

AutoCure 5000 - 2116 Portable Repair Arm

Assembly and Operating Manual



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1. Warnings and Danger



**DANGEROUS VOLTAGES ARE
PRESENT IN THIS EQUIPMENT!**

**CONTACT WITH LIVE PARTS
COULD CAUSE
SERIOUS INJURY OR DEATH!**

**CONNECTION, INSTALLATION, MAINTENANCE,
ADJUSTMENT, SERVICING AND OPERATION TO BE
DONE BY QUALIFIED PERSONNEL ONLY.**

**ENSURE THAT EQUIPMENT IS COMPLETELY
AND PROPERLY GROUNDED BEFORE APPLYING
SUPPLY POWER AND BEFORE EQUIPMENT
OPERATION.**

In this manual, the words **WARNING**, **CAUTION** and **NOTE** are used to emphasize important safety information as follows:

WARNING

Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

CAUTION

Hazards or unsafe practices which could result in minor personal injury, product or property damage.

NOTE

Important installation, operation or maintenance information.

WARNING

Read the following warnings before using this equipment



READ THE MANUAL

Before operating finishing equipment, read and understand all safety, operation and maintenance information provided in the operation manual.



OPERATOR TRAINING

All personnel must be trained before operating finishing equipment.



EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.



LOCK OUT / TAG-OUT

Failure to de-energize, disconnect, lock out and tag-out all power sources before performing equipment maintenance could cause serious injury or death.



AUTOMATIC EQUIPMENT

Automatic equipment may start suddenly without warning.



PRESSURE RELIEF PROCEDURE

Always follow the pressure relief procedure in the equipment instruction manual.



KEEP EQUIPMENT GUARDS IN PLACE

Do not operate the equipment if the safety devices have been removed.



KNOW WHERE AND HOW TO SHUT OFF THE EQUIPMENT IN CASE OF AN EMERGENCY



WEAR SAFETY GLASSES

Failure to wear safety glasses with side shields could result in serious eye injury or blindness.



INSPECT THE EQUIPMENT DAILY

Inspect the equipment for worn or broken parts on a daily basis. Do not operate the equipment if you are uncertain about its condition.



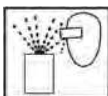
NEVER MODIFY THE EQUIPMENT

Do not modify the equipment unless the manufacturer provides written approval.



NOISE HAZARD

You may be injured by loud noise. Hearing protection may be required when using this equipment.



PROJECTILE HAZARD

You may be injured by venting liquids or gases that are released under pressure, or flying debris.



PINCH POINT HAZARD

Moving parts can crush and cut. Pinch points are basically any areas where there are moving parts.



STATIC CHARGE

Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or electric shock and other serious injury.



WEAR RESPIRATOR

Toxic fumes can cause serious injury or death if inhaled. Wear a respirator as recommended by the fluid and solvent manufacturer's Safety Data Sheet.



TOXIC FLUID & FUMES

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, injected or swallowed. LEARN and KNOW the specific hazards or the fluids you are using.



FIRE AND EXPLOSION HAZARD

Improper equipment grounding, poor ventilation, open flame or sparks can cause a hazardous condition and result in fire or explosion and serious injury.



MEDICAL ALERT

Any injury caused by high pressure liquid can be serious. If you are injured or even suspect an injury:

- ◆ Go to an emergency room immediately.
- ◆ Tell the doctor you suspect an injection injury.
- ◆ Show the doctor this medical information or the medical alert card provided with your airless spray equipment.
- ◆ Tell the doctor what kind of fluid you were spraying or dispensing.



GET IMMEDIATE MEDICAL ATTENTION

To prevent contact with the fluid, please note the following:

- Never point the gun/valve at anyone or any part of the body.
- Never put hand or fingers over the spray tip.
- Never attempt to stop or deflect fluid leaks with your hand, body, glove or rag.
- Always have the tip guard on the spray gun before spraying.
- Always ensure that the gun trigger safety operates before spraying.



PROP 65 WARNING

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

It is the responsibility of the employer to provide this information to the operator of the equipment.

For further safety information regarding this equipment, see the General Equipment Safety Booklet (77-5300).

2. Equipment Safety Guidelines

(Read and understand this manual before operating equipment.)

CAUTION!!

1. Turn power off at source before servicing equipment or attempting any electrical or mechanical maintenance, especially lamp replacement.
2. If the control panel main power switch is ON, voltage may exist at the lamps even though the lamps are not emitting light. AN ELECTRICAL SHOCK COULD POSSIBLY RESULT!
3. Heater head(s) contains high voltage. Do not insert metallic objects into cooling louver openings.
4. Before applying supply power, make sure the AutoCure arm(s) are grounded properly before equipment operation.
5. Before each operation of the AutoCure arm(s), inspect the repair arm(s) heater lamp(s). If any lamps are broken or break at any time, shut the power off and discontinue use. When the damaged or broken lamp(s) are replaced by the qualified personnel, turn the power back on.
6. This is an automatic piece of equipment. Heater can very quickly come on to full intensity without warning to unaware personnel.
7. Heater surfaces can become hot when used at high power for extended periods. Use caution whenever handling heater head(s). The heater head(s) have black insulated handles to use for moving or manipulating heater head(s).
8. Do not move heater when in operation because it will move the temperature sensor viewing area and the heater head's distance to product. If the heater accidentally moves, check temperature sensor viewing area with the "Positioning Beam" and verify acceptable positioning of heater head.
9. Use care when manipulating or positioning heater head(s) and arms. Avoid possible pinch points.
10. The positioning beam/pyrometer must be aimed at the surface target to be heated. If it is not properly aimed at the surface target, (i.e. aimed into open air) the pyrometer will read a lower temperature causing the unit to go to high lamp intensities for abnormal time lengths. If used in this condition for extended period of time, it can damage the unit.
11. When the unit is NOT in operation, the E-stop button MUST be pressed for safety of personnel, unit, and other material/equipment in vicinity of the heater head(s).

LAMPS

All lamp end covers and grills must be installed before operating and using the repair arms to avoid electrical shock.

The lamps of the repair arms have similarities to a standard incandescent light bulb. During the repair arm curing cycle, the repair arm lamps can sometimes emit bright light similar to a standard incandescent light bulb. As you would with an incandescent light bulb, we high recommend you

DO NOT STARE DIRECTLY INTO THE BRIGHT LIGHT.

DO NOT HANDLE INFRARED LAMPS WITH BARE HANDS. Remove any contamination with alcohol and a clean, soft cloth. Contamination on quartz tubes allows the quartz to overheat, which leads to premature lamp failure.

PYROMETER POSITIONING BEAM

A class 2 laser emits in the visible region (635-870mN) at 1mW of power. The blink reflex of the human eye (aversion response) will prevent eye damage, unless the person deliberately stares into the beam for an extended period. **DO NOT STARE INTO THE BEAM.**

ENVIRONMENT

Heater head contains high voltage connections that are open to atmosphere. These units are not air-purged. Ensure use of unit is acceptable in the area in which it will be used.

3. Operating Instructions

Temperature Controller Single or Double Ramp Operation (See Figure 1)

Single Ramp Operation: The temperature ramps in a predetermined amount of time from ambient to a set point temperature and holds at that temperature for a required amount of time.

Double Ramp Operation: The temperature ramps in a predetermined amount of time from ambient to the first set point temperature and holds at that temperature for a required amount of time, it then ramps in a predetermined amount of time to a second set point temperature and holds at that temperature for a required amount of time.

Temperature Controller Displays

The upper display indicates the mode of the heating cycle and the process temperature. During the Ramp mode the upper display will toggle between the process temperature and ramping. Once the cure temperature (set point) has been reached the upper display will toggle between the hold time remaining (in minutes) and the process temperature. When the hold time becomes less than one minute the upper display will toggle between the hold time remaining (in seconds) and the process temperature. The lower display indicates the cure temperature (set point).

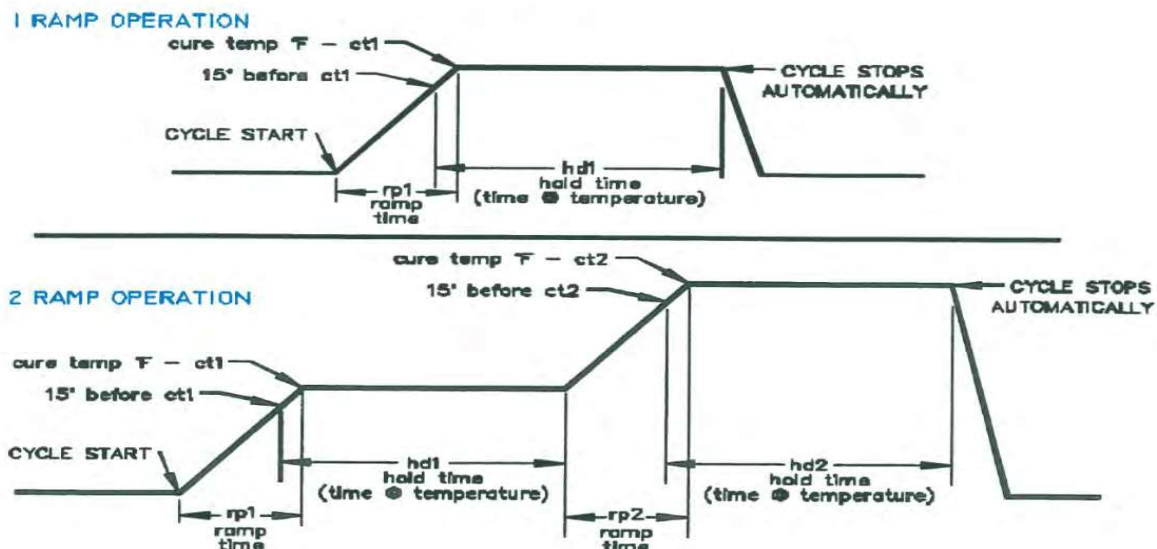
Cycle Start Button

The product will heat to the set point temperature and remain there for the time selected. The hold time will start when the temperature reaches 15°F before set point.

Heater Position

If the heater is too far from the product, the temperature will not be reached and the hold timer will not be activated.

Figure 1



Setting the Temperature Controller Parameters

Single Ramp

1. Turn power on.
2. Turn positioning beam on and position heater.
3. Set controller parameters
4. Hold the  button for 1-2 seconds
 - a. Set rp1 (ramp time) in minutes  
Press 
 - b. Set ct1 (cure temp) in degrees  
Press 
 - c. Set hd1 (hold time) in minutes  
Press 
 - d. Set rp2 = 0 (this disables 2nd ramp)
Press 
5. Press the  to exit setup menu
6. Set auxiliary heater off or on
7. Press the cycle start

Double Ramp

1. Turn power on.
2. Turn positioning beam on and position heater.
3. Set controller parameters
4. Hold the  button for 1-2 seconds
 - a. Set rp1 (ramp time) in minutes  
Press 
 - b. Set ct1 (cure temp) in degrees  
Press 
 - c. Set hd1 (hold time) in minutes  
Press 
 - d. Set rp2 (2nd ramp time) in minutes  
Press 
 - e. Set ct2 (2nd cure temp) in degrees  
Press 
 - f. Set hd2 (2nd hold time) in minutes  
Press 
5. Press the  to exit the setup menu
6. Set auxiliary heater off or on
7. Press cycle start



4. Lamp Installation and Replacement Instructions

Danger!!

Turn power off at source before removing end covers and servicing lamps. A fatal electrical shock could possibly result.

Precautions for Handling Quartz Infrared Lamps

Do not handle infrared lamps with bare hands. Remove any contaminations with alcohol and a clean, soft cloth. Contaminations on quartz tubes cause the quartz to overheat, which may lead to premature lamp failure.

Caution!!

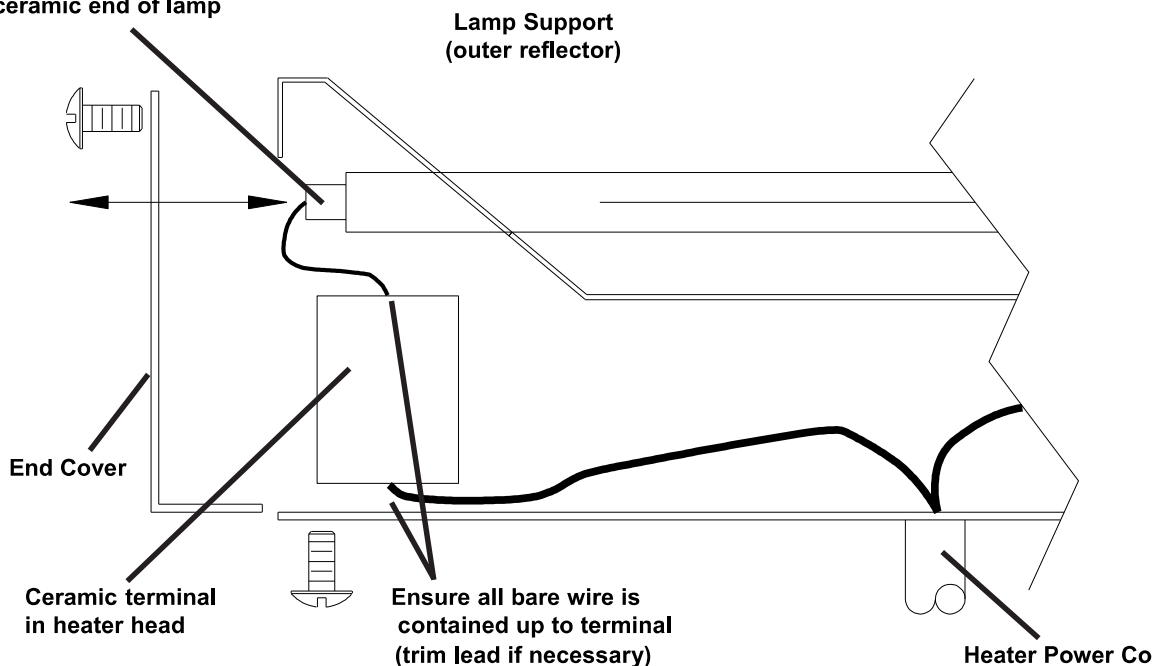
If lamps are replaced, with lamps having metal ends, metal ends must be removed to permit proper assembly and prevent the possibility of arcing or shorting.

Lamp Installation / Replacement Procedure

1. Make sure main system circuit breaker is OFF.
2. Rotate heater so lamps are horizontal.
3. Remove end covers to gain access to lamp leads.
4. Disconnect wire from the ceramic terminal block and remove lamp that is being replaced.
5. Carefully slide the lamp through the lamp support.
6. Remove electrical insulation sleeves from the old lamp on both lamp leads and install them on the new lamp leads. Push the sleeve to the ceramic end of the lamp (see drawing below).
7. Secure the lamp lead to the power wire coming into the heater at the ceramic terminal block.
8. Install end covers.

NOTE: If lamp leads are too tight, damage to lamp may result.

Make sure lamp sleeving is pushed all the way into ceramic end of lamp



5. Heater Position Instructions

Important: Precautions and Instructions

General Instructions (Read All)

1. The "Positioning Beam" (red dot) is an aid for proper placement of the heat sensor. The heat sensor reads an area of 0.8 to 1.2" diameter depending on the heater's distance from the surface. The sensor takes an average temperature reading of the area and displays it on the temperature controller. **Note: the red dot is not at the exact center of the sensing area. As you face the control panel the dot is 3/4" to the left of the heat sensor.**
2. Make sure the heat sensing area is reading a painted surface. If the sensing area is positioned incorrectly and is partially reading tape, masking, trim, plastic, rubber, a window, or a wheel well, it will measure an average temperature much higher or lower than the actual temperature of the painted surface. Thus, the heater will possibly overheat the area and scorch the paint, or not heat the part enough and the paint will not be cured.
3. The heater head distance from the product is important. If the heater head is too far away, the product will not reach cure temperature and will run indefinitely trying to get to temperature. If the heater head is too close "striping" may occur. The recommended distance of the heater face to the product is 8 -12". The heater should be as parallel as possible to the product surface, which helps maintain uniform heating over the heated area.
4. Before heating a repair, determine if there are any types of reinforcements or extra thicknesses of metal in the area to be cured. These areas will heat at different rates and not achieve the same temperature as the single thickness metals without reinforcements. Aim the heat sensor on, or near, the multiple thickness or reinforced areas so they will be fully cured.
5. Once the cycle has started, do not move the unit. This will cause the temperature sensor to "see" a different area, which may be cooler. If the temperature drops 18°F, it will reset the timer and run another complete cycle. To help the unit's stability, be sure to lock the casters on the base of the arm after positioning the heater to lock it in place.
6. Check the control panel 3 to 5 minutes into the cycle. See if the temperature has risen to set point and if the timer has started. If it hasn't, determine the problem and correct it. If there is a problem with the position or setup of the arm where it cannot achieve the set point temperature, the timer will not turn on. The heater will run at full intensity indefinitely.
7. To achieve a full cure on a repair area, including overspray, the "effective cure area" of the heater must be considered. The "effective cure area" of the rectangular shaped heater heads is an oval shape that is just slightly smaller than the heater head. A general rule for the "effective cure area" dimensions are 1" in from the sides and end covers of the heater head, which creates the outer boundaries of the oval. When main and auxiliary heater heads are used together, add the two areas together.

Heat Masking

1. Any heat sensitive materials or surfaces (including plastic, rubber, trim, pin stripes, decals, light lenses, mirrors, door handles, interior materials, etc.) in the heating area must be masked or removed during the heating cycle. High temperature/reflective masking material approved for this type of application is required.
2. When curing small areas, it is not recommended to use heat masking around the area except to cover heat sensitive materials. The heat sensor "sees" an area approximately 1" in diameter, a heating area that is 1.5" or smaller could result in a false reading if the heat sensor is reading the masking.

Positioning / Set-Up of Heater Head Instructions

Positioning / Set-Up of an arm on flat surfaces (doors, hood, roofs, trunk lids, etc.)

1. Follow any of the instructions previously mentioned in the precautions and instructions section.
2. Always position heaters parallel and 8 to 12" from the surface.
3. Aim the positioning beam on spot being repaired; make sure that the beam is not aimed at heat sensitive materials.
4. Engage caster locks.
5. Recheck heat sensor aim with the positioning beam.
6. Set the temperature and time settings.
7. Start heat cycle.
8. Approximately 3-5 minutes after start, check that the temperature is at set point and the timer has started.
9. When the timer and the heater lamps shut off, the cycle is complete and ready for the next repair.
10. Press the E-stop button on unit when cycle has completed before moving unit to next repair or in to storage position.

Positioning / Set-Up of a heater on a curved or contoured surfaces (fender, hood, roof, trunk corners)

1. Follow any of the instructions previously mentioned in the precautions and instructions section.
2. Always position heaters parallel and 8 to 12" from the surface. Adjust the A and B heaters to the contour of the curve, with the most direct heat radiation in the area of the repair.
3. Aim the positioning beam on spot being repaired; make sure that the beam is not aimed at heat sensitive materials.
4. Engage caster lock.
5. Recheck heat sensor aim with the positioning beam.
6. Set the temperature and time settings.
7. Start heat cycle.
8. Approximately 3-5 minutes after start, check that the temperature is at set point and the timer has started.
9. When the timer and the heater lamps shut off, the cycle is complete and ready for the next repair.
10. Press the E-stop button on unit when cycle has completed before moving unit to next repair or in to storage position.

Positioning/Set-Up of an arm on roof posts (heavy reinforcements/multiple metal thickness)

1. Follow any of the instructions previously mentioned in the precautions and instructions section.
2. Position heaters parallel to the surface, the length of the heater along the length of the roof post. Do not put the heater 90° to the post, unless the repair area is very small. The heater should be about 8" from the surface for the heavy reinforcement in the posts.
3. Aim the positioning beam on spot being repaired; make sure that the beam is not aimed at heat sensitive materials. The post is very narrow, so carefully position the heat sensor where it will "see" the post.
4. Engage caster lock.
5. Recheck heat sensor aim with the positioning beam.
6. Set the temperature and time settings.
7. Start heat cycle.
8. Approximately 3-5 minutes after start, check that the temperature is at set point and the timer has started.
9. When the timer and the heater lamps shut off, the cycle is complete and ready for the next repair.
10. Press the E-stop button on unit when cycle has completed before moving unit to next repair or in to storage position.

Positioning/Set-Up of an arm on rocker panels (heavy reinforcements/multiple metal thickness)

1. Follow any of the instructions previously mentioned in the precautions and instructions section.
2. Position heaters parallel to the surface, the length of the heater along the length of the rocker panel. If there is an auxiliary heater head, use both heaters and bend them at about a 135° angle to focus more direct heat around the curve of the rocker panel. The heater should be spaced about 8" from the surface for the heavy reinforcement in the rocker panel.
3. Aim the positioning beam on spot being repaired; make sure that the beam is not aimed at heat sensitive materials
4. Engage caster lock.
5. Recheck heat sensor aim with the positioning beam.
6. Set the temperature and time settings.
7. Start heat cycle.
8. Approximately 3-5 minutes after start, check that the temperature is at set point and the timer has started.
9. When the timer and the heater lamps shut off, the cycle is complete and ready for the next repair.
10. Press the E-stop button on unit when cycle has completed before moving unit to next repair or in to storage position.

6. Maintenance

The AutoCure™5000 will require some basic maintenance when used on a regular basis. Failure to do so may degrade the performance of the unit.

Disconnect main power at the source before performing any maintenance procedures.

Gas Spring

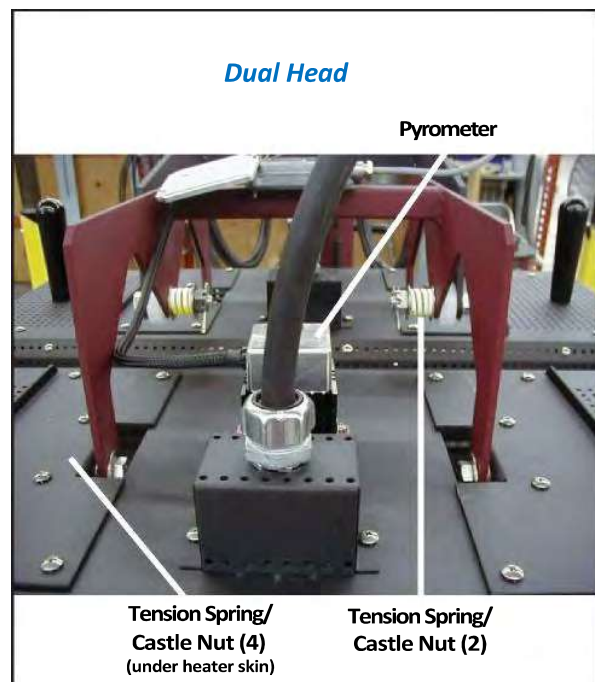
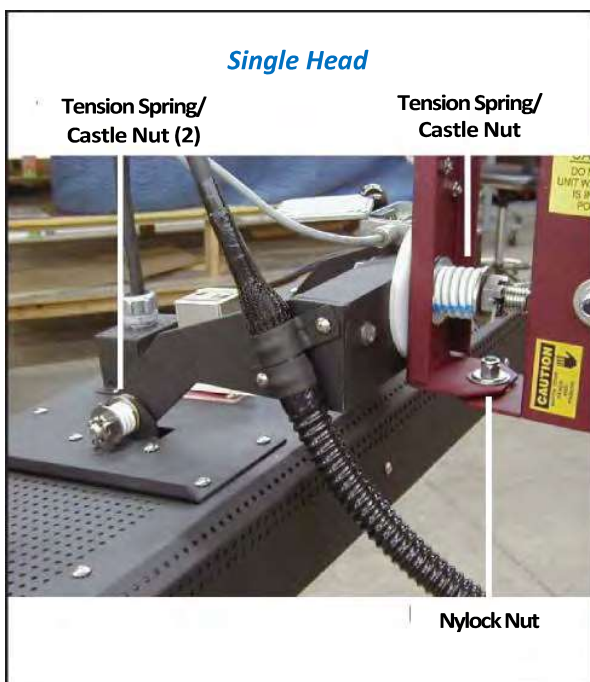
1. Check nylock nut connecting the gas spring for tightness monthly. Check gas spring for leaks. If gas spring becomes weak, raising the heater will become difficult.

Pivot Points

1. Single head units have three (3) castle nut/spring combinations and two (2) shoulder bolts with Nylock nuts. If pivot points become loose, heater positioning will not be maintained. Check these points monthly.
2. Dual head units have seven (7) castle nut/spring combinations and two (2) shoulder bolts with Nylock nuts. If pivot points become loose, heater positioning will not be maintained. Check these points monthly.
3. To adjust spring tension; remove cotter pin, tighten castle nut (usually one or two notches) and replace cotter pin through bolt.

Lamps, Reflectors and Heat Sensor (Pyrometer) Lens

1. Clean with soft cloth and alcohol monthly. Heat sensor accuracy is dependent on a clean lens.



7. Troubleshooting Guide

Heater Power Problems

Problem

Heater lamps come on immediately when disconnect is closed.

Possible Cause and Corrective Action

- With power OFF, measure the resistance from the lamp wires to ground. The measurement should be more than 100 K ohms. If it is less than 100 K, check the lamp wiring and heater head for shorts to ground. Check for a bad firing circuit board or a shorted SCR by: exchanging the firing circuit board with one from a known good control. Does the problem follow the firing circuit board or does it stay with the SCR – replace the defective component.
- Contactor held closed – failed ON. Replace the contactor.

Problem

Heater lamps do not come on.

Possible Cause and Corrective Action

- Is the Power On/Off button illuminated, is the temperature controller on? - Check that incoming line power is present; transformer fuses, primary and secondary are good.
- Do the contactors energize when the Cycle Start button is pressed? – Check for loose wires associated with the contactors, change the temperature controller.
- Check that the set point (bottom display) is higher than the process temperature (top display).
- Are the line fuses in front of the contactors good – check voltage on the load side of the fuses or remove the fuses and check with an ohmmeter.
 - Is the green LED on the firing circuit lit? – Check that the firing circuit has 24 vac, with an ammeter check that the 4-20ma input signal is present from the temperature controller. If the 4-20ma signal is not present, see the section “No Output Signal from Temperature Controller”.
 - Do any of the zones function? – If the above points have been checked, confirm that there is a complete circuit through the lamps and all wiring is tight – change the SCR.
- Are all zones dead? – Zone A should function regardless of the zone switch setting, there is only one firing circuit for all zones - change the firing circuit

Temperature Controller Problems

Problem

Temperature controller has no display.

Possible Cause and Corrective Action

Check the supply voltage (24 VAC) to the unit at terminals 11 and 12. If voltage is present, replace the controller. If voltage is not present, check source of power (fuses, transformers, wiring, etc.)

Problem

No output signal from temperature controller.

Possible Cause and Corrective Action

- Check that the set point (bottom display) is higher than the process temperature (top display).
- Check the 0-5v input to the temperature controller at pins 9 & 10. If the 0-5v signal is not present, confirm that the Raytek pyrometer is functioning.
- Is the LCD display lit? If not, check that the Raytek input power (12 vdc) is present, check that the power supply board is supplying 12 vdc (TB 4) – replace the temperature controller, Raytek, or the power supply board.

Problem

Temperature controller output signal is present, but heater lamps do not come on.

Possible Cause and Corrective Action

Possible defective power controller firing circuit board and/or SCR. Check for a bad firing circuit board or SCR by exchanging the firing circuit board with one from a known good control. Does the problem follow the firing circuit board or does it stay with the SCR – replace the defective component.

Temperature Problems

Problem

The heater reaches set-point temperature, but the paint isn't cured properly or is darkened, or the heater does not reach set-point temperature.

Possible Cause and Corrective Action

- Read the instructions in the manual on how to position and run the heater.
- Clean the temperature sensor lens as described in maintenance section.
- The optical pyrometer is not seeing the surface of the object being heated. The pyrometer has about a 1-inch diameter field of view on the objects' surface. Position the heater head with the pyrometer so it sees the surface being heated. Make sure the pyrometer is not seeing parts of a window, wheel well, tape, masking, etc.

Problem

The temperature display jumps up or down many degrees within a second.

Possible Cause and Corrective Action

- Check for loose connections on the heat sensor (pyrometer) wiring.
- While the heater is running at temperature, gently wiggle the pyrometer cable and have someone watch for sudden temperature changes. If this happens – replace the cable.

Problem

Positioning Beam does not work

Possible Cause and Corrective Action

Check that the power supply board is supplying approximately 3.25 vdc (TB 3). Check that the wires are secure on the power supply board and on the push button. Open the cover on the Heat sink assembly on the back of the heater and retest for the 3.25 v. If the power supply is functioning and there is no voltage at the heat sink assembly, open the Raytek pyrometer and test for the voltage (the 2 wire nuts) – replace the Positioning Beam.

8. Temperature Controller Error Codes

<u>Display</u>	<u>Problem</u>	<u>Actions</u>
Err.H	Open Sensor	Check sensor,wiring, and input
Err.L	Reversed Sensor	Check Sensor polarity
LPbr	Loop Break	Correct problem and Reset controller
0100	Checksum Error	Press Any Key to perform a soft reset and reinitialize controller
0101	RAM Error	
0202	Defaults Loaded	
0303	EEPROM Write Failure	
3865	Power Fail Resume Feature Disabled	No further resume actions available
36 Plus other 2 digit code	Unexpected or invalid interrupt	Reset Controller

Ramp/ Soak Errors

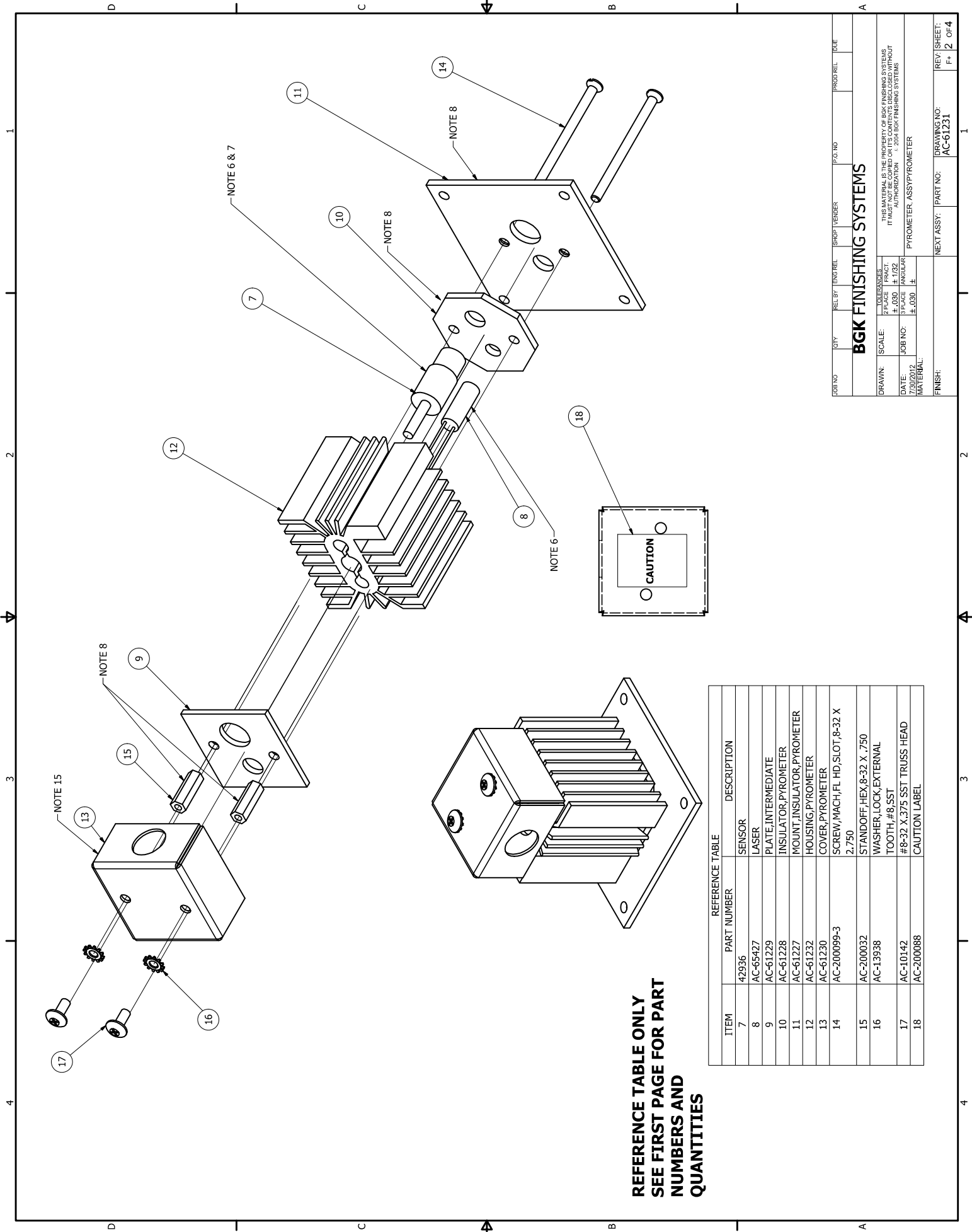
02= Recipe Empty (i.e. no non-zero ramp times)

05= Insufficient Setpoint - Process Value Deviation



4

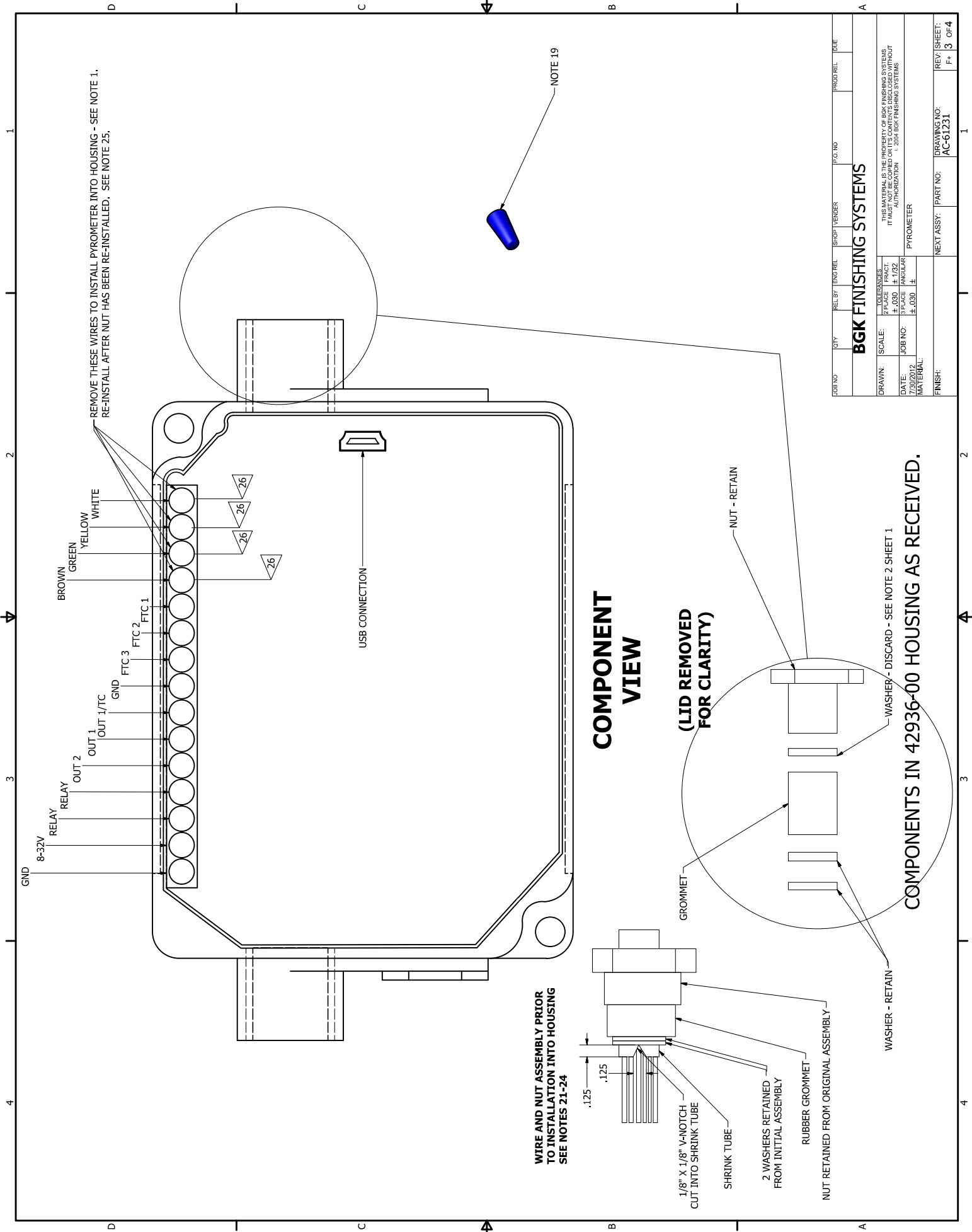
U2 ∞ 1



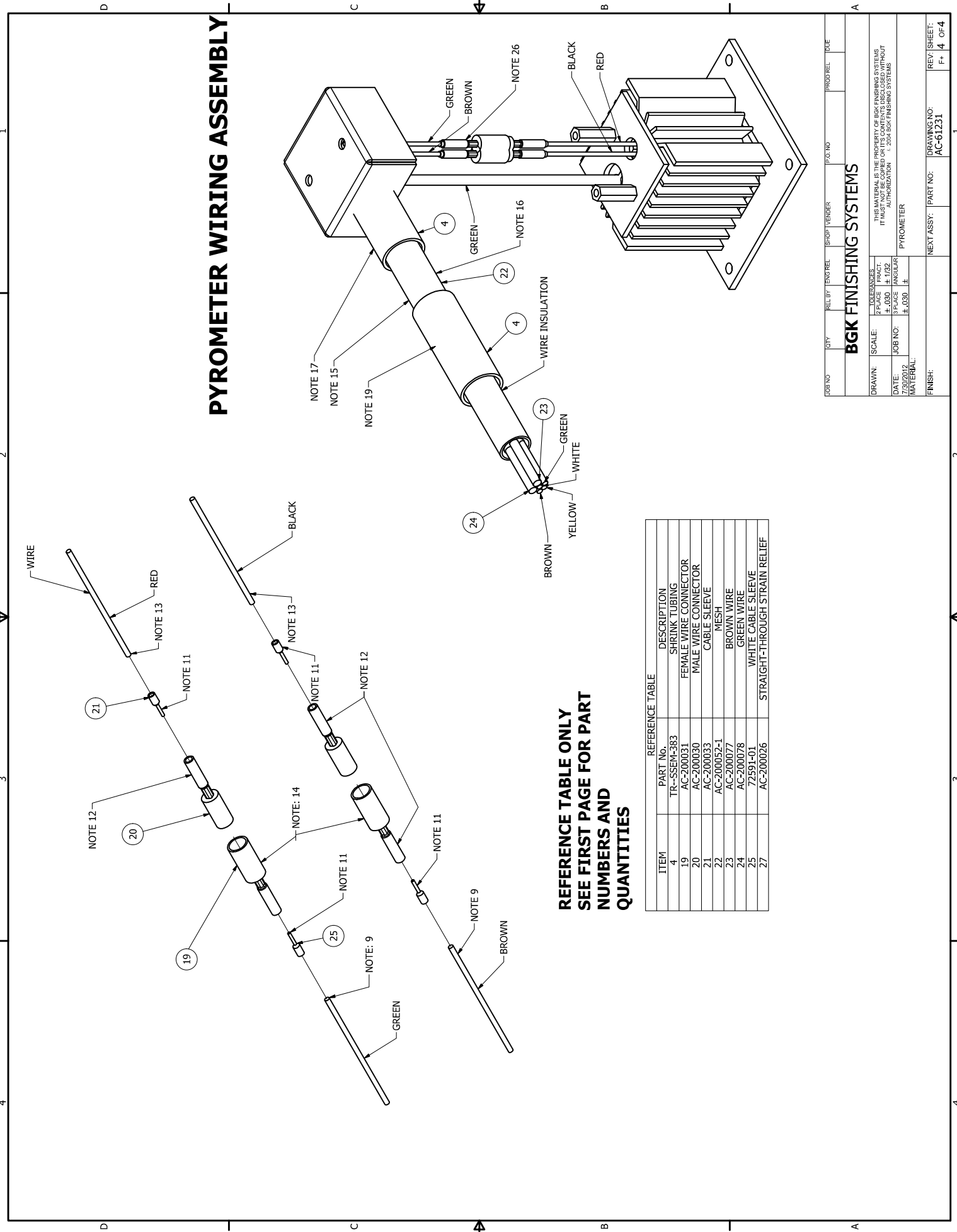
REFERENCE TABLE ONLY
SEE FIRST PAGE FOR PART
NUMBERS AND
QUANTITIES

REFERENCE TABLE		
ITEM	PART NUMBER	DESCRIPTION
7	42936	SENSOR
8	AC-65427	LASER
9	AC-61229	PLATE, INTERMEDIATE
10	AC-61228	INSULATOR, PYROMETER
11	AC-61227	MOUNT, INSULATOR, PYROMETER
12	AC-61232	HOUSING, PYROMETER
13	AC-61230	COVER, PYROMETER
14	AC-200099-3	SCREW, MACH, FL HD, SLOT, 8-32 X 2.750
15	AC-200032	STANDOFF, HEX, 8-32 X .750
16	AC-13938	WASHER, LOCK, EXTERNAL TOOTH, #8, SST
17	AC-10142	#8-32 X.375 SST TRUSS HEAD
18	AC-200088	CAUTION LABEL

JOB NO.	CITY	REL BY	ENG REL	SHOP VENDOR	P.O. NO.	PROD REL	DATE
BGK FINISHING SYSTEMS							
DRAWN:	SCALE:	TOLERANCES: 2 PLACE 3 PLACE 4 PLACE 5 PLACE 6 PLACE 7 PLACE 8 PLACE 9 PLACE 10 PLACE 11 PLACE 12 PLACE 13 PLACE 14 PLACE 15 PLACE 16 PLACE 17 PLACE 18 PLACE 19 PLACE 20 PLACE 21 PLACE 22 PLACE 23 PLACE 24 PLACE 25 PLACE 26 PLACE 27 PLACE 28 PLACE 29 PLACE 30 PLACE 31 PLACE 32 PLACE 33 PLACE 34 PLACE 35 PLACE 36 PLACE 37 PLACE 38 PLACE 39 PLACE 40 PLACE 41 PLACE 42 PLACE 43 PLACE 44 PLACE 45 PLACE 46 PLACE 47 PLACE 48 PLACE 49 PLACE 50 PLACE 51 PLACE 52 PLACE 53 PLACE 54 PLACE 55 PLACE 56 PLACE 57 PLACE 58 PLACE 59 PLACE 60 PLACE 61 PLACE 62 PLACE 63 PLACE 64 PLACE 65 PLACE 66 PLACE 67 PLACE 68 PLACE 69 PLACE 70 PLACE 71 PLACE 72 PLACE 73 PLACE 74 PLACE 75 PLACE 76 PLACE 77 PLACE 78 PLACE 79 PLACE 80 PLACE 81 PLACE 82 PLACE 83 PLACE 84 PLACE 85 PLACE 86 PLACE 87 PLACE 88 PLACE 89 PLACE 90 PLACE 91 PLACE 92 PLACE 93 PLACE 94 PLACE 95 PLACE 96 PLACE 97 PLACE 98 PLACE 99 PLACE 100 PLACE					
DATE:	JOB NO.:	PYROMETER, ASSYPYROMETER					
MATERIAL:							
FINISH:	NEXT ASSY:	PART NO.:	DRAWING NO.:		REV. SHEET:		
			AC-61231		F+ 2 OF 4		



JOB NO.	CITY	REL BY	ENG REL	SHOP VENDOR	P.O. NO.	PROD REL	DATE
BGK FINISHING SYSTEMS							
DRAWN:	SCALE:	THIS MATERIAL IS THE PROPERTY OF BGK FINISHING SYSTEMS. IT MUST NOT BE COPIED OR ITS CONTENTS DISCLOSED WITHOUT AUTHORIZATION BY BGK FINISHING SYSTEMS.					
DATE:	JOB NO:	PYROMETER					
MATERIAL:							
FINISH:	NEXT ASSY:	PART NO:	DRAWING NO:	REV:	SHEET:		
			AC-61231	F+	3	OF 4	



PYROMETER WIRING ASSEMBLY

JOB NO.	CITY	REL. BY	ENG. REL.	SHOP	VENDER	P.O. NO.	PROD. REL.	DATE
BGK FINISHING SYSTEMS								
THIS MATERIAL IS THE PROPERTY OF BGK FINISHING SYSTEMS. IT MUST NOT BE COPIED OR ITS CONTENTS DISCLOSED WITHOUT AUTHORIZATION BY BGK FINISHING SYSTEMS.								
DRAWN:	SCALE:	TOLERANCES:						
DATE:	JOB NO.:	2 PLACE	± .000	± .132				
MATERIAL:		3 PLACE	ANGULAR	PYROMETER				
FINISH:	NEXT ASSY:	PART NO.:	DRAWING NO.:	REV. SHEET:				
		AC-61231	AC-61231	F+ 4 OF 4				

10. Service Instructions For Pyrometer

RAYTEK PYROMETER REPLACEMENT CALIBRATION VERIFICATION ON OVERHEAD OR PORTABLE REPAIR ARM USING A HAND HELD PYROMETER (Raytek MID Pyrometer with BGK Temperature Controller ONLY)

Purpose:

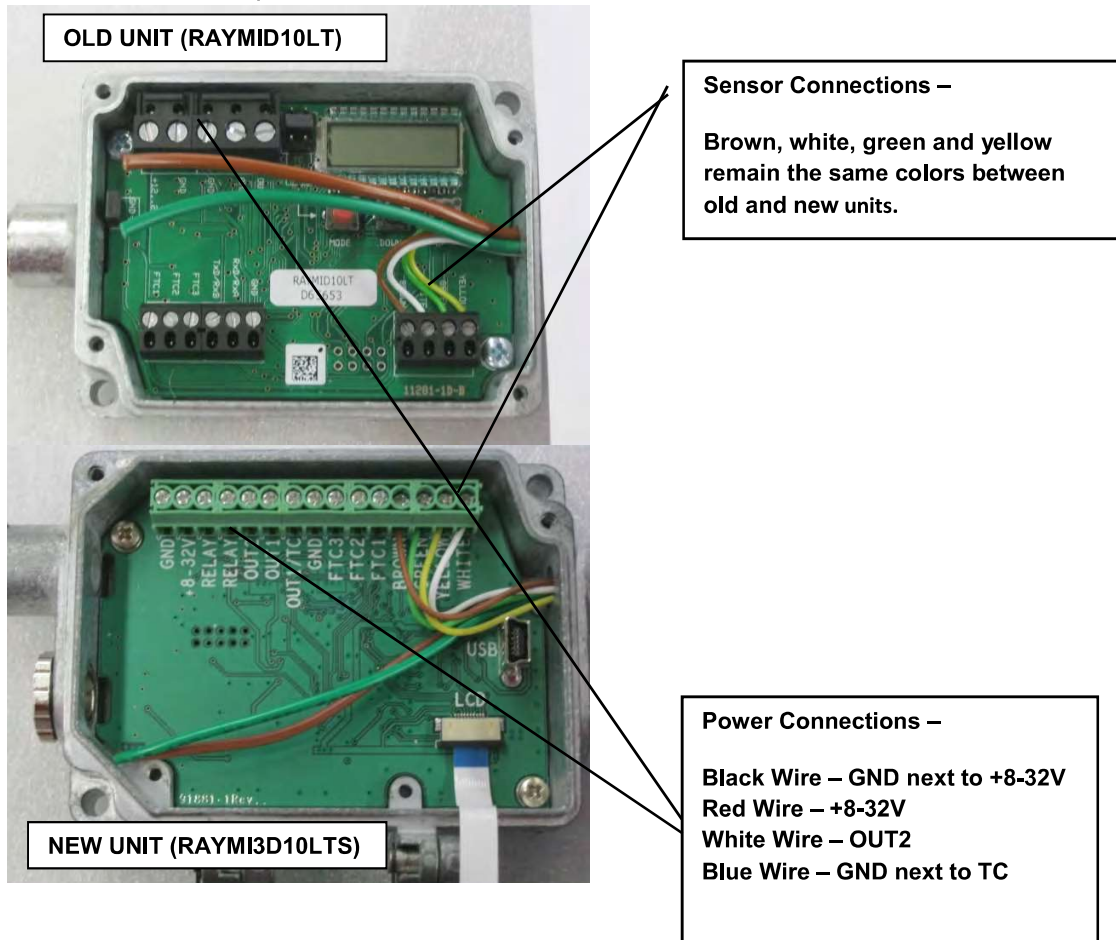
This procedure is to be completed to verify the temperature display is correct on the BGK temperature controller. Then the BGK “Auto-Cure” series repair arms will heat the painted spot repair to the correct temperatures to achieve the proper cure of the paint.

Equipment Required:

- Hand-held Infrared pyrometer in good working order with a current calibration label. Pyrometer with laser aiming is preferred.
- A good condition scrap painted door, fender, or test panel on which to perform the calibration is required. (White or light color is preferred).
- A #1 Phillips screwdriver.

RAYMID10LT Pyrometer Sensor manufactured by Raytek has been discontinued. It has been replaced by model number RAYMI3D10LTS. This Change affects the following Autocure units AC3, AC5, AC6 & AC7, and AC8.

Shown below are photos of the differences between sensors:



Additional modifications required – The AWG gage size of the laser wires that are typically connected inside the sensor with wire nuts. The wire gauge will be changing from 20 AWG to 22 AWG effective upon change over in February 2015.

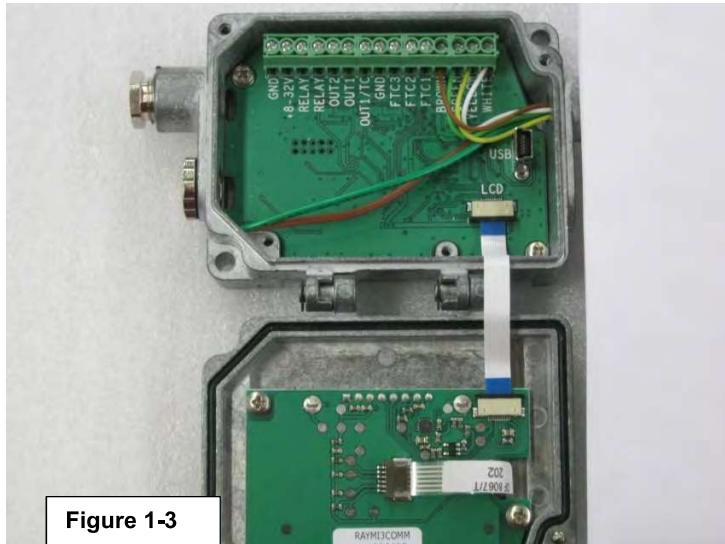


Figure 1-3

The new unit is hinged as shown in Figure 1-3.

Performance - the new sensor is equal, a direct replacement to the older unit. There is no change in emissivity or response time between units, they are equal.



Figure 1-4

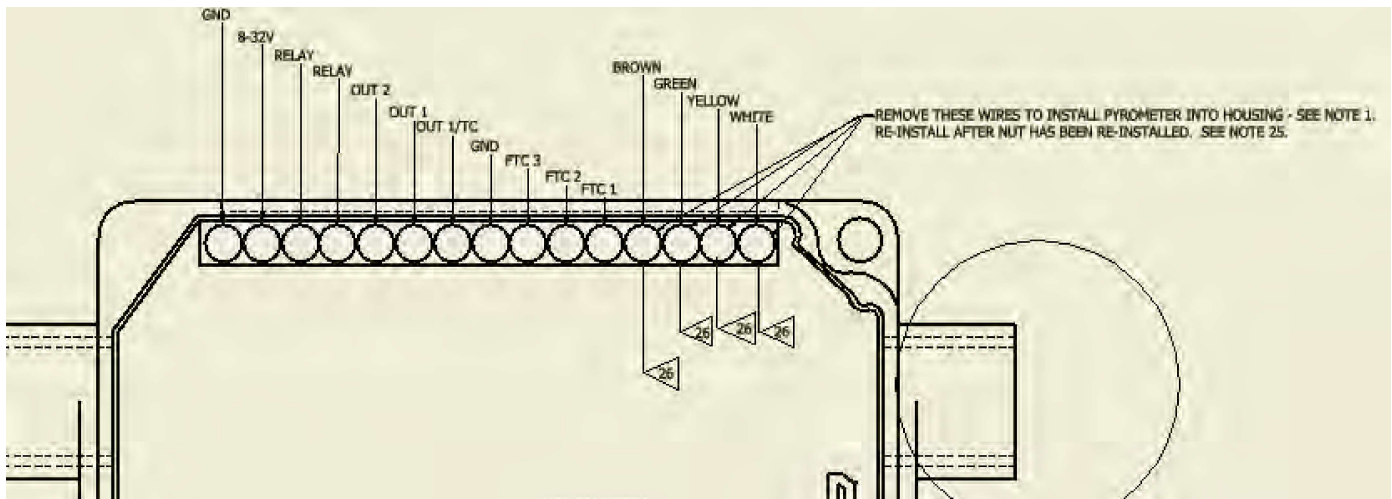
The front cover over lay is solvent resistant. Figure 1-4.

Both the old and new **Raytek units** are not rated for hazardous environment nor are they ATEX approved.

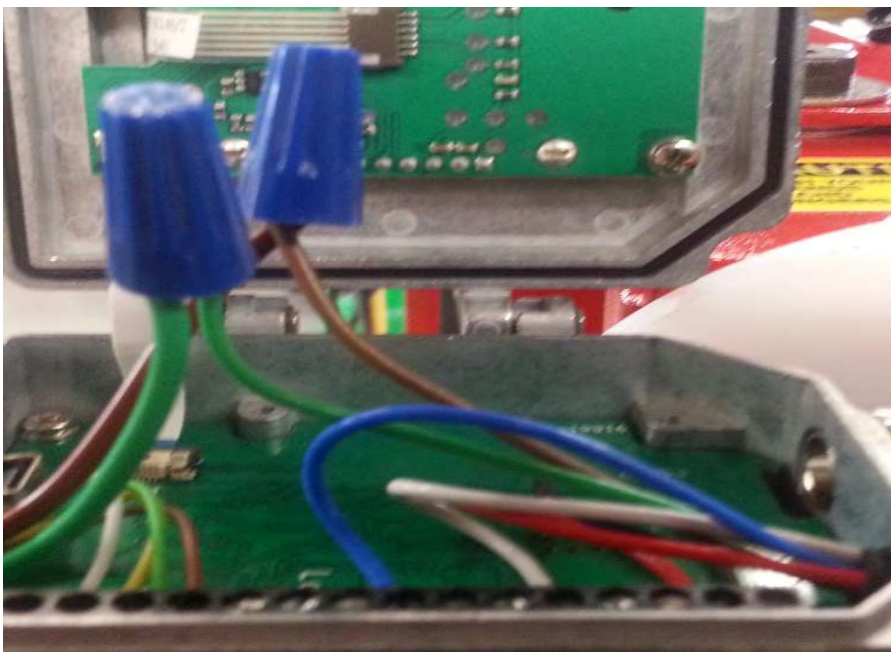
They are **CE rated only**.

Replacement of New Pyrometer Sensor

1. Open Cover for Raytek Sensor, loosen and remove wire from terminals shown below.



2. Undo wires from two wire nuts, as shown.

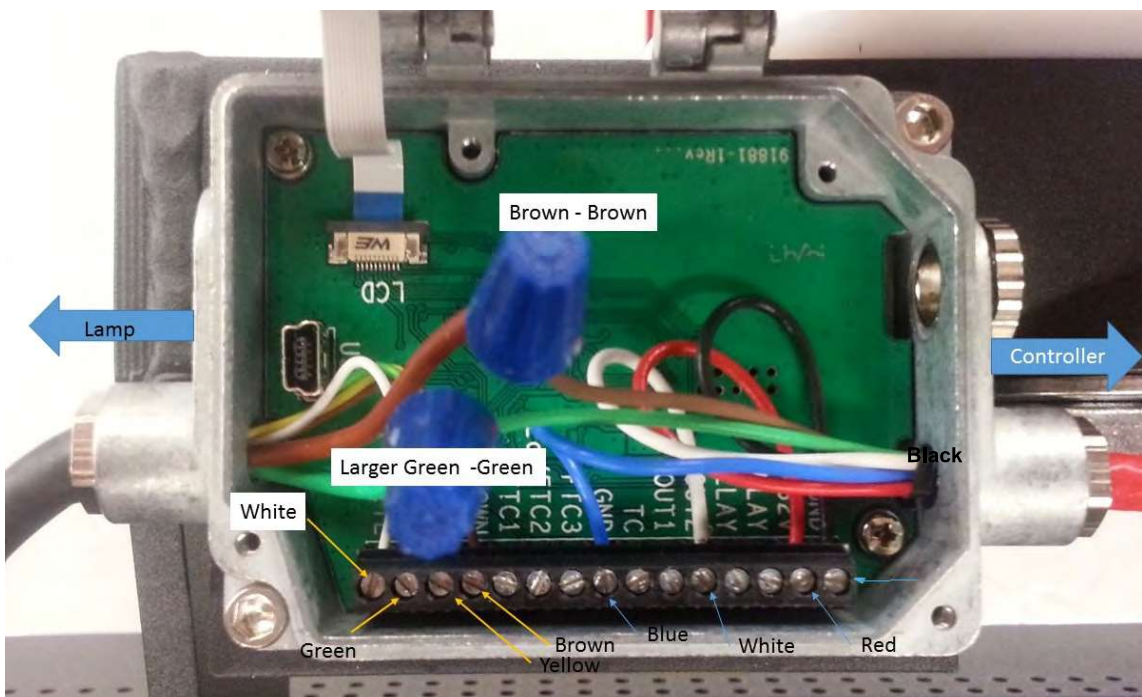


3. Loosen nut on pyrometer side, and remove wires from housing.
4. Open enclosure on top of heat sink, and isolate wires for laser (black/red leads)
5. Clip leads, leaving enough wire to strip and re-connect with crimp connections
6. Loosen and remove standoffs
7. Remove insulating plate
8. Remove heat sink, then remove pyrometer.

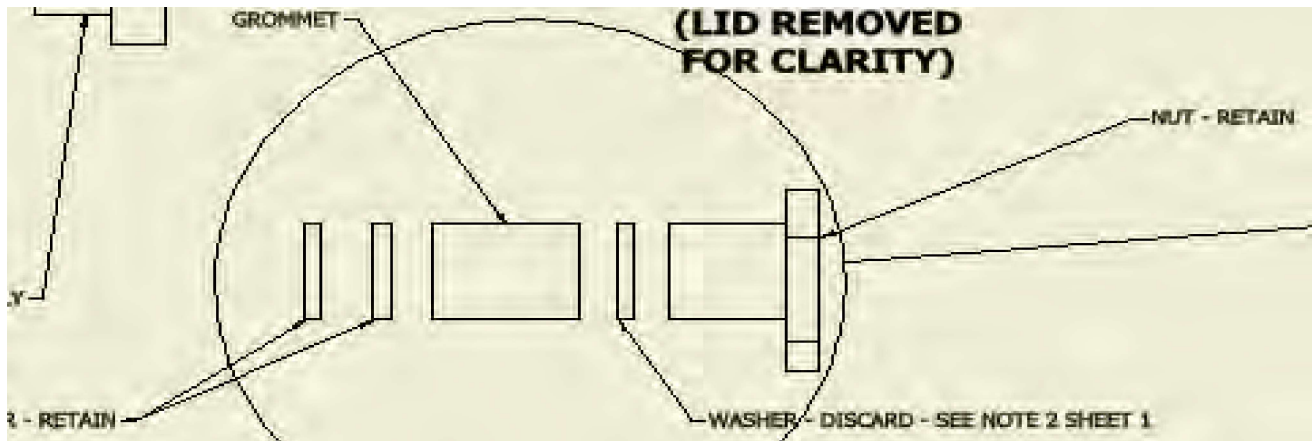
9. Install new pyrometer into heat sink, making sure to adjust fit using varnish tape wrapped on the outside.
10. Install heat sink onto lower insulators
11. Install intermediate plate
12. Crimp laser leads to leads in pyrometer bundle – red to green and brown to black.
13. Install standoffs
14. Replace cover and tighten nuts.
15. If new pyrometer, replace grommet into side of housing.
16. Reconnect leads in Raytek sensor housing using schematic in Step 1.
17. Reconnect wires in wire harness as shown above.

Replacement of Pyrometer Controller

1. Open Housing and loosen 4 terminals to remove pyrometer. Loosen 4 terminals to remove connection to AutoCure Arm as shown below.



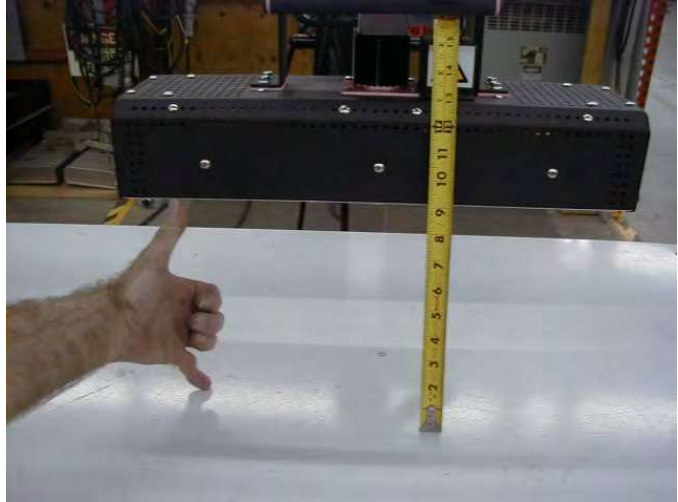
2. Open New Housing, and loosen 4 terminals as shown above to remove pyrometer.
3. Disconnect wires in wire nuts.
4. On New Housing, Loosen and remove nut, grommet, and three washers on thermocouple side. Loosen and remove nut and all washers on AC arm side.
5. Unmount housing and replace with new housing.
6. Install nut, grommet and 2 washers onto Thermocouple leads, as shown below.



7. Once installed, insert leads for thermocouple into terminals indicated in Step 1.
8. Insert and tighten down to 20 Nm.
9. From AC arm, insert nut, AC-200104 Nylon washers and Grommet, similar to diagram in step 5.
10. Insert leads into terminals indicated in step 1. Reconnect leads into wire terminals.
11. Tighten down nut to 20 Nm.
12. Verify calibration per SI-B-11-02.1 (see next page).

Verification / Calibration Procedure

1. Position the good condition testing surface (door, fender, etc.) in front of the heater head. Adjust the heater head about 10" away from the painted test surface. (Approx. an open hand width.)



2. On the good condition, scrap painted testing surface with a pen, pencil or grease pen make a small "X" or dot where the surface is mainly flat and there are **NO** reinforcements or multiple thickness metals within about 12 inches of the mark.

3. Then on the arm control panel, push the "Positioning Beam On" button. Locate the positioning beam (red dot) on the test surface on the "X" or dot you made above. Make sure you maintain the 10-inch gap between the test surface and the heater head. This dot is also the point where the hand-held pyrometer will be aimed during calibration to read the same area the arm pyrometer is reading (temperature reading area). Again, ensure the red dot is **not** aimed at areas with reinforcements or multiple thickness metals within about 12 inches of the dot.



Begin Verification / Calibration Cycle

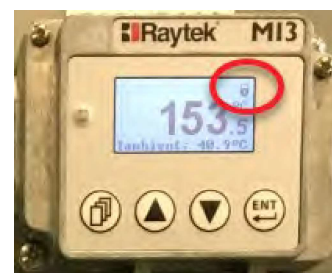
1. Verify that the Ramp 1 and Ramp 2 (if used) cure temperatures (ct1 and ct2) settings are at the proper temperature set points used for the area.
2. Press the “Cycle Start” **button two times with in two seconds**.
Lamp cycle should begin with a ramp-up to the final cure ramp settings. They will be “rp1” set points on a single ramp setup and “rp2” on a dual ramp setup. (See figure A). The temperature set point will be displayed on the bottom display of the temperature controller. The upper display will alternate between “rp_” and the actual temperature feedback from the pyrometer.
After the “rp_” has completed the ramp and flashing, the hold cycle will begin with a constant temperature on the upper display at the “ct_” set point.

Using the handheld pyrometer, measure the temperature of the target about 1” to the right of the positioning beam spot. (Figure D). **Hold the hand-held pyrometer as close to 90° to the testing surface as possible by the edge of the heater head.** This is critical for an accurate and consistent reading.

3. ***Compare the handheld reading with the process temperature (upper display) on the temperature controller. If they are within 5 degrees, no further changes are required. If they are not, continue with doing the following calibration procedure.***

Verify "Lock" Status of Raytek Comm Module

1. **Verify lock status on Raytek box** – Observe the display for a “Padlock” on the screen as shown. If the icon is displayed the unit is “Locked out” preventing any parameter changes. Complete steps below to “Unlock” the unit, otherwise continue with next section.



2. The unit can be unlocked by pressing the  button and the  button simultaneously for 3 seconds or alternatively by pressing the  button for 5 seconds.

Adjusting Raytek Calibration Procedure

1. **Verify correct settings on Raytek box** – Press the page button  until “BOX SETUP” is displayed.

OUT2 Mode

Using the arrow keys   until “OUT2 Mode” is displayed. Verify setting for mode is 0-5V. If the setting is incorrect, press the enter button 

and the setting should be highlighted. Press the arrows keys   until the correct settings is display, 0-5V. After settings is correct, press the enter button



to save setting.

OUT2 Value

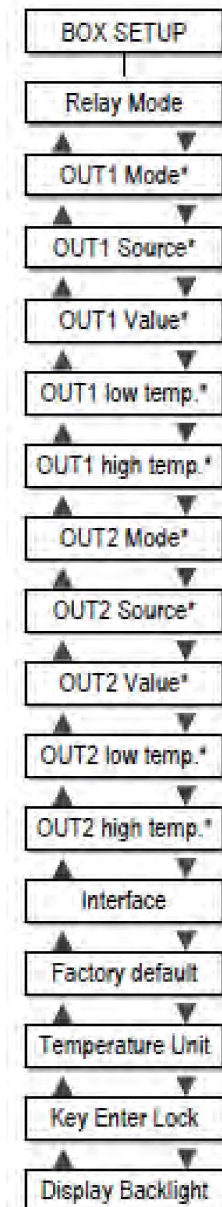
Using the arrow keys   until “OUT2 Value” is displayed. Verify the setting for mode is “Tobject”. If the

setting is incorrect, press the enter button  and the setting should be highlighted. Press the arrows keys



 until the correct settings is display, “Tobject”.

After settings is correct, press the enter button  to save setting.

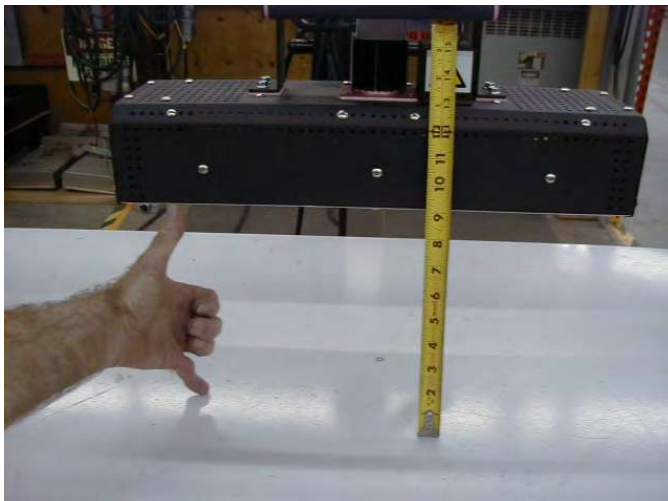


Temperature Unit

Using the arrow keys   until "Temperature Unit" is displayed. Press the enter button  and the setting should be highlighted. Press the arrows keys   until the correct setting is displayed, °F or °C. After settings is correct, press the enter button  to save setting.



2. Position the testing surface (door, fender, etc.) in front of the heater head. Adjust the heater head about 10" away from the painted test surface. (Approx. an open hand width.)



3. On the scrap painted testing surface with a pen, pencil or grease pen make a small "X" or dot where the surface is mainly flat and there are **NO** reinforcements or multiple thickness metals within about 12 inches of the mark.

4. Then on the arm control panel, push the "Positioning Beam On" button. Locate the positioning beam (red dot) on the test surface on the "X" or dot you made above. Make sure you maintain the 10-inch gap between the test surface and the heater head. This dot is also the point where the hand-held pyrometer will be aimed during calibration to read the same area the arm pyrometer is reading (temperature reading area). Again, ensure the red dot is **not** aimed at areas with reinforcements or multiple thickness metals within about 12 inches of the dot.



Begin Calibration Cycle

1. Verify that the Ramp 1 and Ramp 2 (if used) cure temperatures (ct1 and ct2) settings are at the proper temperature set points used for the area.
2. Press the "Cycle Start" **button two times with in two seconds.**

Lamp cycle should begin with a ramp-up to the final cure ramp settings. They will be "rp1" set points on a single ramp setup and "rp2" on a dual ramp setup. (See figure A). The temperature set point will be displayed on the bottom display of the temperature controller. The upper display will alternate between "rp_" and the actual temperature feedback from the pyrometer.

After the "rp_" has completed the ramp and flashing, the hold cycle will begin with a constant temperature on the upper display at the "ct_" set point.



Using the handheld pyrometer, measure the temperature of the target about 1" to the right of the positioning beam spot. (Figure D). **Hold the hand-held pyrometer as close to 90° to the testing surface as possible by the edge of the heater head.** This is critical for an accurate and consistent reading.

Compare the handheld reading with the process temperature (upper display) on the temperature controller. If they are within 5 degrees, no further calibration is required. If they are not, continue with the calibration.

Calibration Adjustment

1. Depress the page button



until "BOX SETUP" is displayed. Press the arrow



buttons until "OUT2 high temp" is displayed. Press

the enter button  to allow the temperature setting to be changed.



2. If the reading on the handheld pyrometer is higher than that of the process

temperature on the temperature controller, decrease the temperature number

using the down button . After adjusting the value press the enter button  to save the value.

3. If the reading on the handheld pyrometer is less than the process temperature on the temperature controller, increase the temperature number using the up button



. After adjusting the value press the enter button  to save the value.

4. ***When you are within 5 degrees difference between the handheld pyrometer and the process temperature, no further calibration is required. Calibration is complete.***

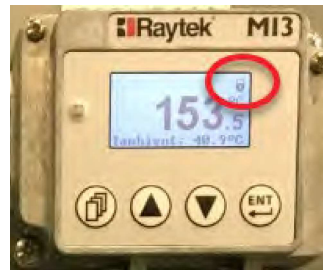
5. Press the page button  until display returns to main screen.

“Lock” out the Comm Box

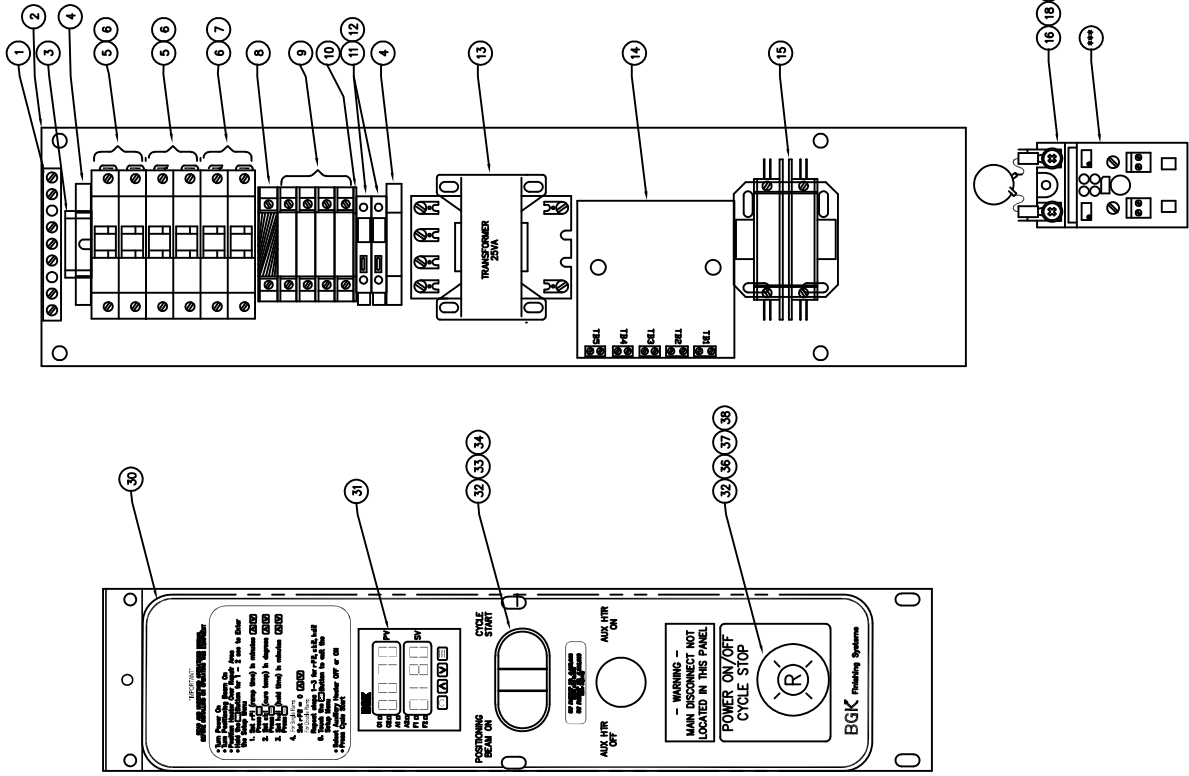
1. Press the page button  until “BOX SETUP” is displayed.

Key Enter Lock

2. Using the arrow keys   until “Key Enter Lock” is displayed. Verify the setting “YES”. If the setting is incorrect, press the enter button  and the setting should be highlighted. Press the arrows keys   until the correct settings “Yes” is displayed. After settings is correct, press the enter button  to save setting.
3. Verify the padlock is displayed as shown.



Procedure is completed.



BACK PANEL MOUNTED COMPONENTS		
ITEM	DEVICE ID	DESCRIPTION
1	GROUND BAR, 7 POLE	GROUND BAR, 7 POLE
2	BACK PANEL	BACK PANEL
3	DIN RAIL	DIN RAIL
4	TERMINAL, END ANCHOR, W/O	TERMINAL, END ANCHOR, W/O
5	FUSE, 1A, 600V, CLASS CC	FUSE, 1A, 600V, CLASS CC
6	FUSE, 1A, 600V, CLASS CC	FUSE, 1A, 600V, CLASS CC
7	TERMINAL, GROUNDING	TERMINAL, GROUNDING
8	TERMINAL, 30A, 600V	TERMINAL, 30A, 600V
9	TERMINAL, 30A, 600V	TERMINAL, 30A, 600V
10	TERMINAL, 30A, 600V	TERMINAL, 30A, 600V
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92	TERMINAL, 30A, 600V	TERMINAL, 30A, 600V
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94	TERMINAL, 30A, 600V	TERMINAL, 30A, 600V
95	TERMINAL, 30A, 600V	TERMINAL, 30A, 600V
96	TERMINAL, 30A, 600V	TERMINAL, 30A, 600V
97	TERMINAL, 30A, 600V	TERMINAL, 30A, 600V
98	TERMINAL, 30A, 600V	TERMINAL, 30A, 600V
99	TERMINAL, 30A, 600V	TERMINAL, 30A, 600V
100	TERMINAL, 30A, 600V	TERMINAL, 30A, 600V

ITEM No.	PART No.	QTY	DESCRIPTION
1	AC-200098-1	6	AVK-8.32

ITEM No.	PART No.	QTY	DESCRIPTION
1	AC-200098-1	6	AVK-8.32

FORM NO.	REV.	REV. DATE	ISSUE NUMBER	REV. NO.	PROCESS	DATE																												
BGK FINISHING SYSTEMS INDIAN SUBSIDIARY IS AN ISO 9001:2015 CERTIFIED ENTERPRISE ISO 14001:2015 CERTIFIED ENTERPRISE ISO 45001:2018 CERTIFIED ENTERPRISE ISO 26001:2018 CERTIFIED ENTERPRISE BAFFLE ELECTRICAL CORD																																		
<table border="1"> <tr> <td>DRAWN:</td> <td>SCALE:</td> <td colspan="5">MATERIALS</td> </tr> <tr> <td>CITL</td> <td>1:8</td> <td>0301</td> <td>1152</td> <td colspan="3"></td> </tr> <tr> <td></td> <td>0308 NO.</td> <td>0301</td> <td>0308 NO.</td> <td colspan="3"></td> </tr> <tr> <td>8/20/2022</td> <td></td> <td>0308</td> <td></td> <td colspan="3"></td> </tr> </table>							DRAWN:	SCALE:	MATERIALS					CITL	1:8	0301	1152					0308 NO.	0301	0308 NO.				8/20/2022		0308				
DRAWN:	SCALE:	MATERIALS																																
CITL	1:8	0301	1152																															
	0308 NO.	0301	0308 NO.																															
8/20/2022		0308																																
WATERBURY SEE P/L				MATERIAL SEE P/L																														
FINISH: DIAMOND SHARP POLISH		NEXT ASSY: PART NO:		DRAWING NO:		REV. SHEET:																												
				AC-0001867		N 2 of 2																												

TABLE: AAA HEATER SELECTION
+ VOLTAGE + WIRING

+ VOLTAGE + WIRING																																																																																																																																																																			
AC-S VOLTAGE OPTION	AC-S DESCRIPTION	TOTAL AMP DRAW	LAMP WIRING DETAIL	AA POWER CONTROL PEDISTAL	AB HEAD CORD PART NO.	AB1 HEAD CORD LENGTH	AC LINE CORD PART NO.	AD CONDUIT GRIP LOCK NUT	AE FUSES	AE1 FUSE QTY	AF** CONDUIT TUBING FEET	AF1 CONDUIT TUBING	AG CONDUIT CLAMP	AG1 CONDUIT CLAMP QTY AND HARDWARE	AH CONDUIT GRIP AND LOCK NUT	AI ALUMINUM CONDUIT GRIP LOCK NUT	AJ AM CONDUIT GRIP LOCK NUT	AK CONDUIT GRIP LOCK NUT	AL ALUMINUM CONDUIT GRIP LOCK NUT	AM CONDUIT GRIP LOCK NUT	AN CONDUIT GRIP LOCK NUT	AO CONDUIT GRIP LOCK NUT	AP CONDUIT GRIP LOCK NUT	AQ CONDUIT GRIP LOCK NUT	AR CONDUIT GRIP LOCK NUT	AS CONDUIT GRIP LOCK NUT	AT CONDUIT GRIP LOCK NUT	AU CONDUIT GRIP LOCK NUT	AV CONDUIT GRIP LOCK NUT	AW CONDUIT GRIP LOCK NUT	AX CONDUIT GRIP LOCK NUT	AY CONDUIT GRIP LOCK NUT	AZ CONDUIT GRIP LOCK NUT	BA CONDUIT GRIP LOCK NUT	BB CONDUIT GRIP LOCK NUT	BC CONDUIT GRIP LOCK NUT	BD CONDUIT GRIP LOCK NUT	BE CONDUIT GRIP LOCK NUT	BF CONDUIT GRIP LOCK NUT	BG CONDUIT GRIP LOCK NUT	BH CONDUIT GRIP LOCK NUT	BI CONDUIT GRIP LOCK NUT	BJ CONDUIT GRIP LOCK NUT	BK CONDUIT GRIP LOCK NUT	BL CONDUIT GRIP LOCK NUT	BM CONDUIT GRIP LOCK NUT	BN CONDUIT GRIP LOCK NUT	BO CONDUIT GRIP LOCK NUT	BP CONDUIT GRIP LOCK NUT	BQ CONDUIT GRIP LOCK NUT	BR CONDUIT GRIP LOCK NUT	BS CONDUIT GRIP LOCK NUT	BT CONDUIT GRIP LOCK NUT	BU CONDUIT GRIP LOCK NUT	BV CONDUIT GRIP LOCK NUT	BW CONDUIT GRIP LOCK NUT	BX CONDUIT GRIP LOCK NUT	BY CONDUIT GRIP LOCK NUT	BZ CONDUIT GRIP LOCK NUT	CA CONDUIT GRIP LOCK NUT	CB CONDUIT GRIP LOCK NUT	CC CONDUIT GRIP LOCK NUT	CD CONDUIT GRIP LOCK NUT	CE CONDUIT GRIP LOCK NUT	CF CONDUIT GRIP LOCK NUT	CG CONDUIT GRIP LOCK NUT	CH CONDUIT GRIP LOCK NUT	CI CONDUIT GRIP LOCK NUT	CJ CONDUIT GRIP LOCK NUT	CK CONDUIT GRIP LOCK NUT	CL CONDUIT GRIP LOCK NUT	CM CONDUIT GRIP LOCK NUT	CN CONDUIT GRIP LOCK NUT	CO CONDUIT GRIP LOCK NUT	CP CONDUIT GRIP LOCK NUT	CQ CONDUIT GRIP LOCK NUT	CR CONDUIT GRIP LOCK NUT	CS CONDUIT GRIP LOCK NUT	CT CONDUIT GRIP LOCK NUT	CU CONDUIT GRIP LOCK NUT	CV CONDUIT GRIP LOCK NUT	CW CONDUIT GRIP LOCK NUT	CX CONDUIT GRIP LOCK NUT	CY CONDUIT GRIP LOCK NUT	CZ CONDUIT GRIP LOCK NUT	DA CONDUIT GRIP LOCK NUT	DB CONDUIT GRIP LOCK NUT	DC CONDUIT GRIP LOCK NUT	DD CONDUIT GRIP LOCK NUT	DE CONDUIT GRIP LOCK NUT	DF CONDUIT GRIP LOCK NUT	DG CONDUIT GRIP LOCK NUT	DH CONDUIT GRIP LOCK NUT	DI CONDUIT GRIP LOCK NUT	DJ CONDUIT GRIP LOCK NUT	DK CONDUIT GRIP LOCK NUT	DL CONDUIT GRIP LOCK NUT	DM CONDUIT GRIP LOCK NUT	DN CONDUIT GRIP LOCK NUT	DO CONDUIT GRIP LOCK NUT	DP CONDUIT GRIP LOCK NUT	DQ CONDUIT GRIP LOCK NUT	DR CONDUIT GRIP LOCK NUT	DS CONDUIT GRIP LOCK NUT	DT CONDUIT GRIP LOCK NUT	DU CONDUIT GRIP LOCK NUT	DV CONDUIT GRIP LOCK NUT	DW CONDUIT GRIP LOCK NUT	DX CONDUIT GRIP LOCK NUT	DY CONDUIT GRIP LOCK NUT	DZ CONDUIT GRIP LOCK NUT	EA CONDUIT GRIP LOCK NUT	EB CONDUIT GRIP LOCK NUT	EC CONDUIT GRIP LOCK NUT	ED CONDUIT GRIP LOCK NUT	EE CONDUIT GRIP LOCK NUT	EF CONDUIT GRIP LOCK NUT	EG CONDUIT GRIP LOCK NUT	EH CONDUIT GRIP LOCK NUT	EI CONDUIT GRIP LOCK NUT	EJ CONDUIT GRIP LOCK NUT	EK CONDUIT GRIP LOCK NUT	EL CONDUIT GRIP LOCK NUT	EM CONDUIT GRIP LOCK NUT	EN CONDUIT GRIP LOCK NUT	EO CONDUIT GRIP LOCK NUT	EP CONDUIT GRIP LOCK NUT	EQ CONDUIT GRIP LOCK NUT	ER CONDUIT GRIP LOCK NUT	ES CONDUIT GRIP LOCK NUT	ET CONDUIT GRIP LOCK NUT	EU CONDUIT GRIP LOCK NUT	EV CONDUIT GRIP LOCK NUT	EW CONDUIT GRIP LOCK NUT	EX CONDUIT GRIP LOCK NUT	EY CONDUIT GRIP LOCK NUT	EZ CONDUIT GRIP LOCK NUT	FA CONDUIT GRIP LOCK NUT	FB CONDUIT GRIP LOCK NUT	FC CONDUIT GRIP LOCK NUT	FD CONDUIT GRIP LOCK NUT	FE CONDUIT GRIP LOCK NUT	FF CONDUIT GRIP LOCK NUT	FG CONDUIT GRIP LOCK NUT	FH CONDUIT GRIP LOCK NUT	FI CONDUIT GRIP LOCK NUT	FJ CONDUIT GRIP LOCK NUT	FK CONDUIT GRIP LOCK NUT	FL CONDUIT GRIP LOCK NUT	FM CONDUIT GRIP LOCK NUT	FN CONDUIT GRIP LOCK NUT	FO CONDUIT GRIP LOCK NUT	FP CONDUIT GRIP LOCK NUT	FQ CONDUIT GRIP LOCK NUT	FR CONDUIT GRIP LOCK NUT	FS CONDUIT GRIP LOCK NUT	FT CONDUIT GRIP LOCK NUT	FU CONDUIT GRIP LOCK NUT	FV CONDUIT GRIP LOCK NUT	FW CONDUIT GRIP LOCK NUT	FX CONDUIT GRIP LOCK NUT	FY CONDUIT GRIP LOCK NUT	FZ CONDUIT GRIP LOCK NUT

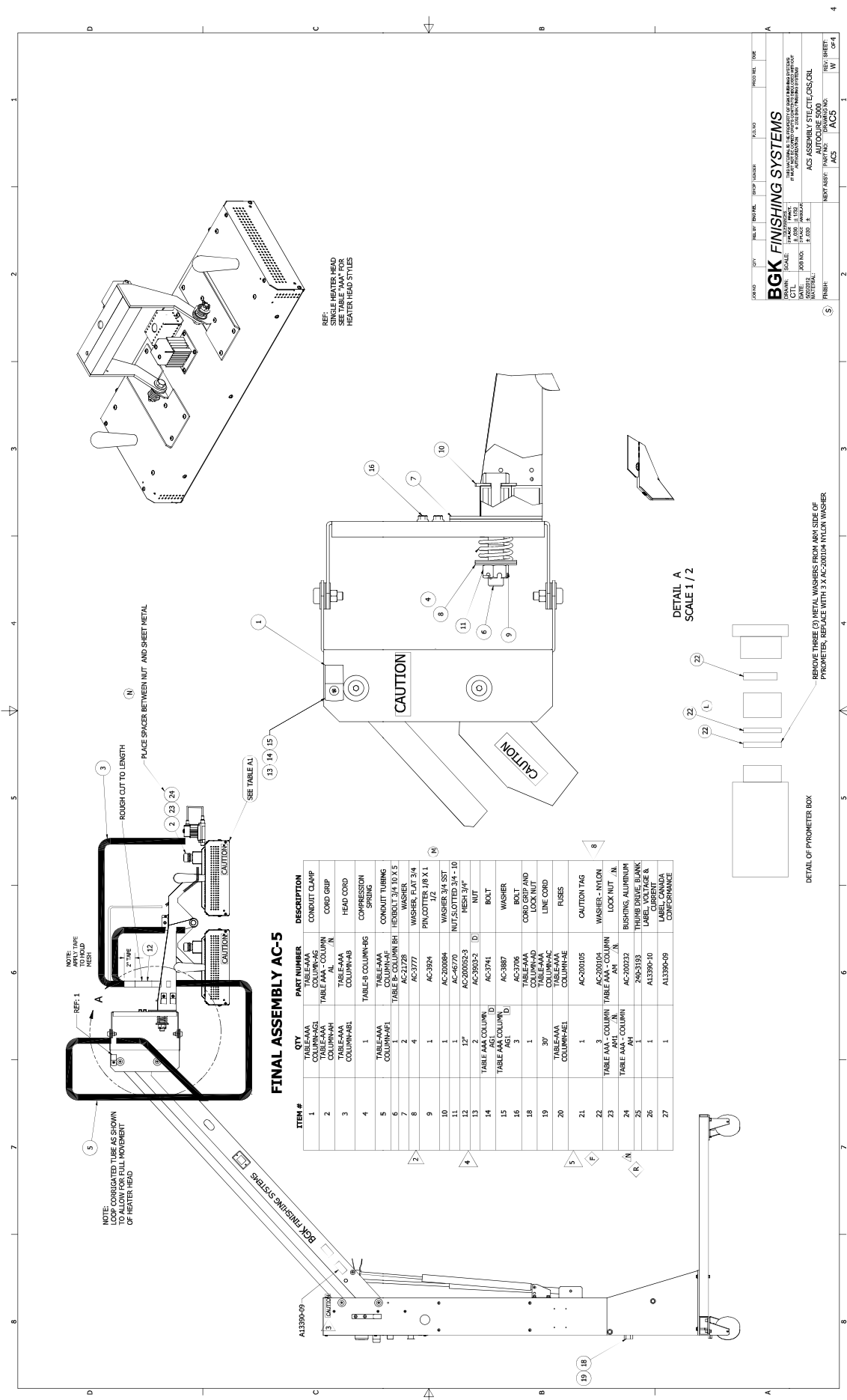
****6ft per head each ^D**
Notes on Sht 2 of 3

6			5			4			3			2			1				
CHG No.	REV	DESCRIPTION	APPROVED	DATE	CHG No.	REV	DESCRIPTION	APPROVED	DATE	CHG No.	REV	DESCRIPTION	APPROVED	DATE	CHG No.	REV	DESCRIPTION	APPROVED	DATE
18784	A	UPDATED CHARTS	BN	8/15/2012	18785	F	REMOVED COORDINATE ITEM #1	BN	9/10/12	18786	G	ADDED AC-200132	BN	1/9/14	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	B	UPDATED CHARTS	BN	8/15/2012	18785	F	ADDED AC-200132	BN	1/9/14	18786	G	ADDED AC-200132	BN	1/9/14	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	C	FIXED PART NO. 1, W/REQ. COLUMNS AL, AM, AN, WAS AC-200135-2 - 3 PLACES	BN	8/15/2012	18785	K	ADDED TABLE #5 AND CANADIAN ITEM EXT. CHANGE FROM SERIES-PARALLEL TO SERIES	BN	3/27/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	D	UPDATED TO REFLECT REQUEST	BN	12/15/12	18785	L	ADDED AC-200132	BN	10/12/15	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	E	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	M	ADDED AC-200132	BN	12/15/15	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	F	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	G	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	H	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	I	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	J	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	K	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	L	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	M	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	N	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	O	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	P	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	Q	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	R	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	S	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	T	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	U	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	V	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	W	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	X	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	Y	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	Z	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AA	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AB	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AC	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AD	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AE	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AF	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AG	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AH	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AI	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AJ	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AK	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AL	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AM	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AN	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AO	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AP	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AQ	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AR	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AS	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AT	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AU	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AV	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AW	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AX	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AY	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	AZ	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	BA	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	BB	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	BC	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	BD	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	BE	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	BF	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	BG	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787	H	HEAD CONDUIT WAS 235-240	BN	2/25/14
18784	BH	ADDED AC-3831 AND AC-3777	BN	6/27/13	18785	N	REMOVED COORDINATE ITEM #1	BN	1/9/14	18786	L	ADDED AC-200132	BN	10/12/15	18787				

TABLE AAA: HEATER SELECTION + VOLTAGE + WIRING

AC-5 VOLTAGE BREAKER DESCRIPTION	TOTAL AMP DRAW	LAMP WIRING DETAIL	HEATER HEAD PRINT	POWER CONTROL PEDestal	AB	AB1	AC	AD	AE	AE1	AF**	AF1	AG	AG1	AH	AK	AL	AM	AM1
AC238-240P 3800 Watt Dual Head	33.43	Parallel	ACHS-4238	AC-200001	AC-200081-7	30	AC-200081-3	AC-200117-3	AC-200037	4	AC-200158-1	6 Q	AC-200028	3	2	AC-200191-1 LABEL SET	-3	Ä	-2
AC238-240P 3800 Watt Dual Head	31.66	Series-Parallel	ACHS-4238	AC-200001	AC-200081-7	30	AC-200081-1 Ä	AC-200117-2	AC-200037	4	AC-200158-2	6 P	AC-200028	3	2	AC-200191-2 LABEL SET	-3	Ä	-2
AC238-380P 3800 Watt Dual Head	42.85	Parallel	ACHS-4238	AC-200001	AC-200081-14	30	AC-200115-1 Ä	AC-200117-2	AC-200038	4	AC-200158-2	12	AC-200028	3	2	AC-200191-2 LABEL SET	-8	Ä	-2
AC238-480P 3800 Watt Dual Head	46.61	Parallel	ACHS-4238	AC-200001	AC-200081-12	30	AC-200081-2 Ä	AC-200117-2	AC-200040	4	AC-200158-2	12	AC-200028	3	2	AC-200191-3 LABEL SET	-8	Ä	-2
AC238-480P 3800 Watt Dual Head	16.82	Series-Parallel	ACHS-4238	AC-200001	AC-200081-7	30	AC-200081-17	AC-200115-4	AC-200039	4	AC-200158-1	6 Q	AC-200028	3	2	AC-200191-3 LABEL SET	-3	Ä	-2
AC238-575P 3800 Watt Dual Head	15.43	Series-Parallel	ACHS-4238	AC-200186-2	AC-200081-7	30	AC-200081-5	AC-200117-2	AC-200039	4	AC-200158-2	6 Q	AC-200028	3	2	AC-200191-4 LABEL SET	-3	Ä	-2

[illegible]



JOB NO	QTY	CALL BY DATE	SHIP VENDOR	Q.O.B.O	PROD LINE	NOTE
BGK FINISHING SYSTEMS THIS MATERIAL IS THE PROPERTY OF BGK FINISHING SYSTEMS IT IS TO BE USED ONLY FOR THE PROJECT AND LOCATION SPECIFIED HEREON IT IS TO BE RETURNED TO BGK FINISHING SYSTEMS AT THE END OF THE PROJECT						
AC5 ASSEMBLY STEEL JOISTS, CBL				REV: SHEET:		
PART NO: AC5				DRAWING NO: AC5		W
NEXT ASSY:				DRAWING NO:		G-4
FINISH:						
DRAWING: SCALE:						
MATERIAL:						
JOB NO:						
DATE:						

AUTOCURE MODEL NUMBERS

AC5-2116-240-PL

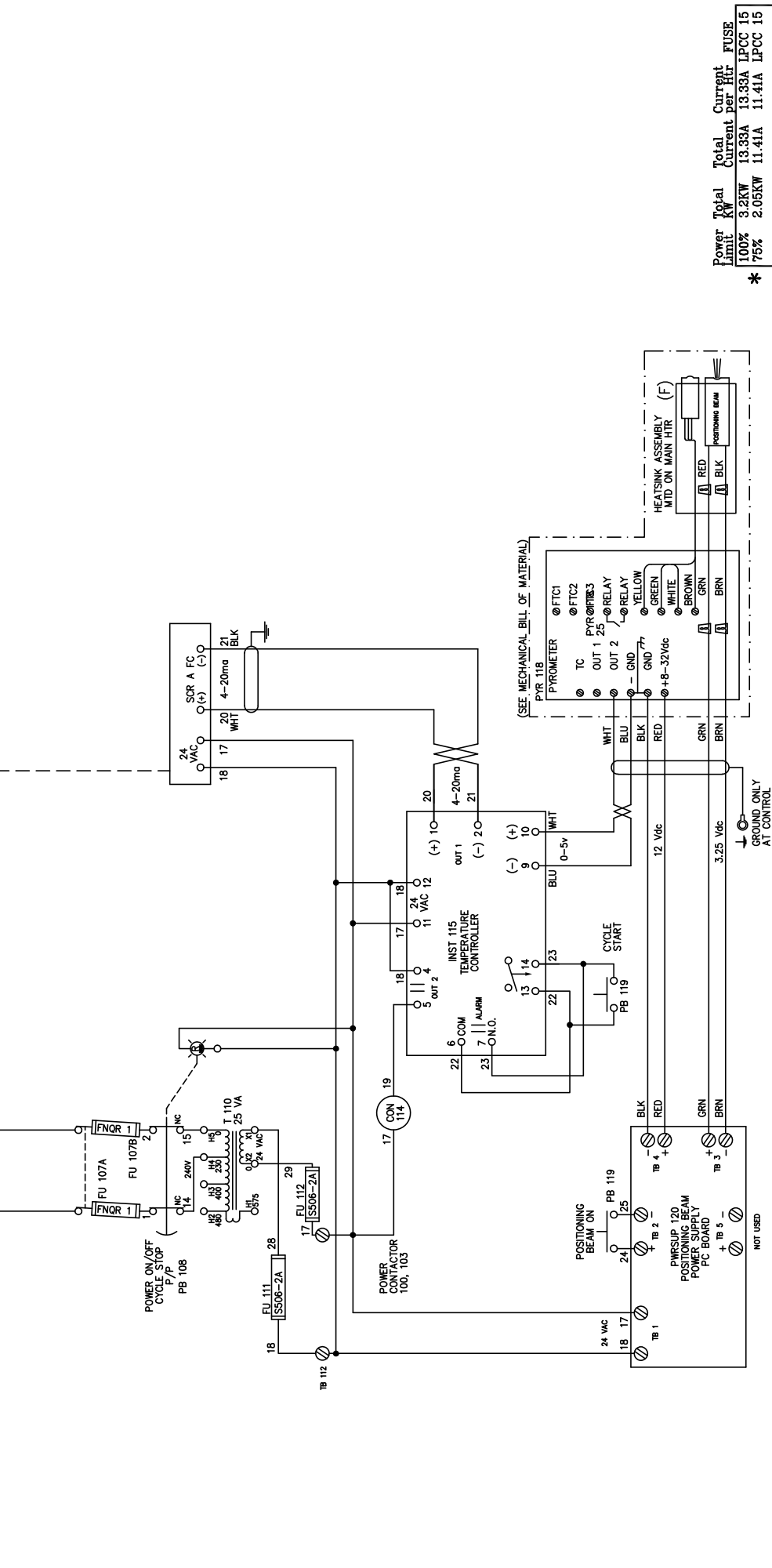
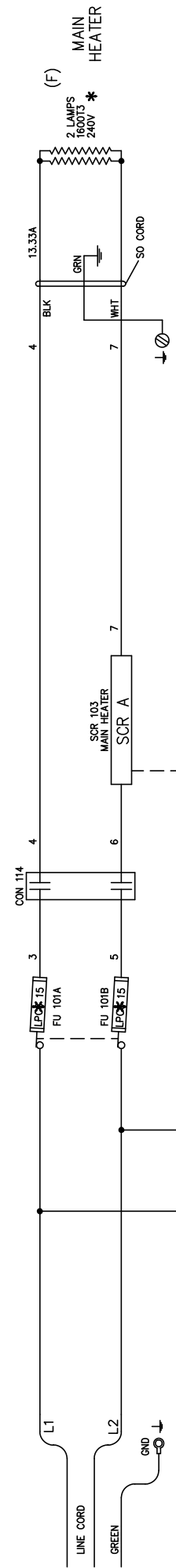
AC5-2116-380-SP

AC5-2116-480-SP

AC5-2116-575-SP

AC5-2116-240-PL

-100
-101
-102
-103
-104
-105
-106
-107
-108
-109
-110
-111
-112
-113
-114
-115
-116
-117
-118
-119
-120
-121
-122
-123
-124
-125



Power Limit	Total kW	Total Current	FUSE
100%	3.2KW	13.33A	13.33A LPCC 15
75%	2.05KW	11.41A	11.41A LPCC 15

THIS MATERIAL IS THE PROPERTY OF CARLISLE FLUID TECH. ©2018 Carlsle Fluid Technologies	
IT MUST NOT BE COPIED OR ITS CONTENTS DISCLOSED WITHOUT AUTHORIZATION.	
CARLISLE FLUID TECHNOLOGIES BGK 783/794-1948	
4131 Pleasant Ridge Dr NE	
ALBANY, GA 31707	
Customer	
Order #	8528
Order Date	05/11/18
Order Qty	1
Order Price	10/03/02
Order #	8528
Order Date	05/11/18
Order Qty	1
Order Price	10/03/02
Order #	8528
Order Date	05/11/18
Order Qty	1
Order Price	10/03/02

(F) = FIELD
LAST NUMBER USED
29

****THIS DOCUMENT APPLIES IF YOUR SYSTEM IS EQUIPPED WITH A
SPRAY/BAKE SWITCH**

Small junction box to interlock controls during spraying.

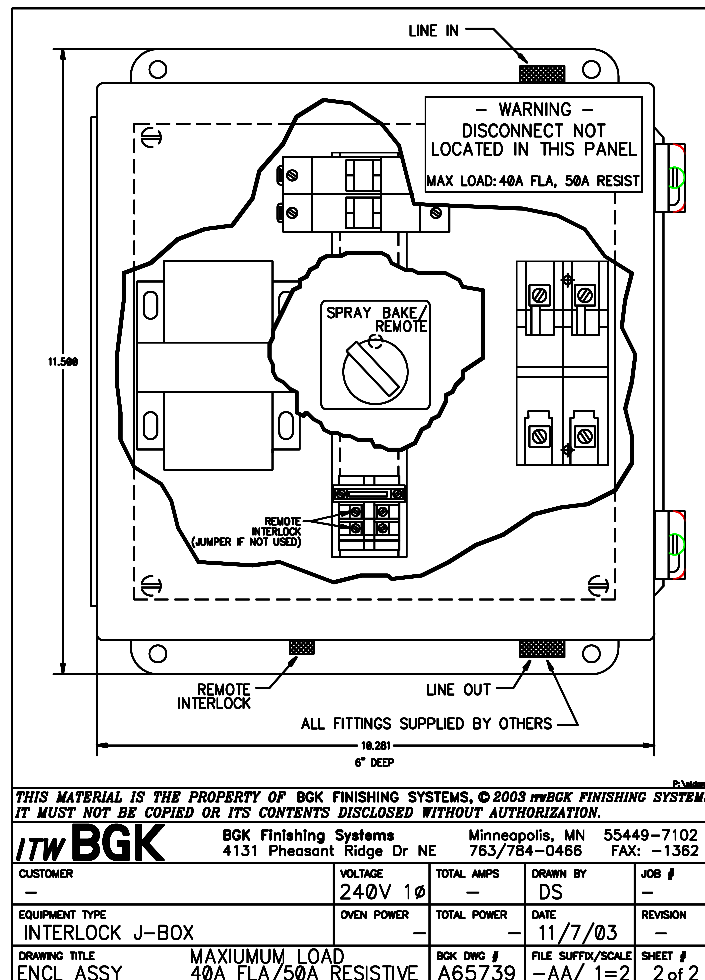
Maximum Load: 40A FLA, 50A Resistive

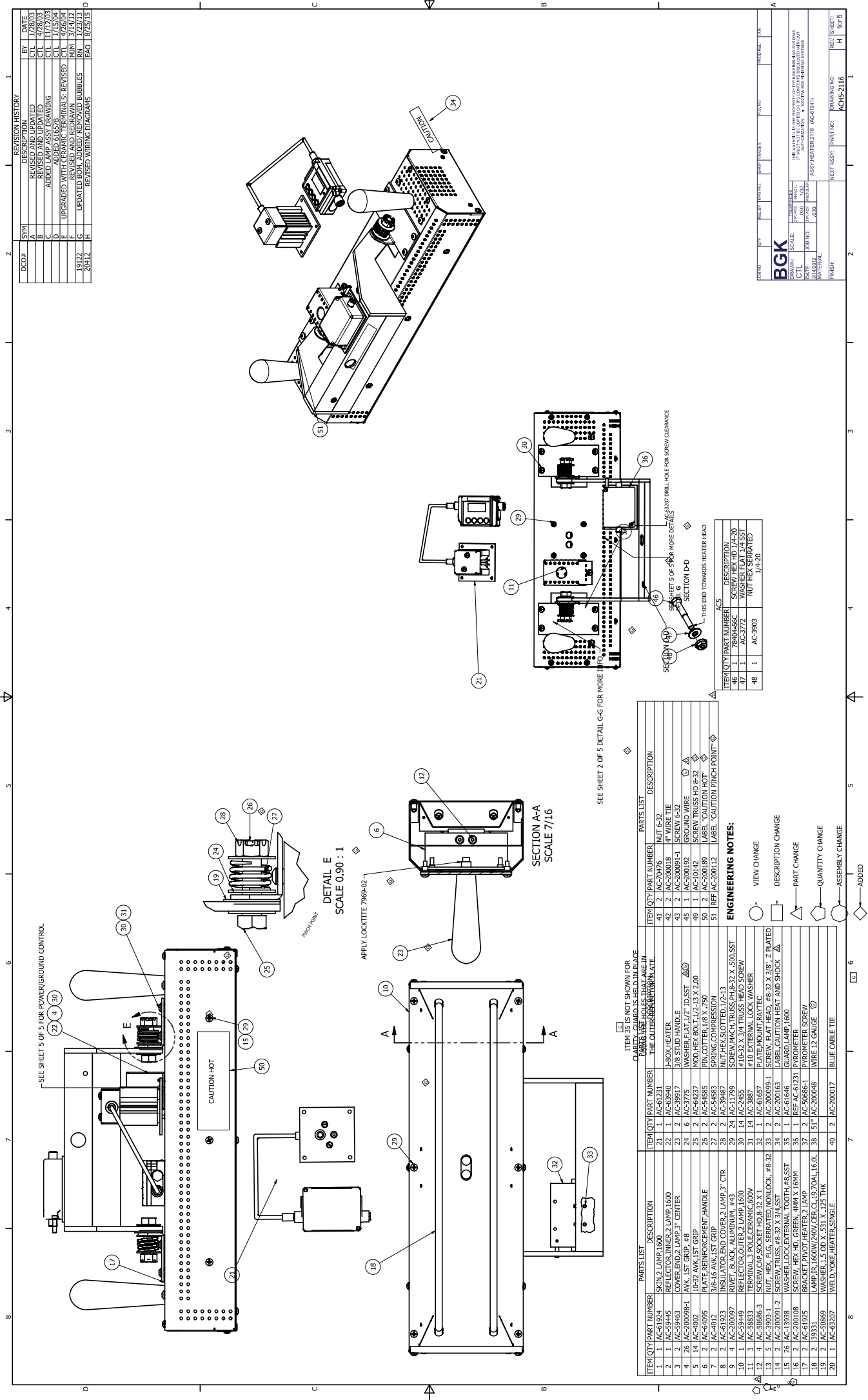
Four configurations:

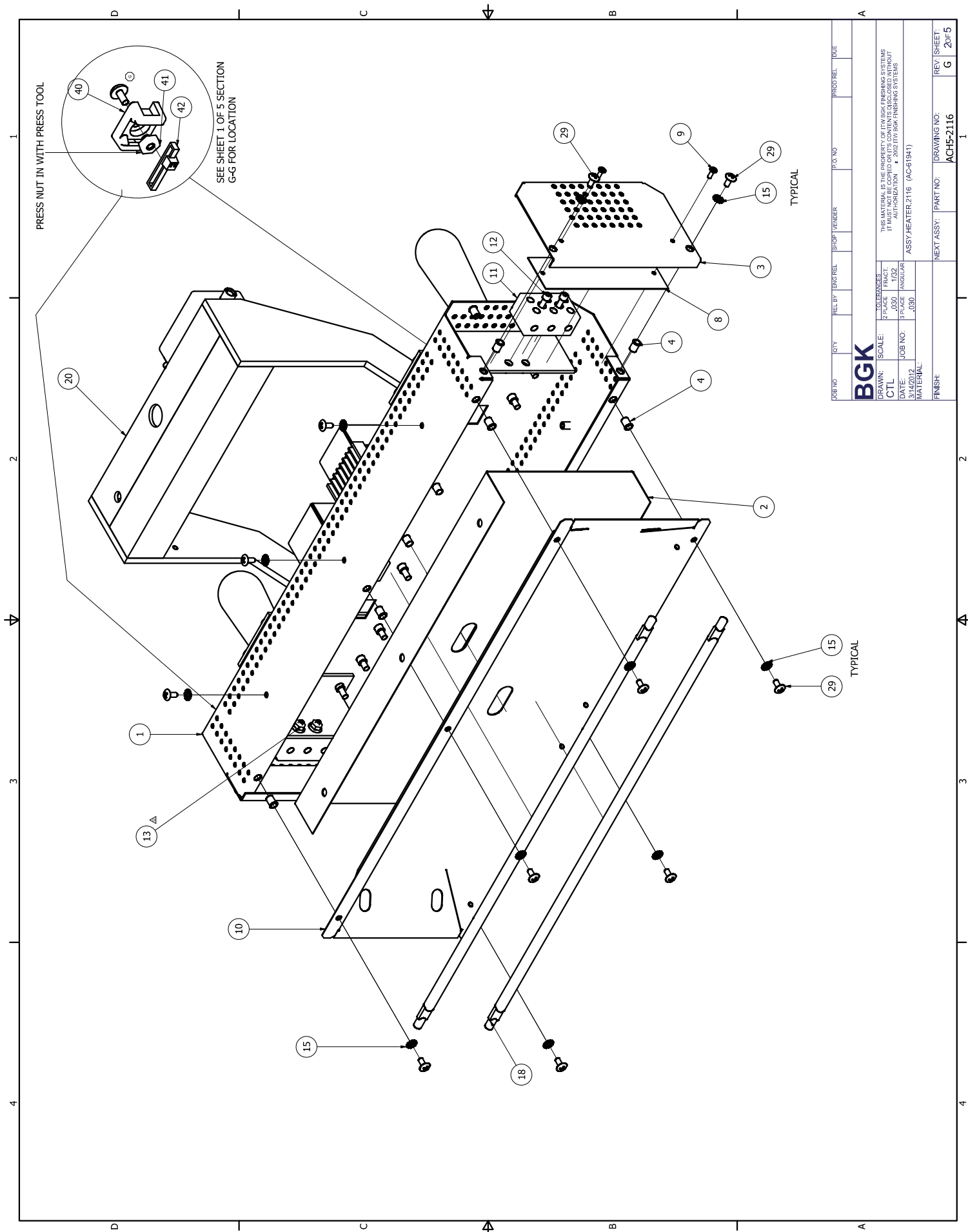
240V 1Ø 480V 1Ø
240V 3Ø 480V 3Ø

2 Modes of Operation

Local: There is a 2 position switch on the front of the box to switch from Spray to Bake.

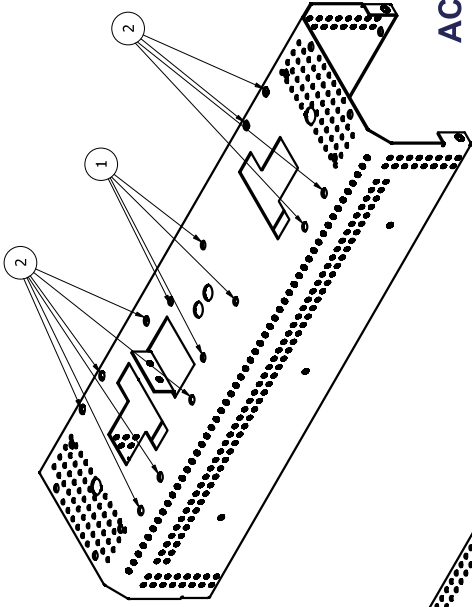




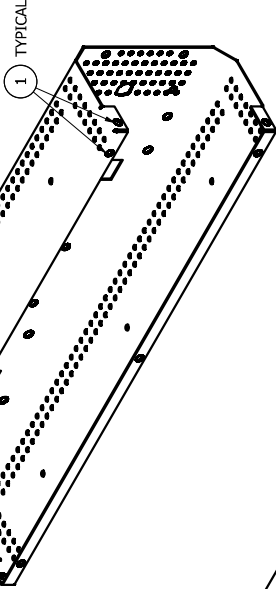


JOB NO.	CITY	MAIL BY	THIS REL.	ISSUE	RENDER	1933 NO.	PROOF REL.	DATE
BKG DRAWING: _____ DATE: _____ JOB NO.: _____ MATERIAL: _____								
SCALE: 2 PLACE, _____ FRACT. 1/32 3 PLACE ANGULAR .030			THIS MATERIAL IS THE PROPERTY OF ITW BOK FINISHING SYSTEMS IT IS LOANED TO YOU UNDER AUTHORIZATION # 2602 ITW BOK FINISHING SYSTEMS ASSY HEATER.2116 (AC-81941)					
FINISH:			NEXT ASSY:		PART NO.		DRAWING NO.	
					ACHS-2116		REV. SHEET: G 20 of 5	

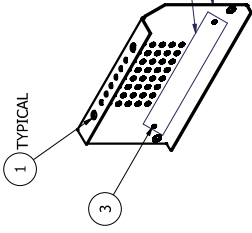
TABLE			
ITEM	PART NO.	QTY	DESCRIPTION
1	AC-200098-1	22	AVK 8/32
2	AC-4002	10	AVK 10/32
3	AC-200097	2	BLACK RIVET
4	AC-4012	1	AVK 3/8
5	AC-200098-3	2	AVK 8/32 2ND GRIP
6	AC-61923	1	INSULATOR
7	AC-200163	1	LABEL



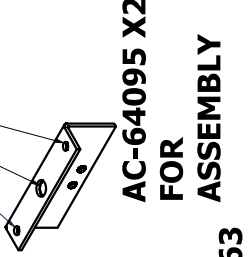
AC-61924



AC-59445



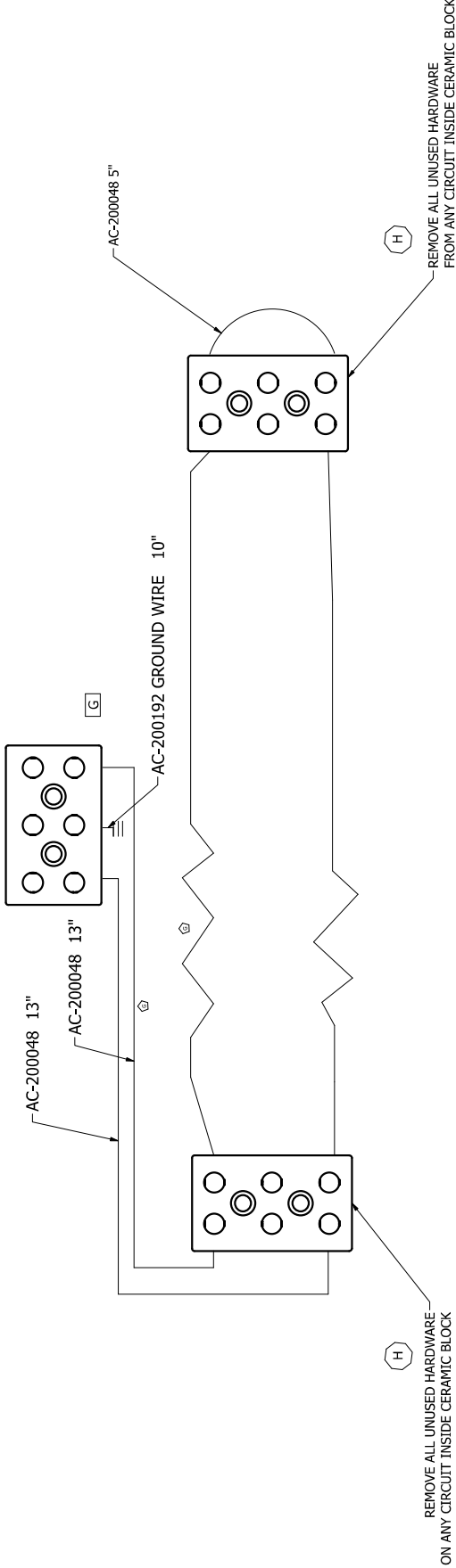
AC-59463
X2 FOR
ASSEMBLY



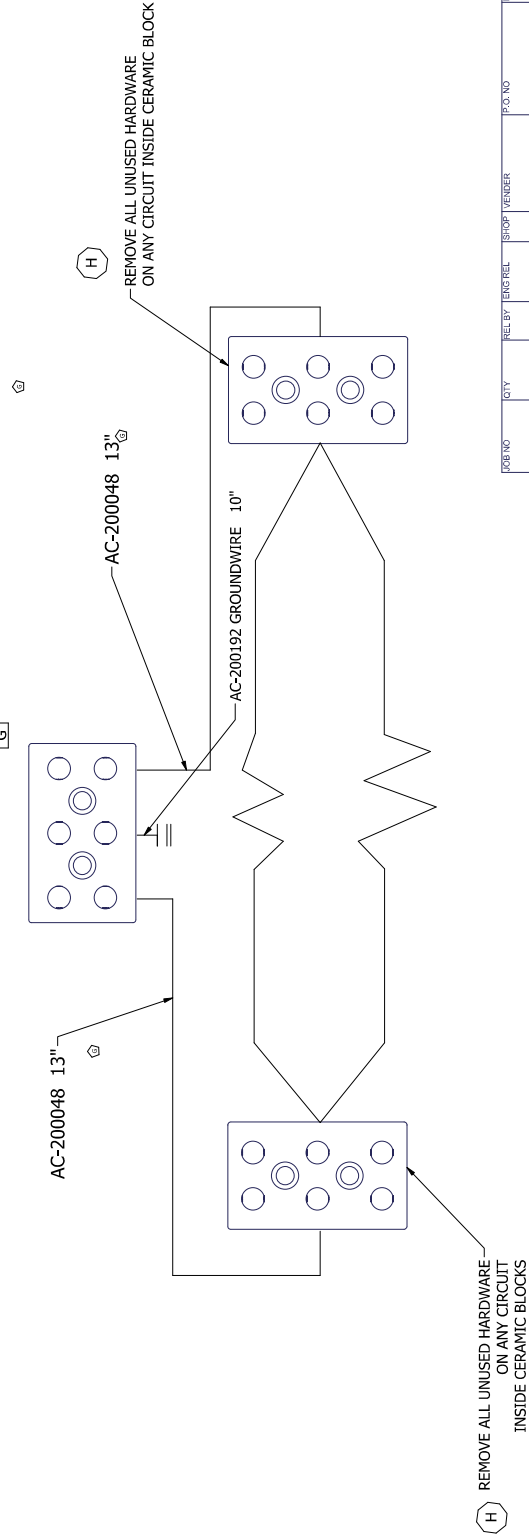
AC-64095 X2
FOR
ASSEMBLY

JOB NO.	QTY	REL BY	ENG REL	SHOP	VENUE	P.O. NO.	PROD REL	NOTE
BGK								
DRAWN:	SCALE:	THIS MATERIAL IS THE PROPERTY OF ITM BGK FINISHING SYSTEMS. IT MUST BE RETURNED OR DESTROYED TO THE SUPPLIER'S ORDER WITHOUT DELAY. IF NOT, THE SUPPLIER WILL BE RESPONSIBLE FOR THE LOSS OF THE MATERIAL.						
CTL	2 PLACE	1/32						
DATE:	3/4/2012	1/32						
MATERIAL:	3 PLACE	ANGULAR						
FINISH:	ASSY HEATER 2116	(AC-61941)						
NEXT ASSY:	PART NO.	DRAWING NO.					REV SHEET	
		ACH5-2116					G 3 of 5	

PARALLEL



SERIES



JOB NO.	QTY.	REL. BY	ENG. REL.	SHOP	VENUE	P.O. NO.	PROD. REL.	NOTE
BGK								
DRAWN:	SCALE:	THIS MATERIAL IS THE PROPERTY OF ITW BGK FINISHING SYSTEMS. IT MUST BE RETURNED TO THE SUPPLIER OR DESTROYED WITHOUT REUSE OR REPAIR. IF NOT RETURNED TO THE SUPPLIER, IT WILL BE DESTROYED.						
CTL	SCALE:	THIS MATERIAL IS THE PROPERTY OF ITW BGK FINISHING SYSTEMS. IT MUST BE RETURNED TO THE SUPPLIER OR DESTROYED WITHOUT REUSE OR REPAIR. IF NOT RETURNED TO THE SUPPLIER, IT WILL BE DESTROYED.						
DATE:	SCALE:	THIS MATERIAL IS THE PROPERTY OF ITW BGK FINISHING SYSTEMS. IT MUST BE RETURNED TO THE SUPPLIER OR DESTROYED WITHOUT REUSE OR REPAIR. IF NOT RETURNED TO THE SUPPLIER, IT WILL BE DESTROYED.						
3/14/2012	SCALE:	THIS MATERIAL IS THE PROPERTY OF ITW BGK FINISHING SYSTEMS. IT MUST BE RETURNED TO THE SUPPLIER OR DESTROYED WITHOUT REUSE OR REPAIR. IF NOT RETURNED TO THE SUPPLIER, IT WILL BE DESTROYED.						
MATERIAL:		ASSY: HEATER 2116 (AC-91941)						
FINISH:		NEXT ASSY:						
		DRAWING NO:		ACH5-2116		REV. SHEET:		
						H 40/5		

REMOVE 2 SMALL BOLTS BEFORE ASSEMBLY.

SEE SHEET 1 OF 5 FOR GROUND CONNECTION.

ASSEMBLE ON CENTER OF LAMP
SEE SHEET 1 OF 5 (DETAIL G)
SCREW HEAD ON OUTSIDE OF THE
HEATER. SCREW HEAD PROVIDED
INSIDE OF HEATER SHOWN.

JOB NO	QTY	REL BY	ENG REL	SHOP VENDOR	P.O. NO	PROD REL	NOTE
BGK							
DRAWN:		SCALE:		THIS MATERIAL IS THE PROPERTY OF ITW BGK FINISHING SYSTEMS. IT MUST NOT BE COPIED OR ITS CONTENTS DISCLOSED WITHOUT AUTHORIZATION. © 2012 ITW BGK FINISHING SYSTEMS			
CTL		2 PLACE		FRAC	1/32		
DATE:		3/4/2012		3 PLACE	ANGULAR		
MATERIAL:					.030		
FINISH:							
NEXT ASSY:				DRAWING NO:		REV / SHEET:	
				ACH5-2116		G 5 of 5	

RECOMMENDED SPARE PARTS

TO ORDER:

CONTACT: SPARE PARTS ORDER ENTRY

PHONE: 1-800-726-8097

E-MAIL: orderentry@CarlisleFT.com

AC5-2116-240-PL

Reference Number	Spares Qty	Part Number	Part Description
CON114	1	005898	CONTACTOR, 40A, 2-POLE, 24 COIL
FU107, FU107B	4	E-143	FUSE,1A,600V,CLASS CC
FU111, FU112	4	AC-200046	FUSE,2A,250VAC,TIME DELAY
FU101A, FU101B	4	AC-200039	FUSE, LOW PEAK CLASS CC, 15A (For 75% Power)
FU101A, FU101B	4	AC-200039	FUSE, LOW PEAK CLASS CC, 15A (For 100% Power)
INST115	1	AC-74816-240-F-75	TEMP. CONTROLLER (Setup-75%, F deg, 240v)
INST115	1	AC-74816-240-F-100	TEMP. CONTROLLER (Setup-100%, F deg, 240v)
PWRSUP120	1	AC-46847	POWER SUPPLY,24VAC - 12VDC & 3.25VDC
SCR A FC	1	003317	Firing Circuit Board-PWR CTRLR,4-20MA,240V, 380V, 480V
SCR 103	1	002985	POWER CONTROLLER,SCR,40A, 240V, 380V, 480V
103	2	AC-200051	POWER CONTROLLER THERMSTRATE,H
	1	AC-200064	LASER KIT (Laser Only)
PYR 118	1	AC-61231	PYROMETER ASSEMBLY KIT (Complete)
	15FT	AC-62797	CABLE, SHIELD, 6 COND., RED
102	6	39331	LAMP, IR, 1600W/240V, CER, CEL, TF