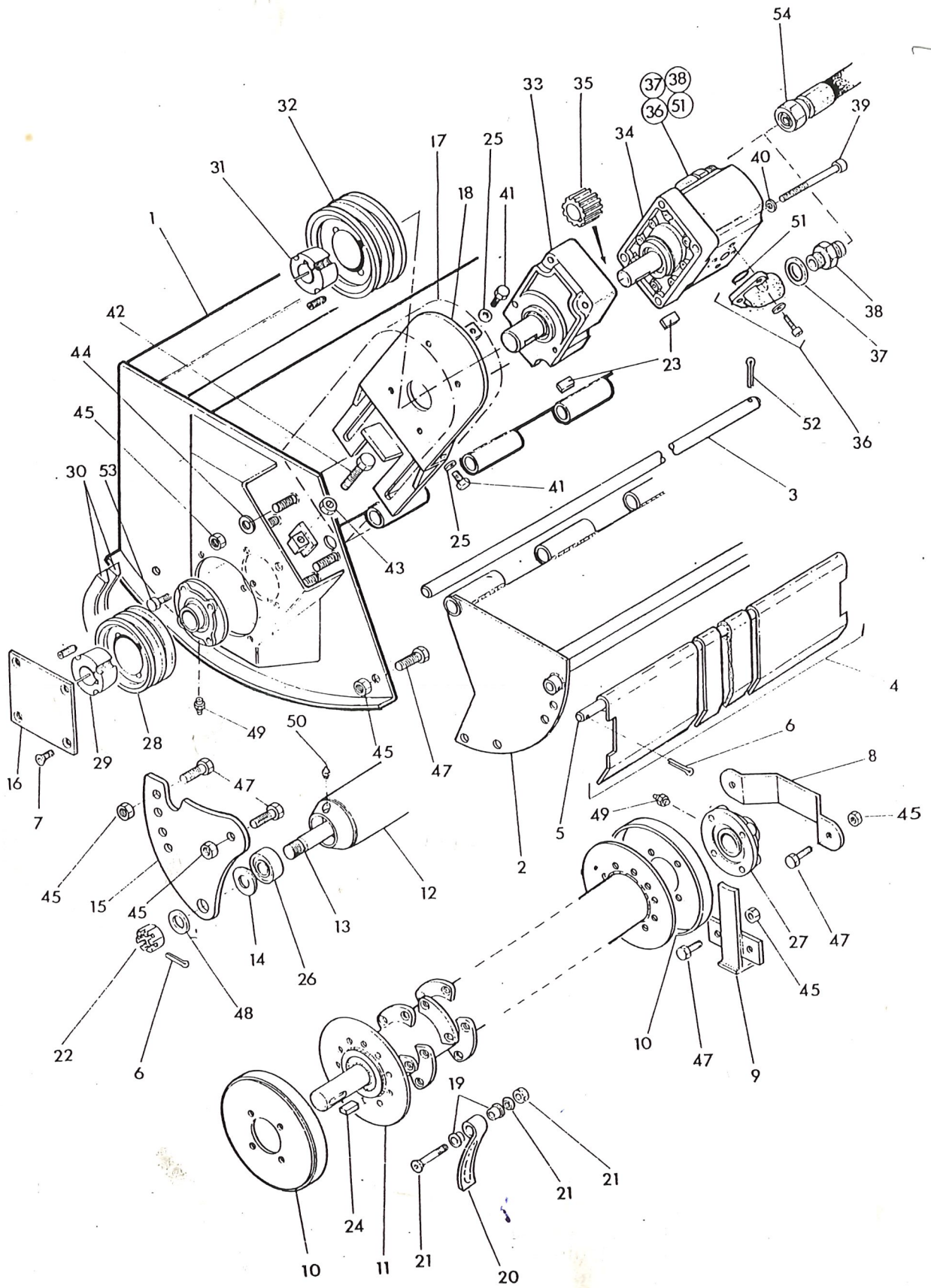
SPEARHEAD TWIGA-6 PARTS LIST

XL Head



Parts list - XL Flail Head		
Fig. Ref	Part number	Item description
1.	1777119	Head shell 4' L.H.
	1777142	Head shell 4' R.H.
2.	1777127	Front hood 4'
3.	1777128	Chain rod 4'
4.	8770621	Skirt chains
5.	2770512	Split pin
6.	1777129	Hood hinge pin 4'
7.	2770535	Bolt
8.	2770417	Nyloc Nut
9.	2770436	Flat washer
10.	1777120	Motor plate
11.	2770442	Spring washer
12.	2770474	Set screw
13.	2770536	Nut
14.	3151010	Motor ← OBSOLETE (USE 3151010 = motor)
15.	3360092	Adaptor (+ ELBOW fit = 3151008)
16.	3151012	Pulley support
17.	3260074	Bonded seal
18.	2770482	Cap bolt
19.	4772228	Key
20.	1777121	Pulley board
21.	2770418	Bolt
22.	2770434	Flat washer
23.	4770824	Pulley 140
24.	4770875	Taper lock 24mm
25.	4770858	Rotor bearing
26.	2770459	Grease nipple 45 degree
27.	4770863	Pulley 160
28.	4770847	Taper lock 50mm
29.	2770397	Bolt
30.	4770837	Belts
31.	1777131	Pulley inspection plate
32.	2770554	Counter sunk screw
33.	<del>1771510</del>	Rotor shield <del>***</del> 1777124
34.	1777123	Rotor 4' c/w flails
35.	4772230	Key
36.	7770699	Flail
37.	7770711	Hedger flail bush
38.	2770328	Bolt pack x 10
39.	1777197	Skid in-fill
40.	1777122	Bearing protection plate
41.	2770535	Bolt
42.	1777126	Roller plate
43.	1777125	Rear roller
44.	1777230	Rear roller shaft
45.	4771604	Roller bearing
46.	1777231	Hub cover
47.	2777501	Castle nut
48.	2770470	Flat washer
49.	2770512	Split pin
50.	3151011	Drive coupling
51.	3760062	Motor pressure hose
	3760063	Motor return hose
NI	1777185	Side plate

SPEARHEAD TWIGA-6 PARTS LIST



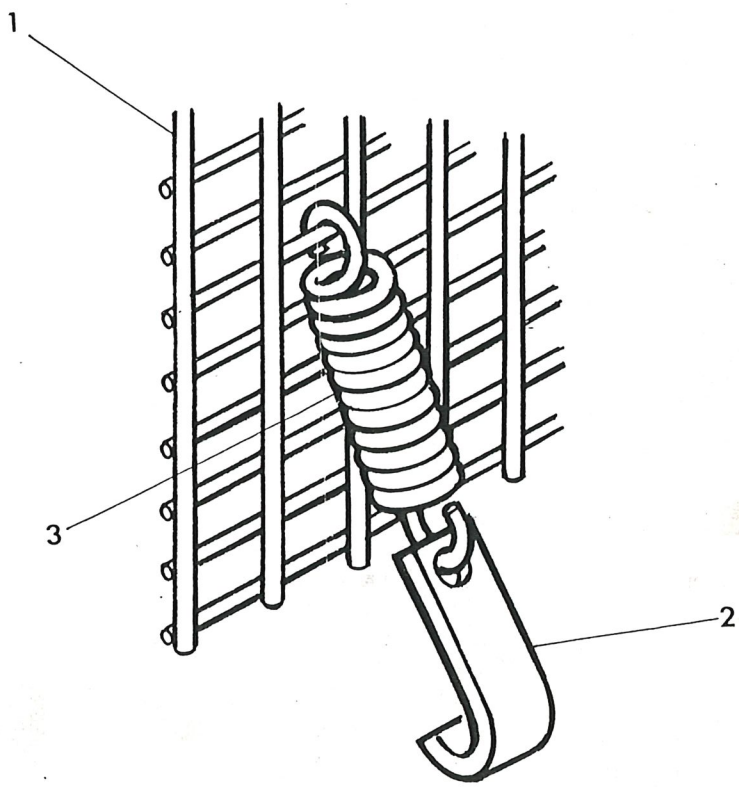
## Parts list - Dual purpose head

Fig. Ref	Part number	Item description
1.	1777180	Head shell 1.2m L.H.
	1777181	Head shell 1.2m R.H.
	1777182	Head shell 1.5m L.H.
	1777183	Head shell 1.5m R.H.
2.	1777188	Front hood 1.2m
	1777190	Front hood 1.5m
3.	1777189	Hood hinge bar 1.2m
	1777191	Hood hinge bar 1.5m
4.	1777192	Flap set 1.2m
	1777193	Flap set 1.5m
5.	1777194	Flap retaining bar 1.2m
	1777195	Flap retaining bar 1.5m
6.	2770512	Split pin
7.	2770554	Counter sunk screw
8.	1777122	Bearing protection plate
9.	1777197	Skid infill
10.	1771510	Rotor shield
11.	1777184	Rotor 1.2m, c/w flails
	1777143	Rotor 1.5m, c/w flails
12.	1777186	Rear roller, 1.2m x 100mm
	1777125	Rear roller, 1.2m x 150mm
	1777146	Rear roller, 1.5m x 150mm
13.	1777285	Roller shaft 1.2m x 100mm
	1777230	Roller shaft 1.2m x 150 mm
	1777289	Roller shaft 1.5m x 150mm
14.	1777287	Hub cover 100mm roller
	1777231	Hub cover 150mm roller
15.	1777196	Roller plate 100mm
	1777126	Roller plate 150mm
16.	1777131	Pulley inspection plate
17.	1777121	Pulley guard
18.	1777120	Motor plate
19.	7770711	Flail bush
20.	7770699	Hedger flail
21.	2770329	Counter bolt/washer/nut pack (10)
	2770333	Flail bolt
22.	2777505	Castle nut 100mm roller
	2777501	Castle nut 150mm roller
23.	4772228	Key
24.	4772230	Key
25.	2770434	Flat washer

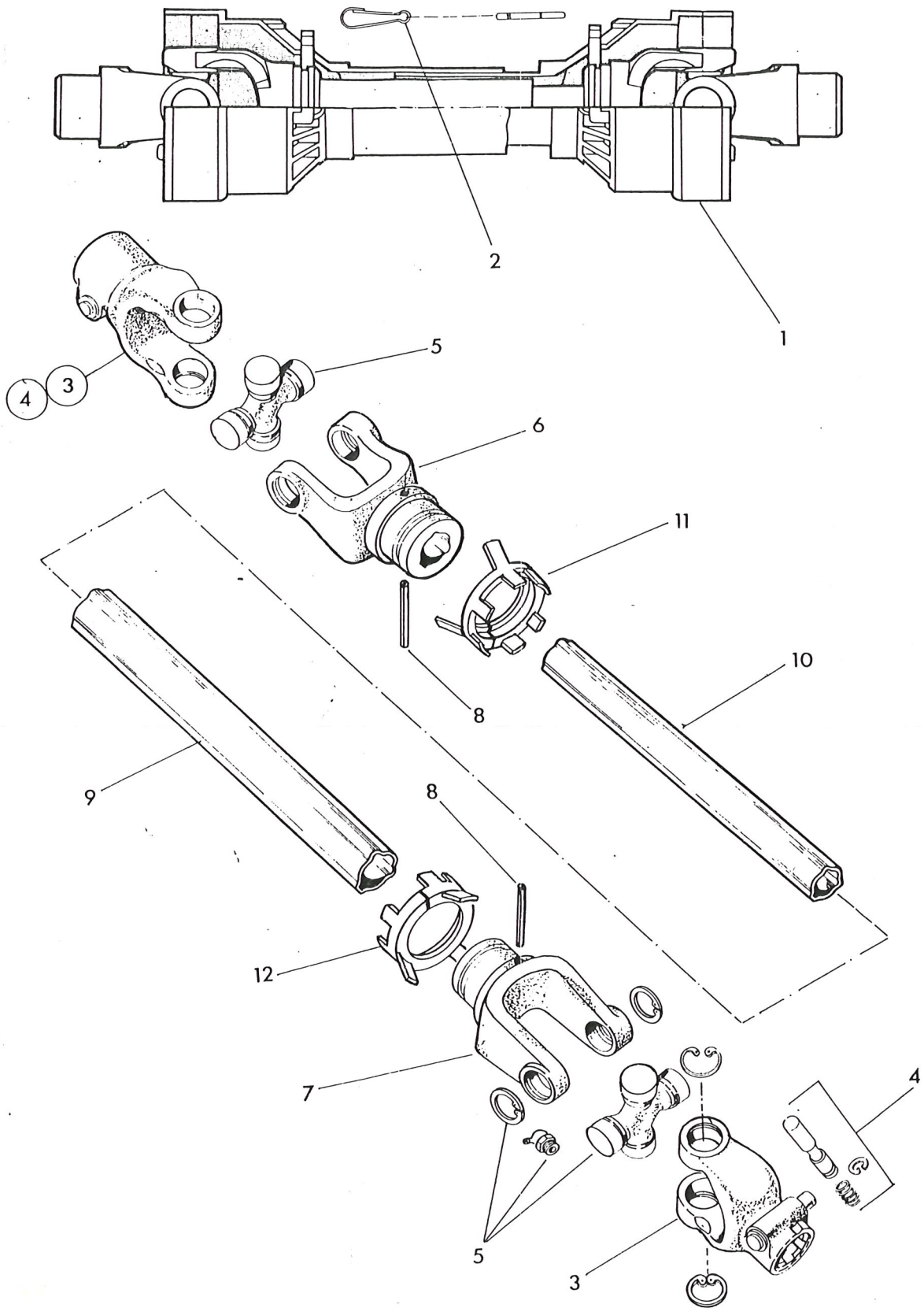
Parts list – Dual purpose head		
Fig. Ref	Part number	Item description
26.	4771621	Bearing 100mm roller
	4771604	Bearing 150mm roller
27.	4770858	Rotor bearing
28.	4770863	Pulley 160
29.	4770847	Taper lock 50mm
30.	4770837	Belt
31.	4770875	Taper lock 24mm
32.	4770824	Pulley 150
33.	3151012	Pulley support
34.	3151010	Motor
35.	3151011	Drive coupling
36.	3151008	Port elbow
37.	3260074	Bonded seal
38.	3360092	Adaptor
39.	2770482	Cap bolt
40.	2770469	Spring washer
41.	2770418	Bolt
42.	2770474	Set screw
43.	2770536	Full nut
44.	2770436	Flat washer
45.	2770417	Nyloc nut
46.	N/A	
47.	2770535	Bolt
48.	2770464	Flat washer 100mm roller
	2770470	Flat washer 100mm roller
49.	2770459	Grease nipple 45 degree
50.	2770467	Grease nipple standard
51.	3261001	"O" ring
52.	2770513	Split pin
53.	2770397	Bolt
54.	3760062	Rotor pressure hose
	3760063	Rotor return hose
N1	3870600	Protective sleeve (per metre)
N1	1777185	Side inspection plate

Parts list - Cab guard

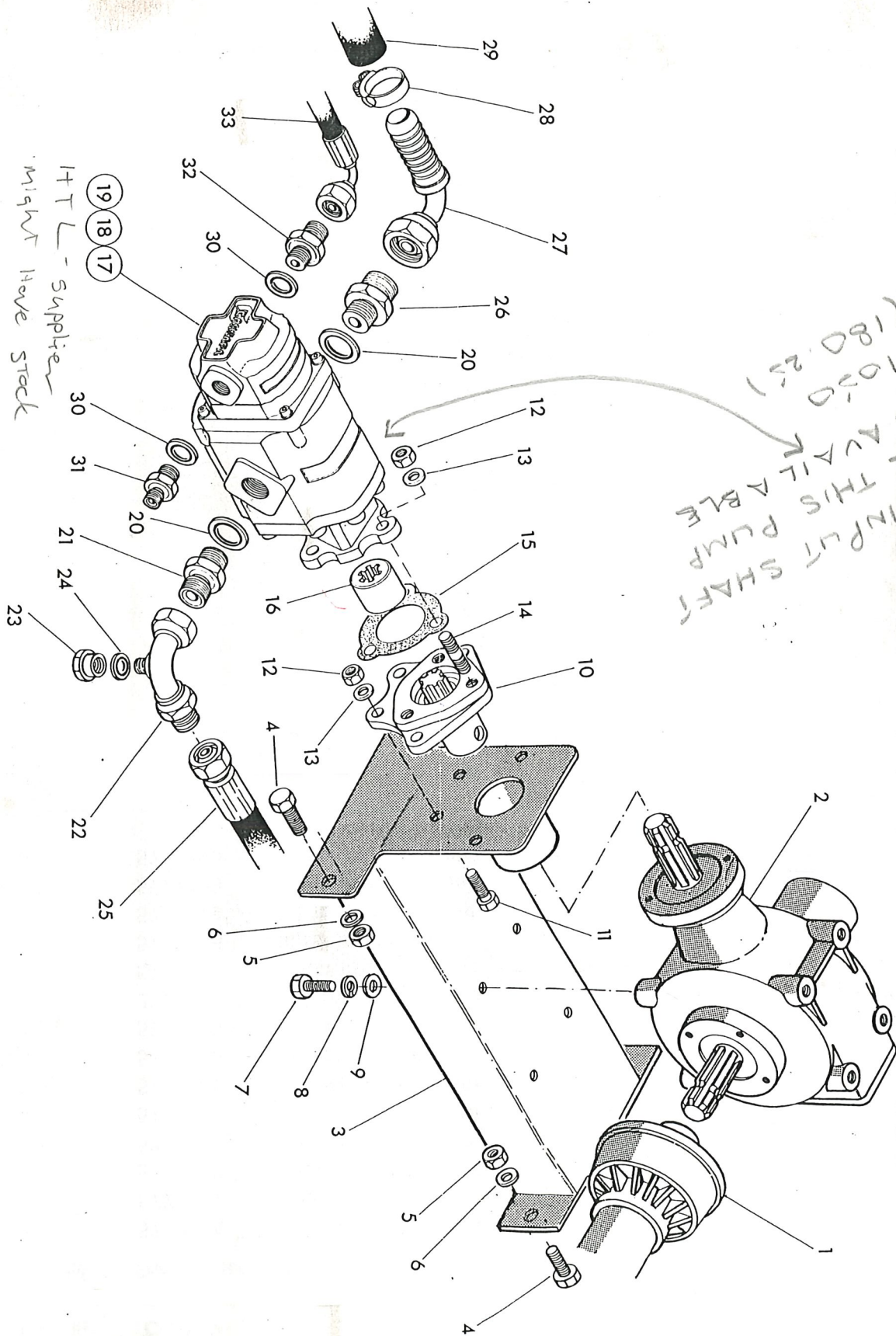
Fig. Ref	Part number	Item description
1.	1777140	Mesh guard panel
2.	1777141	Mesh guard fasteners
3.	6310209	Window guard spring



SPEARHEAD TWIGA-6 PARTS LIST







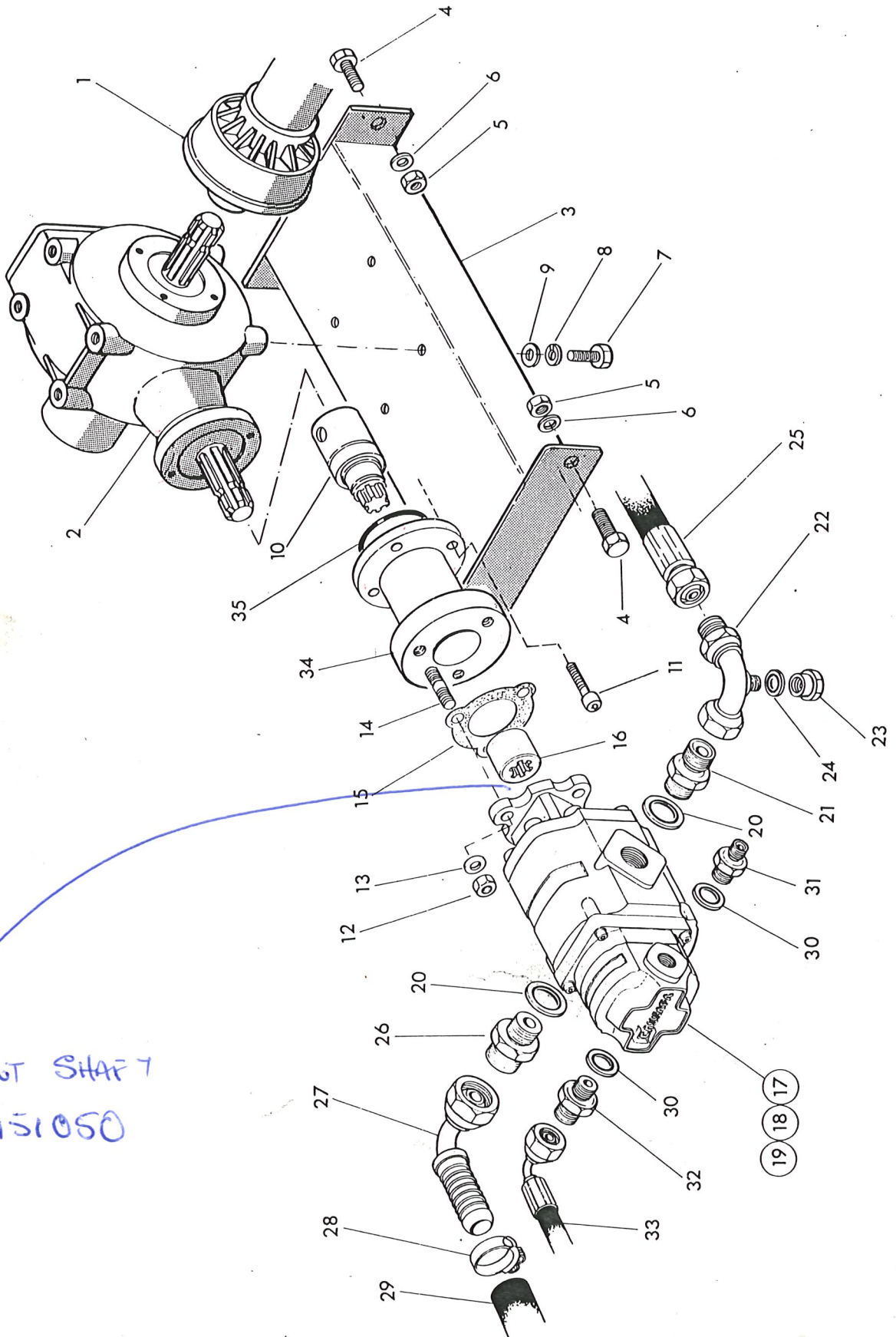
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Parts list - PTO shaft		
Fig. Ref	Part number	Item description
1.	5770084	Complete PTO shaft
	5771332	Complete guard
2.	5771020	Retaining chain
3.	5771299	6 Spline quick release yoke
4.	5771023	Push button assembly
5.	5771301	Cross journal assembly
6.	5770096	Inner tube yoke
7.	5770095	Outer tube yoke
8.	2770542	Roll pin
9.	5772277	Outer profile tube
10.	5772278	Inner profile tube
11.	5771313	Inner guard bearing
12.	5771308	Outer guard bearing
N1	5771299	21 Spline quick release yoke

## Parts list – Pump mounting – pre June 1996

Fig. Ref	Part number	Item description
1	5770084	PTO shaft
2	5770015	Gearbox
3	1777109	Gearbox mounting plate (Pre June '96)
4	2770425	Bolt
5	2770447	Nyloc nut
6	2770454	Flat washer
7	2770420	Bolt
8	2770442	Spring washer
9	2770436	Flat washer
10	3151001	Pump support assembly
11	2772284	Bolt
12	2770412	Nyloc nut
13	2770434	Flat washer
14	2772292	Stud
15	3151013	Gasket
16	3151002	Spline coupling
17	3151005	Tandem pump assembly
18	3151025	Service pump 8cc
	3151023	Service pump 11cc
19	3151005K	Seal kit - tandem pump
20	3260074	Bonded seal
21	3360092	Adaptor
22	3460109	Elbow
23	3460108	Male plug
24	3260070	Bonded seal
25	3760054	Hose assembly straight x straight
	3760135	Hose assembly 90 degree x 90 degree
26	3360094	Adaptor
27	3761001	90 Degree hose insert
28	3861012	Hose clip
29	3710112	Suction hose (per metre)
30	3260072	Bonded seal
31	3360088	Adaptor
32	3360089	Adaptor
33	3760057	Suction hose assembly

SPEARHEAD TWIGA-6 PARTS LIST



INPUT SHAFT  
3151050

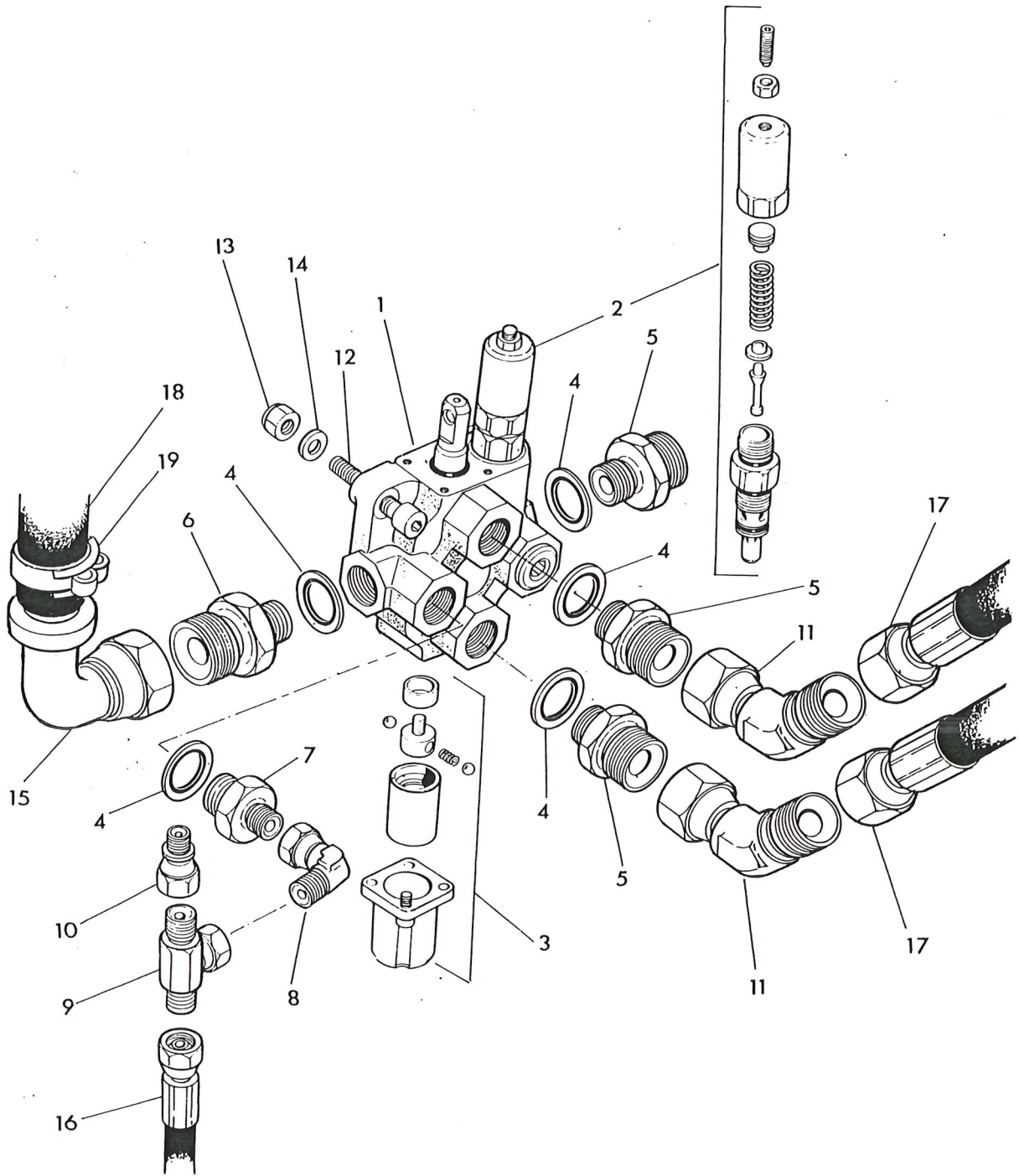
19 18 17

## Parts list – Pump mounting – Post June 96

Fig. Ref	Part number	Item description
1	5770084	PTO shaft
2	5770015	Gearbox
3	1777175	Gearbox mounting plate (Post June '96)
4	2770425	Bolt
5	2770447	Nyloc nut
6	2770454	Flat washer
7	2770420	Bolt
8	2770442	Spring washer
9	2770436	Flat washer
10	3151014	Pump drive shaft
11	2772284	Bolt
12	2770412	Nyloc nut
13	2770434	Flat washer
14	2772292	Stud
15	3151013	Gasket
16	3151002	Spline coupling
17	3151005	Tandem pump assembly
18	3151025	Service pump 8cc
	3151023	Service pump 11cc
19	3151005K	Seal kit - tandem pump
20	3260074	Bonded seal
21	3360092	Adaptor
22	3460109	Elbow
23	3460108	Male plug
24	3260070	Bonded seal
25	3760135	Hose assembly 90 degree x 90 degree
26	3360094	Adaptor
27	3761001	90 Degree hose insert
28	3861012	Hose clip
29	3710112	Suction hose (per metre)
30	3260072	Bonded seal
31	3360088	Adaptor
32	3360089	Adaptor
33	3760057	Suction hose assembly
34	1777176	Pump support tube .
35	3261002 K	O-ring .

1 INAT SHAFT 3151050

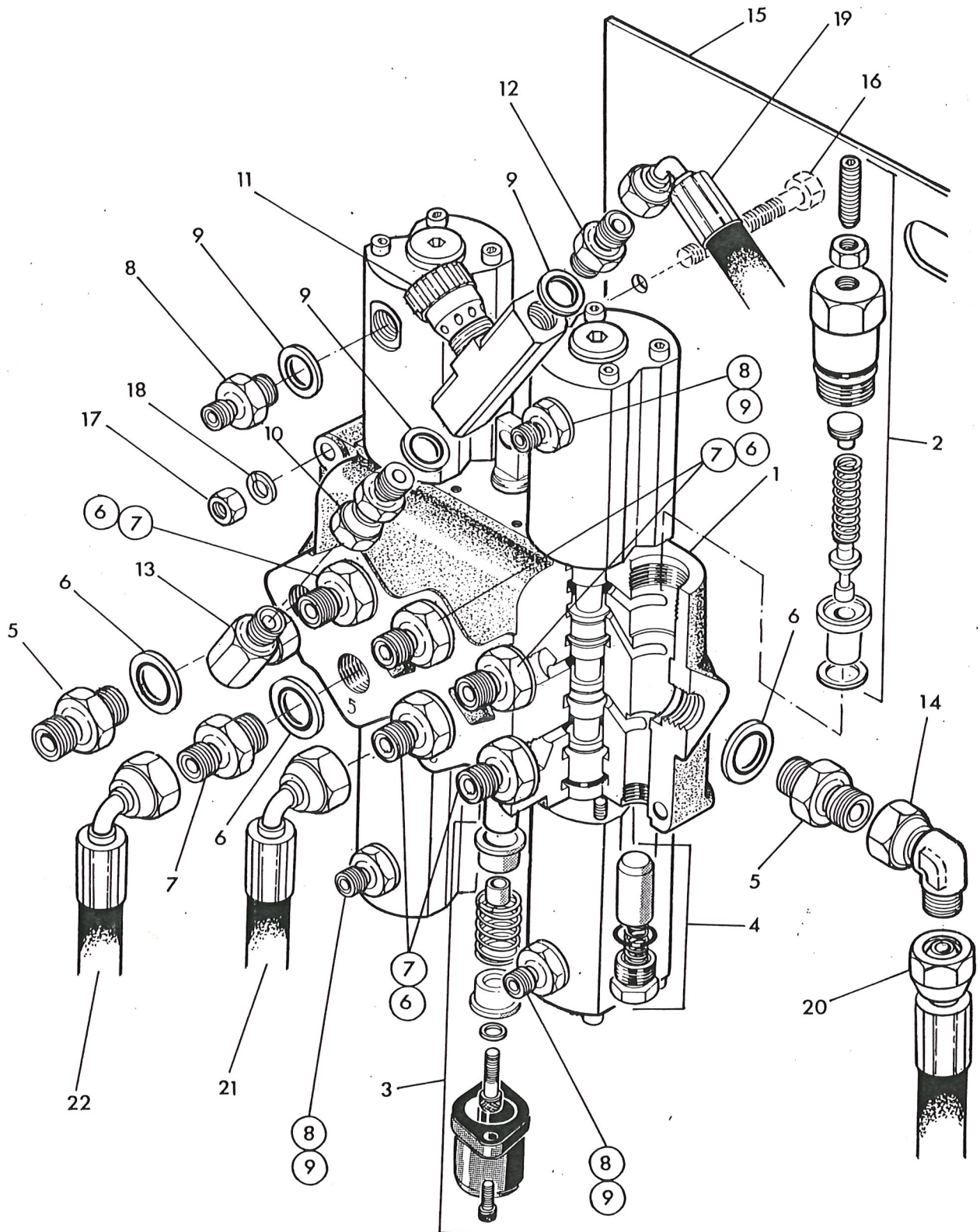
SPEARHEAD TWIGA-6 PARTS LIST



**Parts list – Main relief valve**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1.	3600101	Motor control/relief valve
2.	3600080	Relief valve cartridge
3.	3610081	Spool detent kit
4.	3260073	Bonded seal
5.	3360091	Adaptor
6.	3360101	Adaptor
7.	3360102	Adaptor
8.	3450157	Elbow
9.	3460099	Tee
10.	3360079	Adaptor
11.	3450156	45 Degree elbow
12.	2772284	Cap bolt
13.	2770412	Nyloc nut
14.	2770434	Flat washer
15.	3761004	90 Degree hose insert
16.	3760118	Return hose assembly
17.	3760136	Motor pressure hose - 2w - std/vfr Twiga-6
	3760080	Motor pressure hose - 2w - Twiga-7
	3760137	Motor return hose 1w-std/vfr Twiga-6
	3760081	Motor return hose 1w-Twiga-7
18.	3710114	Return hose per metre
19.	3861014	Hose clip

SPEARHEAD TWIGA-6 PARTS LIST

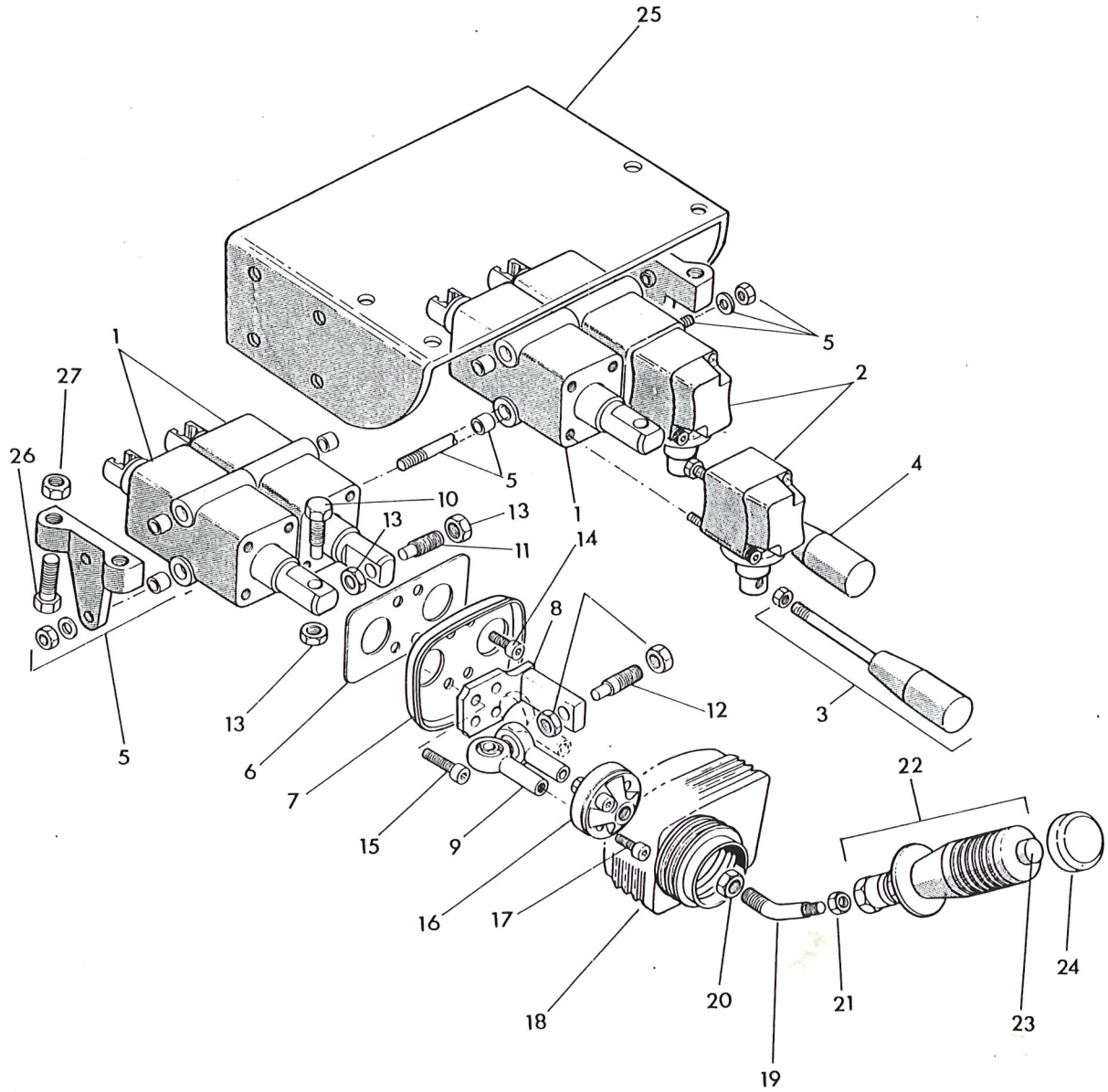




## Parts list - Hydraulic proportional control - joystick

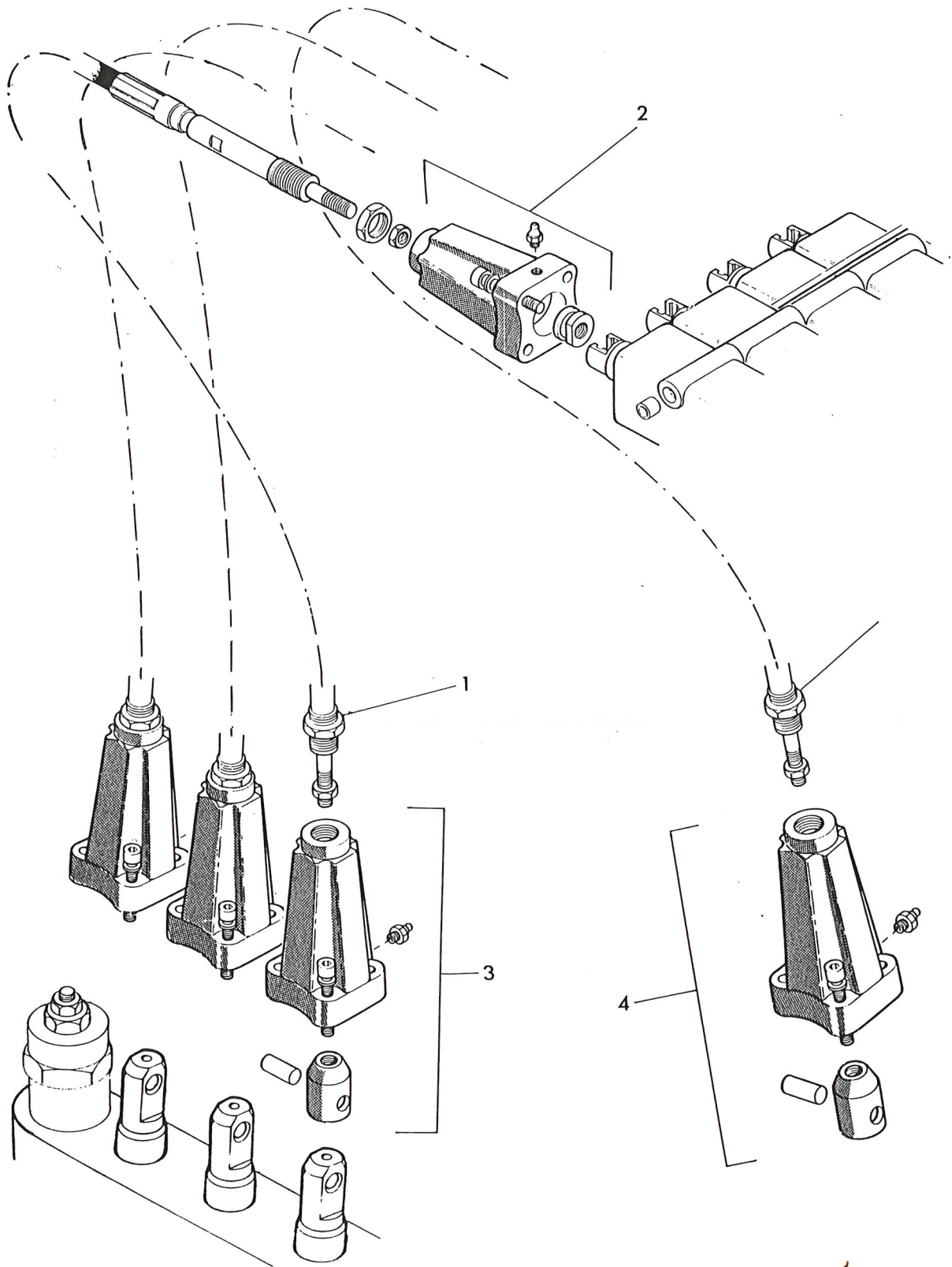
Fig. Ref	Part number	Item description
1.	3910250	Joystick Assembly
	3910250K	Joystick assembly seal kit 2. 3910268 Micro-switch
3.	3910208	Joystick handle + micro-switch
4.	2770536	Nut
5.	3910300	Rubber cap
6.	3910270	Rubber gaiter
7.	3260070	Bonded seal
8.	3250150	Adaptor
9.	3360080	Adaptor
10.	3760155	Hose assembly x 3000mm
	3760157	Hose assembly x 3270mm
	3760156	Hose extension x 500mm
	3760158	Hose extension x 1000mm
11.	2770371	Cap screw
12.	3760167	Hose assembly joystick feed - std
	3760166	Hose assembly joystick return - std
	3760164	Hose extension x 500mm
	3760165	Hose extension x 1000mm
13.	3460100	Tee
14.	3910211	Remote - single lever
	3910212	Remote - 2 lever
15.	3910217	Pivot assembly no. 5
	3910218	Pivot assembly no. 10
16.	3910219	Lever yellow knob
	3910220	Lever red knob
17.	3910243	Stud/leg kit
18.	3910202	Cable support - remote no. 5
	3910204	Cable support - remote no. 10
19.	3910232	3.0m Remote cable
	3910231	3.5m Remote cable
	3910233	4.0m Remote cable
20.	3910201	Cable support - 3 spool bank valve
	3910200	Cable support - motor control valve
21.	1777134/H	Control bracket
22.	2770356	Button head screw
23.	2770416	Nyloc nut
24.	8400105	3 Way rocker switch - electric base plate
	~ 8400103 ~	2 way rocker switch - V.F.R.
25.	8400108	Rubber switch cover

SPEARHEAD TWIGA-6 PARTS LIST



## Parts list – Cable control joystick

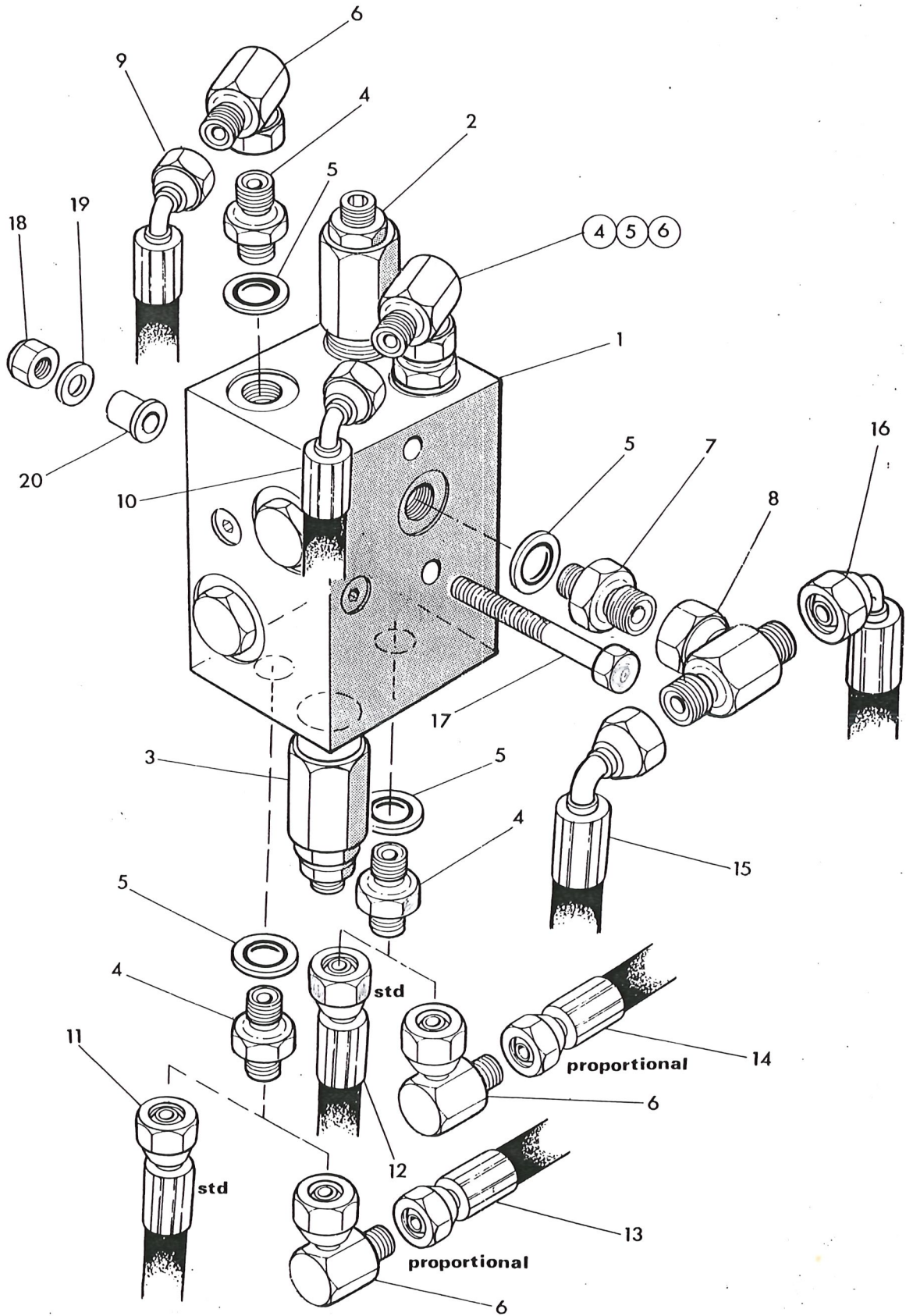
Fig. Ref	Part number	Item description
1.	3910205	Remote single
2.	3910218	Pivot assembly
3.	3910219	Lever, yellow
4.	3910220	Lever, red
5.	3910244	Leg/stud kit
6.	3910260	Gasket
7.	3910261	Back plate
X 8.	3910262	Fulcrum
X 9.	3910263	Ball joint
X 10.	3910264	Shouldered bolt
X 11.	3910265	Shouldered stud
12.		n/a
13.	2770438	Nut
14.	2770540	Cap bolt
15.	2770371	Cap bolt
16.	3910266	Pivot plate
17.	2770543	Cap bolt
18.	3910267	Gaiter
19.	1777199	Cranked stud
20.	2770438	Nut
21.	2770536	Nut
22.	3910208	Hand grip micro-switch assembly
23.	3910268	Micro switch
24.	3910300	Rubber cap
25.	1777134	Control bracket
26.	2770368	Button screw
27.	2770416	Nyloc nut
NI	8400103	2 way rocker switch
	8400108	Rubber switch cover



**Parts list - Cables**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1.	3910230	2.5m Remote cable
	3910232	3.0m Remote cable
	3910231	3.5m Remote cable
	3910233	4.0m Remote cable
2.	3910202	Cable support, remote
3.	3910201	Cable support, spool bank
4.	3910200	Cable support, motor control

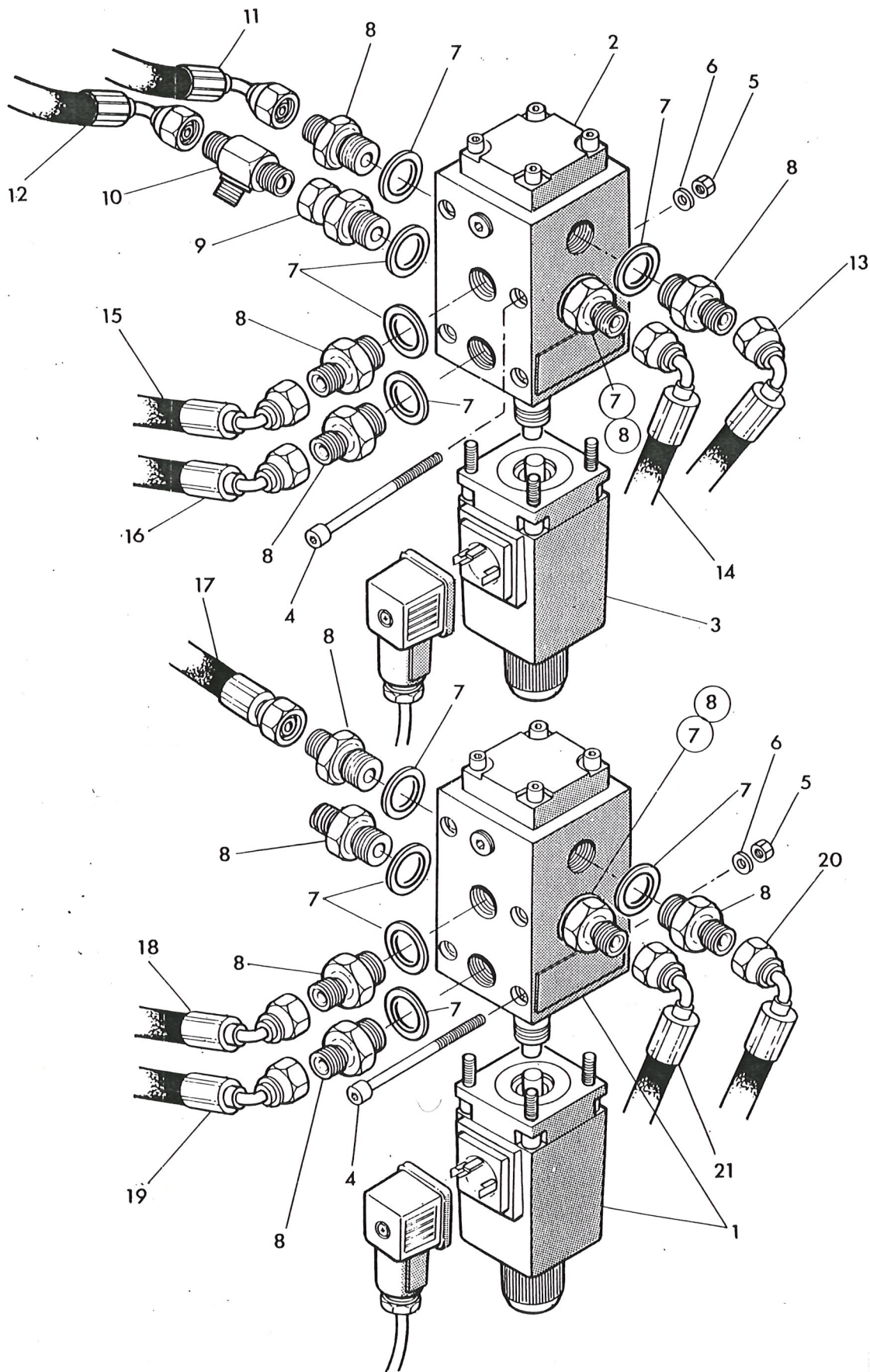
SPEARHEAD TWIGA-6 PARTS LIST



**Parts list – Motion control valve**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1.	3600136	Motion control valve assembly
2.	3610005	Over centre cartridge
3.	3610007	Dual relief cartridge
4.	3360080	Adaptor
5.	3260070	Bonded seal
6.	3460107	Elbow
7.	3360083	Adaptor
8.	3460099	Tee
9.	3760038	Hose assembly - std arm + VFR -T6
	3760073	Hose assembly - Twiga-7
10.	3760037	Hose assembly
11.	3760116	Hose assembly
12.	3760117	Hose assembly
13.	n/a	
14.	n/a	
15.	3760113	Hose assembly
16.	3760118	Hose assembly
17.	2770490	Bolt
18.	2770416	Nyloc nut
19.	2770436	Washer
20.	7770711	Bush

SPEARHEAD TWIGA-6 PARTS LIST



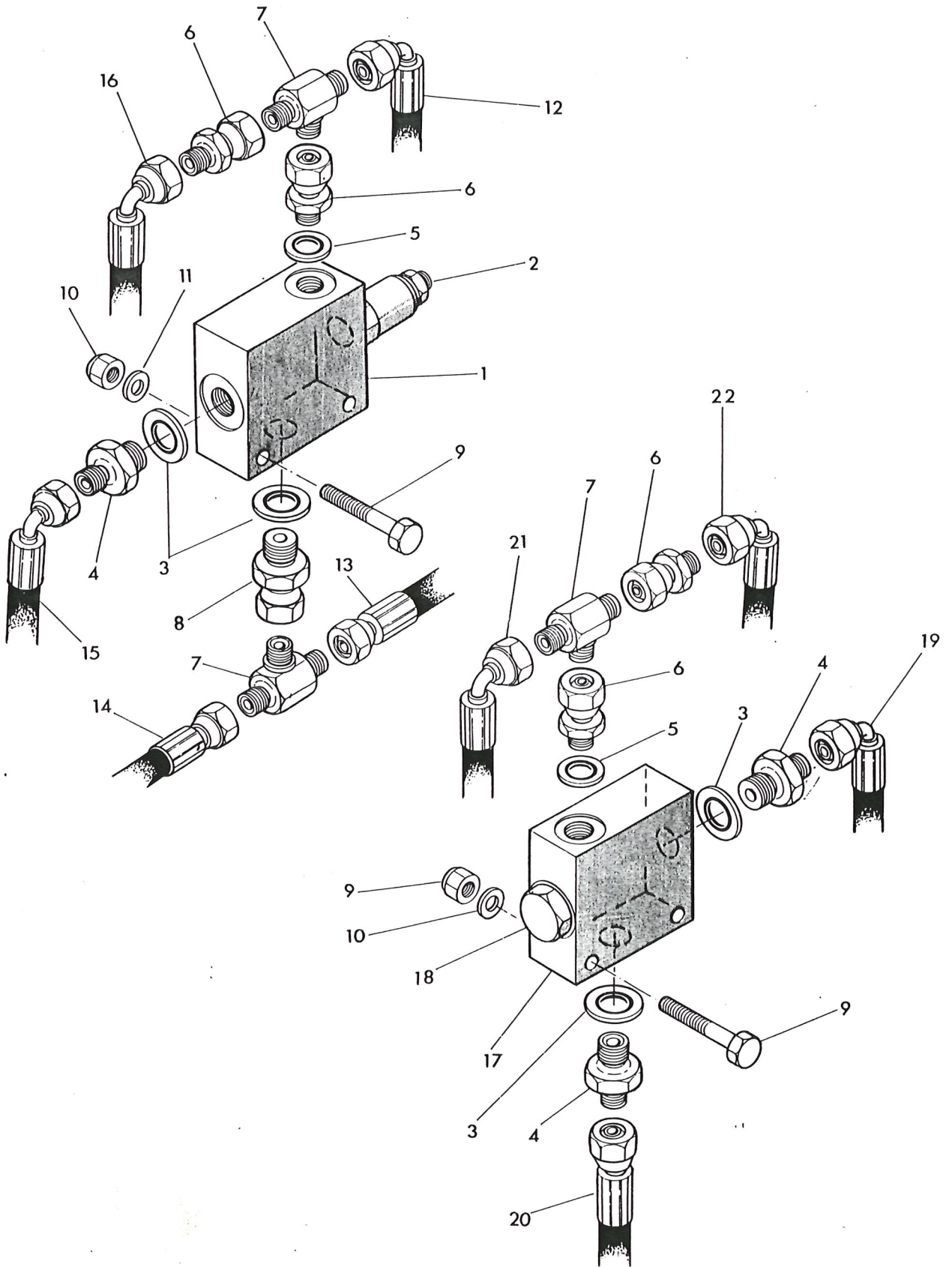


## Parts list - electric diverters - variable Forward Reach (VFR)

Fig. Ref	Part number	Item description
1.	3600110	Electric diverter valve
2.	3600084	Spool block
3.	3600085	Solenoid
4.	2770392	Cap bolt
5.	2770394	Nyloc nut
6.	2770391	Washer
7.	3260071	Bonded seal
8.	3360083	Adaptor
9.	3360084	Adaptor
10.	3460100	Tee
11.	3760020	Hose assembly
12.	3760021	Hose assembly
13.	3760116	Hose assembly
14.	3760117	Hose assembly
15.	3760024	Hose assembly
16.	3760051	Hose assembly
17.	3760022	Hose assembly
18.	3760026	Hose assembly
19.	3760099	Hose assembly
20.	3760196	Hose assembly
21.	3760102	Hose assembly

3600106

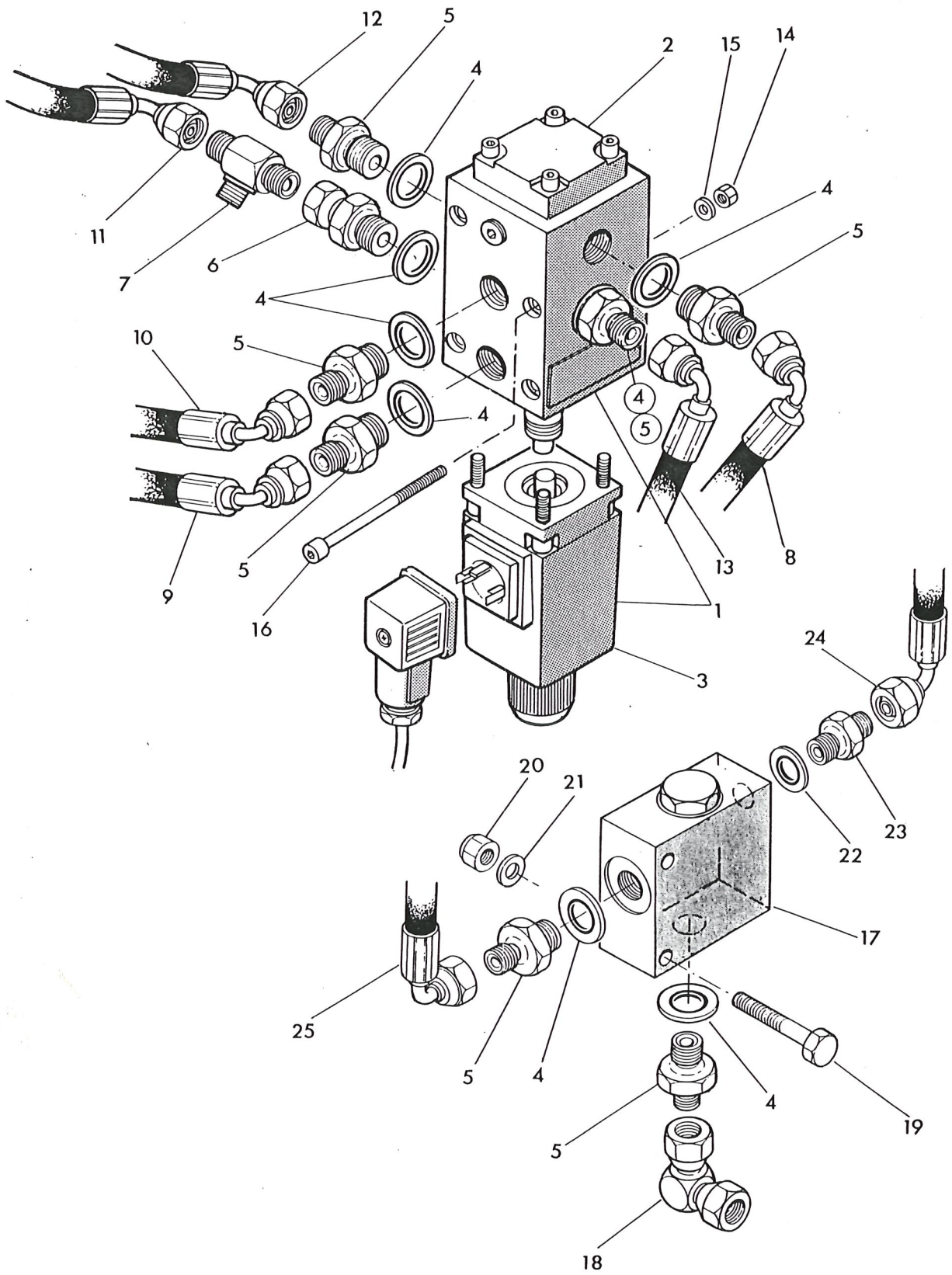
SPEARHEAD TWIGA-6 PARTS LIST



**Parts list – Over centre valve and pilot operated check to VFR**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1.	3600134	Overcentre valve assembly
2.	3610011	Cartridge - overcentre valve
3.	3260071	Bonded seal
4.	3360083	Adaptor
5.	3260070	Bonded seal
6.	3360081	Adaptor
7.	3460100	Tee
8.	3360084	Adaptor
9.	2770430	Bolt
10.	2770416	Nyloc nut
11.	2770432	Flat washer
12.	3760024	Hose assembly
13.	3760099	Hose assembly
14.	3760045	Hose assembly
15.	3760041	Hose assembly
16.	3760042	Hose assembly
17.	3600130	Pilot operated check valve
18.	3610009	Cartridge - P.O.C.V.
19.	3760101	Hose assembly
20.	3760096	Hose assembly
21.	3760102	Hose assembly
22.	3760100	Hose assembly

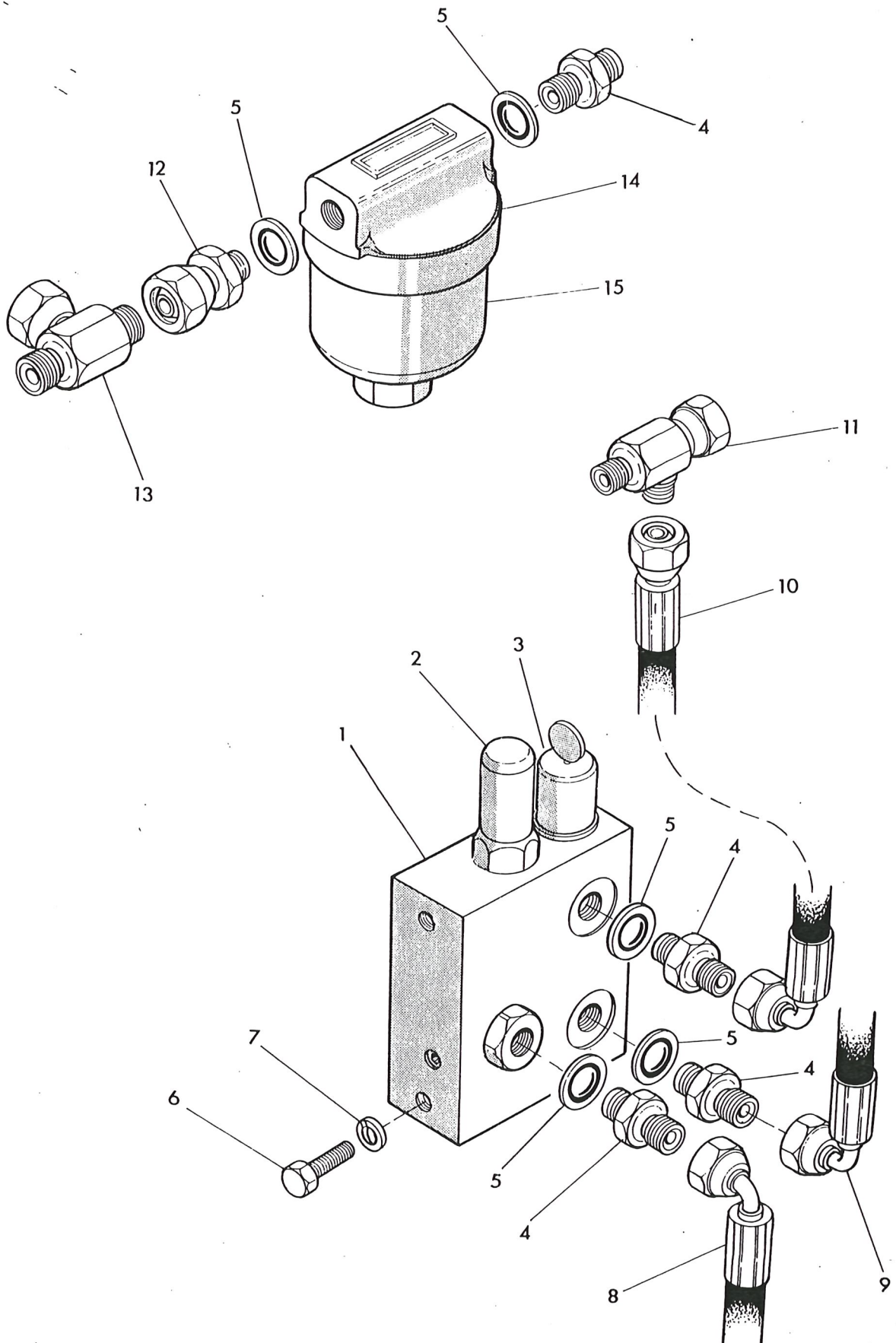
SPEARHEAD TWIGA-6 PARTS LIST



## Parts list – Electric diverter over centre valve, standard arm Twiga-6/Twiga-7

Fig. Ref	Part number	Item description
1.	3600110	Electric diverter valve
2.	3600084	Spool block - diverter valve
3.	3600085	Solenoid - diverter valve
4.	3260071	Bonded seal
5.	3360083	Adaptor
6.	3360084	Adaptor
7.	3460100	Tee
8.	3760116	Hose assembly
9.	3760051	Hose assembly
10.	3760024	Hose assembly
11.	3760021	Hose assembly
12.	3760023	Hose assembly
13.	3760117	Hose assembly
14.	2770394	Nyloc nut
15.	2770391	Flat washer
16.	2770392	Cap bolt
17.	3600134	Overcentre valve assembly
18.	3460107	Elbow
19.	2770430	Bolt
20.	2770416	Nut
21.	2770432	Washer
22.	3260070	Bonded seal
23.	3360080	Adaptor
24.	3760024	Hose assembly
	3760042	Hose assembly - std arm Twiga-6
	3760077	Hose assembly - Twiga-7
25.	3760021	Hose assembly
	3760045	Hose assembly
NI	3900055	Adjustable hose restrictor

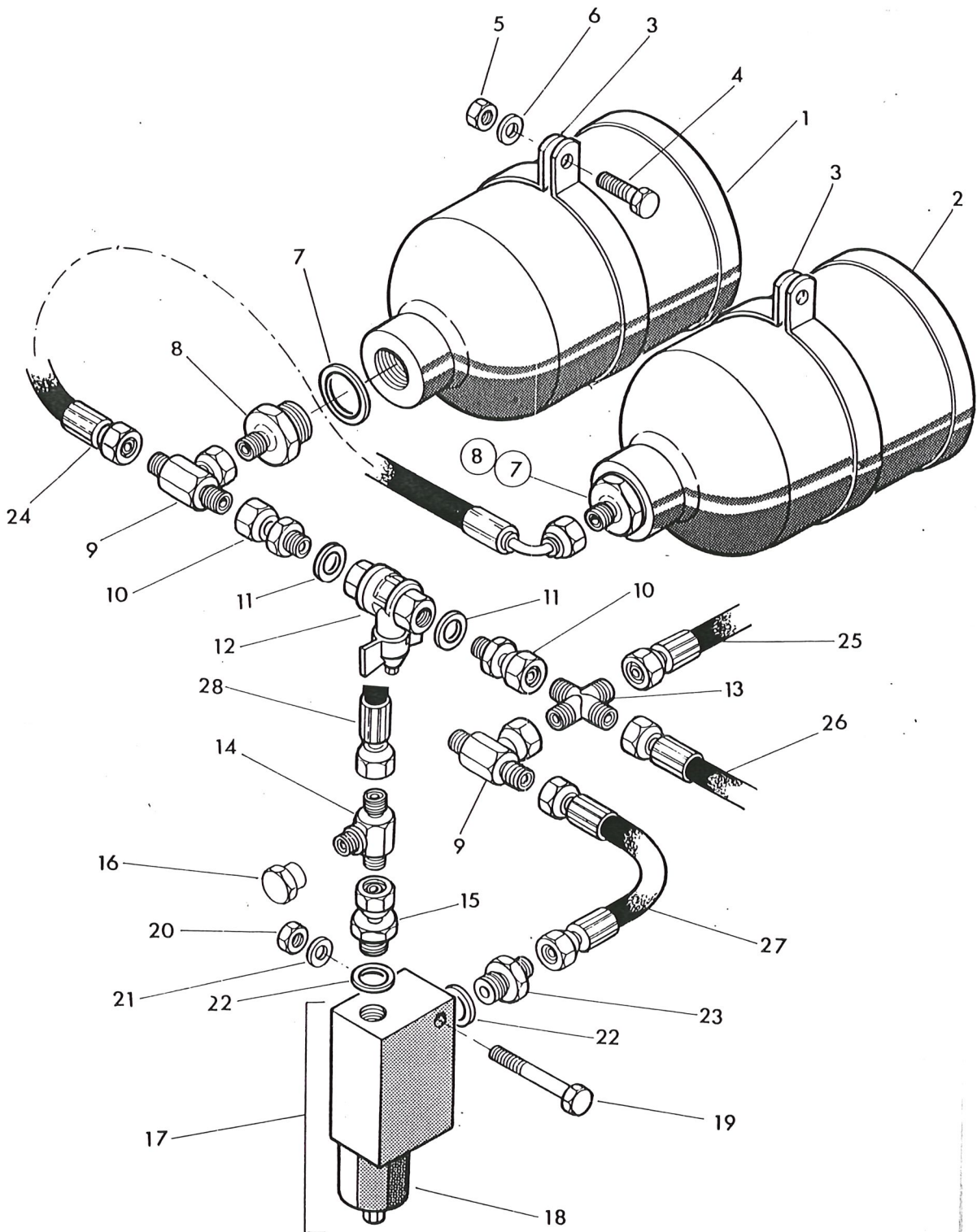
SPEARHEAD TWIGA-6 PARTS LIST



**Parts list – Filter/Feeder unit – Hydraulic Proportional Control**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1.	3910252	Feeder valve
2.	3610020	Relief valve cartridge
3.	3610022	Valve cartridge
4.	3360080	Adaptor
5.	3260070	Bonded seal
6.	2770415	Bolt
7.	2770433	Spring washer
8.	3760168	Hose assembly
9.	3760167	Hose assembly
10.	3760169	Hose assembly
11.	3460101	Tee
12.	3360079	Adaptor
13.	3460099	Tee
14.	3900058	Filter assembly
15.	3900059	Replacement element

SPEARHEAD TWIGA-6 PARTS LIST

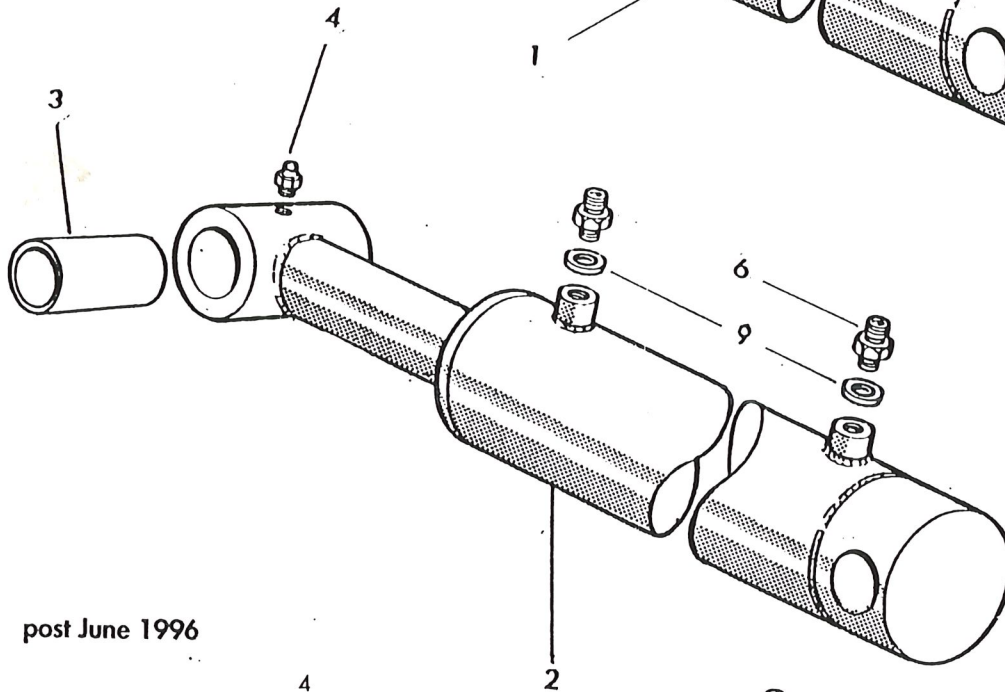
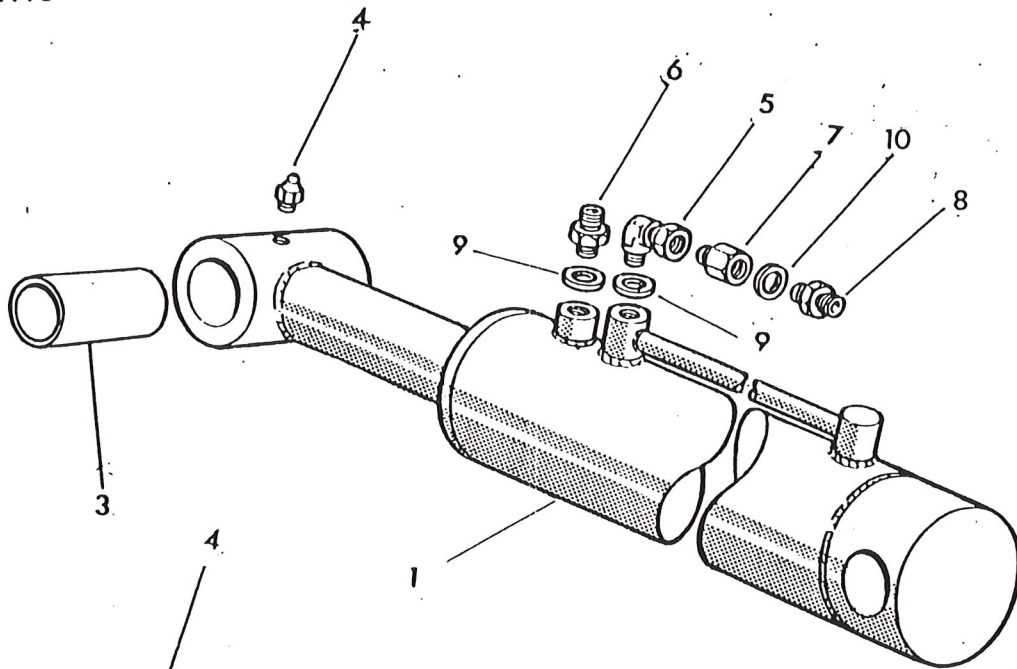




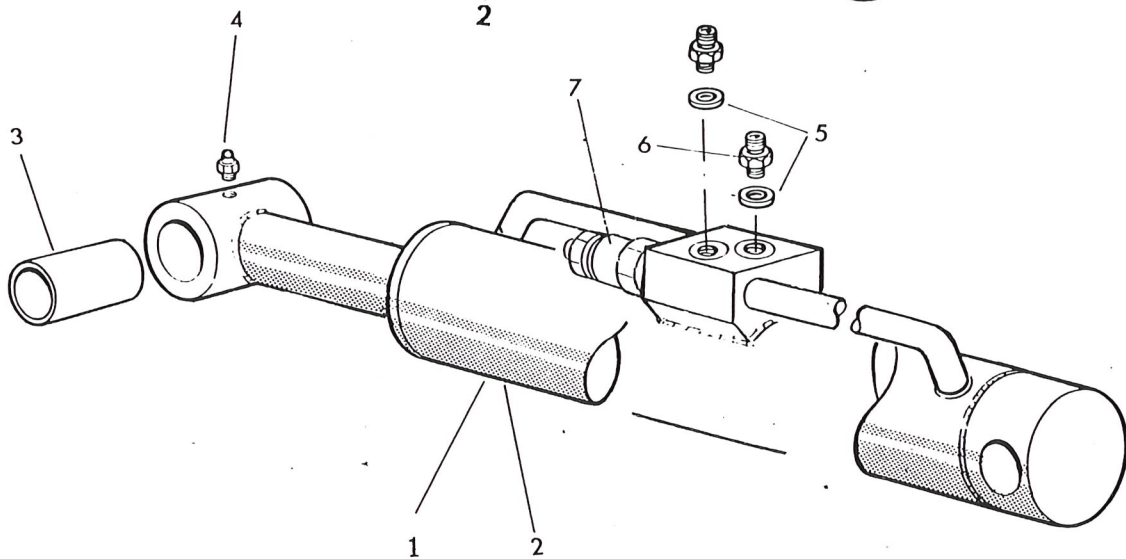
**Parts list – Accumulator and break-back valve**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1.	3900070	Accumulator - 62 bar
2.	3900071	Accumulator - 32 bar
3.	1777132	Accumulator clamp bracket
4.	2770494	Bolt
5.	2770412	Nyloc nut
6.	2770432	Flat washer
7.	3260073	Bonded seal
8.	3360085	Adaptor
9.	3460101	Tee
10.	3360081	Adaptor
11.	3260070	Bonded seal
12.	3600120	Ball valve
13.	3460102	Cross
14.	3460100	Tee
15.	3360084	Adaptor
16.	3460104	Cap
17.	3600111	Break back valve
18.	3610013	Cartridge - break back valve
19.	2772288	Bolt
20.	2770373	Nyloc nut
21.	2771408	Flat washer
22.	3260071	Bonded seal
23.	3360083	Adaptor
24.	3760027	Hose assembly
25.	3760028	Hose assembly
26.	3760029	Hose assembly
27.	3760030	Hose assembly
28.	3760036	Hose assembly - Twiga-6
	3760071	Hose assembly - Twiga-7

pre June 1996



post June 1996



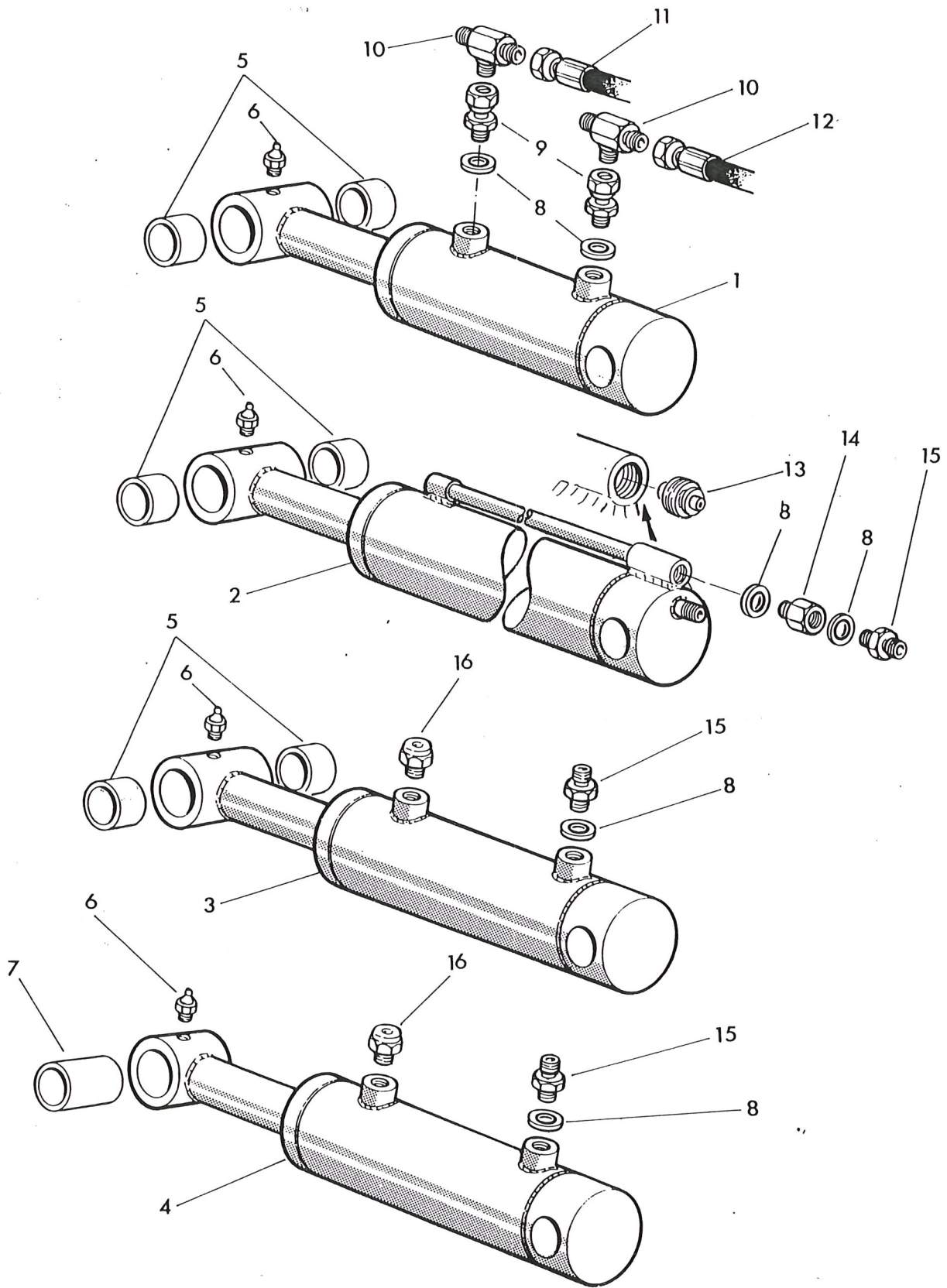
## Parts list – Main and Dipper hydraulic rams – pre June 1996

Fig. Ref	Part number	Item description
1	3580648	Main ram - 3.5" dia
	3570667	3.5" Seal kit - main ram
	3580640	Main ram - 3"
2	3570664	3" Seal kit - main ram
	3580649	Dipper ram - 3.5"
	3570667	3.5" Seal kit - dipper ram
	3580641	Dipper ram 3"
3	3570664	3" Seal kit - dipper ram
	4600410	Bush
4	2772300	Grease nipple 1/8 bsp
5	3450157	Elbow
6	3360080	Adaptor
7	3600114	Hose burst valve
8	3360083	Adaptor
9	3260070	Bonded seal
10	3260071	Bonded seal

## post June 1996

1	3580648A	Main ram - 3.5" dia
2.	3580649A	Dipper ram - 3.5"
	3570667	3.5" Seal kit →
3	4600410	Bush
4	2772300	Grease nipple
5	3260070	Bonded seal
6	3360080	Adaptor
7	3610011	O.C.V. cartridge

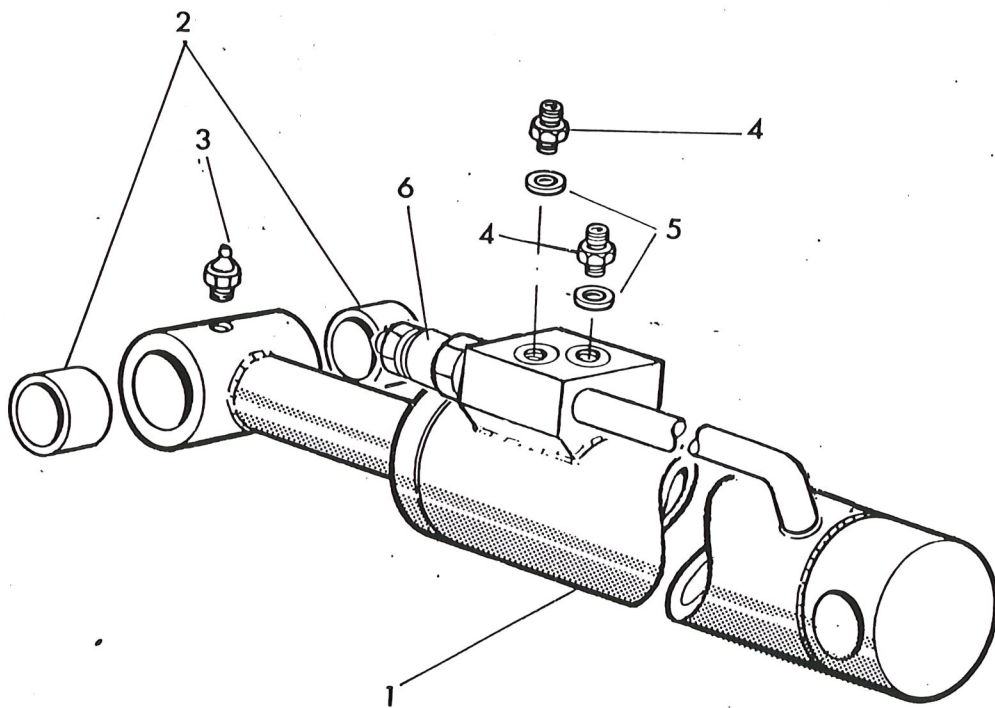
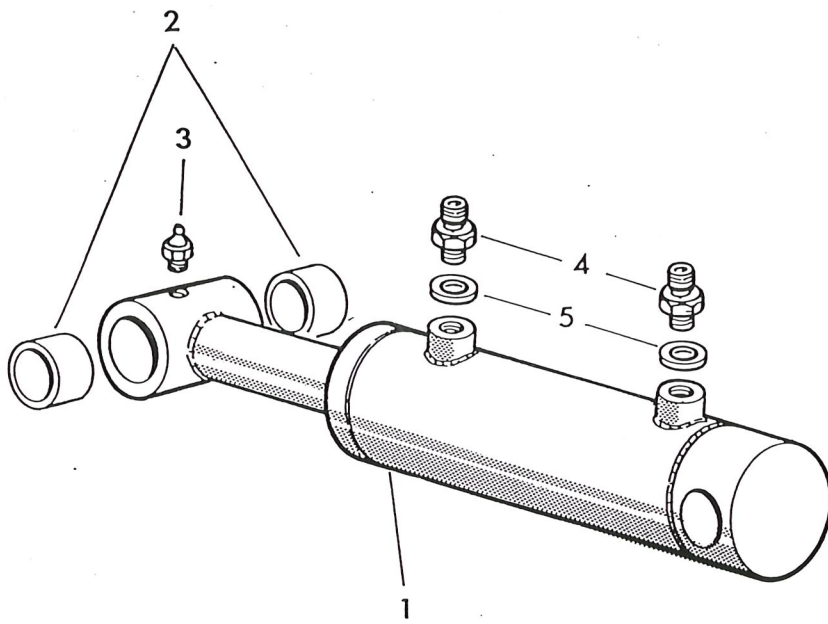
SPEARHEAD TWIGA-6 PARTS LIST



**Parts list – Slave, Head, Break-back and Base plate hydraulic cylinders**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1.	3580645	Slave ram
	3570665	Slave ram seal kit
2.	3580644	Head ram
	3570665	Head ram seal kit
3.	3580643	Break back ram
	3570665	Break back ram seal
4.	3580642	Base plate ram
	3570665	Base plate ram seal kit
5.	4600400	Bush
6.	2772300	Grease nipple
7.	4600410	Bush
8.	3260070	Bonded seal
9.	3360081	Adaptor
10.	3460100	Tee
11.	3760069	Hose assembly - Twiga-6 std
	3760044	Hose assembly - Twiga-6 VFR
	3760079	Hose assembly - Twiga-7
12.	3760068	Hose assembly - Twiga-6 std
	3760043	Hose assembly - Twiga-6 VFR
	3760078	Hose assembly - Twiga-7
13.	3360082	Adaptor
14.	3600113	Hose burst valve
15.	3360080	Adaptor
16.	3570660	Breather

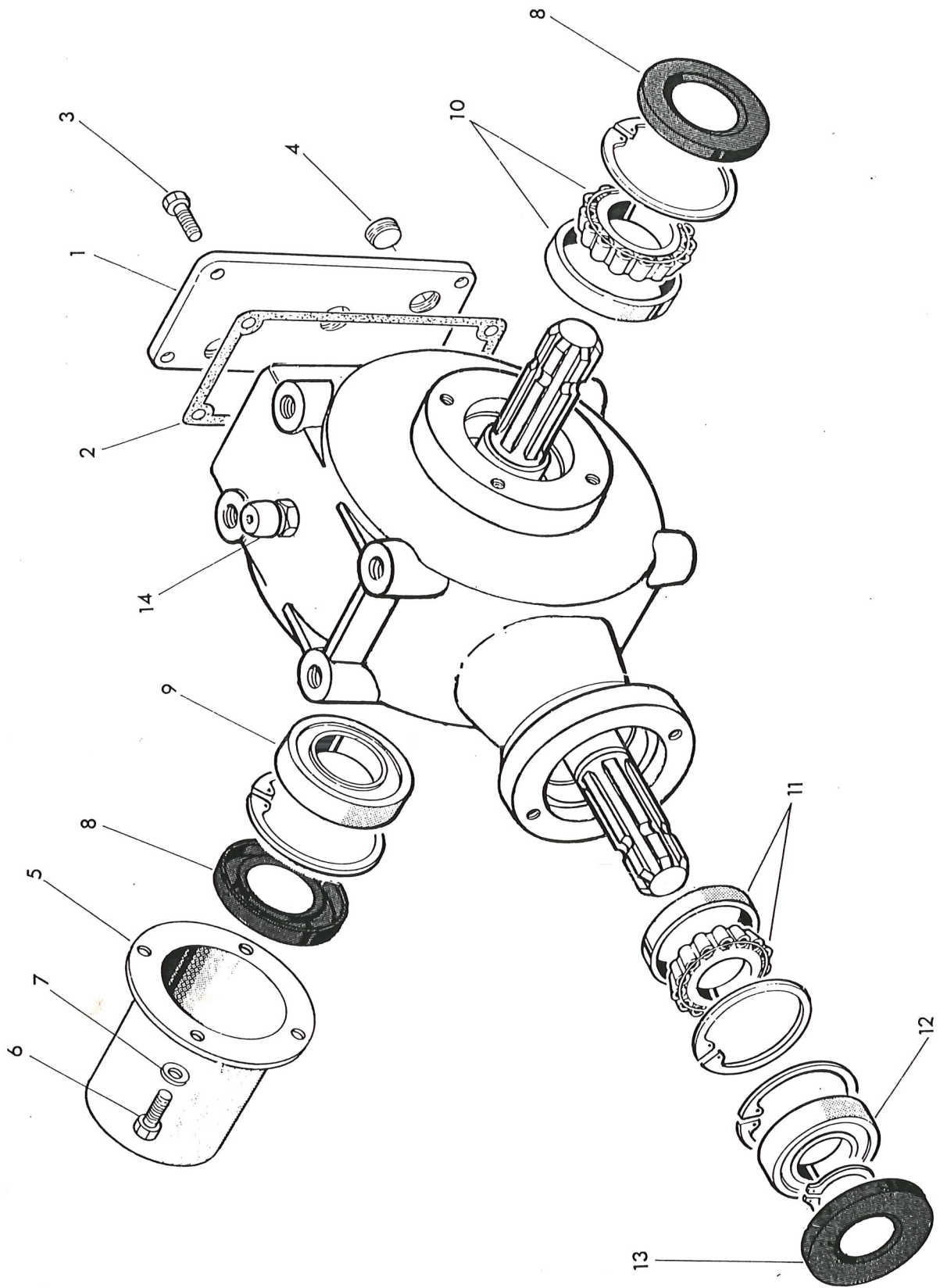
SPEARHEAD TWIGA-6 PARTS LIST



**Parts list – Variable Forward reach Hydraulic Cylinder VFR**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1	3580646	Variable forward reach ram
	3570666	Seal kit
2	4600400	Bush
3	2772300	Grease nipple
4	3360080	Adaptor
5	3260070	Bonded seal
6	3610009	Pilot check cartridge

SPEARHEAD TWIGA-6 PARTS LIST





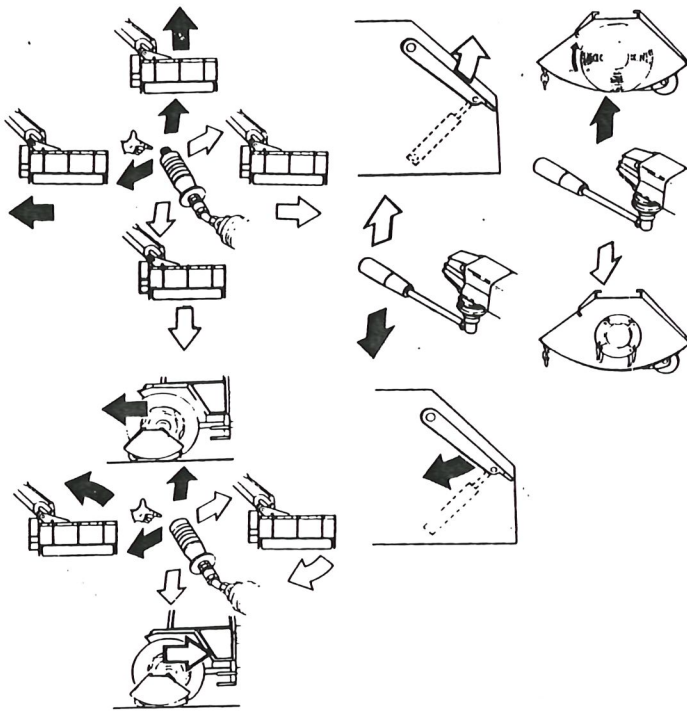
## Parts list - Dual rotation gearbox

Fig. Ref	Part number	Item description	
1.	5777201	Cover	15.16
2.	5777203	Gasket	1.18
3.	2770402	Bolt	
4.	5777208	Plug	3.48
5.	1777602	Shaft guard	4.99
6.	2770418	Bolt	
7.	2770434	Flat washer	
8.	4771506	Oil seal	2.32
9.	4771620	Bearing	5.87
10.	4770660A	Bearing	28.73
11.	4770658	Bearing	24.57
12.	4771600	Bearing	12.90
13.	4771124	Oil seal	2.32
14.	5777204	Breather	9.00

PAUL

THESE ARE THE ONLY  
INTERNAL PARTS AVAILABLE  
FOR THIS BOX

REGARDS, PAUL



1

Recommended P.T.O.  
speed 540 r.p.m.

3



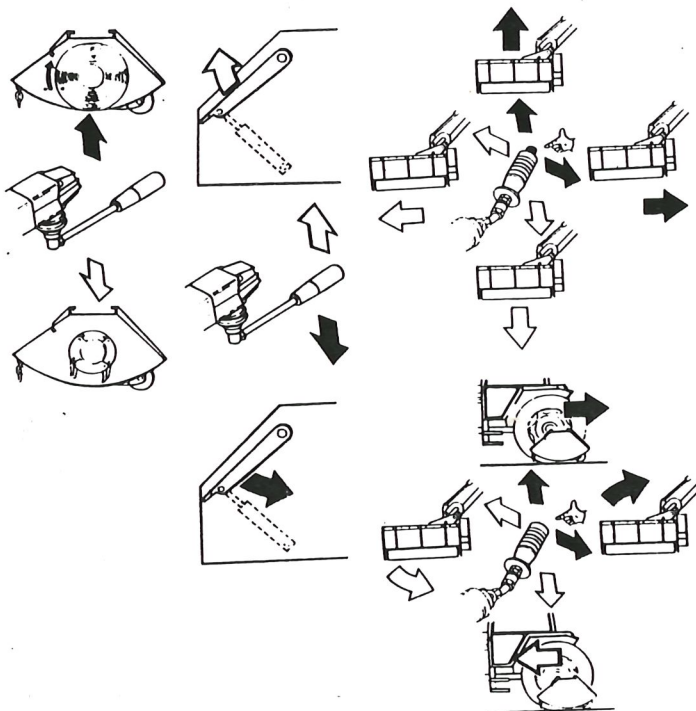
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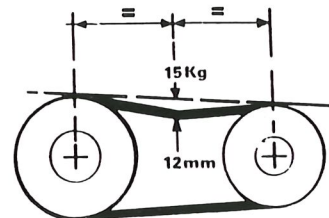
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2

  
**DANGER**  
Rotating cutters under here.

7

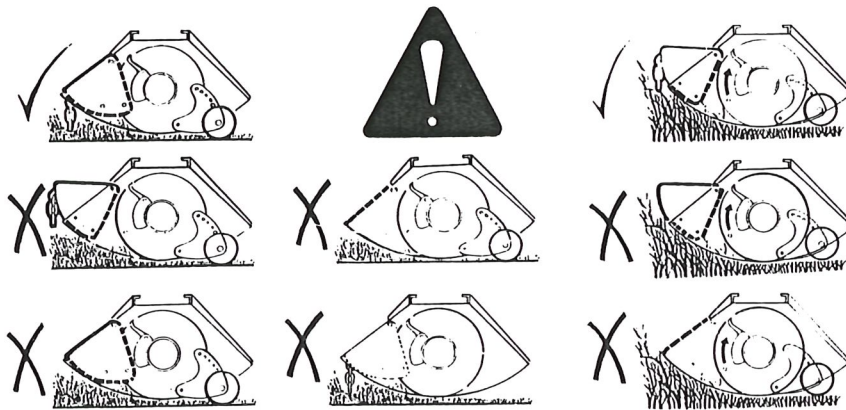


8

**Parts list – decals**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1.	8770344	Right hand control panel decal
2.	8770343	Left hand control panel decal
3.	8770305	Recommended PTO panel
4.	8770322	Grease point decal
5.	8770342	Sling decal
6.	8770340	Read book decal
7.	8770304	Danger decal
8.	8770341	Belt tension decal

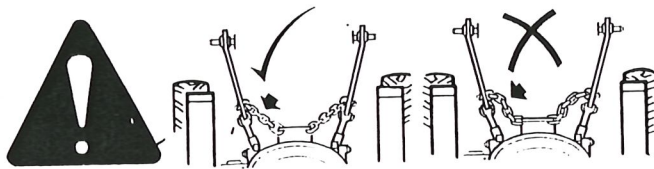
Decals may vary from Part's Book, due to constant changes in E.C. Regulations, please contact Spearhead, if in doubt.



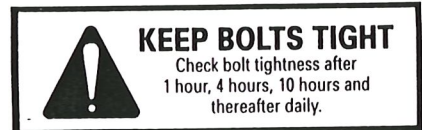
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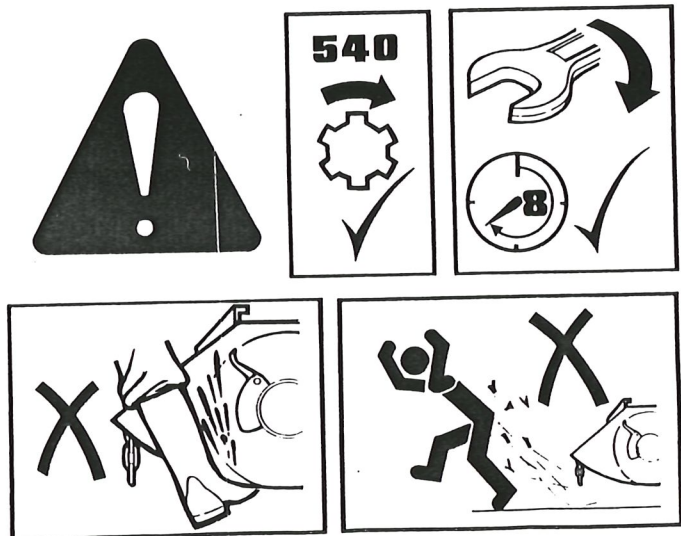
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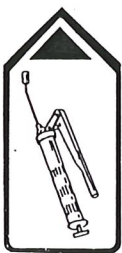
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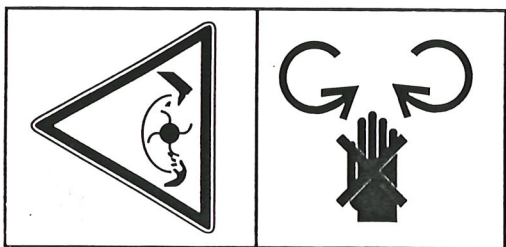
6

**Parts list – decals**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1.	8770345	Head guarding decal
2.	8770307	Manufactured in GB sticker
3.	8770346	Check chains decal
4.	8770306	Keep bolts tight decal
5.	8770308	Spearhead important sticker
6.	8770347	540 rpm speed decal

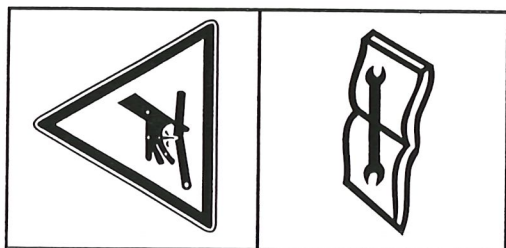


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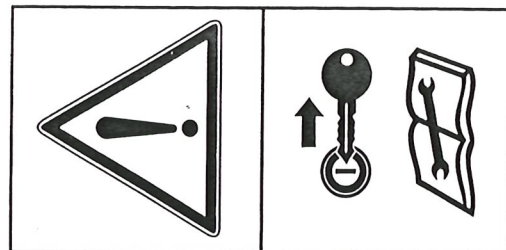
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8770380



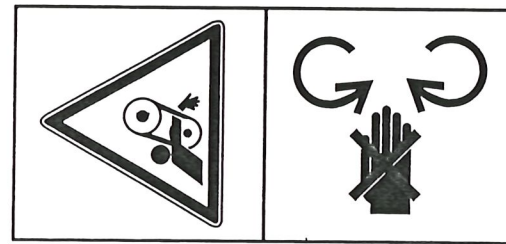
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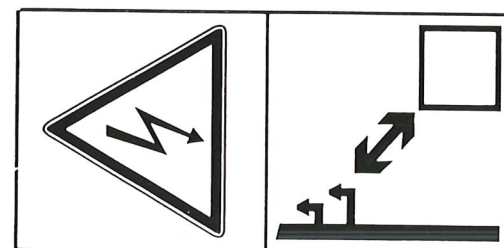
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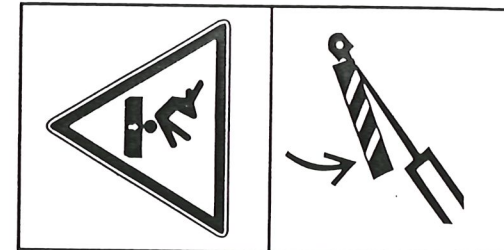
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224



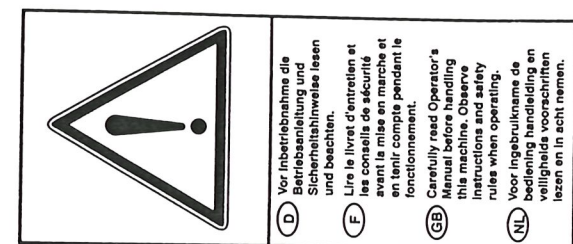
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202



9

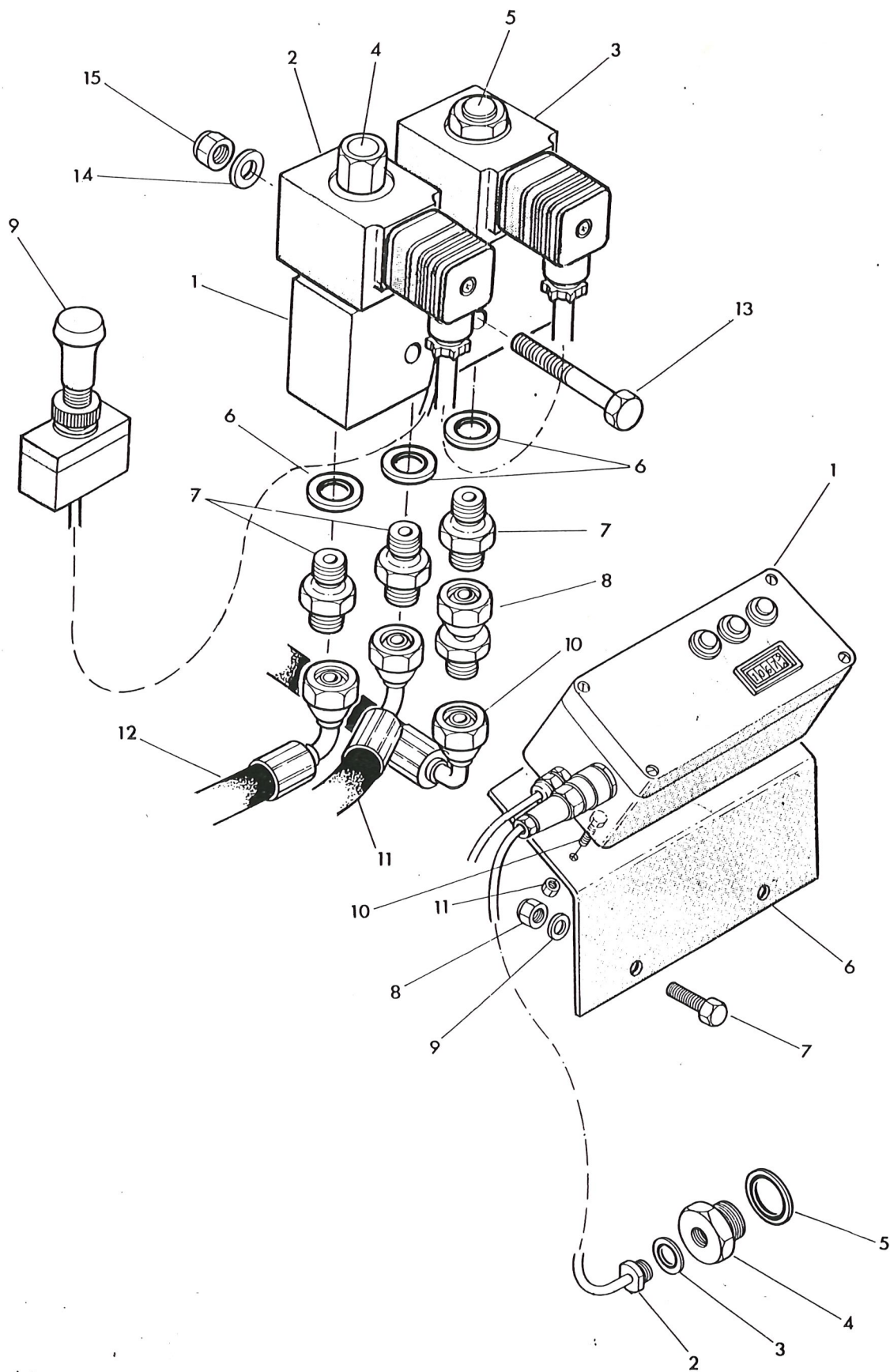
Fr

(D) Vor Inbetriebnahme die Betriebsanleitung und Sicherheitshinweise lesen und beachten.  
 (E) Lire le livret d'entretien et les conseils de sécurité avant la mise en marche et en tant compte pendant le fonctionnement.  
 (GB) Carefully read Operator's Manual before handling the machine. Observe instructions and safety rules when operating.  
 (NL) Voor Ingebruikname de bedienings handleiding en veiligheidsvoorschriften lezen en in acht nemen.

**Parts list – Decals**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1.	8770322	Grease point
2.	8770360	Stay clear of mower flails
3.	8770362	Avoid fluid escaping
4.	8770358	Shut off engine remove key
5.	8770356	Do not open
6.	8770357	Keep safe distance
7.	8770359	Electric power lines
8.	8770355	Secure lifting cylinder
9.	8770363	Careful/read Operator's Manual (4 languages)

SPEARHEAD TWIGA-6 PARTS LIST

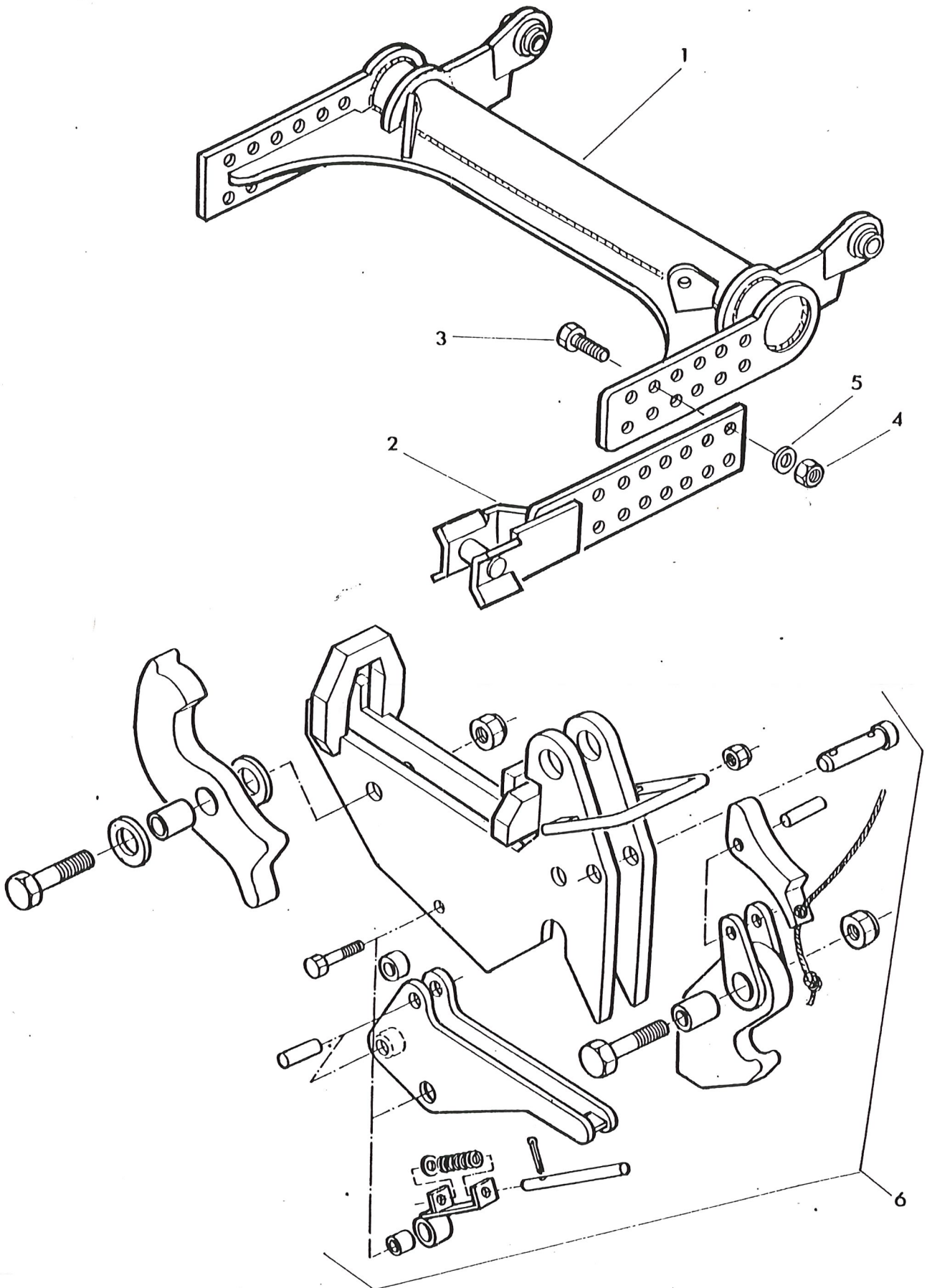




## Parts list - Angle float and system guard

Fig. Ref	Part number	Item description
1.	3600132	Angle float valve assembly
2.	3610030	Solenoid
3.		n/a
4.	3610032	Double poppet valve
5.	3610034	Single poppet valve
6.	3260070	Bonded seal
7.	3360080	Adaptor
8.	3250148	Fix bush
9.	8400100	Switch
10.	3760005	Hose assembly
11.		n/a
12.		n/a
13.	2770485	Bolt
14.	2771408	Washer
15.	2770373	Nyloc nut
16.	1777040	Mounting bracket
17.	2770402	Bolt
18.	2770416	Nyloc nut
19.	2770432	Flat washer
20.	2770250	Screw
21.	2770251	Nut
22.	3260073	Bonded seal
23.		n/a
24.	3900002	Transducer inc. cable
25.	390000	System guard display assembly
NI	1777039	Angle float valve - mounting plate
	2770444	Bolt

SPEARHEAD TWIGA-6 PARTS LIST



**Parts list – Axle mount**

<b>Fig. Ref</b>	<b>Part number</b>	<b>Item description</b>
1.	1777030	Axle mount sub frame
2.	1777032	Axle mount arm
3.	2770550	Bolt
4.	2770409	Nyloc nut
5.	2770517	Flat washer
6.	OPT0200	Category 2 hitch assembly

