Form No. 3356–243 Rev. A

Rear Quick Attach System Kit

For Groundsmaster 7200/7210 Series Mower

Model No. 30377—270000001 and Up

Installation Instructions

Installation

Important The machine must be equipped with the Auxiliary Power Unit Kit, Model No. 30382.

Note: To gain additional access during the assembly of the kit, raise the rear of the traction unit, support it with jack stands and remove the right rear tire. Some components may have been assembled.

1. Mount the rear lift arm to the rear frame members, with 2 screws (7/8 x 4–1/2 inch), lockwashers (7/8 inch) and locknuts (7/8 inch). Position the components as shown in figure 1. Use as many washers as possible to evenly shim between the right and left sides of the lift arm and rear frame members. Torque the screws and locknuts to 382–478 ft–lb.

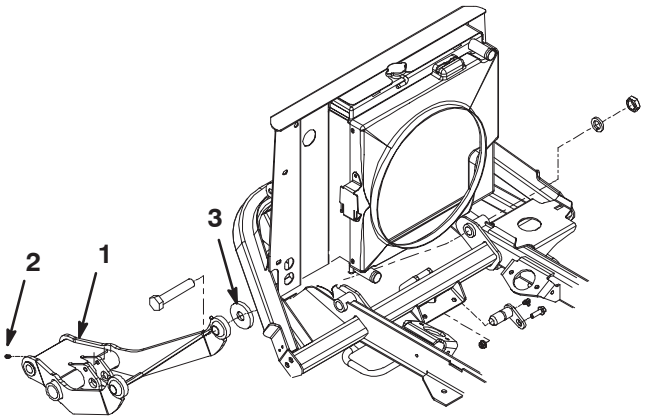

Figure 1

1. Rear lift arm
2. Grease fitting
3. Washer (as required)

2. Thread the grease fitting into the rear of the lift arm (Fig. 1).

3. Thread a 45 degree hydraulic fitting into each port of the hydraulic cylinder (Fig. 2). Make sure the O–rings are in place when installing the fittings. Orientate the fittings as shown in figure 3.

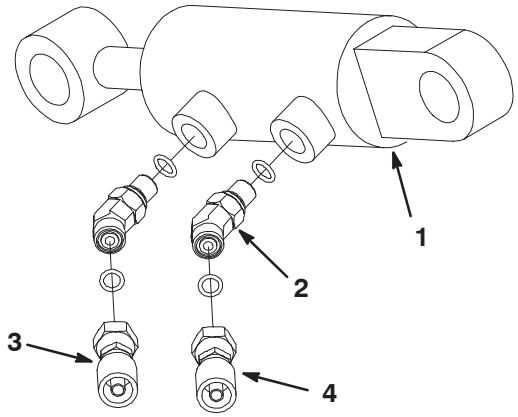

Figure 2

1. Hydraulic cylinder
2. 45 degree hydraulic fitting (2)
3. Hydraulic hose (16.5” long)
4. Hydraulic hose

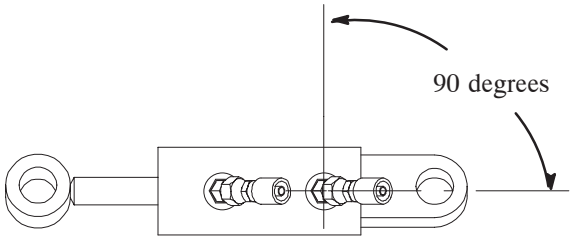

Figure 3

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4. Install the straight fitting end of each hydraulic hose to the fittings on the hydraulic cylinder (Fig. 2). The shorter hose (16.5 inches long) is connected to the fitting closest to the rod end.

5. Mount the rod end of the hydraulic cylinder to the lift arm with a pivot pin (Fig. 4).

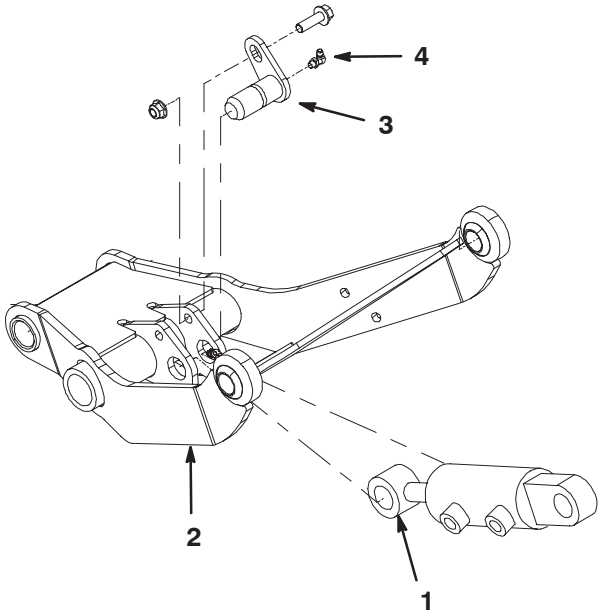

Figure 4

1. Hydraulic cylinder rod end
2. Lift arm
3. Pivot pin
4. Grease fitting

6. Secure the pivot pin to the lift arm with a screw (3/8 x 1–1/4 inch) and a flange nut (3/8), positioning as shown in figure 4.

7. Thread a 90 degree grease fitting into the end of the pivot pin (Fig. 4). Position the grease fitting as shown in figure 5.

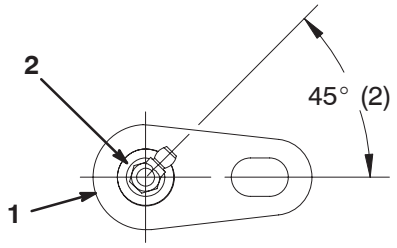

Figure 5

1. Pivot pin
2. Grease fitting

8. Mount the hydraulic manifold to the back of the lift adapter with 2 screws (5/16 x 3/4 inch) and lockwashers (5/16) (Fig. 6).

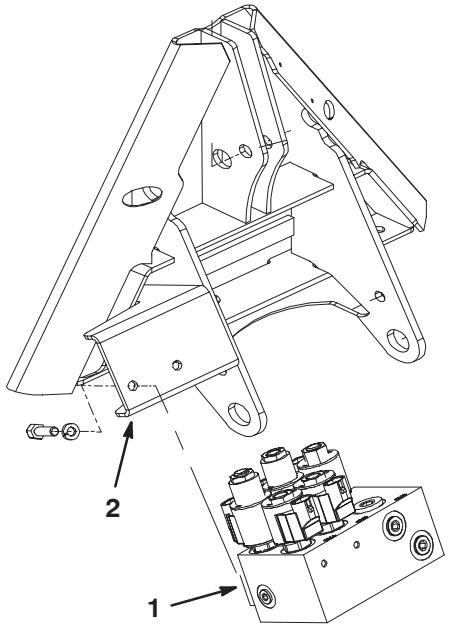

Figure 6

1. Hydraulic manifold
2. Lift adapter

9. Mount the lift adapter to the rear lift arm with a pivot pin (Fig. 7). Secure the pivot pin to the lift adapter with a screw (3/8 x 7/8 inch) and flange nut (3/8 inch).

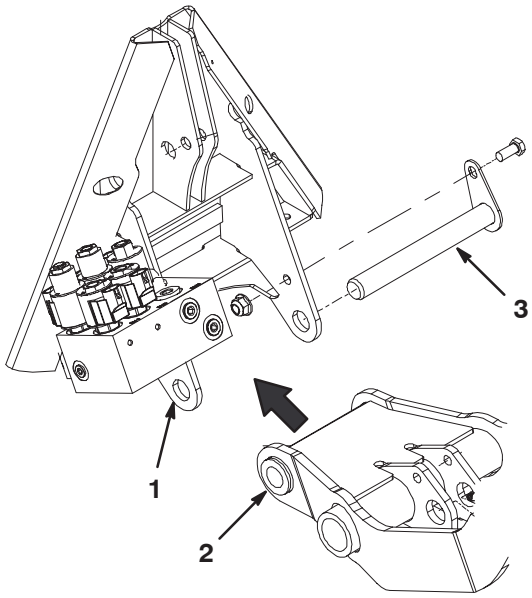

Figure 7

1. Lift adapter
2. Rear lift arm
3. Pivot pin

10. Secure the link mount to the rear bumper bracket with 3 screws (3/8 x 1 inch). Position the link mount as shown in figure 8.

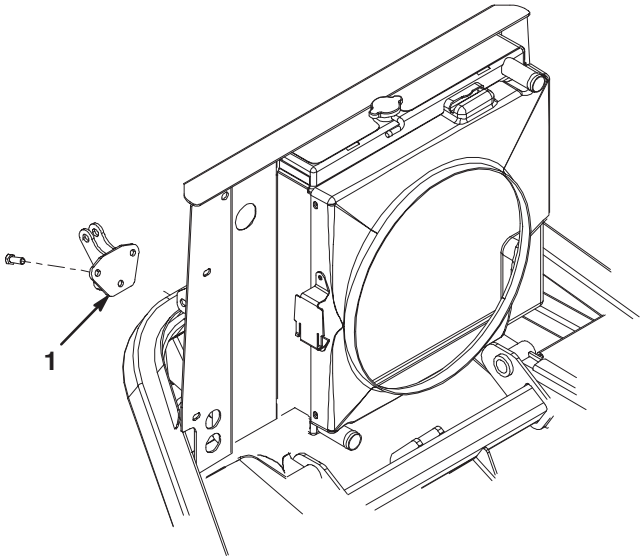

Figure 8

1. Lift mount

11. Assemble the rod ends and jam nuts to the hex tube to form the threaded link (Fig. 9). The nuts and the rod ends have right and left hand threads.

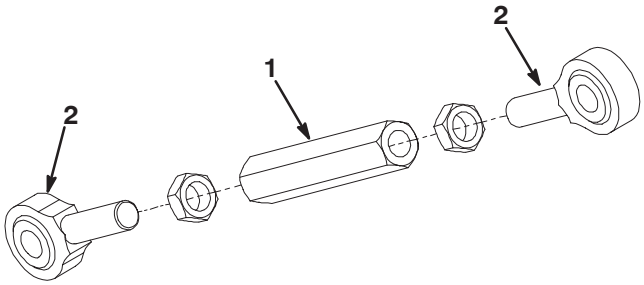

Figure 9

1. Hex tube
2. Rod end

12. Adjust the length of the threaded link to the dimension shown in figure 10 and tighten the jam nuts.

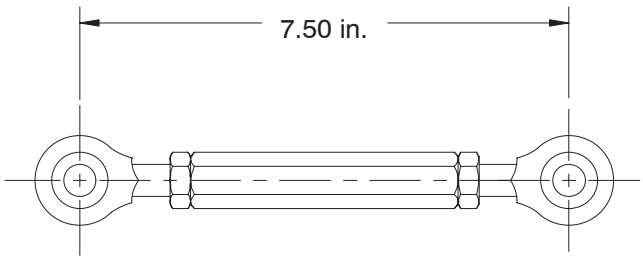

Figure 10

13. Secure one of the threaded link rod ends to the lift adapter with a 1/2 x 1–1/2 inch bolt and 1/2 inch nut (Fig. 11).

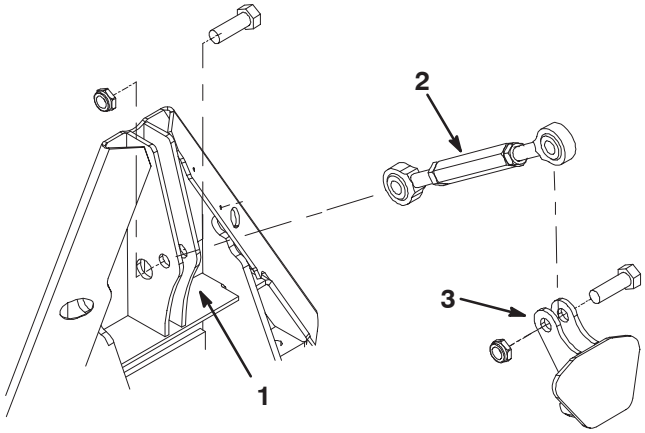

Figure 11

1. Lift adapter
2. Threaded link
3. Link mount

14. Raise the lift adapter and secure the other rod end to the link mount with a 1/2 x 1–1/2 inch bolt and 1/2 inch nut (Fig. 11).

15. Mount the stationary end of the hydraulic cylinder to the underside of the frame cross member bracket with a pivot pin (Fig. 12).

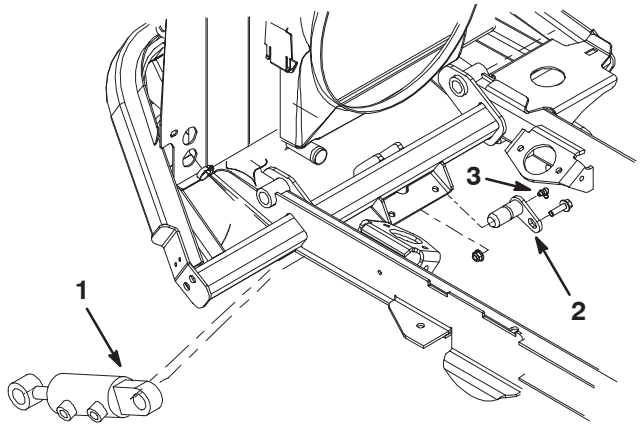

Figure 12

1. Hydraulic cylinder (stationery end)
2. Pivot pin
3. Grease fitting

16. Secure the pivot pin to the frame bracket with a screw (3/8 x 1–1/4 inch) and a flange nut (3/8), positioning as shown in figure 12.

17. Thread a 90 degree grease fitting into the end of the pivot pin (Fig. 12). Position the grease fitting as shown in figure 13.

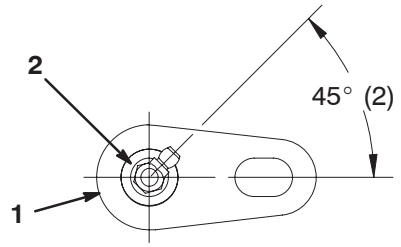

Figure 13

1. Pivot pin
2. Grease fitting

Important Make sure the O–rings are coated with fresh clean oil and in place when installing the fittings and hoses.

18. Connect the 2 hoses from the hydraulic cylinder to the fittings on the bottom of the hydraulic manifold (Fig. 14 thru 16). Orientate the fitting as shown in figure 15.

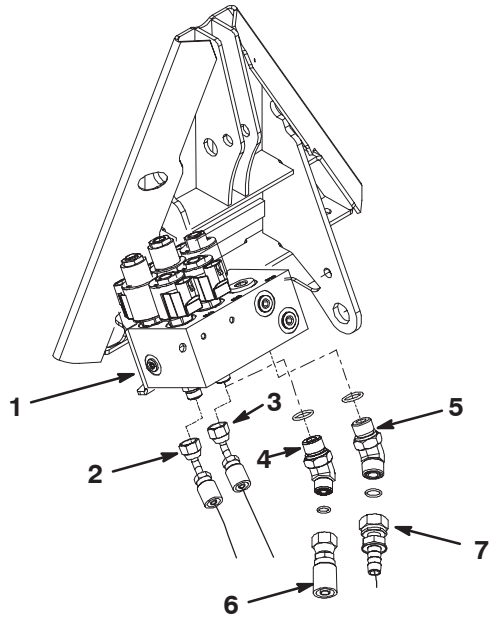

Figure 14

1. Hydraulic manifold
2. Hydraulic hose from hydraulic cylinder
3. Hydraulic hose from hydraulic cylinder (16.5" long)
4. 45 degree fitting (smaller)
5. 45 degree fitting (larger)
6. Hydraulic hose (95.25" long)
7. Hydraulic hose (25" long)

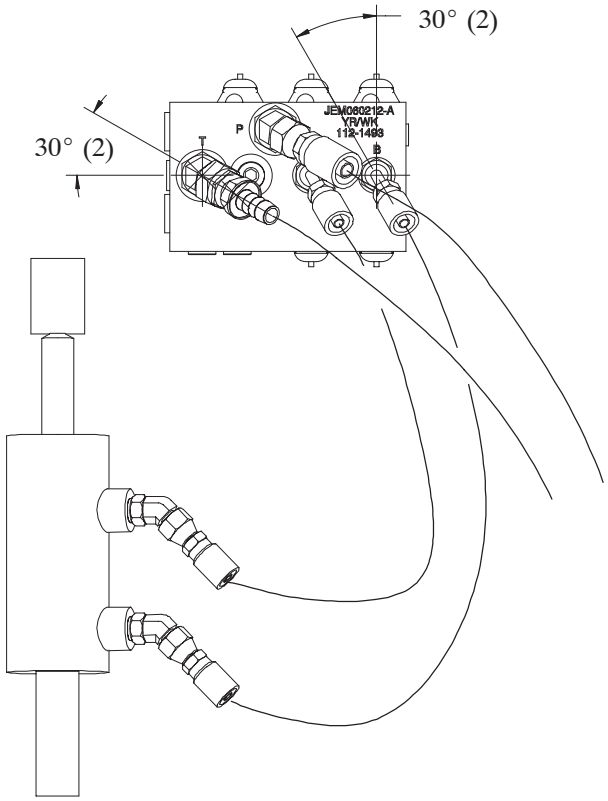

Figure 15

19. Thread the 45 degree hydraulic fittings into the bottom of the hydraulic manifold (Fig. 14). Orientate the fitting as shown in figure 15.

20. Secure the short hose (25 inch) to the 45 degree fitting on the manifold (Fig. 14).

21. Secure the long hose (95 inch) to the other 45 degree fitting on the manifold (Fig. 14).

22. Insert the protective sleeve onto these hoses and secure with three cable ties (Fig. 16).

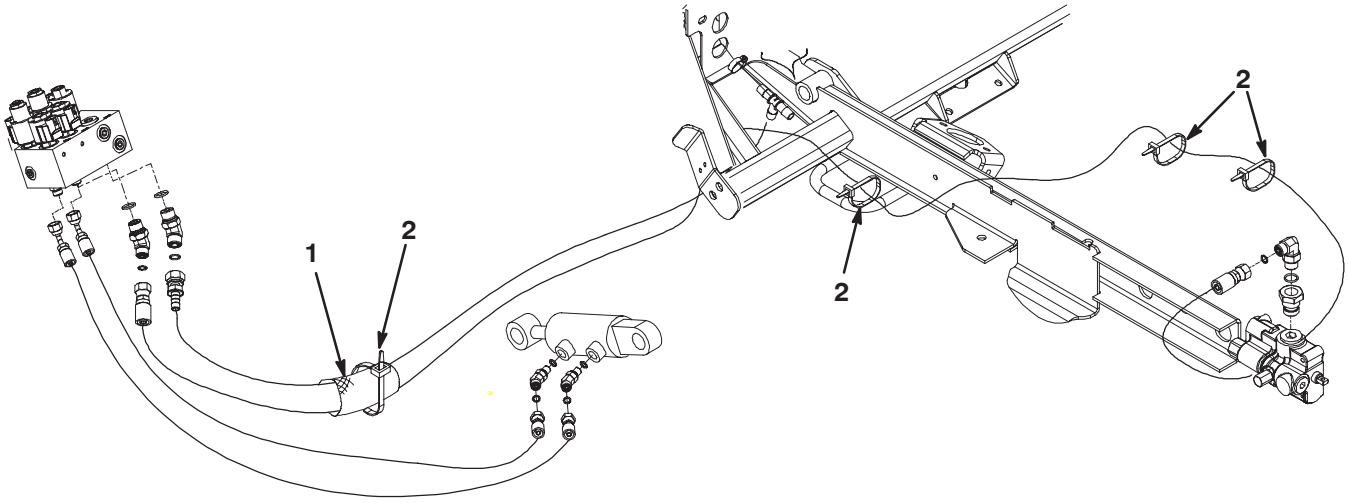

Figure 16

1. Protective sleeve
2. Cable tie

23. On the right side of the machine, just ahead of the radiator frame, place a drain pan under the oil cooler return hose (lower hose) (Fig. 17).

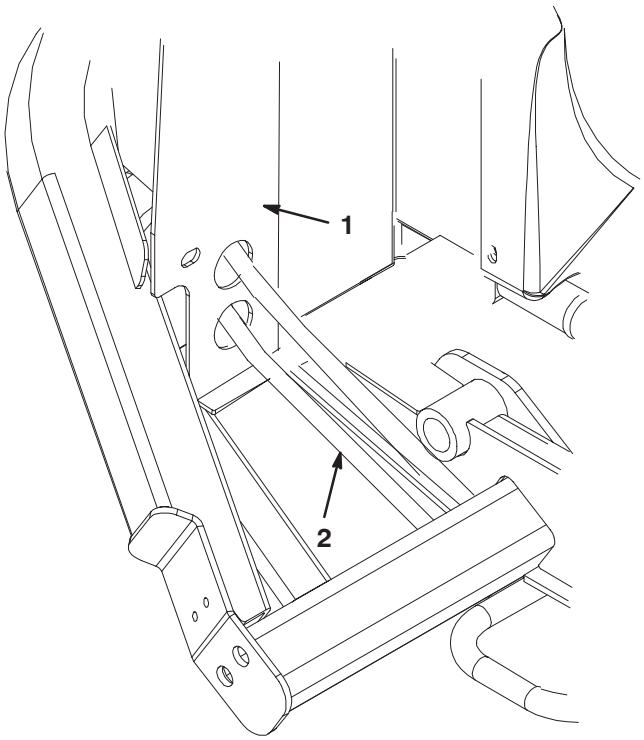

Figure 17

1. Radiator frame
2. Oil cooler return hose

24. Route the short hose, from the manifold forward to the oil cooler hose location stated previously.

25. Insert the tee fitting into the end of the short hose (Fig. 18).

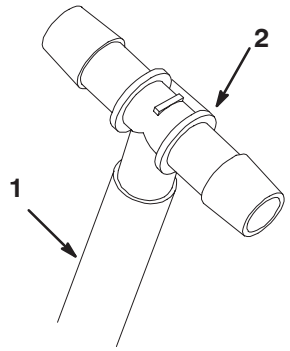

Figure 18

1. Short hose
2. Tee fitting

26. Measure approximately 5 inches from the radiator frame and cut the oil cooler return hose. This is the hose between the deck lift valve and the oil cooler. Hold the hose ends upward to decrease the amount of hydraulic fluid lost (Fig. 19).

27. Insert the ends of the hydraulic tee fitting into the cut hose ends (Fig. 19).

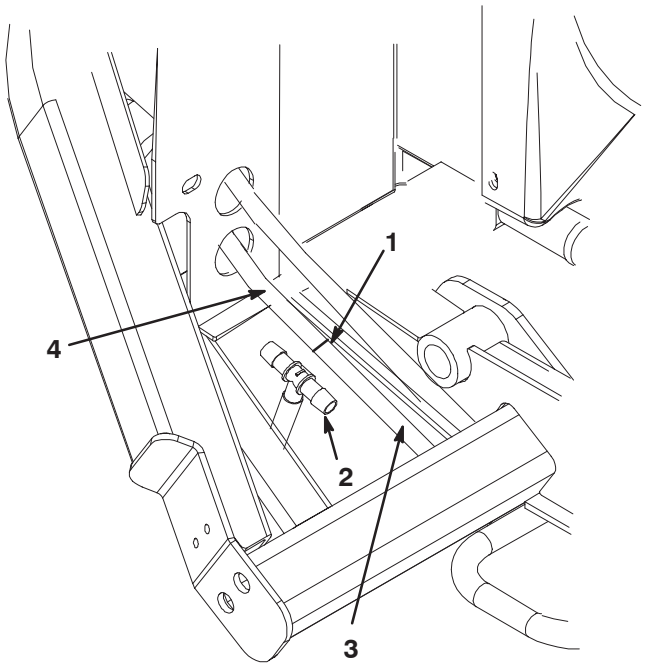

Figure 19

1. Cut hose here
2. Tee fitting
3. To deck lift valve
4. From oil cooler

28. Secure all 3 of the hoses to the tee fitting with 7/8 inch hose clamps.

29. On the right frame channel, locate the deck lift valve assembly (Fig. 20).

30. Remove the plug from the top of the valve assembly (Fig. 21).

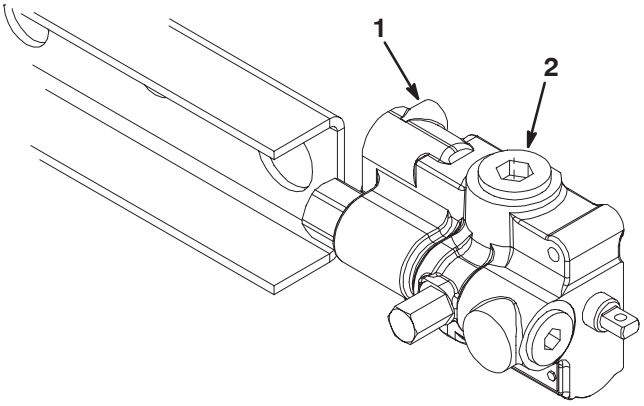

Figure 20

1. Valve assembly
2. Plug

31. Thread the sleeve fitting into the opening in the top of the valve and position as shown in figure 21.

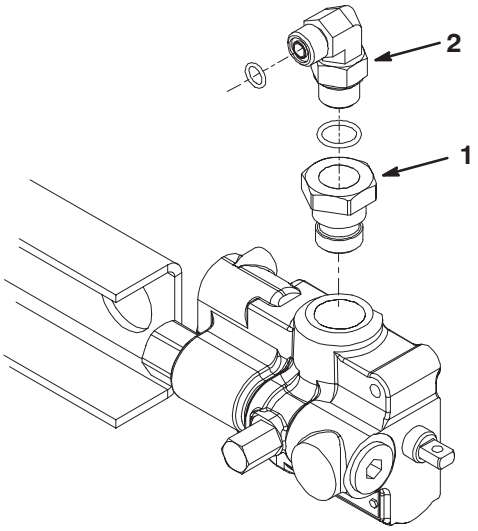

Figure 21

1. Sleeve fitting
2. 90 degree fitting

32. Thread a 90 degree fitting into the sleeve fitting on the valve (Fig. 21).

33. Route the long manifold hose forward, under the radiator frame, over the frame cross member and along the frame rail back to the valve (Fig. 16).

34. Secure the hose fitting to the valve fitting (Fig. 16).

35. Using the existing holes, mount 2 relays to the front of the radiator frame with 2 screws (1/4 x 1/2 inch) and locknuts (1/4 inch) (Fig. 22).

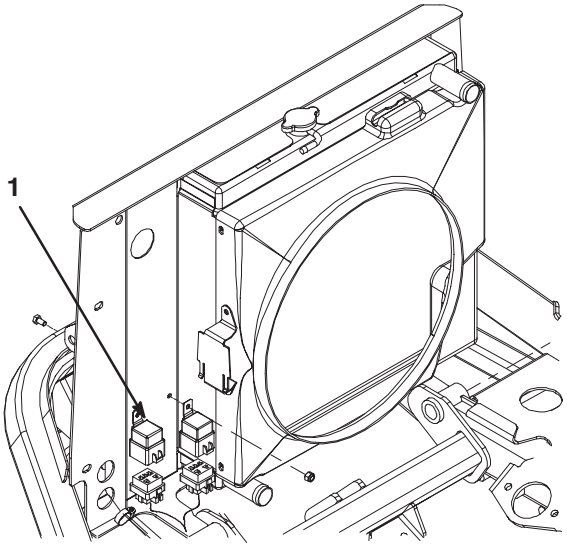

Figure 22

1. Relay (2)

36. Unlatch the control panel cover and move it aside (Fig. 23).

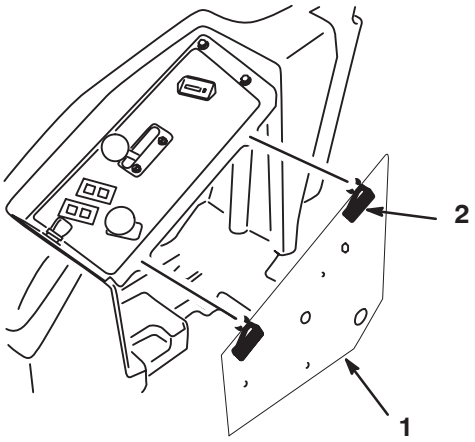

Figure 23

1. Control panel
2. Latch

37. Locate and remove the two knock out plugs, shown in figure 24, from the top of the control panel.

38. Carefully cut and remove the decal material to expose the control panel holes. Deburr the newly exposed edges of the control panel.

Note: Only remove knock–out plugs and decal material for the required switches.

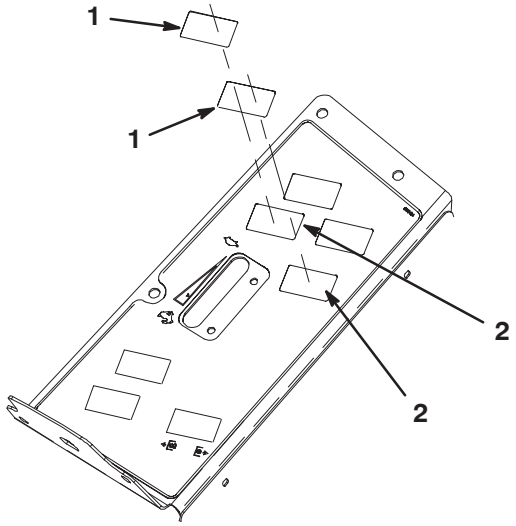

Figure 24

1. Knock out plug
2. Knock out plug locations

39. Clean the control panel surface and affix the decal around the exposed holes (Fig. 25).

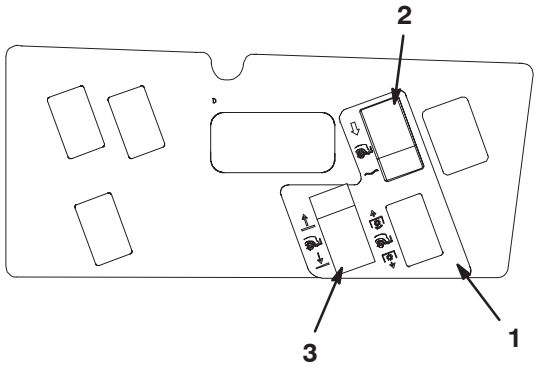

Figure 25

1. Decal
2. Float/Power dow (2 Position switch)
3. Lift/Lower (3 position switch)

40. Insert the switches into the appropriate mounting holes (Fig. 25). The flat on the switch is to be positioned toward the operator.

41. Route and connect the wire harness (Fig. 26) at the follows locations:

- Hydraulic manifold connectors
- Relays under control panel
- To main harness connector
- Red power wire connector
- Ground to ground block
- Lift/Lower switch
- Float/Enable switch
- Blower PTO switch (Used with Auxiliary Hydraulic Power Unit Kit, Model No. 30382)

42. Secure the wire harness with cable ties.

Important Keep the harness away from all hot, sharp or moving parts.

43. Grease all the new fittings with No. 2 Lithium Based grease.

44. Check the hydraulic fluid level and replenish as required.

45. Start the machine and operate rear lift. Check for leaks and replenish hydraulic fluid as required.

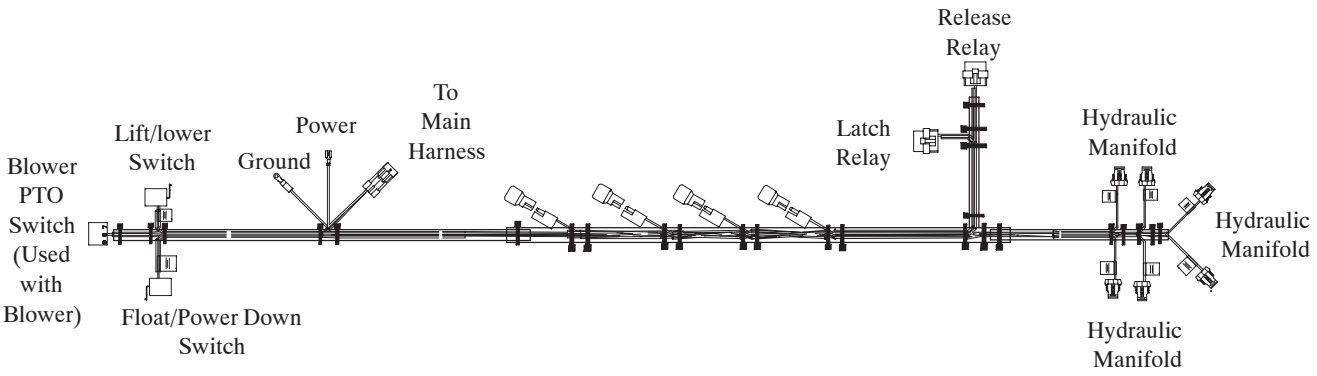

Figure 26

Operating Tips

- Read and understand the attachment Operator's manual prior to use.
- Make sure the appropriate weight mount bracket and front weight(s) are installed for the rear attachment.
- Remove rear attachment and any loose front end weights prior to mowing.
- Use care when operating the machine when a rear attachment is installed because it is wider than the machine and may contact poles, fences or trees.
- Never operate the machine near bystanders.

Operation

Lift/Lower Switch

Move switch to **Lift** to raise attachment and to **Lower** to lower attachment.

Float/Power Down Switch

Moving the switch to **Float** allows the attachment to follow the contour of the ground. Moving the switch to **Power Down** will add weight from the machine to increase ground engagement force. Higher ground engagement force will decrease the traction capacity of the machine.

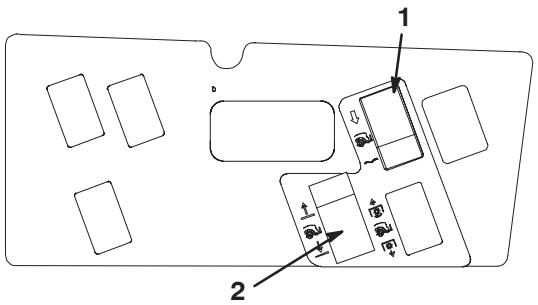

Figure 27

1. Float/Power Down switch
2. Lift/Lower switch

Attachment Angle Adjustment

To increase or decrease the engagement angle of the attachment proceed as follows:

- Loosen the jam nuts on the threaded link.
- Rotate the hex tube until the desired angle is attained.
- Tighten the jam nut to lock the adjustment.
- With the engine operating at low idle, raise the rear attachment to make sure it does not contact the hood.

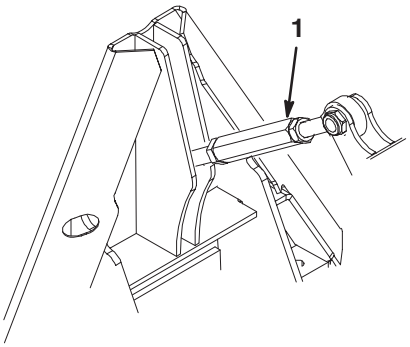

Figure 28

1. Threaded link

Maintenance

- Lubricate the (5) grease fittings with No. 2 Lithium based grease weekly or after every washing.
- When operating in dusty conditions the air cleaner should be checked daily . A safety air cleaner element is available and may be added to the existing air cleaner for additional engine protection.

Weight Charts

Use the following weight charts to determine the correct amount of front weight required for your machine.

(72 in width of cut) Models 30360, 30361, 30363 &30364 With NO hard canopy (model 30359) AND	Additional Front Weight Required	Weight Part Number	Weight Description	Qty
Rear QAS (Model 30377) and no attachment	0 lbs	NA		
Finish Grader (Box Rake) (Model 08754)	0 lbs	NA		
Steel Drag Mat (Model 08757)	0 lbs	NA		
Tooth Rake (Model 08751)	0 lbs	NA		
Tooth rake with Spring Rake (Model 08752) attached	0 lbs	NA		
Cocoa Drag Mat (Model 08758)	67 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 1
Nail Drag (Model 08761)	67 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 1
Debris Blower (Model 30393)	109 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 2
Rahn Groomer (Allied Product)	151 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 3
(72 in width of cut) Models 30360, 30361, 30363 &30364 With hard canopy (model 30359) AND				
Rear QAS (Model 30377) and no attachment	0 lbs	NA		
Finish Grader (Box Rake) (Model 08754)	25 lbs	PN 114-4090 **OR** Model 30375	Front Weight Bracket **OR** Jack Stand Kit	1 1
Steel Drag Mat (Model 08757)	25 lbs	PN 114-4090 **OR** Model 30375	Front Weight Bracket **OR** Jack Stand Kit	1 1
Tooth Rake (Model 08751)	25 lbs	PN 114-4090 **OR** Model 30375	Front Weight Bracket **OR** Jack Stand Kit	1 1
Tooth rake with Spring Rake (Model 08752) attached	25 lbs	PN 114-4090 **OR** Model 30375	Front Weight Bracket **OR** Jack Stand Kit	1 1
Cocoa Drag Mat (Model 08758)	109 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 2
Nail Drag (Model 08761)	109 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 2
Debris Blower (Model 30393)	151 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 3
Rahn Groomer (Allied Product)	Not Approved			

Models 30362 &30365 (62 in width of cut) With NO hard canopy (model 30359) AND	Additional Front Weight Required	Weight Part Number	Weight Description	Qty
Rear QAS (Model 30377) and no attachment	67 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 1
Finish Grader (Box Rake) (Model 08754)	151 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 3
Steel Drag Mat (Model 08757)	151 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 3
Tooth Rake (Model 08751)	109 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 2
Tooth rake with Spring Rake (Model 08752) attached	151 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 3
Cocoa Drag Mat (Model 08758)	151 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 3
Nail Drag (Model 08761)	151 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 3
Debris Blower (Model 30393)	151 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 3
Rahn Groomer (Allied Product)	Not Approved			
Models 30362 &30365 (62 in width of cut) With hard canopy (model 30359) AND				
Rear QAS (Model 30377) and no attachment	109 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 2
Finish Grader (Box Rake) (Model 08754)	193 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 3
Steel Drag Mat (Model 08757)	193 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 4
Tooth Rake (Model 08751)	151lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 3
Tooth rake with Spring Rake (Model 08752) attached	193 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 4
Cocoa Drag Mat (Model 08758)	193 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 4
Nail Drag (Model 08761)	193 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 4
Debris Blower (Model 30393)	193 lbs	PN 114-4090 & PN 114-4096	Front Weight Bracket & 42 lb front weight	1 4
Rahn Groomer (Allied Product)	Not Approved			

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