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October 1982

Part No.

71.15.854



**POWER ARM 7, 8 & A16**

**SPARE PARTS**

### USE ONLY McCONNEL SPARE PARTS

To be assured of the latest design improvements purchase your genuine replacements from the original equipment manufacturer F.W. McConnel Ltd. through your local dealer or stockist.

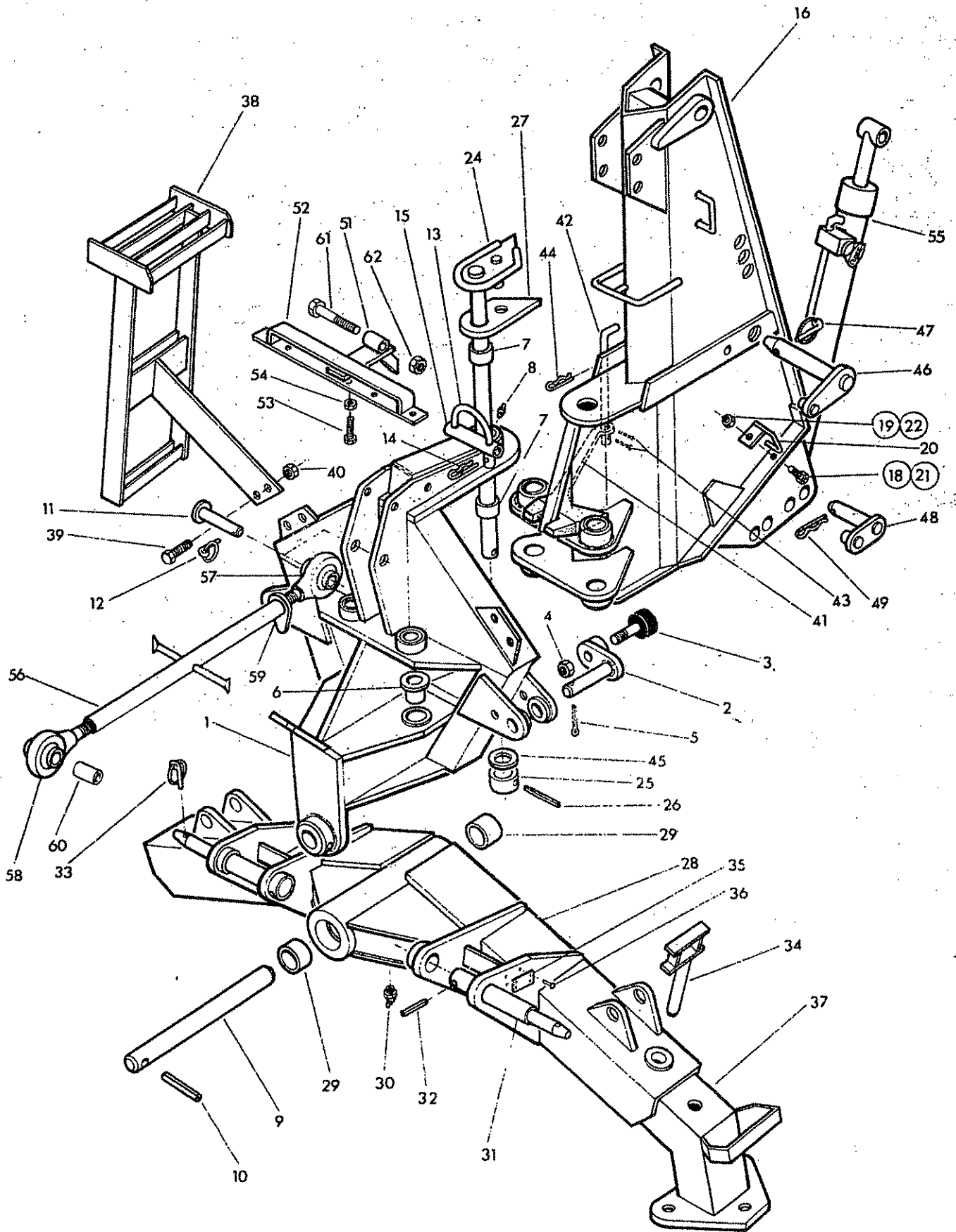
Always quote machine type and serial number as well as the part number.

Design improvement may have altered some of the parts listed in this manual - the latest part will always be supplied when it is interchangeable with an earlier one.

### THE DOT SYSTEM

Many spares are supplied as Assemblies or as Sub-assemblies and, to help the customer determine the composition of an Assembly, the Dot System is used. The Main Assembly will not show a dot preceding its description and is printed in BLOCK CAPITALS. Subsequent listed parts are preceded by one or more dots until the next major assembly is reached. An increase in the number of preceding dots indicates that the item is an associated part of the preceding item. Whenever the number of dots are decreased by one this indicates the termination of an assembly.

# MAIN FRAME, SLEW COLUMN & LEGS

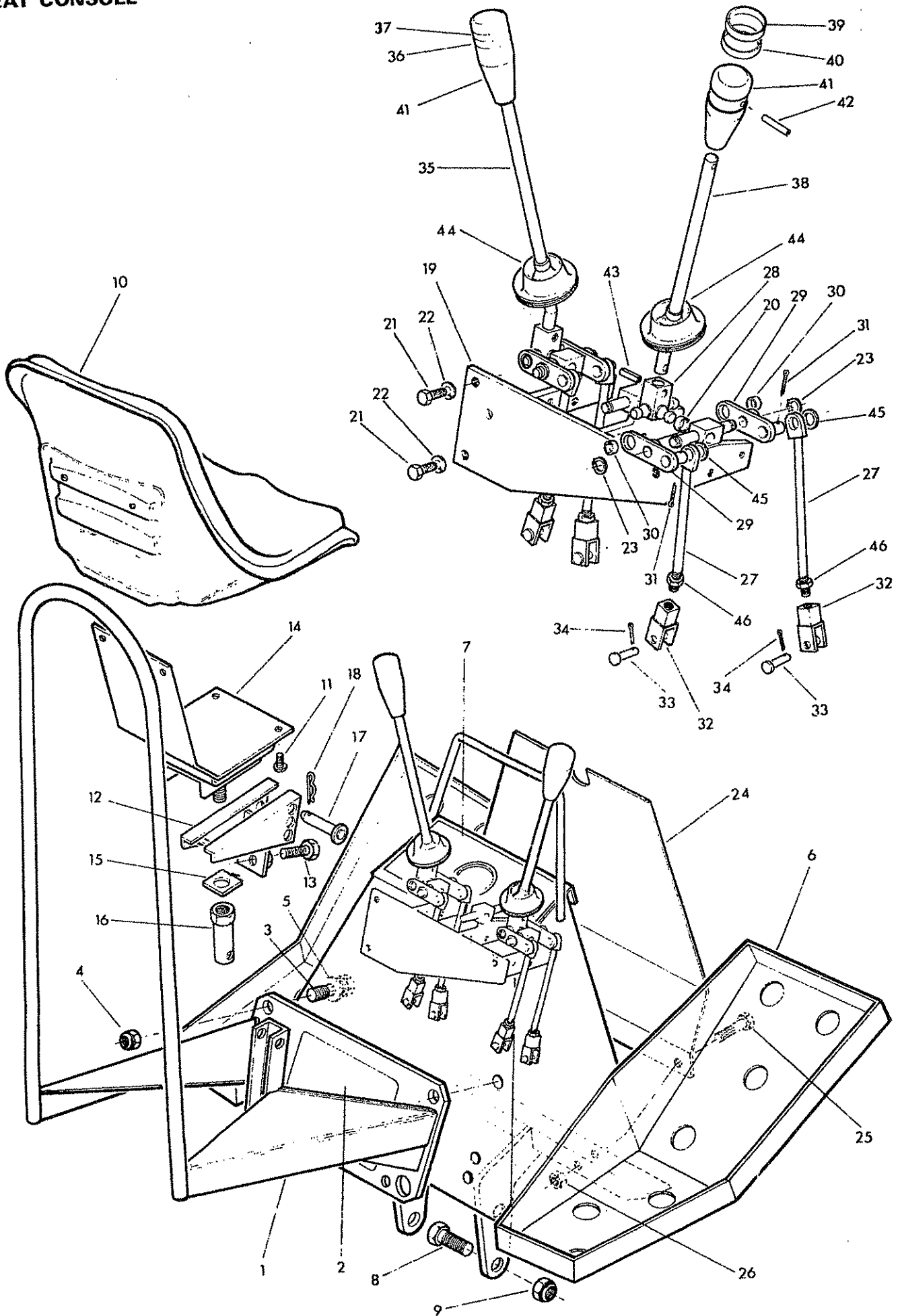


Ref	Part No.	Qty	Description
	71 15 251		PA7 & PA8 COMMON ASSEMBLY
	71 15 252	1	..Main frame and slew column assembly
1	71 15 270	1	..Main frame c/w pins, bushes etc.
2	71 15 033	2	...Levelling ram pin c/w slewing buffer
3	71 03 046	1	....Slewing buffer c/w nut
4	91 00 012	1	....Aeronut M10
5	05 03 145	1	....Split pin 3/16" diameter x 1.3/4" long
6	71 02 173	4	...Slew link bush
7	71 15 200	2	...Kingpin bush
8	09 01 121	2	...Greaser 1/8" BSP
9	71 15 032	1	...Jack leg pivot pin c/w spring dowel
10	04 22 648	1	....Spring dowel 3/8" dia. x 3" long
11	71 15 046	1	...Top hitch pin c/w linch pin
12	04 31 217	1	....Linch pin
13	71 15 122	1	...Hose guide c/w spring cotter
14	04 31 105	1	....Spring cotter
15	71 15 121	1	...Hose guide tube
16	71 15 273	1	..Slew column c/w brackets
17	71 15 105	1	...Hose bracket R.H. c/w nut and screw (not illus)
18	93 13 055	1	.... Set screw M10 x 25
19	91 43 005	1	....Clevelok nut M10
20	71 15 106	1	...Hose bracket L.H. c/w nut and screw
21	93 13 055	1	....Set screw M10 x 25
22	91 43 005	1	....Clevelok nut M10
23	71 15 317	1	..Slew assembly complete not illus. (see page 70)
24	71 15 050	1	..King pin c/w collar assembly
25	71 15 052	1	...Collar
26	04 22 640	1	...Roll pin 3/8" diameter x 2.1/2" long
27	71 15 051	1	...Tail
28	71 15 261	1	..Outer leg assembly c/w pins etc.
29	60 00 160	2	...Pivot bush
30	09 01 124	1	...Greaser 1/8" BSP 67 $\frac{1}{2}$ <sup>o</sup> angled
31	71 15 012	2	...Linkage pin c/w pins
32	04 22 632	1	....Spring dowel 3/8" diameter x 2" long
33	04 31 217	1	....Linch pin
34	71 15 011	2	...Jack leg locating pin
35	71 15 209	1	...Serial plate
36	71 03 230	4	...Rivet
37	71 15 264	2	..Inner telescopic leg
38	71 15 269	2	..Steps c/w bolts and nuts
39	92 13 086	2	...Bolt M12 x 40
40	91 43 006	2	...Clevelok nut M12
41	71 03 044	1	..Transport lock
42	71 15 109	1	..Lock rod c/w pins
43	05 03 095	1	...Split pin
44	04 31 105	1	...Spring cotter
45	71 15 186	1	..Thrust washer
46	71 15 066	1	..Main arm pivot pin c/w linch pin
47	71 15 147	1	...Linch pin
48	71 03 038	1	..Lift ram pin c/w spring cotter
49	04 31 105	1	...Spring cotter
50	71 15 316	1	..Valve carrier bracket c/w bolts
51	71 15 141	1	...Valve bracket arm
52	71 15 142	1	...Hose retainer
53	92 13 064	2	...Bolt M8 x 30
54	91 43 004	2	... 'Clevelok' nut M8
55	71 15 303	1	..Lift ram assembly (see page 102)
	71 15 275	1	..Top link assembly
56	71 02 217	1	..Top link tube
57	71 15 204	1	..Cat II end left hand
58	71 02 218	1	..Cat II end right hand
59	71 02 214	1	..Locking collar
60	71 15 222	1	..John Deere top link sleeve

61 92 13 226  
62 91 43 006

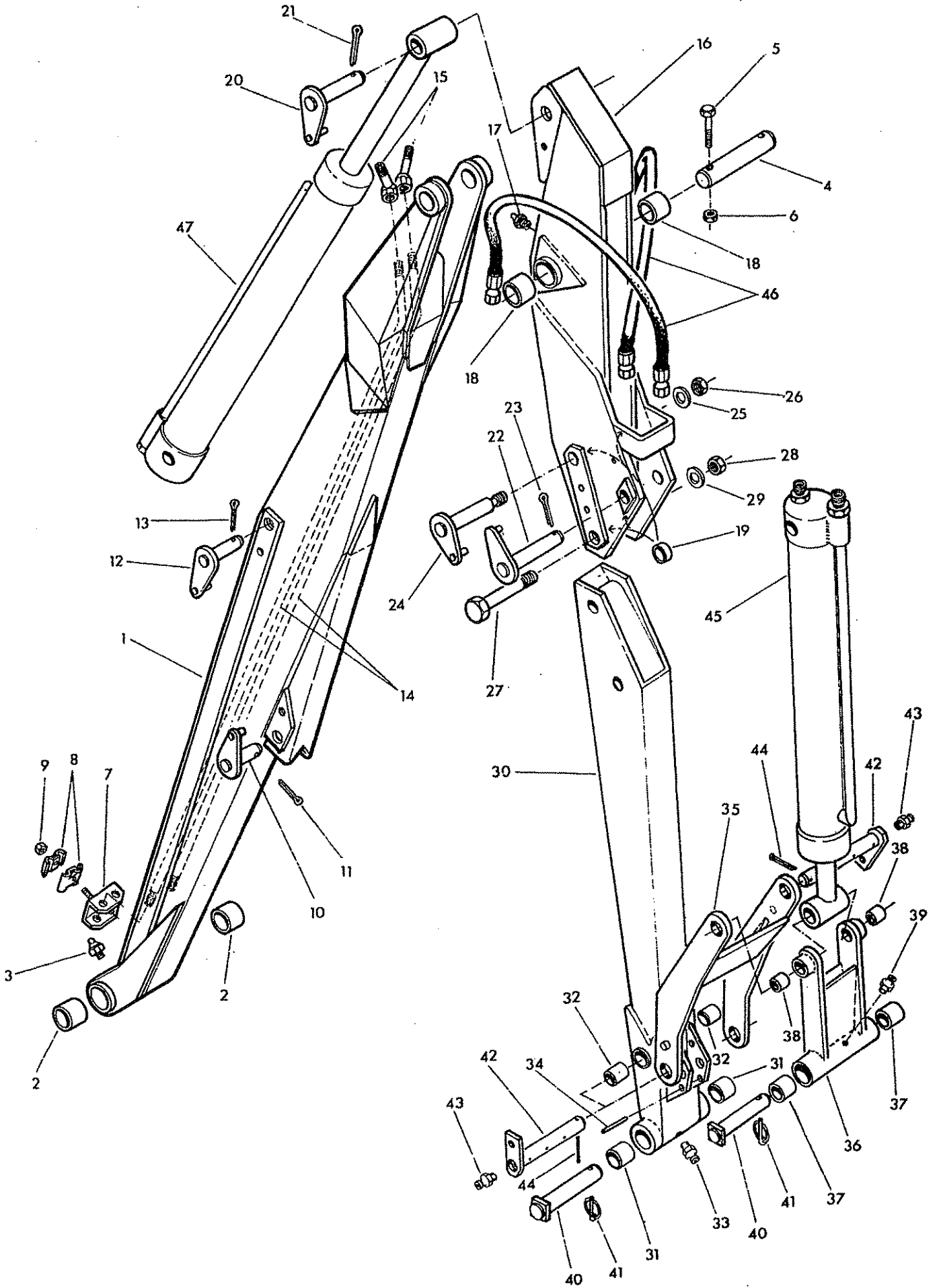
Bolt M12 x 110  
Self locking nut M12 } Ref only

# SEAT CONSOLE



Ref	Part No.	Qty	Description
	71 15 251		PA7 and PA8 COMMON PARTS (continued)
	71 15 253	1	.Seat console and lever assembly
	71 15 336	1	..Console assembly comprising :-
1	71 15 352	1	...Seat support frame
2	71 15 349	1	....Safety cab instruction label
3	93 13 055	1	....Hexagon set screw M10 x 25
4	91 13 005	1	....Hexagon nut M10
5	91 00 205	1	....Spring washer
6	71 15 351	1	...Console c/w bolts
7	71 15 345	1	....Operating instruction label
8	93 13 097	4	....Set screw M16 x 45
9	91 43 007	4	....'Clevelok' nut M16
	71 03 273	1	..Bostrom seat assembly
10	71 06 352	1	...Seat c/w screws
11	71 06 181	4	....Set screw 5/16" UNC
12	71 03 276	1	...Seat bracket c/w set screws
13	03 11 166	1	....Set screw 5/8" UNF
14	71 03 110	1	...Seat support
15	71 03 114	1	...Clamp plate
16	71 03 065	1	...Seat clamp
17	71 01 065	1	...Pivot pin c/w spring cotter
18	04 31 105	1	....Spring cotter
19	71 15 346	1	..Handle carrier c/w screws
20	71 15 202	3	...Lever pivot bush
21	93 13 035	3	...Set screw M10 x 16
22	91 00 205	3	...Spring washer
23	81 21 073	4	...Circlip
24	71 15 348	1	..Console cover c/w nuts and bolts
25	92 13 114	2	...Bolt M8 x 55
26	91 43 004	2	... 'Clevelok' nut M8
27	71 15 339	4	..Actuating rod
28	71 15 111	2	..Rocker block
29	71 15 112	4	..Pivot link c/w bush and split pin
30	71 15 202	1	...Bush
31	05 03 082	1	...Split pin 3/32" diameter x 1" long
32	71 15 175	4	..Clevis end
33	71 15 113	4	..Clevis end pin c/w split pin
34	05 03 082	1	...Split pin 3/32" diameter x 1" long
	71 15 133	1	..Handle assembly
35	71 15 131	1	...Handle
36	81 14 062	1	...Ring - red
37	81 14 063	1	...Ring - black
	71 15 134	1	..Handle assembly
38	71 15 132	1	...Handle
39	81 14 060	1	...Ring - yellow
40	81 14 061	1	...Ring - green
	Items 41 to 43 (inclusive) are common to both lever assemblies :-		
41	81 14 053	1	...Lever knob
42	04 20 812	1	...Spring dowel 1/8" diameter x 3/4" long
43	04 21 612	1	...Spring dowel 3/16" diameter x 3/4" long
44	81 14 028	2	..Lever boot
45	01 00 103	4	..Plain washer 3/8" diameter
46	01 11 003	4	..Hexagon nut 3/8" UNF

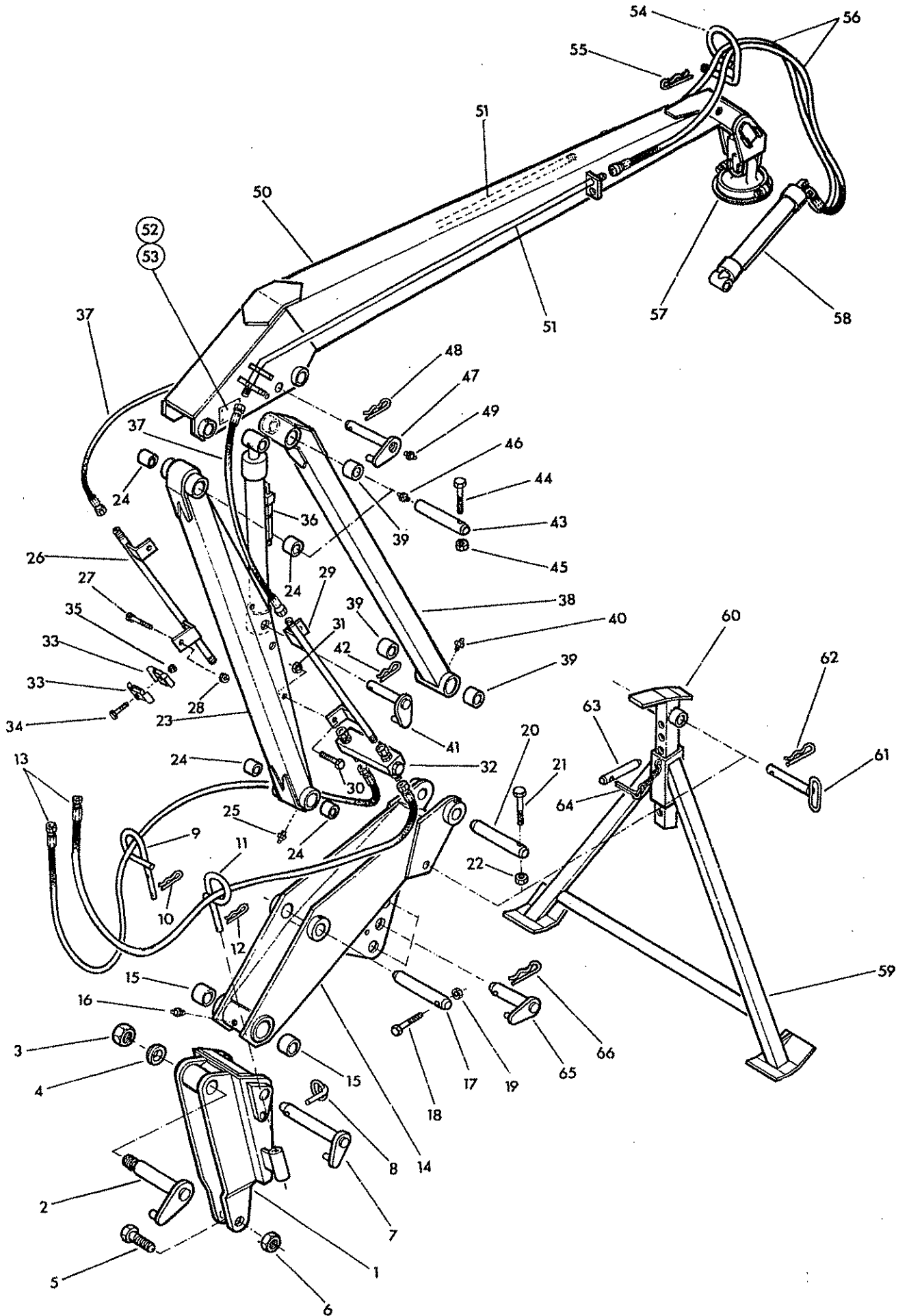
# ARMHEAD



Ref	Part No.	Qty	Description
	71 15 251		PA7 and PA8 COMMON PARTS (continued)
	71 15 254	1	..Armhead assembly
	71 15 299	1	..Main arm assembly comprising :-
1	71 15 291	1	...Main arm c/w bushes
2	71 15 208	2	....Bush
3	09 01 124	1	....Greaser 1/8" BSP
4	71 15 067	1	...Reach arm pivot pin c/w nuts and bolts
5	92 13 165	2	....Bolt M10 x 80
6	91 43 005	2	....'Clevelok' nut M10
	72 12 017	1	...Hose bracket guide assembly
7	71 17 020	1	....Hose bracket
8	60 12 026	2	....Pipe clamp - double
9	01 41 003	1	....Clevelok nut 3/8" UNF
10	71 15 054	1	...Lift ram rod end pin c/w spring cotter
11	05 03 145	1	....Split pin 3/16" dia x 1.3/4" long
12	71 15 055	1	...Reach ram base end pin c/w spring cotter
13	05 03 145	1	....Split pin 3/16" dia x 1.3/4" long
14	71 15 068	2	...Rigid pipe
15	71 15 069	2	...Angular union
	71 15 306	1	..Dipper arm upper assembly comprising :-
16	71 15 300	1	...Dipper arm upper c/w bushes
17	09 01 124	1	....Greaser 1/8" BSP
18	71 15 208	2	....Pivot bush
19	70 12 037	4	....Joint pin bush
20	71 15 054	1	...Reach ram rod end pin c/w spring cotter
21	05 03 145	1	....Split pin 3/16" dia x 1.3/4" long
22	71 15 055	1	...Bucket ram base end pin c/w spring cotter
23	05 03 145	1	....Split pin 3/16" dia x 1.3/4" long
24	71 15 057	1	...Arm joint pin c/w nut and washer
25	91 00 108	1	....Plain washer $\varnothing$ 20
26	91 43 008	1	....'Conelok' nut M20
27	02 11 489	1	...Bolt 1" UNF x 6" long
28	01 41 009	1	... 'Clevelok' nut 1" UNF
29	01 00 109	1	...Plain washer 1" dia
	71 05 363	1	..Dipper arm lower assembly comprising:-
30	71 05 360	1	...Dipper arm lower c/w bushes
31	71 01 134	2	....Bucket pivot bush
32	71 01 083	2	....Radius arm pivot bush
33	09 01 121	1	....Greaser 1/8" BSP
34	04 21 832	1	...Spring dowel 1/4" diameter x 2" long
35	71 05 369	1	...Radius arm
36	71 06 312	1	...Slave link c/w bushes
37	71 01 134	2	....Bush
38	71 01 083	2	....Bush
39	09 01 121	1	....Greaser 1/8" BSP
40	72 17 010	2	...Bucket pivot pin c/w linch pin
41	04 31 217	1	....Linch pin
42	71 05 090	2	...Radius arm pin c/w pin and greaser
43	09 01 121	1	....Greaser 1/8" BSP
44	05 03 165	1	....Split pin 3/16" dia x 2" long
45	71 05 298	1	..Bucket Ram assembly (see page118)
46	85 11 263	2	..Hose 3/8" BSP S-F S-F x 34" long
47	71 15 365	1	..Reach ram assembly (see page116)



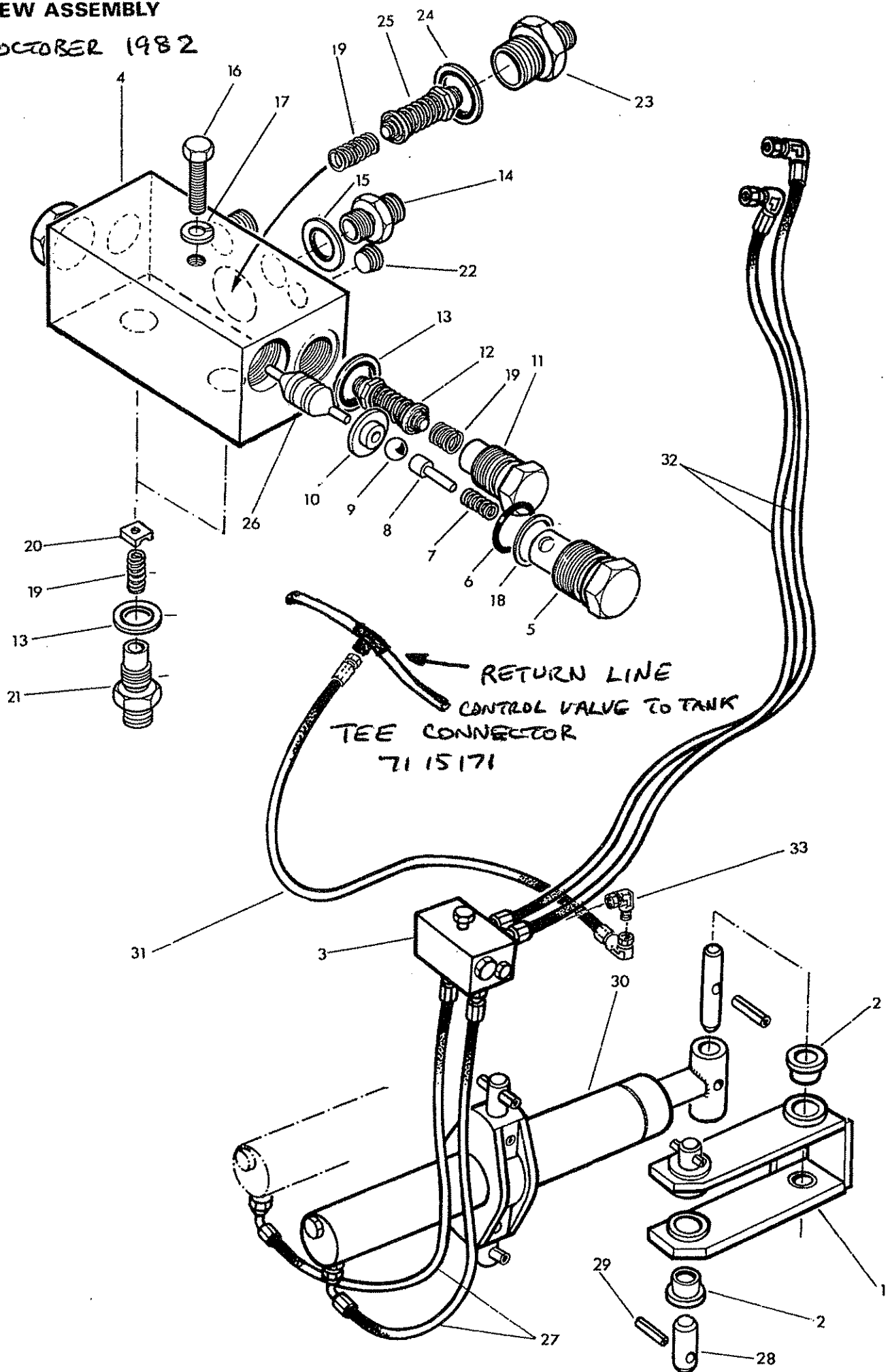
# A16 LOADER ARMHEAD



Ref	Part No.	Qty	Description
			A16' LOADER ARM HEAD
1	70 16 255	1	.Column adaptor bracket
2	70 16 024	1	.Adaptor bracket pin C/W nut
3	01 41 009	1	.. Hexagon nut 'Clevelok' 1" UNF
4	79 16 025	1	.Adaptor bracket washer
5	03 11 189	2	.Set Screw 1" UNF x 2 1/4" long
6	01 51 009	2	.Hexagon nut thin 'Clevelok' 1" UNF
7	70 16 026	1	.Rocker arm pivot pin c/w linch pin
8	04 31 217	1	.. Linch pin
9	71 02 204	1	.Hose guide R. Hand c/w spring cotter
10	04 31 105	1	.. Spring Cotter
11	71 02 203	1	.. Hose guide L. Hand c/w spring cotter
12	04 31 105	1	.. Spring Cotter
13	85 31 233	2	.Hose 3/8 BSP S-F S-F 75" long
14	70 16 265	1	.Rocker arm c/w bushes & greaser
15	70 15 010	2	.. Bush
16	09 01 121	1	.. Greaser 1/8" BSP - straight
17	70 16 029	1	.Tension linkpin c/w nut & bolt
18	92 13 124	1	.. Bolt M8 x 60
19	91 43 004	1	.. Hexagon Nut 'Clevelok' M8
20	70 16 028	1	.Compression link pin c/w nut & bolt
21	92 13 124	1	.. Bolt M8 x 60
22	91 43 004	1	.. Hexagon nut 'Clevelok' M8
23	70 16 261	1	.Tension link c/w bushes & greaser
24	71 01 134	4	.. Bush
25	09 01 121	1	.. Greaser 1/8" BSP - straight
26	70 16 275	1	.Rigid pipe R. Hand c/w S-screw & nut
27	93 13 044	2	.. Set Screw M8 x 20
28	91 43 004	2	.. Hexagon nut 'Clevelok' M8
29	70 16 276	1	.Rigid pipe L. Hand c/w S-screw & nut
30	93 13 044	2	.. Set screw M8 x 20
31	91 43 004	2	.. Hexagon nut 'Clevelok' M8
32	70 16 273	1	.Cross port relief valve (see page 97)
33	60 12 026	4	.Hose Clip
34	92 13 075	2	.Bolt M10 x 35
35	91 43 005	2	.Hexagon nut 'Clevelok' M10
36	70 16 277	1	.Reach Ram assembly (see page 105)
37	85 11 263	2	.Hose 3/8 BSP S-F S-F 34" long
38	70 16 260	1	.Compression link c/w bushes & greaser
39	71 01 134	4	.Bush
40	09 01 121	1	.Greaser 1/8" BSP - straight
41	70 16 032	1	.Reach ram base end pin c/w spring cotter
42	04 31 105	1	.. Spring cotter
43	70 16 031	2	.Link top pin c/w nut, bolt & greaser
44	92 13 124	1	.Bolt M8 X 60
45	91 43 004	1	.Hexagon nut 'Clevelok' M8
46	09 01 121	1	.. Greaser 1/8" BSP - straight
47	70 16 033	1	.Reach ram rod end pin c/w spring cotter and greaser
48	09 01 121	1	.. Greaser 1/8" BSP straight
49	04 31 105	1	.. Spring cotter
50	70 16 262	1	.Main boom c/w pipes
51	70 16 017	2	.. Rigid pipe
52	70 16 018	1	.. Serial plate
53	71 03 230	4	.. Pop rivet
54	72 14 030	1	.Hose guide c/w spring cotter
55	04 31 105	1	.. Spring cotter
56	85 31 223	2	.Hose 3/8 BSP St-F 90°-F 59" long
57	70 16 278	1	.Swivel assembly (see page 107)
58	70 16 279	1	.Grab ram (see page 103)
59	70 16 271	1	.Stand c/w slider & pins
60	70 16 272	1	.. Slide tube
61	70 16 035	1	.. Stand pin c/w spring cotter
62	04 31 105	1	.. Spring cotter
63	71 01 055	1	.. Retainer pin
64	05 03 105	1	.. Split pin 3/16" dia x 1 1/4" long
65	70 16 030	1	.Lift ram rod pin c/w spring cotter
66	04 31 105	1	.. Spring cotter

# SLEW ASSEMBLY

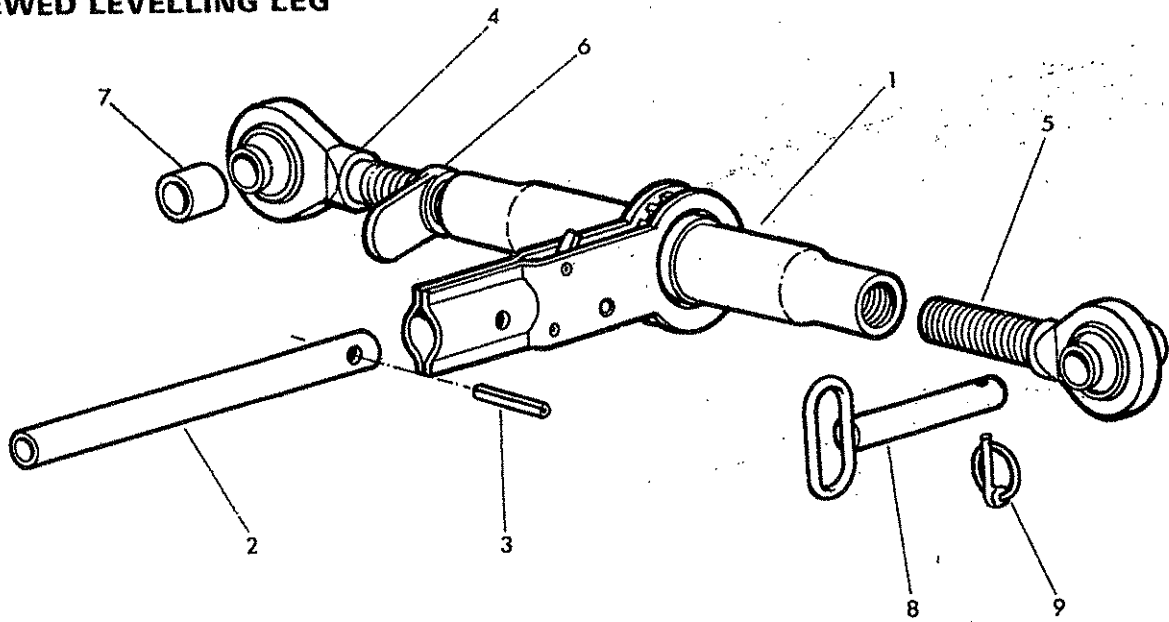
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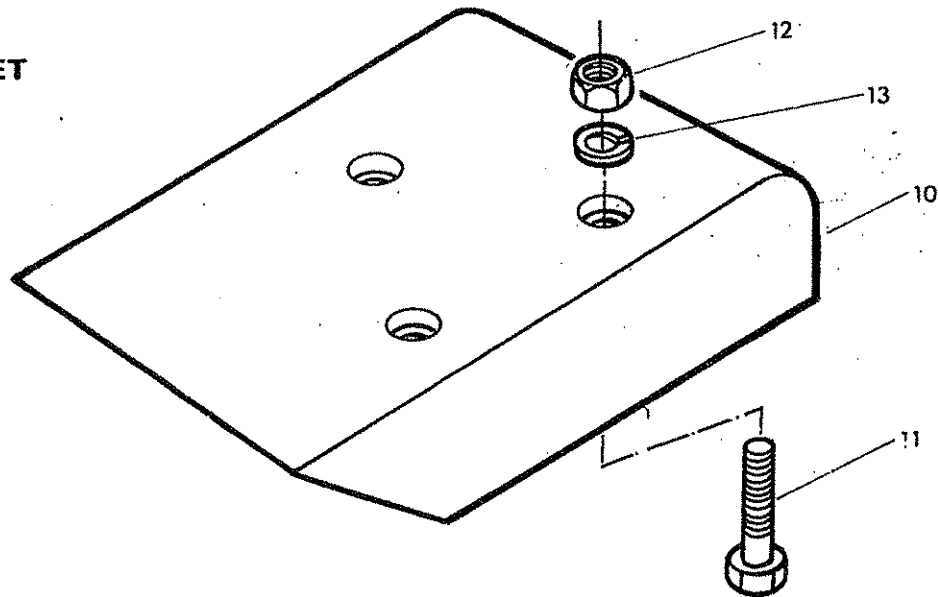
Ref	Part No	Qty	Description
	71 15 251		PA7 and PA8 COMMON PARTS (continued)
	71 15 252	1	. Main frame and slew column etc.
	71 15 317	1	..Slew assembly comprising:-
1	71 02 172	2	...Slew link c/w bushes
2	71 02 173	4	....Bush
3	71 15 369	1	...Slew cross port valve assembly compr:-
4	71 15 355	1	....Cross port block
	81 30 057	2	....Check valve assembly
5	81 30 025	1	.....Check valve cap
6	87 00 644	1	.....'O' ring
7	81 14 045	1	.....Spring
8	81 30 040	1	.....Spring guide
9	09 05 509	1	.....Steel ball $\emptyset$ 9
10	81 30 024	1	.....Check valve seat
11	81 30 031	2	....Relief valve cap
12	81 30 030	2	....Relief valve (210 bars - 3000 PSI)
13	86 50 103	4	....Bonded seal 3/8" BSP
14	80 02 177	2	....Union 1/4" BSP M-M
15	86 50 102	2	....Bonded seal 1/4" BSP
16	93 13 044	1	....Setscrew M8 x 20
17	91 00 204	1	....Spring washer $\emptyset$ 8
18	87 09 644	2	....Anti extrusion ring
19	81 16 011	5	....Spring
20	81 23 041	2	....Restrictor disc
21	85 81 182	2	....Special union 1/4" BSP - 3/8" BSP M-M
22	85 82 041	2	....Taper plug
23	81 30 083	1	....Relief valve body
24	86 50 104	1	....Bonded seal 1/2" BSP
25	81 30 082	1	....Relief valve (125 Bar - 1800 PSI)
26	81 30 026	1	....Actuator
27	85 36 072	2	...Hose 1/4" BSP S-F 90° F x 22" long
28	71 02 174	4	...Slew link pivot pin c/w spring dowel
29	04 22 528	1	....Spring dowel 5/16" dia x 1 3/4" long
30	71 15 295	2	...Slew ram assembly see page
31	85 36 082	1	...Hose 1/4" BSP S-F 90° F x 29" long
32	85 36 102	2	Hose 1/4" BSP S-F 90° F 45" long (Ref only)
33	85 81 190	1	...Swivel elbow 90°

(81 30 030 IS 8130 077 less cone spring)

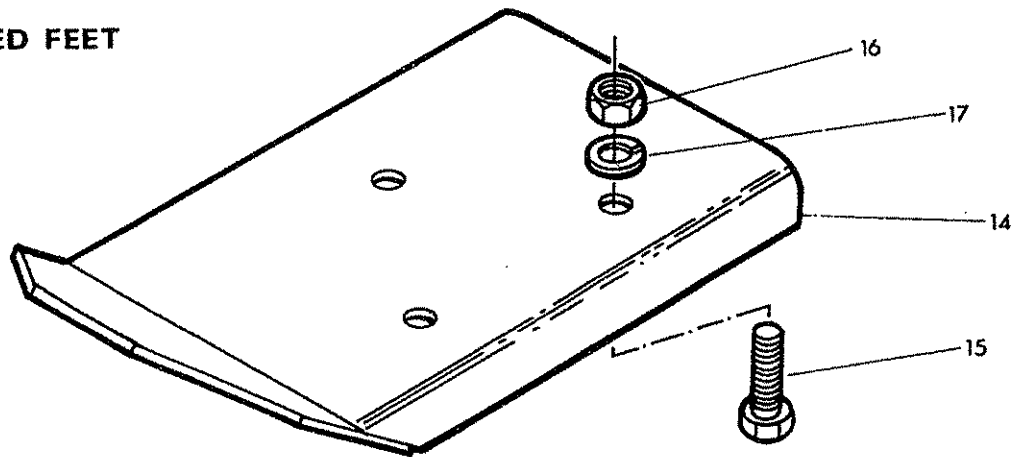
**SCREWED LEVELLING LEG**



**CAST FEET**



**FABRICATED FEET**



Ref	Part No.	Qty	Description
	71 15 325		SCREWED LEG LEVELLING KIT (Standard for PA7)
	71 15 276	2	.Leg adjuster link assembly comprising :-
	71 15 350	1	..Tube ratchet c/w handle
1	71 15 353	1	...Ratchet
2	71 15 217	1	...Handle c/w spring dowel
3	04 21 820	1	....Spring dowel 1/4" dia x 1 1/4" long
4	71 15 206	1	..Category II end Right Hand
5	71 15 207	1	..Category II end Left Hand
6	71 15 153	1	..Locking collar
7	71 15 152	2	.Spacer
8	71 15 149	2	.Leg adjuster pin c/w linch pin
9	04 31 217	1	..Linch pin

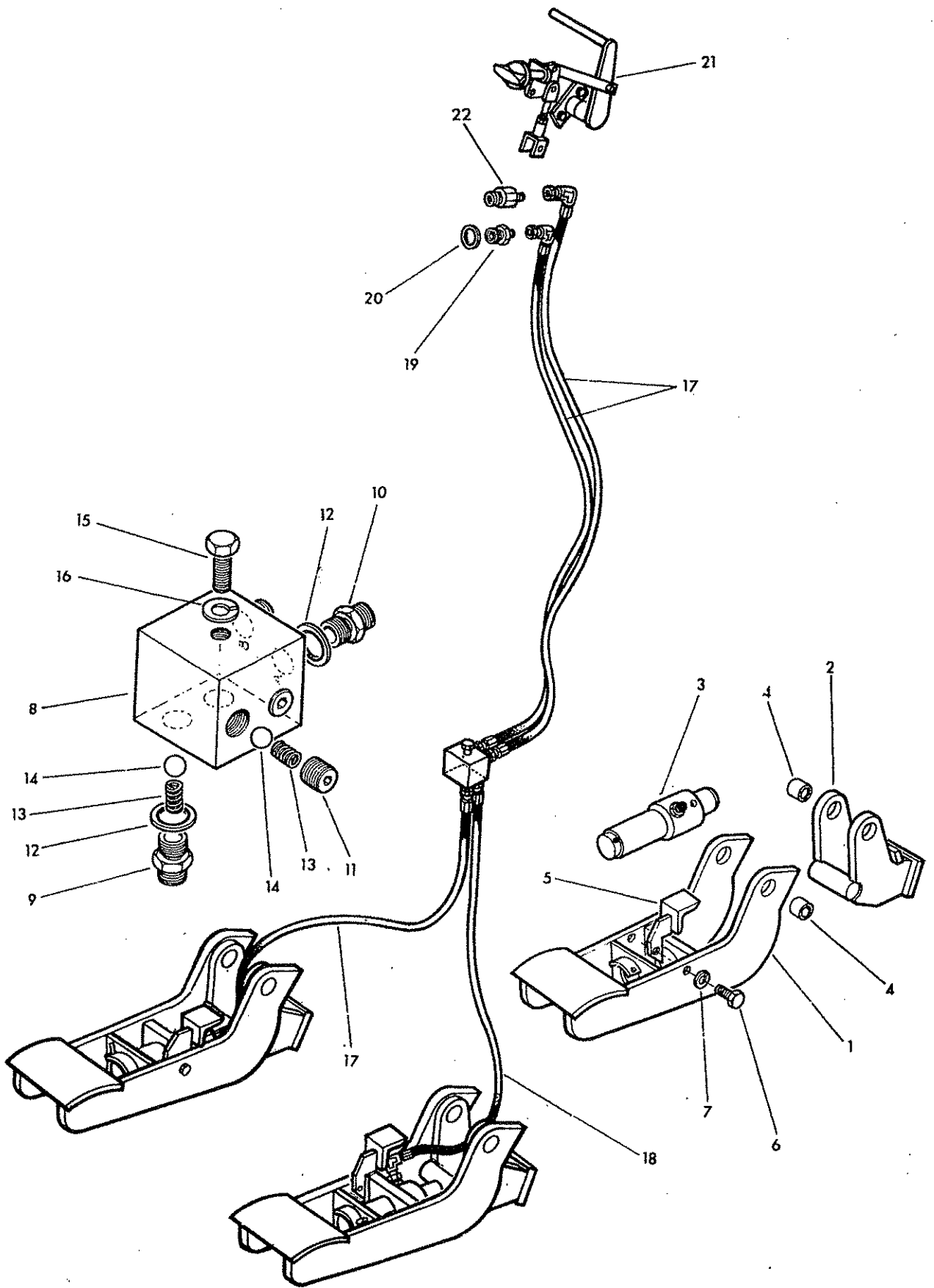
	71 15 265		KIT OF CAST FEET (standard for PA7)
10	71 01 279	1	.Foot Right Hand
	71 01 280	1	.Foot Left Hand (not illustrated)
11	02 16 286	6	.Bolt 5/8 UNC x 3 1/2" long
12	01 12 006	6	.Hexagon nut 5/8" UNC
13	01 11 206	6	.Spring washer 5/8" diameter

	71 15 266		KIT OF FABRICATED FEET (Standard for PA8); Optional Extra for PA7.
14	71 03 259	1	.Foot Right Hand c/w nuts, bolts and washers
	71 03 258	1	.Foot Left Hand c/w nuts, bolts and washers (not illustrated)

Items 15 to 17 (inclusive) are common to both feet assemblies

15	02 16 146	3	..Bolt 5/8" UNC x 1 3/4" long
16	01 12 006	3	..Hexagon nut 5/8" UNC
17	01 00 206	3	..Spring washer 5/8" diameter

I.W.T. KIT



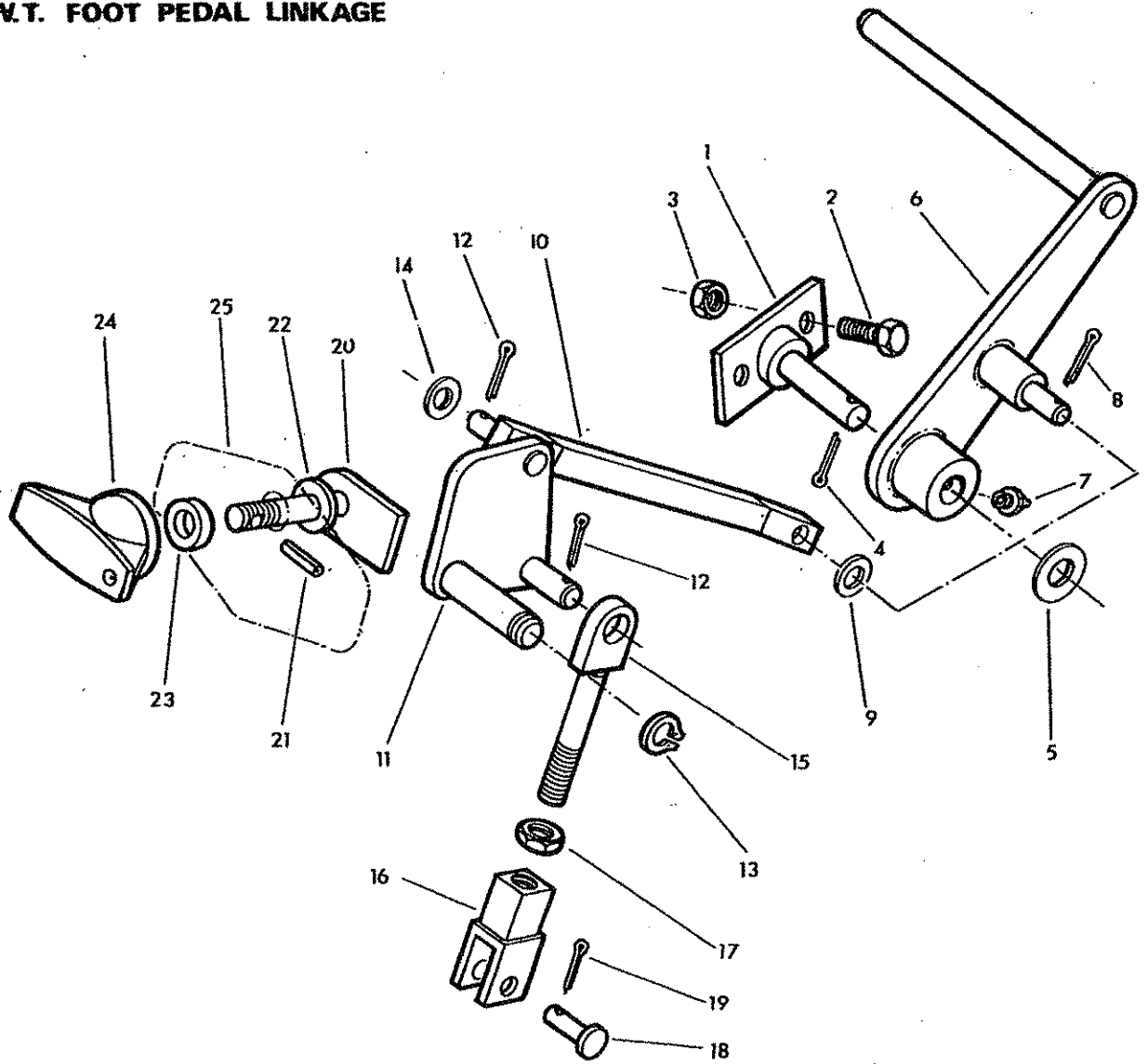
Ref	Part No.	Qty	Description
	71 15 334		I.W.T. KIT INSTALLATION (for machines with valve control valve)
			Standard build for PA8 Optional extra for PA7.
	71 15 286	1	.Lift arm assembly left hand
	71 15 287	1	.Lift arm assembly right hand (see exploded view)

\*Items 1 to 7 (incl) are common to both lift arm assemblies:-

1	71 03 266	1	..Lift arm
2	71 03 057	1	..Reaction bracket
3	71 15 289	1	..Ram assembly (see page 99 )
4	60 12 032	2	..Bush
5	71 03 228	1	..Connection guard e/w screw
6	03 11 083	1	...Setscrew 3/8" UNF x 1" long
7	01 00 203	1	...Spring washer 3/8" dia
	71 15 100	1	.Selector valve assembly
8	71 15 101	1	..Valve block
9	71 15 102	2	..Slotted union
10	80 02 177	2	..Union 1/4" BSP M-M
11	71 15 103	2	..Plug
12	86 50 102	4	..Bonded seal
13	81 16 011	4	..Spring
14	09 05 509	4	..Steel ball $\phi$ 9
15	93 13 044	1	..Setscrew M8 x 20
16	91 00 204	1	..Spring washer $\phi$ 8
17	85 36 102	3	.Hose 1/4" BSP S-F 90° F 45" long
18	85 36 042	1	.Hose 1/4" BSP S-F 90° F 40" long
19	85 81 172	1	.Union 1/2" BSP - 1/4" BSP M-M
20	86 50 104	2	.Bonded seal 1/2" BSP
21	71 15 344	1	.I.W.T. foot pedal linkage assembly (see page 76 )
22	85 81 188	1	.Union - long 1/2" BSP M-M



# I.W.T. FOOT PEDAL LINKAGE

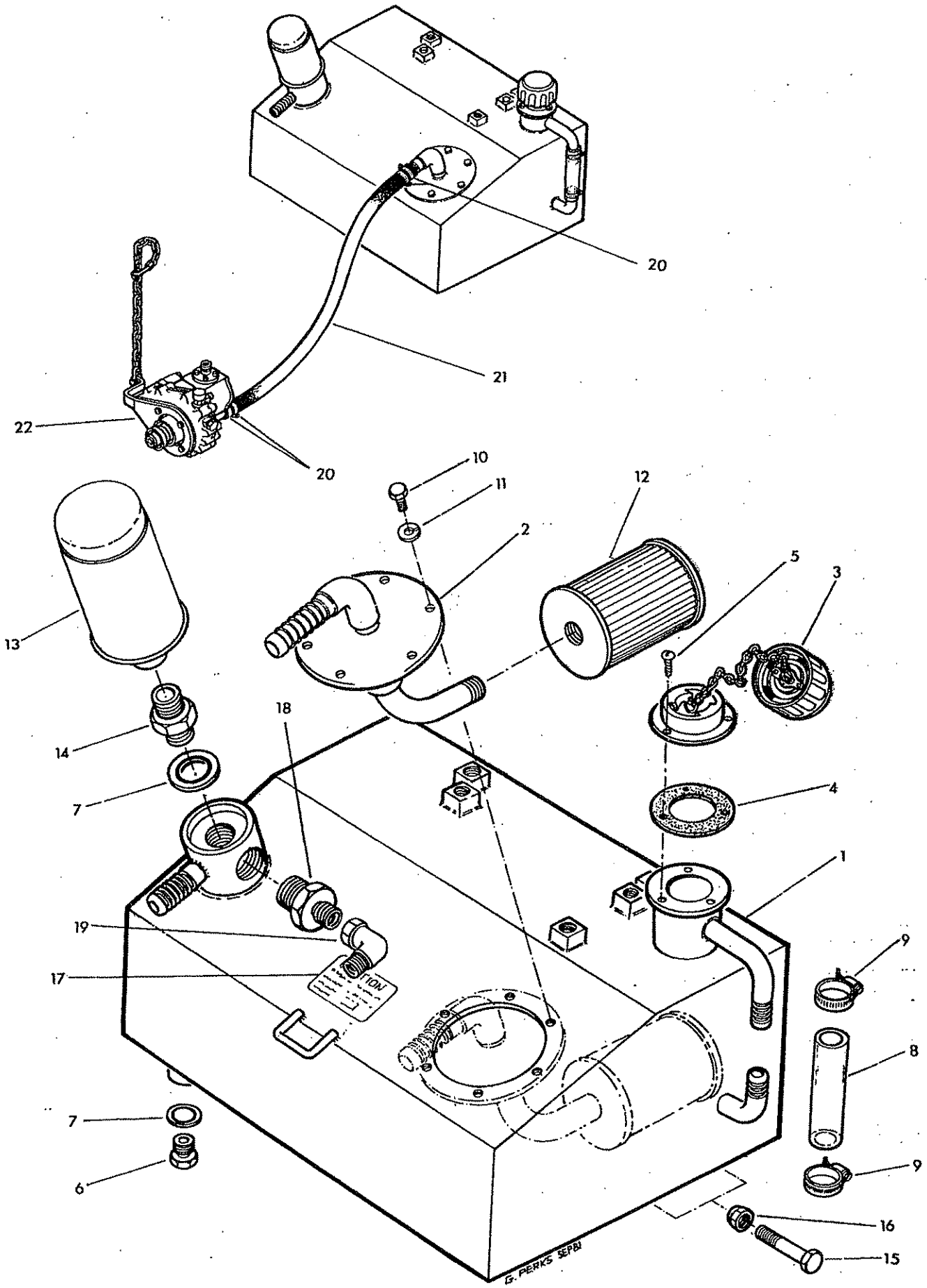


Ref	Part No	Qty	Description
	71 15 258		I.W.T. KIT INSTALLATION (continued) Standard build for PA8 Optional extra for PA7
	71 15 344	1	.I.W.T. foot pedal linkage assembly
1	71 15 117	1	..Pedal pivot c/w screws, nuts etc.
2	93 13 044	2	...Setscrew M8 x 20
3	91 43 004	2	...'Clevelok' nut M8
4	05 03 103	1	...Split pin 1/8" dia x 1 1/4" long
5	91 00 107	1	...Plain washer $\emptyset$ 16
6	71 15 341	1	..Foot pedal c/w greaser, split pin and washer
7	09 01 121	1	...Greaser 1/8" BSP
8	05 03 082	1	...Split pin 3/32" dia x 1" long
9	91 00 104	1	...Plain washer $\emptyset$ 8
10	71 15 342	1	..Linkage rod
11	71 15 343	1	..Rocker c/w circlip, split pin and washer
12	05 03 082	2	...Split pin 3/32" dia x 1" long
13	81 21 073	1	...Circlip
14	91 00 104	1	...Plain washer $\emptyset$ 8
15	71 15 115	1	..Actuating rod
16	71 15 175	1	..Clevis end
17	01 31 003	1	..Hexagon nut 3/8" UNF
18	71 15 175	1	..Clevis end pin c/w split pin
19	05 03 082	1	...Split pin 3/32" dia x 1" Long
20	71 15 119	1	..Lever lock c/w spring dowel
21	04 20 820	1	...Spring dowel 1/8" dia x 1 1/4" long
22	01 00 103	1	..Plain washer
23	71 15 116	1	..Special washer
24	71 15 123	1	..Knob
25	71 15 124	1	..Instruction label

\* Assembly note:

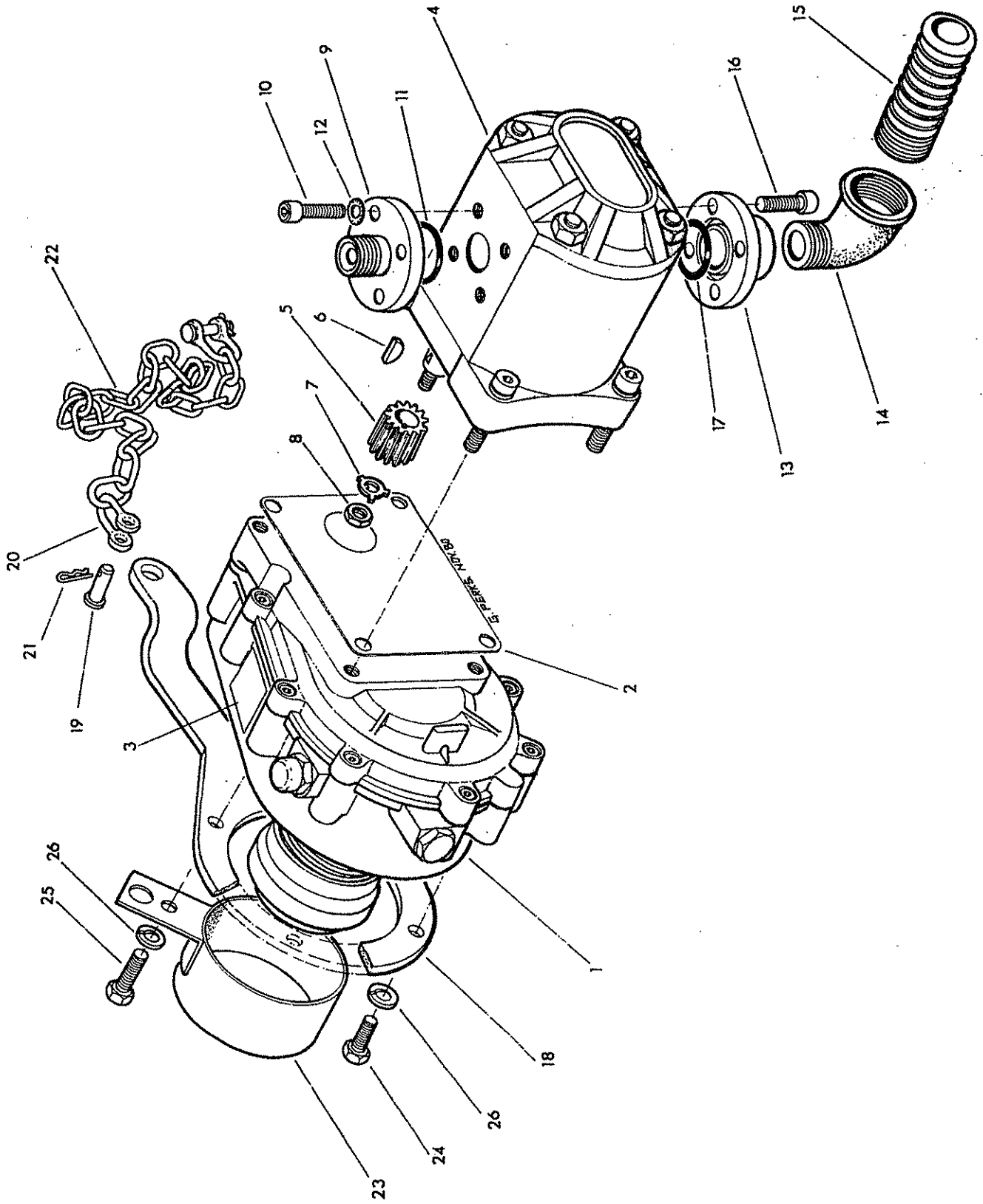
It is important that the dimple on the knob is assembled to line up with the latch on the lever lock.

# INDEPENDENT HYDRAULIC KIT



Ref	Part No	Qty	Description
	71 15 259		INDEPENDENT HYDRAULIC INSTALLATION Std. build for PA8 Optional extra for PA7
	71 15 308	1	.Oil tank assembly compr:--
1	71 15 309	1	..Oil tank
2	71 15 307	1	..Tank lid
	84 01 014	1	..Filler breather assembly
3	84 01 015	1	..Filler cap & neck
4	84 01 017	1	...Gasket
5	03 00 082	3	...Screw - self tapping - 3/16" dia x 1/2" long
6	71 15 088	1	...Drain plug
7	86 50 104	2	..Bonded Seal 1/2" BSP
8	85 05 005	1	..Oil sight tube
9	09 04 204	2	..Hose clip
10	93 13 023	6	..Setscrew M6 x 12
11	91 00 203	6	..Spring washer $\phi$ 6
12	84 01 044	1	..Strainer
13	84 01 045	1	..Canister filter
14	85 81 174	1	..Union 1/2" BSP - 1" UNF M-M
15	92 13 226	2	..Bolt M12 x 110
16	91 43 006	2	..'Clevelok' nut M12
17	84 01 046	1	..Filter instruction label
18	85 81 153	1	..Union 1/4 BSP - 1/4 BSPT M-M
19	85 81 190	1	..90° swivel elbow 1/4 BSP M-F
20	09 04 106	4	.Hose clip (1" bore hose)
21	85 00 865	1	.Hose 1" bore x 65" long
22	80 13 335	1	.Brevini gearbox/Casappa pump assy (see page 80)

# GEARBOX - CASAPPA PUMP

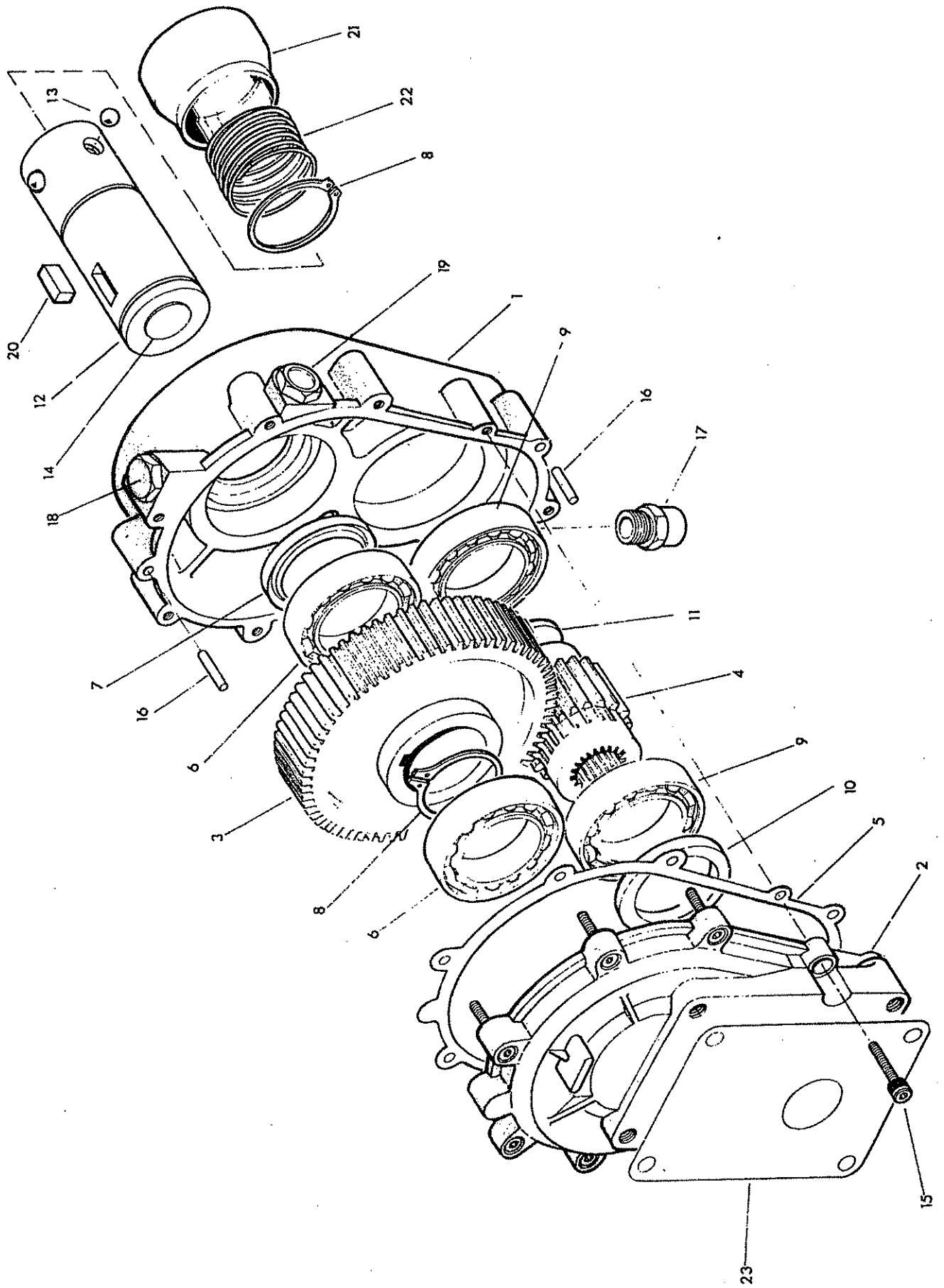


Ref	Part No	Qty	Description
	71 15 259		INDEPENDENT HYDRAULIC INSTALLATION (cont)
			Standard build for PA8
	80 13 335	1	..Brevini gearbox/Casappa pump assembly
	80 13 324	1	..Gearbox c/w coupling, gasket etc.
1	80 13 325	1	..Gearbox (see page82)
2	82 01 132	1	...Gasket pump face
3	80 13 052	1	...Instruction label
	82 01 656	1	..Pump assembly comprising:-
4	82 01 456	1	...Pump c/w key, washer and nut etc.
5	82 01 131	1	....Pump drive coupling
6	82 01 133	1	....Woodruff key
7	82 01 134	1	....Tab washer
8	82 01 135	1	....Special hexagon thin nut M12 x 1.5 pitch
9	80 05 043	1	...Pressure connection c/w screws, 'O' ring & washer
10	93 43 044	4	....Capscrew M8 x 20
11	86 00 405	1	....'O' ring
12	01 00 302	4	....Shakeproof washer
	80 05 044	1	...Suction connection assembly
13	80 05 036	1	....Connection base
14	85 81 168	1	....Elbow 3/4" BSP Female - 1/2" BSP Male
15	80 05 037	1	....Low pressure connection
16	93 43 044	4	....Capscrew M8 x 20
17	85 00 405	1	....'O' ring
	80 05 034	1	..Torque arm c/w chain and shackle etc
18	80 05 033	1	...Torque arm
	60 00 087	2	...Shackle assembly comprising:-
19	60 00 089	1	....Shackle pin
20	60 00 088	1	....Shackle
21	04 31 105	1	....Spring cotter
22	09 02 330	1	...Chain
23	80 13 268	1	..P. T. O. guard
24	93 13 055	3	..Setscrew M10 x 25
25	93 13 065	1	..Setscrew M10 x 30
26	91 00 205	4	..Spring washer $\varnothing$ 10
27	92 43 074	4	..Socket headed bolt M8 x 35

80 13 323

PUMP & GEARBOX (BARE)

# GEARBOX

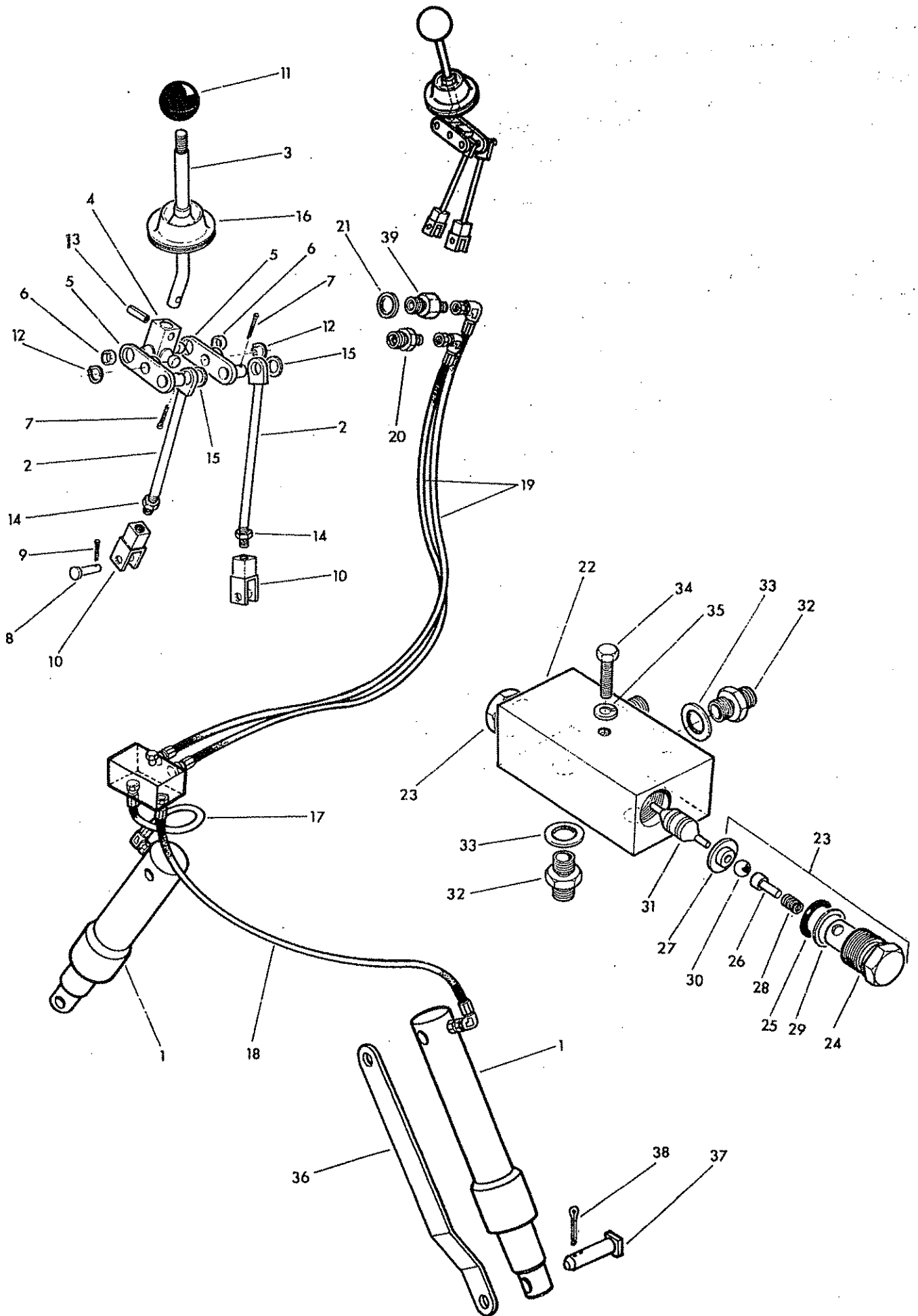


Ref	Part No	Qty	Description
	80 13 325		GEARBOX (Brevini MP2)
1	80 13 074	1	.Gearbox casing
2	80 13 073	1	.Gearbox lid
3	80 13 078	1	.Gear
4	80 13 072	1	.Pinion
5	80 13 053	1	.Gasket
6	06 00 048	2	.Bearing
7	86 29 134	1	.Seal
8	04 01 250	2	.External circlip $\varnothing$ 50
9	06 00 051	2	.Bearing
10	86 29 142	1	.Seal
11	80 13 077	1	.Expansion plug $\varnothing$ 28
12	80 13 075	1	.Shaft
13	09 05 116	3	.Steel ball $\frac{1}{2}$ " dia
14	80 13 067	1	.Expansion plug $\varnothing$ 37
15	93 43 053	8	.Capscrew M6 x 25
16	80 13 076	2	.Dowel $\varnothing$ 5 x 28
17	80 13 068	1	.Breather plug
18	80 13 070	1	.Drain plug
19	80 13 069	1	.Oil level plug
20	80 13 079	1	.Key 12 x 8 x 20
21	80 13 030	1	.Ball retainer
22	80 13 032	1	.Ball retaining spring
23	82 01 132	1	Gasket - Pumpface ref. only

3.9 : 1

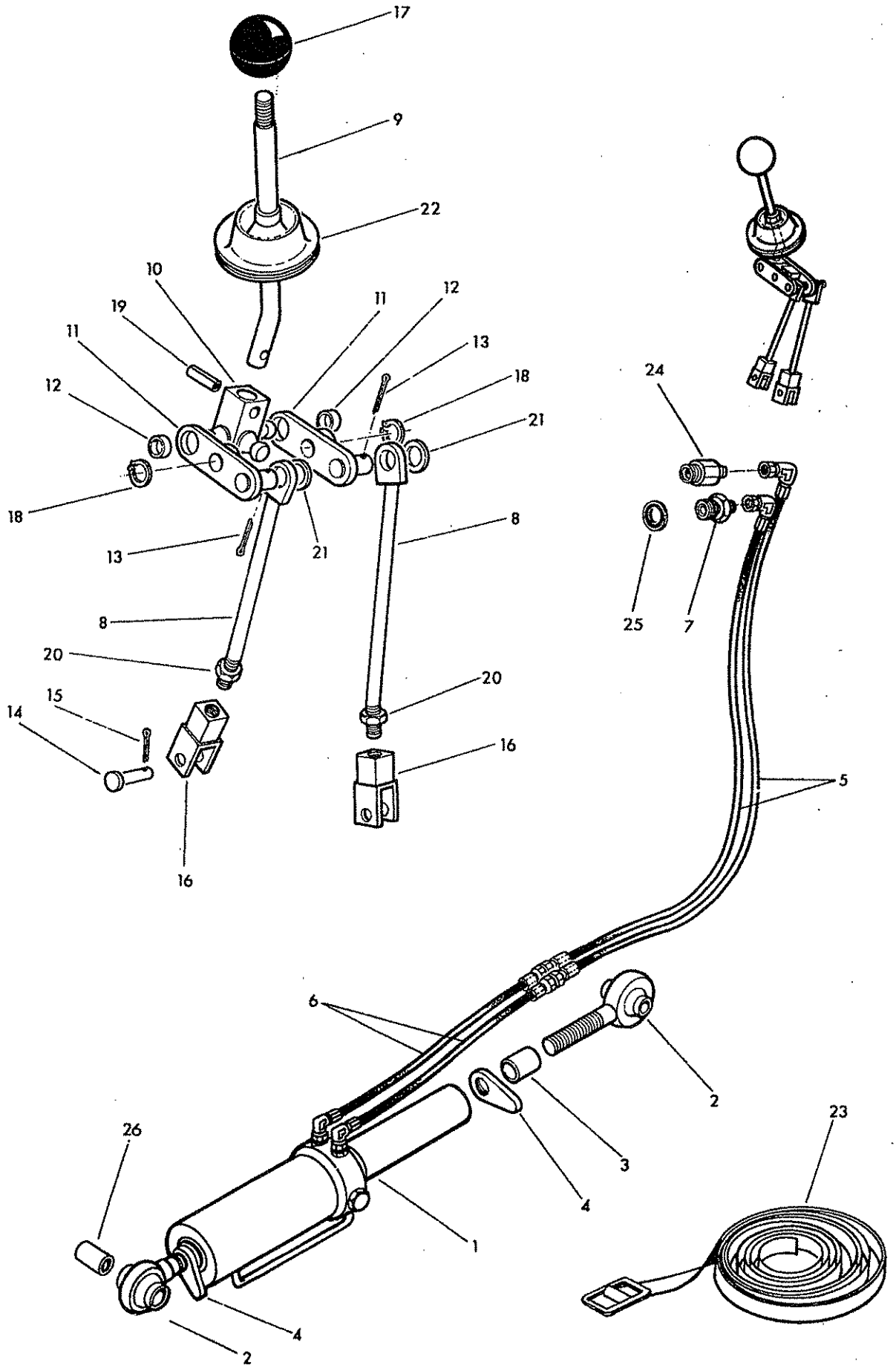


# HYDRAULIC LEVELLING KIT



Ref	Part No	Qty	Description
	71 15 260		HYDRAULIC LEVEL KIT INSTALLATION Standard build for PA8 Optional extra for PA7
1	71 15 277	2	. Levelling ram assembly (see page 100.)
	71 15 340	1	. Lever kit assembly
2	71 15 339	2	..Actuating rod
3	71 15 110	1	..Handle
4	71 15 111	1	..Rocker block
5	71 15 112	2	..Pivot link c/w bush and split pin
6	71 15 202	1	..Bush
7	05 03 082	1	...Split pin 3/32" dia x 1" long
8	71 15 113	2	..Clevis end pin c/w split pin
9	05 03 082	1	...Split pin 3/32" dia x 1" long
10	71 15 175	2	..Clevis end
11	09 03 121	1	..Knob - black
12	81 21 073	2	..Circlip
13	04 21 612	1	..Spring dowel 3/16" dia x 3/4" long
14	01 31 003	1	.Hexagon nut 3/8" UNF
15	01 00 103	2	..Plain washer 3/8" diameter
16	81 14 028	1	..Lever boot
17	85 36 072	1	.Hose 1/4" BSP SF 90° F 22" long
18	85 36 082	1	.Hose 1/4" BSP S-F 90° F 29" long
19	85 36 102	2	.Hose 1/4" BSP S-F 90° F 45" long
20	85 81 172	1	.Union short 1/2" BSP 1/4" BSP M-M
21	86 50 104	2	.Bonded seal 1/2" BSP
	71 15 323	1	.Pilot check valve assembly comprising:-
22	71 15 324	1	..Check valve block
23	81 30 057	2	..Check valve comprising:-
24	81 30 025	1	..Valve cap
25	87 00 644	1	... 'O' ring
26	81 30 040	1	... Spring guide
27	81 30 024	1	... Check valve seat
28	81 14 045	1	... Spring
29	87 09 644	1	... Anti-extrusion ring
30	09 05 509	1	... Steel ball Ø 9
31	81 30 026	1	..Actuator
32	80 02 177	4	..Union 1/4" BSP M - M
33	86 50 102	4	..Bonded seal 1/4" BSP
34	93 13 044	1	..Setscrew M8 x 20
35	91 00 204	1	..Spring washer Ø8
36	71 15 247	1	.Packing stay
37	71 15 013	2	.Leg ram pin c/w split pin
38	05 03 145	1	..Split pin 3/16" dia. x 1.3/4" long
39	85 81 188	1	.Union- long 1/2" BSP - 1/4" BSP M-M

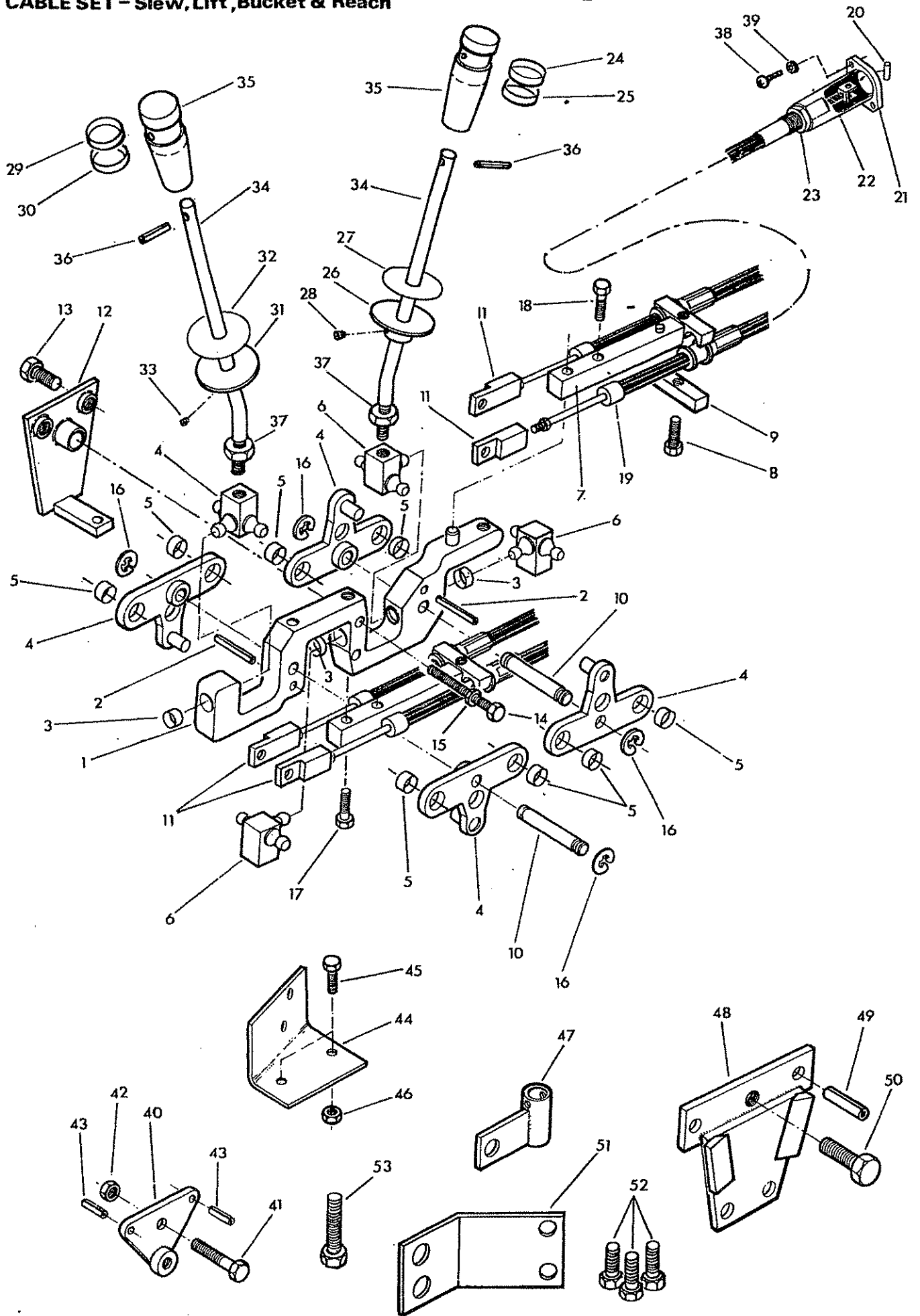
# HYDRAULIC TOP LINK



Ref	Part No	Qty	Description
	71 15 257		HYDRAULIC TOP LINK INSTALLATION Optional extra for PA7 and PA8
	71 15 281	1	.Tilt ram general assembly
1	71 15 283	1	..Ram assembly (see page 101 )
2	71 02 218	2	..Cat II link end
3	71 15 135	1	..Collar
4	71 02 214	2	..Locking collar
5	85 36 102	2	.Hose ¼" BSP S - F 90° x 45" long
6	85 56 012	2	.Hose ¼" BSP S - M 90° x 20" long
7	85 81 172	1	.Union ¼" BSP - ½" BSP M - M short
	71 15 340	1	.Lever kit assembly
8	71 15 339	2	..Actuating rod
9	71 15 110	1	..Handle
10	71 15 111	1	..Rocker block
11	71 15 112	2	..Pivot link end c/w bush and split pin
12	71 15 202	1	...Bush
13	05 03 082	1	...Split pin 3/32" dia x 1" long
14	71 15 113	2	..Clevis end pin c/w split pin
15	05 03 082	1	...Split pin 3/32" dia x 1" long
16	71 15 175	2	..Clevis end
17	09 03 121	1	..Knob - black
18	81 21 073	2	..Circlip
19	04 21 612	1	..Spring dowel 3/16" dia x ¾" long
20	01 21 003	1	..Hexagon nut 3/8" UNF
21	01 00 103	2	..Plain washer 3/8" dia
22	81 14 028	1	..Lever boot
23	71 15 150	1	.Parking strap
24	85 81 188	1	.Union - long ¼" BSP - ½" BSP M-M
25	86 50 104	2	.Bonded Seal ½" BSP
	OPTIONAL EXTRA		
26	71 15 222	1	.John Deere Sleeve

# CABLE SET - Slew, Lift, Bucket & Reach

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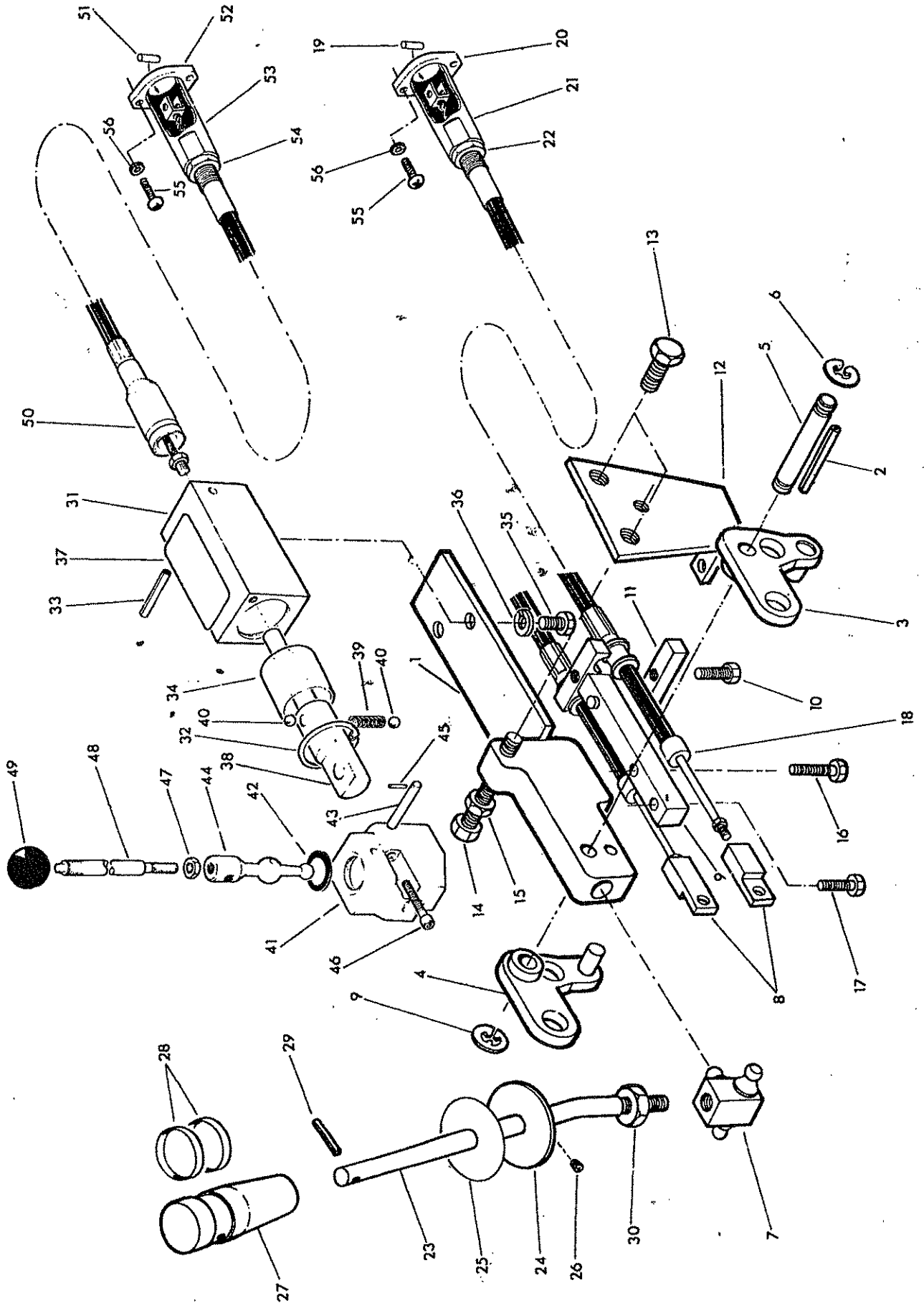


Ref	Part No	Qty	Description
	71 15 256		CABLE CONTROL SET
*	71 15 362	1	.Slew-lift-bucket-reach cable set R-Hand
1	71 15 357	1	..Cable frame c/w spring dowel & bush
2	04 21 632	2	...Spring dowel 3/16" dia x 2" long
3	71 15 180	4	...Bush
4	71 15 223	4	..Double lever c/w bush
5	71 15 180	2	...Bush
6	71 15 224	4	..Rocker block
7	71 15 225	2	..Cable bracket c/w screw
8	93 13 054	1	...Set screw M8 x 25
9	71 15 226	1	..Cable clamp
10	71 15 227	2	..Lever spindle
11	71 15 229	4	..Cable end
12	71 15 358	1	.. Torque plate c/w screw & nuts
13	93 13 045	2	...Set screw M12 x 20
14	93 13 124	1	...Set screw M8 x 60
15	91 13 004	1	...Hexagon nut M8
16	81 21 073	4	..Circlip
17	92 13 064	1	..Bolt M8 x 30
18	93 13 054	1	..Set screw M8 x 25
19	71 15 359	4	..Cable assembly c/w sleeve flange etc.
20	71 15 160	1	...Pin
21	71 15 161	1	...Flange
22	71 15 162	1	...Sleeve
23	91 00 016	1	...Thin hexagon nut M16 x 1.5 pitch
	71 15 363	1	..Lever assembly compr:-
24	81 14 061	1	...Ring - green
25	81 14 060	1	...Ring - yellow
26	71 15 138	1	...Instruction mounting plate c/w label & grubscrew
27	71 05 149	1	....Operating label
28	02 00 014	1	....Grubscrew 1/4" UNF socket headed
	71 15 354	1	..Lever assembly compr:-
29	81 14 063	1	...Ring - black
30	81 14 062	1	...Ring - red
31	71 15 137	1	...Instruction mounting plate c/w label and grubscrew
32	71 05 148	1	....Operating label
33	02 00 024	1	....Grubscrew 1/4" UNF head
Items 32 to 35 inclusive are common to both lever assemblies			
34	71 15 232	1	...Handle
35	81 14 053	1	...Lever knob
36	04 20 812	1	...Spring dowel 1/8" x 3/4" long
37	91 13 006	1	...Hexagon locknut M12
38	03 00 033	8	.Postdrive screw 1/4" UNC x 3/4" long
39	01 00 401	8	.External serrated washer 1/4" dia
40	71 15 238	3	.Console adaptor bracket c/w nut, bolt etc.
41	92 13 084	1	..Bolt M8 x 40
42	91 43 004	1	..'Clevelok' nut M8
43	04 21 612	2	..Spring dowel 3/16" dia x 3/4" long
44	71 15 239	1	.I.W.T. mounting bracket c/w screws & nuts
45	93 13 044	2	..Setscrew M8 x 20
46	91 32 004	2	..'Clevelok' nut M8
47	71 15 125	2	.Hose guide tube
48	71 05 213	2	.Mudwing bracket c/w spring dowel etc.
49	04 22 816	1	..Spring dowel 1/2" dia x 1" long
50	03 11 086	1	..Setscrew 5/8" UNF x 1" long
51	71 15 234	1	.Mounting bracket - tip-over seat
52	93 13 055	3	.Set screw M10 x 25
53	92 13 085	1	.Belt M10 x 40

\* Alternative L. Hand assembly for Slew-Lift-Reach Bucket cable set

71 15 356            1            .Cable set L. Hand  
Components are identical to the above R. Hand build.

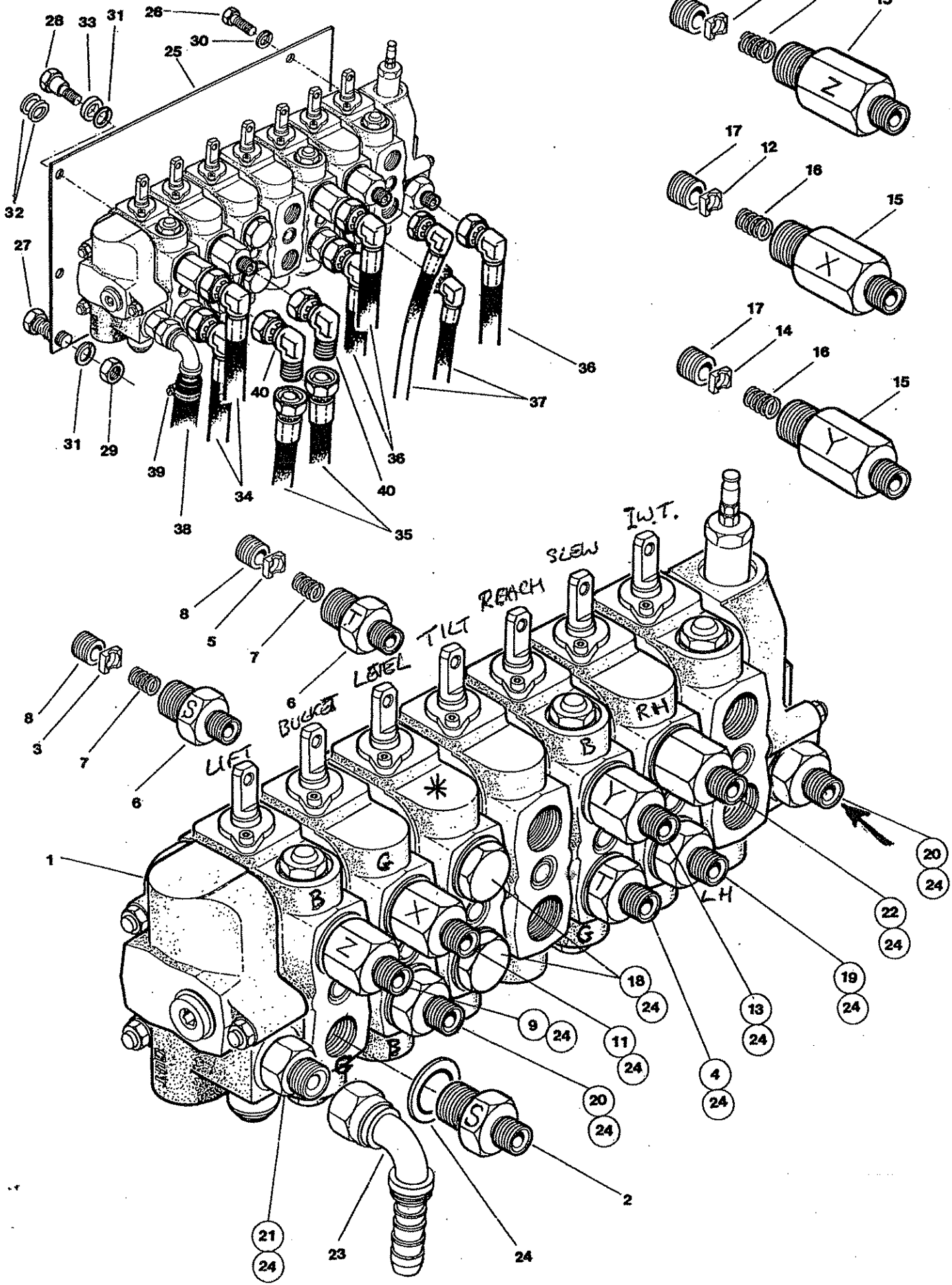
CABLE SET(Continued) Tilt Level & I.W.T.



Ref	Part No	Qty	Description
	71 15 256		CABLE CONTROL SET (continued)
	71 15 300		..Level Tilt I.W.T. cable set
1	71 15 361	1	..Cable set body c/w spring dowel
2	04 21 632	1	...Spring dowel 3/16" dia. x 2" long
3	71 15 235	1	..Lever R. Hand
4	71 15 236	1	..Lever L. Hand
5	71 15 227	1	..Lever spindle
6	81 21 073	2	..Circlip
7	71 15 224	1	..Rocker block
8	71 15 229	2	..Cable end - for level and tilt
9	71 15 225	1	..Cable bracket c/w screw
10	93 13 054	1	...Set screw M8 x 25
11	71 15 225	1	..Cable clamp
12	71 15 358	1	..Tongue plate c/w screws & nuts
13	93 13 046	2	...Set screw M12 x 20
14	93 13 124	1	...Set screw M8 x 60
15	91 13 004	1	...Hexagon nut M8
16	92 13 064	1	..Bolt M8 x 30
17	93 13 054	1	...Set screw M8 x 25
18	71 15 359	2	..Cable assembly c/w sleeve flange etc., for level & tilt
19	71 15 160	1	...Pin
20	71 15 161	1	...Flange
21	71 15 162	1	...Sleeve
22	91 00 016	1	...Thin hexagon nut M16 x 1.5 pitch
	71 15 240	1	..Handle assembly for Level & tilt compr:-
23	71 15 232	1	...Handle
24	71 15 139	1	...Instruction mounting plate c/w label & grubscrew
25	71 15 136	1	...Operating label
26	02 00 014	1	...Grubscrew 1/4" UNF socket headed
27	81 14 053	1	...Lever knob
28	71 15 241	2	...Ring - blue
29	04 20 812	1	...Spring dowel 1/8" x 3/4" long
30	91 13 006	1	...Hexagon locknut M12
31	71 14 069	1	..Control block c/w spring dowel & circlip (For I.W.T.)
32	04 11 118	1	...Internal circlip
33	04 25 540	1	...Spring dowel $\emptyset$ 5 x 40
34	71 14 067	1	..Detente cage
35	93 13 034	2	..Setscrew M8 x 16
36	91 00 204	2	..Spring washer $\emptyset$ 8
37	71 03 120	1	..I.W.T. Instruction label
38	71 14 070	1	..Spindle
39	71 14 068	1	..Spring
40	09 05 108	2	..Steel ball 1/4" dia
	81 30 065	1	..Lever pivot box assembly compr:-
41	81 30 001	1	...Lever pivot box
42	81 30 013	1	...Lever seal ring
43	81 30 009	1	...Lever pivot
44	81 30 019	1	...Lever
45	81 30 021	1	...Spring dowel
46	93 43 072	2	..Capscrew M5 x 35
47	91 33 004	1	..Thin hexagon nut M8
48	71 14 072	1	..Lever handle
49	09 03 121	1	..Lever knob - black
50	81 25 060	1	..Cable c/w sleeve flange etc., for I.W.T.
51	81 25 051	1	...Pin
52	81 25 059	1	...Flange
53	81 25 049	1	...Sleeve
54	91 00 016	1	...Thin hexagon nut M16 x 1.5 pitch
55	03 00 033	6	..'Posidrive' screw 1/4" UNC x 3/4" long
56	01 00 401	6	..External serrated washer 1/4" dia



# PA8/A16. VALVOIL CONTROL VALVE & HOSE LOOM



\* FOR HYDRAULIC

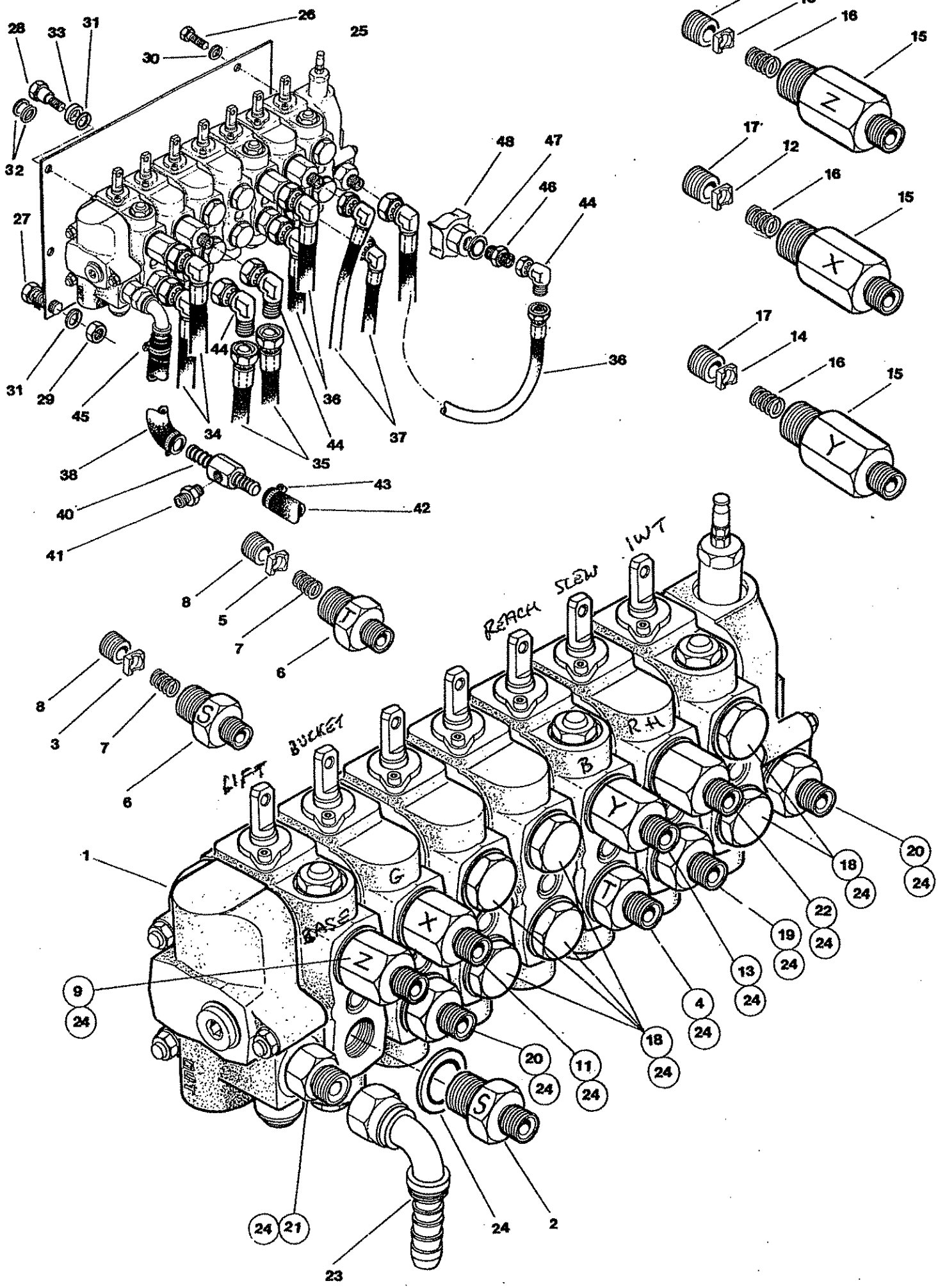
Ref	Part No	Qty	Description
	71 15 330		VALVOIL CONTROL VALVE & HOSE LOOM FOR PA8 DIGGER
■	81 28 273	1	.Valve c/w unions & mounting plate
1	81 28 270	1	..Valvoil SD6 control valve (see page96)
2	81 24 035	1	..Short restrictor 'S' assembly ½" - 3/8 BSP M-M
3	81 23 044	1	...Restrictor disc - yellow
4	81 24 036	1	..Short restrictor 'T' assembly ½" - 3/8 BSP M-M
5	81 23 045	1	...Restrictor piston - white
	Items 6 - 8 are common to both 'S' and 'T' restrictor assemblies		
6	81 24 088	1	...Restrictor body
7	81 16 011	1	...Restrictor spring
8	81 24 089	1	...Plug
9	81 24 047	1	..Long restrictor 'Z' assembly
10	81 23 046	1	...Restrictor disc - black
11	81 24 045	1	..Long restrictor 'X' assembly
12	81 23 044	1	...Restrictor disc - yellow
13	81 24 046	1	..Long restrictor 'Y' assembly
14	81 23 045	1	...Restrictor disc - white
	Items 15 - 17 inclusive are to 'X', 'Y' and 'Z' restrictor assemblies		
15	81 24 087	1	...Restrictor body
16	81 16 011	1	...Restrictor spring
17	81 24 089	1	...Plug
18	81 03 001	2	..Blanking plug ½" BSP
19	85 81 172	1	..Union ½" BSP - ¼" BSP M-M
20	60 00 112	2	..Union ½" BSP - 3/8" BSP M-M
21	85 81 180	1	..Union ½" BSP - 5/8" BSP M-M
22	85 81 188	1	..Union - long - ½" BSP - ¼" BSP M-M
23	85 81 173	1	..Elbow 5/8" BSP low pressure
24	86 50 104	12	..Bonded seal
25	71 15 166	1	..Mounting plate
26	93 13 034	3	..Setscrew M8 x 16
27	93 13 095	2	..Setscrew M10 x 45
28	92 00 004	1	..Special shoulder bolt
29	91 13 005	2	..Hexagon nut M10
30	91 00 204	3	..Spring washer ø 8
31	91 00 205	3	..Spring washer ø 10
32	91 00 105	2	..Plain washer ø 10
33	71 15 092	1	..Special spacer
34	85 31 233	2	..Hose 3/8 BSP SF 90° F 75" long (lift)
35	85 41 223	2	..Hose 3/8 BSP SF 135° F 52" long (bucket)
36	85 31 293	3	..Hose 3/8 BSP SF 90° F 90" long (Reach & supply)
37	85 36 102	2	..Hose ¼" BSP S-F 90° F 45" long (slew)
38	85 01 111	1	..Hose 5/8" bore 64" long (Return)
39	09 04 204	2	..Hose clip (5/8 bore hose)
40	85 81 117	2	..Elbow 3/8" BSP 90° M-F
* 41	72 13 005	4	..Hose armour cable - Reach & bucket
* 42	71 15 173	2	..Hose armour cable - lift

\* Not illustrated see page for installation.

■ VALVOIL CONTROL VALVE & HOSE LOOM FOR A16 LOADER  
The parts list for the A16 Loader is identical to the above with the following exception.

81 28 275	1	.Valve c/w unions
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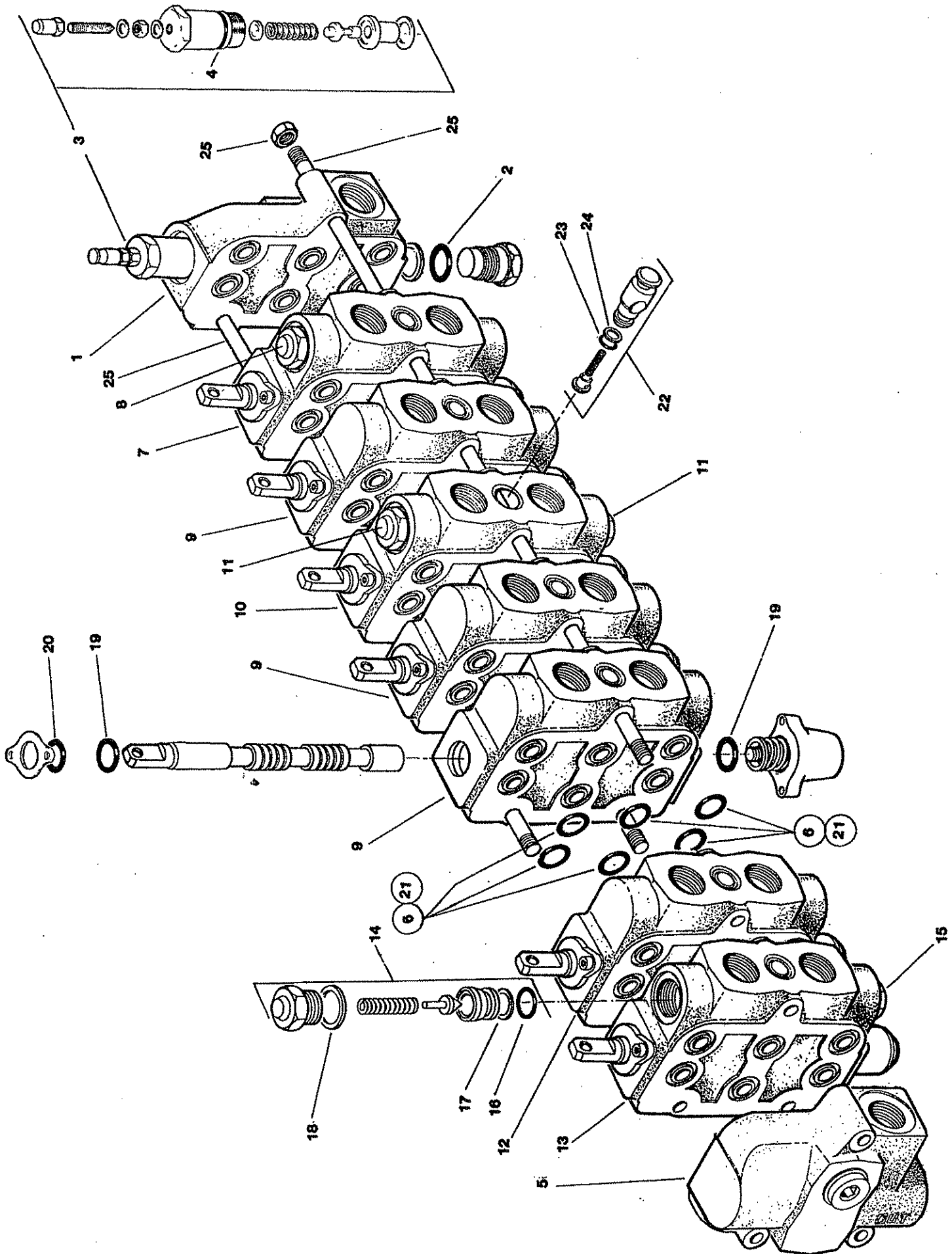
# PA7. VALVOIL CONTROL VALVE & HOSE LOOM



Ref	Part No	Qty	Description
	71 15 335		VALVOIL CONTROL VALVE & HOSE LOOM FOR PA7
	81 28 274	1	.Valve c/w unions & mounting plate
1	81 28 271	1	..Valvoil SD6 control valve (see page 96 )
2	81 24 035	1	..Short restrictor 'S' assembly ½" - 3/8" BSP M- M
3	81 23 044	1	...Restrictor disc - yellow
4	81 24 036	1	..Short restrictor 'T' assembly ½" - 3/8" BSP M-M
5	81 23 045	1	...Restrictor piston - white
Items 6 - 8 are common to both 'S' and 'T' restrictor assemblies			
6	81 24 088	1	...Restrictor body
7	81 16 011	1	...Restrictor spring
8	81 24 089	1	...Plug
9	81 24 047	1	..Long restrictor 'Z' assembly
10	81 23 046	1	...Restrictor disc - black
11	81 24 045	1	..Long restrictor 'X' assembly
12	81 23 044	1	... Restrictor disc - yellow
13	81 24 046	1	..Long restrictor 'Y' assembly
14	81 23 045	1	...Restrictor disc - white
Items 15 - 17 inclusive are common to X, Y, and Z restrictor assemblies.			
15	81 24 087	1	...Restrictor body
16	81 16 011	1	...Restrictor spring
17	81 24 089	1	...Plug
18	81 03 001	2	..Blanking plug ½" BSP
19	85 81 172	1	..Union ½" BSP - ¼" BSP M-M
20	60 00 112	2	..Union ½" BSP - 3/8" BSP M-M
21	85 81 180	1	..Union ½" BSP 5/8" BSP M-M
22	85 81 188	1	..Union - long - ½" BSP - ¼" BSP M-M
23	85 81 173	1	..Elbow 5/8" BSP low pressure
24	86 50 104	12	..Bonded seal
25	71 15 166	1	..Mounting plate
26	93 13 034	3	..Setscrew M8 x 16
27	93 13 095	2	..Setscrew M10 x 45
28	92 00 004	1	..Special shoulder bolt
29	91 13 005	2	..Hexagon nut M10
30	91 00 204	3	..Spring washer ø 8
31	91 00 205	3	..Spring washer ø 10
32	91 00 105	2	..Plain washer ø 10
33	71 15 092	1	..Special spacer
34	85 31 233	2	.Hose 3/8" BSP S-F 90° F 75" long (lift)
35	85 41 223	2	.Hose 3/8" BSP S-F 135° F 52" long (bucket)
36	85 31 293	3	.Hose 3/8" BSP S-F 90° F 90" long (Reach & supply)
37	85 36 102	2	.Hose ¼" BSP S-F 90° F 45" long (slew)
38	85 01 111	1	.Hose 5/8" bore 64" long (return)
39	71 15 171	1	.Tee connection assembly
40	71 15 172	1	..Connector body
41	85 81 153	1	..Union ¼" BSP - ¼" BSP M-M
42	85 01 112	1	..Hose 5/8" bore 16" long
43	09 04 204	2	..Hose clip 5/8" bore
44	85 81 117	3	.Elbow 90° 3/8" BSP M-F
45	09 04 204	2	.Hose clip 5/8" bore
46	60 00 113	1	.Union 3/8" BSP M-M
47	86 50 103	1	.Bonded seal 3/8" BSP
48	85 90 023	1	.Self seal coupling - Female half
49 *	72 13 005	4	.Armour cable - Reach & bucket
50 *	71 15 173	2	.Armour cable - lift

\* Not illustrated see page for installation.

# CONTROL VALVE-VALVOIL



Ref	Part No	Qty	Description
	81 28 271		VALVOIL CONTROL VALVE FOR PA7 DIGGER
	81 28 270		VALVOIL CONTROL VALVE FOR PA8 DIGGER
	81 28 272		VALVOIL CONTROL VALVE FOR A16 LOADER

The spare parts list for all three valves is identical.

The difference is in the pressure setting of the adjustable main relief valve. Preset valves are recognized in the following manner:-

PA7 Main relief valve is Blue and calibrated to 2250 psi 153 Bar

PA8 Main relief valve is unpainted and calibrated to 2500 psi 170 Bar

A16 Main relief valve is Red and is calibrated to 2750 psi 187 Bar

The spare parts list is as follows:-

1	81 28 024	1	.Inlet section c/w main relief valve & 'O' ring
2	86 00 113	1	.. 'O' ring
3	81 28 020	1	..Main relief valve c/w 'O' ring
4	86 00 113	1	... 'O' ring
5	81 28 025	1	.Outlet section c/w 'O' ring
6	86 00 503	6	.. 'O' ring
7	81 28 026	1	.Service section - I.W.T. c/w locked line relief valve
8	81 28 021	1	..Locked line relief valve (5000 psi - 345 bar)
9	81 28 027	3	.Service section - slew, level & tilt
10	81 28 028	1	.Service section - Reach c/w locked line relief valve
11	81 28 021	2	..Locked line relief valve (5000 psi - 345 bar)
12	81 28 029	1	.Service section - Bucket
13	81 28 030	1	.Service section - lift c/w locked line relief valve
14	81 28 022	1	..Locked line relief valve (3000 psi - 210 bar)
15	81 28 021	1	..Locked line relief valve (5000 psi - 345 bar)

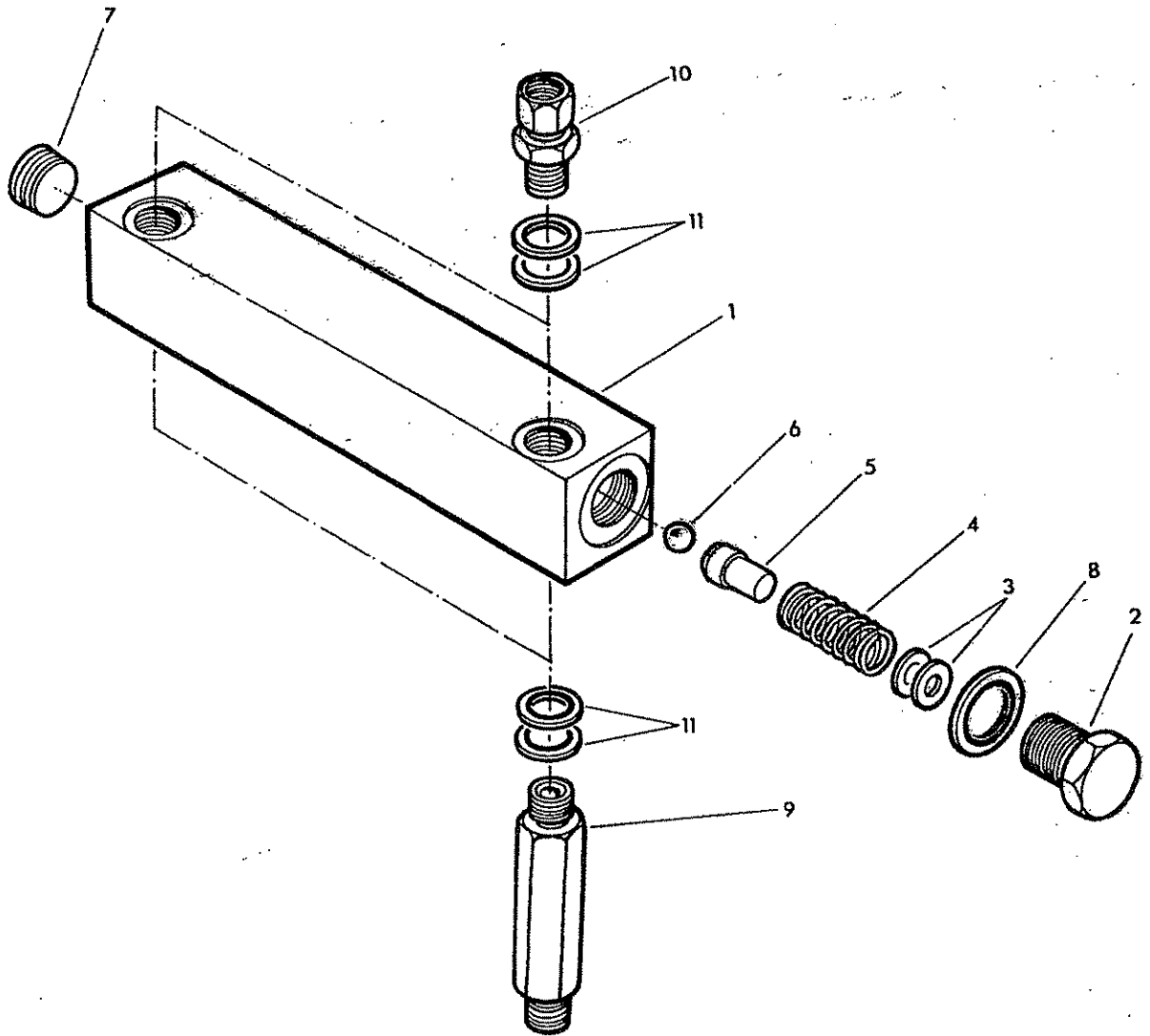
Items 16 & 17 are common to all locked line relief valve.

16	86 00 107	1	... 'O' ring
17	86 09 107	1	...Back up ring
18	81 30 086	1	...Copper Sealing washer

Items 19 - 21 inclusive are common to all service sections

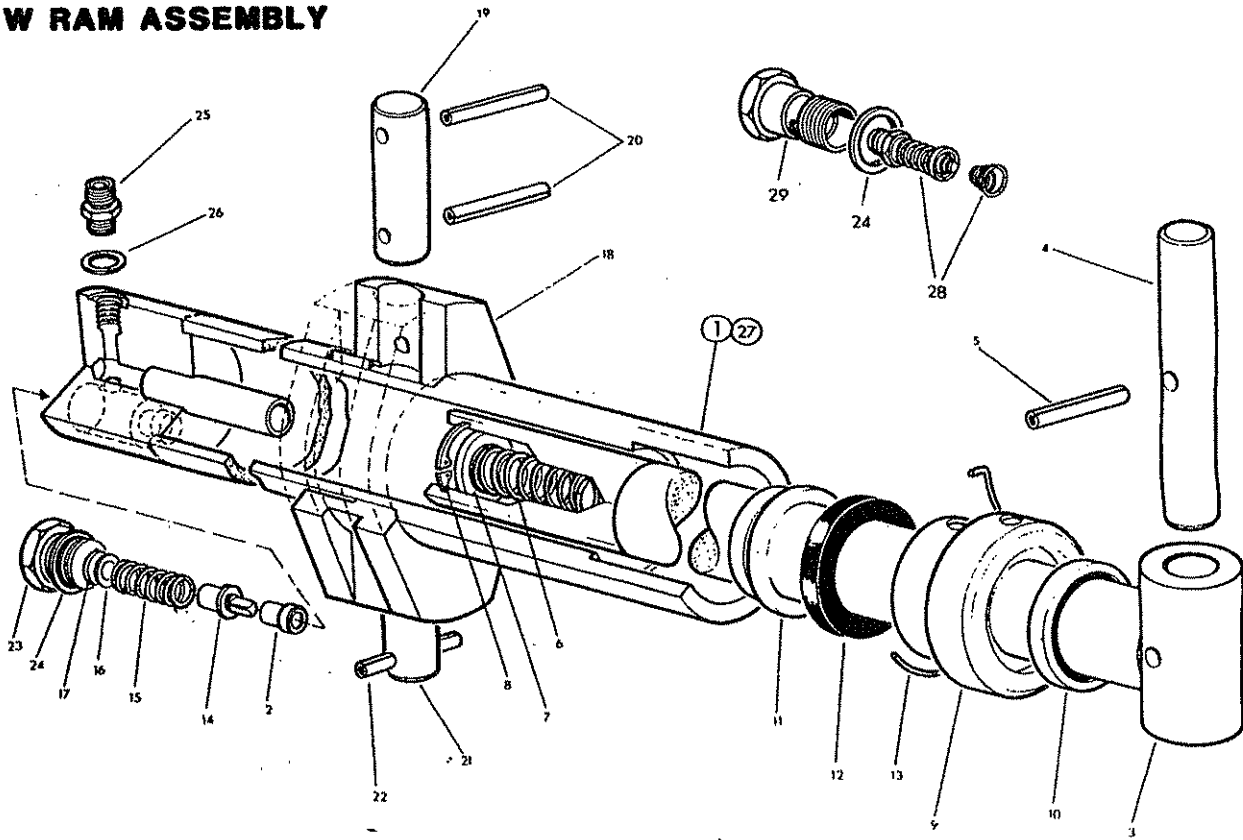
19	86 00 112	2	..Spool 'O' ring
20	86 00 504	1	..Wiper 'O' ring
21	86 50 503	6	..Inter section 'O' ring
22	81 28 023	7	.Check valve c/w rings
23	86 00 501	1	.. 'O' ring
24	86 09 501	1	..Back up ring
25	81 28 031	1	.Valve tie rod kit c/w nuts
	86 99 184		SEAL KIT

# LOADER CROSS PORT RELIEF VALVE



Ref	Part No.	Qty	Description
	70 16 273		LOADER CROSS PORT RELIEF VALVE ASSY
1	70 16 274	1	.Valve block
2	60 01 124	1	.Relief valve cap
3	01 00 102	as reqd	.Shim 5/8" dia x .040 thick
4	60 00 110	1	.Spring
5	60 00 109	1	.Spring seat
6	09 05 110	1	.Steel ball 5/8" dia
7	85 82 044	1	.Plug 1/2" BSPT
8	86 50 104	1	.Bonded seal 1/2" BSP
9	85 81 181	2	.Union 3/8 BSP M-M
10	85 81 178	2	.Swivel union 3/8" BSP M-F
11	86 50 103	8	.Bonded seal 3/8 BSP

# SLEW RAM ASSEMBLY



Ref	Part No.	Qty	Description
	71 18 260		SLEW RAM ASSEMBLY
+* 1	71 18 261	1	.Ram cylinder barrel c/w drill bush
+* 2	81 25 048	1	..Drill bush $\phi 5$
3	71 15 298	1	.Ram rod assembly compr:-
4	71 02 176	1	..Rod pivot pin c/w spring dowel.
5	04 22 528	1	...Spring dowel 5/16" dia x 1 3/4" long.
6	71 03 078	1	..Spring.
7	71 15 043	1	..Spring seat.
8	04 11 230	1	..Internal circlip.
9	71 18 012	1	.Head bush c/w wiper
10	86 29 152	1	..Wiper seal.
11	71 01 031	1	.Insert
12	86 12 132	1	.Gland seal.
13	71 01 030	1	.Locking wire.
+ 14	81 25 041	1	.Relief valve needle assembly
+ 15	81 10 003	1	.Relief valve spring
+ 16	60 01 232	As reqd	.Shim 0.4mm
+ 17	01 00 102	As reqd	.Bright washer 5/16" dia.
18	71 18 263	1	.Slew ram trunnion c/w pins
19	71 18 013	1	.Pivot pin, upper c/w spring dowel
20	04 22 528	2	..Spring dowel 5/16" dia x 1 3/4" long.
21	71 02 177	1	.Pivot pin lower c/w spring dowel.
22	04 22 528	2	..Spring dowel 5/16" dia x 1 3/4" long.
23	81 03 001	1	.Plug 1/2" BSP
24	86 50 104	1	.Bonded seal 1/2" BSP
25	80 02 177	1	.Union 1/4BSP M-M
26	86 50 102	1	.Bonded seal 1/4" BSP
	86 99 179		SEAL KIT

**\* Assembly Note.**

Item 2 is assembled into item 1 using 'Permabond A115' or similar.

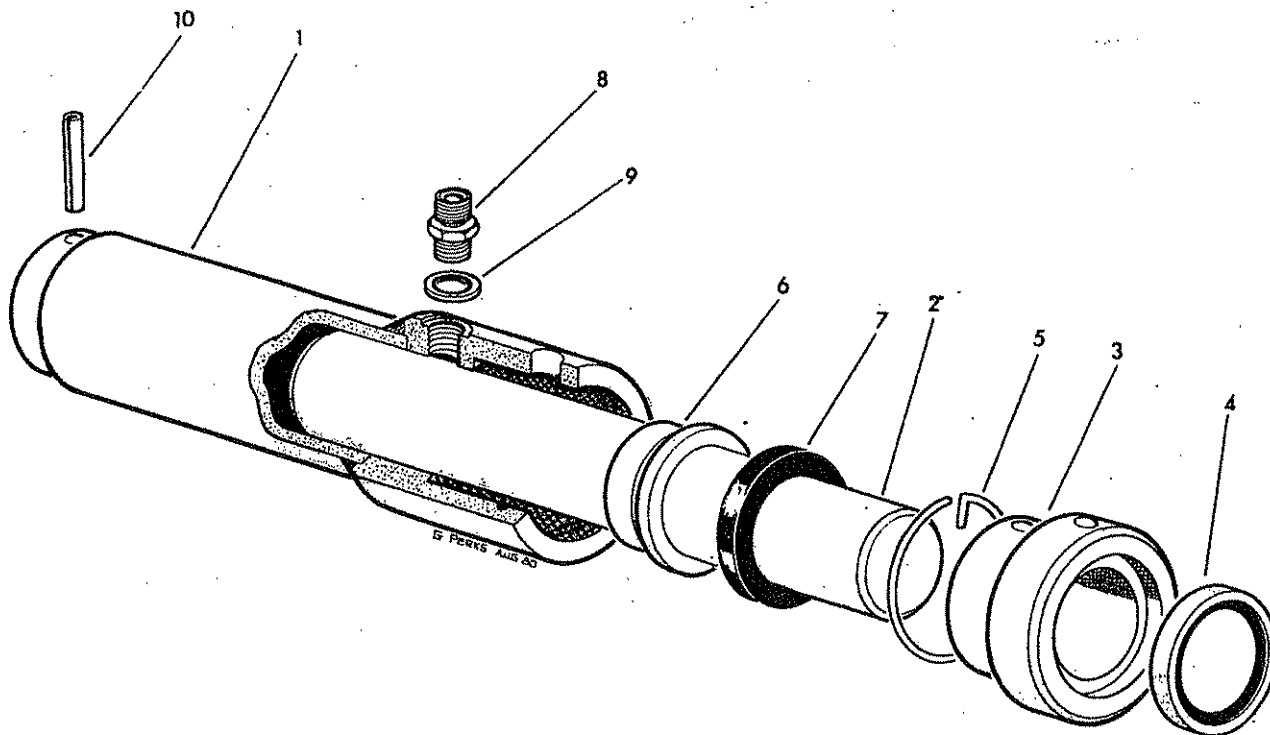
**+ Spares Note.**

For machines prior to December, 1984 items 1, 2, 14, 15, 16, 17 and 23 are replaced by

27	71 15 296	1	.Ram barrel
28	81 30 030	1	.Relief valve c/w spring
29	71 15 044	1	.Cushion relief valve body.

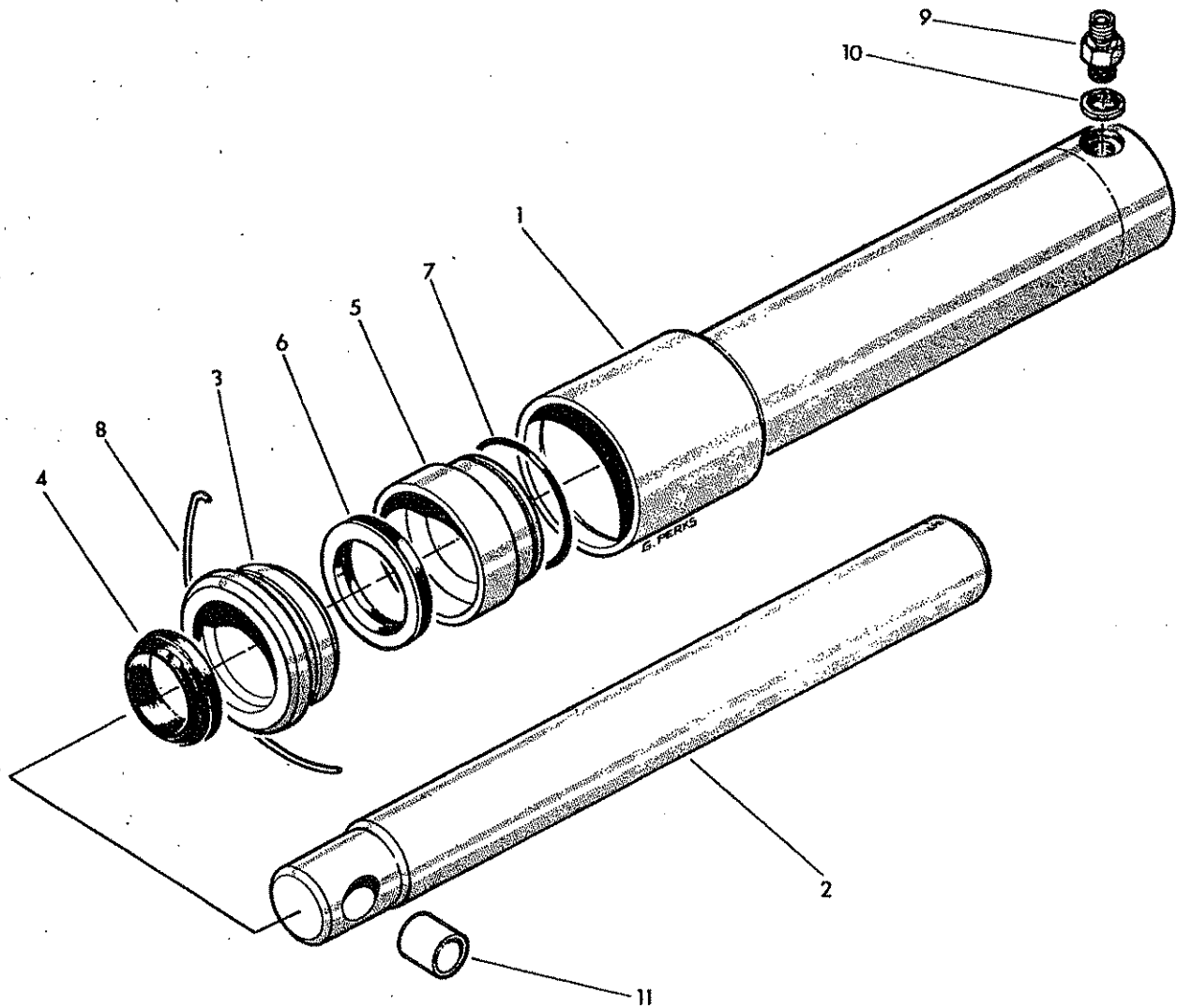


# I.W.T. RAM



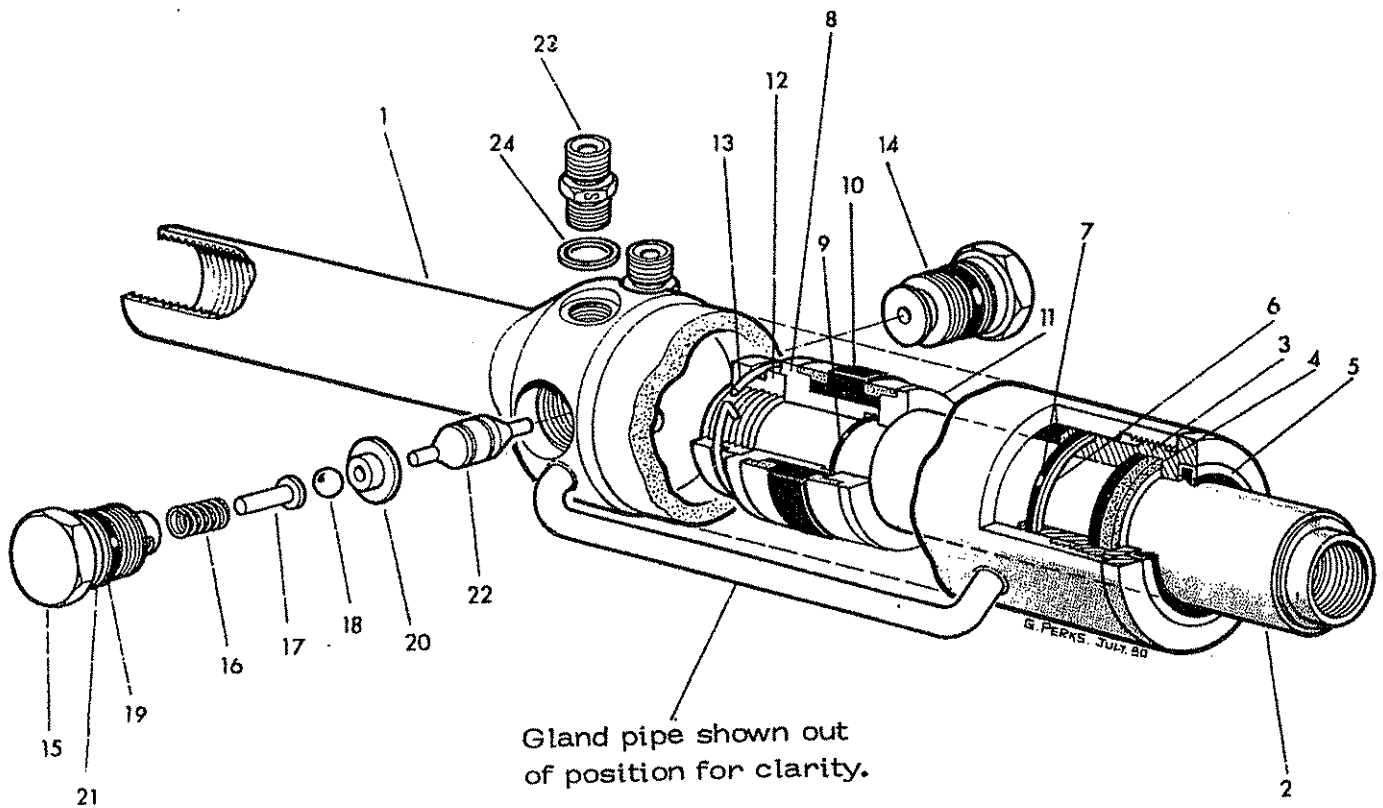
Ref	Part No.	Qty	Description
	71 15 289		I.W.T. RAM ASSEMBLY
1	71 15 290	1	.Ram cylinder
2	71 03 058	1	.Ram rod
3	71 01 029	1	.Ram head bush c/w wiper
4	86 40 230	1	..Wiper
5	71 01 030	1	.Locking wire
6	71 01 031	1	.Bronze insert
7	86 12 132	1	.Gland seal
8	80 02 177	1	.Union 1/4" BSP MM
9	86 50 102	1	.Bonded seal 1/4" BSP
10	04 21 824	1	.Spring dowel 1/4" diameter x 1 1/2" long
	86 99 179		RAM SEAL KIT

# LEVELLING RAM



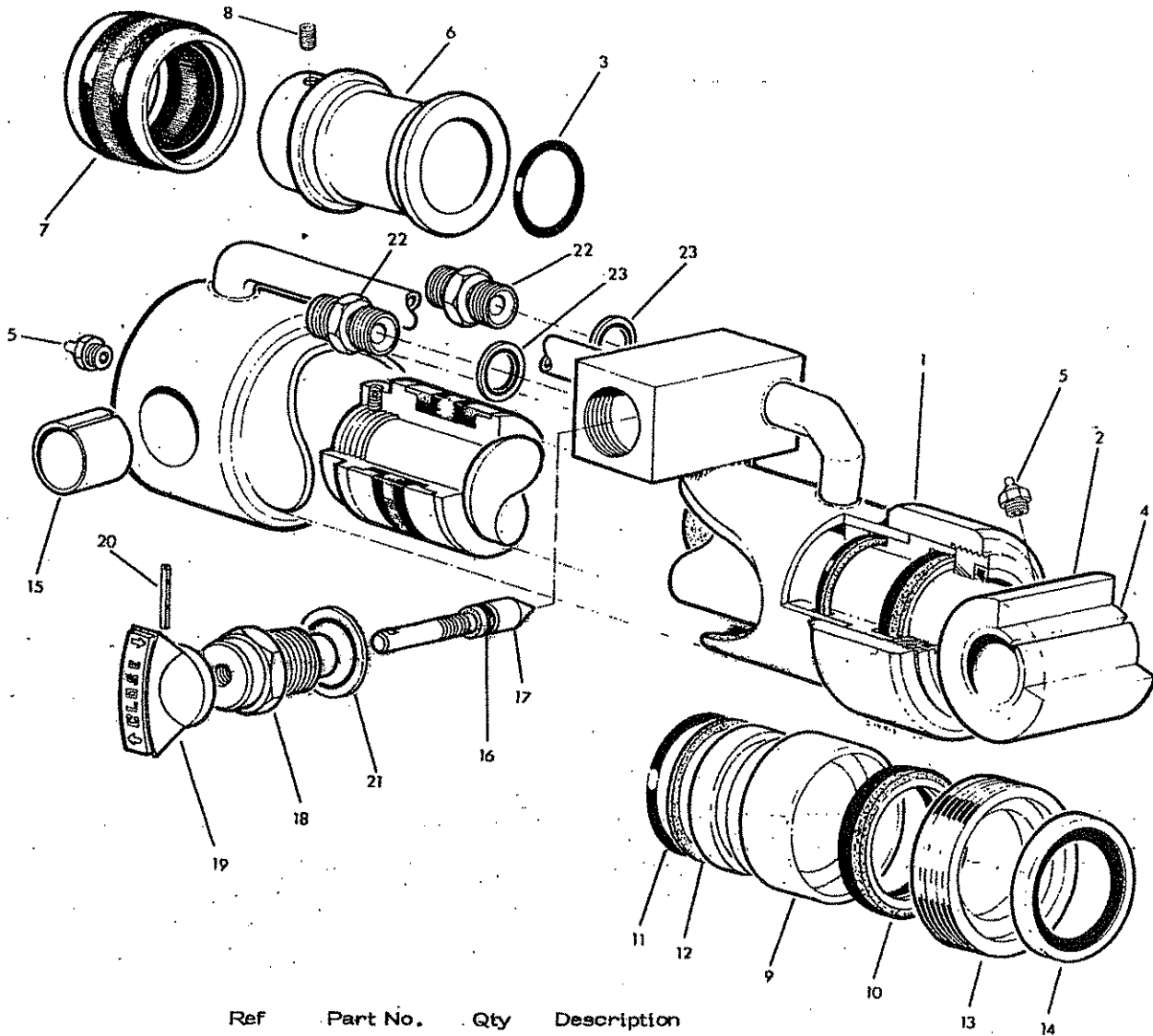
Ref	Part No.	Qty	Description
	71 15 277		LEVELLING RAM ASSEMBLY COMPLETE
1	71 15 278 1	1	.Ram Barrel
2	71 15 279	1	.Ram rod
3	71 09 032	1	.Gland retainer c/w wiper
4	86 29 130	1	..Wiper
5	71 09 033	1	.Gland housing c/w seal
6	86 15 001	1	..Seal
7	86 00 312	1	..'O' ring
8	71 09 034	1	..Locking wire
9	81 30 066	1	.Restrictor 3/8" BSP - 1/4" BSP mm
10	86 50 103	1	.Bonded seal 3/8" BSP
11	71 05 050	1	.Bush-rod end
	86 99 154		RAM SEAL KIT

# HYDRAULIC TOP LINK RAM



Ref	Part No.	Qty	Description
	71 15 283		HYDRAULIC LINK RAM ASSEMBLY
1	71 15 284	1	.Ram cylinder
2	71 15 286	1	.Ram rod
3	71 15 038	1	.Head bush c/w seals etc.
4	86 15 004	1	..Rod seal
5	86 29 137	1	..Rod wiper
6	87 09 740	1	..Anti-extrusion ring
7	87 00 740	1	..'0' ring
8	71 15 036	1	.Piston seal carrier c/w '0' ring
9	86 00 302	1	..'0' ring
10	86 37 740	1	.Piston seal
11	71 15 037	1	.Piston seal plate
12	71 15 035	1	.Piston nut c/w locking ring
13	71 15 039	1	..Locking ring
14	81 30 057	2	.Check valve assembly
15	81 30 025	1	..Check valve cap
16	81 14 045	1	..Spring
17	81 30 040	1	..Spring guide
18	09 05 509	1	..Steel ball M9 $\phi$
19	87 00 644	1	..'0' ring
20	81 30 024	1	..Check valve seat
21	87 09 644	1	..Anti-extrusion ring
22	81 30 026	1	.Actuator
23	81 30 037	2	.Restrictor
24	86 50 102	2	.Bonded seal 1/4" BSP
	86 99 180		RAM SEAL KIT

# LIFT RAM

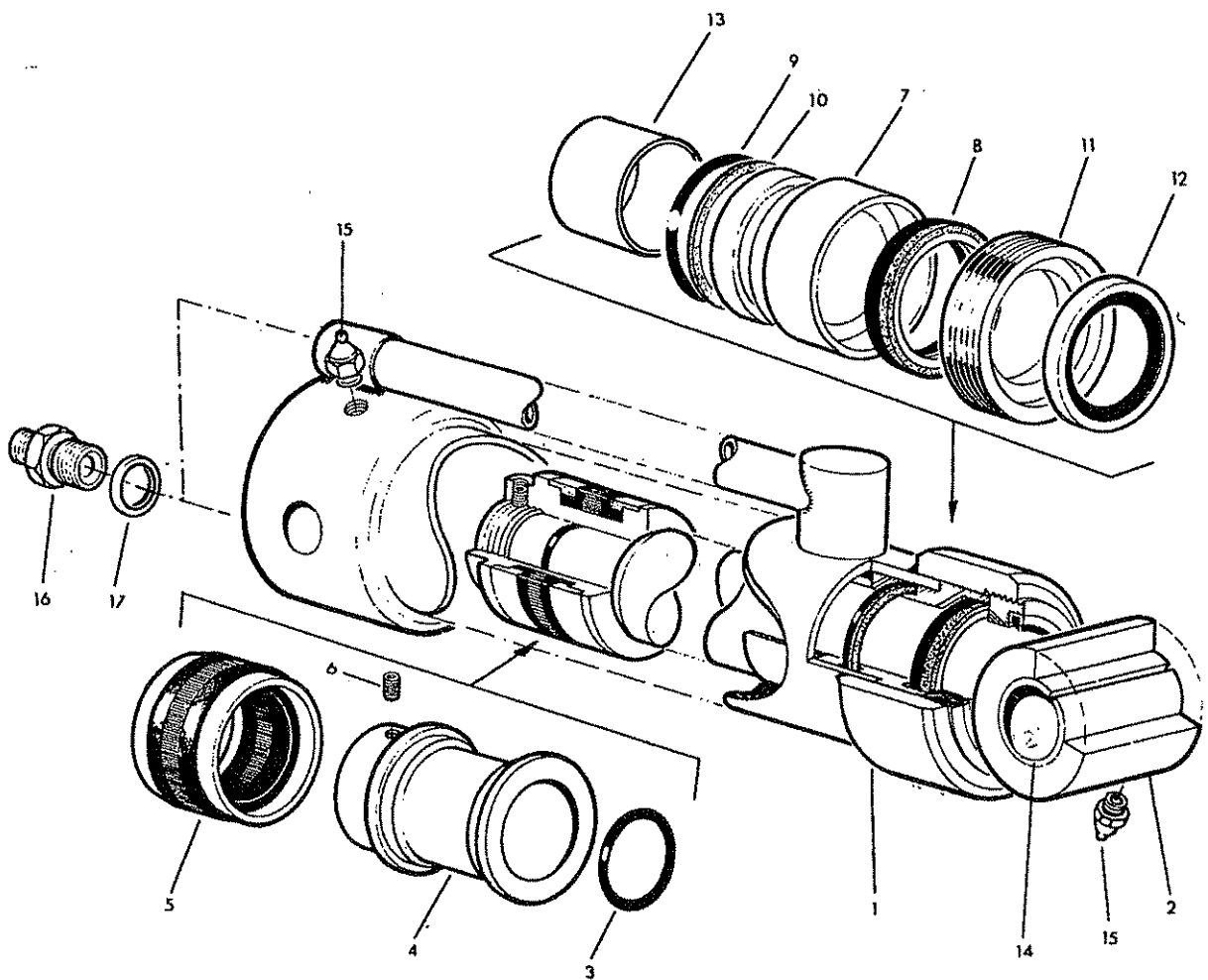


Ref	Part No.	Qty	Description
	71 15 303		LIFT RAM ASSEMBLY COMPLETE
	71 15 304	1	.Ram Assembly
1	71 15 305	1	..Ram cylinder
2	71 01 095	1	..Piston rod c/w bush 'O' ring.
3	86 00 119	1	... 'O' ring.
4	71 05 050	1	... Bush
5	09 01 121	2	..Greaser 1/8" BSP straight.
6	71 01 165	1	..Piston c/w seal and grub screw.
7	86 36 131	1	... Piston seal
8	93 00 110	1	... Grub screw M6 x 8
9	71 01 099	1	..Gland housing c/w seal and 'O' ring.
10	86 22 127	1	... Gland seal
11	86 00 304	1	... 'O' ring.
12	86 09 304	1	... Anti extrusion ring.
13	71 01 100	1	..Gland nut c/w wiper
14	86 40 328	1	... Piston rod wiper
15	71 15 048	2	.Bush - ram cylinder
16	71 15 099	1	.Tap spindle c/w 'O' ring.
17	81 06 045	1	.. 'O' ring.
18	81 06 043	1	.Tap gland nut.
19	81 08 006	1	.Tap knob
20	04 20 820	1	.Spring dowel 1/8" dia x 1 1/4" long.
21	86 50 104	1	.Bonded seal 1/2" BSP
22	60 00 113	2	.Unton 3/8" BSP MM
23	86 50 103	2	.Bonded seal.

86 99 102

RAM SEAL KIT

# GRAB RAM

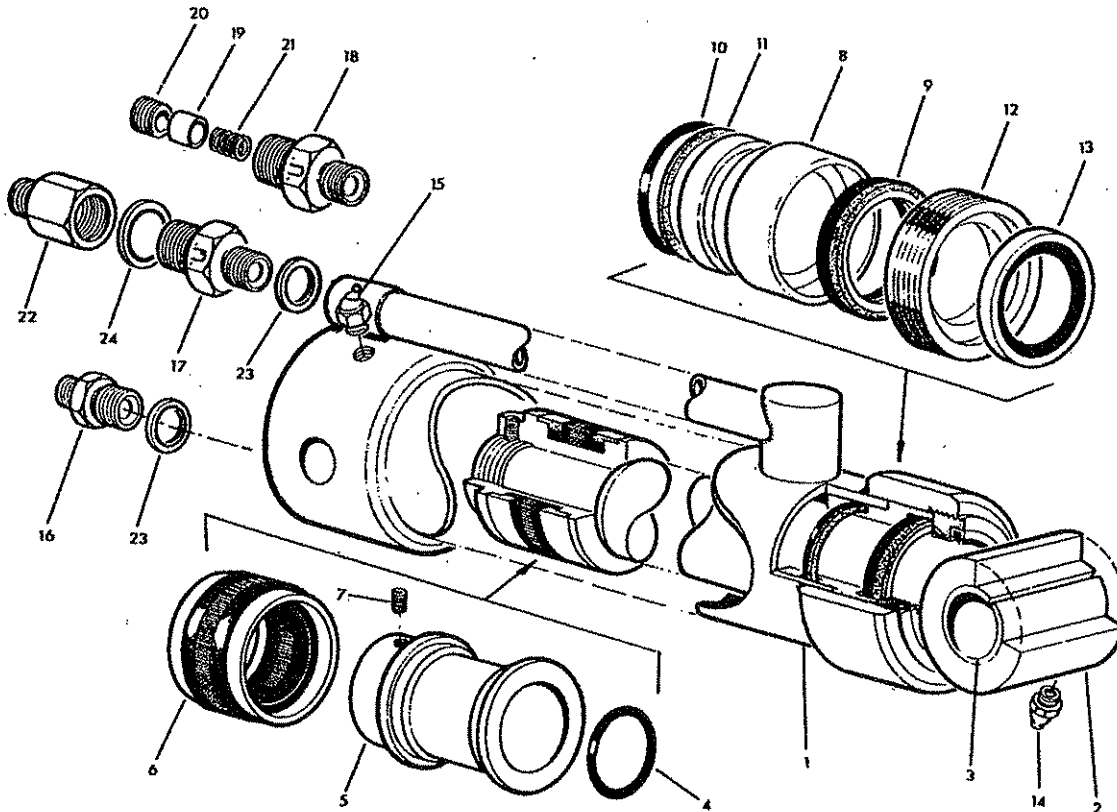


Ref	Part No.	Qty	Description
	70 16 279		GRAB RAM ASSEMBLY COMPLETE COMPR:-
	70 16 280	1	..Ram Assembly
1	72 12 272	1	..Ram cylinder
2	72 12 004	1	..Piston rod.
3	86 00 119	1	..'O' ring.
4	71 01 165	1	..Piston c/w seal and grub screw
5	86 36 131	1	..Piston seal.
6	93 00 110	1	..Grub screw M6 x 8
7	71 01 099	1	..Gland seal housing c/w seals and 'O' ring etc.
8	86 22 127	1	..Gland seal.
9	86 00 304	1	...'O' ring.
10	86 09 304	1	...'Anti extrusion ring.
11	71 01 100	1	..Gland nut c/w wiper
12	86 40 328	1	...'Piston rod wiper
13	71 06 196	1	..Piston rod spacer
14	71 05 050	1	..Bush
15	09 01 121	2	..Greaser 1/8 BSP straight
16	60 00 113	2	..Union 3/8 BSP M-M
17	86 50 103	2	..Bonded seal 3/8 BSP

86 99 102

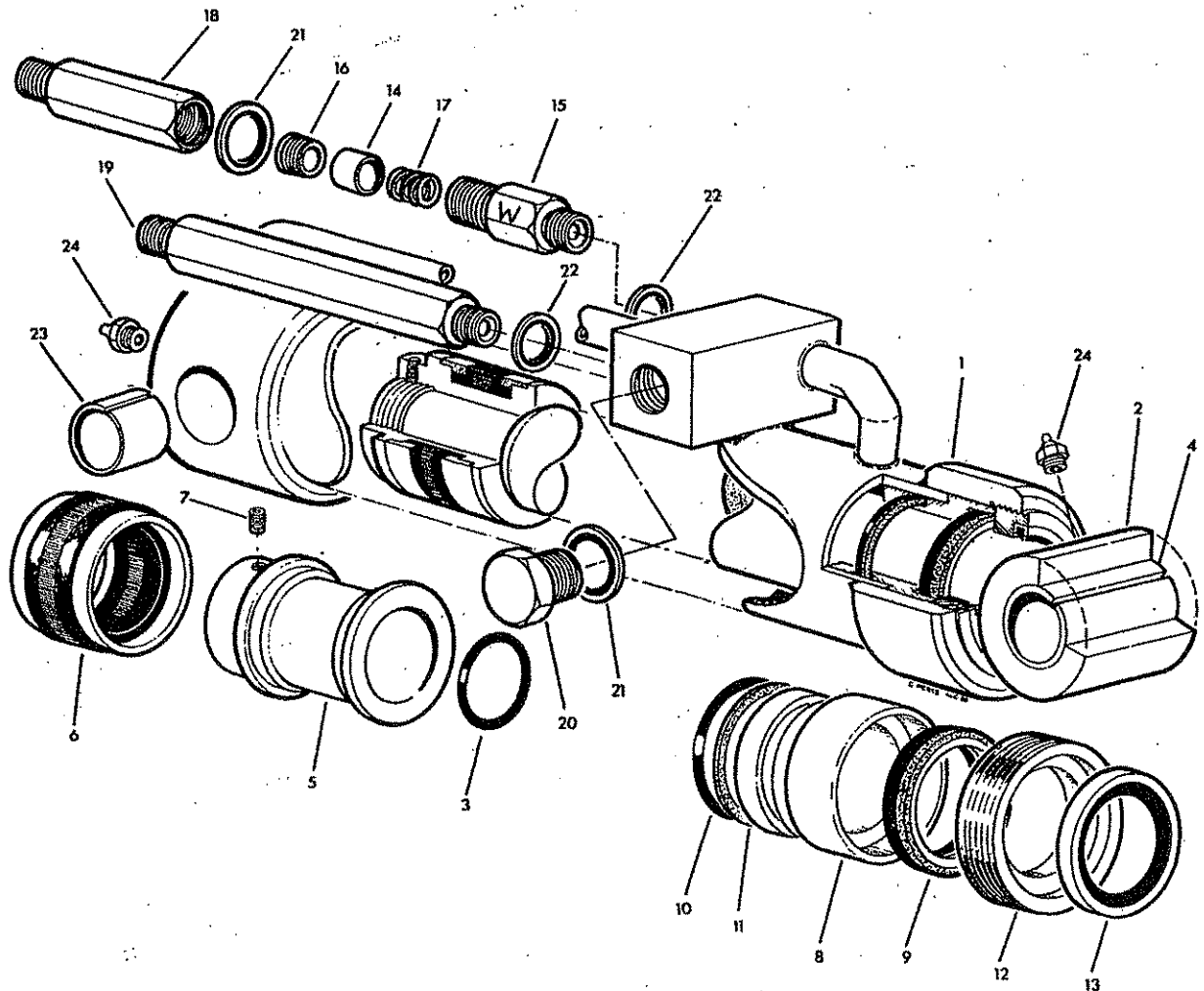
RAM SEAL KIT

# DIGGER REACH RAM



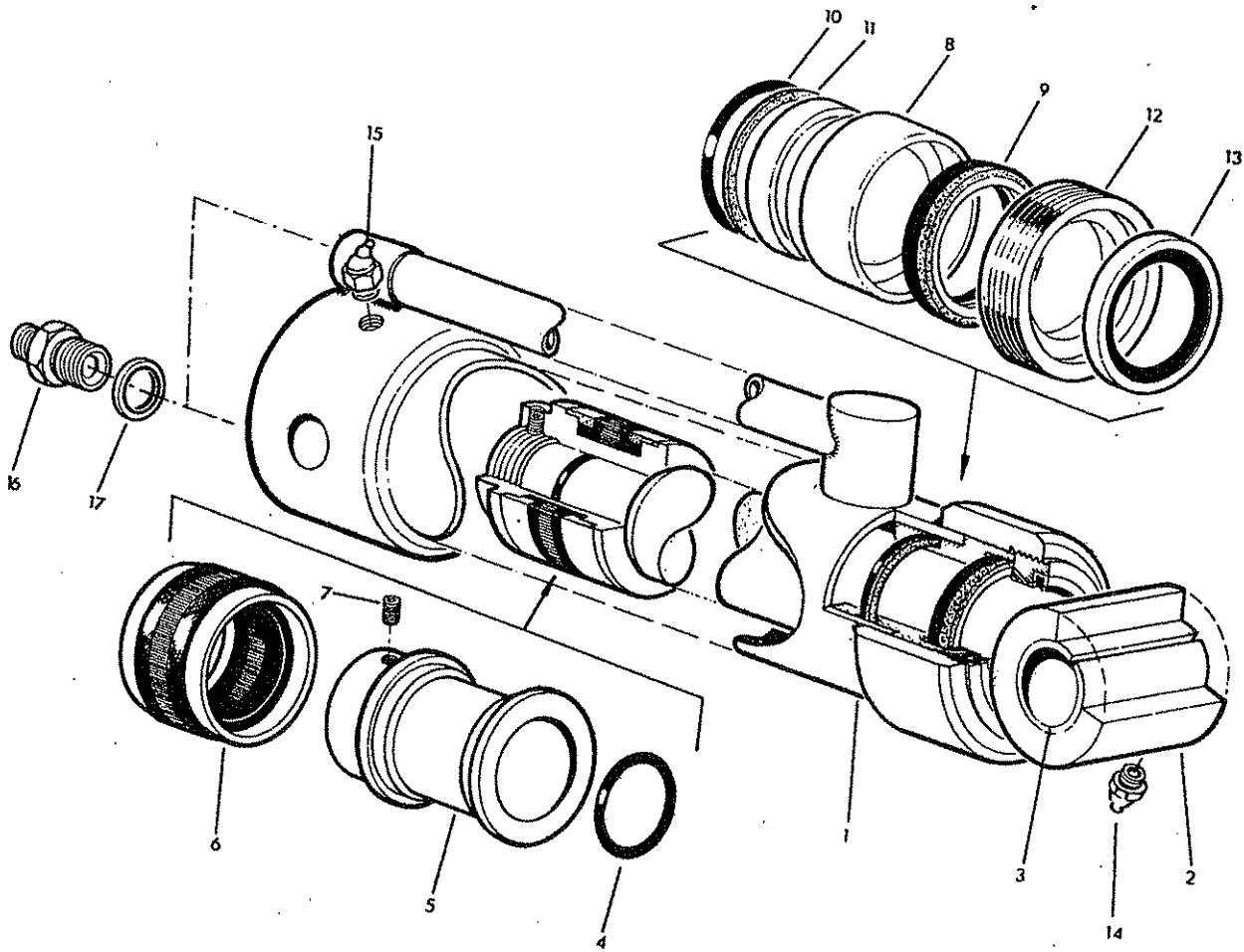
Ref	Part No.	Qty.	Description
	71 15 365		DIGGER REACH RAM
	71 03 303	1	.Basic Ram Assembly
1	71 03 304	1	..Ram cylinder
2	71 01 095	1	..Piston rod c/w bush and 'O' ring.
3	71 05 050	1	...Bush
4	86 00 119	1	... 'O' ring.
5	71 01 165	1	.. Piston c/w seal and grub screw.
6	86 36 131	1	...Piston seal.
7	93 00 110	1	...Grub screw M6 x 8
8	71 01 099	1	..Gland housing c/w seats and 'O' ring.
9	86 22 127	1	...Gland seal.
10	86 00 304	1	... 'O' ring.
11	86 09 304	1	...Anti-extrusion ring.
12	71 01 100	1	..Gland nut c/w wiper
13	86 40 328	1	...Piston rod wiper
14	09 01 121	1	..Greaser 1/8" BSP - st.
15	09 01 124	1	..Greaser 1/8 BSP - angular 67 $\frac{1}{2}$ <sup>o</sup>
16	60 00 113	1	..Union 3/8 BSP -MM
17	81 24 037	1	..Short restrictor 'U' assembly.
18	81 24 055	1	..Restrictor body.
19	81 23 008	1	..Restrictor piston.
20	81 23 002	1	..Plug.
21	81 14 045	1	..Spring.
22	85 81 176	1	..Adaptor 3/8 BSP-M 1/2" BSP-F
23	86 50 103	2	..Bonded seal 3/8BSP
24	86 50 104	1	..Bonded seal 1/2" BSP
	86 99 102		SEAL KIT

# LOADER REACH RAM



Ref	Part No.	Qty.	Description
	70 16 277		REACH RAM ASSEMBLY COMPLETE
	71 15 304	1	.Ram assembly.
1	71 15 304	1	..Ram cylinder
2	71 01 095	1	..Piston rod c/w bush 'O' ring.
3	86 00 119	1	... 'O' ring.
4	71 05 050	1	... Bush
5	71 01 165	1	..Piston c/w seal and grub screw
6	86 36 131	1	... Piston seal
7	93 00 110	1	... Grub screw M6 x 8
8	71 01 099	1	..Gland housing c/w seal and 'O' ring.
9	86 22 127	1	... 'O' ring.
10	86 00 304	1	..Gland seal.
11	86 09 304	1	... Anti extrusion ring.
12	71 01 100	1	..Gland nut c/w wiper
13	86 40 328	1	... Piston rod wiper
	81 24 044	1	.Long restrictor 'W' assembly
14	81 23 004	1	..Restrictor piston
15	81 24 054	1	..Restrictor body
16	81 23 002	1	..Plug.
17	81 16 011	1	..Spring.
18	85 81 177	1	.Adaptor 3/8 BSP-M- 1/2 BSP -F
19	85 81 179	1	.Union 3/8 BSP M-M 6" long.
20	81 03 001	1	.Blanking plug 1/2" BSP
21	86 50 104	2	.Bonded seal 1/2" BSP
22	86 50 103	2	.Bonded seal 3/8" BSP
23	71 15 048	2	.Bush - Base end.
24	09 01 121	2	.Greaser 1/8 BSP - straight.

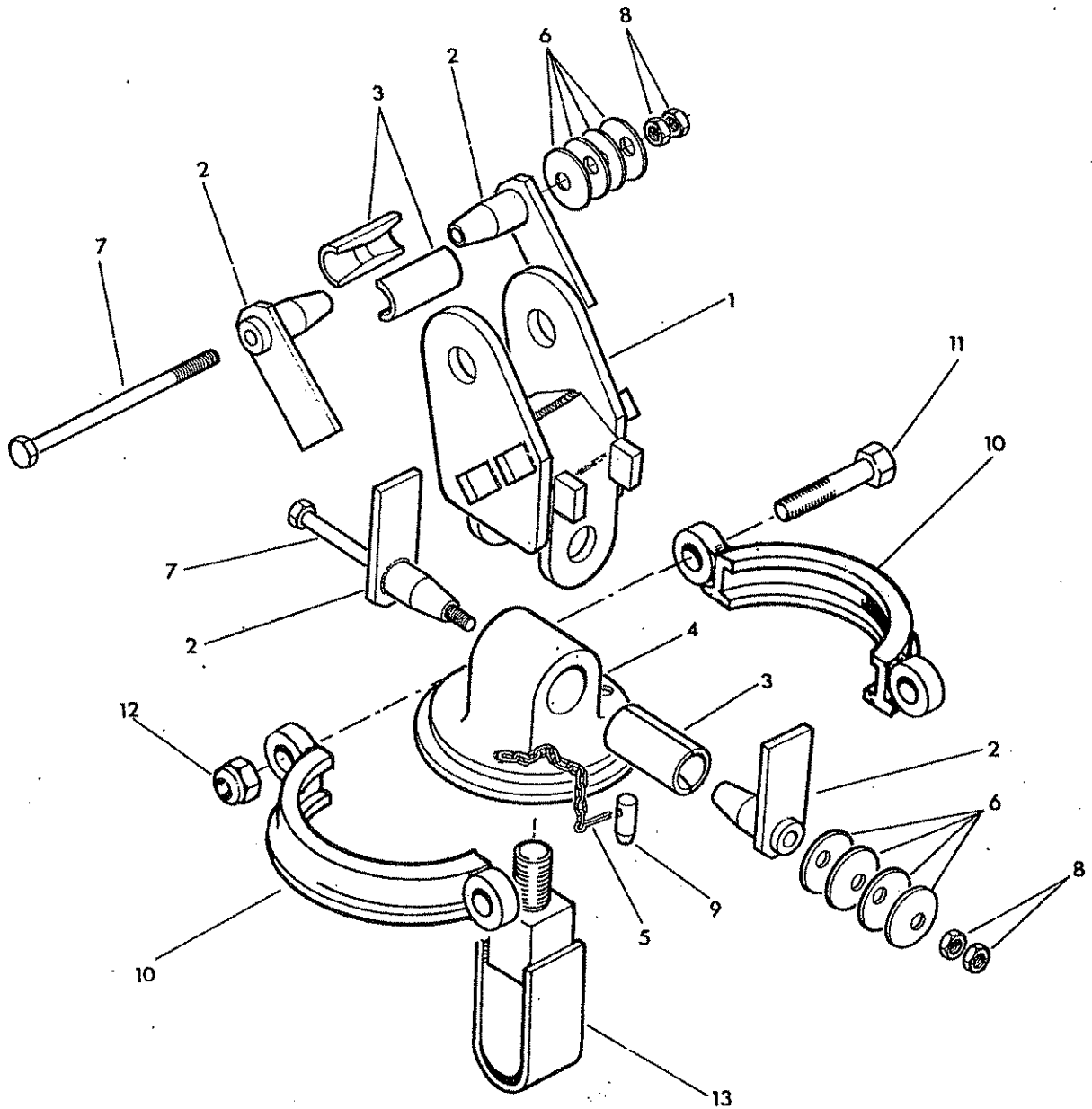
# BUCKET RAM



Ref	Part No.	Qty	Description
	71 05 298		BUCKET RAM ASSEMBLY
	71 03 303	1	..Basic ram assembly.
1	71 03 304	1	..Ram cylinder
2	71 01 095	1	..Piston rod c/w bush and 'O' ring.
3	71 05 050	1	...Bush
4	86 00 119	1	... 'O' ring.
5	71 01 165	1	..Piston c/w seal and grub screw
6	86 36 131	1	...Piston seal
7	93 00 110	1	...Grub screw M6 x 8
8	71 01 099	1	..Gland housing c/w seals and 'O' ring.
9	86 22 127	1	...Gland seal
10	86 00 304	1	... 'O' ring.
11	86 09 304	1	...Anti-extrusion ring.
12	71 01 100	1	..Gland nut c/w wiper
13	86 40 328	1	...Piston rod wiper
14	09 01 121	1	..Greaser 1/8" BSP - st.
15	09 01 124	1	..Greaser 1/8" BSP - angular 67 $\frac{1}{2}$ <sup>o</sup>
16	60 00 113	2	..Union 3/8 BSP M-M
17	86 50 103	2	..Bonded seal.

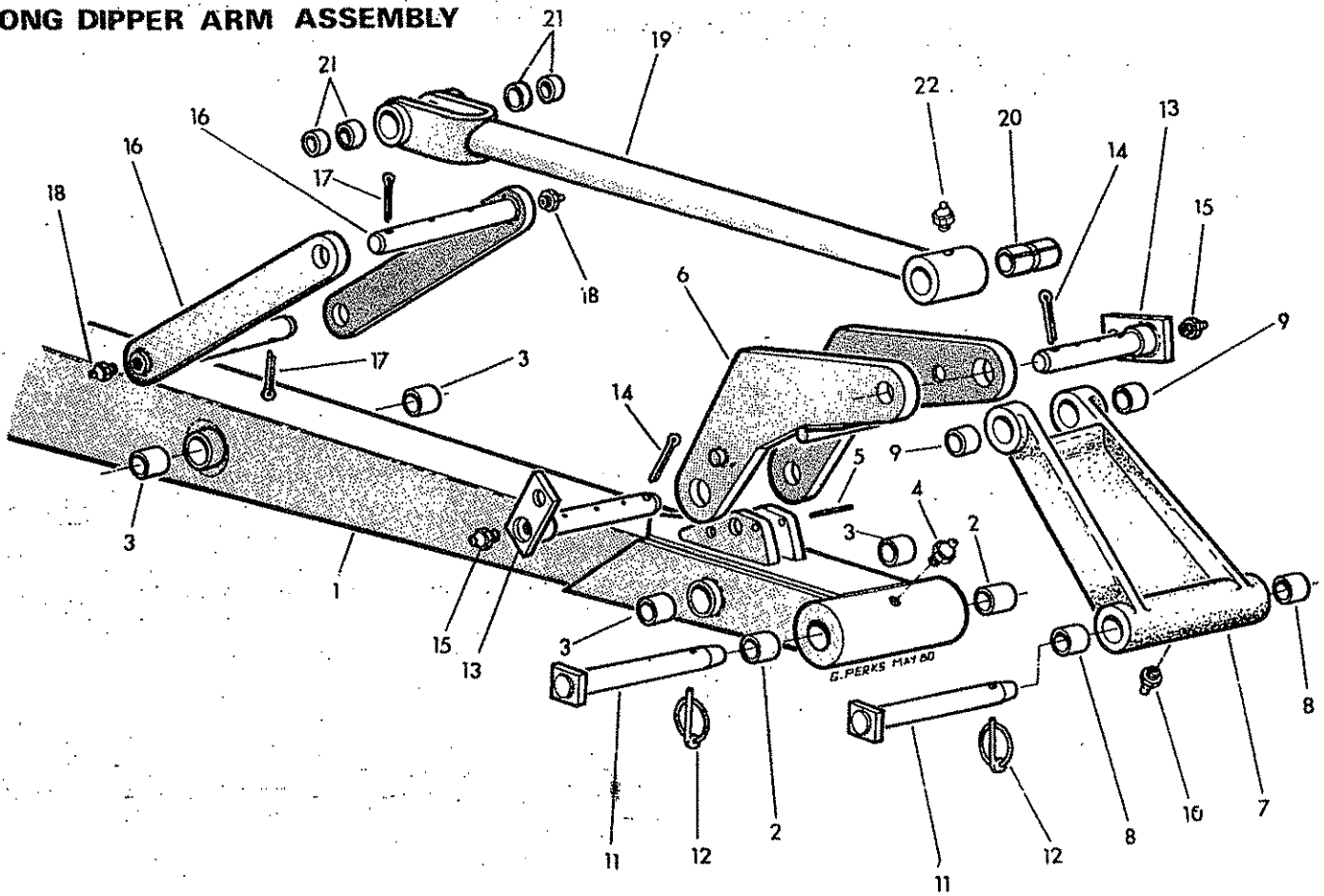


# A16 SWIVEL ASSEMBLY



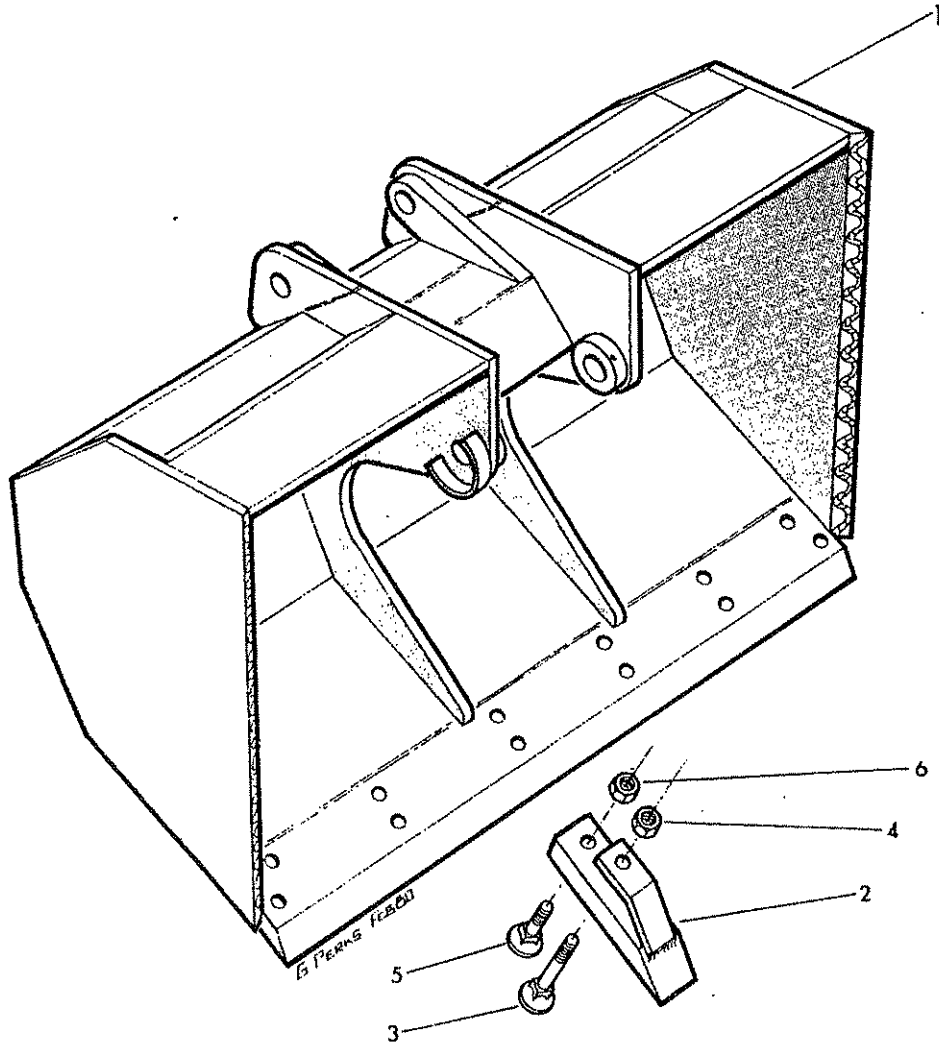
Ref	Part No.	Qty	Description
<b>SWIVEL ASSEMBLY</b>			
1	70 16 281	1	.Swivel jaw
2	70 16 052	4	.Friction pin
3	70 16 053	1	.Damping bush
4	70 16 282	1	.Swivel plate c/w split pin
5	05 03 083	1	..Split pin 1/8" dia x 1" long
6	70 14 021	8	.Spring disc
7	02 11 486	2	.Bolt 5/8 UNF x 6" long
8	01 31 006	4	.Thin Hexagon nut 5/8 UNF
9	71 05 076	1	.Locating pin
10	71 05 326	2	.Swivel clamp half
11	02 11 186	2	.Bolt 5/8 UNF x 2 1/4" long
12	01 51 006	2	.Clevelok thin hexagon nut 5/8 UNF
13	73 12 073	1	.GOM Safety Strap

# LONG DIPPER ARM ASSEMBLY



Ref	Part No.	Qty	Description
	71 05 364		LONG DIPPER ARM ASSEMBLY (FOR DIGGER/LOADER)
1	71 05 361	1	.Long dipper arm c/w bushes etc.
2	71 01 134	2	..Bucket pivot bush
3	71 01 083	4	..Radius arm pivot bush
4	09 01 121	1	..Greaser 1/8" BSP straight
5	04 21 832	1	..Spring dowel 1/4" dia x 2" long
6	71 05 369	1	.Radius arm
7	71 06 312	1	.Slave link c/w bushes etc
8	71 01 134	2	..Bush
9	71 01 083	2	..Bush
10	09 01 121	1	..Greaser 1/8" BSP straight
11	72 17 010	2	.Bucket pin c/w linch pin
12	04 31 217	1	..Linch pin
13	71 05 090	2	.Radius arm pin c/w pin and greaser
14	05 03 165	1	..Split pin 3/16" diam x 2" long
15	09 01 121	1	..Greaser 1/8" BSP straight
16	71 06 141	2	.Radius arm c/w split pin and greaser
17	05 03 165	1	..Split pin 3/16" diameter x 2" long
18	09 01 121	1	..Greaser 1/8" BSP straight
19	71 06 316	1	.Slave link c/w bushes and greaser
20	71 05 050	1	..Bush
21	70 12 037	4	..Bush
22	09 01 121	1	..Greaser 1/8" BSP straight

# DITCHING BUCKETS

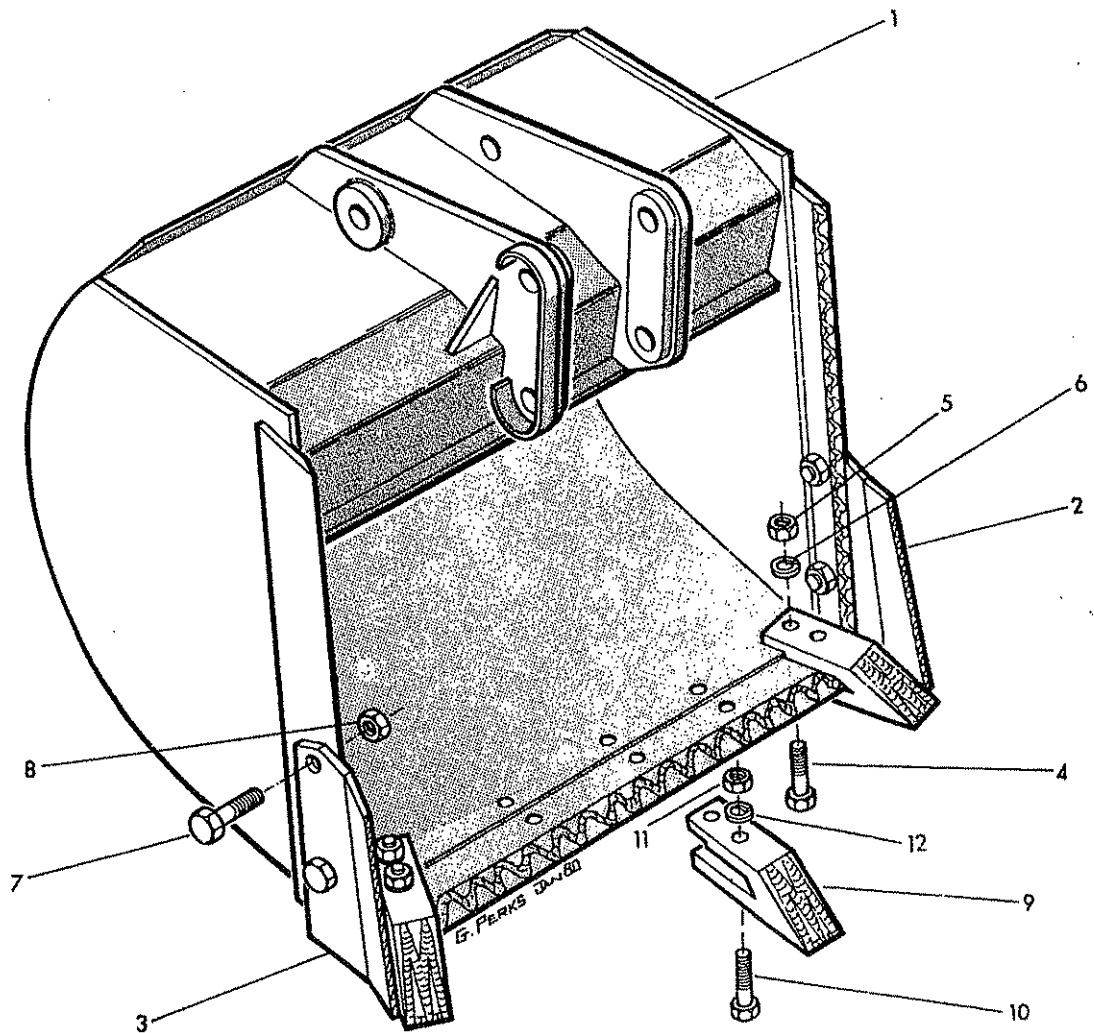


Ref	Part No	Qty		Description
		1 m	800 mm	
1	72 17 261			1 METRE DITCHING BUCKET
	72 17 263	1		.Bucket (not illustrated)
	72 17 260			800 mm DITCHING BUCKET
	72 17 262		1	.Bucket

The following items are common to both bucket assemblies:-

2	60 12 073	8	6	.Tine assembly
3	60 12 074	1	1	..Tine bolt long c/w nut
4	01 12 004	1	1	...Hexagon nut 7/16 UNC
5	60 12 034	1	1	..Tine bolt short c/w nut
6	01 12 004	1	1	...Hexagon nut 7/16 UNC

# HEAVY DUTY DIGGING BUCKETS



Ref	Part No.	Qty		Description
		450 mm	600 mm	

1	72 17 251			600 mm DIGGING BUCKET
	72 17 252		1	.Bucket
	72 17 250			400 mm DIGGING BUCKET
	72 17 253	1		.Bucket not illustrated

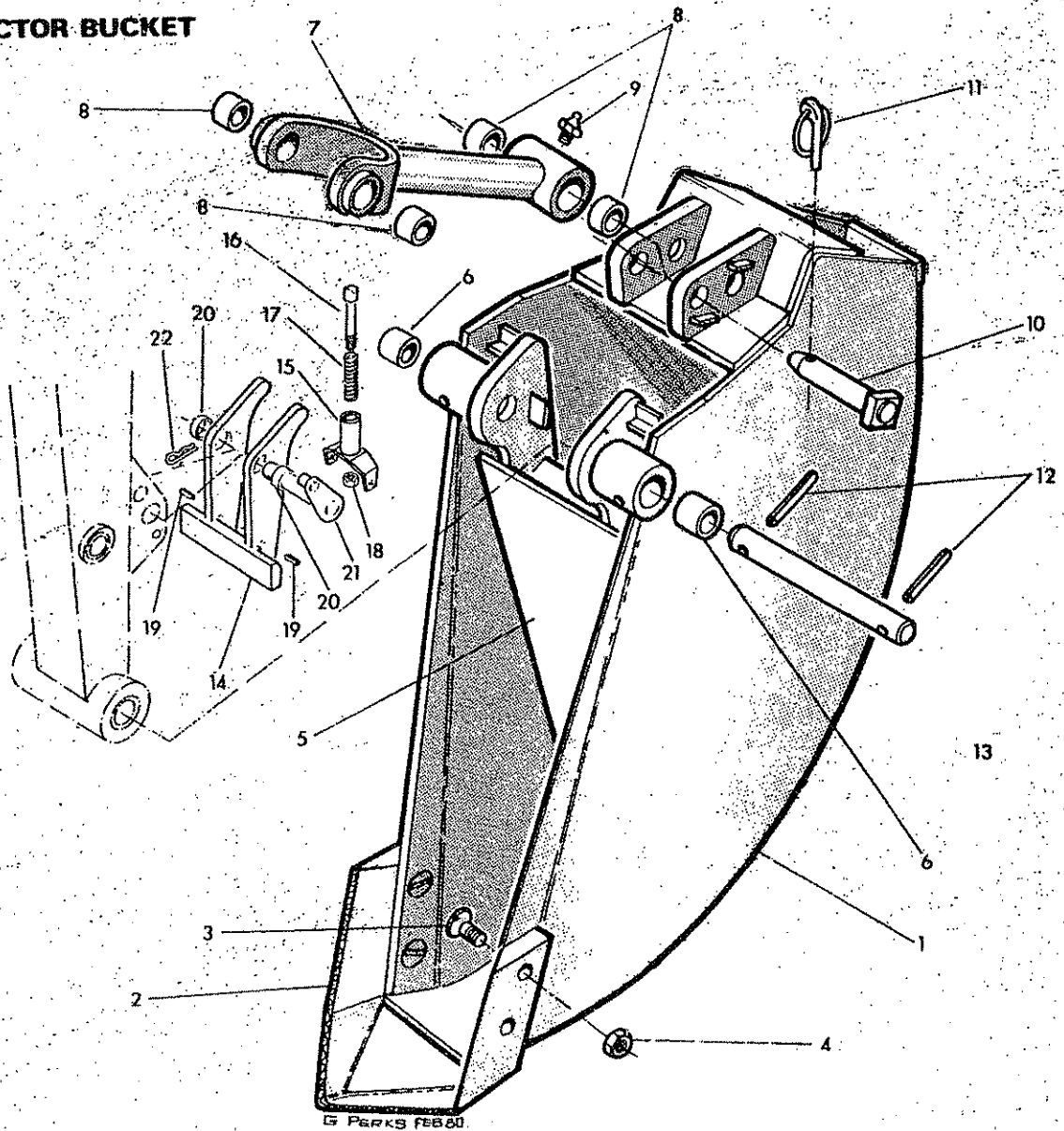
The following items are common to both bucket assemblies :-

2	72 17 259	1	1	.Side tine left hand c/w nuts, bolts etc.
3	72 17 258	1	1	.Side tine right hand c/w nuts, bolts etc.

Items 4 - 8 (inclusive) are common to both side tines.

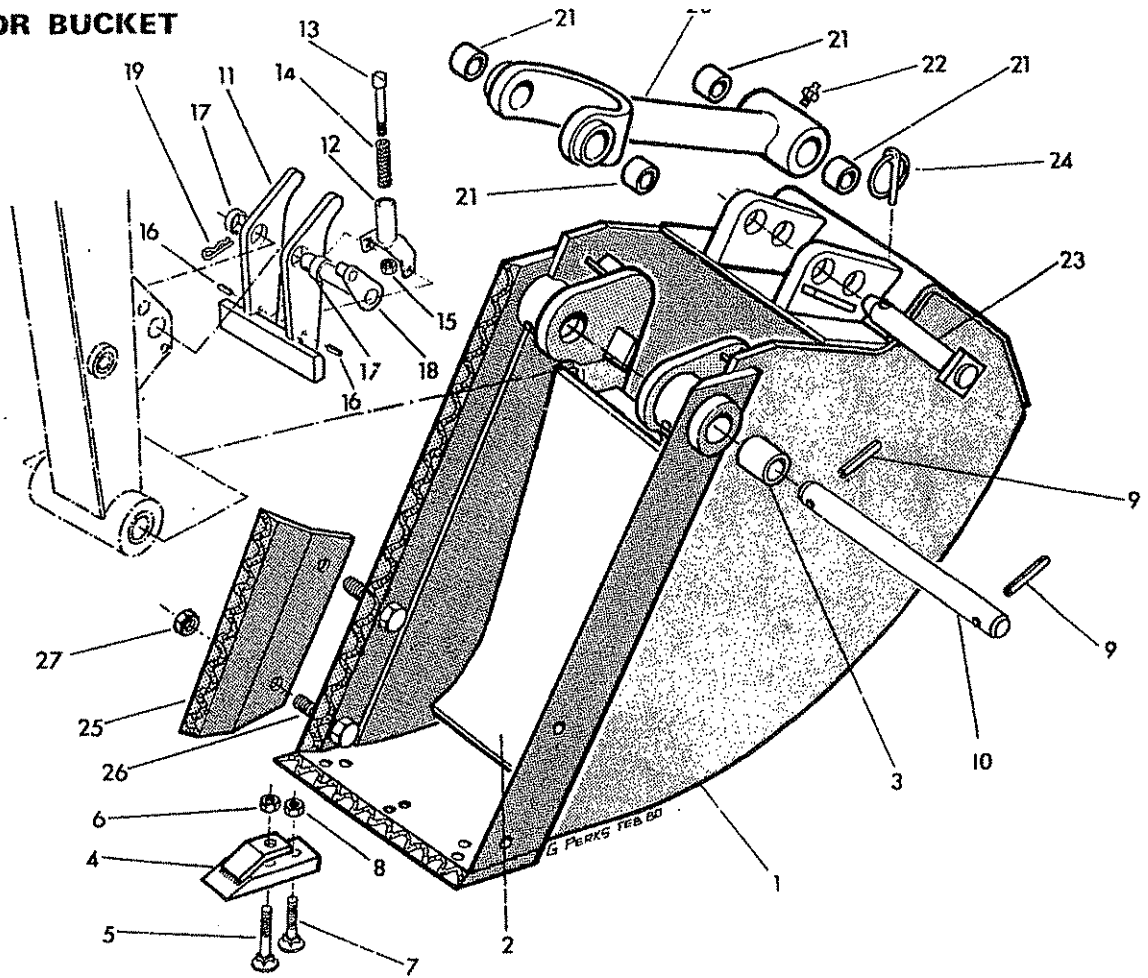
4	92 13 085	2	2	..Bolt M10 x 40 coarse
5	91 13 005	2	2	..Hexagon nut M10 coarse
6	91 00 205	2	2	..Spring washer Ø10
7	02 11 124	2	2	..Bolt 7/16 UNF x 1½" long
8	01 41 004	2	2	..Self-locking nut 7/16 UNF
9	72 17 300	2	3	.Bucket tine c/w nuts, bolts etc.
10	92 13 085	2	2	..Bolt M10 x 40 coarse
11	91 13 005	2	2	..Hexagon nut M10 coarse
12	91 00 205	2	2	..Spring washer Ø10

# 140m.m. EJECTOR BUCKET



Ref	Part No.	Qty	Description
	72 17 280		140 mm EJECTOR BUCKET
1	72 17 277	1	.Bucket
2	70 12 263	1	.Bucket shoe
3	70 12 030	4	.Special shoe screw 7/16" UNC
4	01 32 004	4	.Hexagon thin nut 7/16" UNC
5	72 17 278	1	.Ejector
6	73 12 021	2	.Bucket pivot bush
7	72 17 289	1	.Special slave link c/w bushes and greaser
8	70 12 037	4	..Bush
9	09 01 121	1	..Greaser
10	72 17 019	1	.Ram rod pivot pin c/w lynch pins
11	04 31 217	1	..Lynch pin
12	04 42 632	2	.Spirol pin
13	73 12 020	1	.Bucket pivot pin
	72 17 020	1	.Latch assembly comprising :-
14	72 17 030	1	..Latch rocker
	72 17 031	1	...Cartridge assembly comprising :-
15	72 17 032	1	...Cartridge fork
16	72 17 034	1	...Plunger
17	60 00 110	1	...Spring
18	01 11 003	1	...Hexagon nut 3/8" UNF
19	04 21 812	2	..Roll pin 1/4" diameter x 3/4" long
20	72 17 035	2	..Bush
21	72 17 036	1	..Latch pin c/w spring cotter
22	04 31 105	1	...Spring cotter

# 300m.m. EJECTOR BUCKET

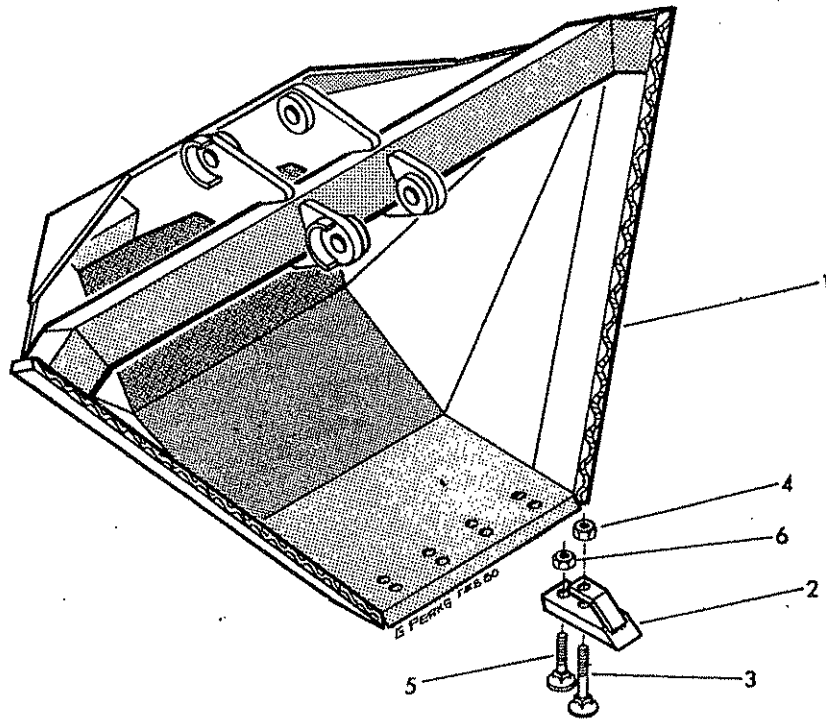


Ref	Part No.	Qty	Description
	72 17 281		300 mm EJECTOR BUCKET
1	72 17 306	1	.Bucket
2	72 17 308	1	.Ejector
3	60 12 032	2	.Bucket pivot bush
	60 12 073	3	.Tine assembly
4	60 12 033	1	..Tine
5	60 12 074	1	..Tine bolt long c/w nut
6	01 12 004	1	...Hexagon nut 7/16 UNC
7	60 12 034	1	..Tine bolt short c/w nut
8	01 12 004	1	...Hexagon nut
9	04 42 632	2	.Spirol pin
10	73 12 033	1	.Bucket pivot pin
	72 17 020	1	.Latch assembly comprising :-
11	72 17 030	1	..Latch rocker
	72 17 031	1	..Cartridge assembly comprising :-
12	72 17 032	1	...Cartridge fork
13	72 17 034	1	...Plunger
14	60 00 110	1	...Spring
15	01 11 003	1	...Hexagon nut 3/8" UNF
16	04 21 812	2	..Roll pin 1/4" diameter x 3/4" long
17	72 17 035	2	..Bush
18	72 17 036	1	..Latch pin c/w spring cotter
19	04 31 105	1	...Spring cotter
20	72 17 289	1	.Special slave link c/w bushes and greaser
21	70 17 037	4	..Bush
22	09 01 121	1	..Greaser
23	72 17 019	1	.Ram rod pivot pin c/w linch pin
24	04 31 217	1	..Linch pin

### OPTIONAL EXTRA

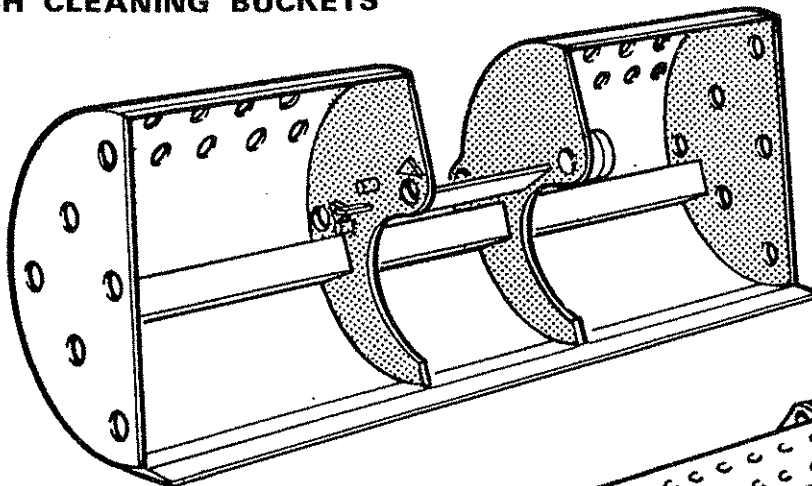
25	70 12 072	2	CHEEK PLATES c/w nuts and bolts
26	02 11 134	4	.Bolt 7/16" UNF x 1.5/8" long
27	01 41 004	4	.Self-locking nut 7/16" UNF

## WIDE 'V' BUCKET



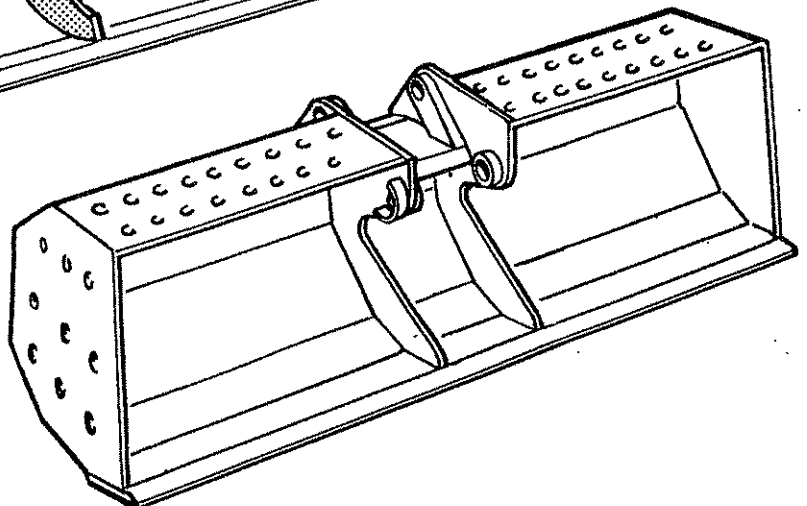
Ref	Part No	Qty	Description
	72 17 290		1240 'V' BUCKET
1	72 17 291	1	.Bucket
2	60 12 073	4	.Tine Assemblies
3	60 12 074	1	..Tine bolt long c/w nut
4	01 12 004	1	...Hexagon nut 7/16 UNC
5	60 12 034	1	..Tine bolt short c/w nut
6	01 12 004	1	...Hexagon nut 7/16 UNC

## DITCH CLEANING BUCKETS

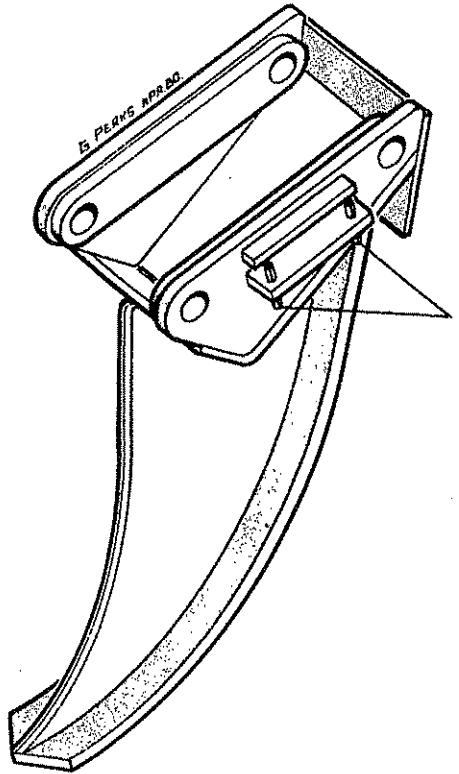


72 17 270  
1.5 METRE DITCH  
CLEANING BUCKET

73 12 320  
1.2 METRE DITCH  
CLEANING BUCKET



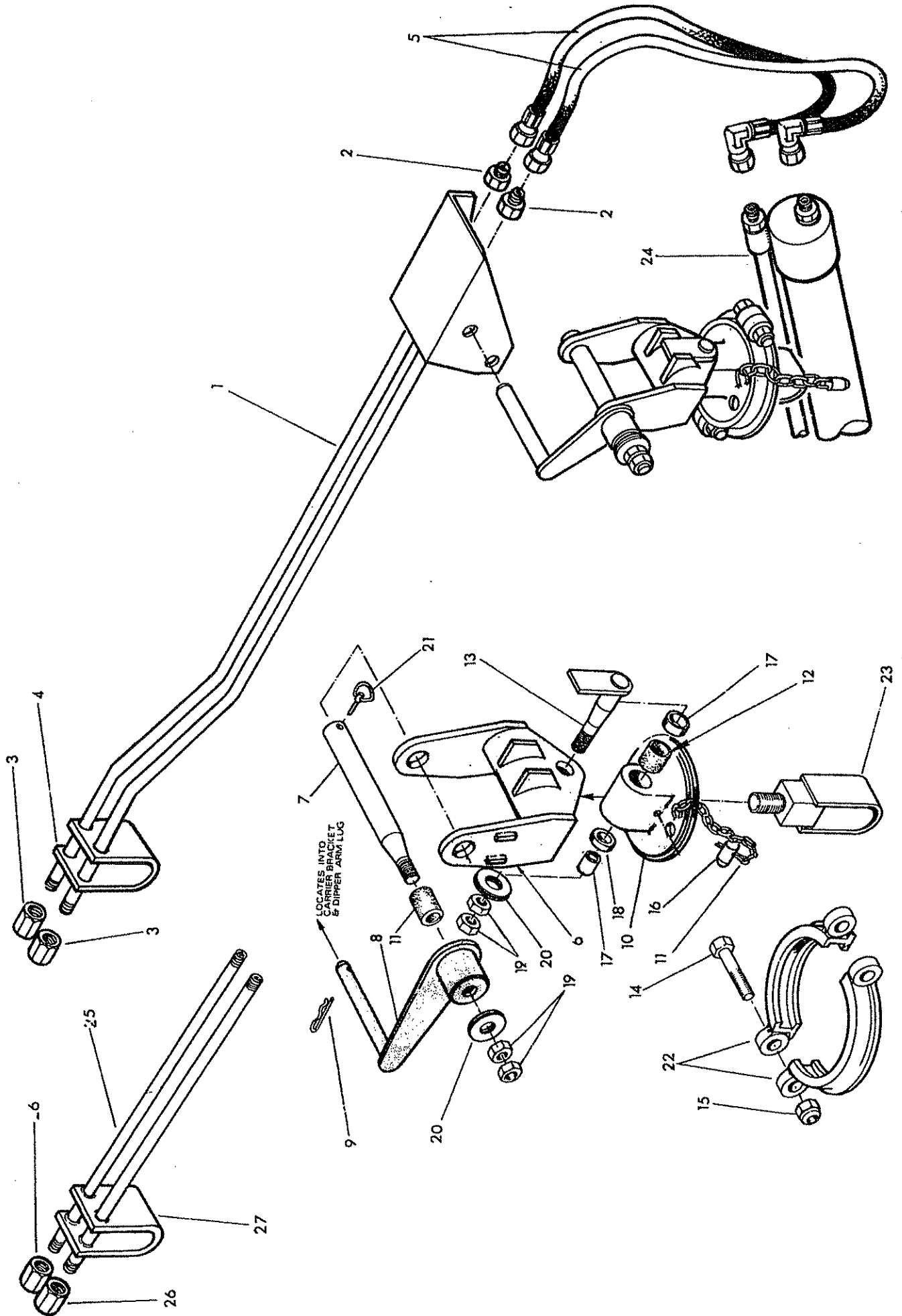
# PICK TINE



<u>Ref</u>	<u>Part No.</u>	<u>Qty</u>	<u>Description</u>
	73 12 315		PICK TINE ASSEMBLY
1	04 22 732	2	.Spring dowel 7/16" diameter x 2" long



# GRAB SWIVEL, RAM & PIPES



Ref	Part No.	Qty	Description
	73 12 371		K44 KNUCKLE, GRAB RAM AND PIPES FOR STANDARD ARM
1	73 12 366	1	.Carrier bracket c/w fittings
* 2	70 14 020	2	..End fitting
* 3	81 06 013	2	..Straight socket 3/8" BSP
4	73 12 103	1	..'U' bracket
5	85 31 223	2	.Hose 3/8" BSP S-F 90°F 59" long
	73 12 294	1	.Grab suspension swivel K44 comprising:-
■ 6	73 12 295	1	..Universal jaw
7	73 12 024	1	..Suspension swivel pin
8	73 12 296	1	..Torque arm c/w spring cotter
9	04 31 105	1	...Spring cotter
10	71 05 324	1	..Swivel plate c/w pins
11	05 03 083	1	...Split pin
12	71 05 071	2	..Friction sleeve
13	71 05 072	1	..Swivel pin
14	02 11 186	2	..Bolt 5/8" UNF x 2.1/4" long
15	01 51 006	2	..Thin aeronut 5/8" UNF
16	71 05 076	1	..Locating pin
17	73 12 072	1	..Steel bush
18	70 12 037	2	..Spring steel bush
19	01 31 006	4	..Locknut 5/8" UNF
20	70 14 027	4	..Spring disc
21	04 31 217	1	..Linch pin
22	71 05 326	2	..Clamp half
23	73 12 073	1	..G.C.M. safety strap
24	70 16 279	1	.Grab ram assembly complete (see page 103 )
	73 12 372		K44 KNUCKLE, GRAB RAM AND PIPES FOR EXTENDED DIPPER ARM

The parts lists for the extended assemblies are identical to their standard counterpart with the addition of :-

25	73 12 361	1	.Pipe extension c/w fittings
▲ 26	81 06 013	2	..Straight socket 3/8" BSP
27	73 12 103	1	..'U' bracket

\* Assembled onto item 1 with jointing tape

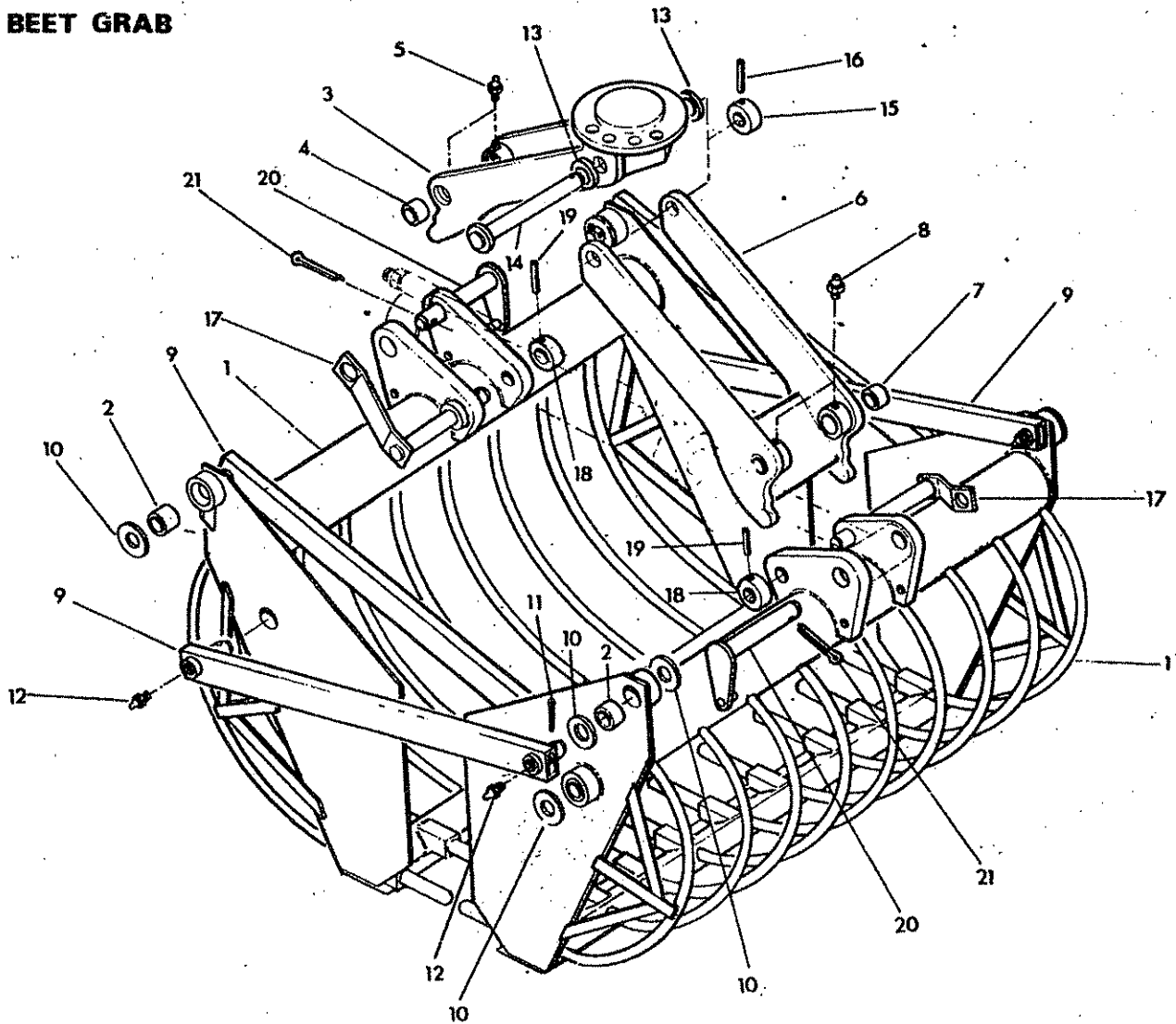
▲ Assembled onto item 25 with jointing tape

■ Spares Note. Supply as a spare together with :-

1 off item 16 73 12 070 Bush

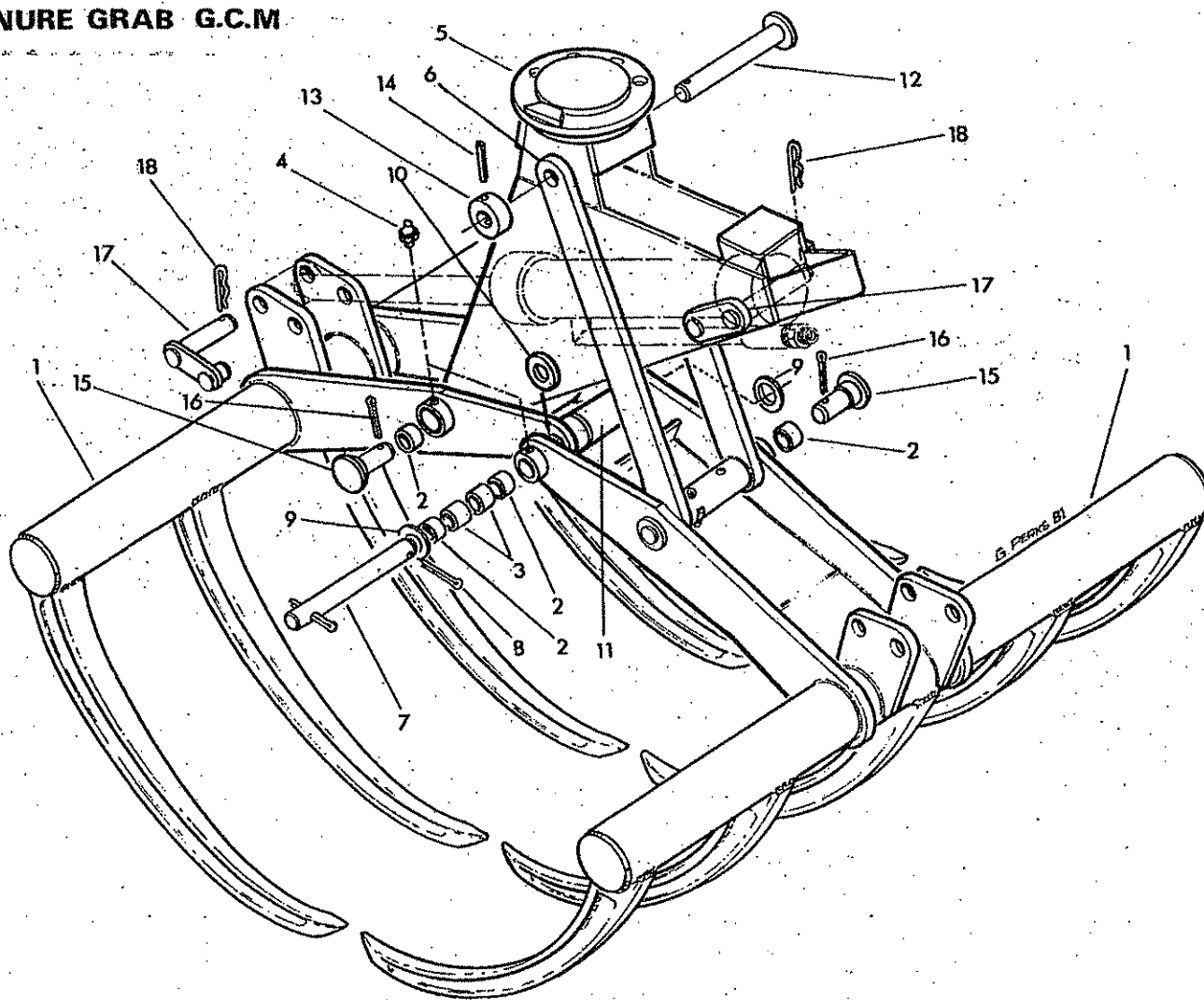
1 off item 17 70 12 037 Spring steel bush

# BEET GRAB



Ref	Part No	Qty	Description
	70 16 300		BEET GRAB ASSEMBLY
1	70 16 301	2	.Beet grab half c/w bush
2	60 12 032	4	..Bush
3	70 16 303	1	.Suspension link fixed c/w bushes & greasers
4	60 12 032	2	..Bush
5	09 01 121	2	..Greaser 1/8" BSP - straight
6	70 16 305	1	.Suspension link c/w bushes & greasers
7	60 12 032	2	..Bush
8	09 01 121	2	..Greaser 1/8" BSP - straight
9	70 16 039	4	.Cross link c/w washers, split pin etc
10	70 16 041	4	..Washer 1 1/4" dia.
11	05 03 206	2	..Split pin 1/4" dia x 2 1/2" long
12	09 01 121	2	..Greaser 1/8 BSP - straight
13	70 16 044	2	.Spacer
14	70 16 045	1	.Suspension link pin c/w collar & spring dowel
15	70 16 046	1	..Collar
16	04 21 628	1	..Spring dowel 3/16" dia x 1 3/4" long
17	70 16 047	2	.Suspension link pin lower c/w collar & spring dowel
18	70 16 049	1	..Collar
19	04 21 632	1	..Spring dowel 3/16" x 2" long
20	70 16 054	2	.Ram locating pin c/w split pin
21	05 03 165	1	..Split pin 3/16" dia x 2" long

# MANURE GRAB G.C.M

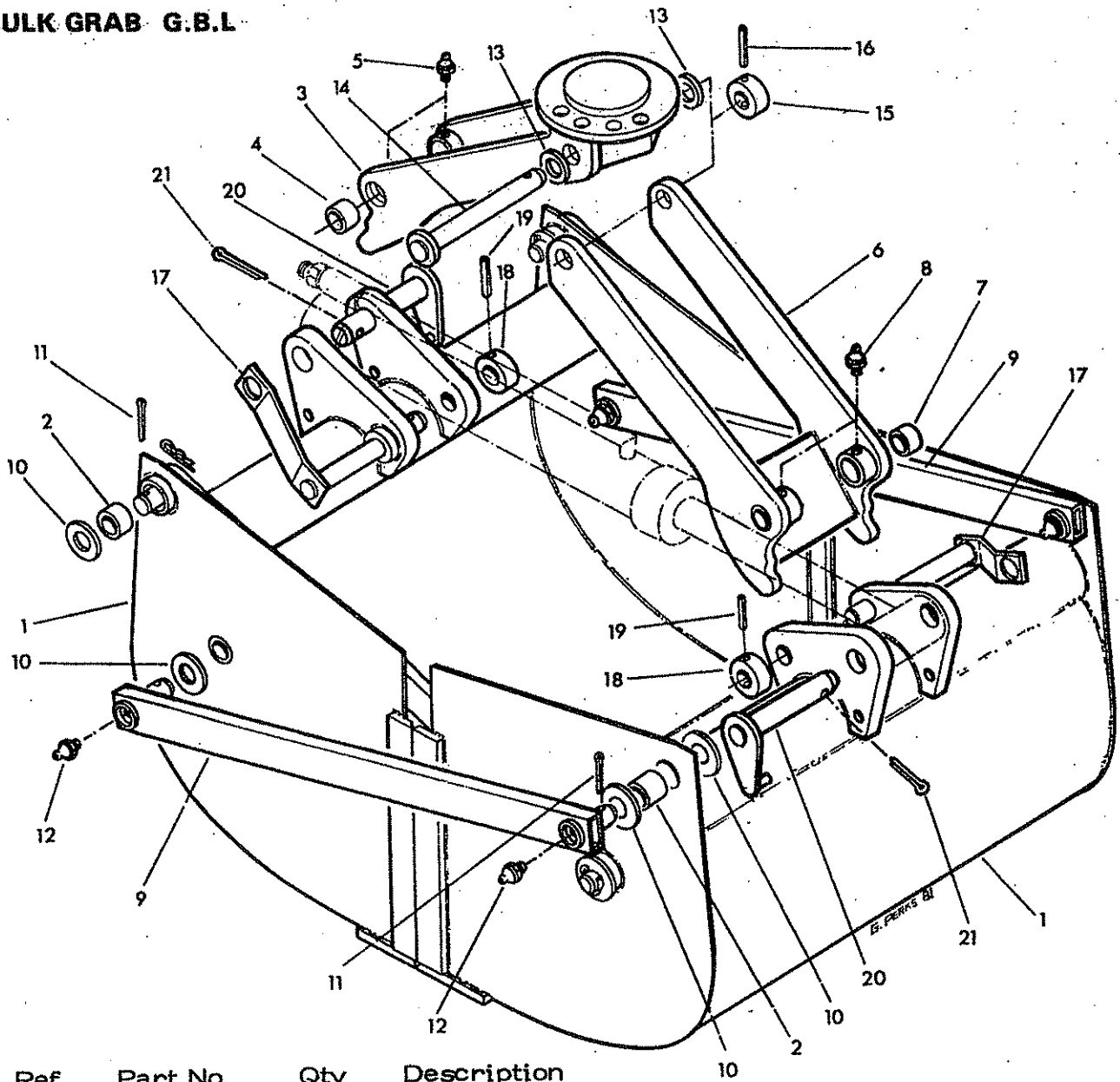


Ref	Part No	Qty	Description
	70 16 320		MANURE GRAB ASSEMBLY G.C.M.
1	70 16 321		.Grab half c/w bushes & greasers
2	71 01 134	1	..Bush
3	60 12 032	3	..Bush
4	09 01 121	4	..Greaser 1/8 BSP - straight
5	72 14 302	1	.Suspension frame
6	70 16 322	1	.Suspension link
7	70 16 055		.Joint pin c/w split pin & washer
8	05 03 165	2	..Split pin 3/16" dia x 2"
9	70 16 041	2	..Washer $\phi$ 32
10	70 16 056	2	.Spacer
11	70 16 058	1	.Spacer
12	70 16 057	1	.Suspension link pin c/w collar & dowel
13	72 14 068	1	..Collar
14	04 21 628	1	..Spring dowel 3/16" dia x 1 3/4" long
15	70 16 059	4	.Pivot pin c/w Split pin
16	05 03 165	1	..Split pin 3/16" dia x 2" long
17	72 14 071	2	.Ram pin
18	04 31 105	2	.Spring cotter

## OPTIONAL EXTRA

70 14 287	2	Slurry plate c/w hook & spring cotter
70 14 071	2	Attachment hook
04 31 105	2	Spring cotter

**BULK GRAB G.B.L.**



Ref	Part No	Qty	Description
	70 16 310		<b>BULK GRAB ASSEMBLY G.B.L.</b>
1	70 16 311	2	.Grab half c/w bushes
2	60 12 032	4	..Bush
3	70 16 303	1	.Suspension link fixed c/w bushes & greasers
4	60 12 032	2	..Bush
5	09 01 121	2	..Greaser 1/8 BSP - straight
6	70 16 305	1	.Suspension link c/w bushes & greasers
7	60 12 032	2	..Bush
8	09 01 121	2	..Greaser 1/8 BSP - straight
9	70 16 039	4	.Cross link c/w washers, split pin etc
10	70 16 041	4	..Washer 1 1/4" dia.
11	05 03 206	2	..Split pin 1/4" dia x 2 1/2" long
12	09 01 121	2	..Greaser 1/8" BSP - straight
13	70 16 044	2	.Spacer
14	70 16 045	1	.Suspension link pin c/w collar & spring dowel
15	70 16 046	1	.Collar
16	04 21 628	1	..Spring dowel 3/16" dia x 1 1/4" long
17	70 16 047	2	.Suspension link pin lower c/w collar & spring dowel
18	70 16 049	1	..Collar
19	04 21 632	1	..Spring dowel 3/16" dia x 2" long
20	70 16 054	2	.Ram locating pin c/w split pin
21	05 03 165	1	..Split pin 3/16" dia x 2" long

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# **F W McConnell Ltd**

*agricultural & industrial machinery*

Registered office: Temeside Works  
Ludlow, Shropshire, SY8 1JL England

*registered number 305192 England*

*telephone: Ludlow 3131 (std 0584)*

*telex: 35313*

