



Welcome to the OLYMPIA Advantage.

The OLYMPIA has been designed and built to deliver trouble free performance. Like all mechanical equipment however, trouble free operation is based on complete and ongoing maintenance procedures being adhered to in order to validate your Resurface Corp. warranty.

We have included a maintenance log form at the back of this manual to assist you in maintaining a permanent record of your maintenance program. Please copy this form to provide additional pages as needed.

The operational and maintenance procedures outline a step by step process that should be followed precisely. A variety of safety and performance-enhancing options are available and may be ordered on any model.

The illustrations and product information contained in this manual were current at the time of publication. In order to continue Resurface Corp.'s development of its ice resurfacing technology, Resurface Corp. reserves the right to change designs, models and specifications without notice and without liability for such changes.

The components in your OLYMPIAice resurfacing machine are warranted against defects in material and workmanship by Resurface Corp., for two full years from the date of delivery.

The power train of the OLYMPIAresurfacer is a GMC 4-wheel drive chassis. It should be placed on a ongoing maintenance schedule with your local GMC dealer to retain the safety and dependability originally built in by GMC.

For continued safe, economic operation and to validate the Resurface Corp. warranty, the balance of your OLYMPIAice resurfacing machine should be strictly maintained under the guidelines outlined in this manual.

ALL WARRANTY REPAIRS MUST FIRST BE AUTHORIZED BY RESURFACE CORP. OR AN AUTHORIZED DEALER

No warranty on this machine will be honoured by Resurface Corp. other than that stated above.

DRIVER INSTRUCTIONS

Do Not Operate Unless Properly Trained.

This OLYMPIA ice resurfacer has been manufactured for the resurfacing of ice surfaces only.

Do Not Use for any other purpose.

Read Owners instruction manual completely before use.

Only authorized, trained drivers are to operate the OLYMPIA.

No Passengers allowed on the machine at any time.

Make sure the ice surface is clear of people before commencing resurfacing operation.

Make sure the arm rest is in the down position prior to starting the OLYMPIA.

Prior to starting the engine check to make sure the gear lever is in the Park position and that the elevator is in the neutral position.

Gear lever position for forward motion is "D".

Gear lever position for reverse motion is "R".

Never leave the gear lever in the neutral "N" position. This is only used for emergency removal of the Olym pia from the ice surface if the engine is inoperable.

Always keep the gear lever in the park "P" position when the OLYMPIA is not in use.

Make sure the conditioner is in the raised position prior to moving the OLYMPIA .

Depress the brake pedal before starting the engine.

Move the gear lever to the "D" position.

Ease off the brake pedal, depress the accelerator pedal and drive onto the ice surface.

Stop the OLYMPIA immediately upon hearing the audible/ visual alarm.

Operate the OLYMPIA in accordance to the operating instruction in the owners manual.

Do not exceed 3000 rpm.

Lower the conditioner to the ice surface prior to turning on the elevator.

Turn on the flood water and wash water as required.

Turn off the flood water and / or wash water.

Switch off the elevator and then raise the conditioner before leaving the ice surface.

Drive to the storage area.

Put the gear lever in the park "P" position before turning off the engine.

Never reach under the snow bin or conditioner until they are secured.

Switch off the fuel at the tanks when the machine is not in use.

Keep the OLYMPIA parked in area which has no public access.

Always maintain the machine in accordance with the manufacturers requirements.

Remove key from ignition before dismounting.

Do Not operate the Olym pia if not properly serviced or if any safety guards provided are not fitted into their proper place.



Owner's Name:
Address:
.....
.....

Identification Number:
Model Number:
Machine Weight Empty:
Machine Weight Full:
Conditioner Size:
Kilowatt (HP) @ 2000 RPM:
Options:
.....
.....
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Resurfce Corp. Service: 1-519-669-1694 Distributor #:

CUT ALONG THIS LINE

Owner's Name:
Address:
.....
.....

Identification Number: Model Number:
Machine Weight Empty: Machine Weight Full:
Conditioner Size: Kilowatt (HP) @ 2000 RPM:
Options:
.....
.....
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Resurfce Corp. Service: 1-519-669-1694 Distributor #:



CUT ALONG THIS LINE

AFFIX
STAMP
HERE

RESURFICE CORP.
25 Oriole Parkway East
Elmira, Ontario
Canada N3B 3A9



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For Safe Operation

The OLYMPIA is intended for use, only by people who have a basic knowledge of motorized equipment operation and maintenance. Resurface Corp. cannot accept responsibility for any accidents that occur as a result of operation or maintenance of the machine by personnel who lack this basic knowledge or sufficient training.

Operating conditions vary widely and Resurface Corp. cannot predict these varying conditions, and it is therefore the user's responsibility to determine the appropriate settings in the operation of the OLYMPIA.

Each OLYMPIA is shipped with a variety of built-in safety devices. To prevent the occurrence of such accidents, all operators and maintenance personnel that deal with the machine must carefully read the manuals supplied by Resurface Corp., the power train manufacturer and the fuel supplier, before attempting to operate and maintain the OLYMPIA.

Because there are so many "things that cannot be done" and "things that must not be done" when using the OLYMPIA, it is impossible to cover it all in the OLYMPIA manual. Assume that something is impossible or unsuitable unless the manual specifically states that it can be done.

The following manual is customized for this particular OLYMPIA. It provides detailed information regarding the following:

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Please make use of this material when operating and maintaining the OLYMPIA. Fundamental safety information is high lighted throughout the manual.

All cautions on operation must be strictly observed when operating the machine, carrying out maintenance work, and storing the equipment. Failure to observe the fundamental safety information can cause accidents in which the operator or other personnel that deal with the OLYMPIA are seriously injured, or the machine is damaged. All personnel that deal with the machine must carefully read and thoroughly understand the information in the following pages before attempting to operate or maintain the OLYMPIA.

Unloading & Parts Check

The OLYMPIA is delivered with the various parts of the conditioner stored inside the snow bin.

When getting on the OLYMPIA always use a three point contact mounting. Place one hand on the *seat*, not on the armrest, the other on the hand-grip on the side of the dash and a foot on the conditioner.

The OLYMPIA power system is seat controlled for your safety. You have to be seated on the seat for the engine to start and continue running.

Once seated turn the ignition key. The tach will peak and then drop back to normal.

Check the oil pressure gauge before engaging the gearshift. There is a low oil pressure alarm but always do a visual check of the gauge.

The OLYMPIA has one forward gear and one reverse gear.

Safety Note: Make sure you come to a complete stop before trying to change gears.

Shifting gears from Park, Reverse and Drive is a simple matter of pushing the gear knob down. Push the lever forward or back to the desired position and release. The knob will pop up when the gears are properly engaged.

The speed of the OLYMPIA is controlled directly by the accelerator. The tachometer on the dash will display the engine's RPM's, which is useful to maintain a constant speed while flooding the ice and to prevent over-revving the engine. At no time should the engine exceed 3,000 RPM.

The hydraulic power steering system combined with the studded tires give you optimum control and maneuverability.

The power assisted, self adjusting brakes require only a moderate pressure to activate.

After unloading the OLYMPIA from the transportation vehicle, drive it to your maintenance area. Come to a complete stop and shift into park.

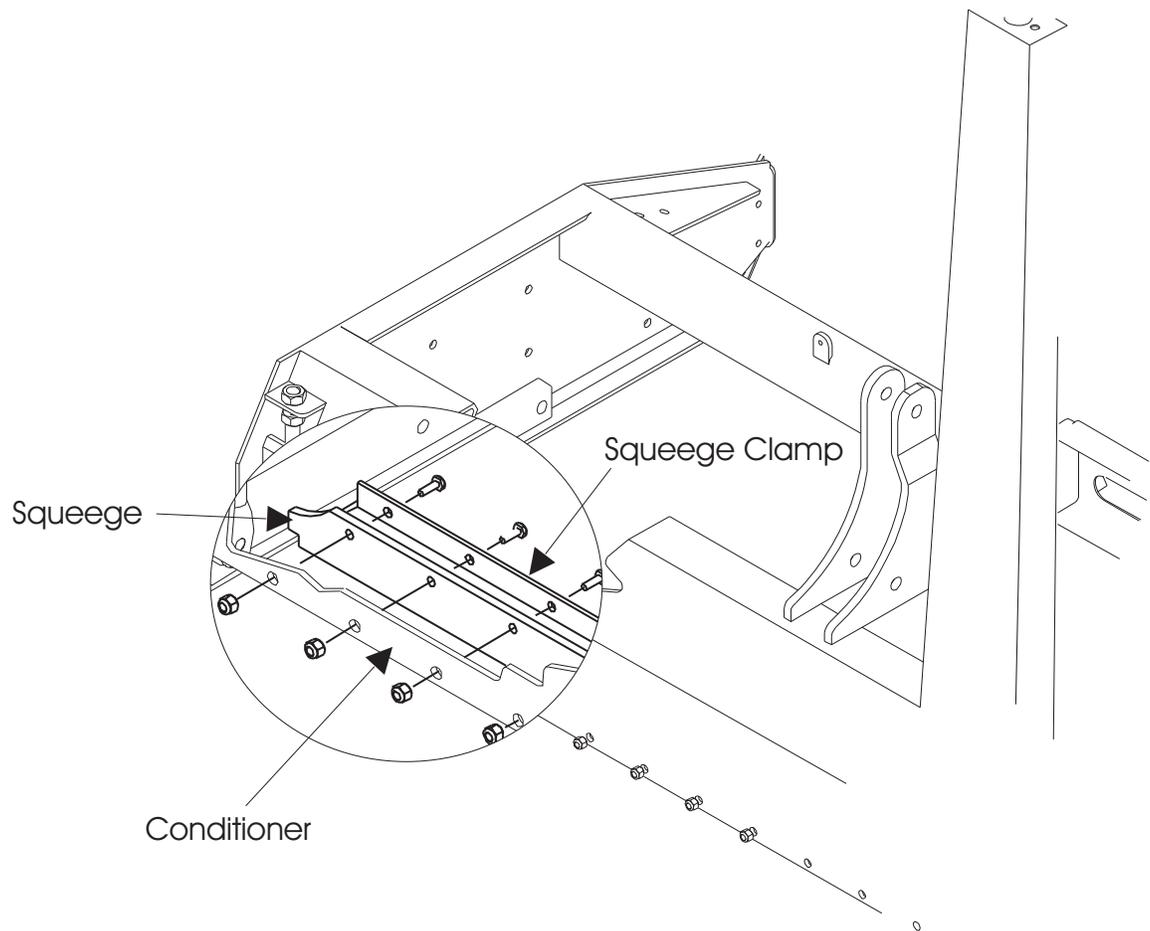
After parking the OLYMPIA leave the conditioner in the raised position. Check to ensure there is adequate top, front and side clearance. Push the top of the snow bin control button on the dash and hold until the snow bin is raised sufficiently to remove the parts inside.

Remove the parts from inside the snow bin. Please do an immediate check.

- | | |
|--|--|
| 1. Blades sheathed in wooden holders
(retain wooden holders for future use) | 9. Tube of Grease |
| 2. Towel Bar Assembly | 10. Jack |
| 3. Two Blade Hooks | 11. Wheel Wrench and Socket |
| 4. Blade Bolts & Nuts (15) | 12. Magnetic Blade Protector |
| 5. Spare Tire | 13. Olympia Room Sign |
| 6. Combination Wrench Set | 14. Squeegee |
| 7. Allen Wrench Set | 15. 3/8" x 1 1/4" Hex Head Cap Screws (20)
& Lock Nuts (20) |
| 8. Grease Gun | 16. Touch up Paint |

Squeegee Installation

To install the squeegee, mount it on the inside of the conditioner, using 3/8" x 1-1/4" hex head cap screws and lock nuts. Carefully trim the squeegee ends so that it fits precisely to the runners at the side plates of the conditioner. Snow which is pushed by the squeegee will be trapped between the squeegee and runners and must not be able to escape and form a ridge on the ice.

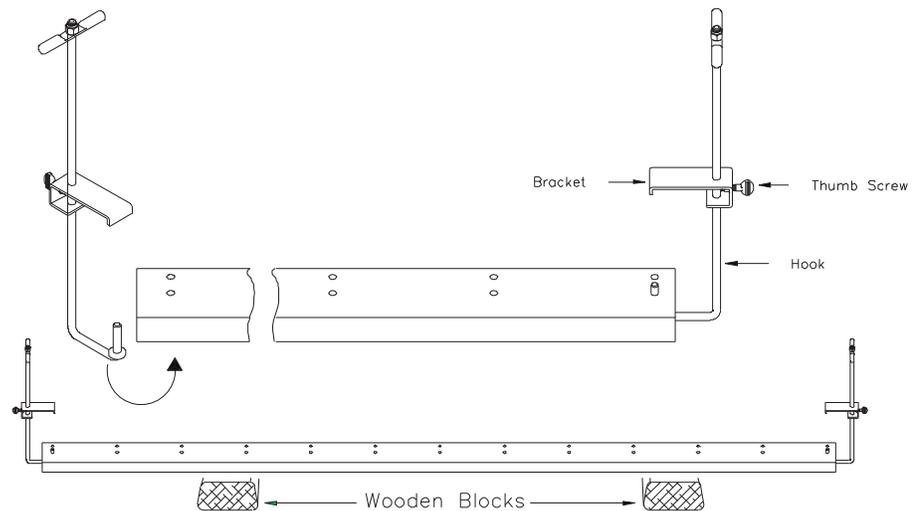


Blade Installation

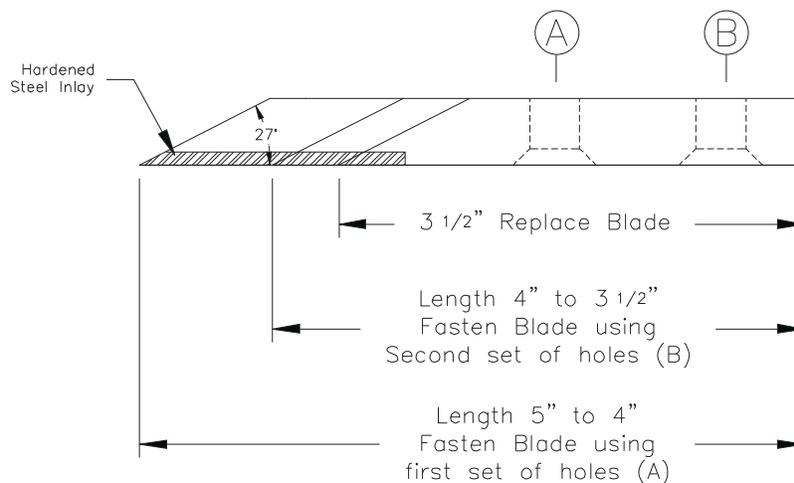
First put on blade handling safety gloves. Unpack the blade and put the magnetic protector guard on the sharp edge. For shipping and storage, blades should be bolted into wooden sheaths.

Safety-Note: Always wear approved safety gloves when handling the blade. For operator safety and to protect the edge of the blade, always use the magnetic blade protector when handling the blade, as it is extremely sharp.

Before installing a blade, make sure the blade holder surface is clean and lightly coated with oil to prevent rust. The blade should also be clean where it attaches to the blade holder and coated with oil. Place it on blocks at the rear of the conditioner. Using the blade hook lift and slide the blade underneath the conditioner until the attachment holes line up. Tighten the blade hooks onto the conditioner.



Install the blade bolts and finger tighten remembering to utilize the row of holes closest to the cutting edge. The second row of holes should be used when the blade has been ground down to 4" overall width.



The Order is Important

Following the diagrams below, begin to install the blade bolts. Finger tighten the bolts. DO NOT use lockwashers as they will damage the blade holder. There are two ways of properly tightening the blade bolts:

Blade Bolt Sequence "A"

Sequence "A" - starting at one end of the blade, tighten the bolts consecutively across the blade to the opposite end. Remove the blade hooks and insert the remaining two blade bolts and tighten.

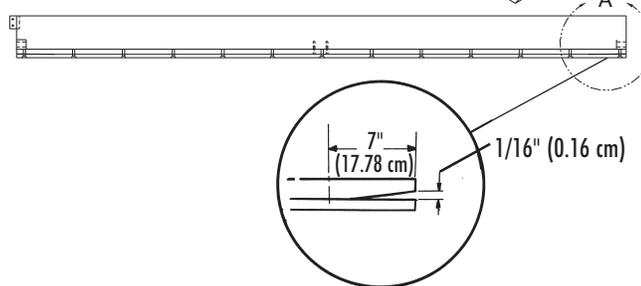
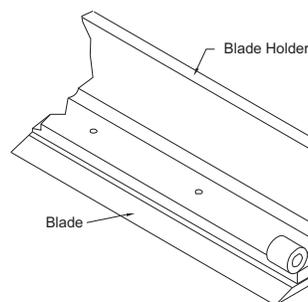
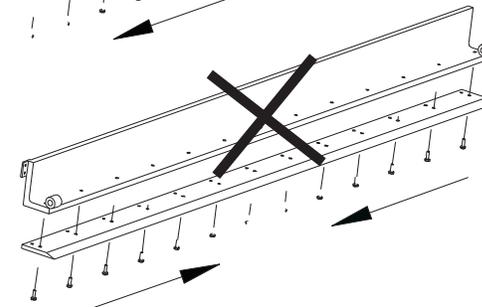
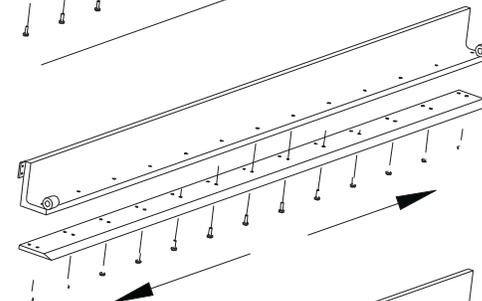
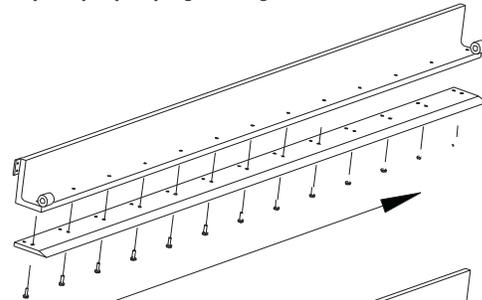
Blade Bolt Sequence "B"

Sequence "B" - starting in the middle tighten the bolts from the centre to one end then return to the centre and tighten the bolts to the other end in order. Remove the blade hooks and insert the remaining two blade bolts and tighten.

Wrong Sequence

Please note: Tightening the bolts in any other order, such as from the ends to the middle or at random will result in a warped blade and uneven ice.

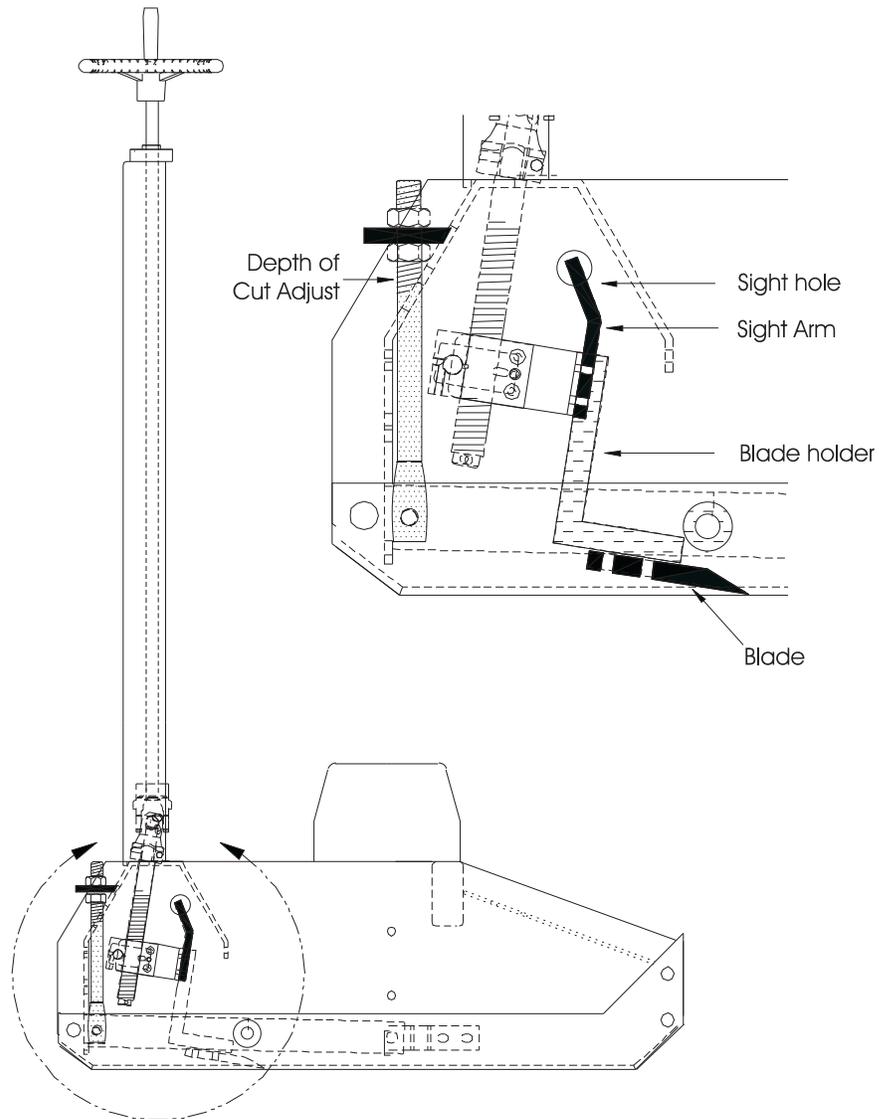
The blade holder is feathered 1/16" over the last 7" on each end. This prevents ridges forming on the ice during the resurfacing operation.



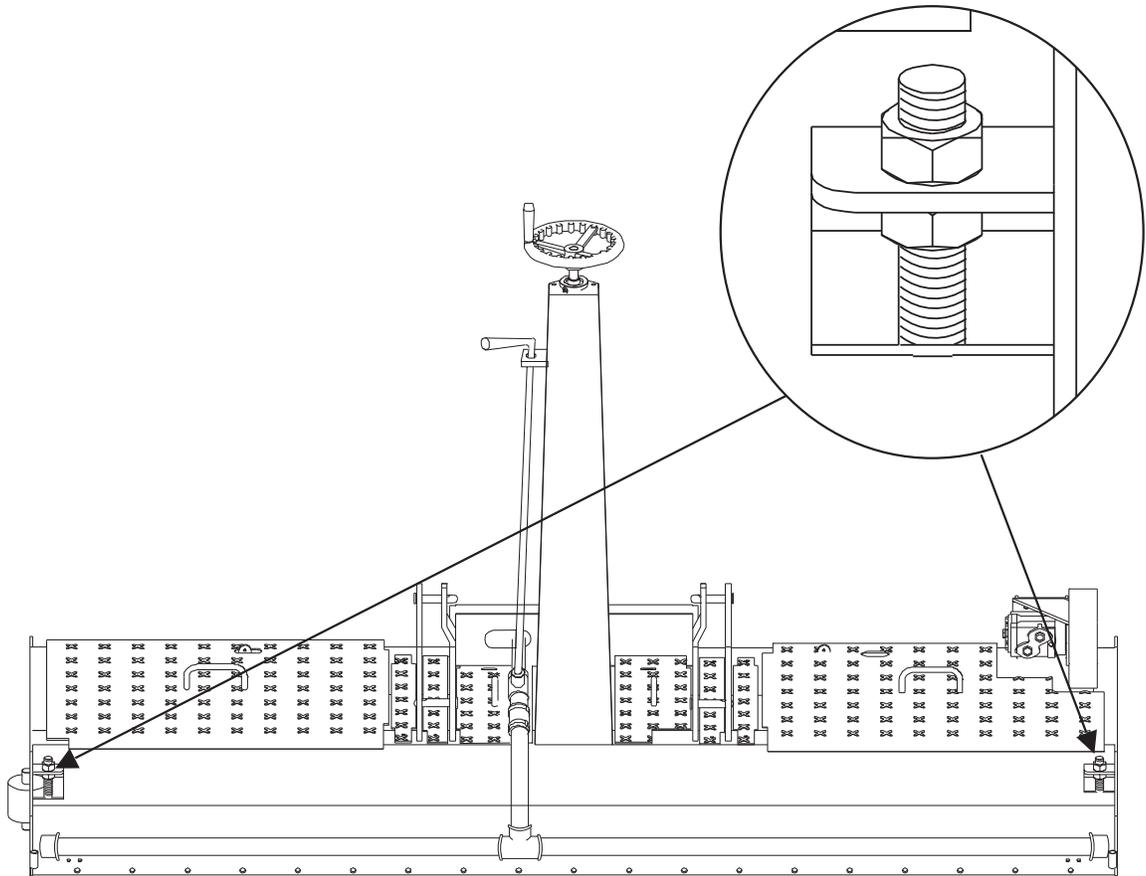
Blade Level Adjustment

The next step is to adjust the level of the blade. The blade adjustment crank, located on the tower to the right of the operator, raises and lowers the blade. The adjustment crank is turned until the indicator arm completely fills the sight hole at the side of the conditioner as shown below.

Blade Sight Hole



If the sight hole is filled but the blade is too high or low, go to the rear of the conditioner and using a 1 1/8" wrench, first loosen the top nut of the blade level adjusters located on each side of the rear of the conditioner shown below.



Then turn the nuts to raise or lower the blade into the proper position, which is exactly level with the bottom of the runner. Once the blade is at the proper level tighten the nuts on the blade level adjuster.

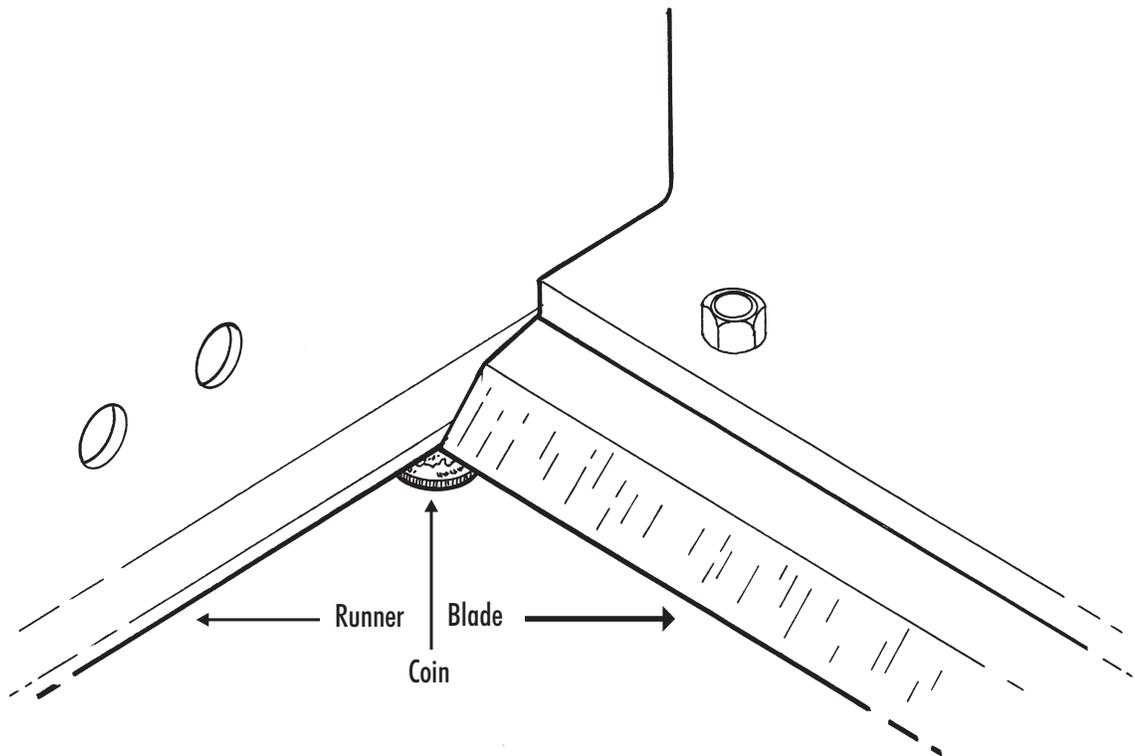
When the ends of the blade are flush with the runners, the majority of the blade will extend 1/16" (1.6mm) below the runners, which is an excessive amount unless the intent is ice maintenance. The blade is now set for a specific blade width.

To check the level of the blade, slide a large coin along the runners of the conditioner, from back to front, until you feel it pass over the edge of the blade.

Safety Note: Be careful when doing the coin check. Make sure you are wearing gloves and that you move the coin from back to front as the blades are extremely sharp.

The sharp tip of the blade should be flush with the runners on both sides. If the blade is flush the coin will slide smoothly over the blade edge.

Blade/Coin Check



To raise the blade, turn the blade adjustment crank counter clockwise.

Please Note: It is important that the blade holder and blade surface be free of foreign material and lightly coated with oil to prevent rust.

Test-drive the OLYMPIA doing a dry cut. If the blade is properly set up you will see a feathered edge on the ice surface on both sides of the conditioner. If the cut is on one side or the other then the blade needs to be raised or lowered, on the driver's side, to bring it precisely level with the runner.

After the blade angle and level are set, any change in the cutting depth will alter the indicator arm position in the sight hole, but blade angle tolerances will accommodate such adjustment and further adjustment of the blade angle will not be necessary.

Horizontal & Vertical Augers

The horizontal auger in the conditioner carries the snow scraped off the ice by the blade into the centre of the conditioner where a vertical auger picks it up and transports it to the snow bin in the front of the OLYMPIA. Engage the horizontal and vertical augers by pushing the elevator button on the dash to the down position.

The horizontal auger should be barely above the ice level to maximize snow pick up while at the same time preventing any marking of the ice surface.

Both the vertical and horizontal augers will begin turning when the bottom half of the elevator control button is pushed in and held until it locks into the On position.

To reverse the auger movement push the top half of the elevator control button and hold until the auger reverses. Upon release the control button will return to the neutral position and the auger movement will stop. Reversing the auger is used to back out anything that may have become plugged in the auger tube.

Horizontal Auger Adjustment

The horizontal auger is adjusted by loosening the four outer bolts on the bearing adjustment plate on each end of the auger and the four bolts for the auger motor mount. The lowest point of the auger should be between 1/16" (1.6mm) and 1/8" (3.2mm) above the bottom of the runners. This can be checked by running a piece of string between the runners at the lowest point of the auger.

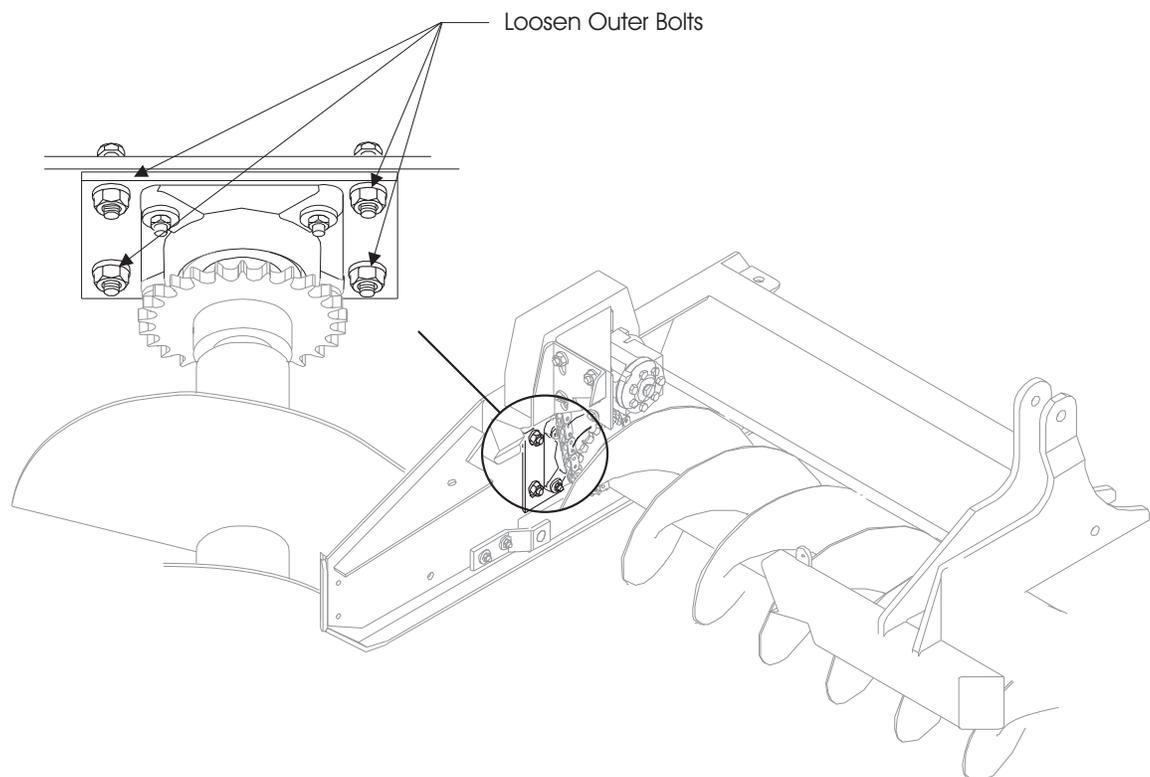
Auger Height Adjustment

Pry the auger to the proper position.

After the adjustment has been completed, re-tighten the four outer bolts on the bearing adjustment plate.

If the auger is set too low, diagonal lines may be found where the auger touches the ice.

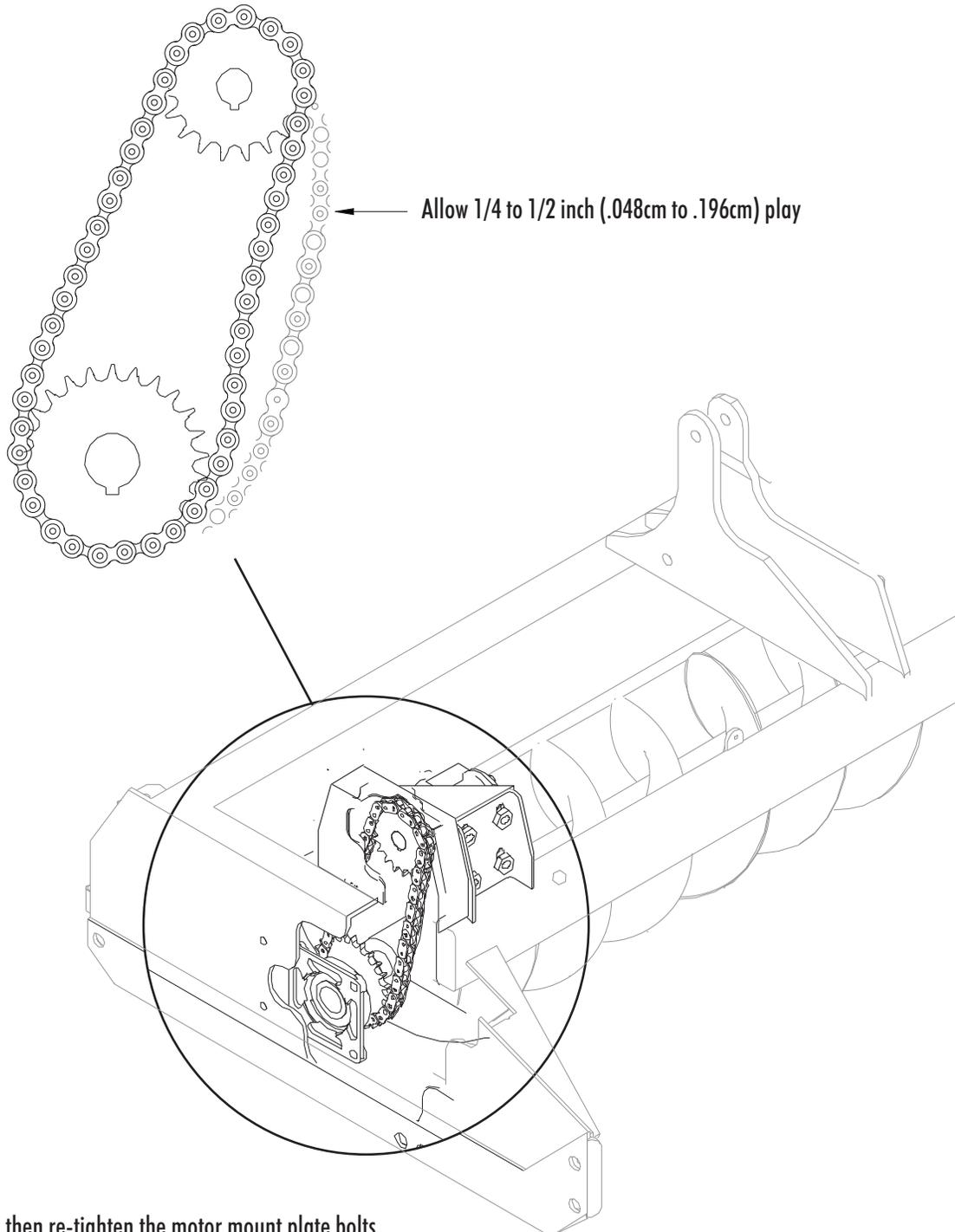
If the auger is set too high, excessive amounts of snow will be left on the ice surface at the end of the flood.



Auger Drive Chain Adjustment

The horizontal auger drive chain should be kept at a reasonable tension at all times. If too loose, the sprockets and chain will wear out prematurely. If too tight, the sprockets, chain and auger bearings will also wear out prematurely.

To adjust the chain tension, loosen the motor mount plate bolts and slide the motor mount until you get the proper tension,



Down Pressure Check

Raise the blade to above the runners by turning the adjustment crank counter clockwise.

With the conditioner in the Up position, drive the OLYMPIA onto the ice surface.

Lower the conditioner to the ice surface by pushing the bottom of the conditioner button until the lift arms are against the down pressure stops. Before operating the OLYMPIA, you should check to see if the runners are sitting level on the ice surface.

We recommend that you drive around the ice surface with the conditioner down for 2 or 3 laps to cool the runners.

To do this, the conditioner should be lowered so the runners are sitting on the ice surface and the conditioner lift arms are against the down pressure stops.

For proper traction and control the rear tires of the OLYMPIA should be in full contact with the ice surface. (the entire width and 3 inches (7.62 cm) of the length of the tire)

Down Pressure Adjustment

To adjust the down pressure stop the OLYMPIA, place it in park and lower the conditioner until it is almost touching the ice surface.

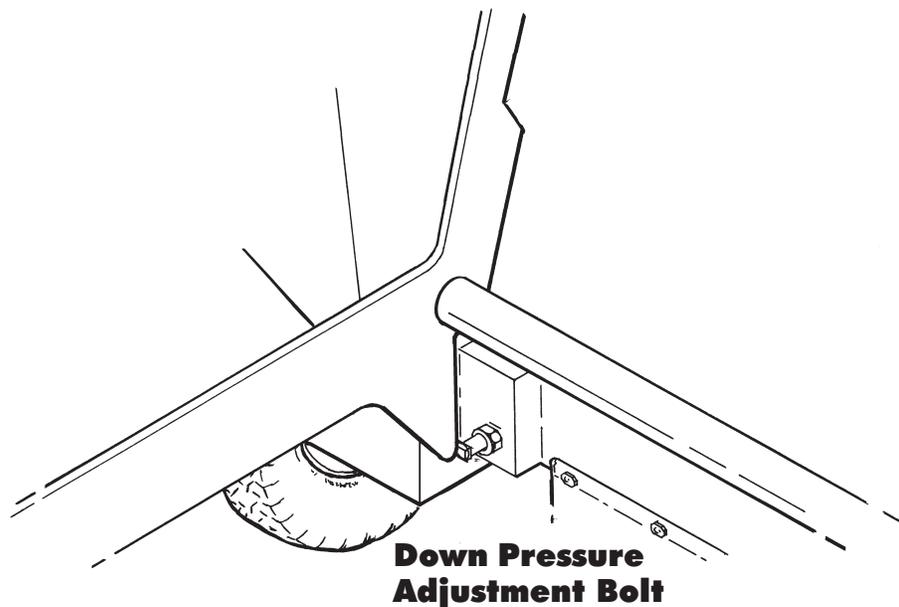
Properly dismount and turn the down pressure stop bolts in (clockwise) 5 full turns.

Remount the OLYMPIA lower the conditioner until you have three tire lugs touching the ice. Shut off the OLYMPIA and dismount. Turn the down pressure stop bolts until they are tight against the down stops under the conditioner arms.

Now tighten the jam nuts.

Too much down pressure will lift the rear wheels off the ice resulting in a loss of control.

Too little down pressure will result in rippled ice and gouging in the corners.



Please Note: Everytime you reset the down pressure you have to reset the top link adjustment.

Top Link Adjustment

Check to make sure the front of the runners are still on the ice surface.

Drive the OLYMPIA once around the rink.

When the top link is adjusted properly the rear tires should leave a full tread pattern on the ice.

Please Note: It is essential for proper operation that tire pressure be maintained at 65 psi.

To test the top linkage, first loosen the lock nuts on both top links.

Now loosen both top links by turning them counter clockwise until there is no tension.

Remount the OLYMPIA and drive forward six feet (2 meters), stop, turn off the OLYMPIA and dismount.

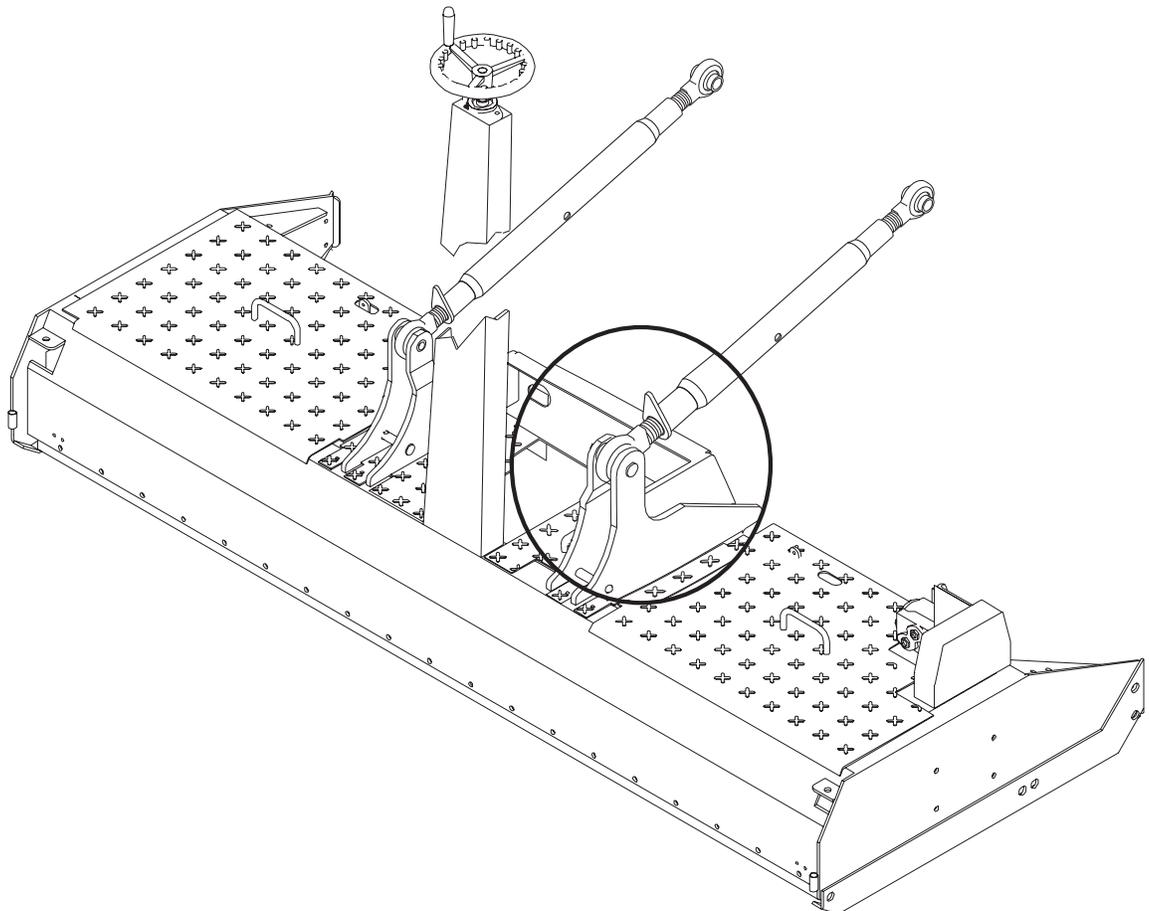
Now simultaneously re-tighten the top links by turning them clockwise making sure to extend the top link to hand tight only.

Secure the top links by tightening the lock nuts.

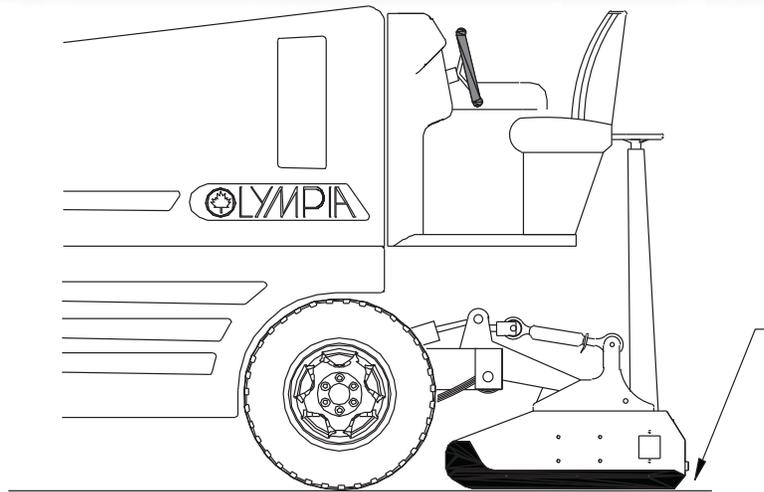
Check to make sure the front of the runners are still on the ice surface. When properly adjusted the runners will not leave any marks on the ice surface.

Please Note: It is essential that you adjust both top links at the same time.

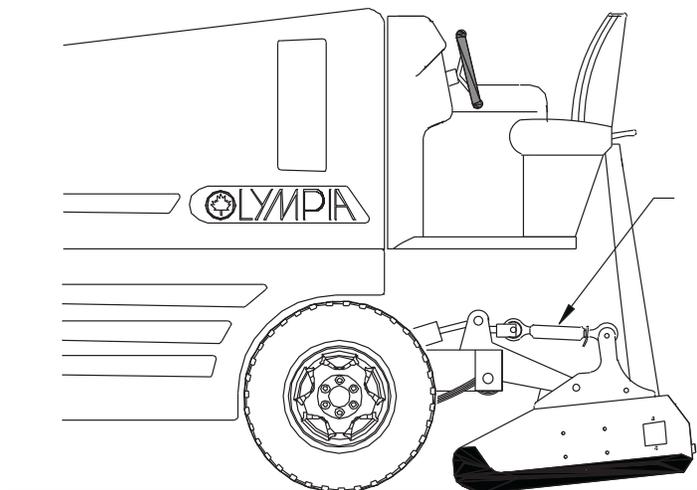
Top Link



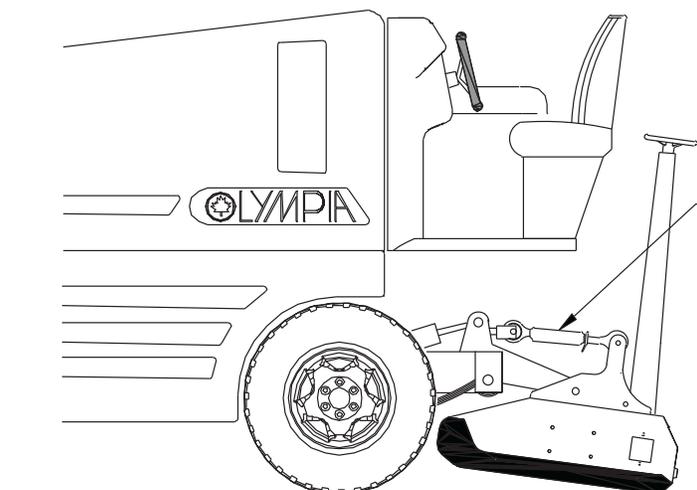
Proper Top Link Adjustment



Top Link too short



Top Link too long

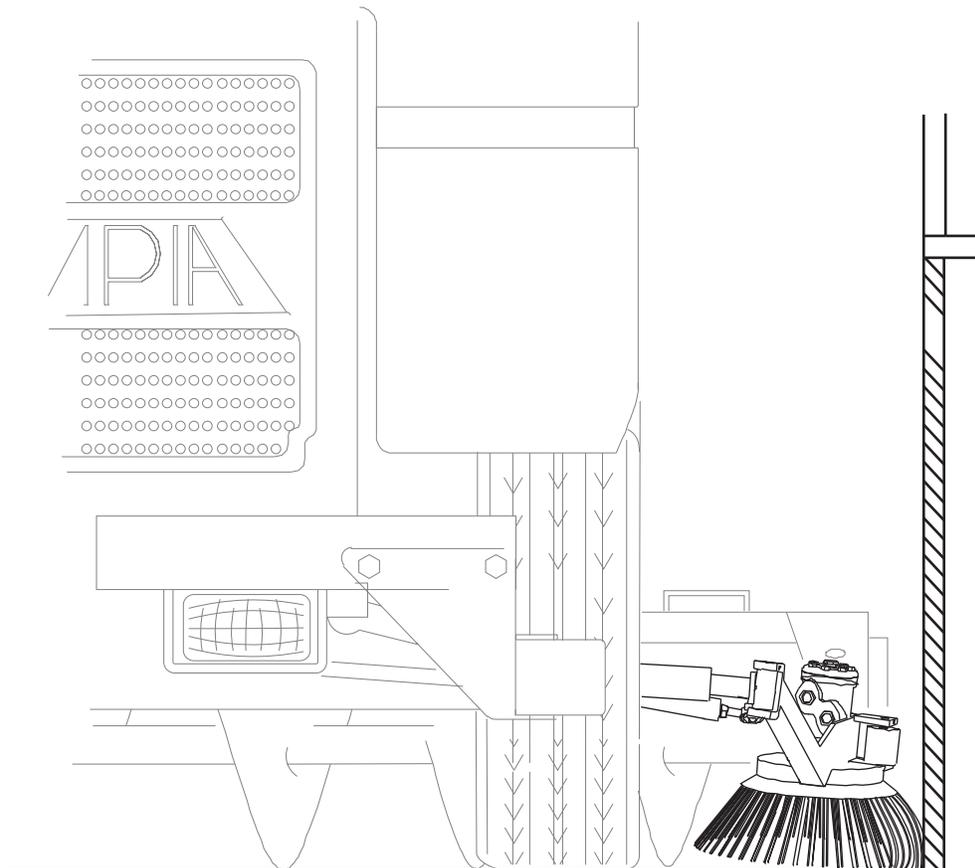


Board Brush Procedure

Prior to the start of a new flood you should carry out a board brush procedure. Drive onto the ice surface and lower the conditioner until the arms are against the stops. Push the bottom of the board brush button on the dash to extend and engage the board brush. The board brush will come down and extend outward. Once the brush is fully extended, only the front edge of the brush should touch the ice surface. This will clean the snow on the edges of the ice surface into the conditioner.

If it becomes necessary to adjust the board brush, stop the OLYMPIA, turn off the engine and properly dismount. Loosen the jam nut and then adjust the hex bolt, turn in to increase the pressure and out to reduce the pressure. Make sure to tighten the jam nut once the board brush is properly set, then retract the board brush and repeat the board brush procedure.

Safety Note: Do not leave the board brush running while adjusting, as it will melt the ice.



Standard Safety Procedures

To assure safety, the operator should take the following safety precautions:

1. Drive defensively at all times.
2. No unauthorized personnel on the ice during resurfacing operations.
3. No passengers allowed on the OLYMPIA while in use.
4. Keep feet and hands away from moving parts.
5. Use the bin safety bar if working under the bin.
6. Never have the augers turning with the conditioner cover plates removed.
7. The dumping area should be kept free of people and obstructions.
8. Do not handle blades without safety gloves and the blade guard in place.
9. Do not operate the OLYMPIA while under the influence of alcohol or drugs.
10. Refuel the OLYMPIA outdoors.
11. Wear proper protective equipment while refuelling, including gloves, goggles and safety shoes.
12. Never operate the hydraulic system above 3000 rpm, as it will cause serious damage to the entire hydraulic system.

Pre-Start Check List

The OLYMPIA is designed to make your job easier, faster and trouble free.

Prior to starting the OLYMPIA it is recommended that you carry out these basic pre-start checks:

1. Make sure the fuel tanks are full.
2. Turn on the fuel.
3. Check couplings and connections with soap & water solution, check for bubbles.
4. Fill water tank.
5. Connect towel bar.
6. Remove water hose from tank.
7. If using a natural gas powered unit make sure the gas fill line has been disconnected.

Safety Note: These pre-start checks should be made every time prior to operating the unit.

The OLYMPIA Safety Check should be carried out at the start of every shift.

- 1. Check the battery cables to make sure they are tight and the battery securely in place.
 - 2. Check the tire pressure on the front driver's side, the tread for wear, and make sure the lug nuts are tight.
 - 3. Check the upper and lower control arms on the front driver's side. Make sure that they are tight.
 - 4. Check the CV boots on the front driver's side. Make sure there is no grease leaking from them. Remember if grease can leak out then water can leak in and cause corrosion.
 - 5. Check the electrical connections and spark plugs.
 - 6. Check for oil leaks from the valve covers and that there is no coolant leaking down the back of the engine.
 - 8. Check all wires and hydraulic hoses to make sure everything is in place.
 - 9. Check the radiator hose on both ends to make sure that it is flexible and the seals are secure and leak free.
 - 10. Give the bumper wheel a spin to make sure it is turning properly.
 - 11. Check underneath the OLYMPIA from the front to see if there are any signs of leaking fluids such as oil, coolant or water.
 - 12. Ensure that no one is working under the machine and that nothing has been left on the floor.
 - 13. Check the front of the hood for any knicks, scratches or cracks.
 - 14. Check to make sure the two hydraulic bin cover cylinders are properly in place.
 - 15. Check the coolant level. If it is below the half way mark add Dexcool.
 - 16. Check the hydraulic fluid level guage. Make sure it is between one half and two thirds full.
 - 17. Check the CV joints down on the front right axle. Make sure there is no grease leaking from them. Remember if grease can leak out then water can leak in and cause corrosion.
 - 18. Check the steering linkage on the right front axle, along with the upper and lower control arms.
 - 19. Check the hydraulic hoses on the right hand side, make sure they are tight, and there are no leaks around the pump.
 - 20. Also, check the bottom of the tank on the right hand side for corrosion and leaks.
 - 21. Check the pump belt tension.
 - 22. Check the lower radiator hose and the other hoses connected to the cooling system, making sure they are not rubbing on anything.
 - 23. Check the radiator to make sure it is not damaged or leaking.
 - 24. Check the air filter, and propane connections.
 - 25. Check the throttle making sure that it moves freely.
 - 26. Check the spark plug wires again for wear. Make sure they are properly attached. Similarly, check the electrical connections for wear.
 - 27. Check the heater hoses for the fuel system.
 - 28. Check the engine oil level.
 - 29. Check the transmission fluid making sure there is fluid on the dip stick and check for bright red colour.
 - 30. Check the oil tank filler cap.
 - 31. Make sure the main access panel is tight and leak free with the gasket properly in place.
 - 32. Check the tire pressure on the front right tire, the tread for wear and cuts, and the wheel nuts.
 - 33. Check the tank drain valve, making sure it is closed.
 - 34. Repeat the tire pressure tread and wheel nut check on the rear right hand wheel.
 - 35. Check the leaf springs. Make sure they are not damaged or loose.
 - 36. Check the brake lines for wear and leaks.
 - 37. Look around the hydraulic manifold block for any oil leaks or loose wire connections.
 - 38. All adjusting nuts should be tight.
 - 39. Also check the tire wash hoses for leaks.
 - 40. Check the condition of the blade, in relationship to the runners.
- Safety Note: To avoid being cut by the blade, always start at the rear of the conditioner and slide your hand towards the front of the conditioner.*
- 41. Check the runners for burrs that would leave scratches on the ice surface. Make sure you go the full length of the runner. The runner should have no knicks or scratches on it, and the blade should be flush or slightly above the bottom of the runner.
 - 42. Remove the conditioner cover on the right hand side and check that the horizontal auger turns freely in both directions.
 - 43. Make sure there is no up, down, or side to side movement.
 - 44. Check the tension on the conditioner chain. There should be between a quarter and a half-inch play.
 - 45. Check all the quick couplers. Make sure they are connected properly.
 - 46. Check the blade holder pivot bolts to make sure they are tight. Replace the conditioner cover plate and install the locking pin. Go to the back of the machine and flip up the towel.
 - 47. Check the squeegee making sure it fits tightly from end to end and there are no knicks, or cuts.
 - 48. Examine the bottom side of the towel. Make sure it is clean, debris-free and that the terri loops are in good condition.

- 49. Check the wash water flow by turning on the wash water using the lever on the conditioner tower. There should be a good spray coming out each side. Turn off the wash-water.
- 50. Check the floodwater by turning the lever on the conditioner tower on and observing the water flow. You should see a consistent flow of water stream coming out each hole along the entire length of the pipe.
- 51. Turn off the flood water, and put the towel back in place. Come around to the driver's side of the conditioner. Remove the conditioner cover plate.
- 52. Check the auger for up and down, and side-to-side movement. Also, make sure the blade holder pivot bolt is tight.
- 53. Check the bottom of the runner again for burrs, or nicks.
- 54. If your Olympia is equipped with the optional hydraulic edger on the conditioner, remove the safety shield and check the cutting tips for damage and make sure the plate is securely attached. Replace the safety shield.
- 55. Check all the hydraulic hose connections on the edger and make sure there are no fluid leaks.
- 56. Check the electrical connections.
- 57. Check the quick couplers underneath the driver's platform to make sure they are securely fastened.
- 58. Check tire pressure, tread and wheel nuts on the rear driver's side wheel.
- 59. Check the master cylinder on the driver's side to make sure it is at the maximum level.
- 60. Check all the hydraulic hoses and connections on the driver's side of the hydraulic manifold. Make sure that there are no leaks and that the hoses are not rubbing on anything that could cause them to become frayed.
- 61. Check the leaf springs on the driver's side rear axle, making sure they are not damaged or loose.
- 62. Check the brake lines for wear and leaks.
- 63. Check the board brush. Make sure that no debris is caught in it and that there is no free play.
- 64. Return both safety support bars back up to their storage place, and insert holding pins.
Now you are ready to finish the circle check on the dash instrument panel. Using the three point procedure mount the OLYMPIA. Lower the arm rest and turn the ignition key to start the OLYMPIA.
- 65. Check the oil pressure.
- 66. Check the voltmeter.
- 67. Check the temperature gauge and the tachometer. The tachometer will go through a test procedure before settling at an idle speed of 800 rpm.
Push the snow bin button to lower the snow bin.
- 68. Check the horn and the lights.
- 69. Make sure the conditioner is all the way up by pushing and holding in the conditioner button on the dash.
- 70. Test the elevator system. First, push the top of the elevator button on the dash and then the bottom half to make sure the elevator is working in both directions.
Leave running long enough to engage the automatic snow breaker.
- 71. While the elevator is running check the snow breaker's manual override by pushing the lower half of the over ride button on the dash and make sure the snow breaker cycles.
- 72. Check the board brush by pushing the lower half of the board brush button, to lower the board brush, and then the upper half to raise the board brush.
- 73. Check the brake pedal and make sure that it does not go all the way to the dash and that the brake lights come on.
- 74. Check the blade-adjustment hand-crank wheel. Make sure it turns freely.
- 75. Check the propane valve. Turn it one way all the way and then back the other way, all the way, and return to which ever tank you wish to start with.
- 76. Check the snow breaker, make sure the bolts are tight and that nothing is loose on the bottom.
- 77. Push the tire wash water button on and off. Make sure to disconnect all water hoses and natural gas fuel lines, if so equipped, before moving the OLYMPIA.
- 78. Check the emergency hand pumps located under the driver's seat. Open the door and remove the jack handle. Locate the emergency "Hand Pump" switch inside the seat box and push the button to the "Hand Pump" position.
- 79. The switch lights, on the dash will come on. Insert the handle and pump it all the way up and down. The conditioner will raise first followed by the snow bin.
- 80. You have now completed the safety-check and are ready to proceed onto the ice surface and begin the resurfacing process. Make sure you use the horn when crossing any pedestrian areas.

Safety Note:

Always use caution when operating the Olympia.

Safety Note: Always use **HOT WATER** in the Flood Water Tank.
Always use **COLD WATER** in the Wash Water Tank if so equipped.
Never leave the **OLYMPIA** unattended during the water filling procedure.

Flood Water Handling Procedure

With the conditioner properly adjusted, you are ready to fill the flood water tank, in preparation for resurfacing the ice. The tank is filled through a pipe located beside the driver's platform. If the extra water option is installed on your machine, both water tanks are filled through the filler cap on the extra water tank.

Flood water flow is regulated by the water tap, which is mounted on the sled tower beside the blade adjustment wheel.

For best resurfacing results, use flood water at 60° C (140° F). Hot water flows into cracks in the ice before cooling and freezing. It also melts some of the ice surface before freezing thus getting the best possible bond with the existing ice. Hot water also holds less oxygen than cold water and therefore produces a denser, harder ice.

Hard ice does not get damaged as easily and therefore does not require resurfacing as often nor as deeply, resulting in minimal ice buildup. This means less time spent on ice maintenance and saves wear and tear on the ice resurfacing equipment.

Water Problems

If you notice a residue forming in your water tanks, it is likely the result of minerals such as calcium and lime in your water supply. This type of residue will eventually block the flood pipe holes. This will be apparent when your water flow is restricted or the ice appears streaked after flooding. The solution is to remove the flood pipe and clear the holes. A more permanent solution is to demineralize the flood water supply before filling the tanks.

Wash Water

For OLYMPIA's equipped with the wash water system; to attain the best ice making results the wash water system should be used during every flood. The wash water system sprays water from the sides of the conditioner into the centre in front of the squeegee creating slush. Excess water and slush is then vacuumed up, taking with it any dirt or debris from the ice. In addition to removing small debris from the ice surface, any snow left behind the blade is turned into slush by the wash water and is pushed into cracks in the ice by the squeegee. The water is filtered and then returned to the wash water tank.

WashWater Handling Procedure

To operate the wash water system during the resurfacing operation, first turn on the water valve on the tower and then go the distance between two lines before pushing the bottom of the wash water button on the dash. While the pump is operating, the orange indicator light on the dashboard will be lit. It is very important that the pump not be turned on until the wash water tap is open as the pump impeller will wear out if there is no water passing through it.

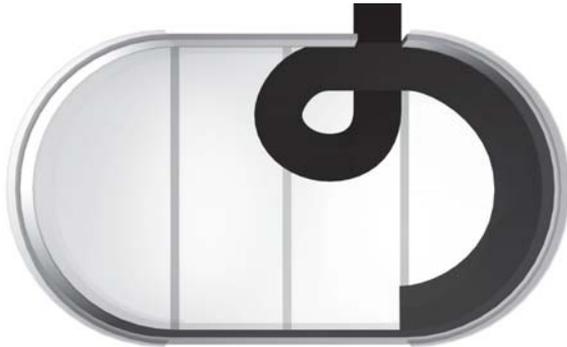
Three-quarters of a lap prior to completion of the flood turn off the wash water by pushing the button on the dash and then turn off the wash water valve on the tower and finish the flood. Just prior to finishing the flood turn off the flood water valve on the tower.



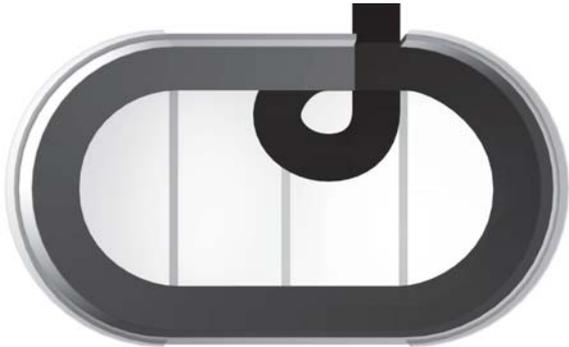
Once you have taken on sufficient water, drive onto the ice and carry out the normal flood procedure as follows: lower the conditioner to the ice surface by pressing the bottom of the conditioner button until the conditioner arms are against the stops. Engage the horizontal and vertical augers by pushing the top of the elevator button on the dash.

Now engage the board brush by pushing the board brush button to the down position. Drives slowly ahead keeping the board brush close to the rink board. This will clean the snow on the edges of the ice surface into the conditioner. Upon completion of a full circuit of the rink, retract the board brush and follow the pattern shown below.

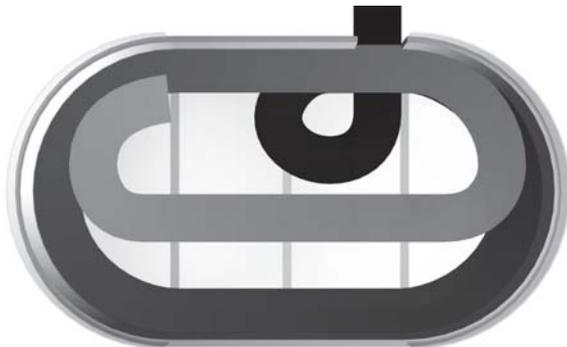
Typical Resurfacing Pattern



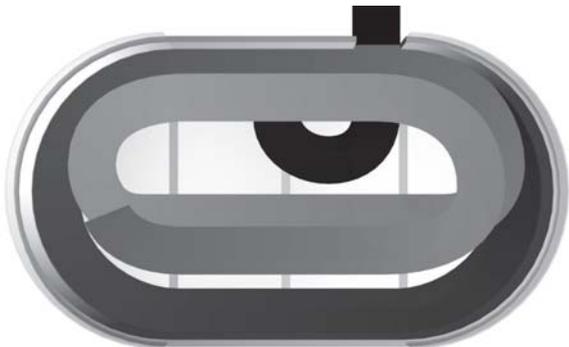
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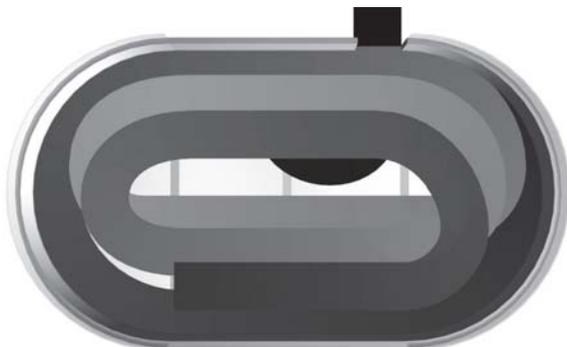
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5



6

Resurfacing Procedure

If your OLYMPIA is equipped with a wash water system turn on the water valve on the tower and then go the distance between two lines before pushing the bottom of the wash water button on the dash to engage the pump. While the pump is operating, the orange indicator light on the dashboard will be lit.

Safety Note: It is very important that the pump not be turned on until the wash water tap is open as the pump impeller will wear out if there is no water passing through it.

Three quarters of a lap prior to completion of the flood turn off the wash water by pushing the button on the dash and then turn off the wash water valve on the tower and finish the flood. Just prior to finishing the flood turn off the flood water valve on the tower. Bring the OLYMPIA to a stop just prior to leaving the ice surface. Push the conditioner control button on the dash to raise the conditioner to the maximum position. Proceed carefully to the snow dumping area prior to dumping, check to insure there is sufficient head, side and front clearance. Then push and hold in the top of the snow dump button to raise the snow dump to its maximum height. The snow bin will be held in place by the hydraulic pressure

Once the snow bin is empty push the bottom of the snow dump button to lower the snow bin to it's operational position. If the dumping area is outside the facility, make sure you wash the tires of the OLYMPIA prior to returning to the ice surface.

Safety Note: Do not depend on the hydraulic pressure when working underneath the raised snow bin. Always engage the safety bars prior to working under the snow bin.

Proceed to the OLYMPIA room and drain the water tanks through the flood pipes by leaving the water control valve open, or through the water tank drainage valves. By following this procedure, the hot water added for the next resurfacing will not be mixed with any cold water left in the tanks from the previous flood, and will be as hot as possible for flooding.

Fill water tanks with sufficient water to do one resurfacing at a time. Water remaining in the tanks after resurfacing should be drained completely to prevent lime build up and corrosion.

If these procedures are not followed the result will be a poor ice surface which will require more maintenance than usual.

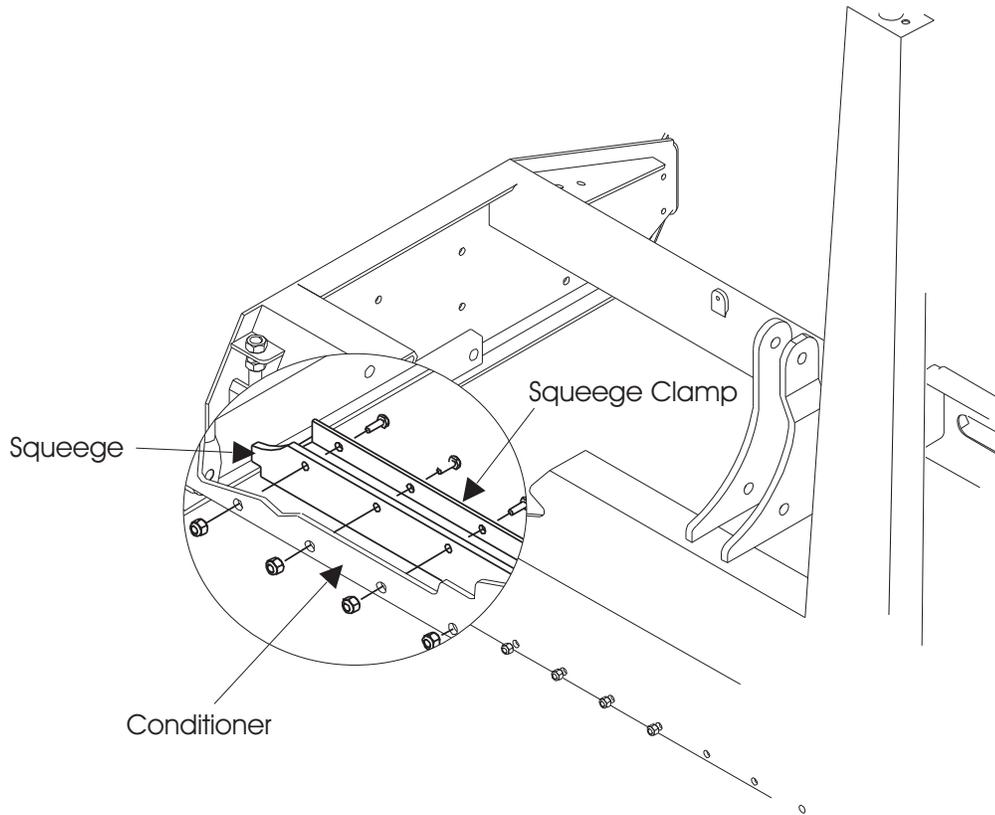
Please Note: After each ice resurfacing operation, drain the water from both the flood water and the wash water tanks.

Building Ice Procedure

When building a layer of initial ice at the beginning of the season, the floodwater tank can be filled full with hot water. Once a layer of ice 3/4 " to 1 1/2 " (2-4 cm) thick has been formed, the amount of ice removed during the resurfacing should equal the amount of floodwater used. By using only enough water to do a flood you keep the flood water at it's hottest thus making the best quality ice and also preventing ice buildup.

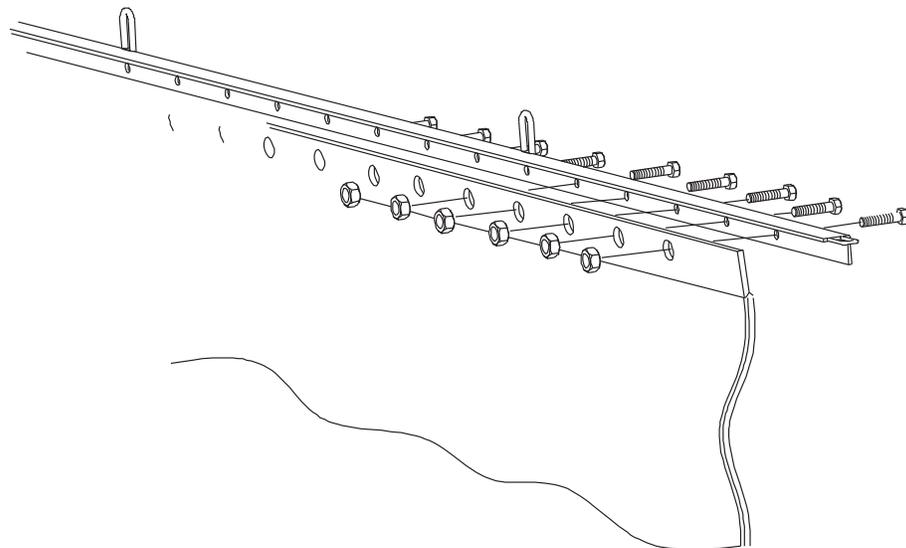
Squeegee Replacement

If the squeegee needs replacing, it should be mounted on the inside of the conditioner, using 3/8" x 1-1/4" hex head cap screws and lock nuts. Trim the squeegee ends to fit tight against the side plates of the conditioner. Snow which is pushed by the squeegee will be trapped between the squeegee and runners and must not be able to escape and form a ridge on the ice.



Towel Replacement

Inspect and replace the towel if necessary. Install the towel on the backside of the towel bar with 3/8" x 1" hex head bolts locknuts, making sure the nuts are on the towel side of the towel bar.



Blade Handling

To ensure operator safety, to protect the edge of the blade, and to provide consistent ice resurfacing, the following section should be read carefully.

It describes the installation and adjustment of the blade, as well as sharpening and storage.

It is essential that the blade be sharp at all times for proper shaving of the ice surface. Blades require sharpening after approximately 100 resurfaces.

Blade Removal Procedure

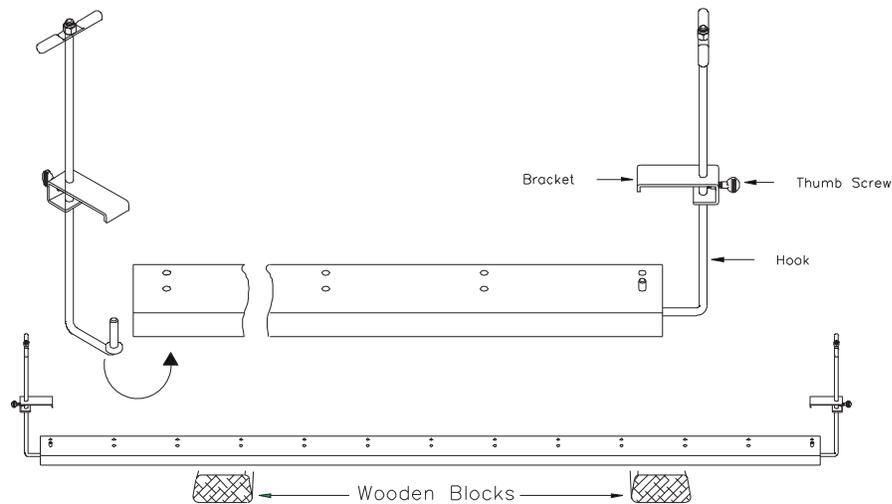
To safely remove the blade from the OLYMPIA, raise the conditioner and place blocks under it for safety. Wearing protective gloves, install the magnetic blade protector, then remove each end bolt from the blade. Insert the blade hooks.

Use the locking thumb screw to secure the blade in position.

Remove the remainder of the bolts from the blade.

Carefully lower the blade away from the blade holder on the conditioner onto wooden blocks.

Lightly coat the entire blade with oil to prevent rust.



Blade Specifications

Blades supplied by Resurface Corp. are high quality alloy steel with a tempered cutting edge which is 58 to 62 Rockwell hard. If purchasing replacement blades from a source other than Resurface Corp., specify the above mentioned hardness in order to get the best results from your OLYMPIA.

Resurface recommends that your blade be held in the grinding machine with the back edge of the blade against two stops (rather than a continuous stop).

Blades should be ground at a 27 degree angle with one bevel.

Too much angle will result in rippled ice, while a smaller angle will not shave the ice properly.

The blade holder is ground down so that each lap of shaving will be feathered into the next without forming ridges in the ice.

To check whether your blades have been sharpened straight, lay two sharpened blades on a flat surface with two cutting edges together.

If the blades have been sharpened straight, the cutting edges will touch the full length of the blades.

The blades for your OLYMPIA need to be replaced when more than 1 1/2" (3.91 cm) has been removed by sharpening.



Natural Gas Refueling Procedure

When refueling compressed natural gas (CNG) powered OLYMPIA the following procedures must be followed precisely.

Read the refueling panel manufacturer's manual.

Make sure ALL sources of possible ignition are completely extinguished and there is no scent of gas or inflammable fumes in the air. If fumes are detected, close the tank valves and immediately vacate the area and call in a qualified technician to deal with the problem.

Do Not turn on any light as it could cause an explosion.

Make sure the ventilating system in the approved CNG refueling area is operating properly and that the safety sensors are in place and operational.

Remove the fueling hose from the storage panel and remove the dust cover. Inspect the nozzle to make sure there is no dirt or debris on the nozzle and that the hose is not damaged or worn.

Remove the screw on cap on the refueling nozzle on the side of the OLYMPIA underneath the driver's platform and insert the fueling hose nozzle.

Press the START button on the remote panel.

Immediately check the air extraction fan to make sure it has been activated and is working properly.

The green light on the panel will be on but not flashing.

If the green light is flashing press the STOP button on the refueling panel and refer to the instructions in the refueling panel manual.

If the red light comes on, stop the refueling and consult the diagnostic section of the refueling panel manual.

If the light is green proceed with the refueling. The system will automatically shut off when the tanks are full and the yellow light on the panel will come on. To stop the refueling process at anytime press the STOP button on the refueling panel.

Safety Note: Always wait 15 seconds and then disconnect the refueling hose from the OLYMPIA.

Replace the dust cover for the nozzle and return the hose to its storage position on the panel.

Replace the screw on cap on the CNG refueling nozzle on the OLYMPIA and resume normal operating procedures.

Procedure for Changing Propane Fuel Cylinders on OLYMPIA Ice Resurfacing Equipment

Responsibility:

The supervisor is responsible for issuing all the necessary equipment, training the employee in its use and ensuring that this procedure is adhered to. The Employee is responsible to follow the tasks as outlined by this procedure.

Equipment:

Personal protective equipment required but not limited to the following shall be used:

- A. Gloves
- B. Safety Goggles
- C. Safety Shoes
- D. Correct hand tools

General:

- A. The ice resurfer shall be moved to the designated area outside. The area must be well ventilated and in a safe location so as to prevent any source ignition.
- B. The operator will close the fuel valve at the cylinder, leaving the machine running until it quits as a result of exhausting the fuel in the fuel lines.
- C. The ignition is then turned off and the key removed.
- D. The propane fuel hose may now be disconnected from the propane fuel cylinder.

Do not use any tool to loosen the coupling.

- E. Unclip the safety straps on the outside tank
- F. Remove the near-empty propane cylinder.
- G. A correctly filled propane cylinder may now be mounted.

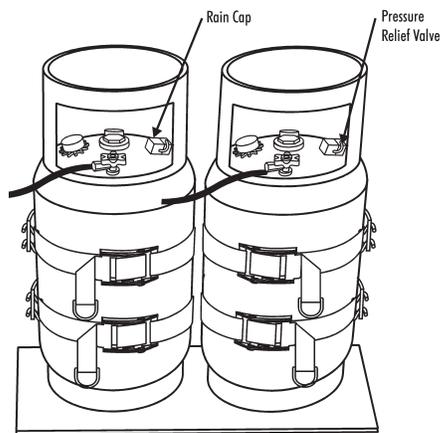
Note: At this stage it is important to ensure that the propane fuel cylinder is mounted with the pressure relief valve in the correct position (12 o'clock if mounted horizontally and to the right hand side if mounted vertically) and check the sealing gasket on the coupling, for placement and foreign materials.

- H. Re-fasten the safety straps.
- I. The propane fuel hose may now be connected to the propane fuel cylinder. *Hand tighten only.*
- J. The valve on the propane fuel may be opened slowly and a final check for leaks made using soapy water and checking for bubbles.

Propane Tank Handling

The standard fuel supply is liquid propane under pressure. Your local propane distributor will be able to arrange a fuel supply program as well as trouble shoot any problems you might experience. If your local licensed propane professional office is not equipped to deal with automotive fuel systems, they can recommend a licensed propane professional who will be authorized to complete service work on their behalf.

Safety Note: When liquid propane is released from a tank, it rapidly returns to its vapour state which is accompanied by extreme cold. To avoid frostbite, protective gloves and glasses must be worn while working with connections on propane tanks.



Tanks should always be handled carefully. Undo the straps which hold the tanks in place and move the straps clear of the tank brackets and hoops. Install tanks with the relief valve pointing to the right of the driver in the vertically installed tanks. Install tanks with the relief valve in the 12:00 o'clock position for tanks mounted in a horizontal fashion. Reconnect straps and check hoses for leaks using soapy water, and check for bubbles.

Recommended Fuel Management

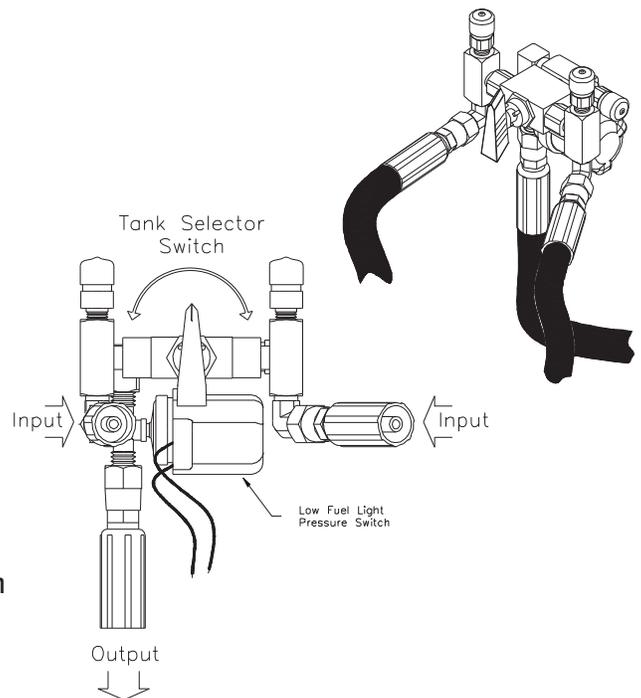
Open the service valve on both tanks and make the appropriate tank selection.

The service valve should be opened slowly or the excess flow valve will close automatically. If this should occur, close the service valve. The valve will reset itself momentarily and then can be reopened slowly.

When reopening the service valves, the operator's attention will also be drawn to the quantity of fuel shown on each tank's fuel gauge.

When operating the machine, fuel tanks can be selected by the selector switch mounted on the vertical auger housing.

When parking the machine, we recommend that both tanks be shut off to avoid the possibility of a slow leak. Hoses and connections should be checked for leaks using soapy water as a detector.



Safety Note: Never use an open flame to detect a leak. Do not expose to excessive heat.

Some operators find the easiest way to manage their propane fuel is to always run on the left tank. When the left tank is empty, the right tank is used to finish the flood, dump and park the machine. The right tank is then moved to the left position on the rack and a full tank is placed on the right rack. Using this method, the machine should never run out of fuel unexpectedly.

Storage Procedures

Propane is a liquid which is stored under pressure and requires special storage and handling procedures to assure safety. Tanks should be stored outdoors, in an upright position, according to Propane Code requirements.. To further ensure safety, tanks should be changed outdoors with the engine shut off and away from open flames.

Safety Note: Due to the flammability of propane vapour, precautions should be taken to ensure safety by prohibiting smoking around the OLYMPIA and particularly while changing tanks.

Pressure Relief Valve

The pressure relief valves on propane tanks are set to release if internal pressure increases past safety limits. If a relief valve releases, it will automatically reset when pressure inside the tank returns to normal. The relief valve should always be protected.

Safety Note: Since propane is poisonous to breathe, it has an odorizing agent added to it to allow operators to notice a leak. If a leak occurs, it will be first noticeable in low areas such as dump pits since propane is heavier than air. If a leak is detected, close the service valve on each tank, making sure to have on your protective gloves and break the hose connections.

Deisel Safety

If your OLYMPIA is diesel powered, accepted safety practices must be observed while refuelling and while in enclosed areas. It is not advisable to park the machine with full tanks as the fuel may expand if the temperature increases, causing a potentially dangerous spill.

Emission Control System

To meet the need for strict emission standards for equipment operating in enclosed spaces the OLYMPIA comes equipped with a industry leading emission control system. The system is made up of a computer controlled fuel management system using precise oxygen sensors to regulate the air/fuel mixture along with a 3 way catalytic purifier. A warning light on the dash alerts the driver there are emission variances and immediate servicing by a qualified technician is required.

Battery

Your OLYMPIA has a negative ground electrical system and is equipped with a 12 volt Delco Freedom battery which requires no maintenance. The test indicator (hydrometer) on top of the battery indicates by colour whether the battery is sufficiently charged for testing (green) or if it requires charging (blue).

Hydraulic Pump

A tandem pump is driven off the engine by a set of two drive belts. The hydraulic system is a complex series of pilot check valves and motion control valves that regulate the flow of hydraulic fluid to various components as required and should only be serviced by qualified personnel. Operation of the hydraulic pump should never exceed 3000 RPM, as serious damage to the hydraulic system will occur.



Daily Maintenance

The power train maintenance program should be set up and followed with your local General Motors dealer.

In addition, the basic OLYMPIA maintenance procedure should be carried out according to the following schedule:

To begin the maintenance program, first park the OLYMPIA leaving the conditioner in the Up position and the gear lever in Park. Raise the snow bin. Turn off the machine. Remove the key from the ignition before proceeding with any maintenance.

Engage the safety bars on each side of the snow bin, remembering to put in the safety pin once the bars are properly positioned.

Fluid Checks

On a daily basis carry out these basic fluid checks:

Check the engine oil and top up with a multi-grade oil.

Check the transmission fluid, topping up when required with Dextron III.

While the hydraulic fluid levels usually remain constant, regular level checks and topping off the levels with Dextron III can avoid a lot of problems down the road.

Finally, check the engine coolant levels and top up with the General Motors recommended, high quality coolant.

When you notice changes in any of the fluid levels you should determine and correct what is causing the loss of fluids.

Belt Checks

Next, the alternator belt should be checked for cracks and wear.

Similarly, the hydraulic belt tension should be maintained at suitable tension factor.

Should it require adjustment, loosen off the two bolts on the pump mount.

Now loosen the jam nut on the tension bolt.

Adjust the tension bolt to the proper tension, then retighten the jam nut.

Finally, retighten the two bolts on the pump mount.

Regular Maintenance

Check the blade holder surface on the conditioner and lightly oil the blade holder.

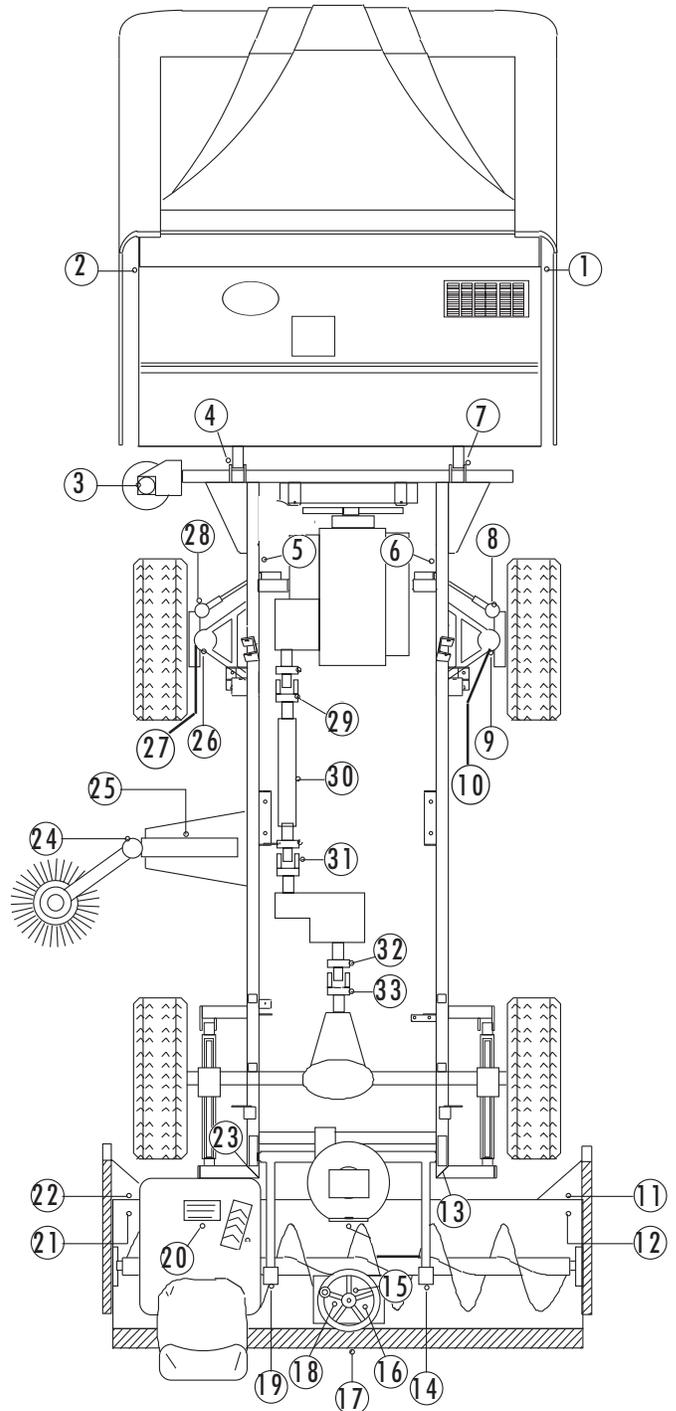
Because of the humid conditions the Olympia operates in, all of the lube points must be greased on a regular basis.

Please Note: Failure to carry out this basic maintenance can lead to damage and down time.

A little bit of grease goes a long way and makes sure the Olympia will do the same.

Every 100 scrapes you should carry out a full lubrication routine and change the ice shaving blade.

Please Note: On the front dumping units raise the snow bin cover approximately one foot. To complete greasing of the snow bin, push the top of the snow dump button on the dash and hold until the snow bin is fully raised. Engage the safety bars on each side remembering to put in the safety pin. On the side dumping machine after raising the snow bin, make sure the snow bin is mechanically secured before proceeding with any maintenance.



Lubrication Routine

Using the drawing on the adjacent page as a guide. Make sure you grease all 25 lube points as follows:

- 1 The bin cover pivot on the right hand side of the OLYMPIA
2. The bin cover pivot on the driver's side
3. Grease the front bumper wheel shaft.
4. Grease the front bin pivot on the driver's side .
5. The end of the steering cylinder on the driver's side.
6. The end of the steering cylinder on the right hand side.
7. Grease the front bin pivot on the right hand side of the OLYMPIA.
8. Grease the end of the tie rod on the right hand side.
9. The right hand side upper ball joint.
10. The right hand side lower ball joint.
11. Grease the blade holder pivot on the right side
12. Grease the horizontal auger flange bearing on the right side - Fill until water is completely flushed.
13. The block where the sled lift arms pivot to raise and lower the conditioner on the right hand side.
14. The greaseable link pin on the conditioner lift arm on the right hand side.
15. The 3/4 inch flange bearing where the blade crank goes through the conditioner.
16. The 3/4 inch flange bearing at the top of the blade adjustment crank.
17. The blade adjust screw.
18. The 3/4 inch universal joint at the base of the blade adjustment crank.
19. Greaseable link pin on the conditioner lift arms.
20. Brake pedal pivot.
21. The horizontal auger flange bearing on the driver's side.
22. The blade holder pivot on the blade adjustment arms on the driver's side.
23. The block where the sled lift arms pivot to raise and lower the conditioner on the driver's side.
24. The board brush swing arm at the pivot point.
25. The board brush mount bracket on the driver's side.
26. Grease the upper ball joint on the driver's side.
27. Grease the lower ball joint on the driver's side.
28. Grease both ends of the tie rod on the driver's side.
29. Front U-joint in the front drive shaft
30. Front drive shaft slip joint
31. Rear U-joint on the front drive shaft
32. Front U-joint on the rear drive shaft
33. Rear U-joint on the rear drive shaft

Monthly Lubrication Procedure

On a monthly basis or after 120 hours of operation you should:

1. Spray grease on the top link threads.
2. Check the tension of the conditioner motor drive chain making sure it has no more than a half inch play.
3. Spray grease on the motor drive chain of the conditioner.
4. Now check the brake fluid level, topping up if needed.
5. Check the tire pressure to ensure the pressure is at 65 PSI.
6. Change the oil and replace the oil filter every 150 hours to avoid costly engine repairs.

Annual Maintenance Hydraulic Fluid

Before the OLYMPIA goes into long term storage or on a yearly basis, the following maintenance should be carried out:

First, the entire unit must be greased and then the hydraulic fluid changed.

This is done by raising and mechanically securing the snow bin. Then:

1. Remove the drain plug at the bottom of the tank.
2. Remove the screen filter and flush clean with a non-petroleum based cleaner.
3. Upon completion, reinstall the drain plug.
4. Now unscrew the canister of the high pressure oil filter.
5. Remove filter and replace with a new one.
6. Reinstall the canister and fill the tank 3/4 full of ATF Dextron III automatic transmission fluid.
7. Always refill the tank through the filler cap to filter out any impurities that might be in the new oil you are adding.

Differential Oil Change

To change the front differential oil simply:

1. Remove the fill plug
2. Remove the drain plug and drain the oil completely.
2. Replace the drain plug.
3. Fill with (75/90 wt.) synthetic oil to the fill plug level.
4. Replace the fill plug and tighten

Changing the rear differential oil:

1. Remove the fill plug
2. Remove the drain plug and drain the oil completely.
2. Replace the drain plug.
3. Fill with (75/90 wt.) synthetic oil to the fill plug level.
4. Replace the fill plug and tighten.

**Transfer Case
Oil Change**

The next major procedure is to change the transfer case oil. This is done by removing the lower drain plug. Now replace the drain plug and refill the transfer case to the top of the plug hole with Dextron III.

To complete the annual maintenance schedule, carry out the combined weekly and 120-150 hours maintenance schedule.

**Washing
Procedure**

The OLYMPIA should be washed with lukewarm water and a mild soap.

Be sure to immediately rinse off the soap with cold water before it can dry and streak the surface of the OLYMPIA.

A high grade automotive wax should be used to preserve the high gloss finish of the OLYMPIA.

**Storage
Procedure**

Carry out the annual maintenance procedure as follows.

1. Spray all the metal surfaces of the conditioner with a light coating of penetrating oil.
2. Grease all the lube points in the OLYMPIA to remove all moisture.
3. Make sure the horizontal and vertical augers and all moving parts of the conditioner are covered with a film of oil.
4. To prevent corrosion in the water system remove the end caps of the flood pipes and flush with water.
5. Drain and flush the water tanks.
6. Leave all the drains and valves open for storage.
7. During the off season the blade should be removed and carefully cleaned with oil.
8. Store blade in the wooden sheath.
9. Check to make sure the blade edge is sharp and there are no knicks.
10. If required, have the blade sharpened before storing for the off season.
11. Don't forget to oil the blade holder on the conditioner as well.

Throughout the storage period, start the engine periodically and let run until the normal operating temperatures are reached.

If the battery runs down over the long storage period, have it charged by a battery specialist and checked for load capacity before reinstalling it in the OLYMPIA.

To put the OLYMPIA back into action at the start of the season, simply follow the weekly maintenance procedure and enjoy another year of trouble-free operation.



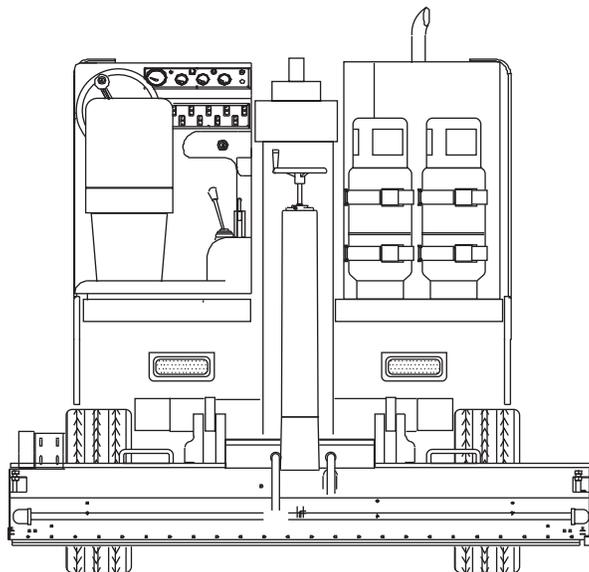
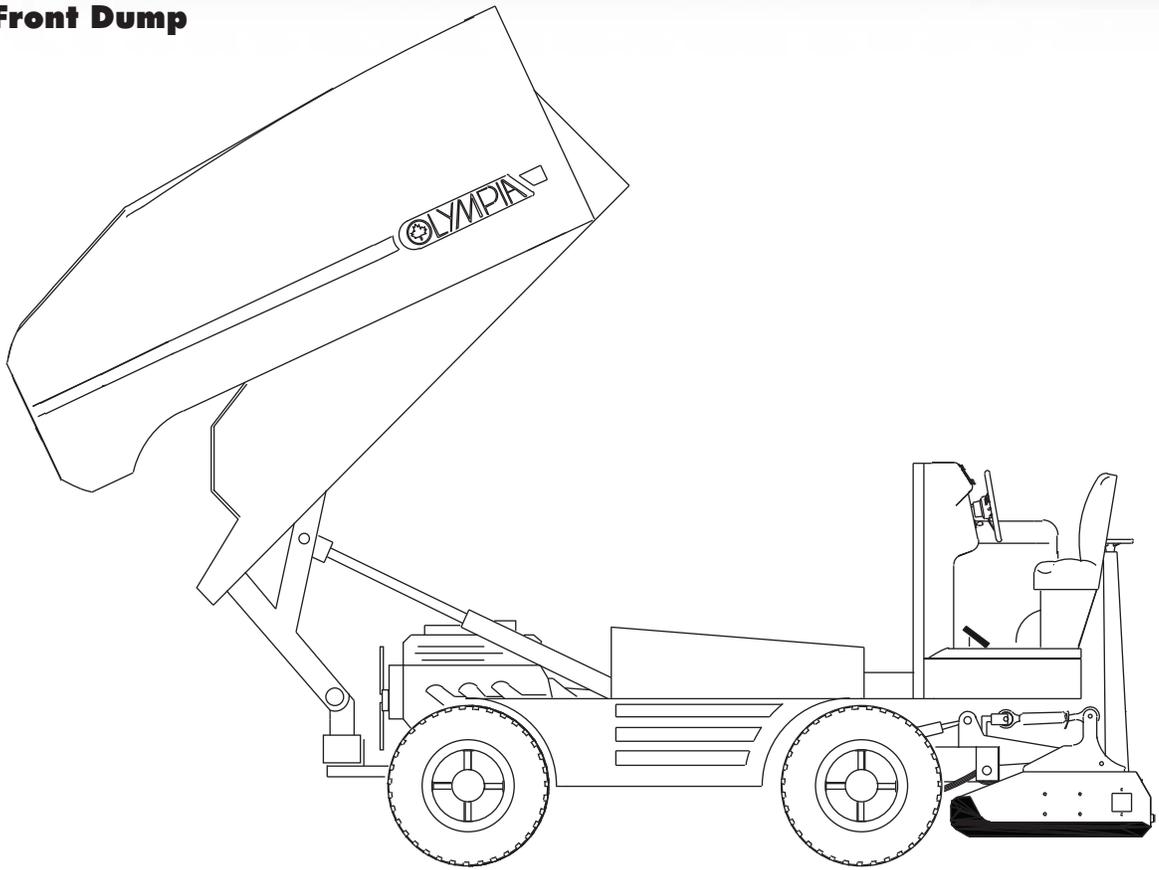
Power train	-Chevrolet four-wheel drive
Engine	283 cu. in. (4.8 litre) displacement, 8 cylinders, 120 horsepower @ 2000 RPM
Transmission	-modified Chevrolet automatic transmission -One forward gear (Low) -Speed varied by accelerator pedal. -Automatic (P, R, N, D)
Transfer Case	-Full time four-wheel drive; 2.72 :1 ratio
Differentials	-3.73 :1 ratio
Alternator	-105 amp rating (Delcotron System)
Battery	-12 volt maintenance-free Delco Freedom -600 amp cold crank rating @ 0° F (-17.8° C)
Electrical	-Negative ground system
Brakes	-Power assisted self-adjusting 4 wheel disc
Steering	-Power (hydraulic)
Tires	-225-75 R16 black wall snow tires load range D -Tungsten tipped studs (including spare) -Rust-resistant low maintenance magnesium alloy wheels -Spare wheel rim is steel-painted black -Recommended pressure - 65 psi
Fuel	-Liquid Propane under pressure, Natural Gas or Diesel.

Instruments	<ul style="list-style-type: none"> -Tachometer/Hour meter gauge -Voltmeter (ammeter) -Oil pressure gauge -Water Temperature gauge -Edger Key light (add on equipment) -Audio/visual warning system for Oil/High Temperature -Fuel gauge (on diesel powered) -Low Fuel Warning Light (on propane) -Service Engine Soon warning light
Controls	<ul style="list-style-type: none"> -Conditioner -Elevator -Board brush -Wash water (add on equipment) -Wash Water control valve -Snow breaker -Snow dump -Tire wash (add on equipment) -Lights -Edger(add on equipment) -Flood water control valve -Blade adjustment handle
Hydraulics	<ul style="list-style-type: none"> -14 Imp. Gallon (63 litre) aluminium tank with fluid level gauge -Strainer - UCC - 125 micron -Filter - Hycon - 20 micron -Pump - Tandem double
Motors	<ul style="list-style-type: none"> -Danfoss (horizontal auger)(board brush) 4.75 cu. in. (80 cc) displacement/Rev -Danfoss (vertical auger) (wash water) 2.96 cu. in. (50 cc) displacement/Rev Ultra 0.61 cu.in. (10 cc) (conditioner edger)
Hydraulic Controls	<ul style="list-style-type: none"> -Sterling - manifold block -Denison-Electric / hydraulic selinoid valves
Other Components	<ul style="list-style-type: none"> -Danfoss controls -Emergency hand pump to raise conditioner, snow bin cover and snow-bin

Exhaust System	<ul style="list-style-type: none"> -Polished stainless steel stack tip, vented 84 inches (213 cm.) above ice surface at rear of machine, opposite driver station -muffler -stainless steel exhaust system (optional) -emission control system (3-Way Catalytic Purifier & fuel management system)
Blade	<ul style="list-style-type: none"> -84 inch (213 cm.) shaving width
Conditioner	<ul style="list-style-type: none"> -9 inch (22.9 cm.) clearance under conditioner in Up position -88 inch (224 cm.) conditioner with 84 inch (213 cm.) blade
Tools	<ul style="list-style-type: none"> -14 piece Open and Box end wrenches, 3/8 to 1-1/4 in. - 9 piece Allen wrench set, 5/64 to 3/8" - jack and wheel wrench and socket -grease gun and cartridge of grease -blade hooks
Bumper Wheels	<ul style="list-style-type: none"> -front: non-marking urethane -conditioner: non-marking urethane -board brush: non-marking urethane
Tanks	<ul style="list-style-type: none"> -Flood Water: Aluminum or stainless steel tanks with water drain valve and water level gauge -Hydraulic Fluid: Aluminum tanks with fluid level gauge
Snow Bin	<ul style="list-style-type: none"> -Steel bin -interior coating, epoxy primer, Urethane Enamel -exterior coating, epoxy primer, undercoating
Noise Levels	<ul style="list-style-type: none"> -1000 RPM engine: 70 DBA -1500 to 1800 RPM: 82 to 85 DBA



Tachometer/Hour Meter	This gauge provides an immediate, accurate indication of the engine RPM and records the number of hours of engine operation.
Voltmeter	The Voltmeter indicates the voltage being produced by the engine's electrical system.
Oil Pressure Gauge	This gauge indicates the pressure under which the engine oil is being distributed to parts which require lubrication.
Water Temperature Gauge	This gauge indicates the temperature of the engine coolant which will vary with air temperature and operating conditions.
A/V Warning System	A light and sound alarm activated by too low oil pressure, or by water temperature over 225° F.
Key Start	
Horn	
Light Switch	
Low Fuel Warning Light	On propane powered OLYMPIAs
Hydraulic Controls	Located on the dash and marked accordingly.
Emergency Hand Pump	Located under the driver's seat.
Accelerator Control	
Brake Control	
Flood Water Control Valve	Mounted on the driver's side of the conditioner tower, beneath blade crank.
Blade Adjustment Handle	Located on the top of the conditioner tower.
Wash Water Control Valve	Mounted on the right hand side of the conditioner tower.

Millennium Front Dump



Millennium Front Dump

Description	Imperial	Metric
Conditioner Clearance	9"	22.9 cm.
Wheelbase	80"	203 cm.
Length Dump Down	162"	411.5 cm.
Length Dump Up	228"	579.1 cm.
Width	88"	223.5 cm.
Height Dump Down	77"	195.6 cm.
Height Dump Up	150"	381.0 cm.
Height of Exhaust Stack	84"	213.3 cm.
Water Tanks	210.2 US / 175 imp. gal	795.6 l.
Snow Tanks	103 cubic ft.	2.915 cubic m.
Hydraulic Oil Tank	14.4 US / 12 imp. gal	54.6 l.
Weight - Empty	6330 lbs.	2871.3 kg
Weight - Full of Water	7905 lbs.	3585.7 kg
Cutting Width	84"	213.3 cm.
OPTIONS		
Wash Water Tank	54 US / 45 imp. gal	204.6 l.
Diesel Fuel Tank	18 US / 15 imp. gal	68.2 l.

**Standard
Equipment**

2 Year Warranty
Chevrolet Power Train serviceable world wide
Automatic Transmission
4 Wheel Drive
Propane/Natural Gas
Emission Control System (3-way catalytic purifier and fuel management system)
Board Brush
Automatic Snow Breaker
Automatic Towel Lift
Front Dump
Aluminum Alloy Wheels
Easily Accessible Hydraulic System
Reversible Auger System
Precision Conditioner Control System
6" Offset Conditioner
Front & Rear Guide Wheels
Full Instrumentation
Finger-tip Control System
Full Lighting Package
Replaceable Runners on Conditioner
Two Tone Paint Scheme (6 standard colour selection)
Snow Tank Safety Stand
Safety Labels
Safety Seat Shut Off
Snow Bin Light
Parking Brake

**Add On
Equipment**

Stainless Steel Tanks

Tire Wash

Wash Water System

Conditioner Hydraulic Edger

Backup Alarm

Seat Belt

Special Paint Colours and Customized Paint Scheme

Six-way Snowplow

Heated Cab

Additional options and custom modifications are available.

Auger Jam

During normal ice resurfacing operations be sure the ice surface is free of debris. If the vertical auger picks up debris, such as a puck, it could eventually jam at the top of the auger thus blocking the path of the scrapings into the snow bin. If this does happen, the first thing you have to do is determine if the obstruction is in the horizontal or vertical auger. First try reversing the auger. If that doesn't clear the obstruction, then take the two quick couplers hoses off of the conditioner and hook the hoses directly together, thus by passing the horizontal auger motor. Push the elevator button and the vertical auger should spin. If it does then the jam has occurred in the horizontal auger.

Horizontal Auger Jam

In the case of a jam occurring in the horizontal auger, you first have to make sure the two quick couplers are attached to the horizontal auger motor. Remove the cover plate on the drivers side. Using a pipe wrench turn the auger by hand and whatever is jamming the auger will turn back out. Replace the cover plate, restart the engine and make sure the auger turns freely. The chain drive for the auger should be reasonably free moving with a quarter to half inch play at all times. If it is loose, simply back off the motor mount plate bolts and slide the motor until you get the proper tension, then tighten the bolts.

Vertical Auger Jam

If the vertical auger does not spin, the blockage has likely occurred in the vertical auger. To un-jam the vertical auger, press the top of the elevator button to reverse the auger. If it doesn't reverse, then shut the engine off. Using a half-inch wrench, remove the two bolts on the cover plate at the top of the blower head. Then remove the remaining four bolts around the blower head and remove the bolt and hose clamp. Now lift the blower head from the unit making sure not to lose the gear ring inside on the drive coupling. Usually the debris is jammed near the top of the auger but in case there is more debris inside, lift the auger straight out and flush out any ice or debris that was causing the jam. Once cleared, slide the auger back into its original position on top of the stub shaft. Replace the gear ring. Now set the blower head back down on top of the vertical auger tube. Re-install the four bolts in the bottom of the blower head along with the bolt and hose clamp and tighten. Make sure there is a 1/16 (1.6 mm) of an inch between the gear ring and the top coupling half. To adjust, loosen the 2 set screws on the top coupling. Use a screwdriver to adjust the spacing then re-set the set screws on the top coupling. Re-install the cover plate. Reconnect the two quick couplers to the horizontal auger motor. Turn the ignition on and press the elevator button and resume normal operations.

Snow Ridge

If you have a ridge of snow forming as the OLYMPIA moves around the ice, check the squeegee on the conditioner. If the fitting on the squeegee against the side of the conditioner is not tight, it will allow snow to escape and form a ridge on the ice. The solution is to remove the squeegee and replace it with a new one making sure the squeegee is trimmed to fit tightly against the side of the conditioner.

Rippled Ice

Too little down pressure, or an incorrect blade angle, or excessive wear on the blade adjustment screw/nut will result in rippled ice. Other causes could be a worn bearing in the snow tower, a worn blade holder swivel or the pins could be worn.

Emergency Hand Pump

In the unlikely case the OLYMPIA will not operate, the OLYMPIA is equipped with an emergency hand pump system located under the driver's seat. Open the door and remove the jack handle.

Locate the emergency "Hand Pump" switch inside the seat box and push the button to the "Hand Pump" position. The switch lights, on the dash, will come on.

Insert the handle and pump it all the way up and down. The conditioner will raise first followed by the snow bin.

Once the conditioner is in the up position stop pumping and move the OLYMPIA off the ice surface to the snow dump area. Check clearances and then resume hand pumping to raise the snow bin. Once the snow bin has been raised sufficiently to place the safety bars in position. Stop pumping and put the safety bars down and fasten with the safety pins. Return to the emergency hand pump and move the switch to the "Drive" position. You can now proceed with the repair of the OLYMPIA.

Caution: Never leave the emergency hand pump in the "Hand Pump" position as it will burn out the solenoids. Also, the emergency hand pump system will only raise, not lower the conditioner and the snow bin

Safety Note: Make sure you engage the emergency hand pump once a week to ensure it is in proper working order.

Driving Control Problems

If there is too much down pressure, the rear wheels will lift off the ice resulting in a loss of control. You can correct the problem by adjusting the down pressure.

Voltmeter Variants

A consistently high or low reading indicates an electrical system problem, which should be assessed and repaired.

Oil Pressure Problems

Pressures indicated may vary with outside temperature and weight of oil being used. Oil pressure in a cold engine may be somewhat higher than normal until the oil reaches operating temperature. If the pressure does not stabilize, or remains either high or low, a problem in the lubrication system may exist and should be investigated immediately to prevent damage to the engine. If an overheating situation occurs, do not operate the engine until the cause is determined to avoid damaging the engine.

Audio/Visual Alarm

The function of this alarm is to assist you in setting up and following a maintenance schedule suitable to your needs and operating conditions. When the alarm is activated, check gauges and return resurfer to storage room. Shut off engine. If the oil pressure is low, check oil, and fill as necessary. If the water temperature is high, check radiator coolant level, and fill as necessary. Consult with your GMC dealer if further problems persist.

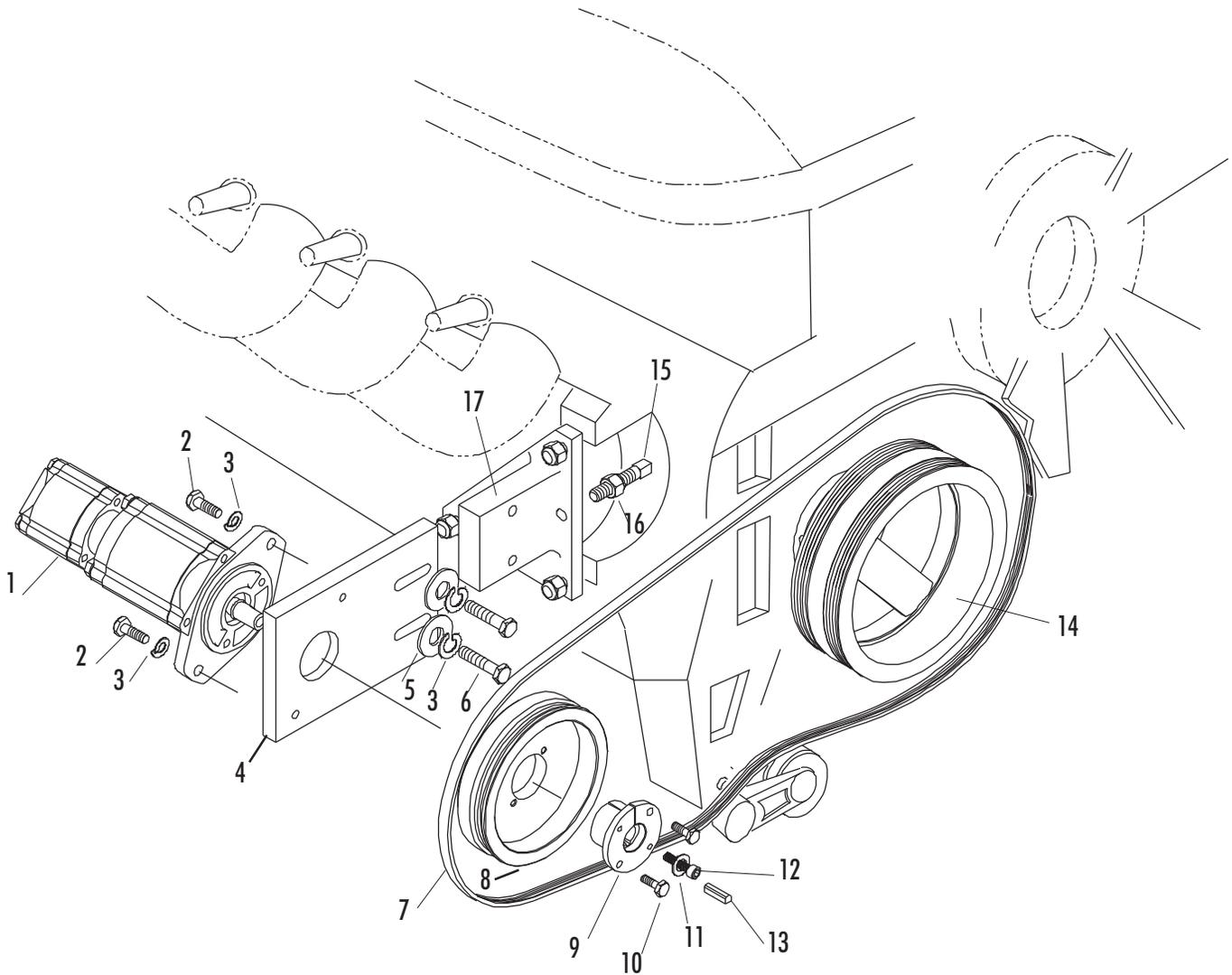
Service Engine Soon

Alerts OLYMPIA operator to the possibility of a malfunction in the fuel or ignition systems, which can create improper exhaust emissions. (Fuel Management System Option)

Back up Alarm

Automatically engages when the gear lever placed in "R" (reverse) position to alert anyone behind the OLYMPIA.

HYDRAULIC PUMP MOUNT

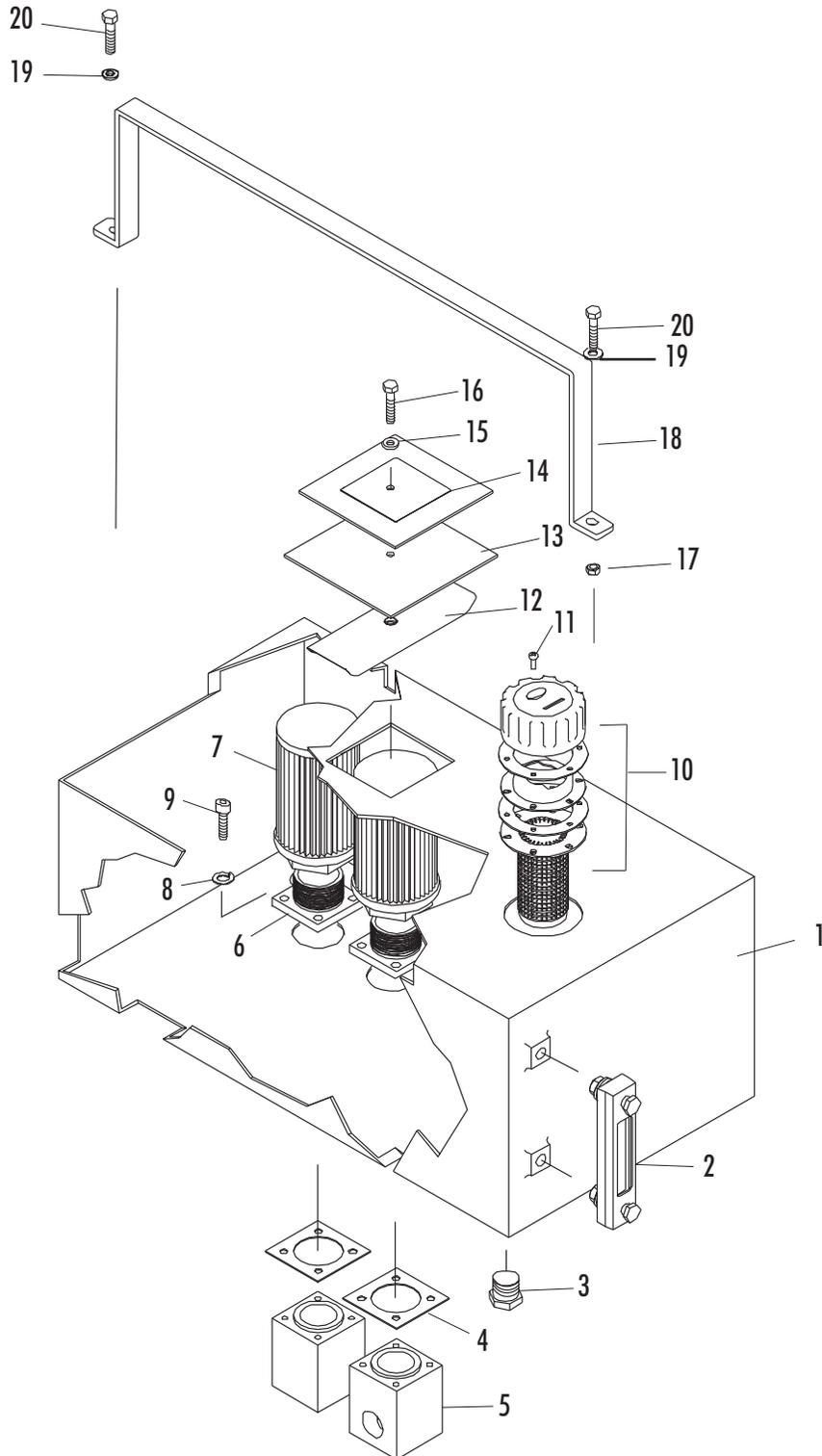




HYDRAULIC PUMP MOUNT

Ref #	Part #	Description	OEM Part #
1	40-3935	Hydraulic Double Pump	1LM35-22DH09S ROQUET
2	49-30500	Hex Head Bolt 3/8-16 x 1	
3	49-36260	Lockwasher 3/8	
4	41-25615	Pump Mount	
5	49-36255	Flatwasher 3/8	3/8" Thick
6	49-30570	Hex Head Bolt 3/8-16 x 1 1/2	
7	41-714	Mirco V-Belt	K040506 14mmx1300mm
8	41-735	Pulley-Two Groove	
9	41-734	QT Bushing 5/8	QT x 5/8 with 5/32 key Way
10	49-30240	Hex Head Bolt 1/4 -20 x1 1/4	
11	49-36135	Flat Washer 1/4 Hole 3/8 Thick	
12	49-38405	Socket Cap Screw M6 x 20mm	
13	49-35085	Key 3/16x 3/4	
14		Pulley-GM Part	
15	49-36959	Square Head Set Screw 1/2 x 2	
16	49-33900	Hex Head Nut 1/2-13	
17	41-25799	Engine Bracket-Pump	

OIL TANK MILLENNIUM & MILLENNIUM PLUS

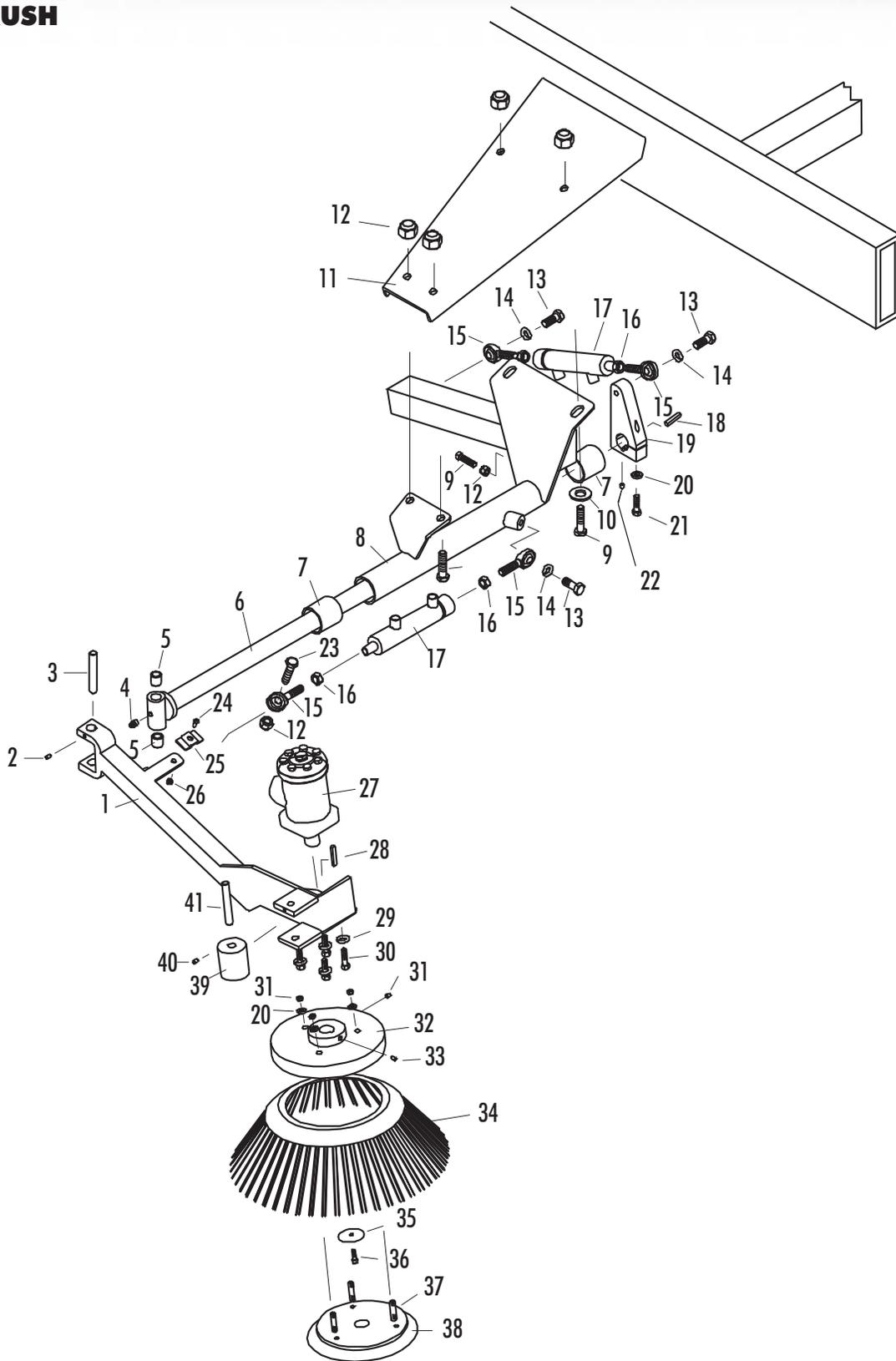




OIL TANK MILLENNIUM & MILLENNIUM PLUS

Ref #	Part #	Description	OEM #
1.	41-9494	Oil Tank	
2.	40-3700	Sight Gauge	SNA 2B/S/O
3.	43-15360	Hex Head Plug	C3159 x 12
4.	41-25840	Strainer Mount Gasket	
5.	41-25825	Oil Tank-Outlet Block	
6.	41-25830	Strainer Mount	
7.	40-3830	Strainer	HZ UCSE1323
8.	49-36265	Lock Washer 5/16	
9.	49-30310	Socket Cap Screw 5/16-18 x 1 1/4	
10.	30-3710	Air Breather-SD	ABB40N
11.	49-30110	Round Socket Machine Screw 10/24 x 1/2	
12.	41-9575	Oil Tank Lid-Bracket	
13.	41-9585	Oil Tank Lid-Gasket	
14.	41-9572	Oil Tank Lid	
15.	49-36200	Flat Washer 5/16	
16.	49-30320	Hex Head Bolt 5/16-18 x 1 1/2	
17.	49-33200	Locknut-Nylon 1/4 -20	
18.	41-9505	Oil Tank hold Down	
19.	49-36130	Flat Washer 1/4	
20.	49-30240	Hex head Bolt 1/4-20 x 1 1/4	

BOARD BRUSH

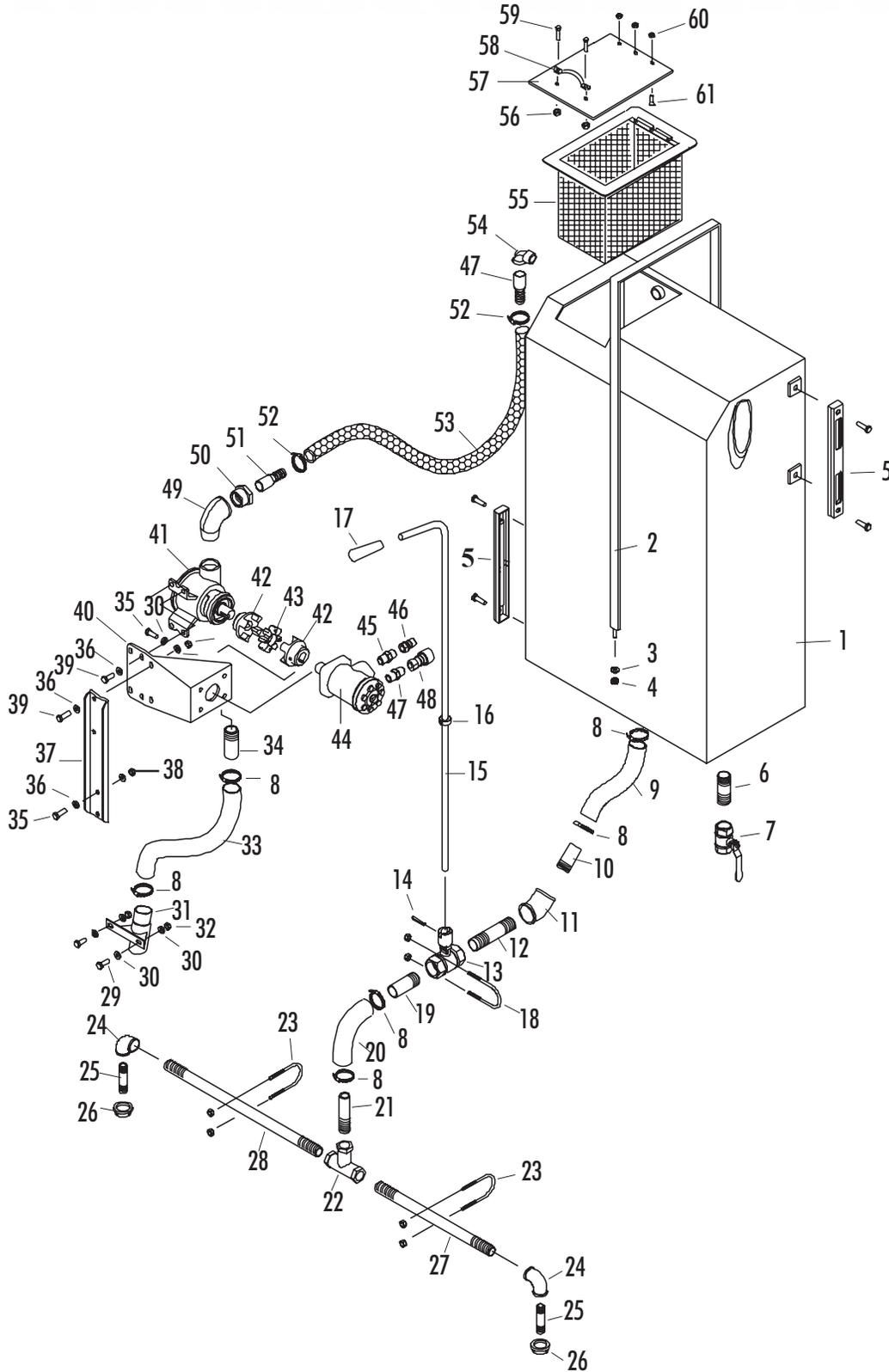




BOARD BRUSH

Ref. #	Part #	Description	OEM #
1	35-23977	Swing Arm	
2	49-37800	Split Pin 1/4 x 1 1/2	
3	35-23750	Pivot Pin	
4	49-19010	Grease Fitting 1/8-27 90 DEG	1613
5	35-23740	Shaft Pivot Sleeve	12DU16 GBR Bearing
6	35-23715	Shaft	
7	35-25460	Bushing	
8	35-23685	Mounting Bracket Kit	
9	49-30910	Hex Hd Bolt 1/2-13 x 1 1/4	
10	49-36300	Flat Washer 1/2	1/2 BS SAE
11		Mounting Bracket on Frame	
12	49-33915	Locknut-Nylon 1/2-13	
13	49-30995	Hex Head Bolt 1/2-12 x 2 Grade 8	
14	49-36320	Lock washer 1/2	
15	35-17280	Rod End	VCM8
16	49-33920	Hex Nut Jamnut 1/2-20	
17	35-20055	Board Brush Cylinder	BX 1997
18	49-35100	Key 1/4 x 1	
19	35-23600	Adjustment Block	
20	49-36250	Flat washer 3/8	
21	49-30585	Hex Head Bolt 3/8-16 x 2 Grade 8	
22	49-36975	Socket Set Screw 5/16-18 x 3/8	
23	49-36952	Square Head Set Screw 3/8 x 1 1/2	
24	49-30230	Hex Head Bolt 1/4-20 x 1	
25	35-23950	Hose Clamp	
26	49-33200	Locknut Nylon 1/4-20	
27	20-3760	Hydraulic Motor	
28	49-35110	Key 14 x 1 1/4	151-7022
29	49-36260	Lock washer 3/8	
30	49-30490	Hex Hd Bolt 3/8-16 x 3/4	
31	49-33500	Locknut-Nylon 3/8-16	
32	35-23850	Top Hub	
33	49-36990	Socket Screw 3/8-16 x 1/2	
34	35-17360	Brush	
35	35-23860	Bottom Hub Washer	
36	49-30190	Socket Cap Screw 1/4-20 x 3/4	
37	49-37930	Engine Stud	
38	35-23800	Bottom Hub	ST-3 #264-049
39	35-9270	Roller	
40	49-36970	Socket Set Crew 1/4-20x14	
41	35-23900	Roller Pin	

MILLENNIUM WASH WATER SYSTEM



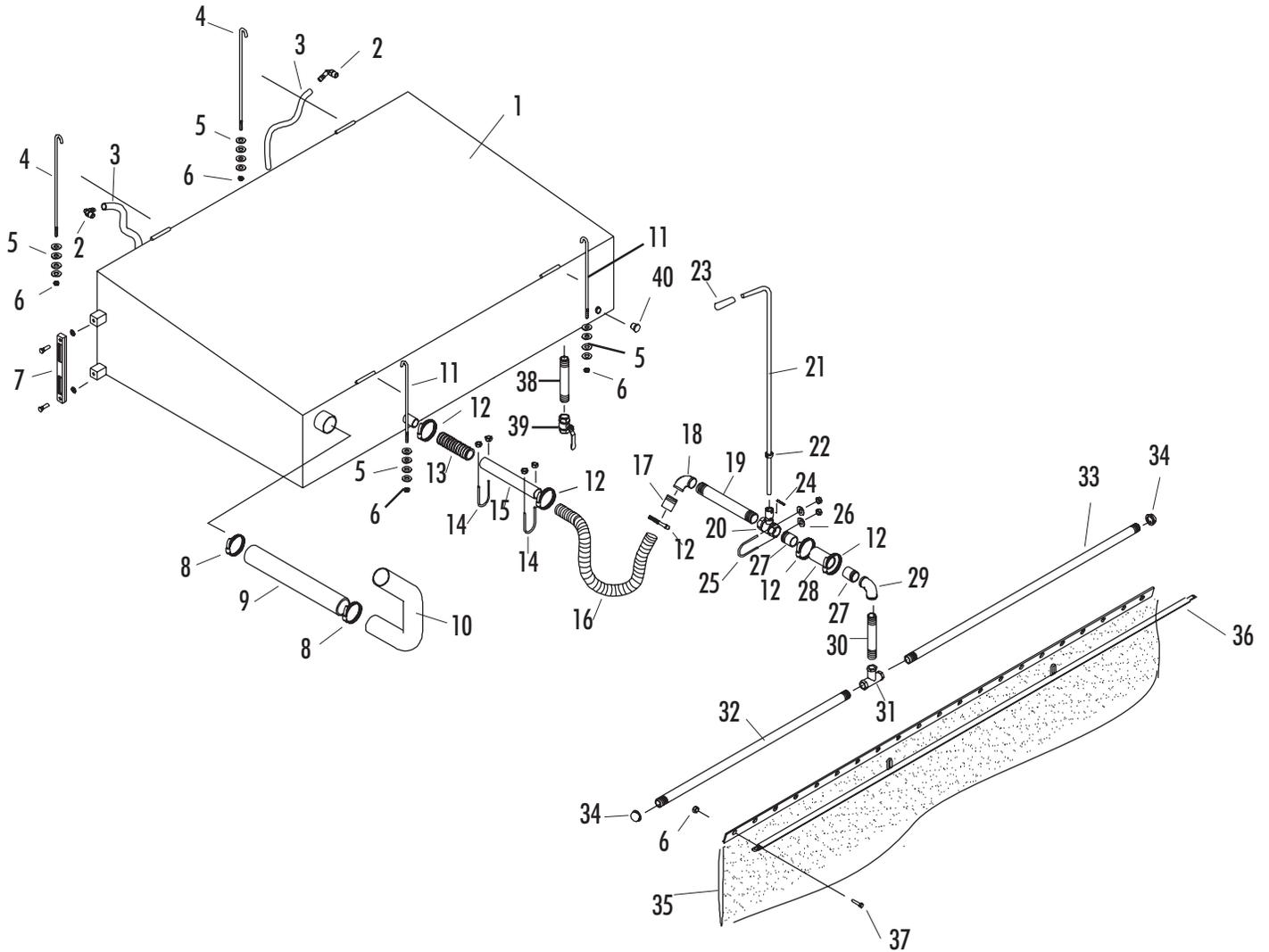


MILLENNIUM WASH WATER SYSTEM

Ref. #	Description	OEM #	Ref. #	Part #	Description	OEM #
1	27-1544 Wash Water Tank		40	27-1530	Wash Water Pump Mount	
2	27-1350 Tank Hold Down Bracket		41	27-1540	Wash Water Pump	6400 0008
3	49-36200 Flat Washer 5/16		42	25-24350	Coupling Half	ROTEX HUB 28 ALUM
4	49-33220 Locknut-Nylon 5/16-18		43	25-24400	Gear Ring	ROTEX INSERT 28 STD
5	30-3721 Sight Gauge	SNA 3B/S/O	44	25-4000	Hydraulic Motor	151-7021
6	30-5266 Nipple 3/4 x 3 Galv		45	43-15430	Hex Nipple	C3069 x 8 x 6
7	60-1062 Water Tap	3/4 NEO Ball Valve 3380	46	40-11450	Quick Disconnect 3/8 Male	S31-3
8	49-3360 Gear Clamp 5/16-1 1/2	HF24	47	43-15390	Bushing	C3109 x 8 x 6 S35-3
9	27-1357 Hose to Sled 26 Vac		48	40-11449	Quick Disconnects 3/8 Female	
10	27-1550 Water Pipe 1 1/4 x 2-1/2		49	27-1450	Street Elbow 1 1/4 Galv	
11	27-1480 45 Elbow 1 1/4 Galv		50	27-1435	Bushing 1 1/4-3/4 Galv	
12	27-1445 Nipple 1 1/4 x 5 Galv		51	27-1430	3/4 Male Hose End	3/4 Insert x Male Adaptor Galv
13	30-5255 Water Tap					HF 10
14	49-37800 Split Pin 1/4 x 1 1/2		52	27-1250	Gear Clamp 5/8	
15	30-25625 Water Tap Rod 45		53	27-1406	3/4 Clear Braid Hose 70	
16	49-37880 5/8 Zinc Plated Shaft Collars	A0620(518)	54	27-1460	Street Elbow 3/4 Galv	
17	30-25620 Grip-Water Tap Rod	RT-1008	55	27-1330	Strainer Basket Assembly	
18	30-17050 U-Bolt 1 1/2 Pipe	2124X-B	56	49-33200	Locknut-Nylon 1/4-20	
19	30-5275 Water Pipe 1 1/4 x 2		57	27-1315	Strainer Basket Lid	
20	27-1373 Water Hose 1 1/2 - 90 x 7	4261 0267	58	50-53550	Handle	682-5093
21	27-1553 Water Pipe 1 1/4 x 4		59	49-30200	Hex Head Cap Screw 1/4 x 3/4	1/4-20 X 3/4
22	27-1495 1 x 1 x 1 1/4 Tee		60	49-33115	Locknut-Nylon 10-24	
23	30-17030 U-Bolt 1 Pipe	2122X-B	61	49-30116	Flat Socket M/S 10-24 X 1/2	MQF1008
24	27-1465 90 Elbow 1 x 3/4 Galv					
25	27-1500 Nipple 3/4 x 1 1/2 Galv					
26	27-1510 Pipe Cap 3/4 Galv					
27	27-1512 Water Pipe 1 x 31 1/2					
28	27-1514 Water Pipe 1 x 44 1/2					
29	49-30300 Hex Head Bolt 5/16 x 1					
30	49-36200 Flat Washer 5/16					
31	27-1370 Suction Tube					
32	49-33220 Locknut-Nylon 5/16-18					
33	27-1358 Water Hose Sled 11 Vac					
34	30-5278 Water Pipe 1 1/4 x 3					
35	49-30500 Hex Head Bolt 3/8 x 1	3/8-16 x 1				
36	49-36250 Flat Washer 3/8					
37	27-1560 Plate Motor Mount					
38	49-33500 Locknut-Nylon 3/8-16					
39	49-30550 Hex Head Bolt 3/8-16 x 1 1/4	3/8-16 x 1 1/4				



MILLENNIUM WATER SYSTEM

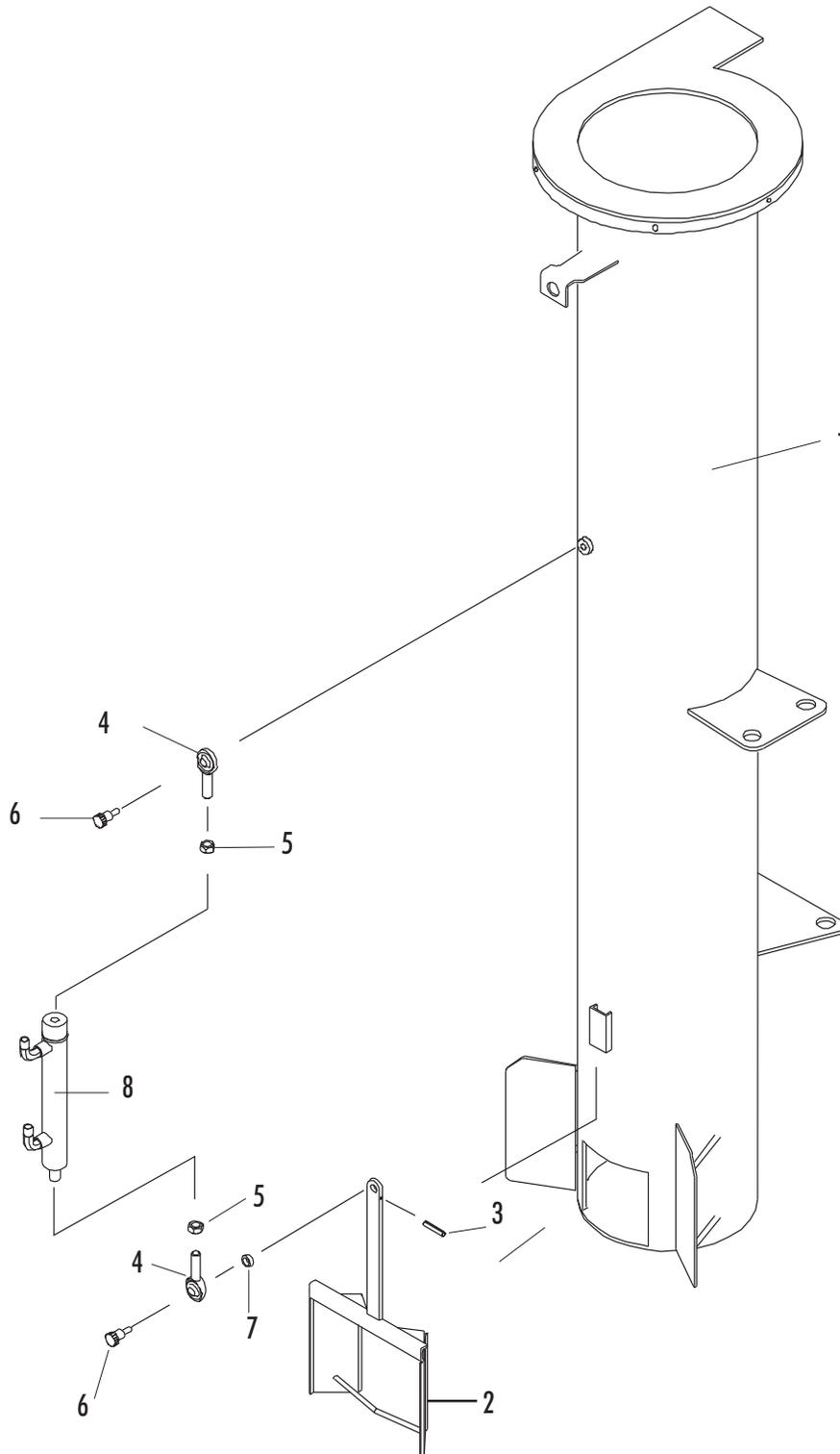




MILLENNIUM WATER SYSTEM

Ref. #	Part #	Description	OEM #
1	30-9300	Water Tank	
2	30-3700	Vent Elbow	129251 PVC Insert x Mip 90 1
3	75-1405	1 Clear Cloth Braid Hose	K3150-16
4	30-9630	Water Tank Tie Down-Front	23 3/4
5	49-36250	Flat Washer 3/8	
6	49-33500	Locknut-Nylon 3/8-16	
7	30-3721	Sight Gauge	SNA 3B/S/O
8	30-3340	Gear Clamp 2 1/2	HF40
9	30-3285	Hose Tank to Tank 2 1/2 x 20	
10	30-25570	Waterfill Pipe	
11	30-9640	Water Tank Tie Down-Back	19
12	49-3360	Gear Clamp 5/16-1 1/2	HF24
13	30-3328	Hose Tank-Pipe 1 1/2 x 13	
14	30-17040	U-bolt 1 1/4 Pipe	2123XB
15	30-25562	Water Pipe 1 1/4 x 17	
16	30-3194	Hose to Sled 17 Vac	
17	30-5278	Water Pipe 1 1/4 x 3	
18	30-5350	90 Elbow 1 1/4 Gal	
19	30-5290	Water Pipe 1 1/4 x 16	
20	30-5255	Water Tap	
21	30-25625	Water Tap Rod 45	
22	49-37880	5/8 Zinc Plated Shaft Collars	A0620(5/8)
23	30-25620	Grip-Water Tap Rod	RT-1008
24	49-37780	Split Pin 3/16 x 1 1/2	3/16 x 11/2 Spring Pin
25	30-17050	U-bolt 1 1/2 Pipe	2124 X-B
26	49-36130	Flat Washer 1/4	
27	30-5275	Water Pipe 1 1/4 x 2	
28	70-3330	Water Hose 1 3/4 x 3 1/2	
29	30-5330	90 Elbow 1 x 1/4 Gal	
30	30-5381	Water Pipe 1 x 8	
31	30-5320	Tee 1	
32	30-5371	Flood Pipe 34 1/2	
33	30-5361	Flood Pipe 43 1/2	
34	30-5310	End Cap 1 Galv	
35	30-21161	Spreader Cloth-85	
36	30-21181	Towel Bar Lift Holder 83 1/4	
37	49-30500	Hex Head Bolt 3/8-16 x 1	3/8 - 16 x 1
38	30-5268	Nipple 3/4 x 10 Gal	
39	60-1062	Water Tap	3/4 NEO Ball Valve 3380
40	43-15370	Hex Head Plug	C3159 x8

SNOW BREAKER - Automatic

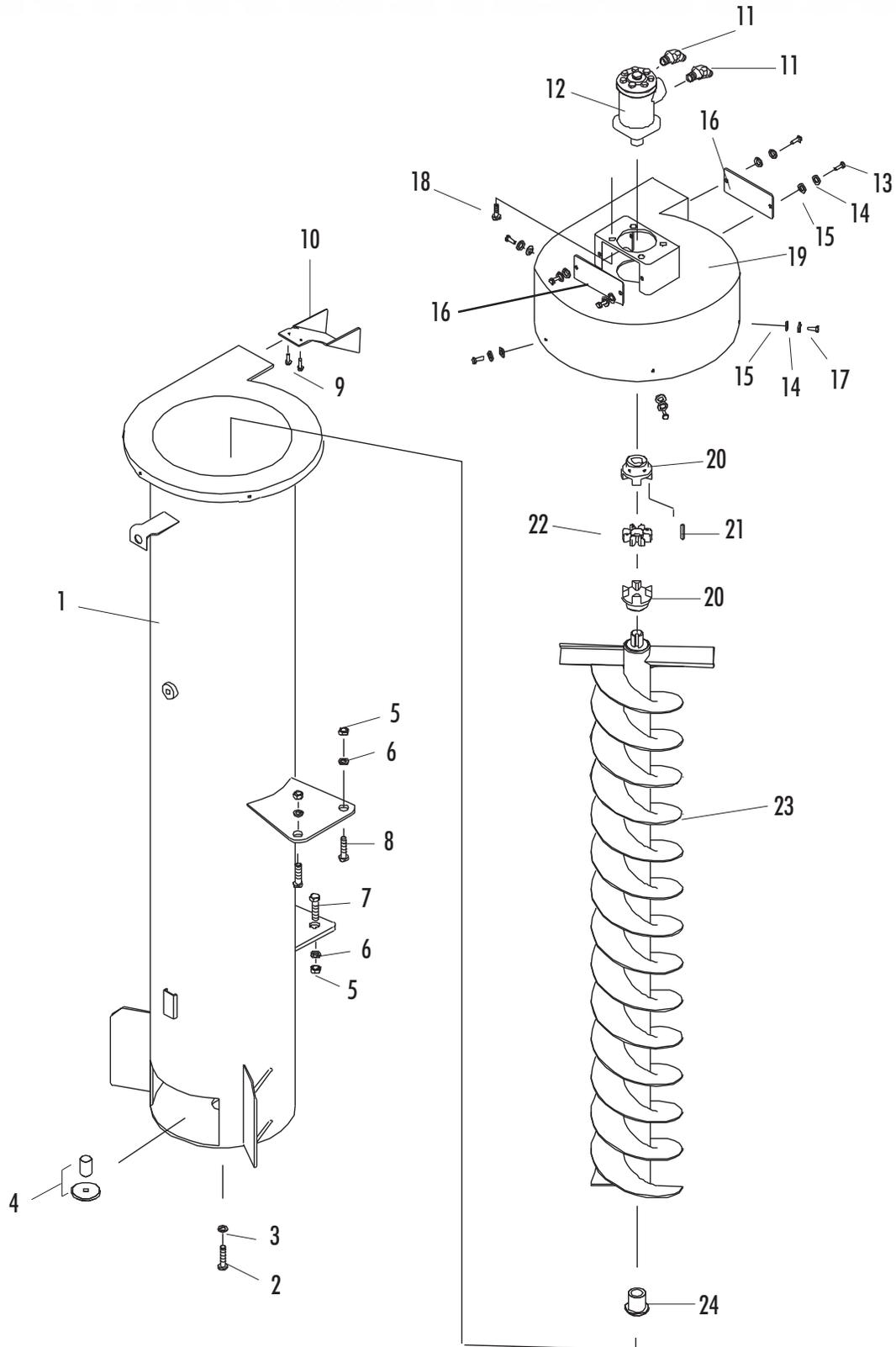




SNOW BREAKER - Automatic

Ref. #	Part #	Description	OEM #
1	25-24166	Elevator Tube-Automatic	
2	25-24210	Snow Breaker	
3	49-37780	Split Pin 3/16 " x 1 1/2"	
4	35-17280	Rod End 1/2"	VCM8
5	49-33920	Hex Jam Nut 1/2" -20	
6	49-30055	Stripper Bolt 1/2" x 5/8"	
7	25-24142	Automatic Snow Breaker Spacer	
8	25-24144	Snow Breaker Cylinder	SX 1997

VERTICAL AUGER - Automatic

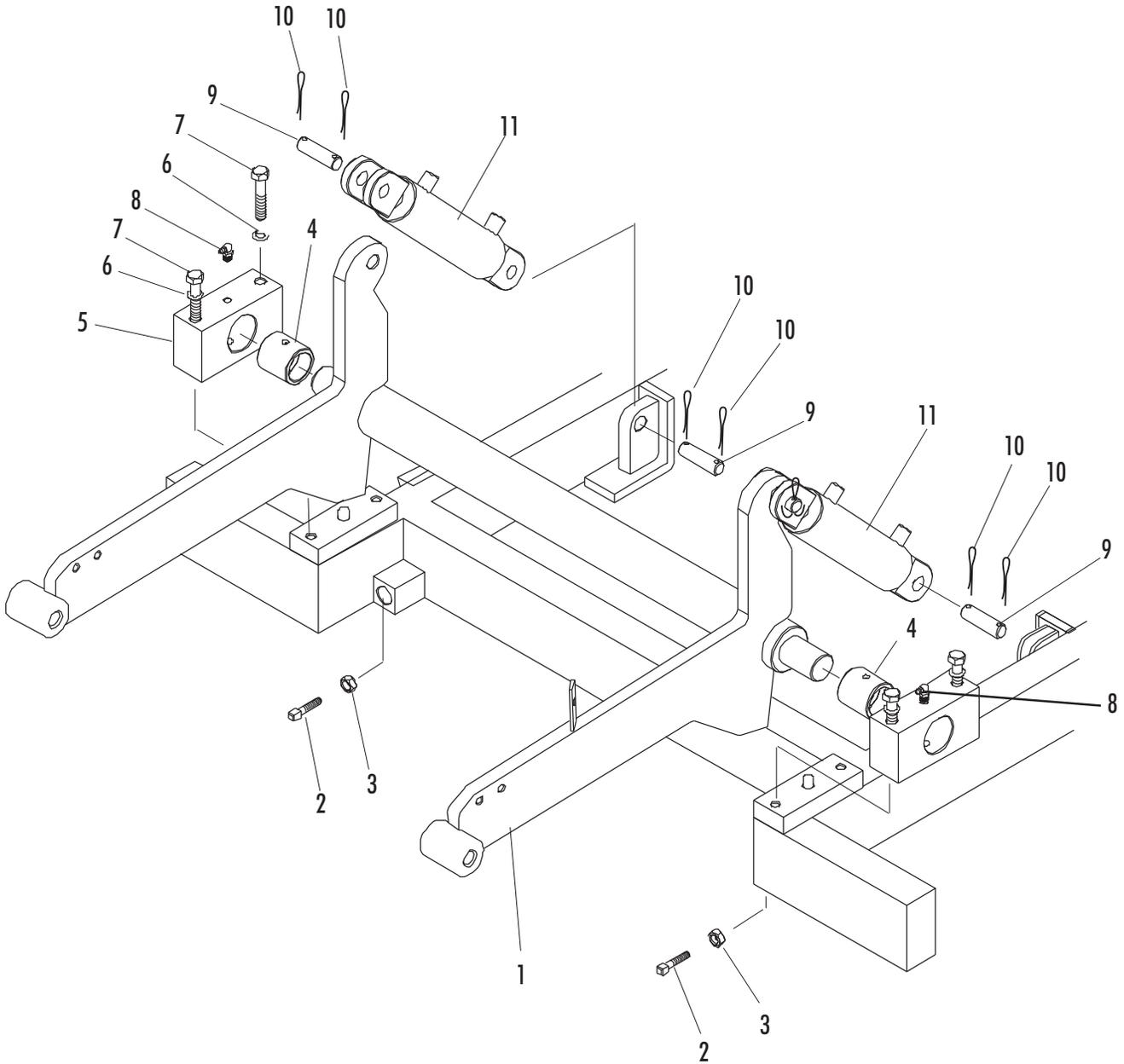




VERTICAL AUGER - Automatic

Ref. #	Part #	Description	OEM #
1	25-24166	Elevator Tube Automatic	
2	49-30910	Hex Head Bolt 1/2-13 x 1/4	
3	49-36320	Lockwasher 1/2	
4	25-24250	Stub Shaft	
5	49-33500	Locknut-Nylon 3/8-16	
6	49-36250	Flat Washer 3/8	
7	49-30550	Hex Head Bolt 3/8-16 x 1 1/4	
8	49-30650	Hex Head Bolt 3/8-16 x 5 Grade 5	
9	49-30110	Round Socket Machine Screw 10/24x 1/2	
10	25-24552	Snow Shield	
11	43-15200	Male 45 Deg Elbow	C5355x8x8
12	25-4000	Hydraulic Motor	151-7021
13	49-30300	Hex Head Bolt 5/16 x 1	
14	49-36265	Lock Washer 5/16	
15	49-36200	Flat Washer 5/16	
16	25-24450	Cover Plate	
17	49-30290	Hex Head Bolt 5/16-18 x 3/4	
18	49-30500	Hex Head Bolt 3/8-16 x 1	
19	25-24500	Blower Housing	
20	25-24350	Coupling Half	ROTEX HUB 28
21	49-35100	Key 1/4 x 1	
22	25-24410	Gear Ring Solid Core	555-028100-0002
23	25-24300	Vertical Auger ROTEX 28 GS Bushing	
24	25-695	Bushing	

CONDITIONER LIFT ARMS

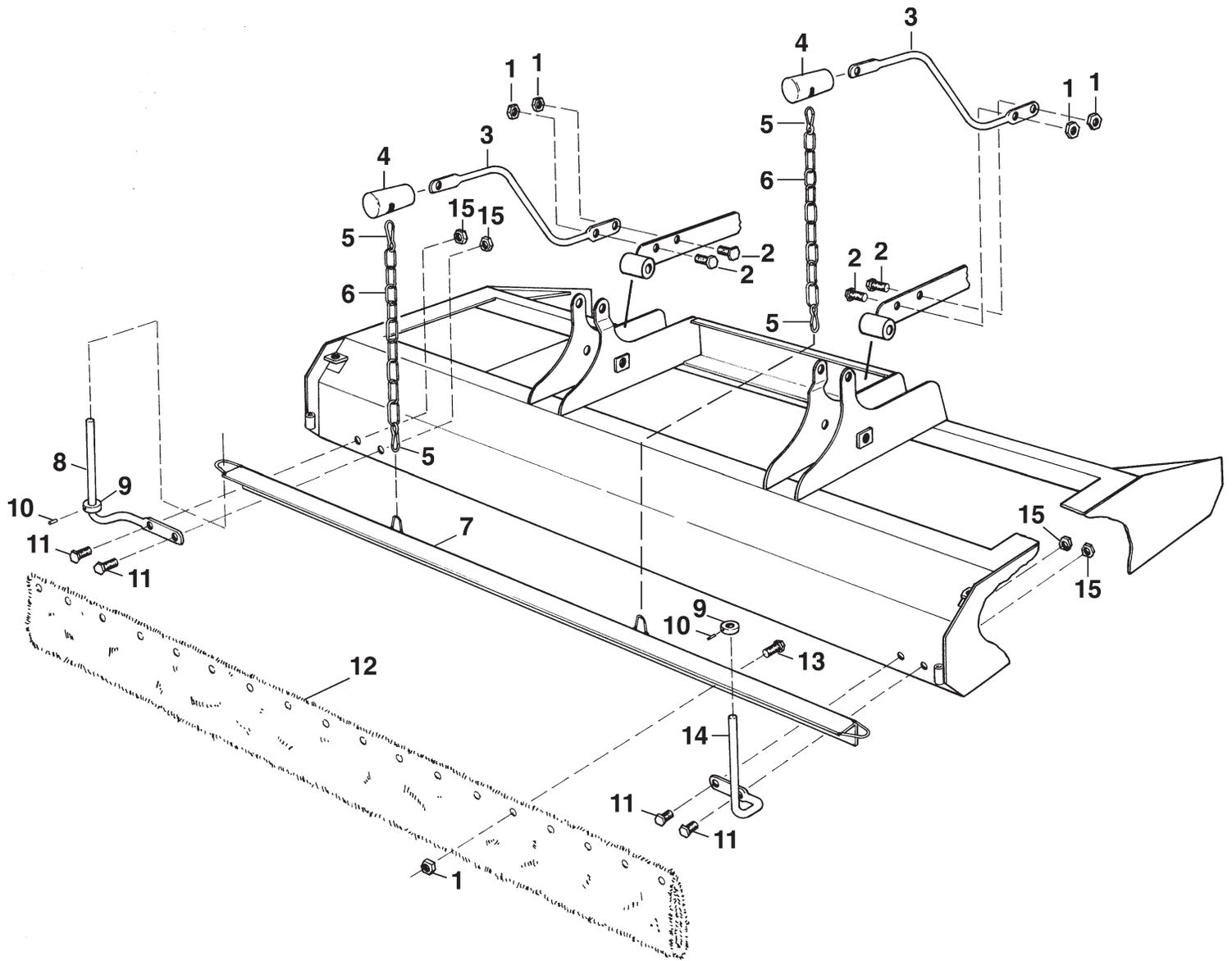




CONDITIONER LIFT ARMS

Ref.#	Part#	Description	OEM#
1.	20-18025	Conditioner Lift Arms & Shaft(88)	
2.	49-36959	Sq. Hd. Set Screw 1/2 X 2	
3.	49-33900	Hex Head Nut 1/2-13	
4.	20- 9828	Pivot Block Bushing	SS4864 32
5.	20- 9830	Pivot Block Cond. Lift Arms	
6.	49-36320	Lockwasher 1/2 (Med. Split)	
7.	49-31015	Hex Hd Bolt 1/2 X 4	1/2-13X4 Grade 8
8.	49-19010	Grease Fitting	1/8 -27-90 Degree
9.	41-25600	Cylinder Pin	
10.	49-37500	Cotter Pin 5/32 X 1/2	
11.	40-20030	Sled Cylinder	

TOWEL BAR LIFT

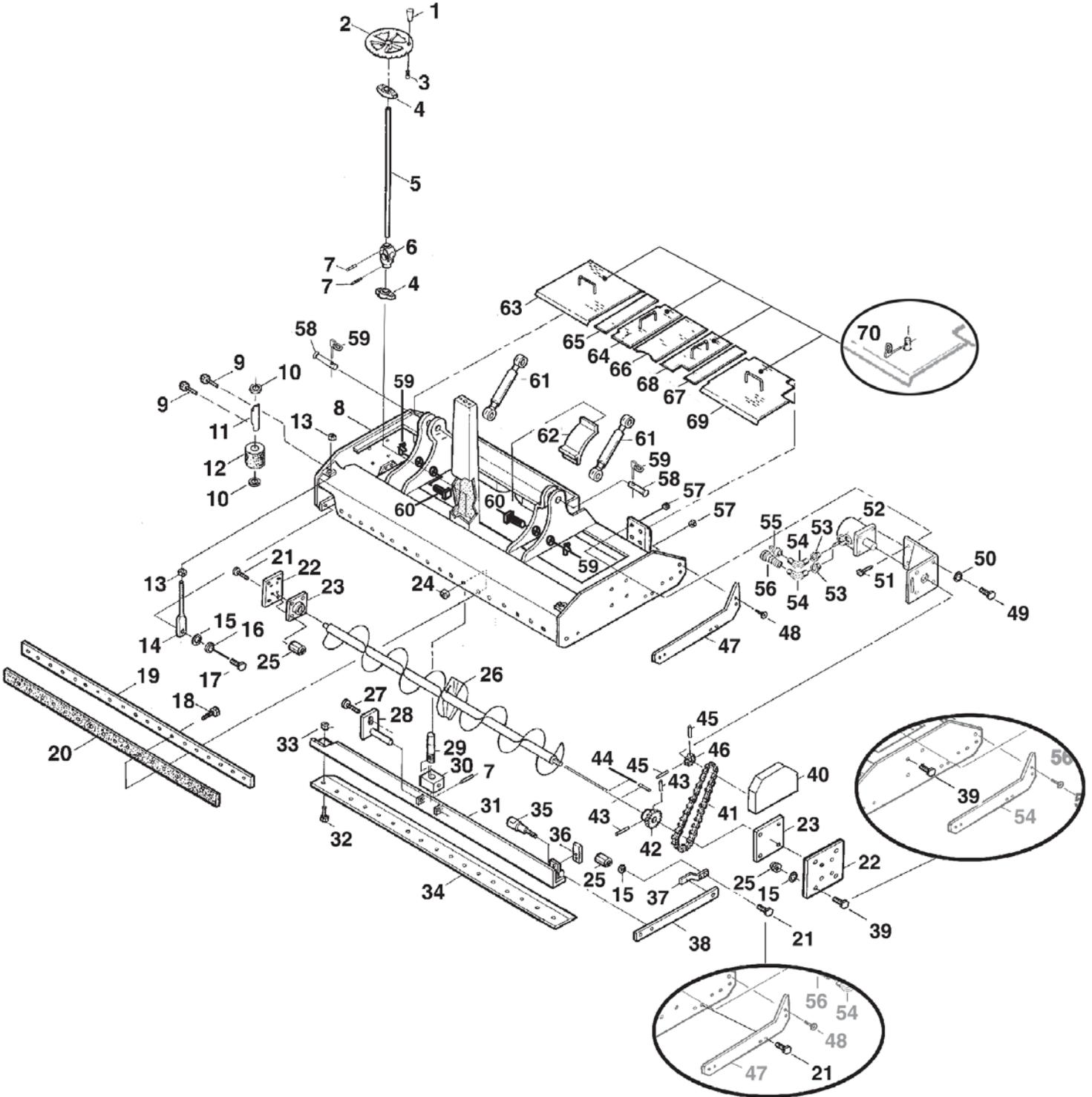




TOWEL BAR LIFT

1	49-33500	Locknut 3/8"-16	
2	49-30575	Hex Head Bolt 3/8"-16 x 1 3/4"	
3	30-22010	Towel Lift Arm Rod	
4	30-22015	Towel Bar Arm Bumper	
5	49-38100	Wire Snaps 2 1/4"	7340-3/8"
6	30-22100	Plated Chain	
7	30-21181	Towel Bar Lift Holder (84" Conditioner)	
8	30-22000	Towel Lift Guide (Left)	
9	25-17010	Shaft Collar 1/2" Zinc	A0500 (1/2")
10	49-36970	Socket Set Screw 1/4"-20 x 1/4"	
11	49-30300	Hex Head Bolt 5/16" x 1"	
12	30-21161	Spreader Cloth (84" conditioner)	
13	49-30500	Hex Head Bolt 3/8"-16 x 1"	
14	30-22001	Towel Lift Guide (Right)	
15	49-33220	Locknut 5/16"-18	

CONDITIONER - 84" WITH WASH WATER

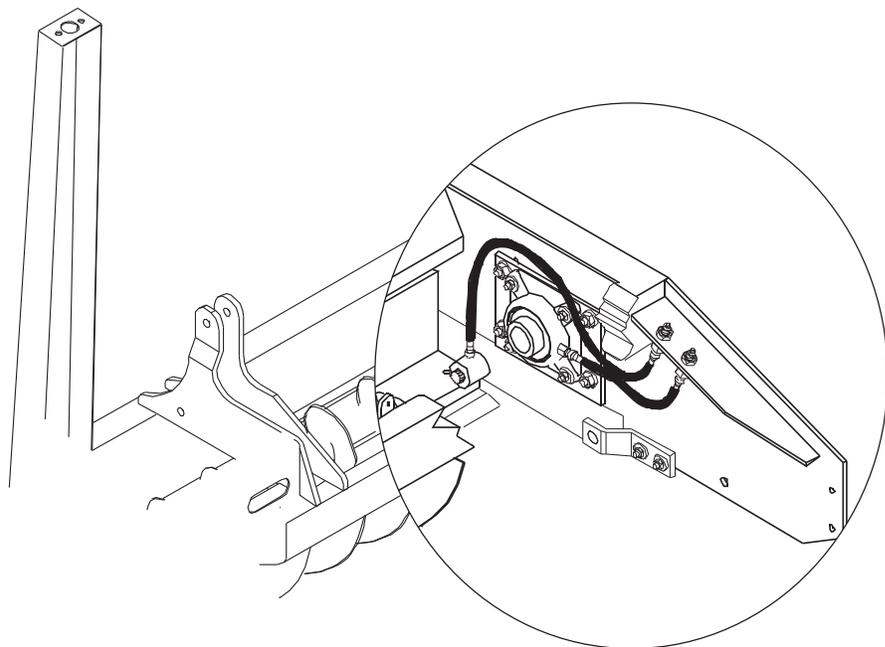
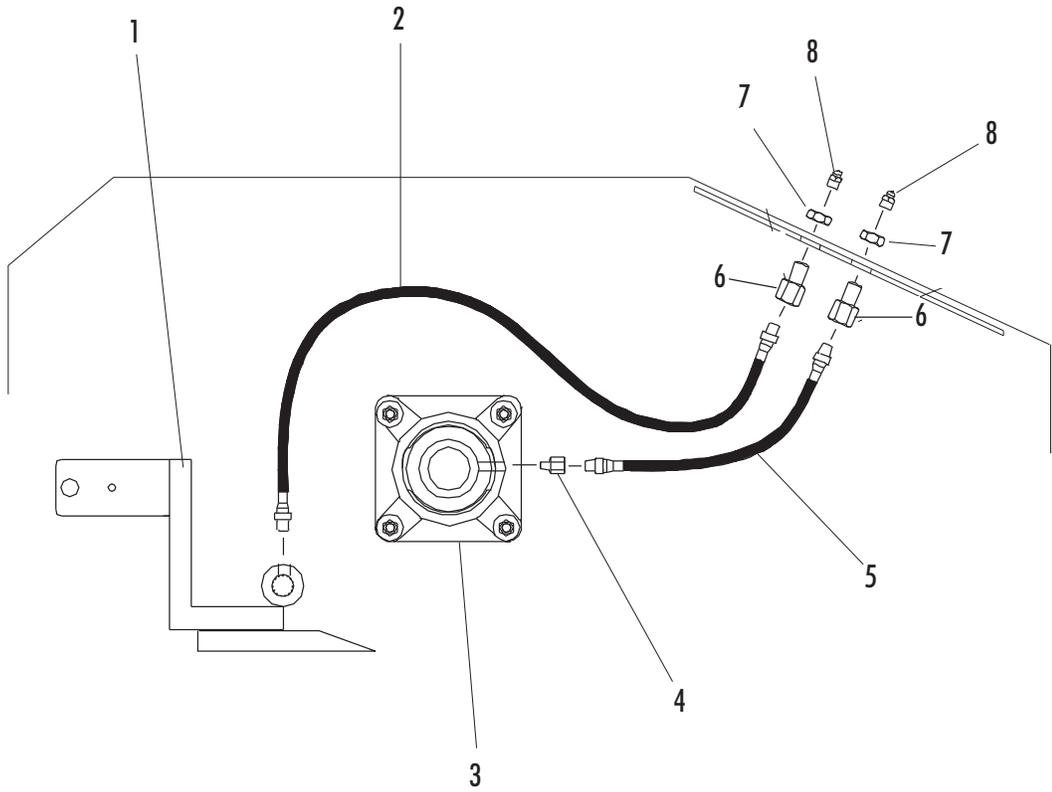




CONDITIONER - 84" WITH WASH WATER

Ref.#	Part #	Description	OEM #	Ref.#	Part #	Description	OEM #
1	20-25700	Handle-Blade Adjustment Wheel		40	20-21781	Chain Guard	
2	20-25750	Blade Adjustment Wheel		41	20-1360	Drive Chain 32"	
3	49-30307	Socket Cap Screw 5/16"-18 x 1"		42	20-1281	25 Tooth Auger Sprocket	50B25F 1 1/2
4	20-1240	2 Hole Flange Bearing 3/4"	SCJT 3/4	43	49-36990	Socket Set Screw 3/8"-16 x 1/2"	
5	20-21685	Blade Adjustment Crank		44	49-35140	Key 3/8" x 1 1/4"	
6	20-3560	Universal 3/4"	102424SF	45	49-36980	Socket Set Screw 5/16"-18 x 1/2"	
7	49-37800	Split Pin 1/4" x 1 1/2"		46	20-1300	19 Tooth Motor Sprocket	50B19F1
8	20-20001	Conditioner Frame		47	20-20065	Runner-Right (20-20055 Runner left)	
9	49-30500	Hex Head Bolt 3/8"-16 x 1"					
10	49-36900	Washer-Bumper Wheel		48	49-30530	Flat Socket Screw 3/8"-16 x 1"	
11	20-25640	Shaft-Bumper Wheel		49	49-30500	Hex Head Bolt 3/8"-16 x 1"	
12	20-9270	Bumper Wheel Conditioner		50	49-36260	Lock Washer 3/8"	
13	49-33970	Hex head Nut 3/4" -10		51	49-30550	Hex Head Bolt 3/8"-16 x 1 1/4"	
14	20-25800	Level Adjustment Rod		52	20-3760	Hydraulic Motor	151-7022
15	49-36300	Flat Washer 1/2"		53	43-15390	Bushing	C3109 x 8 x 6
16	49-36320	Lock Washer 1/2"		54	43-15307	Male 90 Elbow	C3529 x 6
17	49-31000	Hex Head Bolt 1/2"-13 x 2"		55	40-11452	Quick Coupler-Nipple	PY H3 63 3/8 MAL
18	49-30550	Hex Head Bolt 3/8" - 16 x 1-1/4"		56	40-11451	Quick Coupler-Coupler	PY H3 62 3/8 FEM
19	20-21152	Squeegee Clamp Bar 83"		57	49-33500	Locknut-Nylon 3/8"-16	
20	20-21140	Squeegee		58	20-11470	Short Link Pin	02 68404
21	49-30930	Flat Socket Screw 1/2"-13 x 1 1/2"		59	20-11490	Linch Pin 3/8"	02 68789
22	20-21330	Auger Bearing Adjuster Plate		60	20-11481	Long Link Pin	
23	20-1250	4 Hole Flange Bearing 1 1/2"	SF 1 1/2	61	20-11461	Top Link	02 67830
24	49-33500	Locknut-Nylon 3/8"-16		62	20-25850	Snow Chute	
25	49-33915	Locknut-Nylon 1/2"-13		63	20-22000	Conditioner Cover Plate 21 3/4" X 29 3/4"	
26	20-21402	Bottom Auger		64	20-22015	Conditioner Cover Plate 5 5/8" X 17 3/4"	
27	49-30290	Hex Head Bolt 5/16"-18 x 3/4"		65	20-22010	Conditioner Cover Plate 2 1/4" X 17 3/4"	
28	20-21235	Blade Holder Pivot Pin		66	20-22020	Conditioner Cover Plate 7 7/8" X 15 3/8"	
29	20-21225	Blade Adjustment Screw		67	27-1421	Conditioner Cover Plate 2 1/4" X 17 3/4"	
30	20-21230	Blade Adjustment Nut		68	27-1420	Conditioner Cover Plate 7 3/4" X 17 3/4"	
31	20-21302	Blade Holder		69	20-22025	Conditioner Cover Plate 21 3/4" X 23 5/8"	
32	49-30700	Flat Socket Screw 7/16"-14 x 1 3/4"		70	20-11495	Linch Pin 1/4"	02 69167
33	49-33800	Hex Head Nut 7/16"-14					
34	20-9547	Blade 84" x 5" x 1/2"					
35	49-21315	Blade Holder Pivot Bolt					
36	20-25650	Blade Angle Sight Bar					
37	20-21271	Arm Pivot Clamp Bracket					
38	20-21282	Blade Level Adjustment Arm					
39	49-30915	Button Sockcap Screw 1/2"-13 x 1 1/4"					

REMOTE GREASING SYSTEM

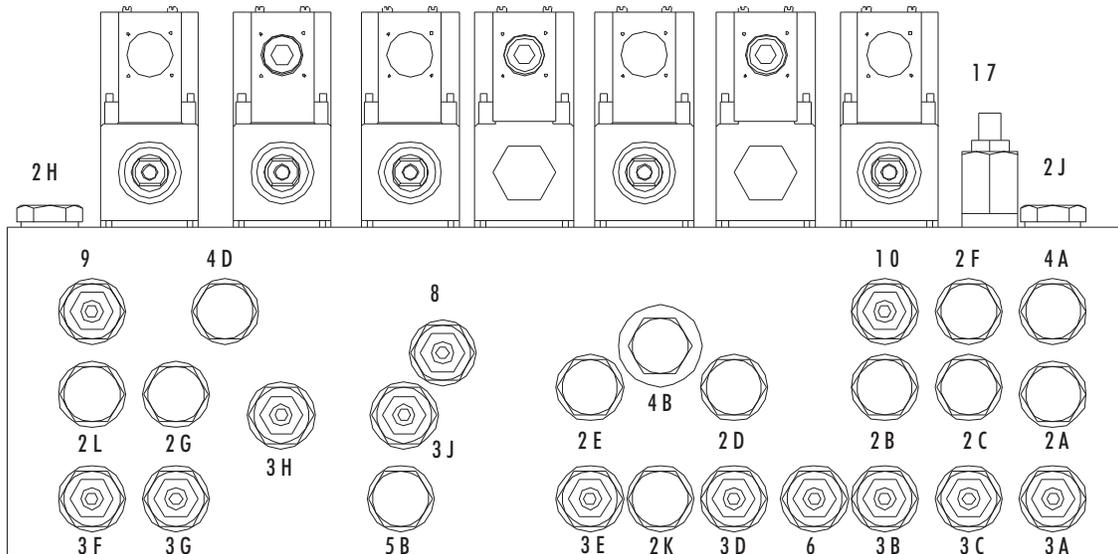
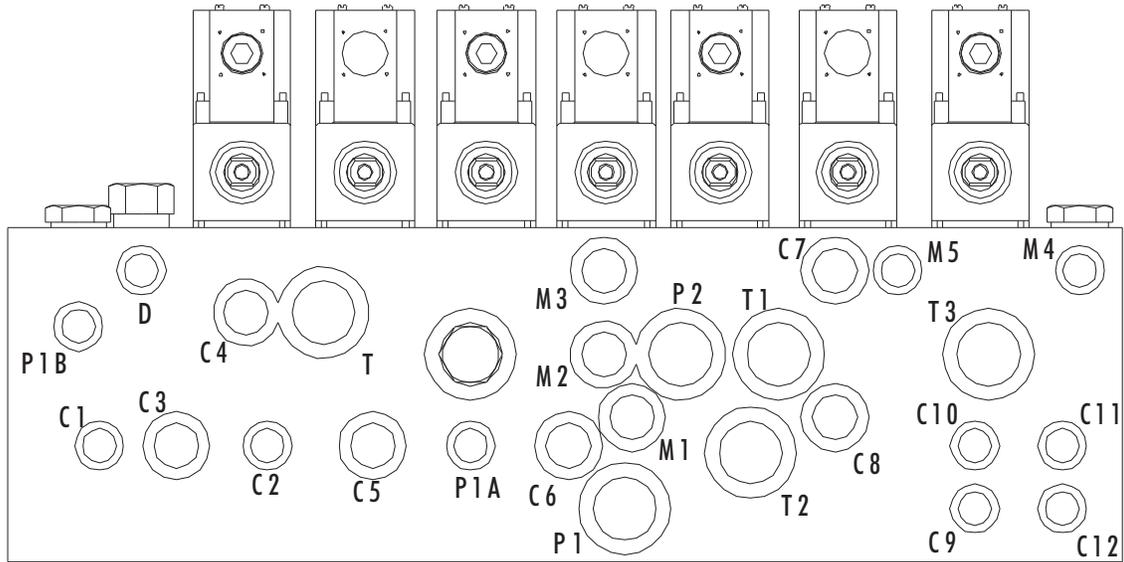




REMOTE GREASING SYSTEM

1.	20-21302	Blade Holder 84"	
2.	20-23150	Synflex Grease Hose 24"	3130-02 3903-02102 3903-02102
3.	20- 1250	4 Hose Flange Bearing 1.5	SF 1 ½
4.	20-23060	¼-28 NPT Grease Adapter	200-24
5.	20-23110	Synflex Grease Hose 9 ½"	3130-02 3903-02102 3903-02102
6.	43-19495	Female Bulkhead Conn.5275X4	5275 X 4
7.	49-33920	Hex Hd. Jamnut ½	½-20
8.	49-19027	Grease Fitting 1/16 Straight	

MANIFOLD BLOCK





MANIFOLD BLOCK

Hydraulic Hose to Connector Sequence On the back of the Main Manifold Bloc

Connector #	Hose #	Connector #	Hose #	Connector #	Hose #
P1B	13	M2	6	M5	8
D	18	C6	2	M4	8
C1	21	P2	9	T3	30
C3	20	T1	24	C10	28
C4	20	T2	23	C11	27
C2	21	P1	22	C9	28
T	19	C8	25	C12	29
C5	1	C7	26		

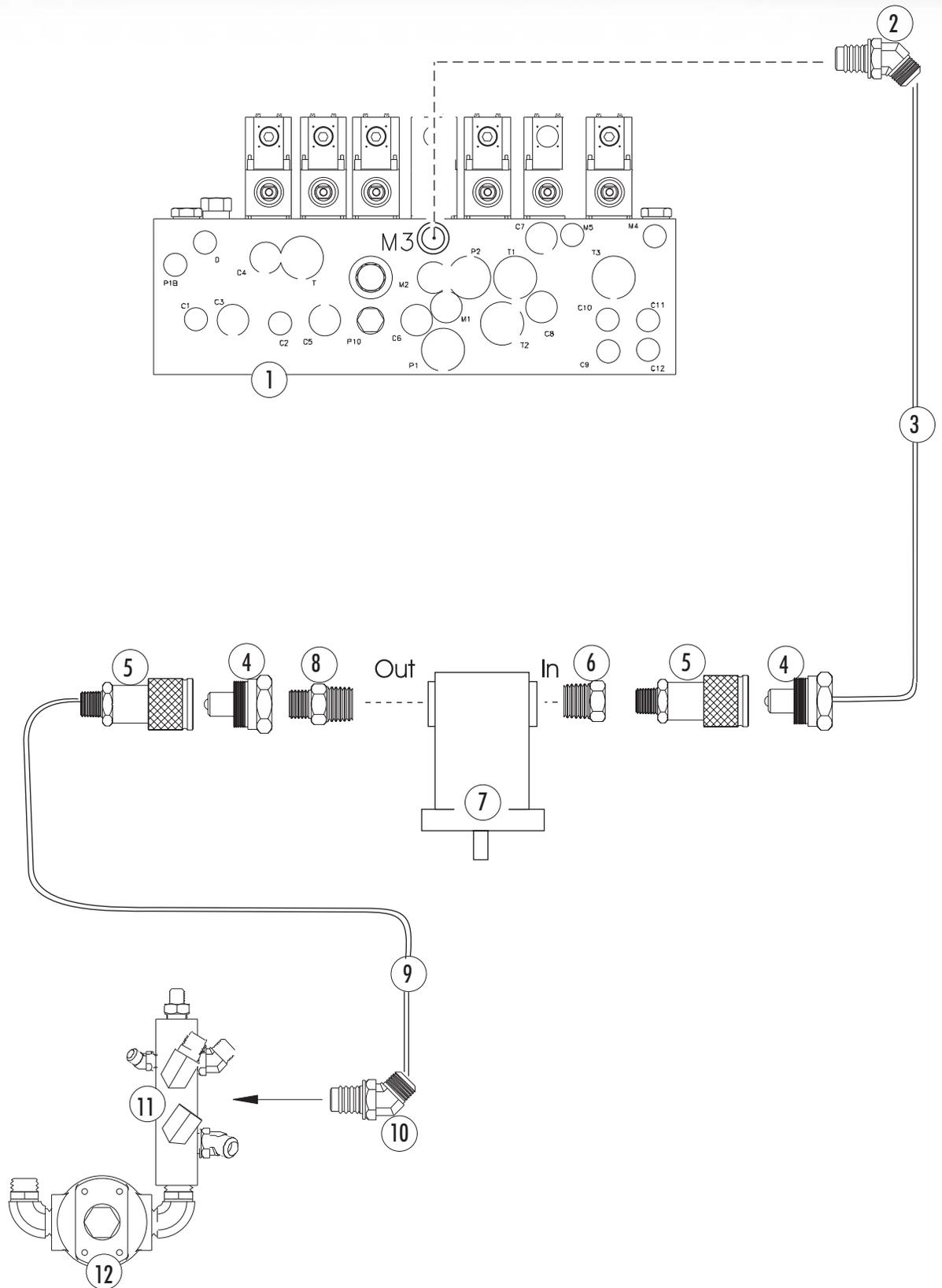
Main Manifold Block Components

Adjuster	Function	Supplier Part No.	Description
2A	Bin Cover	D04B26.9N	Check Valve
2B	Bin Cover	D04B2-0.2N	Check Valve
2C	Snow Bin	D04B2-0.2N	Check Valve
2D	Conditioner	D04B2-0.2N	Check Valve
2E	Conditioner	D04B2-0.2N	Check Valve
2F	Snow Bin	D04B2-0.2N	Check Valve
2G	Board Brush	D04B2-0.2N	Check Valve
2L	Board Brush	D04B2-0.2N	Check Valve
3A	Bin Cover Down	J04A2.ZN	Flow Control
3B	Bin Cover Up	J04A2.ZN	Flow Control
3C	Snow Dump Down	J04A2.ZN	Flow Control
3D	Conditioner Down	J04A2.ZN	Flow Control
3E	Conditioner Up	J04A2.ZN	Flow Control
3F	Board Brush Up	J04A2.ZN	Flow Control
3G	Board Brush Down	J04A2.ZN	Flow Control
3H	Snow Breaker Speed	J04A2.ZN	Flow Control
3J	Elevator Speed 9 GPM @ 1800 RPM	J04A2.ZN	Flow Control
4A	Snow Bin Pilot	D04B2-2.1N	Check Valve
4B	Conditioner Pilot	D04B2-2.1N	Check Valve
4C	Conditioner Pilot (Not Shown)	D04B2-2.1N	Check Valve
4D	Board Brush	D04B2-2.1N	Check Valve
5B	Pressure Override Elevator	R04E3-10.0N	Relief Valve
6	Main Relief Valve 1600 PSI	A 04C20Z4-103N	Relief Valve
8	Elevator Relief Valve 1600 PSI	A 04C2DZ4-34N	Relief Valve
9	Cushion Valve	C 04B3H74-14N	Relief Valve
10	Snow Bin Relief Valve 500-700 PSI	A 04C2DZ4-10W	Relief Valve
11A	Snow Dump Check Valve Locate 4A	PP04SP	Single Acting Pilot Piston
11B	Board Brush Pilot Check Valve under 4D	PP04SP	Single Acting Pilot Piston
11C	Conditioner Pilot Check Valve under 4B&4C	PP04DP	Double Acting Pilot Piston
17	Snow Bin Priority Valve	04B53H2N	BC Snow Bin Priority
19	Board Brush Motor	D04B2-15N	Check Valve

Torque Values for Plugs

13	Plug #2 SAE 3 Ft./Lb. (Not Shown)	16 Plug #8 SAE 30 Ft./Lb.
14	Plug #4 SAE 7 Ft./Lb.	18 Plug #10 SAE 46 Ft./Lb.
15	Plug #6 SAE 15 Ft./Lb.	

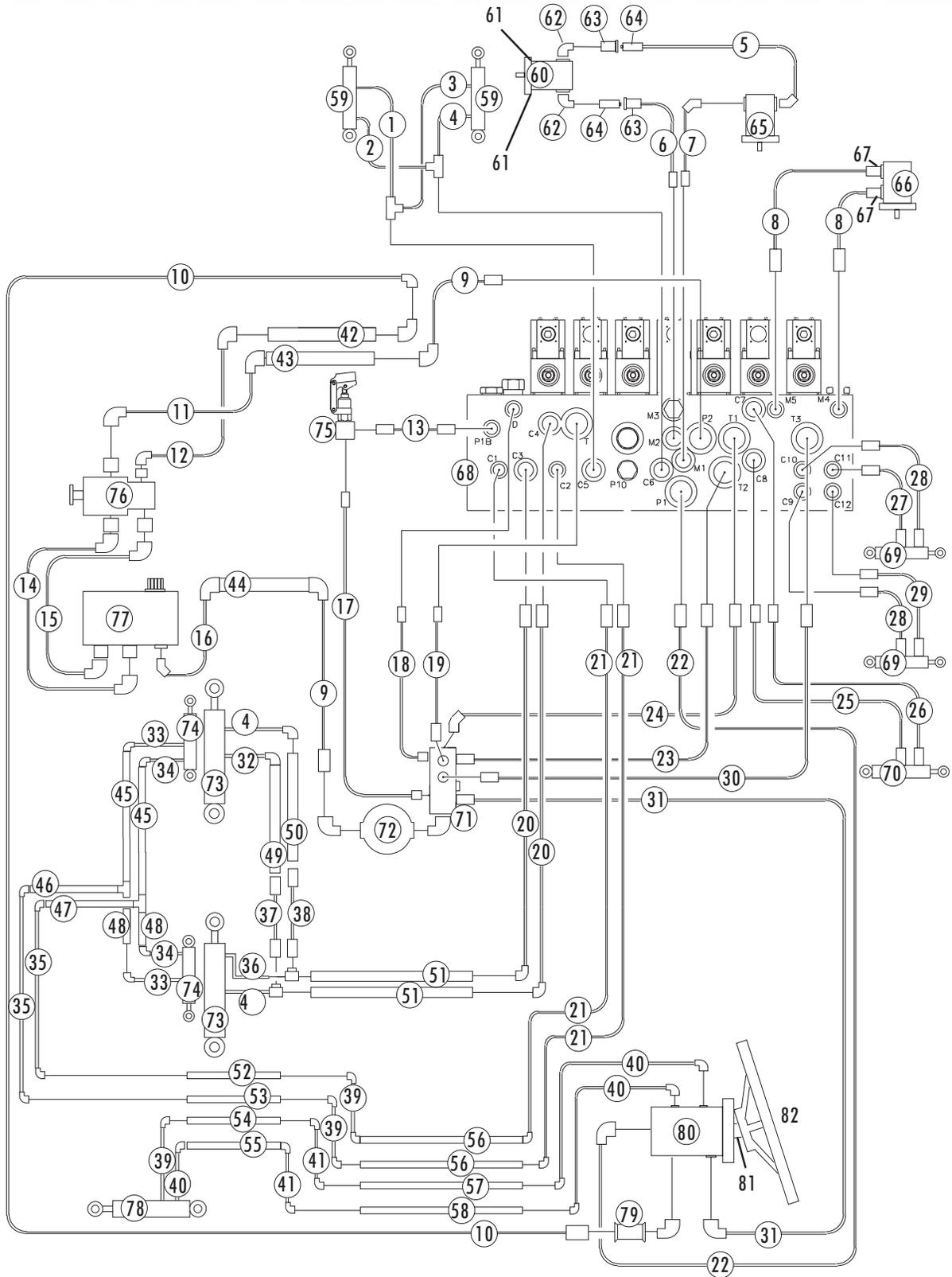
WASH WATER



WASH WATER

1	40-2002	Main Manifold Block Y2K	2884
2	43-15170	Straight Thread O-Ring 45 Elbow	C5364X8
3	42-17354	Hydraulic Hose 3/8 " x 63"	H14506 608 106 063
4	40-11450	Quick Disconnect 3/8 " Male	S31-3
5	40-11449	Quick Disconnect 3/8 " Female	S35-3
6	43-15390	Bushing	C3109X8X6
7	25-4000	Hydraulic Motor	151-7021
8	43-15430	Hex Nipple	C3069x8x6
9	42-17350	Hydraulic Hose 3/8 " x 61"	H14506 608 106 061
10	43-15190	Male 45 Degree Elbow	C5355X8
11	41-25735	T-Off Block Filter	(88)
12	40-3980	Hycon High Pressure Filter	LFBN/HC 110G20A1.0/5-BYP

MILLENNIUM HYDRAULIC COMPONENTS SCHEMATIC

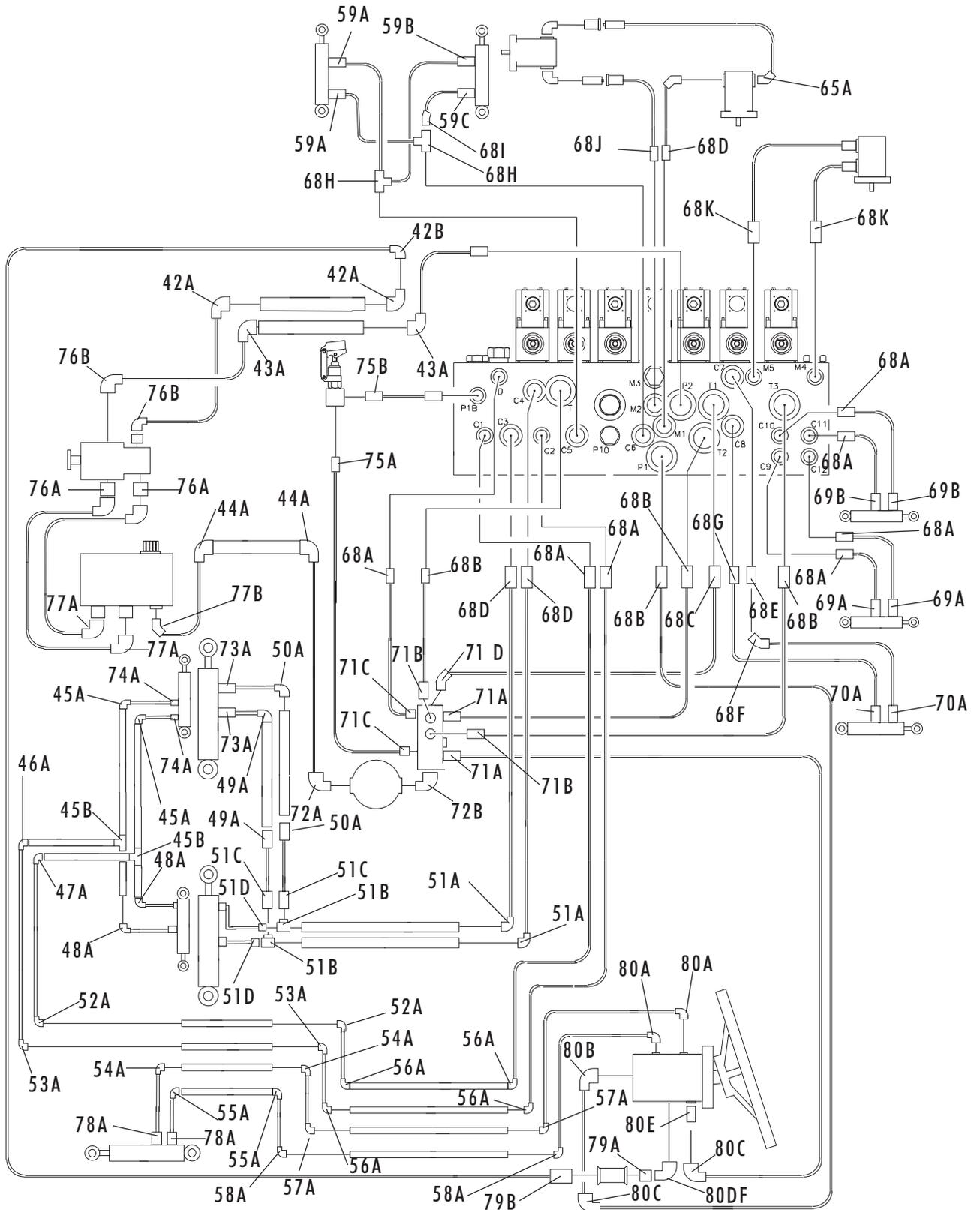




MILLENNIUM HYDRAULIC COMPONENTS

1	42-17233	3/8 Hydraulic Hose 24	H14506 608 608 024	4 5	41-27064	Hydraulic Oil Pipe 1/4 x 62	
2	42-17231	3/8 Hydraulic Hose 23	H14506 608 608 023	4 6	41-27063	Hydraulic Oil Pipe 1/4 x 60	
3	42-17243	3/8 Hydraulic Hose 29	H14506 608 608 029	4 7	41-27088	Hydraulic Oil Pipe 1/4 x 12 1/2	
4	42-17227	3/8 Hydraulic Hose 21	H14506 608 608 021	4 8	41-27095	Hydraulic Oil Pipe 3/8 x 38	
5	42-17375	3/8 Hydraulic Hose 76	H14506 608 106 076	4 9	41-27094	Hydraulic Oil Pipe 3/8 x 37	
6	42-17348	3/8 Hydraulic Hose 60	H14506 608 106 060	5 0	41-27092	Hydraulic Oil Pipe 3/8 x 38 1/2	
7	42-17354	3/8 Hydraulic Hose 63	H14506 608 106 063	5 1	41-27088	Hydraulic Oil Pipe 1/4 x 12 1/2	
8	42-17330	3/8 Hydraulic Hose 107	H14506 608 608 107	5 2	41-27009	Hydraulic Oil Pipe 1/4 x 29 1/2	
9	42-17749	3/4 Hydraulic Hose 44	H14512 612 612	5 3	41-27005	Hydraulic Oil Pipe 1/4 x 27 1/2	
1 0	42-17765	1/4 Hydraulic Hose 86	H14512 12U 612 12U 616 86	5 4	41-27006	Hydraulic Oil Pipe 1/4 x 22	
1 1	42-17743	3/4 Hydraulic Hose 35	H14512 612 612 035	5 5	41-27004	Hydraulic Oil Pipe 1/4 x 20 1/2	
1 2	42-17737	3/4 Hydraulic Hose 32	H14512 612 612 032	5 6	41-27013	Hydraulic Oil Pipe 1/4 x 38 1/2	
1 3	42-17142	1/4 Hydraulic Hose 71	H14504 606 606 071	5 7	41-27012	Hydraulic Oil Pipe 1/4 x 37 1/2	
1 4	42-17723	3/4 Hydraulic Hose 20 1/2	H14512 612 612 020.5	5 8	41-27014	Hydraulic Oil Pipe 1/4 x 39 1/2	
1 5	42-17721	3/4 Hydraulic Hose 19 1/2	H14512 612 612 019.5	5 9	40-20030	Sled Cylinder	151-7022
1 6	42-17710	3/4 Hydraulic Hose 14	H14512 612 612 014	6 0	20-3760	Hydraulic Motor	C3109 X 8 X 6
1 7	42-17105	1/4 Hydraulic Hose 52	H14504 606 606 052	6 1	43-15390	Bushing	C3529 X 6
1 8	42-17035	1/4 Hydraulic Hose 18	H14504 606 606 018	6 2	43-15307	Male 90 Elbow	H3-62 3/8 FEM
1 9	42-17503	1/2 Hydraulic Hose 17 1/2	H14508 608 608 017.5	6 3	40-11451	Quick Coupler-Coupler	H3-63 3/8 MALE
2 0	42-17263	3/8 Hydraulic Hose 39	H14506 608 608 039	6 4	40-11452	Quick Coupler-Nipple	151-7021
2 1	42-17087	1/4 Hydraulic Hose 43	H14504 606 606 043	6 5	25-4000	Hydraulic Motor	151-7022
2 2	42-17560	1/2 Hydraulic Hose 63	H14508 608 608 063	6 6	20-3760	Hydraulic Motor	C5205 X 8 X 8
2 3	42-17503	1/2 Hydraulic Hose 17 1/2	H14508 608 608 017.5	6 7	43-15270	Male Connector	
2 4	42-17713	3/4 Hydraulic Hose 15 1/2	H14512 612 612 015.5	6 8	40-20020	Main Manifold Block	
2 5	42-17079	1/4 Hydraulic Hose 39	H14504 606 606 039	6 9	35-20055	Board Brush Cylinder	
2 6	42-17071	1/4 Hydraulic Hose 35	H14504 606 606 035	7 0	25-24144	Snow Breaker Cylinder	
2 7	42-17151	1/4 Hydraulic Hose 76	H14504 606 606 076	7 1	41-25735	T-Off Block-Filter	LFBN/HC110G20A1.015-BYP
2 8	42-17155	1/4 Hydraulic Hose 78	H14504 606 606 078	7 2	40-3980	Hycon High Pressure Filter	
2 9	42-17149	1/4 Hydraulic Hose 75	H14504 606 606 075	7 3	40-20023	Dump Cylinder	
3 0	42-17512	1/2 Hydraulic Hose 21	H14508 608 608 021	7 4	40-20051	Bin Cover Cylinder	HP-10.21A-6T-N
3 1	42-17545	1/2 Hydraulic Hose 50	H14508 608 608 050	7 5	41-9710	Emergency Hand Pump	1LM35-22DH09S Roquet
3 2	42-17233	3/8 Hydraulic Hose 27	H14506 608 608 024	7 6	40-3935	Hydraulic Double Pump	
3 3	42-17067	1/4 Hydraulic Hose 33	H14504 606 606 033	7 7	41-9492	Oil Tank	
3 4	42-17040	1/4 Hydraulic Hose 21	H14504 606 606 021	7 8	40-20047	Power Steering Cylinder	VUC 34-SAE
3 5	42-17243	3/8 hydraulic Hose 29	H14506 608 608 029	7 9	40-3804	Steering Check Valve	MFP-1188
3 6	42-17213	3/8 Hydraulic Hose 12 1/2	H14506 608 608 012.5	8 0	40-3801	Power Steering Column	105-5056
3 7	42-17210	3/8 Hydraulic Hose 11	H14506 608 608 011	8 1	40-3910	Steering Unit	14353BP-
3 8	42-17160	1/4 Hydraulic Hose 81	H14504 606 606 081	8 2	46-9830	Steering Wheel	B5BL143V/HK5/CW5B
3 9	42-17052	1/4 Hydraulic Hose 27	H14504 606 606 027				/TC3
4 0	42-17040	1/4 Hydraulic Hose 21	H14504 606 606 021				
4 1	41-27036	Hydraulic Oil Pipe 3/4 x 40					
4 2	41-27136	Hydraulic Oil Pipe 3/4 x 43					
4 3	41-25752	Hydraulic Oil Pipe 3/4 x 44					
4 4	41-27074	Hydraulic Oil Pipe 1/4 x 54 1/4					

MILLENNIUM HYDRAULIC FITTINGS

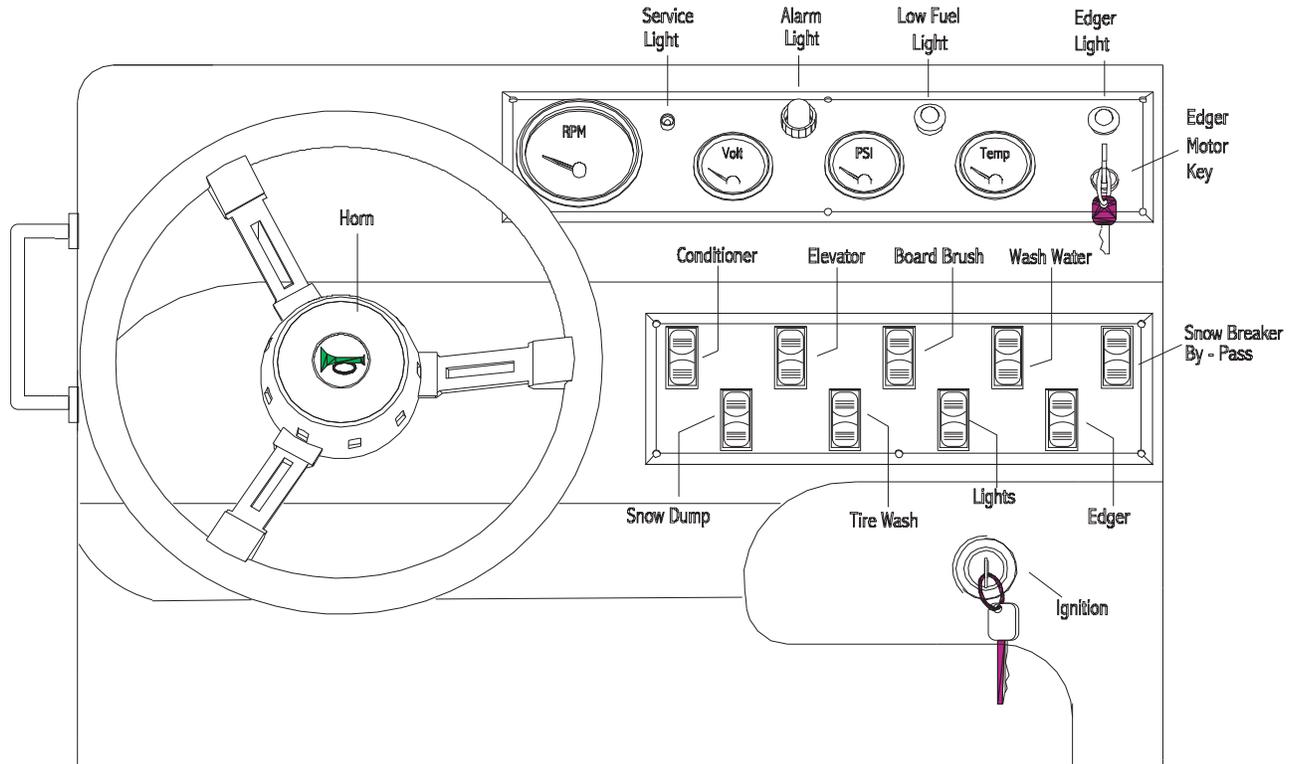




MILLENNIUM HYDRAULIC FITTINGS

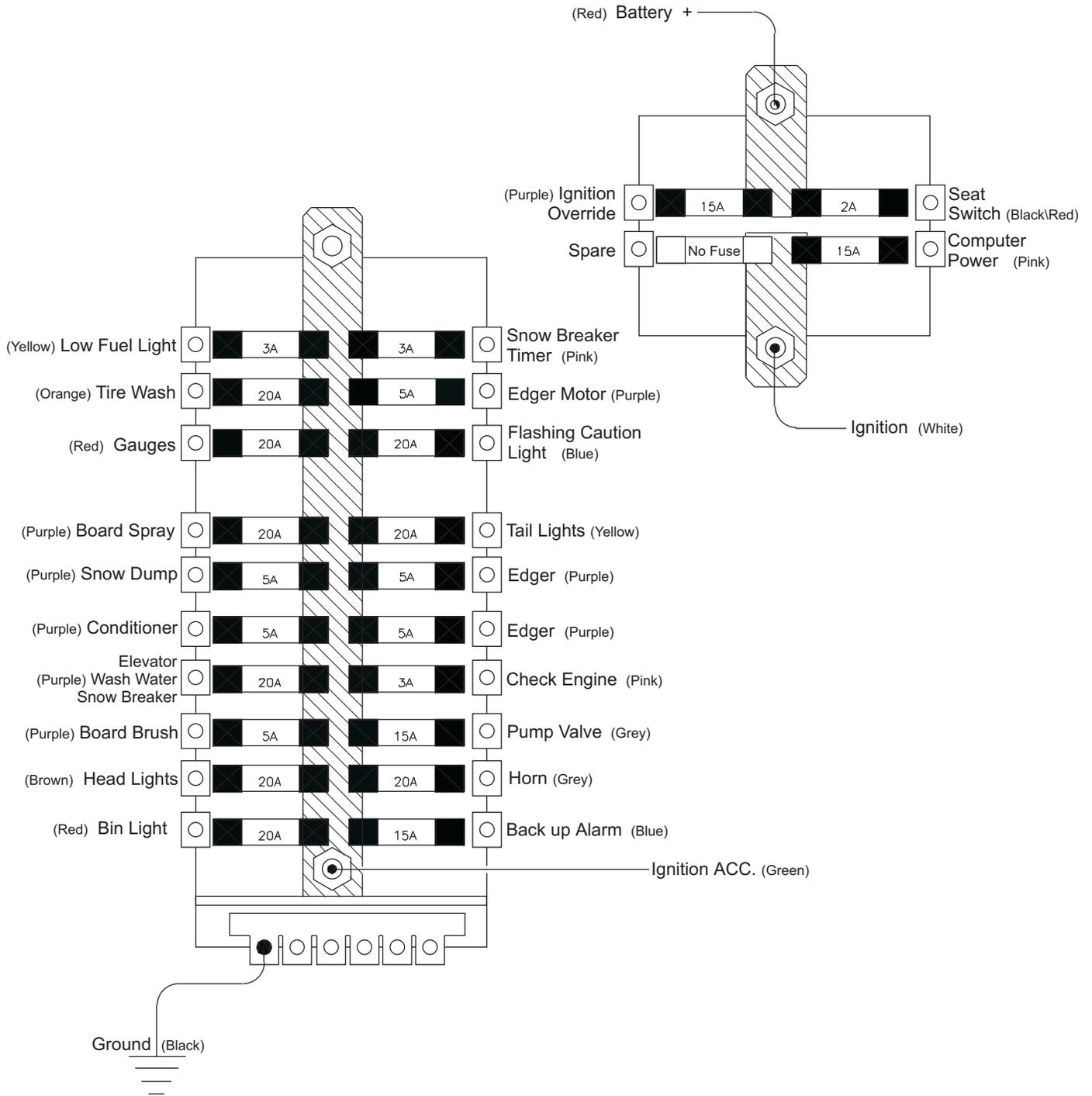
Ref #	Part #	Description	OEM #	Ref #	Part #	Description	OEM #
42A	43-15090	Female 90 Elbow	C5455 X 12	71D	43-15185	Male 45 Elbow	C5355 X 12
42B	43-15085	Swivel 90 Elbow	C5506 X 12	72A	43-15120	Male 90 Elbow	C5405 X 12
43A	43-15090	Female 90 Elbow	C5455 X 12	72B	43-15306	Male 90 Elbow	C3529 X 12
44A	43-15090	Female 90 Elbow	C5455 X 12	73A	43-15150	Male 90 Elbow	C5405 X 8
45A	43-15097	Female 90 Elbow	C5455 X 6	74A	43-15165	Male 90 Elbow	C5405 X 6
45B	43-15299	Tee	C3709 X 4	75A	43-15067	Str Thd O-Ring 90 Elbow	C515 X 6
46A	43-15097	Female 90 Elbow	C5455 X 6	75B	43-15233	Str Thd O-Ring Connector	C5315 X 6
47A	43-15097	Female 90 Elbow	C5455 X 6	76A	43-15040	Str Thd O-Ring 90 Elbow	C515 X 12
48A	43-15097	Female 90 Elbow	C5455 X 6	76B	43-15042	Str Thd O-Ring 90 Elbow	C515 X 12 X 10
49A	43-15095	Female 90 Elbow	C5455 X 8	77A	43-15040	Str Thd O-Ring 90 Elbow	C515 X 12
50A	43-15095	Female 90 Elbow	C5455 X 8	77B	43-15185	Male 45 Elbow	C5355 X 12
51A	43-15300	Tee	C3709 X 6	78A	43-15165	Male 90 Elbow	C5405 X 6
51B	43-15260	Male Connector	C5205 X 8	79A	43-14815	O-Ring Swivel Adapter	C5216 X 12 X 12
51C	43-15190	Male 45 Elbow	C5355 X 8	79B	43-15228	Str Thd O-Ring Connector	C5315 X 12
51D	43-15097	Female 90 Elbow	C5455 X 6	80A	43-15067	Str Thd O-Ring 90 Elbow	C515 X 6
52A	43-15097	Female 90 Elbow	C5455 X 6	80B	43-15066	Str Thd O-Ring 90 Elbow	C515 X 8 X 10
53A	43-15097	Female 90 Elbow	C5455 X 6	80C	43-15075	Swivel Nut 90 Elbow	C5506 X 8
54A	43-15097	Female 90 Elbow	C5455 X 6	80D	43-15042	Str Thd O-Ring 90 Elbow	C515 X 12 X 10
55A	43-15097	Female 90 Elbow	C5455 X 6	80E	43-15230	Str Thd O-Ring Connector	C5315 X 8 X 6
56A	43-15097	Female 90 Elbow	C5455 X 6				
57A	43-15097	Female 90 Elbow	C5455 X 6				
58A	43-15097	Female 90 Elbow	C5455 X 6				
59A	43-15150	Male 90 Elbow	C5405 X 8				
59B	43-15260	Male Connector	C5205 X 8				
59C	43-15190	Male 45 Elbow	C5355 X 8				
65A	43-15220	Male 45 Elbow	C5355 X 6				
68A	43-15233	Str Thd O-Ring Connector	C5315 X 6				
68B	43-15237	Str Thd O-Ring Connector	C5315 X 8 X 12				
68C	43-15228	Str Thd O-Ring Connector	C5315 X 12				
68D	43-15225	Male Connector	C5205 X 12 X 8				
68E	43-15234	Str Thd O-Ring Connector	C5315 X 6 X 8				
68F	43-15073	Swivel Nut 90 Elbow	C5506 X 6				
68G	43-15055	Str Thd O-Ring 90 Elbow	C515 X 6 X 8				
68H	43-14410	O-Ring Run Tee	C5716 X 8				
68I	43-15085	Swivel Nut 90 Elbow	C5506 X 12				
68J	43-15170	Str Thd O-Ring 45 Elbow	C5365 X 8				
68K	43-15230	Str Thd O-Ring Connector	C5315 X 8 X 6				
69A	43-15165	Male 90 Elbow	C5405 X 6				
69B	43-15220	Male 45 Elbow	C5355 X 6				
70A	43-15165	Male 90 Elbow	C5405 X 6				
71A	43-15190	Male 45 Elbow	C5355 X 8				
71B	43-15150	Male 90 Elbow	C5405 X 8				
71C	43-15165	Male 90 Elbow	C5405 X 6				

MILLENNIUM CONSOLE

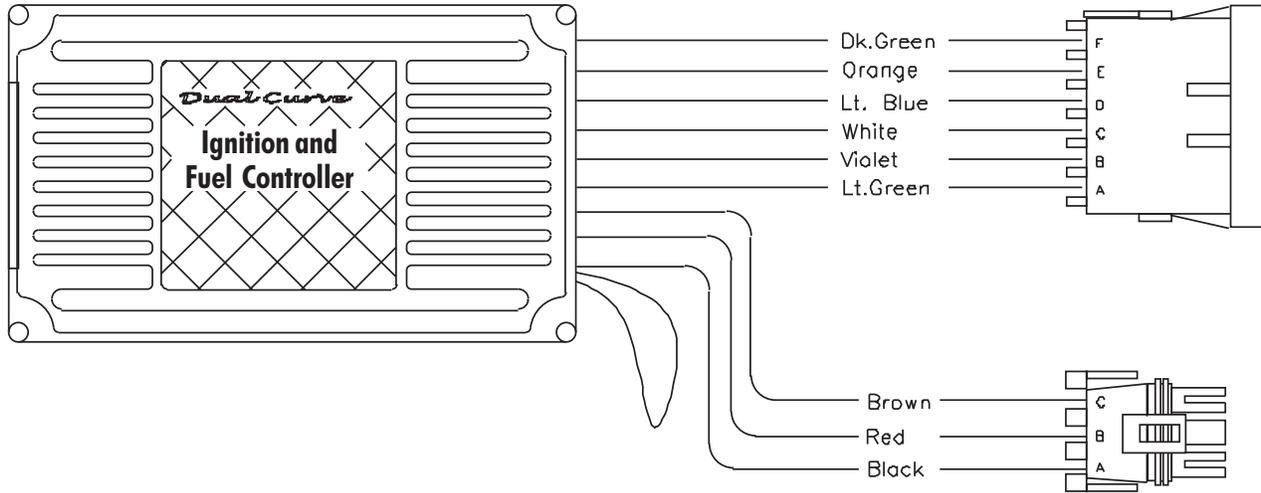




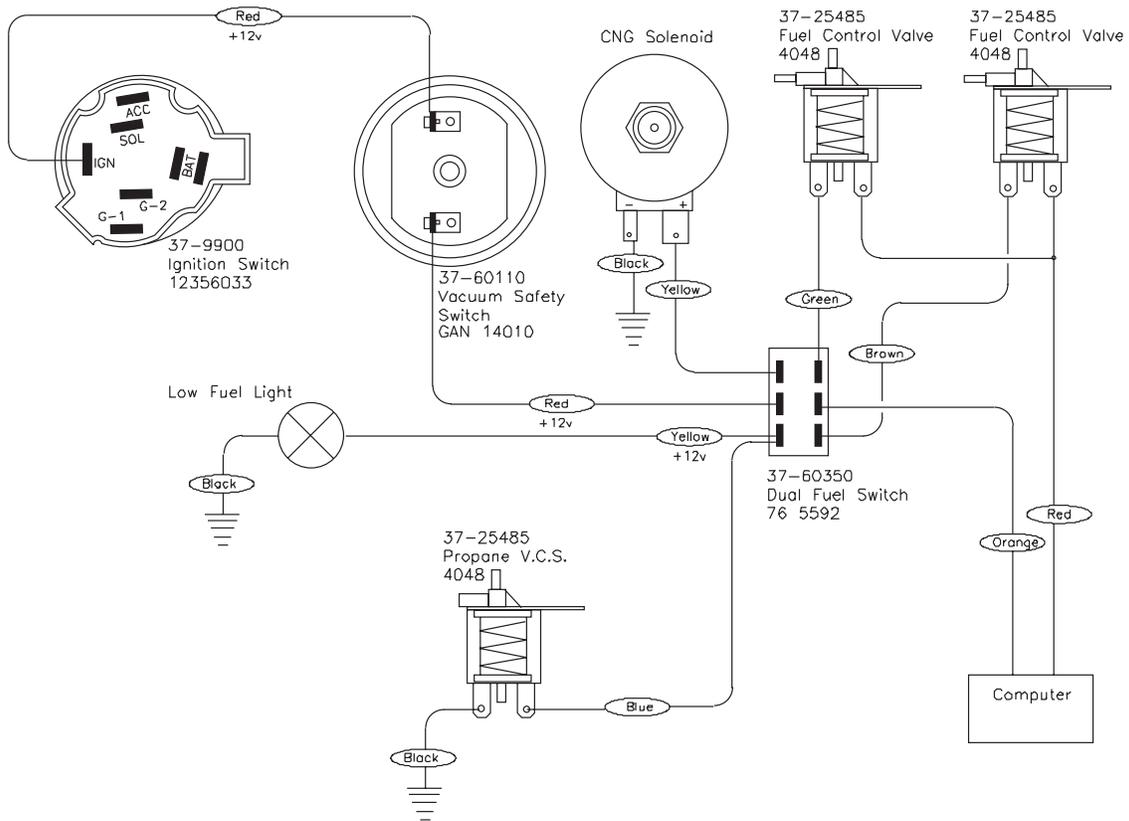
FUSE PANEL



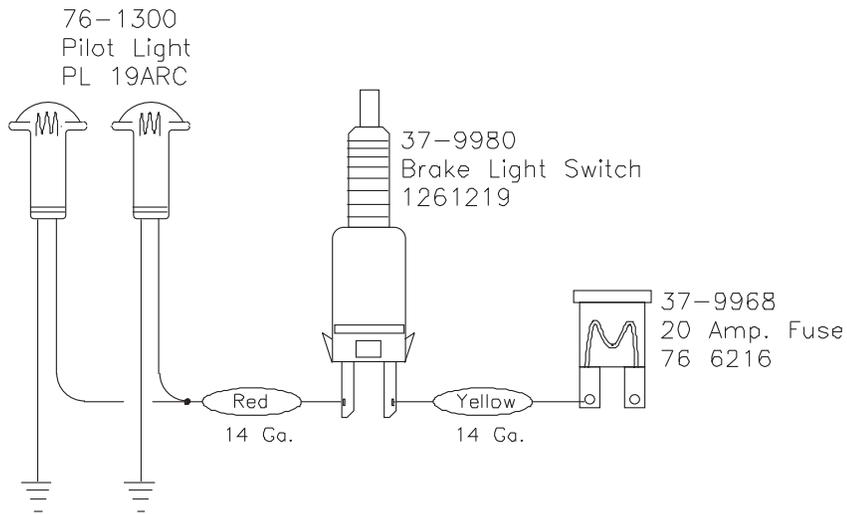
FUEL MANAGEMENT WIRING SCHEMATIC



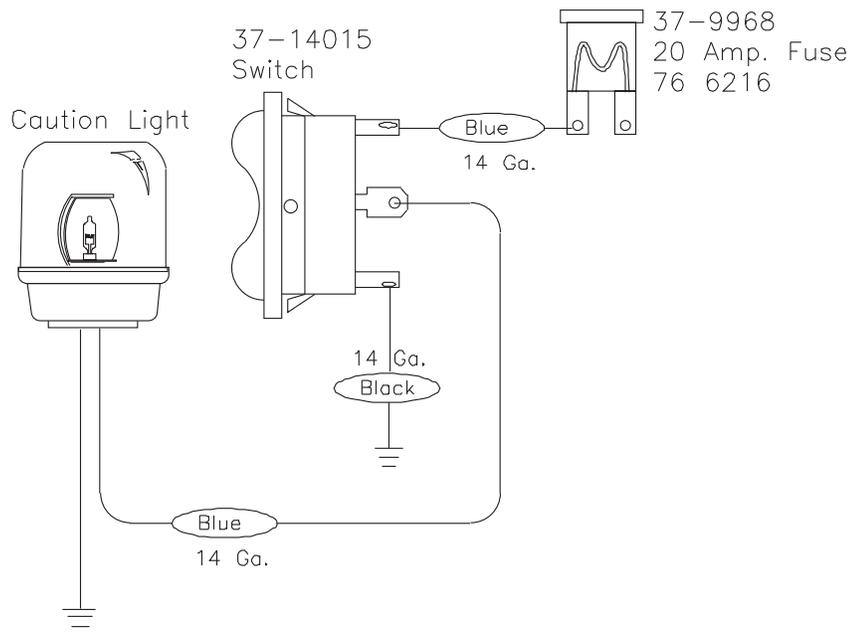
PROPANE AND NATURAL GAS



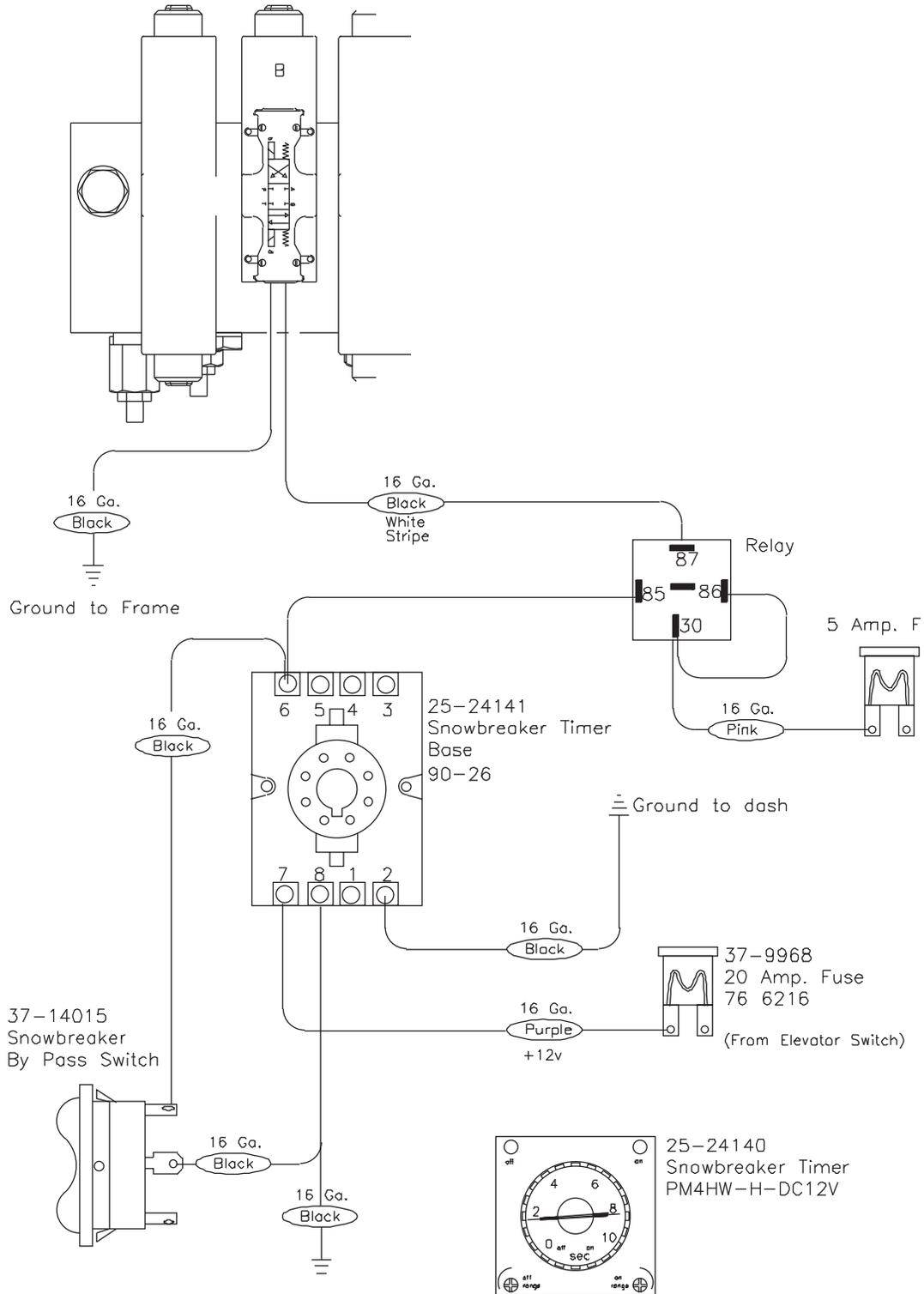
PARKING BRAKE



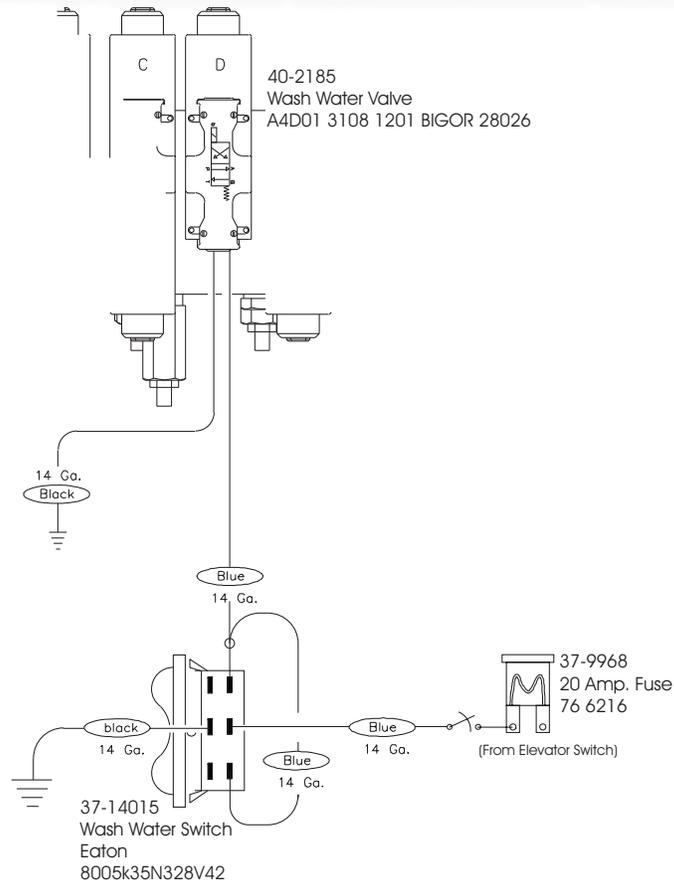
FLASHING CAUTION LIGHT



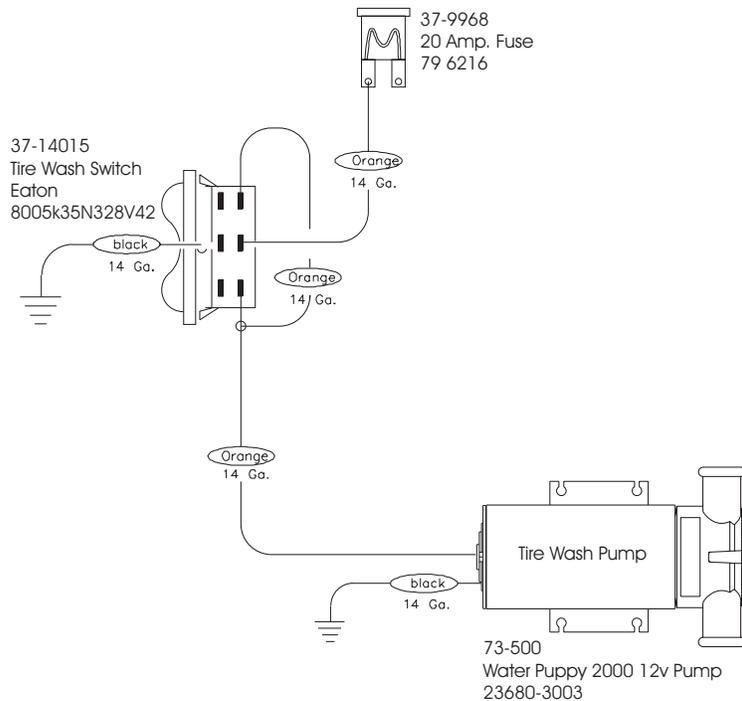
AUTOMATIC SNOWBREAKER



WASH WATER



TIRE WASH



**Wash Water**

For OLYMPIA's equipped with the Wash Water system; to attain the best ice making results the wash water system should be used during every flood. The wash water system sprays water from the sides of the conditioner into the centre in front of the squeegee creating slush. Excess water and slush is then vacuumed up, taking with it any dirt or debris from the ice. In addition to removing small debris from the ice surface, any snow left behind the blade is turned into slush by the wash water and is pushed into cracks in the ice by the squeegee. The water is filtered and then returned to the wash water tank.

**WashWater
Handling
Procedure**

To operate the wash water system during the resurfacing operation, first turn on the water valve on the tower and then go the distance between two lines before pushing the bottom of the the wash water button on the dash. While the pump is operating, the orange indicator light on the dashboard will be lit. It is very important that the pump not be turned on until the wash water tap is open as the pump impeller will wear out if there is no water passing through it. Three quarters of a lap prior to completion of the flood turn off the wash water by pushing the button on the dash and then turn off the wash water valve on the tower and finish the flood. Just prior to finishing the flood turn off the flood water valve on the tower.

TIRE WASH SYSTEM

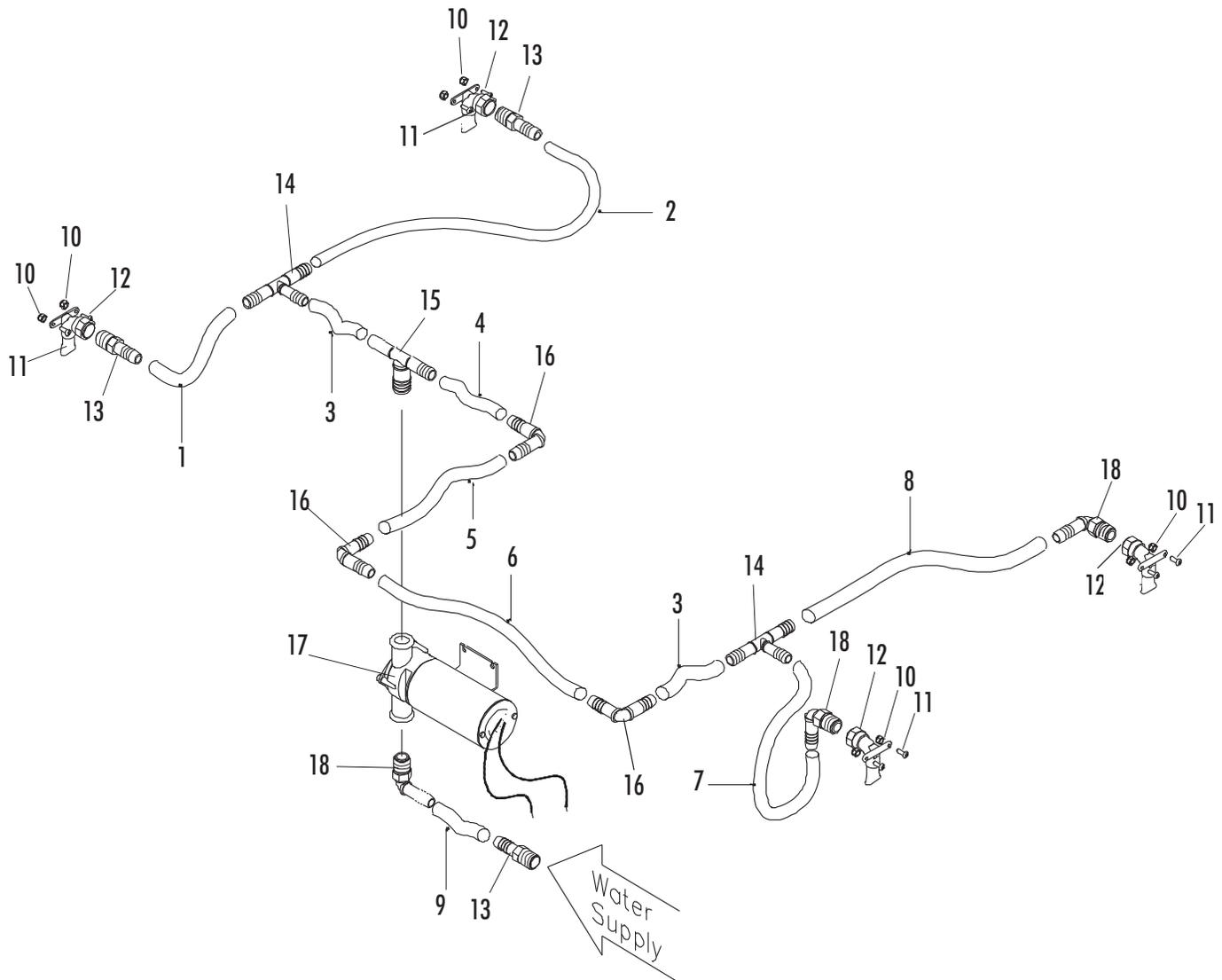
The OLYMPIA Tire Wash system is designed to prevent dirt and debris from outside from being tracked onto the ice surface when the vehicle re-enters the building.

To activate the tire wash system push the top of the tire wash button. Excess water from the wash water system will be sprayed onto the tires. Drive the OLYMPIA forward, making sure the tires make at least a full revolution or more, to insure complete coverage of the tires.

The water should remove the loose dirt and debris from the tire.

Upon completion of the tire wash, check the tire treads for debris that may have become jammed in the treads. Remove the debris prior to driving onto the ice surface.

Please Note: Always clean the floor surface before and after the tire wash procedure.





TIRE WASH SYSTEM

Ref #	Part #	Description	OEM #
1	73-2855	5/8" Clear Braid Hose 18	
2	73-3350	5/8" Clear Braid Hose 51	
3	73-2850	5/8" Clear Braid Hose 12	
4	73-2800	5/8" Clear Braid Hose 11	
5	73-2900	5/8" Clear Braid Hose 16 1/2	
6	73-3325	5/8" Clear Braid Hose 45	
7	73-2950	5/8" Clear Braid Hose 20	
8	73-3370	5/8" Clear Braid Hose 60	
9	73-2852	5/8" Clear Braid Hose 13	
10	49-33115	Locknut-Nylon 10-24	
11	49-30115	Socket Cap Screw 10-24 x 1/2	
12	73-1050	1/2 x1/2 CXF D/E 90 Elbow	A1508
13	73-1030	Male Adaptor	1/2 Poly Insert X MIE
14	73-1015	Nylon Tee 1/2 x1/2 x1/2	PIT 12 Poly Insert Tee 1/2
15	73-1025	Male Tee 1/2	127893PVC Comb Male Tee
16	73-1042	Ploy Insert 90 Elbow 1/2	PI 90 E 12
17	73-500	Water Puppy 2000 12V Pump	23680-3003
18	73-1037	1/2 Nylon 90 Elbow	PI 90 ME 12 Poly Insert x Mip 90 EI





Edger Blade Installation

For OLYMPIA's equipped with the hydraulic edger, the OLYMPIA is shipped with the edger blades in a separate package for safety. To install the blades, first remove the safety shield from the edger and store in the compartment underneath the driver's seat making sure to securely fasten the door.

Leaving the edger in the up position remove the blades from the package and using a 7/16" wrench insert the blade tip into the cutting disc as shown in the diagram below making sure to have the belvelled edge of the blade tip facing counter clockwise.

Position the tip of the blade 1/16" to 1/8" inside the outer edge of the edger board shield. Tighten the fastening bolts.

Hydraulic Edging Procedure

When planning to carry out the edging procedure, prior to driving onto the ice surface, make sure you remove the edger safety cover and stow securely in the compartment under the driver seat. Check the edger blades to make sure they are not chipped, broken or worn and are securely installed. Remove the towel from the conditioner and store in a dry clean area.

Using a three-point mount return to the driver's seat and drive the OLYMPIA onto the ice surface.

Stop, shift into park and then dismount using the three point procedure.

Make sure all doors onto the ice surface are closed and secure.

Using a three-point mount procedure return to the driver's seat and start the OLYMPIA.

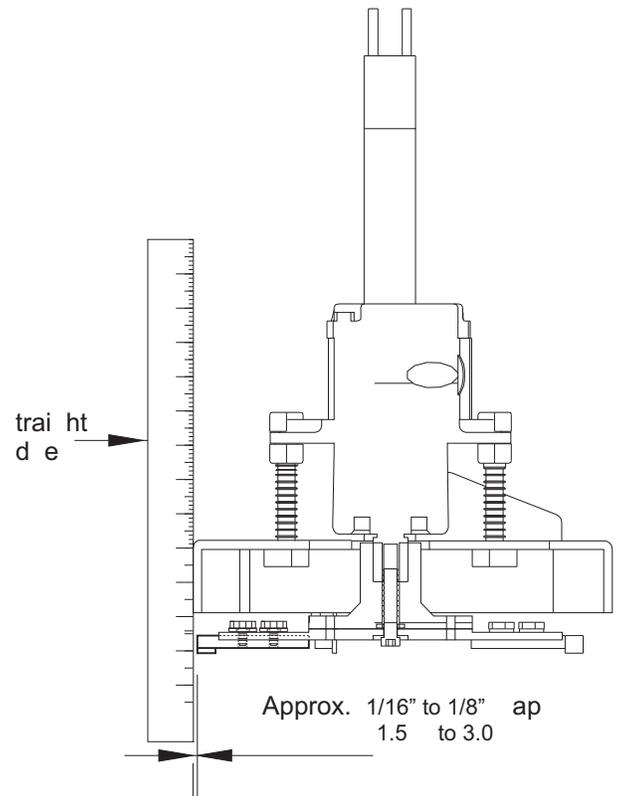
To start the OLYMPIA hydraulic edger push the bottom of hydraulic edger button. The edger will lower to the ice level and swing out toward the boards. Lower the conditioner to the ice surface with the conditioner blade in the up position. Carefully drive the OLYMPIA along side the boards until the edger is in full contact with the boards. Turn on the edger using the edger start key on the dash. Drive slowly during the edging operation in order to produce a smooth ice surface against the boards. Maintain the edger's contact with the boards through the operation. Upon completion of a full circuit turn the edger key on the dash to the off position and remove the key. Wait until the edger blades have come to a complete stop, then push the top of the edger button on the dash and hold in to retract the edger to the full upright position.

Lower the conditioner blade to do a dry scrape and make a complete circuit around the boards keeping the board brush in constant contact with the boards. Disengage the board brush by pushing the top of the board brush button on the dash. Do a second lap half a conditioner width from the boards. Do a third lap, one conditioner width from the boards. Raise the conditioner, drive off the ice surface and proceed to the snow dumping area.

Lower the conditioner blade to do a dry scrape and make a complete circuit around the boards keeping the board brush in constant contact with the boards. Disengage the board brush by pushing the top of the board brush button on the dash. Do a second lap half a conditioner width from the boards. Do a third lap, one conditioner width from the boards. Raise the conditioner, drive off the ice surface and proceed to the snow dumping area.

Stop the OLYMPIA, dismount and replace the edger safety cover which you had stowed under the driver's seat.

Safety Note: Always check the clearances around the OLYMPIA prior to dumping the snow.





The OLYMPIA Safety Check should be carried out at the start of every shift.

- 1. Check the battery cables to make sure they are tight and the battery securely in place.
 - 2. Check the tire pressure on the front driver's side, the tread for wear, and make sure the lug nuts are tight.
 - 3. Check the upper and lower control arms on the front driver's side. Make sure that they are tight.
 - 4. Check the CV boots on the front driver's side. Make sure there is no grease leaking from them. Remember if grease can leak out then water can leak in and cause corrosion.
 - 5. Check the electrical connections and spark plugs.
 - 6. Check for oil leaks from the valve covers and that there is no coolant leaking down the back of the engine.
 - 8. Check all wires and hydraulic hoses to make sure everything is in place.
 - 9. Check the radiator hose on both ends to make sure that it is flexible and the seals are secure and leak free.
 - 10. Give the bumper wheel a spin to make sure it is turning properly.
 - 11. Check underneath the OLYMPIA from the front to see if there are any signs of leaking fluids such as oil, coolant or water.
 - 12. Ensure that no one is working under the machine and that nothing has been left on the floor.
 - 13. Check the front of the hood for any knicks, scratches or cracks.
 - 14. Check to make sure the two hydraulic bin cover cylinders are properly in place.
 - 15. Check the coolant level. If it is below the half way mark add Dexcool.
 - 16. Check the hydraulic fluid level gauge. Make sure it is between one half and two thirds full.
 - 17. Check the CV joints down on the front right axle. Make sure there is no grease leaking from them. Remember if grease can leak out then water can leak in and cause corrosion.
 - 18. Check the steering linkage on the right front axle, along with the upper and lower control arms.
 - 19. Check the hydraulic hoses on the right hand side, make sure they are tight, and there are no leaks around the pump.
 - 20. Also, check the bottom of the tank on the right hand side for corrosion and leaks.
 - 21. Check the pump belt tension.
 - 22. Check the lower radiator hose and the other hoses connected to the cooling system, making sure they are not rubbing on anything.
 - 23. Check the radiator to make sure it is not damaged or leaking.
 - 24. Check the air filter, and propane connections.
 - 25. Check the throttle making sure that it moves freely.
 - 26. Check the spark plug wires again for wear. Make sure they are properly attached. Similarly, check the electrical connections for wear.
 - 27. Check the heater hoses for the fuel system.
 - 28. Check the engine oil level.
 - 29. Check the transmission fluid making sure there is fluid on the dip stick and check for bright red colour.
 - 30. Check the oil tank filler cap.
 - 31. Make sure the main access panel is tight and leak free with the gasket properly in place.
 - 32. Check the tire pressure on the front right tire, the tread for wear and cuts, and the wheel nuts.
 - 33. Check the tank drain valve, making sure it is closed.
 - 34. Repeat the tire pressure tread and wheel nut check on the rear right hand wheel.
 - 35. Check the leaf springs. Make sure they are not damaged or loose.
 - 36. Check the brake lines for wear and leaks.
 - 37. Look around the hydraulic manifold block for any oil leaks or loose wire connections.
 - 38. All adjusting nuts should be tight.
 - 39. Also check the tire wash hoses for leaks.
 - 40. Check the condition of the blade, in relationship to the runners.
- Safety Note: To avoid being cut by the blade, always start at the rear of the conditioner and slide your hand towards the front of the conditioner.*
- 41. Check the runners for burrs that would leave scratches on the ice surface. Make sure you go the full length of the runner. The runner should have no knicks or scratches on it, and the blade should be flush or slightly above the bottom of the runner.
 - 42. Remove the conditioner cover on the right hand side and check that the horizontal auger turns freely in both directions.
 - 43. Make sure there is no up, down, or side to side movement.
 - 44. Check the tension on the conditioner chain. There should be between a quarter and a half-inch play.
 - 45. Check all the quick couplers. Make sure they are connected properly.
 - 46. Check the blade holder pivot bolts to make sure they are tight. Replace the conditioner cover plate and install the locking pin. Go to the back of the machine and flip up the towel.
 - 47. Check the squeegee making sure it fits tightly from end to end and there are no knicks, or cuts.

- 48. Examine the bottom side of the towel. Make sure it is clean, debris-free and that the terri loops are in good condition.
- 49. Check the wash water flow by turning on the wash water using the lever on the conditioner tower. There should be a good spray coming out each side. Turn off the wash-water.
- 50. Check the floodwater by turning the lever on the conditioner tower on and observing the water flow. You should see a consistent flow of water stream coming out each hole along the entire length of the pipe.
- 51. Turn off the flood water, and put the towel back in place. Come around to the driver's side of the conditioner. Remove the conditioner cover plate.
- 52. Check the auger for up and down, and side-to-side movement. Also, make sure the blade holder pivot bolt is tight.
- 53. Check the bottom of the runner again for burrs, or knicks.
- 54. If your Olympia is equipped with the optional hydraulic edger on the conditioner, remove the safety shield and check the cutting tips for damage and make sure the plate is securely attached. Replace the safety shield.
- 55. Check all the hydraulic hose connections on the edger and make sure there are no fluid leaks.
- 56. Check the electrical connections.
- 57. Check the quick couplers underneath the driver's platform to make sure they are securely fastened.
- 58. Check tire pressure, tread and wheel nuts on the rear drivers side wheel.
- 59. Check the master cylinder on the driver's side to make sure it is at the maximum level.
- 60. Check all the hydraulic hoses and connections on the driver's side of the hydraulic manifold. Make sure that there are no leaks and that the hoses are not rubbing on anything that could cause them to become frayed.
- 61. Check the leaf springs on the driver's side rear axle, making sure they are not damaged or loose.
- 62. Check the brake lines for wear and leaks.
- 63. Check the board brush. Make sure that no debris is caught in it and that there is no free play.
- 64. Return both safety support bars back up to their storage place, and insert holding pins.
Now you are ready to finish the circle check on the dash instrument panel.. Using the three point procedure mount the OLYMPIA. Lower the arm rest and turn the ignition key to start the OLYMPIA.
- 65. Check the oil pressure.
- 66. Check the voltmeter.
- 67. Check the temperature gauge and the tachometer.
The tach will go through a test procedure before settling at an idle speed of 800 rpm.
Push the snow bin button to lower the snow bin.
- 68. Check the horn and the lights.
- 69. Make sure the conditioner is all the way up by pushing and holding in the conditioner button on the dash.
- 70. Test the elevator system. First push the top of the elevator button on the dash and then the bottom half to make sure the elevator is working in both directions.
Leave running long enough to engage the automatic snow breaker.
- 71. While the elevator is running check the snow breaker's manual override by pushing the lower half of the over ride button on the dash and make sure the snow breaker cycles.
- 72. Check the board brush by pushing the lower half of the board brush button to lower the board brush and then the upper half to raise the board brush.
- 73. Check the brake pedal and make sure that it does not go all the way to the dash and that the brake lights come on.
- 74. Check the blade-adjustment hand-crank wheel.
Make sure it turns freely.
- 75. Check the propane valve. Turn it one way all the way and then back the other way all the way and return to which ever tank you wish to start with.
- 76. Check the snow breaker, make sure the bolts are tight and that nothing is loose on the bottom.
- 77. Push the tire wash water button on and off. Make sure to disconnect all water hoses and natural gas fuel lines if so equipped before moving the OLYMPIA.
- 78. Check the emergency hand pump located under the driver's seat. Open the door and remove the jack handle. Locate the emergency "Hand Pump" switch inside the seat box and push the button to the "Hand Pump" position.
- 79. The switch lights, on the dash will come on . Insert the handle and pump it all the way up and down. The conditioner will raise first followed by the snow bin.
- 80. You have now completed the circle-check and are ready to proceed onto the ice surface and begin the resurfacing process. Make sure you use the horn when crossing any pedestrian areas.

Safety Note:

Always use caution when operating the Olympia.