

# **SERVICE MANUAL**

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## **SCA WOLFF SYSTEMS SUNTANNING EQUIPMENT WSS/24**

*Exclusive Distributor*



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## INTRODUCTION

This service manual is intended as a supplement to the operational and assembly instructions included with each Wolff System Sunbed. Before beginning any installation, please read sections I through III carefully along with the appropriate portion of section V for the specific equipment being installed.

Refer section III B to the installing electrician for the facility wiring required for your particular equipment and power availability. You will find helpful information on planning your installation in section III C.

Each bed is factory tested by our quality control technicians who affix their identifying label to each bed after their testing is complete. Each completed bed is then inspected by our Quality Control Inspectors who also affix their label to each bed. Only after this thorough inspecting and testing are the beds released for shipment.

Problems may eventually develop, even with the finest equipment, and we have included a comprehensive troubleshooting guide to aid in correcting any problems that may occur. Refer to section IV A for troubleshooting which the equipment owner may perform, and refer to section IV B for troubleshooting which must only be performed by qualified Service Personnel.

The information included in this service manual should simplify installation and operation of your Wolff System Suntanning equipment. It should also provide you with clear, concise instruction for maintenance, repair and parts ordering. Please keep this manual in a convenient location for your reference.

## POWER CONSUMPTION

WSS 20 units - 2500 watts

WSS/24 units - 3130 watts

PROFI 431 Units - 3100 watts

## C. TANNING ROOM ENVIRONMENTAL REQUIREMENTS AND RECOMMENDED SPACE.

### 1. Heating, Ventilating and Air Conditioning (HVAC) Requirements

Flourescent lamp sunbeds produce heat in proportion to the number of lamps in the units. Cooling fans are fitted in the unit to move this heat from the heat producing components within the bed and reject it into the room. The fans do not cool the air and are not a substitute for the proper air conditioning of the room itself.

The 20 lamp units produce approximately 85000 BTU per hour

The 24 lamp units produce approximately 10,000 BTU per hour

Recommended four to six air changes per hour within the sunroom itself to maintain an ambient temperature of 72-76 degrees.

### 2. Room Design

A rectangular room of 6 by 8 feet is the minimum size room that we recommend with the bed positioned parallel to the eight foot wall. The power is supplied at approximately the center of the unit lengthwise. We also suggest that an additional 120 volt AC single phase outlet be provided within the room for accessories.

B. POWER REQUIREMENTS FOR WOLFF SYSTEM PRODUCTS

1. WSS/ 20 and WSS/ 24 Sunbeds

Each sunbed is internally wired to accept one line and one neutral and one ground. The neutral is required since 240 VAC supply is supplied between the sunbed and the sunceiling, resulting in 120VAC to the internal components of the units.

WSS/20 and WSS/24 MODELS

SERVICE ENTRANCE POWER	POWER REQ'D AT EACH BED	PROTECTION FOR BRANCH CIRCUIT	TYPE OF WIRES FROM SERVICE ENTRANCE TO SUNBED	WIRE SIZE AND PHASE USED
120/240 VAC 60 Hz Single Phase	235-245 VAC	20 AMP	HOT (BLK OR RED) NEUTRAL (WHITE) GROUND (GREEN)	NO. 12 AWG (Single Phase)
* 120 VAC 60 Hz Single Phase	115-125 VAC 60 Hz	30 AMP	HOT (BLACK) NEUTRAL (WHITE) GROUND (GREEN)	NO. 10 AWG (Single phase)
208Y/120 VAC 60 Hz Three Phase	203-213 VAC 60 Hz Two Phase	20 AMP	HOT (BLK OR RED) NEUTRAL (WHITE) GROUND (GREEN)	NO. 12 AWG (Two phases used)

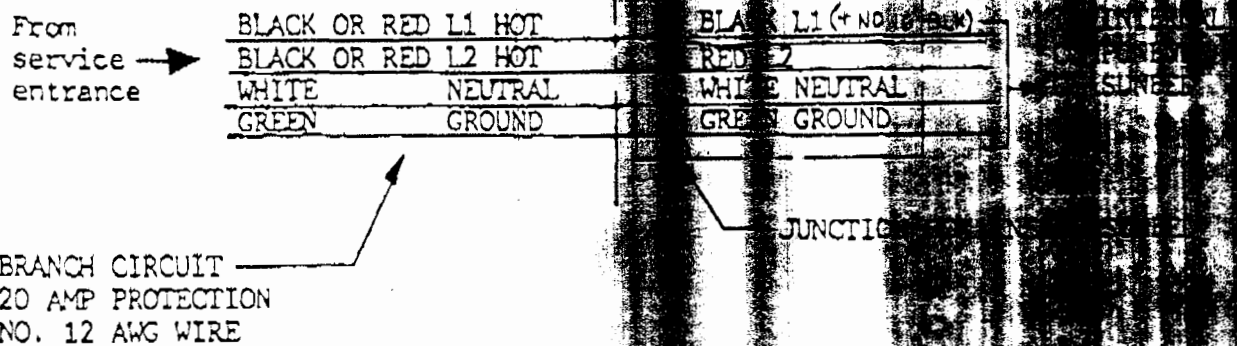
Please note: WSS/20 and WSS/24 Sunbeds are to be hard wired from the wall to the bed, in conduit. No Power cords or plugs are supplied with the units. Ceiling units are powered from the bed unit.

\* CAUTION: The relay in the sunbed unit is rated for either 25 amp or 30 amp. If the bed is being connected to 120 VAC, the relay in the bed must be rated at 30 amp minimum. Replace any 25 amp relay with a 30 amp relay when connecting to 120 VAC.

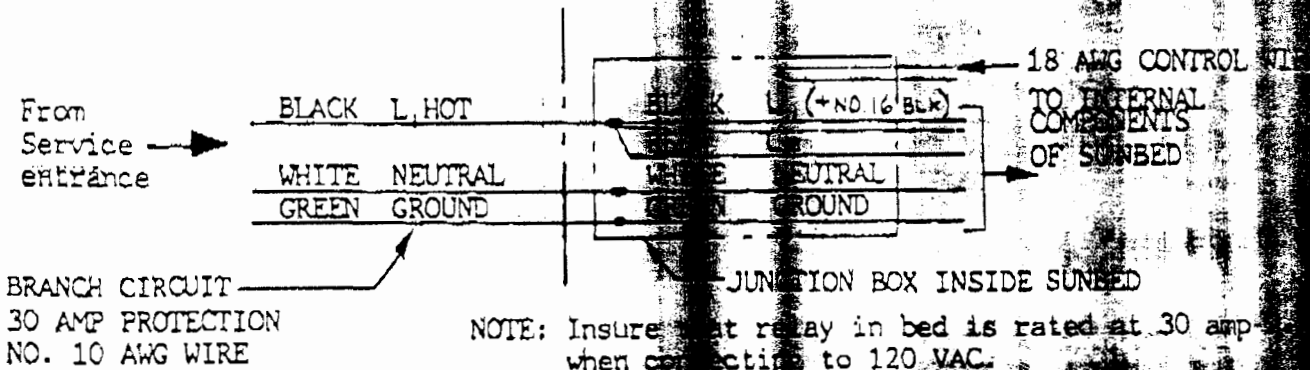
CONNECTING DIAGRAMS FOR POWER INTO SUNBEDS

WSS/20 and WSS/24 MODELS

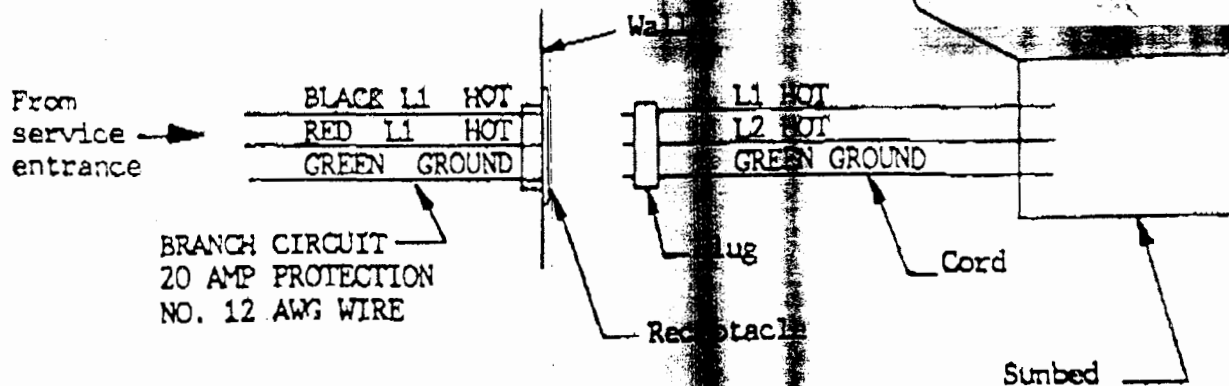
240 VAC 60 Hz single phase or 208Y 60 Hz two phase - 20 AMP circuit required



120 VAC 60 Hz Single phase 30 AMP circuit required

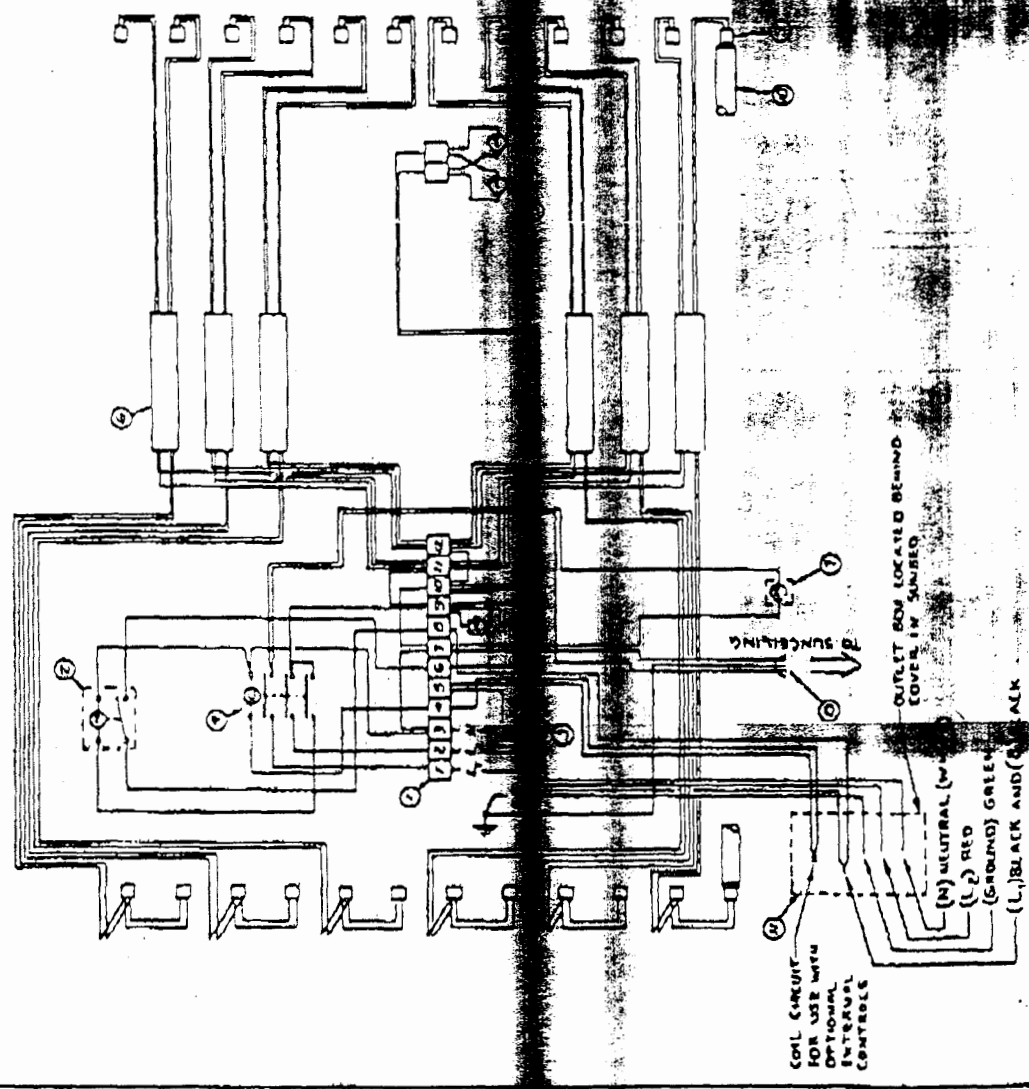


PROFI 431 220 VAC 60 Hz Single Phase 20 AMP Circuit Required



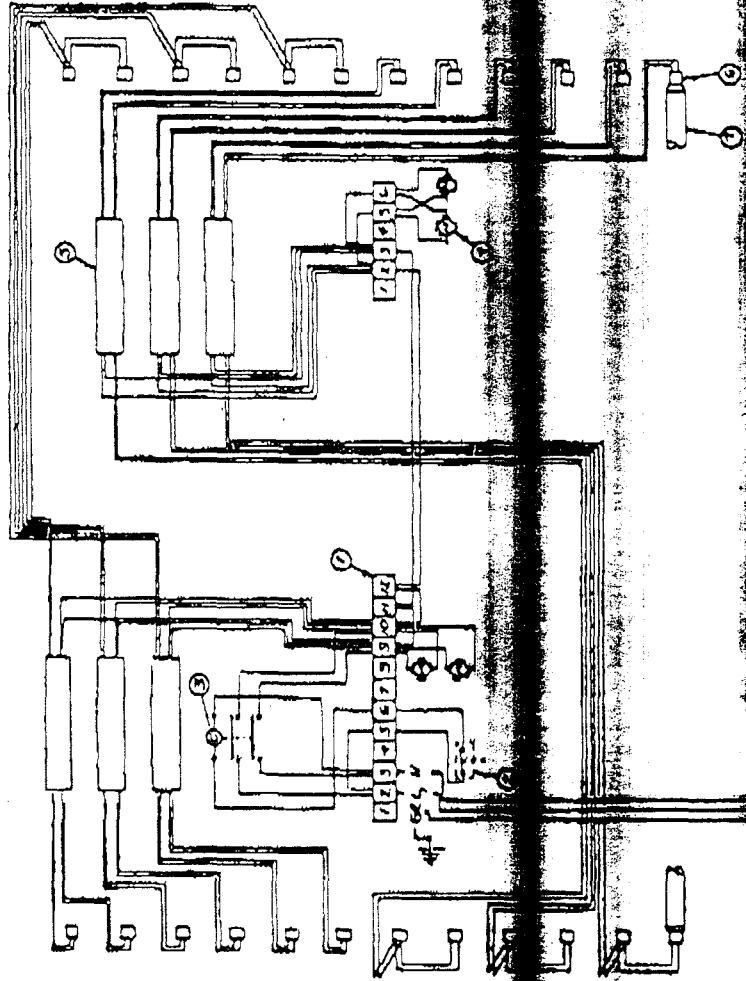
All wiring subject to revision by manufacturer. Please verify that the wiring of your unit conforms to the above, before installation begins. If you have any questions please call our Service office.

ITEM	QTY	DESCRIPTION
1	2	BARBER STRIP
2	1	CLOCK TIMER
3	1	ACRYLIC INTERLOCK
4	1	RELAY
5	4	FAN
6	12	BALLAST
7	1	MODERMETER
8	1	SOCKET
9	24	LAMPHOLDER
10	12	LAMP
11	1	OUTLET BOX



3. Wiring Diagram for the WSS/24

ITEM	QTY	DESCRIPTION
1	2	PHONE DISC
2	1	ACCESS SWITCH
3	1	RELAY
4	4	COIL
5	12	BALLAST
6	24	LAMPHOLDER
7	12	CRIB
8		
9		
10		





## D. PREVENTATIVE MAINTENANCE

Following the preventative maintenance guidelines listed below will provide many positive benefits to the Wolff System. Properly maintained Components will experience a longer life and customers will enjoy comfort while tanning.

### ACRYLICS

Wolff System Tanning units are supplied with a scientific grade acrylic acrylic plate. With proper care, this acrylic will provide many years of satisfactory use. Failure to maintain these plates by cleaning will cause considerable loss of irradiation. When cleaning with acrylic use only Wolff System Hygenic Cleaner. This cleaner is specially formulated containing NO chemicals harmful to either the acrylic surfaces or your skin. Please use the following schedule for acrylic maintenance.

SUNBED PLATE	OUTSIDE SURFACE	AFTER EVERY USE
SUNBED PLATE	INSIDE SURFACE	MONTHLY
SUN CEILING PLATE	OUTSIDE SURFACE	AFTER EVERY USE
SUN CEILING PLATE	INSIDE SURFACE	MONTHLY

### LAMPS AND REFLECTORS

With the acrylics off, inspect the lamps and reflectors and clean any visible dust, dirt, etc. from the unit. Again, keeping surfaces clean and shiny enhances the tanning potential.

**LAMPS** - Remove and wipe with a soft damp cloth and dry with a soft clean cloth.

**REFLECTORS** - First dust off, then wipe reflectors carefully with a soft, dry clean cloth.

### EXTERNAL VENTS AND ROTARY FANS

It is vital to keep these dust free. Fans and Vents clogged with dust will cause over-heating, discomfort for your client, and eventual component failure.

IV GENERAL TROUBLESHOOTING GUIDE

The following troubleshooting information is divided into two sections. Section A contains those items which the owner can check without the aid of a Qualified Service person. Section B contains those items which must be performed by Qualified Service Personnel.

A. General Troubleshooting Which May Be Performed By Owner:

Note: When replacing lamps, use only original Sunbrella™ "S" Lamps.

PROBLEM	CAUSE	REMEDY
Sunbed and Sunceiling do not operate	No power to bed	Check circuit breaker serving bed.
	Hand Timer Not Turned On	Rotate timer clockwise & turn on energy to the circuit.
	External Timing Device Not Activated (If Applicable)	Activate external timing device in conjunction with hand timer.
	Acrylic not seated properly on sunbed causing acrylic switch to open	Seat acrylic firmly in recess in sunbed and secure with retaining strips.
Sunceiling does not operate	Acrylic not seated properly on sunceiling causing acrylic switch to open	Seat acrylic firmly in recess in ceiling and secure with retaining screws.
	Cord from sunceiling not connected to sunbed	connect cord to sunbed
Lamp won't light or flickers	Lamp not seated properly in socket	Remove lamp, inspect contacts on lamp, and reinstall lamp securely into sockets
	Faulty lamp	Replace lamp

PROBLEM	CAUSE	REMEDY
System squeaks when lowering or raising unceiling	Bolts holding ends of pistons secured too tightly	Loosen bolts slightly. Movement of pistons should be free.
	Mounting ends of pistons not properly greased	Wipe off old grease and apply new grease to porting surfaces of every piston. Refer to paragraph 6 of WSS/24 assembly instructions.
	Pistons installed upside down, (rod end up)	Move pistons to correct position. See paragraph 6 of WSS/24 assembly instructions.
	Phenolic Brakes not set properly.	Set Phenolic brakes in centering hold position without excessive pressure. Required to lower or raise ceiling. See figure No. 4 on WSS/24 assembly and setup instructions. Refer to paragraph 6 on WSS/24 assembly instructions.
	Faulty Pistons	Replace faulty pistons.
Ceiling does not hold its position when set	Phenolic brakes not set properly	Set phenolic brakes in centering hold position without excessive pressure. Required to lower or raise ceiling. Turn nuts securing four phenolic stops are tight. See figure No. 4 on WSS/20 assembly and setup instructions or figure No. 4 on WSS/24 assembly and setup instructions.
	Faulty Pistons	Replace faulty pistons.
Sunbed and Sunceiling running hot	Tanning room too small or not properly ventilated	Provide sufficient space and ventilation for system. See paragraph "C" under section III General Equipment Instructions.
	Fans dirty	Clean screens and fans and insure that the screen area is not blocked.

PROBLEM	CAUSE	REMEDY
Sunbed and Suncelling running hot	Rubber spacers under acrylic not positioned properly (Profi only)	Adjust rubber spacers so they seat the acrylic.
Bed is not tanning	Acrylic is dirty	Clean both sides with Soft Act
	Lamps are nearing the end of their effective life	Replace lamps
	Lamps and Reflectors are dirty	Remove lamps and clean both and with soft, dry

### 3. General troubleshooting which may only be performed by Qualified Service Personnel

Refer all servicing in the following section to Qualified Service Personnel. This section is intended to aid service personnel in isolating and removing any problems which may develop and is not intended for use by the owner performing "self-service".

Refer to the assembly and setup instructions included with each bed for the correct sequence of disassembling the sunbed or setting it up again after servicing. Disconnect all power to the bed before disassembling.

Use only original SCA Wolff System parts when replacing components. Refer to the service section of this manual for ordering information and, if under warranty, for obtaining a Service Authorization Number.

**DISCONNECT ALL POWER BEFORE SERVICING UNIT.**

PROBLEM	CAUSE	REMEDY
Sunbed and Sunceiling do not operate	Incorrect hookup of incoming power to sunbed	Check power appropriate wiring and correct
	Faulty hand timer or external timing device	Replace faulty
	Loose wiring connections	Check wiring appropriate tighten connections
	Faulty Contactor in bed	Replace contactor
Sunceiling does not operate	Power cord between bed and ceiling not wired correctly	Check cord wiring appropriate correct as required
	Loose wiring connections	Check wiring appropriate tighten connections
	Faulty Contactor in ceiling	Replace contactor
Lamp won't light or Flickers	Poor Connections at lamp sockets.	Tighten sockets and connections. Check for loose wires.
	Faulty Socket	Replace Socket
	Faulty starter or capacitor (Profi model 431 only)	Replace starter or capacitor
Two or more lamps won't light or do not light properly (after checking section above)	Incorrect hookup of power from sunbed to sunceiling	Check power hookup against appropriate wiring diagram and correct
	Incoming power to sunbed too high or too low	Monitor incoming voltage and correct if required with transformer.
	Wiring connections loosened during shipment	Check wiring circuit against appropriate wiring diagram and tighten connections as required.

PROBLEM	CAUSE	REMEDY
Two or more lamps won't light or do not light properly (after checking section above)	Faulty Ballast	Replace faulty ballast
	Faulty Contactor	Replace faulty contactor
Sunceiling won't raise or lower (Profi Model 431 Only)	Loose wiring connections	Check wiring circuit and re-plate wiring or connections as needed
	Faulty Lift Motor	Replace faulty lift motor
Sunbed/Sunceiling running hot	Incorrect incoming voltage	Monitor incoming voltage and correct if required with transformer
	Loose wiring connections to fans	Check wiring to fans and re-plate connections if needed
	Faulty fans	Replace faulty fans
	Fans blowing air in wrong direction	Check that fans are running in correct direction (fan should blow out)
Bed is not tanning	Incorrect incoming voltage	Monitor incoming voltage and correct if required with transformer (see section III)

## V. SPECIFIC EQUIPMENT INFORMATION

Please refer to the following specific section for the particular equipment which you are installing or servicing. This information should be used in conjunction with the information provided with the equipment which you are installing or servicing.

- A. Sunbed Model WSS/20
- B. Sunbed Model WSS/24
- C. Sunbed, Profi model 431

Sunbed Model WSS/24

## 1. Description and Specifications

The Wolff System WSS/24 features 24 Bellarium "S" Super lamps and a reflection system for fast even tanning. Coupled with acrylic sunbed and eight ventilation fans assure customer comfort even during extended periods of continued use.

Specifications for the WSS/24 are as follows:

Dimensions: 81" x 43" de x 52" High ( Fully assembled)

Weight: 375 lbs.

Power requirements: Refer to section III B of this manual

Power Consumption: 3130 Watts

Number of Lamps: 24

Type of Lamp: Wolff System Bellarium "S" Super lamp

Number of Fans: Eight

Hand Timer: 0-30 min.

## 2. Assembly and Set-Up

Refer to the operating instructions manual included with each unit for a complete list of parts required for assembly and set-up.

STEP 1. See attached



WSS/24 ASSEMBLY INSTRUCTIONS

- STEP 1. Secure crossbar sleeve (item 17) to left stand upright (item 2) using two bolts (item 9), two lockwashers (item 14) and two capnuts (item 6). Tighten capnuts to secure assembly as shown in figure 1.
- STEP 2. Install internally threaded end of Pivot shaft (item 1) into the fourth hole down from the top of the stand upright (lower hole with guideholes) and secure with bolt (item 1) and lockwasher (item 3) as shown in figure 2. Install phenolic block seat (item 16) onto pivot shaft and rotate until pins on phenolic block seat into guide holes in stand upright.
- STEP 3. Install pivot shaft and phenolic block onto right stand upright as described in step 2 above. **DO NOT** install right stand upright onto end of crossbar sleeve at this time.

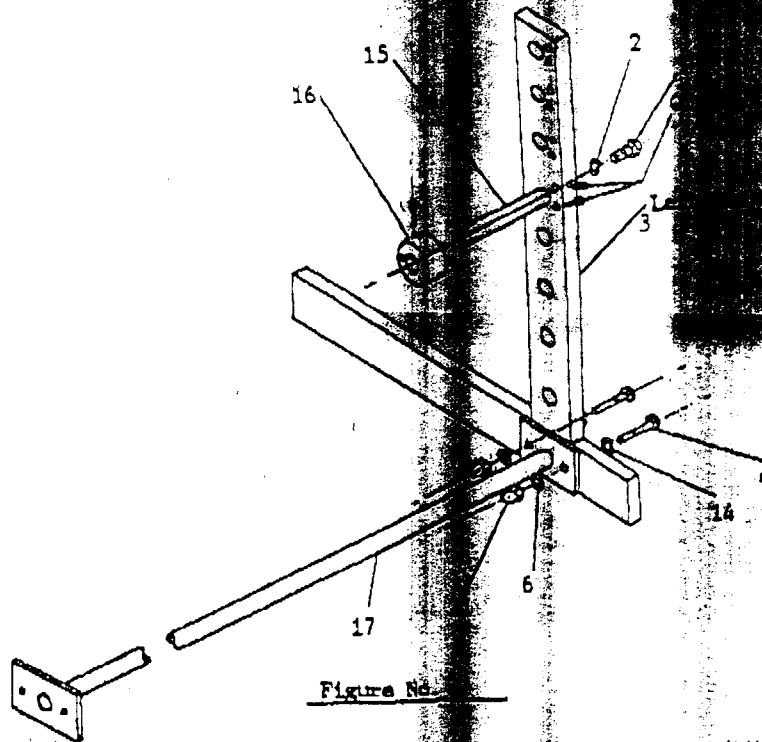
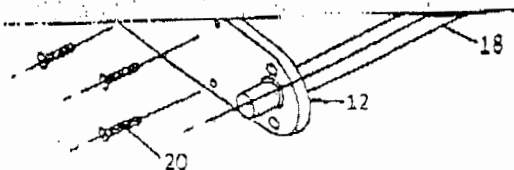
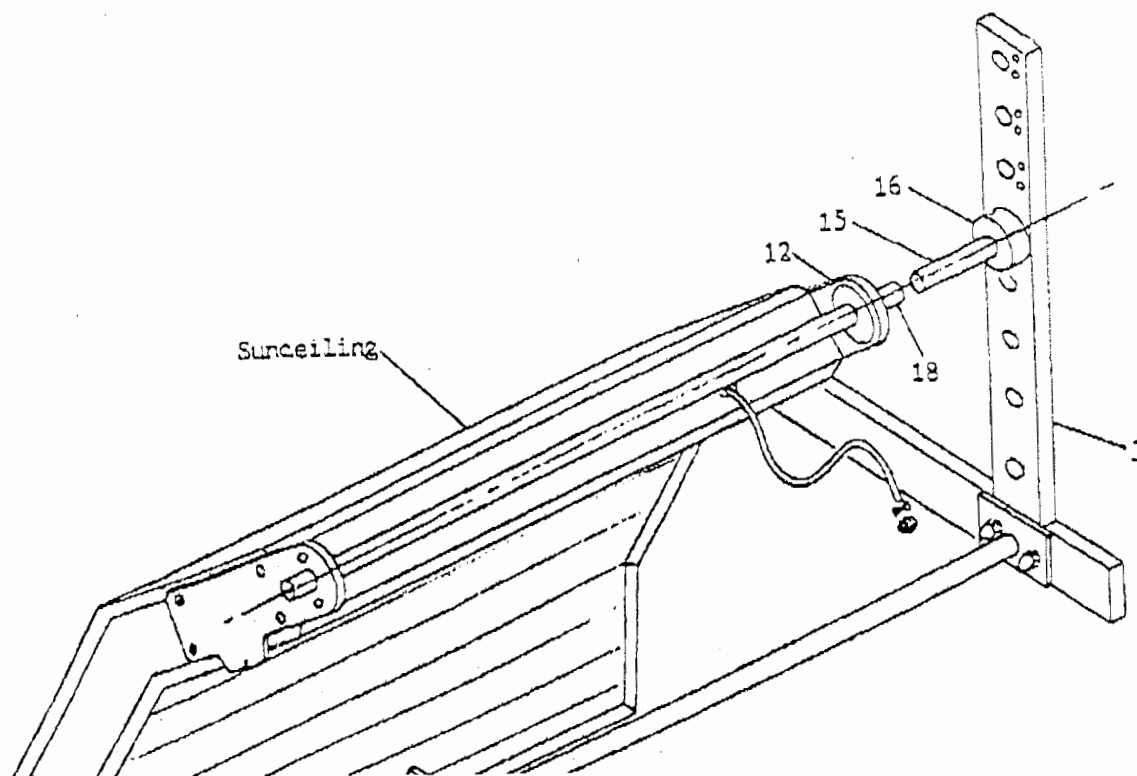


Figure No. \_\_\_\_\_



Figurs No. 2

- STEP 4. Place sunceiling on floor with lamp side up as shown in figure 2 above.
- STEP 5. Position left sunceiling mounting bracket (item 12) onto left rear corner of sunceiling as shown in figure 2 above and secure to sunceiling with four flathead screws ( item 20).
- STEP 6. Fit one end of the linking tube crossbar sleeve (item 18) into the mounting bracket installed onto the sunceiling in step 5 above. Secure with the two hexscrews (item 19), two washers (item 24), and two capnuts (item 22).
- STEP 7. Position right sunceiling mounting bracket (item 12) onto the right rear corner of the sunceiling and onto the end of the linking tube crossbar sleeve (item 18). Secure with fasteners as described in steps 5 and 6 above.
- STEP 8. Turn sunceiling assembly over so lamps face down and position assembly next to left stand upright assembly. See figure 3.
- STEP 9. Raise rear of sunceiling assembly and slide assembly onto end of Pivot shaft (item 15) which protrudes out of stand (item 3). Guide protruding end of linking tube crossbar sleeve (item 18) into phenolic block (item 16) until face of sunceiling mounting bracket (item 12) is against phenolic block.



STEP 12. Connect gas piston ends to brackets on sunceiling as shown in figure 6 below using bolts (item 9), flat washers (item 6), spacers (item 11), and nuts (item 13). Apply any standard grade wheel bearing grease to end of bolt body as shown before installing bolt. Tighten bolt until spacer (item 11) just turns freely and lock with nut. (make sure piston rod points down as shown).

STEP 13. Install bearing bolts (item 4) into the lowermost hole of each stand upright (item 3) and secure with Hex bolts (item 1), and lockwashers (item 2) as shown in figure 7 below.

STEP 14. Apply grease to shoulder of bearing bolts as shown in figure No. 7. Raise the sunceiling until rod ends of gas piston cylinders (item 8) slide over the shoulders of the bearing bolts. Secure with washers (item 10) and locknuts (item 7). Tighten locknuts snugly and then back off 1/2 turn to allow piston to rotate.

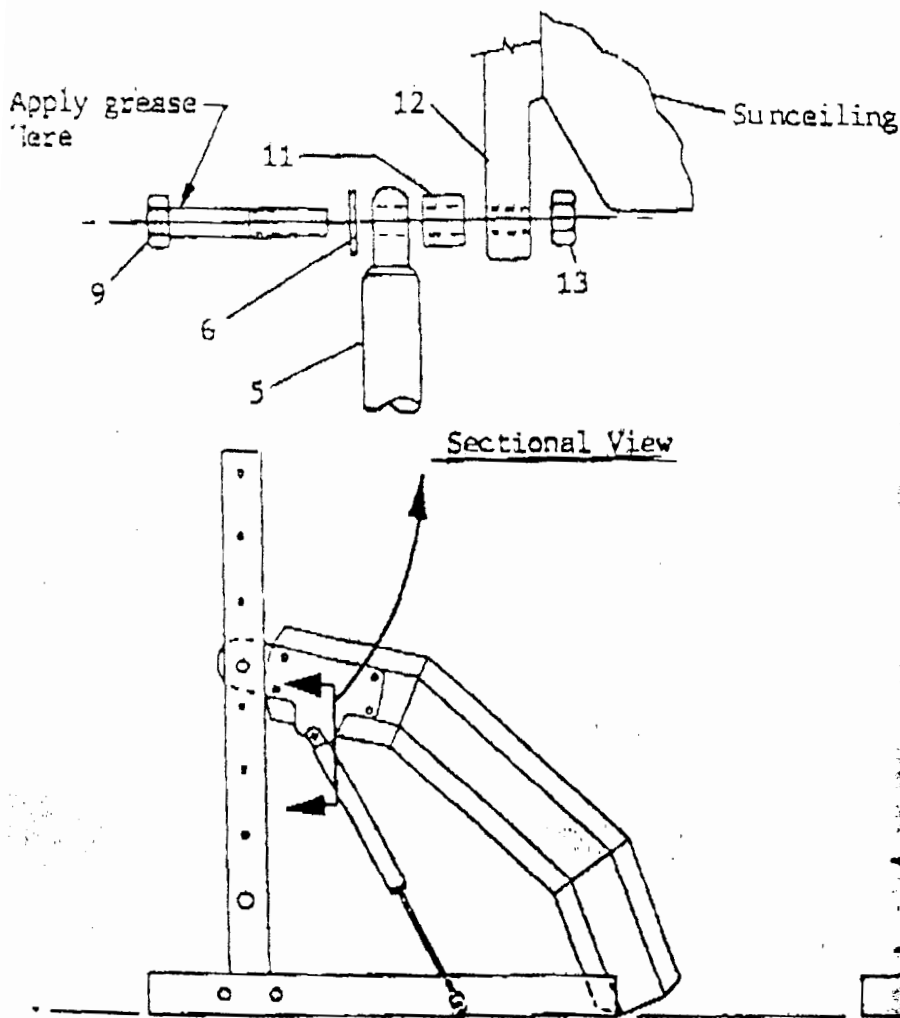


Figure No. 5

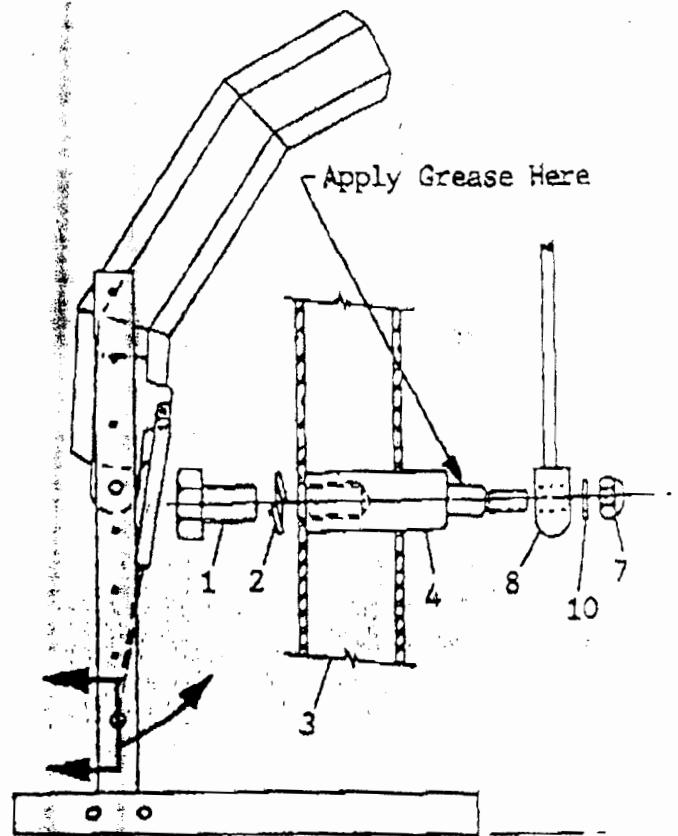


Figure No. 6

STEP 15. Adjust the holding pressure of the phenolic blocks until the sunceiling will hold in any position it is placed in without drifting upward or downward. Do not overtighten, otherwise the sunceiling will become difficult to raise or lower. See figure 7 below.

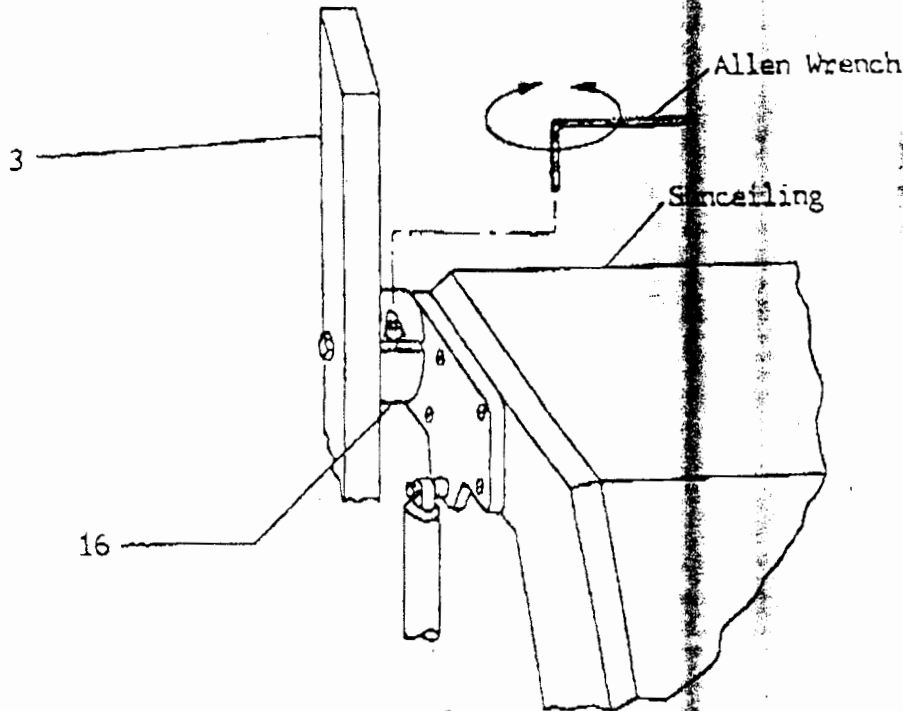


Figure No. 7

STEP 16. Assemble the sunbed legs to the crosspieces with screws and nuts provided. See figure 8 below.

STEP 17. Turn the sunbed upside down and install the leg assemblies onto the notches along the side of the sunbed. Secure with screws provided. Turn assembly back to its upright position as shown in figure 8 below. Some beds may be equipped with an alternate leg style at the manufacturer's option, as shown below.

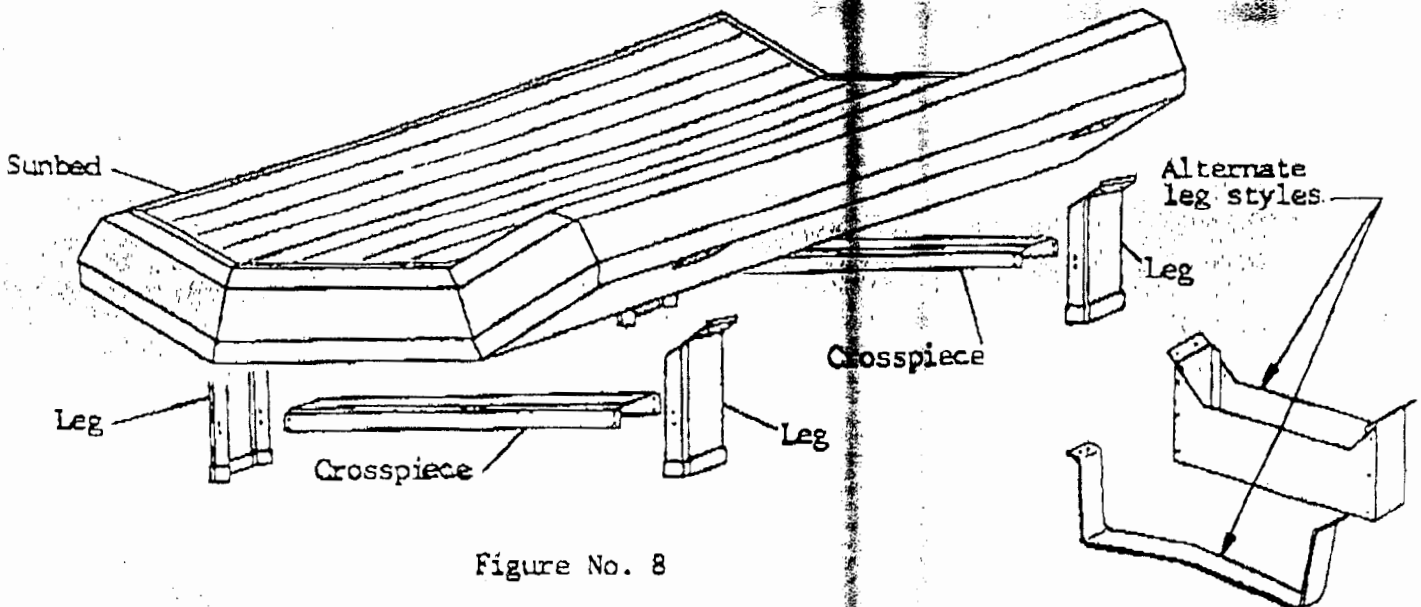


Figure No. 8

STEP 18. Position the sunbed assembly beneath the sun ceiling as shown in Figure 9 below. Connect the power cord from the sun ceiling to the receptacle at the rear of the sunbed.

Refer to section III B of this manual for correct electrical hook-up to the sunbed. Refer to the operating instructions manual for start-up and usage.

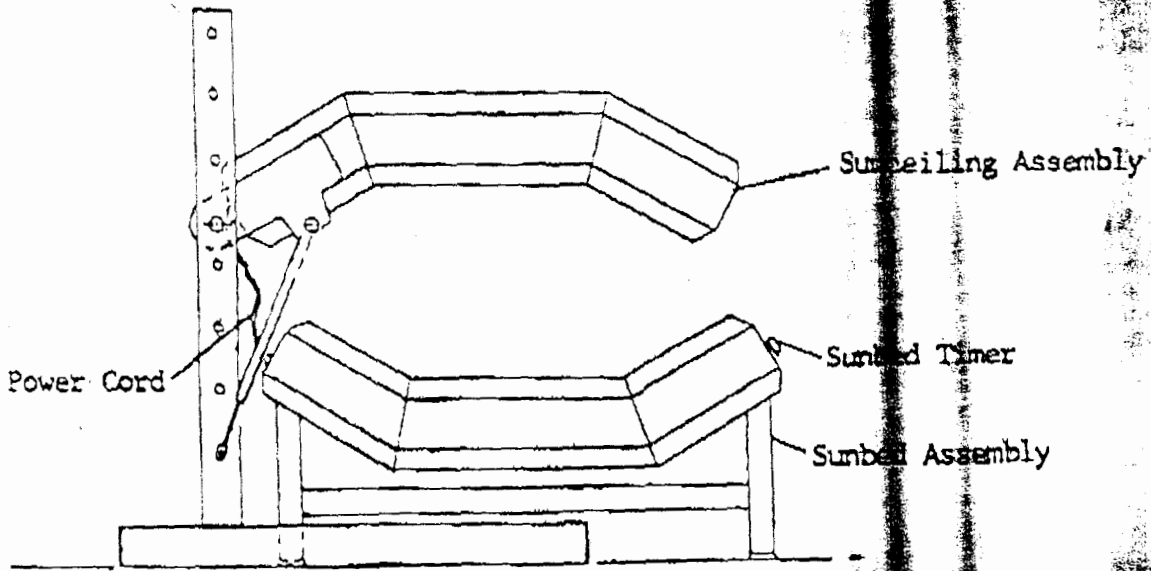


Figure NO. 9

4. WSS/24 REPLACEMENT PARTS LIST

The following is an abbreviated list of parts which we find are  
 If you find that the part you need is not included on this list  
 SCA Service Department for additional information.

PRODUCT CODE	DESCRIPTION	PRICE
010-03	ACRYLIC WSS/24 (sunbed)	5.35
010-04	ACRYLIC WSS/24 (Sunceiling)	5.35
-----	G.E. BALLAST	5.00
070-00-110	HAND TIMER 110V, 30 min	2.65
075-04L	HARDWARE KIT WSS/24 Large	13.60
075-04S	HARDWARE KIT WSS/24 Small	10.00
080-03-A	HEAD CUSHION WSS/24 Black	26.45
080-03-B	HEAD CUSHION WSS/24 Brown	26.45
095-00	LAMP-BELLARIUM "S" SUPERLAME	17.50
110-00M	LAMP SOCKET RDC (MALE)	3.80
110-00F	LAMP SOCKET RDC (FEMALE)	3.80
130-04	PHENOLIC BLOCK KIT WSS/24	6.50
135-04	PISTON WSS/24 630N	23.30
160-00	ROTARY FAN 110 VAC	34.35
-----	ACRYLIC SWITCH	8.75

R533 42 120 308/630N

\* All prices subject to change without notice. Prices listed are effective  
 as of April 5, 1985