JOHN SHEARER DISC PLOUGH (5GP)

parts and instruction manual

no. 72J2

Price $1.90

John Shearer communications

JOHN SHEARER LIMITED

ESTABLISHED 1877
INCORPORATED IN SOUTH AUSTRALIA

HEAD OFFICE & FACTORY

BOX 42 KILKENNY
SOUTH AUSTRALIA 5009

TELEPHONE — *45 4651*
TELEGRAMS & CABLES — *SHEARER ADELAIDE*
TELEX — *AA88109*
STREET LOCATION — *SHARE STREET & KILKENNY ROAD*

WHEN ORDERING SPARE PARTS PLEASE STATE:

1. MODEL, SERIAL NUMBER & SIZE (OF THE MACH. / IMP.).
2. PART NUMBER & DESCRIPTION (OF THE SPARE PART).
3. NUMBER OF PARTS REQUIRED.
4. FORWARDING INSTRUCTIONS.
5. CORRECT NAME & ADDRESS OF DESTINATION.

MODEL & SERIAL NUMBER PLATE IS PLACED ON THE LEFT HAND FRONT OF THE MAIN FRAME.

MADE & PRINTED IN AUSTRALIA BY JOHN SHEARER LIMITED.
72 AUGUST 1973,72J1 NOVEMBER 1974,72J2 FEBRUARY 1977

CONTENTS

A - POLE HITCH

B - LINK, DRAWBAR

C - DRAWBAR

D - STEERING BAR

E - TRACKBAR

F - LIFT CYLINDER

G - ROD, STEERING

H - RAM OR SCREW
TAIL STEERING

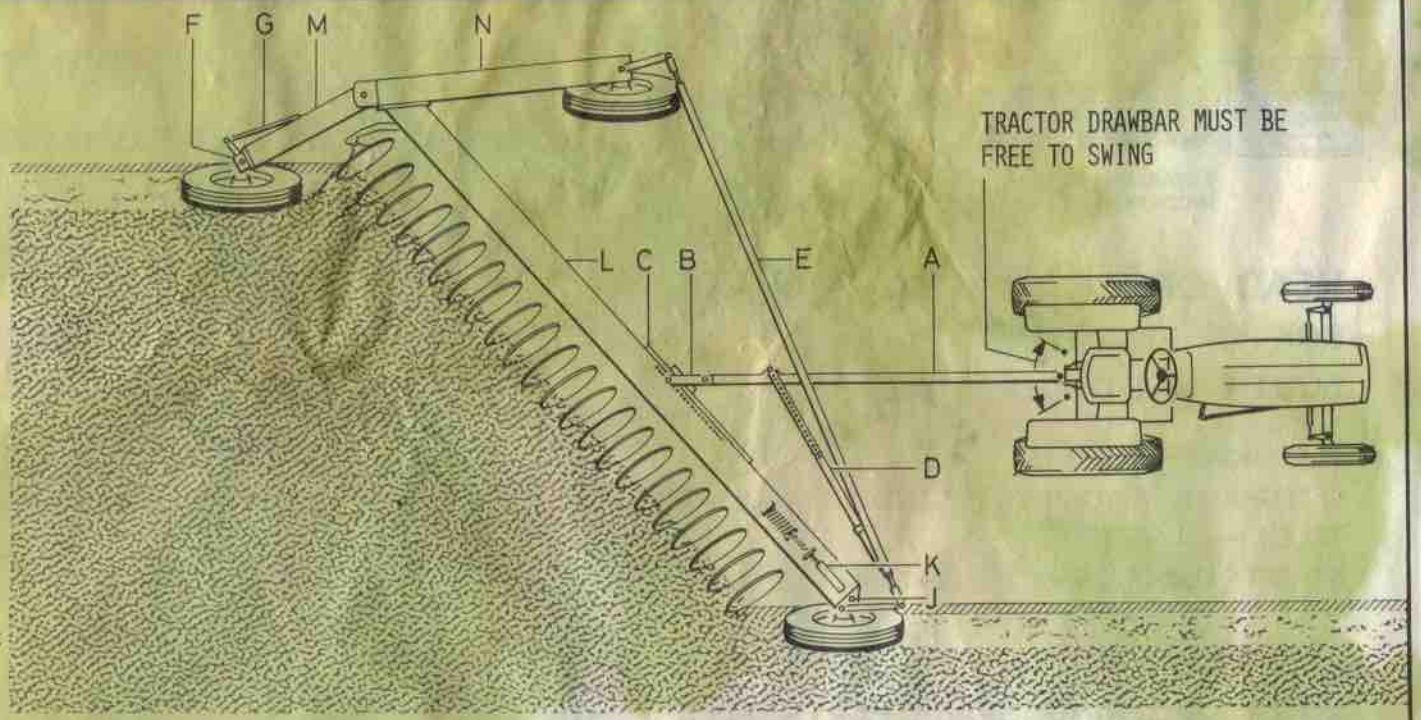
J - STANDARD, FRONT HYDRAULIC

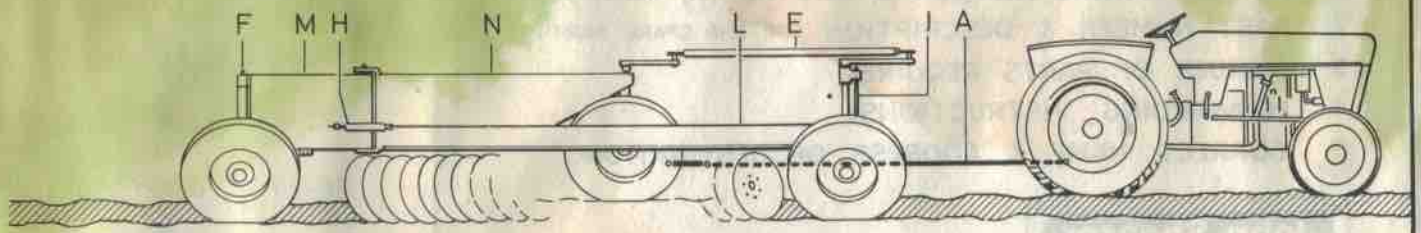
K - ACCUMULATOR, JUMPER

L - BEAM, MAIN

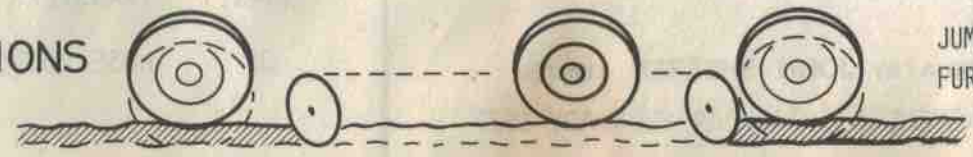
M - BEAM, TAIL

N - BEAM, LAND





NORMAL PLOUGHING



JUMPING OUT AT BOTH
FURROW WHEELS

SETTING UP INSTRUCTIONS

SEE PAGES 3 AND 4

Tractor drawbar must be free to swing.

1. Adjust level of plough frame as on "Setting Up" transfer on the land beam.

2. Set maximum permissible pressure on jump hydraulics as shown on indicator at K.

3. Set width of cut to maximum that gives acceptable ploughing, by extending cylinder (or screw) H.

4. With pole hitch connected to drawbar somewhere near central, adjust the steering bar and trackbar so that front wheels run truly in the direction of ploughing.

5. Set tail wheel steering so that wheel normally runs in the furrow just clear of the furrow wall.

6. Plough a first round at slow speed, adjusting the tail wheel height to achieve the required depth of ploughing. Setting of maximum width of cut, and a slow speed, will minimize soil throw and consequent build-up against fences.

7. On the second round, when the plough has two wheels in a furrow of required depth, and with the plough in the toughest area of the paddock, set:

   - jumper pressure at maximum allowable as in (2)
   - main beam level and adjusted to give required working depth
   - tractor at desired operating speed
   - tractor position relative to the furrow as desired. (See note below).

NOTE RE TRACTOR POSITIONING

Some farmers prefer to drive with a tractor wheel in the furrow, while others prefer to drive with all wheels on unploughed ground. Driving in the furrow may provide easier maintenance of accurate plough positioning and thus a better join of work.

Driving on the land provides uniform traction conditions on both drive wheels and a straighter pull on the tractor drawbar. This improves tractor performance by providing a true pull on the drive wheels as well as avoiding waste draft used in counteracting front wheel drift and heavy steering loads.

Your 5GP, because of the inbuilt weight and the distribution of it will generally work satisfactorily with a straight pull on a tractor out of the furrow and we recommend you take advantage of this.

8. Increase width of cut until the plough "jumps out of the furrow".

   - If it jumps out at both furrow wheels, the line of draught is correct.
   - If it jumps out at the front only, the line of draught should be moved to the left (towards tail wheel) on the drawbar. Readjust steering bar to suit.
   - If it jumps out at the rear only the hitch is moved towards the right (front furrow wheel).

   If the plough cannot be made to "jump out", the conditions are relatively easy and the line of draught will be unimportant.
   Repeat step 8 until the line of draught is correct.

9. Go ahead ploughing, setting the width of cut to provide the best compromise between:

   - adequate "cut out" between discs
   - maximum acres/hour
   - required soil mixing and inversion desired.

10. Having set all other variables, reduce the hydraulic jumper pressure to that which just maintains the required depth of working. This will:

    - minimize loadings on discs/bearing etc.
    - enable discs to follow upwards ground irregularities at an even ploughing depth
    - minimize any tendency to bulldoze (should this occur due to encountering a heap of straw, fallen tree branch etc. a brief pressure drop will allow the plough to clear).

11. Depth of ploughing is best maintained in varying conditions by adjustment of jumper hydraulic pressure as required.

12. The above instructions suit a hydraulically loaded plough but they also apply to a spring loaded plough except that it is necessary to manually adjust the spring settings to that required to just achieve the ploughing depth required. Also it is necessary to use the tail wheel lift cylinder to maintain the working depth required as soil conditions vary.

Unless otherwise noted, parts listed apply to all implements.

14 18 22 26(hydraulic & spring) & 30(hydraulic)

14H = (14 furrow - hydraulic loaded jumpers)

14S = (14 furrow - spring loaded jumpers)

14HS = (14 furrow - hydraulic or spring loaded jumpers)

NOTE ! This manual to be read in conjunction with manual 83J1 (tandem hitch, for single or dual wheel implement) and Product Bulletin No. 107J1 (kit, convert single tail wheel to dual tail wheels).

NOTE ! Your 5GP is despatched from our factory primed with MOBILFLUID 423 transmission oil, or an equivalent from an alternative reputable supplier. This oil is compatible with that specified by, and meets the requirements of, all tractor manufacturers, including those with power shift transmissions, common hydraulic systems, wet clutches and wet brakes.

LUBRICATION

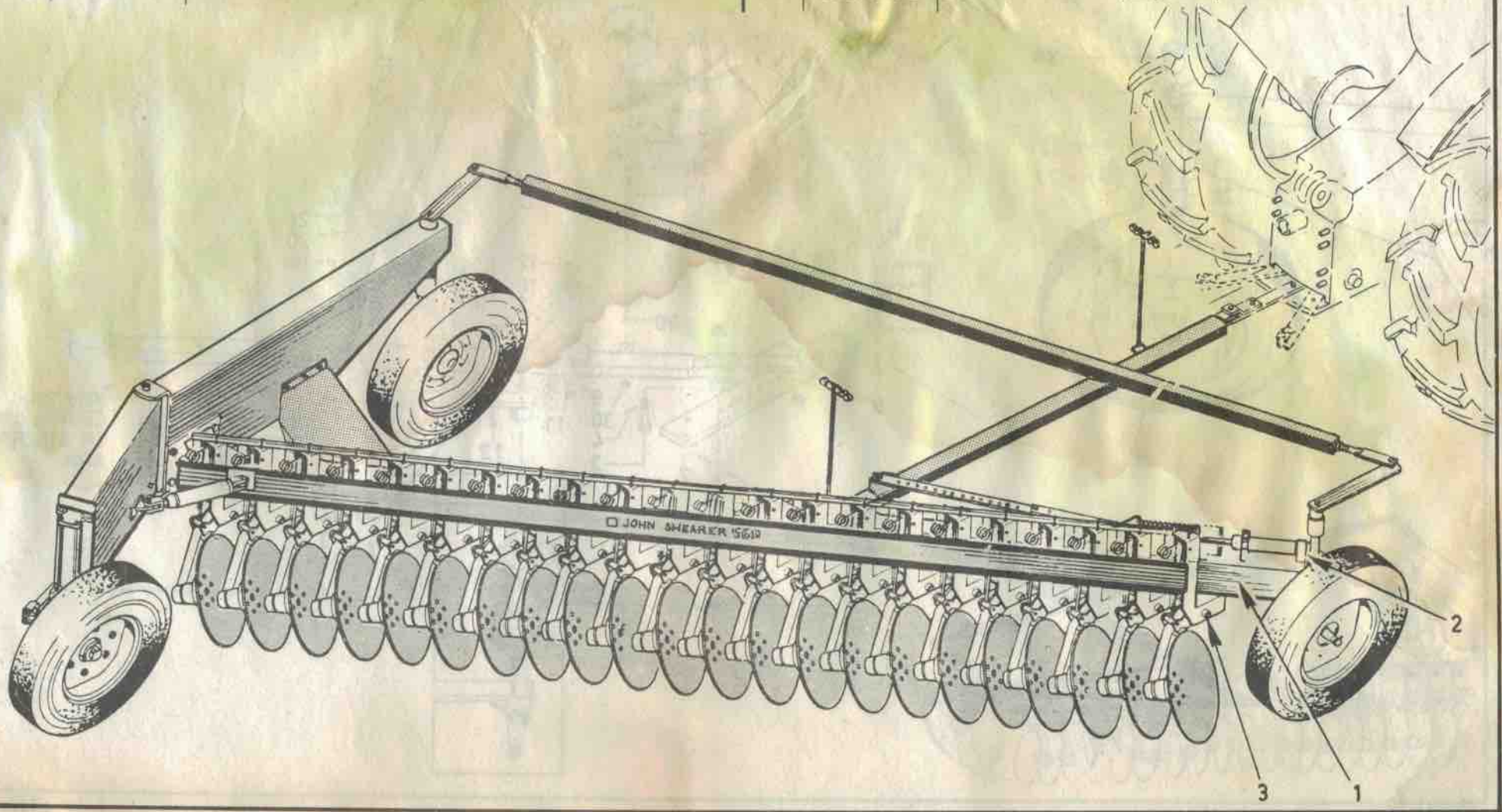
Steering joints	-	daily
Disc hubs	-	monthly
Wheel hubs	-	seasonally

MAIN BEAM

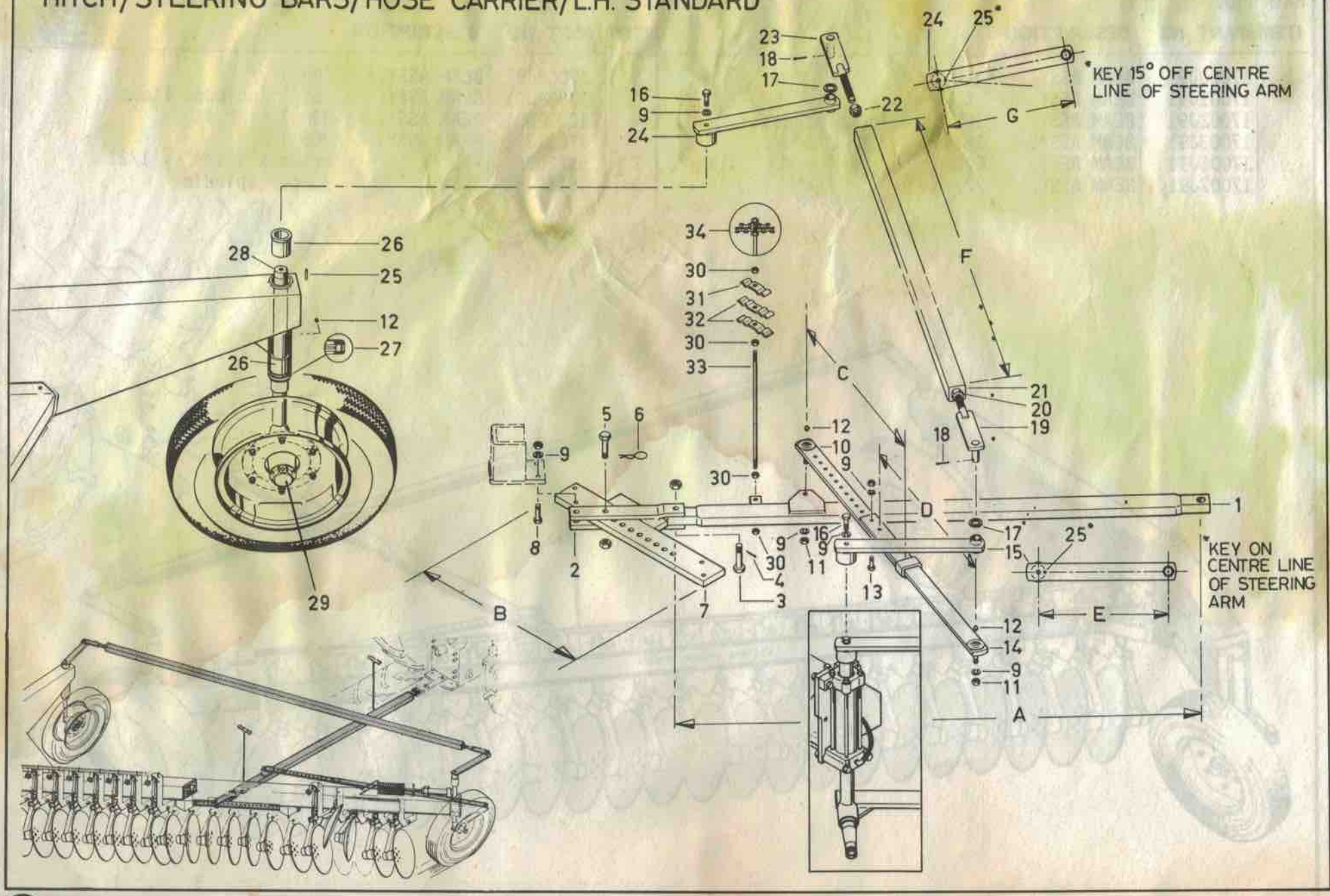
19.177M72J2

ITEM	PART Nº	DESCRIPTION		
1	17000J91	BEAM ASSY.	14H)	
	17001J91	BEAM ASSY.	14S)	
	17002J91	BEAM ASSY.	18H)	Includes items
	17003J91	BEAM ASSY.	18S)	2 & 3
	17006J91	BEAM ASSY.	22H)	
	17007J91	BEAM ASSY.	22S)	

ITEM	PART Nº	DESCRIPTION		
1	17008J91	BEAM ASSY.	26H)	
	17009J91	BEAM ASSY.	26S)	Includes items
	17010J91	BEAM ASSY.	30H)	2 & 3
	17011J91	BEAM ASSY.	30S)	
2	SKP200	PIN		sellock 1-1/4" x 1/2"
3	15140J91	BUSH		jumper spindle



HITCH/STEERING BARS/HOSE CARRIER/L.H. STANDARD

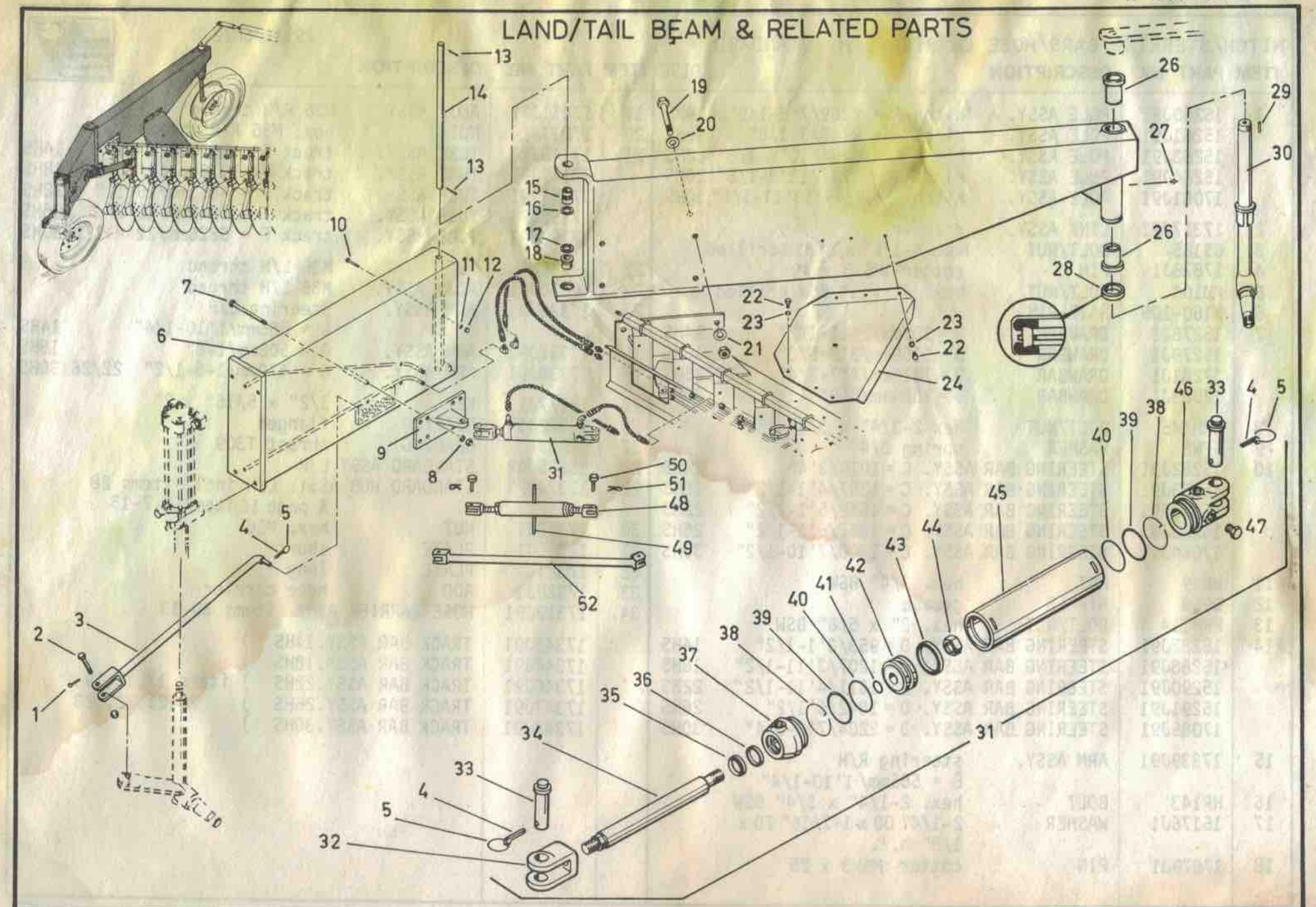


HITCH/STEERING BARS/HOSE CARRIER/L.H. STANDARD

ITEM	PART Nº	DESCRIPTION		DISC
1	15260J91	POLE ASSY.	hitch A = 2289/7'6-1/8"	14HS
	15261J91	POLE ASSY.	hitch A = 2746/9'1/8"	18HS
	15263J91	POLE ASSY.	hitch A = 3254/10'8-1/8"	22HS
	15264J91	POLE ASSY.	hitch A = 3737/12'3-1/8"	26HS
	17081J91	POLE ASSY.	hitch A = 4245/13'11-1/8"	30HS
2	17317J91	LINK ASSY.	drawbar	
3	OS185	BOLT/NUT	hex. 4-1/2" x 1" BSW drilled	
4	17878J1	PIN	cotter M6·3 x 40	
5	KD104	BOLT/NUT	hex. 4" x 1" BSW drilled	
6	H160-106	HAIR-PIN		
7	15278J1	DRAWBAR	B = 902mm/2'11-1/2"	14HS
	15279J1	DRAWBAR	B = 1159mm/3'9=5/8"	18HS
	17281J1	DRAWBAR	B = 1416mm/4'7-3/4"	22/26HS
	17083J1	DRAWBAR	B = 1524mm/5'0"	30HS
8	HRH145	BOLT/NUT	hex 2-3/4" x 3/4" BSW	
9	SPW8	WASHER	spring 3/4"	
10	15282J91	STEERING BAR ASSY.	C = 1016/3'4"	14HS
	15283J91	STEERING BAR ASSY.	C = 1257/4'1-1/2"	18HS
	15285J91	STEERING BAR ASSY.	C = 1562/5'1-1/2"	22HS
	15286J91	STEERING BAR ASSY.	C = 1867/6'1-1/2"	26HS
	17084J91	STEERING BAR ASSY.	C = 2400/7'10-1/2"	30HS
11	WHN9	NUT	hex. 3/4" BSW	
12	D999	NIPPLE	grease	
13	HRH114	BOLT/NUT	hex. 2" x 5/8" BSW	
14	15287J91	STEERING BAR ASSY.	D = 953/3'1-1/2"	14HS
	15288J91	STEERING BAR ASSY.	D = 1207/3'11-1/2"	18HS
	15290J91	STEERING BAR ASSY.	D = 1511/4'11-1/2"	22HS
	15291J91	STEERING BAR ASSY.	D = 1842/6'1/2"	26HS
	17085J91	STEERING BAR ASSY.	D = 2204/7'2-3/4"	30HS
15	17339J91	ARM ASSY.	steering R/H E = 565mm/ 1'10-1/4"	
16	HR143	BOLT	hex. 2-1/4" x 3/4" BSW	
17	15176J1	WASHER	2-1/4" OD x 1-7/16" ID x 1/8" h.t.	
18	17879J1	PIN	cotter M6·3 x 25	

ITEM	PART Nº	DESCRIPTION		DISC
19	17331J91	ADJ. ASSY.	M36 R/H thread	
20	17267J1	NUT	hex. M36 R/H thread	
21	17148J91	TUBE ASSY.	track F = 3023mm/9'11"	14HS
	17149J91	TUBE ASSY.	track F = 3918mm/12'10-1/4"	18HS
	17151J91	TUBE ASSY.	track F = 4851mm/15'11"	22HS
	17152J91	TUBE ASSY.	track F = 5842mm/19'2"	26HS
	17153J91	TUBE ASSY.	track F = 6820mm/22'4-1/2"	30HS
22	17266J1	NUT	M36 L/H thread	
23	17330J91	ADJ. ASSY.	M36 L/H thread	
24	17336J91	ARM ASSY.	steering L/H G = 565mm/1'10-1/4"	14HS
	17337J91	ARM ASSY.	G = 508mm/1-8"	18HS
	17338J91	ARM ASSY.	G = 470mm/1-6-1/2"	22/26/30HS
25	15377J1	KEY	1/2" x 5/16" x 2"	
26	15372J1	BEARING	flanged	
27	12939	BEARING	thrust T309	
28	15375J92	STANDARD ASSY.L/H		
29	15374J91	STANDARD HUB ASSY. L/H incl. items 28 & page 16 items 3,7-15		
30	17323J1	NUT	hex. M16	
31	17322J1	PLATE	short	
32	17321J1	PLATE	long	
33	17320J1	ROD	hose carrier	
34	17319J91	HOSE CARRIER ASSY. items 30-33		
	17343J91	TRACK BAR ASSY.14HS)		
	17344J91	TRACK BAR ASSY.18HS)		
	17346J91	TRACK BAR ASSY.22HS) items 17,18,19		
	17347J91	TRACK BAR ASSY.26HS) 20,21,22,&23		
	17348J91	TRACK BAR ASSY.30HS)		

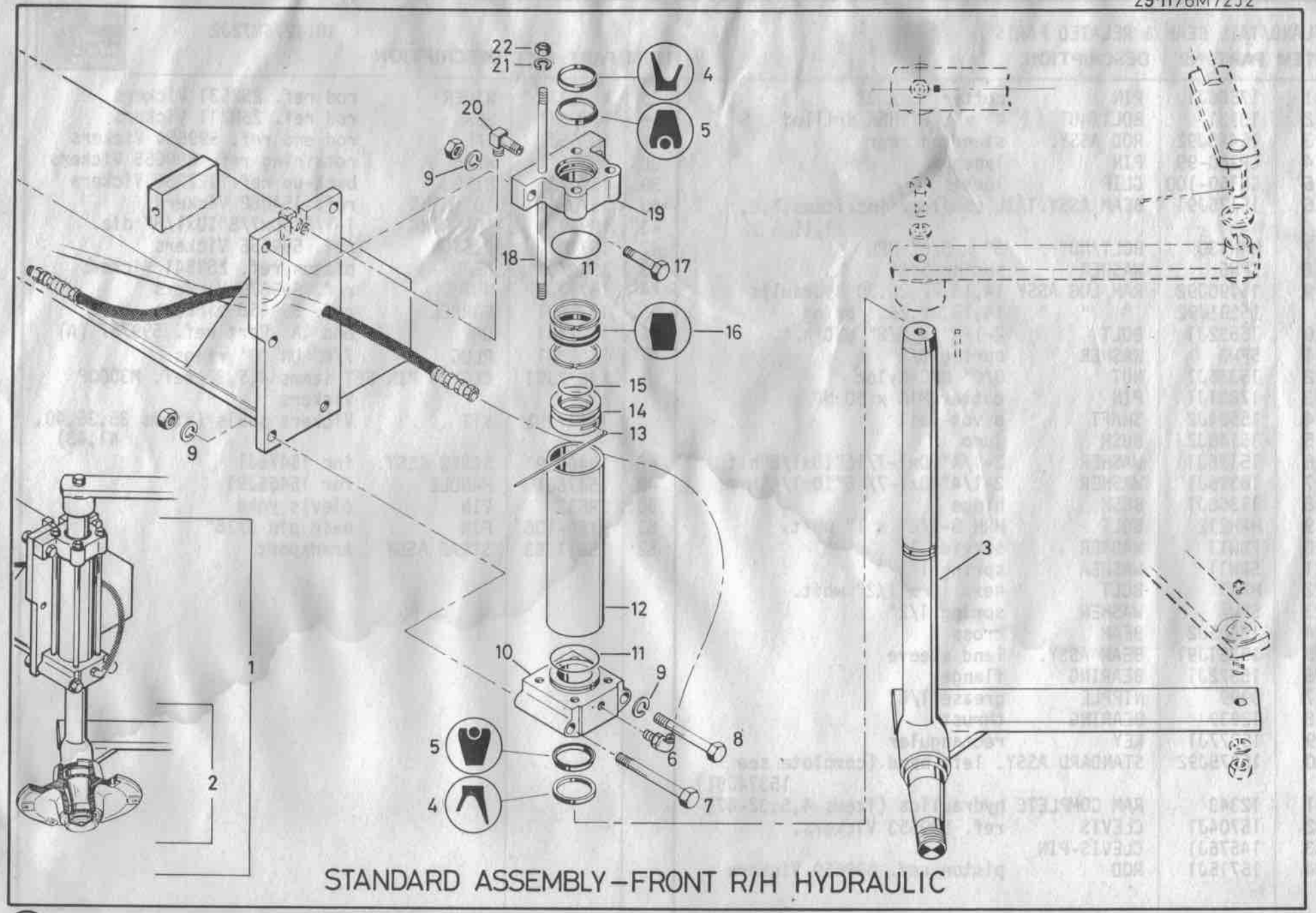
LAND/TAIL BEAM & RELATED PARTS



LAND/TAIL BEAM & RELATED PARTS

10.1276M72J2

ITEM	PART Nº	DESCRIPTION
1	17586J1	PIN cotter M5 x 32
2	13131	BOLT/NUT 4" x 5/8" HRH drilled
3	15448J92	ROD ASSY. steering rear
4	CR160-99	PIN lynch
5	CR160-100	CLIP locking
6	15175J91	BEAM ASSY.TAIL complete inc.items 7,8, 10,11,& 12
7	HRH130	BOLT/NUT 8" x 5/8" HRH
8	SPW6	WASHER spring 5/8"
9	15190J92	RAM LUG ASSY 14,18,22,26,30 hydraulic
	15191J92	" " " 14,18,22,26, spring
10	15532J1	BOLT 2-1/4" x 3/8" UNC h.t.
11	SPW3	WASHER spring 3/8"
12	15336J1	NUT 3/8" UNC Nyloc
13	17881J1	PIN cotter M10 x 50 NP
14	15504J2	SHAFT pivot-tail
15	15140J2	BUSH jump
16	15176J1	WASHER 2-1/4"ODx1-7/16"IDx1/8"h.t
17	15316J1	WASHER 2-1/4"ODx1-7/16"IDx1/4"h.t
18	15368J1	BUSH hinge
19	HRH212	BOLT HRH 8-1/2" x 1" whit.
20	FBW11	WASHER service 1"
21	SPW11	WASHER spring 1"
22	HR81	BOLT hex. 1" x 1/2" whit.
23	SPW4	WASHER spring 1/2"
24	15505J2	BEAM cross
25	15351J91	BEAM ASSY. land sleeve
26	15372J1	BEARING flange
27	D999	NIPPLE grease 1/8"
28	12939	BEARING thrust
29	15377J1	KEY rectangular
30	15375J92	STANDARD ASSY. left hand (complete see 15374J91)
31	12343	RAM COMPLETE hydraulics (items 4,5,32-47)
32	15704J1	CLEVIS ref. 599653 Vickers.
33	14576J1	CLEVIS-PIN
34	15715J1	ROD piston ref. 599659 Vickers
35	14562J1	WIPER rod ref. 252531 Vickers
36	14563J1	SEAL rod ref. 258211 Vickers
37	15705J1	CAP rod end ref. 599654 Vickers
38	15706J1	WIRE retaining ref. 599655 Vickers
39	15707J1	RING back-up ref. 122238 Vickers
40	15708J1	'O' RING ref. 154082 Vickers
41	10959	'O' RING 1-1/8"ODx7/8"IDx1/8" dia.
42	15710J1	PISTON ref. 599656 Vickers
43	15711J1	SEAL piston ref. 259541 Vickers
44	15712J1	NUT ref. 599670 Vickers
45	15716J1	BARREL ref. 599658 Vickers
46	15714J1	CAP end 'A' Port ref. 599757 (A)
47	16893J1	PLUG 7/8" UN 'O' rings
	14577J91	CLEVIS PIN SET items 4,5,32 ref. M3000P Vickers
	15947J91	KIT Vickers seals (items 35,36,40, 41,43)
48	15466J91	SCREW ASSY. inc 15476J1
49	15476J1	HANDLE for 15466J91
50	SR617	PIN clevis yoke
51	H160-106	PIN hair pin 3/16"
52	15511J93	STRAP ASSY transport



STANDARD ASSEMBLY–FRONT R/H HYDRAULIC

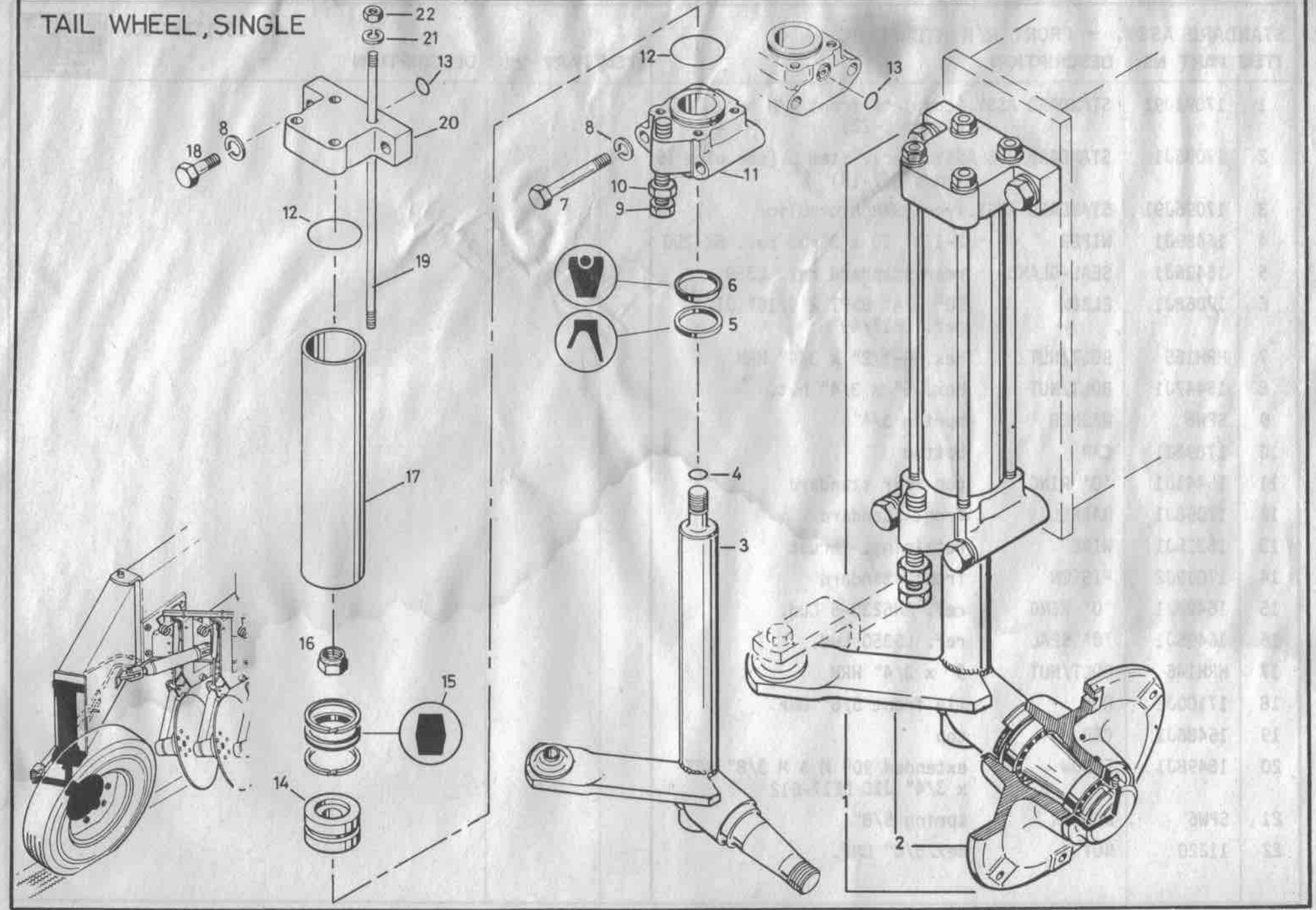
STANDARD ASSY. - FRONT R/H HYDRAULIC

26.1176M72J2

ITEM	PART Nº	DESCRIPTION	
1	17091J91	STANDARD ASSY.	complete front R/H hyd. lift (items 2-22)
2	17095J1	STANDARD/HUB ASSY.	incl. item 3 (see page 16 items 3,7-15)
3	17096J91	STANDARD ASSY.	front R/H hydraulic
4	16489J1	WIPER	2-1/2" ID x 3" OD ref. 62-250
5	15436J1	SEAL-GLAND	rear standard ref. L359
6	17068J1	ELBOW	90° 1/4" BSPT x 9/16" JIC ref. DB17/49
7	HRH155	BOLT/NUT	hex. 6-1/2" x 3/4" HRH
8	15447J1	BOLT/NUT	hex. 6" x 3/4" h.t.
9	SPW8	WASHER	spring 3/4"
10	17898J1	CAP	bottom
11	15441J1	'O' RING	cap-rear standard
12	17098J1	BARREL	front standard
13	15315J1	WIRE	retaining, thrust
14	17099J2	PISTON	front standard
15	16496J1	'O' RING	ref. AN6230-8 Lud.
16	16495J1	'O' SEAL	ref. LS350 Lud.
17	HRH146	BOLT/NUT	3" x 3/4" HRH
18	17100J1	ROD	tie front 5/8" UNF
19	16486J1	CAP	top
20	16498J1	ELBOW	extended 90° M & M 3/8" NPT x 3/4" JIC DE17-612
21	SPW6	WASHER	spring 5/8"
22	11220	NUT	hex. 5/8" UNF.

ITEM	PART Nº	DESCRIPTION

TAIL WHEEL, SINGLE

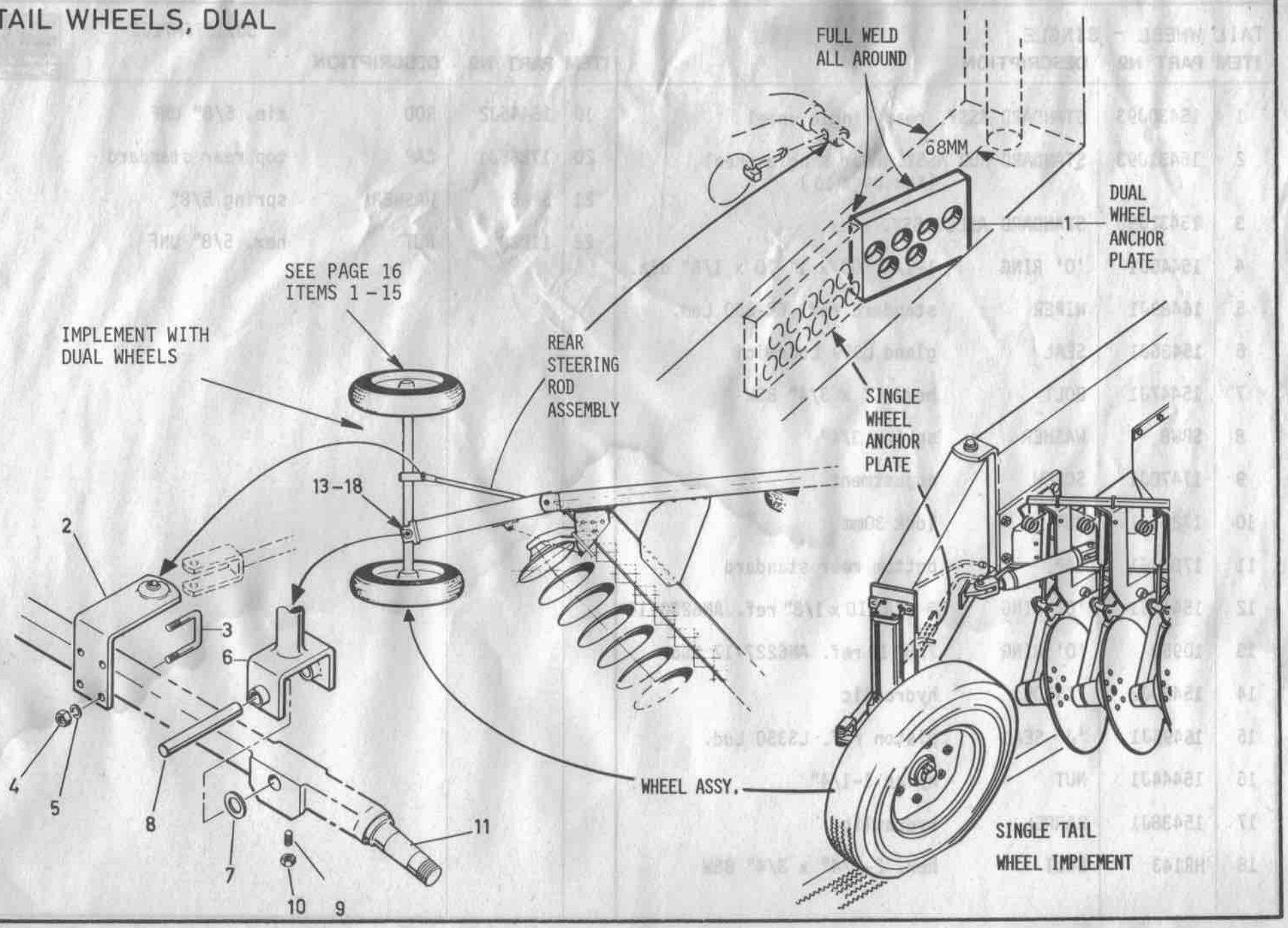


TAIL WHEEL - SINGLE

30.1176M72J2

ITEM	PART Nº	DESCRIPTION	
1	15430J93	STANDARD ASSY. rear single wheel	
2	15431J93	STANDARD HUB ASSY. rear single wheel (see page 16)	
3	15432J93	STANDARD AXLE ASSY. rear	
4	15445J1	'O' RING	1-1/4" OD x 1" ID x 1/8" dia.
5	16489J1	WIPER	standard ref. 62-250 Lud.
6	15436J1	SEAL	gland L359 Ludowici
7	15447J1	BOLT	hex. 6" x 3/4" BSW
8	SPW8	WASHER	spring 3/4"
9	17470J1	SCREW	adjustment
10	17261J1	NUT	lock 30mm
11	17864J1	CAP	bottom rear standard
12	15441J1	'O' RING	3 ./4" ID x 1/8" ref. AN6230-14
13	10959	'O' RING	7/8" ID ref. AN6227-17 Lud.
14	15439J2	PISTON	hydraulic
15	16495J1	'J' SEAL	piston ref. LS350 Lud.
16	15444J1	NUT	nyloc 1-1/4"
17	15438J1	BARREL	hydraulic
18	HR143	BOLT	hex. 2-1/4" x 3/4" BSW
19	15446J2	ROD	tie, 5/8" UNF
20	17865J1	CAP	top rear standard
21	SPW6	WASHER	spring 5/8"
22	11220	NUT	hex. 5/8" UNF

TAIL WHEELS, DUAL

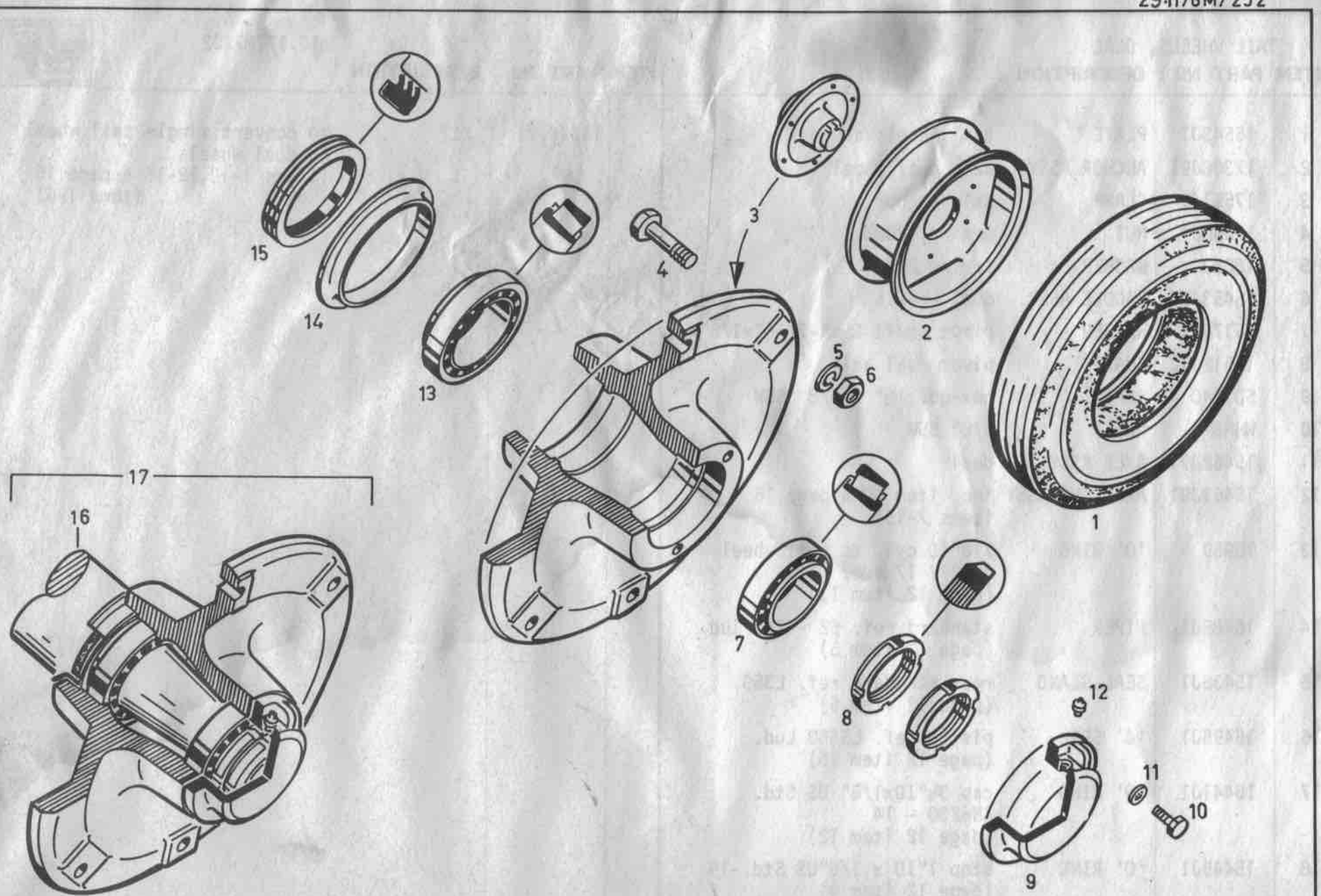


TAIL WHEELS, DUAL

10.177M72J2

ITEM	PART Nº	DESCRIPTION	
1	15543J1	PLATE	dual wheels anchor
2	17308J91	ANCHOR ASSY.	axle dual wheel
3	17551J1	CLAMP	axle anchor
4	17550J1	NUT	hex-hd. 20mm
5	18023	WASHER	spring 20mm
6	15453J92	SADDLE ASSY.	dual wheels
7	15176J1	WASHER	pivot shaft 2¼x1-7/16"x1/8"h.t.
8	15512J1	SHAFT	pivot dual axle
9	SD1540	SCREW	hex-hd. 1½" x 5/8" BSW
10	WHN8	NUT	5/8" BSW
11	15462J91	AXLE ASSY.	dual
12	15461J91	AXLE HUB ASSY	inc. item 10 & page 16 items 7-15
13	10959	'O' RING	7/8"ID cyl. to tail wheel AN6277-17 lud. (page 12 item 13)
14	16489J1	WIPER	standard ref. 62 - 250 lud. (page 12 item 5)
15	15436J1	SEAL-GLAND	rear standard ref. L359 (page 12 item 6)
16	16495J1	'J' SEAL	piston ref. LS350 Lud. (page 12 item 15)
17	15441J1	'O' RING	cap 3¼"IDx1/8" US Std. AN6230 - 14 (page 12 item 12)
18	15445J1	'O' RING	stop 1"ID x 1/8"US Std.-19 (page 12 item 4)

ITEM	PART Nº	DESCRIPTION	
	15516J91	KIT	to convert single tail wheel to dual wheels (items 1-10,12-18 & page 16 items 1-6)



WHEEL, AXLE, HUB, TYRES

ITEM	PART Nº	DESCRIPTION	
1	11280	TYRE	8.25 x 20 x 10 ply Highway or Hi-miler
	11281	TUBE	8.25 x 20
	14682J1	FLAP	8.25 x 20 (included with tyre & tube)
2	15318J91	RIM ASSY.	20"
3	15307J1	HUB	wheel
4	15249J1	BOLT	hex. 2" x 1/2" UNF h.t.
5	SPW4	WASHER	spring 1/2"
6	NFN6	NUT	hex. wheel, 1/2" UNF
7	15203J1	BEARING	wheel, cup JLM104910, cone JLM104948, 50mm
8	15205J1	NUT	spindle, 50mm
9	15305J1	CAP	hub
10	SD2097	SCREW	hex. set, 7/8" x 5/16" UNC h.t.
11	STW3	WASHER	star 5/16"
12	D999	NIPPLE	grease 1/8"
13	15306J1	BEARING	wheel, cup JLM508710, cone JLM508748, 60mm
14	TC462	RING	wear, triple lipped seal ref. 16994 Flavels
15	TC461	SEAL	triple lipped ref. 16946 Flavels
16	17096J91	STANDARD ASSY.	front R/H hydraulic (see page 10)
	15375J92	STANDARD ASSY.	L/H (see page 6)
	15432J93	STANDARD ASSY.	rear (see page 12)
17	17095J91	STANDARD/HUB ASSY.	front R/H items 3,7-16
	15374J91	STANDARD/HUB ASSY.	L/H items 3,7-16
	15431J93	STANDARD/HUB ASSY.	rear, items 3,7-16

TYRE PRESSURE

MAXIMUM PRESSURE 85PSI/586kPa

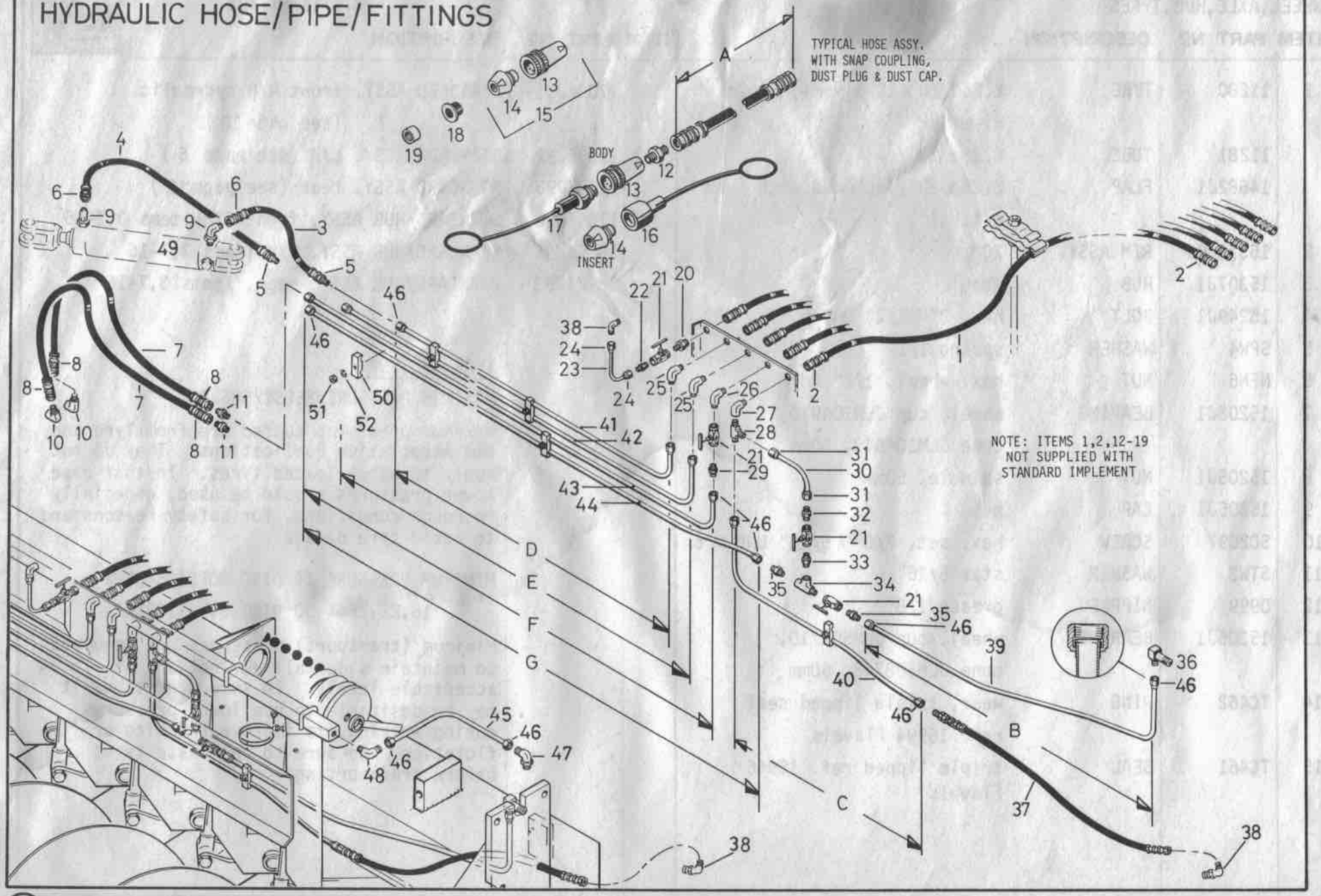
Maximum pressures quoted are from Tyre and Rim Association Publications. They do not apply to water loaded tyres. In that case lower pressures should be used, especially in rough conditions, for safety reasons and to avoid tyre damage.

MINIMUM PRESSURE 14 DISC 50PSI/345kPa

18,22,26 & 30 DISC 55PSI/380kPa

Minimum (transport) pressures are required to maintain side wall deflections at acceptable levels. In some conditions it may be desirable to use lower pressures during working, to improve tracking or flotation. Be sure to reinflate tyres before transporting.

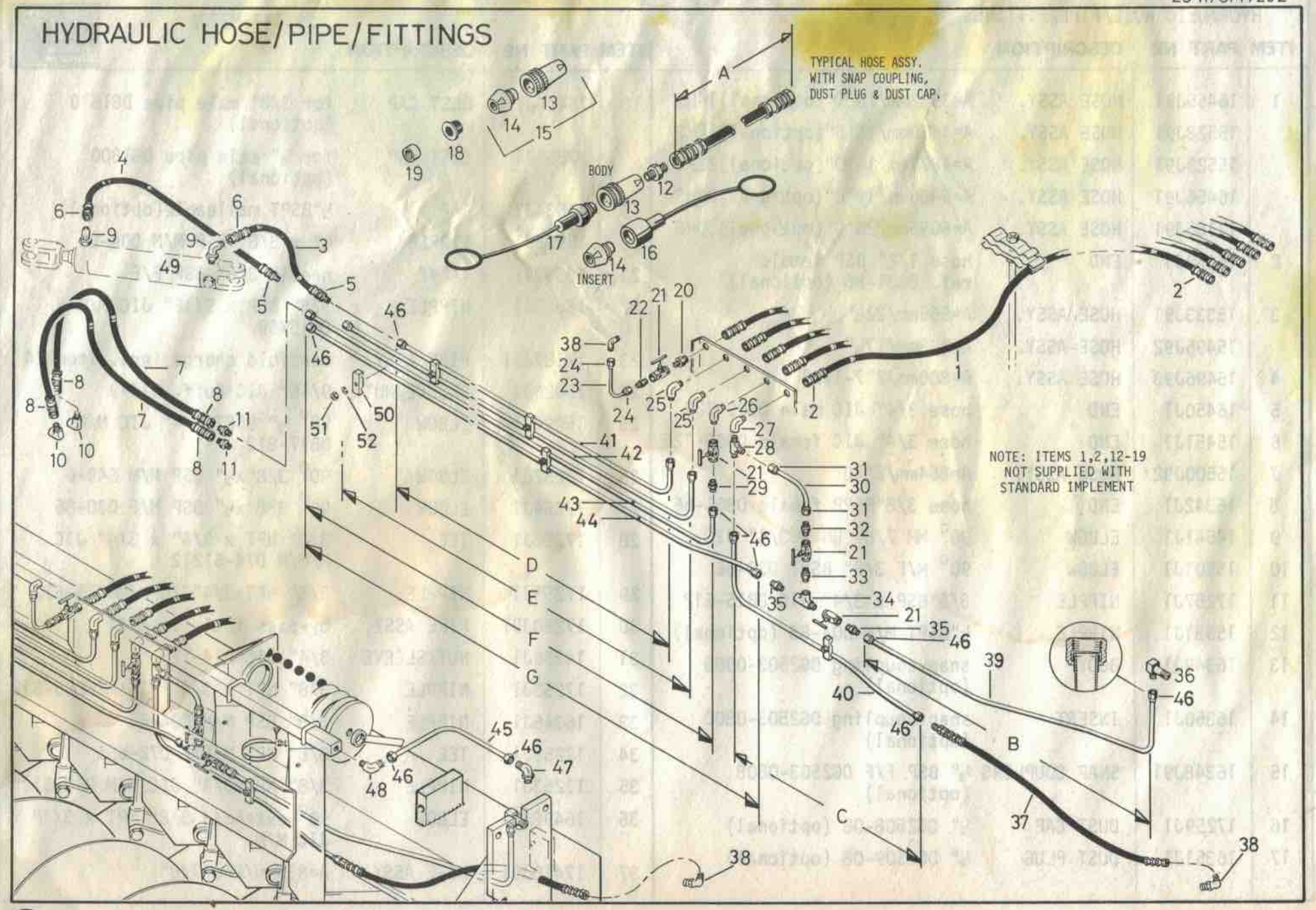
HYDRAULIC HOSE/PIPE/FITTINGS



HYDRAULIC HOSE/PIPE/FITTINGS

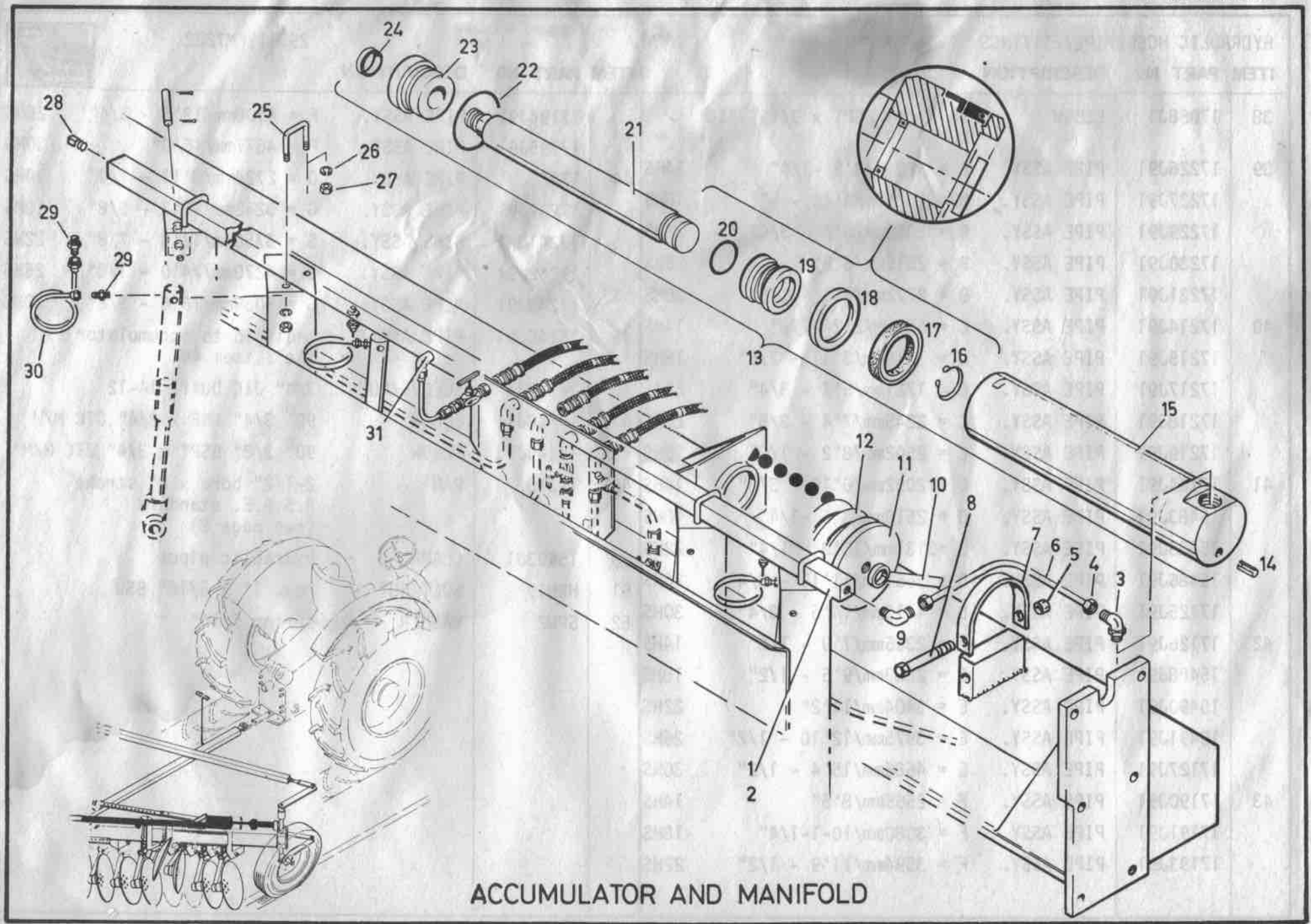
ITEM	PART Nº	DESCRIPTION	
1	16455J91	HOSE ASSY.	A=3962mm/13'0"(optional)14HS
	15528J91	HOSE ASSY.	A=4420mm/14'6"(optional)18HS
	15529J91	HOSE ASSY.	A=4877mm/16'0"(optional)22HS
	16456J91	HOSE ASSY.	A=5486mm/18'0"(optional)26HS
	17185J91	HOSE ASSY.	A=6096mm/20'0"(optional)30HS
2	16359J1	END	hose 1/2" BSP female ref. D801-86 (optional)
3	15333J91	HOSE ASSY.	A=565mm/22¼"
	15495J92	HOSE ASSY.	A=438mm/17¼"
4	15496J93	HOSE ASSY.	A=800mm/2'7-1/2"
5	16450J1	END	hose 3/4" JIC male D809-126
6	15451J1	END	hose 3/4" JIC female D805-126
7	15500J92	HOSE ASSY.	A=864mm/2'10"
8	16342J1	END	hose 3/8"BSPP female D801-66
9	14541J1	ELBOW	90° MM 7/8" UN x 3/4" JIC
10	15501J1	ELBOW	90° M/F 3/8" BSPT D30-66
11	17257J1	NIPPLE	3/8"BSP x 3/4" JIC DB15-612
12	15531J1	NIPPLE	½"BSPT M/M D04-88 (optional)
13	16349J1	BODY	snap coupling DG2503-0008 (optional)
14	16350J1	INSERT	snap coupling DG2503-0800 (optional)
15	16348J91	SNAP COUPLING	½" BSP F/F DG2503-0808 (optional)
16	17259J1	DUST CAP	½" DG2508-08 (optional)
17	16351J1	DUST PLUG	½" DG2509-08 (optional)
18	16494J1	DUST CAP	for 3/8" male pipe D81610 (optional)
	17867J1	DUST CAP	for ½" male pipe D81800 (optional)
19	15534J1	CAP	½"BSPT malleable(optional)
20	15525J1	NIPPLE	½" x 3/8" BSP M/M D04-86
21	15503J1	VALVE	needle 3/8" BSP F/F
22	16647J1	NIPPLE	3/8" BSP x 9/16" JIC M/M DB15/69
23	17187J91	PIPE ASSY.	manifold charge incl. item 24
24	15620J1	SLEEVE/NUT	9/16" JIC Duff. D14-9
25	15494J1	ELBOW	90° ½" BSPTx3/4" JIC M/M DB17-812
26	17252J1	ELBOW	90° 3/8"x½" BSP M/M S49-6
27	17254J1	ELBOW	90° 3/8"x½" BSP M/F D30-86
28	17256J1	TEE	3/8" NPT x 3/4" x 3/4" JIC M/M/M D74-61212
29	17253J1	NIPPLE	3/8" NPTx3/4"JIC M/M D15-612
30	17250J91	PIPE ASSY.	by-pass incl. item 31
31	14359J1	NUT/SLEEVE	3/4" JIC D14-12
32	17253J1	NIPPLE	3/8" NPT x 3/4" JIC M/MD15-612
33	16346J1	NIPPLE	3/8" BSP M/M D04-66
34	17255J1	TEE	3/8" NPT M/F/F D72-666
35	17253J1	NIPPLE	3/8" NPTx3/4" JIC M/M D15-612
36	16498J1	ELBOW	90° extended 3/8" NPT x 3/4" JIC M/M
37	17410J91	HOSE ASSY.	A=835mm/2'8-7/8"

HYDRAULIC HOSE/PIPE/FITTINGS



HYDRAULIC HOSE/PIPE/FITTINGS

ITEM	PART Nº	DESCRIPTION		
38	17068J1	ELBOW	90° 1/4" BSPT x 9/16" JIC DB/17-49	
39	17226J91	PIPE ASSY.	B = 972mm/3'2 -1/4"	14HS
	17227J91	PIPE ASSY.	B = 1486mm/4'10 - ½"	18HS
	17229J91	PIPE ASSY.	B = 2000mm/6'6 - 3/4"	22HS
	17230J91	PIPE ASSY.	B = 2515mm/8'3"	26HS
	17231J91	PIPE ASSY.	B = 2772mm/9'1 - 1/8"	30HS
40	17214J91	PIPE ASSY.	C = 683mm/2'2 -7/8"	14HS
	17215J91	PIPE ASSY.	C = 1216mm/3'11 - 7/8"	18HS
	17217J91	PIPE ASSY.	C = 1721mm/5'7 - 3/4"	22HS
	17218J91	PIPE ASSY.	C = 2245mm/7'4 - 3/8"	26HS
	17219J91	PIPE ASSY.	C = 2502mm/8'2 - 1/2"	30HS
41	17124J91	PIPE ASSY.	D = 2092mm/6'10 - 3/8"	14HS
	15483J91	PIPE ASSY.	D = 2610mm/8'6 -3/4"	18HS
	15485J91	PIPE ASSY.	D =3131mm/10'3 - 1/4"	22HS
	15486J91	PIPE ASSY.	D = 3651mm/11'11 - 3/4"	26HS
	17125J91	PIPE ASSY.	D = 4413mm/14'5 - 3/4"	30HS
42	17126J91	PIPE ASSY.	E = 2365mm/7'9 - 1/8"	14HS
	15488J91	PIPE ASSY.	E = 2883mm/9'5 - 1/2"	18HS
	15490J91	PIPE ASSY.	E = 3404mm/11'2"	22HS
	15491J91	PIPE ASSY.	E = 3975mm/12'10 - 1/2"	26HS
	17127J91	PIPE ASSY.	E = 4686mm/15'4 - 1/2"	30HS
43	17190J91	PIPE ASSY.	F = 2565mm/8'5"	14HS
	17191J91	PIPE ASSY.	F = 3080mm/10-1-1/4"	18HS
	17193J91	PIPE ASSY.	F = 3594mm/11'9 - 1/2"	22HS
	17194J91	PIPE ASSY.	F = 4108mm/13'5 - 3/4"	26HS
	17195J91	PIPE ASSY.	F = 4877mm/16'0"	30HS
44	17238J91	PIPE ASSY.	G = 2724mm/8'11 - 1/4"	14HS
	17239J91	PIPE ASSY.	G = 3242mm/10'7 - 5/8"	18HS
	17241J91	PIPE ASSY.	G = 3756mm/12'3 - 7/8"	22HS
	17242J91	PIPE ASSY.	G = 4270mm/14'0 - 1/8"	26HS
	17243J91	PIPE ASSY.	G = 5039mm/16'6 - 3/8"	30HS
45	15246J91	PIPE ASSY.	manifold to accumulator incl. item 46	
46	14359J1	SLEEVE/NUT	3/4" JIC Duff. 14-12	
47	15248J1	ELBOW	90° 3/4" UNF x 3/4" JIC M/M	
48	15244J1	ELBOW	90° 3/8" BSPT x 3/4" JIC M/M	
49	12343	RAM	2-1/2" bore x 8" stroke A.S.A.E. standard (see page 8)	
50	15493J1	CLAMP	hydraulic pipes	
51	HRH19	BOLT/NUT	hex. 1" x 5/16" BSW	
52	SPW2	WASHER	spring 5/16"	



ACCUMULATOR AND MANIFOLD

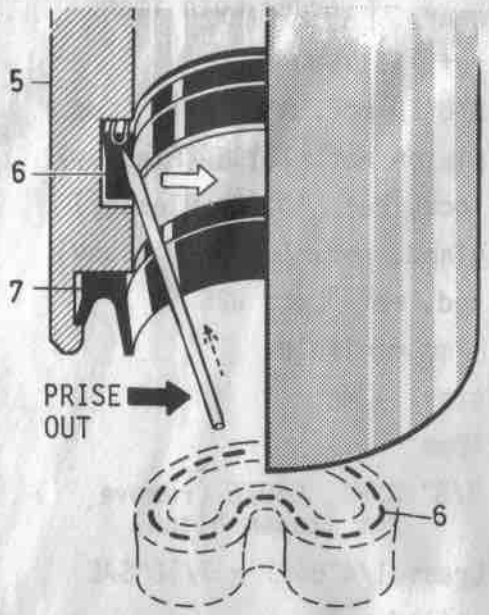
ACCUMULATOR AND MANIFOLD

8.1276M72J2

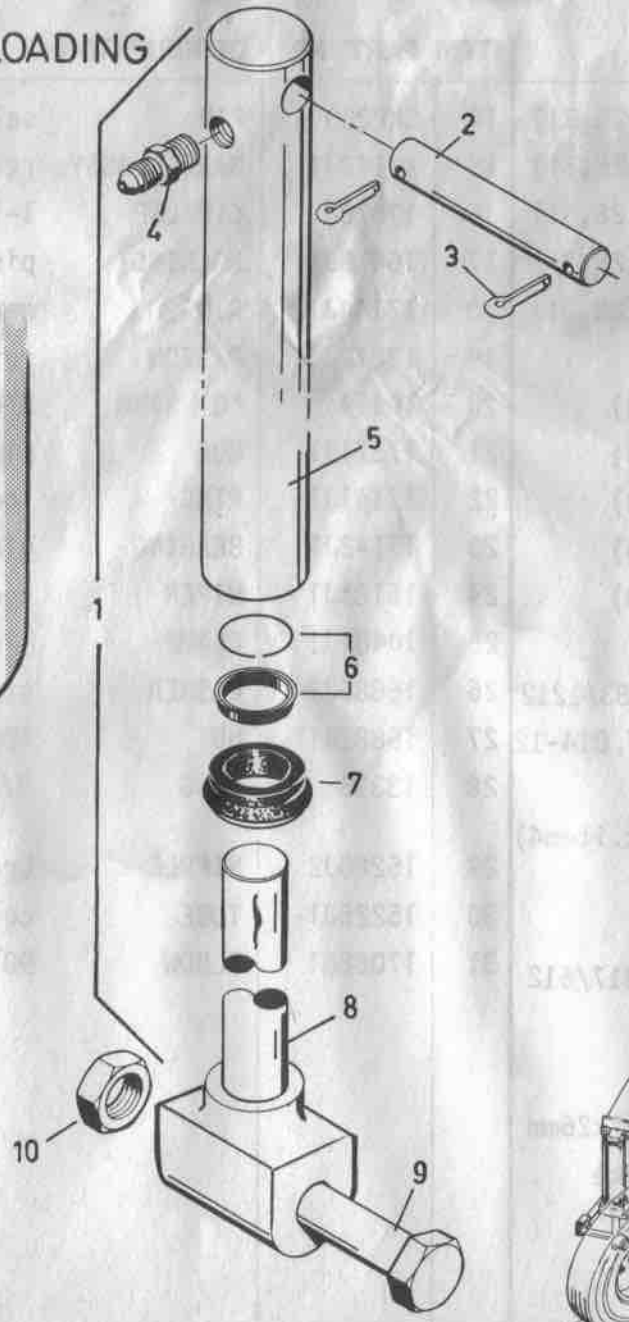
ITEM	PART Nº	DESCRIPTION
1	17050J91	MANIFOLD COMPLETE 14H(inc. items 2,9,28,31)
	17051J91	MANIFOLD COMPLETE 18H(inc. items 2,9,28,31)
	17053J91	MANIFOLD COMPLETE 22H(inc. items 2,9,28,31)
	17054J91	MANIFOLD COMPLETE 26H(inc. items 2,9,28,31)
	17055J91	MANIFOLD COMPLETE 30H(inc. items 2,9,28,31)
2	17056J91	MANIFOLD ASSY. 14H(inc. items 29 & 30)
	17057J91	MANIFOLD ASSY. 18H(inc. items 29 & 30)
	17059J91	MANIFOLD ASSY. 22H(inc. items 29 & 30)
	17060J91	MANIFOLD ASSY. 26H(inc. items 29 & 30)
	17061J91	MANIFOLD ASSY. 30H(inc. items 29 & 30)
3	15248J1	ELBOW accum. 90°M+F3/4"JICx3/4"UN D53/1212
4	14359J1	SLEEVE/NUT tube 3/4"JIC ref. Duff.D14-12
5	18414	NUT M12 h.t. plated
6	15246J91	PIPE ASSY. manifold to accum.(inc.item4)
7	17970J1	YOKE cylinder accumulator
8	18413	BOLT 12 x 100 h.t. plated
9	15244J1	ELBOW 90°3/8"BSPTx3/4"JIC DB17/612
10	15519J1	INDICATOR ASSY.
11	15252J92	RETAINER ASSY. accumulator spring
12	15253J1	SPRING accum. 4-1/2"IDx21-1/2"x26mm
13	17270J92	ACCUMULATOR ASSY. 2-1/2" ID x 8" stroke (items 15-24)

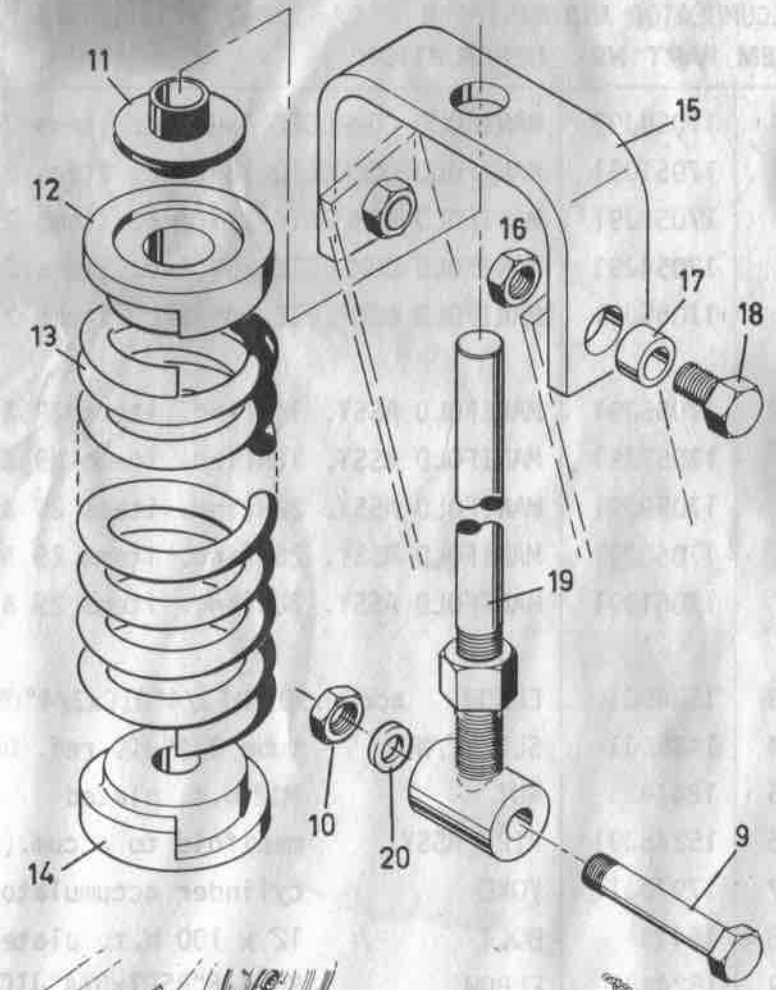
ITEM	PART Nº	DESCRIPTION	
14	SKP200	PIN	sel-lock 1-1/4" x 1/2"
15	17143J1	BARREL ASSY.	ref. 12562 (Plessey)
16	17873J1	CIRCLIP	1-1/8" external
17	16473J1	PACKING piston	ref.L25-SAWR(Lud) order both items
18	17144J1	RING wear	
19	17872J1	PISTON	ref. 13195 (Plessey)
20	10959	'O' RING	7/8"ID ref. AN6227-17 (Lud.)
21	17871J1	ROD	piston ref. 13196 (Plessey)
22	17141J1	RING	lock, ref. 10763 (Plessey)
23	17142J1	BEARING	gland, ref. 10810 (Plessey)
24	16181J1	WIPER	rod, ref. Lud. W26
25	16484J1	CLAMP	12mm manifold
26	16886J1	WASHER	star, 12mm
27	16882J1	NUT	12mm
28	13396	PLUG	3/8" BSPT. D59/6 (remove for tandem hitch)
29	15280J2	NIPPLE	brass 1/4"BSPT x 7/16"SAE
30	15225J1	TUBE	coiled ram
31	17068J1	ELBOW	90° 1/4"BSPT x 9/16"JIC DB17/49

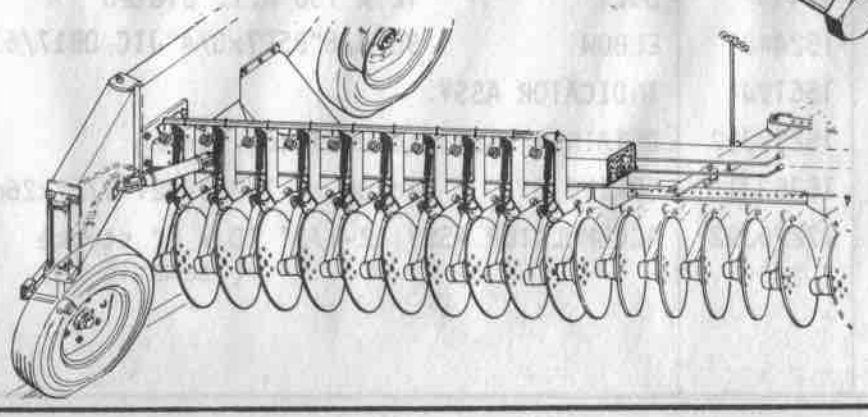
JUMPER
HYDRAULIC & SPRING LOADING



TO REMOVE OLD SEAL USE SCRIBER OR SHARPENED WIRE. TAKE CARE NOT TO DAMAGE SEAL RECESS.







JUMPER - HYDRAULIC & SPRING LOADING

13.1276M72J2

ITEM	PART Nº	DESCRIPTION	
1	15213J91	RAM ASSY.	complete items 4,5,6,7,8
2	15224J1	PIN	ram yoke
3	17579J1	PIN	cotter M5 x 32
4	15280J2	NIPPLE	brass 1/4" BSPT x 7/16" SAE
5	16467J91	KIT	barrel & seals
6	15218J1	SEAL	ram 1" x 1-1/4" x .270 (Lud. L313)
7	15219J1	SCRAPER	seal (62100 Wyclip)
8	15220J91	ROD ASSY.	jumper
9	HR150	BOLT	HR 4" x 3/4" BSW
10	WHL9	NUT	lock. 3/4" BSW
11	SR518	BUSH	nylon
12	15259J1	SEAT	top spring
13	15257J1	SPRING	jumper 16 mm 18" long
14	15258J1	SEAT	bottom spring
15	SD1784A	YOKE	spring
16	16369J1	NUT	lock 3/4" BSW 8 mm thick
17	SD1792	FERRULE	yoke
18	HR140	BOLT	HR 1-1/2" x 3/4" BSW
19	16254J91	ROD ASSY.	spring
20	FBW9	WASHER	flat 3/4"

FITTING INSTRUCTIONS

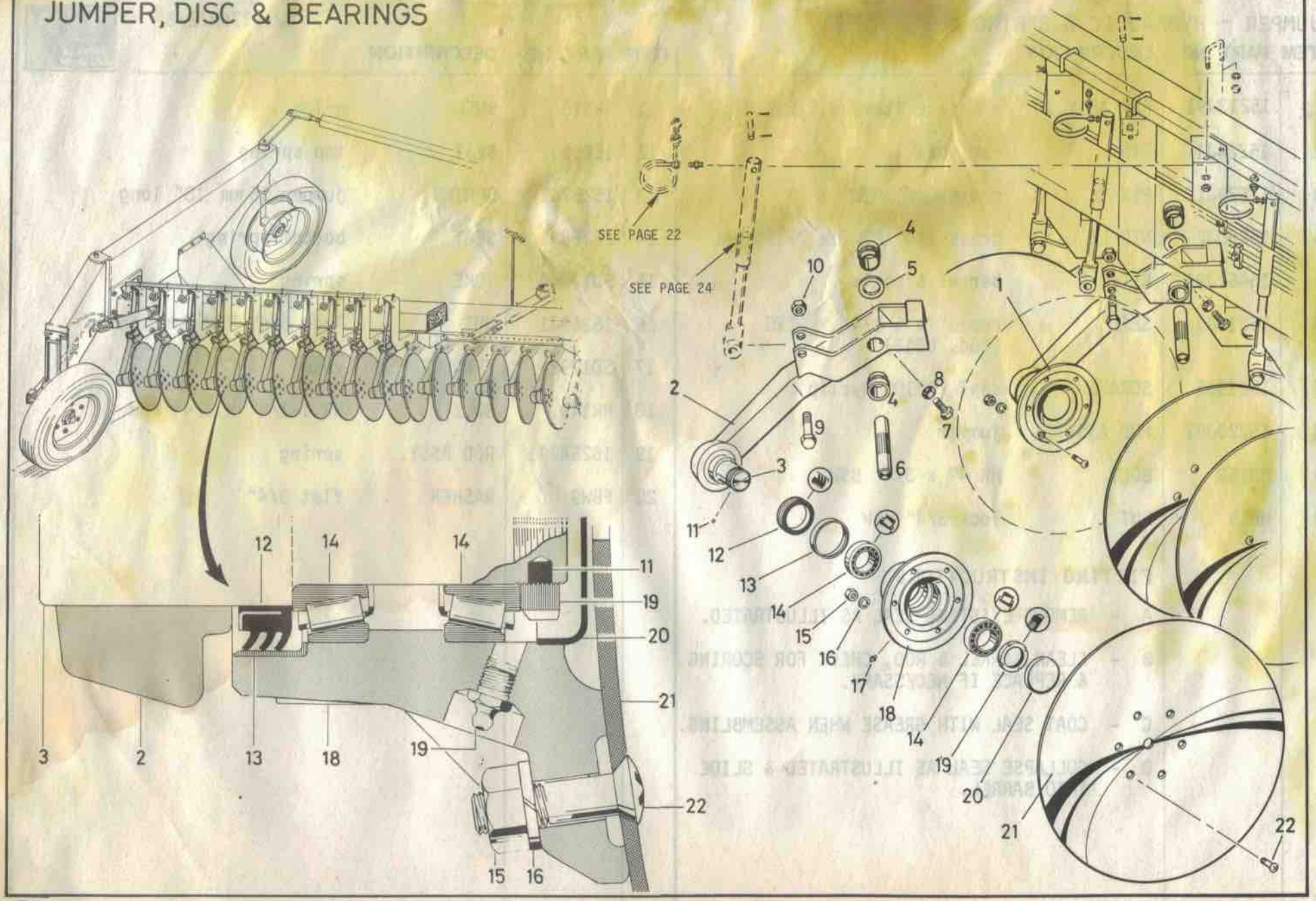
A - REMOVE EXISTING SEAL AS ILLUSTRATED.

B - CLEAN BARREL & ROD, CHECK FOR SCORING & REPLACE IF NECESSARY.

C - COAT SEAL WITH GREASE WHEN ASSEMBLING.

D - COLLAPSE SEAL AS ILLUSTRATED & SLIDE INTO BARREL.

JUMPER, DISC & BEARINGS

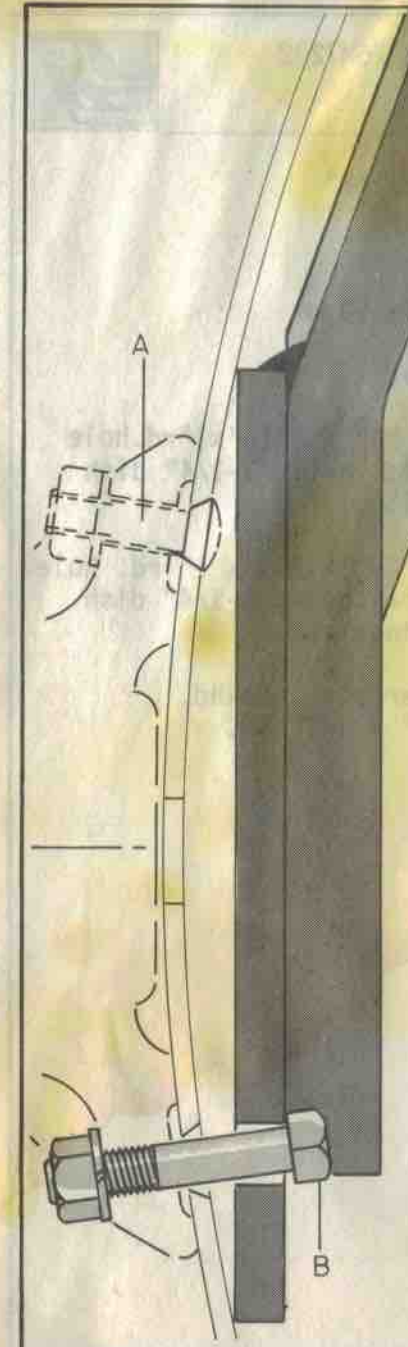


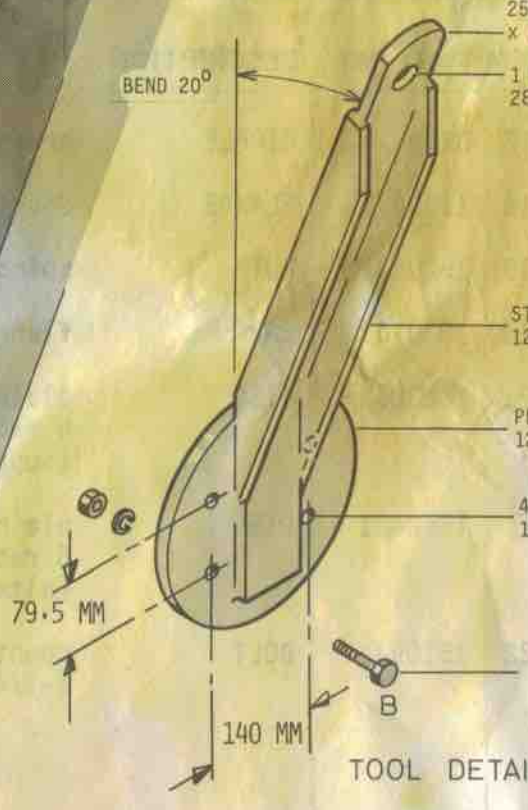
JUMPER, DISC & BEARINGS

3.1276M72J2

ITEM	PART Nº	DESCRIPTION	
1	15194J91	JUMPER ASSY.	items 2,3, 11-14, 16-19
2	15195J91	JUMPER ARM SUB ASSY.	includes item 3
3	15196J1	SPINDLE	disc-jumper arm
4	15140J1	BUSH	jumper spindle
5	15176J1	WASHER	3.2 mm)
	15332J1	WASHER	4.8 mm) as required
	15316J1	WASHER	6.4 mm)
6	15212J5	SHAFT	jumper arm
7	SD1540	SET SCREW	hex. 1-1/2" x 5/8" case hard.
8	WHN8	NUT	hex. 5/8"
9	HR150	BOLT	hex. 4" x 3/4" HR jumper pivot
10	WHL9	NUT	lock 3/4"
11	15206J1	INSERT	nylon, nut
12	12395	SEAL	triple lipped ref. 16913 Flavels
13	12396	RING	wear ref. 17254 Flavels
14	15203J1	BEARING	50 mm ref. cup JLM104910 cone JLM104948
15	15210J1	NUT	plated 1/2" UNC
16	SPW4	WASHER	spring 1/2"
17	D999	NIPPLE	grease 1/8"
18	15204J1	FLANGE	disc
19	15205J1	NUT	spindle 50 mm
20	15207J1	CAP	flange
21	15208J1	DISC	plain 24" x 3/16"x1"rd.hole 6 radial holes 3-1/4" dish (supplied)
	15524J1	DISC	plain 24" x 8G. x 1" rd. hole 6 radial holes 3-1/4" dish (alternative)
22	15209J1	BOLT	counter sunk soc-hd. 1-3/4" x 1/2" UNC

STRAIGHTENING JUMPER ARMS





TOOL DETAILS

METHOD OF STRAIGHTENING

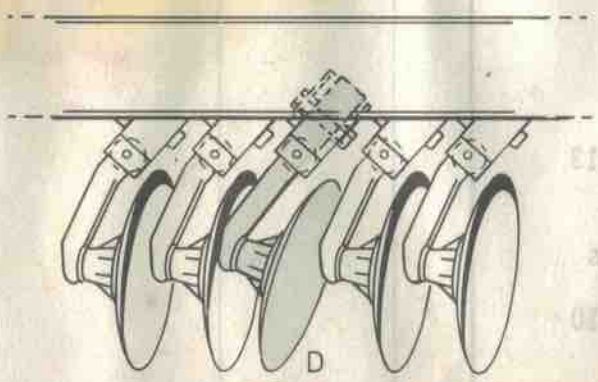
A - Remove 4 bolts, to suit spacing on "jumper straightening tool".

B - Bolt on tool, with 2-1/2" x 1/2" bolts.

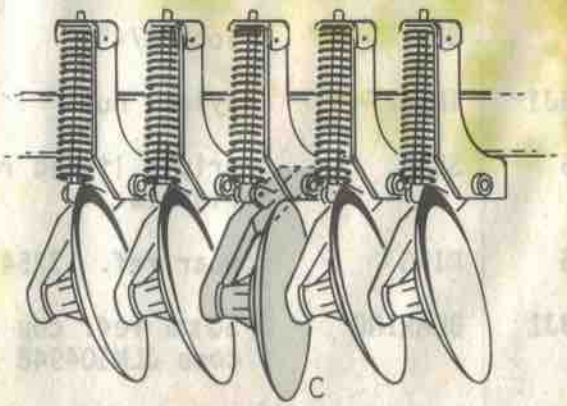
C - Rotate tool to a vertical position (90° to jumper arm) to straighten a twist. Measure spacings at top and bottom to correct undercut.

D - Rotate tool to a horizontal position (parallel to jumper arm) to straighten a bend. Measure spacing at front and rear to correct breast cut.

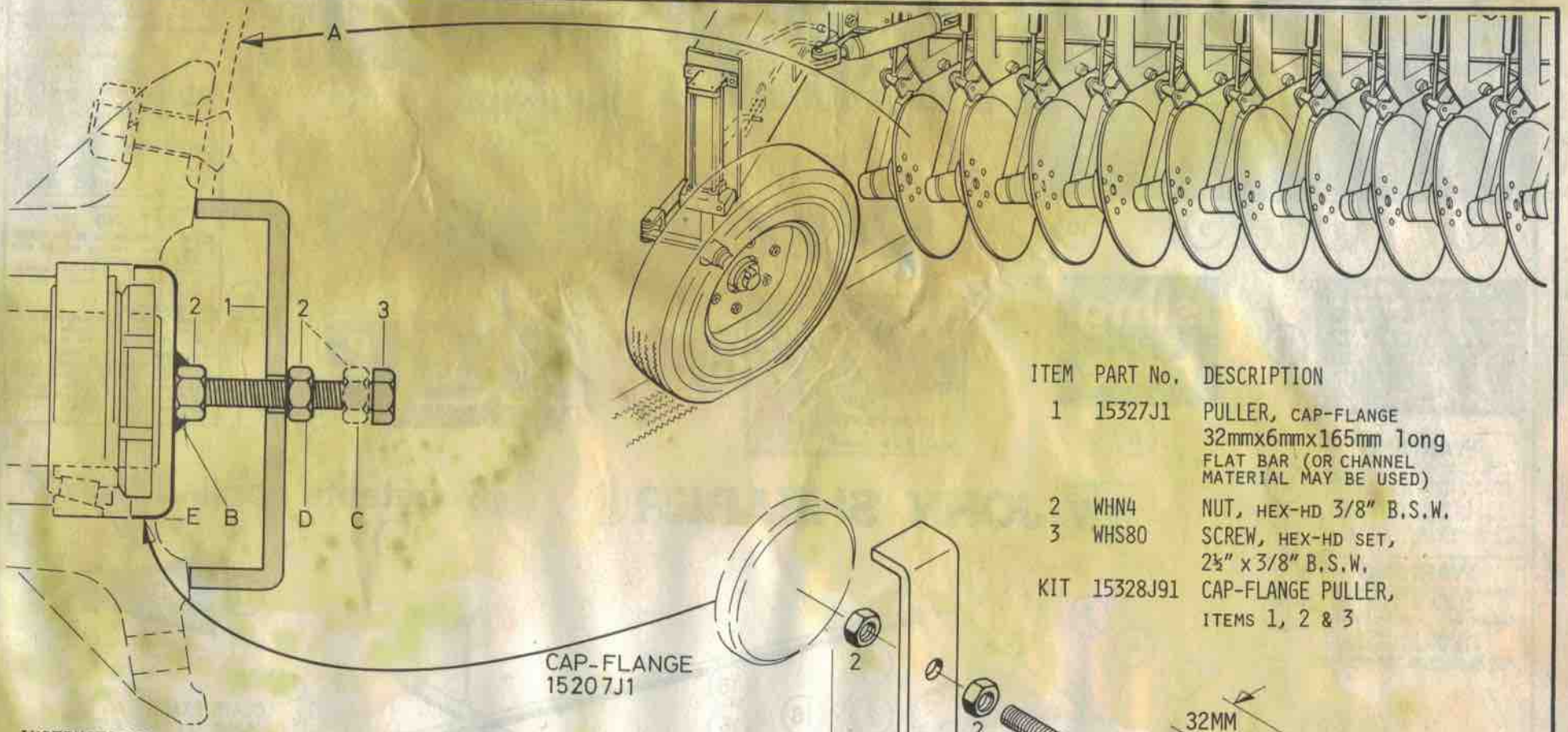
E - Heat area to be straightened to a cherry red. (CAUTION - IF HEAT IS APPLIED TOO CLOSE TO BEARINGS AND SEALS, A WET RAG WRAPPED AROUND HUB WOULD BE ADVISABLE). Apply force in appropriate direction (C and/or D) with block and tackle. Correct disc attitude is established by comparison with adjacent discs.



PLAN VIEW WITH BENT JUMPER ARM ILLUST.
USE METHOD 'D' TO CORRECT BEND.

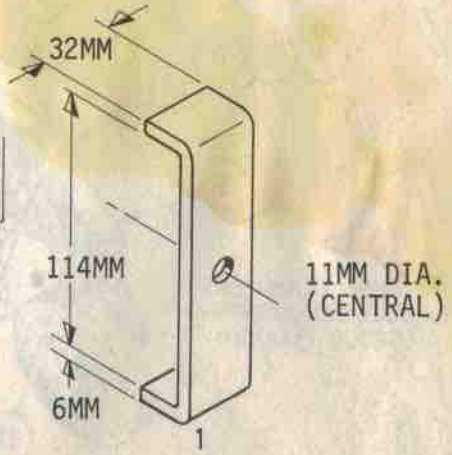


REAR VIEW WITH TWISTED JUMPER ARM ILLUST.
USE METHOD 'C' TO CORRECT TWIST.



ITEM	PART No.	DESCRIPTION
1	15327J1	PULLER, CAP-FLANGE 32mmx6mmx165mm long FLAT BAR (OR CHANNEL MATERIAL MAY BE USED)
2	WHN4	NUT, HEX-HD 3/8" B.S.W.
3	WHS80	SCREW, HEX-HD SET, 2½" x 3/8" B.S.W.
KIT	15328J91	CAP-FLANGE PULLER, ITEMS 1, 2 & 3

CAP-FLANGE
15207J1



INSTRUCTIONS -

A - REMOVE DISC

B - TACK WELD NUT TO CENTRE OF CAP-FLANGE

C - WITH NUT UNDER HEAD INSERT SCREW THROUGH 11MM HOLE IN CHANNEL AND TIGHTEN SCREW TO WELDED NUT.

D - TURN NUT AGAINST CHANNEL WHICH WILL LIFT SCREW AND CAP-FLANGE.

E - WHEN RE-ASSEMBLING APPLY PLIABOND (OR EQUIVALENT) TO MATING SURFACES.

KIT, CAP-FLANGE PULLER, JUMPER BEARINGS

Good Design
FOR AUSTRALIAN DESIGN INDEX
INDUSTRIAL DESIGN COUNCIL OF AUSTRALIA
7

Gutes Design
FÜR DEN AUSTRALISCHEN DESIGN INDEX
INDUSTRIAL DESIGN COUNCIL OF AUSTRALIA
8

良いデザイン
9

Buen Diseño
DEL INDICE AUSTRALIANO
INDUSTRIAL DESIGN COUNCIL OF AUSTRALIA
10

18

John Shearer
model
serial no
Made in Australia
5

Maximum Allowable
Stationary Setting
14

PLOUGH W-I-D-E
YOUR SGP IS CAPABLE OF WORKING 25 INCHES (630 mm) OF WIDTH PER DISC IN MOST CONDITIONS.

DISCS	Ft. ins.	m
14	9-4	2·8
18	12-0	3·6
22	14-8	4·4
26	17-4	5·2
30	20-0	6·0

USE THIS ABILITY
IT WILL SAVE YOU..... FUEL, TIME, DAMAGE, DISC WEAR
4

JOHN SHEARER
2

SETTING UP
WITH PLOUGH STATIONARY and ON LEVEL GROUND:
1. LEVEL PLOUGH FRAME SO THAT ALL DISCS TOUCH GROUND TOGETHER.
2. ADJUST DEPTH STOP (AT REAR LIFT CYLINDER) SO THAT IT OPERATES 2" (50mm) AFTER ALL DISCS TOUCH GROUND.

BEGIN PLOUGHING, THEN:
3. ADJUST TAIL STEER TO GIVE ABOVE WIDTH OF CUT.
4. INCREASE LOADING BY JUMPERS UNTIL REQUIRED PLOUGHING DEPTH IS ACHIEVED.
* ONLY CLOSE UP THE PLOUGH WHEN "MAXIMUM PERMISSIBLE" JUMPER LOADING WILL NOT PROVIDE REQUIRED DEPTH.
* OPEN UP W-I-D-E WHEN POSSIBLE.
* CONTROL PLOUGHING DEPTH BY VARIATION OF JUMPER LOADING PRESSURE.
3

HYDRAULIC FLUID
WE USE AND RECOMMEND Mobilfluid 423 TRANSMISSION FLUID, A PRODUCT OF Mobil Oil Australia Limited. Mobilfluid 423 IS COMPATIBLE WITH FLUIDS SPECIFIED BY TRACTOR MANUFACTURERS AND IS SUITABLE FOR USE AS A MULTI-PURPOSE TRANSMISSION/HYDRAULIC FLUID IN TRACTORS. THIS INCLUDES TRACTORS FITTED WITH POWER SHIFT TRANSMISSIONS, COMMON HYDRAULIC SYSTEMS, WET CLUTCHES AND WET BRAKES.
15

sling here
6

1

5GP
13

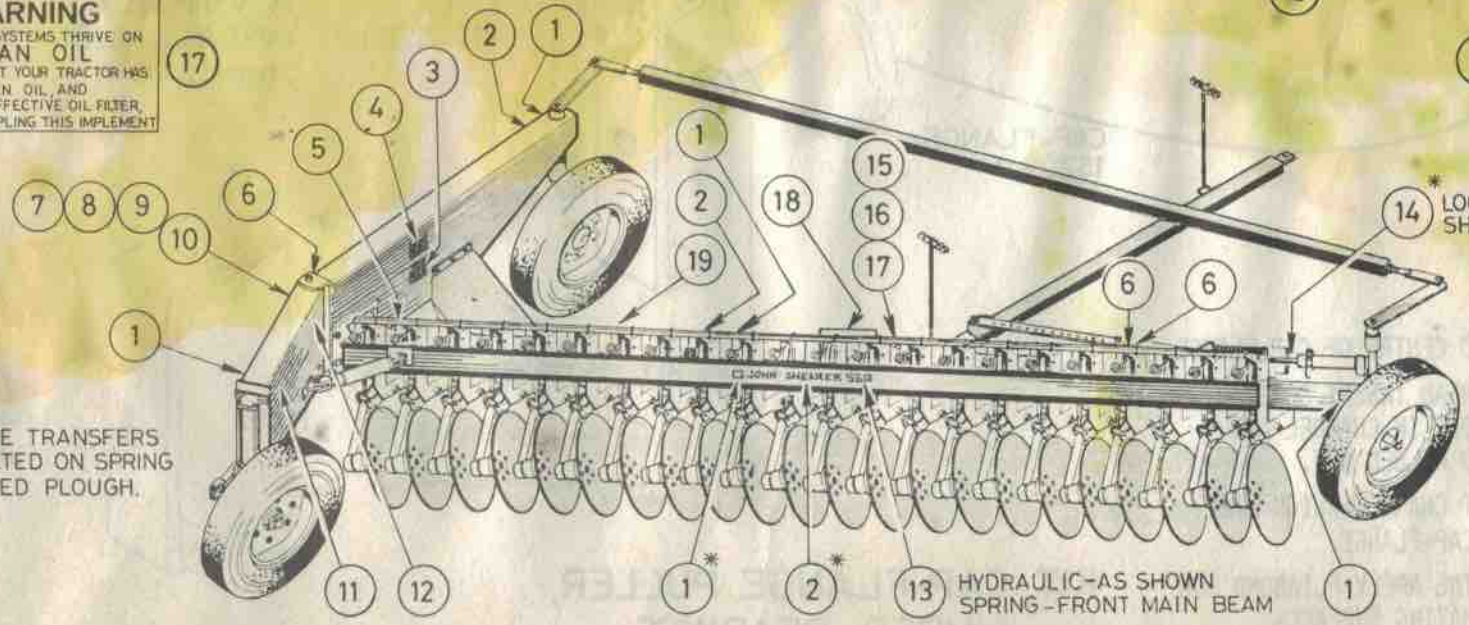
WARNING
AVOID DAMAGE TO THE LIFT MECHANISM BY ADJUSTING ENGINE SPEED OF THE HYDRAULIC RAM. AT FULL LOAD ENGINE SPEED, SO THAT IT IS NOT LESS THAN
1.5 - 2.0 SECONDS FOR 7" STROKE
3.0 - 4.0 SECONDS FOR 16" STROKE
"FASTER SPEEDS MAY CAUSE DAMAGE"
16

JOHN SHEARER 11

patents applied for
19

WARNING
"HYDRAULIC SYSTEMS THRIVE ON CLEAN OIL"
ENSURE THAT YOUR TRACTOR HAS
• CLEAN OIL, AND
• AN EFFECTIVE OIL FILTER,
PRIOR TO COUPLING THIS IMPLEMENT
17

EXPORT AWARD
12



* LOCATE EXACTLY AS SHOWN ON DWG. B5757

* THESE TRANSFERS DELETED ON SPRING LOADED PLOUGH.

HYDRAULIC-AS SHOWN
SPRING-FRONT MAIN BEAM

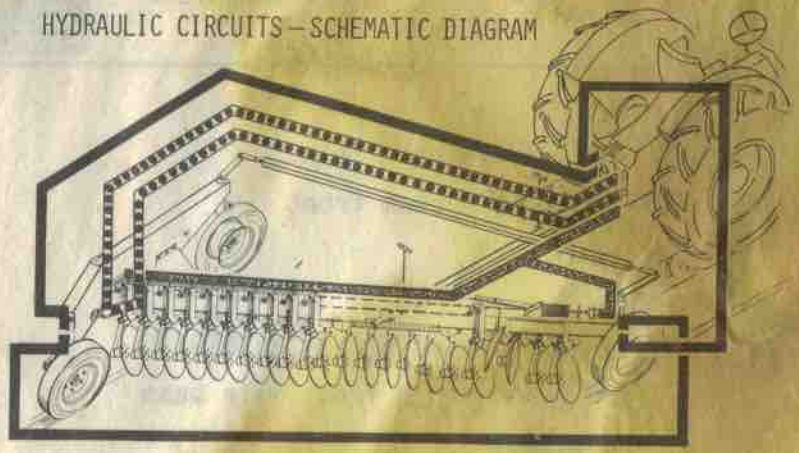
TRANSFERS

TRANSFERS

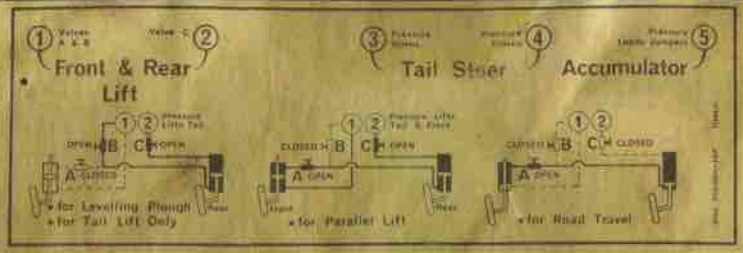
21.1276M72J2

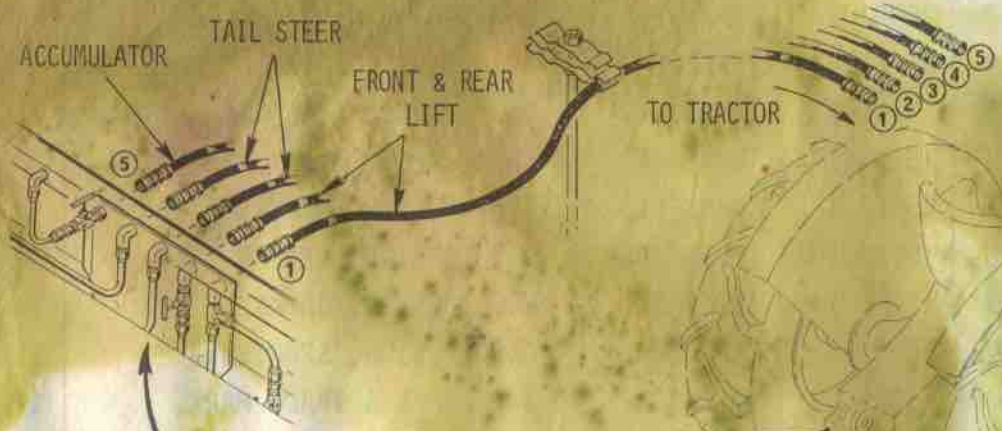
ITEM	PART No.	DESCRIPTION		QUANTITY H	QUANTITY S	LOCATION
1	15874J3	TRANSFER	J.S. TRADE MARK	5	4	as shown incl. main beam front
2	15875J2	TRANSFER	J.S. LARGE	3	2	as shown incl. main beam front
3	15981J1	TRANSFER	SETTING UP	1	1	as shown
4	15980J1	TRANSFER	PLOUGH WIDE	1	1	as shown
5	15968J1	TRANSFER	PLATE MODEL & SERIAL No.	1	1	top of beam (use drive screws 16161J1)
6	15854J1	TRANSFER	SLING HERE	3	3	top of land beam; top & front main beam
7	15956J1	TRANSFER	GOOD DESIGN, ENGLISH	1	1	tail beam outside
8	15957J1	TRANSFER	GOOD DESIGN, GERMAN	1	1	tail beam outside
9	15958J1	TRANSFER	GOOD DESIGN, JAPANESE	1	1	tail beam outside
10	15959J1	TRANSFER	GOOD DESIGN, SPANISH	1	1	tail beam outside
11	15873J3	TRANSFER	J.S. NAME & TRADE MARK	1	1	tail beam inside
12	15966J1	TRANSFER	EXPORT AWARD	1	1	tail beam inside
13	15965J1	TRANSFER	'5GP'	1	1	hydraulic as shown - spring front main beam
14	15540J1	TRANSFER	ACCUMULATOR	1	–	front main beam (see drawing B5757)
15	15971J1	TRANSFER	HYDRAULIC FLUID	1	1	top of beam next to hydraulic support plate
16	15876J1	TRANSFER	RAM WARNING	1	1	top of beam next to hydraulic support plate
17	15982J2	TRANSFER	CLEAN OIL WARNING	1	1	top of beam next to hydraulic support plate
18	15969J1	TRANSFER	HYDRAULIC CONNECTION	1	1	on hydraulic support plate
19	15870J3	TRANSFER	PATENTS	1	1	front main beam
	16161J1	SCREW	DRIVE 5/16"x 4U	4	4	secures serial plate (item 5)

HYDRAULIC CIRCUITS—SCHEMATIC DIAGRAM



FRAME LIFT TAIL BEAM CYLINDER ACCUMULATER CYLINDER & JUMPER CYLINDERS





All hydraulic circuits terminate with plugged ends.

Tractors having less remote outlets than plough has hydraulic functions, logically suggests snap couplings on plough outlets.

On tractors with more remote outlets than plough requires, it may be more convenient to leave hoses, with tractor snap couplings, permanently on plough.

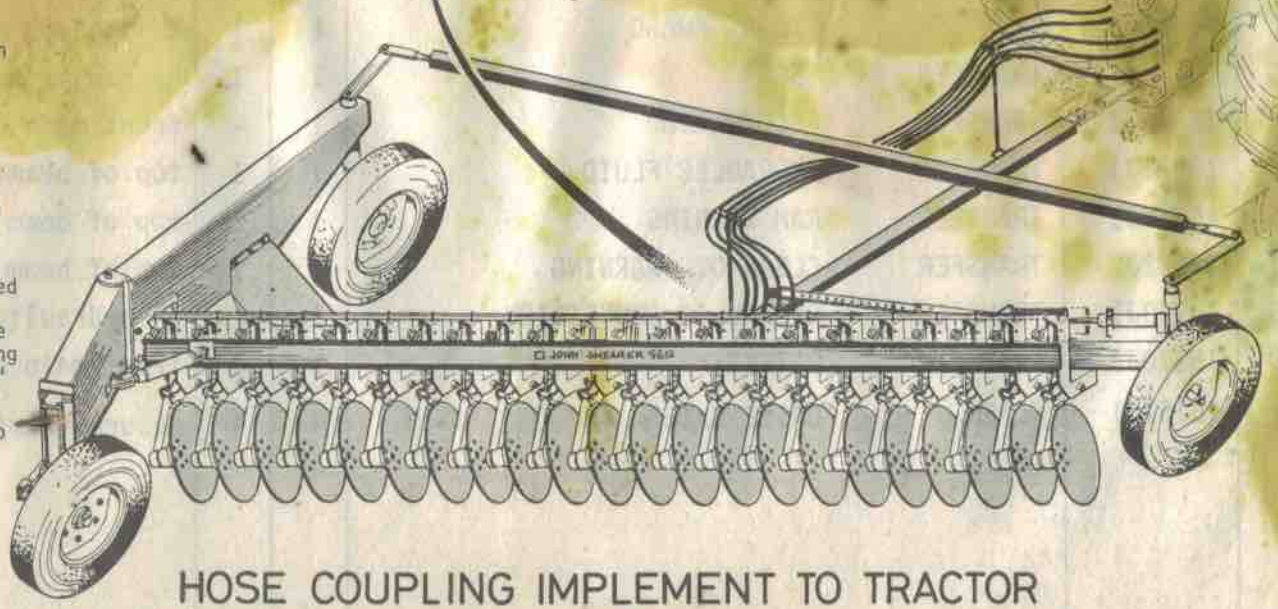
NOTE!

1. The accumulator ram is a single acting circuit only and requires one operating hose. Tail steer and rear lift circuits are double acting and require two hoses.

2. Rear lift and accumulator circuits have inbuilt needle valves. This permits the plough to be operated with these circuits "pre-set" and the hoses then disconnected and used on another circuit. e.g. if the tractor has only one remote service and tail steering is the most valuable function to operate "on the go" in the particular conditions e.g. say on hillsides.

On the other hand the tail steer cylinder has no needle valve. If it is decided to operate without hoses on this circuit, it is necessary to either...

(a) Fit the screw tail steer turnbuckle;
(b) Have snap couplings on the plough which will hold circuit pressures in the plough while working.



HOSE COUPLING IMPLEMENT TO TRACTOR