

## USER'S MANUAL FOR R7DA SERIES

### SINGLE PACKAGE GAS HEATING/ELECTRIC COOLING HIGH OUTSIDE AIR AND DOAS ROOFTOP UNIT



## ⚠ WARNING ⚠

### FIRE OR EXPLOSION HAZARD

- Failure to follow safety warnings exactly could result in serious injury or property damage.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.
- 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.
- Leave the building immediately.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas suppliers instructions.
- If you cannot reach your gas supplier, call the fire department.

**DO NOT DESTROY. PLEASE READ CAREFULLY. KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.**

## GENERAL INFORMATION

This gas heating/electric cooling unit has been designed and built to provide many years of safe and dependable comfort provided that it is properly installed and maintained. With regular maintenance, this unit will operate satisfactorily year after year. Abuse, improper use, and/or improper maintenance can shorten the life of the appliance and create unsafe hazards. A regular service and maintenance schedule should be established to ensure efficient and safe operation of the unit. Maintenance instructions are provided in this manual.

Keep this literature where you have easy access to it in the future. If a problem occurs, check the instructions and follow recommendations given. If these suggestions don't eliminate your problem, call your servicing contractor.

### References

Type	Form	PN
Installation	I-R7DA	1024294
Controls	CP-P125-D19-D21-D22-D23	1024315
Replacement parts	P-R7DA	D303299

### Important Safety Information

Please read all information in this manual thoroughly and become familiar with the capabilities and use of your appliance before attempting to operate or maintain this unit. Pay attention to all dangers, warnings, cautions, and notes highlighted in this manual. Safety markings should not be ignored and are used frequently throughout to designate a degree or level of seriousness.

**DANGER:** A danger statement describes a potentially hazardous situation that if not avoided, will result in severe personal injury or death and/or property damage.

**WARNING:** A warning statement describes a potentially hazardous situation that if not avoided, can result in severe personal injury and/or property damage.

**CAUTION:** A caution statement describes a potentially hazardous situation that if not avoided, can result in minor or moderate personal injury and/or property damage.

**NOTE:** A note provides important information that should not be ignored.

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## ⚠ DANGER ⚠

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- **To avoid possible equipment damage, fire, or death, the following instructions must be observed regarding unit location, combustion air requirements, and operational procedures:**
  - **To achieve optimum performance and minimize equipment failure, it is recommended that periodic maintenance be performed on this unit. The ability to properly perform maintenance on this equipment requires certain mechanical skills and tools. Please consult your dealer for maintenance information and availability of maintenance contracts.**
  - **The area around the gas heating/electric cooling unit and the vicinity of any other gas appliances must be kept clear and free of combustible materials, gasoline, and other flammable vapors and liquids. Do not store or use flammable items such as paint, varnish, or strippers in the vicinity of the unit.**
  - **Do not use the area around the unit as a storage area. This area must be kept clean and clear of loose or exposed insulation materials. Examine the unit's area when it is installed or when insulation is added, since some insulation materials may be combustible.**
  - **Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the unit and to replace any part of the control system and any gas control which has been under water.**
  - **Familiarize yourself with the controls that shut off the gas and electrical power to the unit. If the unit is to be shut down for an extended period of time, turn off both the gas and electrical power. For your safety always turn off both the gas and electrical power before performing service or maintenance on the furnace. If the gas supply must be shut off, refer to the gas valve label (see [Figure 1](#) or [Figure 2](#)).**
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## FOR YOUR SAFETY READ BEFORE OPERATING

## POUR VOTRE SÉCURITÉ, VEUILLEZ LIRE CE QUI SUIT AVANT L'UTILISATION

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

**AVERTISSEMENT :** Si ces directives ne sont pas respectées à la lettre, un incendie ou une explosion pourrait survenir et causer des dommages matériels, des blessures ou des pertes de vie.

- 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 electrical 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.
  - If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or move by hand, do not 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 has 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 has been under water.

- A. Cet appareil n'est pas doté d'une veilleuse d'allumage. Il est pourvu d'un dispositif d'allumage qui allume automatiquement le brûleur. N'essayez pas d'allumer le brûleur de façon manuelle.
- B. AVANT DE FAIRE FONCTIONNER L'APPAREIL, sentez tout autour de l'appareil pour déceler toute odeur de gaz. Sentez à proximité du sol, car certains gaz sont plus lourds que l'air et se déposent sur le sol.
- QUE FAIRE S'IL Y A UNE ODEUR DE GAZ.
- N'essayez d'allumer aucun appareil.
  - Ne touchez à aucun interrupteur électrique; n'utilisez aucun téléphone dans le bâtiment.
  - Appelez immédiatement le fournisseur de gaz en employant le téléphone d'un voisin. Respectez les instructions du fournisseur de gaz.
  - Si personne ne répond, appelez le service des incendies.
- C. Enfoncez ou faites tourner le robinet à gaz à la main seulement. N'utilisez jamais d'outils. S'il n'est pas possible de faire tourner ou d'enfoncer le robinet à la main, n'essayez pas de le réparer. Faites appel à un spécialiste. Si vous forcez l'interrupteur ou tentez de le réparer, cela pourrait causer un incendie ou une explosion.
- D. N'utilisez pas cet appareil si l'une de ses pièces a été immergée dans de l'eau. Appelez immédiatement un technicien qualifié pour inspecter l'appareil et remplacer toute pièce du système de commande ou toute commande de gaz qui a été immergée dans de l'eau.

## OPERATING INSTRUCTIONS

## DIRECTIVES DE FONCTIONNEMENT

1. **STOP!** Read the safety information above on this label.
2. Set the thermostat to the lowest setting.
3. Turn off all electrical power to the appliance.
4. The appliance's ignition device automatically lights the burner. Do not try to light burner by hand.
5. Remove the control access door/panel (upper door if two-door model).
6. Move the gas control switch to the "OFF" position. (See Figure 1)
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in above information. If you don't smell gas, go to the next step.
8. Move the gas control switch to the "ON" position. (See Figure 1)
9. Replace the control access door/panel (upper door if two-door model).
10. Turn on all electrical power to the appliance.
11. Turn the thermostat to a 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.

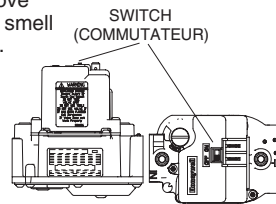


Figure 1

1. **ARRÊTEZ!** Veuillez lire les renseignements de sécurité à la partie supérieure de la présente étiquette.
2. Réglez le thermostat au réglage le plus bas.
3. Coupez l'alimentation électrique à l'appareil.
4. Cet appareil ménager étant doté d'un système d'allumage automatique, n'essayez pas d'allumer le brûleur manuellement.
5. Retirez le panneau/volet d'accès de commande (panneau supérieur s'il s'agit d'un modèle à deux panneaux).
6. Réglez l'interrupteur de commande du gaz en position « OFF » (arrêt). (Voyez la Figure 1.)
7. Attendez cinq (5) minutes pour s'assurer de la dissipation du gaz. Vérifiez alors s'il y a une odeur de gaz, y compris au niveau du sol. En cas d'odeur, **ARRÊTEZ LE PROCÉDÉ!** Suivez les instructions ci-dessus (Section B). Si vous ne remarquez aucune odeur de gaz, passez à l'étape suivante.
8. Réglez l'interrupteur de commande du gaz en position « ON » (marche). (Voyez la Figure 1.)
9. Remettez le panneau/volet d'accès de commande en place (panneau supérieur s'il s'agit d'un modèle à deux panneaux).
10. Allumez toute alimentation électrique à l'appareil.
11. Ajustez le thermostat à la position désirée.
12. Si l'appareil ne fonctionne pas, suivez les directives de la section « Pour couper l'alimentation en gaz de l'appareil » et appelez un technicien ou le fournisseur de gaz.

## TO TURN OFF GAS TO APPLIANCE

## POUR COUPER L'ALIMENTATION EN GAZ DE L'APPAREIL

1. Set the thermostat to the lowest setting.
2. Turn off all electrical power to the appliance if service is to be performed.
3. Remove the control access door/panel (upper door if two-door model).
4. Move the gas control switch to the "OFF" position. Do not use force. (See Figure 1)
5. Replace the control access door/panel (upper door if two-door model).

1. Réglez le thermostat au réglage le plus bas.
2. Coupez toute alimentation électrique à l'appareil si un entretien doit être effectué.
3. Retirez le panneau/volet d'accès de commande (panneau supérieur s'il s'agit d'un modèle à deux panneaux).
4. Tournez l'interrupteur de commande du gaz en position « OFF » (arrêt). Ne forcez pas. (Voyez la Figure 1.)
5. Remettez le panneau/volet d'accès de commande en place (panneau supérieur s'il s'agit d'un modèle à deux panneaux).

Figure 1. Gas Valve Label (100- and 166-kBTU Units)

## GENERAL INFORMATION—CONTINUED

### Important Safety Information—Continued

#### 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 electrical 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.
  - If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or move by hand, do not 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 has 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 has been under water.

#### POUR VOTRE SÉCURITÉ. À LIRE AVANT L'EMPLOI

**ATTENTION!** L'inobservation de ces instructions peut entraîner un incendie ou une explosion pouvant causer des dommages à votre propriété à votre personne, ou la mort.

- A. Cet appareil ménager n'a pas de veilleuse. Il est doté d'un système d'allumage automatique. Ne pas essayer d'allumer le brûleur manuellement.
- B. **AVANT L'USAGE.** Attention à une possible odeur de gaz surtout au niveau du plancher où les gaz les plus lourds ont la tendance de se concentrer.
- EN CAS D'ODEUR DE GAZ.**
- Ne mettre en marche aucun appareil électrique.
  - Ne toucher à aucun commutateur électrique, ne pas employer le téléphone.
  - Quitter le bâtiment immédiatement et avertir la compagnie du gaz en utilisant le téléphone d'un voisin.
  - A défaut de la compagnie du gaz, avertir le service des pompiers.
- C. Enfoncer ou faire tourner le robinet à gaz à la main seulement. Ne jamais utiliser d'outils. S'il n'est pas possible de faire tourner ou d'enfoncer le robinet à la main, ne pas essayer de le réparer. Faire appel à un spécialiste. Forcer ou tenter de réparer le robinet pourrait être à l'origine d'une explosion ou d'un incendie.
- D. Il est déconseillé d'utiliser cet appareil en contact prolongé avec l'eau. Faire inspecter ou remplacer toute commande par un technicien qualifié si un des systèmes de contrôle du gaz s'est trouvé sous l'eau.

#### OPERATING INSTRUCTIONS

1. **STOP!** Read the safety information above on this label.
2. Set the thermostat to the lowest setting.
3. Turn off all electrical power to the appliance.
4. The appliance's ignition device automatically lights the burner. Do not try to light burner by hand.
5. Remove the control access door/panel (upper door if two-door model).
6. Move the gas control knob clockwise  to "OFF". (See Figure 1)
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, **STOP!** Follow "B" in above information. If you don't smell gas, go to the next step.
8. Move the gas control knob counterclockwise  to "ON". (See Figure 1)
9. Replace the control access door/panel (upper door if two-door model).
10. Turn on all electrical power to the appliance.
11. Turn the thermostat to a 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.

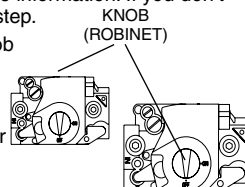





Figure 1

#### MODE D'EMPLOI

1. **ATTENTION!** Lire d'abord la liste des mesures de sécurité ci-dessus.
2. Mettre le thermostat à la position minimale.
3. Couper le courant électrique qui mène à l'appareil.
4. Cet appareil ménager étant doté d'un système d'allumage automatique, ne pas essayer d'allumer le brûleur manuellement.
5. Retirer le panneau/volet d'accès de commande (panneau supérieur s'il s'agit d'un modèle à deux panneaux).
6. Faire tourner le robinet à gaz dans le sens des aiguilles d'une montre  pour l'amener sur la position OFF (Arrêt) (Voir Figure 1).
7. Attendre cinq (5) minutes pour s'assurer de la dissipation du gaz.  
En cas d'odeur, **ARRÊTER LE PROCÉDÉ.** Suivre les instructions ci-dessus (Section B). En l'absence de toute odeur de gaz, avancer à l'étape suivante.
8. Faire tourner le robinet à gaz dans le sens inverse des aiguilles d'une montre  pour l'amener sur la position ON (Marche) (Voir Figure 1).
9. Remettre le panneau/volet d'accès de commande en place (panneau supérieur s'il s'agit d'un modèle à deux panneaux).
10. Rebrancher l'appareil sur le réseau électrique.
11. Ajuster le thermostat à la position désirée.
12. Si l'appareil ne fonctionne pas, suivre les "Directives d'arrêt" cidessous et appeler le technicien de service.

#### TO TURN OFF GAS TO APPLIANCE

1. Set the thermostat to the lowest setting.
2. Turn off all electrical power to the appliance if service is to be performed.
3. Remove the control access door/panel (upper door if two-door model).
4. Move the gas control knob clockwise  to "OFF". Do not use force. (See Figure 1)
5. Replace the control access door/panel (upper door if two-door model).

#### DIRECTIVES D'ARRÊT


1. Mettre le thermostat à la position minimale.
2. Débrancher l'appareil en prévision de la réparation.
3. Retirer le panneau/volet d'accès de commande (panneau supérieur s'il s'agit d'un modèle à deux panneaux).
4. Faire tourner le robinet à gaz dans le sens des aiguilles d'une montre  pour l'amener sur la position OFF (Arrêt) Ne pas forcer (Voir Figure 1).
5. Remettre le panneau/volet d'accès de commande en place (panneau supérieur s'il s'agit d'un modèle à deux panneaux).

Figure 2. Gas Valve Label (200- and 225-kBTU Units)

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**⚠ WARNING ⚠**

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To avoid possible equipment damage or injury, the following instructions must be observed regarding the combustion air supply:

- Combustion air must not be drawn from a corrosive atmosphere.
  - The gas heating/electric cooling unit needs an adequate supply of combustion and ventilation air for proper and safe operation. Do not block or obstruct air openings on the unit or air openings supplying the area where it is installed.
  - If the unit is operated with inadequate combustion air supply, the flame roll-out control switch located above the burners will open, turning off the gas supply to the burners. The flame roll-out control is a manual reset device. Do not attempt to reset this device yourself! Call your servicing contractor.
  - To maximize heat exchanger life, the combustion air must be free of chemicals which form corrosive acidic compounds in the combustion gases.
  - **IMPORTANT NOTE:** Do not store any chemicals with flammable or caustic vapors near the vent termination.
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*Ductwork*

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**⚠ WARNING ⚠**

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To avoid possible equipment damage or injury, the following instructions must be observed regarding ductwork:

- Failure to prevent products of combustion from being circulated into the occupied space can create potentially hazardous conditions including carbon monoxide poisoning that could result in personal injury or death.
  - The duct connections must be physically sound and sealed to the unit's casing to prevent products of combustion from entering the occupied space.
  - The return air and circulating air ductwork must not be connected to any other heat producing device such as a fireplace insert, stove, etc. Doing so may result in fire, explosion, personal injury, carbon monoxide poisoning, or property damage.
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## PROGRAMMABLE DIGITAL CONTROLLER AND SENSORS

All systems have a unit-mounted, 24-volt programmable controller (see [Figure 3](#)). The controller is factory-programmed to match the control selection on the order: option D19 for discharge air temperature based space temperature control, option D21 for makeup air unit control, option D22 for single set point discharge air temperature control, or option D23 for direct space temperature control (refer to the controls manual listed in [Table 1](#)). Some sensors are standard and others will depend on option selection.



Figure 3. System Programmable Controller with Integral Display

## SYSTEM MAINTENANCE

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### **⚠ WARNING ⚠**

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- **Ensure that all electrical power to the unit is disconnected and that the gas is shut off before performing the following recommended maintenance.**
  - **DO NOT touch any of the internal electrical components while cleaning the unit.**
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Proper maintenance is most important to achieve the best performance from the appliance and should be performed by a qualified service technician at least once a year. Follow the maintenance schedule and the instructions below for years of safe, trouble free operation.

- Do not place combustible materials on or against the cabinet.
- Do not store gasoline or any other flammable vapors and liquids in the vicinity of the unit.
- Annually inspect the physical support of the unit to ensure that it is physically sound without sagging, cracks, gaps, etc., around the base so as to provide a seal between the support and the base.
- Annually inspect the return-air connection to ensure that it is physically sound and is still sealed to the casing of the unit. Also inspect the unit, ductwork, and vent system for signs of physical deterioration.
- Always replace the doors on the unit after servicing. Do not operate the unit without all doors and covers in place.

### **Regular Cleaning**

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### **⚠ CAUTION ⚠**

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**Take care not to damage the aluminum fins during cleaning.**

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- Remove any leaves and grass clippings from the outdoor coil.
- Check for and remove any obstructions such as twigs, sticks, etc.
- Clean the blower compartment regularly during the heating and cooling seasons to remove any dust that may have accumulated in the compartment or on the blower and motor. Buildup of dust on the blower and motor can create excessive loads on the motor resulting in higher than normal operating temperatures and possible shortened service life.

### **Air Filters**

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### **⚠ WARNING ⚠**

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**Never operate the unit without filters in the return and outdoor air systems. Dust and lint in return and outdoor air can build up on the internal components, resulting in loss of efficiency, equipment damage, and possible fire risk.**

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These units are factory-equipped with pleated 4-inch disposable filters. The filters should be checked periodically and replaced (or cleaned) when necessary with filters of the same dimensional size. Replace using disposable filters with a minimum airflow rating of 500 fpm or permanent filters only. Clean outdoor air filters every 6 months.

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### **IMPORTANT NOTES**

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- **Always replace the filter access panels after changing or cleaning the filters. DO NOT operate unit without the filter access panels in place.**
  - **It is very important to replace or clean the filter(s) installed in the return air duct of this system. A clogged filter could cause airflow related problems and reduce the overall efficiency of your unit. Always replace disposable filter(s) installed in your system only with the same size dimensional filters that are being replaced. Do not use 1- or 2-inch disposable filters.**
  - **Filters must be ULC approved or equivalent for use in Canada.**
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## Motor Lubrication

The motors for the circulating air blower, outdoor fan, and combustion blower are pre-lubricated and sealed by the manufacturer. No further oiling is required for the life of this product.

## Burner Maintenance

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### ⚠ WARNING ⚠

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**Some components in the burner vestibule are at high temperatures while the burners are operating. Use caution to avoid personal injury.**

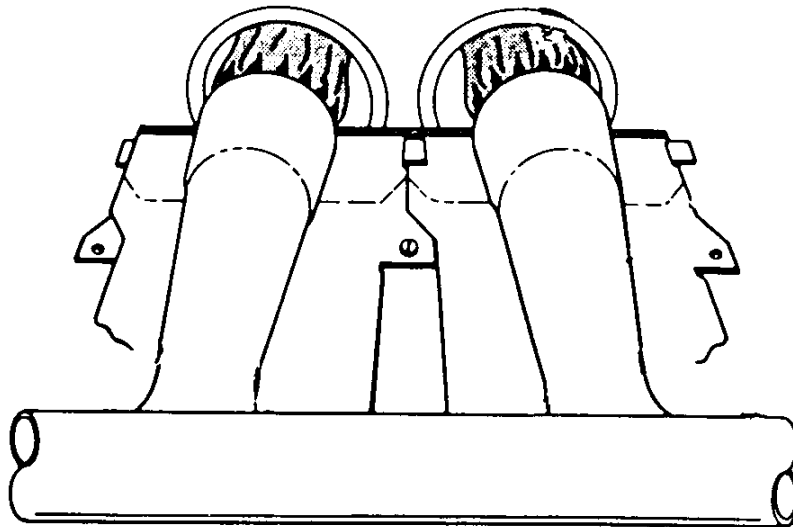
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- Check the burner flames at the start of every heating season.
  - Refer to the controls manual listed [Table 1](#) to operate the unit in test mode.
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**NOTE: In a properly adjusted burner assembly, the flame bends up and to the left at the end of the heat exchanger tube, and the end of the flame will be out of sight around the bend. The flame color should be blue, however some light yellow streaks may occur on the outer portions of the flame.**

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- Remove the control access panel to the unit and visually inspect the burner assembly to ensure that the flame is drawn directly into the center of the heat exchanger tube (see [Figure 4](#)).



**Figure 4. Burner Assembly Inspection**

## TROUBLESHOOTING

Before you call a Technician, check the following:

- Check the thermostat setting. Ensure that the system mode and temperature settings are correct.
- Check the electrical panel for tripped circuit breakers.
- Check the filters for dust accumulation.
- Check the unit and make sure it is clean and not covered with grass or leaves.
- If the items above don't resolve your problems, call your nearest Service Technician.



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