



SURFACE CONVEYOR

Owners Manual



SONNYS ENTERPRISES. INC.
5605 Hiatus Road Tamarac, Florida 33321

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 of servicing of this equipment please contact:

TECHNICAL SERVICES DEPT.
SONNY'S ENTERPRISES INC.
5605 Hiatus Road
TAMARAC, FLORIDA
TELEPHONE: 800-327-8723 FAX: 800-495-4049.

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



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 thru 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 only 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 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.**

PRODUCT SPECIFICATIONS

- Accepts 13 inch wide tires
- Roller on Demand or continuous use
- Adaptable for front wheel pull or rear wheel push
- Direct drive speed reducer driven by high torque hydraulic motor
- Removeable take-up section cover for ease of maintenance
- Reliable air over oil hydraulic tensioner
- Long lasting Log Chain
- 14' roller spacing available
- Sonny's 2 wheel surface roller
- 5/16" thick steel deck 3/8" all angles
- Double hinged exit pusher roller door
- UHMW protective covering for the outside guide rail
- Air cylinder controller roller-up fork
- Recommend Ace 84 Pulse Kit

PREPARATION OF CONCRETE

THE MOST IMPORTANT FACTOR IN SUCCESSFUL CONVEYOR OPERATION
IS ACCURATE CONCRETE WORK ON THE WASH TUNNEL FLOOR !

Faithful adherence to the specifications shown on SONNT'S drawings #CWS-SC-01 and #CWT-SC-98004-A3 will help to achieve this goal.

While all dimensions and features shown on these drawings are very important some key factors require special attention.

For REAR WHEEL PUSH conveyor should sit $\frac{3}{4}$ " above passenger finished floor .

For FRONT WHEEL PULL conveyor should sit $\frac{3}{4}$ " below passenger finished floor.

(SEE DRAWINGS FOR CONCRETE DETAIL)

Proper placement of customer supplied steel angle and flat plate as shown in Section Thru Trench Detail drawing #

The side to side slopes and level areas of the finished floor. (ref. Section Thru Trench detail drawing #)

The entrance to exit finished floor and conveyor track shelf entrance to exit should RISE $\frac{3}{16}$ " per 10 feet of conveyor length or 1" for every 50 ft. of length.

Tracking bars are recommended.

Optional kick off plate to assist roller return exit end.

Be certain that all Notes shown on Drawings #CWS and #CWT are understood and performed properly.

Confirm the location of all in-ground chases and conduits as well as required dimensions and slopes to pouring concrete.

FOR ANY QUESTIONS please contact the Technical Service Department at Sonny's.

FRONT WHEEL PUSH OPERATIONS

Vehicle is driven onto the conveyor until the front wheel of that vehicle passes the roller up opening in the conveyor. The operator depresses the roller up button, the air cylinder lifts the roller up bar that delivers a pusher to the floor area. When the pusher reaches the floor area, the cancel limit switch will de-energize the roller-up cylinder. The vehicle proceeds through the wash being pushed by the roller behind the left front wheel. All rollers not called for proceed under the floor and surface beyond where the front would be setting. The vehicle remains stationary.

CONVEYOR SECTIONS FOR FRONT WHEEL PUSH

- 1). Entrance Box
- 2). 10ft. Take-up section, with hydraulic cylinder take-up and roller return to surface. Lower roller through
- 3). 10ft. Tapered Guide Section
- 4). 10ft. Intermediate Sections
- 5). 5ft. Exit section.
- 6). Exit and Drive box
- 7). Chain
- 8). Rollers
- 9). Hydraulic Power Pack

REAR WHEEL PUSH OPERATIONS

When the Rear Wheel Push is used a special section is furnished with the conveyor, allowing the roller to surface further along the conveyor path, allowing the vehicle to be placed completely on the conveyor with the rollers coming to the surface after the front wheel, unless they are called for by the operator. At this time the roller would surface behind the rear wheel.

CONVEYOR SECTIONS FOR REAR WHEEL PUSH

- 1). Entrance Box
- 2). 10ft. Take-up section, with hydraulic cylinder chain take-up and lower trough to suit
- 3). 17ft. Section with roller return to surface (at 20')
- 4). 10ft. Tapered Guide Section
- 5). Intermediate Sections
- 6). 5ft. Exit section.
- 7). Exit and Drive box
- 8). Chain
- 9). Rollers
- 10). Hydraulic Power Pack

INSTALLATION & OPERATION

ACCURATE CONVEYOR INSTALLATION IS CRITICAL FOR PROPER OPERATION ! BE CERTAIN THAT YOUR INSTALLERS ARE WELL EXPERIENCED IN OVER AND UNDER CONVEYOR INSTALLATION.

INSTALLATION

MECHANICAL:

Correlator should already be assembled and the frame located.

Entrance box and entrance lower steel troughs to be bolted together and put into place.

Set the entrance box and trough with the vehicle center line as per print.

The distance between the entrance and exit boxes is the conveyor length less 1 inch. The measurement is taken from the inside of the entrance box to the inside of the exit box.

In an existing car wash the top of the correlator frame, the entrance box and entrance lower section of trough and the exit box need to be set compatible to the existing floor. The exit of the 4" PVC raceway needs to be close to the power pack for easy hose routing.

Conveyor start/stop buttons should always be placed with easy reach of conveyor.

(1) start/stop at the entrance and (1) start/stop at the exit.

The electrical control for reversing the conveyor in case of an emergency must always be placed in close proximity of the conveyor.

HYDRAULIC

The hydraulic power unit supplies hydraulic fluid under pressure to the conveyor motor driving the conveyor. ½" minimum size plumbing rated @ 2000 psi minimum. Use plumbing elbows sparingly, sweep ell's are preferable. The customer's hydraulic power source will be required to provide at least 10gpm @ 1000 psi to the Conveyor drive motor.

PNEUMATIC

Interconnect a 3/8" compressed air line (100 psi @ 0.5 cfm) from the customer's Air Compressor to the Sonny's supplied air regulator and air solenoid valve and to the air cylinder ports on the conveyor take-up section. For long term, low maintenance operation install a 3/8" manual drain valve at the lowest point in each air line to the air cylinder.

ELECTRIC

Interconnect three #16AWG wires from and to the customer's car wash equipment programmer through the optional Conveyor pulse switch. If the pulse switch kit is ordered from Sonny's connect the pulse switch as follows.

1. To the switch "C" terminal connect the single phase voltage hot lead from the programmer.
2. To the switch "NO" terminal connect a wire that will return to the programmer with the conveyor pulse signal
3. To the switch "GROUND" terminal connect an earth ground wire from the Programmer.

Interconnect two # 16AWG wires (120v or 24v hot and neutral specify voltage with order) through the customers remote 'Roller-Up" control switch to the "Roller-Up" air solenoid valve provided by SONNY'S.

OPERATION

Starting and stopping conveyor movement is controlled by push button switches that operate the motor starter coil for the conveyor drive hydraulic power pack.

The "Roller-Up" function to move vehicles through the car wash on the conveyor is controlled for each vehicle by a push-button switch on the equipment programmer push-button station. " Back Up" Rollers may be raised automatically through the equipment programmer.

The speed of conveyor movement may be changed by the flow control valve on the conveyor hydraulic power pack.

FOR PROPER OPERATION SET THE ROLLER UP AIR PRESSURE AT 70 PSI MAXIMUM !!

OPTIONAL EQUIPMENT OPERATION

PULSE SWITCH KIT: Each time any magnet on the circular aluminum disc passes within range of the solid state switch an electrical pulse signal is sent to the equipment programmer to start and stop each piece of equipment according to the cumulative pulse count for each vehicle. The quantity of pulses transmitted in any given time frame is directly proportional to the speed of the conveyor.

SAFETY HORN WARNING KIT: Each time the conveyor start switch is pressed the horn will sound for a pre-determined period of time BEFORE the conveyor begins to move. Five seconds minimum of horn operation is suggested.

ANTI-COLLISION CONTROL KIT: When a vehicle has departed the last piece of equipment in the wash tunnel but has not vacated the exit concrete pad of the wash the anti-collision sensor detects this vehicle's presence. When a second vehicle approaches the last piece of equipment in the wash tunnel the anti-collision control sensor that has detected the first vehicle on the exit pad causes the conveyor to stop thereby preventing the second vehicle from hitting the first vehicle. The conveyor will not start automatically after the first vehicle clears the anti-collision sensor. As a safety measure conveyor restart can only occur from a manual start operation.

SONNY'S SURFACE CONVEYOR
CONVEYOR CHAIN TENSIONING INSTRUCTIONS

THIS TYPE OF CONVEYOR IS DESIGNED TO MAINTAIN CHAIN TENSION AUTOMATICALLY.

IF THE CENTER OF THE IDLE PULLY TO THE INSIDE EDGE OF THE ENTRANCE BOX IS LESS THAN 18" THE CHAIN SHOULD BE SHORTENED.

TURN SELECTOR VALVE ON CHAIN TENSIONER AIR SUPPLY TO THE OPPOSITE POSITION. THIS WILL RETRACT TENSIONING CYLINDER ALLOWING SLACK IN THE CHAIN TO REMOVE LINKS. CAREFULLY REMOVE LINKS IN PAIRS. THEN LIBRICATE ALL GREASE FITTINGS.

UTILITIES REQUIREMENTS

HYDRAULIC

The Customer's plumber is to provide and install minimum ½ inch pressure and return lines (minimum rating 2000 psi) from the customer's hydraulic power pack to the fittings on the hydraulic motor at the exit section of the conveyor. Sweep ells are preferable to 90 degree elbows. The conveyor will require approximately 10 gpm @ 1000 psi of hydraulic power.

PNEUMATIC

The Customer's plumber is to provide and install a 3/8 inch compressed air lines (100 psi @ 0.5 cfm) from the customer's air compressor through the regulator/solenoid manifold to the air cylinder on the conveyor take-up section of the entrance of the car wash.

ELECTRIC

The customer's electrician is to provide and install three #16AWG wires to and from the Customer's equipment programmer through a pulse sensor switch located in the conveyor drive section at the exit end of the car wash.

The Customer's electrician is to provide and install two #16AWG wires from a 120v or 24v (specify with order) power source through the customer's remote "Roller-Up" control switch to the air solenoid valve provided by SONNY'S.

OPTIONAL SAFETY HORN WARNING OR ANTI-COLLISION KITS

ELECTRIC

The customer's electrician it to provide and install single phase power through the conveyor interlock circuit for the horn Warning Kit and/or Anti-Collision Control Kit.

PREVENTATIVE MAINTENANCE

DAILY

- Check all functions of the conveyor for proper operation.
- Listen for and correct the cause of any unusual notes from the conveyor.
- Wash down the conveyor at the end of each day.
- Open manual air dump valves at the roller-up air cylinder at the end of each business day.

WEEKLY

- Grease the take-up shaft bearings under the plate and the take-up drum fittings.
- SAFELY inspect the roller-up system for proper operation. Be certain the roller-up forks are FULLY raised and lowered promptly on signal.
- Clean the take-up slide shafts.

MONTHLY

- Inspect all hardware and fittings for tightness.
- Inspect pusher rollers for wear. Replace as Necessary.
- Inspect conveyor chain and chain sprockets for wear. Replace as necessary.
- Grease the take-up slide tube until grease begins to flow from the bottom of each of the 2 slide tubes.

SEMI-ANNUAL

- Drain, flush clean and re-fill the hydraulic power pack that drives the conveyor with new, non foaming. Non detergent hydraulic fluid (ISO #46)
- Turn the conveyor chain upside down in order to extend the life of the chain.

PARTS LIST



REPLACEMENT

Replacement Parts Surface Conveyor - Sonny's®

We make car washing easy!



Take-Up Drum & Log Chain

- 3.5" Pitch Log Chain
- Pricing based on minimum 100 feet of chain

Item #	Description	Price
SUR/D	Drum, Surface Conveyor, Take-up, SONNY'S	\$199.00
SUR/D/SHAFT	Surface Conveyor, Take Up Drum Shaft	49.95
LOGCHAIN	Chain, Log Chain, 3 1/2in Pitch	\$6.95



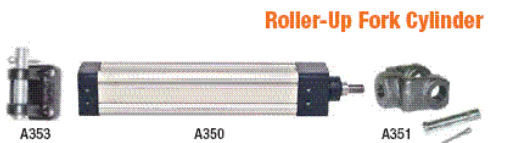
Sprocket For Use With Logchain

Item #	Description	Price
CRCV4T/SUR	Sprocket, Surface, 4-Tooth, SONNY'S	\$149.95



Chain Tension Cylinder

Item #	Description	Price
TF10GALA3FA10000	Cylinder, Vickers 3.25 X 10X 1.75 ROD	\$699.00



Roller-Up Fork Cylinder

Item #	Description	Price
A350	Cylinder, 8in Stroke	\$103.65
A351	Rod Clevis, 1/2in with Pin & Cotter	26.35
A352	Pin and Cotter only for A351 Rod Clevis	4.79
A353	Rear Clevis, 1/2in with Pin & Cotter	24.95



Roller Assembly

- New Surface Roller Assembly
- With (2) 3" Poly Wheels
- With Log Chain Link

Item #	Description	Price
SSRLOG	Roller Assembly, Surface, Sonnys, Log link	\$68.95



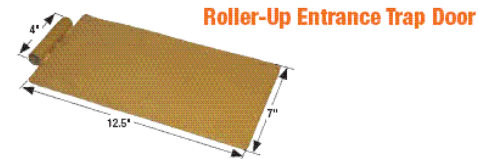
Sprocket For Use With Logchain

Item #	Description	Price
CRCV5T/SUR	Sprocket, Surface 5-Tooth, SONNY'S	\$175.00



Heco Front Flange & Char-Lynn Char-Lynn, 2000 11.9 Cu In / Rev

Item #	Description	Price
HC16FF	Front Flange Heco	\$739.40
HC5GK	Sungear Kit 16E, Heco	95.95
CL106-1012-006	Motor, Char-Lynn 2000 11.9 Cu In / Rev	\$288.69
CONHCMP	Conveyor, Heco Plate, 16in x 16in, SF	99.95



Roller-Up Entrance Trap Door

Item #	Description	Price
SURENT#1	Surface Conveyor, Entrance Trap Door	\$55.00

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"EXPRESS ORDER" using our online Quick Order Pad at: SonnysDirect.com/quick

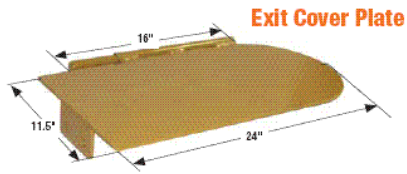
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REPLACEMENT



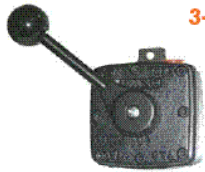
View your order history at
www.SonnysDirect.com

Replacement Parts Surface Conveyor & Correlator Sonny's®



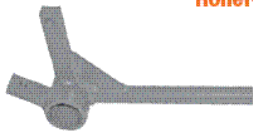
Exit Cover Plate

Item #	Description	Price
SUREXTCP	Surface Conveyor, Exit Cover Plate	\$109.00



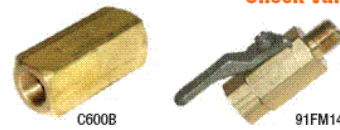
3-Position Rotary Disc Valve

Item #	Description	Price
PL37	Valve, Rotary Disk 3-Position, 3/8" Port	\$175.00



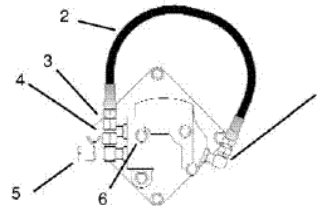
Roller-Up Fork

Item #	Description	Price
SURFORK	Surface Conv. Roller Up Fork w/Bushing	\$96.00



Check Valve and Ball Valve

Item #	Description	Price
C600B	Check Valve, Brass 3/8in Female	\$24.00
91FM14	Valve, Ball Brass 1/4inF x 1/4inM 1way	3.75



HECO GEAR

Heco Hose Kit

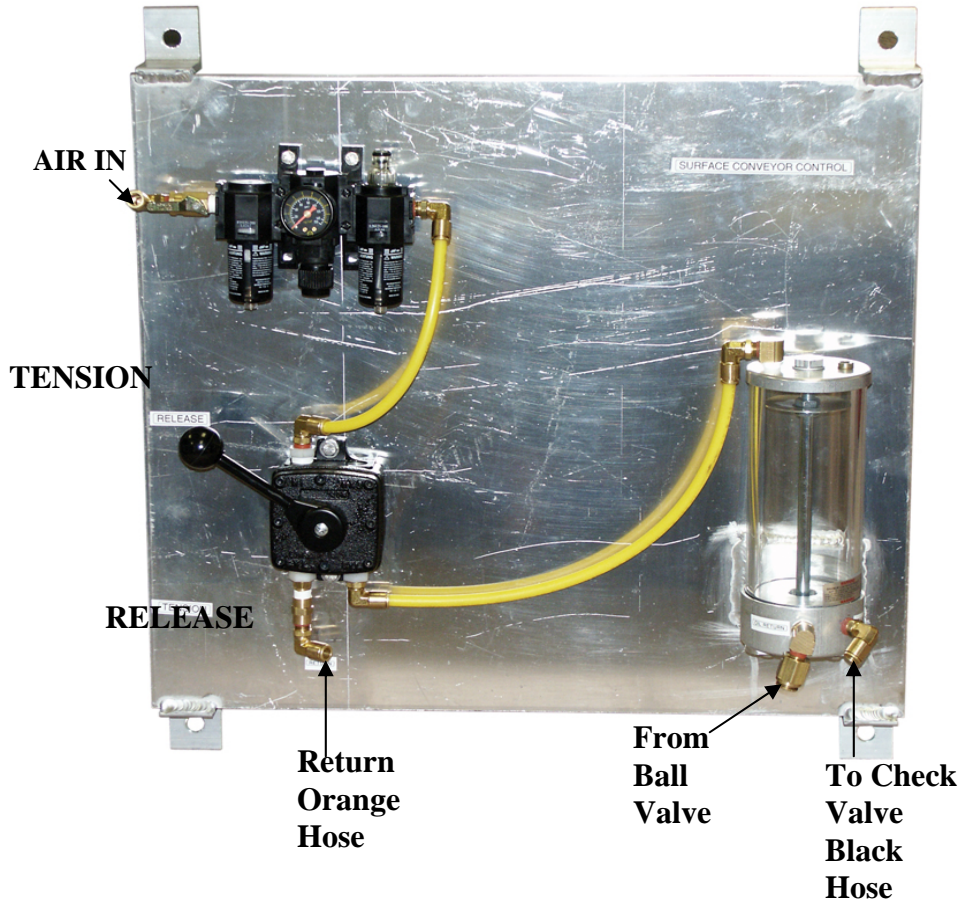
Hose & fitting kit for Heco cap drain to return with Char-Lynn® hydraulic oil



- 1 H6801-6-4 3/8" MJIC X 1/4 "O" Ring
- 2 FC06FJSMP 25" 3/8 Hose w 3/8 FJIC SW X 3/8 MPT
- 3 H6506-8-6 1/2 FX 3/8F Pipe Swivel
- 4 H6400-8-10 1/2 MJIC X 5/8 M "O" Ring Fitting
- 5 H6804-8-10 1/2 MJIC X 5/8 "o" Ring Tee
- 6 31524 1/4 Hex Brass Plug

Item #	Description	Price
HEC0600	Heco, Hose Kit	\$50.00

SURFACE CONVEYOR CONTROL



CUSTOMER SERVICE

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

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

DEPARTMENT	PHONE NUMBERS	FAX NUMBERS
Toll Free Main Line 4049	800-327-8723	800-495-
Equipment Department 720-9292	954-467-1203	954-

Or you can email Sales at sales@sonnysdirect.com

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

From all of us here at

