



sportSchwank

HIGH EFFICIENCY INFRARED HEATER

INSTALLATION / OWNER'S MANUAL

INSTALLER: LEAVE THESE INSTRUCTIONS WITH THE CONSUMER

CONSUMER: RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE



DANGER

If you smell gas:

- 1. Shut off gas to the appliance.**
- 2. Extinguish any open flame**
- 3. If odor continues, keep away from the appliance and immediately call your gas supplier or fire department.**



WARNING:

Do not store or use gasoline or other flammable vapours and liquids in the vicinity of this or any other gas fired appliance.

An LP-cylinder not connected for use shall not be stored in the vicinity of this or any other appliance.



WARNING: For Outdoor Use Only

Keep this manual in a secure place .
Record for future reference:

Model #: _____

Serial #: _____
(information located on heater rating label)





WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death.

Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

FIELD CONVERTIBILITY:

“The conversion shall be carried out in accordance with the requirements of the authorities having jurisdiction and in accordance with the requirements of the B149.1 (latest edition) installation code” in Canada, and ANSI Z223.1 (latest edition) in the U.S.A.

NOTICE:

The manufacturer reserves the right to make changes to equipment and specifications without obligation or notification.

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sportSchwank

SERIES

HIGH EFFICIENCY INFRARED HEATER FOR OUTDOOR SPACES

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**WARNING**

Installation and repair should be done by a qualified service person. The heater should be inspected before use and at least annually by a qualified service person.



More frequent cleaning may be required as necessary. It is imperative that control compartment, burners and circulating air passageways of the heater be kept clean.

The heater must be installed and the gas supply connected and tested in accordance with all local codes or, in the absence of local codes, with the *National Fuel Gas Code ANSI Z223.1/ NFPA 54* in the USA, or in Canada the *Natural Gas and Propane Installation Code, CSA B149.1*, or the *Propane Storage and Handling Code, B149.2*.



Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

**WARNING**

- Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition.
- Young children should be carefully supervised when they are in the area of the heater.
- Clothing or other flammable materials should not be hung from the heater, or placed on or near the heater.
- Any guard or other protective device removed for servicing the heater must be replaced prior to operating the heater.

**WARNING**

Maintain adequate clearance around air openings into the combustion chamber and clearances from combustible material. Provide for accessibility and for combustion and ventilation air supply to the heater.

**WARNING**

The heater, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the *National Electrical Code, ANSI/NFPA 70* in the USA, or the *Canadian Electrical Code, CSA C22.1*.

**WARNING****Clearance from combustibles**

Location of flammable or explosive objects, liquids or vapors close to the heater may cause fire or explosion and result in property damage, injury or death. Do not use, store or locate flammable or explosive objects, liquids or vapors in proximity of the heater.



The structure, materials, or items in proximity to, or stored under the heater will be subjected to radiant heat and could be seriously damaged. The clearances to combustible material represent the minimum distances that must be maintained between the outer heater surface and a nearby surface so that a surface temperature of 90F°(50C°) above ambient is not exceeded.

It is the installer's responsibility to ensure that building materials with a low heat tolerance which may degrade at lower temperatures are protected to prevent degradation.

It is beyond the scope of these instructions to consider all conditions that may be encountered. Consult local authorities such as the Fire Marshall, insurance carrier, or safety authorities if you are uncertain as to the safety or applicability of the proposed installation.

Refer to Figure 1 and Table 1 for the certified clearances to combustibles that apply to the appropriate model input/size.

1. GENERAL

These instructions are for the sportSchwank Series heater, a gas fired combined intensity infrared heater suitable for outdoor installation. This appliance shall be used only in a well-ventilated space and shall not be used in a building, garage or any other enclosed area.

This appliance may be installed with shelter no more inclusive than:

- (a) With walls on all sides, but with no overhead cover
- (b) Within a partial enclosure which includes an overhead cover and no more than two side walls. These side walls may be parallel, as in a breezeway, or at right angle to each other.
- (c) Within a partial enclosure which includes an overhead cover and three side walls, as long as 30 percent or more of the horizontal periphery of the enclosure is permanently open.

Installation must conform to all local codes or, in the absence of local codes to:

- **U.S.A.:** *National Fuel Gas code ANSI Z223.1 / NFPA 54*, and the *National Electrical Code ANSI/NFPA No 70* (latest editions)
- **Canada:** The *Natural Gas and Propane Installation Code CSA B149.1* and the *Canadian Electrical Code CSA C22.1* (latest editions).
- Periodic changes to standards and requirements, may make revision to equipment and installation procedures necessary. In case of discrepancy, the latest installation manual will take priority.

This heater is designed and certified for use outdoors in accordance with Standards ANSI Z83.26-2007 / CSA 2.37-2007.

Schwank Group warrants that the heater will operate as designed in wind conditions up to 10 MPH. Note this unit is not designed to operate in adverse weather conditions including higher wind speeds exceeding the certification requirement of 10 MPH.

2. INSTALLATION REQUIREMENTS

2.1 MOUNTING CLEARANCES

sportSchwank Series heaters must be mounted with minimum clearances as shown in Section 8.4. The heater should also be located with respect to building construction and equipment so as to provide sufficient clearance and accessibility for servicing and cleaning of burners and ignition control. Minimum mounting height is to be no less than 96". Do not store or place anything directly underneath heater.



2.2 HEATER MOUNTING

The sportSchwank Series heater is approved for both horizontal and angle mounting.

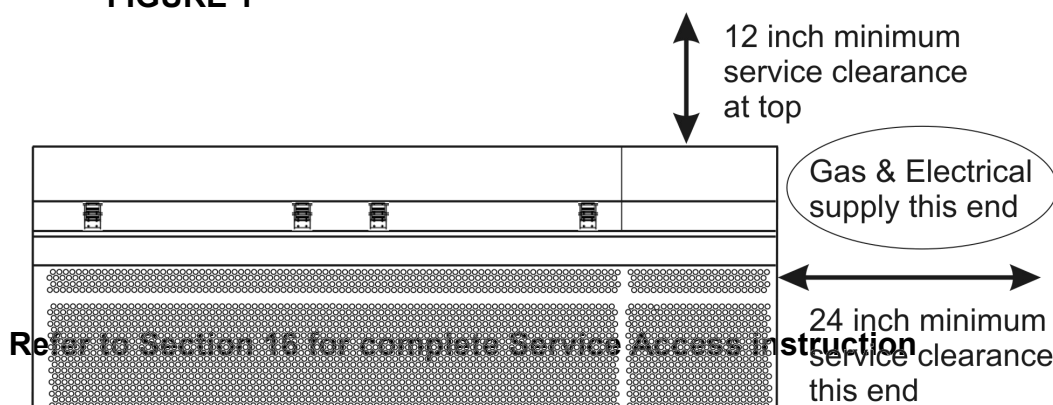
When angle mounting, the short axis may be rotated to a maximum of 30°. Refer to FIGURE 3. Improper angle mounting can result in damage to the heater and unsafe or uncertain operation, and will void warranty.

IMPORTANT: For either horizontal or angle mounting, the long axis of the heater must be level. Use only non-combustible mounting hardware. FIGURE 2 on Page 5 illustrates typical suspension hardware that may be used.

Maintain adequate clearance around air openings into the combustion chamber, clearances from combustible material, provision for accessibility, and for combustion and ventilating air supply.

2.3 SERVICE ACCESS CLEARANCE

FIGURE 1



2.3 GAS SUPPLY LINE INSTALLATION

- All piping must be installed according to local codes or, in the absence of local codes, with the *National Fuel Gas Code ANSI Z223.1/ NFPA 54* in the USA, or in Canada the *Natural Gas and Propane Installation Code, CSA B149.1*, or the *Propane Storage and Handling Code, B149.2*.
- A drip-pocket at the inlet connection must be provided.
- Piping joint compounds must be resistant to the action of liquefied petroleum gases.
- Ensure gas pipe is sized to meet the capacity requirements of all heaters in the system, and the supply pressure requirements outlined in Section 2.5 below.
- **DO NOT INSTALL ANY GAS PIPING IN HEAT ZONES**

2.4 PRESSURE AND GAS LEAK TESTING

Test the gas supply piping system for leaks:

- Test piping joints for leaks with a soap and water solution
- Test piping system for leaks using gas meter / pressure gage test.

CAUTION:

- **DO NOT USE AN OPEN FLAME TO TEST FOR GAS LEAKS**
 - The appliance and its individual shutoff valve must be disconnected from



the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig [3.5 kPa] .

- *The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig [3.5 KpA].*

2.5 GAS PRESSURE REQUIREMENTS

The sportSchwank Series heater is to utilize natural gas only.

The maximum supply pressure must be limited to 14" w.c. (0.5 psi) [35 mb]. If the supply line pressure is above 14" w.c. [35 mb], then a separate pressure reducing regulator must be installed. The minimum pressure at the inlet to the heater must be equal to or greater than 6.0" w.c. [15 mb] for natural gas.

The sportSchwank 30 model is equipped with a safety control system (low gas pressure cut-off switch) designed to shut the burner off in the event of inadequate gas pressure (4.5" w.c. [11.3 mb] minimum gas supply line pressure required).

The burner requires the following gas supply conditions to operate:

Natural Gas: Orifice sized for heat content 1000 Btu/cu ft [37.5 MJ/cu m].

3. INSTALLATION PROCEDURES

TABLE 1	LINE PRESSURE		MANIFOLD PRESSURE
	MINIMUM " w.c. [mb]	MAXIMUM " w.c. [mb]	
NATURAL GAS	6.0 [15]	14.0 [35]	5.0 [12.5]

1. Install gas line as outlined in Section 2.
2. MOUNTING HARDWARE: The heater manufacturer cannot anticipate all structural conditions and other wind and weather conditions in which the heater will be mounted or attached:
 - Mount heaters using non-combustible mounting hardware
 - Ensure the mounting hardware/brackets and anchoring to the structure is of sufficient engineering design, strength, quality and workmanship, to support the weight of the heater and any other loads such as snow accumulation
 - Provide bracing as required to prevent undue movement of the heater
 - Seismic bracing, if required, must conform to local codes and engineering practices
 - Use Table 2 and Figure 2 to determine the heater dimensions and weight requirements for the design of mounting hardware / brackets

3. The sportSchwank Series heater is approved for both horizontal and angle mounting. When angle mounting, the short axis may be rotated to a maximum of 30°. *For either horizontal or angle mounting on the short axis, the long axis of the heater must be in a horizontal position.*
4. Maintain the minimum clearances to combustibles as indicated in Section 7.
5. Connect heater to the main gas line. When possible, use an approved 1/2" flexible connector (available as an option from the manufacturer or your local supplier) to absorb gas line expansion and any vibration - check local code requirements.
6. Leak and pressure test all gas supply lines
7. Set up gas supply pressures at heater to ensure proper manifold pressure (see Section 2.5 and TABLE 1)
8. Ensure proper electrical rating in the system by checking voltage at ignition module terminals. (refer to Section 9) To avoid system malfunction, the voltage range must be within 21.6 Volts to 26.4 Volts, and correct polarity must be maintained throughout the system.
9. Test-fire the heating system by following the lighting instructions as shown below and on heater.

4. LIGHTING INSTRUCTIONS

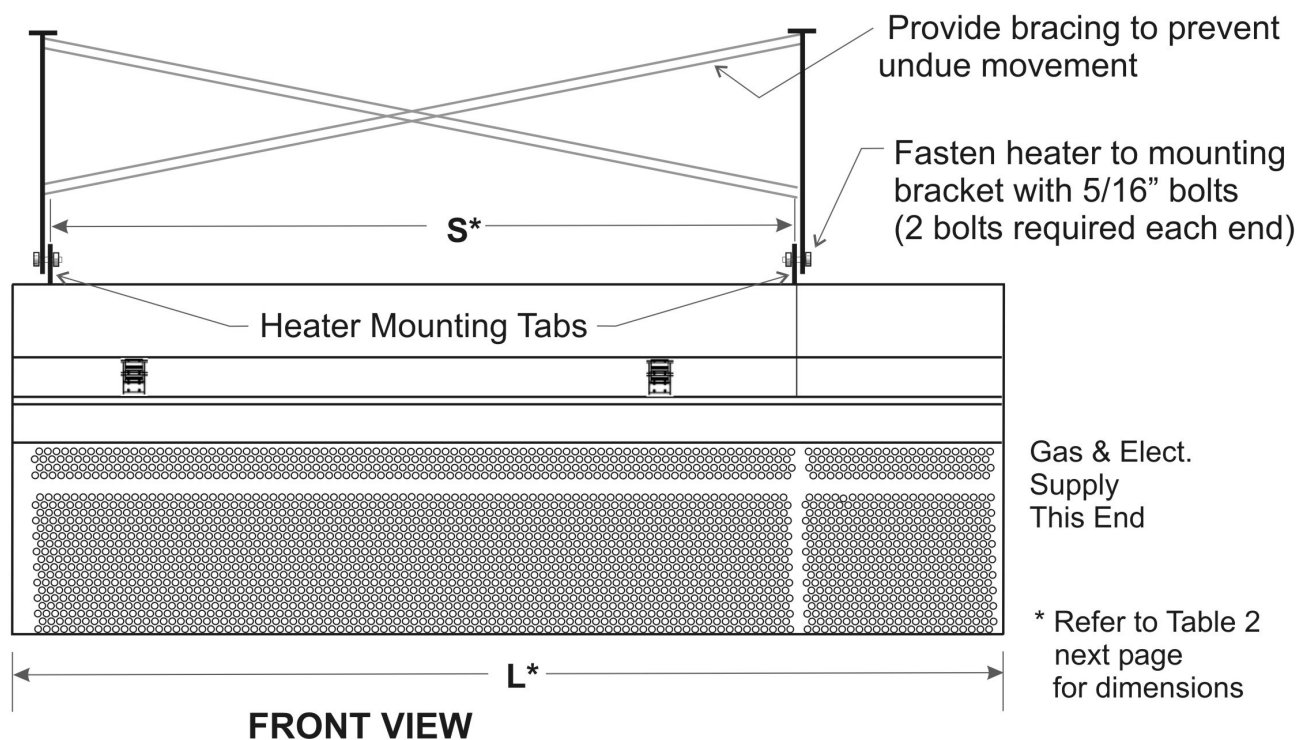
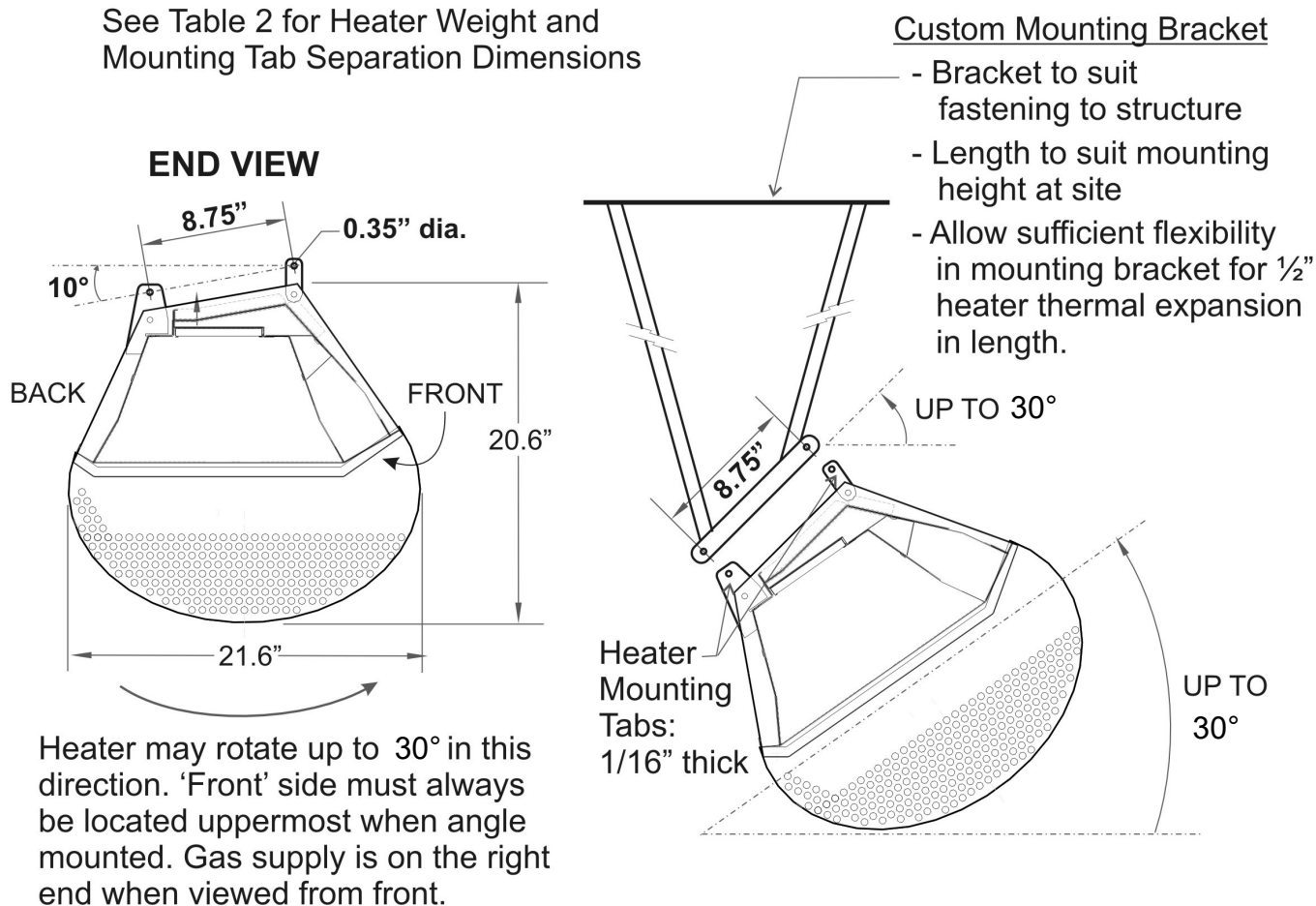
1. Ensure the correct voltage is supplied and gas valve is in the ON position.
2. Turn on power to heater, set thermostat (if applicable) to desired setting, the heater will light.
3. If heater does not light: Turn off power to heater, turn gas valve to OFF position.
4. Wait for five minutes and repeat steps above. If heater does not light after three attempts, call a qualified service technician.

5. SHUT DOWN INSTRUCTIONS

1. For temporary shutdown, turn off the electrical supply.
2. For complete shutdown, turn off the electrical supply and turn gas control knob to the "OFF" position.

FIGURE 2 sportSchwank Mounting - Conceptual Only

See Table 2 for Heater Weight and Mounting Tab Separation Dimensions

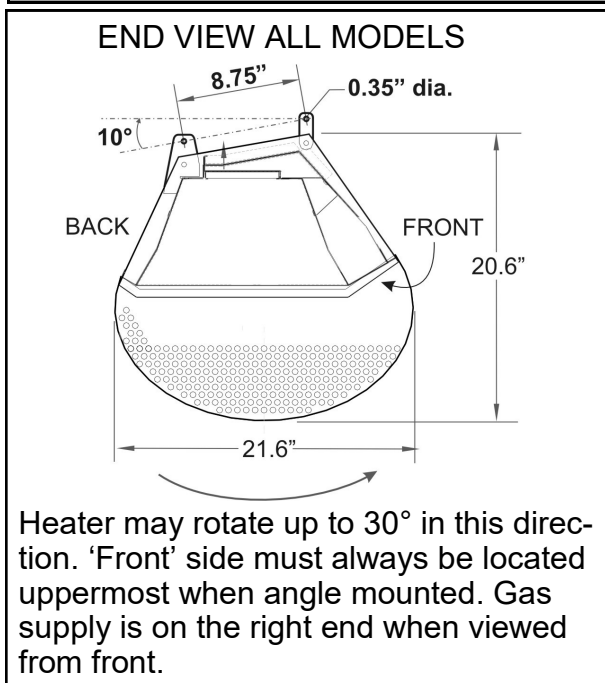
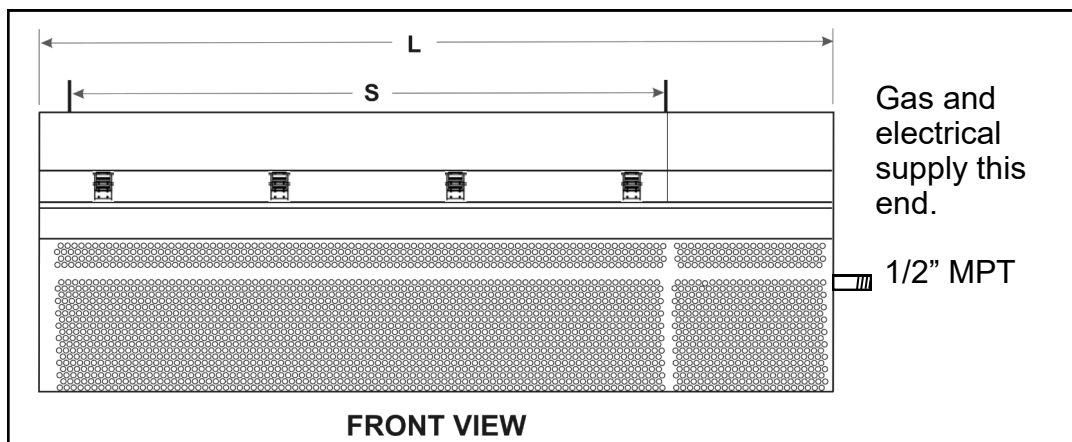


6. DIMENSIONS & CONFIGURATION sportSchwank SERIES

TABLE 2

sportSchwank	Dimensions		Capacity Btuh [kW]	Weight Lbs [kg]	Elect.*
	L In [cm]	S In [cm]			
10	35" [89]	21.7" [55.1]	33,500 [10]	50 [23]	24 VAC 60 Hz 0.55 A
15	50" [127]	32.6" [82.8]	50,000 [15]	71 [32]	
20	57" [145]	43.5" [110.5]	67,000 [20]	94 [43]	
30	78.7" [200]	65" [165.1]	103,000 [30]	132 [60]	

FIGURE 3: DIMENSIONS



To 'size' the transformer required to operate multiple heaters in one control zone:

- First heater in zone requires 40 VA
- Each additional heater: plus 20 VA
- The sum total will be the required transformer rating
- If total VA exceeds one available transformer rate (in between sizes) select the next higher VA rating

Refer to Section 9 - Electrical Requirements

7. MINIMUM CLEARANCES TO COMBUSTIBLES

FIGURE 4: MINIMUM CLEARANCES TO COMBUSTIBLE

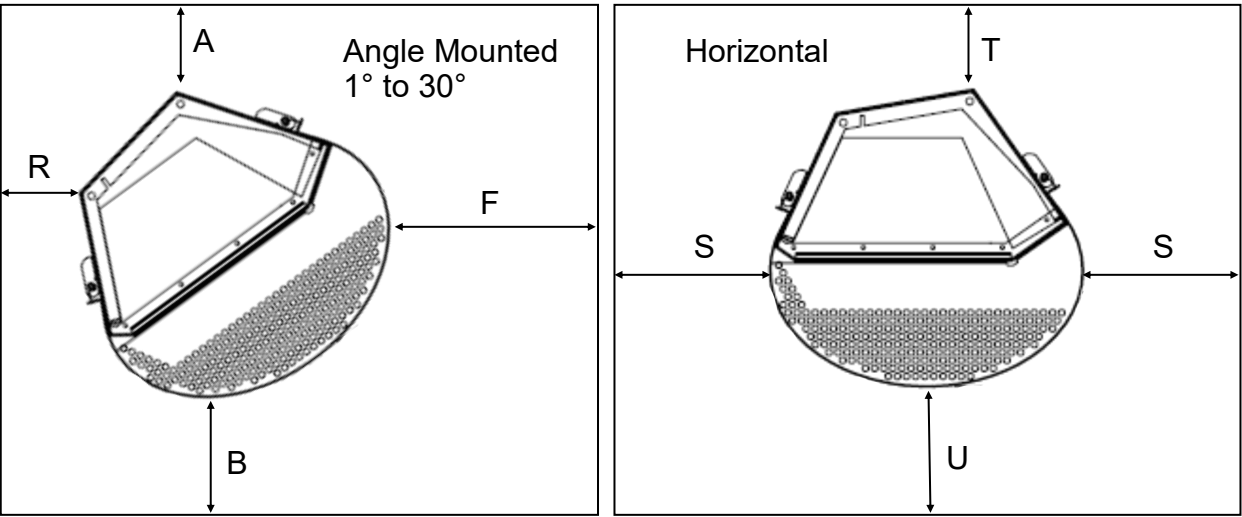


TABLE 3: MINIMUM CLEARANCES TO COMBUSTIBLE

sportSchwank	Angle Mounted 1° to 30°				Horizontal		
	ABOVE A In. [cm]	REAR R In. [cm]	BELOW B In. [cm]	FRONT F In. [cm]	TOP T In. [cm]	SIDES S In. [cm]	UNDER U In. [cm]
10	24" [61]	8" [20]	66" [91]	66" [170]	18" [46]	30" [76]	90" [229]
15	24" [61]	8" [20]	66" [91]	66" [168]	18" [46]	30" [76]	96" [244]
20	24" [61]	8" [20]	70" [91]	70" [178]	18" [46]	36" [91]	100" [254]
30	24" [61]	8" [20]	74" [91]	74" [188]	18" [46]	42" [107]	105" [267]



The structure, materials, or items in proximity to, or stored under the heater will be subjected to radiant heat and could be seriously damaged. The clearances to combustible material represent the minimum distances that must be maintained between the outer heater surface and a nearby surface so that a surface temperature of 90F°(50C°) above ambient is not exceeded.



It is the installer's responsibility to ensure that building materials with a low heat tolerance which may degrade at lower temperatures are protected to prevent degradation.

8. ELECTRICAL REQUIREMENTS

The heater, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.1.

Single heater requires a 24 Volt, 60 Hz electrical transformer sized at 40 VA. When multiple heaters are controlled in a single zone, a 24 Volt 60 Hz transformer sized at 40 VA for the first heater, plus 20 VA for each additional heater in the zone. If the total VA requirement exceeds a standard available transformer rating (in between sizes) select the next higher available transformer VA rating.

For example, five heaters controlled together (wired in parallel), require a 150 VA transformer ($40 + 20 + 20 + 20 + 20 = 120 \rightarrow$ go to available size = 150 VA).

PROPER WIRING POLARITY MUST BE MAINTAINED, particularly when grouping the heaters in a zone.

Ensure that wire gauge is properly sized to suit distances between control and heaters. Malfunction of the heating system will result if the voltage varies by more than +10% or -10%.

9. SEQUENCE OF OPERATION FOR FENWAL 35-60 DSI CONTROL



WARNING: The Series 35-60 uses voltages of shock hazard potential. Wiring and initial operation must be done by a qualified service technician.

Start up - Heat Mode

On a call for heat the Fenwal 35-60 control will reset, perform a self check routine, flash the diagnostic LED for up to four seconds. The gas valve and spark are energized commencing the 21 second trial for ignition period.

When flame is detected during the trial for ignition, spark is shutoff immediately and the gas valve remains energized. The thermostat and main burner flame are constantly monitored to assure the system continues to operate properly. When the thermostat is satisfied and the demand for heat ends, the gas valve is de-energized.



Flame Failure - Multi Trial Model:

Should the main burner fail to light, or the flame is not detected during the first trial for ignition period, the gas valve is de-energized and the control goes through an inter-purge delay before another ignition attempt. The control will attempt two additional ignition trials before going into lockout and the valve relay is de-energized.

Recovery from lockout requires a manual reset by either resetting the thermostat or removing 24 volts for a period of 5 seconds. If the thermostat is still calling for heat after one hour the control will automatically reset and attempt to ignite the burner again.

Flame Failure - Re-Ignition:

If the established flame signal is lost while the burner is operating, the control will respond within 0.8 seconds. The HV spark will be energized for a trial ignition period in an attempt to relight the burner.

If the burner does not light the control will make two more attempts to relight the burner before de-energizing the gas valve. If the burner does not relight, the control will go into lockout as noted above in "Failure to light". If flame is re-established, normal operation resumes. Multi-try models will allow three tries for ignition including interpurges.

Cautions:

1. Ceramic insulators should not be in or close to the flame.

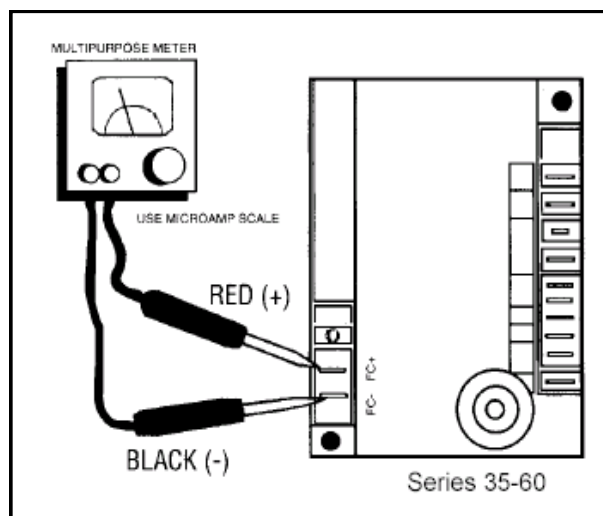


2. Electrode assemblies should not be adjusted or disassembled. Electrodes should have a gap spacing of 1/8" - 3/16" (3.12± 0.81 mm). If this spacing is not correct, the assembly must be replaced. Electrodes are pre-set and NOT field adjustable.

3. Exceeding the temperature limits can cause nuisance lockouts and premature electrode failure.

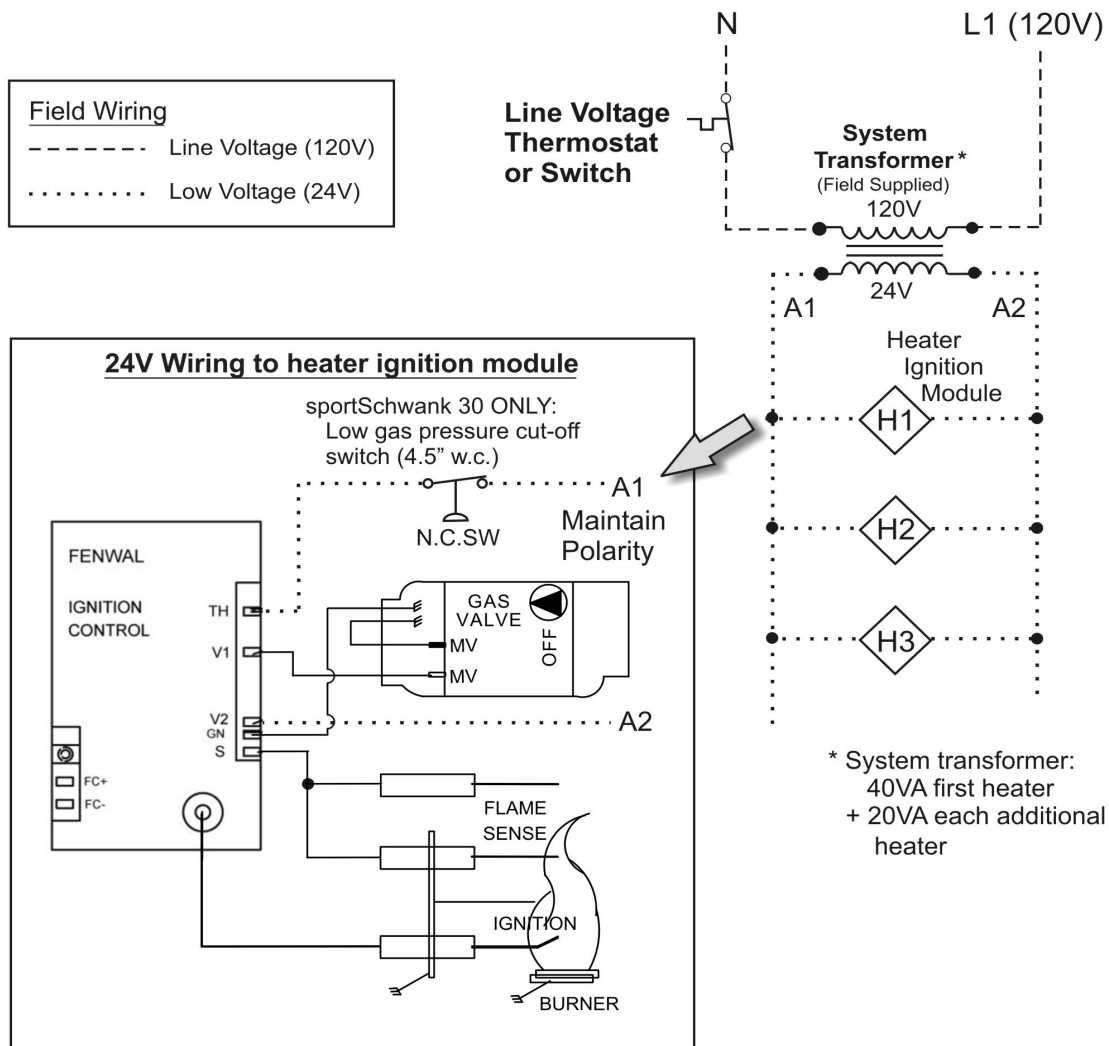
Flame current is the current which passes through the flame from the sensor to ground. The minimum flame current necessary to keep the Fenwal 35-60 system from lockout is 0.7 μ A (microamps). To measure the flame current, connect analog DC microammeter to the FC-FC+ terminals.

Meter should read 0.7 μ A or higher. If the meter reads below "0" on scale, meter leads are reversed. Disconnect power and reconnect meter leads for proper polarity.



10. WIRING DIAGRAM - Fenwal 35-60 DSI Control

Note: Power supply: Provide disconnect means and overload protection as required by local and/or national code..
 Maintain polarity at control modules.



Fenwal Control Terminal Designation

TH/W	Thermostat Input
GND	System Ground
V1	Valve Power
V2	Valve Ground
NC	Alarm
S1	Remote Flame Sensor

Error Mode

Internal Control Failure
Flame with No Call for heat
Ignition Lockout

LED Indication

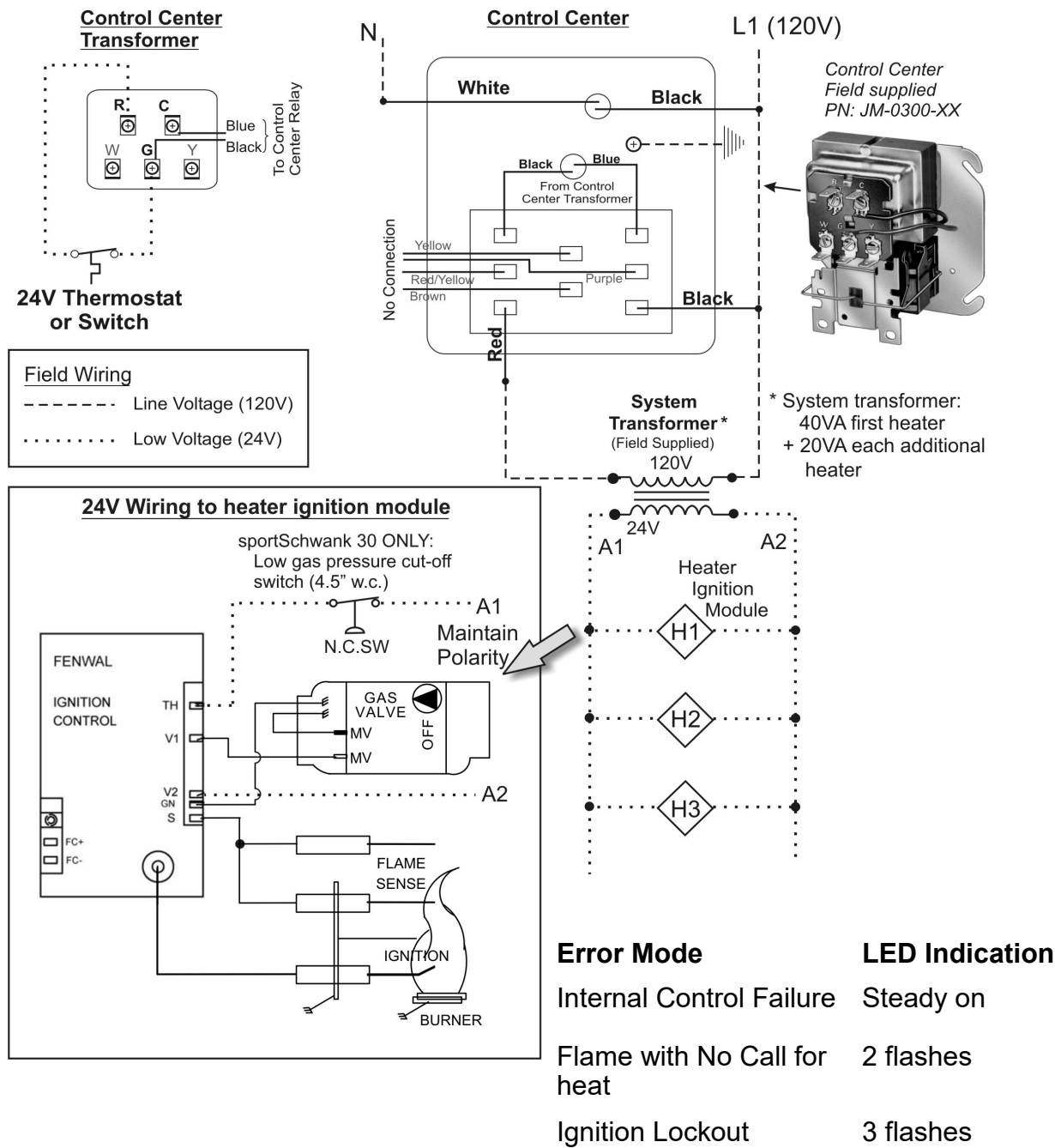
Steady on
2 flashes
3 flashes

Fault Conditions:

The LED will flash on for 1/4 second, then off for 1/4 second during a fault condition. The pause between fault codes is 3 seconds.

11.WIRING DIAGRAM - Fenwal 35-60 DSI Control
- 24 VOLT SWITCHING

Note: Power supply: Provide disconnect means and overload protection as required by local and/or national code..
Maintain polarity at control modules.



Fault Conditions:

The LED will flash on for 1/4 second, then off for 1/4 second during a fault condition. The pause between fault codes is 3 seconds.

12. SPARK IGNITION CIRCUIT

The step-up transformer in the ignition control provides spark ignition at 30,000 volts (open circuit). To check the spark ignition circuit, proceed as follows.

- 1 Shut off gas supply to the gas control
- 2 Disconnect the ignition cable at the ignition control stud terminal to isolate the circuit from the spark igniter or igniter/sensor
- 3 Prepare a short jumper lead, using heavily insulated wire such as ignition cable

CAUTION



In the next step, DO NOT allow fingers to touch either the stripped end of the jumper or the stud terminal. This is a very high voltage circuit and electrical shock, personal injury or death can result.

- 1 Perform this test immediately upon energizing the system before the ignition control goes into safety lockout and interrupts the spark circuit. Touch one end of the jumper firmly to the ignition control GND terminal. (DO NOT remove the existing ground lead.) Slowly move the other end of the jumper wire toward the stud terminal on the ignition control to establish a spark.
- 2 Pull the wire away from the stud and note the length of gap at which spark stops.
- 3 A spark length of 1/8 in. (3mm) or more indicates satisfactory voltage output. If no arc can be established, or the maximum spark is less than 1/8 in. (3mm), and power to the ignition control input terminals was proved, replace the ignition control.

13. HEATER FINISH

The sportSchwank is available with the exterior weather enclosure options:

- constructed of stainless steel
- or constructed of aluminized steel with a black coating

With extended use, exterior heater surfaces may discolor to some extent due to the impact of heat and the deposit of air born particles that have gone through combustion. In some environments, the stainless steel lens cover may experience some surface oxidization and discoloration. These are normal occurrences and in no way affect the operation of the heater or the manufacturer's warranty.

OCCASIONAL FINISH MAINTENANCE:

Wear protective gloves, eyewear, and breathing mask when performing finish maintenance. Ensure that power to the heater is disconnected prior to maintenance and the application of any finish coating. Use a fine steel wool to remove blemishes or unsightly deposit, and smooth the outer surface. The black heater finish coat can be touched up using a high temperature coating that is compatible with the original finish, such as Thurmalox Stove Paint-Flat Black-1200°F (650°C) or equivalent. **No other coating type or non-high-temperature paint finish may be applied to the heater – use of an incompatible finish coating could create a hazardous condition such as fire or noxious fumes, damage the heater, and void the warranty.**

14. MAINTENANCE GUIDE



WARNING: Improper adjustment, alteration, service or maintenance can cause property damage, injury or death.

Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment. Service to the heater must be performed by a qualified gas service technician.

- Keep the appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
- The flow of combustion and ventilation air to the heater must not be obstructed
- Annual servicing and cleaning of the heater by a qualified service technician is essential for continued efficient operation.
- Periodically visually inspect the tile burner for proper operation:
 - Proper combustion will cause the tile burner surface to appear a bright luminous orange
 - If a “dark spot” appears on the tile burner surface, dust or other contaminant has accumulated in the tile perforations and cleaning is required (see below)
 - Servicing and cleaning of the heater must be performed by a qualified gas service technician
- An annual inspection and servicing should be carried out by qualified gas service technician as follows:
 - Clean the ceramic tile with compressed air. Avoid directing air stream at gasket material between tile and heater body. The air pressure **must be lower than 20 psi [140 kPa]**.
 - Clean the venturi tube with compressed air. The air pressure **must be lower than 20 psig [140 kPa]**.
 - Visually inspect the burner tiles for proper combustion - clean tiles as above if required
 - If a crack is visible in any tile, the tile must be replaced
- **Indication of back firing:**

WARNING: *If heater backfires during operation, it **must** be turned off **immediately**. Contact a qualified gas service technician for heater repair before putting the heater back into operation.*

 - Loud ignition noise, followed by distinct hissing sound.
 - Little or no visible burning on the ceramic tile surface.
 - Combustion is taking place inside the burner body.
- **Cause & remedy of back firing: Service repair required by qualified gas service technician**
 - Improper gas pressure entering the venturi tube: Check gas pressure - Refer to Table 1 Page 4.
 - Broken/cracked ceramic tile and/or gasket: Replace damaged component.

- Faulty sealing of the ceramic tile to the burner body, caused by breakdown of gasket material: Replace gasket and re-seat tile.
- Refer to Section 13. Troubleshooting Guide for further servicing information
- Schwank Technical Service is available during regular business hours (Eastern Time Zone) to qualified gas service technicians at 1-877-446-3727
 - Have available the information required in the Commissioning Report (pages 18 & 19)

15. SERVICE ACCESS

For access to the burner and controls to perform setup, maintenance, and service procedures, remove only the cotter pins at the front of the heater (2 to 4 pins). The weather screen will rotate down, out of the way for service, cleaning and other maintenance.

FIGURE 5 - COTTER PIN REMOVAL FOR SETUP & SERVICE ACCESS

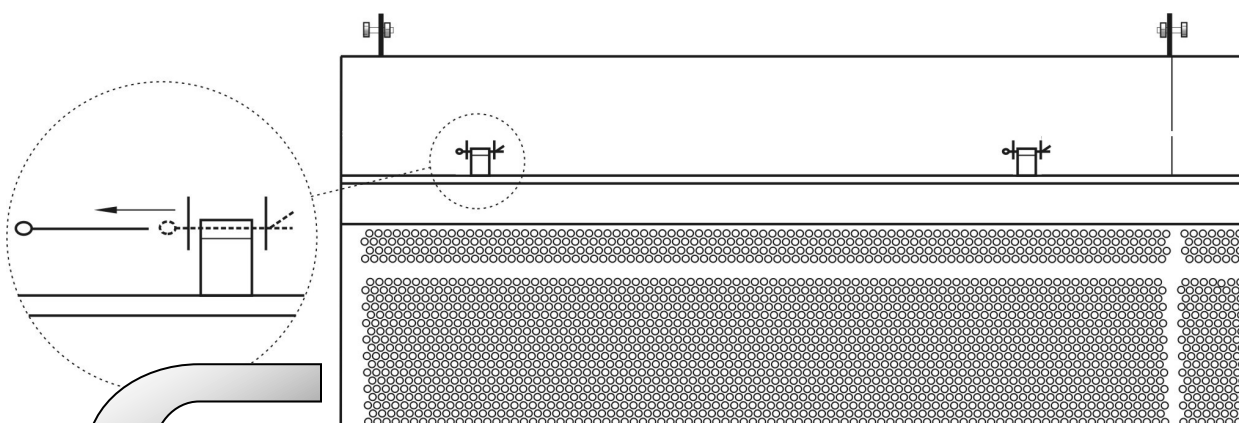
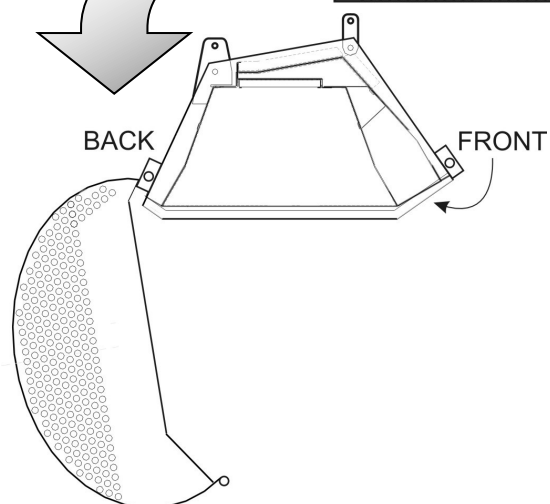


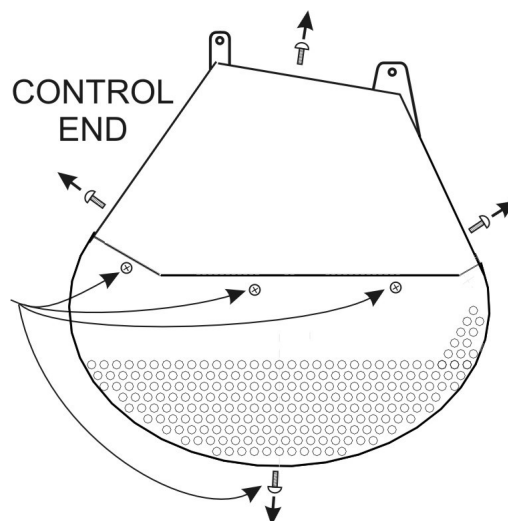
FIGURE 6 - END COVER REMOVAL FOR SERVICE ACCESS



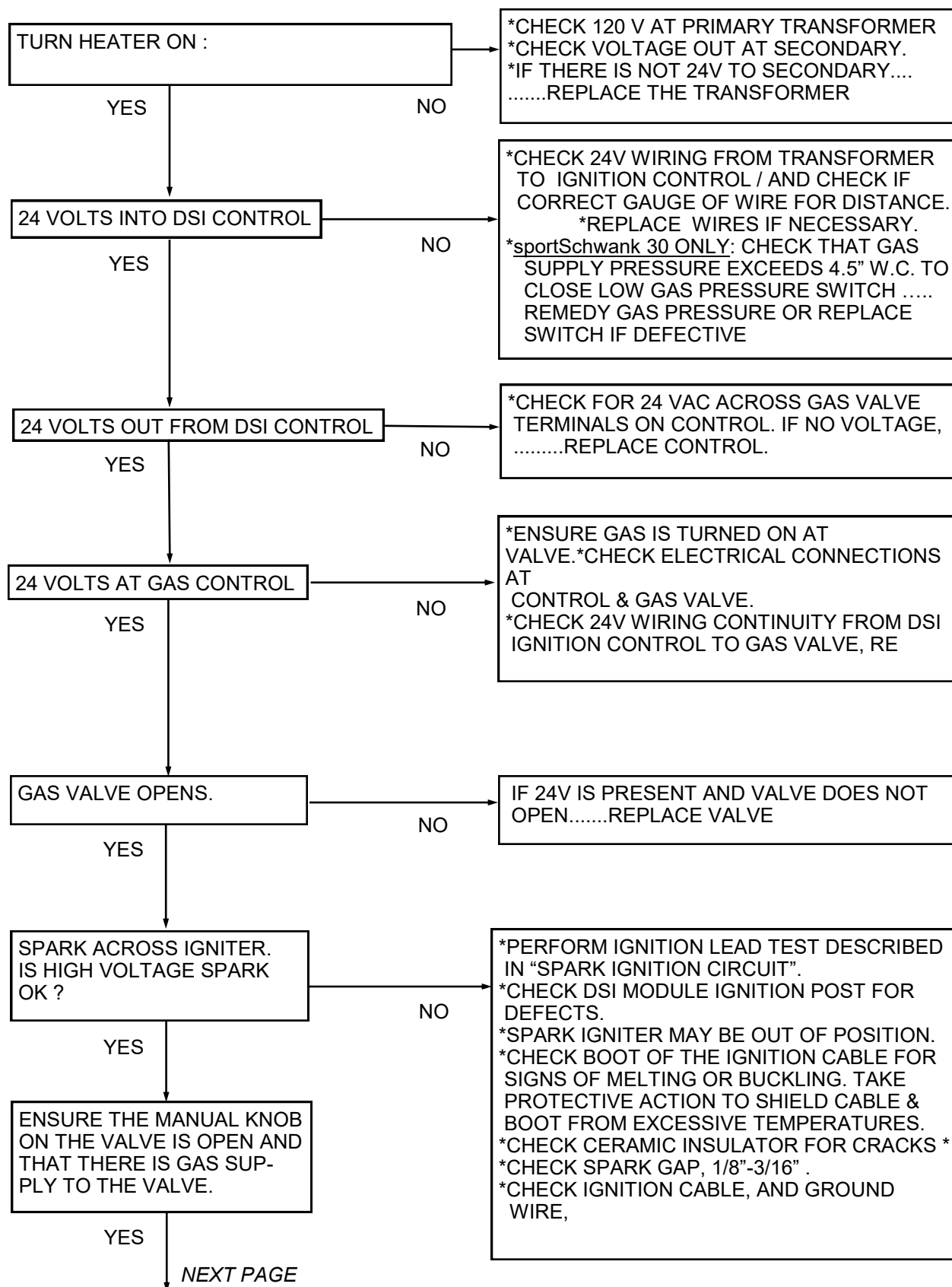
replacement

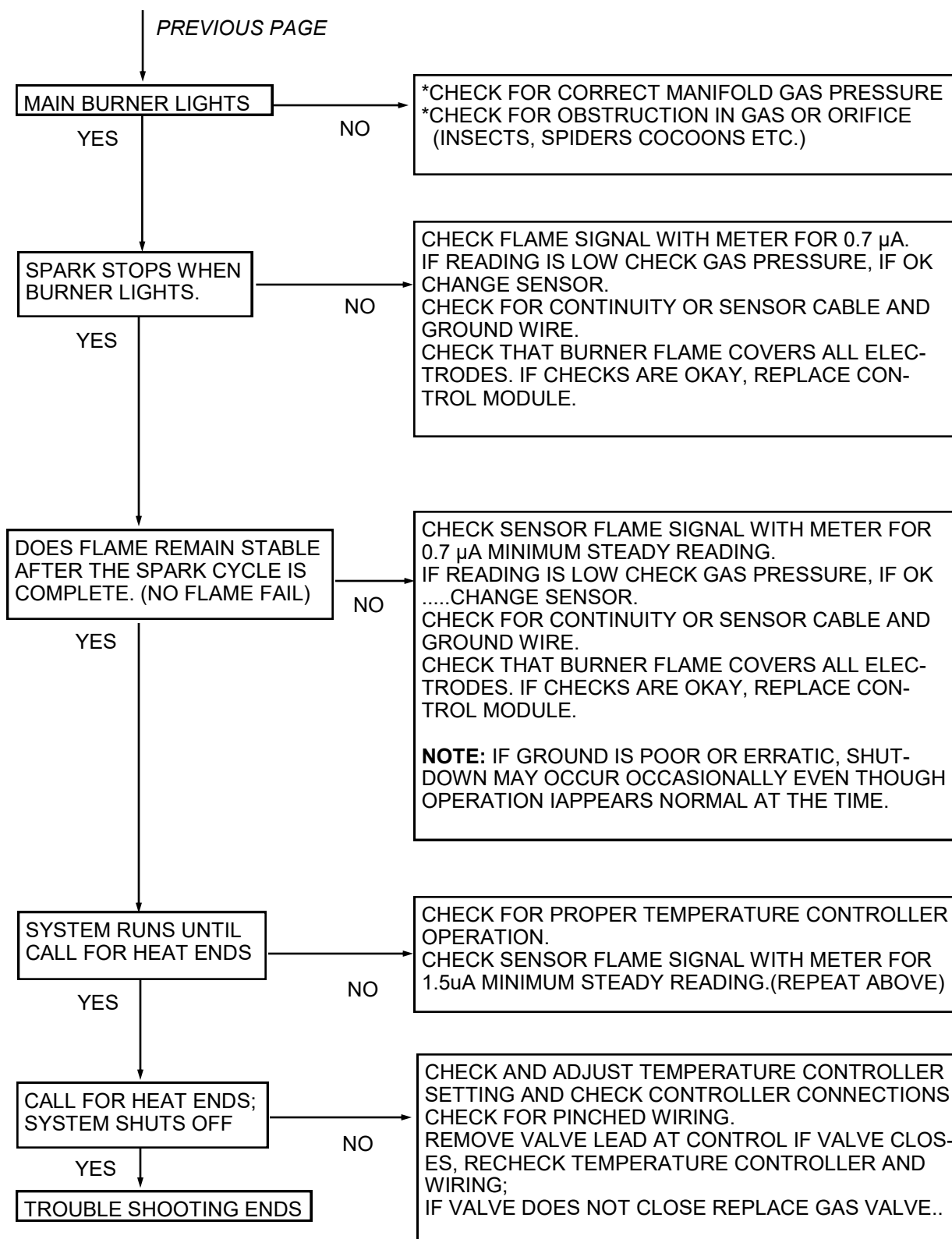
FIRST - Remove lower screened panel by removing 3 end screws, plus bottom screw. Then remove upper end panel - extract 3 screws

Gas valve



16. TROUBLESHOOTING GUIDE





NOTE: IF CONTROL GOES INTO LOCKOUT, THE SYSTEM CAN BE RESET BY INTERRUPTING THE POWER SOURCE:

17. COMMISSIONING REPORT**AS PER I&O MANUAL AND LOCAL CODES**

CONTRACTOR NAME:DATE.....

ADDRESS:.....

.....

CITY:.....

PHONE:.....

CELL:

JOB SITE.....CITY.....

HEATER MODEL NUMBER:.....

HEATER SERIAL NUMBER:

**EQUIPMENT HAS BEEN FACTORY FIRED AND TESTED BEFORE DELIVERY, NEVERTHELESS
IT IS NOT A PLUG IN APPLIANCE. IT DOES REQUIRE COMMISSIONING AND FIELD ADJUSTMENTS**

**TO ENSURE THAT SITE CONDITIONS ARE COMPATIBLE WITH THIS HEATER, AND TO
ALLEVIATE NUISANCE CALL BACKS FOR THE CONTRACTOR, THE FOLLOWING
START-UP NEEDS TO BE COMPLETED BY THE LICENSED GAS INSTALLER.**

**A CONTRACTOR CALLING FOR TECHNICAL SUPPORT
MUST PROVIDE THE INFORMATION FROM THE COMPLETED
COMMISSIONING REPORT (THIS PAGE & NEXT PAGE)**

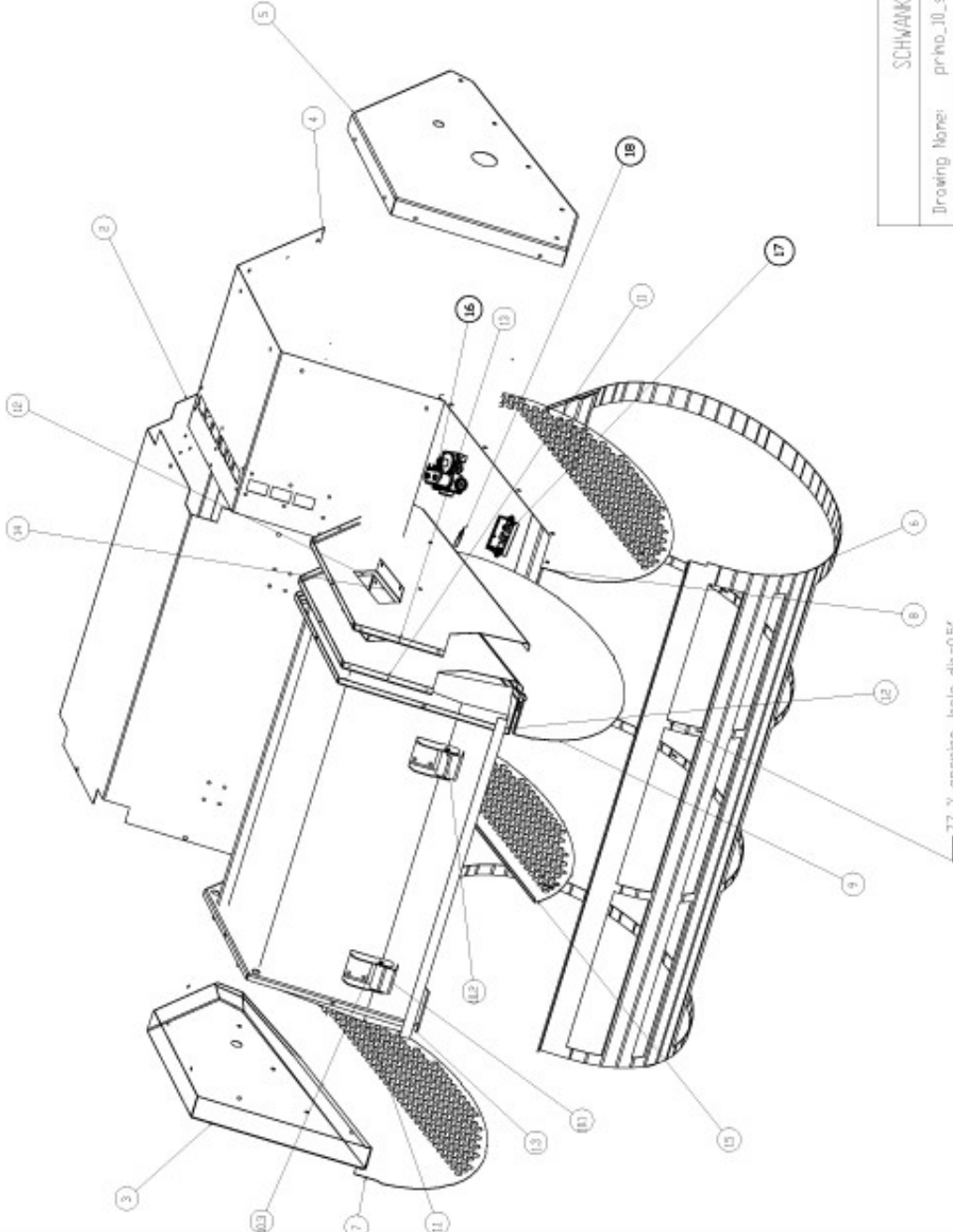
FAX COMPLETED FORM TO TECHNICAL SERVICES: CANADA - 905-712-8336 USA - 706-554-9390

**TO BE COMPLETED BY THE LICENSED INSTALLER:
PATIO HEATER COMMISSIONING REPORT**

TYPE OF GAS:	NG <input type="checkbox"/>	LP <input type="checkbox"/>
IS HEATER EXPOSED TO CHEMICAL OR CORROSIVE ATMOSPHERE:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
IS AN OPEN FLAME COMPATIBLE WITH THE INSTALLED LOCATION:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
MINIMUM CLEARANCES CONFORM AS PER I&O MANUAL:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
IF THIS IS A HIGH ALTITUDE AREA WHAT IS THE ALTITUDE ABOVE SEA LEVEL	<input type="text"/> Feet	
IS HEATER SHORT AXIS HORIZONTAL WITH THE VENTURI ON TOP:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
IS GAS SUPPLY LINE ADEQUATELY SIZED FOR SYSTEM VOLUME:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
HAVE GAS LINES AND BRANCHES BEEN PURGED OF AIR:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
THIS HEATER WAS FIELD TEST FIRED WITHOUT ANY MALFUNCTION:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
INLET GAS SUPPLY PRESSURE WITH HEATER OPERATING:	<input type="text"/>	WC"
GAS VALVE OUTLET (Manifold) PRESSURE WITH HEATER OPERATING:	<input type="text"/>	WC"
HAS THE WIRING POLARITY BEEN MAINTAINED THROUGHOUT:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
WHAT IS THE VOLTAGE READING AT THE IGNITION MODULE:	<input type="text"/>	VOLTS
WHAT IS THE FLAME SIGNAL STRENGTH IN uA FROM SENSOR:	<input type="text"/>	uA (microamps)
IS THE HEATER CONTROLLED BY A THERMOSTAT:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
IS THE THERMOSTAT STRATEGICALLY LOCATED:	YES <input type="checkbox"/>	NO <input type="checkbox"/>
TOTAL HEATERS SUPPLIED FROM ONE SINGLE TRANSFORMER:	<input type="text"/>	TOTAL
WHAT IS THE RATING OF THE TRANSFORMER IN VA:	<input type="text"/>	V.A.
WHAT IS THE TOTAL LENGTH OF THE LOW VOLTAGE WIRING:	<input type="text"/>	FEET
WHAT IS THE GAUGE OF THE LOW VOLTAGE WIRING:	<input type="text"/>	GAUGE
DOES THE HEATER HAVE GOOD ELECTRICAL GROUNDING:	YES <input type="checkbox"/>	NO <input type="checkbox"/>

* FAX COMPLETED FORM TO TECHNICAL SUPPORT: 1-866-361-0523; PHONE: 1-877-446-3727

18. Replacement Parts are available from your local Schwank distributor.
Schwank Customer and Technical Services can be reached at 1-877-446-3727.



ALL DIMENSIONS ARE IN INCH

— 77 % opening, hole dia=0.5"

Bending Data
Bottom die = 16 mm
Bend Deduction = .137"
Radius = .065"

ITEM	PART NUMBER	MATERIAL	QTY.
1	Primo 30 heater body	5052 Aluminum	1
11	Primo 30 support plate	5052 Aluminum	1
12	Primo 30 support plate	5052 Aluminum	1
13	Primo 30 support plate	5052 Aluminum	1
2	Primo 30 top cover	Aluminum	1
3	Primo 30 fur end cover	Aluminum	1
4	Primo 30 electrical cover	Aluminum	1
5	Primo 30 electrical cover	Aluminum	1
6	Primo 30 service door	304 2b SS	1
7	Primo 30 service door	304 2b SS	1
8	Primo 30 service door	304 2b SS	1
9	Primo 30 center plate	304 2b SS	1
10	Primo 30 latch part 1 assembly	304 2b SS	4
101	Primo 30 latch part 1	304 2b SS	1
102	Primo 30 latch housing	304 2b SS	1
103	Primo 30 latch part 2	304 2b SS	1
11	Primo 30 electrical baffle 1	304 2b SS	1
12	Primo 30 electrical baffle 2	Aluminum	1
13	Primo 30 electrical baffle 3	304 2b SS	1
14	Primo 30 door cover	Aluminum	1
15	Primo 30 door cover	304 2b SS	1
16	Valve		1
17	Controller		1
18	Igniter		1

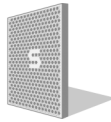
SCHWANK LTD.

Drawing Name: primo_30_sports_heater

Material: Date: Feb 26/08

Thickness: Drawn by: Soner Hasson

Ref.	Source of Drawing Information	Scale	1/2
1	Purch/Laser tolerance unless noted: +/- .005		4
2	Pin nut tolerance unless noted: +.003, -.00		5
3	Bending tolerance unless noted: +/- .131		6



GAS-FIRED INFRARED OUTDOOR HEATERS : sportSchwank Series

The Manufacturer warrants that this product is free from defects in material or workmanship under normal use and service subject to the terms of this document.

THREE YEAR WARRANTY

Subject to the conditions and limitations stated herein, during the term of this limited warranty, we will supply any component part (at our option a new or repaired component part) of the heater, as defined below, excluding any labor, which the Manufacturer's examination determines to be defective in workmanship or material for a period of three years (3 years) from the date of installation, unless otherwise specified below. This warranty applies to the heater's original owner, and subsequent transferees and only if the unit is installed and operated in accordance with the printed instructions accompanying the unit and in compliance with all applicable installation, building codes and good trade practices.

CERAMIC TILE BURNER - THREE YEAR WARRANTY

The manufacturer warrants the ceramic tiles in the burner for a period of 15 years (15 years) against defect in workmanship and material.

WHAT IS NOT COVERED

The Manufacturer shall not be responsible for any expenses, including service, labor, diagnosis, analysis, material or transportation charges incurred during removal or reinstallation of this product, or any of its components or parts. All labor or service charges shall be paid by the owner. This warranty does not cover heating products improperly installed, misused, exposed to or damaged by negligence, accident, corrosive or contaminating atmosphere, water, excessive thermal shock, impact, abrasion, normal wear due to use, alteration or operation contrary to the owner's manual or if the serial number has been altered, defaced or removed. This warranty shall not apply if the input to the heating product exceeds by more than 2% of the rated input on the rating plate. The Manufacturer shall not be liable for any default or delay in performance by its warranty caused by any contingency beyond its control, including war, government restrictions, or restraints, strikes, fire, flood, acts of God, or short or reduced supply of raw materials or products.

WARRANTY PROCEDURE

To establish the installation date for any purpose under this Limited Warranty, you must retain the original records that can establish the installation date of your unit. If you do not provide such documents, the start date of the term of this Limited Warranty will be based upon the date of unit manufacture, plus thirty (30) days. Failure to maintain the equipment through regular annual service maintenance by a qualified service technician shall void the warranty.

LIMITATIONS AND EXCLUSIONS

This document contains all warranties made by the Manufacturer and may not be varied, altered or extended by any person. There are no promises, or agreements extending from the Manufacture other than the statements contained herein. THIS WARRANTY IS IN LIEU OF ALL WARRANTIES EXPRESSED OR IMPLIED, TO THE EXTENT AUTHORIZED BY THE LAWS OF THE JURISDICTION, INCLUDING SPECIFICALLY THE WARRANTIES OR MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE.

It is understood and agreed that the Manufacturer's obligation hereunder is limited to repairing or replacing parts determined to be defective as stated above. In no event shall the Manufacturer be responsible for any alleged personal injuries or other special, incidental or consequential damages. As to property damages, contract, tort or other claim the Manufacturer's responsibility shall not exceed the purchase price paid for the product.

All replacement parts will be warranted for the unused portion of the warranty coverage period remaining on the applicable unit.

Some Authorities do not allow certain warranty exclusions or limitations on how long a warranty lasts or the exclusions or limitations of incidental or consequential damages. In such cases, the above limitations or exclusions may not apply to you and are not intended to do so where prohibited by law. This warranty gives you specific legal rights. You may also have other rights which vary by each jurisdiction.

6485 ORDAN DR MISSISSAUGA, ON, L5T 1X2
2 SCHWANK WAY, WAYNESBORO, GEORGIA. 30830-8336

Ph: 1-877-446-3727
TSA@SchwankGroup.com

Fax: 1-866-361-0523
www.SchwankGroup.com

GP-D230-BX-01A
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JULY 2008
RL: 1A
BA