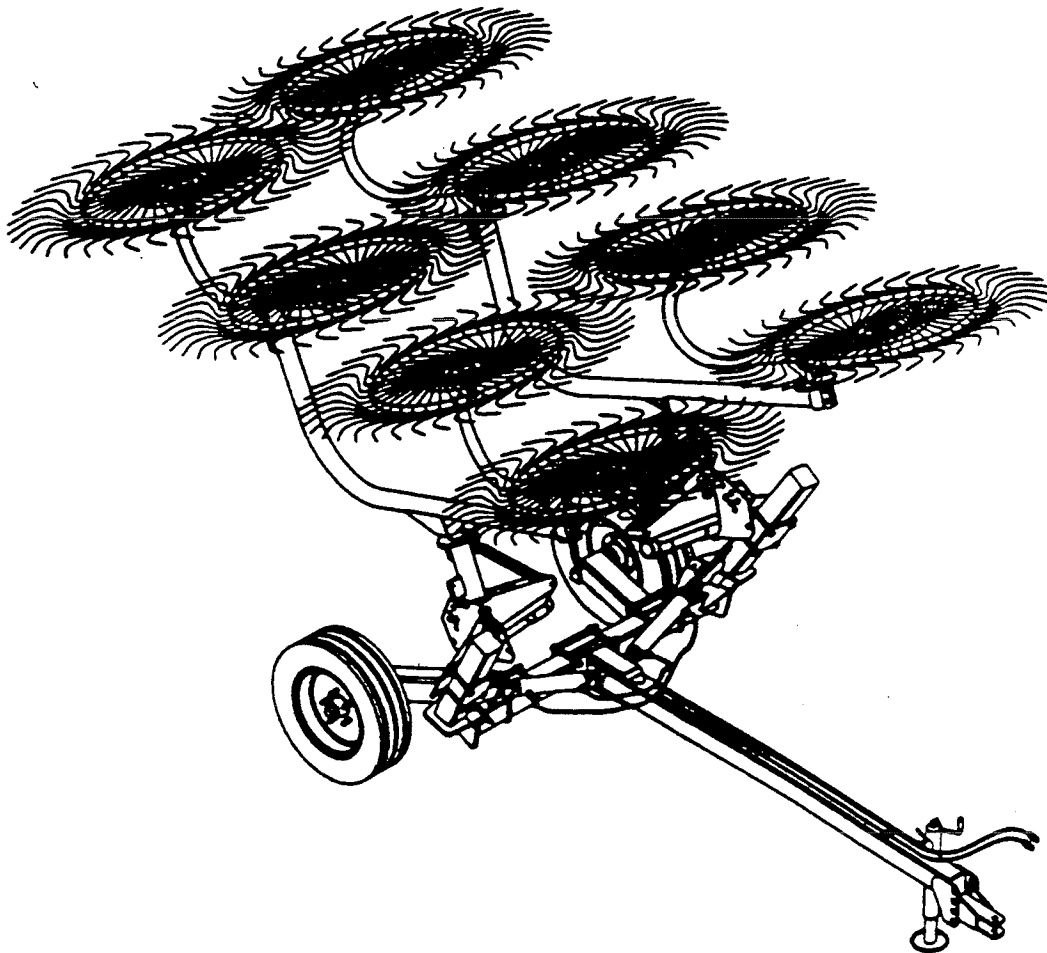


AG EQUIPMENT



U S A

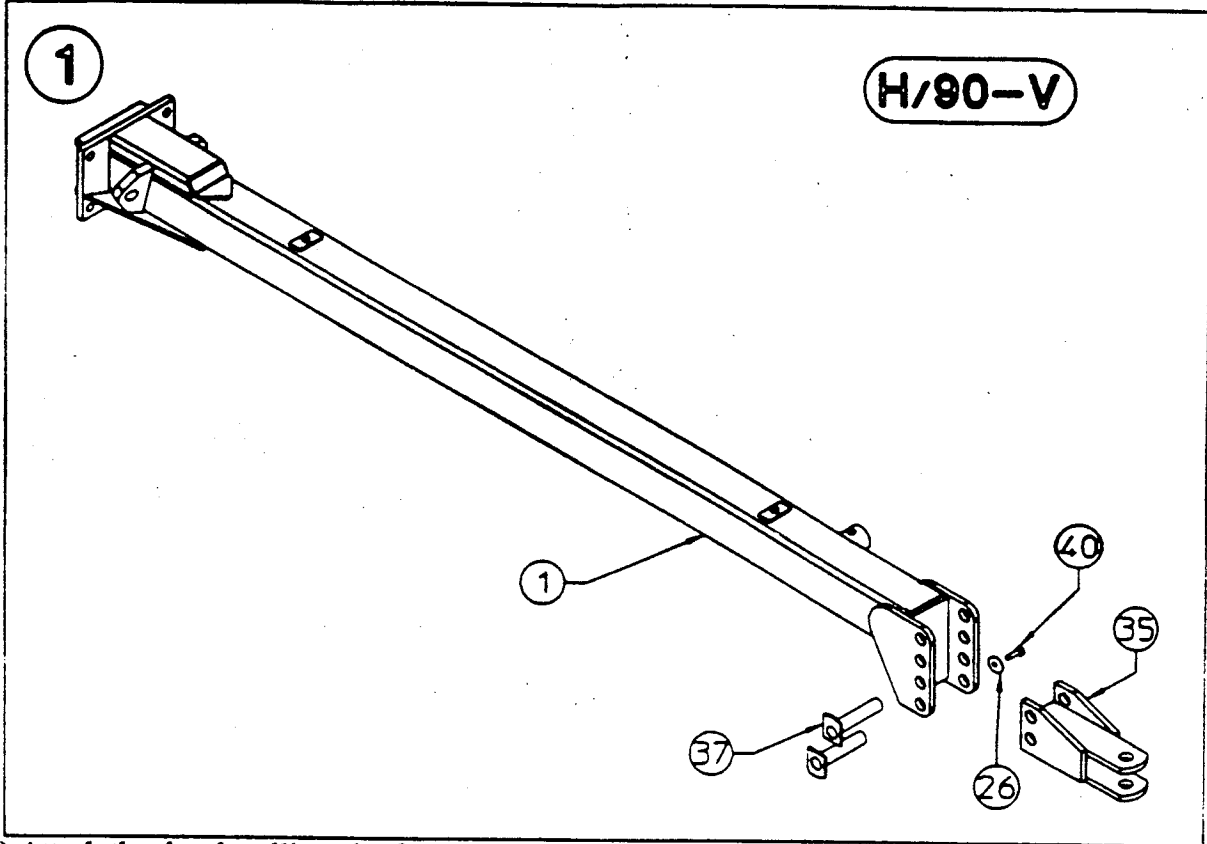
**ASSEMBLING USE AND
MAINTENANCE
SPARE PARTS LIST**



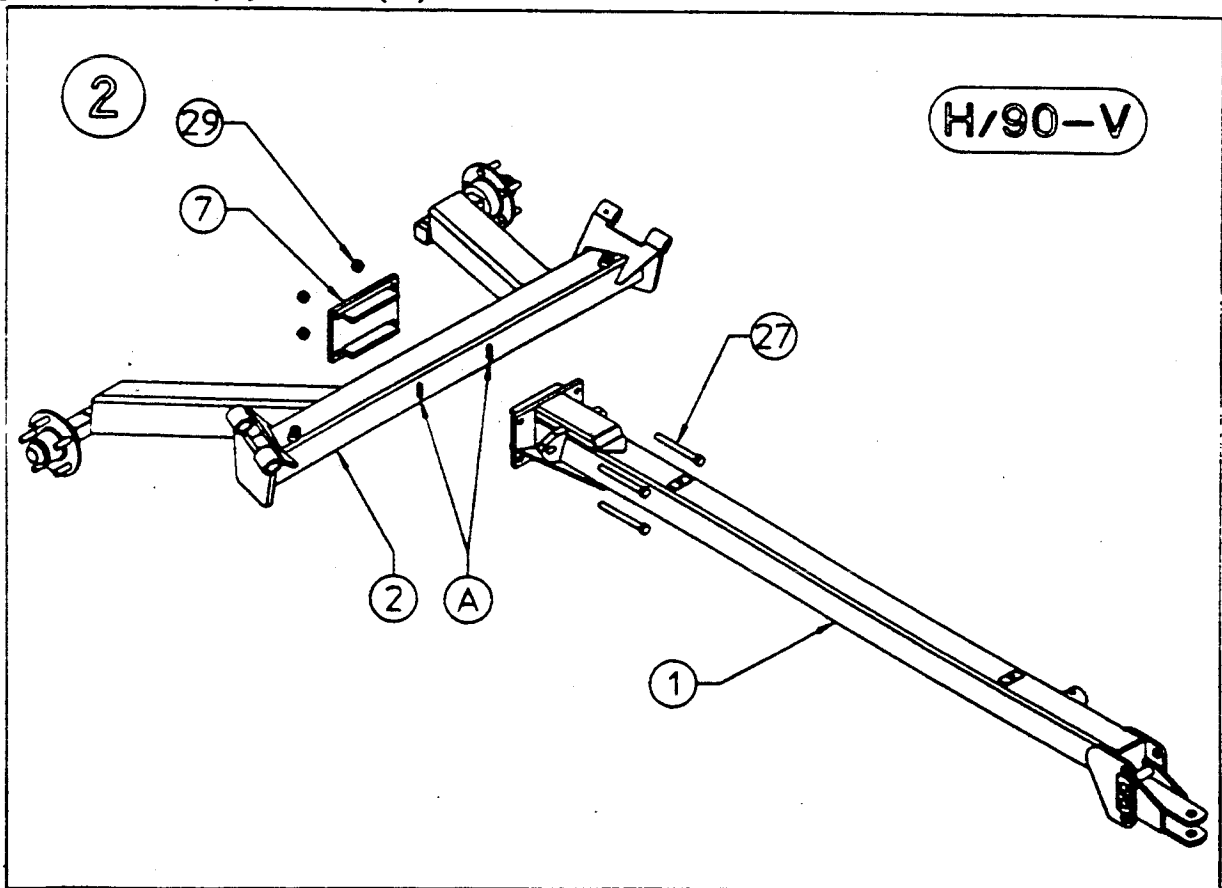
H/90-V 8
10
12

ASSEMBLY

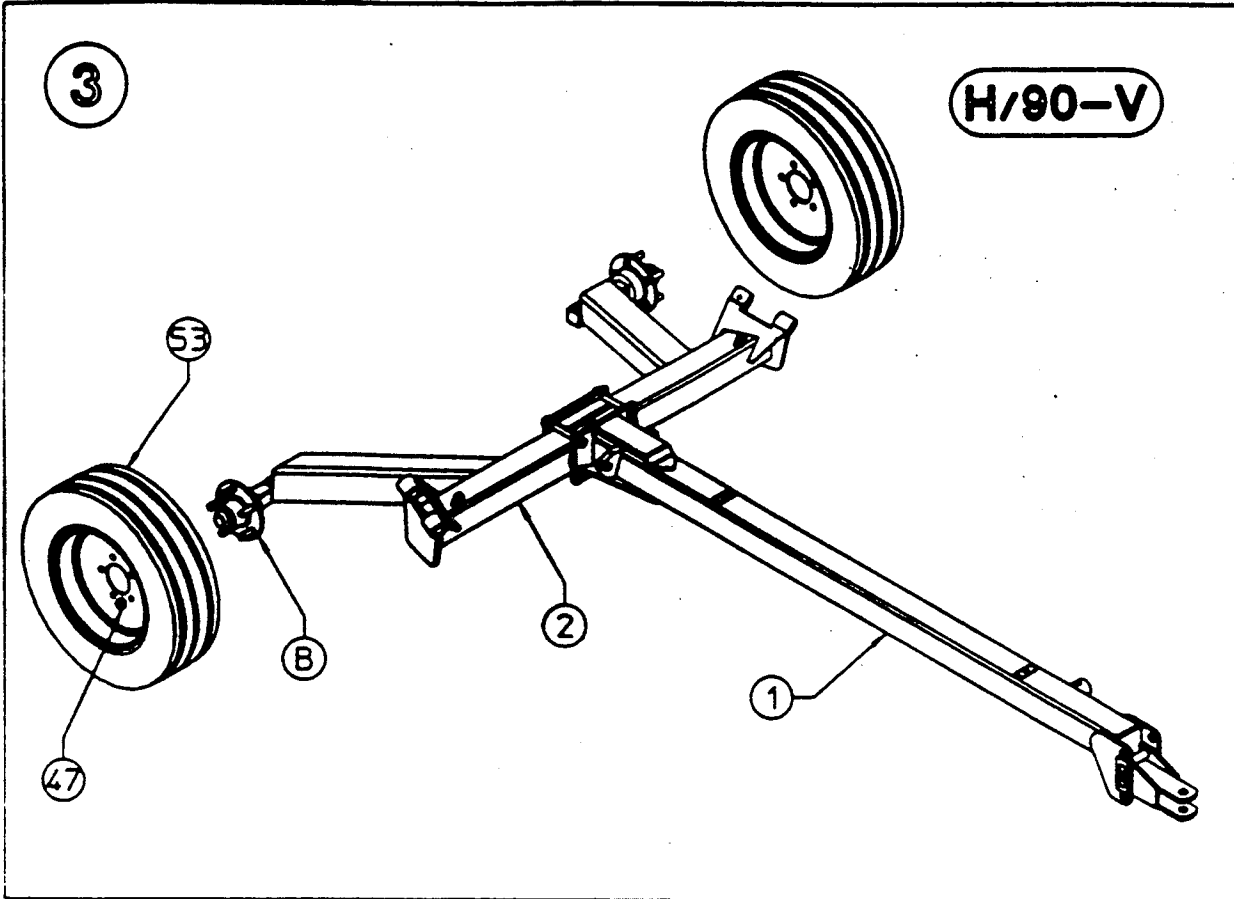
1) Attach the tractor hitch (35) to the drawbar (1) using the two pins (37), fastening with the screws (40) and washers (26).



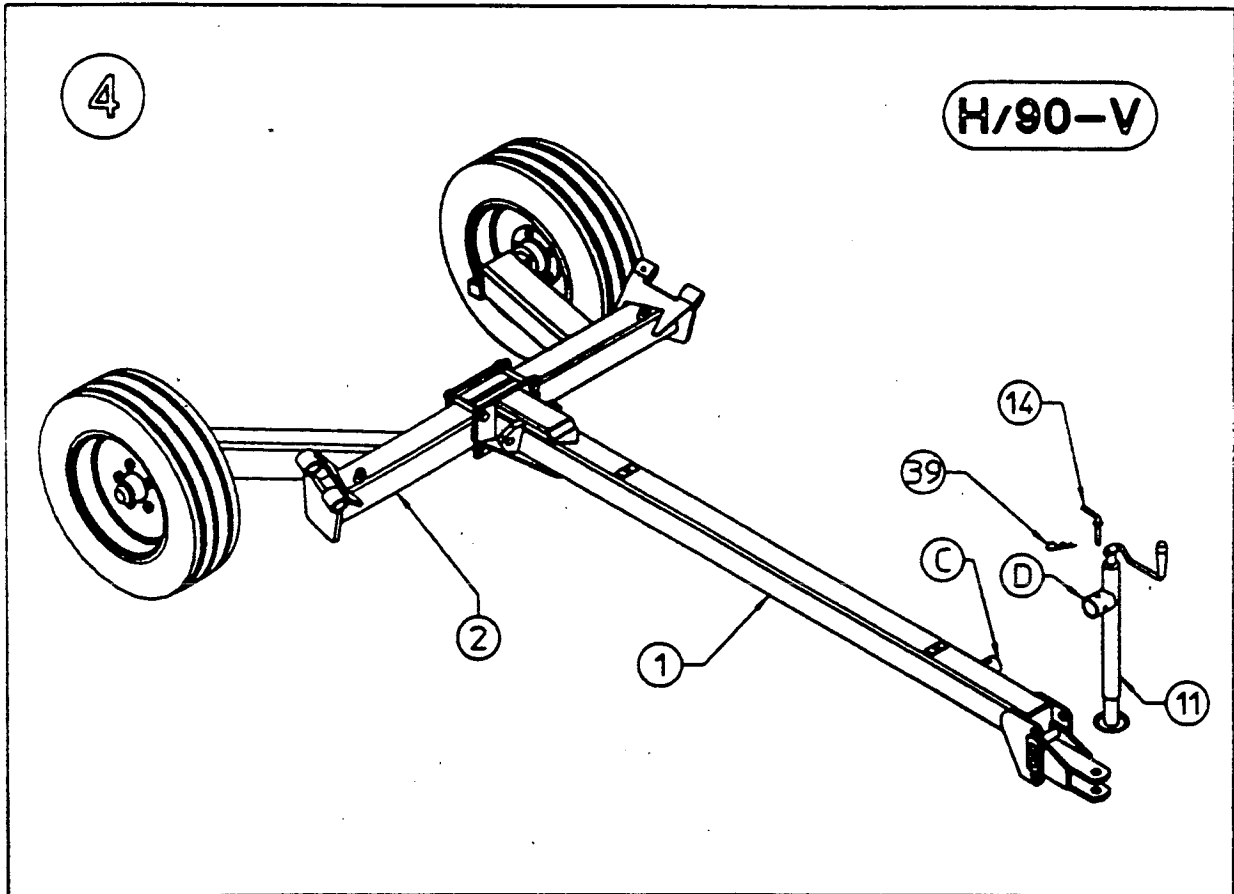
2) Attach the drawbar (1) to the frame (2) centering it between plates (A) and fastening it with the plate (7), screws (27) and nuts (29).



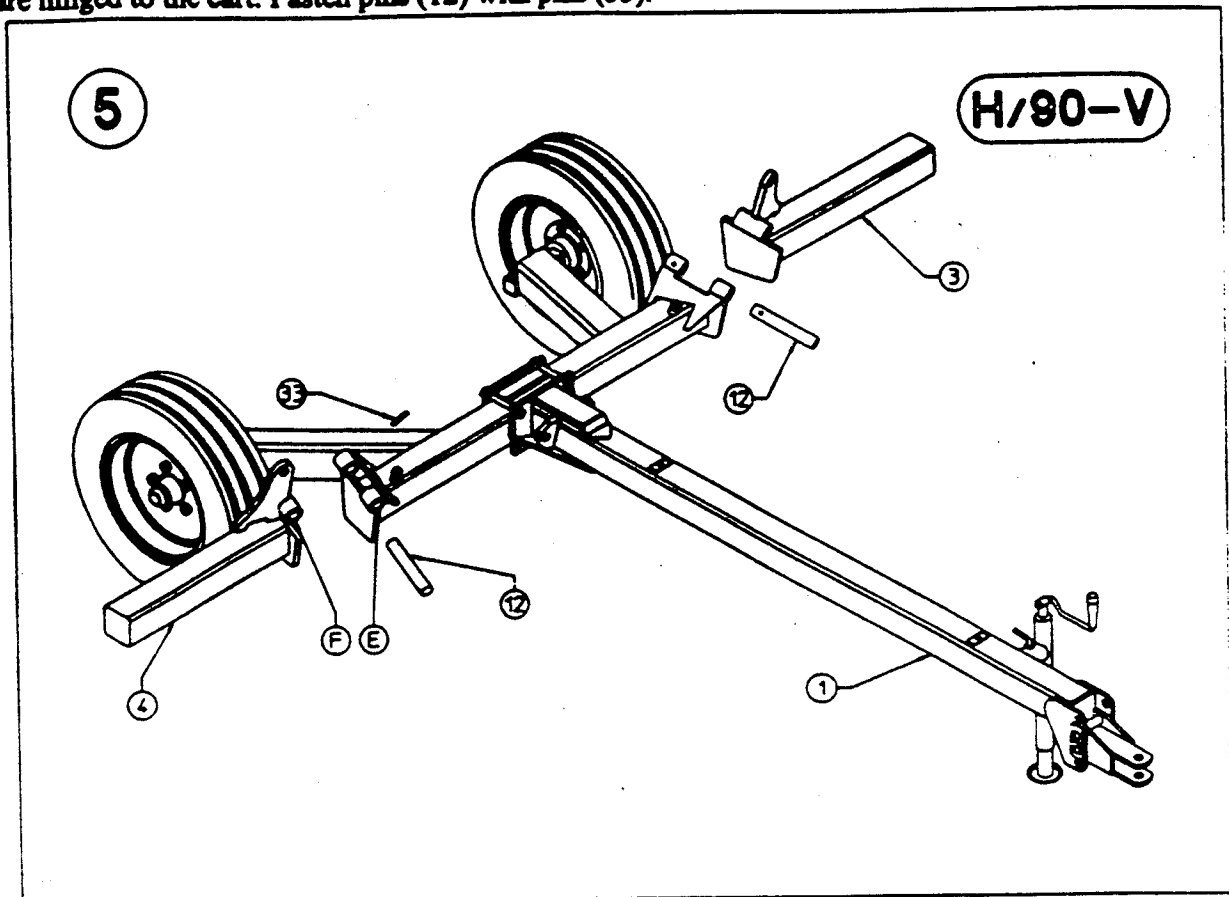
3) Mount wheels (53) to hubs (B) on frame (2) using nuts (47).



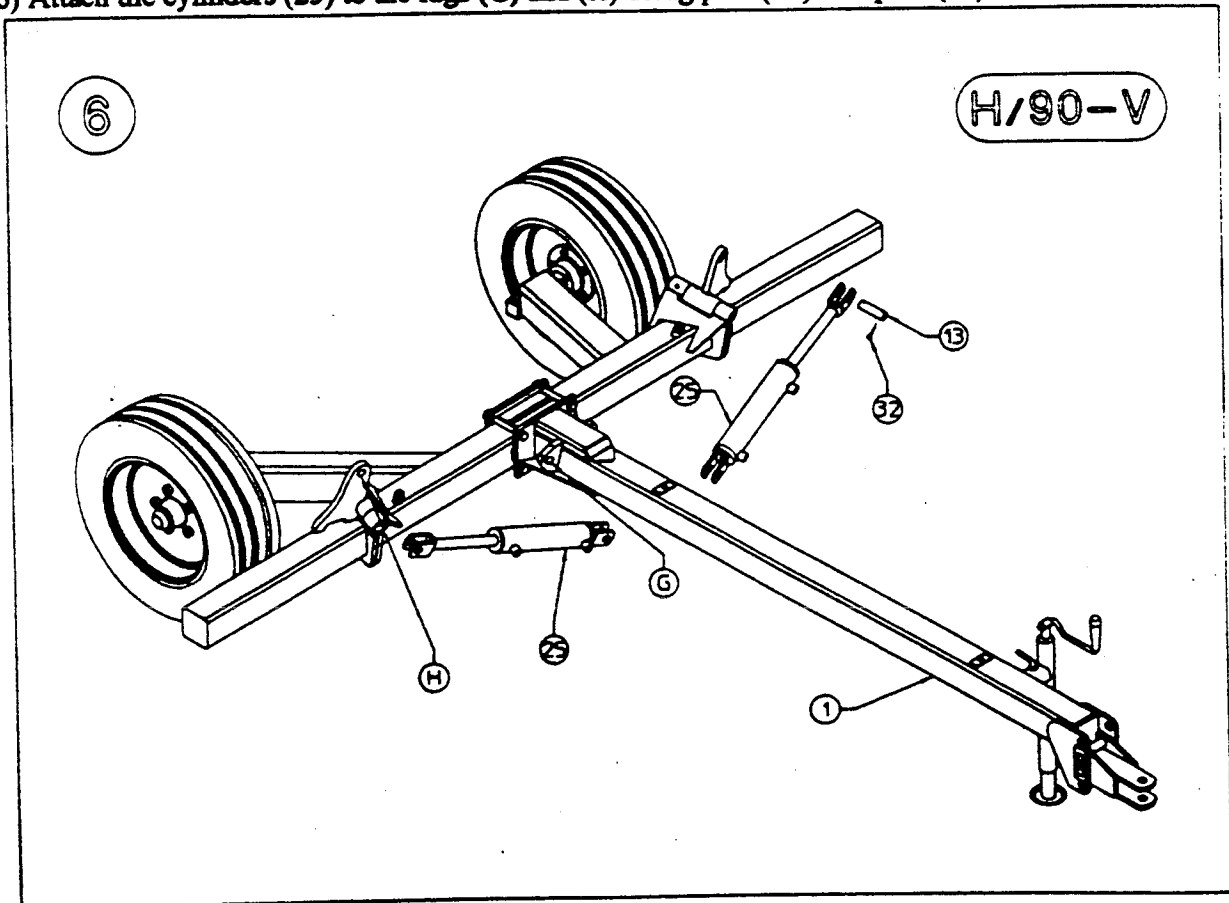
4) Attach mount (D) of the drawbar parking stand (11) to pin (C) on drawbar (1) and fasten with pins (14) - (39)



5) Insert pins (12) into holes (E) on the cart and holes (F) on the arms (3) - (4), so that arms (3) - (4) are hinged to the cart. Fasten pins (12) with pins (33).

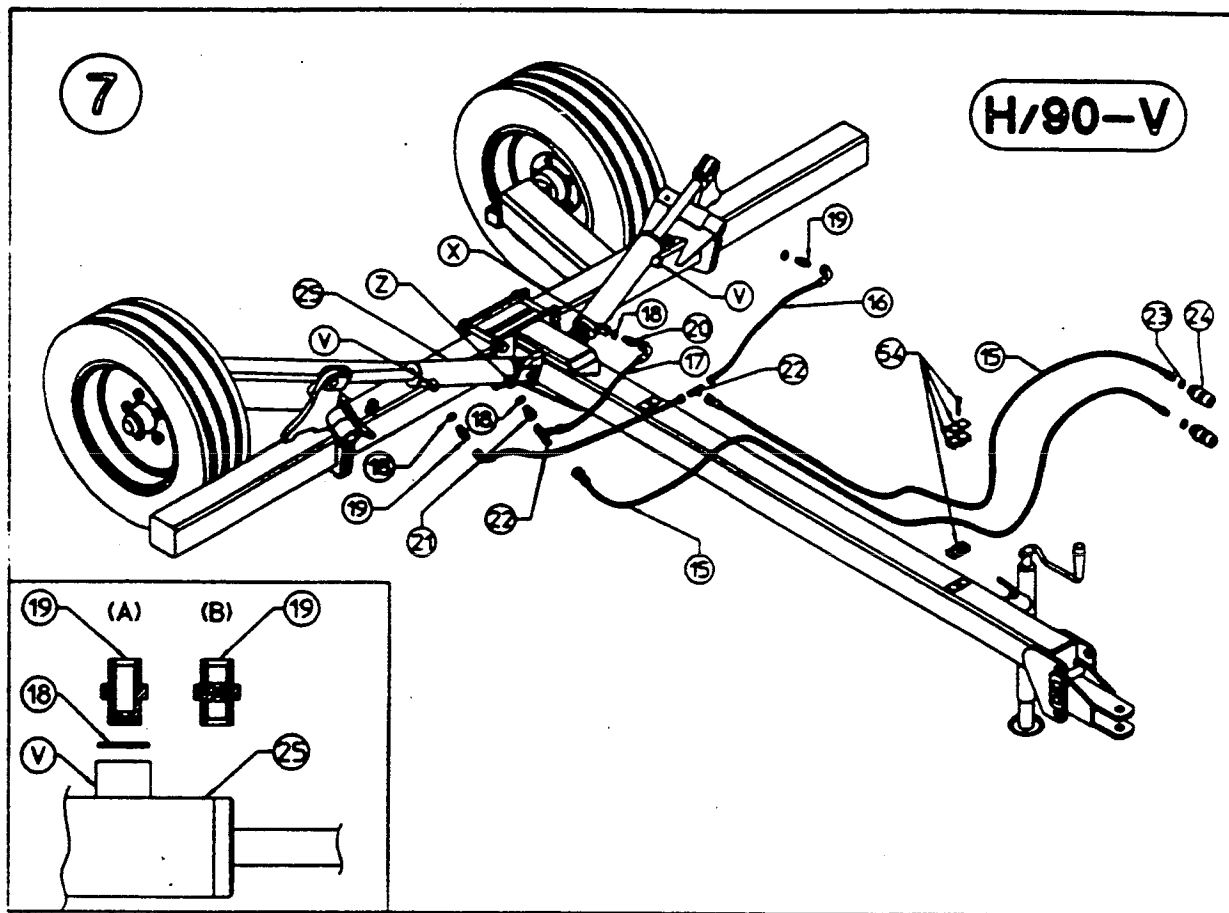


6) Attach the cylinders (25) to the lugs (G) and (H) using pins (13) and pins (32)

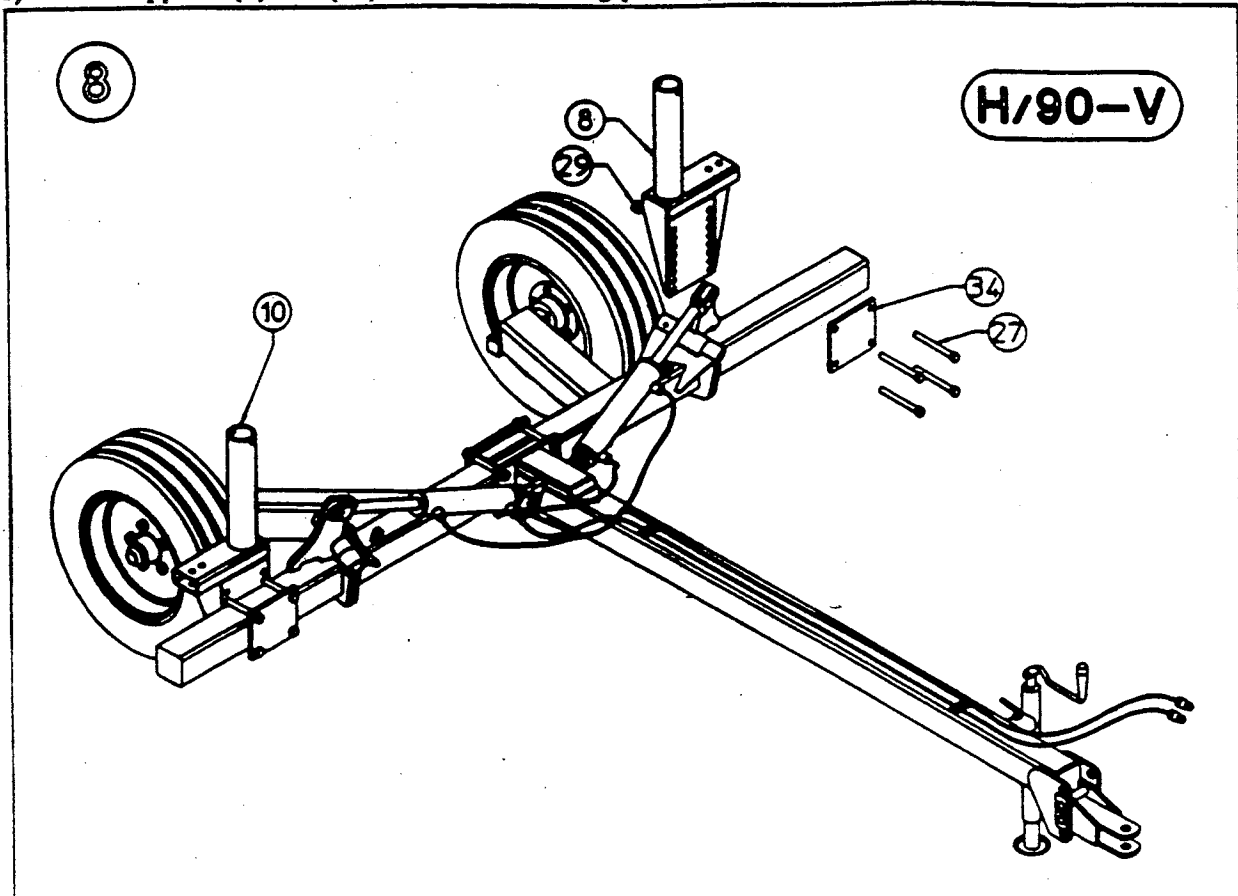


HYDRAULIC SYSTEM ASSEMBLY

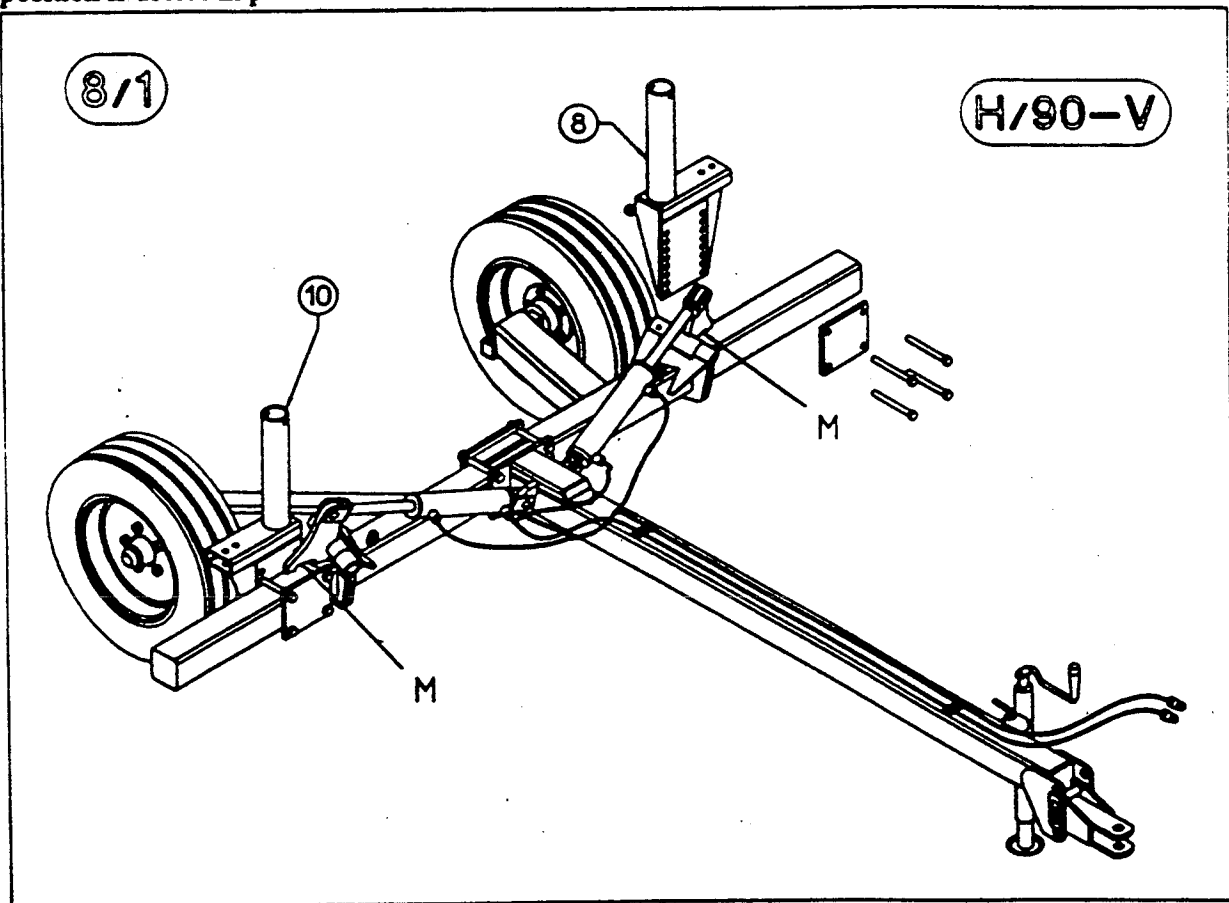
- a) Attach washers (18) and the reducer nipples (19) at holes V on cylinders (25). If the reducer nipple (19) is an "A" type, attached the side with the reduced hole towards hole V on cylinders (25). If nipple (19) is a "B" type, either side can be connected (See detail).
- b) Attach the curved end of pipes (16) to the reducer nipples (19) and join them at them at center with pipe union (22).
- c) Attach washer (18) and the normal hole nipple (20) at holes X on cylinder (25).
- d) Attach washer (18) the rotating union (21) and union (22) to hole (Z) on the other cylinder (25).
- e) Connect the curved end of pipe (17) to nipple (20) and the straight end to union (22)
- f) Connect the rotating female ends of pipes (15) to union (22)
- g) Place washers (23) and connect the quick-release coupling (24) to the straight male ends of pipes (15)
- h) Check to make sure that all connections are correctly fastened.
- i) Attach the hose collar (54) to the lugs on drawbar, fastening on correctly position (see step 9)



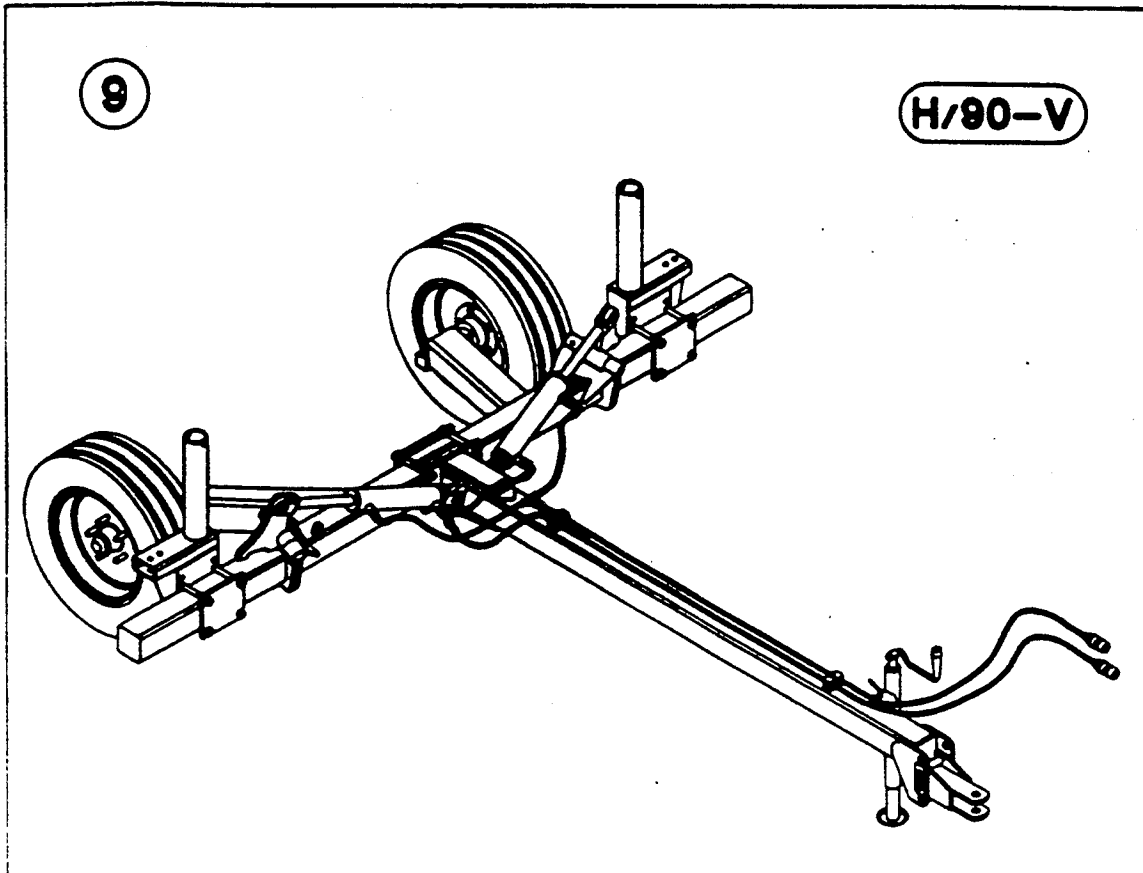
8) Fasten supports (8) and (10) to the frame using plates (34), screws (27) and nuts (29)



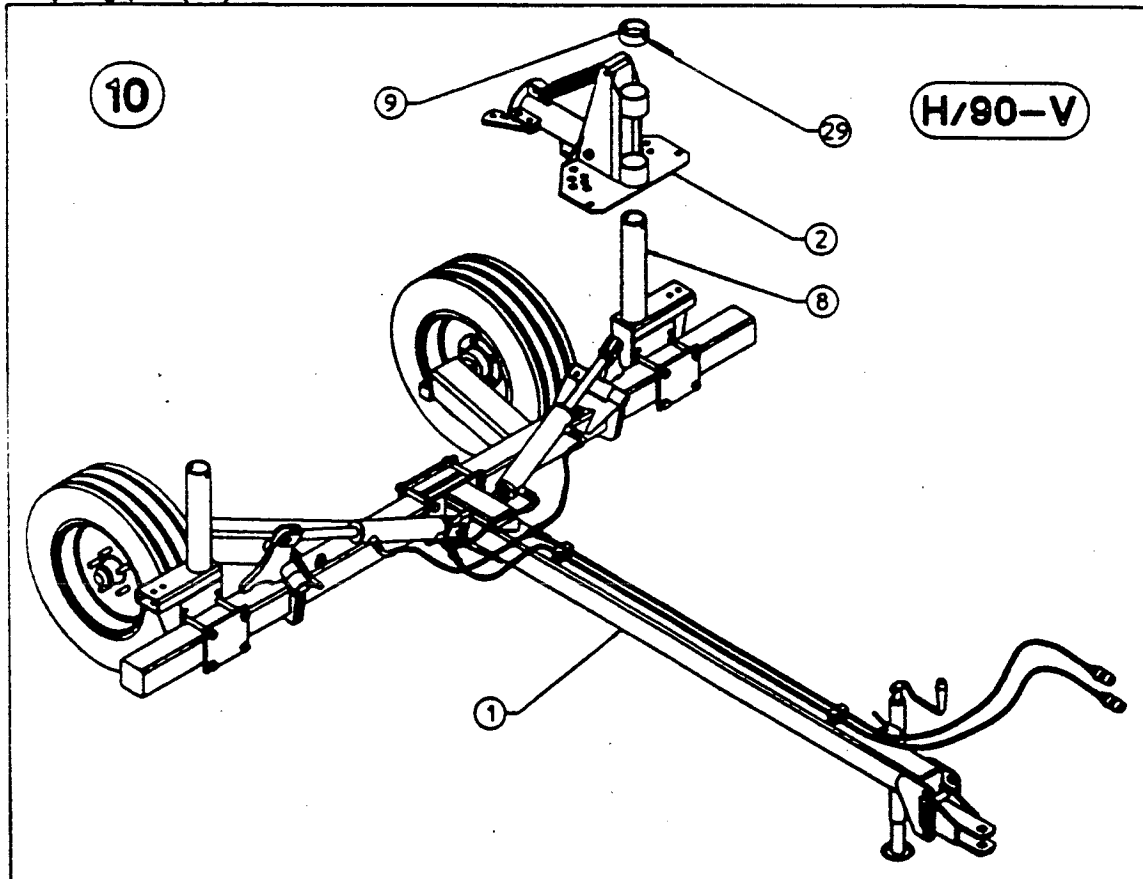
8/1) Supports (8) and (10) can also be attached by passing the screws through slot (M). This position is useful in particular for model V/8.



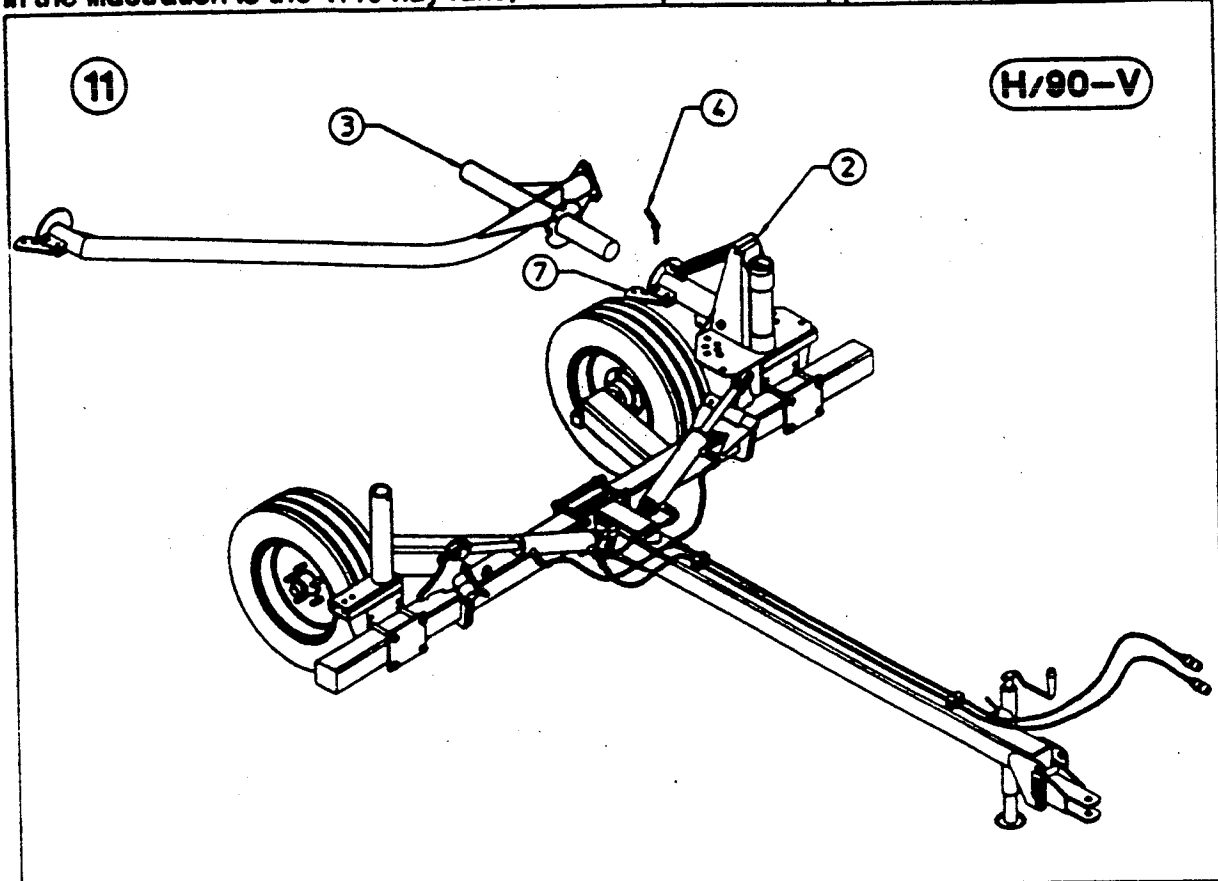
9) The H/90 cart is now completely assembled and we can begin the assembly of the hay rakes.



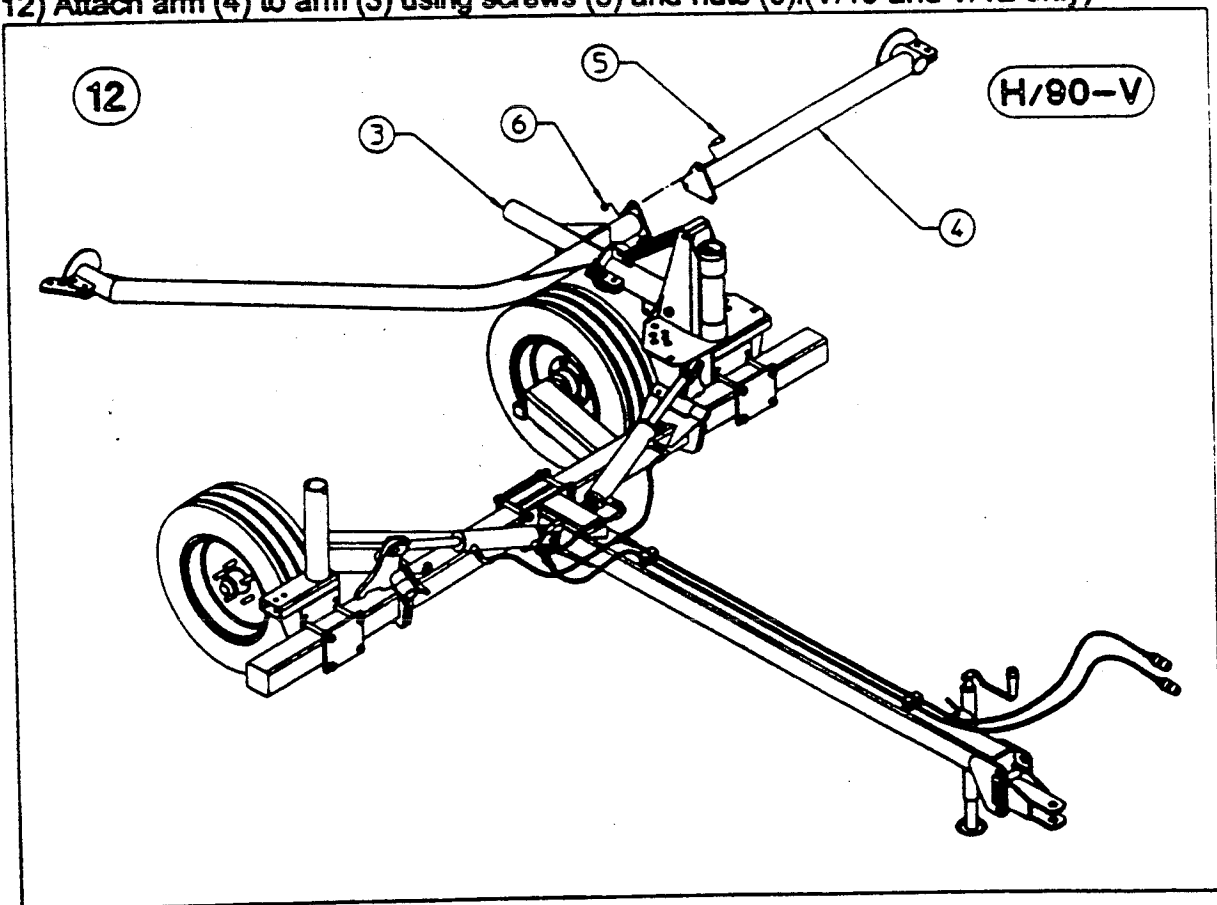
10) Place the pivoting bracket (2) over support (8), fastening it with the bushing (9) and the spring pin (29).



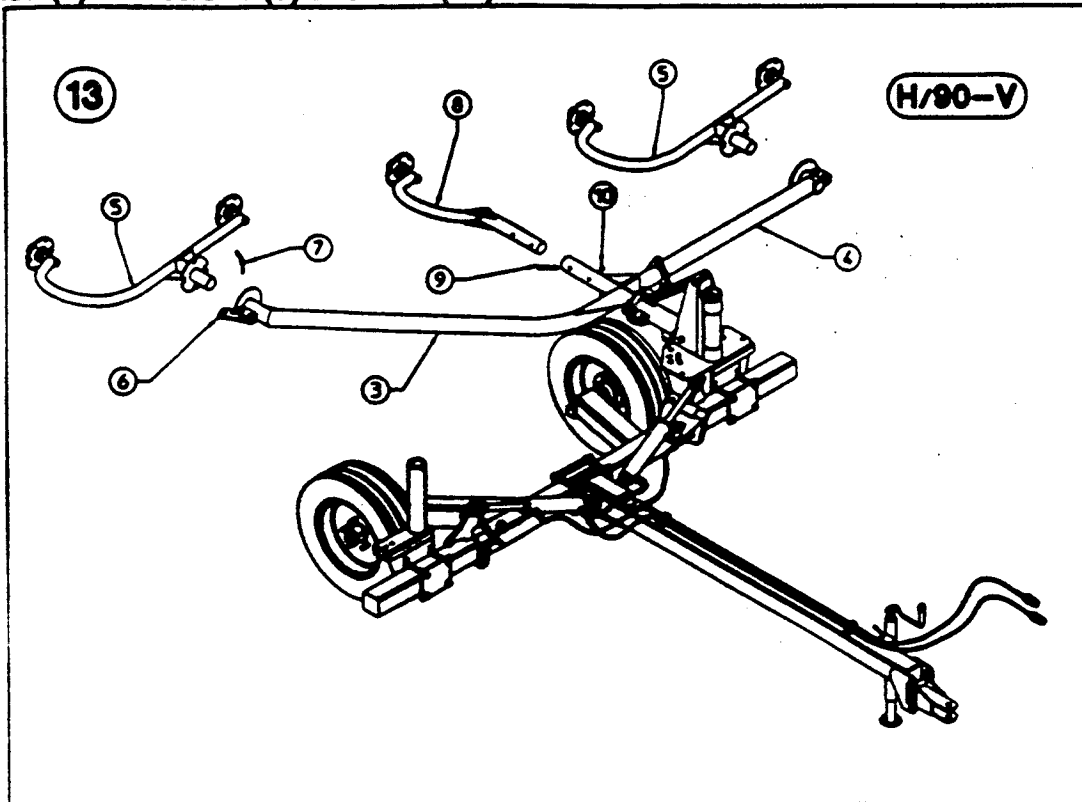
11) Attach arm (3) to the pivoting bracket (2) and fasten with lever (7) and pin (4). Shown in the illustration is the V/10 hay rake; the same procedure applies to the V/8 and V/12.



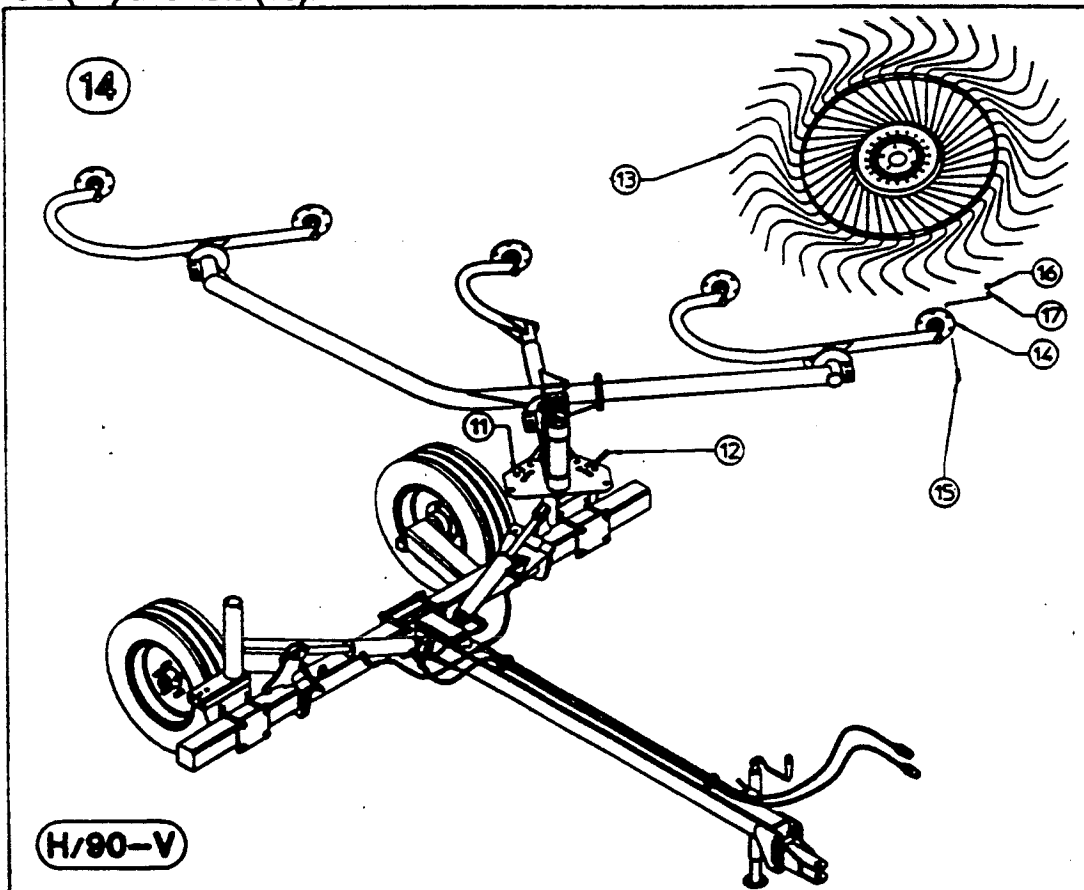
12) Attach arm (4) to arm (3) using screws (5) and nuts (6). (V/10 and V/12 only)



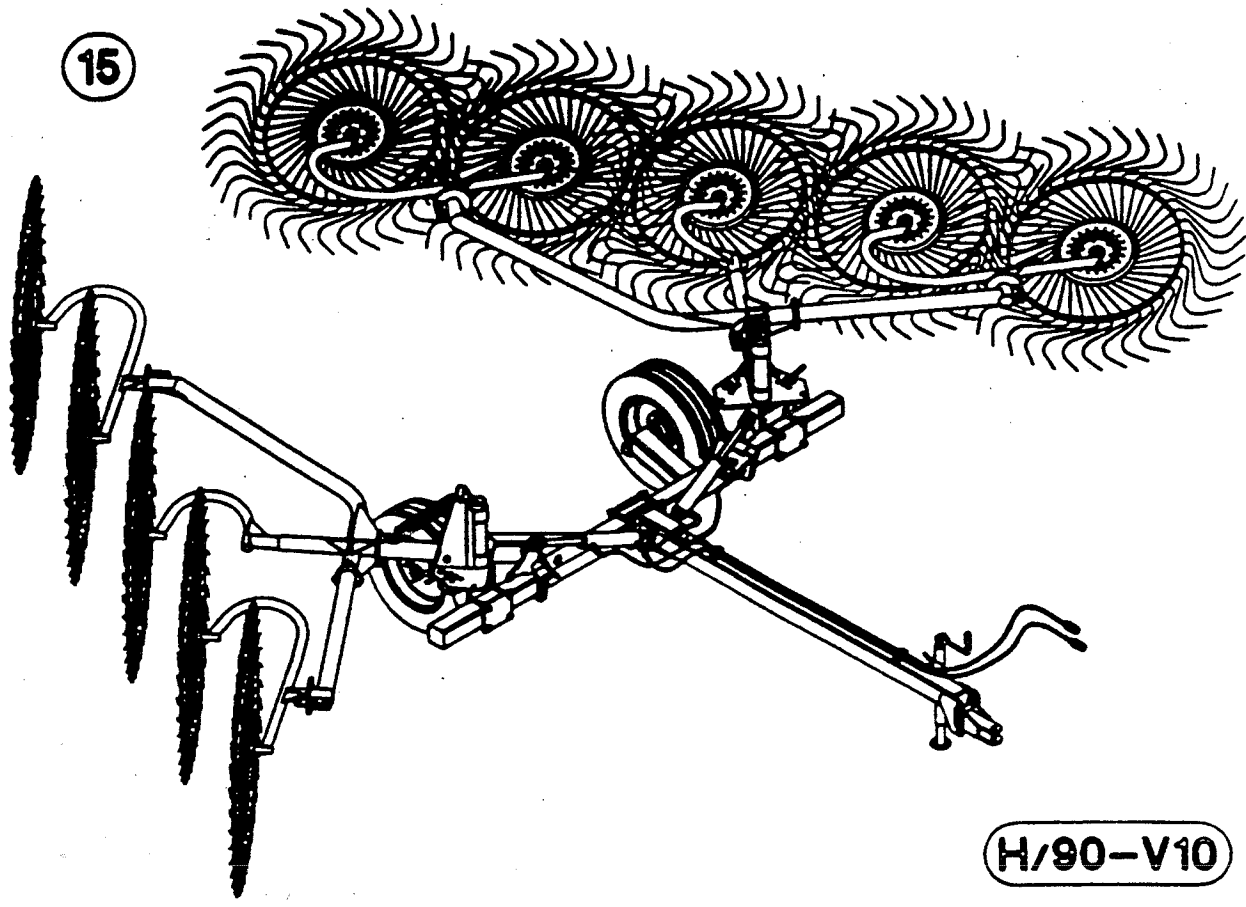
13) Attach brackets (5) to arms (3) and (4), fastening with levers (6) and pins (7). Attach bracket (8) with screws (9) and nuts (10).



14) Position the hay rake arm so that pin (12) can be inserted in one of the holes on the quadrant (11), then attach the rake wheels (13) to the hubs (14) using screws (15), washers (17) and nuts (16).

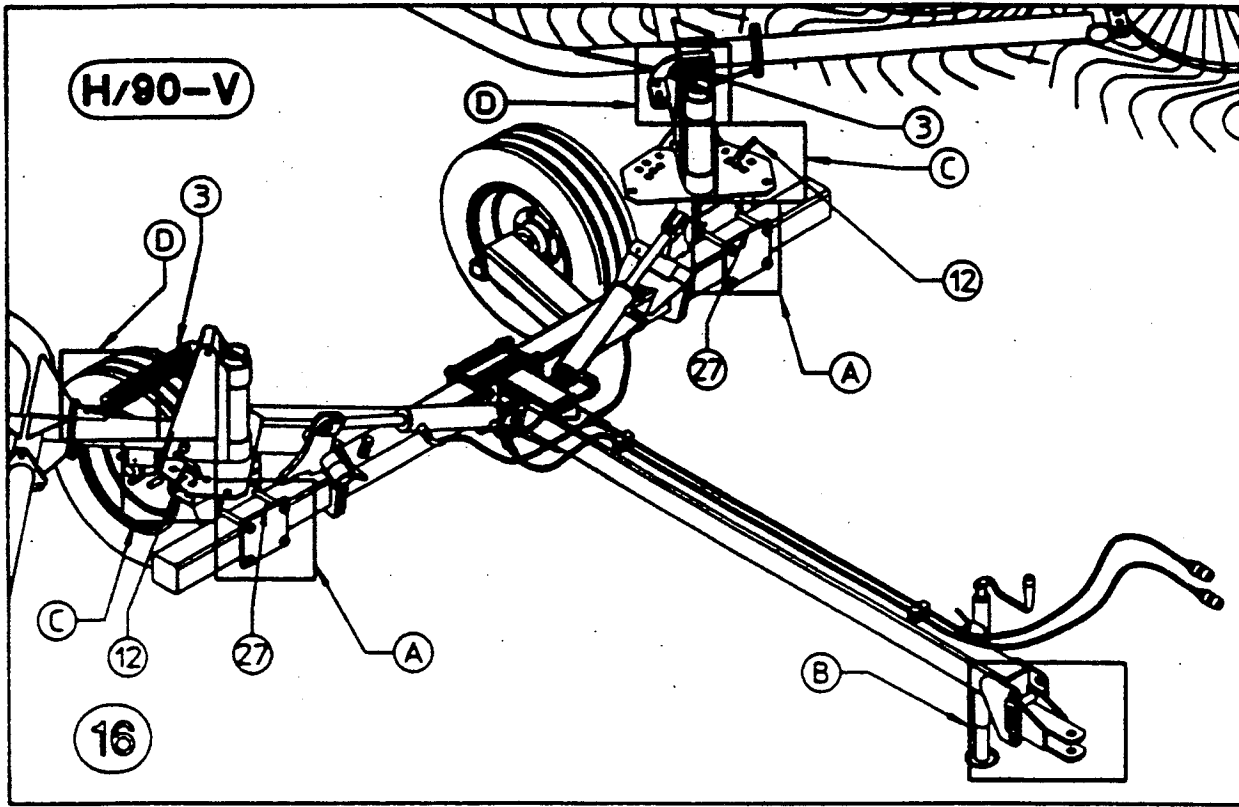


15) Repeat the procedures for steps 10 to 14 on the right side of the machine to complete the H/90-V cart. Shown in the illustration is the V/10 model



ADJUSTMENTS FOR MACHINE USE

The machine must be adjusted according to the specific work requirements. Thus the various adjustment possibilities will be described, so you can choose that which best suits your work requirements.



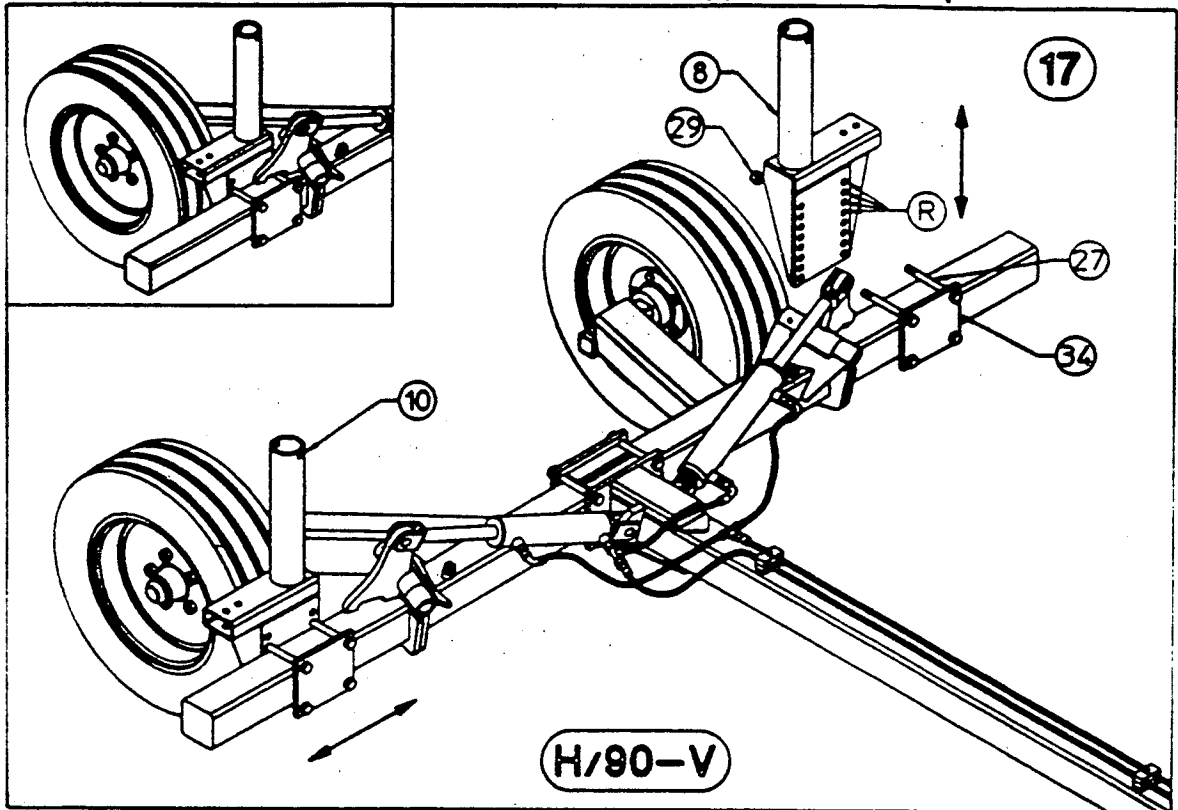
A) The hay rake supports can be adjusted vertically and horizontally by inserting the screws (27) into the different holes on the support and by sliding the support lengthwise along the frame.

B) The tractor hitch must be adapted to the tow hook on the tractor and adjusted according to the pressure of the rake wheels on the ground.

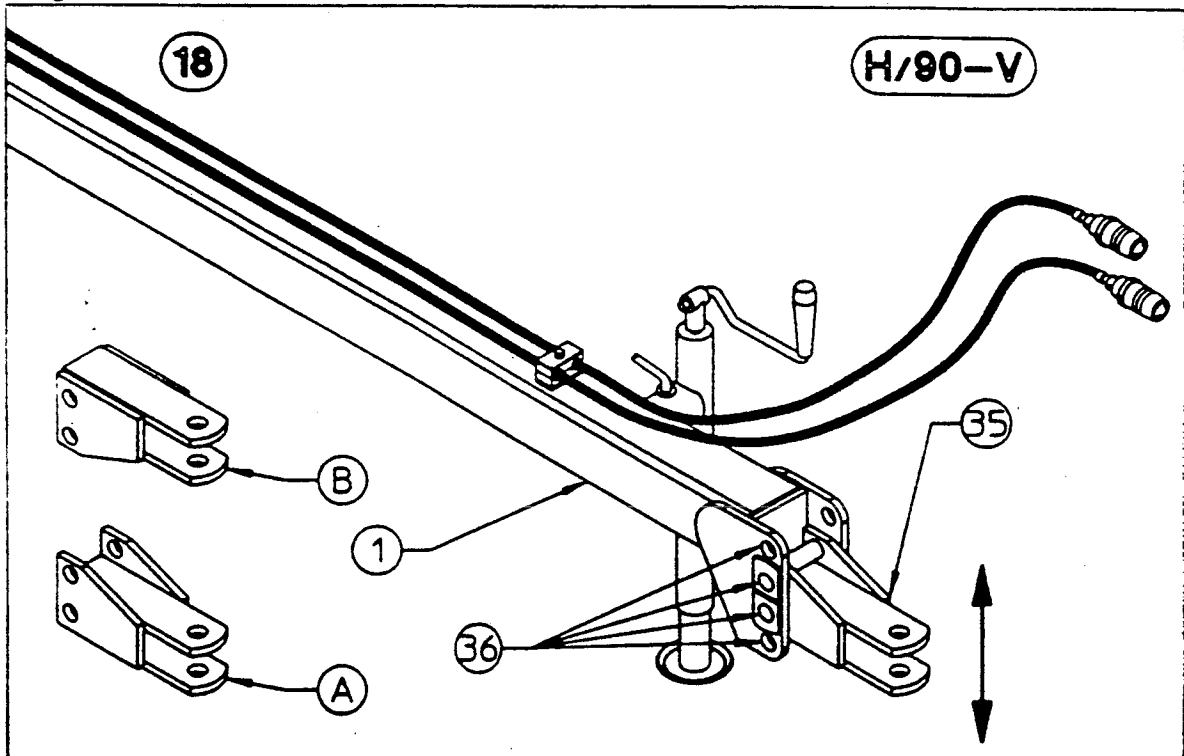
C) The hay rake arms can be pivoted and locked into different positions using pin (12).

D) The pressure of the rake wheels on the ground can be regulated also by means of the suspension springs (3), which can be set in different positions.

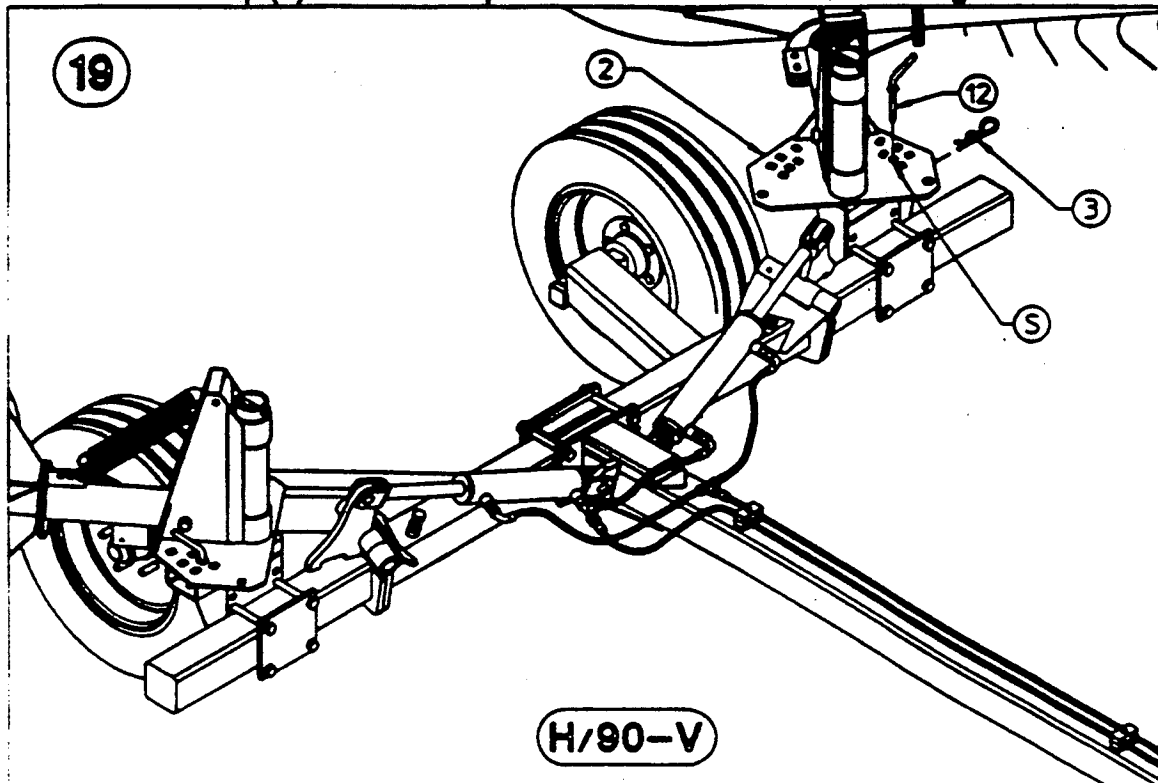
17) The support arms (8) and (10) can be adjusted in height by placing the screws (27) in the different holes (R) and in width by sliding the support along the frame before tightening the screws. The narrowest position is with the screws passing through the slot. The adjustments depend on the pressure of the rake wheels on the ground and the desired swath width. For the V/8 it is best to set all supports at the low position.



18) The tractor hitch (35) can be set in different positions, using holes (36), to allow coupling to all tractor types. By turning the hitch upside-down from (A) to (B), additional settings are available.



19) The hay rake arm can be pivoted to obtain a different working angle and further variation of the swath. Pin (12) is inserted in the different holes in quadrant (2) and fastened with the clip (3). The central position is the best for most working conditions.



20) The springs (3) should normally be attached as shown in the large illustration and in the detail at the upper left (attached at the central hole). They can be attached to the other two holes to obtain a different rake wheel pressure on the ground. The other detail shows piece (7), which can be used with the V/8 for special working conditions.

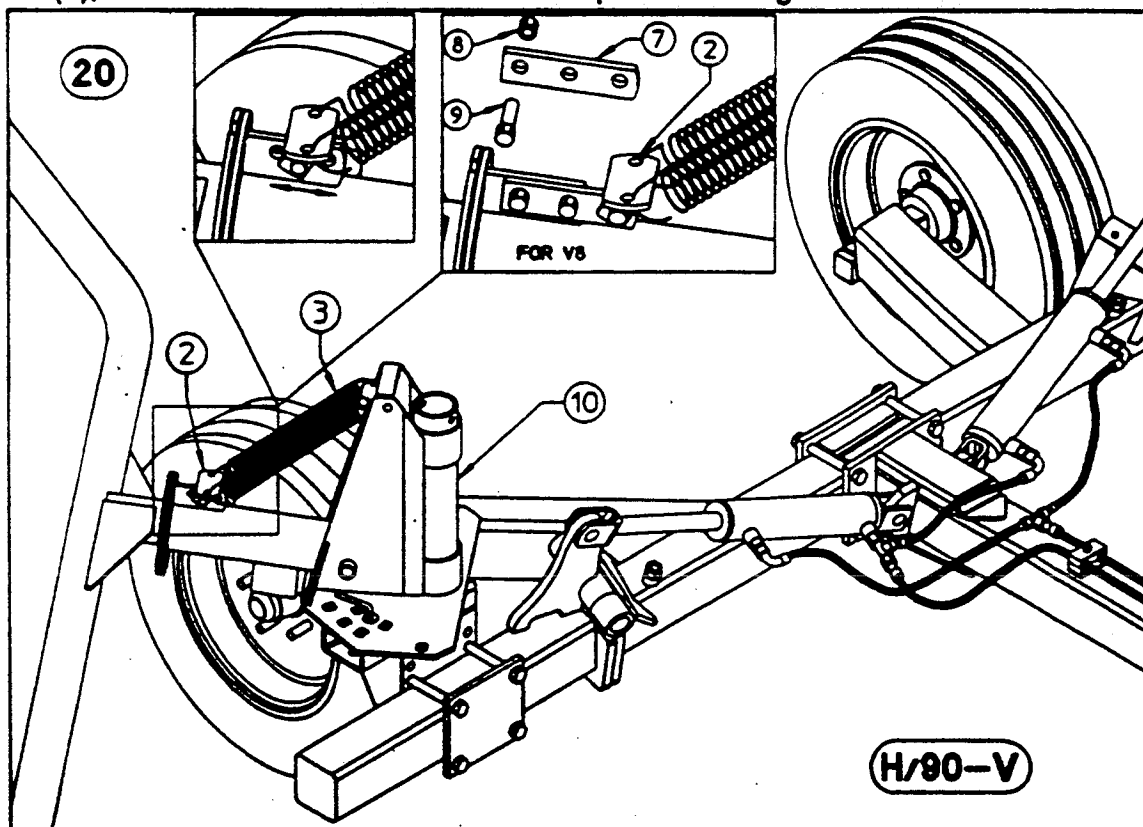
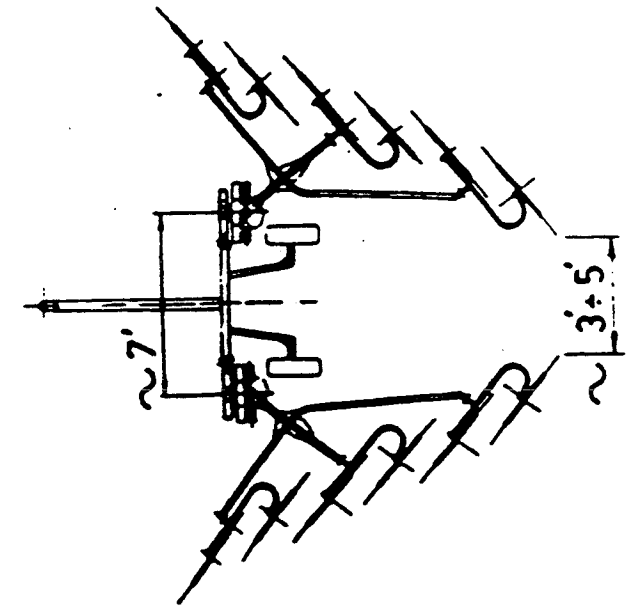
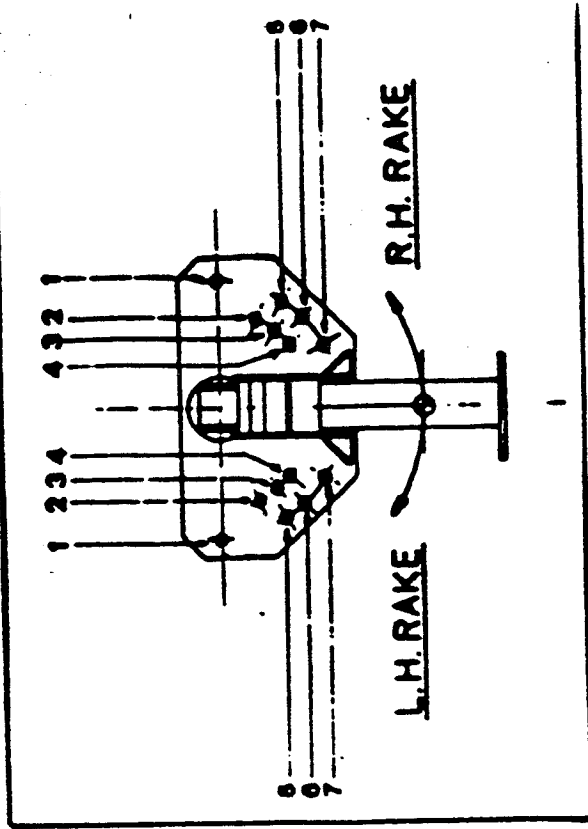


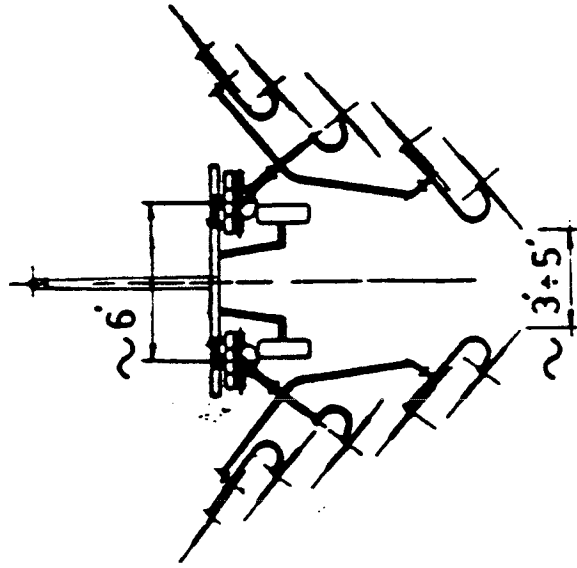
TABLE 11

Here we indicate the approximate measurements for the assembly of the RP/8 - RP/10 - RP/12 and the corresponding swath sizes.

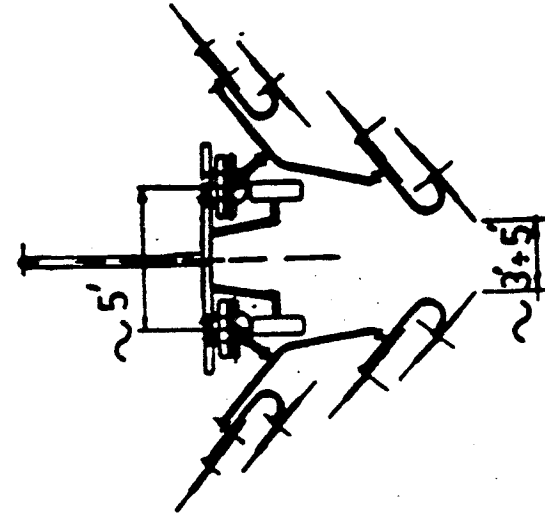
NB - These swath measurements correspond to positioning at holes 3 - 5 on the movable part of the hay rake body.



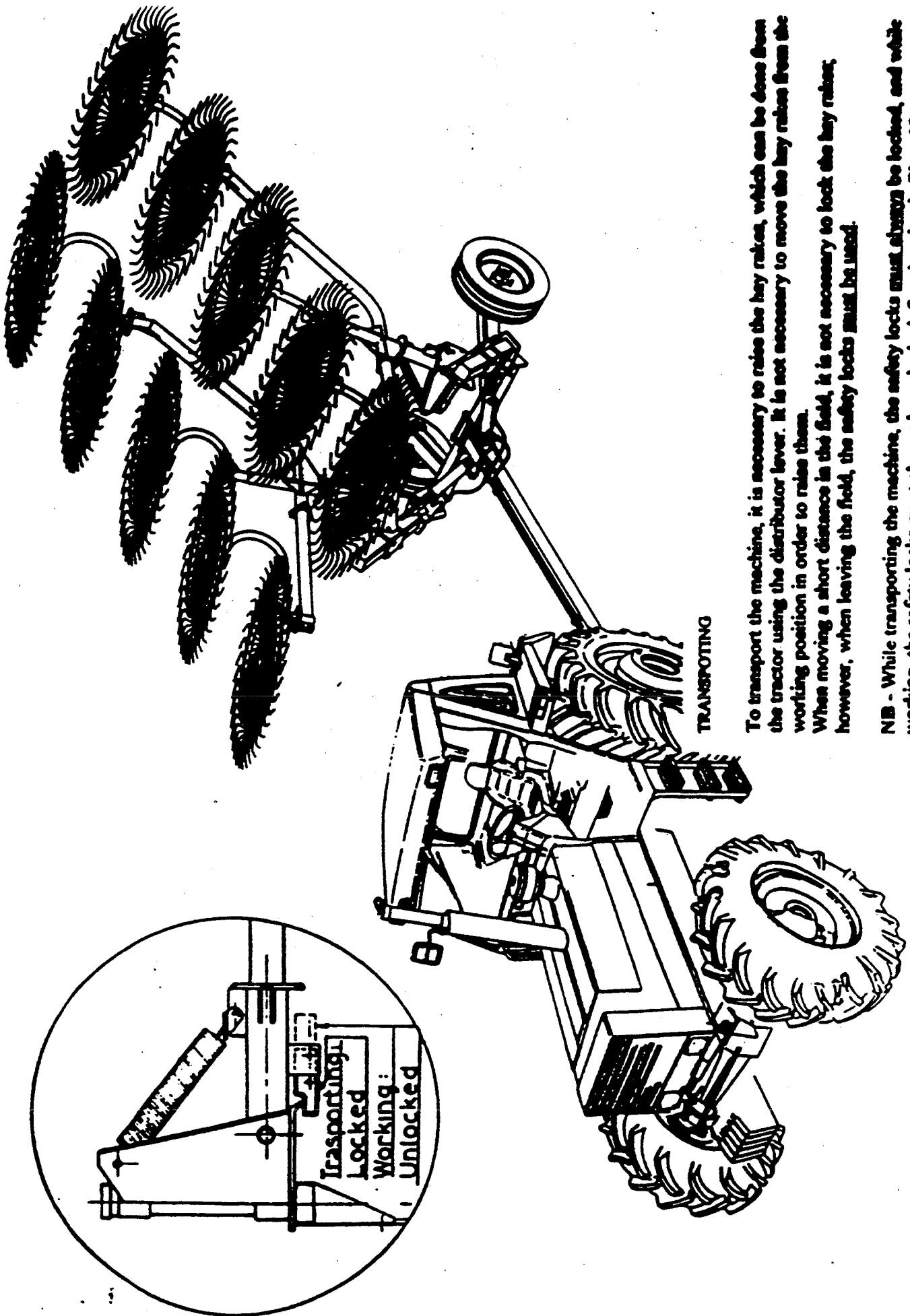
H90-V12



H90-V10



H90-V8



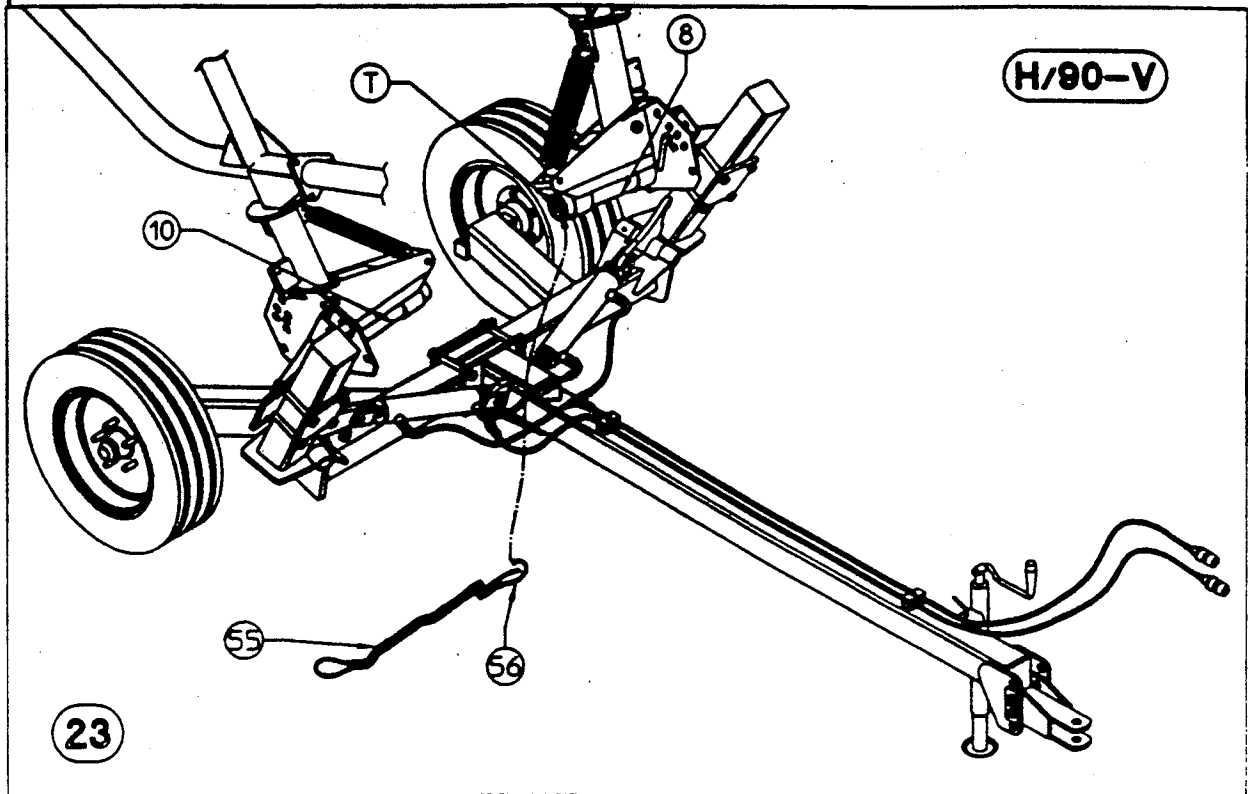
TRANSPORTING

To transport the machine, it is necessary to raise the hay rakes, which can be done from the tractor using the distributor lever. It is not necessary to move the hay rakes from the working position in order to raise them. When moving a short distance in the field, it is not necessary to lock the hay rakes; however, when leaving the field, the safety locks **must be used**.

NB - While transporting the machine, the safety locks must always be locked, and while working, the safety locks must always be unlocked. See drawing in Plate 12.

23) For safety reasons, after raising the side arms attach the chain (55) to the two supports (8) and (10) by connecting the hooks (56) to pins (T).

Warning: The chain **MUST** be removed before putting the arms back into the working position.



H/90-V

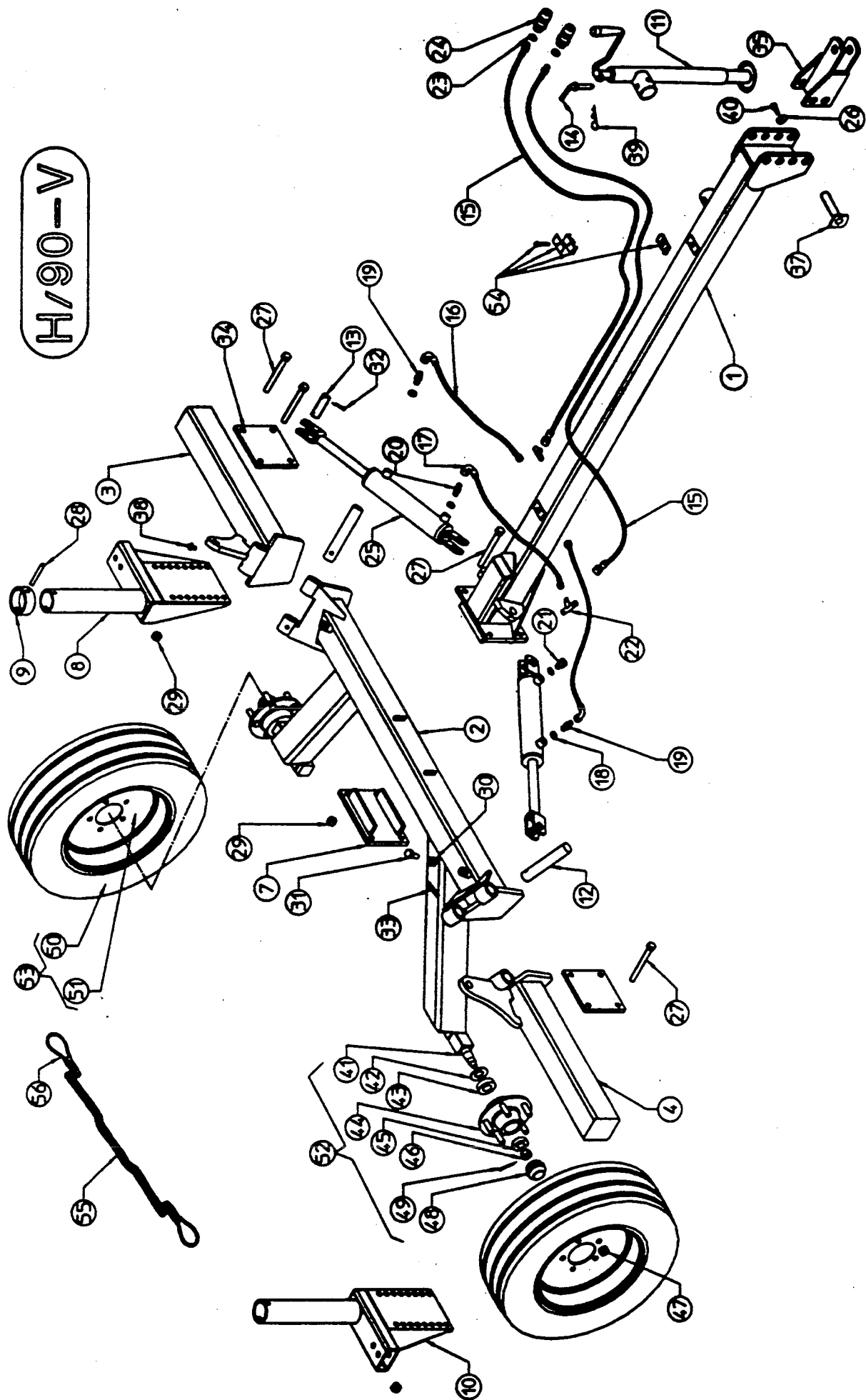
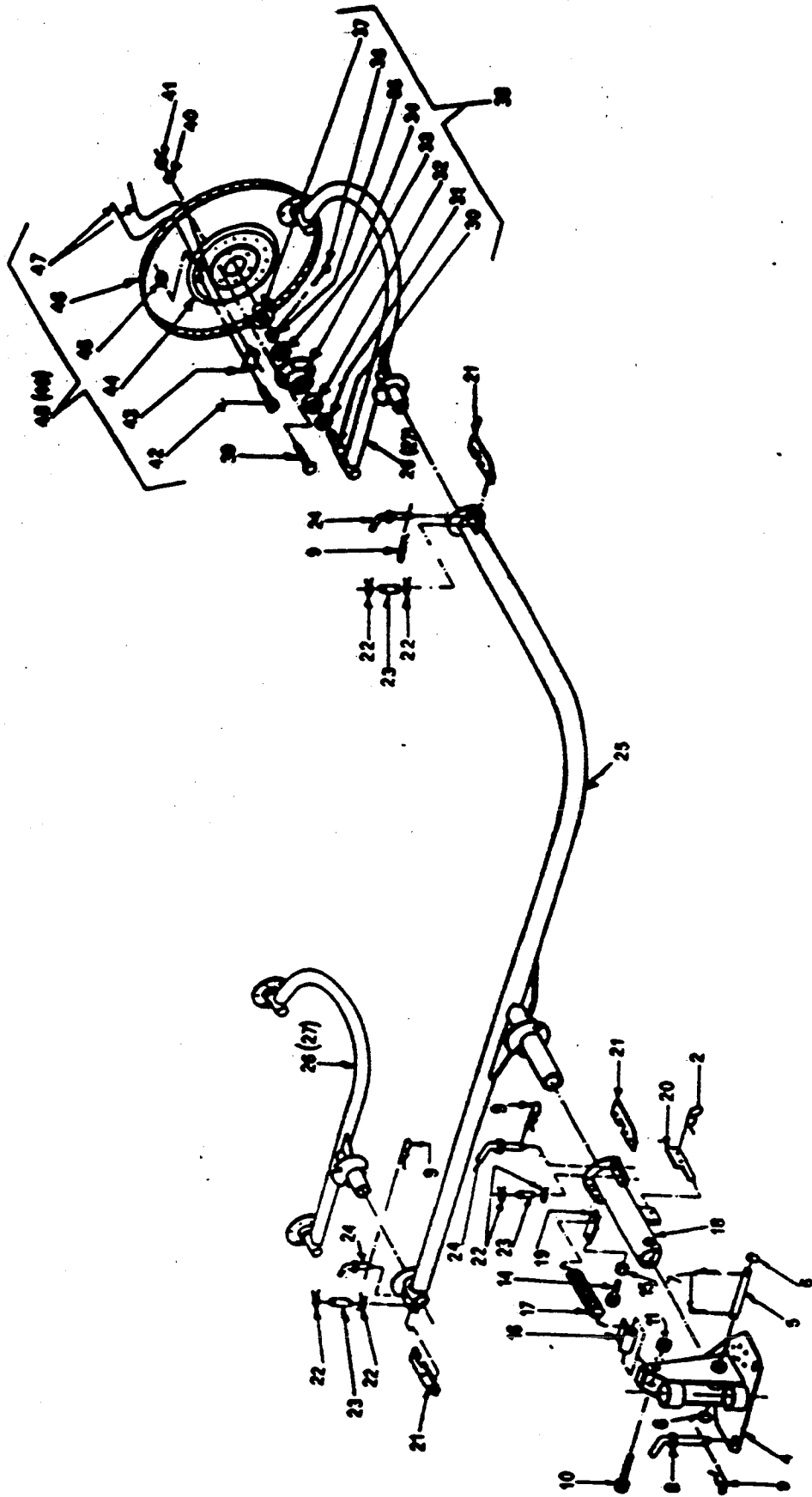


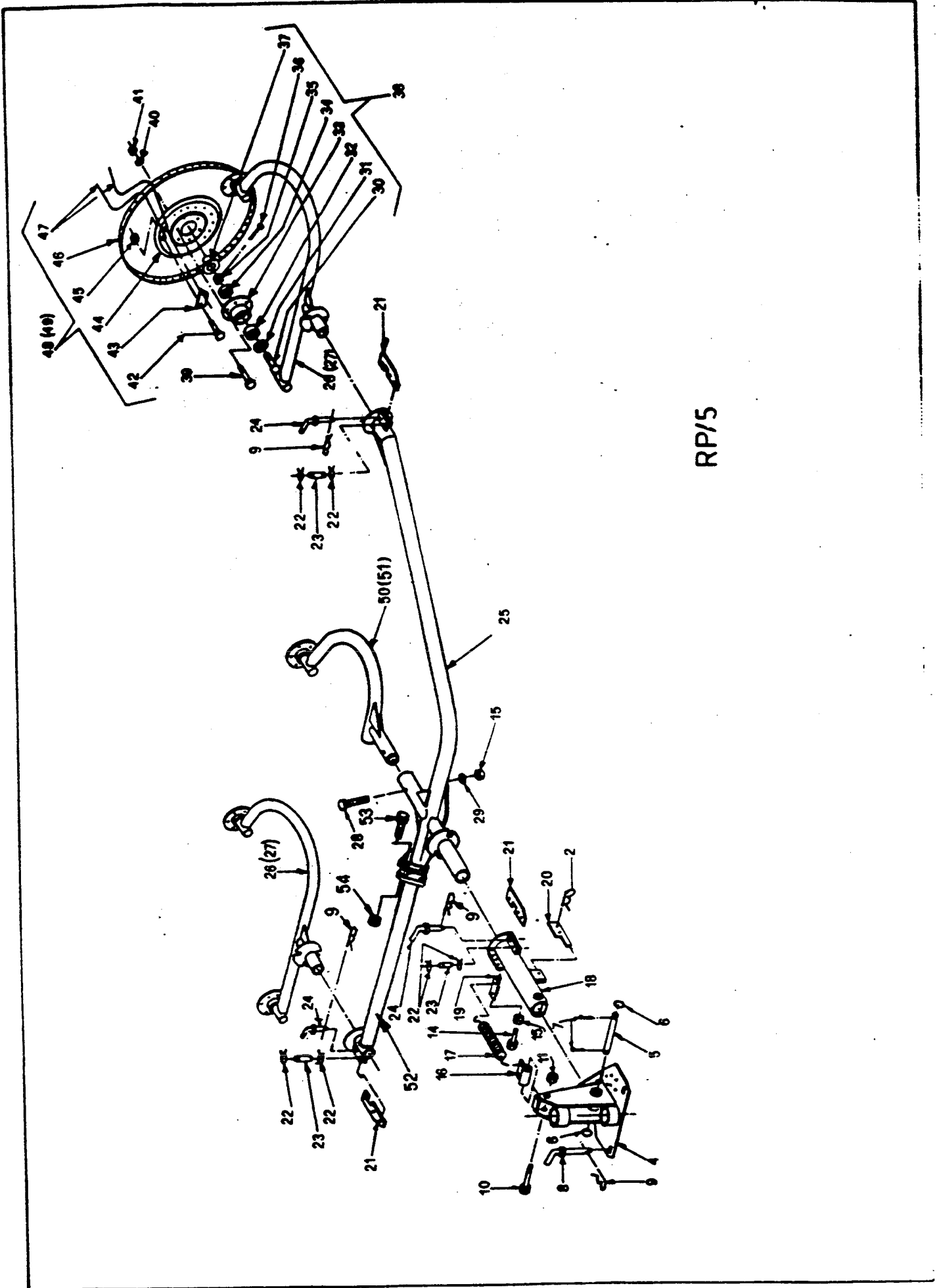
TABLE NO. 920.091				
H/90-V				
ITEM	Q.ty	PART NO	DESCRIPTION	NOTE
1	1	210.534	Drawer	
2	1	210.533	Cart frame	
3	1	200.163	L. H. Arm	
4	1	200.164	R. H. Arm	
7	1	210.536	Plate	
8	1	210.532	L.H. base	
9	2	210.539	Bush	
10	1	210.540	R.H. base	
11	1	200.203	Parking stand	
12	2	200.202	Hinge pin	
13	4	200.032	Cylinder pin	
14	1	200.222	Pin	
15	2	600.276	Hose	
16	2	600.275	Hose	
17	1	600.274	Hose	
18	4	600.039	Copper washer	
19	2	200.192	Nipple	
20	1	600.270	Nipple	
21	1	600.271	Turning fitting	
22	2	600.272	Fitting	
23	2	600.269	Copper washer	
24	2	600.273	Rapid couplig	
25	2	210.570	Cylinder	
.	.	610.340	Set of gasket	
26	2	600.092	Washer	
27	12	600.219	Screw	
28	2	610.269	Spring washer	
29	12	600.080	Nut	
30	2	600.082	Nut	
31	2	600.035	Screw	
32	8	600.038	Split pin	
33	2	600.027	Spring pin	
34	2	215.210	Plate	
35	1	210.542	Bracket	
37	2	200.828a	Pin	
38	2	600.034	Grease nipple	
39	1	600.019	Split pin	
40	2	600.770	Screw	
41	2	205.276	Hub pin	
42	2	600.284	Dust cover	
43	2	600.285	Bearing	
44	2	600.286	Hub	
45	2	600.287	Bearing	
46	2	600.288	Nut	
47	10	600.289	Nut	
48	2	600.290	Cap	
49	2	600.291	Split pin	
50	2	610.291	Tire	
51	2	610.290	Rim	
52	2	205.213	Hub assy	
53	2	610.270	Tire assy	
54	2	610.060	Hose collar	
55	1	210.543	Chain	
56	2	600.375	Hook	



RP/4

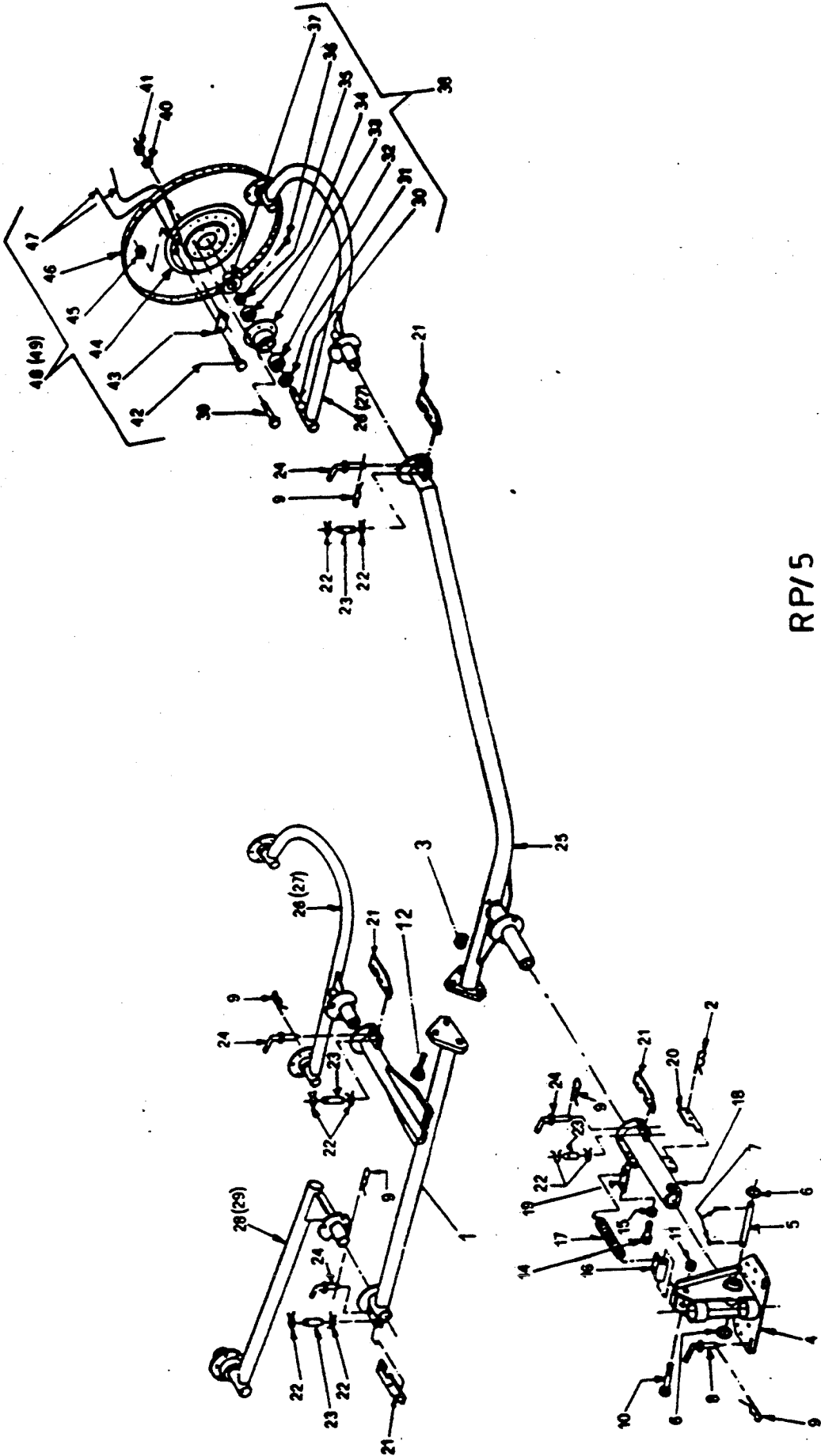
RP/4

ITEM	PART NO.	QTY.	DESCRIPTION
2	600.020	1	SPLIT PIN
4	200.064	1	SUPPORT
5	200.067	1	PIN
6	600.021	2	WASHER
7	600.022	2	SPLIT PIN
8	200.222	1	PIN
9	600.019	4	SPLIT PIN
10	610.018	1	SCREW
11	600.075	2	NUT
14	600.004	1	SCREW
15	600.008	1	NUT
16	200.068	1	UPPER LINKAGE, SPRING
17	200.069	2	SPRING
18	200.071	1	SWINGING PIPE
19	200.070	1	LOWER LINKAGE, SPRING
20	200.072	1	LOCK DEVICE
21	200.073	3	LEVER
22	600.023	6	SNAP RING
23	200.074	3	PIN
24	200.075	3	PIN
25	200.076	1	MAIN PIPE
26	200.077	2	WHEEL ARM, R.H.
(27)	(200.078)	(2)	(WHEEL ARM, L.H.)
30	205.277	4	PIN
31	600.011	4	DUST COVER
32	600.012	4	BEARING
33	600.013	4	WHEEL HUB
34	600.014	4	BEARING
35	600.015	4	SELF-LOCKING NUT
36	600.301	4	SPLIT PIN
37	600.016	4	SAFERY CAP
38	205.041	4	HUB ASSY.
39	600.006	24	SCREW
40	600.024	24	SPRING WASHER
41	600.010	24	NUT
42	600.005	80	SCREW
43	200.012	40	TINE CLAMP
44	200.010	4	FLANGE
45	600.029	80	NUT
46	200.009	4	RIM
47	200.011	160	TINE
48	210.180	4	WHEEL ASSY. , R.H.
(49)	(210.181)	4	(WHEEL ASSY. , L.H.)



RP/5

RP/5				
ITEM	PART NO	Q.ty		DESCRIPTION
2	600.020	1		SPLIT PIN
3	200.096	1		BASE
4	200.064	1		SUPPORT
5	200.067	1		PIN
6	600.021	2		WASHER
7	600.022	2		SPLIT PIN
8	200.035	1		PIN
9	600.019	4		SPLIT PIN
10	610.018	1		SCREW
11	600.075	2		NUT
14	600.004	1		SCREW
15	600.008	2		NUT
16	200.068	1		UPPER LINKAGE, SPRING
17	200.069	2		SPRING
18	200.071	1		SWINGING PIPE
19	200.070	1		LOWER LINKAGE, SPRING
20	200.072	1		LOCK DEVICE
21	200.073	3		LEVER
22	600.023	6		SNAP RING
23	200.074	3		PIN
24	200.075	3		PIN
25	210.199	1		ARM
26	200.077	2		WHEEL ARM, R.H.
(27)	(200.078)	(2)		(WHEEL ARM, L.H.)
28	600.007	1		SCREW
29	600.018	1		SPRING WASHER
30	205.277	5		PIN
31	600.011	5		DUST COVER
32	600.012	5		BEARING
33	600.013	5		WHEEL HUB
34	600.014	5		BEARING
35	600.015	5		SELF-LOCKING NUT
36	600.301	5		SPLIT PIN
37	600.016	5		SAFETY CAP
38	205.041	5		HUB ASSY.
39	600.006	30		SCREW
40	600.024	30		SPRING WASHER
41	600.010	30		NUT
42	600.005	100		SCREW
43	200.012	50		TINE CLAMP
44	200.010	5		FLANGE
45	600.029	100		NUT
46	200.009	5		RIM
47	200.011	200		TINE
48	210.180	5		WHEEL ASSY., R.H.
(49)	(210.181)	(5)		(WHEEL ASSY., L.H.)
50	200.079	1		ARM, R.H.
(51)	(200.080)	(1)		ARM, L.H.
52	210.198	1		ARM
53	600.310	3		SCREW
54	600.075	3		NUT



RP/5
TABLE NO.920098

TABLE NO.920.098

RP/5

ITEM	Q.ty	PART NO	DESCRIPTION	NOTE
1	1	210.575	PIPE	
2	1	600.020	SPLIT PIN	
3	3	600.075	NUT	
4	1	200.064	SUPPORT	
5	1	200.067	PIN	
6	2	600.021	WASHER	
7	2	600.022	SPLIT PIN	
8	1	200.222	PIN	
9	5	600.019	SPLIT PIN	
10	1	610.018	SCREW	
11	1	600.075	NUT	
12	3	600.310	SCREW	
14	1	600.004	SCREW	
15	1	600.008	NUT	
16	1	200.068	UPPER LINKAGE, SPRING	
17	2	200.069	SPRING	
18	1	210.066	SWINGING PIPE	
19	1	200.070	LOWER LINKAGE, SPRING	
20	1	200.072	LOCK DEVICE	
21	4	200.073	LEVER	
22	8	600.023	SNAP RING	
23	4	200.074	PIN	
24	4	200.075	PIN	
25	1	210.576	MAIN PIPE	
26	2	200.077	WHEEL ARM, R.H.	
(27)	(2)	(200.078)	(WHEEL ARM, L.H.)	
28	1	200.218	ARM, R.H.	
(29)	(1)	(210.067)	(ARM, L.H.)	
30	5	205.277	PIN	
31	5	600.011	DUST COVER	
32	5	600.012	BEARING	
33	5	600.013	WHEEL HUB	
34	5	600.014	BEARING	
35	5	600.015	SELF-LOCKING NUT	
36	5	600.301	SPLIT PIN	
37	5	600.016	SAFETY CAP	
38	5	205.041	HUB ASSY.	
39	30	600.006	SCREW	
40	30	600.024	SPRING WASHER	
41	30	600.010	NUT	
42	100	600.005	SCREW	
43	50	200.012	TINE CLAMP	
44	5	200.010	FLANGE	
45	100	600.029	NUT	
46	5	200.009	RIM	
47	200	200.011	TINE	
48	5	210.180	WHEEL ASSY., R.H.	
(49)	(5)	(210.181)	(WHEEL ASSY., L.H.)	

D.H.E.

Dist OF FARM Equipment

Red BAY ALA. 35582