Owner's Manual

3 Cage Heated Regal Stainless Steel Cage Arrangement on Mobile Stainless Steel Base

Single Heated Regal Stainless Steel Cage

Heated Regal Stainless Steel Cages

- *Aids recovery from surgery or treatment*
- *Easy-to-use temperature controller*
- *Available as single cages & arrangements*
- *Strong, durable, welded stainless steel*

Model Numbers:
12012-00-CTCTEI, 12012-00-CTDREI, 12012-00-DRCTEI, 12012-00-DRDREI, 12012-00-DREPEI, 12012-00-DRFNEI, 12013-00-DRHJEI, 12012-00-EPDREI, 12012-00-EPEPEI, 12012-00-EPFNEI, 12012-00-EPGLEI, 12012-00-EPHJEI, 12013-00-EPHJEI, 12012-00-FNDREI, 12012-00-FNEPEI, 12012-00-FNFNEI, 12012-00-FNGLEI, 12012-00-FNHJEI, 12013-00-FNHJEI, 12013-00-FNJFEI, 12013-00-FNLBEI

SSCI
Wheeling, IL (800) 323 7366

Form No. 702761 07/07

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Comments:

Chapter 1 - General Information

Introduction

Place your patients in SSCI Heated Regal Cages for extra warmth and comfort during recovery from surgery or treatment. A specially designed electric heating element is laminated to the underside of each cage to distribute steady, uniform heat over the entire floor, helping to maintain an animal's body temperature for greater comfort and faster recovery. The temperature of each cage floor is controlled by an electronic heat controller. An easy-to-read LCD display allows you to monitor and adjust the floor temperature for each patient.

We manufacture Heated Regal Cage arrangements that are ideal for most facilities - refer to your current SSCI Product Catalog for available arrangements. These pre-wired, pre-assembled arrangements include full-width, top-mounted heat controller housings that can be plugged into any standard 110VAC wall outlet (other voltages available). Standard arrangements are two tiers high, up to six feet wide, and with a maximum of five cages. Arrangements can be ordered mounted on stationary or mobile stainless steel bases. Heated cages can be ordered for any Regal Cage arrangement, but for non-standard arrangements, assembly will probably be required at your facility.

About this Manual

Every attempt has been made to insure that the information in this manual is correct and complete. SSCI, however, always welcomes our customer's suggestions for improvements to our products and associated publications.

Information & Safety Notices

In this manual you will find important information under the headings **Note:** and ***CAUTION:***.

Notes

Under **Note:** headings, you will be given additional information pertinent to the subject discussed in that paragraph or step.

> **Example:**
>
> To increase the temperature, turn the temperature control knob clockwise. **Note:** The maximum temperature is 105° F.

CAUTIONS

Under ***CAUTION:*** headings, you will be alerted to potentially hazardous conditions which, if ignored or mishandled, could result in injury to yourself, or damage to the equipment.

> **Example:**
>
> ***CAUTION:*** **When the cage or cage arrangement is mounted on a mobile base, the wheel brakes should be engaged any time the assembly is not actually being moved.**

Related Manual

For detailed information on Regal Cages, refer to *Owner's Manual, Regal Stainless Steel Cages, 702715.* This manual includes information on parts identification, installation, use and care, maintenance, parts replacement, and troubleshooting for Regal Stainless Steel Cages. A copy of this manual can be obtained on request to *SSCI Customer Service.*

Models

Single Cages

Table 1 lists single SSCI Heated Regal Stainless Steel Cages. These cages are available in a wide variety of sizes. Some size cages are available with either single or double doors. Cage bodies all measure 28.25 in. (71.75 cm) front to back, and 30.188 in. (76.68 cm) deep overall including the latch. Each cage is normally ordered with a 110VAC electrical system, a Fahrenheit-graduated thermostat, and mounted on either a stationary or mobile stainless steel base, however, other options are available.

SSCI Part Number	Doors	Cage Dimensions	
		Inches	Centimeters
12012-00-CTCTEI	Single	18W x 18H	45.72W x 45.72H
12012-00-CTDREI	Single	24W x 18H	60.96W x 45.72H
12012-00-DRCTEI	Single	18W x 24H	45.72W x 60.96H
12012-00-DRDREI	Single	24W x 24H	60.96W x 60.96H
12012-00-DREPEI	Single	30W x 24H	76.20W x 60.96H
12012-00-DRFNEI	Single	36W x 24H	91.44W x 60.96H
12013-00-DRHJEI	Double	48W x 24H	121.92W x 60.96H
12012-00-EPDREI	Single	24W x 30H	60.96W x 76.20H
12012-00-EPEPEI	Single	30W x 30H	76.20W x 76.20H
12012-00-EPFNEI	Single	36W x 30H	91.44W x 76.20H
12012-00-EPGLEI	Single	42W x 30H	106.68W x 76.20H
12012-00-EPHJEI	Single	48W x 30H	121.92W x 76.20H
12013-00-EPHJEI	Double	48W x 30H	121.92W x 76.20H
12012-00-FNDREI	Single	24W x 36H	60.96W x 91.44H
12012-00-FNEPEI	Single	30W x 36H	76.20W x 91.44H
12012-00-FNFNEI	Single	36W x 36H	91.44W x 91.44H
12012-00-FNGLEI	Single	42W x 36H	106.68W x 91.44H
12012-00-FNHJEI	Single	48W x 36H	121.92W x 91.44H
12013-00-FNHJEI	Double	48W x 36H	121.92W x 91.44H
12013-00-FNJFEI	Double	60W x 36H	152.40W x 91.44H
12013-00-FNLBEI	Double	72W x 36H	182.88W x 91.44H

Table 1. Single Heated Regal Stainless Steel Cages - Models

SSCI Standard Heated Regal Cage Arrangements

Table 2 lists the SSCI standard heated Regal Cage arrangements. These two-tier arrangements are available with two, three, or five cages; arrangement widths are 2, 3, 4, and 6 feet. Cage sizes are standard as listed in Table 1. Each arrangement normally comes with a 110VAC electrical system, a Fahrenheit-graduated thermostat, and mounted on either a stationary or mobile stainless steel base, however, other options are available. These arrangements are shipped fully assembled.

SSCI Part Number	Number of Cages	Arrangement Width	Type of Base	Cages in Top Tier	Cages in Bottom Tier
3000006026	2	2 ft (0.61m)	Stationary	One 24"W x 30"H	One 24"W x 30"H
3000006006	2	2 ft (0.61m)	Mobile	One 24"W x 30"H	One 24"W x 30"H
3000006028	2	3 ft (0.91m)	Stationary	One 36"W x 30"H	One 36"W x 30"H
3000006007	2	3 ft (0.91m)	Mobile	One 36"W x 30"H	One 36"W x 30"H
3000006030	3	4 ft (1.22m)	Stationary	Two 24"W x 24"H	One 48"W x 30"H*
3000006012	3	4 ft (1.22m)	Mobile	Two 24"W x 24"H	One 48"W x 30"H*
3000006045	3	4 ft (1.22m)	Stationary	Two 24"W x 30"H	One 48"W x 30"H*
3000006013	3	4 ft (1.22m)	Mobile	Two 24"W x 30"H	One 48"W x 30"H*
3000006034	5	6 ft (1.83m)	Stationary	Three 24"W x 24"H	Two 36"W x 30"H
3000006021	5	6 ft (1.83m)	Mobile	Three 24"W x 24"H	Two 36"W x 30"H
3000006046	5	6 ft (1.83m)	Stationary	Three 24"W x 24"H	One 48"W x 30"H* One 24"W x 30"H
3000006023	5	6 ft (1.83m)	Mobile	Three 24"W x 24"H	One 48"W x 30"H* One 24"W x 30"H
3000006047	5	6 ft (1.83m)	Stationary	Three 24"W x 30"H	Two 36"W x 30"H
3000006022	5	6 ft (1.83m)	Mobile	Three 24"W x 30"H	Two 36"W x 30"H

* Double Door Cage

Table 2. Standard Heated Regal Cage Arrangements - Models

Heat Controller Housings

For Standard SSCI Regal Cage Arrangements

Heat controller housings are available in a range of models depending upon the number of cages to be served, and the width of the arrangement. Table 3 shows the available housings for SSCI standard Regal Cage arrangements.

SSCI Part Number	Number of Controllers	Arrangement Width
12150-02-DRAVAT	2	2.0 ft (0.61m)
12150-02-FNAVAT	2	3.0 ft (0.91m)
12150-03-HJAVAT	3	4.0 ft (1.22m)
12150-05-LBAVAT	5	6.0 ft (1.83m)

Table 3. Heat Controller Housings for Standard SSCI Regal Cage Arrangements

For Non-standard SSCI Regal Cage Arrangements

Table 4 lists the heat controller housings available for non-standard arrangements. Choice of model depends upon the number of cages to be served and the width of the arrangement. Heated cages can be ordered for any Regal Cage arrangement, but on non-standard arrangements, assembly will probably be required at your facility.

SSCI Part Number	Number of Controllers	Arrangement Width
12150-01-DRAVAT	1	2.0 ft (0.61m)
12150-01-EPAVAT	1	2 ft, 6 in. (0.76m)
12150-01-FNAVAT	1	3.0 ft (0.91m)
12150-01-HJAVAT	1	4.0 ft (1.22m)
12150-01-JFAVAT	1	5.0 ft (1.52m)
12150-01-LBAVAT	1	6.0 ft (1.83m)
12150-02-DRAVAT	2	2.0 ft (0.61m)
12150-02-EPAVAT	2	2 ft, 6 in. (0.76m)
12150-02-FNAVAT	2	3.0 ft (0.91m)
12150-02-HJAVAT	2	4.0 ft (1.22m)
12150-02-LBAVAT	2	6.0 ft (1.83m)
12150-03-DRAVAT	3	2.0 ft (0.61m)
12150-03-HJAVAT	3	4.0 ft (1.22m)
12150-03-JFAVAT	3	5.0 ft (1.52m)
12150-03-LBAVAT	3	6.0 ft (1.83m)

Table 4. Heat Controller Housings for Non-standard SSCI Regal Cage Arrangements
(cont'd on *Page 6*)

SSCI Part Number	Number of Controllers	Arrangement Width
12150-04-HJAVAT	4	4.0 ft (1.22m)
12150-04-LBAVAT	4	6.0 ft (1.83m)
12150-05-HJAVAT	5	4.0 ft (1.22m)
12150-05-JFAVAT	5	5.0 ft (1.52m)
12150-05-LBAVAT	5	6.0 ft (1.83m)
12150-05-LZAVAT	5	6 ft, 6 in. (1.98m)
12150-05-MXAVAT	5	7.0 ft (2.13m)
12150-05-OTAVAT	5	8.0 ft (2.44m)
12150-06-JFAVAT	6	5.0 ft (1.52m)
12150-06-LBAVAT	6	6.0 ft (1.83m)
12150-06-OTAVAT	6	8.0 ft (2.44m)
12150-07-LBAVAT	7	6.0 ft (1.83m)
12150-08-LBAVAT	8	6.0 ft (1.83m)
12150-08-MXAVAT	8	7.0 ft (2.13m)
12150-09-LBAVAT	9	6.0 ft (1.83m)
12150-09-MXAVAT	9	7.0 ft (2.13m)
12150-09-OTAVAT	9	8.0 ft (2.44m)
12150-10-OTAVAT	10	8.0 ft (2.44m)

Table 4. Heat Controller Housings for Non-standard SSCI Regal Cage Arrangements (cont'd from *Page 5*)

Other Regal Models

Other versions of the Regal Stainless Steel Cages are available to meet your special requirements. Descriptions, pictures, and information on SSCI products can be found in our catalog, and on our website at www.suburbansurgical.com. To order these products, refer to *Parts Ordering Procedure* on *Page 26*.

- Full-view back cages
- Front and back door cages
- Transport cages
- Intensive care units
- Bases for intensive care units
- Cage doors for custom-built cages
- Stacking cat cages

Bases

General

Heated Regal Cages can be mounted on site-built concrete or wood bases, or on SSCI stainless steel stationary or mobile bases. For information on site-built bases, refer to *Owner's Manual, Regal Stainless Steel Cages, 702715*. For information on SSCI stainless steel bases, refer to *Owner's Manual, Stationary & Mobile Regal Cage Bases, 702714*.

SSCI Stainless Steel Stationary Bases

The stationary base (Figure 1) adds about 1.5 in. (3.81 cm) to the height of your arrangement although this dimension will vary somewhat depending on the final positions of the leveler legs.

Figure 1. Typical SSCI Stationary Base

Figure 2. Typical SSCI Mobile Base

SSCI Stainless Steel Mobile Bases

Mobile bases (Figure 2) are identical to stationary bases but with the addition of four or six casters depending on the arrangement width. The mobile base adds approximately 6.75 in. (17.15 cm) to the height of your arrangement.

CAUTION: **When the cage or cage arrangement is mounted on a mobile base, the wheel brakes should be engaged any time the assembly is not actually being moved. Be especially careful when the unit is not on a level surface and may be free to roll uncontrolled.**

CAUTION: **When moving a heated cage or arrangement on a mobile base, remember to unplug the heat controller electric power cord first.**

Accessories

SSCI provides a variety of accessories for Regal Stainless Steel Cages to custom-fit them to your requirements. Descriptions, pictures, and information on SSCI products can be found in our catalog, and on our website at www.suburbansurgical.com. To order accessories, refer to *Parts Ordering Procedure* on *Page 26*.

- Removable divider panels for double door cages
- Stainless steel resting shelves
- Top panels
- End panels
- Swivel casters
- Cage handles
- Noise reduction strapping
- Squeeze-back panels
- Oxygen therapy doors
- Pulmo-Aide compressors
- IV hooks
- Animal transfer doors
- Food and water bowls and holders
- Card holders
- Clipboards
- Medicine bins with clipboards
- Plastisol-coated, removable cage floors
- Stainless steel, removable cage floors
- Litter pans

Safety

CAUTION: **Before working on the electrical system, make sure that all heat controllers are Off and the electric power cord unplugged.**

CAUTION: **When the cage or cage arrangement is mounted on a mobile base, the wheel brakes should be engaged any time the assembly is not actually being moved. Be especially careful when the unit is not on a level surface and may be free to roll uncontrolled.**

CAUTION: **When moving a heated cage or arrangement on a mobile base, remember to unplug the heat controller electric power cord first.**

Care & Cleaning of Stainless Steel

Introduction

Stainless steel is steel alloyed with chromium to make it highly resistant to stain, rust, and corrosion. **Note:** This does NOT mean that stainless steel will *never* rust or corrode. Science has not yet developed a steel which is completely stainless or corrosion PROOF.

The type of stainless steel and finish selected by SSCI for this product is the best available for the intended use.

Cleaning & Cleansers

The basic rule of thumb is to use the mildest cleaning agent that will do the job effectively. After cleaning, always rinse thoroughly with clear water, and dry completely. Frequent cleaning will prolong the service life of stainless steel equipment and will help maintain a bright, pleasing appearance.

Ordinary deposits of waste and fluids can usually be removed with soap and water. More stubborn deposits or tightly adhering debris may require harder scrubbing and possibly the use of commercial cleaning products acceptable for use on metal surfaces. When using any cleaning agent, rub in the direction of the polish lines or "grain" of the metal. For high luster finishes, clean soft cloths or pads should be used.

If especially rough cleaning is necessary, use "stainless steel" wool, nylon, or plastic scrubbers. Test these scrubbers in an inconspicuous area first to be sure they do not mar or scratch the stainless steel finish.

Minor scale build-up and some hard water spotting may be removed by washing with vinegar, followed by a neutralizing rinse with clear water and a thorough drying with a soft cloth. For heavy deposits of scale, 5% oxalic acid (use warm), 5-15% sulfamic acid, or 5-10% phosphoric acid may be used. Always follow with a neutralizing rinse of clean water and a thorough drying.

Deodorizing Agents, Disinfectants, & Sanitizers

The large selection of brands and combinations of chemicals available for deodorizing, disinfecting, and sanitizing is staggering. Select one or more agents for use in your facility only after weighing all the benefits claimed by each product. Often this choice is made without adequate consideration of the effects these agents may produce on equipment or furnishings.

CAUTION: **Before selecting a chemical to employ in your facility, review label statements regarding use with metals (stainless steel). Always consult the chemical supplier if there are any doubts.**

Avoid prolonged use of chlorides (such as chlorine bleach), bromides, iodides, and thiocyanates on stainless steel surfaces as these chemicals will cause pitting, corrosion, and metal discoloration. Allowing salty solutions to evaporate and dry on stainless steel may also contribute to corrosive conditions.

In summary, select chemical deodorizers, disinfectants, and/or sanitizers only after weighing all possible benefits and known adverse effects.

Effect on Warranty

The warranty for this product is void if the care and cleaning instructions provided in this manual are not followed.

Cleaning Requirements

Clean the Regal Cage exactly in accordance with the cleaning instructions provided in *Chapter 3* of this manual.
Failure to follow these instructions can void your warranty.

SSCI Contact Information

Contact SSCI Customer Service by mail, telephone, or fax. The department is available from 8:30am to 5:00pm, Central Time, Monday through Friday. Closed holidays.

Address: Suburban Surgical Co., Inc.
275 Twelfth Street
Wheeling, Illinois 60090

Telephone: Illinois - (847) 537-9320, ext. 3518
Toll Free - (800) 323-7366

Fax: (847) 537-9061

Web: www.suburbansurgical.com

Warranty

Suburban Surgical Company, Inc. warrants the original purchaser that our products are of the highest standards in material and workmanship. Our stainless steel components are guaranteed to last a lifetime assuming they are used as intended, properly maintained and cared for. Mechanical, electrical, electronic, hydraulic, and any product's devices carry a one year warranty.

Items purchased by Suburban Surgical Company, Inc. from other manufacturers and incorporated into our equipment are covered by the respective manufacturer's warranties.

Warranties will not apply if it is determined by Suburban Surgical Company, Inc. that the equipment became defective due to an accident, misuse, abuse, improper maintenance or alteration. Warranty freight charges are covered for the first year only.

Comments:

Chapter 2 - Installation & Setup

General

This chapter guides you in installing and setting up Heated Regal Stainless Steel Cages as part of a cage arrangement. For assembly of the cage arrangement, refer to SSCI *Owner's Manual, Regal Stainless Steel Cages, 702715*. If you have problems or require additional assistance, please feel free to call SSCI Customer Service at (800) 323-7366.

Unpacking & Inspection

CAUTION: **Unpacking Regal Cages is not difficult. The items are heavy, however, and we recommend that unpacking be done by at least two people.**

If the shipping container appears damaged in any way, contact the shipping company immediately. Save all damaged packing materials to assist in proving liability for damage.

Carefully inspect the cage or arrangement as you unpack it. If any damage is noted, or if parts appear to be missing, call SSCI Customer Service at (800) 323-7366.

Cage & Heat Controller Numbering

The cages and heat controllers are numbered as shown in Figure 3. (Numbers are not displayed on the arrangement.) Each heat controller controls one cage, and that controller and cage carry matching numbers.

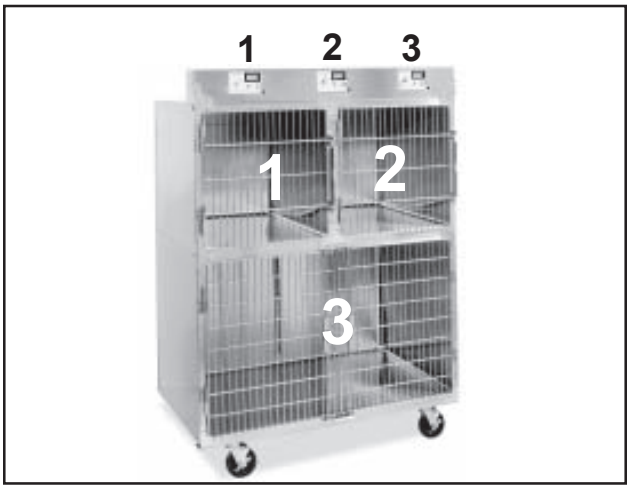

Figure 3. Cage & Heat Controller Numbering (3 Cage Arrangement Shown)

Example (Figure 3):

- Heat controller #1 controls cage #1.
- Heat controller #2 controls cage #2.
- Heat controller #3 controls cage #3.

Heat controllers are numbered consecutively from left to right across the housing.

Cages are numbered like you read a book - from left to right in the top tier, then from left to right in the next lower tier, and so on through any remaining tiers.

Note: When hooking up the wiring, take special care to connect each cage to its like-numbered heat controller.

Installation Procedures

Cage Bases

If an SSCI stationary or mobile stainless steel base is being used, refer to SSCI *Owner's Manual, Stationary & Mobile Regal Cage Bases, 702714* for assembly instructions. If a site-built base is being used, refer to *SSCI Owner's Manual, Regal Stainless Steel Cages, 702715* for construction information.

Single Heated Regal Cages

Installation of a single heated cage consists of placing the cage on its base in its intended location, then plugging the power cord into a standard 110VAC outlet. At that point, the cage is ready for operation.

Standard Heated Regal Cage Arrangements

These arrangements consist of two to five cages in a standard SSCI arrangement. Refer to Table 2 on *Page 4*. These arrangements are shipped fully assembled. Installation of a standard heated cage arrangement consists of placing the arrangement in its intended location, then plugging the power cord into a standard 110VAC outlet. At that point, the arrangement is ready for operation.

Non-standard Heated Regal Cage Arrangements

Overview

On non-standard arrangements, assembly will probably be required at your facility. Individual heated cages are shipped fully assembled including heating elements and attached wiring.

Tools & Supplies Required

- Phillips screwdriver
- Utility knife
- Wire crimping tool
- Electrical tape
- Masking tape
- Foil or duct tape

Procedure

1. Build the base.
   - If an SSCI stationary or mobile stainless steel base is being used, refer to SSCI *Owner's Manual, Stationary & Mobile Regal Cage Bases, 702714* for assembly instructions.
   - If a site-built wood or concrete base is being used, refer to *SSCI Owner's Manual, Regal Stainless Steel Cages, 702715* for construction information.

Figure 4. Slit-sleeve Tubing

Figure 5. Assembled Cages & Heat Controller Slit-sleeve Tubing.

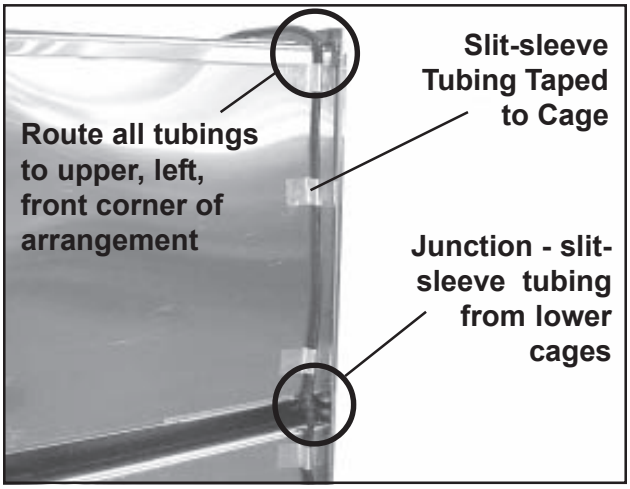

Figure 6. Tubing on Cage Side

2. Begin assembling the cage arrangement. For detailed assembly instructions, refer to *SSCI Owner's Manual, Regal Stainless Steel Cages, 702715*.

Note: Most of the wiring in Heated Regal Cages is routed through black, ribbed tubing called "slit-sleeve" tubing (Figure 4).

3. When assembling the cage arrangement, route all cage slit-sleeve tubing to the left sides of the cages (Figure 5), and secure it to the cage sides with foil or duct tape.

   For cages not on the left end of the arrangement, route the tubing up the cage's left side, between other cages if necessary, to the top of the arrangement, then to the left side. Tape these tubings to the cage sides before mounting the cages onto the arrangement.

   Note: Route all cage tubings to the upper, left, front corner of the arrangement (Figure 6). In *Step 11*, they will be passed through an opening in the top panel (Figure 7) to the heat controller housing.

4. Where two slit-sleeve tubings meet (Figure 6), remove the wires from one tubing, insert them into the other tubing, and cut away the empty portion of the first tubing. With electrical tape, tape the junction completely so that no wires are visible.

5. Finish assembling the arrangement, routing all the wires and slit-sleeve tubing over the top and to the left end of the arrangement.

6. Mount the end panels to both ends of the cage arrangement and peel off all the protective film. Refer to *Adding End Panels to the Arrangement* in *SSCI Owner's Manual, Regal Stainless Steel Cages, 702715.*

7. The wire bundle from each cage includes three black wires and two white wires. With masking tape, tape the wires from each bundle into a separate group, then mark the bundle with the appropriate cage number.

8. Place all the wire bundles into slit-sleeve tubing and tape up all junctions. The ends of the wires should be exposed and showing the numbered tape markers. Cut away any excess slit-sleeve tubing.

9. Peel the protective film from the top panel.

10. Insert the rubber grommet provided into the hole in the left front corner of the top panel (Figure 7).

11. Run the slit-sleeve tubing up through the grommet in the top panel, then mount the top panel onto the arrangement. Refer to *Adding a Top Panel to the Arrangement* in *SSCI Owner's Manual, Regal Stainless Steel Cages, 702715.*

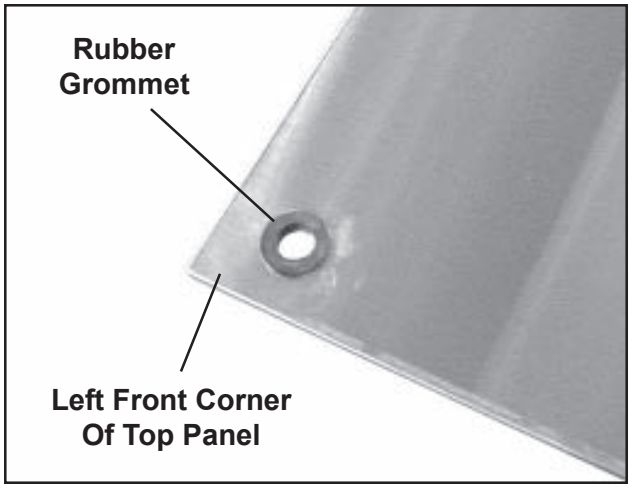

Figure 7. Rubber Grommet in Top Panel

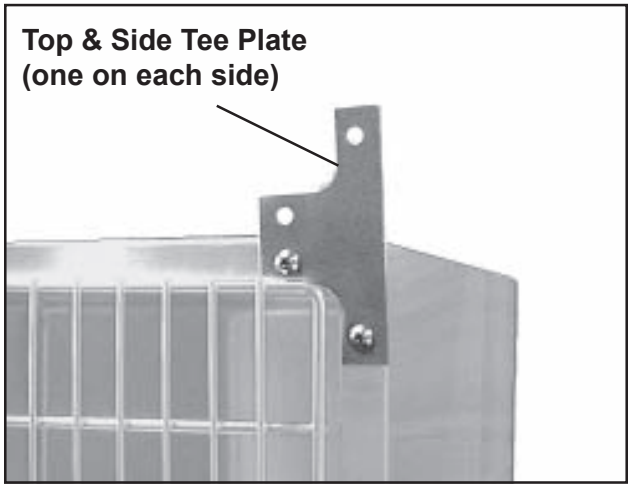

Figure 8. Top & Side Tee Plate Mounted on Cage

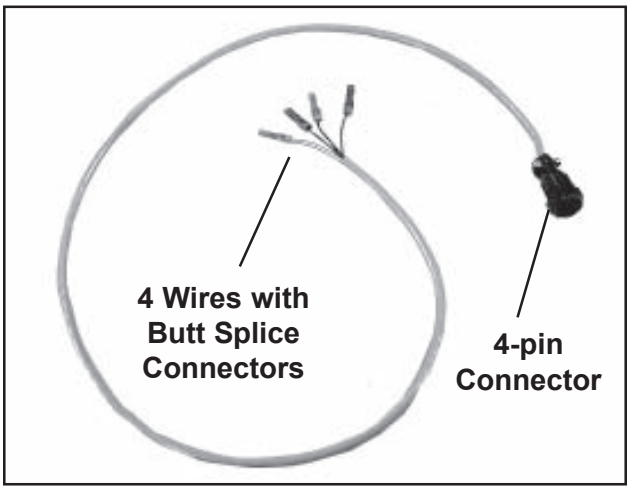

Figure 9. Typical Trunk Line (1 per Cage & Heat Controller)

12. A trunk line (Figure 9) connects each cage to its heat controller. Four butt splice connectors are pre-attached to the wires from the trunk line. Take one trunk line and connect it to the five (three black, two white) wires from Cage No. 1 according to Figure 10. To connect a wire:
    a. Trim the wire down to a convenient length but don't lose the number marker.

    b. Strip the insulation from the end of the wire about 1/2 in.

    c. Twist the copper strands together.

    d. Insert the wire into the butt splice on the trunk line.

    e. With a crimping tool, tightly crimp the butt splice onto the wire.

    f. Tug on the wire to make sure you have a tight connection.

    g. Repeat *Sub-steps a* through *f* for the other sets of wires in the cage-to-trunk line connection.

CAUTION: **Notice that one black and one white wire from the cage are thinner than the other wires. Study Figure 10 carefully and make sure you connect all wires correctly.**

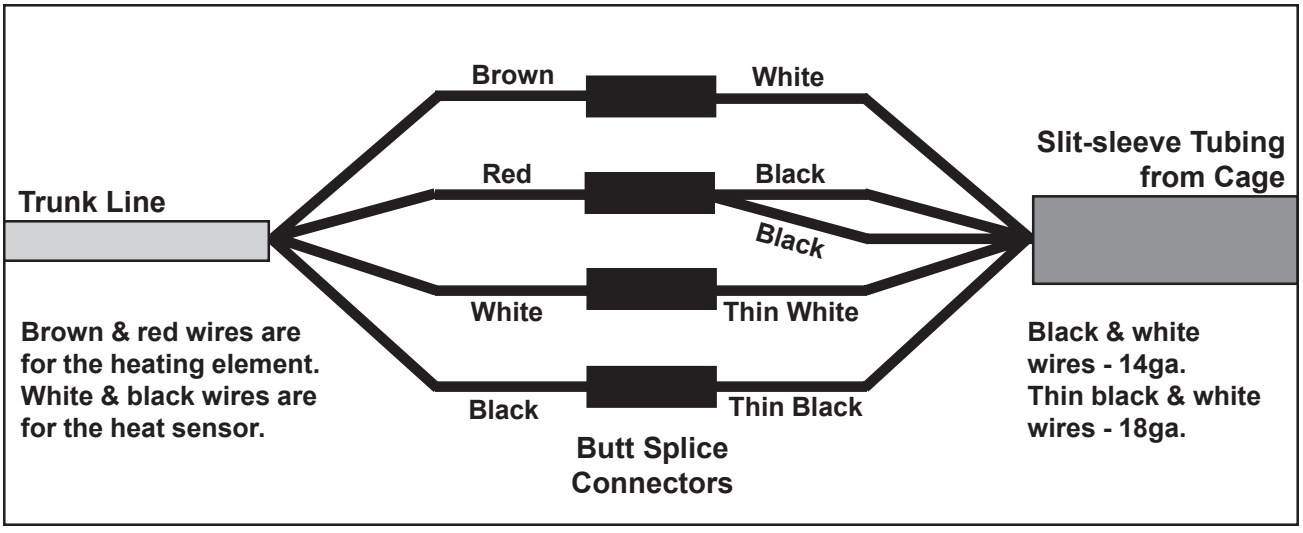

Figure 10. Wiring Diagram - Trunk Line/Cage Wires Connections

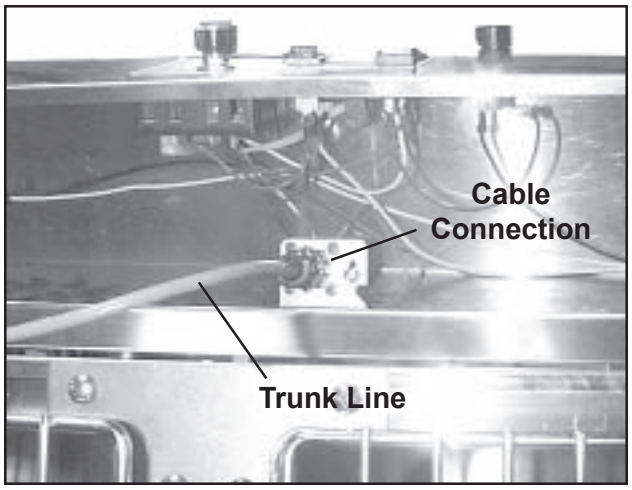

Figure 11. Interior View of Heat Controller Housing (tilted backward)

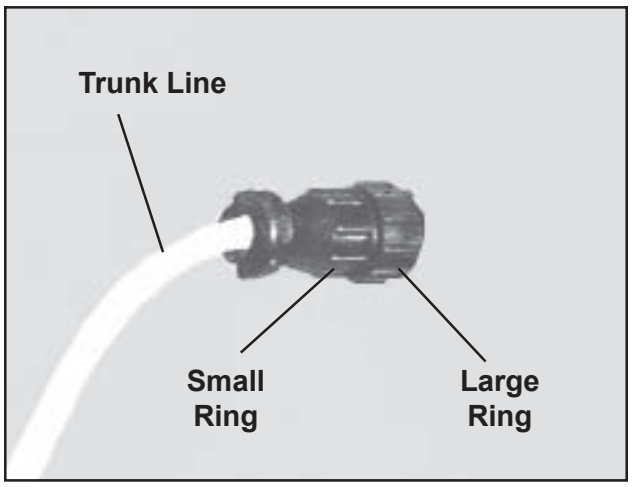

Figure 12. 4-Pin Connector

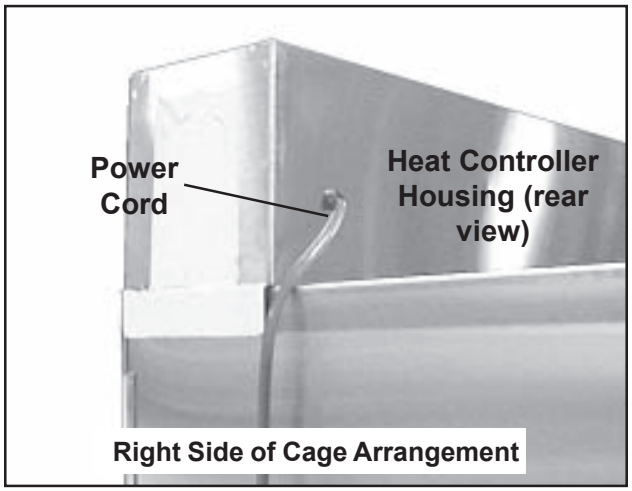

Figure 13. Heat Controller Housing Power Cord

Note: To identify the various mounting plates on the front of the arrangement, refer to *Chapter 2 - Parts Identification* in *Owner's Manual, Regal Stainless Steel Cages, 702715.*

13. Mount one top & side tee plate to each end of the upper front of the arrangement (Figure 8).

14. Place the heat controller housing on top the arrangement but DO NOT connect it to the top & side tee plates yet.

15. Turn the heat controller housing over on its back so that the open underside faces front (Figure 11).

CAUTION: **To tighten or loosen the 4-pin connectors on the trunk lines, ALWAYS hold the small ring and turn the large ring (Figure 12). NEVER turn the small ring. Trying to turn the small ring can tear the pins out of the connector.**

16. Making sure that the pins and holes line up correctly, plug the 4-pin plug into the cable connection on Heat Controller No. 1 (Figure 11) and secure the connection by turning the large ring clockwise.

17. Test the controller to be sure it operates correctly. To test the controller:
    a. Plug the heat controller housing power cord into a standard 110VAC outlet (Figure 13).

    b. Push the On/Off button. The button illuminates and the LCD displays the temperature.

    c. Rotate the temperature control knob clockwise. The heat indicator illuminates.

    d. Wait for a few minutes, then feel the floor of the cage you connected the controller to - it should feel warm.

e. When the floor reaches the set temperature, the heat indicator goes out.

f. Push the On/Off button to turn the heat controller Off.

g. Unplug the power cord.

h. If the controller performed satisfactorily, go on to *Step 18* and continue the installation. If not, recheck your wiring connections for accuracy and tightness, and make corrections where necessary. Then, repeat *Step 17* until the controller operates as it should.

18. Once the heat controller is operating properly, use electrical tape to completely tape up the completed wire connections.

19. Label the end of the trunk line with the cage/heat controller number.

20. Repeat *Steps 12,* and *16* through *19* for each additional heat controller.

21. After all trunk lines are connected, place all wiring and slit-sleeve tubing into the bottom of the heat controller housing, and turn the housing right-side-up.

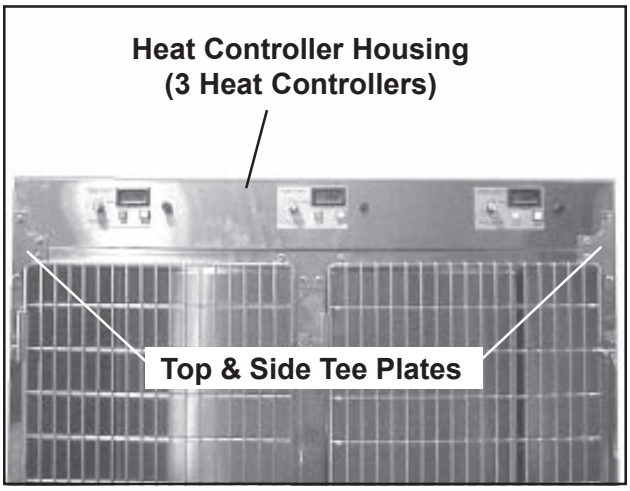

Figure 14. Heat Controller Housing Installed on Cage Arrangement

22. Fasten the heat connector housing securely to the two top & side tee plates installed earlier (Figures 8 & 14).

23. Peel off any protective film still on the heat controller housing, end panels, or top panel.

24. Plug the heat controller housing power cord into a standard 110VAC outlet (Figure 13).

Comments:

Chapter 3 - Use & Care

Introduction

This chapter guides you in operating the heaters on the SSCI Heated Regal Stainless Steel Cages. Detailed information on the use and care of the cages themselves will be found in SSCI's *Owner's Manual, Regal Stainless Steel Cages, 702715* which was supplied with the cage(s).

Operating the Cage Heaters

Heat Controller Components

The following paragraphs describe the various components on the heat controller (Figure 15).

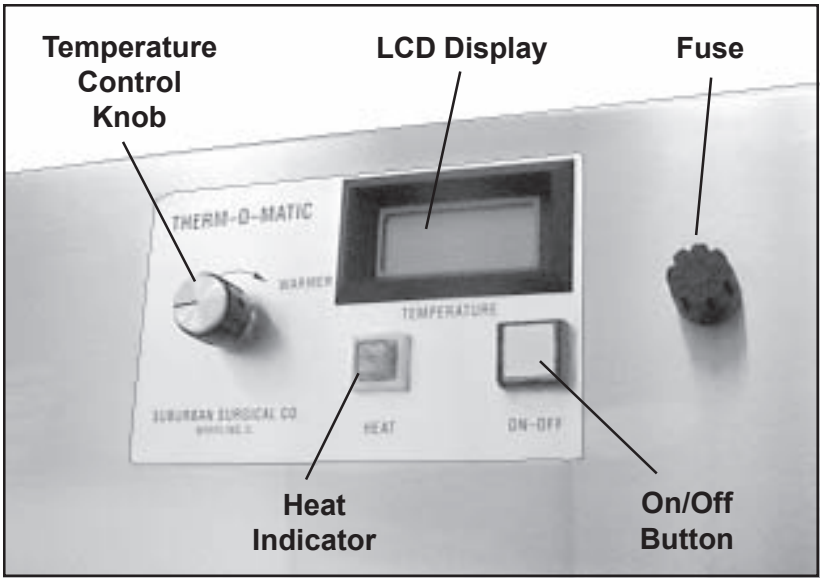

Figure 15. Heat Contoller Components

On/Off Button

Pressing the On/Off button (Figure 15), as you might expect, turns the heat controller On or Off. When the controller is On, this button is illuminated.

Temperature Control Knob

The temperature control knob (Figure 15) allows you to select the desired temperature for the cage.

- To increase the temperature, turn the temperature control knob clockwise. **Note:** The maximum temperature is 105° F.
- To decrease the temperature, turn the temperature control knob counterclockwise.

LCD Display

When the controller is On, the LCD display (Figure 15) shows the current temperature of the cage floor in degrees Fahrenheit.

Heat Indicator

The heat indicator (Figure 15) illuminates when you turn the controller On, and turns Off when the cage reaches the selected temperature.

Fuse

A fuse (Figure 15) rated at 2 amps is located next to the heat controller faceplate and protects the unit against electrical malfunctions. It is a 3AG Fast-Acting, 250v, 2A fuse.

Using the Heater

Press the On/Off button (Figure 15) to turn the heater On or Off. When you turn the unit On, the On/Off button and the heat indicator will illuminate. The LCD screen will display the current temperature of the cage.

- To increase the temperature, turn the temperature control knob clockwise. **Note:** The maximum temperature is 105° F.
- To decrease the temperature, turn the temperature control knob counterclockwise.

The heat indicator will turn Off when the cage reaches the selected temperature.

To maintain the cage at a constant temperature, turn the temperature control knob slightly counterclockwise after the cage reaches the selected temperature. The controller will maintain that temperature.

Replacing a Fuse

The heat controller is protected by a single 3AG Fast-Acting, 250v, 2A fuse. This fuse can be ordered from SSCI, however, it is a common type, and it will be faster and more economical to obtain one at your local hardware or electrical supply store.

Removal

1. Unplug the electric power cord.

2. Turn the fuse cap about 1/4 turn counterclockwise until it releases, then pull it out of the fuse holder (Figure 16).

3. Pull the fuse out of the fuse cap.

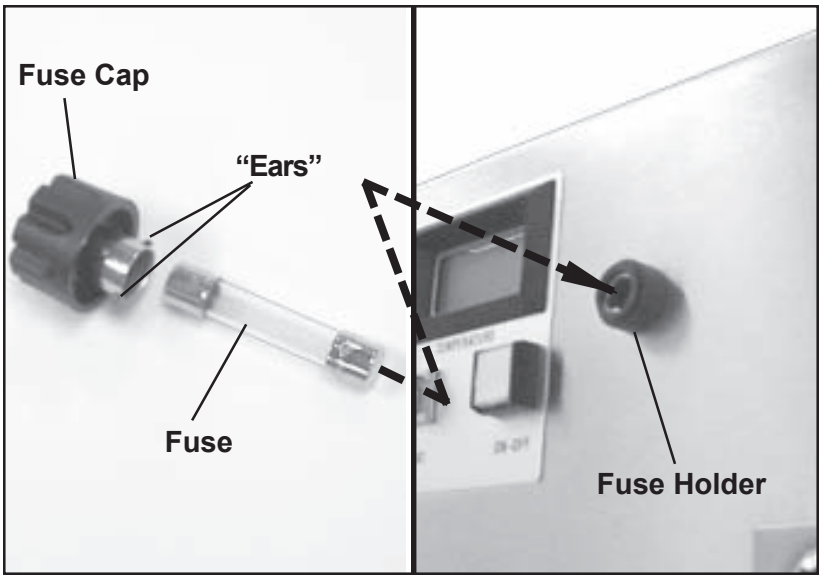

Figure 16. Fuse Assembly

Inspection

Look carefully at the fuse. Notice the thin wire visible inside the glass section of the fuse. If this wire is intact, the fuse is probably OK. If it is broken, the fuse is bad and must be replaced. The heat controller will not operate if the fuse is defective or missing.

Installation

1. Press either end of the new fuse into the fuse cap (Figure 16).

2. Notice the two tiny "ears" on the fuse cap and the two matching gaps inside the fuse holder. Insert the fuse and cap into the fuse holder so that the "ears" on the fuse cap enter the gaps in the holder.

3. Press the fuse into the holder and rotate it about 1/4 turn clockwise until it seats.

4. Plug in the electric power cord.

Keeping Your Regal Cage Clean

Introduction

You will no doubt want to clean your Regal cage frequently. Maintaining high standards of sanitation will be an important priority for your facility. Refer to *Care and Cleaning of Stainless Steel* on *Page 9* for more detailed information.

Cleaning Procedures

Whenever necessary, rinse the cage with clear water and dry thoroughly with clean, soft cloths.

Ordinary deposits of waste and fluids can usually be removed with soap and water. Stubborn deposits may require scrubbing with “stainless steel” wool, nylon, or plastic scrubbers and/or the use of commercial cleaning products. Always scrub in the direction of the “grain” of the metal. Rinse with clear water and dry thoroughly with clean, soft cloths.

Minor scale build-up and some hard water spotting may be removed by washing with vinegar, followed by a neutralizing rinse of clear water, and a thorough drying with clean, soft cloths.

If especially rough cleaning is necessary, use “stainless steel” wool, nylon, or plastic scrubbers. Test these scrubbers in an inconspicuous area first to be sure they do not mar or scratch the stainless steel finish.

For heavy deposits of scale, 5% oxalic acid (use warm), 5-15% sulfamic acid, or 5-10% phosphoric acid may be used. As always, rinse with clear water, and dry thoroughly with clean soft cloths.

Avoid prolonged use of chlorides (such as chlorine bleach), bromides, iodides, and thiocyanates. Never allow salty solutions to dry on the stainless steel.

***CAUTION:* The warranty for this product is void if the care and cleaning instructions provided in this manual are not followed.**

Chapter 4 - Replacement of Parts

Replacement Parts

Table 5 shows the replacement parts available for SSCI Heated Regal Stainless Steel Cages. For parts not listed, contact SSCI Customer Service at (800) 323-7366. Refer to *Parts Ordering Procedure* on *Page 26*.

Part Name	SSCI Part Number	Quantity	Replacement Instructions
Heat Controller Housing	Refer to Tables 3 & 4	1 per arrangement	*Page 27*
Electric Power Cord	212691	1 per arrangement	*Page 29*
Temperature Control Knob	853461	1 per heat controller	*Page 32*
Temperature Control Assembly	853844	1 per heat controller	*Page 33*
Heat Indicator Light (Amber)	853454	1 per heat controller	*Page 36*
Fuse, 3AG, Fast-Acting, 250v. 2A	853848	1 per heat controller	*Page 22*
Fuse Holder	853671	1 per heat controller	*Page 39*
LCD Display	853843	1 per heat controller	*Page 41*
Trunk Line	754195	1 per heat controller	*Page 44*

Table 5. Replacement Parts Available for SSCI Heated Regal Stainless Steel Cages

General Information

- Many threaded fasteners used on SSCI products are secured with thread adhesive to insure structural integrity. Removing any screw or bolt may be difficult at first.
- If during disassembly, you remove any tape, cable ties, etc., remember to replace them when the installation is complete.
- During disassembly, retain all hardware items such as screws, nuts, lockwashers, etc. for reassembly.
- If you have problems with any procedure, please feel free to call SSCI Customer Service at (800) 323-7366.

Parts Ordering Procedure

Order new equipment, accessories, and/or replacement parts directly through SSCI Customer Service. You can order by mail, telephone, or fax. Refer to *SSCI Contact Information* on *Page 10* for address, telephone, and fax numbers. When ordering, please provide the following information:

- Your name
- Company name
- Company account number
- Telephone number
- Fax number
- e-mail address
- Shipping address
- Billing address (if different from shipping address)
- Names, part numbers, and quantities of items being ordered
- Credit card number and expiration date, or other payment information
- Preferred method of shipment
- Information on whether the items are required on a normal or urgent basis

Parts Replacement Procedures

The following sections guide you in replacing worn, damaged, or missing parts on an SSCI Heated Regal Stainless Steel Cage or cage arrangement.

Heat Controller Housing

Refer to Tables 3 & 4 in *Chapter 1* for Part Numbers

Overview

These instructions guide you in replacing the complete heat controller housing including all the controllers, and are suitable regardless of the number of controllers in the arrangement.

Tool Required

- Phillips screwdriver

CAUTION: **Before working on the electrical system, make sure that all heat controllers are Off and the electric power cord unplugged.**

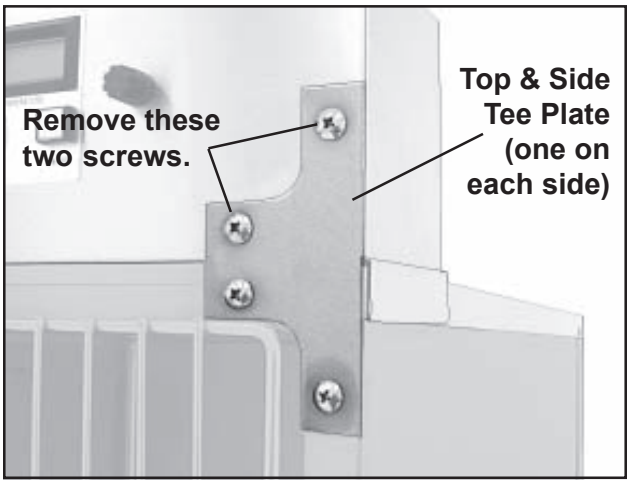

Figure 17. Top & Side Tee Plate

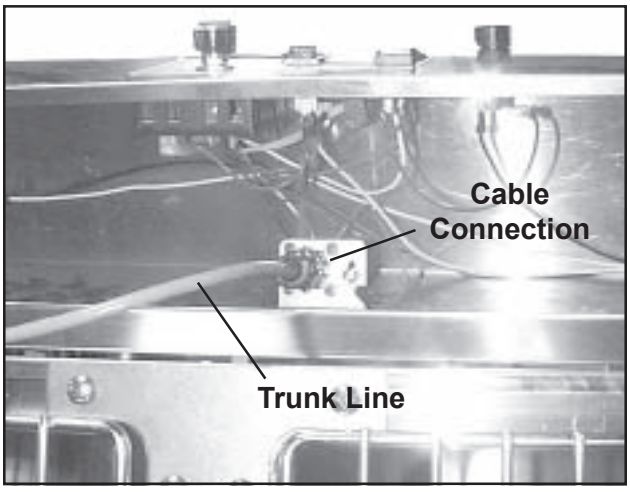

Figure 18. Interior View of Heat Controller Housing (tilted backward)

Removal

1. Turn all the heat controllers Off.
2. Unplug the heat controller housing electric power cord.
3. With a Phillips screwdriver, unscrew the top two screws on both side & tee plates to release the heat controller housing (Figure 17).
4. Tilt the heat controller housing backwards so that the open underside faces front (Figure 18).
5. Check all the trunk lines and make sure they are properly numbered so you can correctly replace them. If they are not numbered, refer to *Cage & Heat Controller Numbering* on *Page 13* and label the trunk lines.

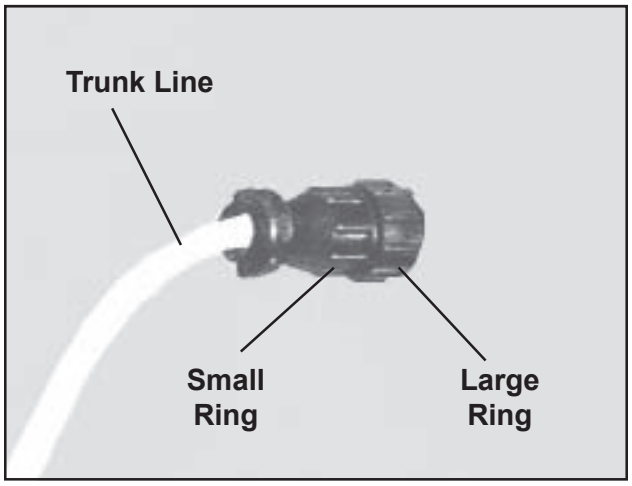

Figure 19. 4-Pin Connector

CAUTION: **To tighten or loosen the 4-pin connectors on the trunk lines, ALWAYS hold the small ring and turn the large ring (Figure 19). NEVER turn the small ring. Trying to turn the small ring can tear the pins out of the connector.**

6. When all the trunk lines are numbered, unplug them all from cable connections on the heat controllers (Figure 18).

7. The power cord should already have been unplugged (*Step 2*), so you can now remove the heat controller housing from the cage arrangement.

Installation

1. Place the new heat controller housing on top the arrangement. DO NOT connect it to the top & side tee plates yet.

2. Turn the heat controller housing over on its back so that the open underside faces front (Figure 18).

3. Making sure that the pins and holes line up correctly, plug the 4-pin plug into the cable connection on Heat Controller No. 1 (Figure 18) and secure the connection by turning the large ring clockwise.

4. Plug in the electric power cord.

5. Test the controller to be sure it operates correctly. Refer to *Steps 17b* through *h* on *Page 18* for the test procedure.

6. Unplug the electric power cord.

7. Repeat *Steps 3* through *6* for each additional heat controller. Make sure that all trunk lines are correctly numbered and connected.

8. When wiring is complete for all heat controllers, place the exposed trunk lines, wiring, and slit-sleeve tubing into the bottom of the heat controller housing, and turn the housing right-side-up.

9. Fasten the heat connector housing securely to the two top & side tee plates (Figure 17).

10. Plug in the electric power cord.

Electric Power Cord

P/N 212691

Overview

The electric power cord exits from the right rear of the heat controller housing (Figure 20). The cord plugs into a standard 110VAC outlet.

Tools Required

- Phillips screwdriver
- Pliers

CAUTION: **Before working on the electrical system, make sure that all heat controllers are Off and the electric power cord unplugged.**

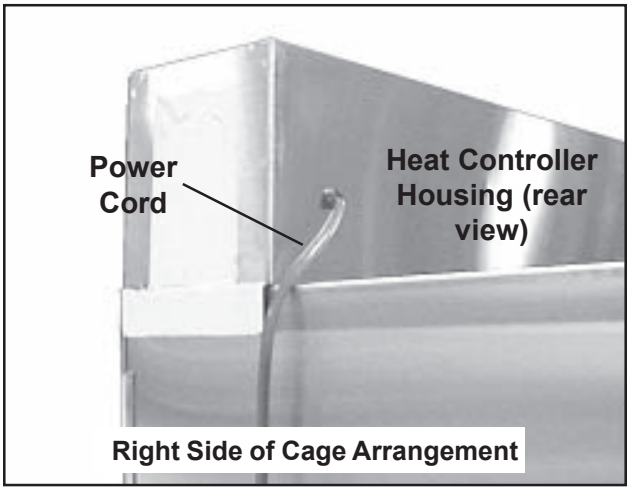

Figure 20. Heat Controller Housing Power Cord

Removal

1. Turn all the heat controllers Off.
2. Unplug the heat controller housing electric power cord.
3. With a Phillips screwdriver, unscrew the top two screws on both side & tee plates to release the heat controller housing (Figure 17).
4. Tilt the heat controller housing backwards so that the open underside faces front (Figure 18).

Note: It is not really necessary to remove the heat controller housing from the cage arrangement to replace the power cord. Doing so, however, makes the process much easier.

5. Check all the trunk lines and make sure they are properly numbered so you can correctly replace them. If they are not numbered, refer to *Cage & Heat Controller Numbering* on *Page 13* and label all the trunk lines.

CAUTION: **To tighten or loosen the 4-pin connectors on the trunk lines, ALWAYS hold the small ring and turn the large ring (Figure 19). NEVER turn the small ring. Trying to turn the small ring can tear the pins out of the connector.**

6. When all the trunk lines are numbered, unplug them all from cable connections on the heat controllers (Figure 18).

7. The power cord should already have been unplugged (*Step 2*), so you can now remove the heat controller housing from the cage arrangement.

8. Inside the heat controller housing, disconnect the three wires that extend from the power cord:
   - One white wire - connects to one or more white wire(s) - one from each heat indicator
   - One black wire - connects to one or more black wire(s) - one from each fuse
   - One green wire - connects to one green ground wire

Note: Pay attention to the orientation of the strain relief so that you can replace it correctly.

9. With a pliers, squeeze the moving segment of the strain relief inward, and pull the relief out of the heat controller housing.

10. Pull the power cord and wires out of the heat controller housing.

11. Open the strain relief and remove the power cord.

Installation

1. Insert the new power cord wiring into the housing along with about two-inches of the gray cord.

2. On the portion of the cord outside the housing, place the strain relief on the power cord oriented the same way that it was removed.

3. Place the moving segment of the strain relief inside the larger segment.

4. Squeezing the moving segment inward, insert the rear end of the strain relief through the power cord opening until the relief snaps into place.

5. Connect the white, black, and green wires from the power cord to the same wires you removed the old wires from (refer to *Step 8* above).

6. Plug all trunk lines into their correct connectors.

7. Plug in the electric power cord.

8. Test Controller #1 to be sure it operates correctly. Refer to *Steps 17b* through *h* on *Page 18* for the test procedure.

9. Repeat the test for each additional heat controller.

10. When all heat controllers operate correctly, place the exposed trunk lines, wiring, and slit-sleeve tubing into the bottom of the heat controller housing, and turn the housing right-side-up.

11. Fasten the heat connector housing securely to the two top & side tee plates (Figure 17).

12. Plug in the electric power cord.

Temperature Control Knob

P/N 853461

Tools Required

- Small flat-blade screwdriver
- Pliers

Removal

1. Rotate the knob fully counterclockwise.
2. Note the position of the indicator line on the front of the knob.
3. With a small flat-blade screwdriver, loosen the setscrew in the knob (Figure 21).
4. Pull the knob off the shaft.

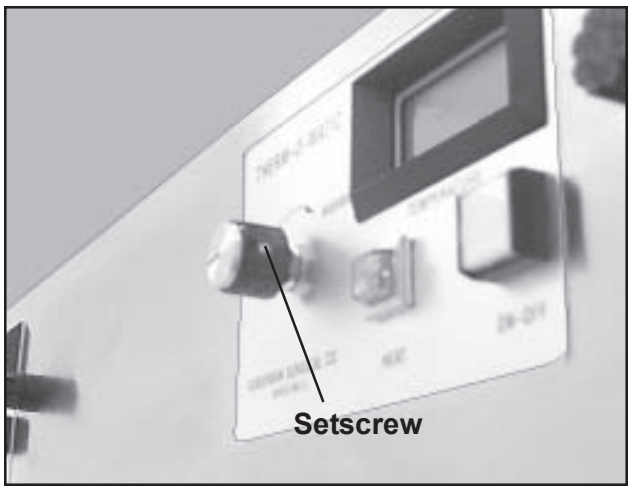

Figure 21. Temperature Control Knob Set-screw

Installation

1. Make sure the shaft is turned fully counterclockwise. If necessary, use a pliers to turn the shaft.
2. Place the knob on the shaft with the indicator line in the same position as above.
3. Tighten the setscrew (Figure 21).

Temperature Control Assembly

P/N 853844

Tools Required

- Phillips screwdriver
- Small, flat-blade screwdriver
- 1/2 in. wrench

CAUTION: **Before working on the electrical system, make sure that all heat controllers are Off and the electric power cord unplugged.**

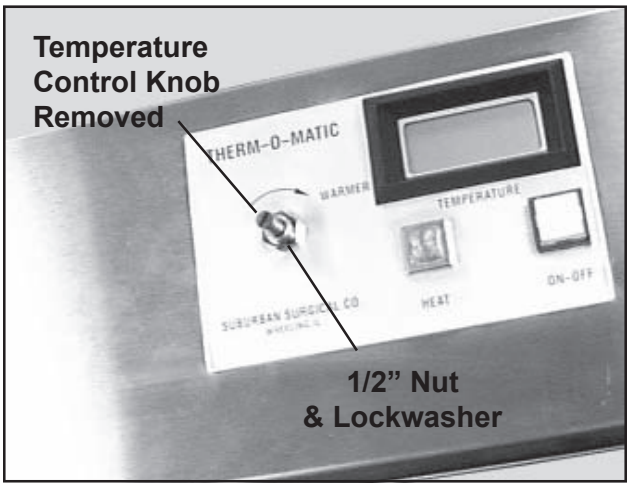

Figure 22. Temperature Control Nut, & Lockwasher

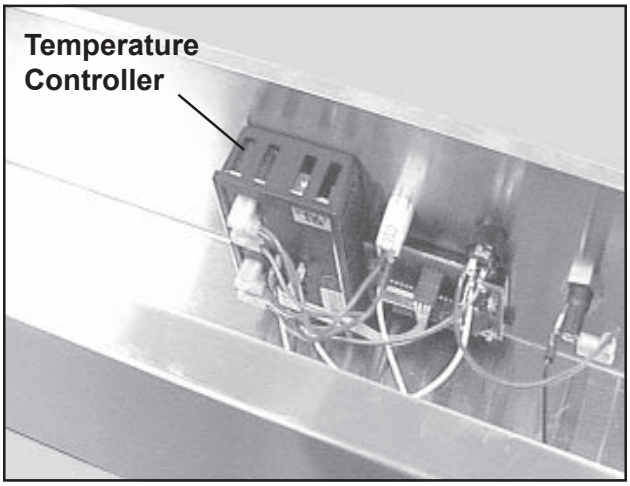

Figure 23. Temperature Control Assembly

Removal

1. Turn all the heat controllers Off.
2. Unplug the heat controller housing electric power cord.
3. Remove the heat controller housing from the cage arrangement. Refer to *Heat Controller Housing - Removal - Steps 3* through *7,* starting on *Page 27.*
4. Lay the housing down on its top so that the open side is upward.
5. Remove the temperature control knob. Refer to *Temperature Control Knob - Removal, Steps 1* through *4* on *Page 32.*
6. With a 1/2 in. wrench, remove the nut and lockwasher from the shaft on the front of the heat controller (Figure 22).
7. Pull the temperature control assembly shaft out of its mounting hole and position the assembly in the housing so that you can work on it comfortably (Figure 23).

In the next steps you will pull the wire connectors off the terminals on the rear of the temperature control assembly (Figure 24).

Note: Terminal numbers are molded onto the rear of the assembly next to their respective terminals.

Note: Terminal **3** is not used.

8. Pull the connector (one green and one white wire) from Terminal **4**.

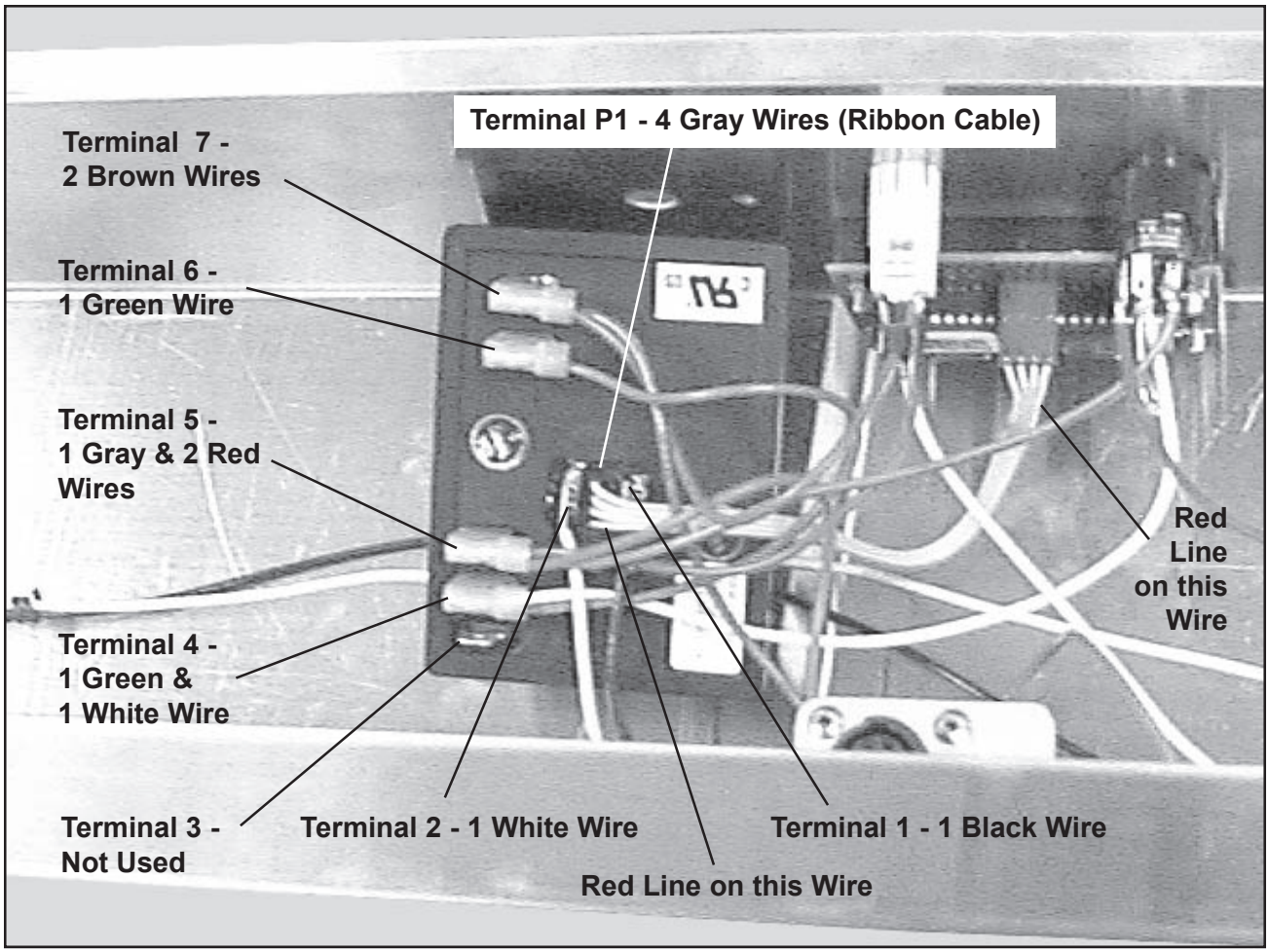

Figure 24. Wire Connections on Temperature Control Assembly

9. Pull the connector (one gray wire andtwo red wires) from Terminal **5**.

10. Pull the connector (one green wire) from Terminal **6**.

11. Pull the connector (two brown wires) from Terminal **7**.

12. Note the position of the wire with the red line on the ribbon cable (four small gray wires). Pull the connector from Terminal **P1**.

13. With a small, flat-blade screwdriver, pry the connector (one white wire) from Terminal **2**.

14. With a small, flat-blade screwdriver, pry the connector (one black wire) from Terminal **1**.

15. Remove the old temperature control assembly from the housing and discard it.

Installation

1. Rest the new temperature control assembly in the housing oriented as shown in Figure 24. **Note:** Remember that the housing is inverted as you are working on it, so the temperature control assembly r will go in upside-down.

2. Replace the connector (one black wire) onto Terminal **1**.

3. Replace the connector (one white wire) onto Terminal **2**.

4. Replace the connector (four gray wires - ribbon cable) onto Terminal **P1**. **Note:** The wire with the red line should go toward the bottom, and toward the power cord end of the housing (Figure 24).

5. Replace the connector (two brown wires) onto Terminal **7**.

6. Replace the connector (one green wire) onto Terminal **6**.

7. Replace the connector (one gray wire and two red wires) onto Terminal **5**.

8. Replace the connector (one green and one white wire) onto Terminal **4**.

9. Place the temperature control assembly shaft through the front of the housing, with the assembly oriented as shown in Figure 23.

10. Secure the assembly in place by mounting the lock-washer and nut onto the shaft in front of the controller housing (Figure 22).

11. Install the temperature control knob. Refer to *Temperature Control Knob - Installation - Steps 1* through *3*, on *Page 32*.

12. Place the exposed trunk lines, wiring, and slit-sleeve tubing into the bottom of the heat controller housing, and turn the housing right-side-up.

13. Fasten the heat connector housing securely to the two top & side tee plates (Figure 17).

14. Plug in the electric power cord.

Heat Indicator Light (Amber)

P/N 853454

Tools Required

- Phillips screwdriver
- Needle-nose pliers
- Small, flat-blade screwdriver
- 1/2 in. wrench

CAUTION: **Before working on the electrical system, make sure that all heat controllers are Off and the electric power cord unplugged.**

Removal

1. Turn all the heat controllers Off.

2. Unplug the heat controller housing electric power cord.

3. Remove the heat controller housing from the cage arrangement. Refer to *Heat Controller Housing - Removal - Steps 3* through *7,* starting on *Page 27*.

4. Lay the housing down on its top so that the open side is upward.

Note: In *Steps 5* through *7* you will release the temperature control assembly to make more room to work with the heat indicator light. DO NOT disconnect the wires from this assembly.

5. Remove the temperature control knob. Refer to *Temperature Control Knob - Removal, Steps 1* through *4* on *Page 32*.

6. With a 1/2 in. wrench, remove the nut and lockwasher from the shaft on the front of the heat controller (Figure 22).

7. Pull the temperature control assembly shaft out of its mounting hole and position the assembly so that you can work on the heat indicator light.

8. Pull the connector with the brown wire off the indicator light terminal (Figure 25).

9. Pull the connector with the red and white wires off the indicator light terminal.

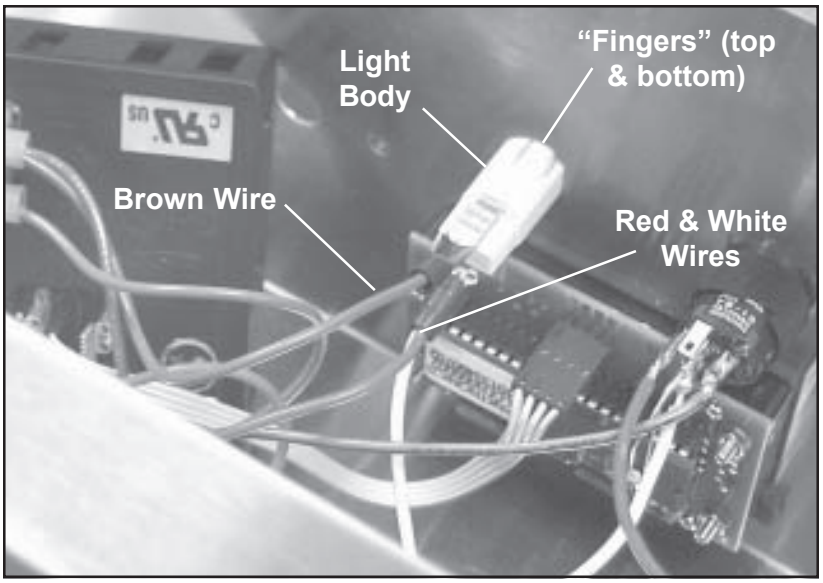

Figure 25. Heat Indicator Light

10. Notice that there are plastic "fingers" on the top and bottom of the white indicator light body that hold the light in place. With a needle-nose pliers, press these "fingers" inward and pull the light body out through the front of the heat controller housing.

Installation

1. From the front of the heat controller, press the new indicator light body into its opening into the housing. Press it all the way in until it snaps in place (Figure 25).

2. Push the connector on the brown wire onto the indicator light terminal as shown in Figure 25.

3. Push the connector on the red and white wires onto the indicator light terminal.

4. Place the temperature control assembly shaft through the front of the housing, with the assembly oriented as shown in Figure 23.

5. Secure the assembly in place by mounting the lock-washer and nut onto the shaft in front of the controller housing (Figure 22).

Note: If you have accidentally disconnected wires from the temperature control assembly, refer to Figure 24 and reconnect them in their correct positions.

6. Install the temperature control knob. Refer to *Temperature Control Knob - Installation - Steps 1* through *3*, on *Page 32*.

7. Place the exposed trunk lines, wiring, and slit-sleeve tubing into the bottom of the heat controller housing, and turn the housing right-side-up.

8. Fasten the heat connector housing securely to the two top & side tee plates (Figure 17).

9. Plug in the electric power cord.

Fuse Holder

P/N 853671

Tools Required

- Phillips screwdriver
- 11/16 in. wrench

CAUTION: **Before working on the electrical system, make sure that all heat controllers are Off and the electric power cord unplugged.**

Removal

1. Turn all the heat controllers Off.

2. Unplug the heat controller housing electric power cord.

3. Remove the heat controller housing from the cage arrangement. Refer to *Heat Controller Housing - Removal - Steps 3* through *7,* starting on *Page 27*.

4. Lay the housing down on its top so that the open side is upward.

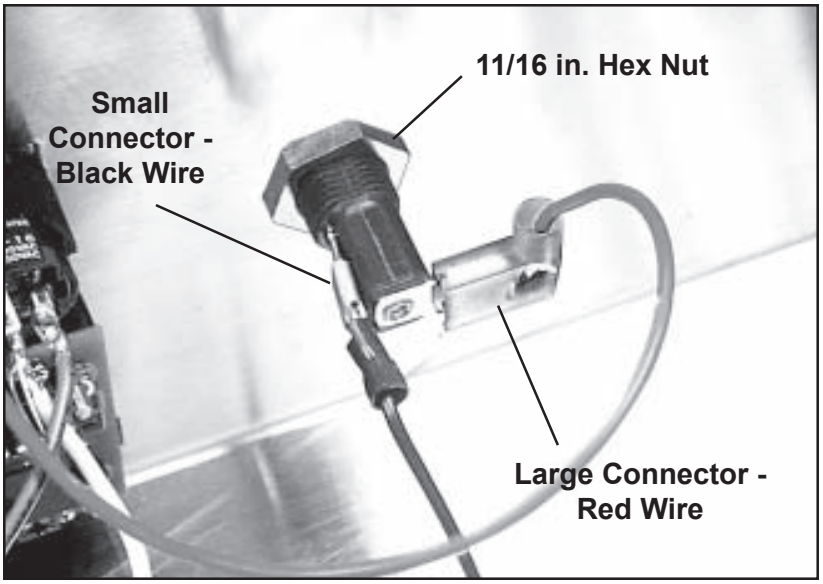

Figure 26. Fuse Holder

5. Pull the large connector with the red wire off the fuse holder (Figure 26).

6. Pull the small connector with the black wire off the fuse holder.

7. With a 11/16 in. wrench, unscrew the hex nut on the fuse holder.

8. Pull the fuse holder out of the front of the heat controller housing.

9. Remove the fuse from the holder and inspect it (refer to *Replacing a Fuse* on *Page 22*). If the fuse is good, save it for later use. If not, discard it.

Installation

1. Open the new fuse holder and verify that it contains a fuse of the correct value. If not, replace the fuse with a correctly rated fuse. The heat controller is protected by a single 3AG Fast-Acting, 250v, 2A fuse. Replace the fuse and fuse cap into the fuse holder.

2. Slip the new fuse holder through the opening in the front of the heat controller housing.

3. Inside the housing, fasten the holder in place with the same 11/16 in. hex nut removed earlier (Figure 26).

4. Put the small connector with the black wire onto the fuse holder.

5. Put the large connector with the red wire onto the fuse holder.

6. Place the exposed trunk lines, wiring, and slit-sleeve tubing into the bottom of the heat controller housing, and turn the housing right-side-up.

7. Fasten the heat connector housing securely to the two top & side tee plates (Figure 17).

8. Plug in the electric power cord.

LCD Display

P/N 853843

Tools Required

- Phillips screwdriver
- 1/2 in. wrench
- 13/64 in. wrench

CAUTION: **Before working on the electrical system, make sure that all heat controllers are Off and the electric power cord unplugged.**

Removal

1. Turn all the heat controllers Off.

2. Unplug the heat controller housing electric power cord.

3. Remove the heat controller housing from the cage arrangement. Refer to *Heat Controller Housing - Removal - Steps 3* through *7,* starting on *Page 27*.

4. Lay the housing down on its top so that the open side is upward.

Note: In *Steps 5* through *7* you will release the temperature control assembly to make more room to work with the LCD display. DO NOT disconnect the wires from the assembly.

5. Remove the temperature control knob. Refer to *Temperature Control Knob - Removal, Steps 1* through *4* on *Page 32*.

6. With a 1/2 in. wrench, remove the nut and lockwasher from the shaft on the front of the heat controller (Figure 22).

7. Pull the temperature control assembly shaft out of its mounting hole and position the assembly so that you can work on the LCD display (Figure 23).

8. Note the position of the wire with the red line on the ribbon cable (four small gray wires). Pull the connector from Terminal **P1**.

9. With a 13/64 in. wrench, remove the four retaining nuts on the rear of the digital display.

10. Remove the printed circuit board from the assembly.

11. Pull the bezel out from the front of the housing.

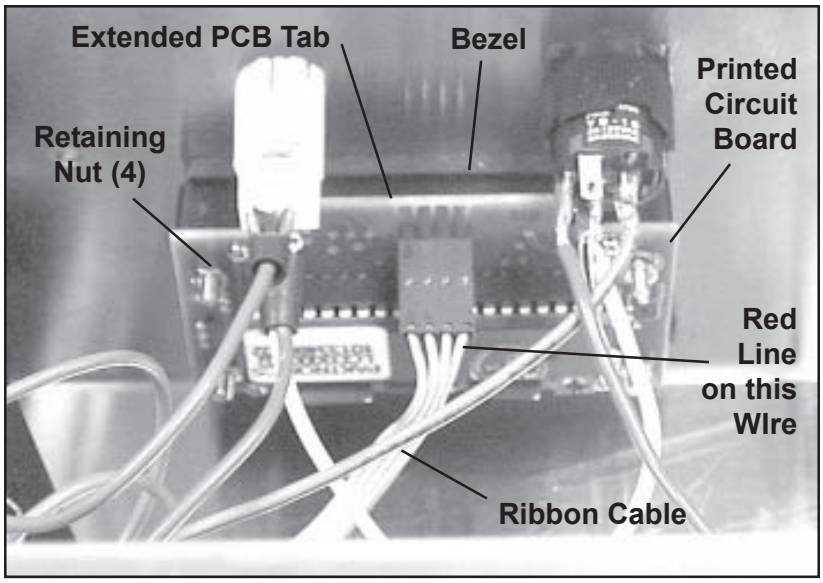

Figure 27. LCD Display

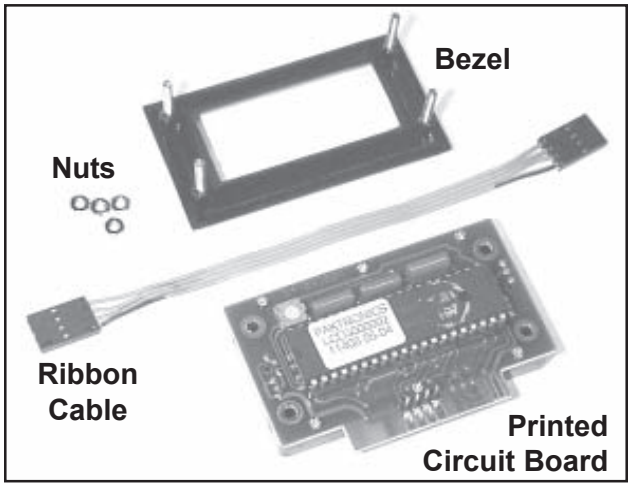

Figure 28. Digital Display Parts

Installation

1. Place the threaded studs on the new bezel into the four screw holes on the front of the housing.

2. Inside the housing, place the printed circuit board over the four studs on the bezel. The extended tab portion of the circuit board should point up. If you install it with the tab pointing down, the display will be upside-down!
   Note: Remember that the housing is inverted as you are working on it, so the tab will point down when the installation is complete (refer to Figure 27).

3. Secure the assembly together with the four nuts removed above (Figure 28). **Note:** Four spare nuts are provided with the new display. None of the other hardware items supplied in the bag assembly will be needed for this installation.

4. Replace the connector (four gray wires - ribbon cable) onto Terminal **P1**. **Note:** The wire with the red line should go toward the bottom, and toward the power cord end of the housing (Figure 27). **Note:** A new ribbon cable is supplied with the display. You can use the existing cable, or install the new one.

5. Place the temperature control assembly shaft through the front of the housing, with the assembly oriented as shown in Figure 23.

6. Secure the assembly in place by mounting the lock-washer and nut onto the shaft in front of the controller housing (Figure 22).

7. Install the temperature control knob. Refer to *Temperature Control Knob - Installation - Steps 1* through *3*, on *Page 32*.

8. Place the exposed trunk lines, wiring, and slit-sleeve tubing into the bottom of the heat controller housing, and turn the housing right-side-up.

9. Fasten the heat connector housing securely to the two top & side tee plates (Figure 17).

10. Plug in the electric power cord.

Trunk Line

P/N 754195

Overview

A trunk line connects the cage arrangement sensor and heating element wiring to the heat controller.

Tools & Supplies Required

- Phillips screwdriver
- Utility knife
- Wire crimping tool
- Electrical tape

CAUTION: **Before working on the electrical system, make sure that all heat controllers are Off and the electric power cord unplugged.**

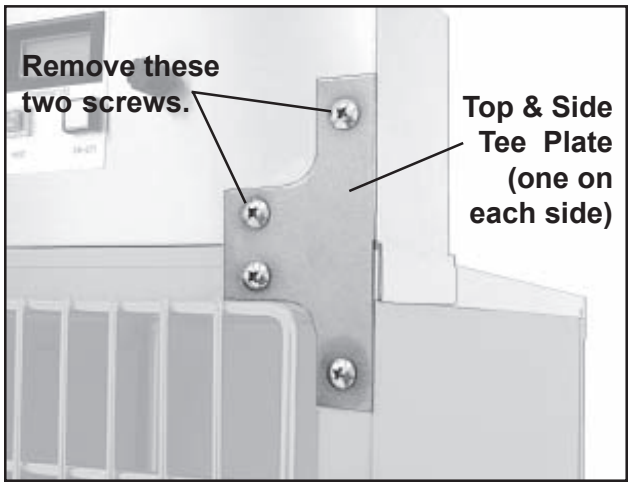

Figure 29. Top & Side Tee Plate

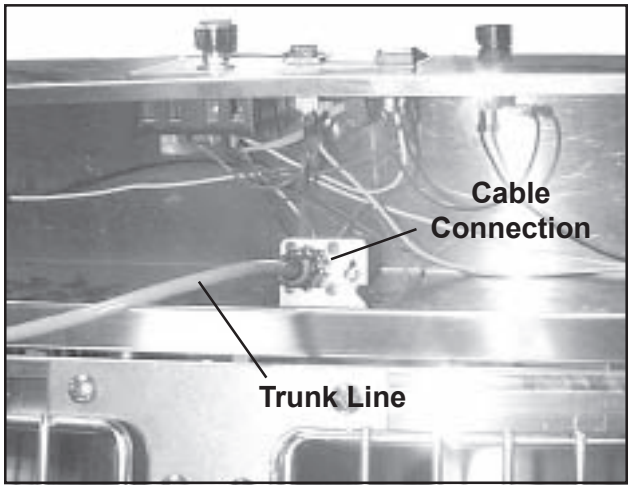

Figure 30. Interior View of Heat Controller Housing (tilted backward)

Removal

1. Turn all the heat controllers Off.

2. Unplug the heat controller housing electric power cord.

3. With a Phillips screwdriver, unscrew the top two screws on each side & tee plate (Figure 29) to release the heat controller housing.

4. Tilt the heat controller housing backwards so that the open underside faces front (Figure 30).

CAUTION: **To tighten or loosen the 4-pin connectors on the trunk lines, ALWAYS hold the small ring and turn the large ring (Figure 31). NEVER turn the small ring. Trying to turn the small ring can tear the pins out of the connector.**

Note: If you are replacing more than one trunk line, make sure they are numbered to facilitate the correct replacement. If they are not numbered, refer to *Cage & Heat Controller Numbering* on *Page 13* and label all the trunk lines.

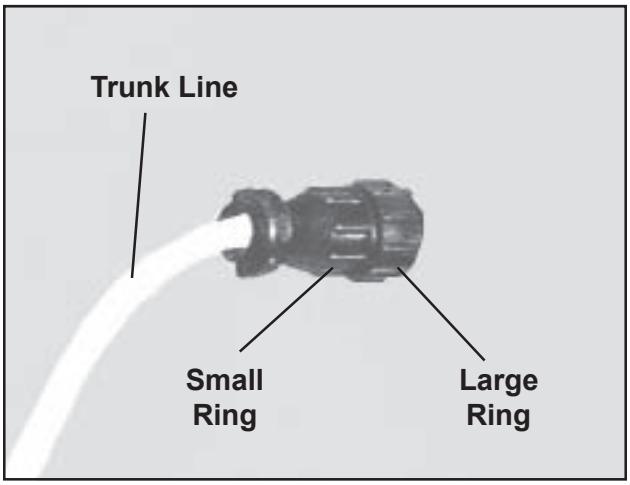

Figure 31. 4-Pin Connector

5. Unplug the trunk line you are replacing from the cable connection on the heat controller (Figure 30).

6. Remove all the electrical tape from the connection between the trunk line and the slit-sleeve tubing from the cage.

7. Cut off all five wires from the slit-sleeve tubing from the cage (Figure 10). Cut these wires as close to the butt splice connections as possible.

8. Discard the old trunk line.

Installation

1. Connect the four butt splice connectors on the new trunk line to the five wires from the cage. Refer to *Figure 10* on *Page 17*.

2. Making sure that the pins and holes line up correctly, plug the 4-pin plug into the cable connection on the heat controller and secure the connection by turning the large ring clockwise.

3. Plug in the electric power cord.

4. Test the controller to be sure it operates correctly. Refer to *Steps 17b through h* on *Page 18* for the test procedure.

5. Unplug the electric power cord.

6. Once the heat controller is operating properly, use electrical tape to completely tape up the completed wire connections.

7. Label the end of the trunk line with the cage/heat controller number.

8. When wiring is complete for all heat controllers, place all wiring and slit-sleeve tubing into the bottom of the heat controller housing, and turn the housing right-side-up.

9. Fasten the heat connector housing securely to the two top & side tee plates (Figure 17).

10. Plug in the electric power cord.

Comments:

Chapter 5 - Troubleshooting

General

The following procedures will help you fix most of the problems that you might encounter with your Heated Regal Cage or arrangement. For problems with the cage itself, refer to SSCI *Owner's Manual, Regal Stainless Steel Cages, 702715.* If necessary, please feel free to call SSCI Customer Service at (800) 323-7366. Our experienced technical support personnel will be glad to help you.

For more information on contacting SSCI, refer to *SSCI Contact Information* on *Page 10*.

Part numbers for available replacement parts are shown on *Page 25*. To order replacement parts, refer to *Parts Ordering Procedure* on *Page 26*.

Possible problems are listed below along with their page references:

Returning Cage Elements for Repairs

RMA Numbers

If elements of your cage arrangement should require return to SSCI for repairs, discuss the problem with one of our Customer Service Representatives. Obtain an RMA number (Return Merchandise Authorization) from them before shipping the item back. **Note:** SSCI will *not* accept merchandise returned without an RMA number.

Packing & Shipment

Package the item securely in a suitable container and staple or tape the cover securely in place. Ship documentation with the item including:

- Destination
- RMA Number
- Your name, company and address
- Your telephone number
- A description of the reason for returning the component

The On/Off button light does not come on.

Remedial Action

First: Make sure the electric power cord is plugged in.

Second: Try pressing the On/Off button several times to see if that brings the light on.

Third: Check the fuse - refer to *Page 22*, and replace the fuse if it is blown.

Fourth: Make sure that you have power to the outlet you are using. Try plugging another device into the outlet and see if the device works.

Fifth: Check the electric power cord for damage. If the cord is damaged, order a new cord, P/N 212691. To replace the electric power cord, refer to *Page 29*.

Sixth: The temperature control knob may be slipping on its shaft. Refer to *Temperature Control Knob* on *Page 32*. Follow the instructions to remove and reinstall the knob to make sure it is tight, and correctly positioned on the shaft.

Seventh: If the plug and cord both appear to be OK, the temperature control assembly in the temperature control assembly is probably defective. For a replacement temperature control assembly, order P/N 853844. To replace a temperature control assembly, refer to *Page 33*.

Eighth: If the temperature control assembly seems to be OK, the light assembly itself is probably defective. The light assembly is not a field-replaceable item. To return the heat controller housing for repair, refer to *Returning Cage Elements for Repairs* on *Page 47*.

The On/Off light is on, but there is no heat to the cage, heat cannot be adjusted, or heat is erratic.

Remedial Action

First: Is the light in the On/Off button on? If it is on, go to the Fifth procedure below. If the light is not on, try pressing the On/Off button several times to see if the light comes on. If the light does not come on, go to the Second procedure below.

Second: Make sure the electric power cord is plugged in.

Third: Check the fuse - refer to *Page 22*, and replace the fuse if it is blown.

Fourth: Make sure that you have power to the outlet you are using. Try plugging another device into the outlet and see if the device works.

Fifth: Check the position of the temperature control knob. If it is turned fully counterclockwise, the temperature controller is not calling for heat. Try rotating the knob fully clockwise and see if that causes the cage to heat up. Refer to *Temperature Control Knob* on *Page 21*.

Sixth: The temperature control knob may be slipping on its shaft. Refer to *Temperature Control Knob* on *Page 32*. Follow the instructions to remove and reinstall the knob to make sure it is tight, and correctly positioned on the shaft.

Seventh: Check the 4-pin connector on the trunk line and make sure the cable is properly connected. Refer to the *CAUTION* on *Page 18.* Rotate the large ring counterclockwise and remove the plug from the connector. Look at the pins inside the plug. If they are loose or bent, the plug has been improperly attached to the connector and has been damaged. If the plug is damaged, the trunk line must be replaced. For a replacement trunk line, order P/N 754195.

Comments:

Inside back cover.

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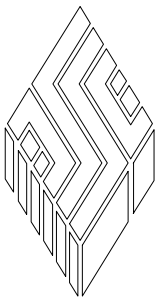
For more information on SSCI's fine line of products and accessories, talk to your SSCI sales representative.



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