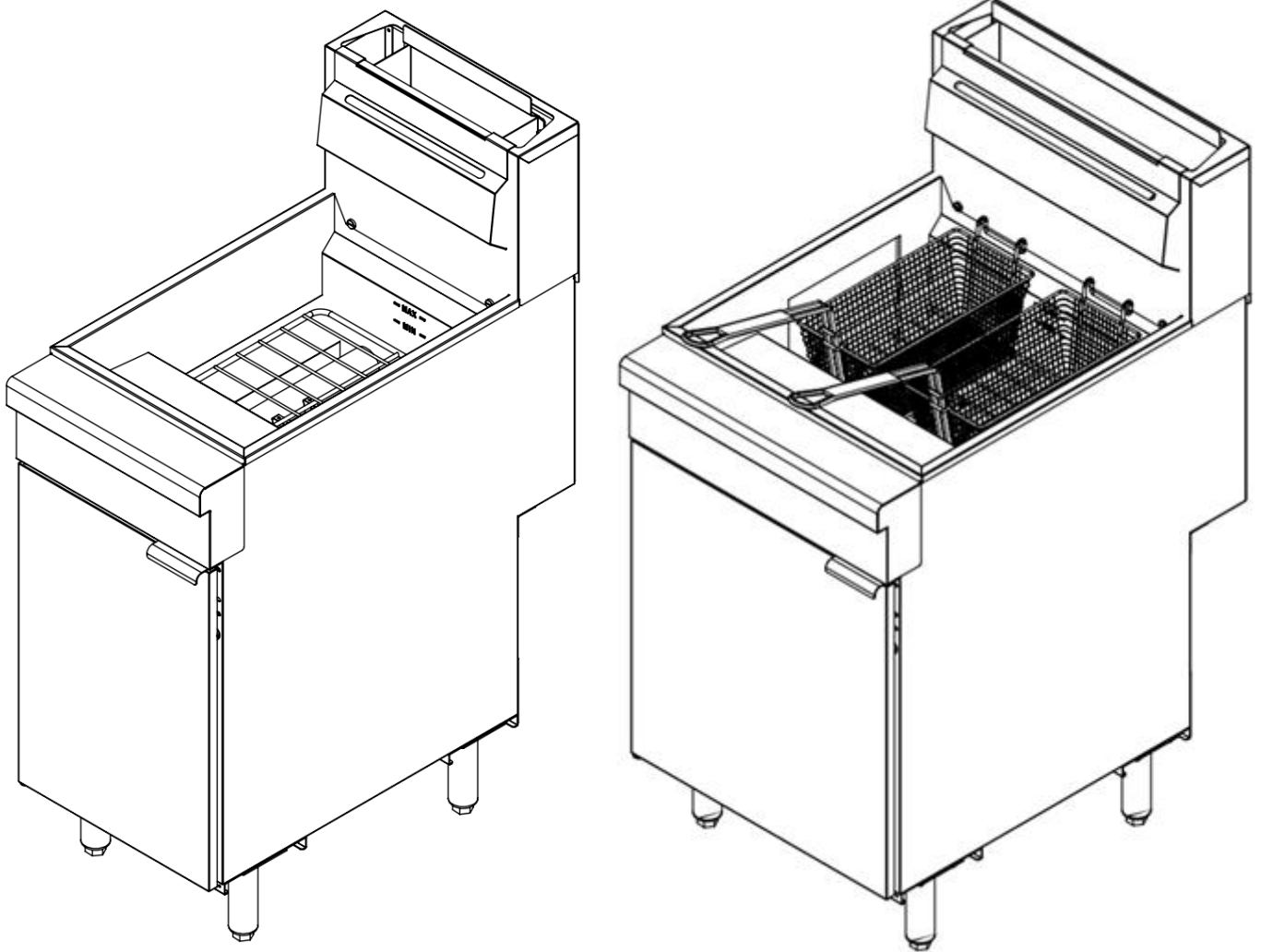


NORIOTA

INSTALLATION AND INSTRUCTION MANUAL



**FFRY & NFF SERIES
GAS DEEP FRYER**

OPERATOR SAFETY AND OPERATING TIPS

Quick Reference Only - Follow Full User Manual



NOTICE!

This guide highlights important safety and operating reminders only. It does not replace the full Installation and Instruction Manual. Read and follow the full manual before installing, operating, cleaning, or servicing this unit.



WARNING!

Improper installation, gas connection, ventilation, or operation can cause fire, explosion, carbon monoxide exposure, serious injury, or death. Only **qualified personnel** should install or service this equipment. Do not operate this unit if unsafe conditions are present.

Before Each Use

- Confirm the fryer is level, stable, and installed under a properly operating ventilation hood.
- Confirm the fry tank is clean, dry, and free of water before adding oil.
- Use liquid cooking oil only.
- Maintain oil between the MIN and MAX markings at all times.



WARNING!

Do not operate the fryer unless the fry tank is filled with oil and the heat tubes are fully covered.

Critical Safety Reminders

- If gas odor is present, stop immediately and follow site gas emergency procedures.
- Never use water or ice on an oil or grease fire.
- Do not move the fryer while it contains hot oil or hot liquid.
- Do not leave the fryer unattended while heating or operating.
- Do not operate if the ventilation hood is not operating properly.
- Never use an open flame to check for gas leaks.



WARNING!

If gas odor is present, the pilot does not remain lit, the fryer does not operate normally, or oil heats unevenly, stop and refer to the full user manual or contact **qualified service personnel**.

Cooking, Oil, and Cleaning Tips

- Preheat oil fully before loading food.
- Lower baskets slowly to reduce splashing.
- Do not overload baskets.
- Remove excess ice or moisture from food before frying.
- Allow recovery time between batches.
- Do not salt, season, or shake breaded product directly over the fry tank.
- Filter oil at least daily, or more often during heavy use.
- Allow fryer and oil to cool before cleaning or covering.
- Drain oil only into suitable metal hot-oil containers.
- Ensure the drain valve is fully closed before refilling.

Normal Operation

- Burner cycling on and off
- Oil bubbling during cooking
- Temporary temperature drop after loading
- Slight temperature change during cycling

These are normal operating characteristics.

Need Help

For product support, manuals, or service assistance:



Website
www.noriot.ca



Phone
1-877-NORIOTA



Email
support@noriot.ca

Please have your model and serial number available when contacting support.

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INTRODUCTION

Thank you for choosing NORIOTA commercial gas floor fryers. This manual provides important information for the safe installation, operation, and maintenance of NORIOTA gas floor fryer models. These units are designed and manufactured for commercial foodservice applications and are intended to deliver consistent frying performance when installed, operated, and maintained in accordance with this manual.

This manual applies to NORIOTA gas floor fryer models including FFRY40, FFRY50, FFRY70, NFF3, NFF4, and NFF5, in both natural gas and propane versions. Model-specific specifications may vary. Always refer to the unit rating label for exact technical information including gas type, pressure, and clearance requirements.

Gas floor fryers are high-performance cooking appliances designed to rapidly heat and maintain large volumes of oil at controlled temperatures. Unlike residential appliances, commercial fryers operate at higher heat output, recover temperature more quickly, and are designed for continuous or heavy-duty use. Because of this, proper installation, oil management, ventilation, and daily operating practices are critical to achieving safe operation, consistent food quality, and long equipment life.

Improper installation or operation can result in reduced performance, excessive oil degradation, unsafe conditions, or equipment damage. Particular attention must be given to gas supply, ventilation, oil level management, and cleaning procedures. Understanding how the fryer operates, including burner cycling, heat transfer through the fry tank, and the role of the cold zone, will help reduce operator error and unnecessary service calls.

Important Information for Owners and Operators

- Read this manual completely before installing or operating the equipment.
- Installation, gas connection, and servicing must be performed by **qualified personnel** in accordance with applicable local codes and regulations.
- This equipment is intended for commercial foodservice use only. It is not intended for household, residential, or other non-commercial use.
- Improper installation, use, or maintenance may result in personal injury, fire hazard, equipment damage, or reduced performance.
- Never operate the fryer without oil covering the heat tubes. Failure to maintain proper oil level may result in damage to the fry tank and unsafe operating conditions.
- Oil condition and handling practices directly affect food quality, equipment performance, and service life.
- These fryers are designed for use with liquid cooking oil only. Solid oil or solid shortening must not be used in the fry tank.
- Keep this manual in a readily accessible location for reference by operators and service personnel.

Gas fryers depend on proper airflow and ventilation to operate correctly. Adequate combustion air must be supplied to the burners, and exhaust gases must be removed through an appropriate ventilation system. Poor airflow, improper hood design, or blocked flue discharge can result in inefficient combustion, overheating, or unsafe operation. For this reason, installation under a properly designed commercial hood system is required.

In addition to installation, operator practices play a major role in fryer performance. Overloading baskets, introducing wet product, allowing debris to accumulate, or failing to filter oil regularly can lead to temperature instability, excessive oil breakdown, and reduced cooking consistency. Routine cleaning and preventive maintenance are essential to maintaining proper operation.

Intended Use

NORIOTA gas floor fryers are designed and manufactured for commercial foodservice environments, including restaurants, cafés, catering operations, institutional kitchens, and similar applications. These units are intended for deep frying food products in liquid edible cooking oil under controlled temperature conditions.

The equipment is designed for indoor use only and must be installed in a location that meets all requirements for gas supply, ventilation, clearance, and safe operation as outlined in this manual. The fryer is intended to be operated by trained personnel familiar with commercial kitchen equipment and basic safety practices.

This equipment must not be used for any purpose other than deep frying food products. It must not be used for heating non-food materials, processing chemicals, or any application inconsistent with the instructions provided in this manual.

INTRODUCTION

Use outside of intended application may result in unsafe conditions, equipment damage, or voiding of warranty coverage.

Residential Installation Considerations

NORIOTA gas floor fryers are designed and manufactured for commercial foodservice use only. They are not intended for residential or household use.

Commercial gas fryers differ materially from residential cooking appliances in heat output, ventilation requirements, clearance requirements, operating environment, duty cycle, and overall safety considerations. These units are designed for installation and operation in commercial kitchens or similar professional foodservice environments where appropriate gas supply, commercial ventilation, fire safety measures, trained operators, and code-compliant installation conditions are in place.

Residential or household installation or use is not recommended and may be prohibited by local code, insurance requirements, or authority having jurisdiction. Use of this equipment in a residential or non-commercial setting may create unsafe operating conditions, increase fire risk, result in improper ventilation or inadequate clearances, and may affect warranty coverage.

This equipment must be installed and operated only in suitable commercial environments and only in accordance with this manual and all applicable local codes and regulations.

Manual Scope and Updates

This manual contains important safety, installation, operation, and maintenance instructions. Following these instructions will help ensure safe operation, consistent performance, and long equipment life.

This manual is intended to provide guidance for normal operation and routine maintenance. Advanced service procedures, gas system adjustments, and internal component repairs must be performed by **qualified service personnel** only.

NORIOTA reserves the right to update product design, specifications, and documentation without notice. While reasonable efforts are made to ensure accuracy, users must always follow applicable local codes and regulations and consult **qualified professionals** when required.

Failure to follow the instructions and guidelines in this manual may result in personal injury, equipment damage, unsafe operating conditions, or reduced performance.

RECEIVING AND INSPECTING THE EQUIPMENT

Carefully inspect the equipment immediately upon delivery and before signing the carrier's delivery receipt.

Inspect the exterior packaging for visible signs of damage, including dents, punctures, crushed corners, broken components, pallet damage, or other evidence of mishandling in transit. If visible damage is observed, note the damage clearly on the delivery receipt and request that the carrier acknowledge it. Retain a copy of the signed delivery receipt for your records.

After the unit has been delivered and unpacked, inspect the fryer itself for concealed damage. Check the exterior panels, door, fry tank, baskets, flue components, legs or castors, drain components, and visible controls for freight-related damage or missing parts. If concealed damage is discovered, notify the delivering carrier promptly and request an inspection. All freight damage claims must be filed with the carrier, as shipping damage is the responsibility of the carrier and is not covered under warranty.

Do not install, connect gas, fill with oil, or place the fryer into service until the inspection process is complete. Retain all packaging materials until any freight damage claim has been resolved or carrier inspection has been waived.

Important Handling Notes

- Do not remove the fryer from the delivery area or proceed with installation before completing the inspection.
- Do not use the door or door handle to lift or move the fryer.
- If the carrier is unable or unwilling to allow adequate inspection time, note this clearly on the delivery receipt before signing.
- Retain all packaging materials until the inspection process is complete.

Reporting Damage

- **Visible damage:** Must be noted on the delivery receipt at the time of delivery.
- **Concealed damage:** Must be reported to the carrier immediately upon discovery.

Failure to follow these procedures may affect the ability to file a freight damage claim.

Before Installation

Confirm the following before proceeding:

- The model number matches your purchase order.
- The gas type matches the ordered unit.
- The fryer has not been damaged during transit.
- All shipped accessories and components are present.
- The rating label is present and legible.
- The manual gas shutoff valve and site gas connection requirements have been reviewed by qualified installation personnel before installation begins.

Serial Number Information

The model and serial number are located on the unit rating label. Always have the model number and serial number available when contacting NORIOTA or an authorized service provider for parts, service, or technical support.

Final Receiving Reminder

Do not proceed with installation until the fryer has been fully inspected and any shipping damage, missing parts, or documentation issues have been identified and addressed. Early inspection is the owner's best protection against freight disputes, installation delays, and avoidable service issues.

SAFETY INFORMATION

This section contains important safety information intended to reduce the risk of personal injury, fire, property damage, or equipment damage. Read and follow all safety instructions before installing, operating, or servicing this equipment.



This is the Safety Alert Symbol. This symbol alerts you to potential hazards that can injure or kill you and others. All safety messages will follow the Safety Alert Symbol and either the words “DANGER”, “WARNING” or “CAUTION”.



DANGER!

This symbol indicates a hazardous situation which will result in death or serious injury.



WARNING!

This symbol indicates a hazardous situation or unsafe practice which, if not avoided, could result in death or serious injury.



CAUTION!

This symbol indicates a potential hazard or unsafe condition that may result in injury, equipment damage, or property damage.



NOTICE!

This symbol indicates important information related to proper use, installation, or maintenance of the equipment that does not involve a personal injury hazard.

All safety messages identify the hazard, explain how to reduce the risk, and describe the possible consequences if instructions are not followed.



WARNING!

Fire Hazard - For Your Safety

- Do not store or use gasoline or other flammable vapors or liquids near this or any other appliance.
- Keep the area around the fryer free and clear of combustible materials.
- The operator must ensure that instructions to be followed in the event of a gas odor are posted in a prominent location. Obtain these instructions from the local gas supplier.



WARNING!

Burn Hazard

- Contact with hot oil will cause severe burns.
- Hot oil is more dangerous than boiling water and can cause serious injury.
- Use extreme caution during operation, draining, filtering, and cleaning.
- Always use appropriate protective equipment when handling hot oil.
- Do not touch hot surfaces, flue components, or metal parts during or immediately after operation.



WARNING!

If Gas Odor Is Detected

- Do not attempt to light the appliance.
- Shut off the gas supply at the manual gas shutoff valve.
- Do not operate electrical switches or create ignition sources.
- Do not use a telephone in close proximity to the fryer.
- Evacuate the area and contact the local gas supplier or gas company immediately.



WARNING!

Proper Oil Level

- Never operate the fryer without oil covering the heat tubes.
- Never heat an empty fry tank.
- Maintain oil level between the minimum and maximum fill lines at all times.
- Solid oil or solid shortening must not be used in this fryer.

SAFETY INFORMATION



NOTICE!

- This equipment is intended for commercial foodservice use only. It is not intended for household, residential, or other non-commercial use.
- Installation, gas connection, and service must be performed by **qualified personnel** in accordance with applicable local codes and regulations.
- Use of non-approved parts, improper installation, or unauthorized service may result in unsafe conditions and may affect warranty coverage.

General Safety Instructions

- This equipment must be installed, operated, and maintained in accordance with this manual.
- Do not operate the fryer if it has been damaged, is malfunctioning, or is not operating properly.
- Do not modify, remove, or bypass any safety devices or factory-installed components.

Gas Safety



WARNING!

Incorrect gas type, improper connection, or gas leaks may result in fire or explosion. Verify gas type and perform leak testing before operation.



CAUTION!

Never use an open flame to check for gas leaks. Use approved leak-testing methods only.

- Verify that the gas type supplied matches the gas type indicated on the rating label.
- This unit is not field convertible between gas types.
- All gas connections must be leak tested before placing the fryer into operation.
- Use only approved gas supply components and installation practices.
- Ensure the manual gas shutoff valve is accessible at all times.
- Do not operate the fryer if gas connections are loose, damaged, or leaking.
- Never use an open flame to check for gas leaks. Use a soap-and-water solution or other approved leak-testing method only.
- If the pilot goes out, ignition fails, or the gas control has been turned OFF, wait at least 5 minutes before attempting to relight. This waiting period allows unburned gas to dissipate.

Grease Fire Hazard



WARNING!

Hot oil can ignite and spread rapidly, creating a burn and fire hazard. Improper response can cause serious injury, death, or extensive property damage.

If a grease or oil fire occurs:

- Do not use water or ice. Water will cause violent splashing and spread the fire.
- Turn off the gas supply at the shutoff valve if it is safe to do so.
- Smother flames using a metal lid or appropriate fire suppression system.
- Use a Class K fire extinguisher.

Never attempt to move the fryer during a fire.

Installation Safety



WARNING!

Improper installation may result in fire, tipping, or unsafe operation. Installation must be performed by **qualified personnel** in accordance with applicable codes and this manual.



WARNING!

Do not install or operate the fryer without all legs or castors properly installed. Operating the fryer without legs or castors may result in unstable conditions, improper clearance from the floor, and increased risk of fire or injury.

- Install the fryer only on a level, stable surface capable of supporting the equipment and oil load. The fryer may be installed on combustible floors when all required clearances are maintained and all legs or approved castors are properly installed.
 - The fryer must be level front-to-back and side-to-side.
 - Legs or castors must be properly installed before operation. If castors are installed, an approved restraint device must be installed and connected before operation.
- Maintain required clearances from combustible and non-combustible materials at all times.
- Install the fryer under a properly designed commercial ventilation system.
- Do not block or restrict flue or ventilation openings.
- The fryer must not be installed in areas exposed to water, outdoor conditions, or excessive moisture.

SAFETY INFORMATION

Ventilation and Airflow Safety



WARNING!

Inadequate ventilation or blocked airflow can result in overheating, poor combustion, or dangerous operating conditions. This fryer must be installed under a properly functioning commercial ventilation system.



WARNING!

Inadequate combustion air or a blocked flue can cause overheating, poor combustion, and dangerous carbon monoxide conditions.

- If a restraint device, quick-disconnect, or other mobility-related safety device is disconnected for cleaning, service, or repositioning, it must be properly reconnected before the fryer is returned to normal operation.
- Do not connect the flue outlet directly to any duct or exhaust system.
- Maintain proper clearance between the flue outlet and hood filters.
- Ensure adequate airflow to support combustion and heat removal.
- Do not block the flue outlet or restrict combustion air openings.
- Do not place hands, arms, or other body parts directly above the flue outlet while the fryer is operating. Hot exhaust can cause burns.
- Avoid conditions that create strong drafts or downdrafts around the fryer.

Oil Handling and Operation Safety



CAUTION!

Moving the fryer with hot oil can result in severe burns and spills. Allow oil to cool and drain before repositioning.

- Maintain oil level between the minimum and maximum fill lines at all times.
- Do not overfill the fry tank. Oil expands as it heats and may overflow.
- Remove excess moisture from food products before placing them into oil. Do not load wet or heavily iced product into hot oil. Excess moisture can cause violent splashing or boil-over.
- Lower baskets slowly to prevent splashing.
- Do not overload baskets, which may cause excessive temperature drop, oil splashing, or overflow.
- Do not attempt to move or reposition the fryer while it contains hot oil, boil-out solution, or any other hot liquid. Spilled hot liquid can cause severe burns and slip hazards.
- Do not leave the fryer unattended during operation.
- Keep the area around the fryer clear of combustible materials.

Cleaning and Maintenance Safety



CAUTION!

Improper handling of hot oil during cleaning may result in burns or equipment damage. Allow the fryer to cool and use appropriate containers and procedures.

- Allow the fryer to cool before draining oil or performing cleaning procedures.
- Use appropriate containers and handling methods when draining hot oil. Drain hot oil only into suitable metal containers designed for hot-oil handling. Do not use plastic buckets, glass containers, or any container not rated for hot oil.
- Ensure the drain valve is fully closed before refilling the fry tank.
- Ensure the fry tank is completely dry before adding oil. Water remaining in the fry tank can cause dangerous splattering when oil is heated.
- Use only approved cleaning agents suitable for commercial fryer applications.
- Do not use abrasive tools or corrosive chemicals that may damage surfaces.
- Do not spray controls, burners, or the outside of the fryer with liquids or cleaning agents.

Regular cleaning and maintenance are required to ensure safe operation and prevent buildup that may affect performance.

Service and Repair Safety



WARNING!

Servicing this equipment without proper training may result in serious injury or death. All service and repairs must be performed by **qualified personnel only**.

- Shut off the gas supply before performing any service or maintenance.
- Do not attempt to repair or adjust gas components without proper training.
- Use only approved replacement parts.
- Do not operate the fryer with panels removed or safety components bypassed.

Unauthorized service or modification may result in unsafe conditions and may affect warranty coverage.

Final Safety Reminder

Safe operation of this equipment depends on proper installation, operating practices, and maintenance.

IMPORTANT SAFEGUARDS

This section outlines critical requirements for safe installation, operation, and long-term use of this equipment. These safeguards supplement the Safety Information section and must be followed at all times.

Gas Connection Requirements



WARNING!

Improper gas connection or incorrect gas supply may result in fire, explosion, or unsafe operation.

- Verify that the gas type matches the rating label.
- This unit is not field convertible between gas types.
- All gas connections must be installed and tested by **qualified personnel**.

- Install a manual gas shutoff valve in an accessible location.
- Ensure gas supply pressure meets the requirements specified on the unit rating label.
- All gas connections must be leak tested prior to operation using approved methods only.
- Never use an open flame to check for gas leaks.
- Ensure all connections remain secure and free from damage during operation.
- Follow all gas supply pressure testing and isolation requirements during system testing.

Ventilation and Fire Code Compliance



WARNING!

Improper ventilation may result in fire, overheating, or unsafe combustion conditions.

- This fryer must be installed under a properly designed commercial ventilation system.
- Do not connect the flue outlet directly to any duct or exhaust system.
- Maintain adequate clearance between the flue outlet and hood filters.

- Ensure adequate combustion air is available at all times.
- Do not obstruct airflow or block ventilation openings.
- Installation must comply with all applicable local fire and building codes.

Oil Disposal



CAUTION!

Improper handling or disposal of used oil may result in burns, spills, or environmental hazards.

- Allow oil to cool before draining, filtering, or handling.
- Use appropriate containers designed for hot oil.
- Dispose of used oil in accordance with local regulations.

- Do not dispose of oil in drains or unsuitable waste systems.
- Follow proper procedures for storage and transport of used oil.

Unit Disposal



NOTICE!

Improper disposal of equipment may result in environmental harm or regulatory non-compliance.

- Dispose of this equipment in accordance with applicable local regulations.
- Remove or properly handle any components that may require special disposal procedures.

- Ensure all gas connections are safely disconnected prior to disposal.
- Follow applicable guidelines for recycling or disposal of metal and other materials.

INSTALLATION

This section provides the requirements and procedures for proper installation of the fryer. Installation must be completed before the unit is placed into operation. Installation, gas connection, and initial startup must be performed by **qualified personnel** in accordance with applicable local codes and regulations.



NOTICE!

Installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1, and the Natural Gas and Propane Installation Code, CSA B149.1, as applicable.

Pre-Installation Checklist

Before installation, confirm the following:

- The model number and gas type match the order and site requirements.
- The installation location meets all clearance, ventilation, and utility requirements.
- The gas supply is available and sized correctly for the equipment.
- The unit has been inspected for shipping damage and all components, and rating label are present.

Do not proceed with installation if any issues are identified.

Location Requirements

- Install the fryer indoors only, in a well-ventilated commercial kitchen environment.
- The installation surface must be level, stable, and capable of supporting the unit and oil load.
- Do not install the fryer in areas exposed to water, excessive moisture, or outdoor conditions.

Clearance Requirements



WARNING!

Failure to maintain required clearances may result in fire hazard or unsafe operation. Maintain minimum clearances from combustible materials as below.

Minimum clearances:

- **Combustible construction:**
 Left: 6 in (15 cm) Rear: 6 in (15 cm) Right: 6 in (15 cm)
- **Non-combustible construction:**
 Left: 0 in (0 cm) Rear: 0 in 0 cm) Right: 0 in (0 cm)
- **Floor:** The fryer may be installed on combustible floors when all required clearances are maintained and all factory-supplied legs or approved castors are properly installed. Do not install the fryer directly on the floor or without legs or castors. Always follow the unit rating label and applicable local code requirements.

Gas Supply Requirements



WARNING!

Incorrect gas type or supply pressure may result in fire, explosion, or improper operation. Verify gas type and supply pressure before connecting the fryer.

- Verify that the gas type matches the rating label on the unit.
- This unit is not field convertible between gas types.
- Gas supply pressure must meet the requirements specified on the rating label:
 - Natural Gas: 4 in W.C. manifold pressure
 - Propane: 10 in W.C. manifold pressure
- The gas supply system must be sized to provide sufficient flow for the fryer.
- A manual gas shutoff valve must be installed in an accessible location.

Gas Supply Pressure Testing Requirement

- The unit and its individual manual gas 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 PSI (3.45 kPa).
- The unit must be isolated from the gas supply piping system by closing its individual manual gas shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSI (3.45 kPa).

Ventilation and Hood Requirements



WARNING!

Improper ventilation may result in overheating, poor combustion, or unsafe operating conditions. This fryer must be installed under a properly designed commercial ventilation system.

- Ventilation and fire protection systems must comply with applicable local code requirements and NFPA 96 where adopted.
- Install the fryer under a commercial exhaust hood suitable for gas cooking equipment.
- Do not connect the fryer flue directly to any duct or exhaust system.
- Maintain proper clearance between the flue outlet and hood filters.

INSTALLATION

- Ensure adequate airflow for combustion and heat removal.

Flue and Rear Riser Installation

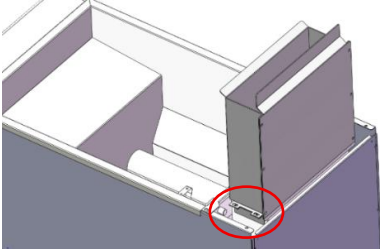


WARNING!

Improper installation of the flue or operation without the flue components installed can result in poor combustion, overheating, and dangerous exhaust conditions.

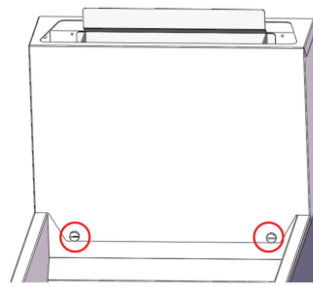
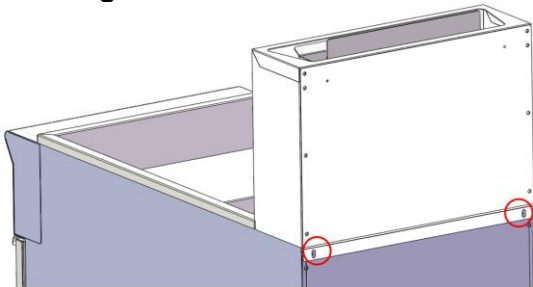
The fryer is shipped with the flue components and rear riser packaged separately. These components must be installed before operating the fryer.

Installing the Inner Flue Box



1. Position the inner flue box over the flue opening at the rear of the fryer.
2. Align the mounting holes on the flue box with the corresponding holes on the fryer.
3. Secure the inner flue box using the included four (4) 10-24 screws.
4. Ensure the flue box is properly seated and securely fastened.

Installing the Rear Riser



1. Position the rear riser over the installed flue assembly at the rear of the fryer.
2. Align the rear mounting holes on the riser with the fryer cabinet.
3. Secure the rear of the riser using the included two (2) 10-24 screws.
4. Align the front mounting slots of the riser with the fryer.
5. Secure the front of the riser using the included two (2) slotted head screws.
6. Verify the riser is properly aligned and fully secured on all sides.

Final Check

- Ensure all screws are tightened securely.
- Confirm the flue opening is unobstructed.
- Verify the riser and flue components are stable and correctly positioned.

Do not operate the fryer without the flue components properly installed.

Leg Installation, Leveling, and Stability



WARNING!

Do not install or operate the fryer without all legs or castors properly installed. Operating the fryer without legs or castors may result in unstable conditions, improper clearance from the floor, and increased risk of fire or injury.

- Install each leg by threading the leg stem into the threaded mounting hole on the base of the fryer.
- Tighten each leg securely and confirm all legs are fully seated before placing the fryer upright.
- After installation, verify the fryer is level front-to-back and side-to-side.
- Adjust the legs or castors as needed to achieve proper leveling.
- Proper leveling helps maintain even oil distribution and correct operation.

Restraint and Mobility



WARNING!

Failure to properly secure a mobile fryer may result in tipping, gas line damage, or injury.



WARNING!

When this appliance is installed with optional castors, it must be installed using a commercial gas connector that complies with ANSI Z21.69 or CSA 6.16 and a quick-disconnect device that complies with ANSI Z21.41 or CSA 6.9. A restraining device must also be installed to prevent movement of the appliance and to avoid strain on the gas connection.

- If castors are installed, ensure they are properly secured in place of the legs.
- If the restraint or gas connection is disconnected for cleaning or service, it must be properly reconnected before returning the fryer to operation.
- For installations with castors, ensure the floor is level and the fryer is stable before operation.

INSTALLATION

Gas Connection Procedure



WARNING!

Improper gas connection may result in fire or explosion.
All gas connections must be installed by **qualified personnel**.

- Connect the unit to the gas supply using approved fittings and piping.
- Ensure gas supply piping is clean and free of dirt, metal particles, debris, and excess joint compound.
- Ensure a manual gas shutoff valve is installed in an accessible location.
- A sediment trap (drip leg) must be installed in the gas supply line upstream of the unit. The sediment trap helps prevent dirt, debris, and moisture from entering the gas components.
- Ensure all threaded connections are properly sealed using materials approved for the gas type used.
- Do not apply excessive force to gas fittings, valves, safety valve, or controls.
- The unit is equipped with an integrated gas safety valve that includes pressure regulation.
- Gas supply pressure must match the requirements shown on the rating label.
- Do not connect unit to gas supply with pressure outside the allowable range shown on the rating label.
- If any additional upstream pressure regulation is required by local code or site conditions, it must be installed by qualified personnel and must not restrict required gas flow to the unit.
- After connection, perform leak testing before placing the unit into operation.

Leak Testing Procedure



WARNING!

Gas leaks may result in fire or explosion.
All connections must be leak tested before operation.

- After gas connection, confirm all control knobs are in the OFF position.
- Open the manual gas shutoff valve.
- Apply a soap-and-water solution or approved leak-detection solution to all joints and connections.
- Check for bubbles or other signs indicating a leak.
- If a leak is detected, shut off the gas supply immediately. The connection must be corrected and retested by qualified personnel before operation.
- Never use an open flame to check for leaks.

Final Installation Checks

Before opening the gas supply, confirm the following:

- The fryer is installed in the correct location and meets all clearance requirements.
- The unit is level front-to-back and side-to-side with legs or castors properly installed and secured.
- If equipped with castors, the restraint device is properly installed and connected.
- The gas type matches the rating label.
- The gas supply is connected securely and has been leak tested.
- The manual gas shutoff valve is accessible.
- The ventilation system is installed, operational, and unobstructed.
- The flue outlet is not blocked and has proper clearance to hood filters.
- The drain valve is fully closed and the fry tank is dry and clean.
- The fryer is clean and free of films, packaging materials, and debris.

Do not attempt to light or operate the fryer until all installation checks have been completed.

Installation Responsibility

Installation must be performed in accordance with this manual and all applicable local codes and regulations. Improper installation may result in reduced performance, equipment damage, unsafe operating conditions, fire hazard, or affected warranty coverage. The following conditions are not covered under warranty:

- Damage resulting from improper unpacking, handling, or installation.
- Problems caused by installation with wrong gas type or gas supply pressure not matching rating label.
- Problems caused by improper gas connection, failure to leak test, use of non-approved gas supply components, or failure to install an accessible manual gas shutoff valve where required.
- Performance or safety issues caused by inadequate ventilation, restricted combustion air, blocked flue discharge, or improper hood installation, or failure to maintain required clearances.
- Damage or instability caused by improper leveling, failure to install legs or castors correctly, or failure to use required restraint devices on mobile installations.
- Problems caused by installation in unsuitable environments, including outdoor installation, water exposure, or other conditions inconsistent with this manual.
- Damage or unsafe conditions resulting from unauthorized modification, non-approved parts, or improper service.

OPERATION

This section provides instructions for normal operation of the fryer, including startup, temperature control, and safe daily use. Proper operation is critical to achieving consistent cooking results, maintaining oil quality, and ensuring safe working conditions.

Only **trained personnel** should operate this equipment.

Normal Operating Behaviour

During normal operation, the fryer heats the oil by means of gas burners located beneath the fry tank heat tubes. The thermostat cycles the burners on and off automatically to maintain the selected oil temperature. Slight temperature variation during operation is normal and does not indicate a problem.

When the fryer is first started from a cold condition, it will require time to bring the oil to the set temperature. Once the target temperature is reached, the burners will shut off and cycle back on as needed to maintain cooking temperature. This burner cycling is a normal part of operation.

During active frying, oil temperature will drop when product is added. This is expected. The amount of temperature drop and the recovery time will depend on several factors, including:

- batch size
- product temperature and moisture content
- oil level and oil condition
- fryer size and burner input
- how quickly consecutive batches are loaded

Large or wet loads will reduce oil temperature more sharply and may increase recovery time. Smaller, consistent batches will generally produce better cooking consistency and faster recovery.

The pilot flame remains lit during normal operation unless the fryer is shut down fully or a safety shutoff condition occurs. The main burners will cycle on and off under thermostat control while the fryer is operating.

The fryer is also equipped with a high-limit safety device to help protect against overheating. If the oil temperature rises above the normal operating range, the high-limit device may shut off the gas supply and extinguish the pilot. If this occurs, do not attempt to resume normal operation until the fryer has cooled and the cause has been identified in accordance with this manual.

Oil condition has a major effect on fryer behaviour. Darkened, degraded, or debris-laden oil may smoke more, recover less effectively, produce poor frying results, and cause odor, residue buildup, or excess foaming. These conditions do not always indicate equipment failure and should be evaluated as part of normal oil management.

Under normal conditions, the fryer should heat reliably, maintain the set temperature through thermostat cycling, and recover in a predictable manner between batches. If the fryer shows repeated ignition failure, unstable flame, poor recovery under normal loading, overheating, or shutdown that does not clear through normal procedures, refer to the Troubleshooting Guide or contact **qualified service personnel**.

Fryer Components Overview

The diagram below identifies key components referenced throughout the operation procedures in this section.

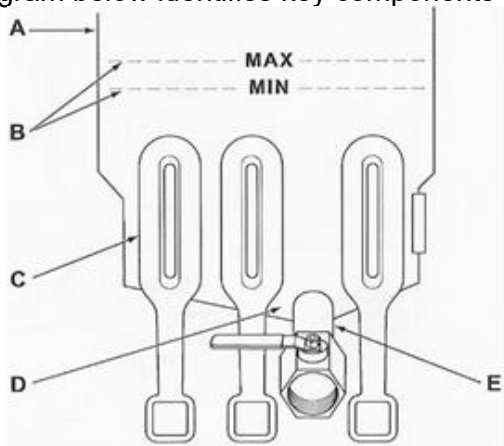


Figure A – Fry tank components

- A** - Fry tank
- B** - Minimum oil level marking (MIN)
- B** - Maximum oil level marking (MAX)
- C** - Burner tubes
- D** - Fry tank low point (drain sump)
- E** - Drain valve outlet

Frying Operation Best Practices

Proper operating practices are essential for consistent cooking results, safe operation, and extended oil life.

- Preheat the fryer to the desired temperature before adding product.
- Do not overload fry baskets. Smaller, consistent batch sizes improve temperature stability and recovery.
- Lower baskets slowly to prevent oil splashing.
- Remove excess moisture from food products before frying. Water and ice can cause splattering and rapid oil degradation.
- Allow the fryer to recover to the set temperature between batches.
- Do not leave the fryer unattended during operation or while heating oil.
- Keep the area around the fryer clean and free of combustible materials.

For best cooking performance:

- Load baskets evenly to ensure consistent cooking.
- Avoid mixing different types of food that may affect oil quality or flavor.
- Avoid frequent large batch loading that causes excessive temperature drop.
- Monitor cooking results and adjust batch size or timing as needed.
- Recommended maximum basket loading is 1.5 lb (0.7 kg) per basket for 40 lb fry tank models, 2.5 lb (1.1 kg) per basket for 50 lb fry tank models, and 3.0 lb (1.4 kg) per basket for 70 lb fry tank models.

For safe and efficient operation:

- Maintain proper oil level at all times.
- Do not operate the fryer without oil covering the heat tubes.
- Do not load wet or heavily iced product into hot oil. Excess moisture can cause violent splashing and boil-over.
- Avoid introducing foreign materials or debris into the fry tank.
- Keep flue and ventilation openings clear and unobstructed.

Consistent operating practices will improve food quality, reduce oil consumption, and help maintain stable fryer performance.

Oil Management Doctrine

Proper oil management is one of the most important factors affecting fryer performance, food quality, operating cost, and equipment life. Clean, properly maintained oil produces more consistent frying results, supports stable temperature recovery, reduces residue buildup, and helps protect the fry tank and heat transfer surfaces. Poor oil management leads to smoking, foaming, off-flavors, dark product appearance, slow recovery, carbon buildup, and unnecessary service issues.

For normal operation:

- Maintain oil level between the minimum and maximum fill lines at all times.
- Top off oil as needed to replace oil lost through product absorption, filtering, and normal use.
- Do not operate the fryer with oil below the minimum level or with heat tubes exposed.
- Filter oil regularly, and at minimum daily under normal use. Heavy-use operations may require more frequent filtering.
- Skim crumbs and loose debris during operation to reduce carbon formation and premature oil breakdown.
- Keep salt, seasoning, breading fines, and other contaminants out of the fry tank whenever possible. Do not salt food directly over the fryer.
- Remove excess water, ice, or surface moisture from product before frying. Water accelerates oil degradation, increases splatter, and may contribute to foaming.
- Use the correct frying temperature for the product being prepared. Running hotter than necessary shortens oil life and may reduce product quality.

Oil quality should be monitored continuously during use. Oil should be filtered, refreshed, or replaced as needed based on actual condition, not only by schedule. Signs that oil may require replacement include:

- persistent smoking at normal frying temperatures
- excessive darkening
- strong off-odors
- excessive foaming
- poor recovery or unstable frying performance
- excessive sediment, gum, or carbon buildup
- poor product color, taste, or surface finish

Different food products affect oil differently. High-moisture, heavily breaded, strongly seasoned, or flavor-intensive foods may shorten oil life more quickly. Where practical, avoid using the same oil for products that transfer strong flavors or contaminants to other foods.

When the fryer is idle, good oil discipline still matters:

- Do not leave excessive debris in the tank.
- Cover the oil when practical to reduce contamination from dust, light, and airborne debris. If using a matching NORIOTA fry tank cover, ensure it is installed only when the fryer is shut down, cool, and safe to cover.
- Do not leave the fryer running at frying temperature longer than necessary during idle periods.

If using a matching NORIOTA fry tank cover, covering the oil when the fryer is idle can help reduce contamination and extend oil life.

Proper oil management is not optional maintenance. It is a core part of normal fryer operation and one of the primary drivers of cooking consistency, oil cost control, cleaning burden, and long-term equipment reliability.

Solid Oil and Shortening Restriction

This fryer is designed for use with liquid cooking oil only. Solid oil or solid shortening must not be used in the fry tank. Melting solid oil or solid shortening in the fry tank may damage the unit, interfere with proper heat transfer, and may affect warranty coverage.

Control System Overview

The fryer is equipped with a manual gas control system using a standing pilot and a thermostat-controlled burner circuit and does not require external electrical power for basic operation.

The control system consists of the following primary components:

- Thermostat for temperature control
- Combination gas valve for pilot and main burner control
- Standing pilot assembly
- Thermopile (millivolt generator)
- High-limit safety device

These components work together to control burner operation, maintain oil temperature, and provide basic safety shutoff protection.

Thermostat Operation

The thermostat regulates oil temperature by cycling the main burners on and off.

- When the oil temperature is below the setpoint, the thermostat allows gas flow to the main burners.
- When the oil reaches the set temperature, the thermostat interrupts gas flow to the burners.
- The burners will cycle as needed to maintain the selected temperature.

This cycling is normal and is required to maintain stable cooking conditions.

Standing Pilot System

The fryer uses a standing pilot flame that remains lit during operation.

- The pilot flame provides ignition for the main burners.
- The pilot must be manually lit during startup.
- Once lit, the pilot remains on unless the unit is shut down or a safety device interrupts gas flow.

If the pilot is extinguished, the fryer will not allow main burner operation.

Thermopile (Millivolt System)

The thermopile is heated by the pilot flame and generates a small electrical signal (millivoltage).

- This signal powers the gas valve and safety circuit.
- If the pilot flame is lost, the thermopile cools and stops generating voltage.
- When this occurs, the gas valve automatically closes to shut off gas flow.

This provides automatic shutdown in the event of pilot failure.

Gas Valve Function

The combination gas valve controls gas flow to both the pilot and the main burners.

- The valve includes OFF, PILOT, and ON positions.
- In the PILOT position, gas flows only to the pilot assembly.
- In the ON position, gas flow to the main burners is controlled by the thermostat.
- The valve will shut off gas flow automatically if safety conditions are not met.

High-Limit Safety Device



WARNING!

Do not attempt to bypass, disable, or modify the high-limit safety device. Operating the fryer without this protection may result in fire, equipment damage, or serious injury.

The fryer is equipped with a high-limit safety device to protect against overheating.

- If the oil temperature exceeds a safe limit, the high-limit device will shut off gas flow to the burners.
- In most cases, the pilot will also be extinguished.
- The fryer must be allowed to cool before the high-limit can be reset.
- If the fryer shuts down due to overheating, do not attempt to relight the pilot until the oil temperature is below 300 °F (149 °C).

Do not attempt to bypass or reset the high-limit without identifying the cause of the over-temperature condition.

Normal System Behaviour

During normal operation:

- The pilot flame remains lit.
- The main burners cycle on and off based on thermostat demand.
- Oil temperature fluctuates slightly around the setpoint.
- The thermopile continuously powers the safety circuit while the pilot is lit.

These conditions indicate normal operation.

Abnormal Conditions

The following conditions may indicate a problem requiring attention:

- Pilot will not stay lit
- Burners do not ignite when thermostat is turned on
- Burners remain on continuously without cycling
- Frequent high-limit shutdown
- Delayed ignition or unstable flame

If abnormal operation is observed, refer to the Troubleshooting Guide or contact **qualified service personnel**.

Before First Use

Before using the fryer for food preparation for the first time:

1. Confirm the fryer is installed correctly and all installation checks are complete.
2. Wash the fry tank interior, baskets, hanger, crumb rack or screen, and other food-contact accessories with warm water and a mild detergent.
3. Rinse thoroughly with clean water.
4. Dry all parts completely.
5. Ensure the fry tank is completely dry before adding oil.

Do not add oil to a wet fry tank. Residual water can cause dangerous splattering when oil is heated.

Filling the Fry Tank



WARNING!

Never operate the fryer without oil covering the heat tubes. Heating an empty or partially filled fry tank may result in fire, severe equipment damage, or unsafe operating conditions.



NOTICE!

Solid oil or solid shortening must not be used with this fryer. Melting solid oil or shortening in the fry tank may damage the tank and affect warranty coverage.

Before lighting the fryer, the fry tank must be properly filled with cooking oil.

1. Ensure the drain valve is fully closed.
2. Fill the fry tank with liquid cooking oil only.
3. Maintain the oil level between the **MIN** and **MAX** fill lines.
4. Do not fill past the **MAX** line. Oil expands when heated and may overflow.
5. Add fresh oil as needed during operation to maintain proper oil level.
6. Never operate the fryer unless the heat tubes are fully covered with oil.

After filling:

- Allow time for oil to settle before lighting the fryer.
- Recheck oil level after initial heating and add oil if necessary.

Lighting and Burner Operation

The fryer uses a standing pilot system. The pilot must be lit before the main burners can operate.

Once the pilot is established and the gas control valve is placed in the ON position, the main burners operate under thermostat control.

During normal operation:

- the pilot flame remains lit
- the main burners ignite from the pilot flame when the thermostat calls for heat
- the burners cycle on and off automatically to maintain the selected oil temperature

This burner cycling is normal and required for proper temperature control. If the pilot does not remain lit, if the burners do not ignite properly, or if flame behavior appears unstable, refer to the Troubleshooting Guide or contact **qualified service personnel**.


Burner Flame Appearance

During normal operation, burner flames should be steady and predominantly blue.

- Yellow or orange flames may indicate poor combustion, dirty burners, or incorrect gas supply conditions.
- Lifting, rolling, or unstable flames may indicate improper gas pressure, blocked flue discharge, or poor ventilation.

If abnormal flame conditions are observed, shut down the fryer and contact **qualified service personnel**.

Startup Procedure



WARNING!

If the pilot goes out, ignition fails, or the gas control has been turned **OFF**, wait at least 5 minutes before attempting to relight. This allows unburned gas to dissipate.

Before starting the fryer, confirm that the fry tank has been properly filled with **liquid cooking oil** and that the heat tubes are fully covered.

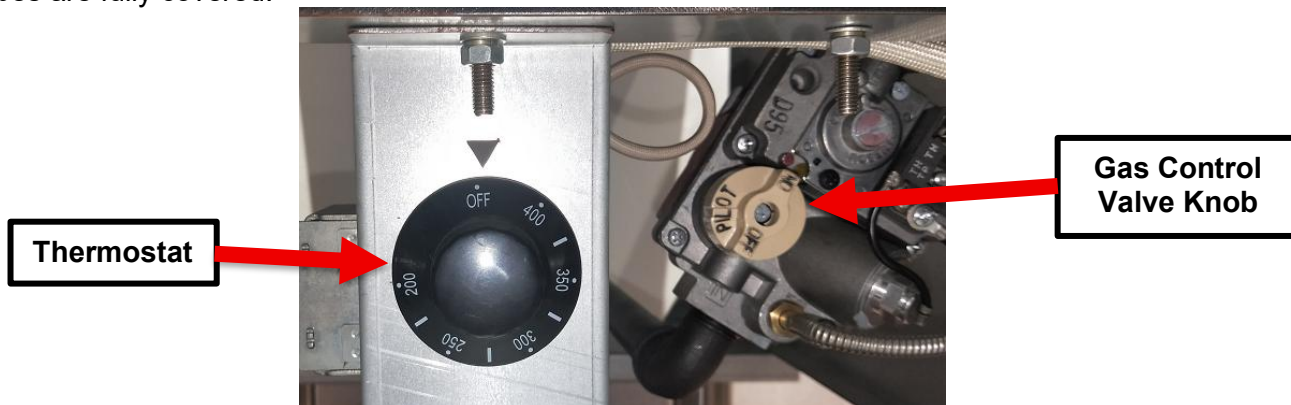


Figure B – Thermostat and gas control valve

1. Open the front access door.
2. Turn the thermostat to the **OFF** position. The thermostat is located behind the door.
3. Push in and turn the gas control valve knob to the **OFF** position.
 - i. Wait at least 5 minutes to allow any unburned gas to vent.
4. Push in and turn the gas control valve knob to the **PILOT** position.

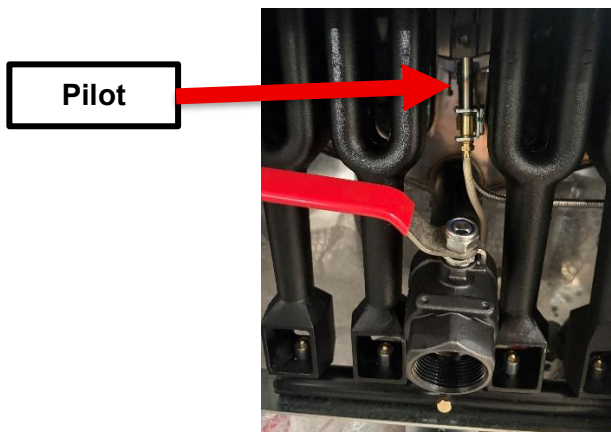


Figure C – Pilot location behind burner assembly

OPERATION

5. While still holding the knob in, light the pilot with a lit flame.
 - i. The pilot is located inside the burner section, positioned slightly above the drain valve outlet, toward the fry tank, and positioned between the burner tubes.
 - ii. Continue to hold the knob in until the pilot remains lit when the knob is released.
 - iii. If the pilot does not remain lit, repeat steps 3 through 5.
6. Push in and turn the gas control valve knob to the **ON** position.
7. Turn the thermostat to the desired temperature setting.
 - i. The main burners will ignite and operate automatically under thermostat control.
8. Allow the fryer to reach operating temperature before adding product. Do not leave fryer unattended while heating oil.

If the gas supply is interrupted, repeat steps 2 through 7.

Shutdown Procedure



WARNING!

Do not operate the fryer if the ventilation hood or required building systems are not operating. If power loss prevents proper ventilation, shut down the fryer and do not resume operation until required ventilation and normal operating conditions have been restored.

The fryer may be shut down in one of two ways depending on how long it will remain out of use:

- **Standby shutdown** - for short periods between cooking cycles or brief idle periods
- **Complete shutdown** - for end of day, cleaning, maintenance, extended idle periods, or whenever the fryer is not intended to remain ready for immediate use

Standby Shutdown

Use standby shutdown only for short periods when the fryer will remain attended and may be returned to operation shortly.

1. Turn the thermostat to the **OFF** position.
2. Turn the gas control valve from **ON** to the **PILOT** position.
3. Confirm that the main burners are off and that only the pilot remains lit.

In standby mode, the pilot remains lit but the burners will not operate unless the thermostat is turned back on.

Complete Shutdown

Use complete shutdown for end of day, before cleaning, before draining oil, during maintenance, or whenever the fryer will not be used for an extended period.

1. Turn the thermostat to the **OFF** position.
2. Push in and turn the gas control valve knob to the **OFF** position.
3. Confirm that the pilot flame is extinguished and that all gas flow to the fryer has been shut off.

After complete shutdown, allow the fryer and oil to cool before draining, filtering, cleaning, or servicing. If using a matching fry tank cover, install the cover only after the fryer has been shut down and allowed to cool. Do not cover the fryer while burners are operating or while the unit is at frying temperature.

Extended Shutdown

For extended shutdown or out-of-service conditions:

1. Perform the **Complete Shutdown** procedure above.
2. Allow the fryer and oil to cool to a safe temperature.
3. Drain, filter, or dispose of oil as required by your operating procedure.
4. Clean the fryer in accordance with the Cleaning and Maintenance section of this manual.
5. Shut off the manual manual gas shutoff valve if required by site procedure, service work, or local code.

Fry Tank Cover (Optional Use)

The fry tank cover may be used to protect oil from contamination when the fryer is not in operation.

- Install the cover only after the fryer has been shut down and allowed to cool to a safe temperature.
- Do not install the cover while burners are operating or while the fryer is at frying temperature.
- Ensure the cover is positioned securely on the fry tank before leaving the unit unattended.

Use of a fry tank cover may help reduce debris contamination and support oil cleanliness during idle periods.

Important Shutdown Notes

- Do not leave the fryer unattended while the burners are operating.
- Do not leave the fryer at frying temperature during long idle periods.
- Do not begin draining or cleaning until the fryer has been shut down properly.
- Use complete shutdown, not standby mode, before cleaning, maintenance, or extended non-use.

OPERATION

Power Outage Shutdown



WARNING!

Do not use the fryer during a power outage. If power loss prevents proper ventilation, turn the thermostat **OFF**, turn the gas control valve to **OFF**, and do not resume operation until required ventilation and normal operating conditions have been restored.

Draining the Fry Tank



WARNING!

Hot oil can cause severe burns.
Allow the fryer to cool to a safe temperature before draining.
Use appropriate protective equipment and containers designed for hot oil.

Before draining the fry tank:

- Ensure the fryer has been properly shut down and thermostat is in the OFF position.
- Allow oil to cool to a safe handling temperature.
- Verify that a suitable metal container is positioned to receive the oil.
 - Do not use plastic, glass, or unapproved containers.
- Ensure the fryer is stable and positioned correctly.

Draining Procedure



Figure D – Drain extension installed on drain valve

1. Open the front access door.
2. Install the drain extension onto the drain valve.
 - Hand-tighten only. Do not overtighten.
3. Position the drain extension into an appropriate container or mobile filtering unit. Verify an appropriate container is in place before opening the drain valve.
4. Slowly open the drain valve.
 - Allow oil to begin flowing in a controlled manner.
5. Once flow is stable, open the drain valve fully to drain the tank.
 - If the drain becomes clogged, close the drain valve and clear the obstruction from inside the fry tank only after the oil has cooled to a safe handling temperature. Never attempt to clear a clogged drain from the front of the drain valve.
6. When the fry tank is empty, use a tank brush to remove debris and residue.
7. Close the drain valve securely.

After Draining

- Ensure the drain valve is fully closed before refilling the tank.
- Remove the drain extension after use.
- Do not operate the fryer until the tank has been properly refilled with oil.
- If the fry tank has been emptied and will not be immediately refilled, ensure the fryer remains shut down and do not attempt to relight the pilot until the tank has been properly refilled with liquid cooking oil.
- When refilling after draining, add liquid cooking oil to at least the MIN level and not above the MAX line. Oil will expand as it is heated.

Never operate the fryer with the drain valve open or improperly closed.

CLEANING AND MAINTENANCE

Regular cleaning and preventive maintenance are essential to maintaining safe operation, stable temperature control, good frying results, long oil life, and long equipment life. Failure to follow recommended cleaning and maintenance procedures may result in reduced performance, excessive residue buildup, carbon accumulation, poor oil quality, unstable recovery, difficult cleaning conditions, unsafe operation, or increased service requirements. Only routine cleaning and basic operation should be performed by the operator. All adjustments, repairs, and internal servicing must be performed by **qualified service personnel**.



WARNING!

Hot oil and hot surfaces can cause severe burns. Allow the fryer and oil to cool to a safe temperature before draining, cleaning, or servicing. Shut the fryer down properly before beginning any cleaning or maintenance procedure.

General Maintenance Guidance

Routine cleaning and preventive maintenance help to:

- maintain stable frying temperatures
- improve food quality and consistency
- extend oil life
- reduce carbon and grease buildup
- preserve cabinet appearance
- reduce unnecessary service calls
- extend equipment life

Do not:

- use corrosive, chlorine-based, or sulfate/sulfide cleaners, or harsh chemicals not specifically intended for commercial fryer cleaning
- use wire brushes, ordinary steel wool, files, or other carbon-steel tools on stainless steel surfaces
- use sharp tools that may gouge tank or cabinet surfaces
- allow water to remain in the fry tank before refilling with oil
- bypass shutdown, draining, or cooling procedures during cleaning
- immerse the fryer in water or any other liquid

Cleaning frequency depends on product mix, oil condition, daily volume, breading load, seasoning, and general kitchen environment. Heavy-use operations, breaded products, and greasy or high-carbon conditions may require more frequent cleaning than the minimum intervals listed in this manual.

Daily Cleaning

1. Shut the fryer down in accordance with the **Shutdown Procedure** section of this manual.
2. Wipe off any oil splashes or spills from the exterior surfaces while residue is still easier to remove.
3. Clean exterior surfaces using a soft cloth with warm water and a mild detergent.
4. Use a non-abrasive scouring pad only where needed for stubborn deposits.
5. Remove crumbs, loose debris, and food particles from accessible interior areas and removable components.
6. Clean fry baskets, basket hanger, crumb rack or screen, and other removable parts.
7. Clean and sanitize the surrounding area around the fryer as required by site practice.

Daily cleaning should be paired with routine oil skimming or filtering as required by the operation. Leaving debris in the tank accelerates carbon formation, shortens oil life, and increases cleaning difficulty.

Exterior and Stainless Steel Cleaning

Exterior cabinet surfaces should be kept clean and free of grease accumulation. If routine cleaning is neglected, grease can polymerize, burn onto surfaces, and become much harder to remove.



CAUTION!

Improper cleaning tools may damage stainless steel surfaces and increase future staining or corrosion risk.

Cleaning Procedure

- Use warm water and a mild soap or detergent on a soft cloth.
- Rinse with clean water and dry thoroughly.
- For grease or stubborn residue, use a non-abrasive cleaner suitable for stainless steel and rub in the direction of the finish lines.
- Dry with a soft cloth after cleaning.

Do not use:

- ordinary steel wool
- wire brushes
- scrapers, files, or carbon-steel tools
- abrasive methods that scratch the finish
- circular scrubbing patterns on polished stainless steel surfaces

Darkened heat-tint areas on stainless steel may occur from repeated exposure to heat. These areas are not necessarily harmful, but should be cleaned using appropriate stainless-safe methods only.

Oil Filtering and Oil Change Guidance

Oil filtering is one of the most important daily or high-frequency maintenance activities. Filter oil at least daily under normal use. High-volume operations, especially those frying breaded or heavily seasoned products, may require filtering two or more times per day.

General Guidance

- Filter oil at least daily under normal use.
- Filter more often if frying heavily breaded, highly seasoned, or high-volume products.
- Skim debris during active use to reduce contamination and carbon buildup.
- Replace oil when condition indicates it is no longer suitable for service.

Oil condition should be judged by actual operating results and appearance, including smoking, darkening, foaming, off-odors, excessive sediment, or poor frying performance.

If oil is being drained for filtering or replacement, follow the **Draining the Fry Tank** procedure in this manual.

Fry Tank Cleaning After Draining

Once the oil has been drained:

- Use the provided tank brush to remove scraps, sediment, and remaining debris from the tank.
- Clean between and around the heat tubes carefully to remove carbon, crumbs, and residue buildup.
- Ensure the drain valve is fully closed before refilling with oil.
- Do not return the fryer to service until the tank is clean and properly refilled with liquid cooking oil.

This post-drain cleaning step is important even when a full boil-out is not being performed. It reduces contamination carryover and improves oil life.

Boil-Out Procedure

The fryer should be thoroughly cleaned by boil-out on a routine basis. Boil-out frequency depends on use conditions, product type, oil condition, and carbon buildup. Perform boil-out cleaning weekly or as required.



WARNING!

Completely shut down the fryer when oil is being replaced by water, and again when the heating portion of boil-out is complete. This prevents unintended burner operation during draining, rinsing, or refilling.

Boil-Out Procedure

1. Drain the fry tank in accordance with the **Draining the Fry Tank** procedure.
2. Once the oil has been drained, flush out scraps and sediment using the provided tank brush.
3. Close the drain valve.
4. Fill the fry tank with water and a low-foaming fryer cleaner or degreaser suitable for boil-out. Follow the cleaner manufacturer's instructions.
 - i. Do not use chlorine cleaners or sulfate / sulfide cleaners in the fry tank.
5. Ensure the solution level remains between the **MIN** and **MAX** fill lines in the tank.
6. Set the thermostat to **200 °F (93 °C)** or to the cleaner manufacturer's recommended temperature.
7. Allow the solution to reach a gentle simmer only. Do not allow the tank to boil aggressively, as excessive foaming may occur.
8. Maintain the simmer for approximately 15 to 20 minutes, or as needed to soften grease, gum, and carbon deposits.
9. Turn the thermostat **OFF** and allow the solution to stand briefly so loosened residue can be removed more effectively.
10. Scrub the fry tank walls, heat tubes, and accessible surfaces with the tank brush.
11. Drain the cleaning solution from the tank.
12. Close the drain valve and refill the tank with clean water.
13. Add **1 cup (1/4 L) of vinegar** to help neutralize alkaline cleaner residue.

CLEANING AND MAINTENANCE

14. Bring the rinse solution to a gentle simmer, then turn the thermostat **OFF** and allow it to stand for a few minutes.
15. Drain the tank again.
16. Rinse thoroughly with clean hot water until all cleaner residue has been removed.
17. Dry the tank thoroughly with clean cloths. All water must be removed before refilling with oil. Residual water can cause violent splattering when hot oil is added.
18. Close the drain valve and refill the fryer in accordance with the **Filling the Fry Tank with Oil** procedure.



WARNING!

All water must be removed from the fry tank before adding oil. Residual water can cause dangerous splattering and severe burns when oil is heated.

Flue and Burner Area Inspection

The flue area should be inspected regularly for obstruction, grease, or corrosion. Blocked flue discharge can affect both safety and performance.

Flue Inspection Guidance

- Inspect the flue area only when the fryer is cool.
- Check for obstruction, grease buildup, corrosion, or signs of abnormal heat exposure.
- Do not turn the fryer on while inspecting the flue area. Examination during operation may cause injury.
- Do not place any object on, over, or around the flue outlet.

Burner areas should be kept free of lint, grease, and debris. Monthly cleaning around burners and orifices is recommended where lint or debris accumulation is present.

Visual burner flame checks may also be useful. A proper flame is generally steady and blue. Yellow tipping, lifting, or unstable flame behavior may indicate an adjustment or service issue. These checks are observational only unless performed by **qualified service personnel**.

Temperature Verification and Calibration Check

Regular temperature verification helps confirm that the fryer is heating and cycling correctly.

Operator-Level Temperature Verification

- Verify fryer temperature periodically using a calibrated thermometer suitable for hot oil service.
- Place the thermometer probe in the oil at a representative measurement location, away from direct contact with tank walls or heat tubes.
- Compare observed temperature behavior to the thermostat setting over several burner cycles.

If the fryer consistently overheats, undershoots significantly, fails to cycle normally, or produces unstable results under normal loading, refer to the **Troubleshooting Guide** or contact **qualified service personnel**.

Calibration and Adjustment Boundary

Thermostat calibration and adjustment must be performed by **qualified service personnel** only. Do not attempt to adjust, recalibrate, or modify the thermostat unless qualified to do so.

Preventive Maintenance and Service Boundary

Preventive maintenance is a documented program of routine checks and cleaning intended to support safe, sanitary, and efficient equipment operation.

Operators may perform:

- daily exterior cleaning
- daily debris removal
- oil filtering and oil replacement
- boil-out cleaning
- basic visual inspection of flue, burners, baskets, and removable parts
- basic temperature verification

Qualified service personnel should perform:

- thermostat calibration or adjustment
- burner tuning or pressure adjustment
- gas valve adjustment or replacement
- thermopile, pilot, or high-limit diagnosis
- burner orifice cleaning beyond routine external access

CLEANING AND MAINTENANCE

- inspection or testing of safety devices
- repair of stripped, leaking, damaged, or unstable components

Improper servicing may result in unsafe operation, reduced performance, or warranty issues.

Fry Baskets, Hanger, and Accessories

Accessories that contact oil or food residue should be cleaned regularly.

- Clean fry baskets and basket hanger daily or as needed.
- Remove crumbs and food residue from basket supports and internal accessories.
- Inspect baskets and handles for wear, bending, looseness, or damage.
- Replace damaged accessories before returning the fryer to normal use.

If using a matching NORIOTA fry tank cover, keep it clean and use it only when the fryer is shut down and safe to cover.

Area Around and Beneath the Fryer

Grease and debris accumulation around the fryer increases cleaning difficulty and may contribute to sanitation or fire risk.

- Clean around the fryer regularly.
- Clean behind and beneath the fryer on a scheduled basis appropriate to the operation.
- Keep the surrounding area free of grease accumulation, food debris, and combustible clutter.

Mobile units must be returned to their correct position and any restraint device must be reconnected after cleaning or repositioning.

Recommended Maintenance Schedule

Use the schedule below as a baseline. Increase frequency as required by daily volume, breading load, seasoning, debris, or site conditions.

Task	Recommended Frequency
Wipe exterior surfaces	Daily
Clean fry baskets, hanger, and removable parts	Daily
Remove debris from tank and accessible interior areas	Daily
Filter oil	Daily at minimum, more often as needed
Check oil level and oil condition	Daily and during operation
Clean surrounding area around fryer	Daily
Boil-out cleaning	Weekly or as required
Clean behind and beneath fryer	Weekly
Inspect flue area for obstruction or grease	Monthly visual check by operator; formal qualified-service inspection at least annually
Inspect burner area for lint or debris	Monthly
Verify temperature behavior with calibrated thermometer	Monthly
Confirm drain flow and clear any drain restriction	Monthly
Inspect baskets and accessories for wear or damage	Monthly
Have unit inspected by qualified service personnel	At least semi-annually, or more often in heavy-use applications


Final Maintenance Reminder


Regular inspection, cleaning, filtering, and prompt correction of minor issues will help prevent costly repairs, reduce downtime, improve food quality, preserve oil life, and extend the operating life of the fryer.

TROUBLESHOOTING GUIDE

If the fryer does not appear to be operating correctly, review the **Operation**, **Shutdown Procedure**, **Draining the Fry Tank**, and **Cleaning and Maintenance** sections first. Many issues are caused by oil condition, startup sequence, ventilation, loading practices, or cleaning needs and can often be corrected without service.

Use the guide below to identify common symptoms, likely causes, and recommended corrective actions. If the issue persists after completing the recommended steps, discontinue use and contact **qualified service personnel**.

	WARNING!	If the issue involves gas odor, unstable flame, visible leakage, overheating, or any other unsafe condition, shut the fryer down immediately and do not resume operation until the problem has been corrected.
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	WARNING!	Shut off the fryer and allow it to cool before attempting inspection or maintenance. Do not attempt to adjust, repair, or disassemble gas or control components unless qualified to do so.
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Before Calling for Service

Before troubleshooting specific issues, confirm the following:

- The fry tank is filled with liquid cooking oil to the proper level.
- The drain valve is fully closed.
- The gas supply is turned on.
- The gas control valve is in the correct position.
- The thermostat is set correctly.
- The pilot flame is lit and stable.
- The ventilation system is operating and unobstructed.
- The oil condition is acceptable.

Many apparent equipment problems are resolved by correcting one of the above conditions.

Symptom	Possible Cause	Corrective Action
Power, Gas, and Ignition		
Pilot will not light	Gas supply is turned off	Verify gas supply is on and available
	Gas control valve not in correct position	Follow the Startup Procedure and confirm the valve is in the PILOT position
	Air in gas line during initial startup	Retry lighting procedure after waiting at least 5 minutes
	Ignition flame not reaching pilot assembly	Reapply ignition flame correctly during pilot-lighting procedure
Pilot lights but will not stay lit	Gas control knob not held long enough	Hold the knob in long enough for the thermopile to heat
	Weak or unstable pilot flame	Retry lighting procedure; if problem continues, contact qualified service personnel
	Gas supply interruption or unstable gas supply	Verify gas supply is stable
	Pilot flame not properly heating the thermopile	Retry lighting procedure and ensure the pilot flame is properly established. If the problem continues, contact qualified service personnel.
Burners do not ignite	Thermostat is set too low or OFF	Set thermostat above current oil temperature
	Gas control valve is not in the ON position	Confirm gas control valve is in the ON position
	Pilot is not properly established	Relight pilot following the Startup Procedure
	High-limit device has been triggered	Allow fryer to cool and attempt restart; if condition repeats, contact qualified service personnel
Repeated ignition failure	Startup sequence not followed correctly	Repeat full Startup Procedure exactly as written
Gas odor is present	Leak or unsafe gas condition	Shut fryer down immediately, shut off the gas supply, do not attempt to relight, and follow site gas-odor emergency procedures. Contact the gas provider or qualified service personnel as appropriate.

TROUBLESHOOTING GUIDE

Symptom	Possible Cause	Corrective Action
Temperature and Heating Performance		
Fryer does not reach temperature	Large batch size causing excessive temperature drop	Reduce batch size and allow recovery time
	Oil level too low	Refill with liquid cooking oil to proper level
	Oil is degraded or contaminated	Filter or replace oil
	Ventilation or airflow problem	Verify hood is operating and flue area is unobstructed
	Cold startup condition	Allow sufficient preheat time
	Heavy product loading	Reduce loading and allow more recovery time between batches
Fryer overheats	Thermostat set too high	Reduce thermostat setting
	Oil degraded or excessively dirty	Replace oil and clean fryer as needed
	Flue outlet obstructed or airflow restricted	Clear obstruction and verify ventilation system is operating
Fryer shuts down unexpectedly	High-limit device may have activated due to overheating or unsafe operating condition	Allow fryer to cool. Do not resume operation until the cause has been identified and corrected. If the condition repeats, contact qualified service personnel .
Burner cycling seems frequent	Normal thermostat operation	This is normal if fryer is maintaining temperature correctly
Fryer temperature seems unstable	Large wet loads or inconsistent batch sizes	Reduce batch size and improve product preparation consistency
Oil Quality and Frying Results		
Oil foams excessively	Water or moisture entering the oil	Dry product thoroughly before frying
	Oil is degraded	Replace oil
Oil smokes at normal frying temperature	Oil is degraded or overheated	Replace oil and verify operating temperature
Oil breaks down quickly	Excessive debris, breading, or seasoning contamination	Filter more frequently and skim debris during use
	Frying temperature set higher than necessary	Use only the temperature required for the product
Food cooks unevenly	Inconsistent batch size or product size	Load baskets evenly and use smaller, consistent batches
Food color is too dark	Oil is degraded or temperature is too high	Replace oil and verify thermostat setting
Food is greasy or poor quality	Oil temperature too low or recovery incomplete	Allow fryer to recover before adding next batch
Off-odors or poor flavor transfer	Oil contaminated by previous product	Filter or replace oil and avoid mixing strongly flavored products where practical
Oil Handling, Draining, and Tank Issues		
Oil leaks from fryer	Drain valve not fully closed	Close drain valve securely and verify leakage stops
	Drain components loose or damaged	If leakage continues after confirming the drain valve is closed, discontinue use and contact qualified service personnel .
Tank will not drain properly	Debris obstructing drain path	Allow oil to cool, inspect drain path, and clear obstruction safely
Oil drains slowly	Sediment or debris buildup in tank or drain area	Clean tank and drain area after proper shutdown
Oil level drops during use	Normal product absorption and carryout	Top off oil as needed to maintain proper level
Oil overflows	Tank overfilled before heating	Do not fill past the MAX line
Excessive debris remains after draining	Inadequate post-drain cleaning	Use tank brush to remove sediment and residue before refilling
Ventilation, Flue, and Installation-Related Issues		
Burner flame appears unstable	Drafts or poor ventilation	Verify hood operation and eliminate strong drafts where possible. If unstable flame continues, shut the fryer down and contact qualified service personnel .

TROUBLESHOOTING GUIDE

Symptom	Possible Cause	Corrective Action
Poor recovery or overheating	Flue outlet obstructed	Remove obstruction and verify proper clearance around flue
Fryer operates poorly after being moved	Restraint or gas connection not re-established correctly	Verify fryer is correctly positioned and all required connections are restored
Fryer seems uneven during operation	Fryer not level	Re-level fryer front-to-back and side-to-side
Uneven frying results side-to-side	Improper leveling affecting oil distribution	Re-level fryer properly
Installation appears unsafe or unstable	Legs or castors not installed correctly	Discontinue use until installation is corrected
Cleaning and Maintenance Related Issues		
Heavy carbon buildup in tank	Infrequent filtering or cleaning	Increase filtering frequency and perform boil-out cleaning
Persistent residue after cleaning	Daily cleaning not sufficient	Perform full boil-out procedure
Excessive grease buildup on exterior	Inadequate routine cleaning	Clean exterior surfaces daily with approved methods
Burned-on stains on stainless steel	Grease allowed to accumulate over time	Clean with non-abrasive stainless-safe methods
Water splattering when reheating	Water remained in tank after cleaning or boil-out	Do not resume use until tank is completely dry
Repeated drainage or cleaning difficulty	Debris left in tank too long	Increase cleaning frequency and remove debris after draining
When to Stop and Call for Service		
Pilot repeatedly will not stay lit	Thermopile, gas valve, or pilot-related fault	Contact qualified service personnel
Burners do not ignite after normal startup checks	Control or gas-system fault	Contact qualified service personnel
Fryer repeatedly overheats or trips high-limit	Temperature control or airflow problem	Discontinue use and contact qualified service personnel
Visible oil leak from tank or fittings	Component damage or leak	Discontinue use and contact qualified service personnel
Repeated unstable flame or delayed ignition	Burner, pilot, gas pressure, or control issue	Contact qualified service personnel
Unsafe condition cannot be corrected by normal checks	Unknown fault	Shut fryer down and contact qualified service personnel

Service Guidance

Only **qualified service personnel** should perform:

- gas system adjustment
- thermostat calibration
- burner or orifice service
- high-limit diagnosis or replacement
- internal control or valve repair
- repair of leaking, stripped, or damaged components

Improper service may result in unsafe operation, equipment damage, or affected warranty coverage.

WARRANTY

For full warranty terms, conditions, limitations, and exclusions, please visit:

<https://noriota.ca/pages/warranty-policy>

To register your product online, visit:

<https://noriota.ca/pages/warranty-registration>

Please have your model number and serial number available when registering your product or requesting warranty support.

Scan to register your product online:



SPARE PARTS AND SERVICE INFORMATION

Spare Parts Identification

Replacement parts diagrams and component lists for NORIOTA equipment are available online to support service, maintenance, and parts ordering.

These diagrams are provided for reference and identification purposes only and are intended for use by **qualified service personnel** and authorized dealers when identifying replacement components.

Accessing Spare Parts Diagrams

Current spare parts diagrams and part identification resources can be found at:

www.noriota.ca

Search by model number to locate the appropriate parts documentation. Ensure you are referencing the correct model and revision before selecting parts.

Important Notes Regarding Spare Parts

Spare parts diagrams illustrate component locations and assemblies but do not replace professional service training.

Parts availability may vary by model, production run, or revision.

Always verify the model number and serial number before ordering replacement parts.

Use of non-genuine replacement parts may affect performance, safety, and warranty coverage.

Service and Parts Ordering Guidance

For parts ordering, warranty inquiries, or service assistance, contact your authorized NORIOTA dealer, email support@noriota.ca, or visit www.noriota.ca.

Only **qualified service personnel** should install replacement components. Improper installation may result in equipment damage, unsafe operation, or affected warranty coverage.

Rating Label Information

The rating label contains important technical and identification information for the fryer, including:

- model number
- serial number
- gas type
- input rating
- manifold pressure requirements
- clearance requirements
- certification information, including applicable safety and sanitation standards

Always verify that the gas type and installation requirements shown on the rating label match the installation site and utility supply before placing the fryer into service.

Rating Label Location

The rating label is located on the back side of the front access door.

Open the front access door to view the label. Always refer to the rating label on the unit itself for the correct model number, serial number, gas type, input rating, manifold pressure, clearance requirements, and certification information.

Do not remove, cover, deface, or paint over the rating label. The rating label must remain legible for the life of the equipment.

COMMISSIONING RECORD

Record the information below at the time of installation. This record helps confirm proper installation conditions, supports future service, and may assist in warranty evaluation. Retain this page for your records.

UNIT AND PURCHASE INFORMATION

Model Number: _____

Serial Number: _____

Date of Purchase: _____

Purchased From (Dealer / Supplier): _____

Dealer Contact (if available): _____

INSTALLATION DETAILS

Installation Date: _____

Installation Location (Site / Address): _____

Installed By (Company / Technician Name): _____

Installer Contact (if available): _____

<p>GAS SUPPLY VERIFICATION</p> <p>Gas Type (Natural Gas/LP Gas): _____</p> <p>Supply Pressure (measured): _____ <input type="checkbox"/> Verified matches range on rating label or manual</p> <p>Manifold Pressure (measured): _____ <input type="checkbox"/> Verified matches rating label specification</p> <p>Gas Connection Leak Checked: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Shutoff Valve Accessible: <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>UNIT SETUP AND CONDITIONS</p> <p>Unit Level Confirmed: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Legs or Castors Installed Properly: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If castors installed, restraint device connected: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Clearances Verified: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Ventilation / Hood Operation Verified: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Flue Area Unobstructed: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Ambient Temperature at Installation: _____</p>
<p>OIL AND TANK SETUP</p> <p>Fry tank filled between MIN and MAX fill lines: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Drain Valve Closed and Leak-Free: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Heat Tubes Fully Covered: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Fry tank confirmed clean, dry, and free of water before filling with oil: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Oil Type (Liquid Cooking Oil Only): _____</p>	<p>INITIAL OPERATION CHECK</p> <p>Pilot Lights and Remains Stable: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Burners Ignite and Operate Correctly: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Thermostat Cycles Normally: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Temperature Response Verified: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Abnormal Noise or Vibration: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Gas Odor Present: <input type="checkbox"/> Yes <input type="checkbox"/> No - if yes, do not operate</p>

NOTES / OBSERVATIONS

INSTALLER CONFIRMATION

Installer Name: _____

Signature: _____

Date: _____

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