HydraMaster
A Universal Cleaning Concepts Company

TITAN 375

Owner Manual

MAN-47899 REV A

September 2025

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1 - GENERAL INFORMATION

The Titan 375 is a carefully engineered truckmount by HydraMaster for carpet cleaning, hard surface, upholstery cleaning and water extraction/restoration.

The system utilizes an internal combustion engine to provide the power necessary to turn both the blower (vacuum pump) and the high-pressure water pump.

The heat from the engine and blower exhausts is transferred to the high-pressure cleaning solution in the stainless-steel high-pressure heat exchanger.

Finally, the cleaning chemical is injected into the pressurized water stream just before leaving the machine and is delivered to the cleaning tool through the high pressure solution hoses.

The solution is recovered by the vacuum generated by the blower and collected in the recovery tank for proper disposal.

To provide an on-board fresh water source in a space-saving configuration two Sub-Mount Freshwater Tanks are available as an option.

It is the purpose of this manual to help the technician properly understand and maintain the truckmount. Additional in-depth service information is available in the Service Manual, available at: https://xxxxxxxxxxxxxxxxxxxx

By following these guidelines carefully, you can expect years of reliable operation.

Contact Information

If you have any questions regarding the operation, maintenance or repair of this machine, please contact your local distributor.

To find a local distributor, please visit our website at

https://hydramaster.com/dealer-locator

If your question cannot be resolved by your local distributor or by the information within this manual, you may contact HydraMaster directly using the following phone numbers:

HOURS	TELEPHONE NUMBERS	E-MAIL ADDRESSES
Monday – Friday 7:00 am to 5:00 pm Pacific Time	**Technical Support** (800) 426-1301 FAX: (800) 426-4225	**Technical Support** techsupport@hydramaster.com
	Customer Service/Parts (800) 426-1301 FAX: (800) 426-4225	**Customer Service/Parts** parts@hydramaster.com

When calling the distributor, be sure to reference the serial number and date of purchase.

FOR YOUR REFERENCE:

Model	
Serial number	
Date of Purchase	
Purchased From (Distributor)	
Address	
Phone Number	
Sales Representative	

Warnings

⚠WARNING

HydraMaster uses this WARNING symbol throughout the guide to warn of possible injury or death.

CAUTION

This CAUTION symbol is used to warn of possible equipment damage.

NOTICE

This NOTICE symbol indicates that federal or state regulatory laws may apply, and also emphasizes supplemental information.

⚠WARNING

During the operation of the truckmount many components are in motion. Never touch any part of the truckmount that is in motion. Serious injury or death may result.

⚠WARNING

During the operation of the truckmount many surfaces will become extremely hot. Never touch hot surfaces. Serious injury may result.

⚠WARNING

The operation of this truckmount can produce noise levels exceeding 85 decibels to a distance of 10 feet. The Occupational Safety and Health Administration (OSHA) recommends the use of hearing protective equipment if a person is exposed to an average of 85 decibels over an eight hour period. Check with local and state agencies concerning hearing conservation rules.

⚠WARNING

During the operation of the truckmount carbon monoxide and other toxic fumes are produced. Position the vehicle so that any fumes produced will be directed away from inhabited areas and any points of building entry (doors, windows, air conditioning units, fans, etc.) Do not occupy the vehicle while the truckmount is in operation. Serious injury may result.

⚠WARNING

During the operation of the truckmount chemicals known to the State of California to cause cancer, birth defects and other reproductive harm are produced by the engine exhaust.

⚠WARNING

Never operate the truckmount with a portable gas container inside the vehicle. Doing so will increase the risk of fire and explosion. Serious injury or death may result.

⚠WARNING

Transporting a vented fuel container that presently contains, or has ever contained in the past, a flammable liquid is strictly forbidden by HydraMaster and by federal and state regulations. Doing so will increase the risk of fire and explosion. Serious injury or death may result.

⚠WARNING

Never smoke in or around the truckmount. Doing so will increase the risk of fire and explosion. Serious injury or death may result.

CAUTION

During the operation of the truckmount the exhaust system will become extremely hot. Keep all flammable materials away from the truckmount exhaust system. Failure to do so will increase the risk of fire and explosion. Serious property damage may result.

CAUTION

Never operate the truckmount when the vehicle is tilted more than 10 degrees in any direction. Doing so will result in improper lubrication of the engine and increase the risk of serious component or engine damage.

CAUTION

Never perform cleaning operations when the truckmount engine is running at the IDLE throttle position. Failure to do so will increase the risk of serious component or engine damage.

CAUTION

Never operate the truckmount with the vehicle doors closed. Doing so results in extremely high temperatures inside the vehicle and will lead to serious component or engine damage.

CAUTION

Never use concentrated acids or solvents (including d-limonene) in the truckmount water system or chemical system. Use of these products will cause serious component damage.

CAUTION

Never operate the truckmount with water hardness reading measuring 3.0 grains per gallon or higher. Using water with 3.0 grains or higher will build up scale inside the truckmount water system. Scale build up causes serious component damage. Test all water prior to use and use water softening equipment if necessary.

CAUTION

Never allow water to freeze inside the truckmount. Serious component damage will occur and may void warranty on affected components. Perform all freeze guarding procedures outlined in the Owners manual.

CAUTION

Many vehicles have critical components mounted directly below the floor that can easily be damaged. Before drilling holes in the floor of the vehicle, inspect that underside of the vehicle for critical components. Failure to do so may result in damage to the vehicle.

CAUTION

During the operation of this equipment, surfaces will become hot. Do not allow components such as hoses to touch hot surfaces. Failure to heed this warning can result in equipment damage which is not covered by warranty.

2 - RESPONSIBILITIES

Purchaser's Responsibilities

Prior to purchasing a van, ensure that the payload is suitable for all of the equipment that will be installed and transported. This includes and is not limited to: the truckmount, recovery tanks, fresh water tanks and on-board water, hose reels, hoses, cleaning tools, chemicals, drying equipment, etc. Payload capacity information is available through the auto dealer, the manufacturer's website, and is also located on the door pillar of the vehicle.

Purchase a heavy duty Group 24 (550 CCA or better) battery for this truckmount. This is normally available from the installing dealer.

Prior to dropping your van off at the distributor for the truckmount installation it is recommended that a spray-on bed liner be applied to the floor of the vehicle, such as Rhino Lining or Line-X.

Prior to operating the truckmount read this manual in its entirety and familiarize yourself with the information contained here. Special attention should be paid to all the caustions and warnings.

The distributor is responsible for the correct installation fo the truckmount. The distributor is also responsible to train you in the correct and proper operation and maintenance of the truckmount.

NOTICE

Any modification of the truckmount may void the warranty.

Distributors Responsibilities

Acceptance of Shipment

Before accepting the truckmount, check the following:

- The truckmount should be free from any shipping damage. Do not sign the delivery receipt until you have closely inspected the truckmount and noted any damage on the delivery receipt. Hidden damage may be present even if the box looks intact. It is recommended that the box be opened before signing for the shipment.
- Check the packing list and verify that all the items are accounted for.

Installation Responsibilities

- Ensure proper payload capacity. It is the distributors responsibility to verify that the equipment package does not exceed the vehicle capacity.
- Ensure installation of a safe fuel tap system and through-floor fittings as provided by HydraMaster.
- Proper placement of the truckmount, recovery tank, fresh water tank, and accessories in the vehicle and securing them with bolts and back up plates. The distributor should verify that the owner is in agreement with the layout.
- Ensure proper connection of the fuel lines.
- Ensure proper connection and installation of the battery. Verify that the battery is in accordance with HydraMaster's recommendations.
- Check the pump, vacuum blower and engine oil levels prior to starting the truckmount.
- Start and run the truckmount and check that all systems function properly.
- Test all hoses, wands, etc. for correct operation.
- Ensure timely return of the document package.

Training

The distributor should provide a thorough review of the owners manual with the purchaser along with instruction and familiarization with:

- How all truckmount systems function
- All safety precautions and their importance
- How to correctly start and shut down the truckmount
- How to correctly clean with the truckmount
- Where and how often to check and change component oil levels
- Freezing damage and how to avoid it. This includes explaining proper freeze guarding procedures.
- How to perform basic troubleshooting of the truckmount
- Hard water damage and how to avoid it. This includes how to determine if hard water is present and the installation and use of water softening equipment
- The truckmount's warranty and warranty procedures

3 - SPECIFICATIONS

Machine Specifications

Frame Dimensions	24.0” W x 31”H x 36”D	
Weight	570 lbs	
Engine – 23Hp Vanguard Briggs and Stratton	Oil Type	Synthetic 5W-30
	Capacity	Approx 1-1/2 quarts (48 oz.) when changing oil and filter
	Engine RPM	3200 rpm
	Fuel Consumption	1.0 gph
	Electric Key Start	
Vacuum Blower – 4005 Tuthill - Dual Splash Lubrication	Maximum Vacuum	12” Hg
	Oil Type	Synthetic ISO 150 rating
	Gear End Capacity	Approx 5.8 oz.
	Drive End Capacity	Approx 4.7 oz.
	Blower rpm	3200 rpm
Water Pump	Oil Type	30W non-detergent
	Capacity	Approx 14.0 oz
	Pump Rate	4.0 gallons per minute
	Pump rpm	1,750 rpm
Electric Pump Clutch	12v	
Operating Pressure	0-2000 psi	
Chemical System	Stainless Steel Last Step Chemical Injection	
Heating System	Finned Tube SS Heat Exchanger	

Standard Equipment

Standard Equipment	High Pressure Hose	¼” High Temperature Lined/Vinyl Cover – 100 ft.
	Vacuum Hose	2” Vacuum Hose – 100 ft.
		1-1/2” Wand Whip – 10 ft.
	Recovery Tank	70 Gallon MaxAir Universal Tank – Single Port
	Cleaning Wand	13” Evolution Wand
	Chemical Jug	5 Gallon
	Battery Box	
	Van Decal	
	Van Installation Kit	
	Owners Manual	

Optional Equipment

Optional Equipment	Recovery Tank	100 Gallon MaxAir Universal Tank – Single Port
	Fresh Water Tank	70 Gallon Rotomolded Tank
		80 Gallon Rotomolded Tank
		120 Gallon Rotomolded Tank
	Automatic Wastewater Disposal System (AWDS)	Comet Pump

4 - PRECAUTIONS

High Altitude Operation

Elevation plays a key role in how the truckmount will operate. Operation at high altitude (above 5,000 ft.) may require a high-altitude carburetor adjustment. Use of high altitude jets will improve power, reduce fuel consumption and help reduce excessive carbon build-up in the exhaust and heat exchanger system.

Contact the local Briggs and Stratton dealer or HydraMaster to obtain the proper jet size for your intended altitude operating environment. Your local Briggs and Stratton dealer can be located at: https://www.briggsandstratton.com/na/en_us/support/product-selector.html

Local Water Precautions

The quality of water varies greatly from region to region. Many areas have an excess of minerals in the water which results in what is commonly called “hard water”. These minerals tend to adhere to the insides of heat coils and other parts of the machines causing damage and a loss of cleaning effectiveness. This influences the reliability and efficiency of equipment in direct proportion to the level of hardness.

Hard Water Advisory

HydraMaster recognizes that any hard water deposits which may occur within the water system of our truckmounts is a serious problem. Truckmount heat exchange systems are not tolerant of foreign material. Hard water deposits will decrease the performance of the system and will lower the reliability of the entire system.

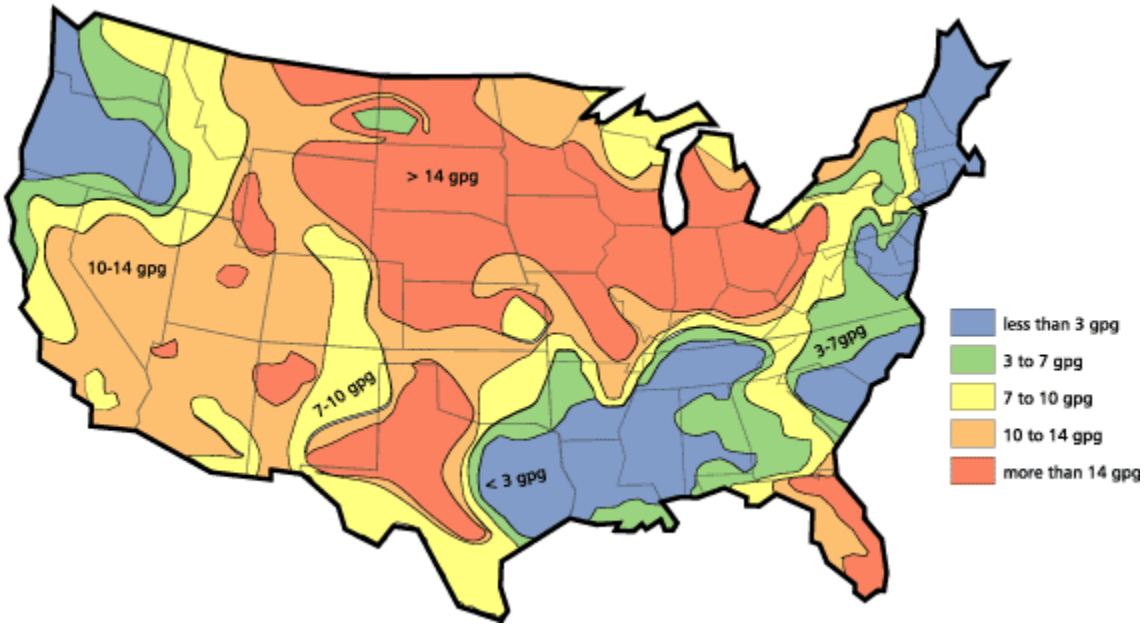
To validate a machines warranty, HydraMaster requires that all machines that operate in designated “Hard Water Areas” (3.0 grains or more per gallon) be equipped with a water softener system. Periodic descaling or acid-rinsing alone is not adequate in these areas. HydraMaster does not recommend any particular type or brand, however the relative effectiveness of any system should be discussed with your local distributor.

CAUTION

Failure to take appropriate measures to prevent scale build up can result in system failure and loss of warranty on affected parts.

Hard Water Area Map

The hard water area map, shown below defines hard water areas in the continental United States which compromise fluid related components such as hoses, fittings, heat exchangers, pumps and valves. For other countries, hard water area maps can be obtained from geological societies.



NOTICE

The map shown is provided for general reference only. Water hardness in your geographic area should be confirmed by testing.

Water Softeners

Cleaning efficiency and equipment life is increased, chemical use decreased, and the appearance of cleaned carpets enhanced when water softeners are incorporated in hard water areas. HydraMaster strongly urges the use of water softener units with the Titan 375 in areas that exceed 3.0 grains per gallon.

Failure to use a water softener in these areas will invalidate the machine's warranty. Referring to the hard water area map in the previous section will help you determine the quality of water in your area.

The relatively low cost of water softener service is more than made up for by increased life of machine parts, reduced chemical costs and continued cleaning efficiency. The water softener will also increase the effectiveness of the cleaning chemicals, therefor less chemical will be needed.

Contact a water softener distributor in your area for information on the rental of a simple water treatment unit to carry in your truck. Be sure to charge the water softener in accordance with the capability of the softener.

Example: If the softener will treat 900 gallons of water and the machine uses an average of 30 gallons/hour, for an average of 5 hours a day, this equals 150 gallons of water per day. In 6 days the machine would use 900 gallons of water. Therefore the softener would need to be recharged every 6th working day for maximum effectiveness.

Waste Water Disposal Advisory

There are laws in most communities prohibiting the dumping of recovered 'gray' water from carpet cleaning in any place but a sanitary treatment system.

The cleaning rinse water, recovered into your units vacuum tank, contains materials such as detergents, and must be safely processed before entering streams, rivers and reservoirs.

In most cases an acceptable method of waste water disposal is to discharge into a municipal sewage treatment system after first filtering out solid materials such as carpet fiber. Access to the sanitary system can be obtained through a toilet, laundry drain, RV dump, etc. Permission should first be obtained from any concerned part or agency.

One disposal method which complies with most laws and regulations is to accumulate the waste water and haul it to an appropriate dump site. Another solution is to equip your Titan 375 with an Automatic Wastewater Disposal System (AWDS). These systems are designed to remove waste water from the extractor's recovery system and actively pump the water through hoses to a suitable disposal drain.

HydraMaster makes an AWDS which can be ordered with new equipment or installed later.

When properly configured, the system will continuously monitor the level of water in the tank and pump it out simultaneously with the cleaning operation. The hidden benefit of this process is that the technician does not have to stop his/her cleaning to empty the recovery tank.

NOTICE

IN ACCORDANCE WITH EPA, STATE AND LOCAL LAWS, DO NOT DISPOSE OF WASTE WATER INTO GUTTERS, STORM DRAINS, STREAMS, RESERVOIRS, ETC.

The penalties for non-compliance can be serious. Always check local laws and regulations to be sure you are in compliance.

5 - OPERATION

Start-Up Procedure

1. Perform all daily and periodic maintenance as specified in Section 7 of this manual.
2. Locate water source at job site and connect garden hose to the truckmount.

NOTICE

The water box should be full prior to starting the truckmount.

NOTE: If you are using an 'Automatic Pump In System' the machine may start with no water in the waterbox, but the pump clutch will not engage until sufficient water has been pumped from the fresh water tank to the waterbox.

3. Lay out the vacuum hose and solution hose to the farthest end of the cleaning job. 'Working back' to the truckmount is found by most cleaners to be the most efficient.
4. Connect the cleaning tool.
5. Turn the ignition key to "ON". Pull the choke and start the truckmount with the throttle cable fully depressed ("IDLE" position – see figure 1).

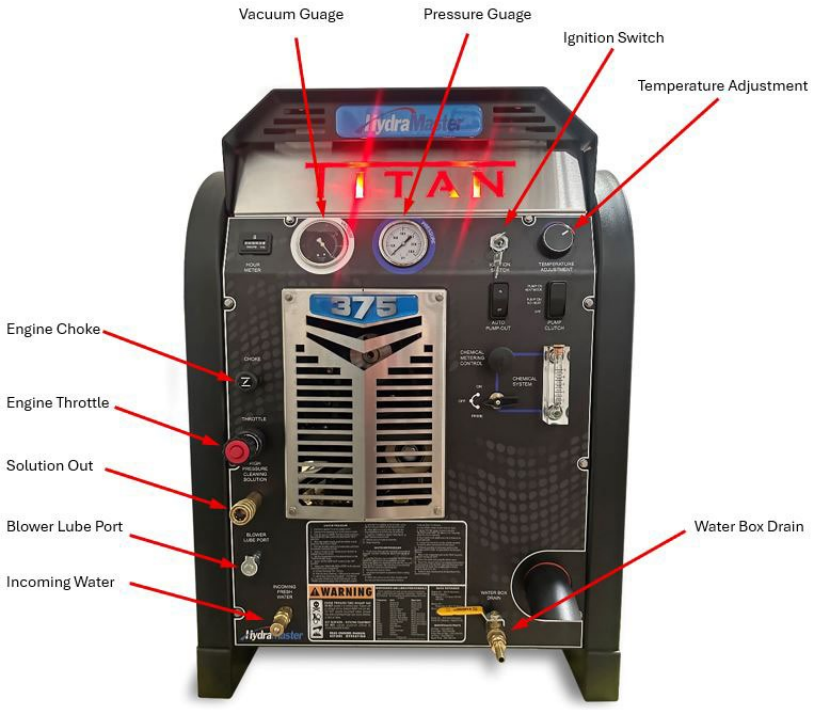


Figure 1

6. After the engine starts, push the choke in and allow the truckmount to run in “IDLE” for 2-3 minutes to warm up.
7. Pull the throttle cable to full extension and twist the handle clockwise to lock.
8. Press the “PUMP CONTROL” switch to engage the pump clutch for carpet cleaning or upholstery cleaning as follows:
    a. Switch to “HP ONLY” if connected to a fresh water supply from the building.
    b. Switch to “HP ON & Pump-In ON” if connected to a fresh water tank.
9. Set the temperature to the desired level on the “TEMPERATURE” knob.
10. If used, turn the “AUTO PUMP-OUT” switch to the “ON” position.

Figure 2

11. Adjust the “PRESSURE REGULATOR”, located on the left side of the of the machine, to the desired cleaning pressure level.
    a. Suggested settings:
    b. Carpet Cleaning 300-400 psi
    c. Hard Surface Cleaning: 1,000 or as indicated on cleaning tool

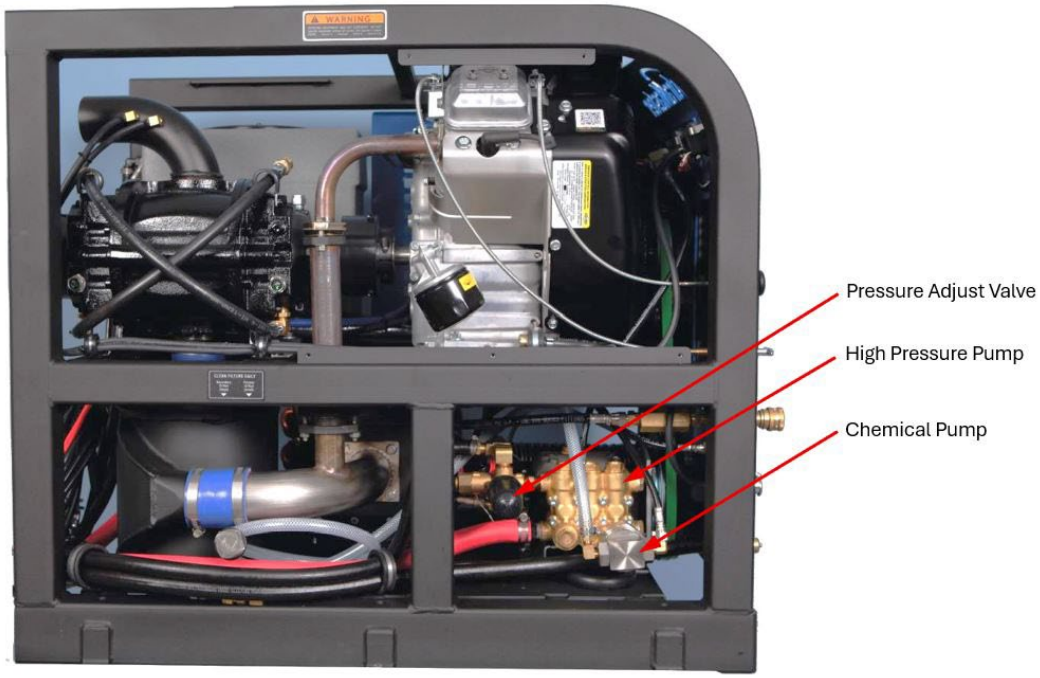


Figure 3

12. Turn the “CHEMICAL SELECTION VALVE” to the “PRIME” position to purge any air from the system.
    a. With the truckmount running at full throttle, block off the vacuum intake to the recovery tank. The vacuum gauge should read 12-14” Hg. This will assist in priming the chemical system.
    b. Allow chemical to flow through the chemical meter at full flow for 30 seconds.
    c. Turn the “CHEMICAL SELECTION VALVE” to “ON”. The restriction can now be removed from the vacuum inlet.
    d. While spraying solution from the cleaning tool adjust the chemical flow by turning the “CHEMICAL METERING CONTROL KNOB”.
13. Begin cleaning.

CAUTION

Never perform cleaning operations when the truckmount engine is running at IDLE throttle position. Failure to follow this caution will increase the risk of serious component or engine damage.

Water Extraction Procedure

To perform water extraction, set the “PUMP CONTROL” switch to the flood extraction position. This will disengage the pump clutch, allowing for the machine to run without fresh water connected to the machine.

Shut-Down Procedure

1. Flush clean water through the chemical system for 10 seconds. Turn the “CHEMICAL SELECTION VALVE” to “OFF”.
2. Cool the truckmount down by turning the “TEMPERATURE CONTROL” dial to the lowest position (counter-clockwise). Spray the cleaning wand into the vacuum hose for 3-5 minutes. The chemical is now flushed from the truckmount, hoses and cleaning tool.
3. Remove the vacuum hose.
4. Lubricate the blower to prevent it from rusting internally.
    a. Allow the unit to run for a few minutes with the vacuum hose disconnected in order to remove moisture from the blower.
    b. Cap off the inlet(s) to the vacuum tank.
    c. Spray a HydraMaster-recommended spray lubricant into the “BLOWER LUBE PORT” for about 5 to 7 seconds while the unit is running.
    d. Allow the machine to run for an additional 2 to 5 minutes under load to flush the lubricant.
    e. Uncap the inlet(s) and run the unit for another minute to allow the blower to cool down.
5. If freeze guarding is necessary perform the procedure at this time. See section XX of the Freeze Guarding section in this manual.
6. Return the engine throttle to the “IDLE” position.
7. Turn the ignition key OFF.
8. Drain the water box using the drain valve on the front of the machine.
9. Drain and rinse the vacuum tank in an appropriate location.

NOTICE

In accordance with the EPA, state and local laws, do not dispose of water from the recovery tank into gutters, storm drains, streams, reservoirs, etc.

10. Perform daily maintenance as specified in the Maintenance section of this manual.

6 – CLEANING CHEMICALS AND METHODS

Your HydraMaster truckmount has been engineered using the latest and most sophisticated technology available to produce the finest carpet cleaning results possible. Despite this, it remains only a tool of the carpet cleaning trade and results will vary depending on technician training.

HydraMaster strongly recommends all technicians attend an Institute of Inspection, Cleaning and Restoration Certification (IICRC) approved school as soon as possible and to always follow IICRC guidelines when cleaning.

This section describes the carpet cleaning procedure in the following areas:

- Precautions
- Preparing the Carpet for Extraction
- Rinse and Recovery
- Overwetting
- Streaking
- Cleaning Tool Tips

Precautions

The use of some chemicals (such as concentrated acids and/or solvents) in your truckmount can cause serious damage to internal plumbing and high pressure pump, as well as some carpet and upholstery materials.

HydraMaster strongly recommends the use of a water softener to prevent the build up of scale and hard water deposits in your truckmount.

HydraMaster recommends only the use of chemicals containing rust and corrosion inhibitors and water softening agents to prevent chemical built up which may lead to component failure and warranty denial.

CAUTION

> Increased demand for neutralizing rinse agents result in the need for special care when using these acid based chemicals. The negative side of these products is their corrosive effects on metals, including fittings, pumps, heat exchangers, etc.

HydraMaster's ***ClearWater Rinse*** has been formulated to protect vital components. Hydramaster will not warrant parts that have been damaged from other acid agents.

Preparing the Carpet for Extraction

Pre-Vacuum the Carpet

Whether you instruct the customer to pre-vacuum or offer it as part of your service, proper vacuuming will make your job easier and produce superior results. The more time spent removing loose particulate soil, the easier it will be to remove the oily soil stuck to the fibers.

Pre-Treat the Carpet

This process of applying traffic lane type chemicals to the carpet (whether by sprayer or rotary scrubber) is essential prior to extraction with your truckmount.

By applying cleaning agents to the carpet and letting them dwell for 10-20 minutes prior to rinsing, you allow the product to dissolve and emulsify the oily, sticky binders holding the soil to the fibers. This will allow more soil to be removed in one or two cleaning tool passes and help prevent over-wetting.

Remember the solution coming out of your cleaning tool is only in contact with the carpet fibers for a few seconds. Relying on the rinse agents to do the majority of the cleaning will result in overly long dry times and excess detergent residue left in the carpet.

HydraMaster recommends the use of our pre-sprays: ***Fastbreak*** for residential carpet and ***Blitz*** for commercial carpet needs.

Rinse and Recover

Whether you are using a wand or rotary extraction tool, you should clean and area appropriately 3 ft. x 3 ft. with the solution valve open, then immediately go over the same area with vacuum only to remove any excess moisture.

CAUTION

Olefin fiber is becoming more popular, particularly in commercial installations. The process mentioned above can leave excessive residual moisture because olefin fibers will not absorb any of the cleaning solution. You must only apply solution during the backward stroke of the wand so it can be immediately captured by the vacuum head. RX20® users should follow each pass with a dry pass. Failure to follow this procedure will cause solution to flow to the back of the carpet along with some of the soil. This, along with any soil imbedded in the backing, will be wicked to the surface of the fibers as the carpet dries.

HydraMaster recommends the following rinse aids:

- Alkaline – ***Hydra-Dri Powder*** or ***Hydra-CleanLiquid***.
- Acid – ***Clear Water Rinse***.

NOTICE

For more information about HydraMaster's complete chemical product line, visit us at: http://hydramaster.com/Products/Chemical.aspx

Overwetting

Overwetting is an annoyance to all concerned. Extended drying times will leave the customer with a negative impression of both the cleaning company and the process used.

There are several factors that will cause over-wetting:

1. Too few vacuum strokes
2. Clogged vacuum blower filters
3. Recovery tank lid not sealing properly
4. Recovery tank drain valve left partially open
5. Damaged or obstructed, vacuum hoses
6. Obstructed vacuum hoses due to cleaning 'foam-saturated' carpet. It is recommended to use 'crystal' type defoamers distributed evenly over carpet prior to beginning the cleaning process.

Streaking

Streaks in the carpet can appear in both clean and dirty areas and normally appear in heavily soiled, light colored carpets.

Possible reasons for streaking may include:

1. Clogged or improperly angled spray nozzles
2. Spray nozzles that overlap, concentrating the solution
3. A partially clogged vacuum head
4. Inconsistent solution temperature

Cleaning Tool Tips

Wands

The Evolution Wand is truly the next evolution in wand design and performance. The Aluminum tube and Rotomoldeded head make it extremely lightweight which helps to reduce fatigue on the technician. The sealed Delrin® glides help the wand to be easily pushed across the carpet, and are tapered to keep a good seal on the fibers.

No other tool has made such a dramatic increase in soil removal and water recovery. The laminar airflow design of the Evolution wand has boosted the performance of some portable extractors from a bronze to a gold level of certification from the Carpet and Rug Institute's Seal of Approval Program for tested cleaning performance. The Evolution will change the way carpets are cleaned.

Available in two sizes: a 12" head with 1-½" tube and two jets or a high production 16" head with 2" tube and 6 jets.

With a wand, keep cleaning strokes short, front to back, and run a ‘dry pass’.

After pulling the wand for a strip of 3 to 4 feet long with the solution trigger activated, go back up to the top of the stroke and make a ‘dry’ pass (no solution flowing). This gives the wand a second chance to pick up the solution on the carpet.

If you do no run a ‘dry’ pass, the carpet can take longer to dry and possibly the pad under the carpet can become saturated.

Be aware of the carpet seams, try to use strokes that are parallel to the seam. Avoid pulling the wand across the seam. Every stroke can peel the seem connection and pull the carpet off the floor.

Also tilt the wand handle down (head up) to move the tool forward, and away from you, on the carpet. This means less pull on the carpet and less work for you.

Rotary Tools

Evolution RX12 Hard Surface Cleaning Tool

The Evolution RX12 can be used to clean tile, concrete and stone floors.

Select the appropriate pre-spray and apply to the floor. Usually a 5 minute or less dwell time is ideal. Excessive dwell time may actually retard the cleaning process by soaking in deeper and requiring more drying time before sealing.

Recommended pressure is 600 to 1200 psi, and recommended temperature is up to 200 degrees F.

It is usually easiest to move at a moderate rate forward and backwards. You need to overlap enough to assure complete coverage. Moving the RX12 too fast will create a spiral pattern in the grout or tile. Slow down so that this pattern does not occur.

RX20 NEXT GEN tool for Carpet, Hard Surface and Bonnet Cleaning

Before turning on the RX20, adjust the handle, it should rest right below or even with the bottom of your front pants pocket, with the tool resting flat on the floor. Take the time to adjust the tool's height, make sure the head of the tool is flat with the floor while you are holding the handle. Relax your posture, the more difficult it is to hold the tools head flat on the floor surface, the more quickly you will tire.

As with the wand, drying times will be improved if you run a 'dry' pass between 'wet' passes. Hold down the solution trigger and move the unit left or right across the floor 3 or 4 feet then immediately back across the same pass, without the solution flowing, to make the 'dry' pass. Make the next pass half-overlapping the previous pass.

The RX20 excels in heavily trafficked areas and in restorative cleaning. Beware of the seam edges of carpets and transition edges between floor surfaces. Use extreme caution when cleaning these areas.

Sometimes it is necessary to us an edge tool to wand to outline the perimeter of the room in difficult to reach areas where the circular head of the rotary units will not reach.

Upholstery Tools

DriMaster

Use the upholstery tool on small rugs and furniture. When you clean rugs, be sure that the temperature and chemicals are safe for that particular type of rug or material.

As with the larger tools, do not leave the surface of the fabric too wet. Adjust the volume of water on the tool without it touching any surface, the water should just barely come out of the tool before the vacuum pulls it back in. The water will only wet the top layer of the furniture and the vacuum will pull the dirty water back into the tool

If you find it necessary to do a 'dry' pass, keep strokes short to limit the amount of water that comes into contact with the fabric surface.

Evolution Glided Upholstery Tool

The Evolution Upholstery Tool was designed to operate at 40-80 psi. The smooth airflow boosts the water recovery performance as compared to the harsh angles of a steel tool. Best of all, the glided head moves across the fabric better and increases water recovery.

7 - MAINTENANCE

To avoid costly repairs and down time, it is imperative to develop and practice good maintenance procedures. These procedures fall into daily, weekly, monthly, and quarterly increments, and are outlined in this section. All recommended maintenance procedures must be performed by a competent service professional.

This section covers:

- Operational Maintenance
- Overall Machine Maintenance
- High Pressure Pump Maintenance
- Vacuum System Maintenance
- Descaling Procedures
- Freeze Guarding
- Drive Belts

NOTICE

Record the date and machine hours in the maintenance logs provided for your convenience. Records of maintenance must be kept, and copies may be required before warranty will be honored. It is recommended that you affix a copy of the log on the vehicle door near your unit for convenience and serve as a reminder.

Maintenance schedules can be found at:

https://hydramaster.com/titan-375-internal-maintenance-charts/

Operational Maintenance

Daily Maintenance

- Check the engine oil level. Add if needed
- Check the high-pressure pump oil. Add if needed
- Inspect and clean the recovery tank filters
- Inspect and clean the control orifices and filters
- Inspect and clean the garden hose screen
- Inspect the truckmount for water and oil leaks, loose electrical connections, etc. Repair as needed.
- Lubricate the blower lube port with HydraMaster recommended spray lubricant

Weekly Maintenance

- Inspect the recovery tank filters for tears, holes, etc. Repair or replace as needed
- Inspect the sacrificial anode assembly in the tank and repair or replace as needed
- Inspect the vacuum relief valve. Clean and lubricate as needed
- Clean the recovery tank thoroughly with pressurized water
- Check the oil level in the blower. Add oil if needed
- Check the pump drive belt for wear and proper tension. Tighten as needed
- Check all hoses and wiring for wear and chafing. Secure as needed
- Flush the water and chemical system with 50/50 vinegar solution
- Check all nuts and bolts. Tighten as needed
- First time high-pressure pump oil change at 50 hours
- First time engine oil change at 8 hours

Monthly Maintenance

- Check the engine air filter. Clean or replace as necessary
- Check the water level in battery. Fill as needed
- Clean the battery terminals as needed
- First time blower oil change at 100 hours.

Quarterly Maintenance

- Check the engine air filter. Clean or replace as needed
- Clean and gap the spark plugs to 0.030”. Replace if excessive carbon buildup is visible
- Change the fuel filter
- Change pump drive belt

100 Hours

- Replace spark plugs

250 Hours

- Check coupler element (rubber insert) for crack or wear. Replace as needed

500 Hours

- Change the blower oil
- Change the high pressure pump oil
- Check the engine valve clearance (intake and exhaust 0.004” – 0.006”)
- Change the fuel filter
- Check coupler element (rubber insert) for cracks or wear. Replace as needed
- Replace the sacrificial anode in the recovery tank

1000 Hours

- Change air filters
- Check plug wires. Replace as needed
- Check carburetor. Clean or replace as needed
- Clean the heat exchanger core
- Replace the coupler element (rubber insert)

High Pressure Pump Maintenance

Daily

Check the oil level and the condition of the oil. The oil level should be to the center of the sight glass or between the “MIN” and “MAX” lines on the dipstick. The dipstick may be found by removing the oil fill cap.

Periodic

Change the oil after the initial 50 hours of operation and every 500 hours after that. It may be necessary to replace the pump seals and check valves at 500 hours if the truckmount has been running in high ambient temperatures.

CAUTION

If the oil becomes discolored or contaminated, one of the oil seals may be damaged. Do not operate the pump if the crankcase oil has been contaminated. Do not rotate the drive shaft without oil in the crankcase reservoir.

CAUTION

The pump should not be run dry (without water). Running the pump dry will cause premature wear on the seals, packing and plungers. Running the pump dry for prolonged periods of time may cause damage that cannot be repaired and is not covered by the warranty.

CAUTION

Do not run the pump with frozen water in the manifold. If there is a risk of freezing, freeze guard the truckmount. See the Freeze Guarding section for more information.

Vacuum System Maintenance

The vacuum pump in this machine is commonly referred to as a ‘rotary positive displacement blower’ or just ‘blower’ for short. The performance and life of the truckmount is largely dependent on the care and proper maintenance it receives Review the blowers owners manual for a better understanding of this component.

To protect the blower from overloading and damaging itself, a vacuum relief system is installed on the recovery tank. When the recovery tank inlet is completely sealed off, a maximum of 12” Hg will be maintained.

CAUTION

Solid objects entering the blower will cause serious damage to the internal components of the blower. Extreme caution should be used when the truckmount is being run for test purposes with the inlet to the blower exposed (inlet hose removed).

CAUTION

Foam passing through the blower can lead to serious problems with the truckmount. It is important to keep the recovery tank free of foam. The tank is protected from overflowing by a float switch, however this switch will not be activated by foam in the tank.

Daily

At the end of each day the internal components of the blower need to be lubricated. This helps to prevent rust deposits and prolongs the life of the truckmount.

See the machine ‘Shut Down Procedure’ in the Operation section for proper method.

Periodic

Change the oil in both ends of the blower after the initial 100 hours. Change the oil after each 500 hour interval thereafter.

Descaling Procedure

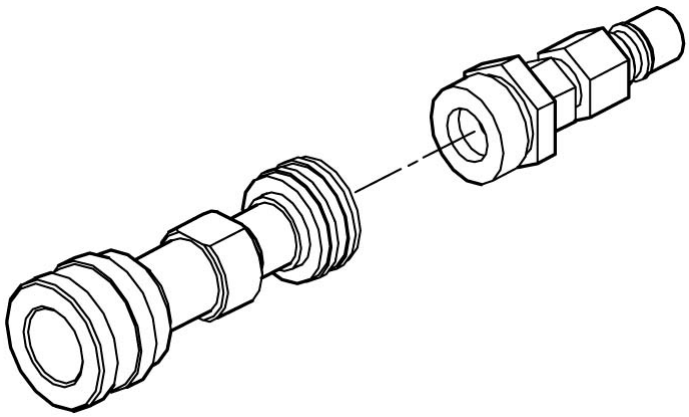
Scale deposits on the interior of the heating system can cause a noticeable loss in heating performance. Deposits of this kind result from hard water. The frequency with which descaling needs to be performed will vary. If your area has particularly hard water, you may need to descale more often.

To descale the system, add an appropriate descaler chemical to the water box. Circulate it through the system, let it stand, then flush and repeat as necessary. Clean all screens and strainers, as the descaling process may dislodge debris that will get captured in the screens and filters.

NOTICE

If using HydraMaster's "TM DeScaler" through the flow meter, make sure to run clean water through the flow meter after this procedure.

To descale using the HydraMaster recirculation kit (PN 000-078-058) start with an empty water box and follow the directions in the kit.



Freeze Guarding

To avoid permanent damage to the truckmount, it is imperative to follow the freeze guard procedure whenever the possibility of freezing temperatures exists.

CAUTION

When disposing of antifreeze follow all local laws and regulations. Do not discard into storm sewers, septic systems, or onto the ground.

⚠WARNING

Antifreeze is harmful or fatal if swallowed. Do not store in open or unlabeled containers. Keep out of reach of children and animals.

Freeze Guard Procedure

1. With the truckmount turned off and the incoming water line disconnected, open the water box drain valve on the front of the truckmount. Allow the system to full drain.
2. Add 2 gallons of 50/50 antifreeze and water mix to the water box.
3. Attach a section of solution hose to the outgoing solution fitting on the front of the machine. Attach the opposite end to the recirculation fitting. If more sections of hose are to be freezeguarded attach those inline with the first section.
4. Start the truckmount and allow it to run for 2 to 3 minutes. This will distribute antifreeze solution throughout the truckmount.
5. Remove the chemical feed line from the chemical jug. Turn the selector valve to “PRIME”. This will vacuum the remaining chemical in the lines to the recovery tank.

   NOTICE

   If using the recirculation kit, skip ahead to step 7
6. Remove the quick connect from the truckmount.
7. Spray the antifreeze and water mix out of the truckmount and into a container to reclaim the solution. Run the truckmount until there is no more solution coming from the truckmount.
8. The truckmount is now freezeguarded. Remember to flush the antifreeze from the system prior to carpet cleaning.

NOTICE

The reclaimed antifreeze solution may be used up to three times before being discarded.

NOTICE

To freezeguard the hoses and wand perform step 7 with the items to be freezeguarded attached.

Recovering Antifreeze for Re-Use

1. Attach all hoses and wands which have been freezeguarded to the truckmount.
2. Attach the incoming water source to the front of the machine.
3. Start the truckmount.
4. Spray the solution through the hoses and wands into a sealable container until all signs of antifreeze are gong.

Freeze Protection of the Pump-In System

1. Drain the fresh water tank.
2. Remove the garden hose adapter from the pump-in pump hose and position the hose so it is pointing outside the van.
3. Turn on the pump-in pump and run for 1-2 minutes until all the water is purged from the hose.

NOTICE

The next time the truckmount is used it may take a few minutes before the water box begins to fill.

Tensioning the Pump Drive Belt

1. Remove the Titan 375 grill to gain access to the idler pulley.
2. Loosen but do not remove the 2-1/2” long bolt (PN 000-143-716) on the idler pulley.
3. Remove the right cover of the machine to gain access to the tensioning screw.
4. Adjust the tension of the belt by turning the 4” long screw (PN 000-143-376).
5. After the proper tension is achieved, tighten the ½” bolt on the idler pulley.

CAUTION

Ensure there is no contact between the idler assembly and the other parts of the truckmount. Contact between rotating parts may result in damage to the truckmount.

8 - WARRANTY

This section lists causes of component failure that specifically void warranty coverage. Such causes as listed in this section shall constitute **abuse** or **neglect**.

Blower

- Failure to lubricate the impellers daily
- Failure to lubricate the bearings as recommended by the manufacturer
- Failure to maintain the proper oil levels
- Failure to change the oil at recommended intervals
- Failure to use the correct oil as recommended by the manufacturer
- Failure to maintain blower safeguard systems (filters, screens, relief valve, shut-off)
- Allowing foam to pass through blower

High Pressure Water Pump

- Failure to maintain proper oil level
- Failure to change oil at recommended intervals
- Failure to use the correct oil as recommended by the manufacturer
- Failure to protect the pump against freezing
- Failure to maintain the pump protection shut off system
- Failure to use water softener in hard water areas
- Use of improper chemicals

Recovery Tank

- Failure to properly maintain screens and filters in the tank
- Failure to clean the tank as recommended
- Failure to maintain the vacuum safety release system
- Use of improper chemicals

Chemical System

- Use of chemicals advised against in this manual
- Failure to use water softener in hard water areas
- Operating without chemical filter screens
- Failure to protect against freezing

Control Panel

- Failure to protect meters, gauges, fittings, against freezing

Vacuum and Solution Hoses

- Failure to protect against freezing
- Failure to protect against damage from hot exhaust contact
- Damage caused by impact or crushing
- Kinking or cracking due to improper storage
- Wear and tear from normal use

Cleaning Wand

- Failure to protect from freezing
- Damage from impact, crushing, or cosmetic

Water Heating System

- Over-pressurization
- Failure to protect against freezing

Hard Water Deposits

- Failure to install or maintain water softener system in hard water areas

Warranty Procedure

Warranty coverage is available through you local distributor

If you have moved to a new area or have purchased a used machine and need information regarding you local distributor, call HydraMaster at (800) 426-1301 or email us at:

techsupport@hydramaster.com

When calling the distributor, be sure to reference the serial number and date of purchase.

FOR YOUR REFERENCE:

Model	
Serial number	
Date of Purchase	
Purchased From (Distributor)	
Address	
Phone Number	
Sales Representative	

How to Order Parts

Warranty Parts Orders

1. Call your local distributor and ask for the Service Department.
2. Have the following information available:
    a. Equipment Model
    b. Date of Purchase
    c. Hours on the Unit
    d. Unit Serial Number
    e. Description of Malfunction
3. Once it has been determined which parts are needed to correct the problem with your truckmount make arrangements with your local distributor to either perform the repairs or ship the parts to you.

We shall always endeavor to be fair in our evaluation of your warranty claim, and shall provide you with a complete analysis of our findings.

HydraMaster's warranty covers only defective materials and/or workmanship for the periods listed in the warranty statement. **Diagnostic reimbursement is specifically excluded.**

Parts Orders

Call you local distributor. In most cases they either stock or have access to the parts through a regional service center.

Emergencies

If for any reason your distributor is unable to supply you with the necessary parts, they may call us and arrange for expedited shipping.

HydraMaster sells parts only through authorized distributors and service centers.

HYDRA MASTER® STANDARD SLIDE-IN LIMITED WARRANTY

HydraMaster warrants to the original end user, each new machine, new accessories and genuine replacement parts against defects in material and workmanship under normal use and service. Our obligation under this warranty is limited to repair or replacement of the defective item at our factory or by an Authorized Service Center. Warranty coverage shall begin on the date of purchase by the original end user (as evidenced by your invoice from the factory or Authorized Dealer) or six (6) months from the date the machine was shipped from the factory, whichever is earlier. The warranty registration card must be completed and returned within 30 days of purchase. The warranty coverage period is specified below.

GROUP	Parts[1,2]	Labor[2]
Frame	3 Years	2 Years
Covers	3 Years	2 Years
Vacuum Recovery Tank (Structural only)	3 Years	2 Years
Vacuum Pump – see Note 3	2 Years	2 Years
Chemical Systems	2 Years	2 Years
Hoses, Internal Machine	2 Years	2 Years
Hoses, External Machine	2 Years	2 Years
Valve, High pressure bypass	2 Years	2 Years
Water Heating System	2 Years	2 Years
Pump, High pressure water	2 Years	2 Years
Belts	2 Years	2 Years
Fittings, internal machine	2 Years	2 Years
Filter Screens	2 Years	2 Years
Gauges	2 Years	2 Years
Electrical Components	2 Years	2 Years
Engine	See Note 3	2 Years
Accessories and Fresh Water Tanks	1 Year	1 Year
Replacement Parts – see Note 4	90 Days	NA

NOTES:
1-Parts repaired or replaced are guaranteed for the remainder of the original machine warranty period.
2-Coverage only applicable to products sold and used in the United States and Canada.
3-As provided by the original Manufacturer.
4-Applies to replacement parts only after machine warranty coverage has expired.

This warranty shall not apply to repairs resulting from accidents or misuse, damage in transit, overloading the capacity of the machine, failure due to lack of proper maintenance or care as described in the operating and maintenance instructions. Freezing of any water or chemical related component will VOID all warranties on water or chemical related components, internal or external. Corrosion, deposits and/or build-up in the water, chemical, recovery or heating systems due to hardness in the water used or chemicals which result in deposits, will VOID all warranties on affected components. The use or application of any chemical, including but not limited to acids or solvents, which results in damage to metal, rubber, plastic, or painted parts will VOID all warranties on those parts. Minor adjustments, such as tightening of screws or bolts not connected with the replacement of parts, are not covered. Replacement of expendable wear items including, but not limited to paint, labels and other cosmetic parts are also not covered. Repairs or alterations by an organization other than the factory or an Authorized Service Center are not covered and will void any HydraMaster warranty as to the parts or systems repaired or altered by a non-authorized organization.

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION OF THE LIMITED WARRANTIES STATED WITHIN. NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS MADE EXCEPT AS EXPRESSLY STATED HEREIN. ANY STATUTORY IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, THAT ARE IMPOSED BY LAW DESPITE THE EXPRESS LIMITATION OR WARRANTIES ABOVE, ARE EXPRESSLY LIMITED TO THE DURATION OF THE WRITTEN WARRANTY. BUYER UNDERSTANDS, ACKNOWLEDGES AND AGREES THAT THE REMEDIES PROVIDED UNDER THIS LIMITED WARRANTY ARE THE SOLE AND EXCLUSIVE REMEDIES AVAILABLE TO THE BUYER. HYDRAMASTER WILL NOT BE LIABLE FOR ANY OTHER OR ADDITIONAL DAMAGES, INCLUDING BUT NOT LIMITED TO INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE FURNISHING, PERFORMANCE, USE OF OR INABILITY TO USE THE MACHINE. ANY EXTENSIONS OF OR MODIFICATIONS MADE TO THIS WARRANTY BY A DEALER/DISTRIBUTOR OF HYDRAMASTER ARE THE SOLE RESPONSIBILITY OF THE DEALER/DISTRIBUTOR.

HydraMaster will pay all freight and transportation charges within the United States, via normal ground shipping means, for replacement of parts covered under this warranty. All material must be properly authorized by HydraMaster prior to being returned. When returning, please provide an explanation of the problem and include the serial number of the machine as well as the name of the selling organization. All defective material must be returned to HydraMaster within 60 days of authorization. The Technical Service department of the authorized Dealer Service Center or the factory will investigate and then contact you.

Transportation of hazardous waste or contaminated equipment is subject to various laws and regulations. In returning machines, parts, or accessories under this limited warranty, the end user must certify in writing that the machines, parts or accessories being returned have not been used for handling, clean up, or disposal of hazardous waste or hazardous materials including but not limited to such things as asbestos, anthrax etc. or if the machines, parts or accessories being returned have been used for handling, clean up, or disposal of hazardous waste or hazardous materials, then the end user must have the machines, parts or accessories decontaminated by licensed and qualified decontamination professionals and provide written certification of this decontamination signed by the decontamination professionals. These machines, parts or accessories are to be returned only to the local HydraMaster Authorized Service Center for Warranty service along with decontamination certification.

HydraMaster reserves the right to change its warranty policy without notice.

CS-46247 rev B

9 - ACCESSORIES AND CHEMICAL SOLUTIONS

HydraMaster machine accessories are the most innovative collection available in the cleaning industry. For example, our RX20 Next Gen Rotary Extractors have changed the shape of carpet cleaning. In addition, our hoses, reels, and tanks are of the finest quality construction.

HydraMaster's full line of machine accessories and chemicals can enhance cleaning performance while reducing your labor costs, and include:

- Upholstery Tools
- Wands
- Vacuum Hoses
- Tanks
- Van Accessories
- Hose Reels
- Carpet Care Detergents
- Rinse Agents
- Pre-Sprays
- Hard Floor Care Detergents
- Defoamers and Descalers
- Deodorizers and Disinfectants
- Spotting Agents

For more information on our full line of accessories and chemical solutions, refer to the HydraMaster website at http://www.hydramaster.com

To order genuine HydraMaster accessories and chemical solutions, call you nearest authorized HydraMaster Distributor.