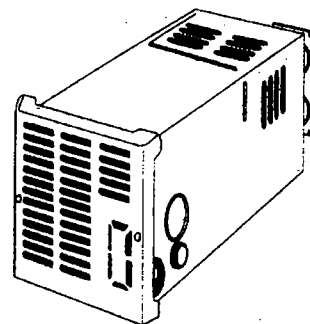
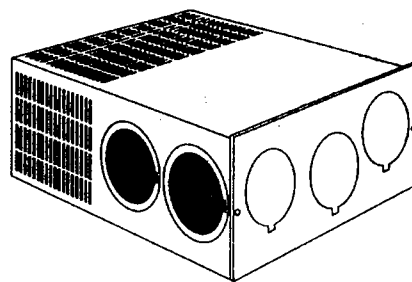


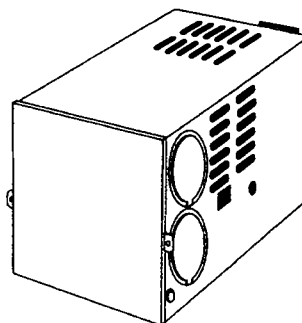
SUBURBAN RV FURNACES



SERVICE MANUAL



DD-17DSI
NT-12S/SE • NT-16S/SE • NT-20S/SE
NT-24SP • NT-30SP • NT-34SP
NT-40
SF-20 • SF-25 • SF-30 • SF-35 • SF-42
SF-20F • SF-25F • SF-30F • SF-35F • SF-42F



Post Office Box 399
Dayton, Tennessee 37321

INSTALLATION REQUIREMENTS -- ALL CURRENT MODELS

Models	Clr Front	Clr Top	Clr Btm	Clr Back	Clr left	Clr right	Ducts Req'd	Btm Duct Sq Inch	Top Duct Sq Inch	L & R Side Duct Sq Inch	Return Air Sq inch
DD17DSI	See *1	0"	n/a	n/a	0"	0"	n/a	n/a	n/a	n/a	n/a
NT12S	3/8"	1"	n/a	n/a	1"	1"	2-4"	n/a	n/a	25"	55"
NT16S	3/8"	1"	n/a	n/a	1"	1"	2-4"	n/a	n/a	25"	55"
NT20S	3/8"	1"	n/a	n/a	1"	1"	2-4"	n/a	n/a	25"	55"
NT12SE	See *1	5/8"		0"	5/8"	5/8"	n/a	n/a	n/a	n/a	n/a
NT16SE	See *1	5/8"		0"	5/8"	5/8"	n/a	n/a	n/a	n/a	n/a
NT20SE	See *1	5/8"		0"	5/8"	5/8"	n/a	n/a	n/a	n/a	n/a
NT24SP	0"	0"		0"	1"	1"	3-4"	48"	n/a	36"	55"
NT30SP	0"	0"		0"	1"	1"	3-4"	48"	n/a	36"	55"
NT34SP	0"	0"		0"	2"	2"	4-4"	48"	n/a	48"	55"
NT40	1"	1"		0"	2"	2"	4-4"	48"	n/a	48"	113"
SF20	1"	0"	0"	0"	0"	0"	2-4"	56"	56"	25"	55"
SF25	1"	0"	0"	0"	0"	0"	3-4"	56"	56"	36"	55"
SF30	1"	0"	0"	0"	0"	0"	3-4"	56"	56"	36"	55"
SF35	1"	0"	0"	0"	0"	0"	4-4"	56"	56"	48"	55"
SF42	1"	1"	0"	0"	2"	2"	4-4"	72" *3	56"	48"	See *2
P30	0"	0"	0"	0"	1"	1"	4-4"	48"	n/a	48"	55"
P40	1"	1"	0"	0"	2"	2"	4-4"	48"	n/a	48"	113"

*1 - Special clearances for discharge grills. Refer to Installation and Instruction Manual.

*2 - Return air should be 142" if 4 ducts are used. May be reduced to 88" if 5 ducts are used.

*3- Bottom duct requires the bottom duct kit # 520753

RETURN AIR

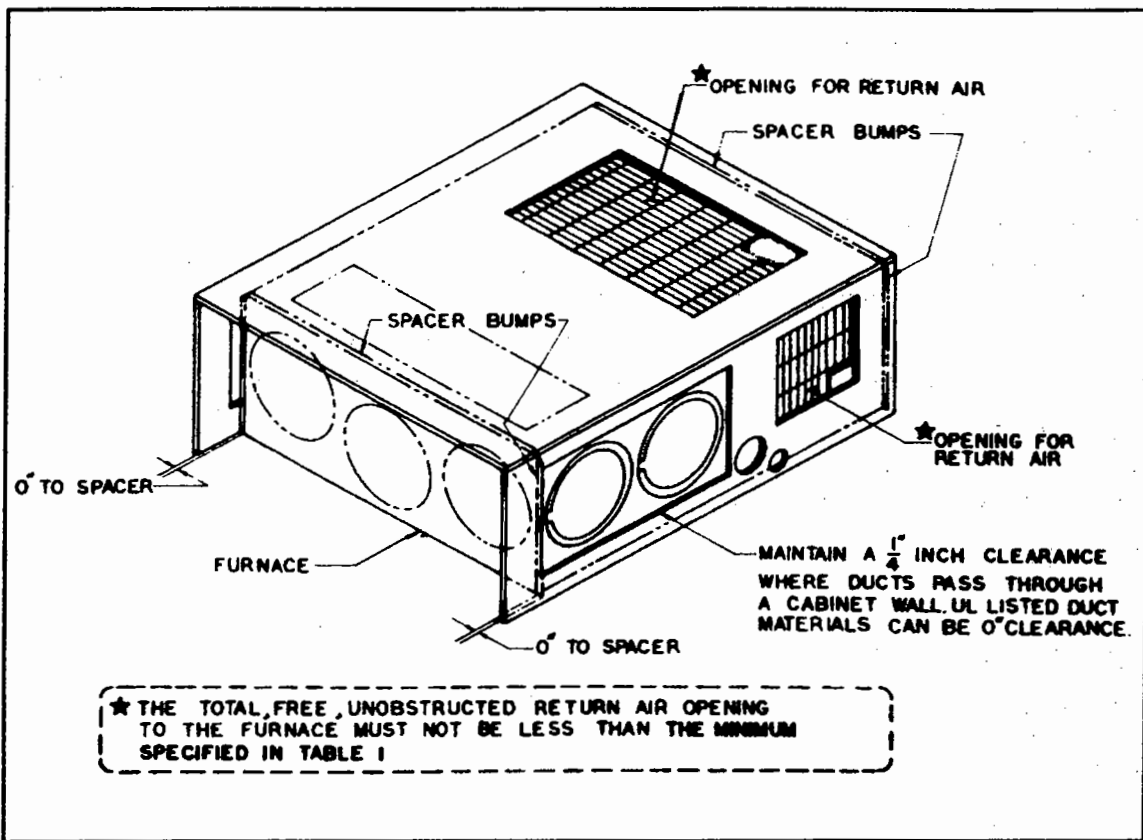


Figure 1

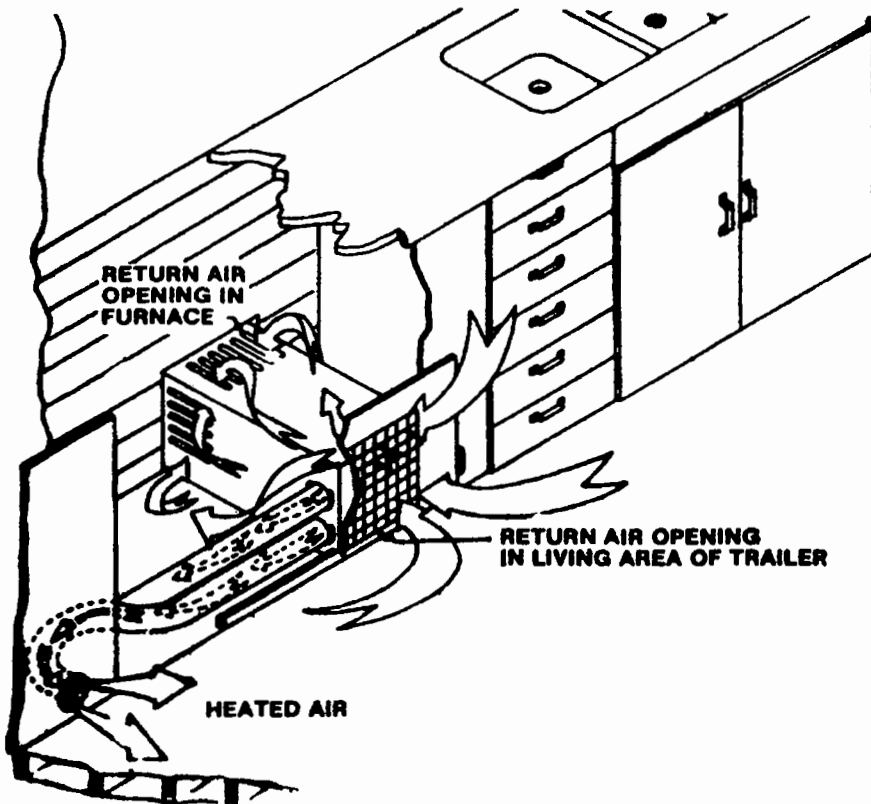


Figure 2

VENT ASSEMBLY INSTALLATION

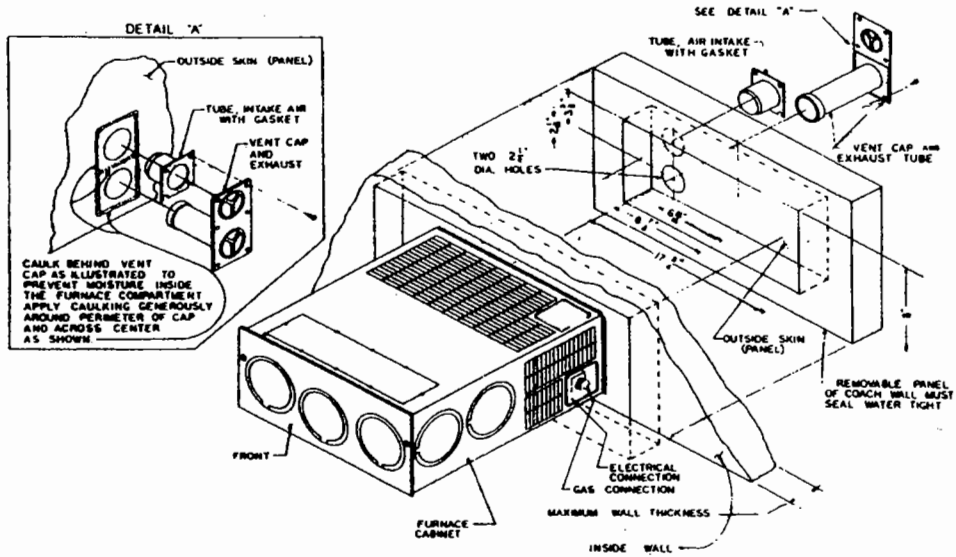


Figure 3

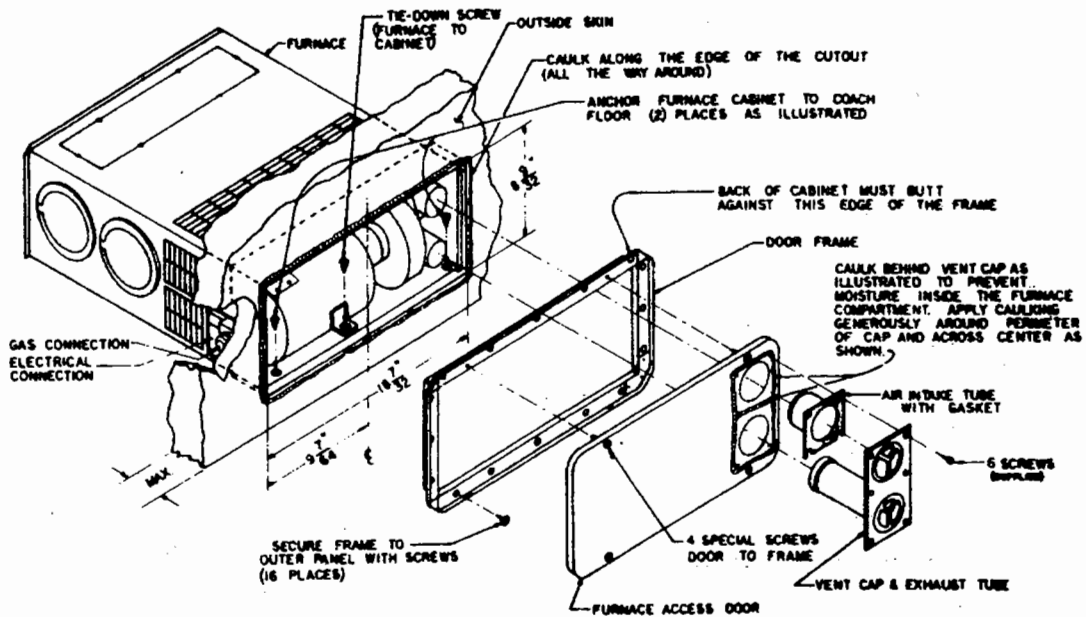


Figure 4

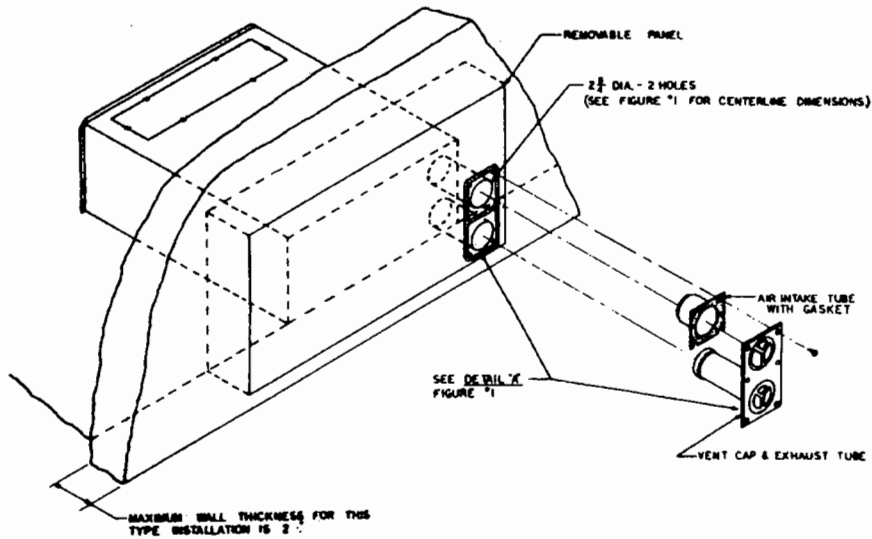


Figure 5

VENT ASSEMBLY INSTALLATION

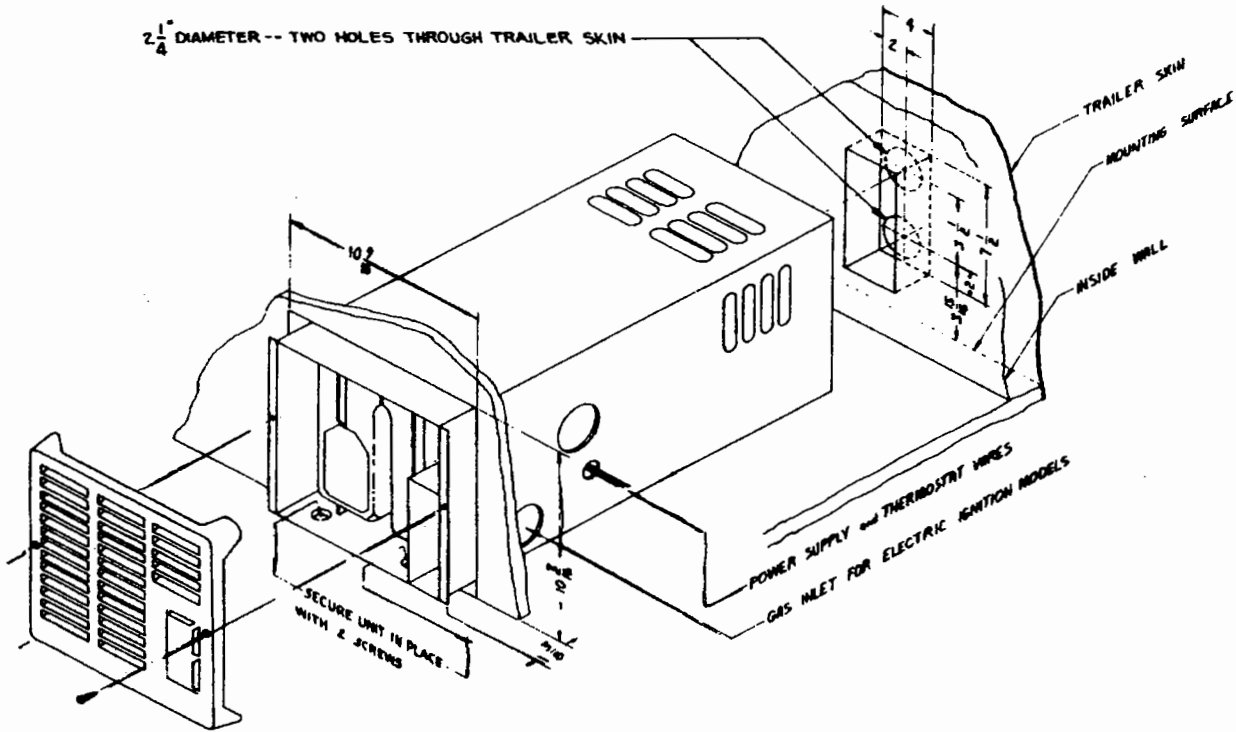


Figure 6

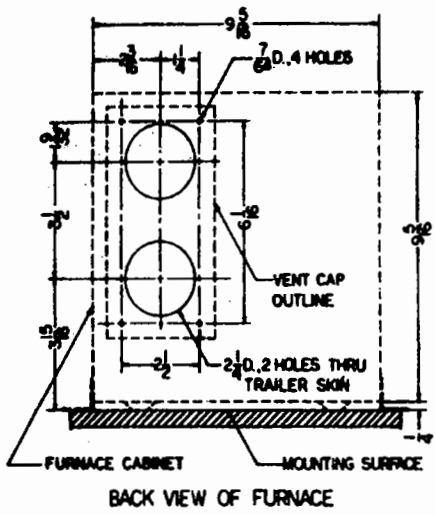


Figure 7

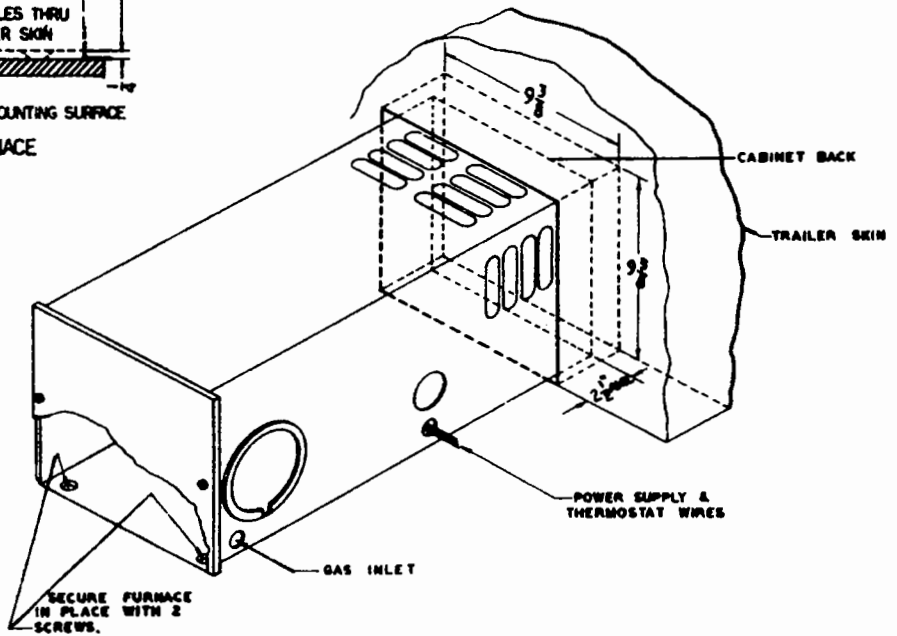


Figure 8

THROUGH THE WALL FURNACE INSTALLATION

VENT ASSEMBLY INSTALLATION

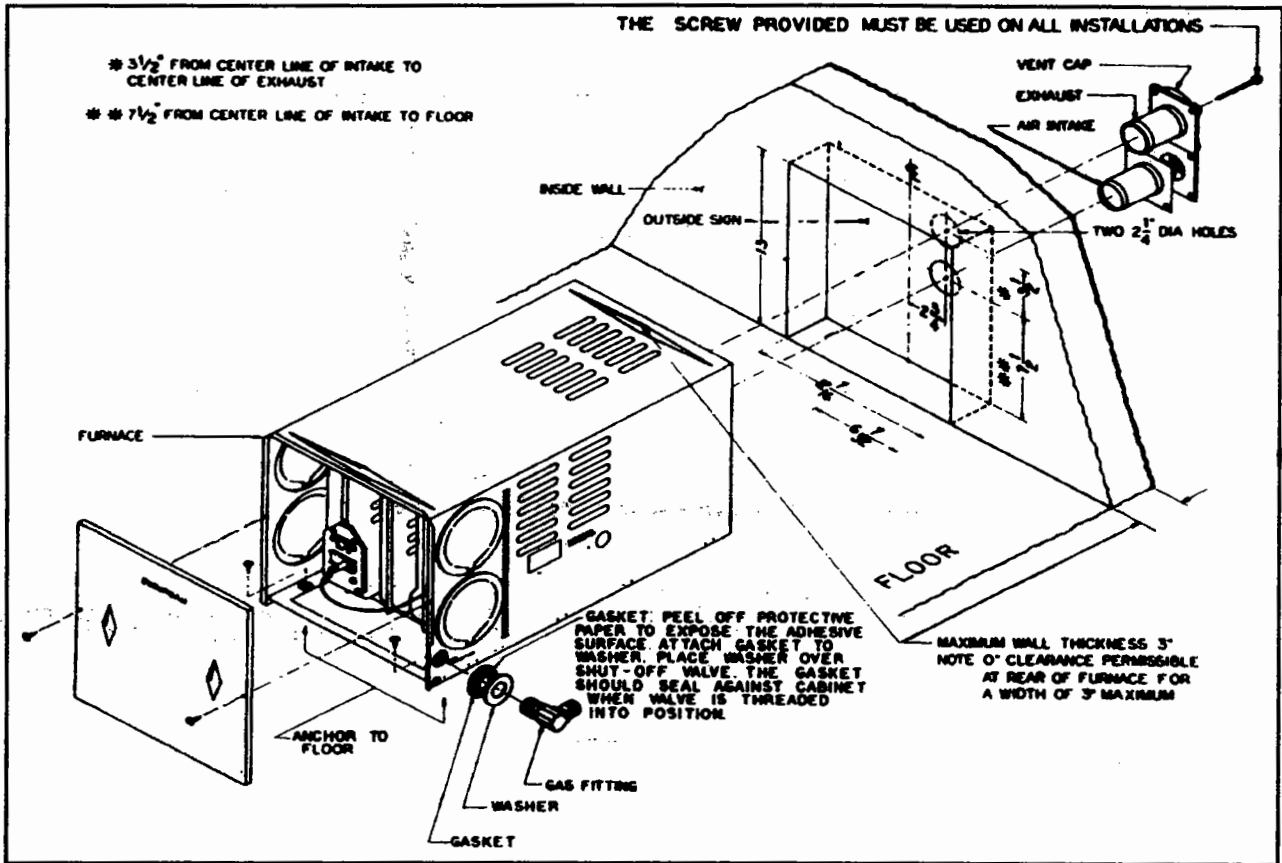


Figure 9

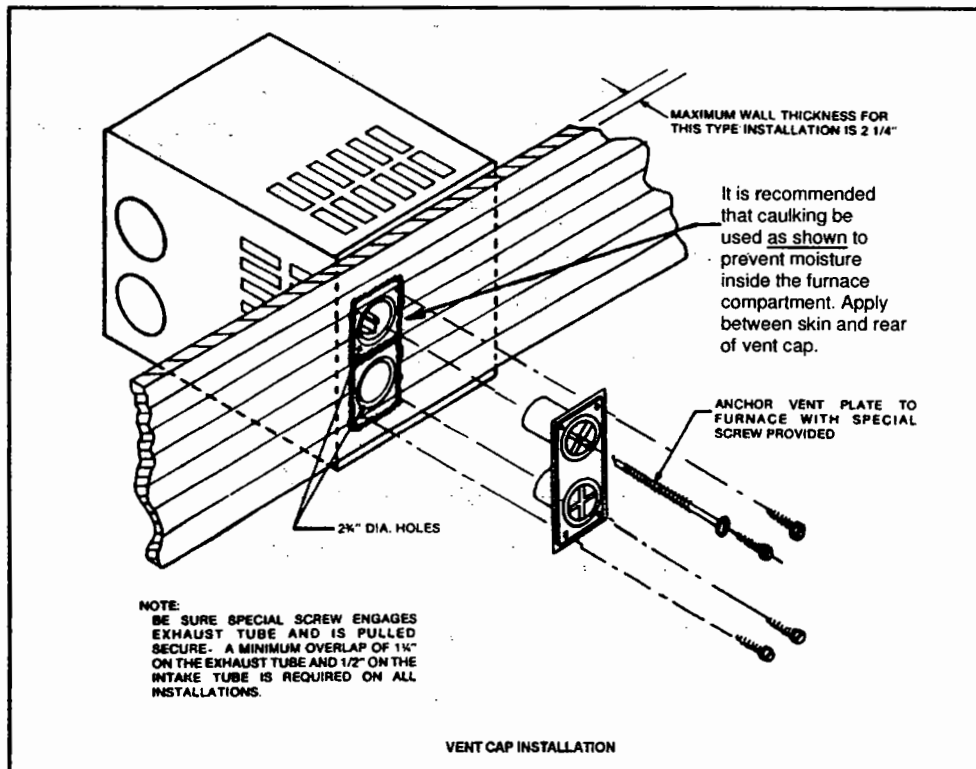
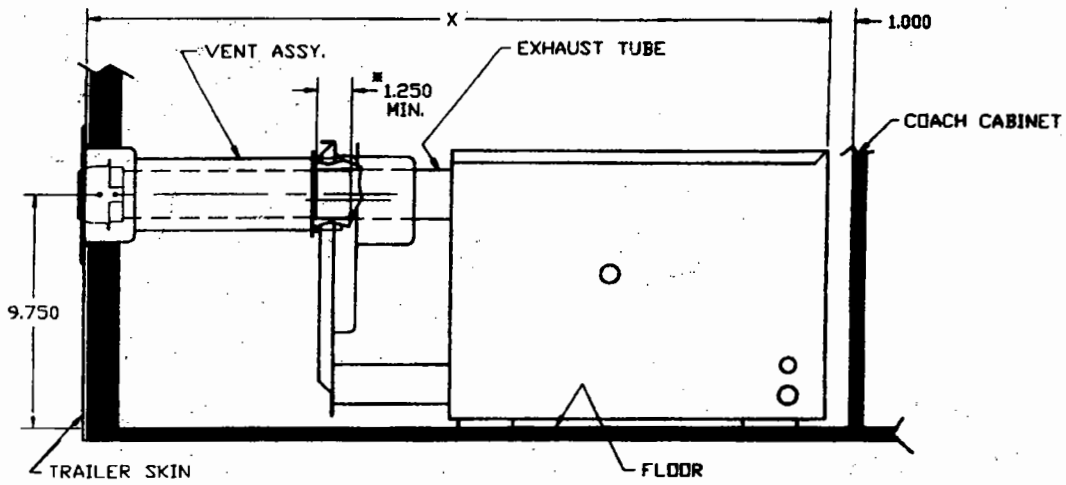


Figure 10

VENT ASSEMBLY INSTALLATION



PART NO.	VENT LENGTH	X DIMENSIONS
260197	5 7/8"	22" - 24 3/8"
260198	8 3/16"	24 3/8" - 26 5/8"
260199	10 1/2"	26 5/8" - 29"

NOTE:
NEVER INSTALL VENT WITH LESS THAN 1.250" OVERLAP
BETWEEN CHAMBER EXHAUST TUBE & VENT ASSY.
EXHAUST TUBE.

Figure 11

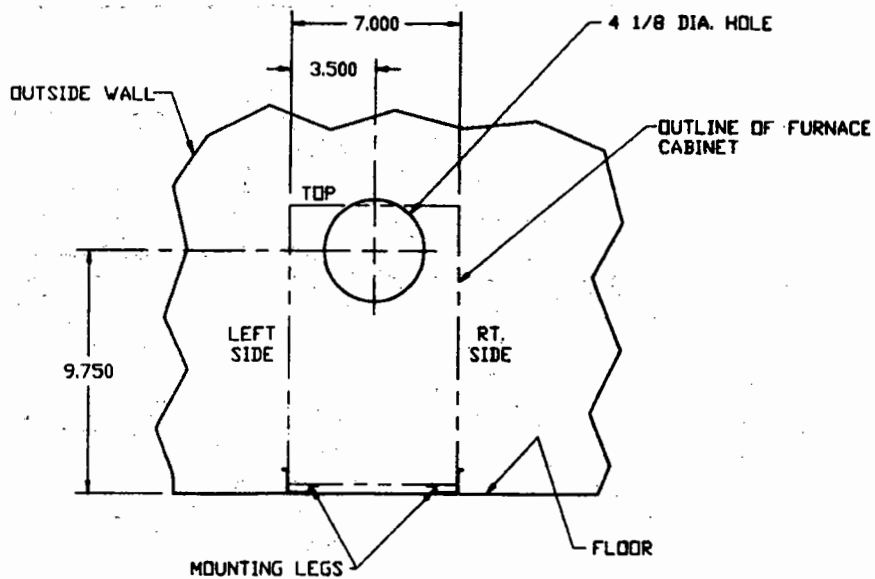


Figure 12

INTAKE TUBE KITS

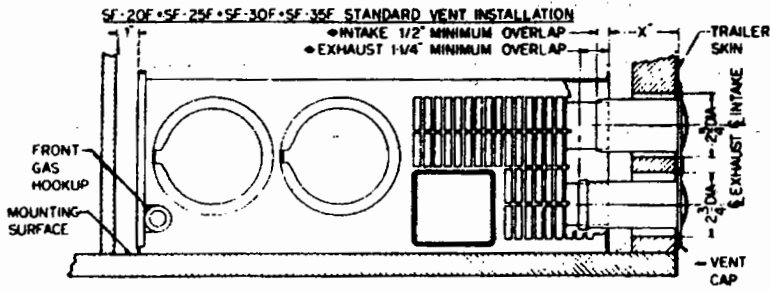


Figure 13

X' DIMENSION	EXTENSION TUBES KIT NO.
0' TO 1 1/2'	520597 • SPECIAL
1 1/2' TO 3'	520548 • STANDARD ★
3' TO 4 1/2'	520549 • SPECIAL
4 1/2' TO 7 1/2'	520550 • SPECIAL
7 1/2' TO 9'	520551 • SPECIAL

◊ NEVER INSTALL THE EXHAUST TUBE WITH LESS THAN 1/4" OVERLAP, OR THE INTAKE TUBE WITH LESS THAN 1/2" OVERLAP

★ STANDARD VENT ASSEMBLY FURNISHED WITH FURNACE. SPECIAL EXTENSION TUBES, IF NEEDED, MUST BE ORDERED SEPARATELY. EXTENSION KITS COME WITH COMPLETE INSTALLATION INSTRUCTIONS

MODELS	DIM. X'
NT-125	3/8"
NT-165	3/8"
NT-205	1"

VENT TUBE INSTALLATION

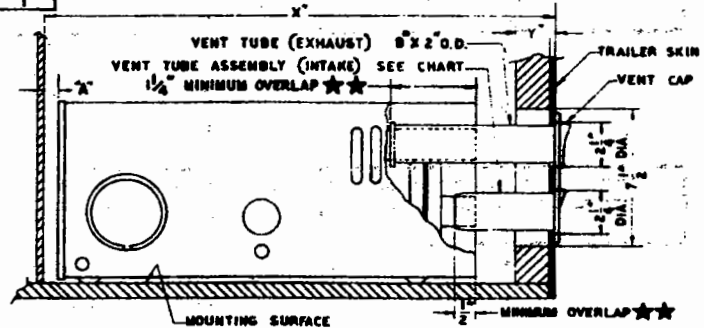


Figure 14

★★ NEVER INSTALL THE EXHAUST TUBE WITH LESS THAN 1/4" OVERLAP, OR THE INTAKE TUBE WITH LESS THAN 1/2" OVERLAP.

PART NO.	INTAKE TUBE LENGTH ONLY	X' DIMENSION
X05066	2" O.D. X 3" STANDARD ★	23 3/8" TO 25 3/8"
X05072	2" O.D. X 5" SPECIAL	25 3/8" TO 27 3/8"
X05078	2" O.D. X 7 1/2" SPECIAL	27 3/8" TO 30 1/8"

★ STANDARD TUBE FURNISHED WITH FURNACE. THE SPECIAL TUBES, IF NEEDED, ARE TO BE ORDERED.

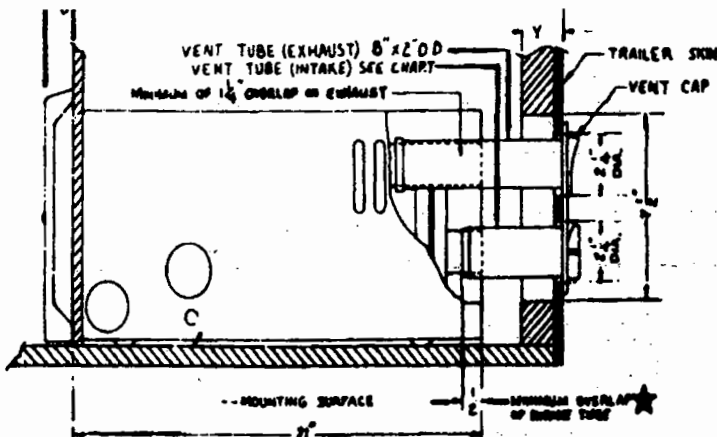


Figure 15

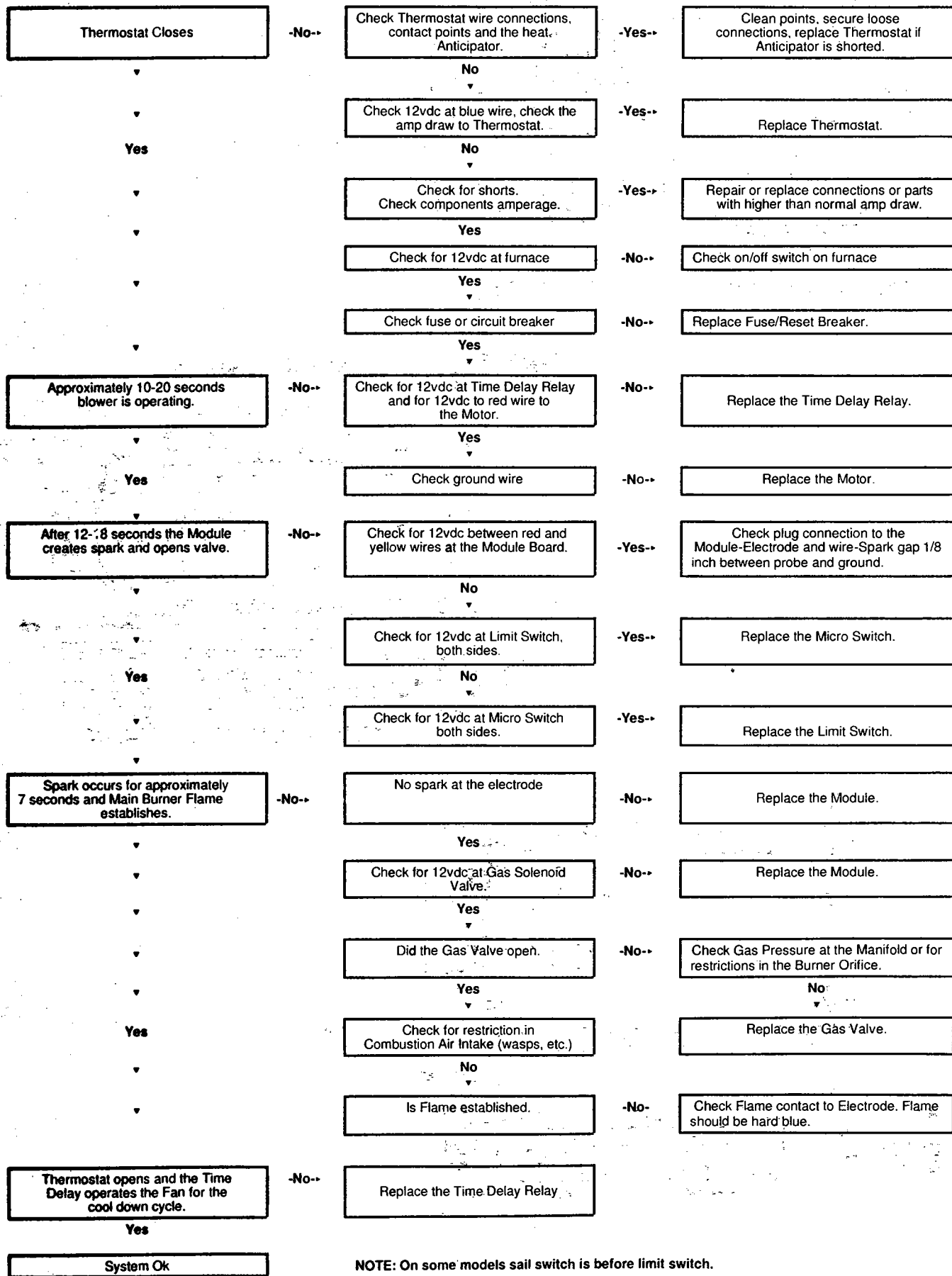
★ NEVER INSTALL INTAKE TUBE WITH LESS THAN 1/2" OVERLAP ON INTAKE AND 1/4" ON EXHAUST.

PART NO.	INTAKE TUBE LENGTH ONLY	X DIMENSION
X05071	2" O.D. X 2 1/2" SPECIAL	21" TO 23 1/2"
X05072	2" O.D. X 5" STANDARD	23 1/2" TO 25 1/2"
X05078	2" O.D. X 7 1/2" SPECIAL	25 1/2" TO 27 1/2"

◊ STANDARD TUBE FURNISHED WITH FURNACE THE SPECIAL TUBES, IF NEEDED, MUST BE ORDERED.

TROUBLE SHOOTING GUIDE

SUBURBAN MODELS NT and SF RV FURNACE HEATING SECTION



NOTE: On some models sail switch is before limit switch.

OPERATION INFORMATION

Figures 16, 17 and 18 illustrate a typical electrical circuit for direct ignition models. The room air blower must be operating at approximately 75% of the normal rpm at 12 volts DC before ignition can occur. This is unlike most residential furnaces which can have burner operation without the blower running.

The operation of a forced draft combustion furnace is controlled through a 12 volt thermostat (24 volt thermostat in the case of a park model furnace). When the thermostat is set above room ambient, the contacts close completing a circuit through the coil of the time delay relay. The contacts on the relay then close, completing a circuit through the windings of the motor and the motor comes on.

As the motor reaches approximately 75% of its normal rpm, the air flow generated by the room air blower pushes against the paddle on the sail switch (sometimes referred to as a microswitch or an air prover switch) sailing it in and closing the contacts. A circuit is then completed through a high temperature limit switch to the module board on a direct ignition furnace.

On a direct ignition furnace, as current passes through the ignition module to the valve, a high voltage spark is produced at the electrode assembly located over the burner. Simultaneously, the valve opens, gas flows into the burner and is ignited by the spark.

All DYNATRIL direct ignition furnaces must have a flame sensing circuit through the control module which senses the presence of main burner flame. If proper flame sensing is not obtained or if the burner fails to light, the furnace must go into 100% lock-out. When lock-out occurs, the valve closes and will remain closed until the thermostat circuit is broken. Re-ignition will not occur automatically.

While 100% lock-out is a safety feature, it can prove to be frustrating for the RV owner who has experienced lock-out problems. Not only can a lock-out problem be difficult at times to diagnose, it will result in continuous operation of the furnace blower (that is, until the thermostat circuit is broken) and can drain the battery.

The solution for this complaint is not to try and eliminate the lock-out function of the furnace, but rather to find the cause for lock-out (which will be covered later), and correct it.

The motor circuit contains a time delay relay (see wiring diagram). The purpose of a time delay relay is to provide a means of the blower operation on initial startup and after the thermostat is satisfied. When the thermostat contacts open, the circuit through the coil of the time delay relay is broken and the contacts open after approximately 3-5 minutes, depending on the furnace model.

MAINTENANCE

Preventative maintenance is essential if an RV owner is to have reliable, safe operation of his furnace. By far, the two most important areas to watch closely in order to assure safe, reliable operation, are the venting and the main burner.

An obstruction in the vent or main burner will reduce the intake of combustion air which results in incomplete combustion. Whenever incomplete combustion occurs, the by-products are carbon monoxide (CO) and soot. If the furnace outside exhaust vent shows black soot may be forming, the furnace should not be operated until the problem is corrected. Possible causes are restriction of combustion air, low gas pressure, dirty burner, slow motor if the motor is defective or voltage supply is low to the extent that it causes CO, by design or furnace should not operate, recirculation of exhaust gases into intake due to improper vent installation, restriction in exhaust.

If operation of the furnace continues under these conditions, it could result in serious injury to the occupants of the RV or even death.

Cleaning of the main burner and an inspection of the venting system should be done at least once a year, preferably just before the beginning of the heating season. Some RV owners and service personnel have the false assumption that if a furnace has not been used, it will not require cleaning. NOT SO! A furnace which has not been used for some time could be more in need of cleaning than a furnace which has been used extensively.

Dust and lint should be removed from the room air blower wheel and sail switch. A build up of dust and lint on the blower wheel can cause the motor to drag and not generate enough air flow to engage the sail switch. Dust accumulation on the sail switch will restrict the travel of the actuator arm to where the air flow across the paddle will not sail it in and complete the valve circuit.

A yearly inspection should be made of all gaskets on the furnace. If any gaskets show signs of leakage or deterioration, they must be replaced.

CAUTIONS

1. Never operate the furnace with the electrode wire disconnected nor with the electrode assembly removed from the furnace.
2. Never use a battery charger to power or test an electronic ignition furnace as they sometimes provide more than 14.5 DC Volts that could damage the module board.
3. Never use a screwdriver on any part of the electrode assembly while the furnace is in operation.
4. Be certain that the spark from the electrode never reaches the flame sensor portion of the electrode assembly. (See Figure 21 for correct gapping.)

FURNACE REMOVAL

To replace parts or service the latter generation furnaces, the M and S series, it is necessary to follow these steps:

1. Disconnect gas and power supply.
2. Remove vent cap assembly by removing applicable screws and one 3" baffle screw. NOTE: A 3" baffle screw is not applicable on all models.
3. Remove the cabinet front.
4. Remove the shipping screw securing the chamber to the cabinet.
5. Pull chamber outward completely to gain access to all controls and parts for adjustment or replacement.

NOTE: Our service technicians are available to assist you in making repairs or parts replacements from 8:00 a.m. to 5:00 p.m. EST, Monday through Friday (except holidays), by calling 423-775-2131.

SERVICE HINTS, DIAGNOSIS AND CORRECTIVE MEASURES FOR THE IGNITION SYSTEMS OF SUBURBAN 12 VOLT DC ELECTRONIC IGNITION GAS FURNACES

Furnaces with Direct Spark Ignition:

Each step in this operation must be completed in the listed order before the next function will occur. To properly diagnose a malfunction and correct it, it must be determined at what step the operation of the furnace failed.

1. When the temperature drops to a set temperature, the wall thermostat contacts close.
2. The fan relay coil is energized in the thermostat relay, completing the circuit to the blower motor. (Some models equipped with a time delay relay have a 5-25 second time delay after the thermostat contacts close).
3. The motor starts and after reaching 75% of its normal rpm, the room air blower wheel or blade activates the sail switch (microswitch), sending current to the temperature limit switch (a normally closed switch), and on to the module board.
4. When energized, the module board has a built-in 15-20 second delay, allowing the combustion air to purge the combustion chamber.
5. The module board supplies a high voltage spark through high tension wire to the electrode assembly, at the same time sending voltage to the gas valve, opening the valve.
6. Burner ignites.
7. The sensor probe signals the presence of flame and the spark stops. (If flame is not established within 7 seconds, the system closes the gas valve and goes into lock-out).
8. The fan switch (normally open) closes on temperature rise. This does not apply to models with the time delay relay. With time delay relay, models will keep the motor running for 3 - 5 minutes.
9. The gas valve closes when either the limit switch or thermostat contacts open.
10. The blower motor goes off when the fan switch or time delay relay opens.

NOTE: Refer to wiring diagram on each model for proper sequence of operation.

Do not use a battery charger to power or test the furnace, as they sometimes provide more than the 14.5 volts DC that will damage the control module board.

All testing and repair should be done by qualified personnel only. Do not use a screwdriver or touch any part of the electrode assembly while the furnace is running.

Do not operate the furnace with the high tension lead wire disconnected to the electrode assembly removed from the burner access plate.

Do not perform any high-pot tests on this furnace!

A. THERMOSTAT IS CALL FOR HEAT, BUT THE BLOWER DOES NOT RUN

1. Check all wiring for correct polarity (refer to wiring diagram), loose connections and possible shorts.
2. Check for 12 volts DC at the furnace connection. Correct power source if "0" volts or below 12 volts DC.
3. Check the wall thermostat and wiring for continuity. Be sure thermostat points are contacting.
4. With thermostat points closed, check for circuit completion across terminals 2 and 4 of the thermostat relay. If no continuity, and wiring to the relay is okay, replace the relay.
5. If there is continuity across terminals 2 and 4, and the wiring to the motor is okay, replace the motor.
6. On time delay relay models, allow 3 - 10 seconds for the circuit to be completed to the motor, as the coil in the time delay relay must heat up to close the contacts.

B. BLOWER IS NOISY

1. Check for lint accumulation or debris on the blower wheels, or possible damage to the wheel.
2. Check for excessive voltage and correct, if present.
3. Check polarity. If reversed, the motor will whine and run backward. Air delivery will be too low to close the microswitch.
4. Wheel may be hitting the housing. Remove the combustion air housing and adjust the wheel with a T-handle 1/8" Allen wrench. On the room air wheel side, a 90° angle 1/8" Allen wrench will be needed to remove or adjust the wheel.
5. At times, insects such as mud daubers and wasps will build nests inside the combustion air housing, coming in from the fresh air intake. Remove any foreign materials and check the combustion air wheel for warpage.
6. If the bushings of the motor are worn and noise persists, replace the motor. Check both wheels for balance and, if not proper, replace the wheel or wheels.

C. BLOWER RUNS BUT BURNER DOES NOT LIGHT

1. Make sure the manual shut-off valve is in the "ON" position.
2. Possible air in the gas lines. Reset the thermostat and cycle the furnace several times to bleed the system.
3. Check the gas supply. Be certain 11" WC pressure is present while the furnace is operating. If not, adjust the pressure regulator.
4. Check the wiring for proper polarity.
5. Check for proper clearances down the sides and across the top for return air to feed the room air blower. Each model furnace has a minimum requirement of return air outlined in the installation manual. With improper return air, the air volume may not actuate the sail switch which sends voltage to the module board. All models must have 1" clearance along the sides and across the top except the NT-34 and NT-40 models, which require 2" on the sides and top.
6. Check the ducting of the furnace to determine proper air flow away from the furnace. See the installation manual for correct duct requirements. If the ducts have severe bends or kinks in the hose, the air flow may be restricted enough to cause the microswitch to bounce back from the volume of air hitting the cabinet front. This again will not allow voltage to the module board. Many times, a furnace will operate satisfactorily on the bench or without the cabinet door on the unit. Check for microswitch engagement when this happens. Correct ducting for proper air flow and/or replace the microswitch (could be stiff).
7. If the furnace will ignite with the cabinet front off, but will not with the cabinet front secured, and the ducting is free, check the gaskets around the burner access door. If the burner access is not properly sealed, air may be deflected from the cabinet front into the burner area, thus disturbing air and gas mixture for proper ignition.
8. Check for 12 volts DC on both sides of the limit switch. If there is voltage on one side of the switch, but not on the other, replace the switch. If voltage is present on both sides of the switch, proceed to Step 9.
9. Check for 12 volts DC at the power terminals on the module board (refer to the wiring diagram-red wire positive and yellow wire negative). If no voltage, check wiring from the sail switch. Correct wiring. Replace switch.
10. If sparking audible approximately 15 seconds after the blower starts, but no ignition, check the high tension wire for continuity, grounding and secure connections. Repair if necessary.
11. Make sure electrode is not grounding to burner, the gap between the spark probe and the ground probe is 1/8" (see Figures 19 and 21), and the ceramic insulator is not cracked, broken or sooted. Adjust, clean or replace as necessary.

12. If sparking is not audible, check the module board and observe if the neon bulb on the circuit board is flashing during the trial for ignition. Remove the white plastic wire connector from the circuit board. Clean the board terminals on back with a soft rubber eraser. Check the little pin terminals in the plastic connector for good contact. Reinstall connector. If the tube does not flash, replace the module board.
13. Check for voltage at the gas valve during the trial for ignition. If no voltage, and connections are okay, replace the board.
14. If the valve does not open with 12 volts DC present, replace the valve.
15. If the electrode sparks and the valve opens but the burner will not light, check the gas supply for 11" WC pressure to the main burner orifice. If 11" is present to the valve but not to the orifice, replace the valve. Check vent and air intake installation. Check the main burner for correct relationship to the electrode assembly (burner should be 3/16" from the spark probe and sawports or charge ports directly under the spark gap). Check main burner for soot build-up in ports. (See Figure 19 for SF models correct electrode adjustment.) Clean cast-iron burners by passing a hacksaw blade through the sawports, being careful not to enlarge the openings. Wirebrush stainless tube burners to remove build-up.
16. Check the combustion air wheel for proper rotation and proper air flow.

D. BURNER IGNITES BUT SHUTS OFF

1. Check to be certain that the flame sensor is over slots in the main burner and that the main burner flame is burning against the tip of the flame sensor - adjust by bending the sensor probe. NOTE: Sensor probe should be in the inner blue cone of the burner flame, approximately 1/4" to 5/16" above the burner. See Figure 19 for SF furnace electrode adjustment.
2. If wire connections are okay, check for continuity through the flame sensor wire.
3. If the continuity of the flame sensor wire is okay, adjust the position of the sensor probe, check air adjustment and check for carbon deposits on the sensor probe. Replace electrode if necessary.
4. When the flame sensor circuit is generating at least 7 microamps on NT Models or 2 to 4 microamps on SF Models, but the burner still goes off and into lock-out, replace the module board.

E. MAIN BURNER WILL NOT SHUT OFF

1. Make sure the thermostat and contact points are open.
2. Check voltage at the valve terminals - should be "0" voltage.
3. Disconnect leads from the valve. If it does not shut off, replace the valve.

F. CONTINUOUS SPARKING OF THE ELECTRODE

1. Check the sensor wire and high tension wire for good connections. Check for separations in either wire - repair or replace. Check to be certain that the flame sensor probe is over the slots in the main burner and that the main burner flame is burning against the tip of the sensor probe. Adjust by bending the probe into flame. The burner flame should be a hard blue flame, laying down on the burner.

G. ERRATIC BLOWER OPERATION

1. Check thermostat wires to furnace.
2. Check thermostat wires at thermostat.
3. Check thermostat points open/close on thermostat.
4. Check voltage at thermostat.
5. Check for shorts in wiring.
6. If blower runs for short period of time, stops- starts again - stops, check amp draw/possible thermal overload switch in motor defective. Replace motor.
7. If blower runs after burner shuts down and thermostat is satisfied, replace relay delay.

H. UNIT GOING INTO LOCK-OUT ONLY ONCE IN A WHILE

1. Thoroughly check the electrode and burner air adjustments.
2. Lock-out can occur if the gas pressure fluctuates at the time the thermostat calls for heat. Pressure fluctuations can be caused by a malfunctioning gas bottle regulator, and obstruction or a kink in the gas line, or moisture in the gas bottle regulator or in the gas lines. It is difficult to check for these fluctuations that will not noticeably affect any other appliance in the coach. However, isolating the furnace from the coach gas system will determine if the gas system is responsible. This isolation procedure can be done by connecting a separate upright bottle, regulator and gas line directly to the furnace, eliminating the coach gas system. If the occasional lock-out still exists, then the furnace should be thoroughly tested to determine the cause; however, if the furnace works properly on this separate system, then the coach gas system should be checked.
3. Check the furnace return air and warm air discharge to be certain sufficient air flow is present to engage the microswitch every time.
4. Check the microswitch to be sure it moves freely.
5. Remove the electrode and burner and clean them thoroughly.
6. When moisture in the gas system is suspected as being the problem, especially where the horizontal type gas bottle is being used, the following steps should be taken to prepare the gas system against further moisture problems.

CORRECTION MEASURES

1. Disconnect gas bottle and drain it completely dry of all gas and all moisture.
2. Disconnect and blow out all gas lines completely dry.
3. Check pressure regulator on the gas bottle. Replace if necessary.
4. Add the drying agent. One half pint of methanol alcohol per 100 pound bottle capacity is recommended.

PRECAUTIONS

1. Never fill the gas bottle over 80%.
2. Do not use the gas bottle completely dry to avoid using up the drying agent.

We have found the above procedures to be effective in solving most occasional lock-out problems, especially where the horizontal type gas bottle is used. All of these steps must be performed as described for the preparation of a contaminated gas system to be 100% effective.

I. REPEATED MODULE BOARD FAILURES

1. Check to be certain that the electrode spark is not sparking against the flame sensor portion of the electrode assembly.
2. Check to be sure the module board or high voltage wires are not shorted to the chamber wrapper or other furnace parts.
3. Be sure the insulator covering the electrode wire connection on the coil of the module board is in place and the insulator behind the module board is in place.
4. Check the high voltage - 14.5 volts DC maximum!! High voltage could intermittently produce volt surges or AC spikes which could damage the module board. Supply voltage to furnace should be checked if repeated module board failures occur. Converter voltage should be wired in parallel with battery to provide constant voltage supply and to filter AC spikes or volt surges. NOTE: Refer to Connecting Power Supply in manual.
5. Be sure duct connections to the furnace are airtight. Seal duct collar connections to the furnace cabinet with metal duct tape, if necessary, to prevent hot air leakage. No air leakage should exist anywhere in the duct system, especially at connections on the furnace cabinet.
6. The high voltage electrode wire should be routed away from any 12 volt wires (except at grommet for sensor wire). No wires should pass over the module board.
7. Be sure the sensor wire terminal is tightly affixed to the sensor probe.
8. Be sure high voltage electrode wire is in good condition and properly positioned onto pierce point electrode or spade terminal.

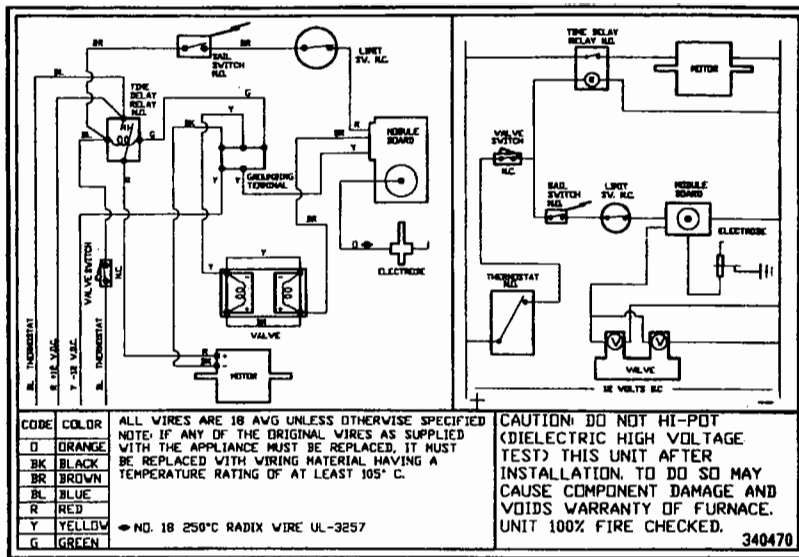


Figure 16

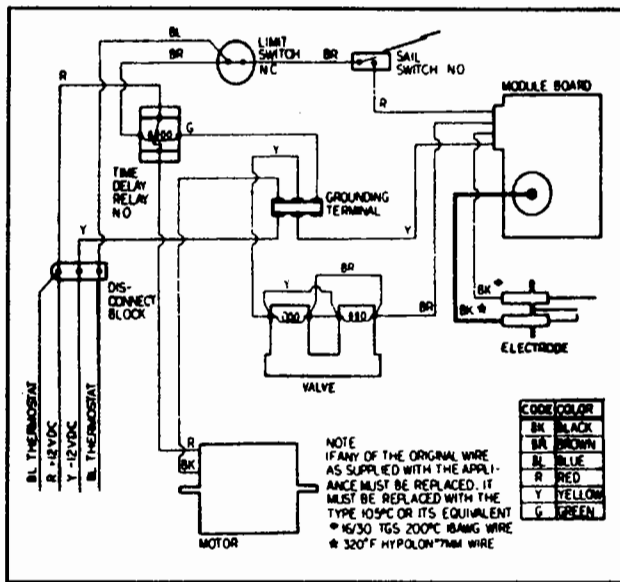


Figure 17

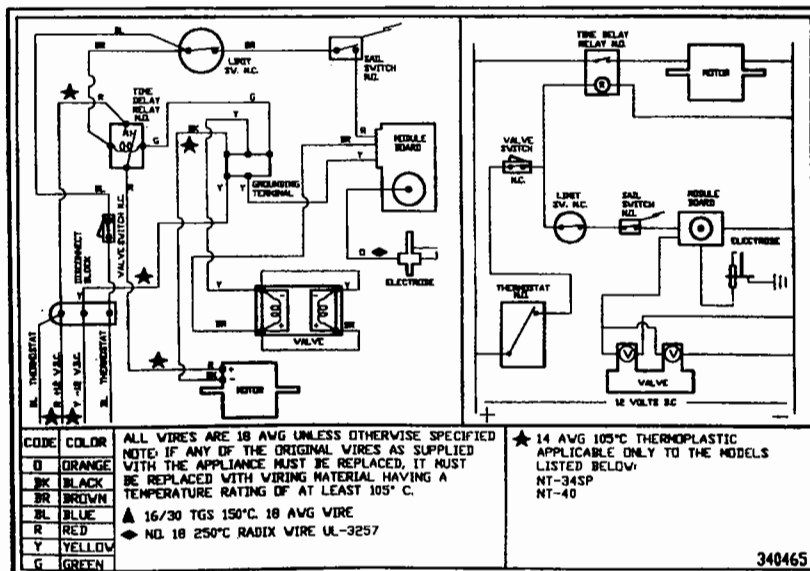


Figure 18

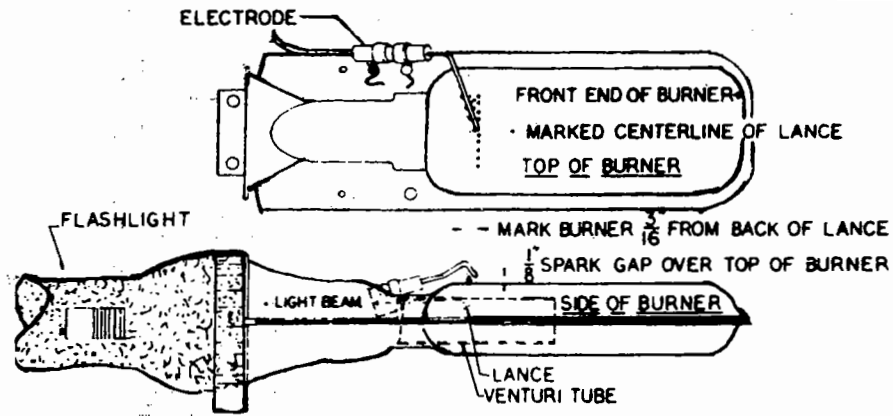


Figure 19

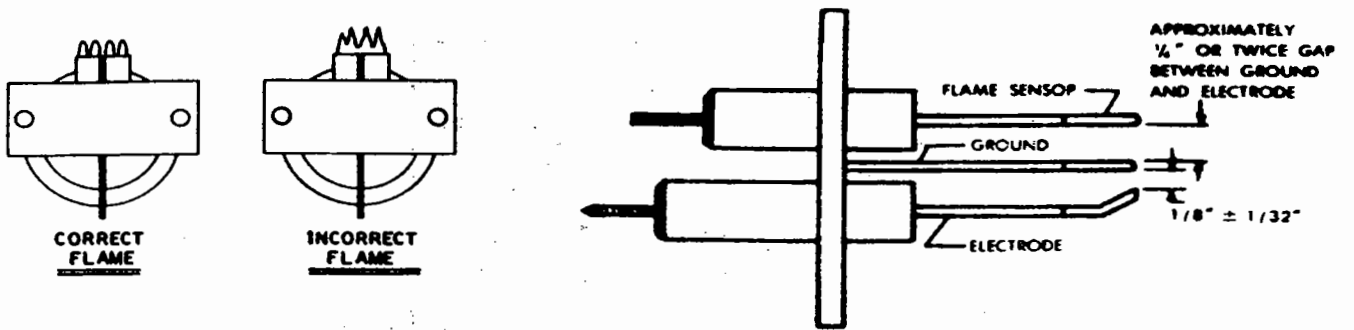


Figure 20

ELECTRODE ASSEMBLY

Figure 21

Direct Spark 3-Try Ignition
 Model Series 05-30
 Part #231741

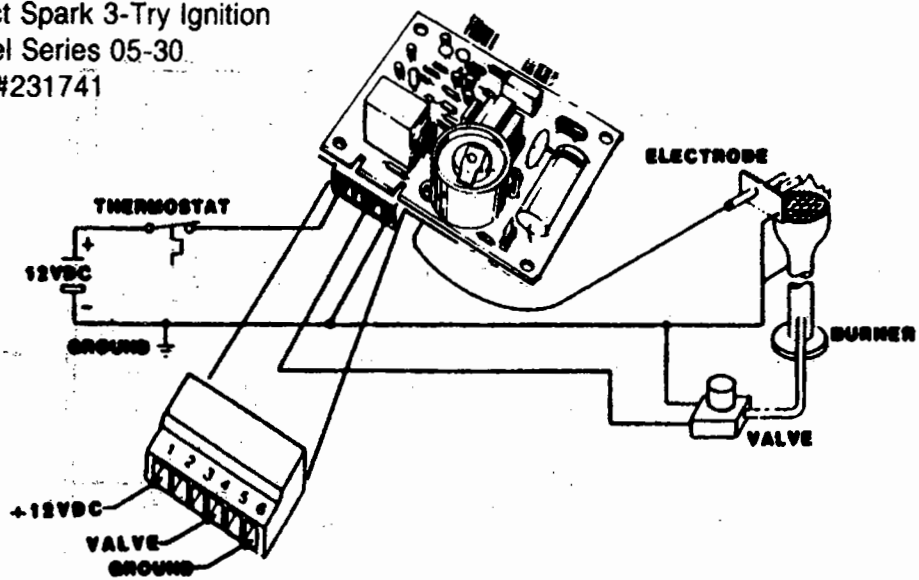


Figure 22

SERVICE CENTER INFORMATION

Suburban Manufacturing Company is always interested in adding qualified service agencies to our list of Recommended RV Service Centers. Our service centers receive substantial price breaks on all parts and units ordered from the factory. Their names, addresses and phone numbers then appear in our Recommended RV Service Center List, which is supplied with each new unit. Customers who write or phone our office are referred to the service agency nearest them and they receive the latest revision of the list for their convenience when traveling.

If you would like more information on having your agency listed as a Suburban Recommended RV Service Center, please contact our Service Department at:

Suburban Manufacturing Company
PO Box 399
Dayton, TN 37321
423-775-2131

WARRANTY REPAIRS

The following Flat Rate Labor Schedule shows our standard time allowances for labor on warranty repairs. In order to obtain reimbursement, the original work order or warranty claim form must be submitted to our office and must include the furnace model number, serial number and date of purchase. In the event that the repair involved replacement of a module board, gas valve, motor or combustion chamber, the defective part must also be returned to our factory for inspection; the part and necessary paperwork should be returned together. Parts on approved claims will be replaced at no charge.

New factory-authorized replacement parts will be replaced at no charge if found to be defective within 90 days; labor is not paid for the part replacement. Defective parts must be returned to our factory for inspection, along with the Bill of Sale showing the purchase date of the part. Should our inspection reveal that the part is not defective, or was not the correct replacement, it will be returned to you and no further action will be taken.

NOTE: Any component part found to be defective must be replaced. Do not attempt to repair component parts. Use only factory-authorized replacement parts.

FOR IN-WARRANTY RECREATIONAL VEHICLE FURNACES ONLY

All Models Forced Air Furnaces

<u>Description of Replacement Part</u>	<u>Set-Up Time</u>	<u>Replacement Time</u>
Replace Gas Valve .....	.5	.5
Replace Manual Shut-Off Valve .....	.25	.25
Replace Main Burner .....	.5	.5
Replace Microswitch .....	.5	.25
Replace Motor .....	.5	1.0
Replace Time Delay Relay .....	.5	.3
Replace Blower Wheel .....	.5	.4
Replace Combustion Chamber (First Year Only) .....	.5	1.5
Replace Thermostat .....	.25	.2
Replace Transformer .....	.5	.5
Replace Electrode .....	.25	.25
Replace Electrode "SF" Models .....	.5	.5
Replace Electrode Wire .....	.5	.2
Replace Module Board .....	.5	.25
Replace Limit Switch .....	.5	.2

All other jobs that are listed contact Suburban factory Service Department for approval.

All flat rates include diagnostic/set-up time and, when applicable, gas leak test.

NOTE: When more than one component is defective, compute the total of both replacement times but only one set-up time.