

KitchenAid®

Kitchen Aid 27' French Door Refrigerators

Models:

KFIS27CXBL

KFIS27CXMS

KFIS27CXMS

KFIL27CXMS

Home Appliances

Prepared by: WHIRLPOOL CONSUMER CARE

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FORWARD

The following service update information is provided to make you more knowledgeable about Whirlpool, Roper, KitchenAid, Maytag, Jenn-Air, and Amana major appliances.

Service update information is designed for the experienced service specialist. It keeps you advised of the most recent improvements and product changes, and allows you to service these products more efficiently.

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Whirlpool Corporation, Benton Harbor, MI 49022

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KITCHENAID 27' FRENCH DOOR REFRIGERATOR WITH ICE AND WATER IN THE DOOR - TEMPEST II



Model Number Description*

KFIS27CXBL	27' FRENCH DOOR INW
KFIS27CXMS	27' FRENCH DOOR INW
KFIS27CXWH	27' FRENCH DOOR INW
KFIL27CXMS	27' FRENCH DOOR INW

*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

Dimensions

Dimensions (Inches)

Capacity	26.630
Depth	35 1/4
Height	70 1/8
Width	35 5/8
Depth Closed Excluding Handles	32 7/8
Depth Closed Including Handles	35 1/4
Depth Excluding Doors	29 1/16
Depth With Door Open 90 Degree	47 7/8
Height To Top Of Cabinet	68 9/16
Height To Top Of Door Hinge	70 1/8
Width of Cabinet Only	35 5/8
Width with Doors Closed	35 5/8

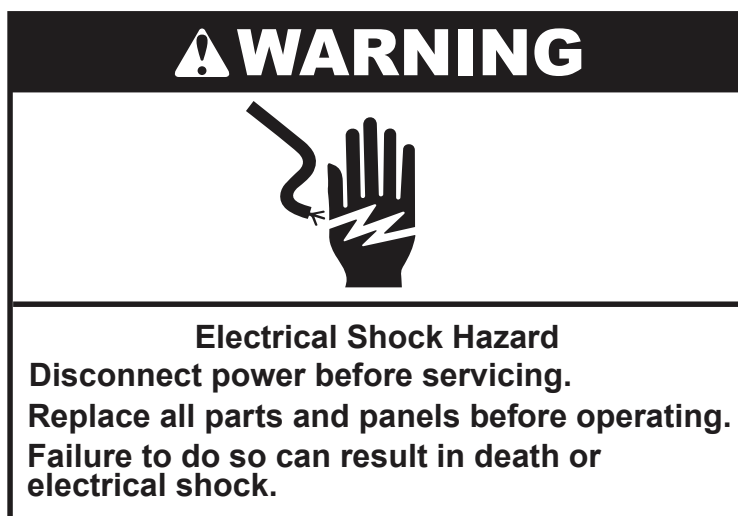
Product Design Overview

- Kitchen Aid 69" Full Depth FDBM
 - ▶ 27 ft Capacity
 - ▶ Energy Star Rated
- New UI Dispenser
 - ▶ Non-rotating spigot (WER design)
 - ▶ Victoria flush architecture
 - ▶ Measured fill
- Controls
 - ▶ USB port for photo upload
 - ▶ Resistive touch
 - ▶ Conversions, Substitutions, Use & Care
- On Door Ice Storage
 - ▶ KA graphics and handle color
- Exterior Features
 - ▶ Contour doors
 - ▶ Architect II handle
- Interior Features
 - ▶ Stationary shelves
 - ▶ Trilogy style crispers with glides
 - ▶ New temp controlled hippo pantry with glides
 - ▶ KA VBL door bins with grippers
 - ▶ Ramp-On LED lighting



*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

Removing Ice Maker Assembly



The ice maker wiring harness is now being routed through the top of the cabinet. This change has made the removal and installation of the ice maker much easier.



Insert a straight blade screwdriver in the slots on the bottom of the fascia and twist the blade to release.



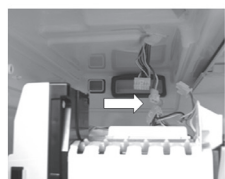
Pull out the bottom of the fascia and roll up to release the hooks on the top of the fascia.



Remove the 1/4 screw securing the ice maker assembly to the top of the cabinet.



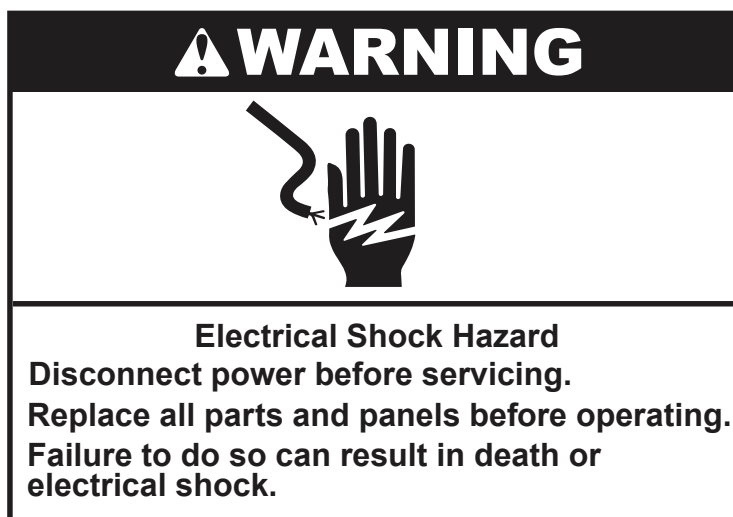
Move a shelf to the top position on the left RC ladder. Remove the ice maker assembly and rest on the shelf.



Disconnect the wire harnesses and remove the ice maker assembly.

*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

Wiring Harness Routing Change



The elimination of the harness grommet and gasket reduces the opportunity of air leakage into the refrigerator compartment. This feature will carry over into all 27' FD refrigerators beginning March 2010 production.



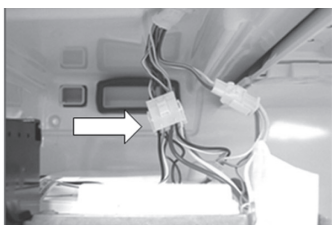
*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

Installing Ice Maker Assembly

⚠ WARNING



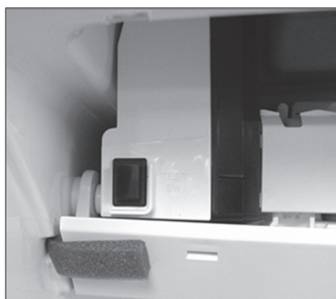
Electrical Shock Hazard
Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.



Rest the ice maker on the top shelf. Connect wire harnesses.



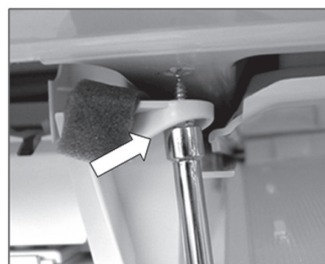
Tilt the ice maker assembly and insert the lip on the right hand side of the assembly into the channel on the cover.



After positioning the right side of the ice maker, raise the left side and align the hanger bracket on the cabinet stud.



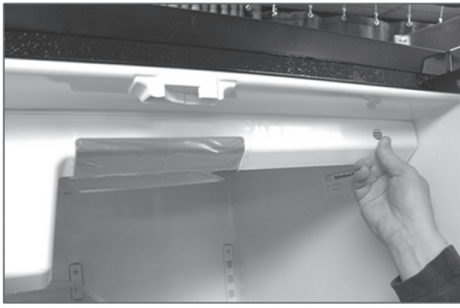
If the ice maker is installed properly, the hole in the ice maker assembly should align with the hole on the top of the cabinet.



Insert 1/4" screw.

*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

Installing Fascia



Insert hooks in top of fascia into slots in top of cabinet and roll bottom of fascia in and up.



Make sure light shield is held in position by the fascia.



Snap the fascia into place.

*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

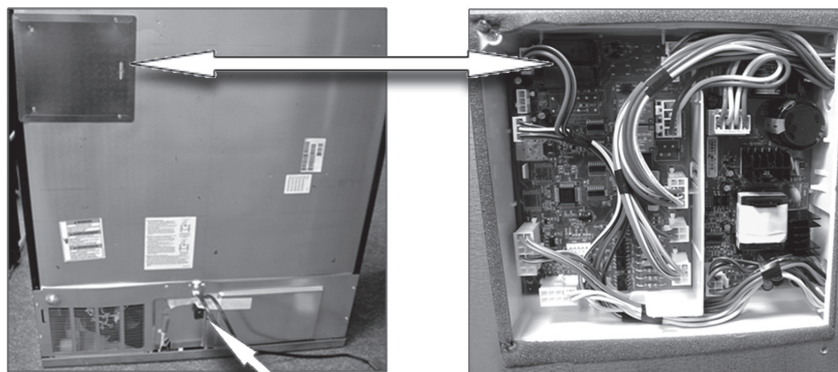
Back Of Unit

Power Supply and Control Board

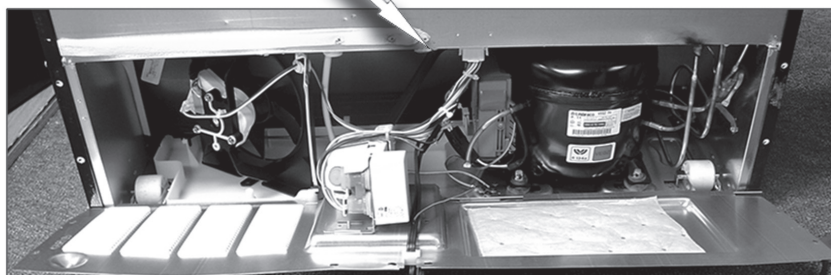
⚠ WARNING



Electrical Shock Hazard
Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.



Machine Compartment



View of the back of the unit – no changes to the old Tempest design.
Refer to Job Aid R-109 more information.

**Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.*

KitchenAid Tempest User Interface



The KitchenAid dispenser incorporates a photo display feature. Downloads are accomplished using a USB connection located under the User Interface.

Programming - Power Up

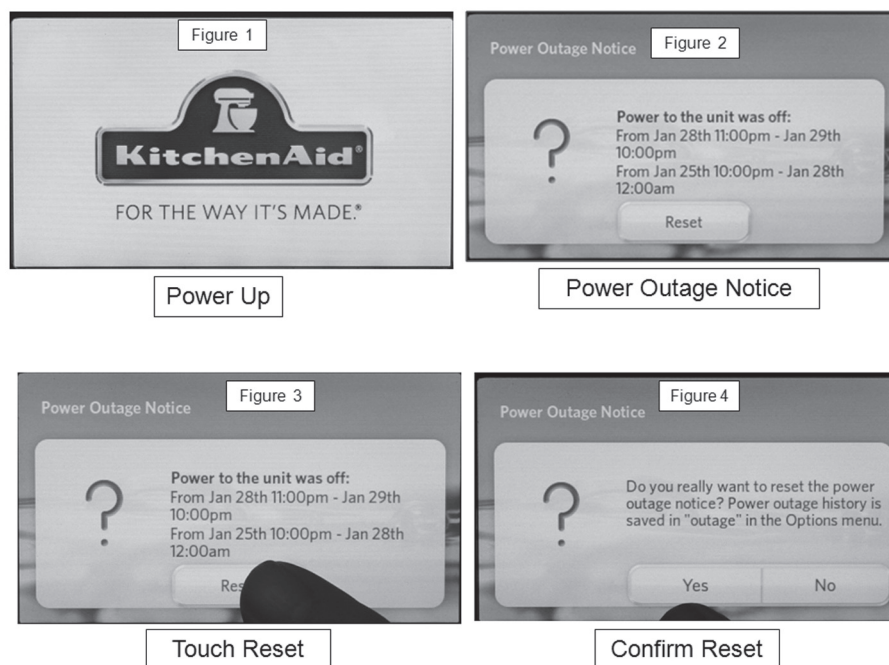


Figure 1 – When the refrigerator is first powered up, the KitchenAid logo is displayed.

Figure 2 – If the refrigerator has been powered up previously and was disconnected from power for any reason the power outage screen will be displayed. The date and time of the power outage will be displayed.

Figure 3 – Touch Reset.

Figure 4 – Confirm whether you want to delete power outage history – touch Yes or No.

*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

Options

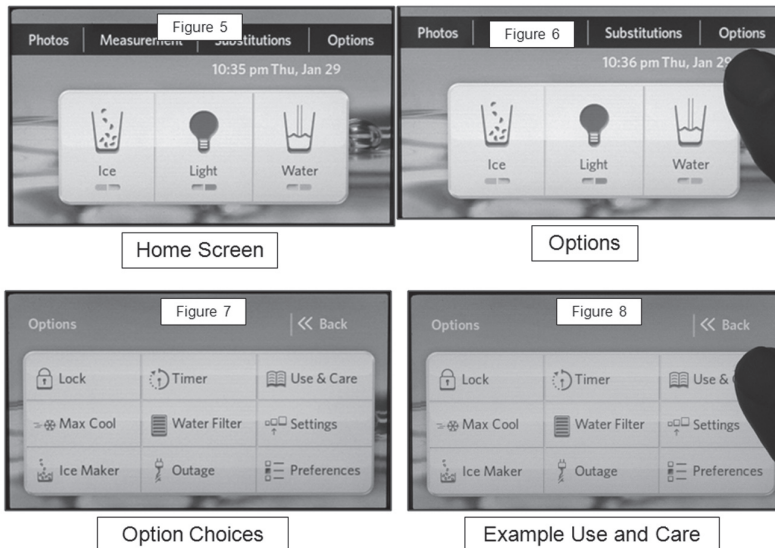


Figure 5 – Home Screen: Photos, Measurements, Substitutions, Options, Displays Time and Temperature, Ice, Light, and Water.

Figure 6 – Select Options.

Figure 7 – Options Screen Lock, Max Cool, Ice maker, Timer, Water Filter, Power Outage, Use and Care, Settings, and Preferences.

NOTE: The Use and Care Option is new.

Figure 8 – Select Use and Care Option. A unique feature of The KA Tempest is the Use and Care Option – This option allows the consumer to view a portion of the information contained in the Use and Care Manual.

New Use and Care Option

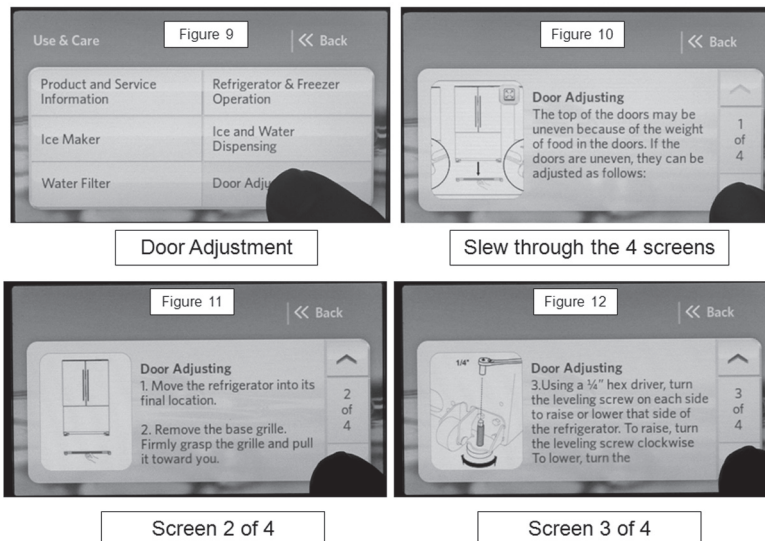


Figure 9 – Use and Care Screen Product and Service Information, Ice Maker, Water Filter, Refrigerator and Freezer Operation, Ice and Water Dispensing, Door Adjustment. (Example of Information: Door Adjustment Selected)

Figure 10 – Page 1 of 4 of Door Adjustment Instructions Page through the information using the Up/Down arrows.

Figure 11 – Page 2 of 4

Figure 12 – Page 3 of 4

*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

New Use and Care Option

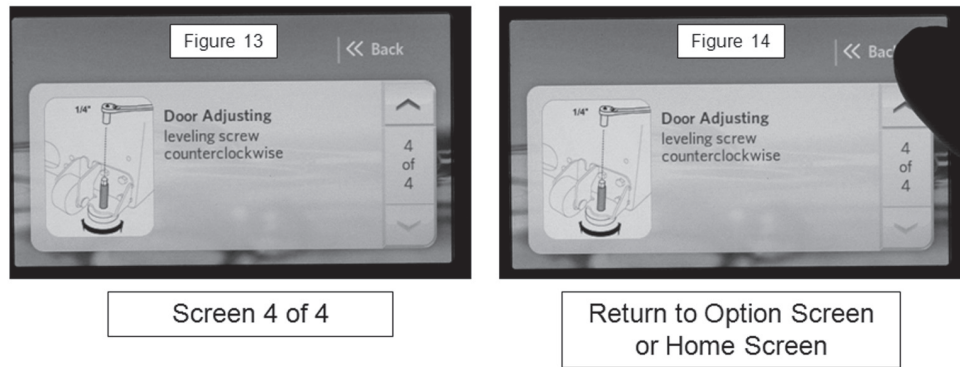


Figure 13 – Page 4 of 4 – Door adjustment shown

Figure 14 – Select Back to return to Option or Home page

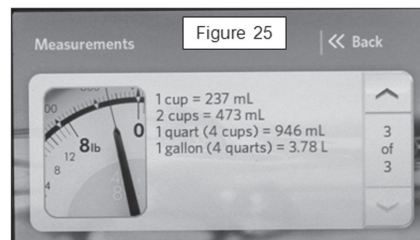
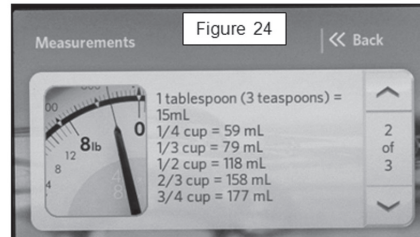
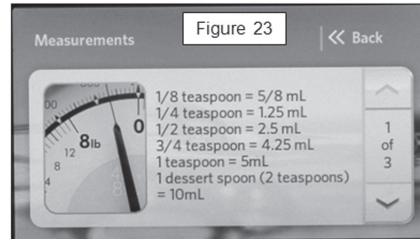
New Substitutions Option



Provides substitutions for common ingredients used in recipes.
 Recommends ingredients that can be substituted for some liquids, powders and solids that you may not have on hand when preparing a recipe.

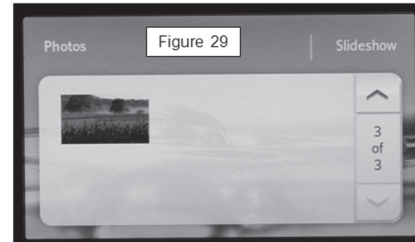
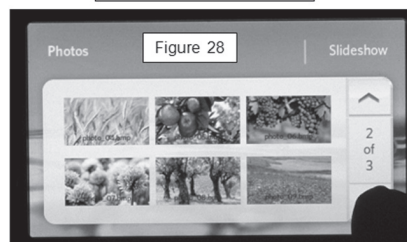
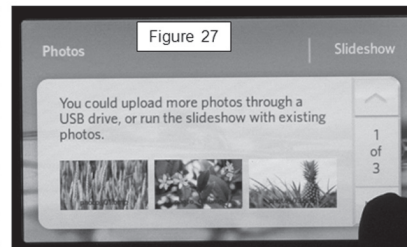
*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

New Measurements Option



Provides measurement equivalents for common liquids, solids, butter and miscellaneous items.

New Photo Display Feature



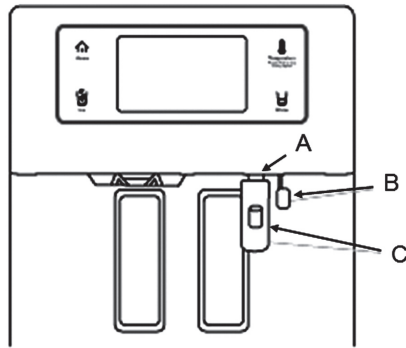
The refrigerator comes from the factory with the display screen preloaded with photos provided by the manufacturer. These default photos will be hidden when a picture is uploaded. If there is no uploaded photo or all uploaded photos are deleted, the default photos will appear again.

Figure 26 – Select Photos

Figures 27- 29 – Page up or down to view photo pages.

*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

Uploading Photos



- A. USB Port
- B. Cover
- C. USB Memory Device

A USB port is located under the display screen in the dispenser area.

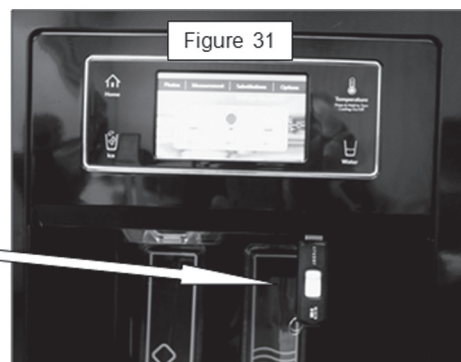
Important: A USB memory device is not provided with the refrigerator. Some USB memory devices are not readable.

- ▶ The USB port supports only USB 1.1 and 2.0 standard memory devices. Photos to be uploaded must be stored in the main directory of the USB device, not in a folder.
- ▶ The USB does not work as a charging device.
- ▶ The ice and water dispensers will not function when the USB memory device is inserted into the USB port.

Important: Photos uploaded cannot be retrieved or transferred.



Use only 1.1 or 2.0 USB Flash Drive Containing jpg. Images



Remove Cover and Plug in Flash Drive, USB Should Begin To Upload.

- ▶ The memory has a capacity of 100 photos. The device converts any size jpg. image to a fixed 480x272 pixel size. The higher the resolution of the image, the longer it will take to upload (convert), therefore you may notice a difference in upload times.
- ▶ When a picture is uploaded multiple times, only one copy of the picture will be stored.

*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

Uploading Photos (continued)

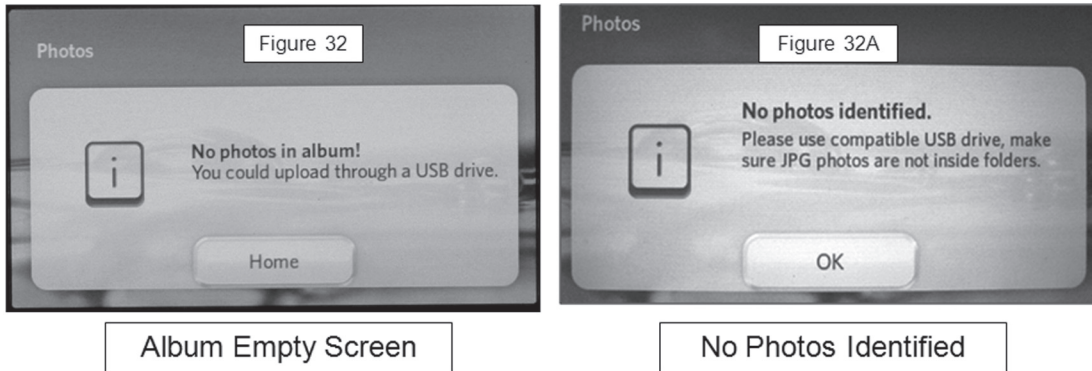


Figure 32 – Album is empty – (All photos have been deleted) upload photos.

Figure 32A – If “No Photos Identified” message is displayed, make sure:

- ▶ Images are JPEG.
- ▶ An USB flash drive USB 1.1 or 2.0 standards is been used (No cameras, I pods, cell phones, external hard memory, etc).
- ▶ Pictures are not inside folders.

Upload Progress Screen

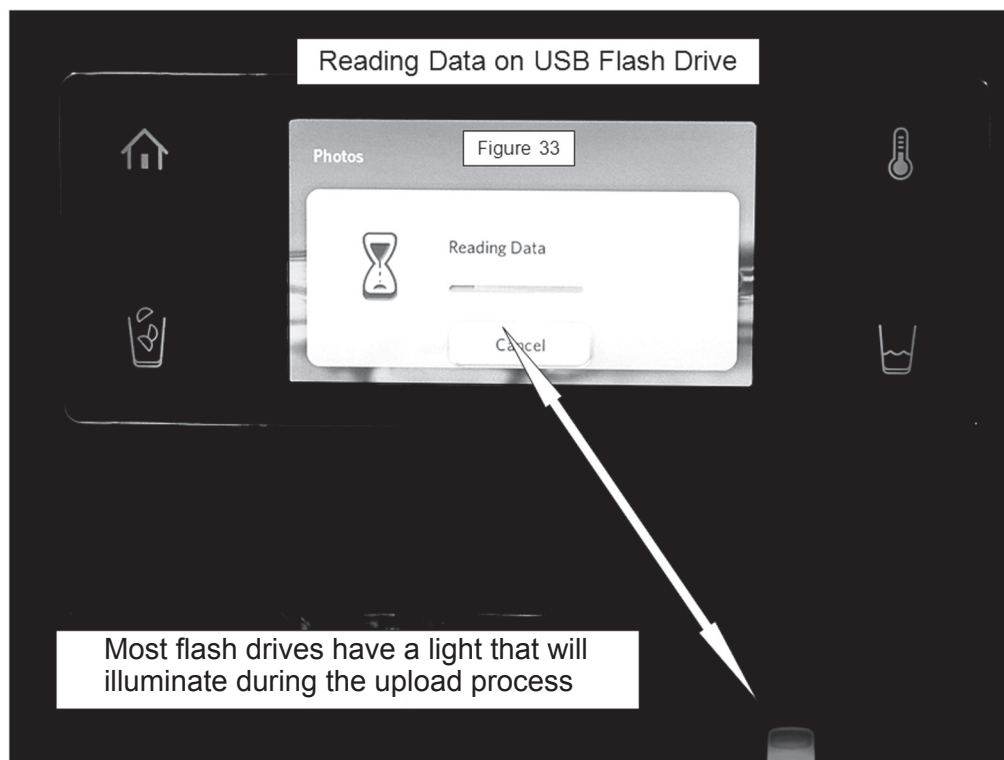


Figure 33 - Upload Progress Screen
Screen indicates progress of downloading USB.

*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

Upload Interruptions

Upload process will be interrupted:

- ▶ If any of the following are pressed: **fill** buttons, **dispenser** paddles or **cancel**.
- ▶ If a **Door Alarm** or **Power Outage** occurs during uploading.
- ▶ If the USB memory device is removed.

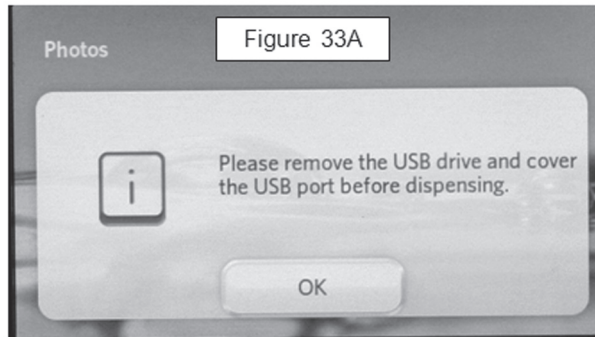


Figure 33A

Screen displayed if trying to use dispenser with USB inserted

Note: If the USB device is removed while uploading photos, the display will show only the photos that have been completely transferred, the display will return to the Home screen.

Placeholders

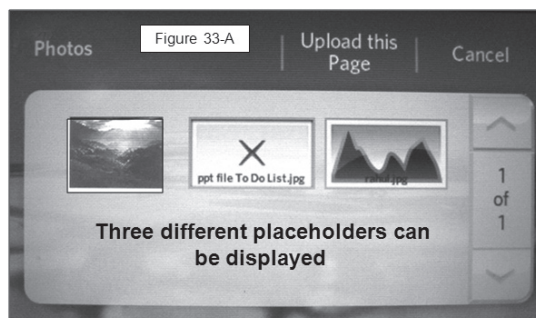


Figure 33-B

This is a corrupted file. It won't be uploaded.

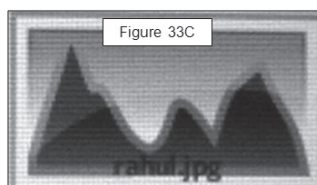
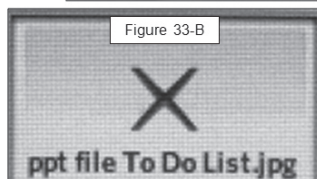
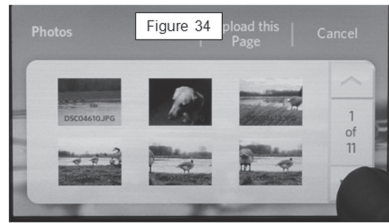


Figure 33C

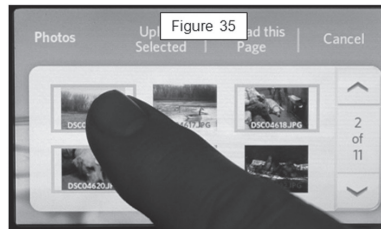
The image does not have a thumbnail for preview but it can be uploaded with no issues.

*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

Selecting Specific Photos to Upload



View Thumbnails of Flash Drive Photos



Select Photos To Upload



Touch "Upload Selected"

The control panel will display all JPEG photos found on the USB memory device. Touch the photos you wish to select. The selected photos will be highlighted.

NOTE:

A selected images will be unselected if it is touched again.

Multiple photos can be selected from different pages. Touch Upload Selected pad to begin Upload.

Upload Progress Screens



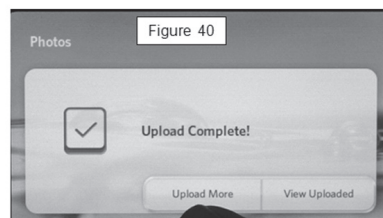
Uploading Photo 1 of 3



Uploading Photo 2 of 3



Uploading Photo 3 of 3



Upload Complete
Upload More - View Uploaded

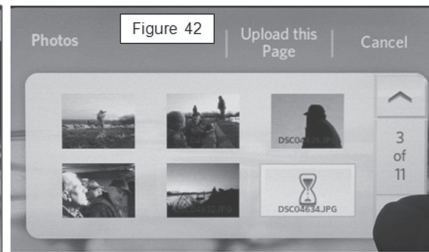
An Upload progress screen indicates the total number of photos and which photo is being uploaded.

Note: Higher resolution photos will require more time to upload than lower resolution photos; this is normal.

*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

Upload Page

An entire page of photos (6 photos) can be uploaded by touching the Upload Page pad.



Use Up/Down Arrows to Slew Through Pages



Upload Page (6 Photos)

Uploading Page Progress Screen



Progress Screen



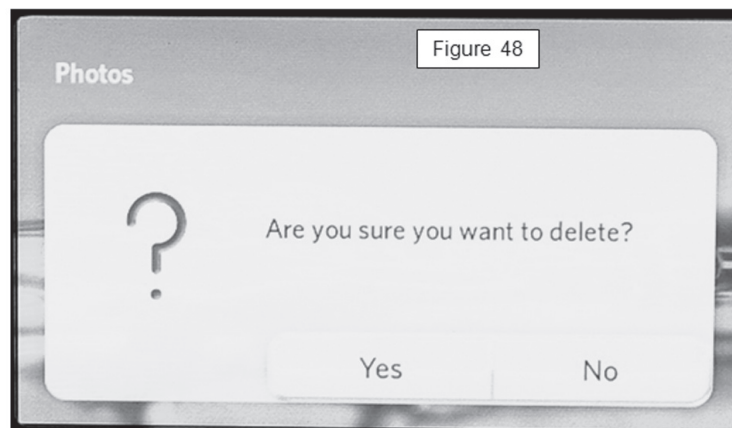
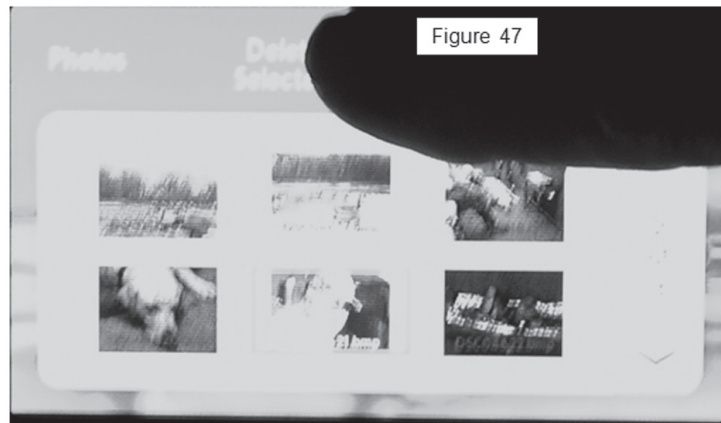
Indicates Uploading Status of Each Photo



Upload Complete – Upload More - View Uploaded

*Always refer to Service Sheet and Use and Care Manual for information specific to the refrigerator you are servicing.

Deleting Photos



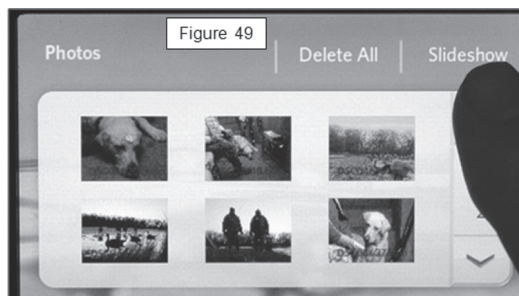
Delete Photos From Memory

Photos can be removed from the memory once uploaded.

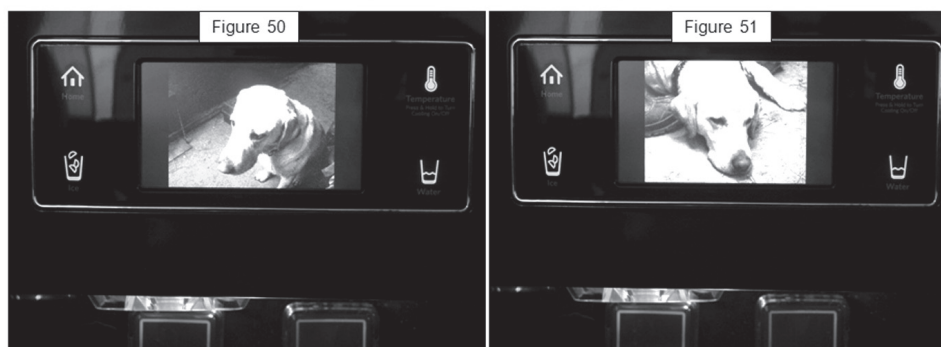
1. Select the image you wish to delete by touching it. The selected photo will be highlighted.
2. Press the Delete Selected pad to delete the selected photos, or touch the Delete All pad to delete the page.

Note: A Factory Reset will also delete all uploaded from the display screen.

View Slideshow



Select Slideshow



All Downloaded Photos Are Displayed In A Continuous Loop For 60 Minutes

1. From the Home Screen, touch photos, photos previously uploaded will be displayed.
2. Touch Slideshow, all uploaded photos will appear in the Slideshow.

Note: After 1 hour of running time, the display screen will automatically return to the Energy Save Mode (Sleep Mode). Touch the display screen to exit Energy Save Mode (Sleep Mode) and return to the Slideshow.

Important: Slideshow will be interrupted if any of the following occur:

- ▶ If any of the fill pads or dispenser paddles are pressed, or if you press anywhere in the display screen.
- ▶ If a door alarm or power outage occurs.
- ▶ When Slideshow is interrupted, restart the slideshow by following steps 1 and 2.

FOR SERVICE TECHNICIAN'S USE ONLY

Tech Sheet

Do not Discard

⚠ DANGER



Electrical Shock Hazard

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

⚠ WARNING



Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

Voltage Measurement Safety Information

When performing live voltage measurements, you must do the following:

- Verify the controls are in the off position so that the appliance does not start when energized.
- Allow enough space to perform the voltage measurements without obstructions.
- Keep other people a safe distance away from the appliance to prevent potential injury.
- Always use the proper testing equipment.
- After voltage measurements, always disconnect power before servicing.

No-Load Performance, Controls in Normal Position

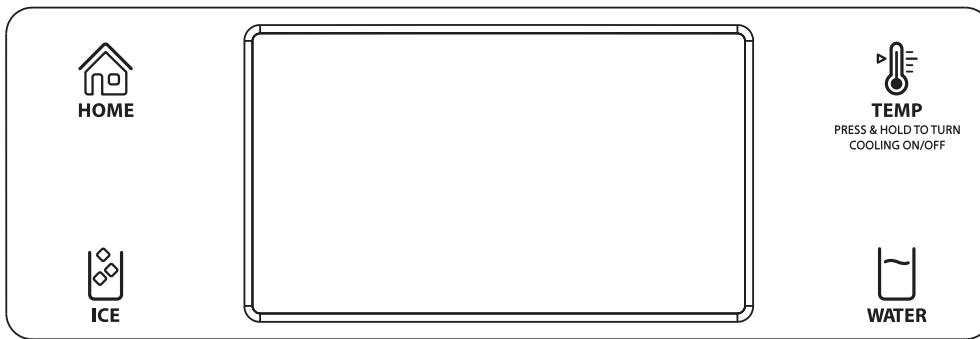
	Kw/24 hr ± 0.4	Percent Run Time ± 10	Cycles/24 hr ± 10	Refrigerator Center Compartment Average Food Temperature $\pm 4^{\circ}\text{F}$	Freezer Compartment Average Food Temperature $\pm 5^{\circ}\text{F}$	Ice Maker Compartment Average Temperature $\pm 5^{\circ}\text{F}$
Ambient $^{\circ}\text{F}$	70° 90° 110°	70° 90° 110°	70° 90° 110°	70° 90° 110°	70° 90° 110°	70° 90° 110°
27 cu ft	1.2 1.7 3.0	70 80 90	14 14 10	38 38 38	0 0 0	15 15 15

Temperature Relationship Test Chart

	Evaporator Outlet $\pm 3^{\circ}\text{F}$	Evaporator Inlet $\pm 3^{\circ}\text{F}$	Suction Line $\pm 7^{\circ}\text{F}$	Average Total Wattage $\pm 10\%$	Suction Pressure ± 2 PSIG	Head Pressure ± 5 PSIG
Ambient $^{\circ}\text{F}$	70° 90°	70° 90°	70° 90°	70° 90°	70° 90°	70° 90°
27 cu ft	-4 -6	-4 -6	75 97	70-85 75-100	6.0 3.6	70 125

Component Specifications

Component	Specifications all parts 115VAC/60HZ unless noted
Compressor	VEGZ7H
	BTUH..... Variable
	Watt..... 60 Hz / 113 watts
	Current Lock rotor..... 3.3 amps± 15%
	Current Full load..... 3.3 amps± 15%
	Resistance Run windings..... 6.4 ohms± 15%
	Resistance Start windings..... 6.4 ohms± 15%
	Inverter..... 3-6 VDC, Red / White =120 VAC
Electric damper control	Maximum closing time..... 16 seconds
	Temperature Rating..... 20°F- 110°F
	RPM..... 4.2
Thermistor	Temperature..... Resistance
	77°F..... 2700 ohms± 1.8%
	36°F..... 7964 ohms± 1.0%
	0°F..... 23345 ohms± 1.8%
Condenser motor	Rotation (facing end opposite shaft)..... Clockwise
	RPM..... 1090 RPM
	Watt..... 3.4 watts±15%@115VAC
	Current..... 0.085 amps± 15%@115VAC
Evaporator fan motor	Rotation (facing end opposite shaft)..... Clockwise
	RPM..... 3000 RPM
	Watt..... 5.5 ±15% watts@12 VDC
	Note: Fan blade must be fully seated on shaft to achieve proper airflow.
Thermostat (Defrost)	Volt..... 120/240 VAC
	Watt..... 495 watts
	Current..... 5.8/3.75 amps
	Resistance across terminals:
	Above 32°F ±5°..... Open
	Below 17°F ±7°..... Closed
Evaporator heater	Volt..... 115 VAC
	Wattage..... 470 ±5% watts @ 115VAC
	Resistance..... 29.0 ±5% ohms
Control board	Volt..... 120VAC, 60 HZ
Dual Water Valve	Watts..... Blue side 20w, Yellow side 20w
Smart Valve (Isolation)	Watts..... 20w
Ice Box Fan	Rotation (facing end opposite shaft)..... Clockwise
	RPM..... 3000 RPM
	Watt..... 5.5 ±15% watts@12 VDC
Light switch	Type..... SPST NC
	Volt..... 125/250 VAC
	Current..... 8/4 amps



Service Diagnostics Mode:

1. Activate the keypad by touching the screen.
2. Press and hold the Home button. While holding Home button press and hold the Temperature button.

NOTE: If the Temp button beeps, you must start procedure over.

3. Release the Home button and the Temp button simultaneously.
4. On the service menu press service diagnostics .

NOTE: The Service Mode can be exited at any time by pressing the back key twice or if left unattended for 20 minutes.

1. Freezer Compartment Thermistor

Status 01Pass

2. Refrigerator Compartment Thermistor

Status 01Pass

3. Evaporator fan motor & air baffle motor

Status 02 fan ON / air baffle cycles open and close

4. Compressor Status / Speed

Press an option to change compressor status or speed.

Status ON / MAX OFF / MIN

5. Defrost Heater / Bimetal

Status 01 Bimetal Closed

6. Defrost Mode

Press an option to change defrost mode - Adaptive defrost on 8 hour basic mode.

When switching options disregard exit mode for ADC.

7. Button and Dispenser pad test

Touch any key or pad to test.

8. Dispenser Lighting

Select ON or OFF to test dispenser lighting.

9. Refrigerator compartment door switch

Status 02 door closed 01 door open

10. Freezer compartment door switch

Status 02 door closed 01 door open

11. Ice Door Motor

Place cup under ice chute, press ice dispenser to perform test.

Status 01 door closed 02 door opening 03 door open 04 door closing

NOTE: Prolonged time delay

12. Water Filter Gallon Usage

Status Gallons used since reset

13. Water Filter Usage Rating

Status 199

14. Water Filter Time Usage

Status days since reset

15. Water Filter Time Rating

Status add days after 182

16. Water Dispense Fill Test

Place cup under spigot press pad to initiate test.

17. Water Dispenser Fill Test

Status Valve OFF / ON

18. Ice Maker Fill Test

Make sure ice Maker mold is empty before performing test.

Remove icemaker front cover to press icemaker test switch.

Status ice maker fill OFF. Wait for icemaker unit to cycle.

19. Ice Level Sensor

Make sure the bin is present and not full before performing test.

Status 02 Bin not full and present

20. Ice Bin Thermistor

Status 01 Pass

21. Ambient Thermistor

Status 01 Pass

22. Humidity Sensor

Status 01 Shows actual humidity reading.

23. Ice Box Fan Motor & Ice Box Air Baffle Motor

Status 02 Fan ON/air baffle closed - ON/OFF delayed cycle

24. Mullion Heater

Status ON / OFF to control heater - test ON/OFF

25. Mullion Heater Mode

Press an option to change mullion heater mode sensor operation.

Status ON / OFF OFF = heater ON 100% of the time

26. Forced Defrost Mode

Press an option to change forced defrost mode

No Forced Defrost / Short Defrost / Long Defrost

27. Exit

The Service Mode can be exited at any time by pressing the back key twice

NOTE: When Service Mode is entered, all main control board loads: defrost heater, compressor, fans, ice maker, etc. are turned off. Only the load being checked during a diagnostic step is energized.

Exceptions:

The ice bin light illuminates anytime a refrigerator compartment door is open.
(10 minute maximum if door is left open)

The mullion heater circuit remains energized (at a rate of 0%, 30%, 70% or 100% of its power dependent on previous setting). The mullion heater remains on until diagnostic step 25 (mullion heater step), where the technician can turn on/off for testing. Once the Service Mode is exited, the mullion heater goes back to the last state previous to entering into Service Mode.



Voltage Test Points



TRAINING EVALUATION

Please use this page as a reminder to provide us with feedback on today's meeting.

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Instructor's Name: _____

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