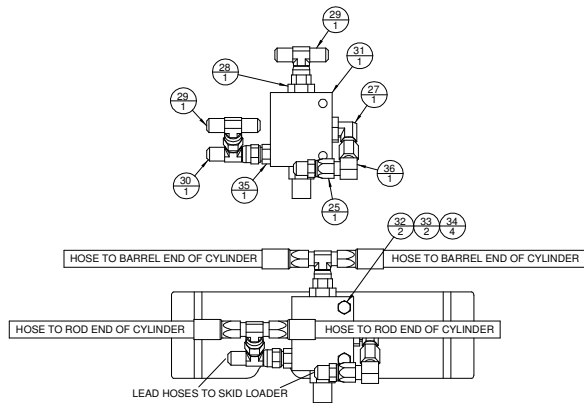


Left Side or Right Side Plumb with Optional Holding Valve (Left Side Plumb Shown)

ITEM	PART NO.	QTY	DESCRIPTION
27	1144PP	1	90° Elbow, #8 SAE O-Ring Male to #6 JIC Male
28	1145PP	1	Adapter, 6MJ-8MB
29	7590PP	2	#6 JIC Female Branch Tee, 6MJ-6MJ-6FJX
30	7591PP	1	#6 JIC Female Run Tee, 6MJ-6FJX-6MJ
31	7669PP	1	Multi-Purpose Holding Valve, with Body
32	7670PP	2	5/16" NC x 2" Lg HHCS
33	7672PP	2	5/16" NC Reverse Lock Nut
34	7671PP	4	5/16" Flat Washer
35	7796PP	1	Adapter, 6MJ-6MB
36	1012PP	1	90° Female Swivel Elbow, #6 JIC

Optional holding valve requires the above parts.

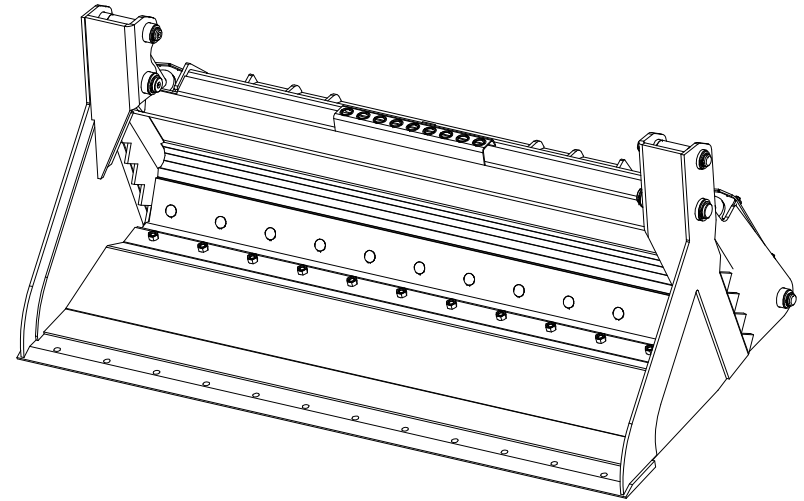
With holding valve and required parts installed, Items #2, 4 and 10 are not used. Holding valve pressure is pre-set. Please call Virnig Mfg. with any questions or problems.



Items in above table are available as a kit. Holding valve kit part number, Left or Right side plumb is 7799VA.

When installing holding valve kit, tees (Item #2), clamps (Item #4) and bolts (Item #10) are not re-used. If unit has elbows attached to tees (used for left/right side plumb without holding valve), they will not be re-used. Restrictor fitting (Item #25) will be re-used.

Heavy Duty Multi-Purpose Bucket



Model Number _____ HMPV _____.

Serial Number _____.

Phone: 320-393-7080

1/1/09
Revised 1/1/13

HMPV

Features of Virnig Mfg. Inc. Heavy Duty Multi-Purpose Buckets includes:

- 2 1/2" bore x 8 3/8" stroke cylinders.
- 5/8" x 6" bolt on edges at rear of clam and front of dozer.
- Cylinder guards standard.
- Clam opening of 33".
- Replaceable bushings at pivot points.
- Constructed with heavy plate for strength and durability.
- Optional 5/8" x 8" bolt on edge on front of clam.
- Recommended for skid loaders with a lift capacity over 2400 lb.

Initial Use

- See following pages for suggested hose routing.
- Check that quick-tach on bucket fits onto skid loader properly. Pins must engage through 3/8" plates at bottom of quick-tach.
- With bottom of attachment touching ground/floor, open clam and slowly roll back bucket. Make sure there is no interference between attachment and loader with clam open and attachment fully rolled back.
- Make sure hoses do not pinch during roll back.
- Slowly roll bucket fully forward. Check that hoses are long enough so they do not stretch or bind.
- Do not connect this attachment to high flow couplers.
- Cycle clam open/close. Check for oil leaks per instructions in "Maintenance" section.
- Read and understand all warning information in this manual before operating this attachment.
- Never exceed the maximum attachment operating pressure of 3500 psi.

Operation

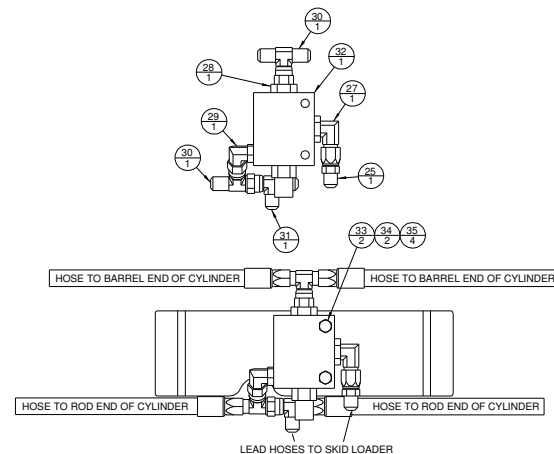
- Always follow safety information.
- Keep bystanders back 50 feet.
- Never attempt to lift more than the operating capacity (attachment weight and load) of skid loader. Attachment weight can be found in Table 1 in attachment parts list.
- Always follow all safety and operating instructions of skid loader.
- Always relieve pressure before disconnecting hydraulic hoses.
- Never hit or pound couplers.
- Never hook a chain on clam or bucket.

Center Plumb with Optional Holding Valve

ITEM	PART NO.	QTY	DESCRIPTION
27	1144PP	1	90° Elbow, #8 SAE O-Ring Male to #6 JIC Male
28	1145PP	1	Adapter, 6MJ-8MB
29	6997PP	1	90° Elbow, #6 SAE O-Ring Male to #6 JIC Male, Short
30	7590PP	2	#6 JIC Female Branch Tee, 6MJ-6MJ-6FJX
31	7591PP	1	#6 JIC Female Run Tee, 6MJ-6FJX-6MJ
32	7669VP	1	Multi-Purpose Holding Valve, with Body
33	7670PP	2	5/16" NC x 2" Lg HHCS
34	7672PP	2	5/16" NC Reverse Lock Nut
35	7671PP	4	5/16" Flat Washer

Optional holding valve requires above parts.

With holding valve and required parts installed, Items #2, 4 and 10 are not used. Holding valve pressure is pre-set. Please call Virnig Mfg. with any questions or problems.

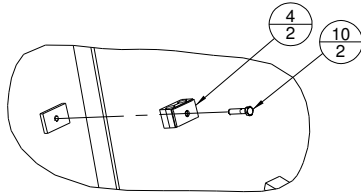


Items in above table are available as a kit. Holding valve kit part number, center plumb is 7483VA.

When installing the holding valve kit, the tees (Item #2), clamps (Item #4) and bolts (Item #10) are not re-used. Restrictor fitting (Item #25) will be re-used.

Plumbing and Installation Notes

Clamp Installation



Note:

- Both right side cylinder ports must be plumbed together.
- Both left side cylinder ports must be plumbed together.
- Restrictor fitting (Item #25), plumbed to barrel ends of cylinders.

Center Plumb

Lead hoses with adapters and couplers are connected to one tee (Item #2) and the second to the restrictor fitting (Item #25).

Note: Tees (Item #2) can be pointed downward for better routing of lead hoses from attachment to skid loader.

Left Side or Right Side Plumb

Two 90° #6 JIC Female Swivel Elbows (Virnig part number 1012PP) are used for left side or right side plumb. One is connected to a tee (Item #2), the other is connected to the restrictor fitting (Item #25).

Lead hoses with adapters and couplers are connected to the two elbows.

Lead hoses are then routed from the elbows, through the formed channel, then to the loader between the mount plate and cylinder mounts.

Operation (cont.)

- With clam fully open, watch for tire interference when rolling attachment fully forward.
- Check for debris in quick-tach area before each hook-up.



Grapple shown Center Plumb works for Case, John Deere, New Holland, Mustang, Takeuchi, and Gehl skid loaders.

Hoses need to be secured so they do not get damaged during operation. Hoses can be routed as shown in the picture above. Hoses can also be tied or bungeed to the skid loader cross member (close to the lower pivot) to hold them from getting pinched or stretched.

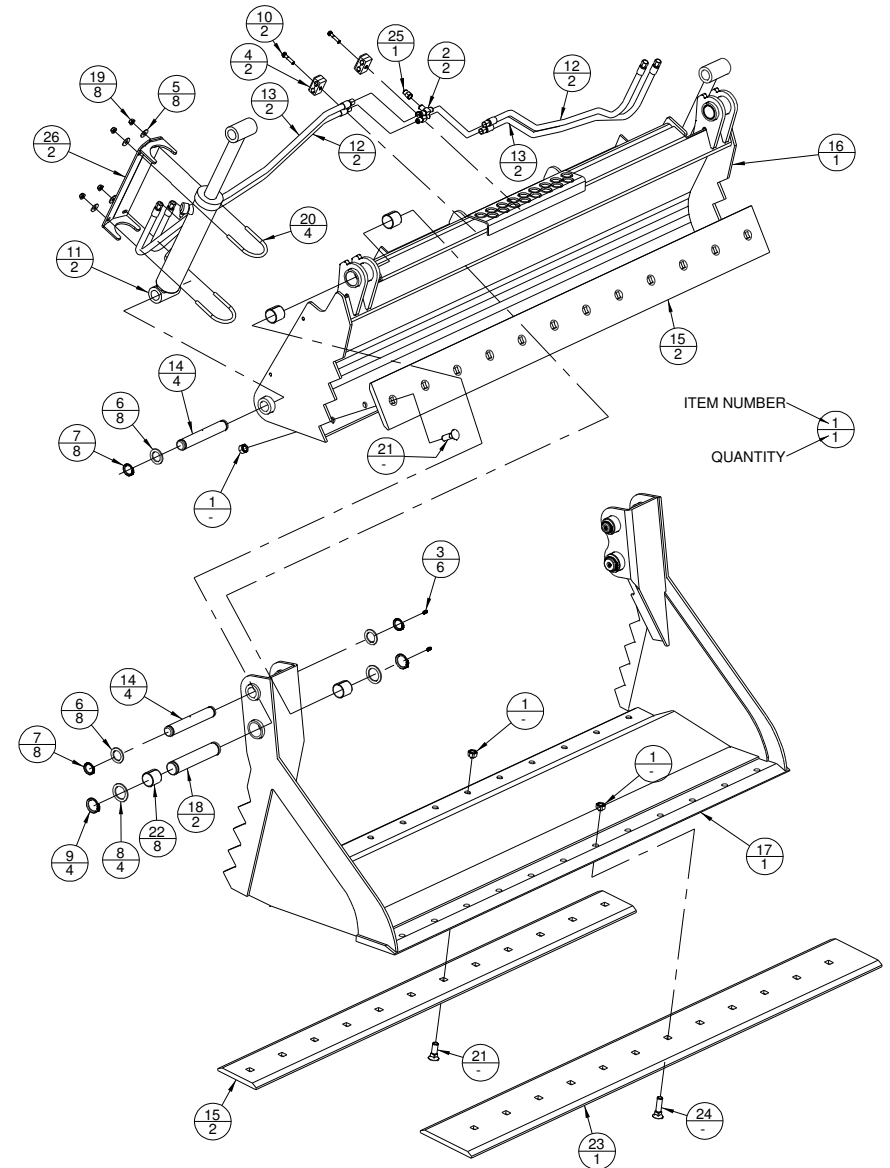
Grapple can also be Left Side Plumbed. Grapple can be converted to Left Side Plumb by following instructions located in this manual. Please see picture on the next page showing Left Side Plumb. Hoses should be run through the bracket on the skid loader arm, as shown, or the hoses can be tied or bungeed to the skid loader arm.



Grapple shown Left Side Plumb, works for Cat, Bobcat, Kubota, Terex and ASV.

If there is too much slack hose, the amount of slack can be adjusted using the clamp on the attachment near the mount plate.

Main Component Assembly

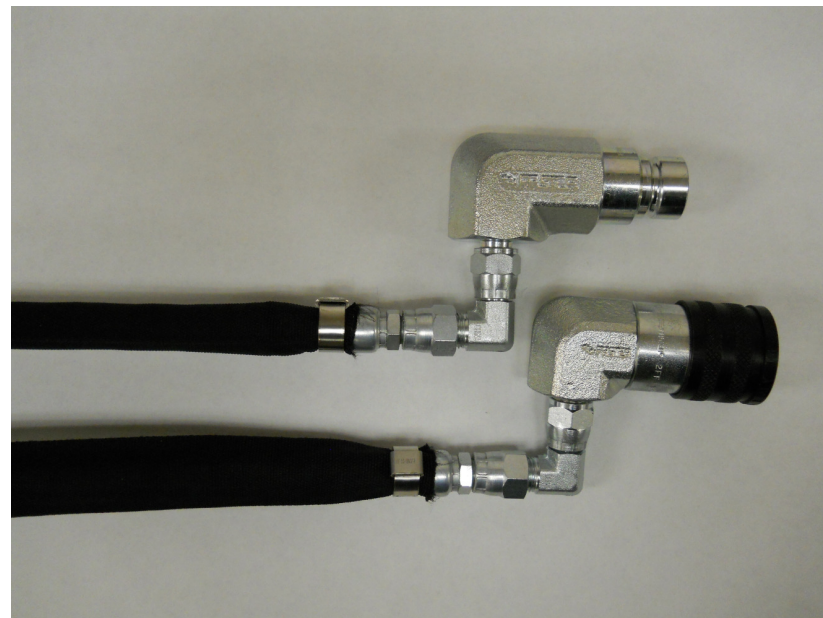


Heavy Duty Multi-Purpose Bucket (HMPV) Parts List (cont.)

Table 1

ITEM	HMPV66	HMPV72	HMPV78	HMPV84
Dozer Weldment	7658VW	7649VW	7661VW	7664VW
Clam Weldment	7657VW	7648VW	7660VW	7663VW
Dozer/Clam Edge	5168VP	5110VP	5173VP	5178VP
# of Nuts & Bolts	22	24	26	28
Inner Hyd. Hose	1136PP, 44 1/2" Lg	1136PP, 44 1/2" Lg	1137PP, 47 1/2" Lg	1138PP, 50 1/2" Lg
Outer Hyd. Hose	1136PP, 44 1/2" Lg	1137PP, 47 1/2" Lg	1138PP, 50 1/2" Lg	1139PP, 53 1/2" Lg
Front Bolt on Edge	BEV66	BEV72	BEV78	BEV84
# of Nuts & Bolts	11	12	13	14
Weight (lb)	1045	1100	1165	1220

D - Additional nuts for optional front bolt on edge.



If needed, additional small elbows (Part No. 1012PP) are zip tied to the attachment and can be installed between hoses and couplers, as shown above, to improve hose routing at hydraulic coupler interface on loader. The additional elbows will not be required for most brands of skid loaders.

Maintenance

*Every 10 hours of operation

- Grease hinge pins and cylinder pins (6 grease fittings total).
- Inspect cylinders, hydraulic fittings, and hoses for leaks and damage. Replace as needed. Make sure skid loader is shut off and hydraulic pressure is relieved before checking for leaks. Never use hands to check for high pressure hydraulic leaks.
- Check for debris build up around cylinders. If necessary, remove cylinder guards and remove debris. Replace cylinder guards.

*Every 50 hours of operation

- Check that all cylinder and hinge pins are secure.
- Check that bolt on edges are secure.
- Check for loose, worn, or missing parts. Repair or replace as needed.
- Contact your dealer for replacement parts.

Warning Labels on Attachment



This label is located near hinge area on the clam. Always keep hands clear of attachment when skid loader hydraulic system is operational.



This label is located near hinge area on the clam. Always stay clear of clam. Never inspect unit with skid loader running or with clam open.



This label is located on the dozer, near the mount plate. This label has several important instructions that must be followed for safe operation of this attachment.

Heavy Duty Multi-Purpose Bucket (HMPV) Parts List

ITEM	PART NO.	QTY	DESCRIPTION
A 1	1008PP	-	5/8" NC Top Lock Hex Nut
2	1013PP	2	Tee, 3-Way #6 JIC Male (37° Flare)
3	1034PP	6	1/4"-28 UNF Straight Grease Fitting
4	1067PP	2	Hose Clamp Assembly
5	1083PP	8	3/8" Flat Washer
6	1094PP	8	1 1/4" Dia x 10 Gage Narrow Rim Mach Bushing
7	1095PP	8	1 1/4" Dia Heavy Snap Ring
8	1097PP	4	1 9/16" Dia x 10 Gage Narrow Rim Mach Bushing
9	1098PP	4	1 9/16" Dia Heavy Snap Ring
10	1117PP	2	5/16" NC x 1 1/2" Lg HHCS
11	7350PP	2	2 1/2" Bore x 8 3/8" Stroke Hydraulic Cylinder
A 12	-----	2	Inner Hyd. Hose, Both Ends #6 JIC 37° Female Swivel
A 13	-----	2	Outer Hyd. Hose, Both Ends #6 JIC 37° Female Swivel
14	2137VP	4	Cylinder Pin
A 15	-----	2	5/8" x 6" Bolt on Dozer/Clam Edge
A 16	-----	1	Dozer Weldment
A 17	-----	1	Clam Weldment
18	5194VP	2	Clam Pivot Pin
19	6140PP	8	3/8" NC Top Lock Flange Nut
20	8330PP	4	3/8" NC x 3" U Bolt
A 21	5585PP	-	5/8" NC x 1 3/4" Lg Plow Bolt
22	5586PP	8	1 9/16" Dia x 1 9/16" Lg Bushing
B 23	-----	1	Bolt on Cutting Edge (BEV)
A,B 24	1036PP	-	5/8" NC x 2" Lg Plow Bolt
25	1131PP	1	Restrictor Fitting, 3/32" Dia Orifice
26	8339WW	2	Cylinder Guard, Heavy Duty
C 27	1127PP	2	Hyd. Hose 72" Lg, Both Ends #6 JIC 37° Female Swivel
	1126PP		Hyd. Hose 80" Lg, Both Ends #6 JIC 37° Female Swivel
	1128PP		Hyd. Hose 88 Lg, Both Ends #6 JIC 37° Female Swivel
	1142PP		Hyd. Hose 96" Lg, Both Ends #6 JIC 37° Female Swivel
	1143PP		Hyd. Hose 102" Lg, Both Ends #6 JIC 37° Female Swivel
C 28	9332PP	1	Flat Face Couplers, 90° Elbow, Male/Female Pair

A - See Table 1.

B - Optional equipment.

C - Item not shown.