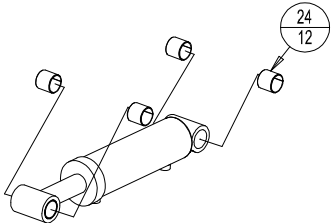


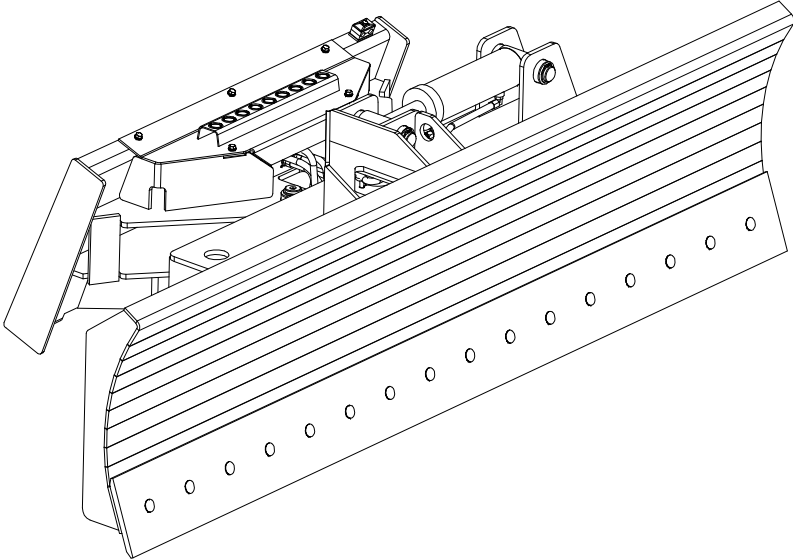
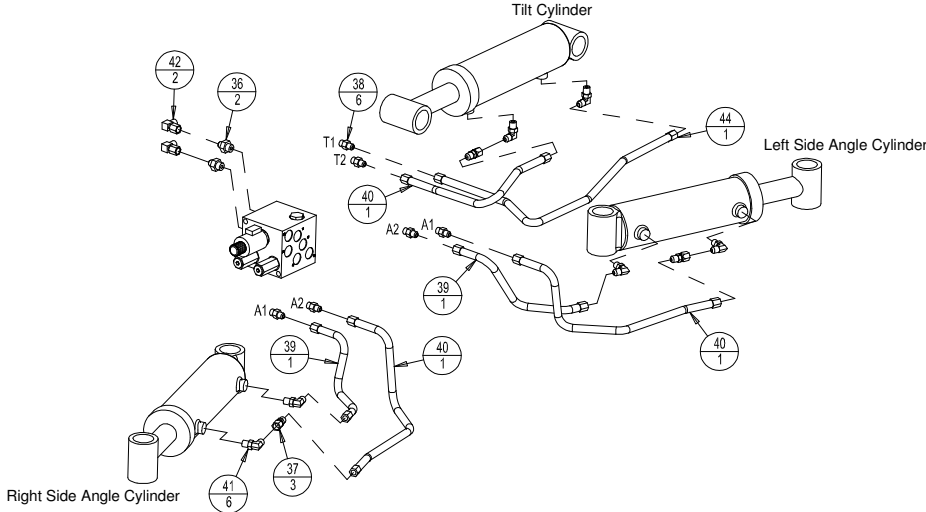
Dozer Blade

Cylinder Bushing Installation



All 3 cylinders use 4 bushings each.

Hydraulic Installation



Model Number _____ DZR _____.

Serial Number _____.

Phone: 320-393-7080

Note: Restrictor fittings (Item #37), plumbed to rod end of all cylinders. Item #42 used for left or right side plumb only.

2/25/10
Revised 1/1/13

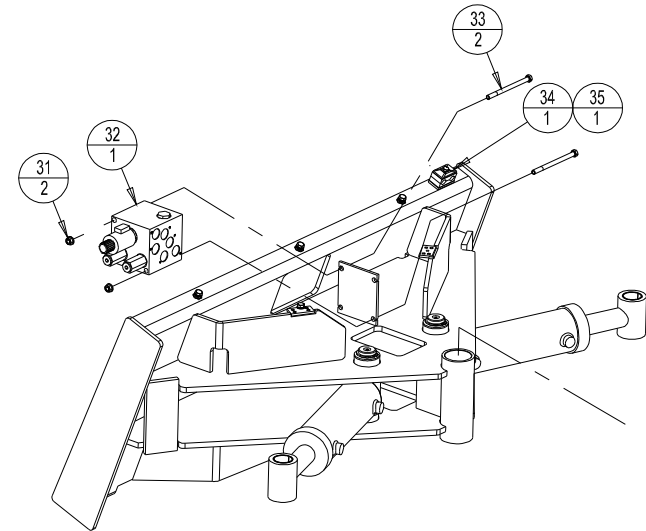
Features of Virnig Mfg. Inc. Dozer Blade includes:

- 3 1/2" bore, 8" stroke cylinders with 1 3/4" rods and 1 9/16" cylinder pins.
- 2 1/8" diameter pivot pin and oscillation pin.
- Bushings at all pivot locations.
- Heavy duty frame with adjustable skid shoes.
- 5/8" x 8" double bevel, reversible wear edge.
- 30° blade angle, left or right discharge and tilts 10°.
- Recommended for skid loaders with a lift capacity greater than 1800 lb.
- The tilt function of the Dozer Blade is controlled by the auxiliary hydraulics on the skid loader.
- An electric hydraulic valve is used to control the angle of the blade using either the skid loaders auxiliary electrical pin connector outlet (if equipped) or an optional Control Box Assembly.

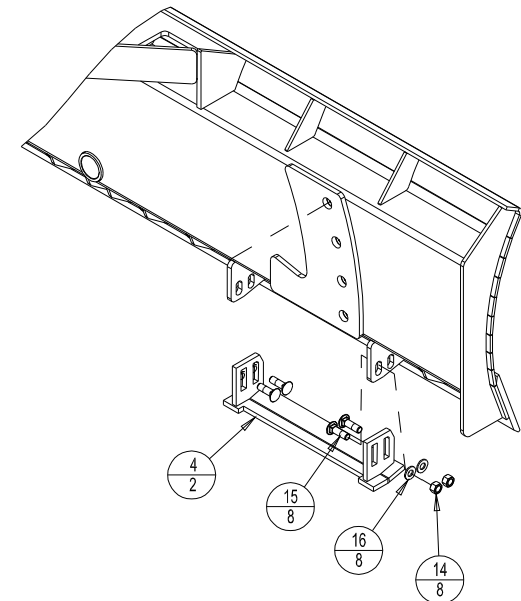
Initial Use

- See following pages for suggested hose routing.
- Check that the quick-tach of the Dozer Blade fits onto skid loader properly. Pins must engage through 3/8" plates at bottom of quick-tach.
- With bottom of the blade touching ground/floor, slowly roll back attachment. Make sure there is no interference between attachment and loader.
- Connect the hydraulic hoses to the standard auxiliary hydraulic couplers.
- Do not connect this attachment to high flow couplers.
- Connect the wiring harness to either the machines auxiliary electrical pin connector outlet or install the Control Box Assembly.
- Make sure hoses and cable do not pinch during roll back.
- Slowly roll attachment fully forward. Check that hoses and cable are long enough so they do not stretch or bind.
- Cycle the blades angle left/right by engaging the machines auxiliary hydraulics.
- Cycle the blades tilt up/down by engaging the machines auxiliary hydraulics and electrical control simultaneously.

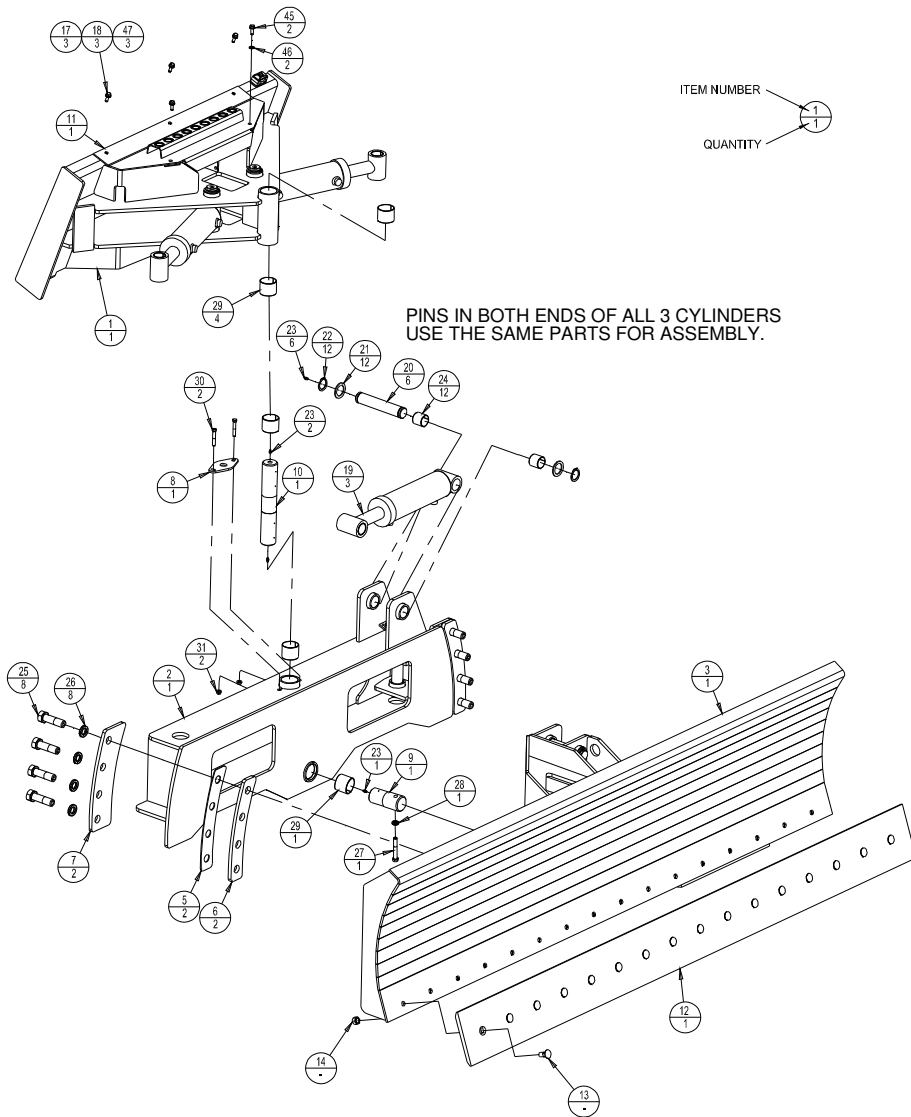
Hydraulic Manifold Installation



Skid Shoe Installation



Main Component Assembly

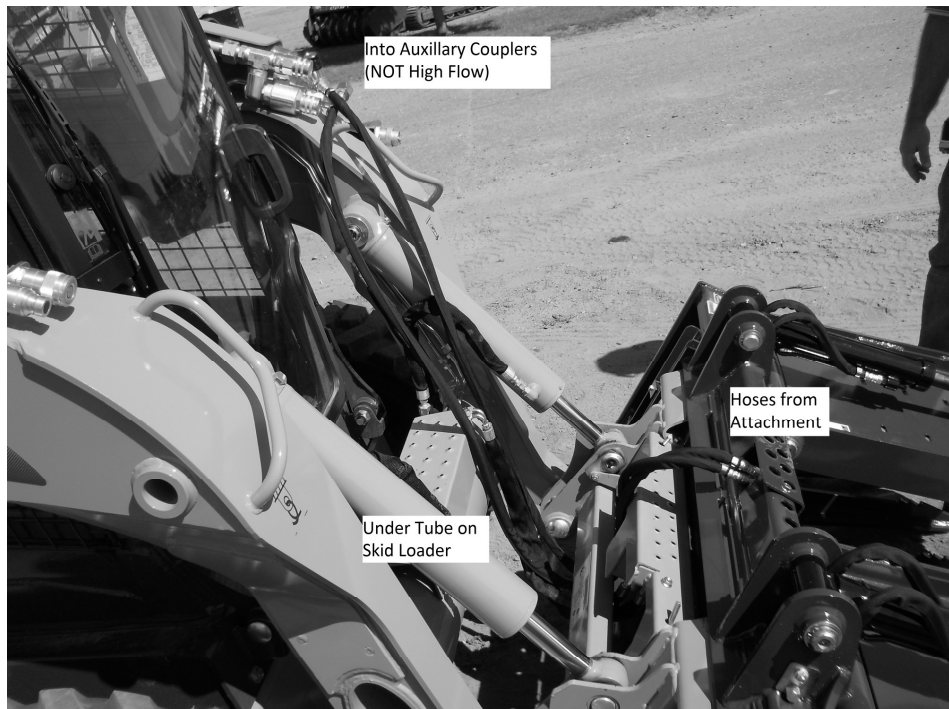


Initial Use (cont.)

- When using the 8 pin or 14 pin auxiliary connector the operator needs to determine which in cab control will energize dozer control valve. (Should be either left or right primary control button). These auxiliary connectors can be used on other Virnig Mfg. Inc. attachments for operation, i.e. Angle Broom.
- The Control Box Assembly can be used on other Virnig Mfg. Inc. attachments, i.e. Angle Broom.
- 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.
- Always follow all safety and operating instructions of skid loader.
- Always relieve pressure before disconnecting hydraulic hoses.
- Never hit or pound couplers.
- Never ram piles, push loads, or objects in excess of skid loader/blade capacity. Damage to blade and/or skid loader may occur.
- Never hook a chain on this attachment.
- Check for debris in quick-tach area before each hook-up.
- Do not lift or carry people on the blade.
- Never work under a raised blade.
- Check your work area and know where all utility lines are. Avoid hitting underground electrical wires, cables, pipes, fence post, gas lines, large rocks, etc...
- For maximum strength the dozer was designed so the loader arms can be run in the full down position against the boom stops. This will help prevent overloading of the lift arms.



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.

Dozer Blade (DZR) Parts List (cont.)

ITEM	PART NO.	QTY	DESCRIPTION	
	39	6996PP	2	Hyd. Hose 22" Lg, Both Ends #6 JIC 37° Female Swivel
	40	7231PP	3	Hyd. Hose 32" Lg, Both Ends #6 JIC 37° Female Swivel
	41	6997PP	6	90° Elbow, #6 SAE O-Ring Male to #6 JIC Male
B	42	1012PP	2	90° Female Swivel Elbow, #6 JIC
C,D	43	7028PP	1	Couplers, Pair, Connect Under Pressure
	44	7797PP	1	Hyd. Hose 41 1/2" Lg, Both Ends #6 JIC 37° Female Swivel
	45	8911PP	2	5/16" NC x 3/4" Lg HHCS
	46	7671PP	2	5/16" Flat Washer
	47	1083PP	3	3/8" Flat Washer
C,D	48	1144PP	2	90° Solid Elbow, #6 Male JIC to #8 O-Ring Thread
D	49	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

A – See Table 1.

B – Used for left side plumb only.

C – Connect under pressure couplers and 90° elbows replace standard couplers on dozer blade.

D – Item not shown.

Table 1

MODEL	DZR72	DZR84	DZR96
Moldboard Weldment	8416VW	8420VW	7538VW
Bolt on Edge	BEV72	BEV84	BEV96
# Bolts & Nuts for Edge	12	14	16
# Nuts for Skid Shoes	8	8	8
Replacement Edge Kit	DEK72	DEK84	DEK96
Weight (lb.)	1510	1575	1640

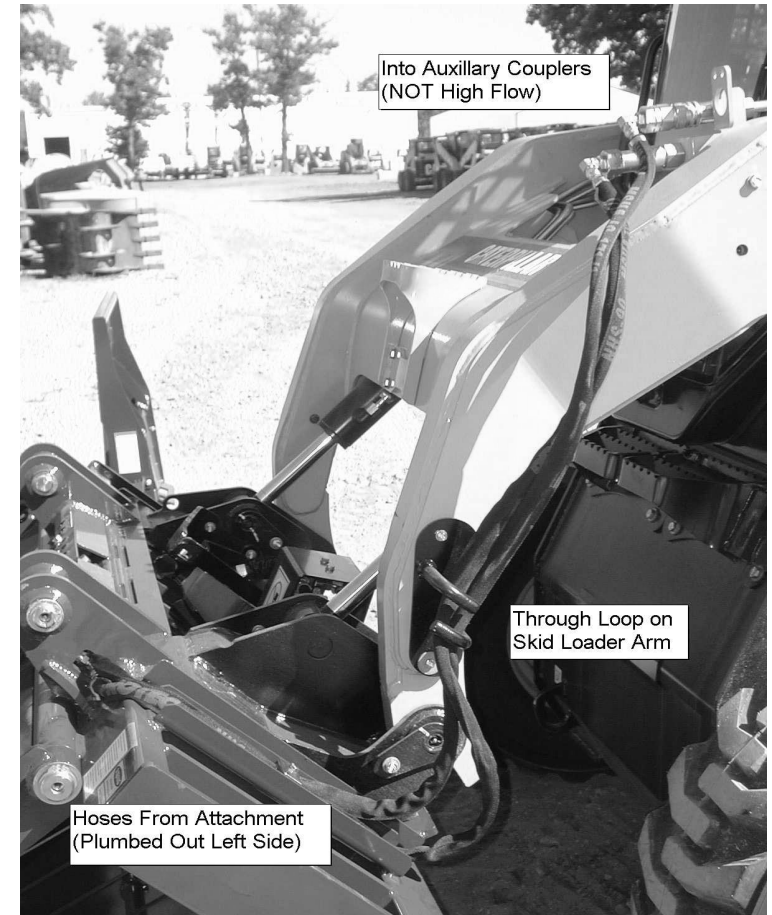
Items 12 through 14 are available as a REPLACEMENT EDGE KIT.

Replacement Edge Kit part numbers are listed in Table 1.

Replacement Edge Kits include width specific Steel Cutting Edge and required mounting hardware.

Dozer Blade (DZR) Parts List

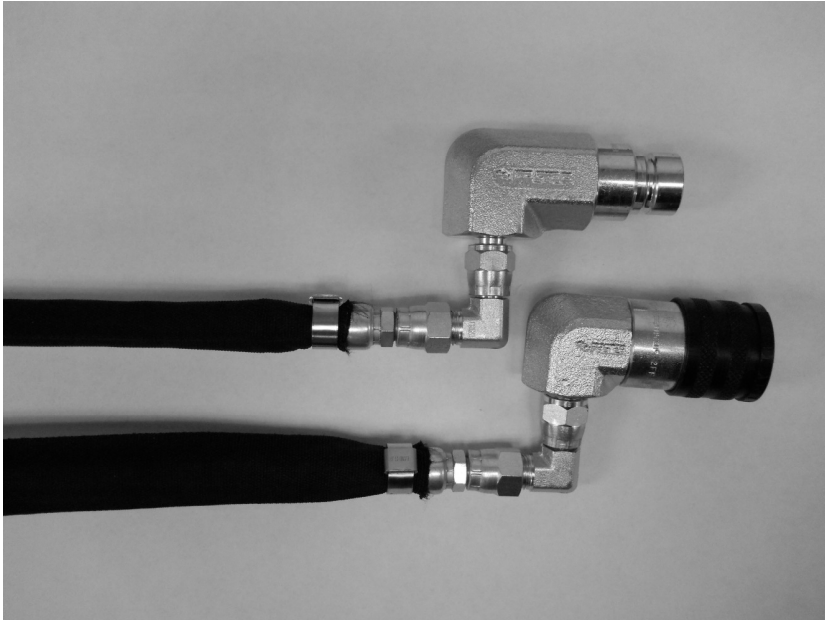
ITEM	PART NO.	QTY	DESCRIPTION
1	7536VW	1	Dozer QT Frame Weldment
2	7537VW	1	Dozer Tilt Frame Weldment
A 3	-----	1	Dozer Moldboard Weldment
4	7575VW	2	Dozer Skid Shoe Weldment
5	7578VP	2	Dozer 14 Gage Spacer
6	7579VP	2	Dozer 1/2" Spacer
7	7580VP	2	Dozer Clamp Flat
8	7581VP	1	Dozer Pin Retainer
9	7586VP	1	Dozer Oscillation Pin
10	7587VP	1	Dozer Pivot Pin
11	8875VW	1	Dozer Cover Plate/Step Weldment
A 12	-----	1	Cutting Edge, 5/8" x 8" Bolt on
A 13	5585PP	-	5/8" NC x 1 3/4" Lg Plow Bolt
A 14	1008PP	-	5/8" NC Top Lock Hex Nut
15	7790PP	8	5/8" NC x 2" Lg Carriage Bolt
16	7957PP	8	5/8" SAE Flat Washer
17	1116PP	3	3/8" NC x 3/4" Lg HHCS
18	1075PP	3	3/8" Lock Washer
19	7229VP	3	Dozer Blade Cylinder
20	5194VP	6	Clam Pivot Pin
21	1097VP	12	1 9/16" Dia x 10 Gage Narrow Rim Mach Bushing
22	1098PP	12	1 9/16" Dia Heavy Snap Ring
23	1034PP	9	1/4"-28 UNF Straight Grease Fitting
24	5586PP	24	1 9/16" Dia x 1 9/16" Lg Bushing
25	6676PP	8	1" NC x 3 1/2" Lg HHCS
26	6677PP	8	1" Lock Washer
27	8866PP	1	1/2" NC x 1 3/4" Lg HHCS GR8
28	8712PP	1	1/2" Lock Washer
29	7789PP	5	2 1/8" Dia x 2" Lg Bushing
30	6721PP	2	3/8" NC x 2 1/4" Lg HHCS
31	6140PP	4	3/8" NC Top Lock Flange Nut
32	7791VA	1	Valve Block Assembly, Dozer
33	7798PP	2	3/8" NC x 5 1/2" Lg HHCS
34	1067PP	1	Hose Clamp Assembly
35	1117PP	1	5/16" NC x 1 1/2" Lg HHCS
36	1145PP	2	Adapter, 6MJ-8MB
37	1072PP	3	Restrictor Fitting, 1/16" Dia Orifice
38	6966PP	6	Adapter, 6MJ-6MB



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.

Warning Labels on Dozer Blade Attachment



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 pivot pin (2 fittings), oscillation pin, and cylinder pins (9 grease fittings total).
- Inspect all fasteners. Make sure they are in place and holding mating parts securely.
- 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.

*Every 50 hours of operation

- Check that cylinder, pivot and oscillation pins are secure.
- Check for loose, worn, or missing parts. Repair or replace as needed.
- Check cutting edge wear. Reverse or replace edge as needed.
- Contact your dealer for replacement parts.



This label is located near the pivot point area on the moldboard. Always keep hands clear of dozer blade when loader hydraulic system is operational.



This label is located near both ends of the moldboard. Always stay clear of moldboard. Never inspect this attachment with loader running or with the blade raised off the ground/pavement.



This label is located on the frame near the quick-tach. This label has several important instructions that must be followed for safe operation of this attachment.