SERVICE SHEET

⚠WARNING

Electrical Shock Hazard

Disconnect all power supplies 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-setting, freezer section 0ºF to -5ºF, 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
TB SERIES			
70ºF (21ºC) 90ºF (32ºC) 110ºF (43ºC)	88±15 92±15 102±15	82±10 - -	-6 to 2 -5 to 2 -4 to 0

SERVICE INFORMATION (W11520164A)

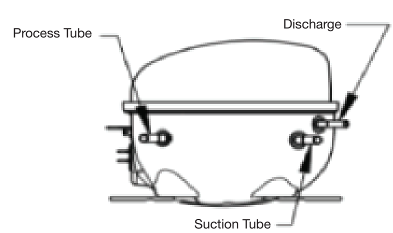
1. Compressor suction and process stubs may not be interchanged.
2. Refrigerant charge must be applied to high side only.
3. Ice maker and water valve not original equipment on all models.
   NOTE: Ice maker cycle must be initiated electrically. Do not try to manually start cycle.
4. The part number can be found on the component.

SERVICEABLE ELECTRICAL PARTS MATRIX			
SERVICEABLE PARTS	**TB1114HY**	**WATTAGE 115 V -127 V AC**	**RESISTANCE (Ω)**
COMPRESSOR	W11369198	90	
RUN WINDINGS	-		1 - 6
START DEVICE, OVERLOAD	See Note 4		
RUN CAPACITOR (IF EQUIPPED)	See Note 4		
ELECTRIC AIR BAFFLE ASSY	See Note 4	12 V DC	
THERMISTOR	See Note 4		2.7 kΩ @ 25°C
USER INTERFACE CONTROL	See Note 4		
MAIN CONTROL	See Note 4		
DEFROST HEATER	See Note 4	101 - 157	
EVAPORATOR FAN MOTOR	See Note 4	2 - 9	
CONDENSER FAN MOTOR	See Note 4	3 - 12	

COMPRESSOR OPTIONS - REFER TO APPLICABLE DESIGN

(OIL COOLER NOT PRESENT ON ALL COMPRESSORS)

JIAXIPERA



TB SERIES

SERVICE SHEET W11125079 REV B

SERVICE KEY ASSIGNMENTS

⚠WARNING

Electrical Shock Hazard
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○ CRUSH

● ○ ○ ○ ○ LED1 LED2 LED3 LED4 LED5 — ○ LIGHT — ○ CUBE — ○ LOCK — ● ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10

SW1 SW2 SW3 SW4 SW5

DURING THE FIRST FIVE MINUTES AFTER A POWER ON, PUT THE SETTING TEMPERATURE AT MINIMUM POSITION FOR BOTH RC AND FC.
AFTERWARDS HOLD "FREEZER TEMP" AND "ICE TYPE" KEYS FOR 3 SECONDS TO ENTER SERVICE MODE.
AFTER ENTERING SERVICE MODE, ALL LEDS WILL TURN ON TO VERIFY ALL LED CAN TURN ON.
TO PROCEED TO SERVICE STEPS, USER SHALL PRESS ALL 5 KEYS INDIVIDUALLY FROM LEFT TO RIGHT TO TURN OFF ALL LEDS AND VALIDATE TOUCH FUNCTION.

KEYS	DESCRIPTION
SW2=LIGHT KEY	INCREMENT KEY: ADVANCE TO NEXT STEP
SW4=LOCK KEY	DECREMENT KEY: GO BACK TO PREVIOUS STEP
SE5=RC TEMP KEY	CHANGE SETTING KEY: TURN ON/OFF LOAD, PAUSE/RUN SPECIFIC TEST

NOTE: FOR SMOOTH OPERATION OF USER INTERFACE KEY ACTIVATION, WAIT AT LEAST 1 SECOND BETWEEN EACH PRESS, TO LET THE SYSTEM TOGGLE BETWEEN SERVICE STEPS.

NOTE: FOR IDI MODEL WITH TWIST TRAY ICE MAKER, UPON ENTRY INTO SERVICE, ICE MAKER IS ENABLED AND A HOMING OPERATION IS PERFORMED, THIS IS TO AVOID OF ANY OTHER LOAD INTERFERENCE WHEN SANKYO IM IS PERFORMING THE HOMING OPERATION.
THE LEDS ON THE FREEZER TEMP SECTION WILL SHOW THE STEP NUMBER WHILE THE LEDS ABOVE REFRIGERATION TEMP SECTION WILL SHOW THE FEEDBACK.
STEPS 29 TO 35 APPLY ONLY FOR MODELS WITH TWIST TRAY ICE MAKER IN THE DOOR (IDI)

STEP	STEP CODE	COMPONENT	ACTION	FEEDBACK
1	● ○ ○ ○ ○ LED1 LED2 LED3 LED4 LED5	FC SENSOR	ENTRY: DISPLAY STEP NUMBER & START SENSOR CHECK. DO: READ THE CURRENT TEMPERATURE OF THE FC THERMISTOR AND COMPARE THE VALUE. EXIT: STOP SENSOR READINGS.	OPEN SENSOR DISPLAY: ● ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10 SHORT SENSOR DISPLAY: ○ ○ ● ○ ○ LED6 LED7 LED8 LED9 LED10 PASS TEST DISPLAY: ○ ● ● ● ○ LED6 LED7 LED8 LED9 LED10 SENSOR STATUS BLANK UNTIL GET A VALID READING ○ ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10
2	OFF	NONE	OFF	OFF
3	● ● ○ ○ ○ LED1 LED2 LED3 LED4 LED5	RC SENSOR STEP CODE:	ENTRY: DISPLAY STEP NUMBER & START SENSOR CHECK. DO: READ THE CURRENT TEMPERATURE OF THE RC THERMISTOR AND COMPARE THE VALUE. EXIT: STOP SENSOR READINGS.	OPEN SENSOR DISPLAY: ● ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10 SHORT SENSOR DISPLAY: ○ ○ ● ○ ○ LED6 LED7 LED8 LED9 LED10 PASS TEST DISPLAY: ○ ● ● ● ○ LED6 LED7 LED8 LED9 LED10 SENSOR STATUS BLANK UNTIL GET A VALID READING ○ ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10
4	OFF	NONE	OFF	OFF
5	● ● ● ○ ○ LED1 LED2 LED3 LED4 LED5	DEFROST SENSOR	ENTRY: DISPLAY STEP NUMBER & START SENSOR CHECK DO. READ THE CURRENT TEMPERATURE OF THE DEFROST THERMISTOR AND COMPARE THE VALUE. EXIT: STOP SENSOR READINGS	OPEN SENSOR DISPLAY: ● ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10 SHORT SENSOR DISPLAY: ○ ○ ● ○ ○ LED6 LED7 LED8 LED9 LED10 PASS TEST DISPLAY: ○ ● ● ● ○ LED6 LED7 LED8 LED9 LED10 SENSOR STATUS BLANK UNTIL GET A VALID READING ○ ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10
6	OFF	NONE	OFF	OFF
7	● ● ● ● ○ LED1 LED2 LED3 LED4 LED5	COMPRESSOR & COND FAN	ENTRY: DISPLAY STEP NUMBER & TURN ON THE COMPRESSOR AND COND FAN. DO: SERVICE USER TO MONITOR THE LOADS. EXIT: LOAD OFF	N/A
8	OFF	NONE	OFF	OFF
9	○ ○ ○ ○ ● LED1 LED2 LED3 LED4 LED5	DAMPER OPEN	ENTRY: DISPLAY STEP NUMBER & OPEN DAMPER. DO: SERVICE USER TO MONITOR THE DAMPER POSITION EXIT: DAMPER CLOSE	N/A
10	OFF	DAMPER CLOSE	OFF	OFF
11	○ ○ ○ ● ● LED1 LED2 LED3 LED4 LED5	DAMPER HEATER ON	ENTRY: DISPLAY STEP NUMBER & TURN ON DAMPER HEATER. DO: SERVICE USER TO MONITOR THE DAMPER HEATER EXIT: LOAD OFF	N/A
12	OFF	NONE	OFF	OFF
13	○ ○ ● ● ● LED1 LED2 LED3 LED4 LED5	DEFROST HEATER ON	ENTRY: DISPLAY STEP NUMBER & TURN ON THE HEATER. DO: SERVICE USER TO MONITOR THE LOAD. EXIT: LOAD OFF	N/A

STEP	STEP CODE	COMPONENT	ACTION	FEEDBACK
14	OFF	NONE	OFF	OFF
15	○ ● ● ● ● LED1 LED2 LED3 LED4 LED5	EVAPORATOR FAN ON	ENTRY: DISPLAY STEP NUMBER & TURN ON THE EVAP FAN. DO: SERVICE USER TO MONITOR THE LOAD. EXIT: LOAD OFF	N/A
16	OFF	NONE	OFF	OFF
17	● ○ ○ ○ ● LED1 LED2 LED3 LED4 LED5	DISPENSER LIGHT ON	ENTRY: DISPLAY STEP NUMBER & TURN ON THE DISPENSER LIGHTS. DO: SERVICE USER TO MONITOR THE LOAD. EXIT: LOAD OFF.	N/A
18	OFF	NONE	OFF	OFF
19	● ○ ○ ● ● LED1 LED2 LED3 LED4 LED5	WATER DISPENSER VALVE	ENTRY: DISPLAY STEP NUMBER. DO: PRESS WATER PADDLE TO ACTIVATE VALVE AND MONITOR LOAD. EXIT: LOAD OFF	NOTE: WATER VALVE WILL REMAIN ON AFTER PADDLE RELEASE, TO EXIT PRESS KEY SW2 (LIGHT)
20	OFF	NONE	OFF	OFF
21	● ○ ● ● ● LED1 LED2 LED3 LED4 LED5	RC DOOR SWITCH INPUT	ENTRY: DISPLAY STEP NUMBER DO: LIGHTS WILL HAVE TO BE VERIFIED ON THE PRODUCT. EXIT: N/A	DOOR OPEN: INTERNAL RC LIGHTS ON DOOR CLOSED: INTERNAL RC LIGHT OFF
22	OFF	NONE	OFF	OFF
23	● ● ○ ● ● LED1 LED2 LED3 LED4 LED5	FC DOOR SWITCH INPUT	ENTRY: DISPLAY STEP NUMBER DO: LIGHTS WILL HAVE TO BE VERIFIED ON THE PRODUCT. EXIT: N/A	DOOR OPEN: INTERNAL FC LIGHTS ON DOOR CLOSED: INTERNAL FC LIGHT OFF
24	OFF	NONE	OFF	OFF
25	● ● ● ○ ● LED1 LED2 LED3 LED4 LED5	ICE PADDLE	ENTRY: DISPLAY STEP NUMBER DO: USER TO PRESS ICE PADDLE. SERVICE USER TO MONITOR THE DISPLAY FEEDBACK. EXIT: N/A	PADDLE PRESSED: ● ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10 NOTE: NO ICE IS DISPENSED IN THIS STEP.
26	OFF	NONE	OFF	OFF
27	● ○ ○ ● ○ LED1 LED2 LED3 LED4 LED5	WATER PADDLE	ENTRY: DISPLAY STEP NUMBER DO: USER TO PRESS WATER PADDLE. SERVICE USER TO MONITOR THE DISPLAY FEEDBACK. EXIT: N/A	PADDLE PRESSED: ● ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10 NOTE: NO WATER IS DISPENSED IN THIS STEP.
28	OFF	NONE	OFF	OFF
29	● ○ ● ○ ○ LED1 LED2 LED3 LED4 LED5	ICE HARVEST	ENTRY: DISPLAY STEP NUMBER. AT ENTRY OF THIS STEP TURN OFF A HARVEST CYCLE. DO: USE THE "CHANGE SETTING KEY" TO START THE HARVEST CYCLE. SERVICE USER TO MONITOR THE DISPLAY FEEDBACK. EXIT: CLEAR FEEDBACK INFORMATION NOTE: BUCKET MUST BE IN PLACE AND NOT FULL TO INITIATE THE HARVEST. THE SYSTEM WILL NOT COME OUT OF THIS STEP UNLESS HARVEST CYCLE IS COMPLETED.	RC FEEDBACK INFORMATION 1) BLANK = UNTIL GET A VALID READING ○ ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10 2) IM HARVEST CYCLE IS ON ● ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10 3) IM HARVEST CYCLE IS OFF ● ● ○ ○ ○ LED6 LED7 LED8 LED9 LED10 4) ICE BUCKET FULL DETECTED ● ● ● ○ ○ LED6 LED7 LED8 LED9 LED10 5) ICE BUCKET NOT FULL ● ● ● ● ○ LED6 LED7 LED8 LED9 LED10 6) SWITCH FAULTY OR MOTOR (TIME OUT = 20 SECONDS) ● ● ● ● ● LED6 LED7 LED8 LED9 LED10
30	OFF	NONE	OFF	OFF
31	● ● ○ ● ○ LED1 LED2 LED3 LED4 LED5	ICE MAKER WATER FILL TEST	ENTRY: DISPLAY STEP NUMBER. UPON ENTRY TO THIS STEP THERE WILL BE A 3 SECOND DELAY, AND THEN THE ICE TRAY WILL BE MOVED TO THE HOME POSITION. DO: AFTER THE TRAY HAS REACHED HOME POSITION, THE "CHANGE SETTING KEY" WILL START AN ICE MAKER FILL (ONLY 100ML+/- 10). SERVICE USER TO MONITOR THE DISPLAY FEEDBACK. EXIT: CLEAR FEEDBACK INFORMATION NOTES: AT STEP ENTRY THE WATER FILL CYCLE DEFAULT TO OFF. PRIOR ENTRY OF THIS STEP RUN STEP 29 TO MAKE SURE THE ICE TRAY IS EMPTY BEFORE PROCEEDING WITH WATER FILL, OTHERWISE DOUBLE FILL WILL OCCUR. MAKE SURE TO PROCEED WITH STEP 29 AFTER WATER FILL TEST TO LEAVE TRAY EMPTY WHEN FINISHING SERVICE. ICE BUCKET MUST BE IN PLACE TO RUN THIS TEST.	RC FEEDBACK INFORMATION: 1) CONFIGURATION TO START ○ ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10 2) ICE TRAY MOVING TO HOME POSITION ● ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10 3) WATER FILL OFF ● ● ○ ○ ○ LED6 LED7 LED8 LED9 LED10 WATER FILL ON ● ● ● ○ ○ LED6 LED7 LED8 LED9 LED10
32	OFF	NONE	OFF	OFF
33	● ○ ● ○ ● LED1 LED2 LED3 LED4 LED5	SANKYO ICE MAKER-ICE TRAY THERMISTOR	ENTRY: DISPLAY STEP NUMBER. DO: READ THE CURRENT TEMPERATURE OF THE ICE MAKER TRAY THERMISTOR AND COMPARE THIS VALUE. THIS INFORMATION SHALL BE DYNAMICALLY UPDATED EVERY SECOND. SERVICE USER TO MONITOR THE DISPLAY FEEDBACK. EXIT: CLEAR FEEDBACK INFORMATION NOTES: FOR MODELS WITHOUT TWIST TRAY ICE MAKER, THE FEEDBACK WILL READ AS OPEN.	OPEN SENSOR DISPLAY: ● ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10 SHORT SENSOR DISPLAY: ○ ○ ● ○ ○ LED6 LED7 LED8 LED9 LED10 PASS TEST DISPLAY: ○ ● ● ● ○ LED6 LED7 LED8 LED9 LED10 SENSOR STATUS BLANK UNTIL GET A VALID READING ○ ○ ○ ○ ○ LED6 LED7 LED8 LED9 LED10
34	OFF	NONE	OFF	OFF
35	● ● ● ● ● LED1 LED2 LED3 LED4 LED5	SERVICE COMPLETED	LAST STEP IN SERVICE	N/A

NOTES:

1. IM SOLENOID GROUNDED THROUGH MOUNTING.
2. EVAP COVER GROUNDED HEAT SHIELD.

WIRING DIAGRAM

⚠ 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.

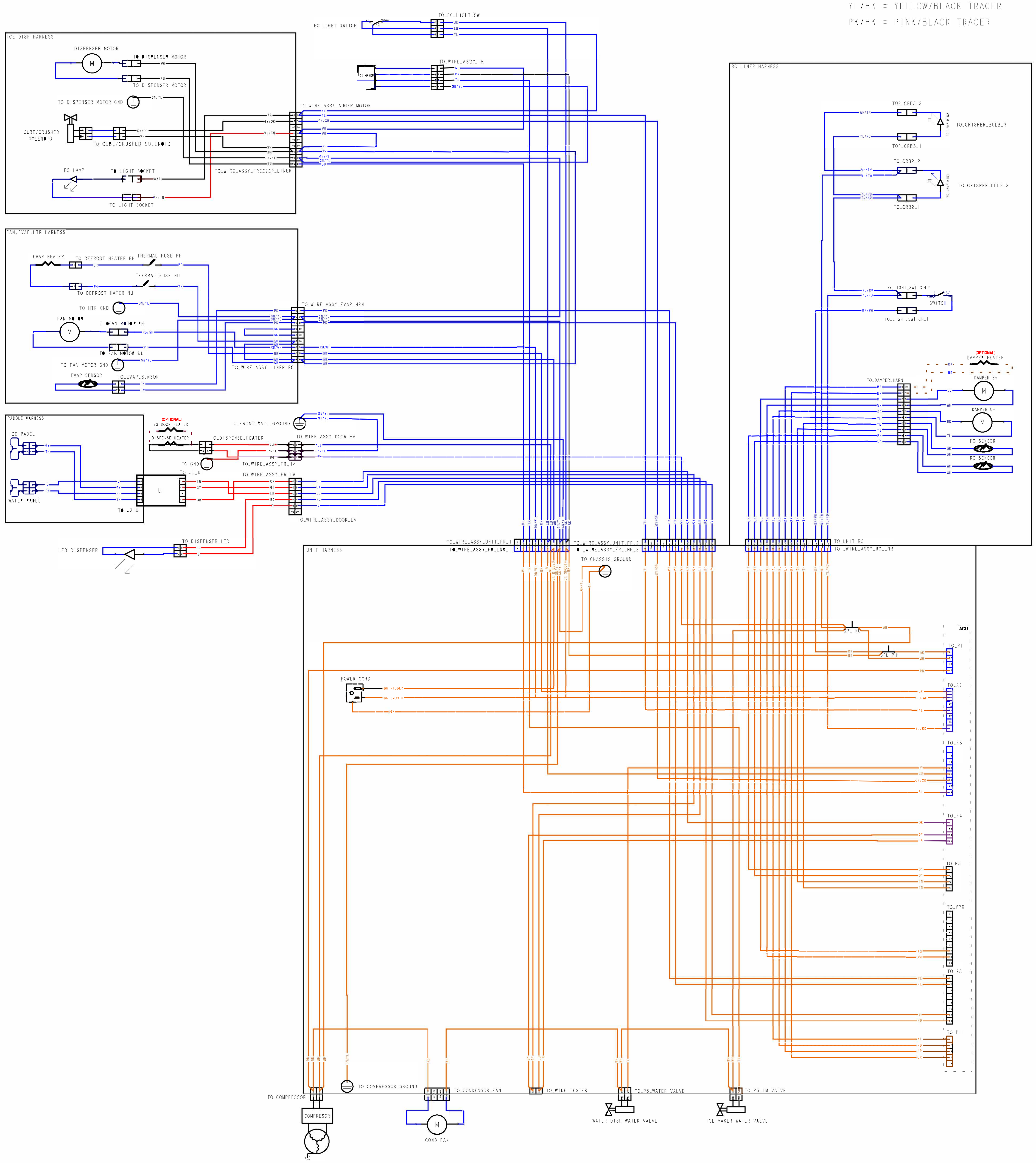
WIRE COLOR CODE
WH/GN = WHITE/GREEN TRACER
OR/BK = ORANGE/BLACK TRACER
YL/RD = YELLOW/RED TRACER
BU/BK = BLUE/BLACK TRACER
WH/BU = WHITE/BLUE TRACER
BK/YL = BLACK/YELLOW TRACER
WH/RD = WHITE/RED TRACER
GN/YL = GREEN/YELLOW TRACER
YL/BK = YELLOW/BLACK TRACER
PK/BK = PINK/BLACK TRACER

WIRE COLOR CODE
BR/WH = BROWN/WHITE TRACER
OR/BU = ORANGE/BLUE TRACER
RD/WH = RED/WHITE TRACER
LB/BK = LIGHT BLUE/BLACK TRACER
TN/WH = TAN/WHITE TRACER
TN/BK = TAN/BLACK TRACER
RD/YL = RED/YELLOW TRACER
V/WH = VIOLET/WHITE TRACER
BL/YL = BLUE/YELLOW TRACER
YL/BU = YELLOW/BLUE TRACER

WIRE COLOR CODE
BU = BLUE
BK = BLACK
RD = RED
WH = WHITE
YL = YELLOW
OR = ORANGE
BR = BROWN
GY = GRAY
PK = PINK
V = VIOLET
TN = TAN

MANUFACTURED UNDER ONE OR OF THE FOLLOWING UNITED STATES PATENTS

3,960,631	4,659,157	4,765,696	4,908,544	5,011,101
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	5,042,398
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	4,996,848	



DPLUS WIRING SHEET NO. W11609908 A

VOLTAGE TEST POINTS THESEUS						
	CONNECTOR	FROM	COLOR	TO	COLOR	SPECIFICATIONS
MAIN CONTROL (ACU)	P1	P1-1	BK	P1-2	WH	120VAC Input Constant from Power Cord.
		P1-2	WH	P1-4	RD	120VAC Output to Compressor/Condenser Fan When Cooling
	P2	P2-1	YL/RD	P1-1	BK	120VAC input FC Light switch feedback
		P2-4	YL	P1-1	BK	120VAC input FC Light switch feedback
		P2-6	RD/WH	P1-2	WH	120VAC Output to Evap Fan when cooling
		P2-7	BR	P1-2	WH	120VAC Output Defrost Heater when defrosting.
	P3	P3-4	V	P1-2	WH	120VAC Output to Water Valve when Water dispensing
		P3-5	LB	P1-1	BK	120VAC Input FC Door Switch
		P3-6	GY/OR	P1-2	WH	120VAC Output to Cube Solenoid when dispensing Cube
		P3-8	BU	P1-2	WH	120VAC Output to Auger Motor when dispensing ice
	P4	P4-1	OR	P4-4	LB	12.7 VDC Output to User Interface
		P4-3 GY				DATA COMMUNICATION
	P5	P5-1	GY	P5-2	GY	5 VDC INPUT RC THERMISTOR
		P5-3	TN	P5-4	TN	5 VDC INPUT FC THERMISTOR
	P8	P8-1	PK	P8-2	PK	5 VDC INPUT DEFROST THERMISTOR
		P8-7	V	P8-8	RD	12.7 VDC Output to Dispenser LED
	P70	P70-7 BU				12 VDC Pulse Damper Stepper Motor coil A +
		P70-8 WH				12 VDC Pulse Damper Stepper Motor coil A -
	P11	P11-1 YL				12 VDC Pulse Damper Stepper Motor coil B +
		P11-2 RD				12 VDC Pulse Damper Stepper Motor coil B -
		P11-3	BR	P11-4	BR	12 VDC Output to damper Heater

VOLTAGE TEST POINTS MINOTAUR						
	CONNECTOR	FROM	COLOR	TO	COLOR	SPECIFICATIONS
HMI	J1	J1-1	LB	J1-4	OR	12.7 VDC Output to User Interface
		J1-2 GY				DATA COMMUNICATION