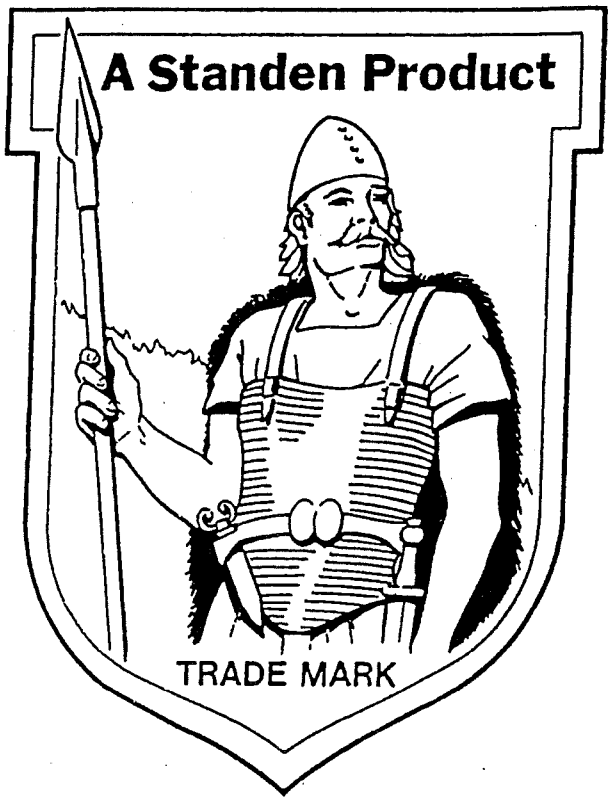
Standen



Bedmaker

1996

Standen Engineering Limited.
Hereward Works,
Station Road, Ely,
Cambridgeshire.
CB7 4BP
England.

Tel: 01353 661111 www.standen.co.uk Fax: 01353 662370

IMPORTANT

- This operators handbook should be regarded as part of the machine. Suppliers of both new and second-hand machines are advised to retain documentary evidence that this handbook was supplied along with the machine.
- On installation of the machine (i.e. starting off in the field), the New Machine Installation Record Card should be completed by the dealer/distributor and be countersigned by the customer. The document is proof that the correct procedures have been followed.
- The New Machine Installation Record Card should be returned to Standen Engineering Limited within 7 days of installation. Failure to do so may invalidate the machine warranty.

On delivery, check that the machine is as ordered and has not been damaged in transit. Please rèport any shortfall to your Standen dealer.

The contents of this handbook, although correct at the time of publication, may be subject to alteration by the manufacturers without prior notice.

Standen Engineering Limited operate a policy of continual product development. Therfore, some illustrations and/or text within this publication may differ from your machine.

CONTENTS

GENERAL SAFETY - BEDMAKER

The following is a guide list of precautions and reminders intended to help provide protection for you, your operators and the users of the public highway.

1. THE MACHINE IN USE

(a) Never attempt to get on or off a moving machine.

(b) Never work under a mounted machine when only supported by the tractor hydraulic linkage.

2. BEFORE TRAVELLING ALONG A PUBLIC HIGHWAY

(a) Clean down the machine to avoid depositing dirt on the road.

(b) Always fold the marker wings as provided upwards, or remove to reduce the width of the machine (see picture C3 on page 2). Make SURE locking pins are located to hold markers.

(c) Raise the sub-soiler tines (behind the ridger bodies) to ensure good ground clearance.

(d) Make sure the tractors' independent brake pedals are coupled together, and that sufficient front weights are fitted to the tractor (if required) to give positive steering.

(e) The Bedmaker with marker arms folded upwards, extends between 3.2 and 2.6 m wide depending on bed width setting of the ridger bodies.

(f) Beware of low cables, doorways etc., when markers are folded.

If the Bedmaker folded as above is 3.0 - 3.5 m wide, it is subject to the following regulation which came into force on 1st March 1985.

Mounted Implement 3.0 - 3.5 m wide

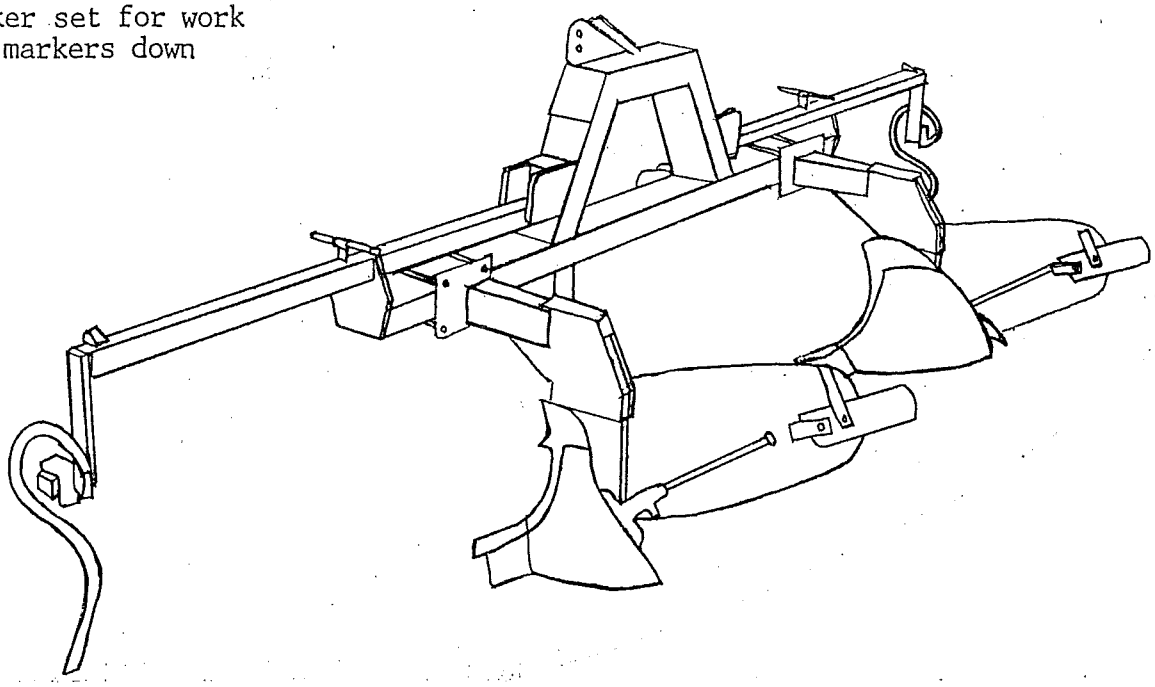
Police Notification: If transporting the machine on a public road for a distance of 5 miles or more or if part of the journey is on a road to which a speed limit of 40 mph or less applies, the police must be given 24 hrs notice with details of the intended journey.

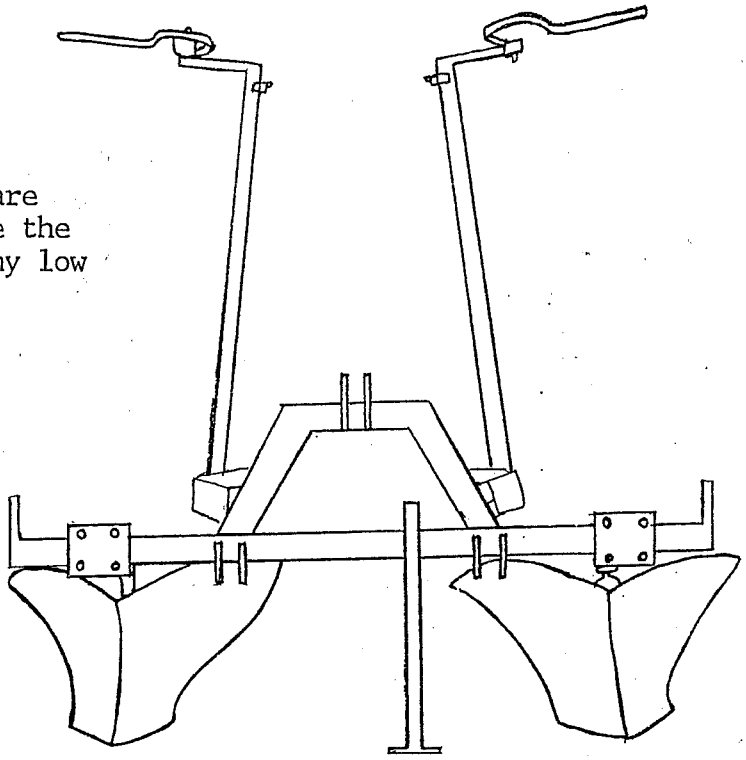
Speed limit of 20 mph on public roads also applies.

IMPORTANT

NEVER DROP THE MACHINE QUICKLY - LOWER GENTLY

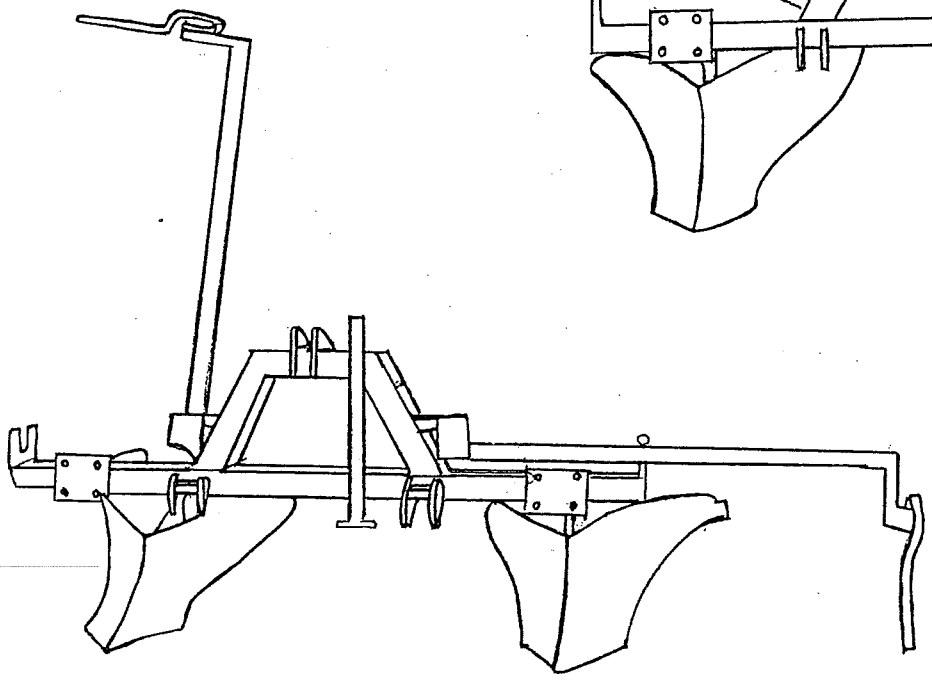
C1 The Bedmaker set for work with both markers down





C2 Folded for transport

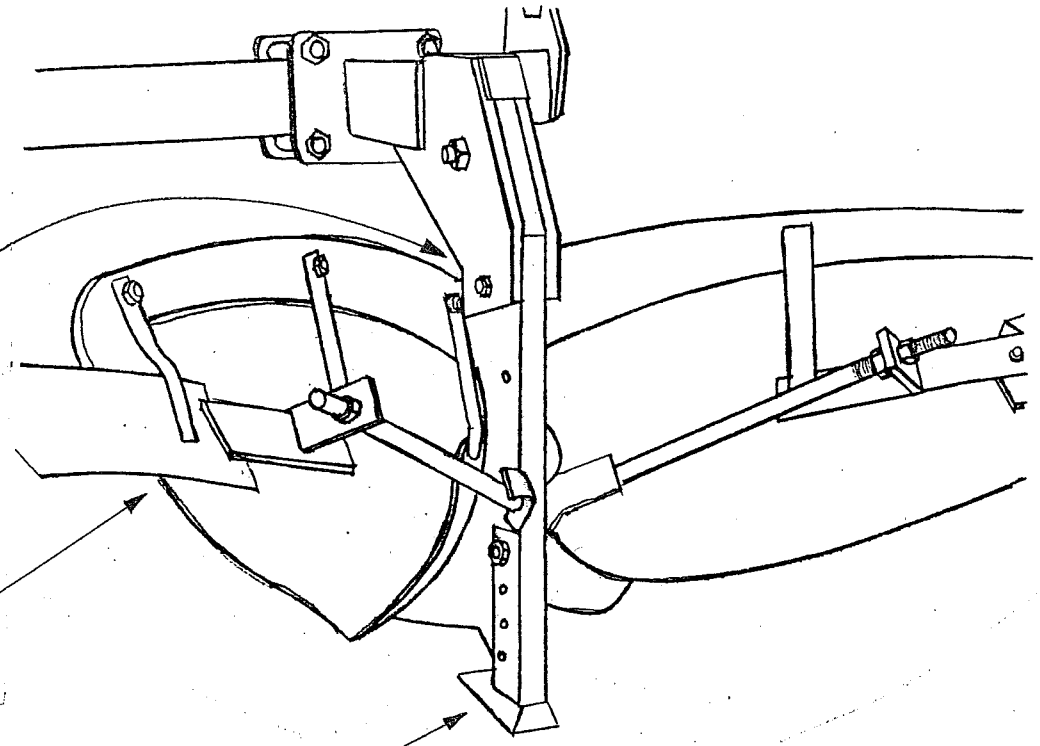
Note: The telescopic arms are retracted to minimise the height. BEWARE of any low cables or overhead obstructions



C3 Set to form beds close to a hedge or other obstruction.

Note: Centre stand is raised before work

C4

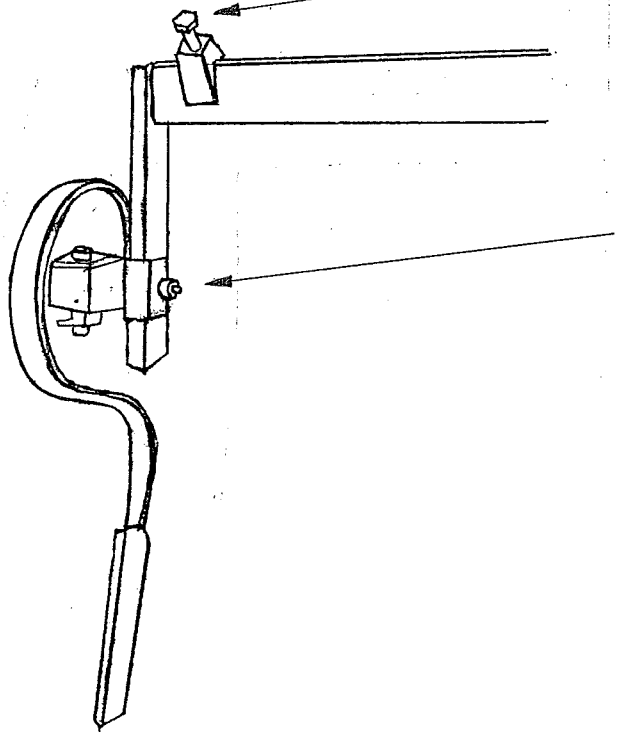


Shear bolt M16 x80
(4.6) quality

Turnover wings are
adjustable for angle
and height

Sub-soiler tine is
retained by M16 x 80 bolt.
Holes are provided for vertical adjustment

C5



Width adjustment for markers
is by telescopic arm (M24 spanner)

Wheel marker tines are adjustable
for height.

5. CULTIVATION TINES (H.D. MODEL)

(a) Normally 2 tines are mounted between the main ridgers (one each side of the central stabiliser). A limited amount of side adjustment is provided for these, should bed widths be changed.

(b) 2 tines are mounted on each heavy duty marker arm to cultivate the half bed being formed by the outside of each ridger. Consequently, all the beds are cultivated as they are formed. Do not put tines too close to the main ridgers, as this will prevent the soil flowing cleanly off the ridgers and could cause blockages.

6. STABILISER FIN (H.D. MODEL)

The depth of the stabiliser needs to be sufficient to fully cover the blade, if possible, to give maximum effect. Provision is made for vertical adjustment by a series of holes.

7. IN THE FIELD

(a) Initially only one marker arm will be required for the first beds on the headlands and the outside beds of each field (see picture C7). Thereafter, the tractor should be driven with one or the other of the marker tines running in the centre of the previously drawn furrow (i.e., both marker arms are folded down with the tines in their working position (see C8).

(b) The depth at which the machine operates should be set according to conditions using the Draft Control lever of the tractor.

(c) Shear bolt M16 x 80 fitted in the Bedmaker body is provided to protect against damage if rocks or any immovable objects are struck in the soil. Do not use HIGH TENSILE BOLTS in this position.

8. GENERAL CHECK

(a) Check all bolts for tightness after the first days work.

(b) Check measure the width of the beds being formed to ensure the tractor is being driven in the correct position in relation to the wheel line marker.

GENERAL POINTS ON BEDMAKING

Early ploughing (Sept-Nov) followed by Bedmaking while dry has proved to be beneficial on heavy soil types where clods are the main problem. By opening up the ground and exposing a much greater surface area to frost, mother nature can be most effective. If ploughing is possible crossways to the direction the eventual potato rows are intended to run, the Bedmaker will slice through the furrow seams helping to leave the soil in a coarse enough state in the beds to stand wintering.

Make sure the beds are deep enough to accommodate the amount of clod/stone which may be separated out in the spring.

If possible work with the sub-soilers fitted at the rear of the ridgers, to leave the furrow bottom loose for drainage.

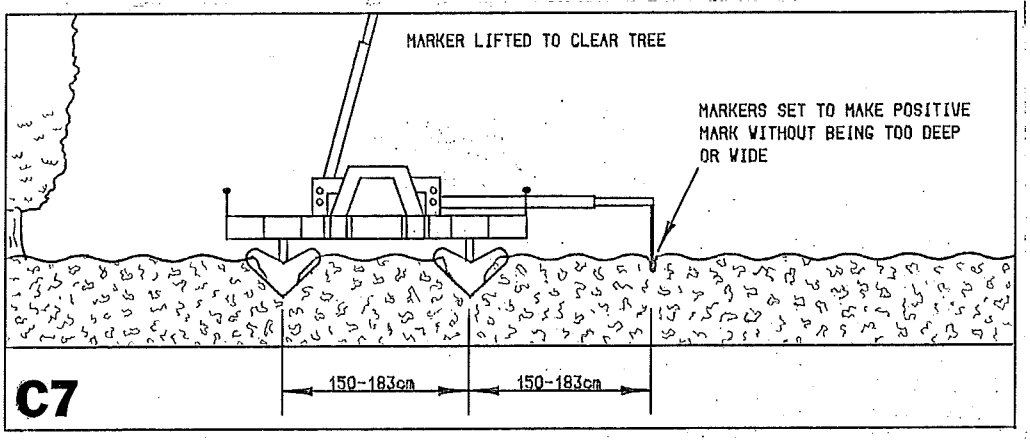
Where bedmaking takes place just prior to de-stoning or de-clodding, pre-cultivation may be required to break the soil down.

Remember that once the beds are formed the foundations are laid and all subsequent planting etc., must follow the same path.

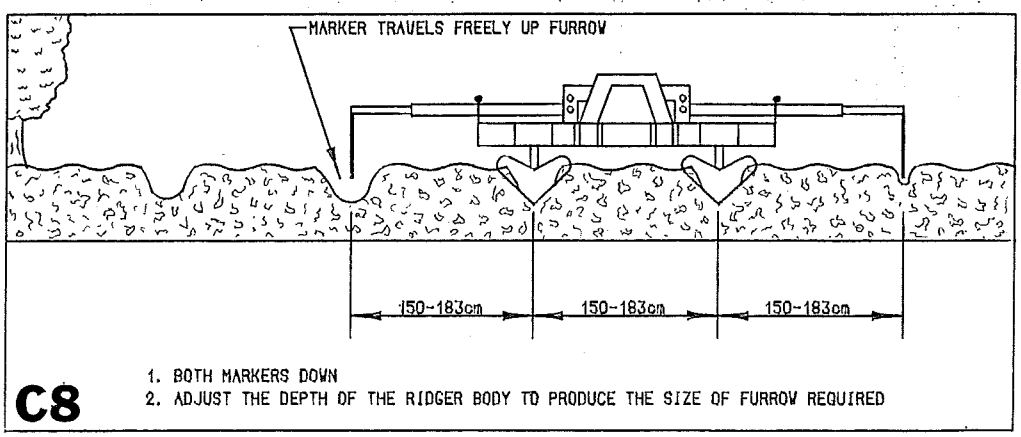
IMPORTANT

Keep all ridger bodies clean to allow the smooth flow of the soil through the machine; this also keeps draft to a minimum.

1ST PASS WITH BEDMAKER (rear view)



2ND PASS WITH BEDMAKER (front view)



MAINTENANCE OF THE BEDMAKER

(a) If the machine is not being used the next day, protect bright working parts with grease or oil to keep them in best working condition.

(b) Lubricate pivot points on the hydraulically folded markers.

(c) Replace worn shears etc., before excessive wear damages the mountings.

WHEN LAYING UP MACHINE AT END OF SEASON

(a) Clean machine down thoroughly.

(b) Check for any worn parts and order spares in good time.

(c) Protect all bright surfaces, such as ridger bodies, with rust preventative.

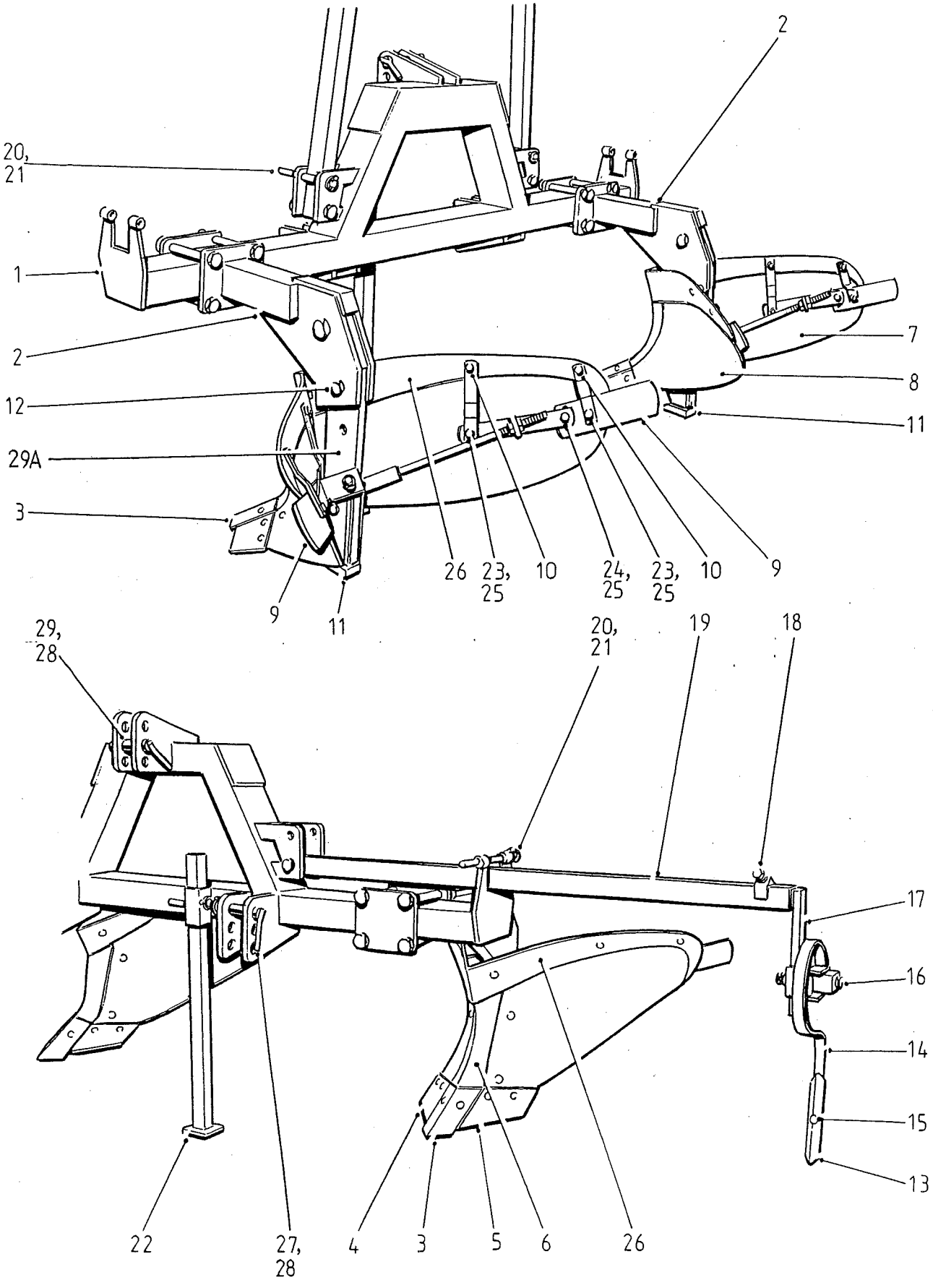
(d) Close hydraulic rams to protect the rods.

(e) Make sure the locking pins are inserted to hold the marker arms in the folded position for safety.

BEDMAKER PARTS LIST

Item	Part No.	Description	Qty.	Remarks
1	KA20484	Main Frame	1	
2	KA20485	Ridger Body Bracket	2	
3	KA20474	Ridger Point	2	
4	KA20476	Ridger Wing Share RH	2	
5	KA20475	Ridger Wing Share LH	2	
6	KA20479	Shin	2	
7	KA20481	Ridger Breast RH	2	
8	KA20480	Ridger Breast LH	2	
9	KA20486	Turnover Plate	4	
10	KA20487	7/16"UNFx30mm Share Bolt	20	
11	KA20482	Sub Soiler Tine	2	
12	KA20483	M16x80mm (4.6) Shear Bolt	2	
13	KA20477	Marker Point	2	
14	KA20488	Marker Coil Tine	2	
15	KA20489	M10x40mm Bolt (saddle head)	2	
16	KA19368	M16x140mm Bolt	2	
17	KA20490	Telescopic Arm	2	
18	22027062/200	5/8"UNCx2"Setscrew	2	
19	KA20491	Marker Arm	2	
20	KA20492	Locking Pin	2	
21	KA20496	M6x45mm Linchpin	2	
22	KA20493	Stand	1	
23	KA20494	7/16"UNFx1 3/8"Share Bolt (NB.Bolt)	a/r	
24	KA20495	7/16"UNF Pipp Nut	a/r	
25	KA20497	7/16"UNFx1 3/4"Share Bolt (NB.Bolt)	a/r	
26	KA20498	Ridger Bolt Top Extension	2	
27	KA20302	Cat.2 Bottom Pin	2	
28	PS714/5	Ø7/16"UNF Linchpin	3	
29	KA20534	Cat.2 Top Pin	2	
29A	KA20565	Ridger Leg	2	
		Additional Parts for Hydraulic Model Consist Of:		
30	KA20536	D/A Hydraulic Ram	2	
31	KA20538	Hydraulic Hose 1/4"R2@1500mm	2	
32	KA20539	Hydraulic Hose 1/4"R2@700mm	4	
33	KA17315	1/2"Male Coupling	2	
34	KA20536S	Seal Kit for D/A Ram	1	
35	KA20364	Marker Tine LH (25mm sq.)	1	Prior to Ser.No.BM188 only
	KA20563	Marker Tine LH (30mm sq.)	1	From Ser.No.BM188 only
36	KA20365	Marker Tine RH (25mm sq.)	1	Prior to Ser.No.BM188 only
	KA20563	Marker Tine RH (30mm sq.)	1	From Ser.No.BM188 only
37	KA20366	Marker Point (2"wide)	2	Prior to Ser.No.BM188 only
	KA20564	Marker Point (2 1/2"wide)	2	From Ser.No.BM188 only
38	KA20478LH/RH	Cultivator Tine (30mm sq.)	6	Prior to Ser.No.BM188 only
	KA20563	Cultivator Tine (30mm sq.)	6	From Ser.No.BM188 only
39	KA20537	Cultivator Tine Point (3"wide)	6	Prior to Ser.No.BM188 only
	KA20564	Cultivator Tine Point (2 1/2"wide)	6	From Ser.No.BM188 only
40	KA20370	Stabilizer Fin (c/w brackets KA20535)	1	
41	KA20380	7/16"UNFx2"Bolt	4	Prior to Ser.No.BM188 only
	KA20540	M12x55mm Bolt	4	From Ser.No.BM188 only
42	KA20540	M12x55mm Bolt	12	

Note: Please quote the full serial number of your machine when ordering spare parts.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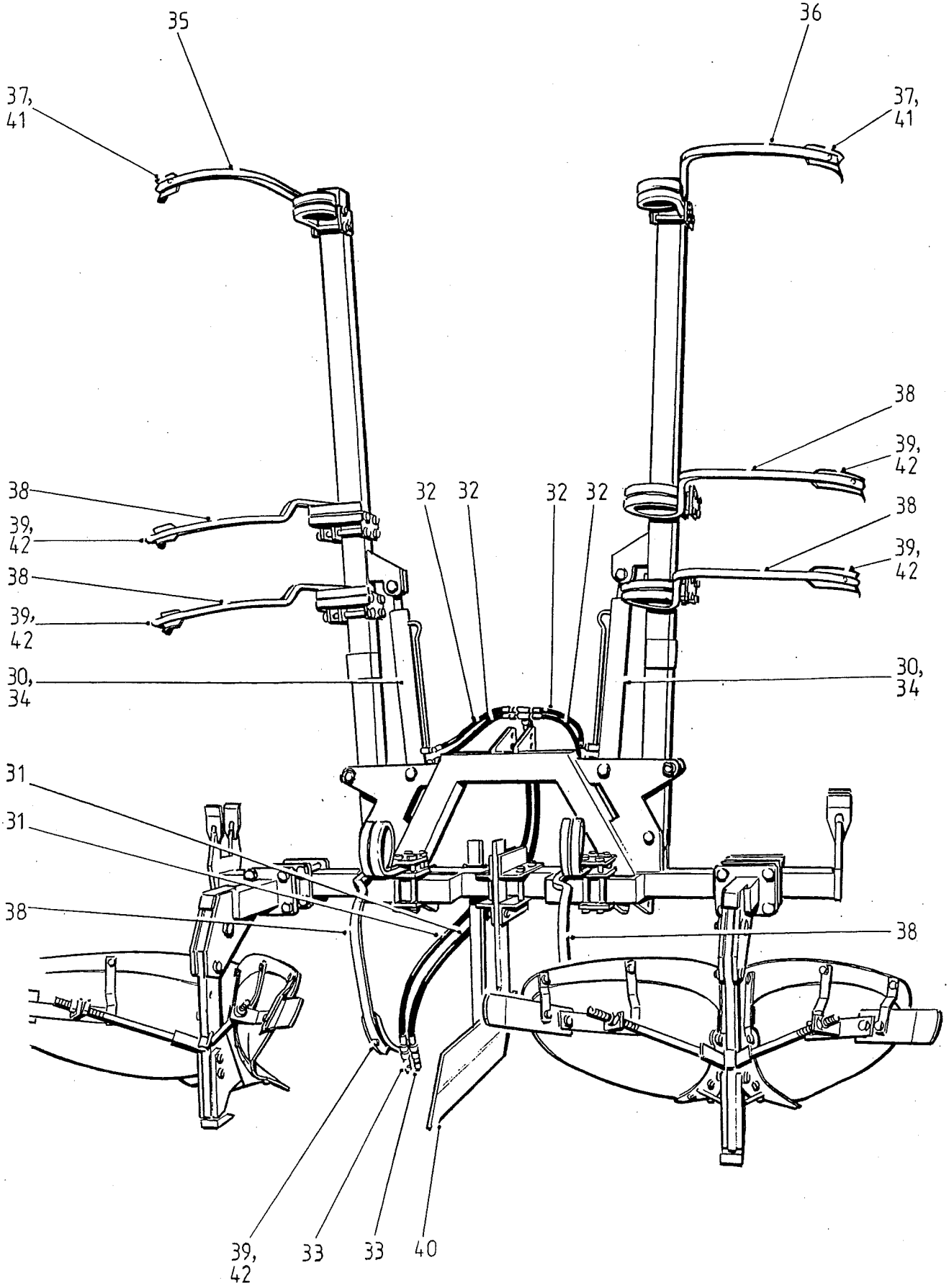
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Break-back Kit (optional)

The break-back kit, which replaces the standard ridger body brackets, is designed to prevent damage of the ridger bodies by allowing them to pivot backwards momentarily when encountering large rocks or immovable objects within the soil. Once clear of the obstruction the ridgers automatically reset themselves.

Priming/Bleeding the Hydraulic System

Hydraulic oil under pressure is extremely dangerous. The hydraulic system is under high pressure even with the machine at rest. Ensure pressure is safely released before breaking into any pipework. System pressure is indicated by the pressure gauge (item 40, page 15).

After fitting the break-back kit to the bedmaker, the hydraulic system will need to be primed and bled to expel all air from the system. On factory fitted break-back kits this will already have been carried out. The same procedure will need to be followed after breaking any connection in the pipework for maintenance. Priming is best done using a hydraulic hand pump.

1. Connect the hose to the hand pump and close the flow valve *(item 30, page 15)*.
2. Loosen the ram bleed screws *(item 23, page 15)*.
3. Carefully fill the system until all air is expelled.
4. Finally, retighten the bleed screws.

Setting the Hydraulic Pressure

For the break-back device to function correctly, the hydraulic pressure must be matched to the gas pressure within the accumulator *(item 42, page 15)*. The table *(page 13)* lists the hydraulic pressures necessary using different accumulator gas pressures. The standard accumulator supplied is preset at 85 bar therefore the hydraulic pressure should be set at 102 bar. Accumulators of different pressures are available through your Standen Dealer.

Changing the accumulator gas pressure requires specialist knowledge and equipment. If a different pressure is required, contact your Standen Dealer.

Setting the hydraulic pressure is best done using a hand pump. However, the tractor single-acting spool valve may be used.

1. Close the flow valve *(item 30, page 15)*.
2. Connect the hose to the spool valve and pressurise the system until the gauge *(item 40, page 15)* reads approximately 10 bar above the required operating pressure.

3. Set the spool valve to 'lower', this will allow a return flow. If using a tractor, also switch off the engine.
4. Carefully reduce the system pressure to the required setting (e.g. 102 bar) by opening the flow valve *(item 30, page 15)*. Tightly close the valve when reached.
5. Finally, disconnect the hose from the spool valve.

Accumulator Gas Pressure (set with no oil pressure)	Hydraulic Oil Pressure (bar) (set after gas pressure)
60 bar	72 bar
65 bar	78 bar
70 bar	84 bar
75 bar	90 bar
80 bar	96 bar
85 bar	102 bar
90 bar	108 bar
95 bar	114 bar
100 bar	120 bar

Maintenance

Inspect the hydraulic hoses and fittings for cuts and abrasions. Replace immediately. The hydraulic system is under high pressure even with the machine at rest. Ensure pressure is safely released before breaking into any pipework. System pressure is indicated by the pressure gauge *(item 40, page 15)*.

Regularly lubricate the break-back pivot points using the grease nipples *(item 11 & 12, page 15)*.

BEDMAKER PARTS LIST

Item	Part No.	Description	Qty.	Remarks
	KA20596	**Break-back Kit Consists Of:**		
1	KA20585	Break-back Hydraulics	1	(see list at end)
2	KA20588	Break-back Arm	2	
3	KA20589	Break-back Pivot Bracket	2	
4	KA20590	Pivot Pin (197mm)	4	
5	KA20591	Pivot Pin (171mm)	2	
6	KA20592	Accumulator Mounting Bracket	1	
7	KA20593	Accumulator Clamp Strap	2	
8	KA20594	Clamp Plate	2	
9	KA20595	Break-back Clamp Plate	2	
10				
11	GS411	1/8"BSP Angled Grease Nipple	2	
12	GS412	1/8"BSP Straight Grease Nipple	2	
13				
14				
15				
	KA20585	**Break-back Hydraulics Consist Of:**		
16	10140	1/2"BSP Q/R Coupling	1	
17				
18	11122	1"BSP Dowty Seal	1	
19	11123	3/4"BSP Dowty Seal	1	
20	11124	1/2"BSP Dowty Seal	4	
21	11125	3/8"BSP Dowty Seal	4	
22	11337	1/4"BSP Dowty Seal	5	
23	11876/8	1/4"BSP Blanking Plug	2	
24				
25	12315	1/2"BSP M M Adaptor	4	
26	12560	3/4"BSPx1"BSP M M Adaptor	1	
27				
28	16356	1/4"BSPx1/2"BSP M M Adaptor	1	
29				
30	22066	1/4"BSP Flow Control Valve	1	
31				
32	27906	1/2"Hose Assembly (1600mm)	3	
33				
34	31099	1/4"BSP Mx1/2"BSPF Swivel Adaptor	1	
35				
36	42653	3/8"BSP Breather Plug	2	
37				
38				
39				
40	KA20581	1/4"BSP Pressure Gauge	1	
41	KA20582	Hydraulic Ram	2	
42	KA20583	Accumulator	1	
43	KA20587	Manifold Block	1	
44				
45	KA20602	1/4"BSP M F Gauge Swivel Adaptor	1	
46				
47	UC25	3/8"BSPx1/2"BSP M M Adaptor	2	
48				
49				
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Note: Please quote the full serial number of your machine when ordering spare parts.

Break-back Kit
Assy No KA20596