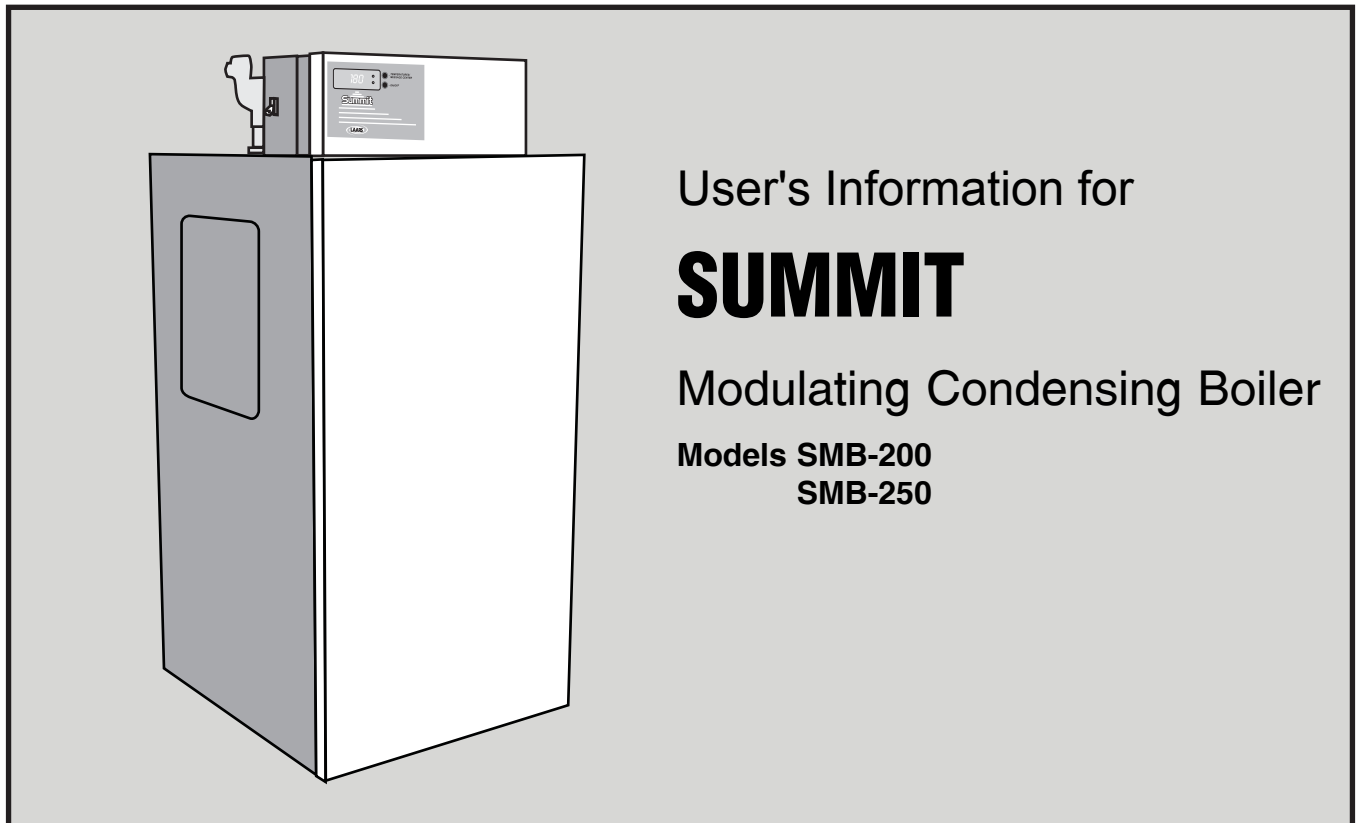




User's Information for

SUMMIT

Modulating Condensing Boiler

Models SMB-200
SMB-250

FOR YOUR SAFETY: This product must be installed and serviced by a professional service technician, qualified in hot water boiler installation and maintenance. Improper installation and/or operation could create carbon monoxide gas in flue gases which could cause serious injury, property damage, or death. Improper installation and/or operation will void the warranty.

⚠ WARNING

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

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

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a nearby phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency, or gas supplier.

⚠ AVERTISSEMENT

Assurez-vous de bien suivre les instructions données dans cette notice pour réduire au minimum le risque d'incendie ou d'explosion ou pour éviter tout dommage matériel, toute blessure ou la mort.

Ne pas entreposer ni utiliser d'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de tout autre appareil.

QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ:

- Ne pas tenter d'allumer d'appareils.
- Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones dans le bâtiment où vous vous trouvez.
- Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
- Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service des incendies.

L'installation et l'entretien doivent être assurés par un installateur ou un service d'entretien qualifié ou par le fournisseur de gaz.

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FOR YOUR SAFETY READ BEFORE OPERATING

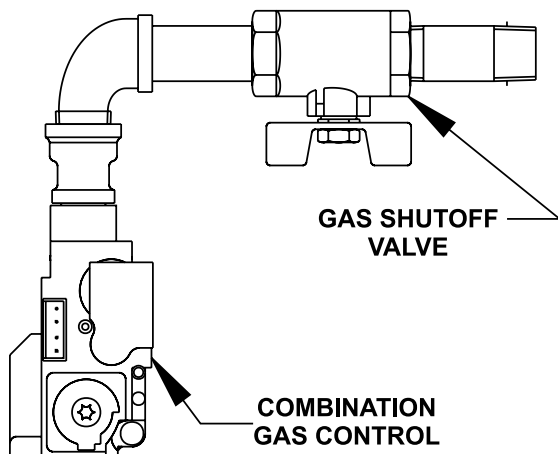
⚠ WARNING

If you do not follow these instructions exactly, a fire or explosion may result, causing property damage, personal injury or loss of life.

- A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS**
- Do not try to light any appliance.
 - Do not touch any electric switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- C. If you cannot reach your gas supplier, call the fire department.
- C. Turn off gas shutoff valve (located above the combination gas control) so that the handle is aligned across the gas pipe. If the handle will not turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part may have been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which may have been under water.

OPERATING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Set the thermostat to lowest setting.
3. Turn off all electric power to the appliance.
4. This appliance is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
5. Remove front cover.
6. Turn gas shutoff valve to "off". Handle will be aligned across gas pipe. Do not force.
7. Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to next step.
8. Turn gas shutoff valve to "on". Handle will be aligned along gas pipe.
9. Turn on all electric power to appliance, depress on/off button on control panel, depress black button on top of control panel.
10. Replace front cover.
11. Set thermostat to desired setting.
12. If the appliance will not operate, follow the instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.



TO TURN OFF GAS TO APPLIANCE

1. Set the thermostat to lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. Remove front cover.
4. Turn gas shutoff valve "off". Handle will be aligned across gas pipe. Do not force.
5. Replace front cover.

PAR MESURE DE PRUDENCE, LISEZ CE QUI SUIT AVANT DE FAIRE FONCTIONNER L'APPAREIL

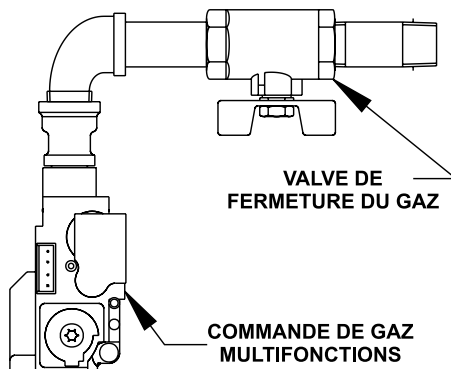
⚠ MISE EN GARDE

Si vous ne suivez pas ces instructions à la lettre, un incendie ou une explosion pourrait se produire et causer des dommages matériels, des blessures personnelles ou même la mort.

- A. Cet appareil n'est pas doté d'une veilleuse. Il est équipé d'un dispositif d'allumage qui allume automatiquement le brûleur. Ne tentez pas d'allumer le brûleur manuellement.
- B. AVANT D'UTILISER, vérifiez s'il n'y a pas d'odeur de gaz près de l'appareil. Vérifiez s'il n'y a pas d'odeur de gaz près du plancher, car le gaz est plus lourd que l'air et peut se déposer sur le plancher.
QUE FAIRE EN CAS D'ODEUR DE GAZ
 - N'essayez pas d'allumer n'importe quel appareil que ce soit.
 - Ne touchez pas à un commutateur électrique. N'utilisez pas le téléphone de votre résidence.
 - Appelez immédiatement votre fournisseur de gaz en utilisant le téléphone de votre voisin. Suivez les instructions de votre fournisseur de gaz.
- C. Si vous ne pouvez joindre votre fournisseur de gaz, appelez le service des incendies.
- C. Fermez la soupape d'arrêt de gaz (située au-dessus de la commande de gaz multifonctions) de sorte que la poignée soit perpendiculaire au tuyau de gaz. Si vous ne pouvez tourner la poignée à la main, n'essayez pas de la réparer. Communiquez avec un technicien de service qualifié. Le fait de forcer ou de tenter de réparer la poignée pourrait causer un incendie ou une explosion.
- D. N'utilisez pas cet appareil si l'une des pièces a été plongée sous l'eau. Communiquez immédiatement avec un technicien de service qualifié afin qu'il inspecte l'appareil et remplace toute pièce du système de commande et toute commande de gaz qui aurait été plongée sous l'eau.

NOTICE D'UTILISATION

1. ARRÊTEZ ! Lisez l'information de sécurité ci-dessus, sur cette étiquette.
2. Réglez le thermostat au réglage le plus bas.
3. Coupez l'alimentation électrique à l'appareil.
4. Cet appareil est doté d'un dispositif d'allumage qui allumera automatiquement le brûleur. Ne tentez pas d'allumer le brûleur manuellement.
5. Retirez le couvercle avant.
6. Mettez la soupape d'arrêt de gaz à «off». La poignée se trouvera perpendiculaire au tuyau de gaz. N'employez pas de force.
7. Attendez cinq (5) minutes afin que le gaz se dissipe. Si vous croyez sentir une odeur de gaz, ARRÊTEZ ! Reportez-vous aux instructions B ci-dessous, sur cette étiquette. S'il n'y a pas d'odeur de gaz, passez à la prochaine étape.
8. Mettez la soupape d'arrêt de gaz à «on». La poignée sera parallèle au tuyau de gaz.
9. Rétablissez l'alimentation électrique à l'appareil, appuyez sur le bouton «on/off» qui se trouve sur le panneau de commande, appuyez sur le bouton noir qui se trouve sur le panneau de commande.
10. Remplacez le couvercle avant.
11. Réglez le thermostat à la température désirée.
12. Si l'appareil ne fonctionne pas, suivez les directives relatives à la fermeture de l'alimentation en gaz et communiquez avec votre technicien de service ou le fournisseur de gaz.



FERMETURE DE L'ALIMENTATION EN GAZ

1. Réglez le thermostat au réglage le plus bas.
2. Coupez toute alimentation électrique à l'appareil si celui-ci doit faire l'objet d'un entretien.
3. Retirez le couvercle avant.
4. Mettez la soupape d'arrêt de gaz à «off». La poignée se trouvera perpendiculaire au tuyau de gaz. N'employez pas de force.
5. Remplacez le couvercle avant.

SECTION 1.

Caring For Your Summit

Your Summit will require very little maintenance. However, as with any fine appliance, there are certain steps you should take to insure continuing optimum performance.

1A. General Care

Keep your Summit area clean and free from combustible materials, gasoline and other flammable vapors and liquids.

If you desire, clean the jacket surfaces with a damp cloth and mild soap. Do not use flammable cleaning materials.

Keep vent terminal free of obstructions — do not pile snow against vent terminal.

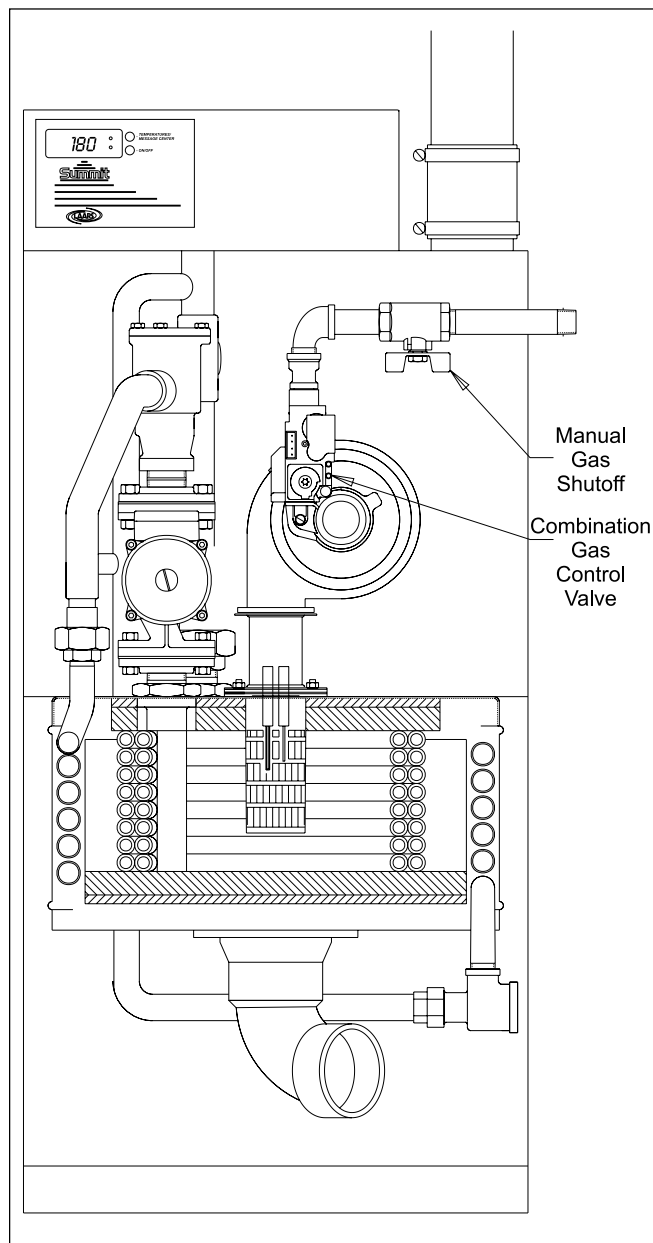


Figure 1. Cutaway View of Appliance.

1B. Annual Inspection of Flue and Vents

You should visually inspect the vent pipe once a year. Should any deterioration exist, have the affected parts replaced.

1C. Shutting Down the Summit Boiler

If the need arises to shut down your boiler, the following steps are required.

1. Switch off main disconnect switch (located on left side of unit).
2. Close manual gas shutoff valve above combination gas control valve (inside unit).
3. Close main manual gas valve.
4. If freezing is anticipated, drain Summit and be sure to also protect building piping from freezing.

The above steps may require qualified service personnel.

1D. To Restart Your Summit

Should the need arise, you may have to restart your Summit. Follow these steps:

1. Momentarily depress reset button on top of control panel
2. Turn up the thermostat to call for heat.
3. In approximately 2 seconds, the blower will operate and ignition will occur after 35-40 seconds. It may take as long as 2½ minutes.
4. If it does not occur, wait 5 minutes and then repeat steps 1 through 3.
5. If, after three attempts, you still do not get ignition, shut down your Summit and call your service man.

If drained, follow these steps:

1. Follow "Installation Manual" for proper filling and purging.
2. Turn on main manual gas valve.
3. Remove front cover and turn on manual gas shutoff valve, above combination gas control valve.
4. Switch on main disconnect switch, depress on/off button on front of control panel, and depress black reset button on top of control panel (pump and blower will start and igniter will be energized, after 35 seconds the gas valve will be energized, and ignition will occur). If ignition does not occur within 2½ minutes switch "off" main disconnect switch, wait 5 minutes and switch "on" again. If after three attempts ignition does not occur, initiate shutdown procedure and call for service.

1E. Annual Inspection of Condensate Drain System

Visually inspect the condensate drain lines. If either clear plastic line appears to be full of condensate (water), loosen the nut on the jacket that retains the line and remove the line from the jacket and clear any obstruction from the line. Replace line and tighten nut.

1F. In the Event of Power Failure

The Summit cannot be operated during an electrical power outage. If there is an extended power outage with danger of freezing, then the Summit (and all other water systems) should be completely drained. When draining the Summit, turn off gas and turn off main power switch. When replacing in service, refer to start-up instruction for proper filling and purging.

1G. Full Service Every Three Years

In addition to the annual visual inspections by the owner, a qualified service agency should conduct a detailed inspection of all flue product carrying areas of the boiler and vent system. This should be done in accordance with the service instruction in the "Installation and Operating Instructions Manual" for the Summit.

⚠ WARNING

Do not use this boiler if any part may have been under water. Immediately call a qualified service technician to inspect the boiler and to replace any part of the control system and any gas control which may have been under water.

⚠ WARNING

Should overheating occur or the gas supply fail to shut off, do not turn off or disconnect the electrical supply to the pump. Instead, shut off the gas supply at a location external to the appliance.

⚠ AVERTISSEMENT

En cas de surchauffe ou si l'admission de gaz ne peut être coupée, ne pas couper ni débrancher l'alimentation électrique de la pompe. Fermer plutôt le robinet d'admission de gaz à l'extérieur de l'appareil.

FOR SERVICE

Contact your installing contractor, gas utility, Laars dealer or call Laars for the nearest authorized representative in your area.

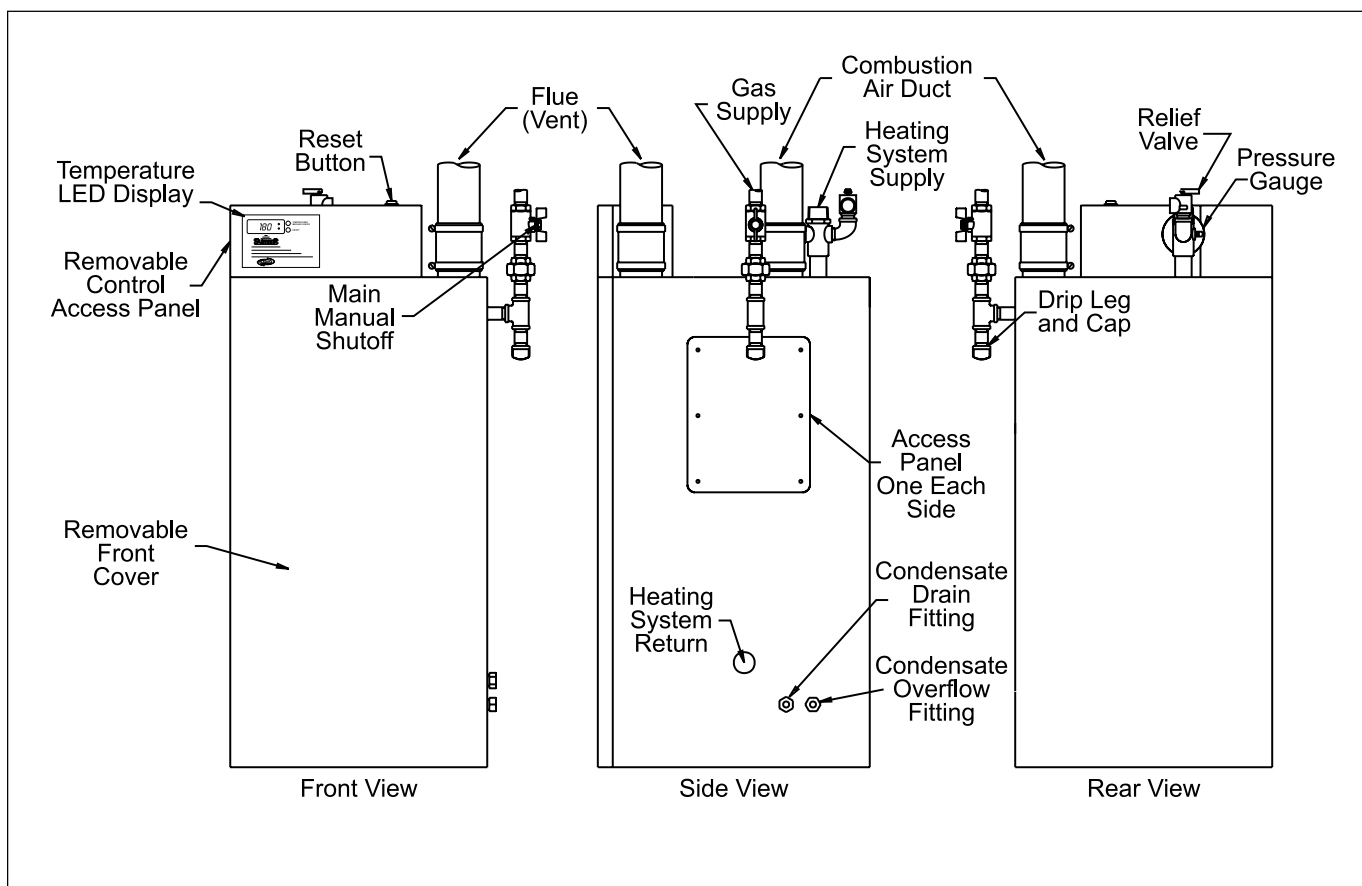


Figure 2. Components Identification.

Message	Identifies	To read or change mode
bFt	Appliance Flow Temp (Supply)	During operation display will default to supply temperature. Press temperatures button repetitively. To sequence through three temperature indicators.
OSt	Outdoor Air Temp	
CSP	Calculated Set Point	
on	On	Appliance in standby mode: will change to bFt on call for heat.
OFF	Off	Appliance switched OFF. Press ON/OFF button for "ON".
LO	Lock Out	After three trials for ignition, will stand in lockout. Press reset on top of panel to retry.
FL3	Third Failure (Failure Level)	To monitor, press and hold temperature button for five seconds. Display will indicate first of eight fault memories (FL1). Then display one of seven fault conditions that occurred previously. Display will sequence through the eight memories.
F-3	Fault Code (Three) There are 7 different Fault Codes defined.	
ICE	Freeze Protection	Sensor has detected return temperature below 39°F (4°C).

Figure 3. Typical Display Identification Codes.

1H. Trouble Shooting - Fault Codes

The Summit boiler is controlled by a Pactrol integrated boiler control (PCB) which provides seven fault codes with eight memories. To obtain fault messages press-in on the message center fault button until the first fault code (FL1) is displayed. The last recorded fault will appear e.g. F-4 (flow thermistor faulty - open or shorted). The control will then sequence through all eight memories, indicating alternately the fault number and the fault code (FL1, F-?; FL2, F=?; ..., FL8, F=?). The fault number in fault code FL1 is the most recent fault.

1H-1. Fault Code Identification

The following seven fault codes may be observed:

- F- Error corrected, control in auto reset period (10 seconds)
- F-0 No fault has occurred
- F-1 Error occurred while reading fault logic of main control
- F-2 Over heat thermostat (Boiler or Flue) has operated (open circuit)
- F-3 Fan fault
- F-4 Flow thermistor faulty (open or short-circuited)
- F-5 Differential Pressure Switch Contacts opened



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