



500

Proven Power and Performance



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## OLYMPIA 500 SERIES

### Features and Benefits

- A one-person cleaning, scraping and resurfacing operation.
- Controls within easy reach of the operator
- Fast on & off hook-up system
- Fits any 3-point tractor hitch
- Stainless steel flood pipes
- Towel bar for smooth ice resurfacing
- Designed for maintenance by your own staff
- Parts and Service readily available
- Designed in Canada, manufactured in Germany
- Can be stored in the summer freeing the tractor for other tasks

Turn your outdoor rink into a championship ice surface with the easy to use, fast, efficient, tractor mounted OLYMPIA 500 ice resurfer from Resurface Corp.

The OLYMPIA 500 twin snow bins allow easy access for off-loading the snow following the resurfacing operation.



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## Foreword

Dear User!

Before you put your OLYMPIA Ice Resurfacer into operation, please take the time to carefully read this operating manual.

Pay particular attention to the safety instructions given throughout the manual.

This is a prerequisite for...  
Safe handling and operation of the ice resurfacer,  
Trouble-free operation of the machine.

Always keep the operating manual in the vicinity of the ice resurfacer.



## Foreword

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### **Note:**

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### **Resurface Corporation**

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25 Oriole Parkway East, Elmira, ON N3B 3A9

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# Foreword

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## Welcome to the OLYMPIA Advantage

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### 1. Welcome to the OLYMPIA Advantage

The OLYMPIA Product line is designed and built to exacting standard to provide trouble free performance. Like all mechanical equipment however, trouble free performance requires effective maintenance and proper operating procedures to be followed. Failure to follow a complete and on-going maintenance program will invalidate the Resurface Corp. warranty on the OLYMPIA 500.

Purchaser: .....

Address: .....  
.....  
.....  
.....

Model: .....

Serial Number: .....

Date Delivered: .....

We have included a maintenance log form at the back of this manual to assist you in maintaining a permanent record of the maintenance carried out on the OLYMPIA 500.

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

Resurface Corp. warrants the components of your OLYMPIA 500 against defects in material and workmanship, for two years from the date of delivery.



## General Information

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For the continued safe, economic operation and to validate the Resurface Corp. warranty, the over-all maintenance and operation of your OLYMPIA 500 must strictly follow the guideline outlined in this manual.

Resurface Corp. or an authorized dealer must first authorize all warranty repairs.

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

## **2. General Information**

### **2.1 Before operating your OLYMPIA 500 Ice Resurfacer**

Congratulations on buying the finest tractor mounted resurfacing machine made. Before you start to operate your new OLYMPIA 500, we strongly recommend that you read this manual thoroughly. In it, you will find all the information needed for years of trouble-free operation.

Your new OLYMPIA 500 was inspected before delivery, however, due to vibrations caused by transportation, all bolts, set screws, fasteners, shields, etc. should be checked for tightness upon arrival. Following the first week of use, you should recheck these same bolts, set screws, fasteners and shields again. After your machine has been in use for a period of time, periodic preventative maintenance checks should be performed. In fact, for maximum performance, we suggest that you establish and follow a comprehensive maintenance schedule.

In the interest of safety, the operator should keep in mind that he is operating a heavy and powerful piece of equipment. It is also recommended that no person, other than the operator, be permitted to ride on the machine, while it is in operation.



## General Information

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### 2.2 OLYMPIA 500 features

- One-person operation for cleaning, scraping and resurfacing
- Simple on/off design frees tractor for summer work
- Stainless steel flood pipes
- Controls within easy reach of the operator
- Easy maintenance by your own staff
- Fits any 3-point tractor hitch
- Easily accessible snow tanks
- Resurfacer can be hooked up in minutes
- Service and parts are readily available

### Specifications

Height.....	67" (170,2 cm)
Width.....	82 ½" (209,6 cm)
Length.....	43" (109,2 cm)
Weight (empty).....	1200 lbs. (544,3 kg)
Water tank capacity.....	approx 90 imp gal. (409,1 L.)
Snow bin capacity.....	50 cu. Ft. (1.415 cum)
Ice shaver blade.....	80" x 5" x ½" (203,2 x 12,7 x 1,3 cm)

The illustration and product information contained herein were current at the time of publication. However, in order to continue to offer the finest products available, Resurface Corp., reserves the right to change specifications designs, and models without notice and without liability for such changes.



### 3. Delivery Procedure

#### 3.1 Tractor Requirements

It is important that your tractor be equipped with the following to give you peak performance:

- Minimum of 45 horsepower
- Ballast pack (mounted on the front of the tractor) to counter-balance the weight of the OLYMPIA 500 when it is full of water.
- Studded front and rear tires. This will give you optimum traction and steering.
- Sway bars are essential to prevent your machine from swaying from side to side.
- "Liquid" filled tires to reduce bounce and increase traction.
- A hydraulic flow of 6 Imperial gallons (22.7 Liters) is required (no more). If your tractor pumps more than 6 G.P.M. (22.7 Lpm) ensure the flow control is set to and operating at 6gpm (22.7 Lpm) to regulate the bottom auger RPM's to approximately 300 rpm. Damage will occur at higher flow rates.

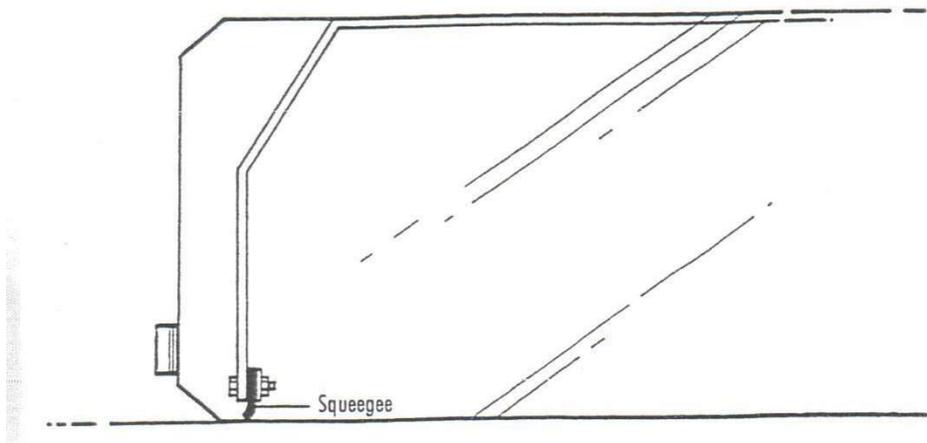


## Delivery Procedure

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### 3.2 The initial Setup of the OLYMPIA 500 Ice Resurfacers

1. Attach spreader cloth to spreader cloth holder with the shorter bolts supplied (3/8" x 1").
2. The squeegee should be installed on the inside of the resurfacers rather than on the outside. This will prevent any snow from sliding out the sides and leaving a ridge. Use the 3/8" x 1 1/4" bolts to secure the squeegee. The ends of the squeegee should be trimmed for a tight fit.



***Due to the EXTREME sharpness of the blade, caution and utmost care must be taken when handling.***

3. A blade protector had been provided – please use it!  
When you are installing or removing a blade, place the protector on the blade with the magnetic strips on the bottom.  
REMEMBER to remove the blade protector AFTER the bolts have been properly tightened.



***Do not operate your OLYMPIA 500 with the blade protector on the blade.***



### 3.3 How to install the blade

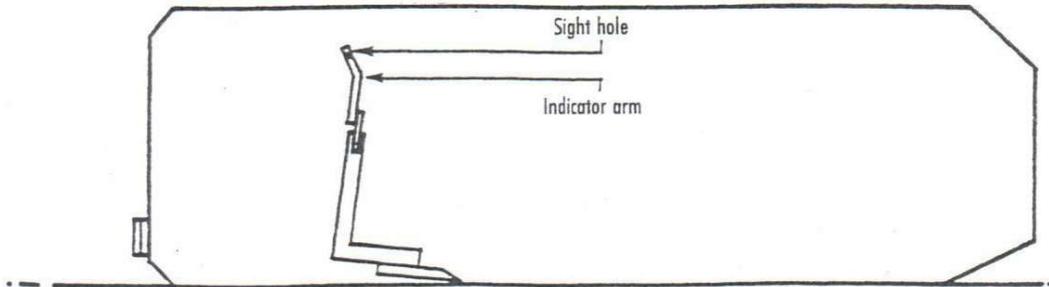
4. The blade holder is located on the underside of the resurfacer. Check to determine the mating surfaces are free of any foreign matter. The blade and the blade holder should be covered with a light coating of oil before installing the blade to prevent rust.
  - a. Raise the OLYMPIA 500 off the floor.
  - b. Place two short blocks behind the conditioner and place the sharpened blade on blocks and then slide the blocks and blade into the appropriate position for installing.
  - c. Bolt one end of the blade to the blade holder (finger tight) and then bolt the other end to the blade holder (also finger tight). Then install the rest of the bolts and nuts finger tight.
  - d. After all the bolts are in place, start in the center of the blade and tighten the bolts and nuts with wrenches working your way to the outside. You can start at one end and work your way to the opposite end.  
**THE BOLTS MUST BE TIGHTENED CONSECUTIVELY.**



***Do not use lock washers as they will damage the blade holder.***

### 3.4 Blade Angle

5. This is one of the most critical settings. To adjust the blade angle:
  - a. Raise the resurfacer to an up position.

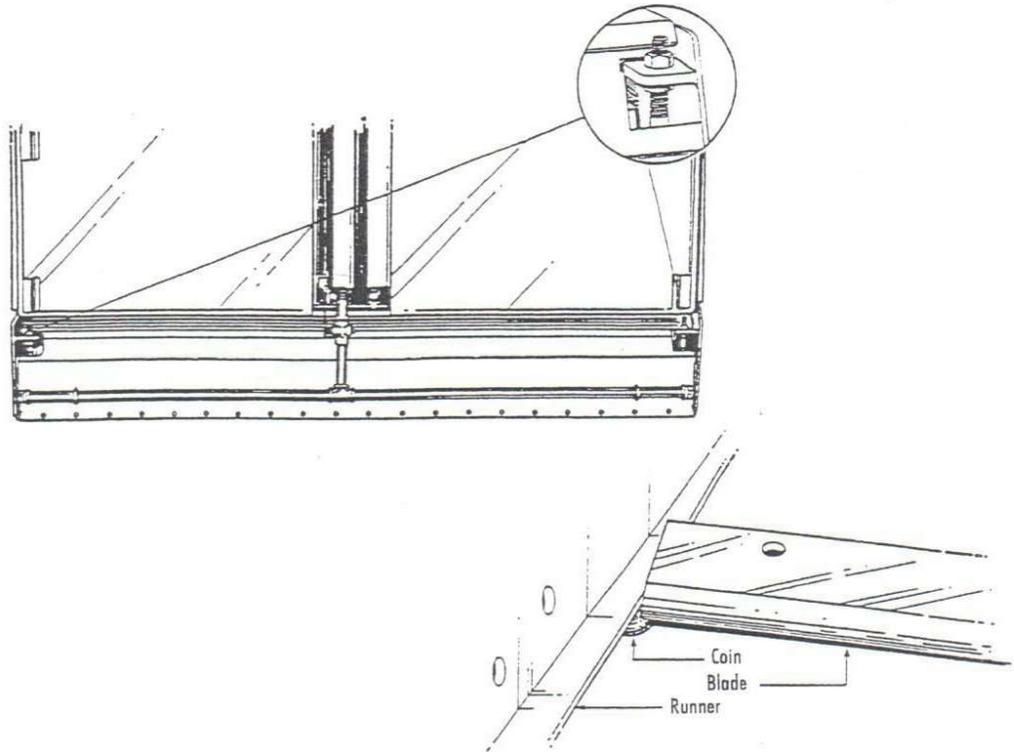


- b. Turn the blade adjustment crank until the indicator arm covers the sight hole
    - c. Adjust the blade level adjusters until the leading edge of the blade is even with the bottom of the runners. It is quite helpful to use a large coin to check the alignment
    - d. Recheck to ensure the indicator arm still covers the sight hole. If it does not, repeat steps B and C. At this point your blade level and angle is set at zero position and the majority of the blade will be about 1/16" (0,2cm) below the runners.

After you have your **BLADE ANGLE** set with the bar covering the sight hole you will be taking 1/16" (0,2cm) of a cut. This amount would normally be quite heavy; therefore, you will have to raise the blade slightly. To raise the blade, turn the blade adjustment crank counter-clockwise.

## Delivery Procedure

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NOTE: After correct adjustment of **BLADE ANGLE**, with the bar covering the sight hole and the cutting edge of the blade flush with the bottom runner, raising or lowering the cutting depth will alter the bar in the sight hole. However, normal blade height adjustments do not impact blade angle and therefore no further **BLADE ANGLE** adjustments are necessary.

As your blades get shorter due to grinding, you will have to adjust the setting to maintain the proper blade angle.

NOTE: Blades should be used in rotation so they are approximately the same width. Do not use a wide blade one time and a short blade the next time, because you will have to change your blade angle each time.

6. CAUTION: When the blade has been installed the runner should rest on wood planks to avoid damage to the blade.



## Delivery Procedure

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7. Connect hydraulic hoses from the motor on the resurfacer to the tractor hydraulics.
8. Raise the ice resurfacer and proceed to the ice surface, so that you can check adjustments.
9. Lower the resurfacer slowly to the ice and make 3-point hitch adjustments so that the runners sit flat on the ice with NO TENSION ON THE TOP LINK.
10. Engage the tractor hydraulics which will put the augers and elevator in motion.
11. Make a short trial scrape to ensure that all the adjustments have been made properly.
12. The machine is now ready for resurfacing.



***Do not fill the water tanks if you are just shaving as the tractor will not lift the resurfacer when it is loaded with both snow and water.***

When performing a resurfacing operation, it is best to drive your machine at a CONSTANT speed.

### 3.5 Blade Sharpness

It is essential that the blade be sharp at all times, if the machine is to operate properly. Although not all conditions are the same it has been found that blades require sharpening after approximately 100 resurfacings.

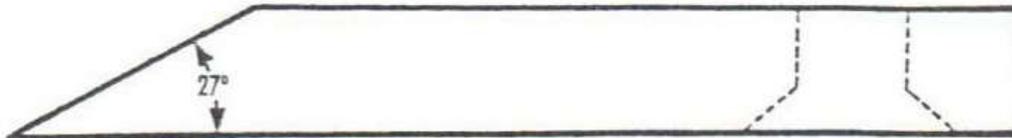
Your OLYMPIA 500 ice resurfer is equipped with a hardened high-quality alloy steel blade which is 58 to 62 Rockwell hard. When you are purchasing replacement blades, other than from us, beware of poor-quality blades, e.g. SOFT METALS.

NOTE: You should beware of poor-quality sharpening services, e.g. The burrs from grinding must be honed off.

### 3.6 Blade Sharpening

**STRAIGHT** – The blade should be sharpened so that it is straight. To check to make sure your blades are being sharpened straight, just lay two sharpened blades on a flat surface with the sharpened ends of the blades, sharpened edge to sharpened edge. Then make sure that the edges are touching for the full length of the blades.

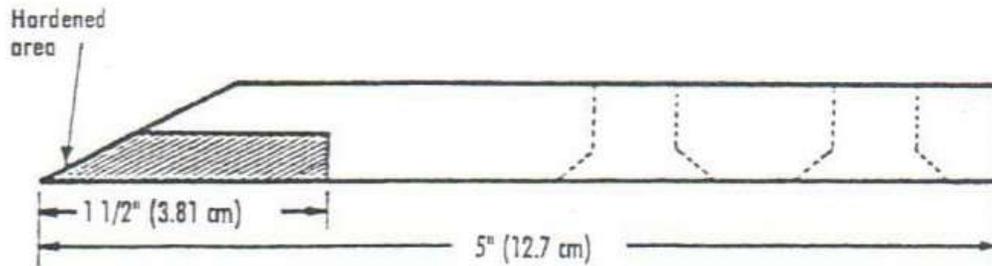
**ANGLE** – When you get your blades sharpened, the blades should be ground at a 27-degree angle and should be ground with one bevel. If your blades are not at the correct angle – too high, the result may be a chattering effect, while if the angle is too low the blade will not shave the ice.



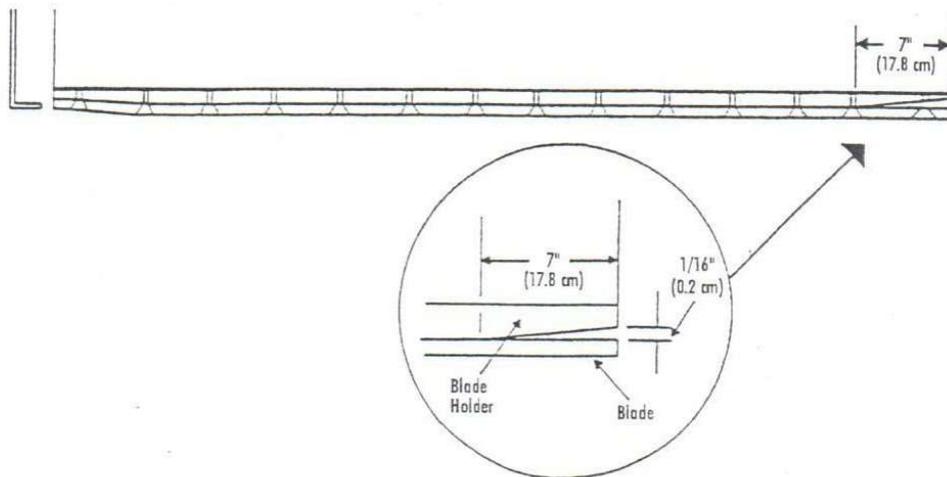


## Delivery Procedure

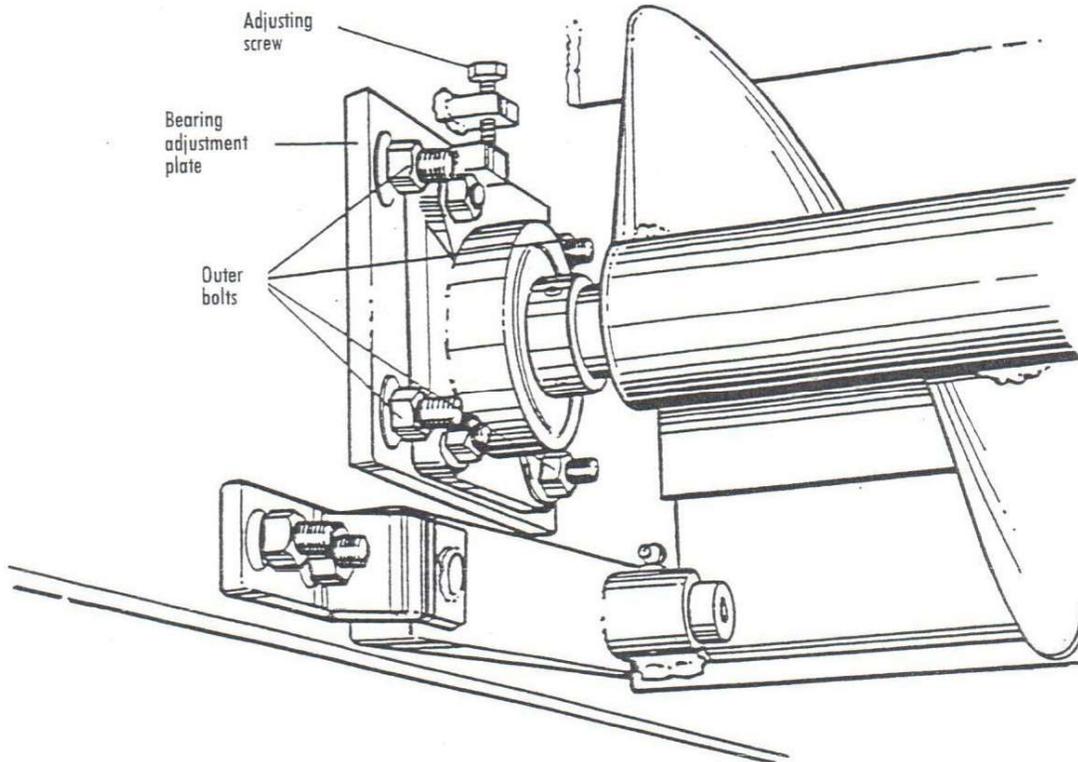
**LONGEVITY** – The blades that were supplied with your OLYMPIA 500 are exhausted when approximately 1 ½" (3,81 cm) has been removed by having them sharpened.



**BLADE HOLDER** – The blade holder is ground 1/16" higher on each end so that one shave of the ice is feathered into the adjoining shave to prevent ridges.



### 3.7 Auger Adjustment



Keep your feet and hands away from under the conditioner when raising or lowering. Be sure you have blocked the conditioner in an up position before you do any adjustments or maintenance.

When you are doing a flood and you find that there are diagonal marks left on the ice it is an indicator that the ice surface may be uneven, your auger is set too low or that your auger is bent. If you find that a large amount of snow is being carried in front of the auger, it is because you have set the auger too far from the ice surface.

To correct these problems, adjust the auger as follows:

1. Loosen the four outer bolts on the bearing adjustment plate.
2. To check the distance for the proper height or depth, run a string across the bottom of the runners at the lowest point of the auger and measure the distance between the string and the auger. The proper space between the ice and the bottom of the auger is 1/16" (0,2 cm) to a maximum of 1/8" (0,125 cm).



## Delivery Procedure

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3. Using a pry bar adjust the height of the auger to the specified distance.
4. Once proper alignment is achieved re-tighten the four outer bolts on the bearing adjustment plate.
5. After you made the auger adjustment, be sure to check the elevator chain tension and adjust it if required.

### 3.8 How to adjust the Elevator Chain

This adjustment is very critical for the operation of your machine as well as to the life of the chain and paddles. You should check the alignment and tension weekly.

1. Loosen the motor mounting bolts.
2. Set the elevator chain tension by loosening or tightening the nut on the elevator take-up bearing until the chain is snug, but not overly tight. Do both sides equally to keep the chain level.
3. Now re-adjust the motor chain tension and re-tighten the motor mounting bolts.



***Care must be taken to ensure persons do not put their hands or fingers near the elevator chain while the machine is operating.***

### 3.9 How to install a new Elevator Chain

1. Install the elevator chain on the machine with the paddles NOT tightened.
2. Disconnect the resurfacers from the tractor and tip it back onto a saw horse so that the paddles are easily accessible to be tightened down.
3. THE PADDLES MUST BE TIGHTENED OVER THE BOTTOM SPROCKET.
4. Tap the paddles on the back side when they are over the bottom sprocket after you have tightened them down.
5. You should always change at least the bottom sprocket when installing a NEW chain.



### **3.10 How to install a new Bottom Sprocket**

1. Clean the auger shaft where the sprocket is to be installed with a file or grinder.
2. Centre the sprocket between the elevator chute opening.
3. Tighten the bolts so that the space between the two halves is the same on both sides. The space should be approximately 1/16" (0,2 cm).

### **3.11 How to adjust the Top Auger**

This is set at the factory. If you find that one of the bins fills up faster than the other, loosen the Allen Head screws on the upper auger flighting collars and then slide the auger flighting towards the tank filling up the fastest – start by moving the auger 1/4" (0,64 cm). Now you can re-tighten the Allen Head screws. Repeat as necessary until the bins fill equally.



## Delivery Procedure

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### 3.12 Now you are ready to add water

Your water temperature should be 140° F. (60° C) or consistent with your municipal code/regulations. You require hot water to get a good bond to the existing ice, and you also get denser ice because more of the oxygen has been removed from the water. Additionally, there will be less ice chipping and therefore less snow build up if hot water is used.

Drain tanks after every resurfacing operation by leaving the water tap open and letting the remaining water flow out through the flood pipes. When preparing for the resurfacing operation, fill your tanks with fresh HOT water.

NOT following this procedure will result in a poor ice surface.

The amount of ice shavings picked up from a resurfacing operation should equal the amount of water that is used, otherwise you will get a buildup of ice. If you find that you ice is building up, you will have to periodically shave without flooding to prevent this build up.

The Flood pipes have been drilled out to 1/8" (0,32 cm) holes. If you feel that this amount of water is still not sufficient, then enlarge the holes.

### 3.13 Preventative maintenance

As stated at the beginning, we suggest that you establish and follow a comprehensive maintenance and service schedule. If you follow this schedule your OLYMPIA 500 will give you years of excellent service. To avoid major problems, you should make minor adjustments as you notice them. Other helpful hints are as follows:

1. Lubricate all bearings WEEKLY to ensure that no moisture is present, including oiling of the chains.
2. Check the elevator chain and the motor chain tensions WEEKLY.
3. Change the blade every 75 to 100 scrapes.
4. Use the blades evenly to avoid unnecessary blade holder adjustments.
5. Be sure to thoroughly wash your machine after every flood.



## Delivery Procedure

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6. Always use the hottest water possible when flooding following your municipal or local regulations.
7. Wax the snow bins for easy snow removal.
8. Always use only genuine OLYMPIA replacement parts.

### 3.14 How to properly store your OLYMPIA 500

The storage area should be a room located as close as possible to the ice surface, as well as on the same level as the ice to eliminate the necessity of ramps. The area between the ice surface and the storage area should be a hard, clean surface so that dirt will not be tracked onto the ice.

Since your OLYMPIA 500 is working with ice and water, the room should be heated above freezing. The room should also be equipped with a floor drain to remove the excess water and melting snow from the area surrounding the machine.

It is suggested that the water tanks should be completely drained and that the elevator shaft be flushed to clear any snow build-up.



***At no time should an attempt be made to clear the elevator shaft by inserting your arm or hand while the machine is in operating.***



## Delivery Procedure

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### SUMMER STORAGE FOR LONG LIFE

To protect your machine during prolonged storage the following procedure is suggested.

1. Grease all grease fittings.
2. Oil the elevator and motor chain.
3. Drain the water system and flush it with a rust and corrosive inhibitor.
4. Remove the blade and coat it with a rust inhibitor. Then store the blade in its wooden sheath.
5. Remove any rust with an emery cloth where the blade attaches to the holder and then coat with oil.

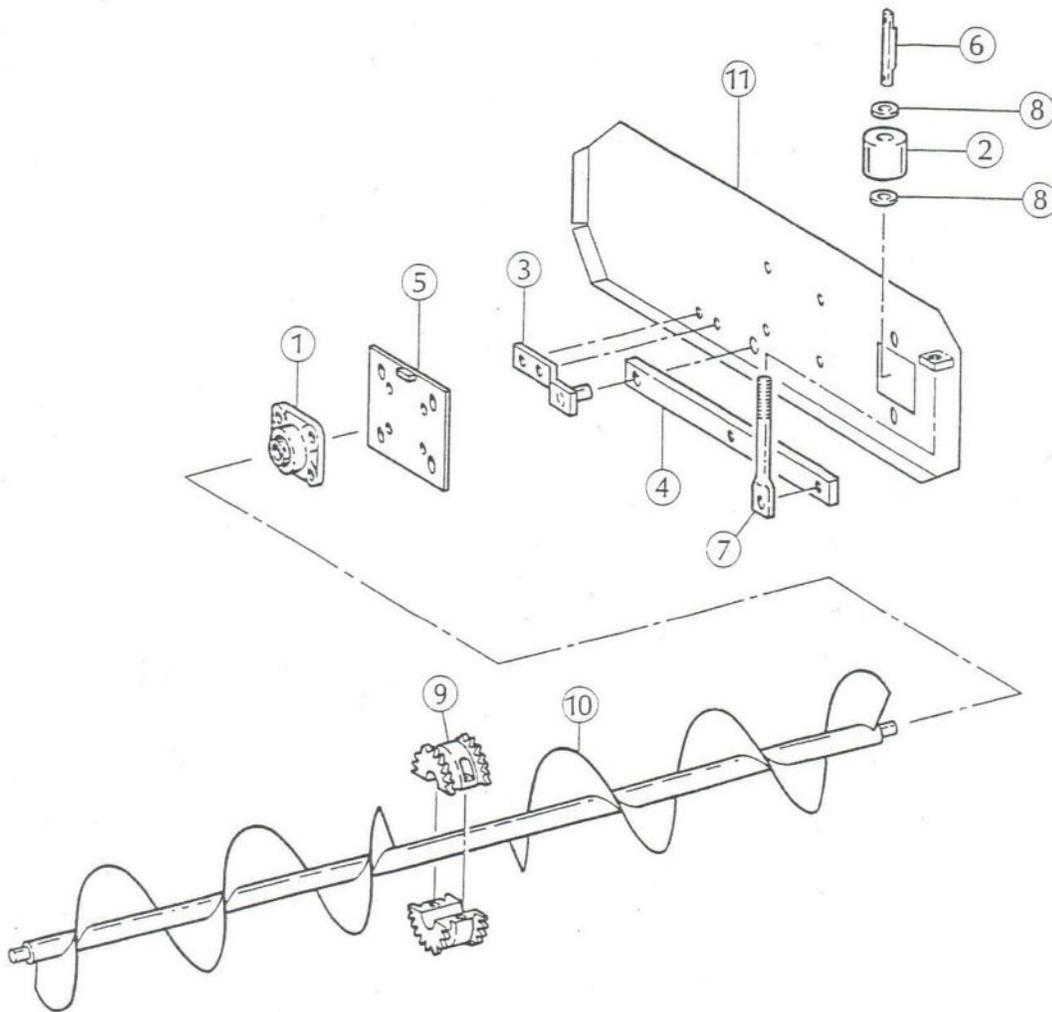


## Delivery Procedure

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## 4. Parts and Service

### 4.1 Bottom Auger Assembly





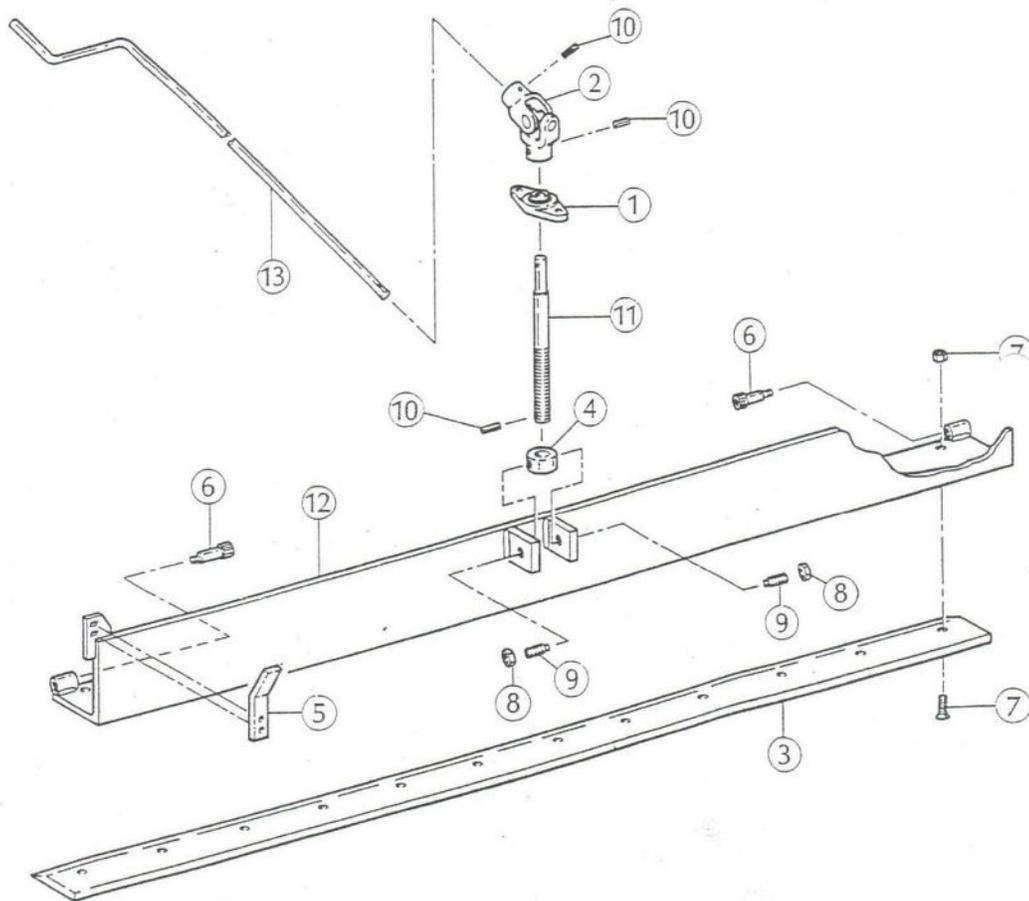
## Parts and Service

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### Bottom Auger Assembly

<b>Part Number</b>	<b>Description</b>
1) 20-1250	4 Hole Flange Bearing 1 ½" (3,8 cm)
2) 20-9270	Bumper Wheel – Conditioner
3) 20-21271	Arm Pivot Clamp Bracket
4) 20-21282	Blade Level Adjustment Arm 20" (50,8 cm)
5) 20-21330	Auger Bearing Adjustment Plate
6) 20-25640	Shaft – Bumper Wheel – Conditioner
7) 20-25800	Level Adjustment Rod
8) 49-36900	Washer-Bumper Wheel-Conditioner
9) 70-21120	Double Bottom Sprocket
10) 70-21420	Bottom Auger
11) 70-21780	Runner Right
12) 70-21781	Runner Left (not shown)

## 4.2 Blade Holder Assembly





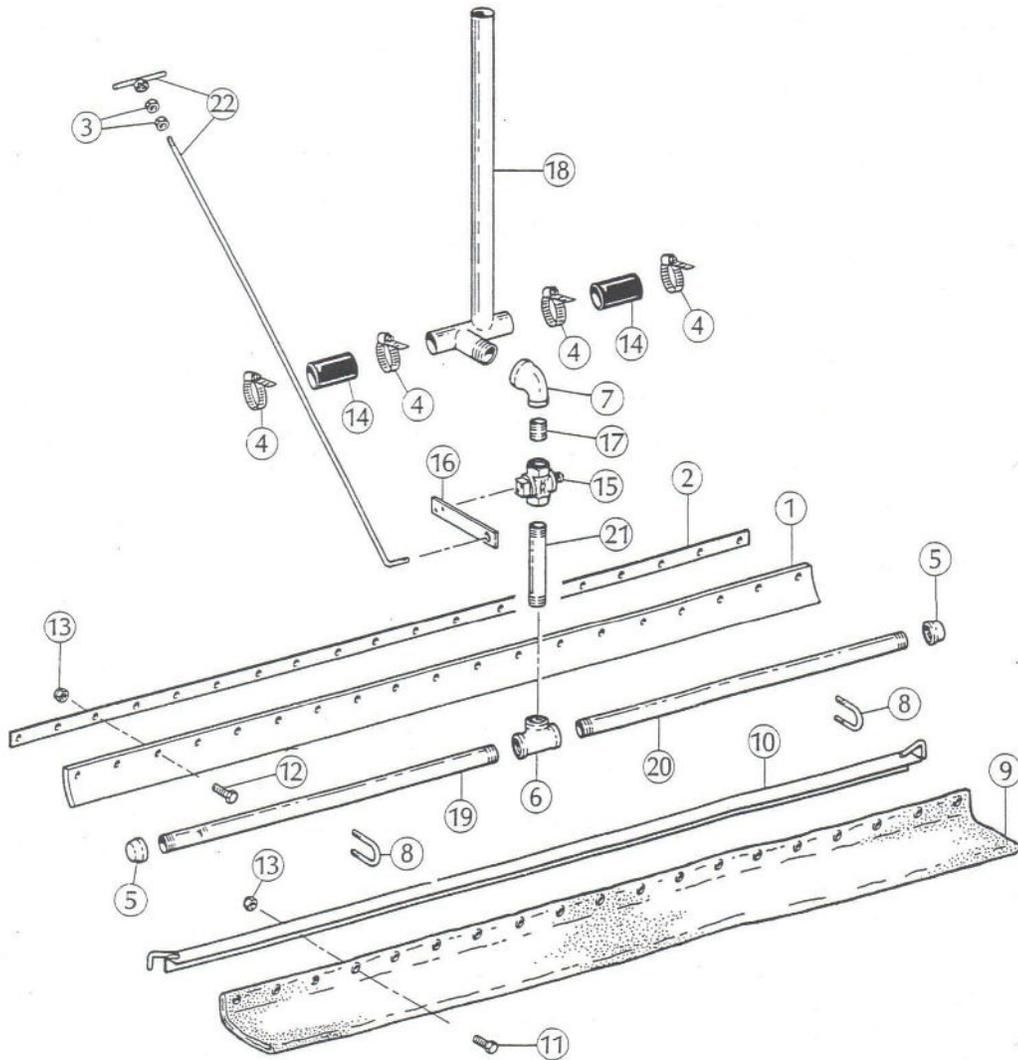
## Parts and Service

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### Blade Holder Assembly

<b>Part Number</b>	<b>Description</b>
1) 20-1240	2 Hole Flange Bearing $\frac{3}{4}$ " (1,9 cm)
2) 20-3560	Universal $\frac{3}{4}$ " (1,9 cm)
3) 20-9548	Blade 80"x5"x $\frac{1}{2}$ " (302,2cm x 12,7cm x1,3cm)
4) 70-21240	Blade Adjustment Screw and Nut
5) 20-25650	Blade Angle Sight Bar
6) 49-21315	Blade Holder Pivot Bolt
7) 49-2200	Blade Bolt and Nut Kit, consisting of 15 each; 49-30700 7/16" – 14 x 1 $\frac{3}{4}$ " Screw 49-33800 7/16" - 14 Hex Nut
8) 70-21303	Blade Holder
9) 70-21640	Blade Holder Crank

### 4.3 Flood Water System



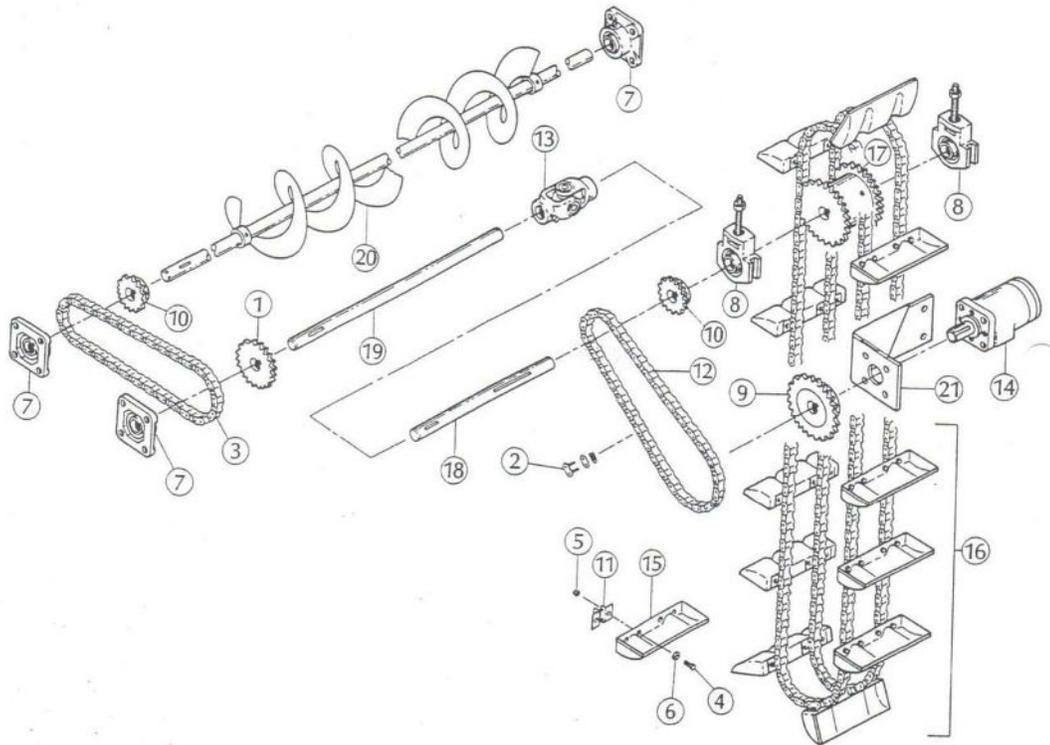


## Parts and Service

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	<b>Part Number</b>	<b>Description</b>
1)	20-21140	Squeegee 80"
2)	20-21150	Squeegee Clamp Bar – 79"
3)	25-17010	½" Zinc Plated Shaft Collar
4)	30-3350	Gear Clamp 1 ¾" (4,4 cm)
5)	30-5310	1" (2,54 cm) End Cap
6)	30-5320	1" (2,54 cm) Tee
7)	30-5330	1" x 1 ¼" (2,54 cm x 3,2 cm) 90° Elbow
8)	30-17030	U-Bolt 1" Pipe
9)	30-21159	Microfiber Spreader Cloth – 80"
10)	30-21170	Spreader Cloth Holder
11)	49-30500	Towel Bar Bolt Kit (25 pack) of 3/8" x 1" Bolts
12)	49-30550	Squeegee Bolt Kit (20 pack) 3/8" x 1 ¼" Bolts And 3/8" locknuts – 49-33500
13)	70-3330	Water Hose 1 ¾" x 3 ½" (4,4 cm x 8,9 cm)
14)	70-5255	Water Tap and Arm
15)	70-5300	1" x 1 ½" Galv Nipple (2,54 cm x 3,8 cm)
16)	70-5340	Water Fill Pipe
17)	70-5390	Flood Pipe 37 ½" (95,3 cm)
18)	70-5400	Flood Pipe 40" (101,6 cm)
19)	70-5410	Nipple 1" x 6" (2,54 cm x 15,2 cm)
20)	70-21650	Water Tap Handle

### 4.4 Snow Conveyor System



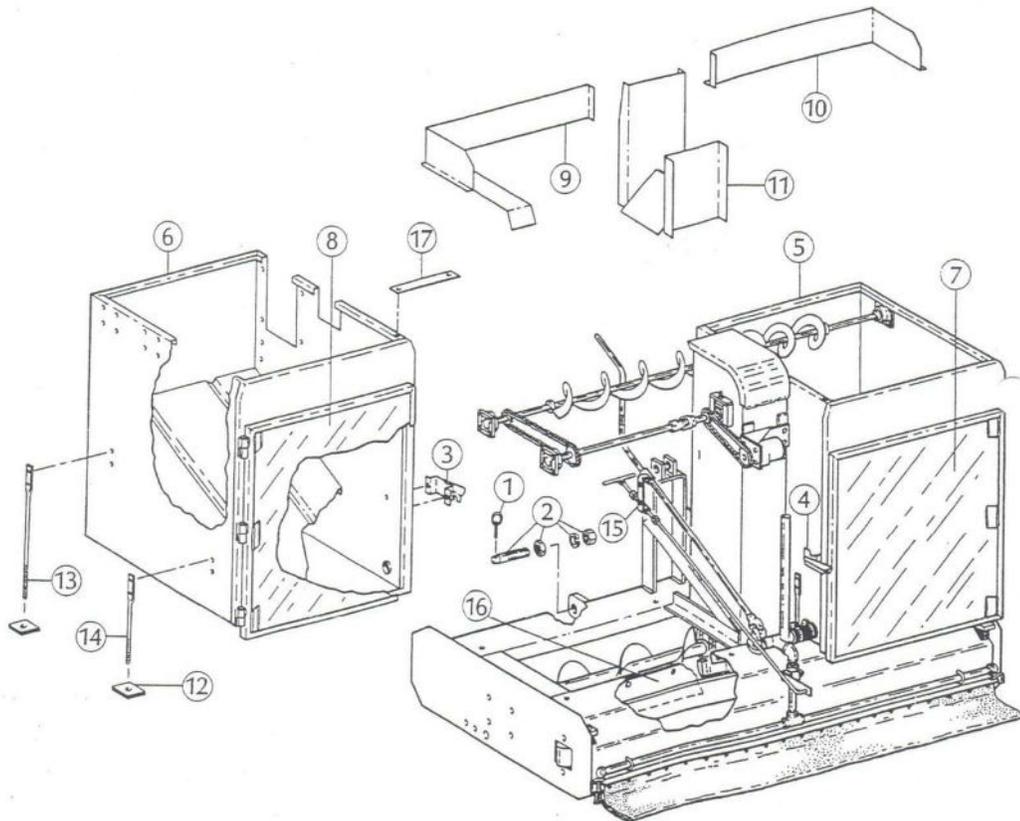


## Parts and Service

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<b>Part Number</b>	<b>Description</b>
1) 20-1300	19 Tooth Sprocket
2) 20-1330	Connecting Link
3) 20-1360	Drive Chain 32" (81,3 cm)
4) 70-1260	4 Hole Flange Bearing 1" (2,54 cm)
5) 70-1270	1" (2,54 cm) Take-up Bearing
6) 70-1280	25 Tooth Sprocket
7) 70-1310	14 Tooth Sprocket
8) 70-1340	Attachment Link
9) 70-1350	Motor Drive Chain 36" (91,4 cm)
10) 70-3550	Universal 1" (2,54 cm)
11) 70-3650	Hydraulic Motor
12) 70-10050	Paddle
13) 70-20080	Elevator Chain Full Kit, includes: 49-30200 Bolt ¼" x ¾" 49-33200 Locknut ¼" 49-36100 Flat Washer ¼" Hole 75-20080 Chain 75-10050 Paddle
14) 70-21110	Double Top Sprocket
15) 70-21210	Top Elevator Shaft
16) 70-21220	Top Extension Shaft
17) 70-21430	Top Auger
18) 70-21590	Top Auger Motor Mount

### 4.5 Main Assembly





## Parts and Service

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<b>Part Number</b>	<b>Description</b>
1) 20-11490	Linch Pin
2) 70-11500	Lift Arm Pin c/w Nut & Washer
3) 70-21340	Door Catch Left
4) 70-21350	Door Catch Right
5) 70-21450	Aluminum Tank Right
6) 70-21451	Aluminum Tank Left
7) 70-21460	Door Right
8) 70-21461	Door Left
9) 70-21520	Snow Divider
10) 70-21610	Rubber Pad
11) 70-21620	Tank Tie Down 23 ½" (59,7 cm)
12) 70-21635	Tank Tie Down 9 ½" (24,1 cm)
13) 70-21660	Guide Bar – Water & Blade
14) 70-21760	Snow Shield
15) 70-21770	Tank Spacer Bracket
16) 70-32010	Riser
17) 70-21362	Door Hinge Left
18) 70-21364	Door Hinge Right
19) 70-32005	Lexan Snow Tank Covers

