

Home Owners Operation and Installation Guide



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Introduction

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Congratulations on the purchase of your new hydrotherapy spa. The spa you have just purchased is considered to be one of the best engineered portable spas in the market place today. Your new spa is not only stylish and elegant, it is designed to give you years of safe reliable personal hydrotherapy and entertainment.

Your new hydrotherapy spa is designed in conjunction with physical therapist, orthopedic and chiropractic doctors to maximize ergonomic design and pinpoint hydrotherapy massage to insure you total relaxation and set you on the pathway to a better physical and mental lifestyle.

Your new spa is manufactured utilizing all the latest modern technology. It is very important that you carefully read this manual to insure you years of efficient safe operation. This manual is particularly directed to safety. We strongly urge you to become thoroughly versed with all the safety precautions and practices outlined in this manual and educate your family in the safe operation of your new backyard entertainment center.

Thank you for choosing our spa line. We wish you many years of personal entertainment.

Precautions

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The following warnings and precautions should be observed at all times. We strongly recommend that you carefully read these common sense rules and educate your family in the safe operation of your new spa.

- Persons suffering from heart disease, diabetes, high or low blood pressure, pregnancy, or any other serious ailments, should consult their physician before using a spa.
 - Each individual has different tolerances to temperature. Excessive water temperature can be dangerous.
 - Do not enter a spa while under the influence of alcohol, and or drugs. Persons under medication, should consult their physician before using a spa.
 - Observe reasonable bathing time. Long exposure to high temperature can result in dizziness, and or hypothermia, and could result in unconsciousness.
 - Always enter or exit a spa slowly and safely.
 - Always supervise small children while using a spa.
 - High temperatures are more dangerous to all children. Please consult your physician about your child's limits.
 - Never place electrical appliances within 10 feet of your new spa.
 - Never operate or attempt to operate any electrical appliances, light switches, or wall outlets while wet or inside the spa.
 - All spas are set to limit temperature to 104 degrees, as required by the Consumer Product Safety Commission.
 - Do not attempt to alter factory settings. Unauthorized alterations to the spa can be dangerous and will void your warranty.
 - Do not alter electric requirement when installing your new spa.
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Site access is one of the most important aspects you face in the purchase of your new spa. In order to insure the safe and proper delivery of your new spa. The following precautions must be observed.

1. First Identify the spa you have purchased on the chart provided on page 8 (Figure 1) and take note of all dimensions.
2. Identify the access area in your yard by which your new spa will be delivered
3. Measure the width of the gate and check it against the depth of your new spa. Allow an additional two to three inches for delivery.
4. Next measure the distance between the ground and lowest point of the eve of your home. Check it against the width of your new spa. Allow an extra 10 to 12 inches of clearance for the use of a spa dolly.
5. If all the measures are good for the delivery, then proceed to walk the path by which the spa will travel to it's final destination. Check for any obstacles that may impede the delivery. If they can be removed. Remove them prior to the delivery of your new spa. If they cannot be removed please contact the dealer for advice.

The following are the most common obstacles that can impede a safe delivery.

Narrow Gates	Exterior Pipes or Hose Bibs
Short Fences	Garden Windows
Low Eves	Short Porches
Low Rain Gutters	Shrubbery
Air Conditioning or Heater Units	Tree Branches
Gas or Electric Meters	90 Degree Turn Clearance

Please be advised that your authorized dealer delivers spas and gazebos to the back yard. Only when adequate height and width clearance and a clear path is provided.

If a crane is required, it is the financial responsibility of the customer, unless stipulated in the original contract. In the event a delivery cannot be made based on the customers information, the customer may be subject to a re-delivery charge.

Size Chart (Figure 1)

Spa Model	Length	Width	Depth
XLs-8000 (All Series)	8'0"	8'0"	41"
XLs-7000 (All Series)	7'0"	7'0"	41"
Chalet (All Series)	8'0"	8'0"	36"
Executive (All Series)	8'0"	8'0"	36"
Predator (All Series)	8'0"	8'0"	36"
Judge (All Series)	7'3"	7'3"	36"
Extravagante (All Series)	7'3"	7'3"	36"
Chateau (All Series)	7'3"	6'6"	30"
Merlot	7'3"	5'6"	30"
Sportsman	7'6"	4'0"	30"

Minimum Deck Size Chart (Figure 2)

Spa Model	Length	Width	Depth
XLs-8000 (All Series)	94"	94"	41"
XLs-7000 (All Series)	84"	84"	41"
Chalet (All Series)	94"	94"	36"
Executive (All Series)	94"	94"	36"
Predator (All Series)	94"	94"	36"
Judge (All Series)	85"	85"	36"
Extravagante (All Series)	85"	85"	36"
Chateau (All Series)	85"	76"	30"
Merlot	85"	64"	30"
Sportsman	89"	44"	30"

**Electrical Requirement Chart
Figure (3)**

Spa Series	Rating	Branch Circuit	GFCI Protection
XLs Series	220v	4 Wire	50 amp
Lx-Series	220v	4 Wire	50 amp
Ex-Series	220v	4 Wire	50 amp
Ec-Series	220v	4 Wire	50 amp
Phs Series	110v	Cord	15 amp

Copper Conductor Chart

Circuit Breaker	Max. Amps	Min. Wire Size
15a	12a	14
20a	16a	12
30a	24a	10
40a	32a	8
50a	40a	6
60a	48a	4
70a	56a	4
80a	64a	4

Preparing for your new spa:

Before attempting to install or using your new spa, please read the following instructions thoroughly.

Your new spa is completely self contained. You can install it just about anywhere. The only requirements are to place the unit on a level surface with adequate drainage, and the spa sets completely flat on the factory recommended surface.

We strongly recommend that you place your new spa on a concrete or framed pea-gravel surface. However, should you decide to place the spa on a wood deck, raised deck, or a balcony, we recommend that you consult a structural engineer to confirm that the surface will support the weight of a full spa.

Please follow these simple guidelines when preparing to install your new spa:

- Locate your spa so that the equipment is above the grade and not subject to flooding.
- Water should always drain away from the spa.
- Always place the spa so that the equipment is easily accessible.
- Always allow additional space around the spa for accessibility to components and accessories.
- Install or replace sprinkler to spray away from the cabinet.
- Do not install your spa near any appliances.

The following types of pads are factory recognized:

- **Cement Pad:** A 4" thick pad is the most universal surface for proper support and long life.
- **Pea-Gravel Surface:** The pea gravel surface must be at least 4 inches thick with a 4x4 frame crossed in the middle.

(Please refer to Minimum Deck Size Chart (Figure2) on page)

We also recommend that you install self closing, self locking gates. Check with City Codes for proper fence height requirements.

Electrical Requirements

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Preparing the electric installation for the your new spa is very important. The guidelines that are set forth in both this manual and the manual issues by Hydro Quip Industries meet the National Electrical Standards for the United States. Any Alteration from the standards set forth may void your warranty and cause severe damage to the system.

Your new spa is categorized by both Name and Series. Please refer to the Electrical Requirement Chart (Figure 3) on page 4 , for your base requirements. We recommend that you consult a state licensed electrician before attempting to hook up your new spa. For proper wire size please refer to the Copper Conductor Chart (Figure 4) on page .

The following, are the simple requirements for our spas based on series. Please refer to these requirements when consulting your electrician.

- If you have purchased an xLs-Series Spa, the following are the minimum requirements for installation.
 1. The System requires a 60 amp. GFCI Circuit Breaker.
 2. The System requires a four (4) wire system (2 Hot Wires, 1 Neutral Wire, and 1 Ground Wire) Wire Size depends on the length of the electrical run. Please consult your electrician for wire size.

 - If you have purchased an Lx, Ex, or Ec-Series Spa, the following are the minimum requirements for installation.
 1. The System requires a 50 amp. GFCI Circuit Breaker.
 2. The System requires a four (4) wire system (2 Hot Wires, 1 Neutral Wire, and 1 Ground Wire) Wire Size depends on the length of the electrical run. Please consult your electrician for wire size.

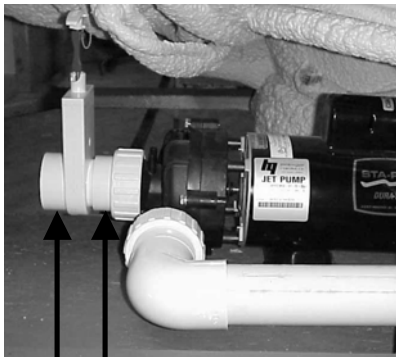
 - If you have purchased a PHS-Series Spa, your new spa comes with a 12 foot GFCI Cord. Even though your new spa only requires 15 amps to operate, it requires a 20amp dedicated receptacle. This system can be converted to 220v service at any time. However it does require a wire change within the system. We recommend that a licensed electrician do the conversion.
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Spa Start-up



In order to properly start up your new spa you will need to become familiar with some of the components shown below. Be sure that the power is completely off before you start the following steps.

Shown Below is the Support Equipment Components:



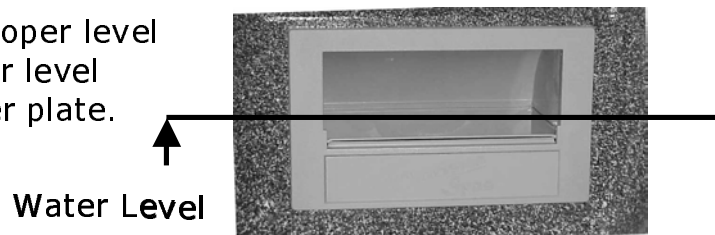
Slice Valve
Pump Union



Power On Switch
Heater Union

Step 1: Check all Pump Unions and Heater Unions and make sure that they are snug. Locate your garden hose and place it in the foot well of the spa. (To Keep the hose from coming out of the spa, coil the hose in the foot well at least two times. As the spa fills, check the pump unions and the heater unions and make sure they are not leaking.

Step 2: Fill the spa to the proper level as shown in picture. A water level line is shown on the skimmer plate.



Step 3: Remove the garden hose and remove from area. Proceed to the GFCI Circuit Breaker and turn the power on. Proceed back to the spa. Check the slice valves and make sure that all the valves are in the up / open position.

Spa Start-up cont.



Step 4: Locate the power on switch and turn the spa on. In most cases the Low Speed pump will come on. Do not be alarmed if it does not. Locate the primary pump button on the spa. (Depending on what series you have will determine where the button is located) You can determine what control you have by looking at the control identification section of this manual. Press the button and the high speed primary pump should activate. If the pump is running, but there is no jet action, the spa may have an air lock not allowing the pump to prime.

Follow the next easy steps to unlock the air lock:





- Push the air button and turn the high speed pump off. If the low speed is activated. Turn down the temperature to the coolest position. The low speed should shut down.
- Locate the Pump Union (Shown on previous page), and lightly loosen the fitting until a constant trickle of water leaks through. (**Caution, Do not loosen the fitting to the point that it comes off the pump.**) Tighten the fitting and turn the pump to high speed and let run for 30 seconds. If the pump does not prime repeat the process. In some cases it may take 4 to 5 attempts.
- If you have a two pump system, repeat the process on the secondary pump.
- If you have an air injection system, The air injection pump does not require priming.

Once all systems are primed, it is time to refer to your equipment owners manual for programming and operation instructions. You can cross reference your equipment by identifying the system in the control identification section of this manual.

Should any operation on the start up fail to function please refer to the troubleshooting section of this manual, or contact your dealer before proceeding.

Caution: allow the spa to run for at least 30 minutes before adding any chemicals to the water.

Control Identification

 <p>CHARISMA SPAS AND GAZEBOS</p>	<p>The DCS System: This system is a solid state control system. The system is 100% programmable from the spa side control. The programming information is in the Hydro Quip Manual. Refer to the DCS 9000 Series Equipment Section.</p>
 <p>CHARISMA SPAS AND GAZEBOS</p>	<p>The Air System: This system is an air activated control system. This system features a solid state temperature read-out, The filtration and heating cycles are programmed on the Equipment. Refer to the HQ-9000 Series Equipment Section.</p>
 <p>CHARISMA SPAS AND GAZEBOS</p>	<p>The Eco-1 & 2 System: This system is found only on the EX, EC, and PHS series spas only. The system is solid state and is 100% programmable from the top side Control. Please refer to the Eco-1 or Eco-2 System section in the Hydro Quip manual.</p>
	<p>The PHS / Ec-300 Control: This system is air activated only. The thermostat control and the filtration timer is located on the control box. Please refer to the HT-650 section in the Hydro Quip Manual.</p>

DCS Manual

Eco¹ Manual

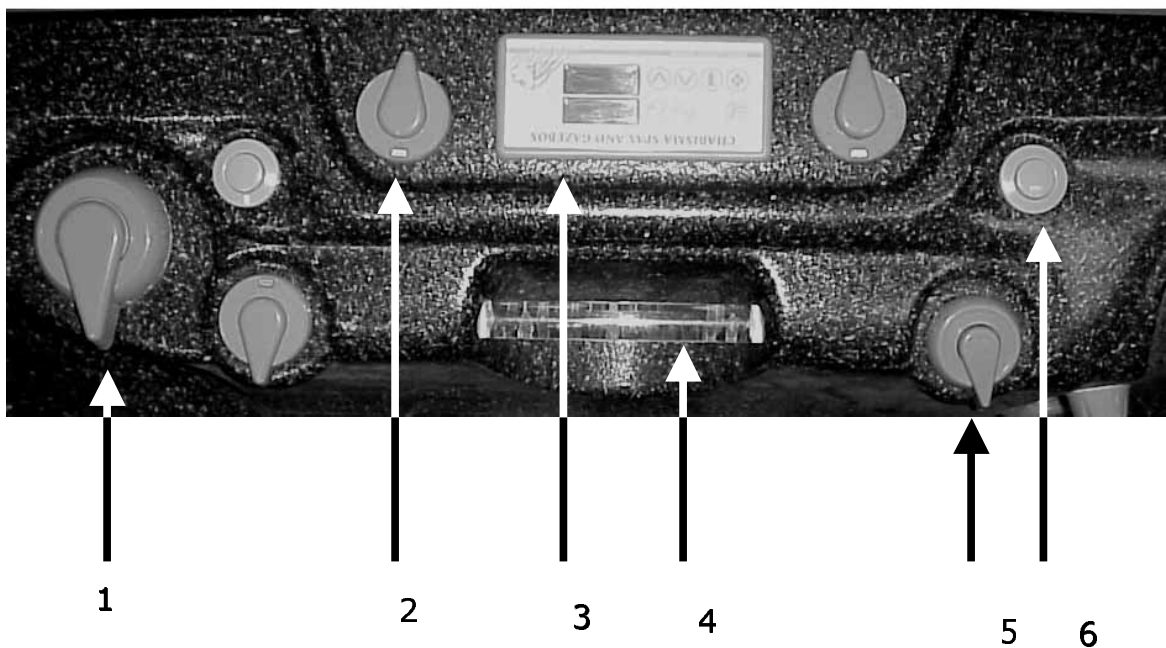
Eco² Manual

Air Manual



Make sure that you have the proper manual for the spa you purchased. Check your electrical requirements against the Hydro Quip Recommended application.

The control panel shown below is for a reference and control operation only. The Controls shown are on an xls-7000. The location of these controls will vary, depending on what spa you purchased and what options are on the unit.

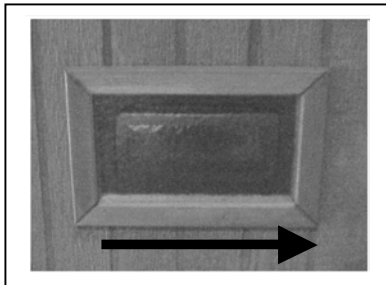


1. **Water Diverter Valve:** This is a three position valve. It is designed to add more pressure to certain areas of the spa such as eurotherapy seats or lounges. Pressure can be increased to either seat or both areas at the same time. Depending on the spa that you have purchased, there can be more than one valve in your spa. In some cases there may not be any valve at all. Because of the high volume pumps that are installed in the spa, we **strongly recommend that the pump be shut down before switching positions of the valve.**
2. **Air Control Valve:** This valve allows air to mix with water. This is a two position valve. The two settings are maximum and minimum. The minimum position is the off position.
3. **Control Center:** Please refer to the previous page for your application. The control shown is the DCS System.

4. **Safety Grab Bar:** The safety grab bar is located in different locations depending on which model you have purchased. This bar is designed for balance and safety it is not a handicap lift rail. A handicap rail is available as an option. Contact your dealer for more information.
5. **Accessory Valve:** This valve is specifically designed to turn on or off the waterfall option. This option is available on all units. However it must be ordered in advance of the purchase of your spa.
6. **Accessory Activation Button:** This button is designed to activate any electrical option you may have ordered with your spa. It will activate either the Deluxe Fiber Optic Lighting System or the Deluxe Mister System.

Stereo Option: The Deluxe Stereo Option is designed to give you years of pleasure. However, there are some precautions and maintenance procedures that must be followed to insure the maximum life and performance of this system.

Warning: The Stereo System is a high grade marine system designed for outdoor use. However it is not designed to take in direct water contact. We have provided a double safety enclosure that should be kept closed at all times during operation as well as idle time. Direct Water Damage to the system will void the manufactures warranty. The Stereo system is a carry in warranty only. Warranty and warranty service center information is provided in your warranty envelope.



To access the secondary enclosure slide the access door to the right. Keep this door closed at all times after adjusting the spa.



The secondary door opens to the down position. Do not leave this door open while the spa is in operation.

Pop Out Therapy Neck Jet Operation



The pop out neck jet is one of the best therapeutic jets on the market today. Precaution must be observed in the proper operation of this jet. Please observe the following operational steps and educate your family.

Step 1: To turn the jet on, turn the face of the jet clockwise until it stops. At this time the pop out jet nozzle will disengage. At this time you can adjust it to the desired position. To turn it off simply twist the jet face counter clockwise to the stop position.

Warning:

Do not attempt to pull the jet nozzle out while in the closed position.

Do not allow children to play with the nozzle while in the disengaged position. (Adult supervision should be observed at all times during the operation or non-operation of this jet)

Do not pull on the jet nozzle to adjust the nozzle.

Please be advised, that damage to this jet is not a warrantable item. Should this jet become disabled. Simply turn the jet to the off position. Place a flat edged screw driver behind the gray face plate and apply gentle pressure till the jet face disengages. You may return it to the local dealer or mail it back to the manufacturer. The cost of this jet face is \$17.95 plus freight as applied.

Deluxe Mister system Operation:



Simply depress the control button located at the control center to activate the system.

The mister system can become plugged up from time to time. We have provided a simple tool to remove the mister insert. Simply unscrew the insert and remove the obstruction and replace. Obstructions in the mister system is not a warrantable item. If you wish to have a service call to remove obstructions, a service charge may apply.

Fiber Optic Lighting System



Your new Deluxe Fiber Optic System can be operated by depressing the gray control button in the spa control area of the spa. The system incorporates a four color, color wheel. The following is the sequence the control center follows by depressing the control button:

- Depress the button once and the lights will activate with the color wheel rotating through the four color sequence.
- Wait till the color that you desire appears and depress the button a second time. This will freeze the color wheel.
- Depress the button a third time and the system will shut down.

Filter Maintenance

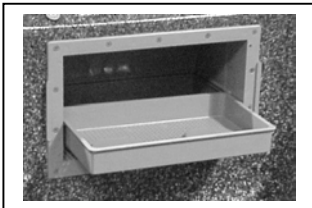
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Step 1: Locate the filter system and identify the filter weir gate. In some cases you may have a 50 sq.ft. Filter system instead of the system shown. The cleaning and cartridge removal is the same for both systems.



Step 2: Place your fingertips inside the top edge of the weir gate plate. Lift up gently and disengage the plate for the filter assembly. Remove and set aside.



Step 3: Locate the weir basket. Slide the weir basket forward. Completely remove the basket and set aside.



Step 4: Remove the two filter cartridges by twisting the filter cartridges counter clockwise approximately one half a turn and lift out of the filter assembly.

(Reverse the process to reinstall)

We strongly recommend that you check your filter system weekly. Depending on usage, clean the cartridge monthly. To extend the life of the cartridge, purchase a second set of filters and alternate monthly.

To ensure clean water, clean the cartridges with a high pressure hose. Soak the filters in a cleaning solution on a bi-monthly basis. Store alternate cartridges in a warm dry location.

Failure to clean cartridges, will result in poor jet pressure, heater failure, and low pressure flow switch problems.

Water Chemistry:

Your spa is designed to give you years of safe dependable use and relaxation. To insure this, you must maintain the water chemistry. Water chemistry will have a direct effect on the support equipment and the spa itself. Raw water chemistry varies in regards to where you live. As the manufacturer we do not provide chemicals or chemical recommendations due to the varied water conditions. Please consult your local dealer or chemical dealer for recommendations regarding your area.

Daily Schedule:

- Check Water Chemistry Balance. (pH)
- Check Disinfectant Levels (Chlorine, Bromine, or Ozone Gas)
- Check Water Levels. (Check levels with no one in the spa)
- Set Filtration Cycles. (We recommend that you cycle the spa a minimum of twice a day for a minimum of three hours per cycle)

Monthly Schedule:

- Lower water level at least 3 inches and clean the water line with a non abrasive cleaner.
- Remove and thoroughly clean filter Cartridges.
- Remove and clean both sides of the spa cover.

Quarterly Schedule:

- Drain Spa Completely
- Sponge down the entire surface of the spa with a disinfectant.
- Apply Surface Sealer if Necessary.
- Soak Filter Cartridges in a cleaning solution for a minimum of 24 hours, and rinse thoroughly.
- Rub Down Cabinet with Sealer or Stain.
- Treat Spa Cover with Treatment/Cleaner.

Maintenance Precautions:

- Add Only One Chemical at a Time. (Do not Pre-Mix Chemicals)
- Do Not add Chemicals through Filter Opening.
- Never add Acid or Pool Chlorine to the Spa
- Allow Spa to Cycle for a minimum of one hour after adding chemicals.
- Always Follow Chemical Suppliers Instructions.

Trouble Shooting Guide

Symptom	Probable Cause	Solutions
Spa Will Not Start-up	House Breaker has Tripped GFCI Breaker has Tripped Heater Limit Switch has Tripped Internal Main Fuse has Blown	Reset Breaker Reset GFCI Reset High Limit Call for Technician
Pump Will Not Prime Or Pump is Surging	Low Water Level Filter Weir Stuck in up Position Slice Valve Closed or Half Closed Pump Unions are Loose Pump Impeller Broken Filters are Dirty	Fill Spa to Proper Level Free Weir Gate Open Valves Tighten Unions Call For Technician Clean Filters
Spa Not Heating Properly	Low Water Level Heater Limit Switch has Tripped Dirty Filters Improper Electrical Service Defective Heater Element Defective Pressure Switch Improper Cover Position	Fill Spa to Proper Level Reset High Limit Switch Clean Filters Call For Electrician Call For Technician Call For Technician Reposition Cover
Water Cloudy or Not Clean	Insufficient Filter Time Dirty Filters Ozone Lamp Burned Out Improper pH Blocked Filter Basket	Reset Filter Time & Cycle Clean Filter Cartridges Call For Technician Balance Chemical Levels Remove Debris
Noisy Pump or Motor	Blocked Skimmer Loose Pump Union Intake Side Low Water Level Slice Valve Closed or Half Closed Worn Pump Bearings Improper Pump Wiring	Remove Debris Tighten Unions Fill Spa to Proper Level Open Valves Call For Technician Call For Technician
No Jet Action	Air Trapped in Pump Slice Valve Closed or Half Closed Blocked Skimmer Dirty Filters Air Controls are closed Diverter Valve out of Position	Bleed Air at the Pump Open Valves Clean Filter Cartridges Clean Filter Cartridges Turned Valve To On Properly Position Valve

Please take the time to fill out your warranty registration card and mail it to the factory as soon as possible. Failure to mail this card may void your warranty. For privacy purposes please enclose the card in an envelope and mail to:

Fiber Design International
1975 East Francis Ave.
Ontario, CA. 91761

Please Print Legibly:

Warranty Registration Card

Customer Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone Number: _____

Spa Serial #: _____
Date of Purchase: _____
Purchase Price: _____

Dealer Name: _____
Address: _____
City: _____ State: _____ Zip: _____