

Hydraulic Power Pack











Designed here. **Built** here. **Backed** here.[™]

TheCarWashBook.com

-www.**SonnysDirect**.com

Chemistry Water

Vacuums Marketing Signage

Parts



Hydraulic Power Pack Owner's Manual

Sonny's, Sonny's The CarWash Factory and Diamond Shine are registered trademarks of Sonny's Enterprises LLC Make CarWashing Easy, OneWash, and CarWash College are trademarks of Sonny's Enterprises LLC Profit Pilot, Wash Pilot, Buff-N-Dry, Fusion Wax and Fusion Rain Repel are trademarks of Sonny's Enterprises LLC

Sonny's Tunnel Equipment (and Design) is a trademark of Sonny's Enterprises LLC

Designed here. Built here. Backed here. is a trademark of Sonny's Enterprises LLC

Products mentioned herein are for identification purposes only and may be registered trademarks of their respective companies. All other brand names, trademarks or registered trademarks are the property of their respective owners.

$\hbox{@ 2023 SONNY'S The CarWash Factory}^{\circ}.$ All Rights Reserved.

SonnysDirect.com

This document is confidential and proprietary to SONNY'S and cannot be used, disclosed, or published without prior written consent. Content, prices, and availability subject to change without notice. All brand names, trademarks or registered trademarks are the property of their respective owners.

Manual-O, Hydraulic Power Pack - Part # 10013914-F



TABLE OF CONTENTS

READ ALL INSTRUCTIONS PRIOR TO OPERATING	5
IMPORTANT SAFEGUARDS AND WARNINGS	5 - 7
SAFETY FIRST	8
INTRODUCTION	9
HYDRAULIC POWER PACK FEATURES	10
CAN REDUCE WATER UTILITY COST – 60% OR MORE	11
UTILITY REQUIREMENTS – VERIFY	11
HYDRAULIC POWER PACK CAPABILITIES	12 - 13
HYDRAULIC POWER PACK SELECTION	14 - 16
SAFETY WEAR REQUIRED FOR INSTALLATION	17
TOOLS REQUIRED FOR INSTALLATION	17
QUICK START INSTALLATION MANUAL	17
INSTALLATION DIMENSIONS – MUST BE VERIFIED	18 - 19
INSTALLATION INSTRUCTIONS	20 - 22
ADJUSTMENTS AND TESTING	23 - 24
GENERAL OPERATION	25
MOTOR, PUMP & PARTS WARRANTY	25
WARRANTY	26

CONTINUES ON NEXT PAGE



© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

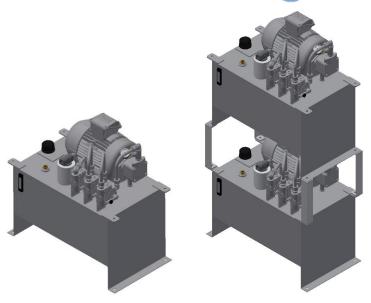
SonnysDirect.com



TABLE OF CONTENTS

PREVENTIVE MAINTENANCE	27
MAINTENANCE VIDEO	27
Sonny's CarWash College™	28
CUSTOMER SERVICE & TECHNICAL SUPPORT	29
HOW CAN WE HELP YOU?	30
ONLINE PRODUCT MANUALS & TECH BULLETINS	31
FREE NEWSLETTERS AND ALERTS	32
FREE CAR WASH CATALOGS & BOOKS	33
EMERGENCY CONTACTS	33
UNLIMITED WASH CLUB	34
BOOST YOUR SALES	35
WHAT YOU SEE IS WHAT YOU GET	35
CONTROL YOUR PROFITABILITY	36
SECURITY AT YOUR FINGERTIPS	36
GROW YOUR BUSINESS	37
TOTAL SOLUTION	38
THIS IS WHO WE ARE	39

Make CarWashing Easy



© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com





READ ALL INSTRUCTIONS PRIOR TO OPERATING

- This manual is a comprehensive step-by-step user instruction guide for the Hydraulic Power Pack and components. To review other manuals go online to SonnysDirect.com under Support Tab.
- Make sure to read, understand and follow all these instructions.
- To address any questions relating to ordering parts, operating the Hydraulic Power Pack, installation, troubleshooting, maintenance, service or anything else, contact Sonny's Technical Support Team at 1-800-327-8723.
- All deviations and alterations from these instructions **MUST** be reported to Sonny's The CarWash Factory[®]. **Keep this manual in a location where it may be used for ongoing reference.**



IMPORTANT SAFEGUARDS AND WARNINGS

- WARNING: Do not perform any maintenance or work on equipment unless you first perform Lock-Out Safety Precautions. All electrically powered equipment MUST have manually operated disconnects capable of being locked in the "OFF" position. Equipment that has been "locked out" for any reason must be restarted ONLY by the person who performed the "lock out" operation. These procedures MUST be followed to avoid personal injury, death and/or dismemberment.
- All parts and components **MUST** be installed by experienced and trained technicians.
- **No** unauthorized personnel should ever be permitted in the wash tunnel or near the equipment at any time.
- Hardhat, safety glasses with side shields, closed steel toe shoes, anti-impact and cut resistant gloves, dust mask, and earplugs if operating power tools, MUST be worn.
- When cutting or grinding any metal, safety glasses, earplugs, and dust mask MUST be worn.
- Do NOT leave a ladder or any other items such as wash down hoses or tools in the wash tunnel while equipment is running. Vehicle damage and injury, including death, can occur.
- Do NOT wear loose fitting clothing or jewelry around moving equipment. Do not allow any part of your body or other objects (including ladders, hoses, or tools) to come in contact with moving equipment. Entanglement may result causing injury, death, or dismemberment.
- Always exercise caution when walking (never run) through the wash tunnel as there may be slippery conditions. Be careful so you do not bump into or trip over equipment.

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com





IMPORTANT SAFEGUARDS AND WARNINGS

- Electrical connections and repairs MUST ONLY be performed by a Licensed Electrician.
- Plumbing connections and repairs MUST ONLY be performed by a Licensed Plumber.
- When working on any equipment that is higher than your shoulders, always use a fiberglass ladder that is in good condition.
- Use proper lifting technique. Team lifts are required for items over 50 lbs.
- Do **NOT** alter or modify parts in any way and do **NOT** interchange or substitute any components without the authorization of your supervisor and Sonny's The CarWash Factory.
- Do **NOT** install any parts or components into faulty materials.
- All damages and defects MUST be reported to both your supervisor and Sonny's The CarWash Factory.
- If there are any malfunctions with the **Hydraulic Power Pack**; or if any questions arise regarding the equipment operations, immediately contact your supervisor or Sonny's The CarWash Factory.
- Only use approved hardware, parts, and components with the Hydraulic Power Pack or any other equipment.
- Protect your body parts against sharp corners and edges at all times.
- Keep loose articles of clothing and jewelry away from the removal, installation, or operation of all equipment.
- The personnel installing the **Hydraulic Power Pack** are responsible for making sure it works according to the instructions in this manual.
- Always remove ladders, tools, parts, etc, from the wash tunnel when finished.
- All personnel **MUST** be trained in the safe operation of all equipment, wash tunnel operations, safety regulations, emergency shutdown and maintenance practices to avoid any accidents.
- Only personnel specifically instructed and trained are permitted to enter the wash tunnel to perform inspections or maintenance. At least two qualified maintenance personnel MUST be present when performing equipment repairs or preventive maintenance.
- IMPORTANT: Call Technical Support to adjust wash cycle when new equipment is installed.
- **WARNING:** All hydraulic and electrical systems in the wash tunnel equipped with a torque relief or overload should be checked and set to the minimum amount that will allow for proper functionality under normal washing conditions.

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com





IMPORTANT SAFEGUARDS AND WARNINGS

- **WARNING:** Possible wet floors and slippery conditions! To avoid an accident that might result in personal injury, death or dismemberment, all personnel **MUST** proceed with Caution.
- <u>WARNING</u>: Do <u>NOT</u> enter the wash tunnel when the equipment is operating. Personal injury, death and/or dismemberment may occur.
- **WARNING**: Make sure the proper Chemistry (Brush Lubrication) is being used in the Car Wash Tunnel to prevent vehicle and/or equipment damage.
- <u>WARNING</u>: If the Equipment Installation Dimensions at the time of installation are **NOT** measured correctly, it may result in equipment damage and/or failure. Dimensions <u>MUST</u> be verified if equipment is already installed. Contact Sonny's Technical Support Team at *1-800-327-8723* for any Installation questions.
- <u>WARNING</u>: All connections and repairs <u>MUST ONLY</u> be performed by Licensed Professionals. Perform all trade work in compliance with all applicable local and national codes.
- WARNING: Although building codes have been considered in developing all drawings, verification of site-specific conditions and compliance with federal, state, and local building codes is the exclusive responsibility of the customer and/or architect and engineer to verify compliance.
- **WARNING:** Do **NOT** attempt to repair or adjust any pressurized liquid or pneumatic part, hose, pipe, or fitting while that equipment is in operation.
- WARNING: Do NOT operate any equipment that requires safety covers with those covers removed or
 improperly installed. Do NOT operate any equipment if any component of that equipment is suspected to be
 defective or malfunctioning.
- <u>WARNING</u>: Store all cleaning, washing solutions and oils in a well-ventilated area. Clean up fluid spills immediately to prevent hazardous safety conditions. Be certain to follow all safety procedures on SDS Sheets for each chemical product used.
- **WARNING:** When a piece of equipment must be in operation during inspection or maintenance, one qualified technician must stay at the power disconnect switch while another qualified technician performs the inspection or maintenance.
- WARNING: All Equipment MUST be given regular maintenance to prevent equipment damage and/or failure that will VOID the warranty.
- WARNING: Emergency "STOP" Buttons MUST be well marked, and their location and proper use reviewed with all personnel. Any activated "STOP" button must be reset only by the person who activated it. Clear the wash tunnel of any people, ladders, hoses, tools, and other loose items before restarting the equipment. An audible device MUST sound to warn people that the equipment is starting.

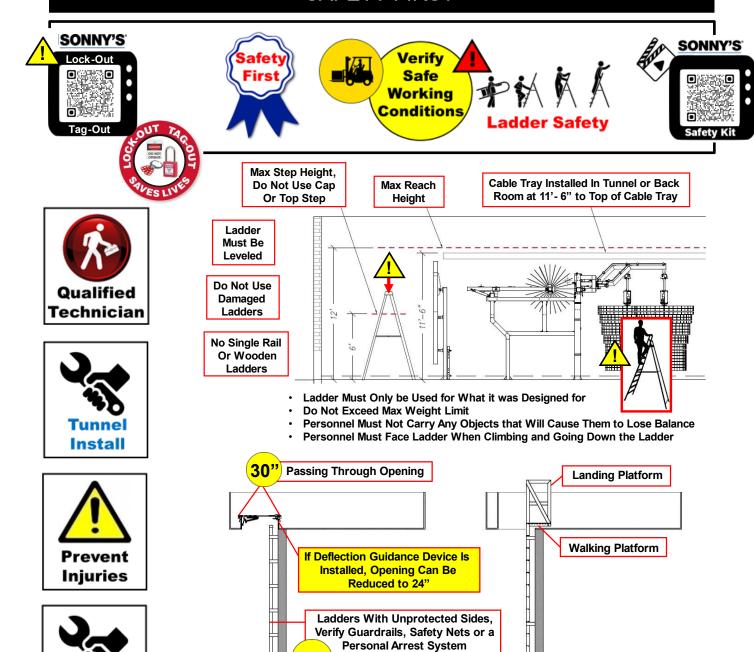
SAVE THESE INSTRUCTIONS

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



SAFETY FIRST



Fixed Ladder With Roof Hatch

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com

Fixed Ladder With

Platform and Enclosed Cage



INTRODUCTION



Make CarWashing Easy





















































Learn More at: www.SonnysDirect.com/onewash



© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



HYDRAULIC POWER PACK FEATURES

Sonny's Hydraulic Power Packs feature durable Vickers Vane® pumps engineered to excel in the harsh environment of a professional car wash. They deliver reliable performance day after day with minimal maintenance.

- Sight Glass & Temperature Gauge
- Return Line Filter
- Filler Breather
- Clean-Out Cover(s)
- Suction Strainer
- System Relief
- Pressure-Compensated Flow Control
- Pressure Gauge
- Low Level Switch
- Vickers Gear Pump on 3HP
- ➤ Vickers Vane® Pump Available on 5, 7.5, 10, 15, 20 HP
- Vickers Piston Pump Available on 7.5,10,15, 20 HP













Sonny's CarWash

One Flow

Two Flow

Three Flow

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



UTILITY REQUIREMENTS

Utilities interconnection and the materials required for interconnection to Sonny's equipment are the responsibility of the customer.



All connections and repairs MUST ONLY be performed by Licensed Professionals.

Perform all trade work in compliance with all applicable local and national codes.



Hydraulic

The installer is to provide materials, install pressure, and return lines to and from the hydraulic power pack flow control valves and the equipment to be operated. These lines may be Schedule 80 BIP, or hose rated at least 2200PSI. Minimum 18 inch long flexible hose should be used at each termination. It is recommended that the return line from the last hydraulic motor in a circuit to the power pack return filter be one size larger than the pressure line (example: pressure line is ½ inch... return line should be ¾ inch). This practice extends the life of the hydraulic motors and pump by reducing line friction and oil temperature.

Electrical

- The Customer's Electrician is to provide materials and install 208VAC or 230VAC or 460VAC, 3-phase, 60Hz power to the electric motor on the hydraulic power pack from a properly sized three pole circuit breaker and motor starter with three thermal overloads.
- The Customer's Electrician is to provide materials and install single phase power (24VAC or 110VAC) from the Customer supplied start/stop system, through the low oil level switch on the hydraulic power pack to the motor starter coil for the hydraulic power pack.



Technical Disclaimer

Although building codes have been considered in developing all drawings, verification of site-specific conditions and compliance with federal, state, and local building codes, it is the exclusive responsibility of the customer and/or architect and engineer to verify compliance.

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



HYDRAULIC POWER PACK CAPABILITIES

Hydraulic Motor Chart

Model	HP	GPM	Capacity in Gallons
HY345	3	4.5	11
HY575	5	7.5	25
HY7510	7.5	10.5	25
HY10124	10	12.3	25
HY151840	15	19.5	40
HY202440	20	33	80
HY7VAR	7.5	10.5	25
HY10VAR	10	12.3	25
HY15VAR	15	19.5	60
HY20VAR	20	33	60

One 5HP Power Pack with 7.5GPM pump can operate

One pair of tire brushes plumbed in series, running at 300RPM with 4.5 cu in/rev motors (5.9GPM fluid requirement)

OR

Four side washers plumbed in parallel with separate speed control valves running at 80RPM, each using 5.9 cu in/rev motors (6.13GPM total fluid requirement)

One 7.5HP Power Pack with 10.5GPM pump can operate

A surface mount or over-under conveyor 100 ft. long or shorter at 120CPH (assumes 15RPM drive sprocket with 5.2:1 speed reducer) using a high torque / low speed hydraulic motor 24.0 cu in/rev (8.1GPM fluid requirement)

OR

One pair of wraps or high side washers plumbed in parallel with separate speed control valves running at 80RPM, each using 9.7 cu in/rev motors (6.72GPM total fluid requirement)

OR

One pair of low side washers plumbed in series running at 80RPM with 5.9 cu in/rev motors, one pair of high side washers plumbed in series running at 80RPM with 11.3 cu in/rev motors, and one pair of tire washers plumbed in series running at 200RPM with 4.5 cu in/rev motors using a flow divider and 3 speed control valves (total fluid requirement of 8.37GPM)

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



HYDRAULIC POWER PACK CAPABILITIES

One 10HP Power Pack with 12.3GPM pump can operate

A surface mount or over-under conveyor longer than 100 ft. at 150CPH (assumes 15RPM drive sprocket with 5.2:1 speed reducer) using a high torque / low speed hydraulic motor 24 cu in/rev (10.12GPM fluid requirement)

OR

A surface mount or over-under conveyor longer than 100 ft. at 150CPH (assumes 15RPM drive sprocket with 5.2:1 speed reducer) using a medium torque / medium speed hydraulic motor 14.9 cu in/rev (6.3GPM fluid requirement)

OF

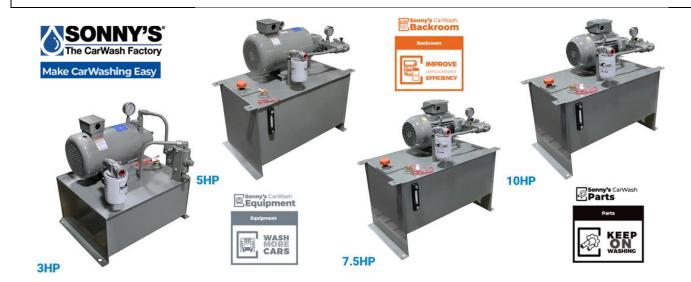
One pair of low side washers plumbed in series running at 80RPM with 5.9 cu in/rev motors, one pair of wraparound washers plumbed in parallel running at 80RPM with 11.3 cu in/rev motors, and one pair of high side washers plumbed in series running at 80RPM with 11.3 cu in/rev motors using 4 speed control valves (total fluid requirement of 10.35GPM)

NOTE

Recommended shaft speed for Tire Brushes with plastic bristles is 300-400RPM.

Recommended shaft speed for Washers with cloth is 60-70RPM.

Recommended shaft speed for Washers with NeoGlide is 80-90RPM.



© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



HYDRAULIC POWER PACK SELECTION

The correct power pack selection is important to your operation for long term reliability and maintenance cost control. Reliability and less maintenance can be achieved partly by sizing a hydraulic power pack so that it's full running load, in gallons per minute, is approximately 80% of the maximum rating of the power pack pump.

Additionally, an operating back-up power pack for key equipment will be most appreciated during an unexpected breakdown. For example, if your conveyor power pack is a 7.5HP, 10.5GPM unit, you could select the same size power pack for your tire brush equipment. By placing these two power packs side by side you can easily switch the hydraulic lines should there be a problem with the conveyor power pack. Your cash register won't ring if the conveyor is not operating but you can still process vehicles without the tire brushes turning.

Sizing a hydraulic power pack is not difficult. One simple formula, and a few minutes of your time to calculate hydraulic motor loads is well worth the effort. Multiple outputs from one power pack (not to exceed the maximum gpm delivery of the power pack pump) can be achieved by plumbing pressure compensated speed control valves in a "daisy chain" method.

The formula for determining hydraulic motor demand in gallons per minute (GPM) is:

equipment shaft rotation rpm X cu in/rev rating of the hydraulic motor
231

= required GPM of pumped hydraulic fluid

SPECIAL NOTE: Series, or parallel, plumbing of hydraulic drive motors must be taken into consideration when sizing a power pack.

Series plumbed motors may be calculated as one motor provided they are the same cu in/rev displacement.

Parallel plumbed motors must be calculated as separate fluid loads and their total usage in GPM added for a total GPM power pack requirement.

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



HYDRAULIC POWER PACK SELECTION

A Few Examples for Using the Selection Formula are:

Example # 1: A pair of cloth equipped wraparound washers using 11.3 cu in/rev motors plumbed in parallel needs a new power pack.

90 rpm X 11.3 cu in/rev 231 = 4.40 GPM per motor = 8.80 GPM for two #1005 motors in parallel

Therefore, a 7.5HP power pack with a 10.5GPM pump with two pressure compensated speed control valves will meet the needs of this equipment fluid demand.

Example # 2: You want to run a pair of low side washers using 5.9 cu in/rev motors plumbed in series, a pair of van side washers using 11.3 cu in/rev motors plumbed in series, and a pair of tire brushes using 4.5 cu in/rev motors plumbed in series all on using one power pack.

Side Washers 80 RPM X 5.9 cu in/rev 231

= 2.04 GPM

Van Washers 80 RPM X 11.3 cu in/rev

231

= 3.91 GPM

<u>Tire Washers</u> 350 RPM X 4.5 cu in/rev

231

6.82 GPM

Total GPM required 12.77 GPM

SonnysDirect.com



HYDRAULIC POWER PACK SELECTION

Therefore, a 15HP power pack with a 19.5GPM pump with three pressure compensated speed control valves will meet the needs of this equipment fluid demand.

Example # 3: A power pack is needed for a 100 ft. long over and under conveyor that will generally run at 120CPH (Cars Per Hour) using a 14.9 cu. in./rev. motor coupled to a 5.2:1 ratio speed reducer. In this application there is 32 inches of conveyor chain travel per drive sprocket revolution. 120 cars per hour equals one pusher roller traveling approximately 40 ft. per minute.

480 inches pusher roller travel per minute
32 in. conveyor chain travel per drive sprocket revolution

- = 15 RPM for drive sprocket X 5.2 speed reduction
- = 78 RPM of hydraulic drive motor shaft

78 RPM X 14.9 cu in/rev 231

= 5.03 GPM hydraulic fluid required for 120 CPH

Allowing for conveyor chain speed increases above 120CPH for this 100 ft. long conveyor a 7.5HP, 10.5GPM hydraulic power pack would be chosen.

NOTE

Hydraulic fluid requirements, in gallons per minute, from the power pack pump will vary with a change in the size of the conveyor hydraulic drive motor as well as a change in the speed of the conveyor chain movement. Always calculate conveyor power pack requirements using the highest conveyor chain speed and the largest (in cu in/rev) hydraulic drive motor that your location would run.

Refer to the conveyor hydraulic motor speed and torque notes in the Motor Chart in this section to determine your motor needs as they relate to high and low speed and high and low torque.

Some high speed, low torque hydraulic drive motors will stall if the conveyor chain is adjusted to a very slow speed. Also, some low speed, high torque hydraulic motors will "top out" at chain speeds that may not be fast enough for high production.

A method to handle the slow conveyor speeds of off-season washing and the high conveyor speeds of the peak washing season is to have both high torque / low speed and low torque / high speed hydraulic motors on hand. This helps to cure the very slow conveyor speed problem by mounting the high torque / low speed motor in that slower season as well as providing an on the-shelf spare hydraulic motor at all times.

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



SAFETY WEAR REQUIRED FOR INSTALLATION

<u>WARNING</u>: Make sure to follow Local and State Safety Wear Required Regulations to ensure the safety of all personnel. Failure to follow Safety Regulations may result in personal injury, death and/or dismemberment.

TOOLS REQUIRED FOR INSTALLATION

Tools	Tools
Not Included	Not Included
Safety Glasses, Gloves	Tape Measure, Sledgehammer
Impact Gun with Sockets	Standard Combo Wrench Set
Standard Screwdriver	1/2" Hammer Drill
1/2"Drive Ratchet Set	Stainless Shims

QUICK START INSTALLATION MANUAL

Go online to SonnysDirect.com under Support Tab and look for:

QUICK START MANUAL



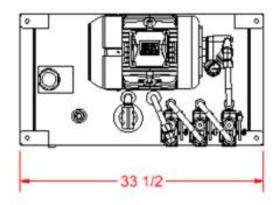
Hydraulic Power Pack

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

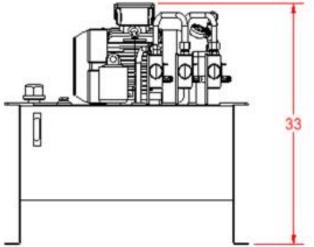
SonnysDirect.com

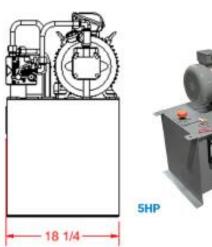


INSTALLATION DIMENSIONS









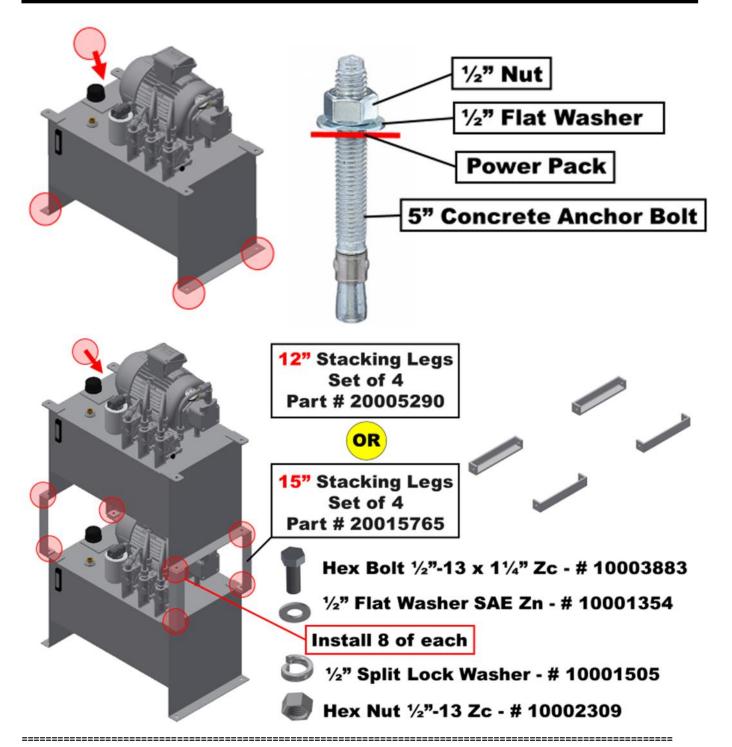
5HP

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



INSTALLATION DIMENSIONS



© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



INSTALLATION INSTRUCTIONS

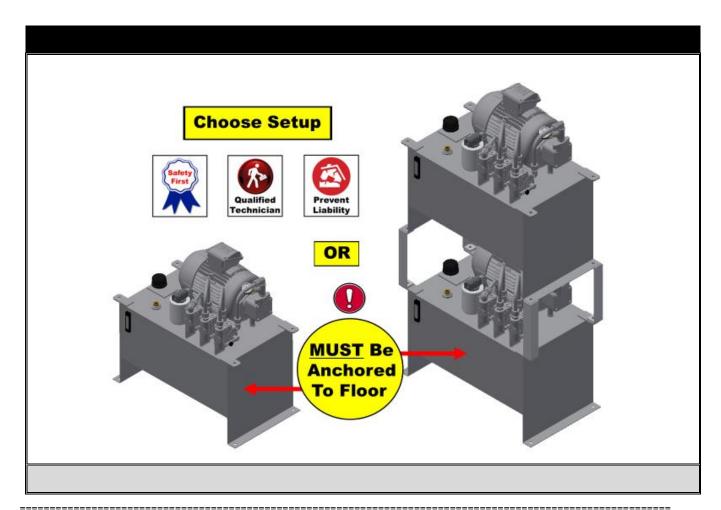


All parts and components <u>MUST</u> be installed by experienced and trained technicians. Safety wear is required for ALL personnel.



WARNING: No climbing or standing on top of unit.

Work Force	Check	Installation Time	Check
2 Experienced and Trained Technicians	▼	1 to 2 Hours Without Setbacks	\

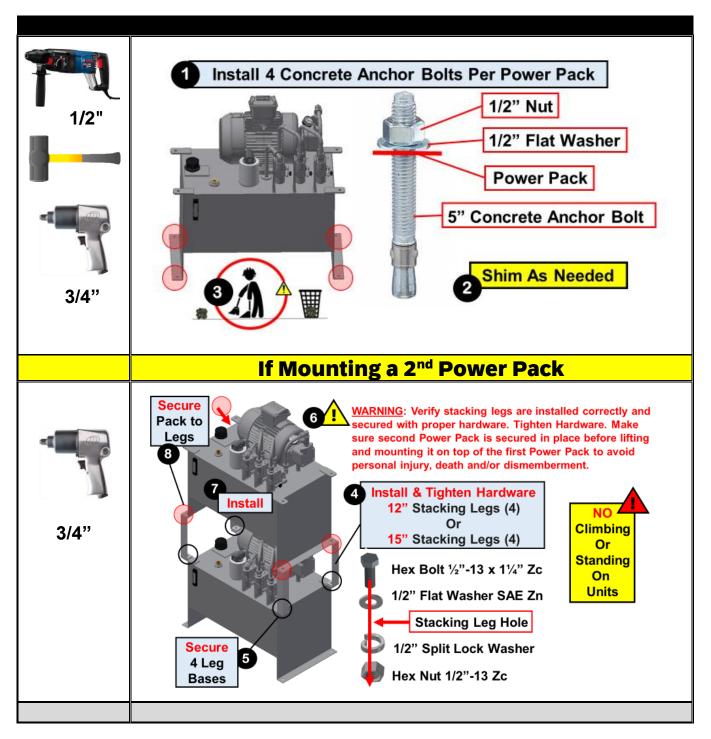


© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



INSTALLATION INSTRUCTIONS

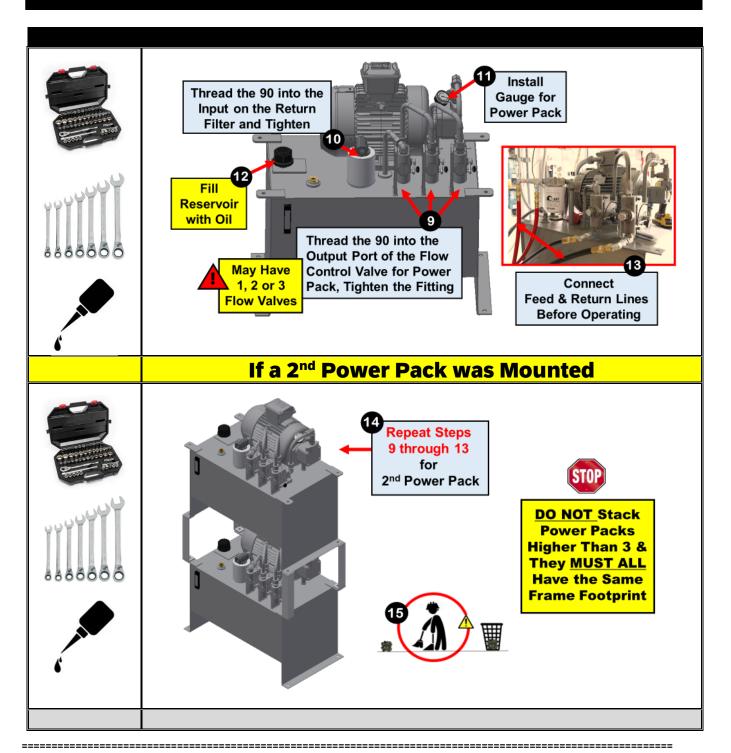


© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



INSTALLATION INSTRUCTIONS



© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



ADJUSTMENTS AND TESTING

IMPORTANT: AFTER WASHING THE FIRST 200 CARS WITH A NEW HYDRAULIC SYSTEM CHANGE THE RETURN LINE FILTER. THEN CHANGE THE RETURN LINE FILTER EVERY 6 MONTHS.

Initial Start-Up

- 1. Check all fittings for tightness.
- 2. Fill the hydraulic system with non-detergent, non-foaming, **ISO 32 10W** grade hydraulic fluid. With the power on, fill the unit until the fluid reaches the low level switch then add a little bit more.
- 3. Adjust the relief pressure for each flow control valve on the Hydraulic Power Pack.
 - a. Install caps on the output of each flow control valve (FCV).
 - b. Pressure **MUST** be equal on each FCV. To achieve this, turn all FCV's off (zero flow).
 - c. Advance the adjustment handle on the FCV closest to the pump to the full flow position (the FCV closest to the pump should have the highest GPM placed on it and go down accordingly).
 - d. Adjust the set screw under the hex cap for this FCV to the minimum relief setting required for operation on each individual piece of equipment.
 - e. Turn this first FCV to zero flow.
 - f. Repeat steps b through d for each FCV, in order, for this Power Pack. Be certain that all FCV's are off except the one that is being adjusted for the pressure relief setting.
- 4. Check that rotation is correct for each hydraulic motor in each circuit. Reverse the hydraulic lines at the hydraulic motors to reverse rotation.
- 5. Adjust for proper hydraulic motor speeds with the appropriate flow control valves on the Hydraulic Power Pack.
- 6. Repair any hydraulic fluid leaks.

Speed and Torque Adjustment (where applicable)

1. Hydraulic

- a. The speed can be adjusted on the flow control for the power pack.
- b. To increase the speed move the handle on the flow control closer to the number 10.
- c. To decrease the speed move the handle on the flow control closer to the number 1.
- d. The torque must be set prior to operation and should be set between 600 and 900 PSI. For information on how to set the torque please refer to Adjustments and Testing section in this manual.

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



ADJUSTMENTS AND TESTING

Speed and Torque Adjustment (where applicable)

2. Electric

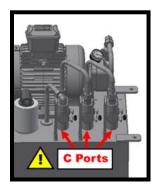
- a. The speed can be adjusted on the Variable Frequency Drive (VFD).
- b. To increase the speed adjust the Hertz on the VFD to a higher number.
- c. To decrease the speed adjust the Hertz on the VFD to a lower number.
- d. The Overload on the Motor Starter protector(s) must be set at the lowest level to allow for operation. Adjust the amps in accordance with motor(s) name plate.

Instructions for Setting the Relief Valve

- 1. Remove the pressure hose going to the hydraulic motor. This is the "C" port on the flow control valve.
- 2. Plug the "C" port with a pipe plug.
- 3. Remove the relief valve cap nut located directly across from the incoming pressure pipe or hose from the pump.
- 4. Startup power unit and read the gauge pressure.
- 5. Adjust the relief valve pressure by turning the adjustment screw clockwise to increase, counterclockwise to decrease.
- 6. Adjust to the lowest possible level to archive desired use.
- 7. Turn off the power unit and replace cap nut on the relief valve and replace the pressure hose on the flow control valve.

For Multi-Flow Units

- 1. Remove both pressure hoses & plug both pressure (C) ports.
- 2. Set flow valve closest to pump to full flow & second flow valve to zero (0) flow.
- 3. Turn on power unit and adjust relief valve to desired setting on first valve.
- 4. Set flow on first valve to 0 flow and flow on second valve to full flow.
- 5. Adjust the relief valve on the second flow valve to the desired setting.
- 6. Turn off power unit and reconnect the pressure hoses.



SonnysDirect.com



GENERAL OPERATION

- Starting and stopping of the electric motor is controlled by the motor starter coil for the function the power pack is designated.
- The speed of the rotation of the motor(s) being driven may be changed by the flow control valve on the Hydraulic Power Pack. See Adjustments and Testing Section.
- Flow dividers are used to divide the hydraulic fluid supplied by a power pack; between several pieces of tunnel equipment to reduce the number of power packs required for a given tunnel layout.
- Fill the hydraulic system with non-detergent, non-foaming, ISO 32 10W grade hydraulic fluid.

NOTE: You can contact Suncoast Hydraulics @ 904-693-3318 for any technical questions.

MOTOR, PUMP & PARTS WARRANTY

- Motors are manufactured by Baldor and are OEM. They can be purchased through Sonny's and will be Drop Shipped from Suncoast Hydraulics.
- All Power Pack Motors carry an (18) month Baldor warranty and will need to be brought to a local Baldor Service center for a warranty evaluation. If a replacement motor is purchased prior to the motor being evaluated and the service center & Baldor decides to repair the motor under warranty the motor will be returned to the customer at no charge for the repairs and the customer will be responsible for payment of the new motor. If the motor is in warranty failure, customer will be issued credit for the motor. Freight is not covered.
- All Pumps carry a (1) year warranty through Suncoast/Vickers and will need to be returned back to Suncoast for any warranty evaluations. If a replacement pump is purchased prior to the bad pump being evaluated, and the pump is repaired under warranty, it will be returned to the customer at no charge for the repairs; and the customer will be responsible for payment of the new pump. The repaired pump is now a spare. If the pump is in warranty failure, customer will be issued credit for the pump. Freight is not covered.
- Warranty on other items such as low level switches, filters and flow controls carry a (1) year warranty period.



WARNING: Warranty is void on all pumps when using a water based fluid.

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



WARRANTY



Always Check Latest Warranty Online: SonnysDirect.com (Support Tab)

SONNY'S ENTERPRISES, LLC **FACTORY LIMITED LIFETIME WARRANTY**



Equipment manufactured by SONNY'S ENTERPRISES, LLC is warranted to be free from defect in material and workmanship. Welded metal framework and other non-moving, non-wearable fabricated metal components manufactured by SONNY'S are warranted for the life of the equipment to the original purchaser. Fabricated metal wearable surface and moving components manufactured by SONNY'S are warranted for a period of one (1) year to the original purchaser of the equipment. All components assembled to SONNY'S equipment that are manufactured by others will also be warranted by Sonnys for a period of one (1) year.

Exclusions: The following items are excluded from the 1 year warranty: Brushes on tire brush & tire shiners, all cloth and materials including neoglide, microclean, standard cloth, drying material, and Ecofi; chain, roller and all wear items. Other restrictions may apply. All new cloth shipped with new SONNY'S equipment is warranted for a period of one (1) year or 80,000, whichever occurs first. Microclean is warranted for a period of one (1) year or 60,000 carwashes, whichever occurs first.

Wear items include, but are not limited to, shocks, cylinders, bearings, material, brushes, and any other item that requires regular greasing. Lack of required maintenance will result in denial of warranty. Wear items will be covered in the event of failure upon startup.

Blower motors not installed utilizing split bolt connectors will NOT be warrantied. Neither labor nor transportation charges are included in this warranty.

This warranty is not assignable or transferable. The warranty period begins the first day following installation or 30 days from the original invoice date, whichever occurs first. The Seller's liability shall be limited to repair or replacement of materials found to be defective within the warranty period. In the event of repair or replacement this limited warranty is noncumulative. The Purchaser must supply the Seller with immediate written notice when any defects are found. The Seller shall have the option of requiring the return of defective material to establish the Purchaser's claim.

This warranty is based upon the Purchaser's reasonable care and maintenance of the warranted equipment. It does not apply to any equipment which has been subject to misuse, including neglect, accident or exposure to harsh chemicals or chemicals that react violently with water, organic acids (e.g. acetic acid), inorganic acids (e.g. hydrofluoric acid), oxidizing agents (e.g. peroxides), and metals (e.g. aluminum). Chemicals corrosive to aluminum alloys, carbon steel, and other metals. Nor does it apply to any equipment which has been installed, repaired or altered by anyone not so authorized by SONNY'S. Further, the equipment must be properly installed with proper accuracy of all specified plumbing, electrical, and mechanical requirements. This warranty does not apply to normal wear and tear or routine maintenance components.

EXCEPT AS EXPRESSLY STATED HEREIN, SONNY'S SHALL NOT BE LIABLE FOR DAMAGES OF ANY KIND IN CONNECTION WITH THE PURCHASE, MAINTENANCE, OR USE OF THIS EQUIPMENT INCLUDING LOSS OF PROFITS AND ALL CLAIMS FOR CONSEQUENTIAL DAMAGES. THE LIMITED WARRANTY EXPRESSED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. SONNY'S NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION HEREWITH.

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



PREVENTIVE MAINTENANCE

DAILY

Maintenance Video, Scan QR Code

or https://youtu.be/H1nMa49zuuY



1. Opening Check List

- a. Check for leaks around hoses and fittings, repair any hydraulic leaks immediately.
- b. Check hydraulic fluid level in the Power Pack reservoir. Refill, as necessary, with a non-detergent non-foaming ISO 32 10W grade hydraulic fluid.

2. Operational Check List

- a. Check fluid temperature on tank sight gauge at mid-day. Oil temperature should not exceed 180 degree Fahrenheit.
- b. Examination of general operation, listen for any unusual noises. Visually check each piece of hydraulic circuit equipment for proper operation.

WEEKLY

1. Clean the entire assembly thoroughly.

FOR THE FIRST MONTH OF OPERATION CHECK ALL FITTINGS FOR TIGHTNESS EACH WEEK.
PERFORM THESE INSPECTIONS AS PER THE SCHEDULE SHOWN BELOW AFTER THE
FIRST MONTH OF OPERATION.

MONTHLY

1. Inspect all hardware and fittings for tightness.

SEMI-ANNUALLY

- 1. Measure and Record Full Load Amp Readings.
 - a. Measure and record full load current readings from each of the three legs of each of the three phase electric motors.
 - b. If the differential of current load exceeds 10% between the legs, or the balanced load current of all three legs has increased over 10% since the most recent measurements, order a replacement motor.
 - c. Record readings in the semi-annual log.
- 2. Change return line fiberglass filter.

ANNUALLY

1. Drain, flush and refill the Hydraulic Power Pack with new, non-foaming, non-detergent hydraulic fluid (ISO 32 10W).

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



Sonny's CarWash College™

Master Your Trade

Comprehensive training to plan, manage, maintain, and grow your business!

Sonnys-Support@SonnysDirect.com / Training@SonnysDirect.com



Hands-On Training - www.SonnysDirect.com/class_schedule

 State-of-the-art equipment labs and collaborative learning environments located in Tamarac, FL & Phoenix, AZ. Hands-on experience that's transferable to your wash.



Real Certifications

 Real training with real testing and certification your staff will gain the necessary skills a positive impact that drives savings.





Real CarWash Experts

 Our Instructors have washed over 100 million cars and combined have owned, operated, or managed over 200 car wash locations.



Comprehensive Training Materials

• Participants leave with complete documentation of every procedure, technique, and skill they learn— a lifetime worth of car washing experience.



© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



CUSTOMER SERVICE & TECHNICAL SUPPORT



Need more help?

For questions regarding installation, operational issues, settings, or servicing of this equipment please contact Sonny's Tech Support or email at

Sonnys-Support@SonnysDirect.com.

To order **replacement parts**, contact **Customer Service**, email us at <u>CustomerService@SonnysDirect.com</u> or visit us on the web at <u>www.SonnysDirect.com</u>.

Toll Free Main Line 800-327-8723 Office: Monday – Friday 8:00 AM – 5:30 PM ET

Fax Number 800-495-4049 **Local Number** 954-720-4100

Customer Service Option 3 Customer Service: Monday – Friday 8 AM – 8 PM ET

Parts Option 3
Equipment Sales Option 4
Technical Support Option 5

SONNY'S ENTERPRISES INC. 5870 N Hiatus Road TAMARAC, FLORIDA 33321

Thank you for being a Sonny's car wash equipment owner!

From all of us here at



Designed here. **Built** here. **Backed** here.™

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



HOW CAN WE HELP YOU?







Get answers to the most **frequently asked questions** regarding car wash equipment, improving your operations, attracting customers, investing in a car wash, managing risk at your car wash, instructional videos, and much, much more.







SonnysDirect.com

(under Support tab)





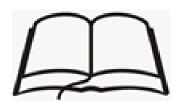


© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



ONLINE PRODUCT MANUALS & TECH BULLETINS





Scan QR Code	Scan QR Code
Product Manuals	Technical Bulletins
Backroom Support Equipment	Central Vacuums
Central Vacuum Systems and Components	Friction Washing Components
Chemical Applicators and Components	Pre-Wash
Controls	Control Release Notes
Conveyors and Components	
Drying Components	Architectural Bulletins
Electronic Components	
Friction Wash	Safety Bulletins
High Pressure Systems	
Pre-Wash	
Signage	

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



property of their respective owners.

FREE NEWSLETTERS AND ALERTS

JOIN THE FAMILY

SIGN UP to get exclusive content.



Select the Publication You Need to Support the Growth of Your Business

© 2023 SONNY'S The CarWash Factory°. All Rights Reserved.	SonnysDirect.com
elevate the cleaning process.	
Water Treatment: Tactics to optimize every drop of water to reduc	
Do's & Don'ts: Tips and Tweaks to keep your Sonny's Equipment	at peak performance.
Detailing: Deals on everything you need to run your professional, a center.	and express detailing
time at a cost that makes sense.	
Car Wash Chemistry: Information to help you deliver a clean, dry,	and shiny car every
Car Wash Marketing: Ideas to capture, upsell and retain your unfaboth onsite and online. Marketing and signage tips to increase members decrease churn and improve loyalty.	ship and average tickets,
Car Week Marketings Ideas to centure upsell and retain your unfa	oir abore of austamore
Technology, Controls, & Point-of-Sale: Learn the latest tips and technology to increase profits and reduce costs.	tricks to leverage
Maintenance & Repair: Receive CarWash College's latest tips to wash.	run a more prontable
Maintanana & Danaira Danaira Carllana'a lataat tina ta	
delivery times and the largest inventory in the world!	loo. Induotry loading
Parts & Supplies: Get Special Offers on car wash parts and suppl	ies Industry leading
improve customer satisfaction.	raming expenses, and
Tunnel Equipment: Latest tips to get more customers, reduce ope	erating expenses, and

Manual-O, Hydraulic Power Pack - Part # 10013914-F



FREE CAR WASH CATALOGS & BOOKS



EMERGENCY CONTACTS

Scan QR Code







Emergency
CarWash Equipment
Tunnel Equipment
CarWash Parts & Supplies
CarWash Controls
CarWash College
CarWash Chemistry
CarWash Signage
Corporate
New Investors

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com





UNLIMITED WASH CLUB





With your **OneWash™** membership, you'll have unlimited access to the industry's only complete suite of car wash business solutions with benefits.











Expert guidance to help you go from breaking ground to ground-breaking performance.





Comprehensive hands-on training to plan, manage, maintain and grow your business.





Equipment

Trusted leadership from the world's largest manufacturer of conveyorized car wash equipment.





Services

Local installation, service and support to build and operate your business.





Vacuums

The industry's best-selling central vacuum with professional grade durability to maximize uptime.





Controls

Complete business management technology to deliver efficiency and profitability across your locations.



Marketing

Marketing consultation, design and campaign management to attract, upsell and retain customers onsite and online.





Signage

Custom branded signage and lighting to create a value proposition and on-site experience that dominates.





Chemistry

The most convenient and accurate way to deliver a clean, dry and shiny car.





Backroom

Integrated backroom systems designed to consistently achieve superior performance.





Water

Revolutionary treatment to elevate water quality and reduce waste.





Parts

12,000 parts in stock for immediate delivery to support your business with inventory for every OEM.

Learn More at: www.SonnysDirect.com/onewash

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



BOOST YOUR SALES



WHAT YOU SEE IS WHAT YOU GET



© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com

This document is confidential and proprietary to SONNY'S and cannot be used, disclosed, or published without prior written consent. Content, prices, and availability subject to change without notice. All brand names, trademarks or registered trademarks are the property of their respective owners.

Manual-O, Hydraulic Power Pack – Part # 10013914-F



CONTROL YOUR PROFITABILITY



Sonny's Point-of-Sale & Back-Office Management System

Engineered with state-of-the-art technologies and designed exclusively for the car wash industry with input from experienced real-world operators. This high-performance car wash point-of-sale (POS) computer system comes complete with features designed to help you maximize your site's profitability, including cash flow management, employee scheduling, VIP club membership programs, house / fleet accounts, online shopping, E-Commerce, and more!

Increase Uptime, Revenue, and Customer Loyalty While Reducing Operating Costs.

SECURITY AT YOUR FINGERTIPS



Compliant Car Wash Video Security Systems

Eyeson Digital Surveillance & Management Systems provides your car wash end-to-end real-time surveillance and monitoring of the entire perimeter of your property including the tunnel, building access points, vacuum stations and employee work areas.

Each system is custom-designed specifically for your car wash security needs and available 24/7/365 live monitoring gives you peace of mind from false damage and accident claims, or cash loss resulting from theft or shrinkage.

Eyeson delivers more, much more. Imagine being able to search by license plate to find all footage of a car on your property or identifying an intruder on your property at 2am looking to steal copper being questioned by a live person via a 2-way speaker that can send the police. These are the options available that let you focus on what really matters—growing your business!

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com

This document is confidential and proprietary to SONNY'S and cannot be used, disclosed, or published without prior written consent. Content, prices, and availability subject to change without notice. All brand names, trademarks or registered trademarks are the property of their respective owners.

Manual-O, Hydraulic Power Pack - Part # 10013914-F



GROW YOUR BUSINESS





Why Choose Car Wash Buildings' Pre-Manufactured Car Wash?

Car Wash Buildings' complete package is designed to provide you with a world-class express exterior car wash structure that dazzles your customers and eclipses your competition without the high cost and lead times associated with traditional building construction.

Unique Light Wall

Forget the signs that drivers are mentally trained to ignore, now you can turn your entire building into a 24/7 marketing tool that draws in passing traffic. The light wall is visible through the glass walls and can be programmed for different color schemes to match your branding, or even seasonal advertising. Imagine turning your car wash green and red for Christmas, or red, white and blue for the 4th of July – even pink in October for breast cancer awareness month!

Your entire order should be available within 8-12 weeks after you give us authorization to begin production.





Designed here. Built here. Backed here.™

© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



TOTAL SOLUTION



© 2023 SONNY'S The CarWash Factory®. All Rights Reserved.

SonnysDirect.com



Designed here. **Built** here. **Backed** here.™



Make CarWashing Easy





