

Benford

OPERATORS HANDBOOK

and

PARTS LIST

for

The Little
Benford
ME130

INTRODUCTION TO THE ME130 EXCAVATOR

The ME130 is a small but powerful hydraulically operated excavator with exceptional stability which can be towed by a pick-up van or Land-Rover at maximum road speeds with complete safety.

ME130 weighs only 480kg and measures 3m long x 1.5 wide when being towed on the road.

It is powered by a small single-cylinder four-stroke 3.7kw (5hp) petrol engine developing a maximum 4000 rev/min, but governed to provide 2.5kw (3.5hp) at 2500 rev/min - enough power to produce a bucket tear-out force of 17kn (1.75tons) via the machine's hydraulic system.

The digger boom has a slew of 130°, a reach of 4.2m, with the bucket fully open and will dig to a maximum depth of 1.9m, it can be fitted with a variety of buckets measuring from 200mm (8in) up to (24in) wide respectively. The boom can also be used for face shovelling with a 560mm (22in) wide shovel.

Robustly constructed for low maintenance under rough operating conditions, the excavator embodies a simple design concept.

This is based on a heavy-duty steel chassis incorporating three cross-members to which components for each mode of operation can be attached and interchanged in a matter of minutes by means of pins instead of nuts and bolts, thus eliminating the need of tools.

For towing, a set of wheels is attached to the front cross-member beneath the boom (which acts as an axle and balance point), with the excavator attached to the towing vehicle by means of a tow bar. On site, the tow bar is detached and the wheels transferred from the front cross-member behind the operators driving seat which now acts as the excavator's rear axle. At the same time, two stabilising outrigger legs (stowed on either side of the driving seat when not in use) are fitted to the front cross-member, one on each side. The end of each outrigger leg is spade-shaped to anchor the excavator firmly to the ground while digging. Operational stability is further improved by fitting a separate set of anchoring spades to the third (centre) cross-member situated under the driving seat.

Sitting on the padded driving seat, the operator controls the machine via a set of five levers conveniently mounted in a row directly in front of the seat. The levers raise and lower the boom, slew it to the left or right, raise and lower the dipper (bucket) arm, control the inward/outward dipping motions of the bucket/shovel, and lift/lower the rear wheel axle.

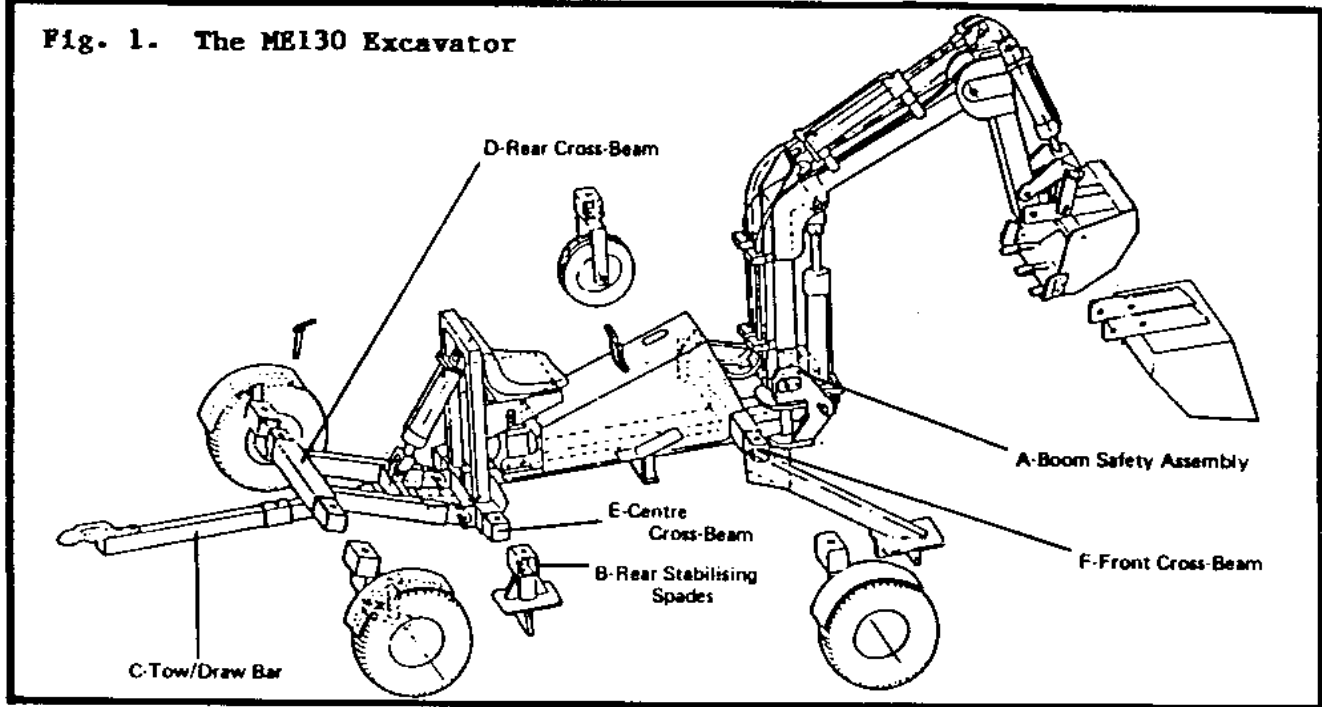
Moving the machine forward, backward or sideways is both simple and quick. Using the appropriate levers, the operator presses both the bucket and rear wheel axle into the ground, lifting the machine's middle section (containing the outrigger legs and anchoring spades) clear of the ground in the process, so that the machine resets only on the bucket and rear stabilizing wheels.

With the bucket now acting as the only anchoring point, the driver operates the boom to move the machine forward or backward. Sideway movements are achieved by slewing the bucket in the required direction to bring the rest of the machine into line. Having manoeuvred the excavator into the new position, the operator uses the bucket and rear wheel axle control levers again to lower the machine's middle section to the ground. With the outrigger legs and spades back in the anchoring position, the bucket is now free to resume digging.

With a special (optional) set of bogey wheels fitted to the front cross-member and the outrigger legs removed, the excavator is only 810mm wide. It can thus be easily wheeled through narrow entrances such as gates leading to private gardens where the machine can be used for a wide variety of digging and landscaping operations, including the preparation of foundations, drains and building ornamental banks; raised walkways, swimming pools and tennis courts. The ME130 is also employed for the digging of graves.

The replacement of an outrigger leg with a special straight leg and used in conjunction with the bogey wheels will enable the excavator to dig close alongside a wall or fence.

Fig. 1. The ME130 Excavator



PREPARING YOUR ME130 FOR WORK

1. Remove light-board assembly (if fitted).
2. Remove stabilising legs from behind seat and place on ground by road wheels.
3. Starting engine.
 1. place fuel tap in ON position (vertical)
 2. put choke lever to ON and adjust throttle to HALF-WAY position
 3. use pull start to start engine
 4. Once engine is running place choke control off position and adjust throttle to full position.

4. REMOVING BOOM SAFETY ASSEMBLY (ITEM A on FIG. 1)

- 1) Pull lever No. 1 (MAIN BOOM) towards seat to release pressure on safety-bar. Remove both R-clips and remove assembly. If unable to remove assembly use lever No. 2 (SLEW) to re-align main boom.
- 11) CARE MUST BE TAKEN WITH ANY MOVEMENT OF SLEW CONTROL WHEN SAFETY BRACKET IS IN POSITION, AS DISTORTION OF PARTS CAN BE CAUSED IF MOVED TOO FAR.

5. FITTING REAR STABILISING SPADES (ITEM B ON FIG. 1)

- 1) Push lever No. 3 (DIPPER ARM) away from seat to extend dipper arm.
- 11) Push lever No. 4 (BUCKET) away from seat to open bucket.

WITH MINIMUM EFFORT THE MACHINE CAN NOW BE MADE TO TIP FORWARD ON FRONT ROAD WHEELS

- 111) REMOVE RETAINING PIN AND REMOVE DRAW/TOWING BAR (ITEM C ON FIG. 1)

6. TO FIT FRONT STABILISING LEGS

- i) Remove R-clips and retaining pins from rear cross-beam (ITEM D ON FIG. 1).
- ii) Push lever No. 1 (MAIN BOOM) forward to elevate road wheels. Remove R-clips and retaining pins and remove wheel units from cross-beam. (ITEM F ON FIG. 1) and replace on rear cross-beam (ITEM D ON FIG. 1). Secure with pins and R-clips.
- iii) Place front stabilising legs on front cross-beam (ITEM F ON FIG. 1) and secure with pins and R-clips. Check ALL pins on machine are secured with R-clips.
- iv) Pull lever No. 1 (MAIN BOOM) towards seat. The front stabilising legs will now come into contact with the ground.

WITH REAR STABILISING SPADES AND FRONT STABILISING LEGS SECURED TO THE MACHINE THE ME130 IS NOW READY TO DIG.

IMPORTANT

THE NARROW WHEELS CAN BE USED IN PLACE OF THE ROAD WHEELS TO ENABLE THE MACHINE TO BE MANOUEVERED THROUGH NARROW ENTRANCES. THE MACHINE SHOULD NEVER BE TOWED WITH THESE WHEELS IN POSITION.

THE STRAIGHT DIGGING LEG IS USED IN PLACE OF EITHER STABILISERS TO ENABLE THE MACHINE TO BE OPERATED CLOSE TO A WALL OR BUILDING.

THE STRAIGHT DIGGING LEG SHOULD NEVER BE USED IN A NORMAL OPEN DIGGING SITUATION.

OPERATION

USE OF LEVERS IN DIGGING FUNCTIONS

- LEVER 1** - Move forward to lower main boom
Move back to raise main boom
- LEVER 2** - Move forward to slew main boom to left
Move back to slew main boom to right
- LEVER 3** - Move forward to extend dipper arm away from machine
Move back to pull dipper arm towards machine
- LEVER 4** - Move forward to open bucket to empty
Move back to close or crowd bucket to dig
- LEVER 5** - Move forward to raise rear wheels when digging
Move back to lower rear wheels when digging

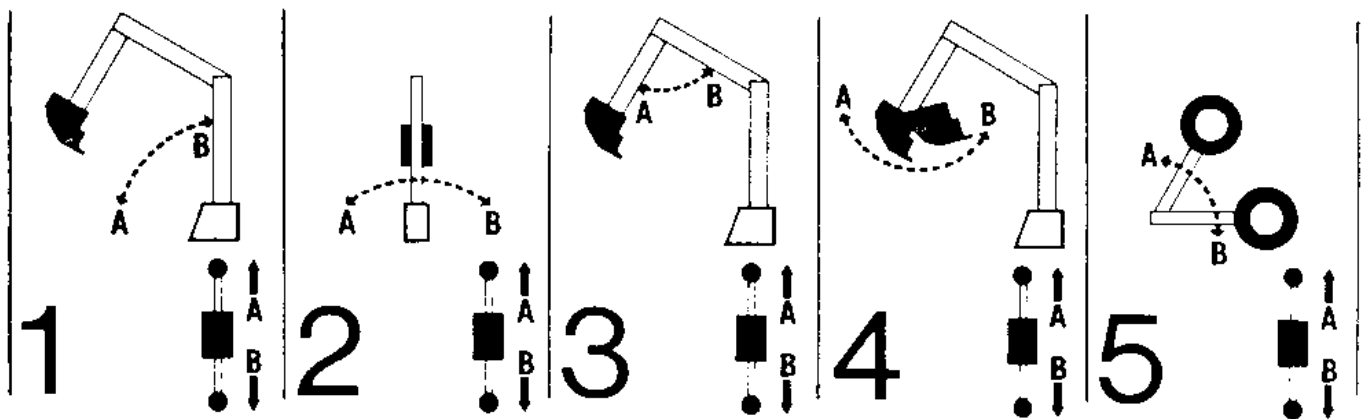


Fig. 2. Operating Lever

7. TO MANOEUVRE MACHINE (IN DIGGING POSITION) FORWARD MOVEMENT

- i) Use lever No. 3 (DIPPER ARM) to extend dipper arm and lever No. 4 (BUCKET) to open bucket.
- ii) Pull lever No. 5 (REAR WHEEL RIM) towards seat to lower rear wheels.
- iii) Push lever No. 1 (MAIN BOOM) forward to raise front stabilizer legs from ground.
- iv) Pull lever No. 3 towards seat.

**THE MACHINE RAISED COMPLETELY ABOVE THE GROUND, WILL MOVE FORWARD.
REPEAT SEQUENCE 7. 1, ii, iii, iv, AS REQUIRED.**

8. BACKWARD MOVEMENT

- 1) Pull lever No. 1 (MAIN BOOM) towards seat
- 1i) Pull lever No. 3 (DIPPER ARM) towards seat
- 1ii) Pull lever No. 4 (BUCKET) towards seat

WHEN MOVEMENTS 1, 1i, 1ii, ARE COMPLETED THE MAIN BOOM, DIPPER ARM AND BUCKET ARE IN THE CLOSED POSITION

- iv) Pull lever No. 5 (REAR WHEEL RAM) towards seat to lower rear wheels.
- v) Push lever No. 1 (MAIN BOOM) away from seat.
Continue until front stabilizing legs are raised from the ground.
- vi) Push lever No. 3 (DIPPER ARM) forward away from seat.

THE MACHINE RAISED COMPLETELY ABOVE THE GROUND WILL MOVE BACKWARDS REPEAT SEQUENCE 8 i) - vi) AS REQUIRED

9. DIRECTIONAL MOVEMENT

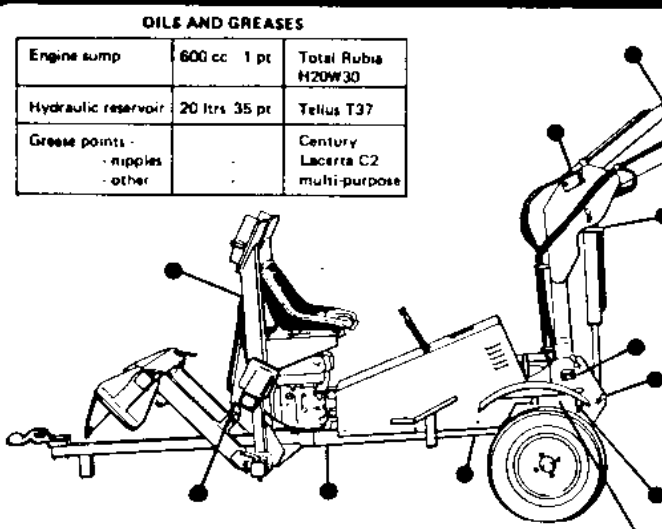
DURING FORWARDS AND BACKWARDS MOVEMENTS DIRECTIONAL MOVEMENTS MAY BE MADE USING LEVER NO. 2 (SLEW CONTROL)

WHEN MAKING DIRECTIONAL CHANGES IT IS IMPERATIVE THAT THE FRONT AND REAR STABILIZERS ARE GIVEN MINIMUM GROUND CLEARANCE TO ENSURE MAXIMUM SAFETY.

ROUTINE CARE AND MAINTENANCE. ROBIN ENGINE.

ROUTINE CARE AND MAINTENANCE PROCEDURES

OILS AND GREASES		
Engine sump	600 cc 1 pt	Total Rubia H20W30
Hydraulic reservoir	20 ltrs 35 pt	Tellus T37
Grease points - nipples - other		Century Lacerta C2 multi-purpose



STARTING AND STOPPING THE ENGINE

Open fuel tap and push control 1/3 towards the high speed position. Close choke.

Pull recoil starter quickly to start engine. Open choke slowly.

To stop engine, press STOP button and hold until engine stops. Close fuel tap.

For full instructions refer to Engine Handbook supplied with machine.

DAILY MAINTENANCE

Check engine oil level on dipstick. Top up if necessary with Total Rubia H20W30.

Check fuel level. Fill tank at beginning of working day.

Check tyre pressures. These should be maintained at 25 p.s.i.

Lubricate all grease nipples with Lacerta C2. See Diagram.

WEEKLY MAINTENANCE

Lubricate all moving parts, particularly control pivots and pins with heavy grade oil.

Check level of hydraulic oil in reservoir. Top up with Tellus 37.

Check hydraulic connections and cylinders for leaks.

Check hydraulic fluid filter.

Check tightness of wheel nuts.

PERIODIC MAINTENANCE

Every six months:

- Change hydraulic oil and filter.
- Check that relief valve setting is 170 bar 2500 p.s.i.
- Remove hub caps from wheels and grease bearings with Lacerta C2, if necessary

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SPARE PARTS - HOW TO ORDER

Please state in this sequence:-

(1) EXCAVATOR SERIAL NUMBER. Without this we cannot be certain of sending you the correct parts. You will find the machine serial number on a small plate fitted in a prominent position.

(2) ENGINE SERIAL NUMBER. If engine parts required.

(3) PART NO., DESCRIPTION AND QUANTITY of parts required.

(4) FULL ADDRESS where parts are to be sent. Also, please advise invoicing address. 'Phone, cable, telex or mail your order to:-

BENFORD LIMITED, WARWICK, ENGLAND.

The Telephone number of our Spares Department is Warwick (0926) 494241.

Our Telex number is 312196.

Our Telegraphic address 'Benfrd, Warwick'.

(5) All Benford spares are despatched in the U.K. by the quickest means available. Special deliveries can be arranged at cost. Heavy or bulky items are forwarded by Road Transport as available.

(6) TERMS. We supply spare parts:-

(a) Cash with order.

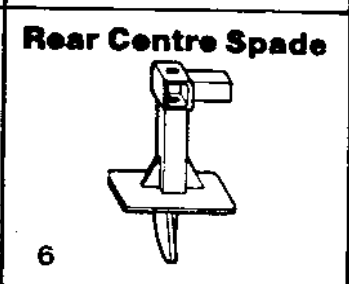
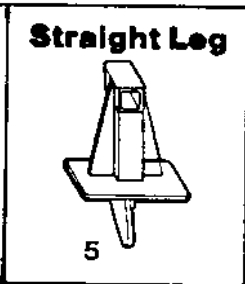
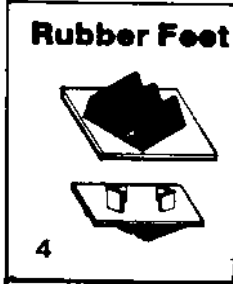
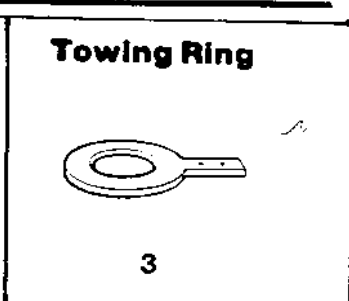
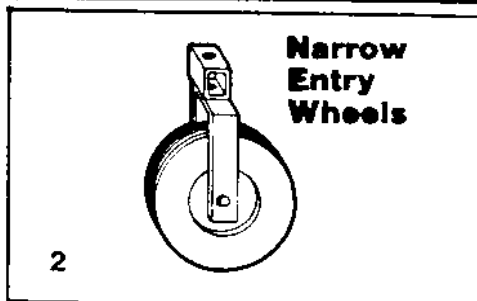
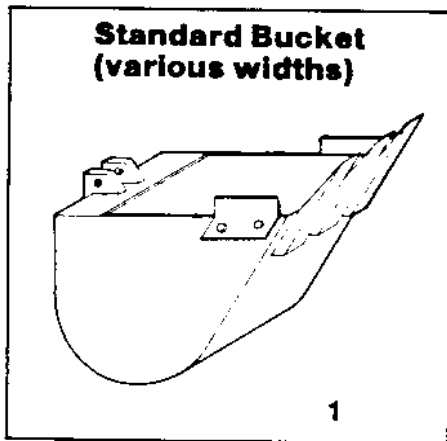
(b) Against pro-forma invoice as required.

(c) Monthly account facilities are available to regular customers on approval of the usual trade references.

(7) This Publication is also available in Micro-Fiche form.

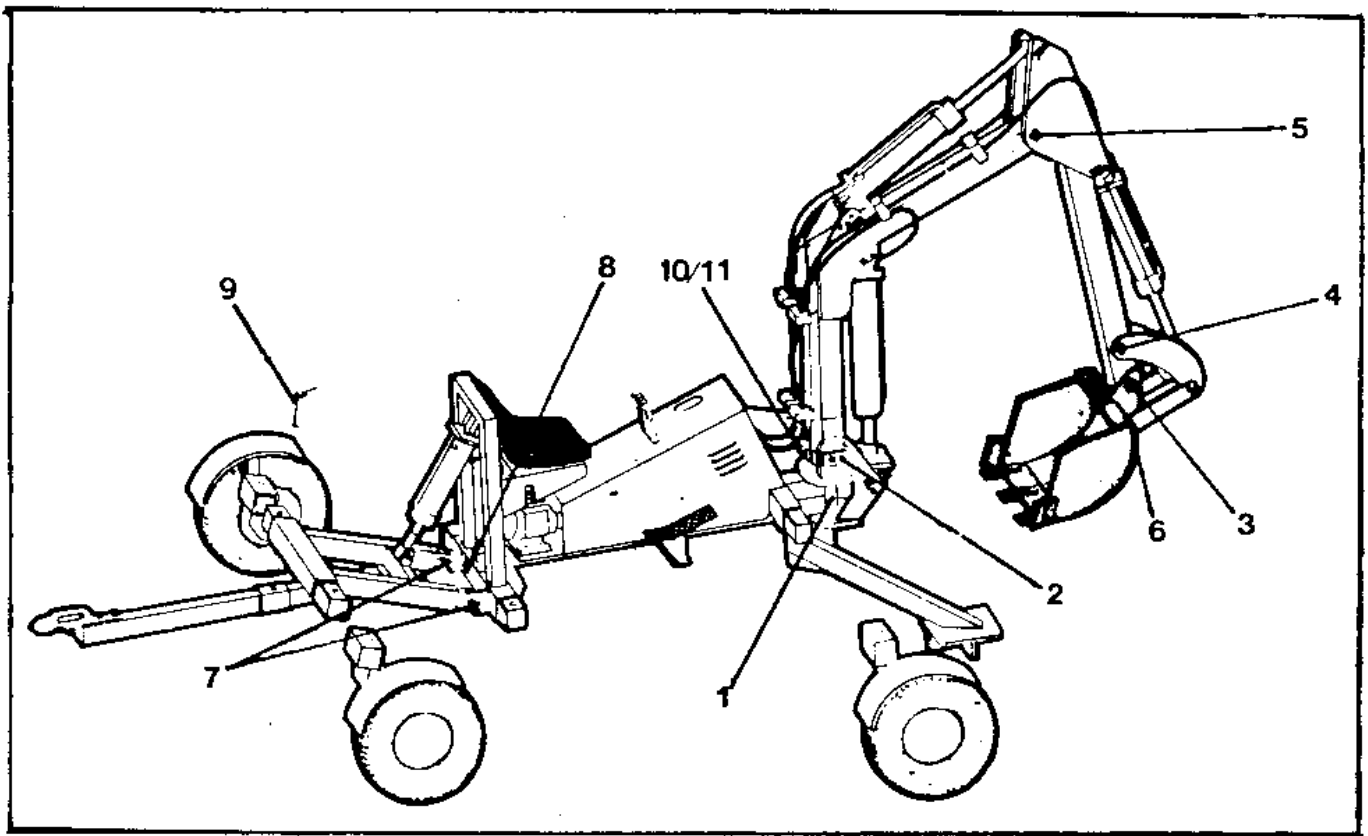
Buckets

Accessories



Ref.	Part No.	Description	Qty	Remarks
1	(1534 11	Bucket - 8"	1	
-	(1534 12	Bucket - 10/12"	1	
-	(1534 13	Bucket - 16/18"	1	Standard
-	(1534 14	Bucket - 22/24"	1	
-	(1534 231	Bucket - reed/ditching	1	
-	1534 107	Side teeth - bucket	2	
-	MSP43 30	Screw	6)	Side teeth
-	MSP54 10	Washer	12)	to buckets.
-	MS51 10	Nut	6)	
2	1534 116	Narrow wheel assembly -	2	
-	-	Each includes:-		
-	-	1534 63 Narrow wheel mounting	1	
-	-	1534-64 Wheel/tyre	1	
-	-	1534 103 Axle pin	1	
-	-	1534 104 Spacer	2	
-	-	396 31 Washer	2	
-	-	MS135 4 32 Split pin	1	
3	1534 86	Tow ring hitch	1	
4	1534 141	Mounting plate - rubber foot	2	
-	1534 130	Rubber buffer	6	
-	MS32 40	Bolt	12)	Buffers to
-	MS54 8	Washer	24)	mounting
-	MS51 8	Nut	12)	plates.
5	1534 65	Straight leg stabilizer	1	
-	1534 131	Straight leg stabilizer c/w foot	2	
-	1534 130	Rubber buffer	6	
-	1534 129	Carriage nut and bolt	12)	Buffers to
-	MS54 8	Washer	12)	legs.
6	1534 66	Centre spade - rear	1	
-	1534 142	Lighting board assembly. Includes:-	1	
-	-	8000 1534 Light cluster - L.H.	1	
-	-	8000 1544 Light cluster - R.H.	1	
-	-	8000 1171 Plug	1	
-	-	8000 31 Cable	1	
-	-	1534 144 Lighting board	1	

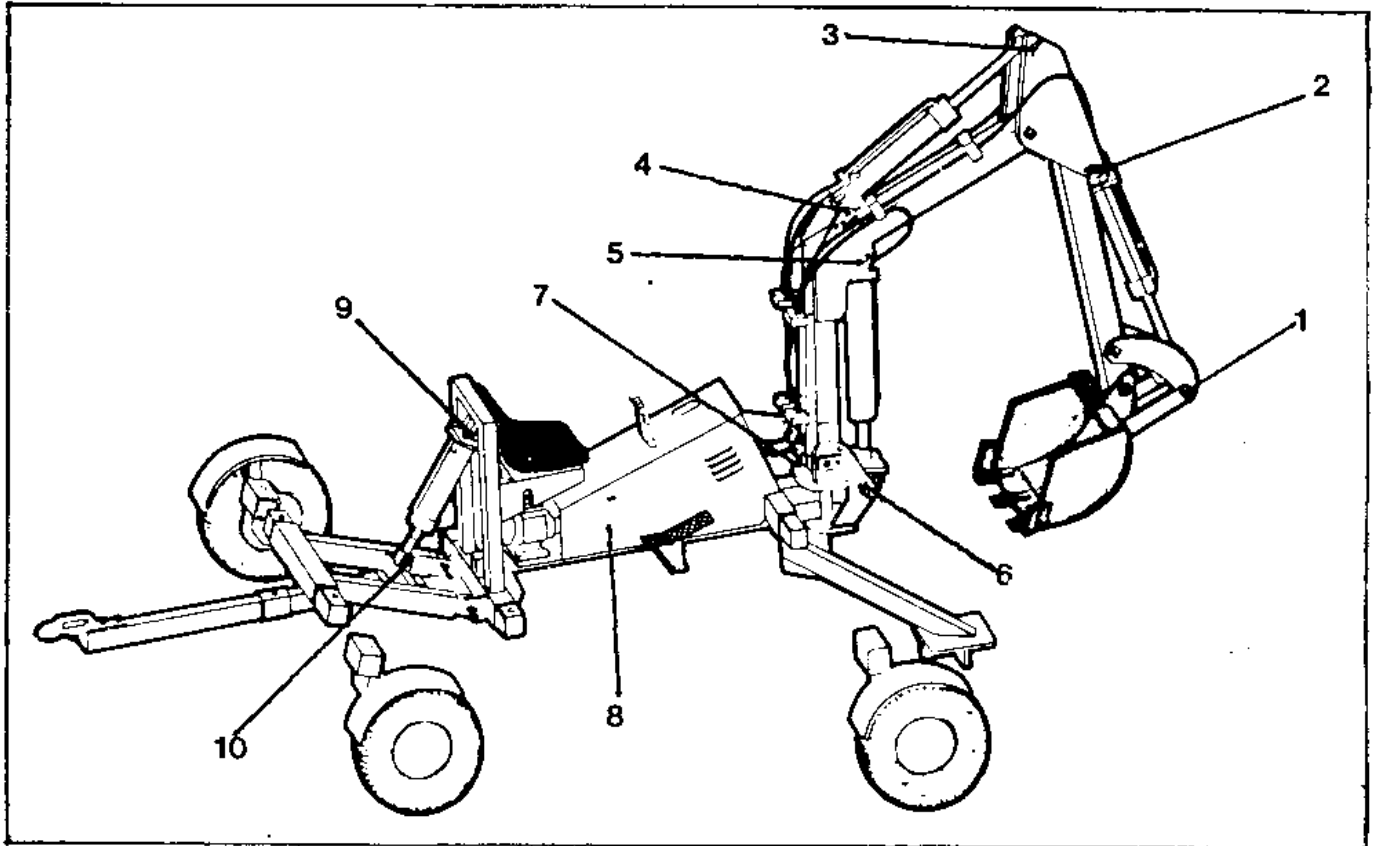
GENERAL LINKING PINS



Ref.	Part No.	Description	Qty	Remarks
1	1534 69	NLPI Main pivot pin	1)	Main pivot pin arrangement.
-	1534 89	RMD675 Thrust washer (into main chassis)	1)	
-	1534 88	RMD674 Bush	2)	
-	MSP43 20	Pin locking screw	1)	
-	MS120 6	Grease nipple	1)	
2	1434 70	NLP2 Main boom pin	1)	Main boom pin arrangement.
-	1434 90	RMD676 Bush (into main boom)	2)	
-	MSP43 20	Pin locking screw	1)	
-	MS120 6	Grease nipple	2)	
3	1534 72	NLP3 Main bucket pin	1)	Main bucket pin arrangement.
-	1534 91	RMD 677 15 Bush (into bucket bracket)	2)	
-	1534 92	RMD 677 38 Bush (into dipper arm)	2)	
-	1534 91	RMD 677 15 Bush (into curved link)	2)	
-	MS120 6	Grease nipple	2)	
-	MSP54 22	Washer	1)	
-	-	Split pin	1)	
-	1534 106	Spacer - bucket pin	1)	
4	1534 72	NLP4 Main link pin	1)	Main link pin arrangement.
-	1534 92	RMD 677 38 Bush - (into dipper arm)	2)	
-	MS120 6	Grease nipple	1)	
-	MSP54 22	Washer	1)	
-	-	Split pin	1)	

Ref.	Part No.	Description	Qty	Remarks
5	1534 72	NLP5 Main dipper pin	1)	Main dipper pin arrangement.
-	1534 92	RMD 677 38 Bush (into boom arm)	2)	
-	1534 91	RMD 677 15 Bush (into dipper arm)	2)	
-	MS120 6	Grease nipple	1)	
-	-	Split pin	1)	
-	MSP54 22	Washer	1)	
-	1534 136	Internal circlip - dipper	2)	
6	1534 77	NLP6 Lower pin - straight link	1)	Lower pin straight link arrangement.
-	1534 94	RMD 678 15 Bush (into bucket bracket)	2)	
-	1534 94	RMD 678 15 Bush (into straight link)	2)	
-	MSP54 22	Washer	2)	
-	-	Split pin	2)	
7	1534 82	NLP7 Rear axle pin	2)	Rear axle pin arrangement.
-	1534 94	RMD 678 15 Bush (into axle)	4)	
-	1534 96	RMD 678 35 Bush (into frame)	2)	
-	MSP54 22	Washer	4)	
-	1534 98	'R' Clips	4)	
8	1534 74	Tow bar pin	1)	
	1534 98	'R' Clip	1)	
9	1534 73	Locating handle pins	6	
	1534 98	'R' Clip	6	
10	1534 78	Safety locking bar	1	
11	1534 79	Safety bar lock pin	1	
-	1534 98	'R' Clip	1	

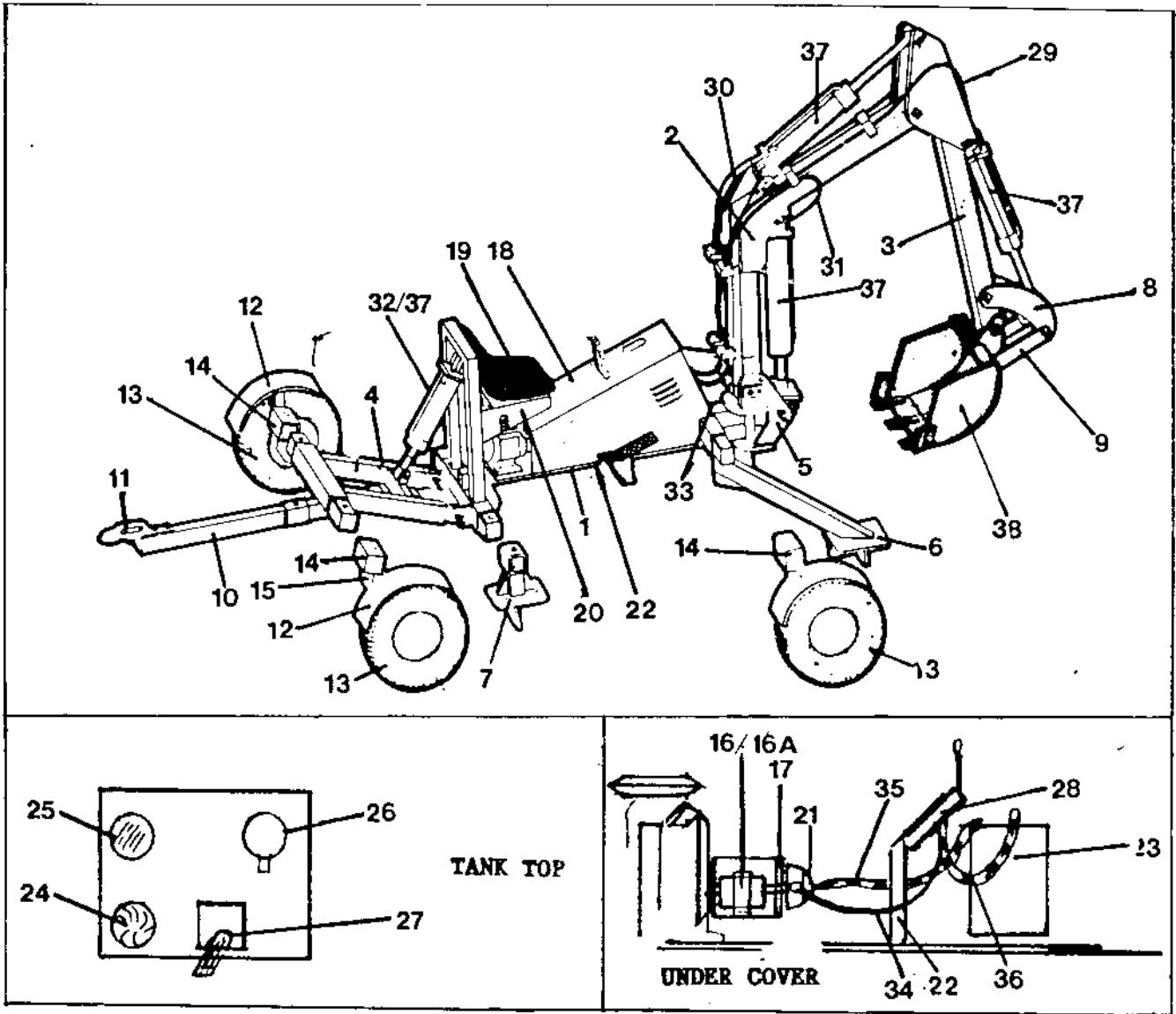
RAM PINS



Ref.	Part No.	Description	Qty	Remarks
1	1534 77	NRP4/1 Bucket ram pin - lower	1)	Bucket lower ram pin arrangement.
-	1534 94	RMD678 15 Bush (into straight link)	2)	
-	1534 97	RMD678 40 Bush (into ram)	1)	
-	MSP54 22	Washer	2)	
-	-	Split pin	2)	
-	MS120 6	Grease nipple	3)	
2	1534 81	NRP4/2 Bucket ram pin - upper	1)	Bucket upper ram pin arrangement.
-	1534 97	RMD678 40 Bush - (into ram)	1)	
-	MSP54 22	Washer	2)	
-	1534 98	'R' Clip	2)	
-	MS120 6	Grease nipple	1)	
3	1534 81	NRP3/3 Dipper ram pin - front	1)	Dipper front ram pin arrangement.
-	1534 97	RMD678 40 Bush (into ram)	1)	
-	MSP54 22	Washer	2)	
-	1534 98	'R' Clip	2)	
-	MS120 6	Grease nipple	1)	
4	1534 81	NRP3/4 Dipper ram pin - rear	1)	Dipper rear ram pin arrangement.
-	1534 97	RMD678 40 Bush - (into ram)	1)	
-	1534 95	RMD678 20 Bush - (into boom)	4)	
-	MSP54 22	Washer	2)	
-	1534 98	'R' clip	2)	
-	MS120 6	Grease nipple	1)	
-	1534 143	Spacer - dipper ram	2)	

Ref.	Part No.	Description	Qty	Remarks
5	1534 85	NRP1/5 Boom ram pin - upper	1)	Boom ram upper pin arrangement.
-	1534 97	RMD678 40 Bush (into ram)	1)	
-	1534 95	RMD678 20 Bush - (into boom)	2)	
-	MSP54 22	Washer	2)	
-	1534 98	'R' clip	2)	
-	MS120 6	Grease nipple	1)	
6	1534 80	NRP1/6 Boom ram pin - lower	1)	Boom ram lower pin arrangement.
-	1534 97	RMD678 40 Bush (into ram)	1)	
-	MSP54 22	Washer	2)	
-	1534 98	'R' Clip	2)	
-	MS120 6	Grease nipple	1)	
7	1534 83	NRP2/7 Slew ram pin - front	1)	Slew ram front pin arrangement.
-	1534 94	RMD678 15 Bush (into slew unit - lower))	
-	1534 93	RMD678 10 Bush (into slew unit - upper))	
-	1534 97	RMD678 40 Bush (into ram)	1)	
-	MS120 6	Grease nipple	1)	
8	1534 84	NRP2/8 Slew ram pin - rear	1)	
-	1534 97	RMD678 40 Bush (into ram)	1)	
-	1534 94	RMD678 15 Bush (into chassis)	2)	
-	MSP54 22	Washer	2)	
-	1534 98	'R' Clip	2)	
-	MS120 6	Grease nipple	1)	
9	1534 82	NRP5/9 Rear axle ram pin - upper	1)	Rear axle ram upper pin arrangement.
-	1534 97	RMD678 40 Bush (into ram)	1)	
-	1534 94	RMD678 15 Bush (into axle)	2)	
-	MSP54 22	Washer	2)	
-	1534 98	'R' Clip	2)	
-	MS120 6	Grease nipple	1)	
10	1534 83	NRP5/10 Rear axle ram pin - lower	1)	Rear axle lower pin arrangement.
-	1534 97	RMD678 40 Bush (into ram)	1)	
-	1534 94	RMD678 15 Bush (into chassis)	2)	
-	MSP54 22	Washer	2)	
-	1534 98	'R' Clip	2)	
-	MS120 6	Grease nipple	1)	

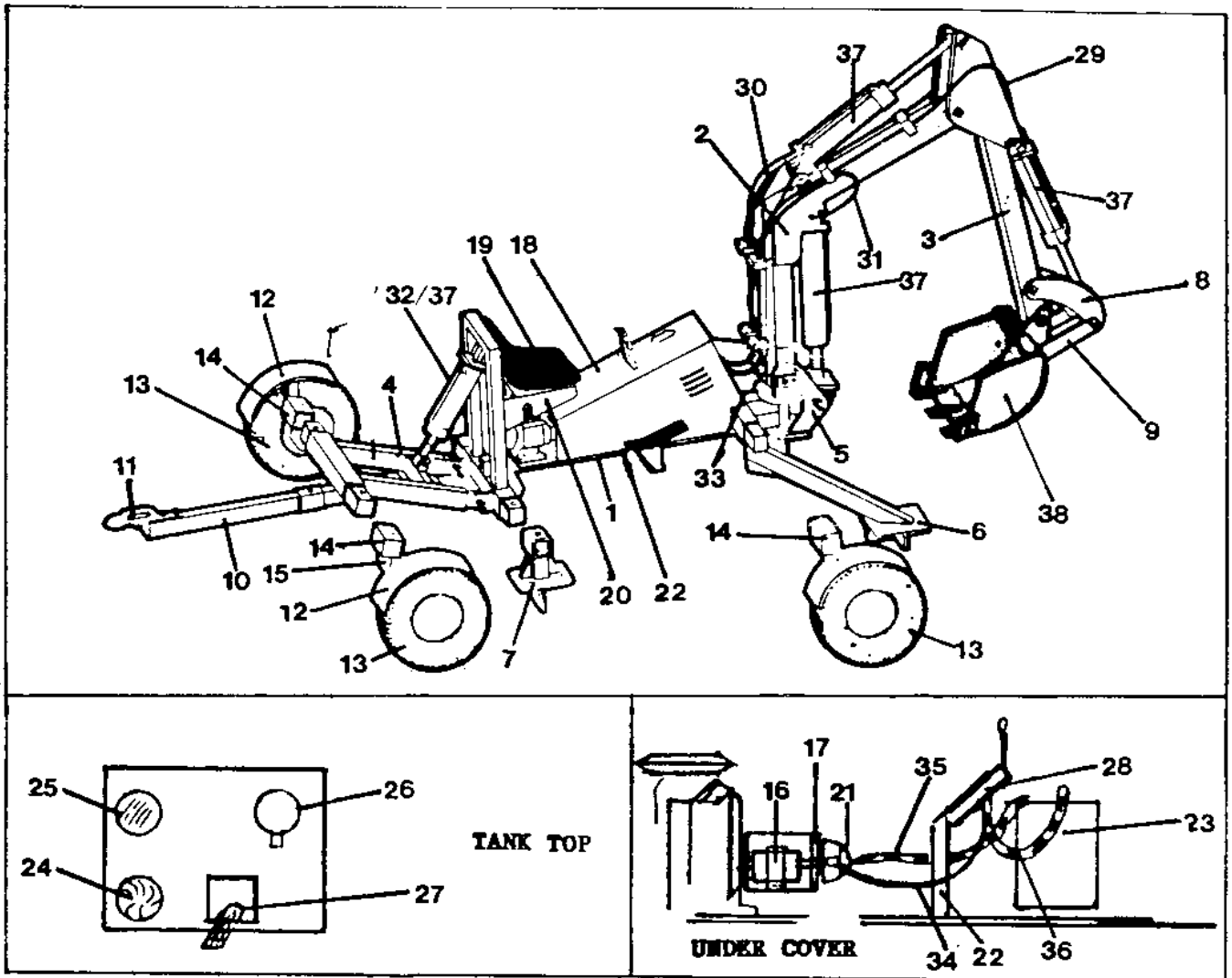
CHASSIS AND FITTINGS



Ref.	Part No.	Description	Qty	Remarks
1	1534 1	Chassis	1	
2	1534 2	Boom	1	
3	1534 3	Dipper	1	
4	1534 4	Rear swing axle	1	
5	1534 5	Swivel unit	1	
6	1534 6	Stabilizer - R.H.	1	
	or			
	1534 7	Stabilizer - L.H.	1	
7	1534 8	Rear spade	2	
8	1534 102	Curved bucket link - L.H.	1	
	1534 101	Curved bucket link - R.H.	1	
9	1534 10	Straight bucket link	2	
10	1534 26	Towbar	1	

Ref.	Part No.	Description	Qty	Remarks
11	1534 27	Towhitch	1	
-	MS34 110	Bolts M12 x 110	2)	Towhitch
-	MS54 12	Washer	2)	to
-	MS51 12	Nut	2)	towbar
12	1534 62	Mudguard	2	
-	MS41 20	Screw	8)	Mudguard
-	MS51 6	Nut	8)	fixing.
-	MS54 6	Washer	16	
13	1534 41	Road wheel assembly each		
-	-	comprising:-	2	
-	-	1534 42 Wheel rim	1	
-	-	1534 43 Tyre	1	
-	1534 86	Pneumatic valve	1	
14	(1534 60	Road wheel mounting - L.H.	1	
	(1534 61	Road wheel mounting - R.H.	1	
15	(1534 16	Suspension assembly - R.H.	1	
	(or			
	(1534 17	Suspension assembly - L.H.	1	
	-	Each includes:-		
-	-	1534 18 Hub	1	
-	-	1534 19 Inner bearing	2	
-	-	1534 20 Outer bearing	1	
-	-	1534 21 Hub cap	1	
-	-	1534 22 Wheel nut	4	
-	-	1534 23 Washer	1	
-	-	1534 24 Split pin	1	
-	-	1534 25 Nut - slotted	1	
-	MSP42 20	Screw	12)	Suspension
-	MSP54 8	Washer	24)	units to
-	MSP51 8	Nut	12)	frame.
-	1534 44	Engine	1)	Robin EY20D
)	Petrol.
-	1706 122	Engine	1)	Honda petrol
)	GX140.
-	1534 108	Mounting pad engine - 'Tico'	2	
-	1534 9	Engine base plate	1	
-	MSP32 60	Bolt	4)	Engine
-	MS51 8	Nut	4)	mountings
-	MSP54 8	Washer	8)	
16	1534 45	Drive coupling assembly. Includes:-	1)	Robin
-	-	1534 48 Coupling - pump	1)	engine.
-	-	1534 47 Coupling - sleeve	1)	
-	-	1534 46 Coupling - engine	1)	
16A	1534 122	Drive coupling assembly. Includes:-	1)	Honda
-	-	1534 48 Coupling - pump	1)	engine.
-	-	1534 47 Coupling - sleeve	1)	
-	-	1534 123 Coupling - engine	1)	
17	1534 49	Adaptor - pump/engine	1	
-	MSP42 16	Screw	4)	Adaptor to
-	MSP127 8	Washer	4)	engine.

CHASSIS AND FITTINGS



Ref.	Part No.	Description	Qty	Remarks
18	1534 31	Main housing cover	1	
-	2/1534 31	Cover lining	1	
-	MS41 20	Screw - M6 x 16	7)	Cover fixings.
-	MS51 6	Nut	6)	
-	MS54 6	Washer	13)	
19	1502 111	Seat	1	
-	1534 139	Seat plate assembly. Includes:-	1	
-	-	1534 134 Seat plate	1	
-	-	1534 140 Seat buffer	2	
-	1534 135	Seat support bracket	1	
-	MSP43 25	Screw	5)	Seat bracket to chassis and seat support.
-	MSP54 10	Washer	5)	
-	MS51 10	Nut	5)	
-	MSP43 30	Screw	1)	Seat support bracket to chassis.
-	MSP54 10	Washer	1)	
-	MS51 10	Nut	1)	
-	MSP42 16	Screw	2)	Seat plate assembly to seat.
-	MSP126 8	Shakeproof washer	2)	
20s	1534 30	Seat support/hinge	1	
21	1534 50	Hydraulic pump. Includes:-	1	
-	-	6230 253 Seal kit	1	

Ref.	Part No.	Description	Qty	Remarks	
-	MSP50 6	Nut	4)	Pump to bell housing	
-	MSP54 6	Washer	4)		
-	MSP41 25	Screw	4)		
22	1534 32	Base plate and valve block pedestal	1	Base plate to frame	
-	MS33 35	Bolt	3)		
-	MS54 10	Washer	6)		
-	MS51 10	Nut	3)		
23	1534 52	Hydraulic tank	1	Tank to frame	
-	MS33 35	Bolt M10 x 30	2)		
-	MS54 10	Nut	2)		
-	MS51 10	Washer	4)		
24	1534 54	Filler/breather hydraulic oil cap assembly. Includes:-	1		
-	-	1534 54A Cap, chain and top plate	1		
-	-	1534 54B Strainer	1		
-	-	1534 54C Gasket	2		
25	1534 53	Sight level gauge and plate	1		
26	1534 55	Return filter assembly. Includes:-	1		
-	-	800 546 Element	1		
-	-	1534 125 Gasket	1		
-	-	1534 55C 'O' ring	1		
-	-	1534 55D Element carrier	1		
-	-				
27	1534 56	Suction filter/element	1	Fittings to hydraulic tank	
-	362 6	Screw - 2BA x $\frac{1}{2}$	14)		
-	-)		
-	1534 127	Suction pipe, elbow and flange	1		
-	1534 128	Suction flange gasket	1		
28	1534 51	Hydraulic control valve. Includes:-	1	Hydraulic valve to pedestal For items marked *	
-	-	6230 254 Seal kit	1		
-	-	1534 51A Relief valve	1		
-	-	1534 51B Relief valve seal kit	1		
-	-	1534 51C Control lever - long	4		
-	-	1534 51D Control lever - short	1		
-	MS32 70	Bolt M6 x 30	3)		
-	MS51 8	Nut	3)		
-	MSP54 8	Washer	6)		
-	9000 400	Hose clips	4)		
29	1534 37	Hose - bucket ram	2	Up to M/C. No. 01384.	
30	1534 36	Hose - dipper ram	2		
31	1534 35	Hose - boom ram	2		
32	1534 33	Hose - rear axle	2		
33	1534 34	Hose - slew ram	2		
34	1534 39	Hose - pump to valve	1		
35	1534 38	Hose - tank to pump	1*		
36	1534 40	Hose - tank to valve	1*		
37	1534 117	Hydraulic ram - clevis end	5)		
		Each includes:-)		
	or	6230 252 Seal kit (1" rod)	1)		
-	1534 28	Hydraulic ram	5)		From M/C. No. 01385.
-	-	6230 255 Seal kit (1 $\frac{1}{4}$ " rod)	1)		

Ref.	Part No.	Description	Qty	Remarks
-	9000 400	Hose clip	4	
-	1534 110	Hose clamp	6	
-	1515 702	Hose clamp - single	8	
-	1515 558	Hose clamp - double	4	
-	MS31 35	Bolt M6 x 35	6)	
-	MS31 60	Bolt M6 x 60	2)	Hose clamp
-	MS51 6	Nut	8)	fixings
-	MS54 6	Washer	8)	
-	1534 230	Armour, spirol	2	
-	1524 230	Armour, spirol	2	
-	1534 337	Hydraulic hose shroud	1	
-	1534 124	Restrictor/adaptor - 1 1/2" x 3/8"	3	Valve block
-	1534 118	Hosetail 3/8" BSP to 1/2" hose	2)	Tank/pump
)	Valve/tank
-	1534 119	Hosetail 1/2" BSP to 1/2" hose	2	Suction hose
-	090 92	Seals - 1/4"	10	Rams
-	N612	Seals - 1/2"	14)	Valve and
)	pump
-	Z97Z	Adaptor - male - 1/2" x 3/8" V	7	Valve block
-	Z183	Adaptor - male - 1/2" x 1/2"	10	Rams
-	N612	Seal	1)	Hosetail to
)	filter.
38	1534 13	Bucket 16/18"	1	Standard.
-	MSP43 30	Screw	6)	Side teeth
-	MSP54 10	Washer	12)	to bucket
-	MS51 10	Nut	6)	
-	SK1980	Identification plate	1	
-	8002 320	Cowl transfer - R.H.	1	
-	8002 321	Cowl transfer - L.H.	1	
-	8002 322	Valve instruction transfer	1	
-	8002 323	Maintenance instructions	1	