



# Hydraulic Power Pack



## Owners Manual

Sonny's Enterprises, Inc.  
5605 Hiatus Road  
Tamarac, Florida 33321

## \*Table of Contents\*

<b>*PRODUCT SPECIFICATIONS*</b> .....	<b>4</b>
<b>*SAFETY REQUIREMENTS*</b> .....	<b>5</b>
<b>*INSTALLATION*</b> .....	<b>6</b>
Utilities Requirements .....	6
Hydraulic Power Pack Installation .....	7
<b>*GENERAL OPERATION*</b> .....	<b>9</b>
<b>*PREVENTIVE MAINTENANCE*</b> .....	<b>10</b>
<b>*PARTS LIST*</b> .....	<b>11</b>
<b>*CUSTOMER SERVICE*</b> .....	<b>13</b>

## **\*INTRODUCTION\***

This Owner's Manual contains information that is vital to the successful installation, operation and maintenance of your SONNY'S vehicle washing equipment.

Please read, and understand, the full contents of this manual before installation and operation of the equipment. Keep this booklet in a location where it may be used for ongoing reference.

Should you have any questions on the operation or servicing of this equipment please contact

TECHNICAL SERVICES DEPT.  
SONNY'S ENTERPRISES INC.

5605 Hiatus Road

TAMARAC, FLORIDA 33321

TELEPHONE: 800-327-8723      FAX: 800-495-4049

THANK YOU FOR YOUR CONFIDENCE IN SONNY'S !!!!!



## \*PRODUCT SPECIFICATIONS\*

- 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.

## **\*SAFETY REQUIREMENTS\***

1. Only those employees specifically instructed by the location manager will be permitted to enter the wash tunnel to perform inspections or maintenance.
2. Do not enter the wash tunnel when the equipment is operating.
3. Always exercise caution when walking through the wash area, may be slippery conditions.
4. Be cautious when walking through the tunnel to avoid running into or tripping over equipment.
5. Do not ever run through the wash area.
6. Do not perform any work on equipment unless you performed Lock-Out Safety Precautions.
7. When maintenance requires that a piece of equipment be in operation, one qualified maintenance person must stay at the power disconnect switch while that equipment is operating.
8. 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 can only be restarted by the person who performed the "lock out" operation.
9. Do not attempt to repair or adjust any pressurized liquid or pneumatic part, hose, pipe or fitting while that equipment is in operation.
10. Any "Stop" switch activated must be reset only by the person who initiated the operation.
11. Electrical connections and repairs are to be performed by a Licensed Electrician only.
12. Store all cleaning and washing solutions and oils in a well ventilated area.
13. Clean up fluid spills immediately to prevent hazardous safety conditions.
14. Be certain to follow all safety procedures on MSDS Sheets for each chemical product used.
15. All new employees must be thoroughly trained in safe operating and maintenance practices.
16. All employees must attend periodically scheduled safety procedure sessions.
17. Do not operate any piece of equipment that requires safety covers with those covers removed or improperly installed.
18. Do not allow any part of your body or other object to come in contact with moving machinery.
19. Do not wear loose fitting clothing or jewelry around moving machinery.
20. At least two qualified maintenance people must be present when performing equipment repairs or preventative maintenance.
21. When working on any equipment that is higher than a person's shoulders always use a fiberglass ladder that is in good condition.

# **\*INSTALLATION\***

## **Utilities Requirements**

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

**Perform all trades work to all applicable local and national codes!**

### **Hydraulic**

- The installer is to provide materials and 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.

**???? QUESTIONS ????**

**CALL**

**TECHNICAL SERVICES DEPT.**

**SONNY'S ENTERPRISES INC.**

**TAMARAC, FLORIDA**

**TELEPHONE: 800-327-8723      FAX: 800-495-4049**

# Equipment Installation

## Hydraulic Power Pack Installation

### Tools

1. Safety Glasses
2. 1/2" Drive Ratchet Set
3. Standard Combo Wrenches
4. Standard Screwdriver
5. 1" Hammer Drill
6. Sledge Hammer
7. Tape Measure

### Consumables

1. Stainless Shims

### Manpower

Two (2) men

### Time (assuming no problems)

1.00 - 2.00 hours

### Installation Steps

1. Determine where the Power Packs are to be installed.
2. Sweep any debris from where the pack will sit.
3. Bring the Power Pack into the building set it in place.
4. Lag the Power Pack down, shim as needed.
5. If a second Power Pack will be mounted above this one install the 4 stacking legs to the pack and lift the second pack into place and bolt it to the stacking legs.
6. Thread the 90 into the output port of the flow control valve of the top pack. Tighten the fitting.
7. Thread the 90 into the input on the return filter and tighten.
8. Repeat steps 6 & 7 on the top pack if present.
9. Install the gauges on both Power Packs
10. Fill the reservoirs with oil.
11. Connect feed and return lines before operation.

# Adjustments and Testing

## Initial Start-Up

**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.**

1. Check all fittings for tightness.
2. Fill the hydraulic system with non-detergent, non-foaming, ISO 46 grade hydraulic fluid.
3. Adjust the relief pressure on 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.
  - d. Adjust the set screw under the hex cap on this FCV to a relief setting of 1200PSI.
  - e. Turn this first FCV to zero flow
  - f. Repeat Steps b - d for each FCV, in order, on 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.

## **\*GENERAL OPERATION\***

### **POWER PACK 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.

## **\*WARRANTY INFORMATION\***

- Fill the hydraulic system with non-detergent, non-foaming, ISO 46 grade hydraulic fluid.
- You can contact Suncoast Hydraulics @ 904-693-3318 for any technical questions.
- 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 a (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 decide to repair the motor under warranty the motor will be returned to the customer @ no charge for the repairs and the customer will be responsible for payment of the new motor. If the motor is a 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 @ 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 a 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.
- Warranty is voided on all pumps when using a water based fluid.

## **\*PREVENTIVE MAINTENANCE\***

### **DAILY**

1. Opening Checks
  - 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 ISO46 grade hydraulic fluid.
2. Operational Checks
  - a. Check fluid temperature on tank sight gauge at mid-day. Oil temperature should not exceed 180 degree Fahrenheit.
  - b. General examination of general operation, listening for any unusual noises. Visually check each piece of equipment in each hydraulic circuit for proper operation.

### **WEEKLY**

1. Clean the entire assembly thoroughly.

FOR THE FIRST MONTH OF OPERATION CHECK ALL FITTINGS FOR TIGHTNESS EACH WEEK.  
PERFORM THIS INSPECTION TO THE SCHEDULE SHOWN BELOW AFTER THE  
FIRST MONTH OF OPERATION.

### **MONTHLY**

1. Inspecting 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 #46).

**\*PARTS LIST\***



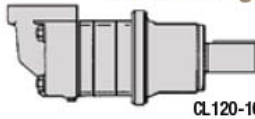
**Char-Lynn® Motors  
 2000 Series**  
 1 1/4in keyed shaft

Char-Lynn®  
 E.T.N.

Item #	Description	Price
CL104-1025-006	Motor, Char-Lynn, 9.6 Cu In / Rev	\$420.15
CL104-1043-006	Motor, Char-Lynn, 18.7 Cu In / Rev	460.35
CL61258	Seal Kit, Char-Lynn 104/106 Series	29.95

**Char-Lynn® Wheel Motor  
 Center Flange 10,000 Series**

Char-Lynn®  
 E.T.N.



CL120-1008



CL6405

Item #	Description	Price
CL120-1008	Motor, Char-Lynn 10,000 Series	\$1983.85
CL6405	Char-Lynn, Motor Seal Kit	25.75
CL6406	Char-Lynn, Shaft Seal Kit	27.80



HC16CF



HC15930

**Heco Center Flange**

For use with Char-Lynn Motor

- New nickel plated shaft
- Nickel plated seal carrier
- Cadmium plated seal carrier bolt
- High pressure lip seal



HC5GK

HÉCO GEAR

Item #	Description	Price
HC16CF	Gearbox, Center Flange Over-Under Conv	\$891.75
HC15930	Seal Kit, Heco	45.00
SK16UN	Seal Kit, Heco Nickel Plated 16CF & 16FF	70.88
HCBK160	Bolt Kit, Char-Lynn to Heco 16 Series	9.90
HC5GK	Sungear Kit 16E, Heco (order separately)	115.50

**Heco 4-Bolt Center Flange  
 Sherman® / MacNeil™ Style**

HÉCO GEAR

For use with Char-Lynn Motor



HC16CF2052E



HC5GK

Item #	Description	Price
HC16CF2052E	Gearbox, Heco 4 Bolt	\$891.61
HC5GK	Sungear Kit 16E, Heco (order separately)	115.50



**Char-Lynn® 2000 Series  
 Use with Heco Gear Boxes**

Char-Lynn®  
 E.T.N.

Item #	Description	Price
CL106-1012-006	Motor, Char-Lynn 2000 11.9 Cu In / Rev	\$342.16
CL106-1013-006	Motor, Char-Lynn 2000 14.9 Cu In / Rev	357.75
CL106-1014-006	Motor, Char-Lynn 2000 18.7 Cu In / Rev	361.90
CL61258	Seal KIT, Char-Lynn 104/106 Series	29.95



CL119-1031

**Char-Lynn® Front Flange  
 10,000 Series**

- 2 1/4in shaft
- 54.7 cubic inch displacement

Char-Lynn®  
 E.T.N.

Item #	Description	Price
CL119-1031	Motor, Char-Lynn 10,000 Series	\$1870.35

**Heco Front Flange**

HÉCO GEAR

For use with Char-Lynn Motor



HC16FF



HC5GK

Item #	Description	Price
HC16FF	Gearbox, Front Flange Surface Conveyor	\$775.78
HC15930	Seal Kit, Heco	45.00
SK16UN	Seal Kit, Heco Nickel Plated 16CF & 16FF	70.88
HCBK160	Bolt Kit, Char-Lynn to Heco 16 Series	9.90
HC5GK	Sungear Kit 16E, Heco (Order separately)	115.50

**Heco 4-Bolt Center Flange  
 Belanger® Style**

HÉCO GEAR

For use with Ross MF Motor



HC16CF2453



HC16M

Item #	Description	Price
HC16CF2453	Gearbox, 4-Bolt, Belanger	\$941.00
HC16M	Sungear Kit HC16CF2453, Heco (order separately)	97.35
MF180601AAAC	Hydraulic Motor, Parker 18ci 2-bolt	295.08



V101P1P1-20

**V10 Series Pumps** 3/4in Straight Keyed Shaft, 1in NPT Inlet, 1/2in NPT Outlet

Item #	Description	Displacement Cubic Inch per revolution	GPM @ 1800 RPM	Price
V101P1P1-20	Pump, Vickers 0.2 Displacement 1.5GPM	0.2	1.5	\$267.25
V101P3P1-20	Pump, Vickers 0.6 Displacement 4.5GPM	0.6	4.5	267.25
V101P4P1-20	Pump, Vickers 0.8 Displacement 6.0GPM	0.8	6	267.25
V101P5P1-20	Pump, Vickers 1.0 Displacement 7.5GPM	1.0	7.5	371.30
V101P7P1-20	Pump, Vickers 1.39 Displacement 10.5GPM	1.39	10.5	283.90
923548	Seal Kit, Vickers Pump 5 & 7HP			5.88
263585	Pump, Vickers Shaft Seal			24.15



V201P6P1-11

**V20 Series Pumps** 3/4in Straight Keyed Shaft, 1 1/4in NPT Inlet, 3/4in NPT Outlet

Item #	Description	Displacement Cubic Inch per revolution	GPM @ 1800 RPM	Price
V201P6P1-11	Pump, Vickers 1.19 Displacement 9.0GPM	1.19	9.0	\$328.15
V201P7P1-11	Pump, Vickers 1.39 Displacement 10.5GPM	1.39	10.5	328.15
V201P8P1-11	Pump, Vickers 1.62 Displacement 12.0GPM	1.62	12.0	328.15
V201P9P1-11	Pump, Vickers 1.81 Displacement 13.5GPM	1.81	13.5	328.15
V201P11P1-11	Pump, Vickers 2.22 Displacement 16.5GPM	2.22	16.5	328.15
V201P13P1-11	Pump, Vickers 2.59 Displacement 19.5GPM	2.59	19.5	328.15
922733	Seal Kit, Vickers Pump Buna-N			21.90
229235	Pump, Vickers Seal Shaft V201P			17.85



V201P6P1-11

**V25 Series Pumps** 7/8in Straight Keyed Shaft, 1 1/2in NPT Inlet, 1in NPT Outlet

Item #	Description	Displacement Cubic Inch per revolution	GPM @ 1800 RPM	Price
25V21A1-20282	Pump, Vickers 4.13 Displacement 31.5GPM	4.13	31.5	\$727.50
922850	Seal Kit, Vickers Pump 25V			29.05

## **\*CUSTOMER SERVICE\***

Please contact SONNY'S Equipment Department for installation and/or operational questions regarding this piece of equipment.

Please refer to the Parts list in this manual or our Parts Catalog and contact SONNY'S Customer Service Order Entry Department for any replacement parts for this piece of equipment.

For Equipment Repairs please visit the web at [www.sonnysdirect.com/manuals](http://www.sonnysdirect.com/manuals).

**DEPARTMENT**

Toll Free Main Line  
Equipment Department

**PHONE NUMBERS**

800-327-8723  
954-720-4100

**FAX NUMBERS**

800-495-4049  
954-720-9292

Or you can email Sales at [sales@sonnysdirect.com](mailto:sales@sonnysdirect.com)

*Thank you for being a SONNY'S car wash equipment owner!*

*From all of us here at*

