



KitchenAid

SERVICE MANUAL

Model: KRSF505ESS



JOB AID TC3287747A



WARNING

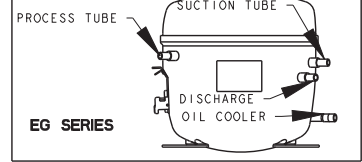
Electrical Shock Hazard
Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.

* Normal operating conditions are viewed when the air and temperature controls are at mid-sitting, freezer section 0 to -5°F and unit is cycling.

NOTE: Watt and pressure readings will vary and are influenced by the existing condition of the appliance, such as iced-up evaporator, condition of condenser, defrost cycle, pull-down time and customer use.

PERFORMANCE DATA *(NORMAL OPERATING CONDITIONS)			
AMB	WATTS	SYSTEM PRESSURE (PSIG)	
		HIGH SIDE	LOW SIDE
70°	140±20	95 ± 20	-7 TO 3
90°	150±20	135 ± 20	-4 TO 3
110°	170±20	185 ± 20	-2 TO 4

(OIL COOLER IS OPTIONAL)
EMBRACO



SERVICE INFORMATION (W10751685 A)

1. COMPRESSOR SUCTION AND PROCESS STUBS MAY NOT BE INTERCHANGED UNLESS INDICATED BY **.
2. ICE MAKER AND WATER VALVE NOT ORIGINAL EQUIPMENT ON ALL MODELS.
3. NOTE: ICE MAKER CYCLE MUST BE INITIATED ELECTRICALLY. DO NOT TRY TO MANUALLY START CYCLE.
4. SERVICE DEFROST BI-METALS -50°F OPEN.
5. PART NUMBER CAN BE FOUND ON THE COMPONENT.

SERVICEABLE ELECTRICAL PARTS MATRIX (COMPONENTS BY CUBIC FOOT SIZE)

SERVICEABLE PARTS	22, 25 CUBIC FOOT	28 CUBIC FOOT	WATTAGE	RESISTANCE Ω
	115V - 127V / 60 HZ			
COMPRESSOR	VEGD6H W10695094	VEGD7H W10653004		
RUN WINDINGS	—	—		5.10 ±8% @77°F
START WINDINGS	—	—		5.70 ±8% @77°F
START DEVICE, OVERLOAD	See Note 6			6.25 ±8% @77°F
RUN CAPACITOR (IF EQUIPPED)	See Note 6			
THERMISTOR	W10280385 (RC cab) W10280386 (FC)	W10323459 (RC evap)		5.3K@50°F, 8.8K@32°F, 25.9K@4°F
MAIN CONTROL (Back Panel)	See Note 6			
USER INTERFACE	See Note 6			
REFRIGERANT VALVE	See Note 6			43-49@70°F
ADAPTIVE DEFROST ** (OPT)	See Note 6			
RC EVAP FAN	See Note 6		2.8	
DEFROST HEATER	See Note 6		441-488	28-31@70°F
DEFROST BI-METAL	See Note 6			
EVAPORATOR FAN	See Note 6		4.2	
CONDENSER FAN	See Note 6		1.6-3.6	

** PRIMARY SOURCE PART NUMBER

ELECTRONIC CONTROL FEATURES

The dispenser user interface in this appliance controls both the product cooling and the dispensing systems. The product cooling diagnostics are first (see this page) followed by the dispensing diagnostics (see back of this page). The cooling portion of the electronic control in this appliance controls the temperatures in the refrigerator and freezer compartments independently, delays the operation of the evaporator fan, and pulses the defrost heater. The fan delay and pulsed defrost features are controlled in the following manner:

1. Evaporator Fan Delay - The electronic control delays the evaporator fan from coming on for 60 seconds after the compressor has turned on, and the evaporator fan stays on for 90 seconds after the compressor has turned off.
2. Pulsed Defrost Heat - During the defrost cycle the heater is energized continuously for the first 5 minutes. It is then cycled off for 60 seconds and on for 120 seconds. This on/off cycle is repeated until the bi-metal opens or the maximum defrost time (21 minutes) is reached.

SERVICE DIAGNOSTICS MODE

To **ENTER SERVICE DIAGNOSTICS Mode**: Press SW1 and SW2 simultaneously for 3 seconds. Release both buttons when you hear the CHIME indicator.

Unit must not be in Lockout prior to entering SERVICE DIAGNOSTIC MODE. The display will show 01 to indicate the control is in step 1 of the diagnostics routine.

To **EXIT SERVICE DIAGNOSTICS Mode**, do one of the following 3 options:

- 1) Press SW1 and SW2 simultaneously for 3 seconds.
- 2) Disconnect the product from power.
- 3) Allow 20 minutes to pass.

Following the exit of the diagnostic mode, the controls will then resume normal operation.

Each step must be manually advanced. Press SW5 to move to the next step in the sequence. Press SW4 to back up in the sequence to the previous step. Diagnostics will begin at Step 1. Each step is displayed in the two digits of the dispenser user interface display. The step results are displayed in the two digits on dispenser user interface display 2 seconds after the step number is displayed. An amber LED will be shown to designate that the step number is being displayed and a red LED will be shown to designate that the status of the step is being displayed. All button and pad inputs shall be ignored and all inputs shall be off, except as described in the actions for each step. Note: The ice door motor cycles 1 minute after an ice dispensing.

Service Tip: If the control does not respond, remove power from the entire appliance for 10 seconds. Re-apply power, wait 10 seconds, and perform the service diagnostics routine.

SWITCH DIAGRAM



Step No.	Component Tested	Suggested Diagnostics Routine: COOLING system steps 1-7. DISPENSING system steps 8-48.	Component Status Indicator
1	FC thermistor	This is an internal board test. The board will check the resistance value of the thermistor and display the results on the RC Temp Display.	O1=Pass O2=Open O3=Short
2	RC thermistor	This is an internal board test. The board will check the resistance value of the thermistor and display the results on the RC Temp Display.	
3	Evaporator fan motor and Air baffle motor	Verify air flow from the evaporator fan. Check to see if the baffle opens and closes. NOTE: RC lower lighting will turn ON if the door is opened in step 3.	O1=Turn both Evap Fan Off O3=Turn on RC Evap Fan O2=Turn on FC Evap Fan O4=Turn both ON
4	Compressor and condenser fan motor (non-VCC and non-Dual Evap models) or Condenser fan motor (VCC models) or Valve and Compressor (Dual Evap models)	Control the Compressor and Condenser Fan Motor using the Change Setting keys. For Dual Evap Models Only: At start of this step, the fans are turned off if they were turned on from previous step. There will be a delay of 3 seconds before start of sub step 01. Each step is timed and will automatically step to the next step. If during any time technician try to change the setting, invalid chime is produced. At end of sub step 5, technician can exit this step by either incrementing or decrementing to the next step. Note: For Dual Evap Models, the dual evap valve will always open to both sides until step 4 when it is requested to drive to different positions. At initial entry, the UI will send digital "1" to output of dual evap valve drives.	O1 = ON O2 = OFF For Dual Evap Models Only: Note: Steps are timed and will automatically advance to next step. O1 - initialize Dual Evap valve in home position (4 min) O2 - close both RC & FC Dual Evap valve (1 min) O3 - turn compressor on (1 min) O4 - keep compressor on, drive the valve to RC pos. & turn the RC fan on (2 min) O5 - keep compressor on, drive the valve to FC pos. & turn the FC fan on (technician confirm before advance to next step; compressor off, fans off, drive dual evap valve to home position at advance of next step).
5	Compressor (VCC models)	- Entering in this Step, the VCC driver shall be set to minimum speed. Exiting this Step, the VCC driver shall be set to 0 RPM (or VCC driver OFF) - Short press on "CHANGE SETTING KEY", shall ramp the compressor from minimum speed to maximum speed within 480 RPM/second (1GHz/second). - Short pressing again "CHANGE SETTING KEY", shall ramp the compressor from maximum speed to minimum speed within 480 RPM/second (1GHz/second)	O1= Compressor at maximum speed; O2= Compressor at minimum speed; O3= Compressor speed is ramping-up from minimum to maximum speed; O4= Compressor speed is ramping-down from maximum to minimum speed;
6	Defrost heater/Bi-metal	Line voltage switched to components from board, verify 120VAC between line and neutral at heater. Under some conditions, the Bi-metal can take a few minutes to close the circuit. Note: If Bi-metal is open, it will need to be by-passed for heater to operate. See Note below.	Blank Until get a valid reading O1 = Bimetal Closed O2 = Bimetal Open
7	Defrost Mode	The Defrost Mode can be set by using SW3. In ADC Mode the product will automatically defrost after a minimum of 8 hours of compressor runtime and up to maximum of 96 hours of compressor runtime, depending upon product usage. In Basic Mode the product will automatically defrost after 8 hours of compressor runtime. The Defrost Mode must be set to ADC ON before exiting the Service Diagnostic Mode. Press SW5 to indicate the completion of this step and to continue with dispenser service routine.	O1 = ADC ON O2 = Basic Mode ON (8 hour timer)

ATTENTION: IF BI-METAL IS BY-PASSED FOR TESTING (IF APPLICABLE), DO NOT OVERHEAT EVAPORATOR AREA.



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DISPENSER USER INTERFACE DISPLAY DIGITS

Digit 1 Digit 2



Amber LED-Order filter
 Red LED-Replace filter

NOTE: The step number is shown first, followed by the status of the step 2 seconds after the step number is displayed. When the step number is being shown, the amber LED will be on. When the status of the step is being shown, the red LED will be on.

SERVICE INFORMATION (W10751682 A)

SWITCH DIAGRAM



Step #	Component Tested	Suggested Diagnostics Routine: COOLING system steps 1-7. DISPENSING system steps 8-48.	Component Status Indicator
8	All UI indicators	Verify that all LED indicators and UI display digits turn on automatically.	All indicators ON
9	UI Button and Pad Test	Displays the User Interface Buttons and Ice and Water Pads status as described in the Component Status Indicator column. NOTE: Do not use SW4 and SW5 as these are used only to navigate through the Service Diagnostics.	Digit 1 Digit 2 1 0 = SW1 Pressed 2 0 = SW2 Pressed 3 0 = SW3 Pressed 6 0 = SW6 Pressed 0 1 = Ice Pad Pressed 0 2 = Water Pad Pressed 0 3 = Ice and Water Pads Pressed NOTE: SW4 and SW5 ARE USED FOR NAVIGATION AND ARE NOT DISPLAYED.
10	N/A	N/A (This step is bypassed automatically)	N/A
11	Dispenser Lighting	Pressing SW3 will change the dispenser lighting setting from OFF(0%) to ON(100%) To DIM(50%)	Blank
12	Accent Lighting	Turn ON all Light Modules (ice bucket light/Pad light). Bypassed in some models	Blank
13	Dispenser Housing Heater Status	Displays the Dispenser Housing Heater status on the UI display. Press SW3 to change status.	O1 = ON O2 = OFF
14	N/A	N/A (This step is bypassed automatically)	N/A
15	N/A	N/A (This step is bypassed automatically)	N/A
16	RC Door Switch Input	Displays the RC Door status in realtime on the UI display. Verify that the open and close status display correctly	O1 = RC Door Open O2 = RC Door Closed
17	FC Door Switch Input	Displays the FC Door status in realtime on the UI display. Verify that the open and close status display correctly.	O1 = FC Door Open O2 = FC Door Closed
18	Ice Door Motor	Displays the Ice Door stepper motor state on the UI display. Initiate ice dispense and verify that the mechanical operation of the ice door corresponds to the component status indicator. NOTE: Ice door will have a delay in closing after an ice dispense is initiated.	O1=Closed, O2=Opening, O3=Open, O4=Closing
19	Fill tube heater status	If this feature is available on the product, this step will allow the fill tube heater to be toggled on and off through the use of SW3.	O1=ON, O2=OFF
20	Water Filter Usage Rating	Displays in two sequential flashes the total water usage rating in gallons for the water filter on the UI display. Wait until dash is displayed which means end of the number.	00/0- to 99/9-
21	Water Filter Time Rating	Displays in two sequential flashes the total time rating in days for the water filter on the UI display. Wait until dash is displayed which means end of the number.	00/0- to 99/9-
22	Water Filter Usage	Displays in two sequential flashes the current water filter status in gallons used since last reset on the UI display. Wait until dash is displayed which means end of the number.	00/0- to 99/9-
23	Water Filter Time	Displays in two sequential flashes the current water filter status in days since last reset on the UI display. Wait until dash is displayed which means end of the number.	00/0- to 99/9-
24	Water Filter Reset	Display in two sequential flashes the current times the Water Filter was reset on the UI display. Wait until dash is displayed which means end of the number.	00/0- to 99/9-
25	N/A	N/A (This step is bypassed automatically)	N/A
26	Main Control Software Version	Displays in three sequential flashes the Main Control software version on the UI display. Note: This is repeated displayed during all time in this step.	00/00/00 to 99/99/99
27	Dispenser UI Control Software Version	Displays in three sequential flashes the Dispenser UI Control software version on the UI display. Note: This is repeated displayed during all time in this step.	00/00/00 to 99/99/99
28-30	N/A	N/A (This step bypassed automatically)	N/A
31	Main UI Cypress SW Version	Reads the EEPROM Map Version.	XX XX XX
28-30	N/A	N/A (This step bypassed automatically)	N/A
38	Forced Defrost mode	Set the Forced Defrost Mode by selecting on the "CHANGE SETTING KEY". The Forced Defrost command shall be sent at the exit of Service Mode. No Forced Defrost = Defrost does not resume after exit from SVC; Short Defrost = minimum TTD; Long Defrost = maximum TTD; Note: "No Forced Defrost" is the default	OF = No Forced Defrost Sh = Short Defrost Lo = Long Defrost
39	Dual Evap Thermistor	Read the current temperature of the Evap thermistor from ACU and compare this value. This information shall be Dynamically updated (every 1 second). Value Read (VR): - COLD_LOWER_LIMIT ≤ VR ≤ HOT_UPPER_LIMIT ⇒ Pass - VR > HOT_UPPER_LIMIT ⇒ Short - VR < COLD_LOWER_LIMIT ⇒ Open	O1 = Pass O2 = Open O3 = Short
40-41	N/A	N/A (This step is bypassed automatically)	N/A
42	UI EEPROM Map Version	Reads the EEPROM Map Version.	XX XX XX
43	UI FLASH Map Version	Reads the FLASH Map Version.	XX XX XX
44	Sankyo Ice maker Harvesting Test	At entry of this step turn OFF a harvesting cycle. Use the "CHANGE SETTING KEY" to start the harvest cycle. Note :- Make the bucket to not full state to initiate the harvesting. The system should not come out of this step unless harvest cycle is completed.	Digit 1: 1 = Ice maker harvesting cycle is ON 2 = Ice maker harvesting cycle is OFF Digit 2: 1 = Ice bucket full detected 2 = Ice bucket not full 3 = Switch faulty or motor (Time out = 20 seconds) Blank = Until get a valid reading.
45	Sankyo and LPIM Ice maker Water Fill Test	Upon entry to this step there will be a 3 second delay, and then the ice tray will be moved to home position. After the tray has reached home position, the "CHANGE SETTING KEY" can be used to start or to toggle between "ON" and "PAUSE" on ice maker fill. NOTE: Water filling time is based on the flash map setting. At step entry the water fill cycle default to OFF. NOTE: The "CHANGE SETTING KEY" will be ignored if the DISPLAY = O1. NOTE: For LPIM, ignore homing of the motor. NOTE: Prior entry of this step run step 44 to make sure the ice tray is empty before proceeding with water fill, otherwise double fill will occur. NOTE: Make sure to proceed with step 44 after water fill test to leave tray empty when finishing service.	O1 = Ice tray moving to home position O2 = Water fill OFF O3 = Water fill ON O4 = Water fill Paused
46	Water dispensing	Pressing the Water Pad will initiate the water dispense	O0 = Water Dispensing Valve OFF O1 = Water Dispensing Valve ON
47	Sankyo Ice maker Ice Tray Thermistor	Read the current temperature of the Ice maker tray thermistor and compare this value. This information shall be Dynamically updated every second. Value Read (VR): - Ice maker temp start threshold < VR ≤ HOT_UPPER_LIMIT ⇒ Valid warmer - COLD_LOWER_LIMIT < VR ≤ Ice maker temp start threshold ⇒ Valid cooler. - VR > HOT_UPPER_LIMIT ⇒ Short - VR < COLD_LOWER_LIMIT ⇒ Open Note : Harvest temp range defined in the flash map	Blank = Until get a valid reading. O1 = Valid temp warmer than harvest temp O2 = Valid temp cooler than harvest temp O3 = Short
48	Ice maker - Ice Bucket Detection Switch	Read the ice bucket detection switch status . Note:- In case of Sankyo IM with no switch present, the display will always show "2" (Ice Bucket present even if the bucket is removed/absent)	O1 = Ice bucket absent O2 = ice bucket present

- NOTES:
1. IM SOLENOID GROUNDED THROUGH MOUNTING.
 2. EVAP COVER GROUNDED HEAT SHIELD.
 3. POLARITY ON THE DISPENSER IS ACCOMPLISHED USING A RELAY ON THE MAIN BOARD. THE BU AND THE GY/OR WIRES SWITCH POLARITY DEPENDING ON THE CRUSH/CUBE POSITION. SEE TABLE BELOW:

WIRING DIAGRAM

CRUSH	GY/OR	BU
CUBE	+	-



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WIRE COLOR CODE
 BW/GN : WHITE/GREEN TRACER
 OB/BR : ORANGE/BLACK TRACER
 YL/RO : YELLOW/RED TRACER
 BL/BU : BLUE/BLACK TRACER
 BU : BLUE
 BK : BLACK
 RD : RED
 WH : WHITE
 YL : YELLOW
 OR : ORANGE
 BR : BROWN
 GR : GRAY
 PK : PINK
 V : VIOLET
 TN : TAN

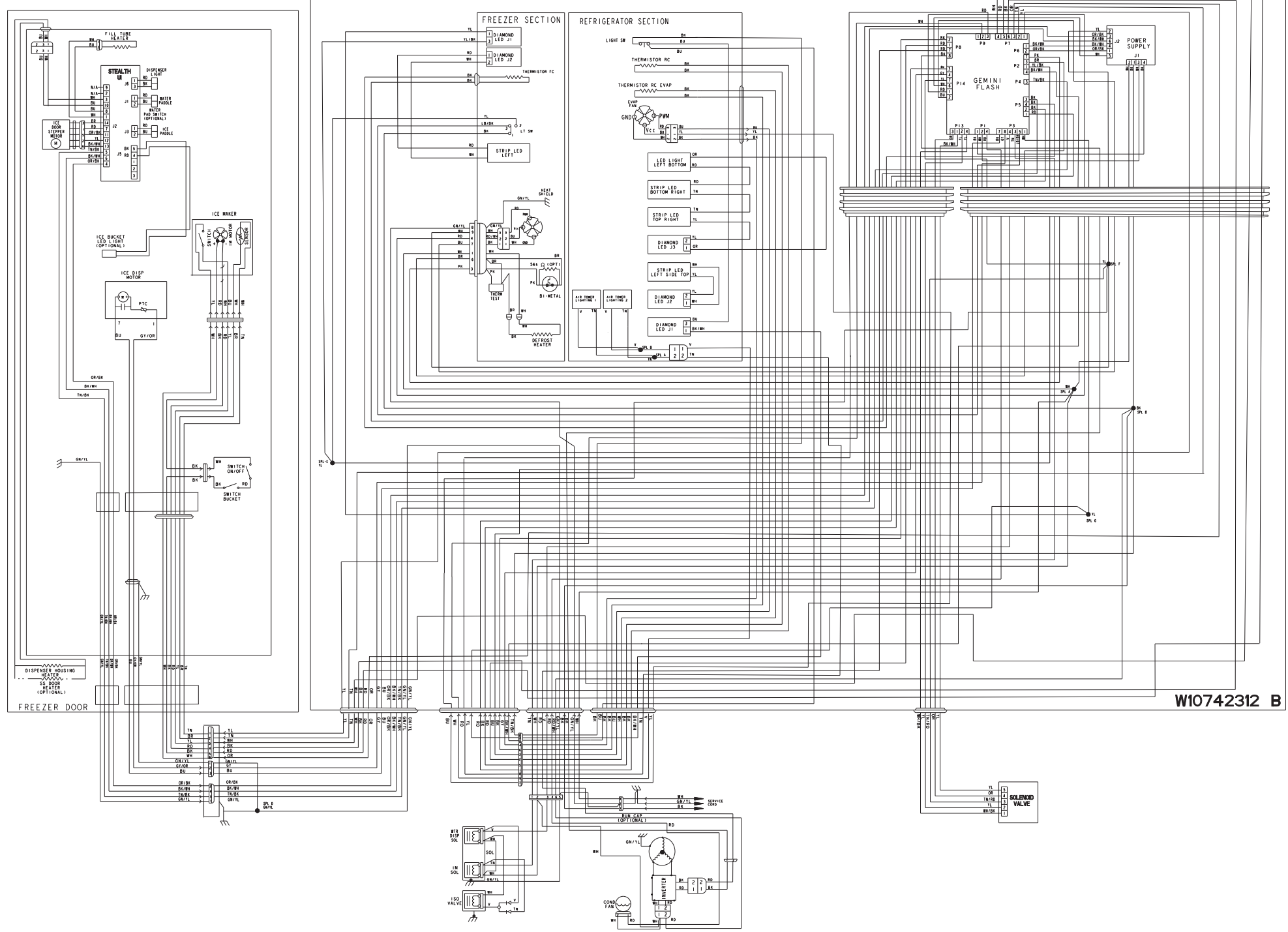
WIRE COLOR CODE
 V/WH : VIOLET/WHITE TRACER
 BL/YL : BLUE/YELLOW TRACER
 YL/BU : YELLOW/BLUE TRACER
 BU : BLUE
 BK : BLACK
 RD : RED
 WH : WHITE
 YL : YELLOW
 OR : ORANGE
 BR : BROWN
 GR : GRAY
 PK : PINK
 V : VIOLET
 TN : TAN

MANUFACTURED ONE OR MORE OF THE FOLLOWING UNITED STATES PATENTS

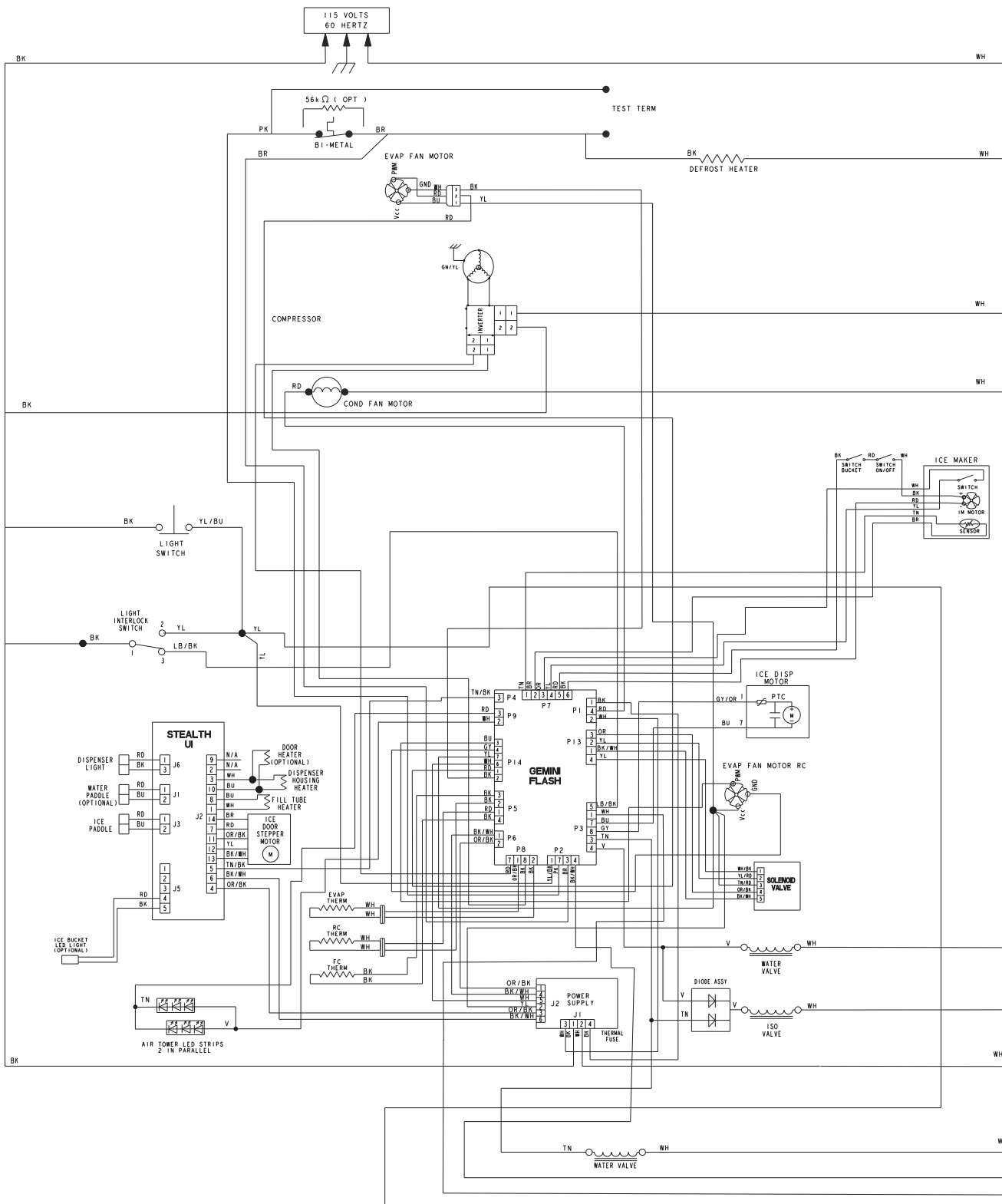
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4,084,725	4,665,708	4,767,896	4,911,508	5,033,182
4,090,641	4,694,553	4,768,353	4,914,928	5,033,273
4,102,660	4,706,169	4,776,178	4,920,758	5,042,598
4,327,557	4,707,401	4,787,216	4,924,680	5,044,704
4,330,310	4,709,556	4,799,362	4,934,541	5,050,777
4,640,432	4,715,512	4,800,935	4,936,641	5,070,708
4,649,712	4,728,759	4,801,181	4,944,566	5,077,985
4,649,717	4,745,656	4,833,894	4,958,890	D309,461
4,649,718	4,745,775	4,862,577	4,956,848	

SYMBOL CODE
 ⊙ : CONNECTOR - SCREW ON
 ○ : DISCONNECT TERMINAL
 ● : PERMANENT CONNECTION
 ➤ : PLUG CONNECTOR
 ⊥ : GROUND (CHASSIS)

OTHER PATENTS PENDING

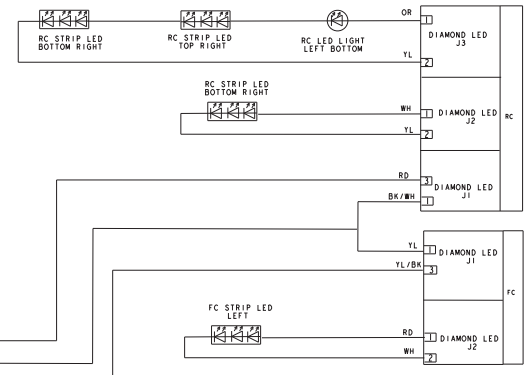


W10742312 B



VOLTAGE CHART						
	FROM	COLOR	TO	COLOR		
POWER SUPPLY	P1	P1-1	BK	P1-2	WH	115VAC INPUT - CONSTANT WHEN UNIT PLUGGED IN
	P2	P2-1	OR/BK	P2-4	BK/WH	14VDC OUTPUT CONSTANT WHEN UNIT PLUGGED IN
		P2-2	YL	P2-5	WH	14VDC OUTPUT CONSTANT WHEN UNIT PLUGGED IN
CORE CONTROL	P1	P1-3	OR/BK	P2-6	BK/WH	14VDC OUTPUT CONSTANT WHEN UNIT PLUGGED IN
		P1-4	RD	P1-2	WH	CONSTANT 120 VAC WHEN PRODUCT IS ON
		P1-1	BK	P1-2	WH	120VAC CONDENSER FAN
	P2	P2-1	YL/BK	P1-2	WH	FC DOOR OPEN 115V. DOORS CLOSED : 0V
		P2-3	BR	P1-2	WH	FC DEFROST HEATER, B1-METAL BYPASS - SERVICE TEST 6. 115V IF BIMETAL CLOSED
		P2-4	BK/WH	P1-2	WH	RC DOOR OPEN 115V. DOORS CLOSED : 0V
	P3	P2-7	PK	P1-2	WH	FC DEFROST HEATER OUTPUT, W/B1-METAL SERVICE TEST 6. 115V
		P3-1	WH	P1-1	BK	120 VAC IF DOORS ARE OPENED FOR LESS THAN 10 MINUTES
		P3-3	TN	P1-2	WH	120 VAC OUTPUT WHEN ICE MAKER VALVE IS ACTIVE
		P3-4	V	P1-2	WH	120 VAC OUTPUT WHEN WATER DISPENSER VALVE IS ACTIVE
	P4	P3-5	LT/BK	P1-2	WH	120 VAC INPUT DOOR SWITCH (WHEN DOOR IS CLOSED)
		P3-7	BU	P3-8	GY	140 VDC OUTPUT TO ID1 MOTOR/NON ID1 MOTOR IS ACTIVE
		P4-3	TN/BK			COMMUNICATION
		P5-1	RD	P5-2	BK	5 VDC INPUT RC THERMISTOR
P5-3		BK	P5-4	BK	5 VDC INPUT FC THERMISTOR	
P6-1		BK/WH	P6-2	OR/BK	CONSTANT 14VDC WHEN CONNECTED TO POWER SUPPLY	
P7-5		RD	P7-6	BK	14 VDC WHEN ICE MAKER IS MAKING A HARVEST	
P5	P7-1	YL	P7-2	TN	5 VDC INPUT IM THERMISTOR	
	P7-3	OR	P7-4	WH	14 VDC WHEN ICE TRAY IS MOVING	
	P8-1	WH	P8-2	BK	5 VDC INPUT RC EVAP THERMISTOR	
	P8-7	RD	P8-8	BK	-7.5V WHEN COMPRESSOR IS ON	
	P9-2	WH	P9-3	RD	14 VDC WHEN AIR TOWER LIGHT IS ON	
	P13	P13-1	BK/WH	P2-3 (POWER SUPPLY)	OR/BK	14VDC VALVE EVAPORATOR A+
		P13-2	YL	P2-3 (POWER SUPPLY)	OR/BK	14VDC VALVE EVAPORATOR B+
		P13-3	OR	P2-3 (POWER SUPPLY)	OR/BK	14VDC VALVE EVAPORATOR A-
P13-4		YL	P2-3 (POWER SUPPLY)	OR/BK	14VDC VALVE EVAPORATOR B-	
P14	P14-1	RD	P14-2	BU	14VDC WHEN FC FAN IS RUNNING AT MAX SPEED	
	P14-3	BU	P14-4	GY	14VDC WHEN RC FAN IS RUNNING AT MAX SPEED	
	P14-6	WH	P14-7	YL	CONSTANT 14VDC WHEN CONNECTED TO POWER SUPPLY	

VOLTAGE TEST POINTS STEALTH					
J1	J1-1	RD	J1-2	BU	PWM SIGNAL □ 9.3 V (IS 1/3 DUTY CYCLE OF 14 V - OPEN) / 0 V - THE ICE DISPENSER IS ACTIVE
	J2-1	WH	J2-8	BU	14 VDC OUTPUT TO FILL TUBE HEATER
J2	J2-3	BU	J2-10	WH	14 VDC OUTPUT TO DISPENSER HOUSING HEATER
	J2-4	OR/BK	J2-6	BK/WH	14 VDC INPUT GEMINI FLASH
	J2-5	TN/BK			COMMUNICATION (NOT TESTED)
J3	J3-1	RD	J3-2	BU	PWM SIGNAL □ 9.3 V (IS 1/3 DUTY CYCLE OF 14 V - OPEN) / 0 V - THE ICE DISPENSER IS ACTIVE
J5	J5-1	RD	J5-3	BK/WH	14VDC OUTPUT TO LV1D1
J6	J6-1	RD	J6-3	BK	14 VDC OUTPUT DISPENSER LIGHT



Brands Affected



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JENN-AIR

MAYTAG

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Sankyo Twist Tray Ice Maker Operation and Troubleshooting

Introduction:

The Twist-Tray Ice Maker (IM) is a 10 cube ice maker manufactured by Sankyo. It is a single unit with no replaceable parts. The IM operates with DC voltages of 14VDC and 5VDC, and water pressure between 30 and 120 psi. It produces around 3.5lbs of ice per day (4lbs per day if MAX ICE is enabled).

IM timing and logic is controlled by the UI Core Control Board. The IM has the following operational components (**Figure 1**):

- DC Motor with bi-directional movement
- Bail Arm to sense ice level in the ice bin
- Internal feedback switch to determine motor position
- Thermistor

The DC motor twists the ice tray. Ice is detached by the twisting motion, no heater is needed. The motor also operates the bail arm.

The bail arm, and the internal feedback switch, checks if the ice bin is full.

The internal feedback switch helps determine if the ice bin is full and monitors motor shaft position.

The thermistor senses the temperature of the ice tray to determine if the water is frozen. (Below 8°F (-13°C) for Normal Ice, 5°F (-15°C) for Max Ice).

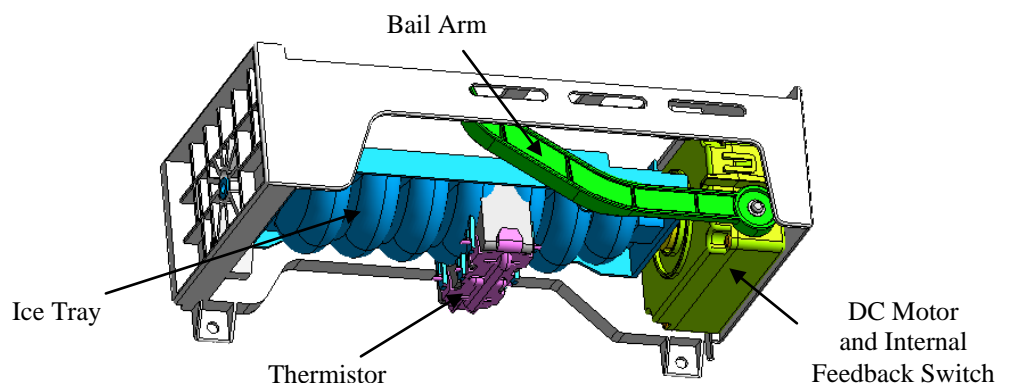


Figure 1: Sankyo Twist Tray Ice Maker

ALL POINTERS ONLINE:
<https://www.servicematters.com/>

To receive pointers by email, or to edit or delete a current email address, go to <https://www.servicebench.com/>

TECHNICAL TRAINING POINTER

For Immediate Attention of Your Service Department

Technical Training Pointer #: W10869036

Refrigeration

Action Required: Informational/Mandatory

Release Date: February 2016

Ice Maker Operation

The information in this section is available as a flow chart. See **Attachment 1 – Ice Maker Normal Operation Flow Chart**.

The IM has five standard states during normal operation. They are:

1. Homing
2. Filling
3. Freezing
4. Ice Ready
5. Harvesting

Other states include Homing Paused, Harvesting Paused, and IM Jammed.

Homing

When power is initially applied to the IM, it will enter the Homing state. 14VDC is applied to the motor driving it counter-clockwise (CCW). The internal feedback switch closes when the ice tray reaches the home (fill) position.

If the IM is not in the Home position after 45 seconds, the IM will enter the Jammed state. The IM will attempt Homing every 60 minutes while in the Jammed state.

Filling

IM filling is skipped for the first cycle following a power interruption to the refrigerator. This ensures the IM is not overfilled, and results in a 3 hour wait for the first batch of ice to drop.

For subsequent cycles, 115VAC is applied to the IM water valve solenoid for 15 seconds, filling the IM with 3.38 fl. Oz. (100ml) of water.

The water fill tube has a heater to prevent icing of the fill tube following Filling. At the beginning of the Filling state, the fill tube heater, if on, will be turned off. After filling completes, a 20 minute delay timer will begin. After these 20 minutes pass, the fill tube heater will turn on for 90 minutes, or until the beginning of the next fill cycle, whichever comes first. During periods where the IM is inactive (turned off, full ice bin, etc.) it is possible for the fill tube to freeze over. After the IM becomes active again, it may take one or two cycles to thaw the ice maker inlet tube line.

Freezing

After the 15 second fill time, the IM enters the Freezing state until the ice cubes are ready. The ice cubes are ready after time and temperature requirements are met. Time and temperature requirements vary between normal ice mode, and MAX ICE.

In normal ice mode, the thermistor temperature must be at or below 8°F (-13°C). In addition, a minimum of 85 minutes must pass. If the RC or FC door is opened during the Freeze state, the timer is paused until the door is closed and additional time is added. For example, if the FC door is opened for 5 minutes, the timer stops for 5 minutes and 5 minutes are also added to the 85 minute timer for a total of 95 minutes.

In MAX ICE mode, the minimum timer is decreased to 70 minutes, but the thermistor temperature must be at or below 5°F (-15°C)

TECHNICAL TRAINING POINTER

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Refrigeration

Action Required: Informational/Mandatory

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Ice Ready

After the ice is ready the IM checks that the ice bin is present, the FC door is closed, and the ice bin is not full. If these conditions are met, the IM enters the Harvesting state.

To check whether the ice bin is full, 14VDC is applied to the IM motor, driving it clockwise (CW).

The motor begins twisting the tray and lowers the bail arm. In the first 7 seconds, if the bail arm contacts ice the internal feedback switch will close indicating the bucket is full. The DC motor will reverse direction, driving the ice tray counter-clockwise (CCW) back to the home position.

The IM will wait 60 minutes, and then repeat this process to check if the ice bin is still full. This process repeats until the IM is not full.

When the ice bin is not full, the internal feedback switch will remain open during these first 7 seconds, and the IM will enter the harvest state, while continuing to drive the IM in the CW direction.

Harvesting

During Harvesting, the position of the internal feedback switch indicates the position of the ice tray.

Since the ice bin is not full, the IM motor continues driving in the CW direction. The CW motion continues, twisting the ice tray to a 160° rotation and dumping the ice. When the tray reaches 160° rotation, the internal feedback switch closes indicating end of course for the ice tray. Travel from the home to end of course position takes between 14 and 20 seconds.

After reaching end of course, the polarity of the 14VDC is reversed, and the IM motor drives the tray in a CCW direction. The internal feedback switch opens shortly after the IM motor begins moving in the CCW direction. The switch will close again when the ice tray is back to the Home position. Travel from the end of course position, to Home takes between 13 and 19 seconds.

If the IM is not in the Home position after 45 seconds, the IM will enter the Jammed state. The IM will attempt Homing every 60 minutes while in the Jammed state.

Harvesting Paused

During Harvesting, if the ice bin is removed, or the FC door is opened, Harvesting will pause and the IM will not move.

Harvesting will resume when the ice bin is present and the FC door is closed, provided the door was not open for more than 60 minutes. If the door was open more than 60 minutes, the IM will enter Homing until thermistor freezing temperature is satisfied. After the freezing temperature is satisfied, Harvesting will begin again.

Homing Paused

During Homing, if the ice bin is removed, or the FC door is opened Homing will be paused and the IM will not move.

TECHNICAL TRAINING POINTER

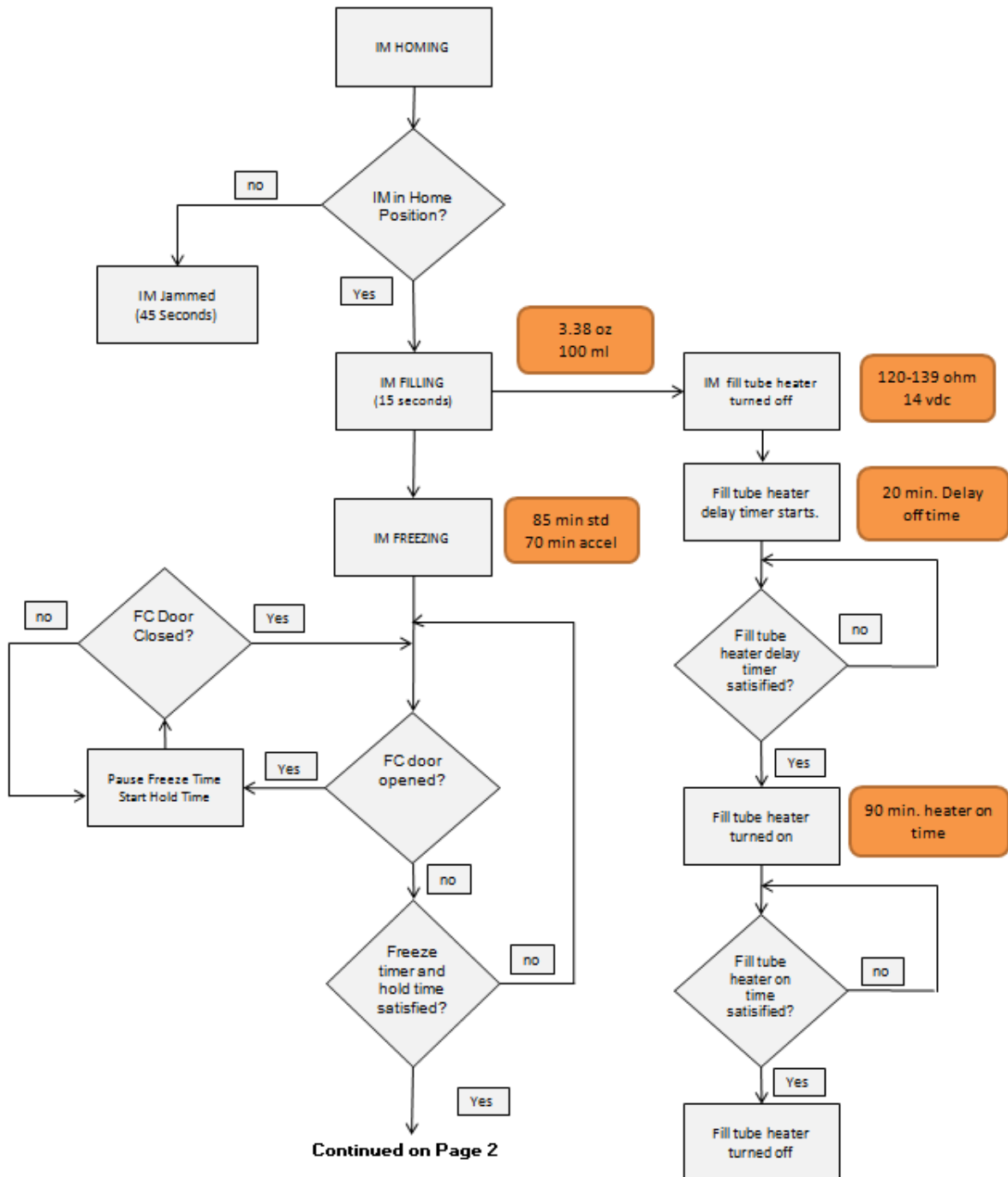
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Technical Training Pointer #: W10869036
 Action Required: Informational/Mandatory
 Release Date: February 2016

☑ Refrigeration

Attachment 1: Ice Maker Normal Operation Flow Chart

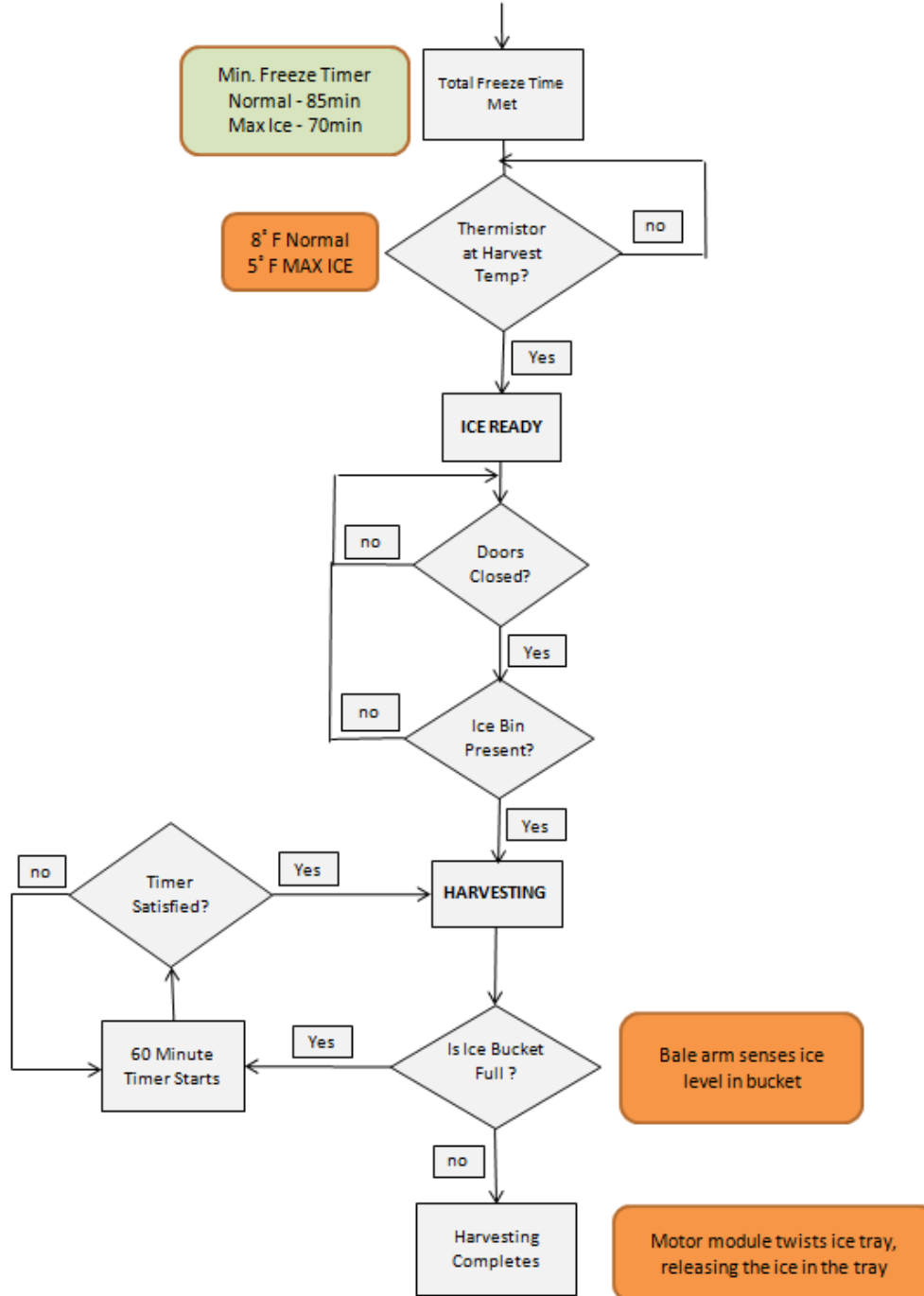
(Page 1 of 2)



Attachment 1: Ice Maker Operational Flow Chart

(Page 2 of 2)

Continued from Page 1



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Refrigeration

Troubleshooting:

⚠ 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.

NOTE: Always refer to the refrigerators Technical Data Sheet when servicing.

NOTE: It is necessary to enter Service Diagnostics to verify voltages for the Ice Maker.

Service Diagnostics

Functional checks of all components required for proper operation of the IM can be completed through Service Diagnostics. Refer to the Service sheet for the refrigerator for instructions on operating Service Diagnostics.

NOTE: Diagnostic Step 48 – Icemaker – Ice Bucket Detection Switch – Does Not Work

Troubleshooting Paths

Complete the preliminary checks prior to troubleshooting. Then proceed down the appropriate path.

Path 1 - If there is ice or water in the ice tray, proceed to Path 1.

Path 2 - If the ice tray is empty, or ice cubes are extremely small proceed to Path 2.

Path 3 – If Path 1 and 2 reveal no issues, proceed to Path 3.

TECHNICAL TRAINING POINTER

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☑ Refrigeration

Preliminary Checks

To operate, the IM must be enabled and turned on.

Enabling The Ice Maker

The IM is disabled if the refrigerator is in Showroom mode or Sabbath mode. To enable the IM:

- Exit Showroom mode
- Exit Sabbath mode

Turning On The Ice Maker

To turn the IM on, remove the ice storage bin, flip the switch to the “ON” position (**Figure 2**), and replace the ice storage bin. When inserted, the ice storage bin closes a bucket switch wired in series with the ON/OFF switch (**Figure 3**).

The optimal freezer temperature for ice making is 0°F, ±3°. Adjust the freezer temperature as needed.

It can take up to 3 hours for the first harvest cycle after the IM is turned on. Allow 72 hours for the ice bucket to fill completely.

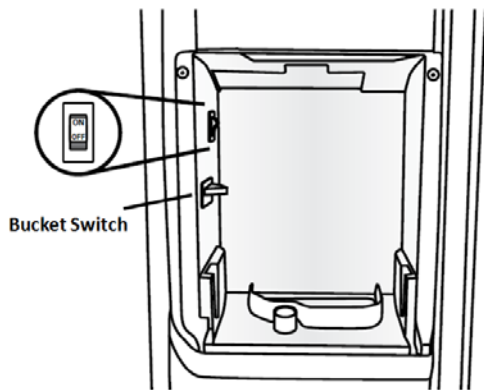


Figure 2: ON/OFF and Bucket Switches

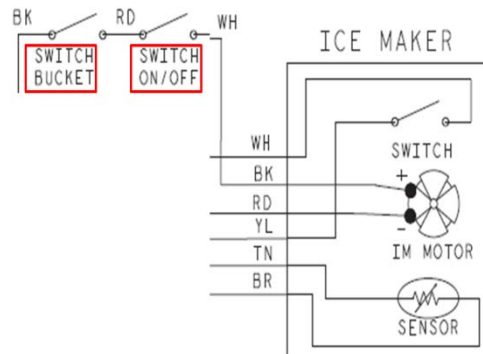


Figure 3: IM Wiring Diagram with ON/OFF & Bucket Switch

Note: If the refrigerator has the light and ice maker switches at the top of the freezer compartment (versus the side of the freezer compartment), the refrigerator may have an issue with the switch making consistently.

Install a shim (Part # 2177331) on the IM cover to ensure the IM switch is engaging.

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Refrigeration

Path 1 - Ice Maker Operational Checks (Steps 44 & 47)

Sankyo Icemaker Ice Tray Thermistor Test

- 1) Run Service Diagnostics Step 47
- 2) If the test indicates either an open or shorted thermistor, replace the IM.

Sankyo Icemaker Harvesting Test

- 1) Ensure the ice bin is not full to ensure test runs to completion.
- 2) Ensure the ice bin has a cutout as shown in **Figure 4**. The bail arm can be obstructed by the ice bin if this cutout is not present.
- 3) To run Diagnostic Step 44, make a jumper wire from the male portion of the power switch connector to simulate the connection between the power switch harness and the switch itself (**Figure 5**).



Figure 4: Left Side View of Ice Bucket



Figure 5: Jumper Wire

- 4) Run Service Diagnostics Step 44, allowing up to 1 minute for test results.
- 5) At the beginning of the test, verify the bail arm is coming down and is not obstructed by the ice bin.
- 6) Check that any ice cubes fall during the harvest cycle. Check for ice jams.
- 7) If the test result indicates a faulty switch or motor, proceed to the next step; otherwise proceed to alternate troubleshooting paths as required.
- 8) Remove the wiring connector at the IM (**Figure 6**).
- 9) Run Service Diagnostic Step 44 and check for 14VDC at the female IM Plug Motor pins (**Figure 7**).

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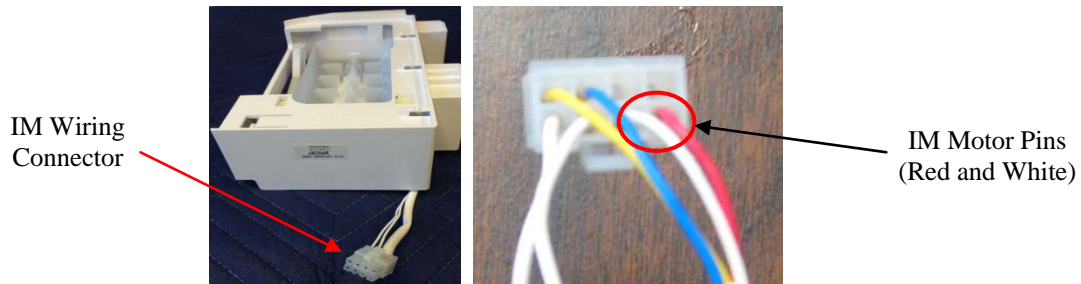


Figure 6: IM Wiring Connector

Figure 7: IM Wiring Connector Motor Pins

- 10) If 14VDC is present, replace the IM.
- 11) If 14VDC is not present proceed to Path 1a, IM Power Supply Checks.

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Release Date: February 2016

Refrigeration

Path 1a - IM Power Supply Checks

If 14VDC is not present at the IM motor pins, proceed down this path.

Check IM Connections Behind Front Grill

Verify IM connections behind the Base Grill/Toe Grill.

- 1) Remove the front grill and check wiring connector is secure (**Figure 8**).

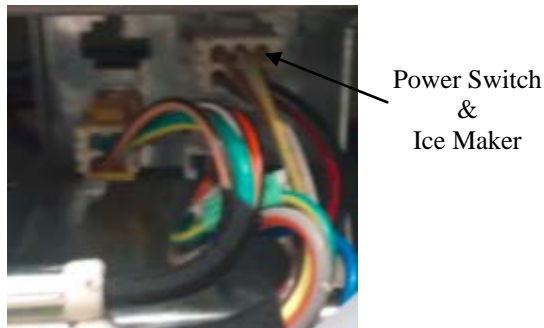


Figure 8: Power Switch Connector

- 2) Run Service Diagnostic Step 44 to provide voltage at test points.
- 3) Check voltage at the Power Switch connector. Voltage should be 14VDC. Refer to the refrigerator wiring diagram to determine proper location for test leads.
- 4) If voltage is not present at the power switch connector in the Base Grill, Check connections at the control board, if connections are secure replace the control board.
- 5) If voltage is present at the power switch connector in the Base Grill, proceed to steps 6 - 9, checking the connections tightness, and continuity of the power switch and bucket switch in the IM cover

Check Power and Ice Bin Switches Are Connected

- 6) Remove the ice bin and IM cover.
- 7) Verify the power switch wire harness is properly seated. The harness is on the lateral side of the IM cover near the back (**Figure 9**).
- 8) Verify the power and bucket switch connections are secure. The switch connections are inside the IM cover on the lateral side (**Figure 10**).

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Refrigeration



Figure 9: Power Switch and Harness

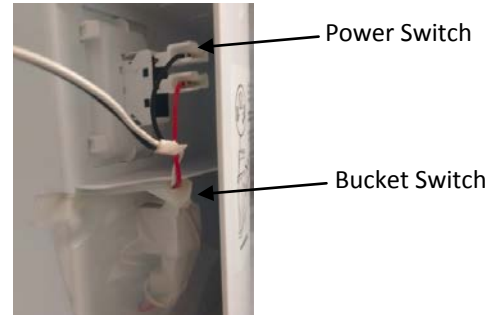


Figure 10: Power and Bucket Switch Connections

- 9) Verify the continuity of the power switch and the bucket switch. When closed, resistance across the switches should be around 1 ohm or less.

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Release Date: February 2016

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Path 2 - Water Supply System Functional Checks (Steps 19 & 45)

Icemaker Water Fill Test

- 1) Run Service Diagnostic Step 45
- 2) The water should dispense for about 15 seconds.
- 3) Check that water fills into each cavity of the tray.
- 4) If unsure, repeat Step 45 and collect water from fill tube into a measuring cup. About 3.38 Oz (between $\frac{1}{4}$ and $\frac{1}{2}$ cup) should dispense.
- 5) If no water, or insufficient water, is dispensed into the IM, check for and measure water from the in-door water dispenser.
- 6) Check water supply pressure is a minimum of 30 psi. A pressure gage is recommended for this check. Checking water pressure without a gage, about 8 oz. (1 cup) of water should dispense in 10 seconds.
- 7) If no water is dispensed from the in-door water dispenser, proceed to Path 2a.
- 8) If sufficient water dispensed from the in-door water dispense, proceed to Path 2b.
- 9) If insufficient water dispensed from the in-door water dispenser, proceed to Path 2c.

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Path 2a – No Water at IM or In-Door Dispenser

Water Supply Blockage Checks

- 1) Check for incoming water to the refrigerator.
- 2) If water is available to the refrigerator, check for a kinked water line going to the bottom of the freezer door.
- 3) If no kinks are present, check the water reservoir for clogging or freezing.
- 4) Check the isolation and dual water valves. Both valves should have 120VAC when energized.
- 5) Check both sides of the dual valve and verify harness connections.

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Path 2b – No Water to IM Only

Check IM Water Line

- 1) Remove the front grill.
- 2) Disconnect the ¼" JG connector feeding the IM.
- 3) Run Service Diagnostic Step 45 and verify the ¼" tube dispenses water.
- 4) If water is dispensed, the line may be kinked in the conduit inside the door or the IM water inlet tube may be frozen.
- 5) If no water is dispensed, check for 120VAC during Diagnostic Step 45. If 120VAC is present, replace IM Water Valve.
- 6) If no water is dispensed, check for 120VAC during Diagnostic Step 45. If 120VAC is not present, check for loose connections and 120VAC at the UI Core Control Board. Secure any loose connections. If 120VAC is not present at the UI Core Control Board, replace the board.

Check for Kinked Water Line

If the product is new and has never produced ice, the water line may be kinked.

- 1) Behind the front grill, disconnect the ¼" JG connector feeding the IM and place in a container to catch the water.
- 2) Using a squirt bottle, squirt water into the water inlet tube at the IM. Water should come out the JG connection at the bottom of the freezer door.
- 3) If no water flowed out, replace the water line in the door conduit.

Check for Frozen IM Water Inlet Tube

If the IM has not cycled in several hours due to a full ice bin, or the IM being turned off, the IM inlet water line may freeze.

- 1) Run Service Diagnostic Step 19.
- 2) If the fill tube heater turns on, leave the fill tube heater on until the IM water inlet tube is thawed.
- 3) If the fill tube heater will not turn on, troubleshoot the fill tube heater.

Troubleshooting the Fill Tube Heater

After a time delay, the fill tube heater energizes following an IM fill cycle. The heater prevents icing of the fill tube which can block water flow. The fill tube can ice up over time if the IM is not cycling for any reason.

- 1) Run Service Diagnostic Step 19.

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- 2) Remove the UI Board from the front of the freezer door.
- 3) Check for 14VDC at the UI board fill tube heater connection.
- 4) If 14VDC is not present, replace the UI board.
- 5) If 14VDC is present, check the heater resistance. The 1.5 watt heater should have a resistance of around 120 – 139 ohms.
- 6) If the heater is open, or shorted, replace the FC door.

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Path 2c – Insufficient Water Dispensed at In-Door Dispenser

If insufficient water is dispensed from the in-door dispenser, check for dirty water filter.

- 1) Remove water filter.
- 2) Dispense water for 10 seconds. If about 8 oz. (1 cup) of water dispense, the water filter is dirty. Replace the water filter.
- 3) If insufficient water dispenses with filter removed, check for blockage of lines or water reservoir between dispenser and the water supply line.
- 4) If no blockages exist, the consumers water supply pressure is likely insufficient.

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Action Required: Informational/Mandatory

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Path 3 – IM Works During Service, But Not During Normal Operation

If the product works during Service routines (water fills and harvesting), but apparently it is not working as it should during normal operation, a couple different conditions could exist.

- The consumer may be opening the door too frequently. This will raise the freezer temperature and in addition delay the freeze timer, increasing time between cycles. Instruct the consumer to minimize door opening for maximum ice production.
- A faulty RC or FC door switch may be preventing the freeze timer from being satisfied, preventing the IM from Harvesting.
- The product may have an issue with the Software and/or the User Interface is corrupted.

Check For Faulty Door Switches

Service Diagnostic Step 17 can be used to check the FC door switch.

- 1) Run Service Diagnostic Step 17.
- 2) Verify the open and close status displays correctly in accordance with FC door cycling.
- 3) If displayed FC door status does not reflect actual door status, replace the FC door switch.

Manufacturing Reset Routine

Before replacing the UI, perform the Manufacturing Reset Routine to reset the User Interface and Control Box settings.

- 1) Unplug the refrigerator, then plug the refrigerator back in.
- 2) Open FC Door for 10 seconds, and then close the door.
- 3) Open RC Door for 10 seconds, and then close the door.
- 4) Simultaneously press and hold SW1 and SW2 for 3 seconds. All UI indicators will illuminate.
- 5) Wait until the UI displays “-5”
- 6) Unplug the refrigerator, then plug the refrigerator back in.
- 7) If the IM is still not working correctly, replace the UI.

TECHNICAL SERVICE POINTER

For Immediate Attention of Your Service Department

Technical Service Pointer #: W10790000A Refrigeration Products
Action Required: Informational/Mandatory
Remove and Replace W10790000 dated April, 2014

Brands Affected



Amana, IKEA, Inglis, Jenn-Air, KitchenAid, Maytag, & Whirlpool Refrigerators Valve Chatter

Models:

See Pages 2 - 3

Serial Numbers:

K001 – Present (January 2010 - Present)

HR001 – Present (January 2010 - Present)

Possible Concern:

Consumers may hear a chattering sound when dispensing water from the refrigerator. The chattering sound may also occur when the Ice Maker fills.

Potential Cause:

Under certain circumstances, water supply pressure exceeding 60 psi may cause valve chattering when water is dispensed to the Ice Maker or water dispenser.

Correction:

Install pressure regulator on customer supply line using kit W10786952.

NOTE: Attaching the pressure regulator requires a 2" spacing between the back of refrigerator and the wall. If this spacing is greater than the existing clearance, installation of the pressure regulator will cause the refrigerator to stick out further than before.

Note: Kit W10786952 is compatible with copper or PEX plastic lines only. For any other type supply line, additional materials may be required.

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TECHNICAL SERVICE POINTER

For Immediate Attention of Your Service Department

Technical Service Pointer #: W10826933
Action Required: Informational/Mandatory
Release Date: May, 2016

Refrigeration

Brands Affected



Jenn-Air, KitchenAid, & Whirlpool Refrigerators Yellow Appearance Inside Refrigerator

Models:

JSC23C9EE*00	KRSC503ES*00	KRSF505ES*00	WRS970CID*00	WRS975SID*00
KRSC500ES*00	KRSF505EB*00	KRSF505EW*00	WRS973CID*00	

Serial Numbers:

HR523 – HR536

Possible Concern:

It is possible that consumers may experience a perceived yellowing of the interior lining of their refrigerator.

Potential Cause:

Under various circumstances, the design of the LED lens may cause the filtered light to cast a yellow hue on the refrigerator liner (**Figure 1**).

Correction

Order and replace the LED lens covers with the new LED lens design (**Figure 2**); part number W10876365.



Figure 1: Old Lens – Yellow Lighting



Figure 2: New Lens – White Lighting

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KitchenAid®

SIDE BY SIDE REFRIGERATOR

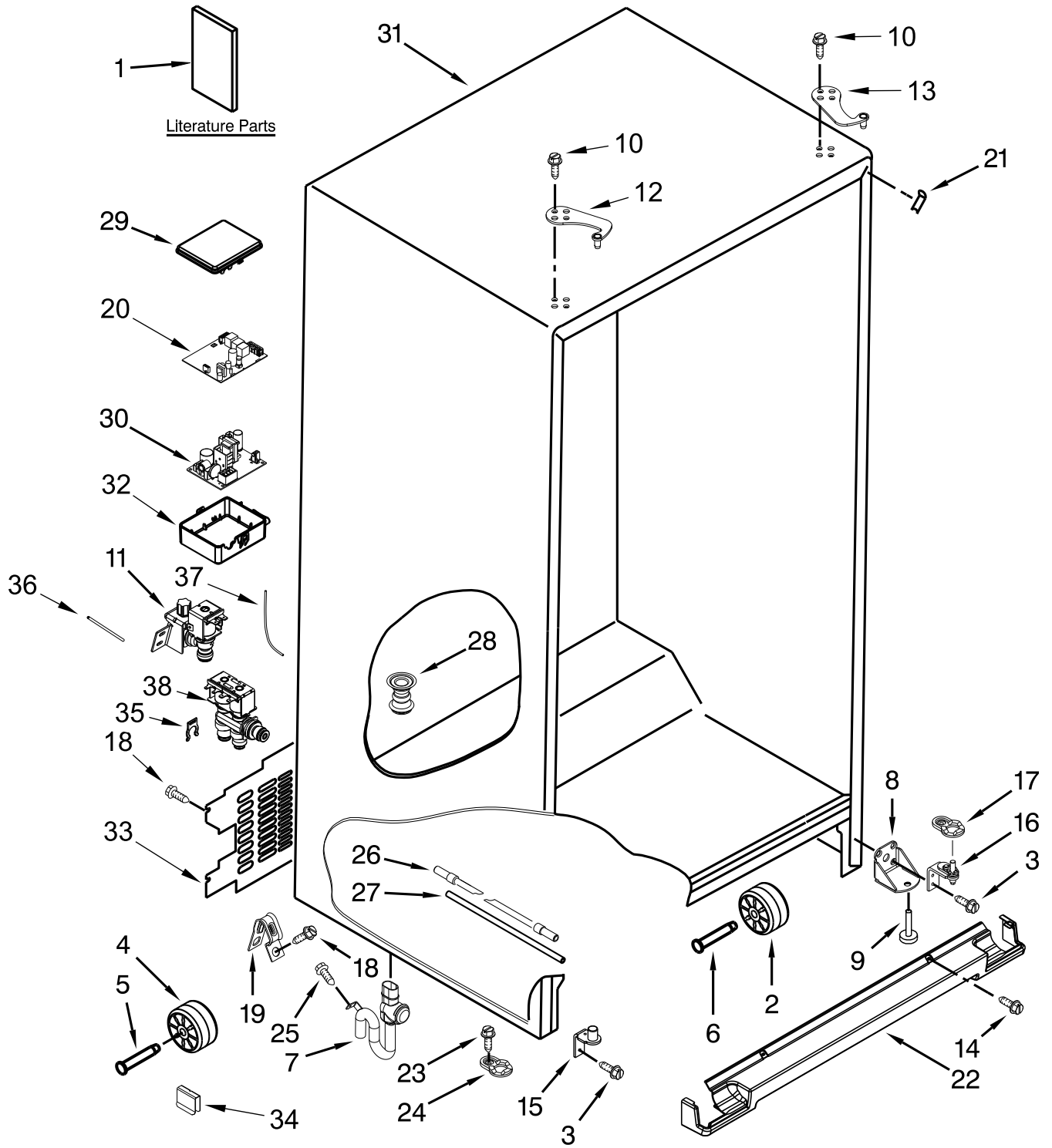
MODELS:

KRSF505EWH00 (White Ice)

KRSF505EBL00 (Black Ice)

KRSF505ESS00 (Stainless Steel)

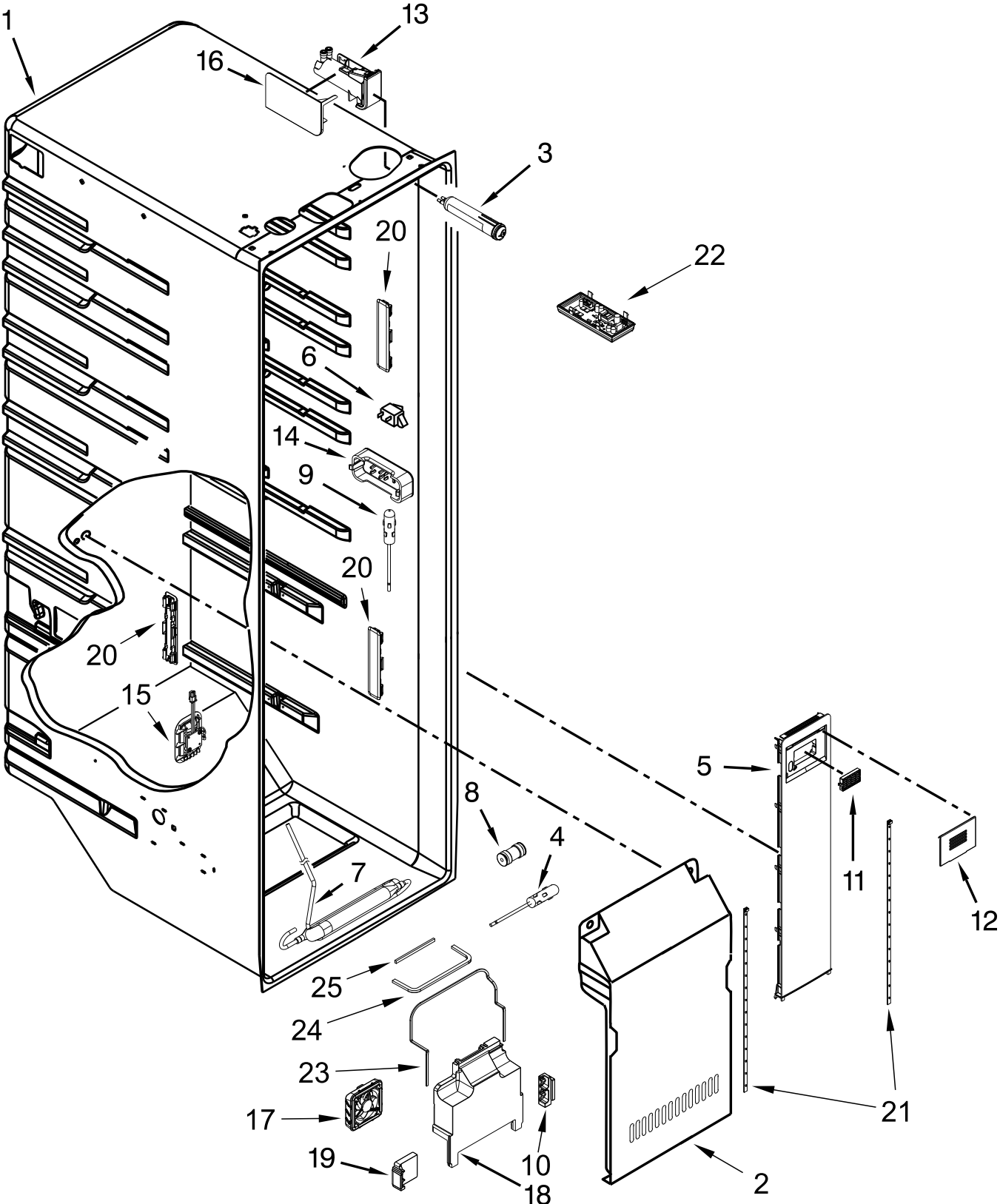
CABINET PARTS



CABINET PARTS

<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>
1		Literature Parts	15		Hinge, Bottom (Freezer)	23	W10142234	Screw
	W10768946	Use & Care Guide				24		Closer, Door (Freezer)
	W10751694	Service & Wiring Sheet		W10249940	White		W10770896	White
	W10922045	Energy Guide		W10249941	Black		W10770895	Black
2	2150304	Roller		W10249943	Grey		W10770893	Grey
3	W10297485	Screw	16		Hinge, Bottom (Refrigerator)	25	W10001250	Screw
4	12477102	Roller		W10666898	White	26	W10279882	Tube, Filter Inlet
5	12477202	Axle, Roller		W10666897	Black	27	W10279885	Tube, Filter Outlet
6	981125	Rivet, Roller		W10666895	Grey	28	W10370680	Fitting, Drain
7	W10369091	Tube, Drain	17		Closer, Door (Refrigerator)	29	12957702	Lid, HV Box
8	W10900758	Bracket, Foot		W10738913	White	30	W10743957	Electronic Control
9	W10141622	Brake, Roller		W10738914	Black	31		Cabinet (Not A Serviceable Part)
10	W10308751	Screw (Black)		W10738911	Grey	32	W10247993	Box, Control
11	W10498992	Valve, Inlet	18	W10141645	Screw	33	W10333887	Cover, Unit
12		Hinge, Top (Freezer)	19	549193	Clamp, Power Cord	34	2223388	Clip, Axle Retainer
	W10901051	White	20	W10226427	Control, Electronic (Power Supply)	35	W10782424	Locking Ring (5/16)
	W10901052	Black	21		Filler, Wrapper		W10782423	Locking Ring (1/4)
	W10901054	Grey		12587703W	White	36	W10811572	Insulating tube
13		Hinge, Top (Refrigerator)		12587703B	Black	37	W10238092	Tube, Water
	W10901046	White		12587703AP	Grey	38	W10341320	Assembly, Dual Water Valve
	W10901047	Black	22		Grille			
	W10901049	Grey		W10713160	White			
14	W10142283	Screw (White)		W10713158	Black			
	W10308487	Screw (Black)		W10713153	Grey			
	W10308489	Screw (Grey)						

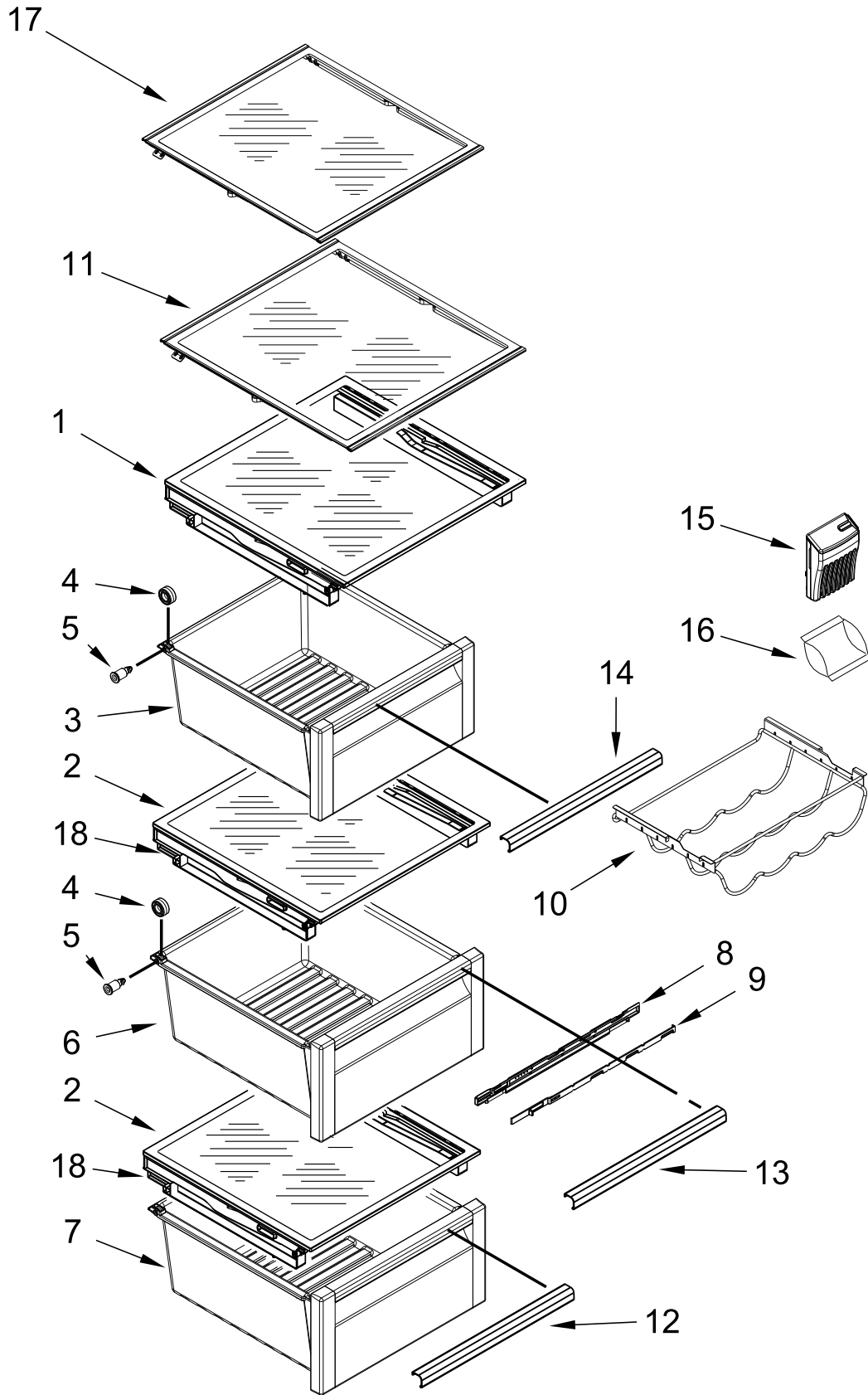
REFRIGERATOR LINER PARTS



REFRIGERATOR LINER PARTS

<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>
1		Liner (Not A Serviceable Part)	12	W10341548	Cover, Air Filter	21	W10727376	Lighting, LED
2	W10387382	Evaporator Cover	13	W10394053	Housing, Water Filter	22	W10724473	Assembly, LED
3	W10569758	Filter, Water	14	W10425252	Cover, Thermistor	23	W10260462	Gasket, Rear
4	W10323459	Thermistor, Evaporator Fan	15	W10876279	Assembly, LED Light Module	24	W10387387	Gasket, Upper
5	W10903407	Tower, Air	16	W10300482	Cover, Water Filter	25	W10394945	Gasket, Rear
6	W10656773	Switch, Light	17	W10723753	Fan Assembly, Evaporator			
7	W10538994	Reservoir	18	W10862067	Evaporator Insulation, With Fan Assembly			
8	W10271541	Connector, Union	19	W10223366	Support, Evaporator (Left Hand)			
9	W10280385	Thermistor						
10	W10223364	Support, Evaporator (Right Hand)						
11	W10315189	Filter, Air	20	W10826780	Lighting, LED-Strip			

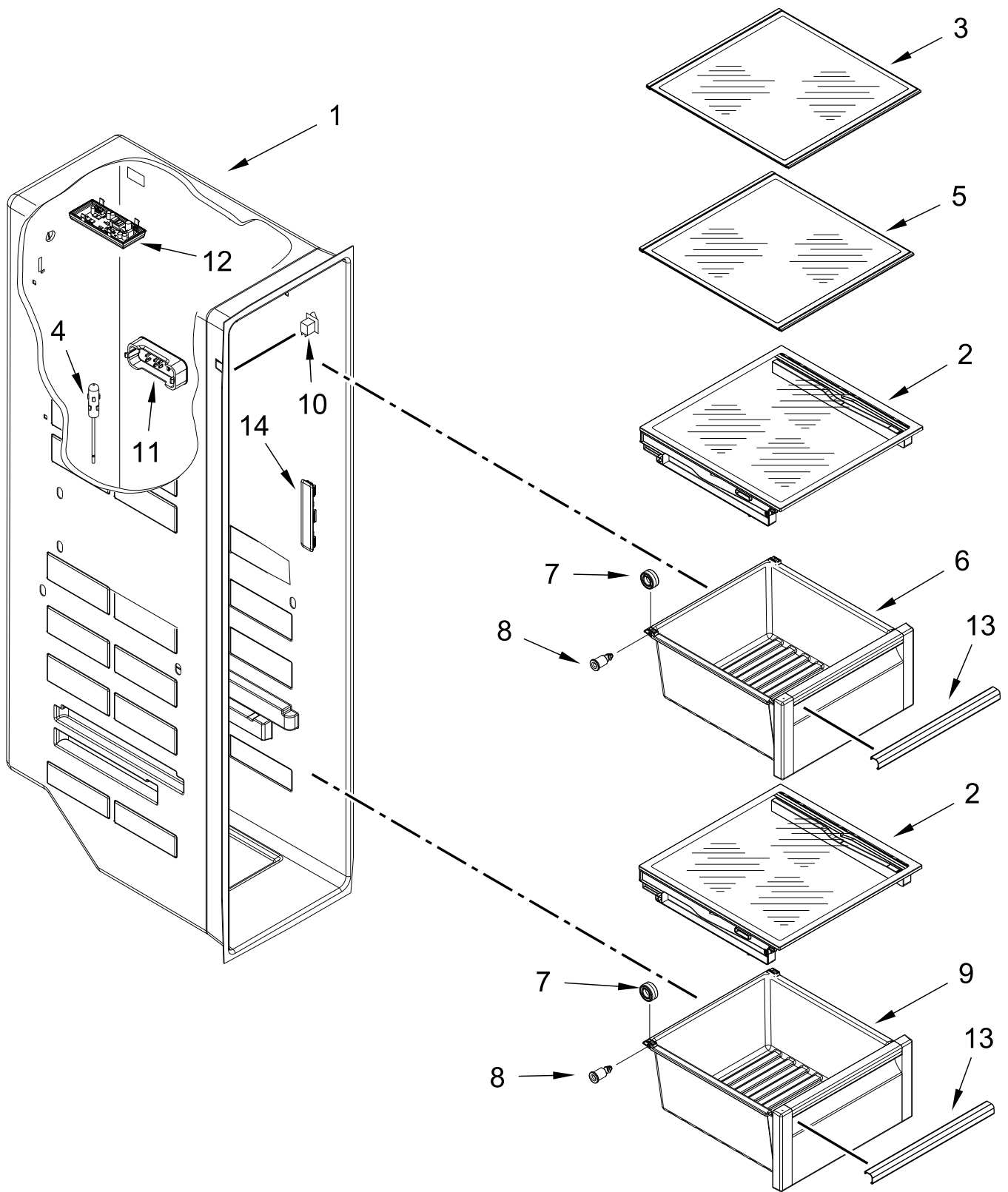
REFRIGERATOR SHELF PARTS



REFRIGERATOR SHELF PARTS

<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>
1	W10387390	Shelf, Snack Pan	8	W10316452	Housing, Humidity	15	W10408747	Holder, Filter
2	W10362173	Assembly, Cover	9	W10257334	Slide, Humidity	16	W10346771	Filter, Produce Preserver
3	W10542033	Snack Pan	10	W10478548	Wine Rack	17	W10790261	Shelf Assembly
4	W10628713	Roller, Pan	11	W10315528	Assembly, Shelf	18		Rail, Track
5	W10628712	Axle, Roller	12	W10531022	Trim, Handle		W10257467	Left Side
6	W10531078	Crisper Pan	13	W10531023	Trim, Handle		W10257466	Right Side
7	W10531080	Meat Pan	14	W10542020	Trim, Handle			

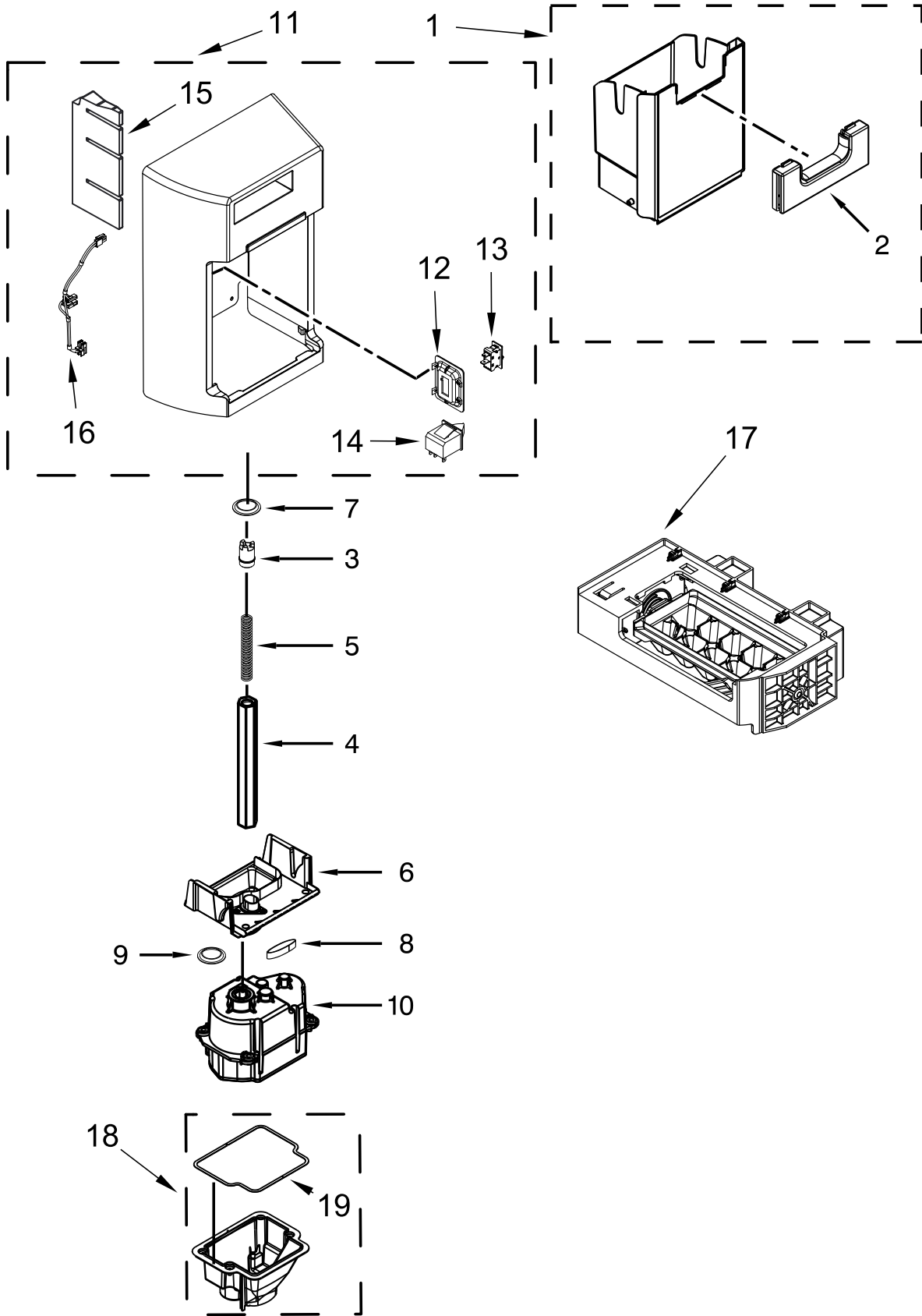
FREEZER LINER PARTS



FREEZER LINER PARTS

<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>
1		Liner (Not A Serviceable Part)	6	W10542031	Bin Assembly	11	W10425252	Cover, Thermistor
2	W10362175	Assembly, Cover	7	W10628713	Roller, Pan	12	W10724473	Assembly, LED
3	W10315533	Shelf, Glass Upper	8	W10628712	Axle, Roller	13	W10542017	Trim, Handle
4	W10280386	Thermistor	9	W10542032	Bin Assembly	14	W10826780	Lighting, LED-Strip
5	W10315534	Shelf, Glass Lower	10	1115373	Switch, Rocker Arm (Freezer)			

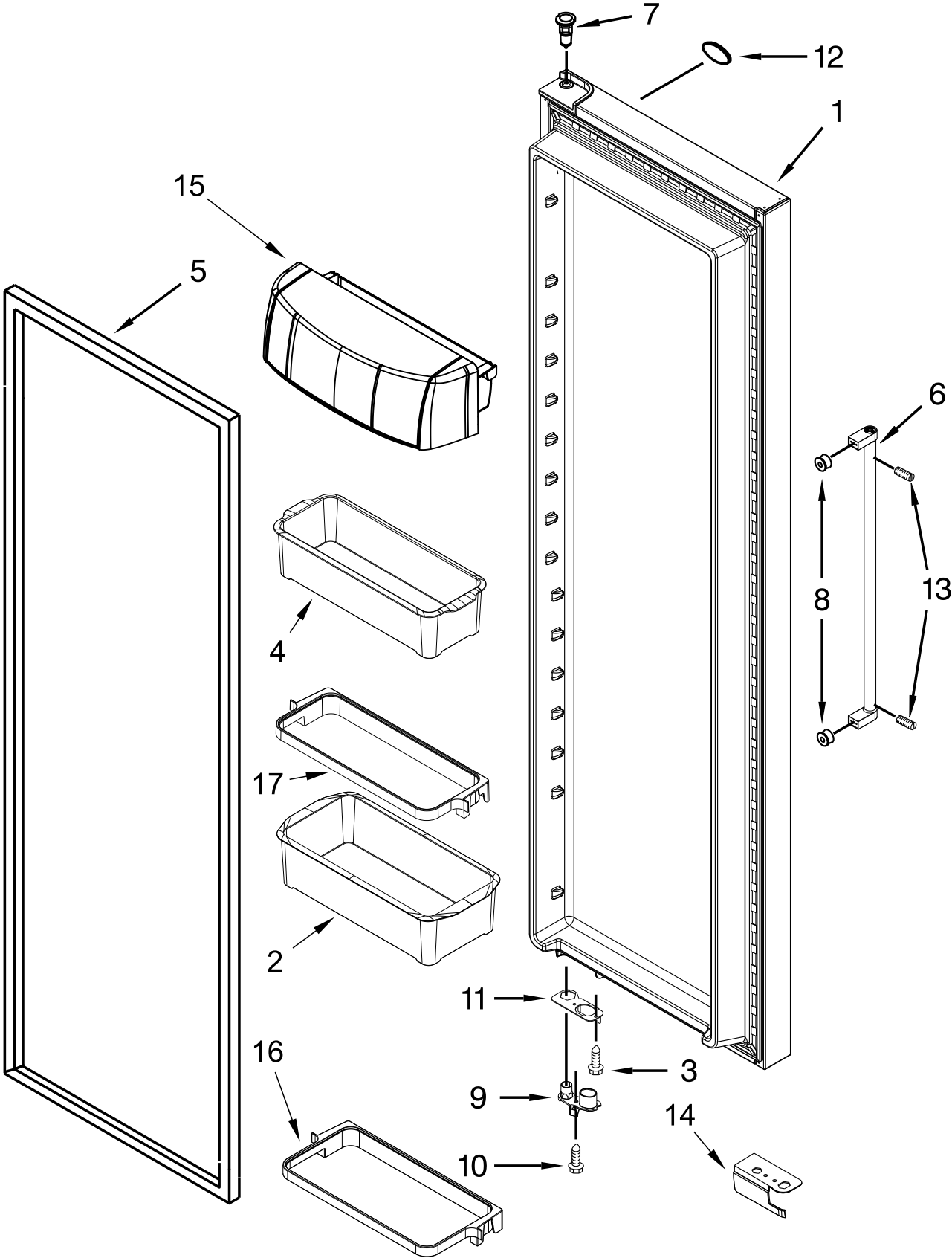
MOTOR AND ICE CONTAINER PARTS



MOTOR AND ICE CONTAINER PARTS

<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>
1	W10781441	Assembly, Ice Bin	10	W10225313	Motor, Dispenser	18	W10765378	Assembly, Motor Box
2	W10781442	Bin, Ice	11	W10669473	Cover, Container	19	W10166854	Gasket
3	2220458	Coupling, Bottom	12	W10691248	Plate, Switch			
4	W10258544	Shaft, Drive	13	W10666871	Rocker, Switch			
5	W10754509	Spring, Coupling	14	W10656772	Switch, Rocker Arm			
6	W10293211	Assembly, Mounting Plate	15	W10749467	Filler, EPS Icemaker Cover			
7	2198628	Seal	16	W10646076	Assembly, Wire Jumper Switch			
8	W10291905	Gasket	17	W10798411	Assembly, Ice Maker			
9	2212370	Washer						

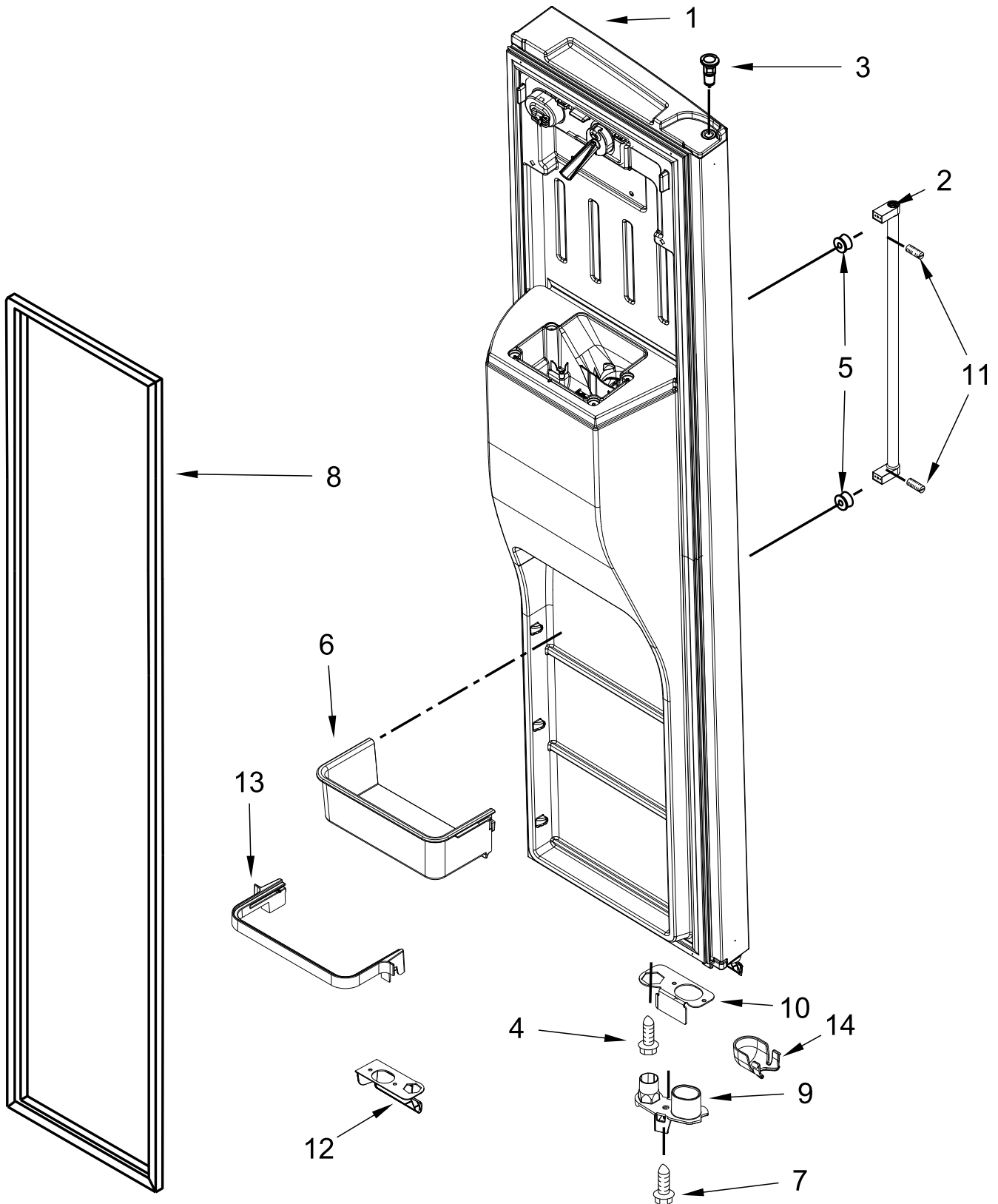
REFRIGERATOR DOOR PARTS



REFRIGERATOR DOOR PARTS

<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>
1		Door, Refrigerator (Includes Item 5)	7	2200086	Thimble, Top	14		Cover, Door Stop
	W10764072	White	8	W10460893	Screw		W10789144	White
	W10763773	Black	9		Closer, Upper Cam Door		W10789145	Black
	W10757191	Stainless		W10248011	White		W10789147	Grey
2	W10316457	Bin, Gallon Door		W10257201	Black	15	W10324760	Assembly, Utility Compartment
3	W10296816	Screw		W10257203	Grey	16	W10494334	Frame, Gallon Door Bin
4	W10316461	Bin, Shallow Door	10	W10296804	Screw	17	W10494333	Frame, Shallow Door Bin
5		Gasket, Door	11	W10888898	Bracket, Door Stop			
	W10247884	Beige	12		Nameplate			
	W10249912	Black		W10518672	Grey			
	W10249916	Grey	13	W10687133	Set Screw			
6		Handle						
	W10740429	Stainless						

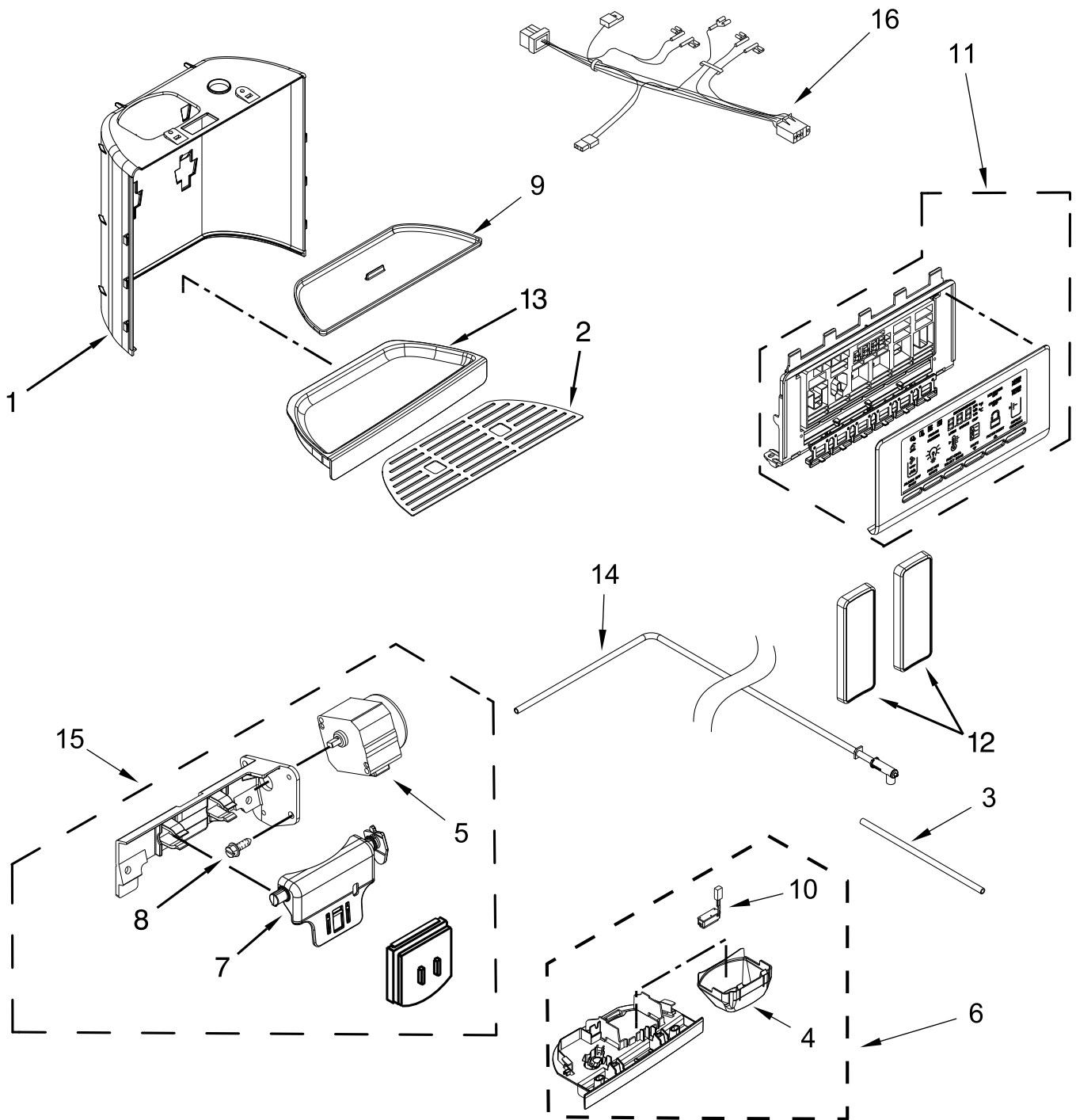
FREEZER DOOR PARTS



FREEZER DOOR PARTS

<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>
1		Door, Freezer (Includes Item 8 And Dispenser Front Parts)	6	W10434529	Bin, Door	10	W10247907	Bracket, Door Stop
	W10755650	White	7	W10296816	Screw	11	W10687133	Set Screw
	W10755677	Black	8		Gasket, Door	12		Cover, Door Stop
	W10755680	Stainless		W10247885	Beige		W10632059	White
2		Handle		W10249913	Black		W10632060	Black
	W10740429	Stainless		W10249917	Grey		W10632062	Grey
3	2200086	Thimble, Top	9		Closer, Upper Cam Door	13	W10494336	Frame, Door Bin
4	W10296804	Screw		W10248015	White	14	W10323148	Cover, Wire
5	W10460893	Screw		W10257204	Black			
				W10257206	Grey			

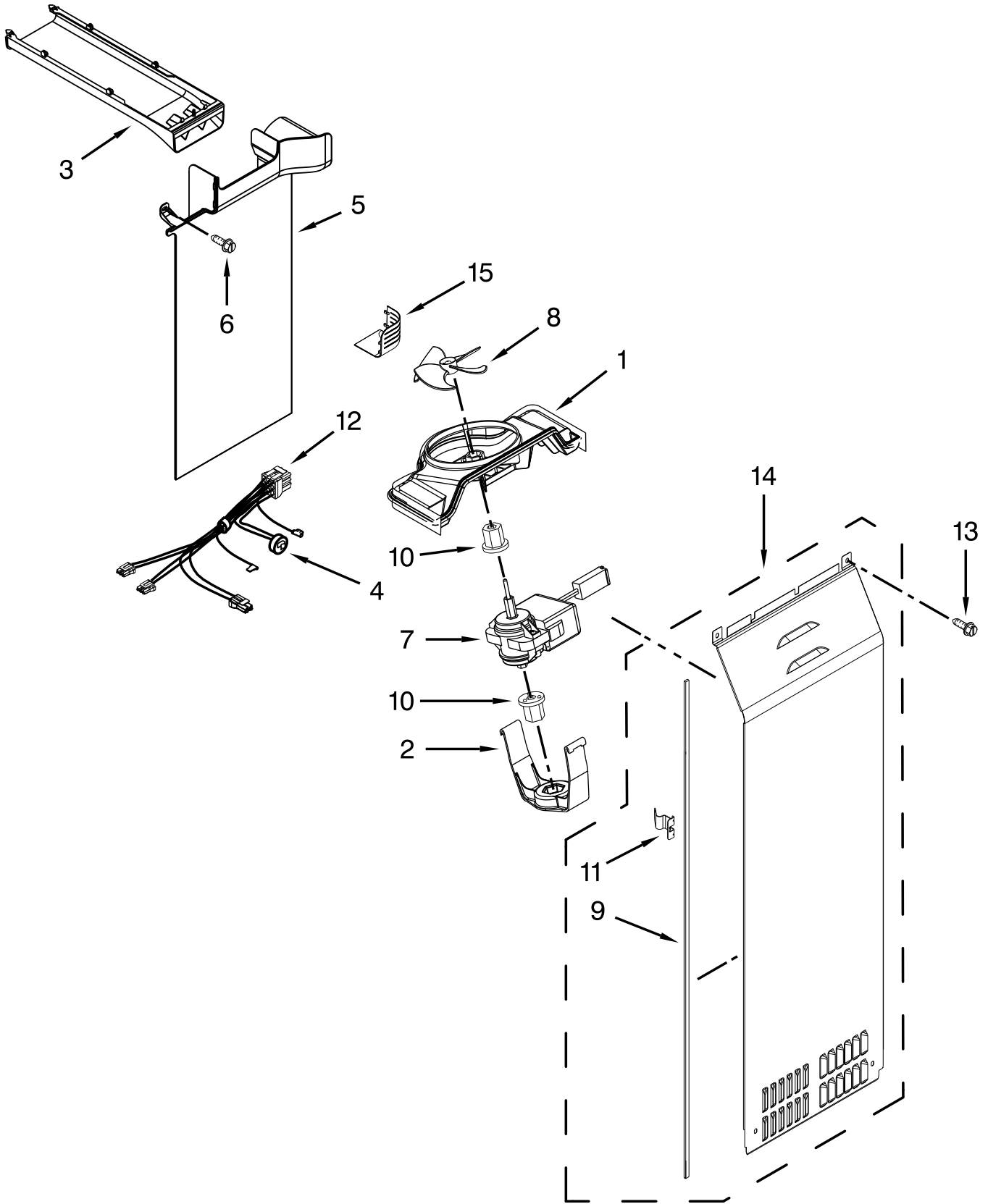
DISPENSER PARTS



DISPENSER PARTS

<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>
1		False Wall, Dispenser	9		Drip Tray, Insert	13		Tray, Housing
	W10317258	White		W10317274	White		W10317264	White
	W10317259	Black		W10317275	Black		W10317265	Black
	W10317255	Stainless		W10317276	Grey		W10317261	Stainless
2	W10317270	Grate, Drip Tray	10	W10238083	Assembly, LED	14	W10386778	Assembly, Water Fitting
3	W10876364	Tube, Water	11	W10798784	User Interface Assembly	15	W10781990	Assembly, Ice Door
4	W10435760	Guide, Ice				16	W10605336	Harness, Wire
5	W10205978	Motor, Dispenser	12		Pad, Ice and Water			
6	W10353593	Assembly, Seperator		W10317250	White			
7	W10346124	Support, Ice Door		W10317253	Black			
8	4449745	Screw		W10346924	Grey			

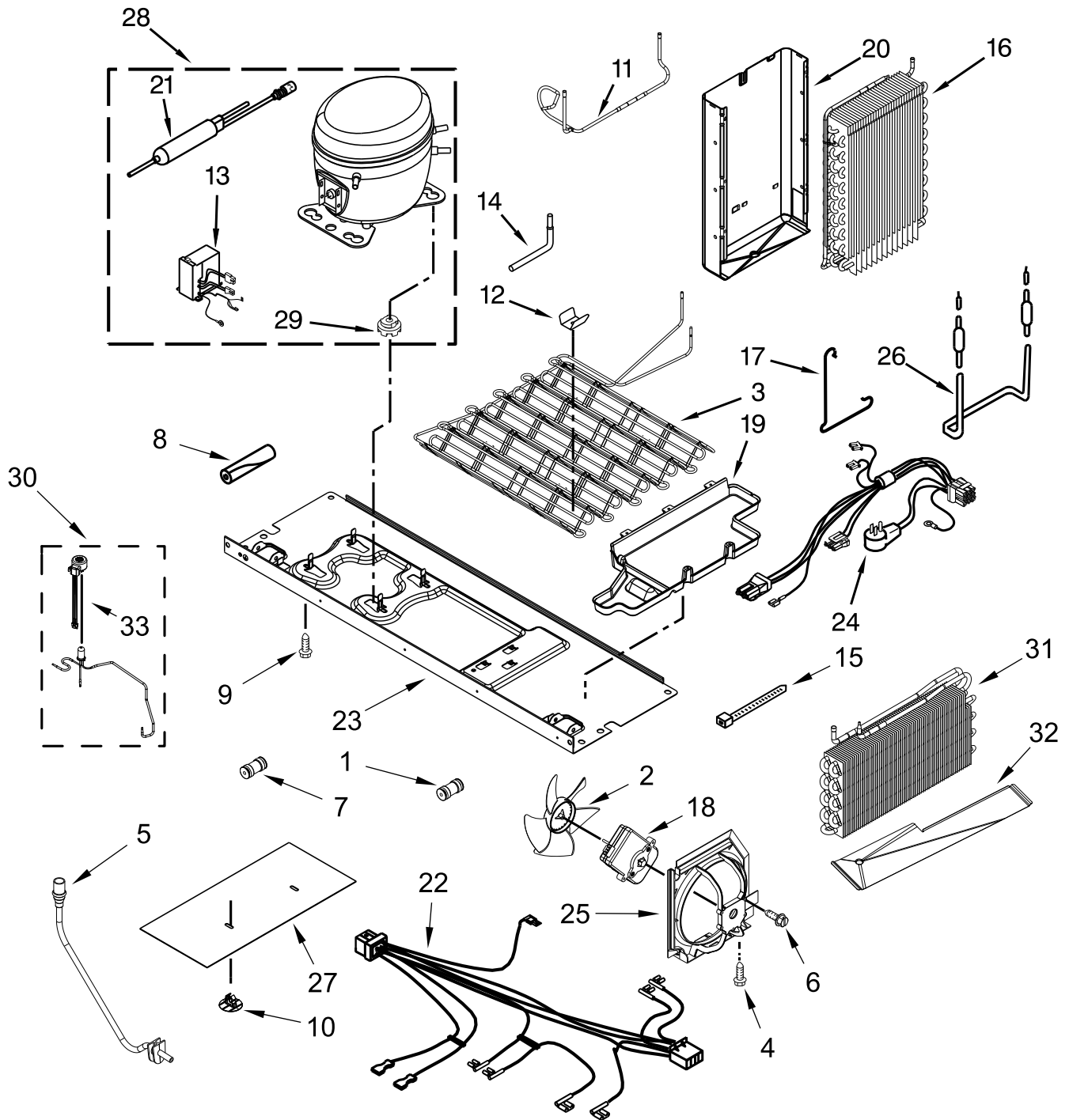
AIR FLOW PARTS



AIR FLOW PARTS

<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus.</u> <u>No.</u>	<u>Part No.</u>	<u>Description</u>
1	W10251462	Scroll, Fan	8	2169142	Blade, Fan	14	W10388268	Cover, Evaporator
2	2223733	Retainer, Fan Motor	9	W10240370	Gasket, Evaporator Cover	15	W10260382	Cover, Light
3	W10550199	Duct, Upper Air	10	W10449920	Grommet, Motor			
4		Bi-Metal Defrost (Not Serviced)	11	W10369602	Clip, Evaporator Cover			
5	W10382898	Duct, Freezer Air	12	W10679946	Assembly, Evaporator Fan Wire (Includes Bi-Metal Defrost)			
6	W10001260	Screw	13	W10142292	Screw			
7	W10556724	Motor, Fan						

UNIT PARTS



UNIT PARTS

<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>
1	W10271543	Connector, Water Tube	13	W10710090	Assembly, Inverter Box	25	W10251467	Baffle, Air
2	2225834	Blade, Fan	14	2325479	Tube, Process	26	W10495967	Heater, Defrost
3	W10276899	Condenser	15	2205813	Tie, Wire	27	W10278140	Cover, Condenser (Bottom)
4	W10142255	Screw	16	2188822	Evaporator	28	W10695094	Compressor
5	W10862105	Tube, Drain	17	2161324	Clip, Defrost Heater	29	2183042	Grommet
6	W10171469	Screw	18	W10527155	Motor, Condenser Fan	30	W10740748	Assembly, Valve Body
7	W10277958	Connector, Water	19	W10703218	Tray, Evaporator	31	W10643261	Evaporator, Dual-RC
8	W10303521	Sleeve	20	W10348669	Heat Shield	32	W10317862	Pan, Drip
9	W10142287	Bolt	21	W10286069	Drier	33	W10868747	Coil, 3 Way Valve
10	W10815861	Clip, Bottom Cover	22	W10679948	Assembly, Unit Wire			REFRIGERANT CHARGE
11	W10223328	Tube, Suction	23	W10680691	Baseplate			5.75 oz. (R-134A)
12	W10248621	Clip, Condenser	24	W10242407	Cord, Power			

OPTIONAL PARTS (NOT INCLUDED)

PAIN, PRESSURIZED SPRAY (12 OZ.)

<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>
	350942	White Primer
	350939	Enamel, Black
	350930	White
	4392901	Biscuit/Bisque
	8171357	Graphite

PAIN, TOUCH-UP (1/2OZ.)

<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>
	72017	White
	72032	Black
	4392899	Biscuit/Bisque
	80051	Graphite

PAIN, BULK (1 QT.)

<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>
	799344	White (Uncut)
	4392900	Biscuit/Bisque
	8171358	Graphite

MISCELLANEOUS

<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>
	W10300794	Handle Installation Kit
	212643	Sealer, Gum (4 Feet)
	479502	Tape, Vinyl (3/4 x 108")
	505587	Sealer, Mastic (1 Qt)
	503695	Cork, Sealer
	542638	Grease, Silicone (1/2 Oz.)
	542639	Cement, Alumilastic (1 1/4 Oz.)
	833938	Kit, Terminal Connector
	4318168	Sealer
	8003RP	Kit, Water Inlet

TORX SCREW WRENCH

<u>Illus. No.</u>	<u>Part No.</u>	<u>Description</u>
	1117510	Torx Key