

# Waste Systems

## **Operation, Cleaning and Maintenance Manual**



# Model:

SSG M1.5 Slow Speed Grinder and Centrifuge

**Options:** Close-coupled and Remote Systems



Issue Date: 8.22.17 **Manual P/N** 115808 rev. B For machines beginning with S/N SG17040005 and above

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## ATTENTION

The model no., serial no., voltage, Hz and phase are needed to identify your machine and to answer questions.

<u>The machine data plate</u> <u>is located on the right front corner</u> <u>of the lower panel</u>

Please have this information ready if you call for service assistance.



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# Two ways to REGISTER YOUR PRODUCT and ACTIVATE YOUR WARRANTY.



- Visit our website at www.championindustries.com and register your product there.
- Use the fax form on the next page and fax to 1 800 661-1660.

# PRODUCT REGISTRATION BY FAX

## **COMPLETE THIS FORM AND FAX TO:**

## (336) 661-1660 in the USA

## 1-(800) 204-0109 in Canada

Model	Serial #		
Date of Installation:/ /	-		
Company Name:			
Address:	(Ofree of)		Destal Cada
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## LIMITED WARRANTY AGREEMENT

Champion Industries (herein referred to as the "The Company"), 3765 Champion Blvd., Winston-Salem, North Carolina 27105, and 2674 N. Service Road, Jordan Station, Ontario, Canada, LOR 1SO, warrants machines, and parts, as set out below.

**Warranty of Machines:** The Company warrants all new waste processing machines of its manufacture bearing the name "Champion", "Trisys", or "Champion-Trisys" and installed within the United States and Canada to be free from defects in material and workmanship for a period of one (1) year after the date of installation or fifteen (15) months after the date of shipment by the The Company, whichever occurs first. Warranty registration must be submitted to the The Company within ten (10) days after installation either online at the Champion Industries website (http://www.championindustries.com/warranty-registration or by fax to (336) 661-1660 in the USA or (905) 562-4618 in Canada. The Company will not assume any responsibility for extra costs for installation in any area where there are jurisdictional problems with local trades or unions.

If a defect in workmanship or material is found to exist within the warranty period, The Company, at its election, will either repair or replace the defective part or accept return of the machine for full credit. In the event that The Company elects to repair, the labor and work to be performed in connection with the warranty shall be done during regular working hours by a Champion authorized service technician. Defective parts become the property of The Company. Use of replacement parts not authorized by The Company will relieve The Company of all further liability in connection with its warranty. In no event will The Company's warranty obligation exceed The Company's charge for the machine.

<u>Approved Waste:</u> Only food, paper napkins, paper towels, and carboard waste are approved for loading into the machine.

<u>**Prohibited Waste:**</u> Examples of prohibited waste that must not be loaded into the machine and not covered by the warranty include, but are not limited to:

- a. Flatware, service ware, plastics, large bones, raw bones, (<u>shells</u>: clam, oyster, mussel, shrimp, crab, lobster, scallop, walnut, peanut, pecan, almond, or any other type of shell not listed), wood, rags, or nitrile gloves.
- b. Loading bulk quantities of waste from tubs, garbage cans, or other large containers directly into the machine or feed troughs.
- c. Metal of any type.

#### The following are not covered by the warranty:

- a. Clogs or damage to any part of the machine due to the loading of prohibited waste.
- b. Replacement of fuses or resetting of overload breakers.
- c. Opening or closing of utility supply valves or switching of electrical supply current.
- d. Cleaning of valves, strainers, screens, nozzles, or spray pipes.
- e. Performance of regular maintenance and cleaning.
- f. Damages resulting from water conditions, accidents, alterations, improper use, abuse, tampering, improper installation, or failure to follow maintenance and operation procedures.

Examples of the defects not covered by the warranty include, but are not limited to: (1) Damage to the exterior or interior finish as a result of the above, (2) Use with utility service other than that designated on the rating plate, (3) Improper connection to utility service, (4) Inadequate or excessive water pressure, (5) Corrosion from chemicals dispensed in excess of recommended concentrations, (6) Failure of electrical components due to connection of chemical dispensing equipment installed by others, (7) Leaks or damage resulting from such leaks caused by the installer, including those at machine trough connections or by connection of chemical dispensing equipment installed by others, (8) Failure to comply with local building codes, (9) Damage caused by labor dispute.

Continued on next page.

## LIMITED WARRANTY AGREEMENT (continued)

**Warranty of Parts:** The Company warrants all new machine parts produced or authorized by The Company to be free from defects in material and workmanship for a period of 90 days from date of invoice. If any defect in material and workmanship is found to exist within the warranty period The Company will replace the defective part without charge.

DISCLAIMER OF WARRANTIES AND LIMITATIONS OF LIABILITY. THE COMPANY'S WARRANTY IS ONLY TO THE EXTENT REFLECTED ABOVE. THE COMPANY MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED, TO ANY WARRANTY OF MERCHANTABILITY, OR FITNESS OF PURPOSE. THE COMPANY SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. THE REMEDIES SET OUT ABOVE ARE THE EXCLUSIVE REMEDIES FOR ANY DEFECTS FOUND TO EXIST IN THE COMPANY'S WASTE PROCESSING MACHINES AND THE COMPANY'S PARTS, AND ALL OTHER REMEDIES ARE EXCLUDED, INCLUDING ANY LIABILITY FOR INCIDENTALS OR CONSEQUENTIAL DAMAGES.

The Company does not authorize any other person, including persons who deal in Champion dishwashing machines to change this warranty or create any other obligation in connection with Champion, Trisys and Champion-Trisys machines.

## **AGREEMENT SIGNATURES**

I acknowlege and agree that a I have read and understand this Limited Warranty Agreement. I agree that the restrictions contained in this Limited Warranty Agreement are reasonable, proper and necessitated by The Company's legitimate interests and the legitimate interests of its subsidiaries and affiliated entities. I acknowledge and agree that I am entering into this Limited Warranty Agreement freely and with the intent to be bound by this Limited Warranty Agreement.

#### ACCEPTED AND AGREED:

BUYER

(Signature)

(Printed Name and Title)

Dated:\_\_\_\_\_

## **Revision History**

We reserve the right to make changes to this manual without notice and without incurring any liability by those changes. Equipment owners may request a revised manual, at no charge, by calling 1 (800) 858-4477 in the USA or by calling 1 (800) 263-5798 in Canada.

Revision	Revised	Serial Number	Revision
Date	Pages	Effectivity	Description
4.11.17	All	SG17040005	Released First Edition
8.22.17	13	SG17040005	Revised drain procedure.

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## Safety Symbols

The following symbols are used throughout this manual to alert the reader to important information.



### WARNING:

Warning statements indicate a condition or practice that can result in personal injury or possible death.



### CAUTION:

Caution statements indicate a condition or practice that can result in damage to the machine or associated equipment.



## DO NOT:

Do not statements indicate that a condition or practice will diminish the effective operation of the machine.



## OKAY:

Okay statements indicate that a condition or practice is correct and should be followed.



## NOTE:

Note statements highlight important information necessary for the operation of the machine.

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#### System Overview

## Waste Control System Overview

The system is designed to process food waste and food waste by-products (see the approved waste list on page 4), using a waste water trough, mechanical macerator, slurry transfer pump, recirculation pump, and centrifuge waste water separator.

#### Main Control Panel an Centrifuge Control Panel System

- 1) Main Control Box
- 2) Remote Push Button Start/Stop Station

#### Slow Speed Grinder SSG M2:

- 1) SSG Drive, 5 HP
- 2) Slurry Pump, 3/4 HP
- 3) Recirculating Pump, 3/4 HP
- 3) Main PLC Control System

#### Centrifuge:

- 1) Drive Motor, 1.5 HP
- 2) Flush-down Solenoid Valve

#### **Slurry Pump:**

1) Drive Motor, 3/4HP

#### **Recirculating Pump:**

1) Drive Motor, 3/4HP

#### Waste Trough Water Piping:

- 1) Fresh Water
- 2) Gray Water (optional)

## Introduction

### System Overview

The SSG waste handling system processes food waste scraped from dishes and deposited into a trough (supplied by others). Waste is macerated in a slow speed grinder to produce a slurry; the slurry is pumped to a centrifuge that extracts the water from the waste to produce a **semi-dry pulp**. The pulp is discharged into a waste bin (supplied by others) and then transported to a waste collection point (supplied by others).

There are two system configurations: close coupled and remote. Remote systems separate the grinder from the centrifuge; close-coupled systems combine the grinder and centrifuge into a single unit.



**Close-Coupled System** 

SSG M2 Close-coupled System

## **Remote System**



Fig. 2 SSG Remote Waste System Champion Rack Conveyor Dishwasher

## System Components



The waste trough flushing nozzles and the system Start/Stop station may be located at the opposite end of the SSG.



The waste Slow Speed Grinder (SSG) and slurry pump are located in the dishroom but may be separate. There is an Emergency safety stop switch on the SSG access door.



The main system control panel is wallmounted. It has a lighted digital touchscreen and an emergency stop switch.



3

The centrifuge separates water from waste and directs water to the drain. The waste falls into a waste container (supplied by others).





Loading Waste

# ATTENTION

THIS EQUIPMENT IS DESIGNED ONLY FOR FOOD WASTE REDUCTION. (NAPKINS, PAPER TOWELS AND CARDBOARD ARE ACCEPTABLE.)

# ATENCIÓN

ESTE EQUIPO ES DISEÑADO SOLAMENTE PARA LA REDUCCIÓN DE RESIDUOS DE ALIMENTOS. (SERVILLETAS, TOALLAS DE PAPEL Y CARTÓN SON ACEPTABLES.)

# **WARNING**

DO NOT LOAD FLATWARE, SERVICE WARE, PLASTICS, LARGE BONES, RAW BONES, (SHELLS: CLAM, OYSTER, MUSSEL, SHRIMP, CRAB, LOBSTER, SCALLOP, WALNUT, PEANUT, PECAN, ALMOND OR ANY OTHER TYPE OF SHELL NOT LISTED), WOOD, RAGS.

DO NOT DUMP BULK QUANTITIES FROM TUBS ,GARBAGE CANS, OR OTHER LARGE CONTAINERS DIRECTLY INTO THE MACHINE OR FEED TROUGHS.

# **! ADVERTENCIA !**

NO CARGUE PLATOS, CUBIERTOS, UTENSILIOS DE COCINA, PLÁSTICOS, HUESOS GRANDES, HUESOS CRUDOS, CÁSCARAS O CARACOLES DE (ALMEJA, OSTRA, MEJILLÓN, CAMARÓN, CANGREJO, LANGOSTA, VIEIRA, NUEZ, MANÍ, NUEZ DE PACANA, ALMENDRA O CUALQUIER OTRO TIPO DE CASCARA O CARACOL AUNQUE NO APARESCA EN ESTA LISTA), MADERA O TRAPOS.

NO USE TINAS, CESTOS DE BASURA U OTROS ENVASES PARA DESCARGAR GRANDES CANTIDADES DE RESIDUOS DE ALIMENTOS DIRECTAMENTE EN LA MÁQUINA, O EN LA ENTRADAS DE CANALES.

## Food Waste Feed Trough

- The waste trough carries acceptable food waste and paper products from scrapping stations (supplied by others) to the inlet of the grinder chamber.
- 2. The trough is equipped with flushing nozzles designed to return water pumped by a recirculation pump.



Fig. 3 Waste trough with flushing nozzles.

## **Grinder Access Door**

- 1. The grinding chamber is protected by an access door mounted at the top of the chamber.
- 2. The door must be closed to run the machine. The machine will stop if the door is opened and the red stop switch will begin to flash.



#### WARNING:

The grinder chamber has rotating blades that may cause serious INJURY or DEATH. Keep hands and clothing clear of blades when power is on. Never bypass a safety switch on this system.



Fig. 4 Grinder Blades



Fig. 5 Grinder Access Door

Continued on next page

#### Close-coupled and Remote Introduction

## **Emergency Stop Switch**

- 1. The Emergency Stop Button is located on the front of the control cabinet above the digital touchscreen display.
- 2. Pushing the stop button will immediately stop the system and the red stop button will begin to flash.
- 3. Pull and turn the button clockwise to reset so the the system may be restarted with the green start button.



Fig. 6 Emergency Stop Switch

## Start/Stop Station

- 1. The Start/Stop station usually is mounted near a scrapping station but can be mounted on the close-coupled unit if desired.
- 2. The station includes a GREEN and RED pushbutton enclosed in a stainless steel box.



Fig. 7 Start/Stop Station

## **Digital Touchscreen Display**



Digital Touchscreen Display

- 1. The touchscreen display is located on the main control cabinet for system control and status messages.
- 2. Touching the buttons navigates from one screen to another. The machine status appears in the top window (see "READY" in Fig 8.).

#### The operator screens include:

Setpoints:	Press the Rinse, slurry, and clean setpoints button to change system settings.		
Manual Control:	<b>trol:</b> Press to manually run the system components to test their opeation.		
Inputs:	Press to display inputs to the system PLC controller.		
Outputs:	Press to display outputs to the system PLC controller.		
Default:	Press to return a setpoint to the factory default. Default is reserved for service.		

## **Close-coupled - Normal Operation**

## FILLING

- 1. Ensure the grinder access door is closed and the Emergency stop button is off, and a waste container is positioned under the centrifuge discharge.
- 2. Turn power ON at the main breaker or service disconnect switch.
- 3. The GREEN pushbutton will begin to flash and "READY" will appear in the Status Window indicating the machine is ready to fill.



- 4. Push the GREEN pushbutton.
- 5. "FILLING" appears in the Status Window and the machine begins to fill. The green pushbutton continues to flash as the tank fills.



- 6. When full, the Green button stops flashing and remains solid green. The Status Window indicates "READY".
- 7. Press the GREEN start pushbutton to begin normal operation.



#### **CHECK DRAIN**

1. During initial "FILLING" if the recirculation tank is not full within 10 minutes then the fill operation will stop.



- 2. "CHECK DRAIN" will appear in the status window. The GREEN pushbutton continues to flash.
- 3. To reset: Close the drains, then Push the GREEN pushbutton. "CHECK DRAIN" will change to "FILLING". The machine will fill again until the machine is full. The status window will display "READY".

#### **RUN/GRIND**

1. Press the solid green GREEN start button to begin the automatic cycle. The Status window will disappear.



2. The grinder will run and food waste may be loaded into the waste trough. Refer to page 4 for the proper waste loading procedures.



#### WARNING:

FAILURE TO FOLLOW THE **LOADING WASTE** INSTRUCTIONS ON PAGE 4 WILL VOID THE WARRANTY ON THE MACHINE.

- 3. The slurry pump will cycle on and off according to its program sending waste to the centrifuge for dewatering. The centrifuge cycles on and off as well.
- 4. The recirculating pump sends water to the waste trough to flush waste down the trough.

## **CLEAN/PAUSE**

1. The system may be paused anytime during operation by pressing the RED pushbutton. The display will indicate "CLEAN" as it begins a clean cycle .



- 2. The "CLEAN" cycle may be stopped by pressing the GREEN start button.
- 3. When the GREEN button is pressed the status window will disappear and the machine will return to normal operation.

## **EMERGENCY STOP**

- Pushing the emergency stop switch located on the front of the control cabinet will immediately stop the machine.
- 2. The digital display indicates "E-STOP".
- 3. The RED stop pushbutton will flash and the GREEN start pushbutton will go out. Both switches are disabled until the emergency switch is reset.





- 4. To reset the Emergency stop switch: Pull the switch button out while turning clockwise. The switch will lock in the up position.
- 5. The RED stop pushbutton will go out and the GREEN start button will flash. The status bar will indicate the status before the E-Stop was pressed.

MANUAL CONTROL

INPUTS

OUTPUTS

#### DOOR OPEN

- 1. Opening the access door at any time will activate the "DOOR OPEN" alert.
- 2. Door open will appear in the display status bar.
- 3. The GREEN pushbutton switch will go out as the RED pushbutton begins to flash.
- 4. Close the access door to reset the condition.
- 5. The RED pushbutton will go out as the GREEN pushbutton begins to flash. Push the GREEN pushbutton to return to normal operation.

**RINSE SETPOINTS** 

**SLURRY SETPOINTS** 

**CLEAN SETPOINTS** 



#### **Close-coupled Alarms**

#### MOTOR OVERLOAD ALARMS

- 1. The motors are protected by motor overloads. In the event of an overload condition, the system will stop and the faulty motor will appear in the status window.
- 2. The GREEN start pushbutton will go out as the RED stop pushbutton comes on. Turn the main power to the machine off and drain the machine.
- 3. An authorized service repairman is required to fix the problem.
- 4. Below are the overload alarms:

GRINDER MOTOR OVERLOAD	GRINDER OL RINSE SETPOINTS SLURRY SETPOINTS CLEAN SETPOINTS	MANUAL CONTROL INPUTS OUTPUTS
Slurry pump motor Overload	SLURRY OL         RINSE SETPOINTS         SLURRY SETPOINTS         CLEAN SETPOINTS	MANUAL CONTROL INPUTS OUTPUTS
CENTRIFUGE MOTOR OVERLOAD	CFUGE OL RINSE SETPOINTS SLURRY SETPOINTS CLEAN SETPOINTS	MANUAL CONTROL INPUTS OUTPUTS
RECIRCULATING PUMP MOTOR OVERLOAD	RINSE SETPOINTS SLURRY SETPOINTS CLEAN SETPOINTS	MANUAL CONTROL INPUTS OUTPUTS

#### CLEANING

9.

- 1. The system must be thoroughly cleaned at the end of the day to prevent odors and ensure the centrifuge and pumps remain in good working order. Refer to Fig. 9 below.
- 2. Push the RED stop button to initiate a "CLEAN" cycle (see PAUSE/CLEAN on page 9).

#### 3. TURN POWER OFF AT THE MAIN BREAKER OR SERVICE DISCONNECT SWITCH.

- 4. Remove the tank covers and flush clean in a sink.
- 5. Open the Grinder Access Door and inspect for metal or other large debris and remove.
- 6. Only open the recirculation tank drain valve to drain the machine.
- 7. Flush the recirculation tank and grinder blades with fresh water to remove accumulated soils. **DO NOT HOSE THE EXTERIOR WITH WATER.**
- 8. Scrub the interior and exterior of the machine using a plastic bristle brush and mild detergent.

#### DO NOT CLEAN THE MACHINE WITH A METAL SCRUB PAD OR BRUSH.



## **Maintenance Schedules**

#### Weekly - Turn power OFF before inspection.

- 1. Check water lines for leaks and tighten as needed.
- 2. Check the building drain for clogs.
- 3. Inspect the interior and exterior of the machine for loose or broken parts.
- 4. Inspect the float switches for free movement.
- 5. Check the centrifuge discharge hose for breaks and replace as needed.
- 6. Inspect the area around the system for accumulated debris and clean as required.

### Monthly - Turn power OFF before inspection.

- 1. Perform all of the weekly checks listed above.
- 2. Open the grinder access door and inspect for obstructions.
- 3. Inspect the system piping for damaged or missing parts.

### Monthly - Turn power ON before inspection.

- 1. Start and run the system normally. <u>DO NOT LOAD WASTE INTO THE MACHINE.</u>
- 2. Push the Emergency Stop Switch and check the operation of the E-STOP alarm per the instructions on pg.10.
- 3. Open the grinder access door and check the DOOR OPEN alarm per the instructions on pg.10.

## Yearly - To be performed by an authorized service agent only.

- 1. Perform all Monthly Maintenance.
- 2. Check the operation of the motor overload alarms per page 11.
- 3. Evaluate all pump motor bearings and seals without disassembly.
- 4. Visually inspect the centrifuge (Contact factory before servicing).
- 5. Check the grinder for chipped/broken blades.

### Lubrication -

- 1. Replace grinder gearcase grease every 15 years or 90,000 hours whichever occurs first.
- 2. Use ~48 oz. of Mobiltemp 1 or equivalent in gearcase. Use lithium grease on shaft seals.

## Troubleshooting

PROBLEM	CAUSE	SOLUTION	
Grinder and/or centrifuge is jammed and/or overloaded with	Improper loading of waste and/or the loading prohibited materials.	Follow the waste loading instructions on pg. 4.	
waste.		Contact service agent for repairs.	
Will not come on.	Main power OFF.	Turn power on at main breaker.	
	Green start button not pressed.	Press start button.	
Low or no water in the recirculation	Water supply OFF.	Open supply valve(s).	
tank.	Drain open	Close drain.	
	Lower float dirty.	Turn off power and clean float.	
	Defective lower float.	Replace float.	
	Slurry pump is clogged.	Call service agent.	
Recirculation tank overflows.	Defective fill valve.	Repair or replace the valve.	
	Defective or dirty upper float.	Clean or replace float.	
	Recirculation pump clogged or defective.	Contact service agent.	
Fills constantly.	Defective upper float.	Turn off power and clean float.	
	Defective solenoid valve.	Repair or replace float.	
Will not Drain.	Drain valve(s) closed.	Open drain valve(s).	
	Building drain clogged.	Clean drain lines.	
Green pushbutton flashing.	Is machine filling with status window display "FILLING"?	Normal - push green button to start.	
	Does status window display "CLEAN".	Normal - push green button when status window displays "READY"	
Green pushbutton solid green, not running.	Does status window display "READY"?	Normal condition, push green start button to start.	
Red pushbutton is flashing.	Does status window display "E-Stop" Does status window display "Door	Normal condition - see pg. 10 to reset. Normal condition - close the grinder	
	Open"?	access door.	
Red pushbutton is solid red.	Does status window display "Cfuge OL", "Slurry OL", "Grinder OL", or "Recirc OL"?	Motor overload has tripped - turn power off and call service agent.	
Waste pulp is too wet or water is exiting the discharge chute.	Food waste has insufficient mass.	Add small pieces of cardboard to grinder.	
	Excess water in the system.	Contact service agent to adjust.	
Odor is detected around machine.	Improper cleaning of machine.	Clean machine and surrounding area.	
	Improper cleaning of area around machine.	Refer to cleaning instructions on pg. 13.	

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## **RINSE SETPOINTS**



CAUTION:

Changing the rinse setpoints may cause the recirculation tank and/or the centrifuge to overflow. Do not change these setpoints without factory authorization.

1. Touch the MAIN MENU - RINSE SETPOINTS button to access the rinse menu below. The values shown are the default settings.



- 2. The RINSE ON INTERVAL sets the time the centrifuge rinse is on during the slurry pump operation. The rinse will come on when the slurry pump pauses.
- 3. The RINSE OFF INTERVAL sets the time the centrifuge rinse is off after the ON interval time has elapsed.
- 4. For example, to change the Rinse On Interval, touch the 0 value, the setting keypad appears. Pressing 20 and ENT, sets a new value and returns to the previous screen.





5. Touch BACK to go back one screen or MAIN to return to the main menu.

## **SLURRY SETPOINTS**



NOTE:

Slurry setpoints control the cycling of the slurry pump. The default settings are 12 seconds pump run and 2 seconds pump off. This cycling keeps the pump flow unobstructed. The centrifuge automatically rinses during the slurry pump off interval.

- 1. Touch the SLURRY SETPOINTS button to access the rinse menu below. The values shown are the default settings.
- 2. TIME and FLOAT are factory settings; do not change. The buttons appear blue when properly set ON.



- 3. The SLURRY ON INTERVAL sets the time the slurry pump is on during the machine automatic cycle. The rinse will come on when the slurry pump pauses.
- 4. The SLURRY OFF INTERVAL sets the time the slurry pump is off after the ON interval time has elapsed.

20		20	SLURRY SETPOINTS		
7	8	9	CLR	SLURRY ON INTERVAL 2	0
4	5	6	CAN	SLURRY OFF INTERVAL	2
1	2	3	ENT	BACK	AIN
0	+/-				

5. To change a setting: touch the desired number displayed, 12 is touched in the example above. Enter the new value, 20 in the example and press ENT to enter the new value. The slurry pump will now run for 20 seconds and pause for 2 seconds.



## NOTE:

The slurry pump will cyle ON and OFF for three cycles and then reverse direction for 1 second. The pump will continue this pattern continuously.

## **CLEAN SETPOINTS**



NOTE:

Clean setpoints control the run time of the slurry pump and centrifuge during the CLEAN cycle (see Clean/Pause on page 10). This cycling flushes the slurry pump and centrifuge whenvere the stop pushbutton is pressed during normal operation.

- 1. Touch the CLEAN SETPOINTS button to access the CLEAN menu below.
- 2. Touching the DEFAULT button changes the settings to 540 seconds and 600 seconds. The factory settings are 54 seconds for the slurry pump 60 seconds for the centrifuge.



- 3. The SLURRY button sets the time the slurry pump runs during the automatic CLEAN cycle. The centrifuge runs and rinses after the slurry pump stops.
- 4. The SLURRY OFF INTERVAL sets the time the slurry pump is off after the ON interval time has elapsed.





5. To change a setting: touch the desired number displayed, 54 is touched in the example above. Enter the new value, 55 in the example and press ENT to enter the new value. The slurry pump will now run for 55 seconds and centrifuge will run for 60 seconds.

## MANUAL CONTROL

- 1. The manual control screen allows testing of the major components in the system to ensure they operate correctly.
- 2. Touch each button to run that component. It will operate as long as the button is pressed.



3. Push BACK to go back one screen or touch MAIN to return to the main menu.

## **INPUTS**

		INPUTS	
I/00 I/01 I/02 I/03 I/04 I/05 I/06	BLFSWU  BLFSWL GRNDOL SLUROL CENTOL STOP START		I/00 PWFSWJ
I/07 1/10	DSS		OUTPUTS BACK MAIN