

PLEASE

READ

BEFORE

USING

THIS

UNIT

SERVOTHERM BASE HEATER
OPERATION & MAINTENANCE MANUALS

MODELS SBH-1, 2, & 3

CONTENTS

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SERVOLIFT/EASTERN CORPORATION
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1. SAFETY PRECAUTIONS

A. NEVER ATTEMPT ANY SERVICE OR CLEANING UNLESS UNIT(S) HAVE BEEN UNPLUGGED FROM THE POWER SOURCE.

B. THE INTERIOR OF THE HEATER IS VERY HOT, DO NOT ATTEMPT TO SERVICE UNITS OR REACH INTO SILOS UNLESS HEATERS HAVE BEEN DISCONNECTED FROM POWER SOURCE AND ALLOWED TO COOL DOWN.

C. ANY REPAIRS TO THESE UNITS MUST BE DONE BY A SERVICE AGENCY OR ELECTRICIAN APPROVED BY SERVOLIFT/EASTERN CORP.

2. INSTALLATION

A. DO NOT PLUG UNITS IN UNTIL YOU HAVE INSPECTED AND REMOVED ALL PACKING MATERIALS, AND READ ALL INSTRUCTIONS.

B. MAKE SURE THAT HEATER SWITCH IS IN THE OFF POSITION PRIOR TO PLUGGING UNIT IN.

C. CHECK YOUR HOUSE POWER SUPPLY MAKING SURE THAT VOLTAGE AND AMPERAGE MATCH THAT OF THE NAME PLATE LOCATED ON FACE OF HEATER.

D. RECEPTACLE MUST BE GROUNDED

E. RECEPTACLE SHOULD BE A DEDICATED CIRCUIT PROTECTED BY A CIRCUIT BREAKER OR FUSES.

F. DO NOT MODIFY PLUG ON THE HEATER CORD.

3. OPERATING INSTRUCTIONS

A. LOAD EACH SILO WITH THE PROPER (CAPACITY OF 30) AMOUNT OF SERVOTHERM BASES - DO NOT OVERLOAD.

B. CLOSE COVER(S)

C. PLUG HEATER CORD INTO A COMPATIBLE RECEPTACLE MAKING SURE FIRST, THAT SWITCH ON THE UNIT IS IN THE OFF POSITION.

D. FLIP SWITCH TO ON POSITION, SWITCH WILL LIGHT SHOWING THAT HEATER IS POWERED AND OPERATING.

THIS HEATER HAS NON ADJUSTABLE PRESET TIMERS AND THERMOSTATS. THERE ARE NO ADJUSTMENTS OR SETTINGS REQUIRED.

~~EACH SILO HAS ITS OWN TELLTALE LAMP TO SHOW THAT THEY ARE OPERATIONAL. LIGHTS WILL FLUCTUATE ON AND OFF WHILE UNITS ARE OPERATIONAL.~~

HEATING ELEMENTS WILL GO ON AND OFF DURING HEAT UP TIME. THIS IS NORMAL TO PREVENT OVERHEATING. BLOWERS WORK AT ALL TIMES.

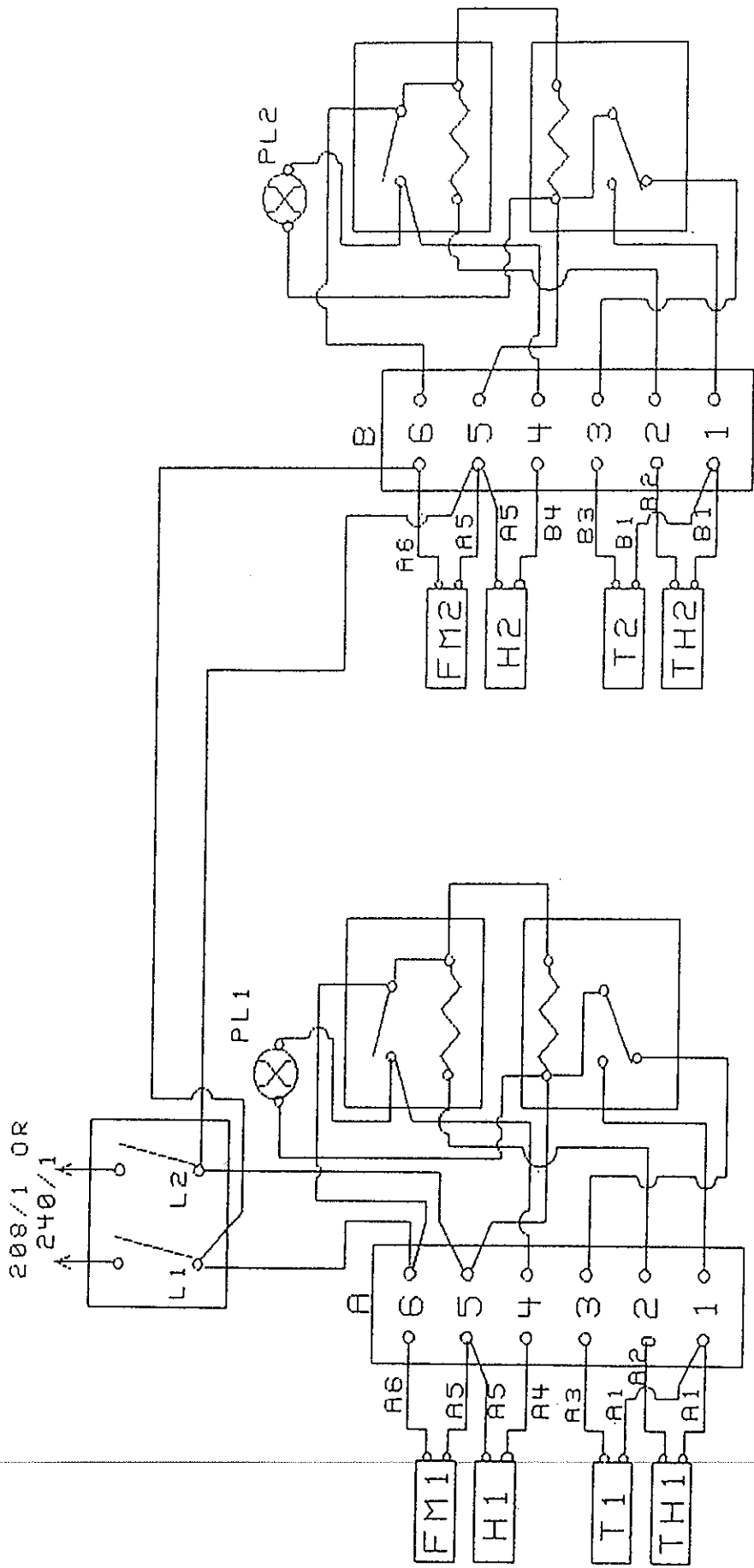
DO NOT HANDLE HOT BASE WITHOUT GLOVES OR PLUNGERS. BASE SURFACE TEMPERATURE IS 225°F.

E. HEATER SHOULD BE ALLOWED TO RUN FOR 75 MINUTES TO FULLY HEAT BASES FOR PROPER OPERATION.

4. CLEANING INSTRUCTIONS

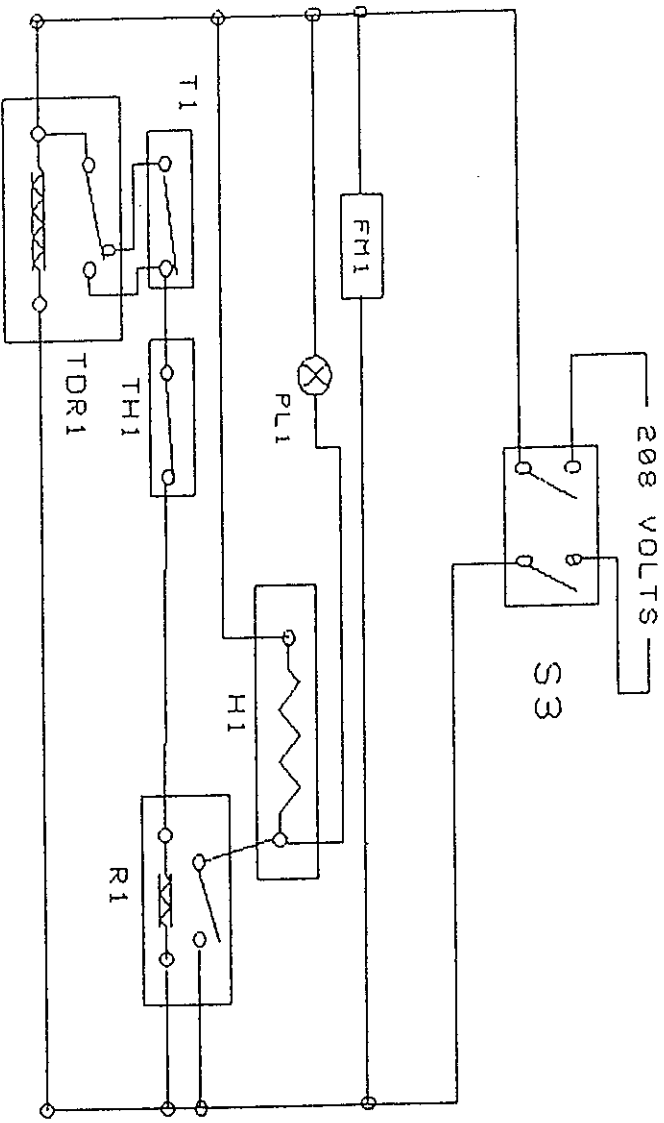
1. SHUT UNIT OFF AND DISCONNECT CORD FROM THE POWER SOURCE.
2. LET UNIT COOL DOWN.
3. NEVER STEAM CLEAN OR HOSE HEATERS DOWN.
4. CLEAN CABINET WITH A NON ABRASIVE STAINLESS CLEANER.

DO NOT USE SCOURING PADS OR ABRASIVES AS THEY WILL SCRATCH THE STAINLESS STEEL.



A1-A6 AND B1-B5 COME FROM WIRES INTERCONNECTED AT THE BOTTOM.
 A6 (2 WIRES) GOES TO BOTH STRIPS.
 A5 (4 WIRES) GOES TO BOTH STRIPS.

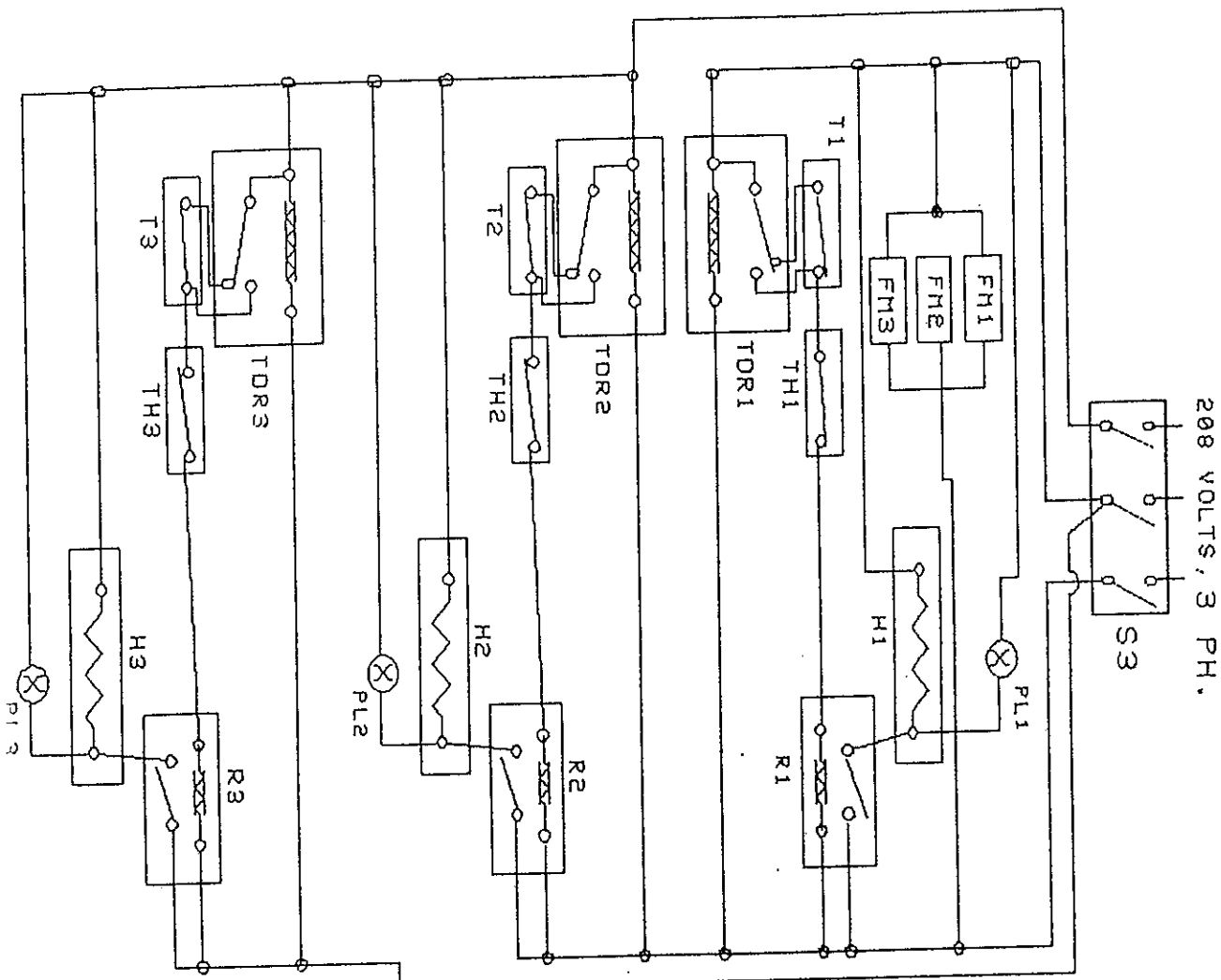
WIRING - PHYSICAL
 MODELS SBH-1 OR SBH-2
 SERVO LIFT/EASTERN CORP.
 1/18/91



VOLTS	WATTS	AMPS	NEMA
208/1	1700	8.2	6-15P
240/1	2230	9.3	6-15P

- PL1 - PILOT LT, SHOWS HI ON
- S3 - LIGHTED DPST TOGGLE SWITCH
- FM1 - FAN MOTOR
- H1 - HEATING ELEMENT
- R1 - RELAY, SPST, NO, 15 AMP.
- TI - THERMOSTAT, 230 F.
- TH1 - THERMOSTAT, 285 F.
- TOR1 - TIME DELAY RELAY, OFF DELAY, SPDT, 6 AMP. CONTACTS. CONTACTS SHIFT WHEN S3 IS CLOSED, ELEMENT OPERATES THROUGH HIGH TEMP. THERMOSTAT ONLY. AFTER DELAY, CONTACTS RETURN TO NORMAL, ELEMENT OPERATES THROUGH BOTH THERMOSTATS. TIMER RESETS WHEN S3 IS OPENED.

WIRING DIAGRAM
 NEW PELLET HEATER
 MODEL SBH-1
 SERVO LIFT/EASTERN CORP.
 12/4/90



208 VOLTS, 3 PH.

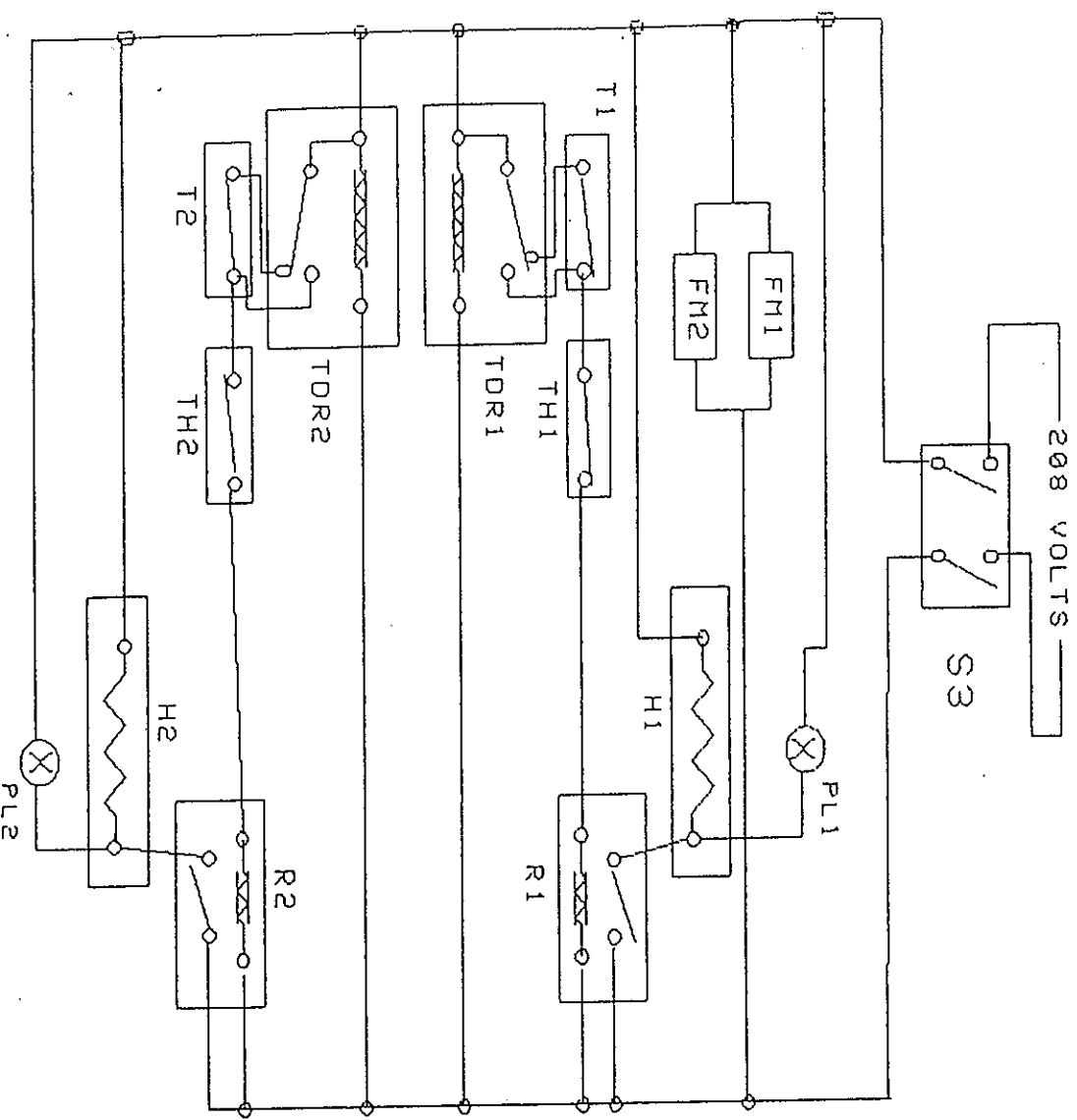
VOLTS WATTS AMPS NEMA

208/3	5100	14.2	L15-20P
240/3	6690	16.1	L15-30P

- PL1,2,3 - PILOT LTS. SHOW H1,2,3 ON
- S3 - LIGHTED 3PST TOGGLE SWITCH
- FM1,2,3 - FAN MOTORS
- H1,2,3 - HEATING ELEMENTS
- R1,2,3 - RELAYS, SPST, NO, 15 AMP.
- T1,2,3 - THERMOSTATS 230 F.
- TH1,2,3 - THERMOSTATS 285 F.
- TDR1,2,3 - TIME DELAY RELAYS.

OFF DELAY, SPDT, 6 AMP. CONTACTS.
 CONTACTS SHIFT WHEN S3 IS CLOSED,
 ELEMENTS OPERATE THROUGH HIGH
 TEMP. THERMOSTATS ONLY.
 AFTER DELAY, CONTACTS RETURN TO
 NORMAL, ELEMENTS OPERATE THROUGH
 BOTH THERMOSTATS.
 TIMER RESETS WHEN S3 IS OPENED.

WIRING DIAGRAM
 NEW PELLET HEATER
 MODEL SBH-3 3 PH.
 SERVOLIFT/EASTERN CORP.
 12/10/90



VOLTS WATTS AMPS NEMA

208/1	3400	16.4	L6-30P
240/1	4460	18.6	L6-30P

PL1, PL2 - PILOT LTS. SHOW HI 2 OH.
 S3 - LIGHTED DPST TOGGLE SWITCH
 FM1, FM2 - FAN MOTORS

H1, H2 - HEATING ELEMENTS
 R1, R2 - RELAYS, SPST, NO, 15 AMP.
 T1, T2 - THERMOSTATS, 230 F.
 TH1, TH2 - THERMOSTATS 285 F.
 TOR1, TOR2 - TIME DELAY RELAYS,

OFF DELAY, SPOT, 6 AMP. CONTACTS.
 CONTACTS SHIFT WHEN S3 IS CLOSED,
 ELEMENTS OPERATE THROUGH HIGH
 TEMP. THERMOSTATS ONLY.
 AFTER DELAY, CONTACTS RETURN TO
 NORMAL, ELEMENTS OPERATE THROUGH
 BOTH THERMOSTATS.
 TIMER RESETS WHEN S3 IS OPENED.

WIRING DIAGRAM
 NEW PELLET HEATER
 MODEL SBH-2
 SERVO LIFT/EASTERN
 CORP.
 12/4/90

#6 PARTS LIST

PART NUMBER	DESCRIPTION
101678	HEATER
101677	BLOWER
101673	TIMER RELAY
101672	RELAY
101674	SWITCH
101675	290° THERMOSTAT
101676	240° THERMOSTAT
100336	INDICATOR LAMP
100403	TERMINAL STRIP
101681	SPRING
100343	CORD
100871	PLUG
	90° STRAIN RELIEF
CSTR 109	SWIVEL CASTER WITH BRAKES - POLY
CSTR 108	SWIVEL CASTERS WITHOUT BRAKES - POLY
CSTR 284	RIGID CASTERS RUBBER
CSTR 285	SWIVEL CASTERS RUBBER WITH BRAKES

TROUBLE SHOOTING

PROBLEM	CAUSES	SOLUTIONS
SWITCH LIGHT DOES NOT GO ON	<ol style="list-style-type: none"> 1. UNIT NOT PLUGGED IN 2. BREAKER IS OFF 3. FUSE BLOWN 4. BAD POWER SWITCH 5. LOOSE WIRING 	<ol style="list-style-type: none"> 1. PLUG IN CORD TO RECEPTACLE 2. TURN ON POWER 3. REPLACE FUSE 4. REPLACE SWITCH 5. CHECK WIRING
POWER ON/NO HEAT	<ol style="list-style-type: none"> 1. BLOWN HEATER 2. OPEN LIMIT SWITCH 3. BLOWN RELAYS 4. LOOSE WIRING 	<ol style="list-style-type: none"> 1. REPLACE HEATER 2. REPLACE THERMOSTAT 3. REPLACE RELAYS 4. CHECK WIRING
BLOWERS NOT OPERATING	<ol style="list-style-type: none"> 1. CHECK POWER 2. BLOWER FAULTY 3. LOOSE WIRING 	<ol style="list-style-type: none"> 1. SWITCH OFF--TURN ON 2. REPLACE BLOWER 3. CHECK WIRING
TEMPERATURE TOO HIGH	<ol style="list-style-type: none"> 1. CHECK TIMER RELAY H/L 2. CHECK H/L THERMOSTAT 3. LOOSE WIRING 	<ol style="list-style-type: none"> 1. REPLACE H/L RELAY TIMER 2. REPLACE H/L THERMOSTAT 3. CHECK WIRING

SERVOLIFT/EASTERN PELLET DISPENSERS.....

Model SBH-1

208 Volts, 8.2 Amps., 1 Phase...

1700 Watts...

Nema #6-15P Plug...

Hubbell #5666VY Plug...

240 Volts, 9.3 Amps., 1 Phase...

2230 Watts...

Nema #6-15P Plug...

Hubbell #5666VY Plug...

Model #SBH-2

208 Volts, 16.4 Amps., 1 Phase...

3400 Watts...

Nema #L6-50P Plug...

Hubbell #5466-C Plug...

240 Volts, 18.6 Amps., 1 Phase...

4460 Watts...

Nema #L6-30P Plug...

Hubbell #5466-C Plug...

Model #SBH-3

208 Volts, 14.2 Amps., 3 Phase...

5100 Watts...

Nema #L15-20P Plug...

Hubbell #2421 Plug...

240 Volts, 16.1 Amps., 3 Phase...

6690 Watts...

Nema #L15-30P Plug...

Hubbell #2421 Plug...

**Pellet Base Dispensers
SBH Series
Master Parts List**

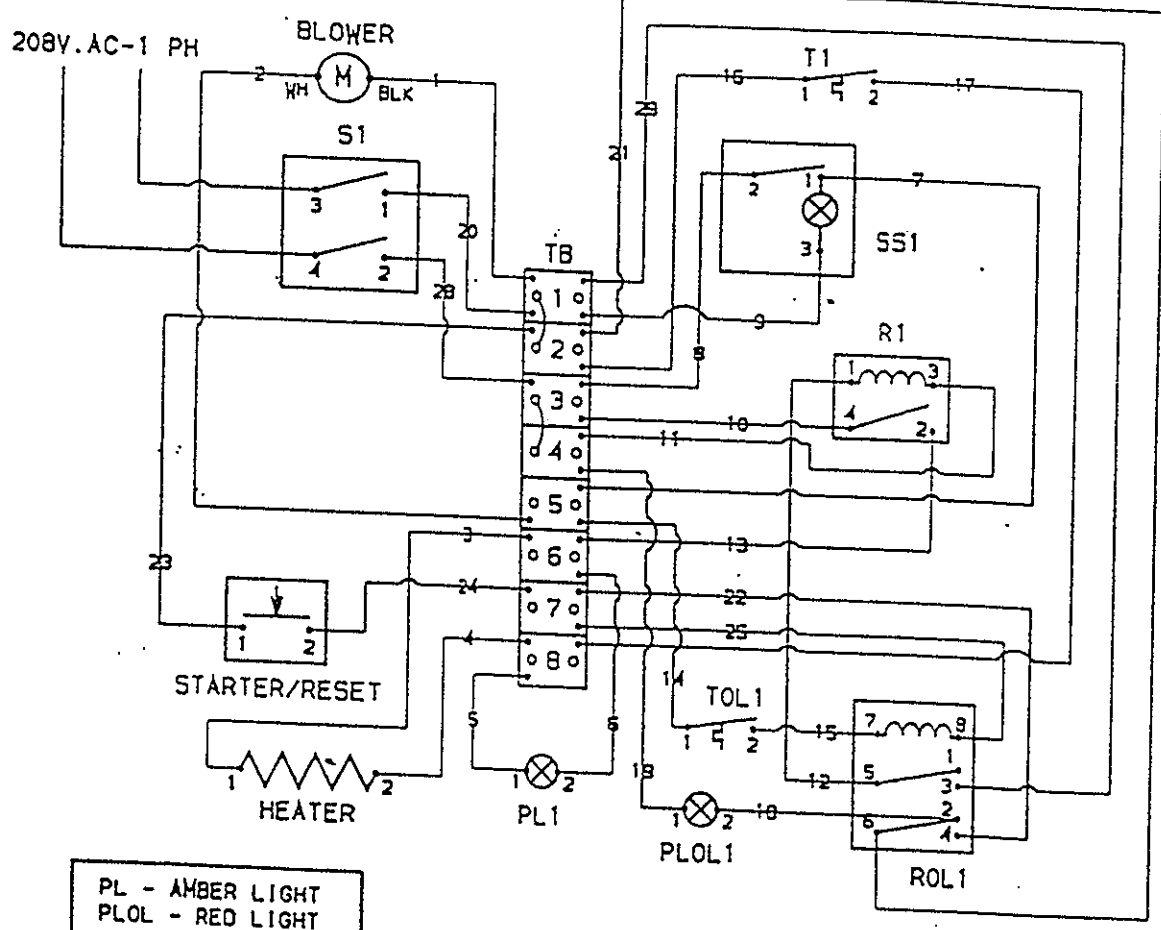
**NEW CONTRLLER STARTED ON
DATE 4/09/03 PART#
106807 or 106949 NEED TO CHECK SERIAL NUMBER!!!**

SBH

PELLET BASE DISPENSERS
SBH SERIES
Master part list

ITEM NO.	DESCRIPTION	PART NO.	
		OLD MODELS	NEW MODELS
1	Terminal block		
2	Fan Motor	100404(8pos)	100401(4pos)
3	Heater 1600W/208V	101677	102947
4	Heater 1600W/240V (Special Model)	102947	101678
5	Heater 500W/208V (Special Model 9" Plate)	101678	102956
6	Thermostat 240°, Temp controller	102956	105474
7	Thermostat 290°, High Limit	101676	101676
8	Thermostat 120°, Temp controller (Special Model 9" plate)	101675	101675
9	Power Switch	rocker 101674 SBH1&2 rocker 101701 SBH3 toggle 103653 SBH1,2&3	103653
10	Control Board - SBH1(madeout of SBH2)		
11	Control Board - SBH2		103587
12	Control Board - SBH3		103588
13	Plug NEMA (6-15P) 15A/250V, 1Ø SBH1		103589
14	Plug NEMA (L6-30P) 30A/250V, 1Ø SBH2	100917	100917
15	Plug NEMA(L15-20P) 20A/250V, 3Ø SBH3	100890	100890
16	Plug 15A/120V SBH1 (Special Model 9" Plate)	100883	100883
17	Indicator Lamp (RED)		100918
18	Indicator Lamp (AMBER)	100335	
19	Start/Reset Switch	100336	
20	Relay DPDT	101709	
21	Relay SPDT (Power)	101703	
22	Fuse 2A	101672	
23	Fuse Holder	101717	
24	Cord Strain Relief	101716	
25	Cord Strain Relief 90°	102955	102955
26	Caster - swivel with brakes	101691	
27	Caster	CSTR-109	CSTR-109
28	Caster - swivel without brakes	CSTR-110	
		CSTR-108	

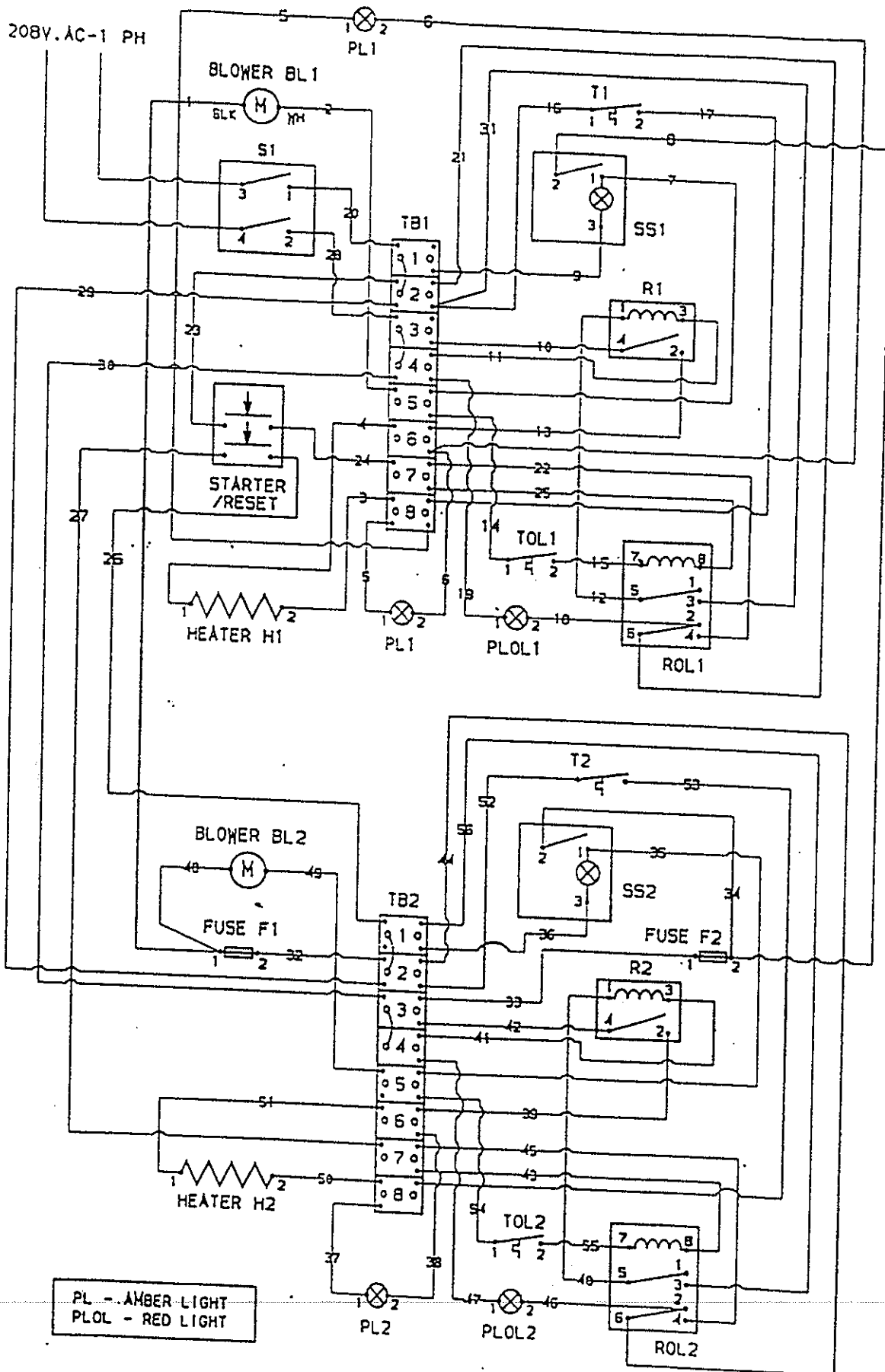
NOTES: 1 - "NEW MODEL" - Starting 12.20.93
2 - For Spring Selection see attached



PL - AMBER LIGHT
 PLOL - RED LIGHT

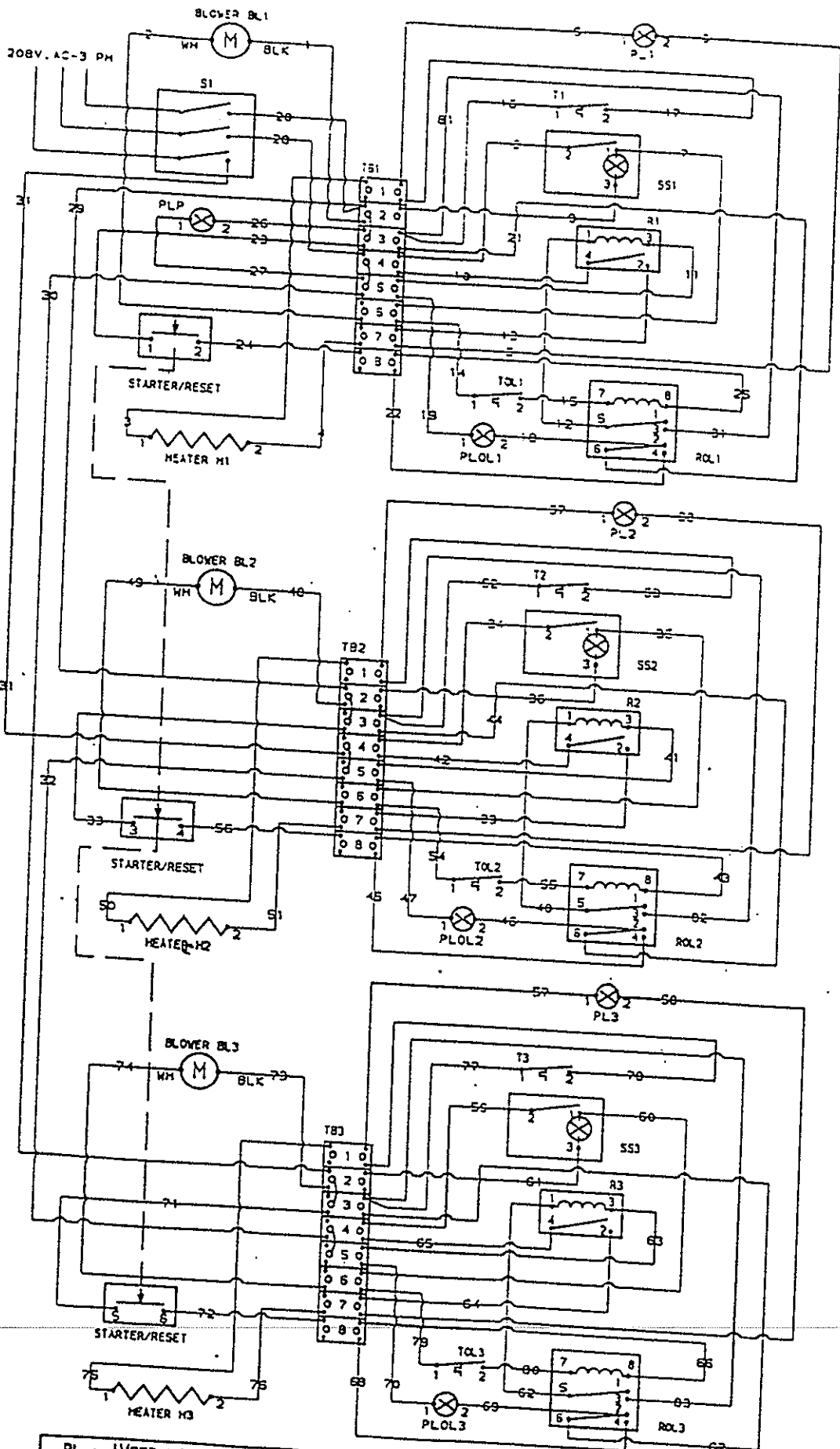
SBH-1

208V. AC-1 PH



PL - AMBER LIGHT
PLOL - RED LIGHT

SBH-2



PL - AMBER LIGHT
 PLOL - RED LIGHT

SBH-3

**Pellet Base Dispensers
SBH Series
Master Parts List**

SBH UNITS

ITEM NO.	DESCRIPTION	(PRE5/92)PART NO.(AFTER5/92)	
		OLD MODELS	NEW MODELS
1	Terminal Block	100404 (8pos)	100401
2	Fan Motor	101677(PRE 5/92)	102947
		102947(AFTER 5/92)	
3	Heater 1600W/208V	101678	101678
4	Heater 1600W/240V (Special Model)	102956	102956
5	Heater 500W208V (Special Model 9" Plate)		105474
6	Thermostat 240 degrees, Temp Controller	101676	101676
7	Thermostat 290 degrees, High Limit	101675	101675
8	Thermostat 120 degrees, Temp Controller		105473
	(Special Model 9" Plate)		
9	Rocker	101674 SBH1&2	103653
	Power Switch	101701 SBH3	
	Togle	103653 SBH1,2&3	
10	Control Board - SBH1 (madeout of SBH2)		103587
11	Control Board - SBH2		103588
12	Control Board - SBH3		103589
13	Plug NEMA (6-15P) 15A/250V/10 SBH1	100917	100917
14	Plug NEMA (L6-30P) 320A/250V/10 SBH2	100890	100890
15	Plug NEMA (L15-20P) 20A/250V,30 SBH3	100883	100883
16	Plug 15A/120V SBH1 (special model 9" plate)		100918
17	Indicator Lamp (red)	100335	
18	Indicator Lamp (amber)	100336	
19	Start/Reset Switch	101709	
20	Relay DPDT	101703	
21	Relay SPDT (power)	101672	
22	Fuse 2A	101717	
23	Fuse Holder	101716	
24	Cord Strain Relief	102955	102955
25	Cord Strain Relief 90 degrees	101691	
26	Caster - Swivel w/Brakes	CSTR-109	CSTR-109
27	Caster	CSTR-110	
28	Caster - Swivel w/o Brakes		

NOTES: 1-"NEW MODEL" - Starting 12.20, 93

2- For Spring Selection See Attached

NEW CONTRLLER STARTED ON

DATE 4/09/03 PART#

106807 NEED TO CHECK SERIAL NUMBER!!!

MODEL: SBH-1
 P/N: 10-100879-000
 SHEET METAL PARTS

Relationship Browser: Children

Child Rev	Filename	AWC Model	Dwg Title	AWC Long Description
Float	300836.dwg	SBH-1, SBH-2, SBH-3	END PANEL	
Float	300842.dwg	SBH-1, SBH-2, SBH-3	HINGE BRACKET, COVER	
Float	300843.dwg	SBH-1, SBH-2, SBH-3	COVER HINGE	
Float	300850.dwg	SBH-1, SBH-2, SBH-3	Thermomether bracket	
Float	300851.dwg	SBH-1, SBH-2, SBH-3	Tube Locator Clip	
Float	300852.dwg	SBH-1, SBH-2, SBH-3	Cord Clip	
Float	300853.dwg	SBH-1, SBH-2, SBH-3	Heater Bracket	
Float	300854.dwg	SBH-1, SBH-2, SBH-3	Bottom Closure expanded metal	
Float	300856.dwg	SBH-1	Bottom enclosure	Bottom enclosure
Float	400276.dwg	SBH-1, SBH-2, SBH-3	Top Weldment	
Float	400277.dwg	SBH-1, SBH-2, SBH-3	Heat Flue System Assembly	
Float	400275.dwg	SBH-1, SBH-2, SBH-3	Inner Liner Assembly	
Float	300809.dwg	SBH-1, SBH-2, SBH-3	Control End Panel	
Float	300808.dwg	SBH-1, SBH-2, SBH-3	Heat Duct	Heat Duct
Float	300807.dwg			
Float	300806.dwg	SBH-1, SBH-2, SBH-3	CONTROL END LINER	
Float	300805.dwg			
Float	300804.dwg			
Float	300803.dwg	SBH-1, SBH-2, SBH-3	Heat Flue (RH)	Heat Flue (RH)
Float	300802.dwg	SBH-1, SBH-2, SBH-3		
Float	300801.dwg	SBH-1, SBH-2, SBH-3	Return Flue (RH)	
Float	300814.dwg	SBH-1	Bottom	
Float	300817.dwg			
Float	300820.dwg			
Float	300829.dwg			
Float	300830.dwg			

Relationship Browser: Children

Child/Rev	Filename	AWC Model	Dwg Title	AWC Long Description
Float	300833.dwg			
Float	300837.dwg			
Float	300838.dwg			
Float	300839.dwg			
Float	300840.dwg			
Float	300841.dwg			
Float	300844.dwg			
Float	300845.dwg			
Float	300846.dwg			
Float	300847.dwg			
Float	300823.dwg			
Float	300824.dwg			
Float	12-106635-000.dwg	SBH-1,-2,-3	CONTROL BOX	REF #300811,HOLES & CUTOUT FOR N
Float	12-106636-000.dwg	SBH-1,-2,-3	CONTROL PANEL	REF #300810,HOLES & CUTOUT FOR N
Float	12-107170-000.dwg	SBH-1,2,3	HINGED COVER PLUNGER (OPTIONAL)	HINGED COVER PLUNGER (OPTIONAL)
Float	11-202128-000.dwg	SBH-1,2,3	COVER, PLUNGER & WEIGHT P	COVER, PLUNGER & WEIGHT PLATE A
Float	12-108122-000.dwg	SBH-1,2,3	CORNER FILLER	CORNER FILLER