



Drive Thru Refrigerator

(H&K P/N 80213-GC)

Equipment Manual

Place this equipment chapter in the Drive-Thru section of the Equipment manual.

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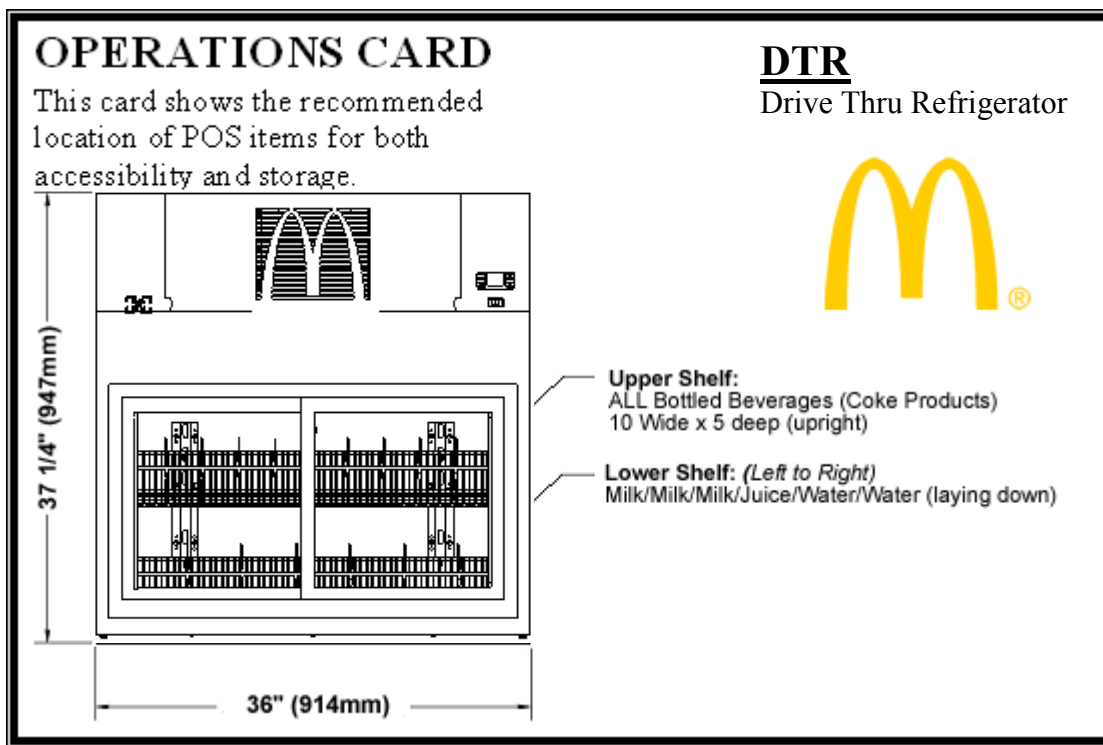
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Introduction

Note: This Installation & Operating Manual contains important instructions and safety information on the Drive Thru Refrigerator (DTR). Read and understand the contents of this manual **before** attempting to install, operate, or service the unit.

The DTR is a compact, wall-mounted refrigerator designed for short term point of use storage of various items. The DTR is designed for use in the Drive Thru area and can be wall mounted above work tables and other equipment, or can be free standing when coupled with its optional stand (H&K P/N 77454). The DTR includes two sliding double pane glass doors with automatic rollback closure, flexible shelf/display system providing setup versatility, product visibility, roll-forward racking, and easy access for product stocking and serving.



Installation Instructions

Installation of this equipment must be completed by qualified personnel in compliance with all manufacturer's instructions and local building, food safety and electric codes.

Inspection

Upon receipt, examine the equipment carefully for any damage. If damage has occurred, notify the freight carrier and H&K immediately.

Uncrate the Unit

This unit will arrive crated in a skid-mounted carton.

Caution! The shipping container may have staples, nails, banding under tension and possible wood splinters, which can cause injuries. Wear gloves and eye protection to reduce the risk of injury when uncrating.

- Cut the banding holding the cardboard carton to the shipping pallet, using heavy scissors or tin snips. Use caution to avoid contact with cut banding.
- Lift the cardboard carton straight up and off the unit.
- Cut the banding that holds the refrigerator to the shipping pallet or skid. Use caution to avoid contact with the cut banding.

***Note: Leave unit on skid until ready to wall-mount**

- Peel the protective adhesive film from all exposed areas (front, sides, and interior).

Caution! The DTR weighs approximately 180 lbs (82 kg). Do not attempt to remove this unit from its packaging without assistance.

Remove Packing & Loose Components



The glass rollback doors and loose components have been secured to prevent damage during shipping. Remove any tape and blocking. Remove any foam blocking and tape used to secure the inside stainless steel wire product shelves and racks. Remove the carton containing product shelf display components.

Wash and Sanitize Unit Interior & Shelving Components

Note! Use only McDonald's approved cleaning and sanitizing agents according to instructions.

- Wipe down, sanitize and dry the refrigerator interior.
- Wipe down, sanitize and dry individual shelf components if pre-installed.

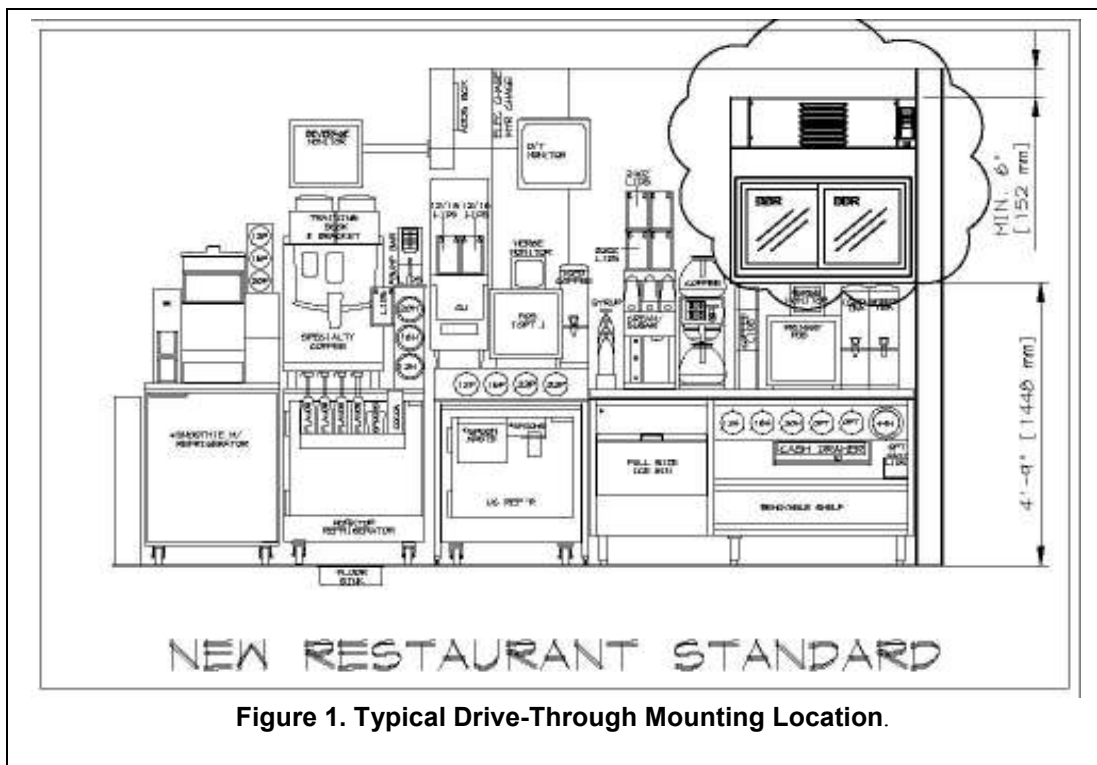
Pre-Installation Checklist

	Ensure wall is reinforced appropriately using a minimum of ¾" (19mm) plywood wall support
	Power receptacle within 72" (1828 mm) to plug in unit

Determine Refrigerator Wall Mounting Location

WARNING! Qualified carpenters and/or equipment installers capable of evaluating wall construction and securely wall mounting heavy refrigerated case must perform wall preparation.

Identify a wall mounting location within the drive-through area. The DTR is typically mounted immediately right or left of the pass-through window, on the adjacent wall, and above the beverage/POS counter, within easy reach of the drive-through crewmember. (Figure 1).



Caution! The DTR is designed for operation at a maximum ambient temperature of 100°F (38°C) and 50% relative humidity. The DTR is designed for use indoors in the drive-through or restaurant kitchen area protected from weather, excessive heat, direct sunlight, excessive humidity and corrosive salt air.

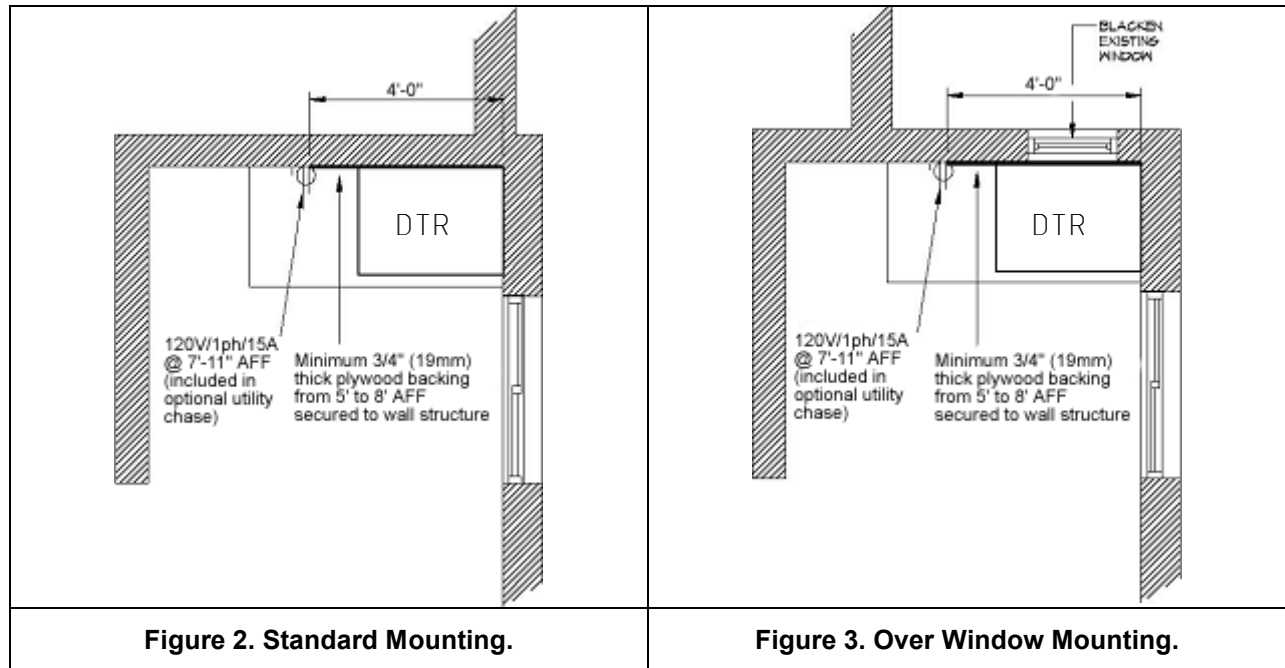
Mounting Preparation

- **Standard Mounting**

The mounting wall must be prepared using minimum 3/4" (19 mm) thick plywood securely anchored to the wall structure, from 60" (152 cm) to 96" (244 cm) above the finished floor completely covering the width of the refrigerator. (Figure 2.)

- **Over-Window Mounting**

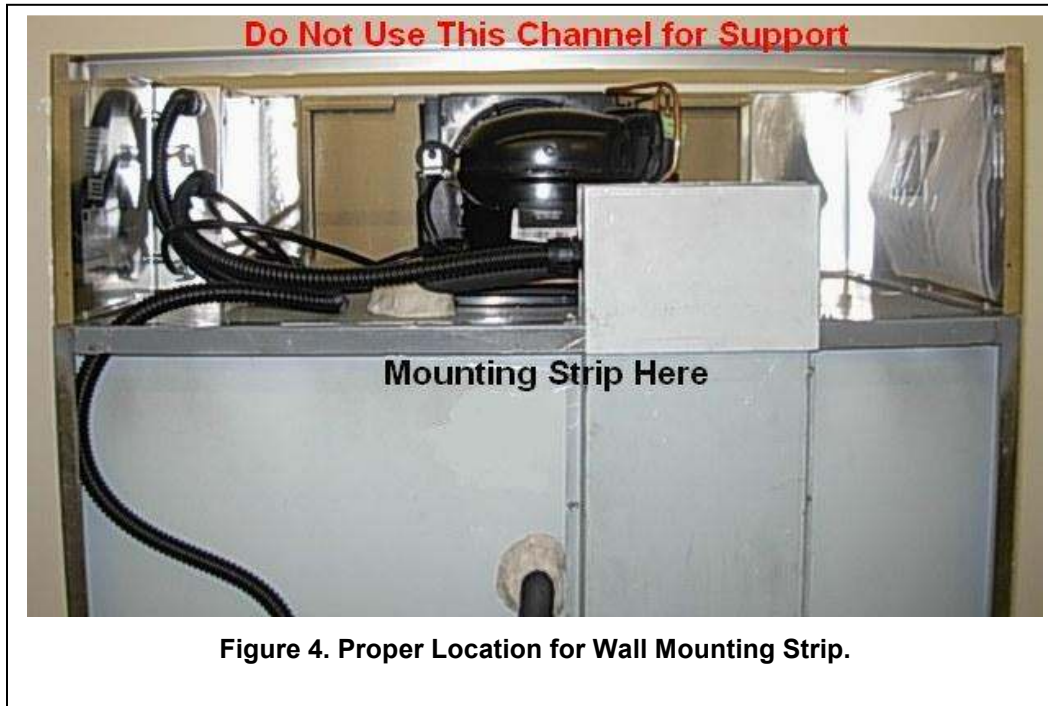
If there is a small side window on the wall where the DTR is to be mounted, the wall surface must be furred out with minimum 3/4" (19 mm) plywood over the window frame to ensure a solid and perpendicular installation. In addition, the window should be blacked out or closed off to provide a finished look when viewed from the building exterior. (Figure 3).



Wall Mounting the DTR Refrigerator

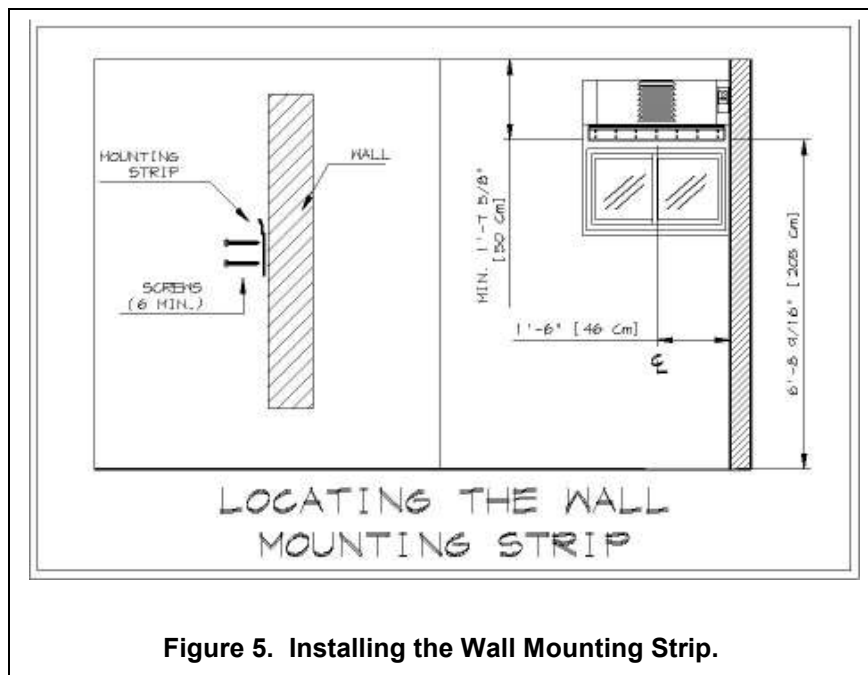
A steel offset mounting strip has been provided for the wall mounting of this unit. This mounting strip will engage the full width of the refrigerator case upper rear frame/flange. (Figure 4.)

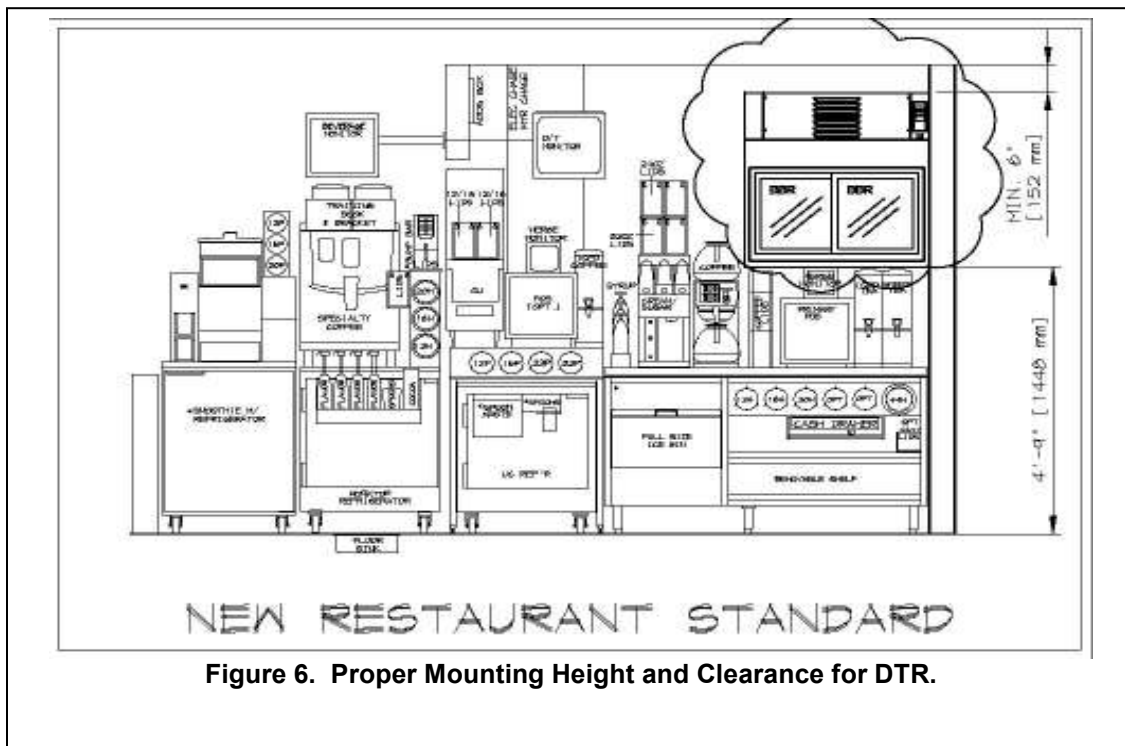
Warning! The steel offset mounting strip must engage the back flange at the bottom of the upper compressor compartment shown. The channel at the top of the compressor compartment is **NOT** designed to support the DTR weight.



Locate center point of desired case-mounting position on wall surface. Measure up 80-9/16" (204.7 cm) from floor, (Figure 5) to provide a DTR unit bottom height or clearance of 57" (145 cm) above the finished floor (A.F.F.). (**NOTE:** Mounting height may vary to meet site requirements.)

Place the bottom of mounting strip at this (80-9/16") height against wall, on center with your mark. Level the mounting strip with a small spirit or laser level. Mark location of the six (minimum) screw holes in the mounting strip. Verify that a minimum of 19-5/8" (50 cm) exists from the bottom of the mounting strip to the ceiling (Figure 6) to allow proper ventilation for the DTR compressor (6" minimum from top of DTR to ceiling).





Important! Failure to provide sufficient top (minimum 6" to ceiling) clearance may shorten the DTR life, increase compressor run time and energy usage, and void the unit's warranty coverage.

Drill a minimum of six pilot holes in the anchor wall, per screw or anchor system instructions.

Secure the mounting strip to wall using #12 x 2" screws in the CBB hardware kit (minimum length) or anchor system. Make sure top edge of strip protrudes from wall as shown in Figure 5. Recheck level of mounting strip.

With assistance, lift the cabinet by the sides to a height that will clear the mounting strip with rear frame flange on cabinet then slowly lower the case flush with wall, to engage mounting strip along full length. Ensure refrigerator frame flange slips behind the mounting strip while you continue to support weight of cabinet.

***Note:** Ensure that the power cord is not pinched and is free from sharp bends or kinks.

Place spirit or laser level on top of unit and verify it is level left-to-right and front-to-back. (**NOTE:** Case can be pitched slightly to the rear but not pitched forward.)

Note! The DTR is shipped with an overflow hose installed. Overflow conditions can be caused by extreme conditions such as high humidity, improper product maintenance (faulty door springs), or improper operation by store personnel such as keeping the door open for extended periods of time, in which case the overflow hose can be run to a floor drain or other approved location.

Plug in power cord at 120-volt/60-Hz outlet identified earlier. Any excess power cord can be coiled and stored in the upper compressor compartment.

To Stand Mount the DTR Refrigerator

Please refer to the installation instructions for the DTR stand (*H&K P/N 77454*) for specific installation instructions.

Operating Instructions

Connect to Power Source

Insert the plug of the DTR into a standard 120V AC 60 Hz. 15A outlet. The DTR contains a compressor and should not be used on the same circuit with other motors or heavy demand appliances.

Start-up

The DTR power switch is located on the front top panel of the unit (Figure 7). This switch will illuminate red when activated indicating that the refrigeration and the interior lighting are operating. ***Allow the DTR to run for one hour prior to loading with product to come up to operating temperature***

Temperature Setting

The DTR has been tested and preset at the factory to maintain a temperature between 34°F (1°C) and 40°F (4.4°C). The temperature controller located on the front top panel displays the internal temperature of the refrigerator. (Figure 12.)

Figure 12



Thermostat Adjustment

If the temperature is not reading within the range specified above, the thermostat can be adjusted by use of the <i> and <↑> or <↓> keys in the following sequence.

Pressing and holding <i> button displays the setpoint. Use the <↑> or <↓> while holding <i> key to select desired setpoint. Complete by releasing <i> key.

Caution! Do not adjust the set point below 34°F or 1°C. Doing so may result in excessive ice buildup on the cooling coils, the unit not holding a safe temperature, and potential damage to the compressor.

Caution! Excessive tampering with the temperature controller may lead to operating difficulties and compromise food safety.

Door Removal/Installation

Remove the sliding glass doors by firmly grasping the outer (right side) door and lifting it straight up in its track. When the bottom edge of the door is free from the lower track, rotate the door out from the bottom. (Figure 8) Repeat the process with the inner (left side) door. Use care to avoid damaging the track spring tabs at the center of the opening (Figure 9). Install doors by reversing the process, taking care to ensure the spring tabs engage the doors.



Figure 7. Removing Sliding Doors.



Figure 8. Door Track Spring Tab.

Door Locking Feature

The sliding doors can be locked in the open position for ease of loading/unloading. The inner (left side) door has a hook that can be raised to engage a tab on the back of the outer (right side) door (Figure 10). To unlock the doors, slide both doors towards the center until the hook disengages.

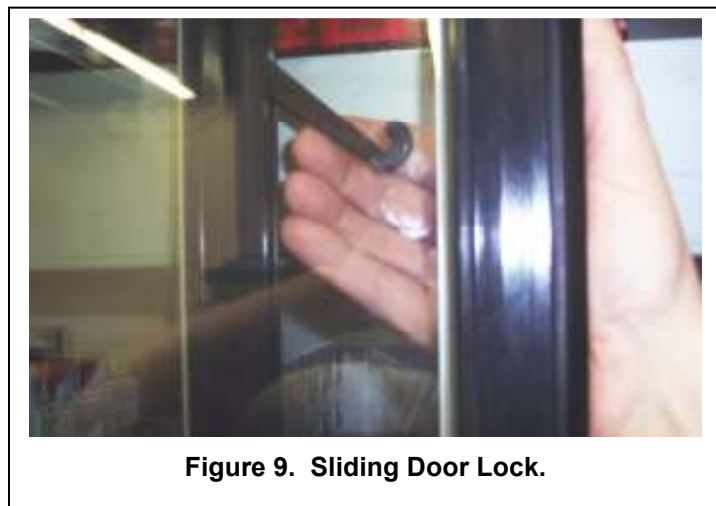
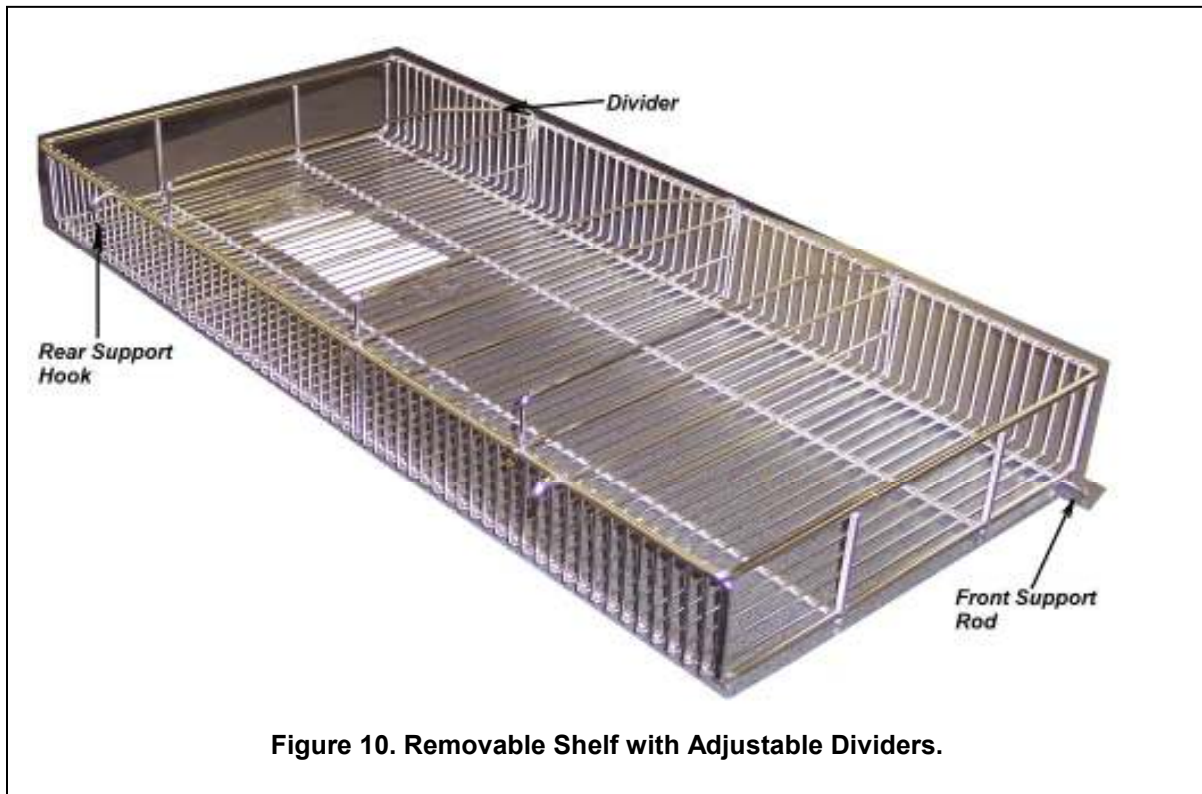


Figure 9. Sliding Door Lock.

Caution! Do not leave the self-closing doors in the locked position for an extended period of time.

Shelf Installation



- Remove the doors to install the shelves.
- Insert the lower shelf into the DTR and lay it flat on the bottom of the refrigerator.
- Insert the upper shelf into the DTR using the center slot on the rear support channels.

- Hold the upper shelf with the front edge about one inch lower than the back edge and insert the rear support hooks into the rear support channels. At the same time, slide the front support rods into the front support channels. Push the shelf back and down to lock it into the channels.

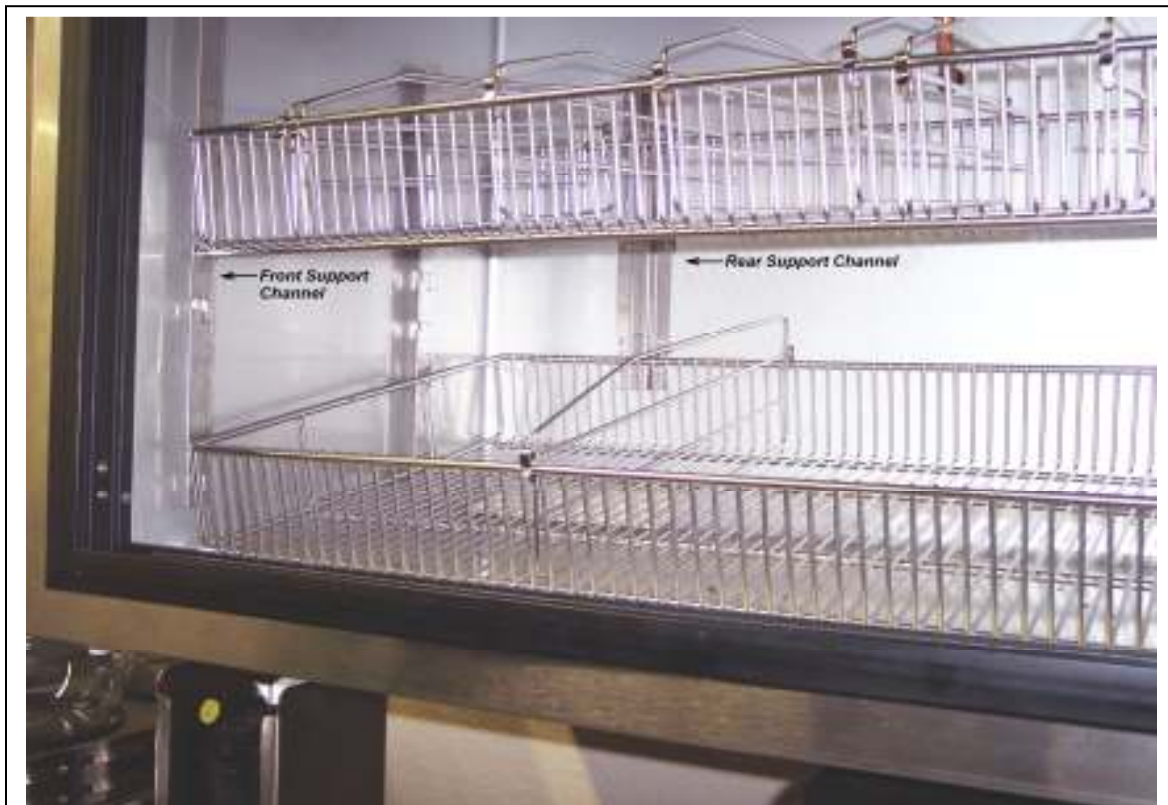


Figure 11 Installing Removable Shelves.

- Raise the back of the lower shelf and secure the rear support hooks into the rear support channel. The front of the lower shelf will rest on the floor of the DTR liner.
- Insert the dividers starting at the left side using individual products as spacers (Figure 13) according to the product alignment (Figure 14).

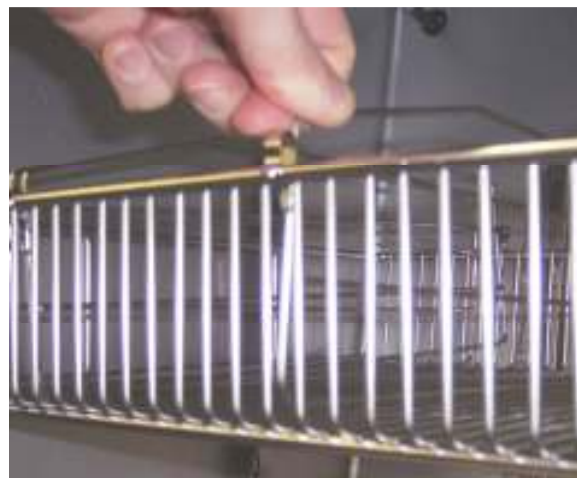


Figure 12. Installing the Shelf Dividers.

- Shelf height is adjustable by raising or lowering the front and rear support channel screws. Front and rear support channels must be adjusted together or the shelves may not properly support their load and be secured in the cabinet. Do not over-tighten the screws.



Figure 13 Product Alignment

Loading and Restocking

Shelf Stocking

All shelving compartments are inclined so that containers will roll or slide forward to the front of the shelf for quick and easy access to the item requested. When restocking product, always fill from the back of a row.

General Product Loading Tips

- **DO NOT** over-load the DTR Case. All refrigeration requires good air circulation to maintain uniform temperatures.
- **DO NOT** let plastic bags, packaging or containers block or obstruct the Evaporator air intake openings at the top of the case.
- **DO NOT** leave the door open, except to remove product or to restock.

Store Closing Procedure

The DTR is designed for continuous operation. Unsold product may remain in the DTR overnight as long as the unit remains turned on and the doors remain closed. Store

operations will determine whether to leave product in the DTR overnight. *Consult your store manager or operations director for guidance.*

Cleaning

Caution! Do not use a pressurized spray to clean the DTR.

Caution! Do not use abrasives or strong chemicals to clean any surfaces of the DTR.

Warning! Do not spray liquids directly onto the power switch, into the compressor compartment at the top of the cabinet, on the internal lights, or into the evaporator. Doing so will void the warranty and risk serious personal injury.

Exterior Cleaning

The exterior of the unit should be cleaned with a mild soap and water solution and a sanitizer. Do not use abrasive cleaners to clean the exterior of the cabinet as this might damage the stainless steel finish. Do not use steel wool or any strong chemicals.

Interior Cleaning

The anodized aluminum interior of the refrigerator can be cleaned using a soft sponge and a mild soap and water solution. Do not allow liquid to puddle in the unit. Wipe the liner dry after cleaning.

Wipe any debris from the sliding door track.

The wire shelves and dividers may be removed from the DTR for cleaning.

Caution! Leaking products may damage the interior liner. If a product leak is discovered, immediately remove and discard the defective product. Promptly clean any remaining soiled product containers and the DTR interior according to the instructions above.

Glass Door Cleaning

Glass doors may be cleaned using a McDonald's approved glass cleaner. Use care to prevent the glass cleaner from contacting the metal or plastic surfaces and immediately wash off any excess.

Preventative Maintenance

Warning! Failure to properly perform scheduled preventative maintenance may void manufacturer's warranty.

WARNING! Verify refrigerator is disconnected from the power source before attempting any preventative maintenance. Failure to disconnect the electric power could result in electric shock, burns, injuries or death.

CAUTION! The fins on a condenser coil are very sharp, and some refrigeration components can be very hot, resulting in possible cuts and/or burns. Avoid physical contact with the fins on the condenser coil or any related refrigeration lines. Gloves are recommended when accessing the internal components of any refrigerated equipment.

CAUTION! The condenser coil is located above the display compartment, which is mounted 7 feet (214 cm) above floor level. Any individual performing maintenance should use a ladder or safe, stable work platform to access and clean service compartment. Use caution to avoid falls and potential injuries.

Empty and Clean the DTR Display (Weekly)

Once a week the display case should be shut down, emptied and given a thorough cleaning, as follows:

- Turn OFF power at switch.
- Unplug unit from 120-volt power outlet.
- Open doors, lock in OPEN position and remove all product from shelves. Any perishable product (milk) should be put into refrigerated storage elsewhere.
- Remove upper and lower shelf sections. *See instructions in the "Operating Instructions – Shelf Installation" section of this manual.*

Note! Use only McDonald's approved cleaning and sanitizing agents, according to instructions.

- Place all shelf components in the sink, then wash, sanitize and wipe dry or allow to air dry.
- Remove both glass doors and clean the glass on both sides.
- Wipe down doorframes and tracks. Inspect tracks for any broken glass or debris. Brush or vacuum out any debris found.
- Clean, sanitize and dry the display compartment, to include: back, sides, top, and floor.

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- Return all display rack components to their original mounting position. Install sliding glass doors.
- Plug in cord at 120-volt outlet.
- Turn ON power switch.

Allow case to run for at least one hour to return to target operating temperature of 34° - 40° F before reloading or stocking product.

Clean the Condenser Coils (Monthly)

First turn the DTR off and unplug from the outlet. Grab the top of the panel as shown and lift straight up until the bottom of the panel just clears the lower retaining tabs as shown in Figure 16.



Figure 16

Rotate the top towards you and pull to remove as shown in Figure 17.



Figure 17

Use a soft-bristled cleaning brush or vacuum cleaner to gently remove dust and debris in and around the coil face. Make sure to brush only in the direction of the coil fins as shown in Figure 18.

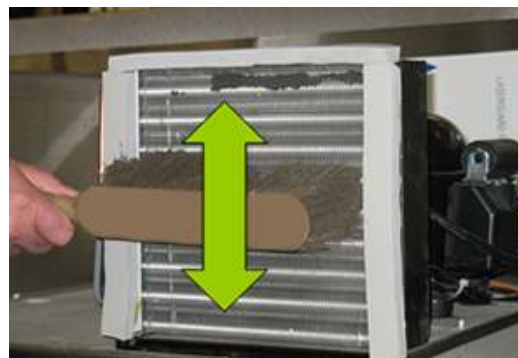


Figure 18

Replace access panel in reverse order of removal making sure the top flange of the panel catches. Plug the DTR back in and turn on the power switch.

Clean the Condensate Evaporator (Annually)

Turn the power switch off and unplug the unit. Remove the three screws at the bottom of the DTR cabinet and carefully lower the condensate evaporator pan as shown in Figures 19 & 20.



Figure 19



Figure 20

Wipe out any loose sediment. Remove excess scale build-up in the evaporator pan with approved McDonald's cleaner, a brush or scouring pad and wipe clean as shown in Figure 21.



Figure 21

Replace the condensate evaporator pan, plug the DTR back into the wall outlet, and turn the power switch on.

Product Warranty

H&K Dallas, Inc. makes the following limited warranties to the original purchaser only for this equipment and replacement parts:

H&K warrants all components to be free of defects in material and workmanship, if properly installed, operated and maintained, for a period of (2) years from the date of the delivery.

The company's obligation under this warranty is limited to repairing or replacing any part or parts of the refrigerator determined to be defective by an authorized representative of H&K.

The company reserves the privilege of determining if such repairs are to be made in the field or at the H&K factory.

The company assumes no liability for expenses or repairs made by other parties except by written consent.

Corrections of such defects by repair or replacement shall constitute fulfillment of all company obligations to the purchaser.

H&K shall not be liable for loss, damages or expenses arising from misuse, abuse, alteration, accident or improper installation of the freezer such as:

- Improper or unauthorized repair;
- Failure to follow proper installation instruction;
- Improper maintenance;
- Damage in shipment;
- Abnormal use;
- Improper power supply;
- Natural disaster;

Special Conditions

This warranty also does not cover:

- Overtime or holiday charges;
- Consequential damages (the cost of repairing or replacing other property which is damaged), loss of time, profits, use of any other incidental damages of any kind.

Troubleshooting

<i>PROBLEM</i>	<i>POSSIBLE CAUSE</i>	<i>WHAT TO DO</i>
Unit won't run when unit is plugged into a grounded (120-volt) electric power outlet.	Unit is not "fully" plugged in.	Verify unit is plugged into outlet.
	Wall outlet isn't working.	Plug DTR into another nearby outlet. If individual outlet is not working, use alternate and contact licensed electrician to repair or replace outlet.
	Circuit breaker has been tripped.	Check circuit breaker to see if it has tripped. Reset if necessary. If these steps do not fix problem, call H&K at 800-788-2445.
Refrigerator is running but it won't reach target operating temperature of 34°-40° F.	Door is left opened for extended periods.	Review product loading and general use instructions with crew to ensure door is open for restocking and order filling only.
	Refrigerator is in direct sun through drive-through window.	Contact 3M® Corporation or their representative for information on tinted window film and its installation.
	Room temperature and/or humidity exceed recommended maximums.	Adjust store or drive-thru zone air conditioning. If these steps do not fix problem, Call H&K at 800-788-2445.
	Condenser Coil is dirty or clogged with debris.	Use a vacuum cleaner or soft brush to clean coils, per Preventative Maintenance instructions in Section 7. If these steps do not fix problem, Call H&K at 800-788-2445.
Door won't close automatically when released.	Obstruction in door track.	Check bottom door track for broken glass or other debris that may interfere with door.
	Door not installed properly.	Lift up and remove door. Catch spring return tab with top/leading edge of doorframe. Push toward center of case and insert door. See page 14 for photos and full instruction.
	Door auto-close spring broken.	Call H&K at 800-788-2445.

Parts List

Item	Description	H&K Part Number
1	Sliding Door and Frame	H-12-14-22
2	Wire Shelf	H-18-249
3	Shelf Divider	H-18-250
4	Condensing Unit	P-1-285
5	Sight Glass	P-1-21
6	Filter/Dryer	P-1-23
7	Thermostatic Expansion Valve	P-1-12-6
8	Cord with Plug	E-10-12-71
9	Electronic Temperature Control	G-R02043
10	Evaporator (Includes Fan and Motor)	E-6-12-2
11	Evaporator Fan Motor Only	E-6-14-089
12	Evaporator Fan Blade Only	E-6-14-090
13	LED Lighting Fixture with Transformer	E-13-19-14
14	Power Switch	E-1-19-1
15	Temperature Probes	E-4-3-157
16	Flexible Drain Tube (per ft)	P-4-16-1
17	Clamp, Flexible Drain Tube	P-10-001
18	Evaporator Pan Heater	E-5-30-18
19	Muffin Fan	E-6-01

Parts Ordering and Service

Returns

Contact: H&K International, Inc.
2200 Skyline Drive
Mesquite, TX 75149
(214) 818-3500

Damages and Shortages

Upon receipt, examine the equipment carefully for any damage. If damage has occurred, notify the carrier and H&K Dallas, Inc. immediately.

Service and Parts

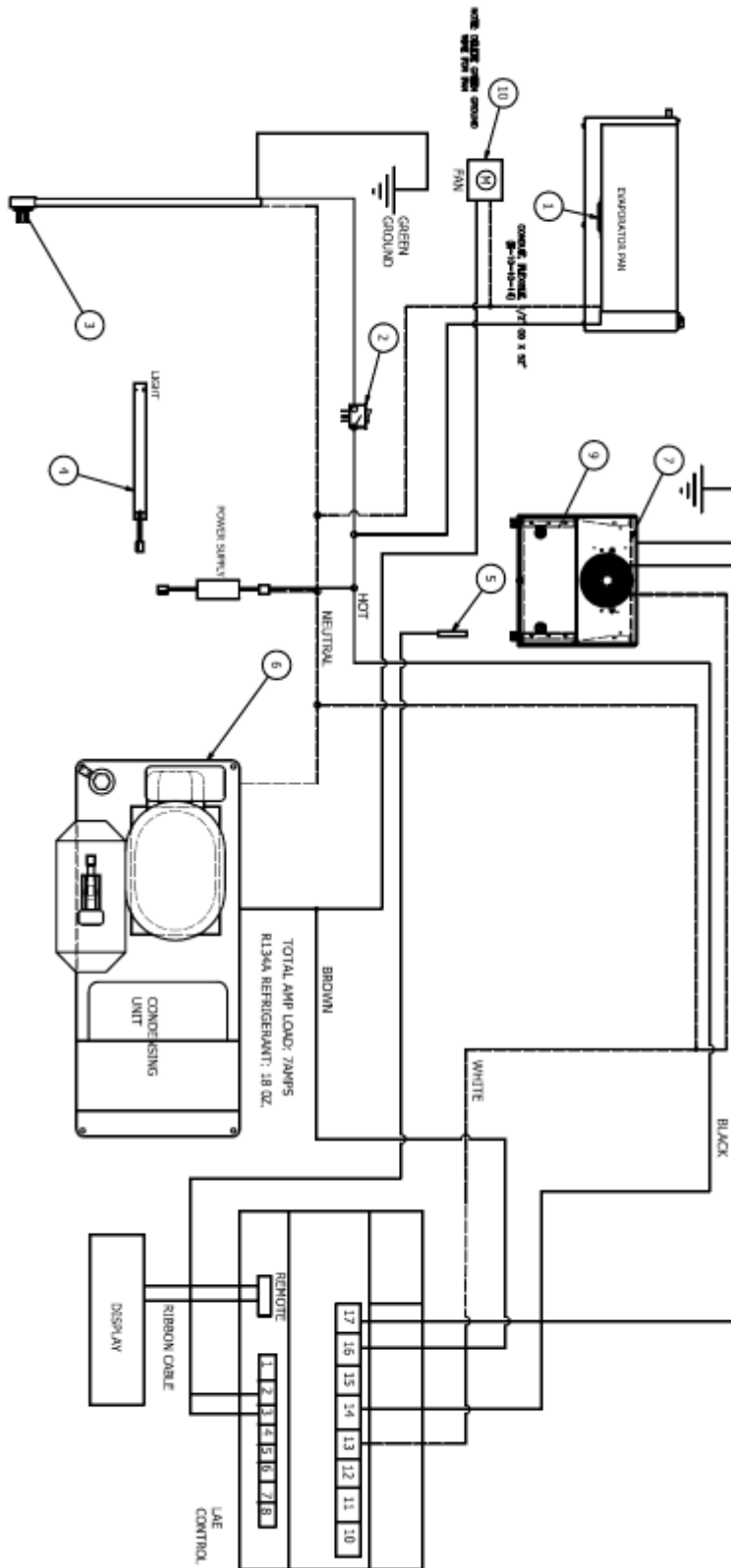
Contact: H&K International, Inc.
2200 Skyline Drive
Mesquite, TX 75149
(214) 818-3500



Disconnect all power sources before attempting any service or repair work.

Caution! A qualified licensed technician should perform all service and repair.

Wiring Diagram



Notes