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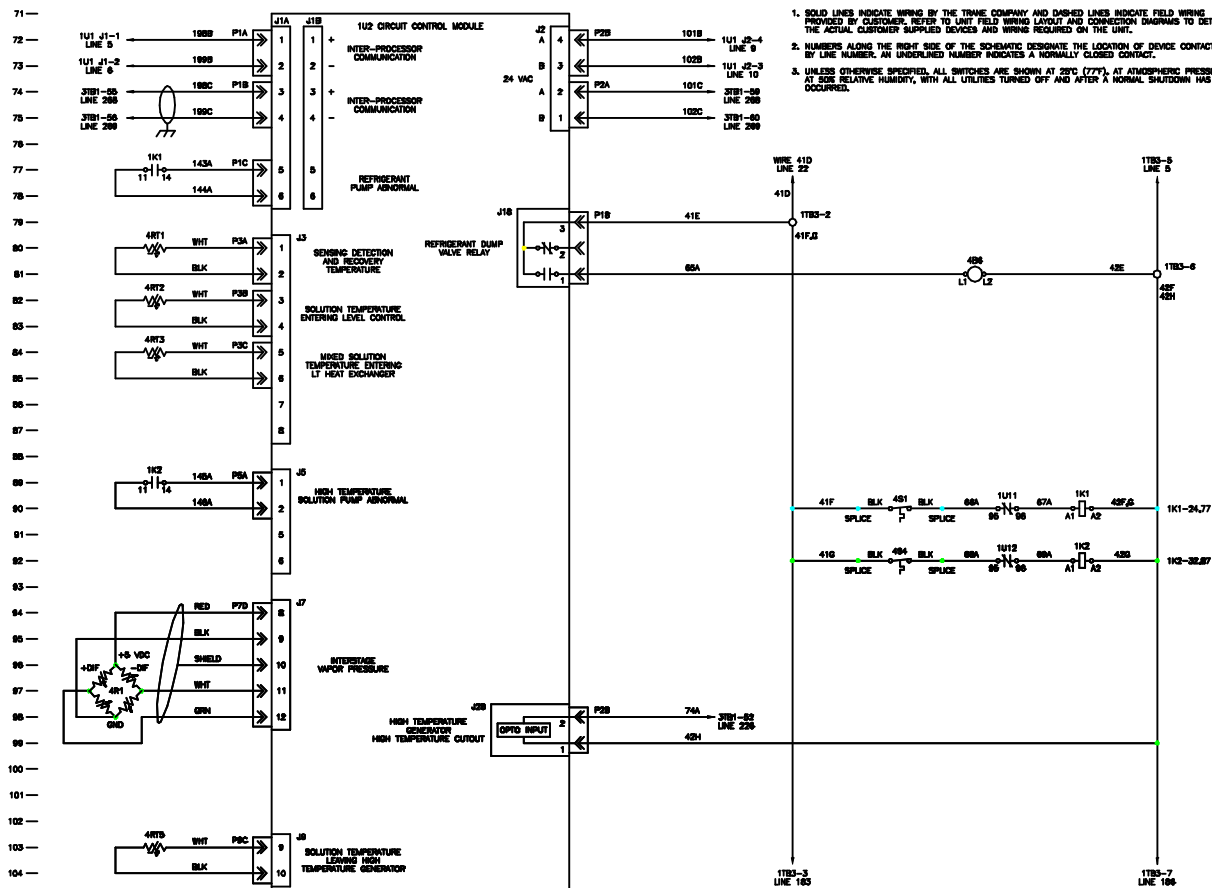
ABSORPTION LIQUID CHILLER
ABDA HORIZON™ TWO-STAGE DIRECT-FIRED ABSORPTION
UNIT SCHEMATIC WIRING DIAGRAM

CIRCUIT CONTROL MODULE AND DEVICE DESCRIPTIONS

DRAWING NUMBER
2307-8202
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SHEET 2 OF 6

NOTE:

- SOLID LINES INDICATE WIRING BY THE TRANE COMPANY AND DASHED LINES INDICATE FIELD WIRING PROVIDED BY CUSTOMER. REFER TO UNIT FIELD WIRING LAYOUT AND CONNECTION DIAGRAMS TO DETERMINE THE ACTUAL CUSTOMER SUPPLIED DEVICES AND WIRING REQUIRED ON THE UNIT.
- NUMBERS ALONG THE RIGHT SIDE OF THE SCHEMATIC INDICATE THE LOCATION OF DEVICE CONTACTS BY LINE NUMBER. AN UNDERLINED NUMBER INDICATES A NORMALLY CLOSED CONTACT.
- UNLESS OTHERWISE SPECIFIED, ALL SWITCHES ARE SHOWN AT 25°C (77°F) AT ATMOSPHERIC PRESSURE, AT 20% RELATIVE HUMIDITY, WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.



DEVICE	DEVICE DESCRIPTION	SHEET
101	LINE VOLTAGE CIRCUIT BREAKER	1
102	LINE VOLTAGE TRANSFORMER CIRCUIT BREAKER	1
103	LINE VOLTAGE TRANSFORMER FUSES	1
104	PHASE VOLTAGE TRANSFORMER FUSE	1
105	REFRIGERANT AND ABSORBER SOLUTION PUMP MOTOR FUSES	1
106	HIGH AND LOW TEMP SOLUTION PUMP MOTOR FUSES	1
107	BURNER FAN MOTOR FUSES	1
108	REFRIGERANT PUMP ABNORMAL RELAY	1,2
109	HIGH TEMP SOLUTION PUMP ABNORMAL RELAY	1,2
110	REFRIGERANT PUMP CONTACTOR	1
111	HIGH TEMP SOLUTION PUMP CONTACTOR	1
112	LINE VOLTAGE FUSED OR HIGH-FUSED DISCONNECT SWITCH	1
113	PHASE CURRENT TRANSFORMER	1
114	LINE VOLTAGE TRANSFORMER	1
115	CONTROL VOLTAGE TRANSFORMER	1
116	UNDER-OVER PHASE VOLTAGE TRANSFORMERS	1
117	LINE VOLTAGE TERMINAL BLOCK	1
118	PUMP MOTOR TERMINAL BLOCK	1
119	LOOPS CONTROL PANEL MOUNTED TERMINAL STRIP	1,2,3,4
120	STARTER CONTROL MODULE	1
121	CIRCUIT CONTROL MODULE	2
122	CHILLER CONTROL MODULE	3
123	PURGE CONTROL MODULE	3
124	STEPPER CONTROL MODULE	3
125	LOCAL CLEAR LANGUAGE DISPLAY PANEL	3
126	OPTIONS CONTROL MODULE	3
127	TRACER COMMUNICATION CONTROL MODULE	3
128	REMOTE CLEAR LANGUAGE I/O BUFFER CONTROL MODULE	3
129	PRINTER COMMUNICATION CONTROL MODULE	3
130	REFRIGERANT PUMP OVERLOAD	1,2
131	HIGH TEMP SOLUTION PUMP OVERLOAD	1,2
132	BURNER FAULT INDICATOR LIGHT	4
133	BURNER MAIN FUEL INDICATOR LIGHT	4
134	BURNER OIL INDICATOR LIGHT	4
135	BURNER FUEL PRESSURE NORMAL INDICATOR LIGHT	4
136	BURNER CALL FOR OPERATION INDICATOR LIGHT	4
137	BURNER FAN MOTOR CONTACTOR	1,4
138	BURNER ALARM RELAY	4
139	BURNER MAIN GAS FUEL SELECT RELAY	4
140	BURNER OIL OR LP GAS FUEL SELECT RELAY	4
141	BURNER RELEASE TO MODULATE RELAY	4
142	BURNER ALARM HORN	4
143	BURNER EMERGENCY STOP SWITCH	4
144	BURNER ALARM SWITCH	4
145	BURNER SERVICE SET-UP SWITCH	4
146	BURNER CONTROL PANEL MOUNTED TERMINAL STRIP	1,4
147	BURNER FAN MOTOR OVERLOAD	1,4
148	BURNER FLAME SAFEGUARD	4
149	BURNER CONTROL MODULE	4
150	BURNER IGNITION CONTROLLER	4
151	TRANSIENT VOLTAGE SUPPRESSION MODULE	4
152	REFRIGERANT PUMP MOTOR	1
153	ABSORBER SOLUTION PUMP MOTOR	1
154	LOW TEMP SOLUTION PUMP MOTOR	1
155	HIGH TEMP SOLUTION PUMP MOTOR	1
156	BURNER FAN MOTOR	1
157	REFRIGERANT DUMP VALVE ACTUATOR	2
158	BURNER CONTROL MODULE	4
159	FLUE GAS RECIRCULATION DAMPER ACTUATOR	4
160	PURGE REFRIGERANT COMPRESSOR MOTOR	5
161	PURGE VACUUM PUMP MOTOR	5
162	SMULTANEOUS HEAT HOT WATER VALVE STEPPER	5
163	PURGE REFRIGERANT COMPRESSOR JUNCTION BOX	5

DEVICE	DEVICE DESCRIPTION	SHEET
413	NATURAL GAS PILOT VALVE	4
414	AUXILIARY NATURAL GAS PILOT VALVE	4
415	NATURAL GAS PILOT VENT VALVE	4
416	LP GAS PILOT VALVE	4
417	AUXILIARY LP GAS PILOT VALVE	4
418	LP GAS PILOT VENT VALVE	4
419	MAIN NATURAL GAS VALVE	4
420	AUXILIARY NATURAL GAS VALVE	4
421	NORMALLY OPEN NATURAL GAS VENT VALVE	4
422	MAIN OIL OR LP GAS VALVE NO. 1	4
423	MAIN OIL VALVE NO. 2	4
424	AUXILIARY OIL OR LP GAS VALVE NO. 1	4
425	AUXILIARY OIL VALVE NO. 2	4
426	NORMALLY OPEN LP GAS VENT VALVE	4
427	BURNER OIL PUMP MAGNETIC CLUTCH	4
428	PURGE TANK VALVE SOLENOID	5
429	PURGE PUMP-OUT SOLENOID	5
430	INTERSTAGE VAPOR PRESSURE TRANSDUCER	2
431	EVAPORATOR DIFFERENTIAL WATER PRESSURE TRANSDUCER	6
432	COND AND ABS DIFFERENTIAL WATER PRESSURE TRANSDUCER	6
433	SENSING DETECTION AND RECOVERY TEMP SENSOR	2
434	SOLUTION TEMP ENTERING LEVEL CONTROL SENSOR	2
435	MIXED SOLUTION TEMP ENTERING LT HEAT EXCHANGER SENSOR	2
436	SOLUTION TEMP LEAVING HIGH TEMP GENERATOR SENSOR	2
437	EVAPORATOR ENTERING WATER TEMP SENSOR	3
438	ABSORBER LEAVING WATER TEMP SENSOR	3
439	ABSORBER LEAVING WATER TEMP SENSOR	3
440	CONDENSER LEAVING WATER TEMP SENSOR	3
441	ABSORBER ENTERING WATER TEMP SENSOR	3
442	PURGE REFRIGERANT COMPRESSOR SUCTION TEMP SENSOR	5
443	SATURATED EVAPORATOR REFRIGERANT TEMP SENSOR	5
444	ABSORBER SPRAY TEMP SENSOR	5
445	MAIN NATURAL GAS VALVE PROOF OF CLOSURE SWITCH	4
446	SOLUTION TEMP LEAVING ABSORBER SENSOR	5
447	SOLUTION TEMP ENTERING ABSORBER SENSOR	5
448	SOLUTION TEMP LEAVING LOW TEMP GENERATOR SENSOR	5
449	SOLUTION TEMP ENTERING HIGH TEMP GENERATOR SENSOR	5
450	SOLUTION TEMP LEAVING LOW TEMP GENERATOR SENSOR	5
451	SATURATED CONDENSER REFRIGERANT TEMP SENSOR	5
452	SMULTANEOUS HEAT HOT WATER VALVE SELECT "N" SWITCH	5
453	SMULTANEOUS HEAT HOT WATER VALVE SELECT "Y" SWITCH	5
454	BURNER STACK FLUE GAS TEMP SENSOR	4
455	REFRIGERANT PUMP MOTOR HIGH TEMP CUT-OUT	2
456	ABSORBER SOLUTION PUMP MOTOR HIGH TEMP CUT-OUT	2
457	LOW TEMP SOLUTION PUMP MOTOR HIGH TEMP CUT-OUT	2
458	HIGH TEMP SOLUTION PUMP MOTOR HIGH TEMP CUT-OUT	2
459	BURNER FLAME SWITCH	4
460	MAIN NATURAL GAS VALVE PROOF OF CLOSURE SWITCH	4
461	AUXILIARY NATURAL GAS VALVE PROOF OF CLOSURE SWITCH	4
462	MAIN OIL OR LP GAS VALVE PROOF OF CLOSURE SWITCH	4
463	AUXILIARY OIL OR LP GAS VALVE PROOF OF CLOSURE SWITCH	4
464	FLUE GAS RECIRCULATION DAMPER PROOF OF CLOSURE SWITCH	4
465	LOW AIR FLOW SWITCH	4
466	NATURAL GAS PRESSURE SWITCH	4
467	HIGH NATURAL GAS PRESSURE SWITCH	4
468	LOW OIL OR LP GAS PRESSURE SWITCH	4
469	HIGH LP GAS PRESSURE SWITCH	4
470	REFRIGERANT LIQUID LEVEL SENSOR	5
471	FLUE GAS RECIRCULATION DAMPER PROOF OF OPENING SWITCH	4
472	FLUE GAS RECIRCULATION DAMPER 10° OPEN SWITCH	4
473	NATURAL OR LP GAS PILOT IGNITION TRANSFORMER	4

DEVICE	DEVICE DESCRIPTION	SHEET
474	BURNER MOUNTED TERMINAL STRIP	1,4
475	NATURAL GAS/OIL FUEL TANK MOUNTED TERMINAL STRIP	4
476	LP GAS FUEL TANK MOUNTED TERMINAL STRIP	4
477	PURGE CONTROL TERMINAL STRIP	5
478	HIGH TEMP GENERATOR HIGH TEMP CUTOUT SENSOR	4
479	ABSORBER SOLUTION PUMP ADJUSTABLE FREQUENCY DRIVE	1
480	LOW TEMP SOLUTION PUMP ADJUSTABLE FREQUENCY DRIVE	1
481	HIGH TEMP CONDENSER HIGH TEMP CUTOUT SWITCH	4
482	BURNER FLAME ROD OR UV SCANNER	4
483	OUTDOOR AIR TEMP SENSOR	3
484	REMOTE CLEAR LANGUAGE DISPLAY PANEL	6
485	PURGE ALARM INDICATOR LIGHT	4
486	VENTILATION RELAY	3
487	CHILLED WATER PUMP MOTOR STARTER	3
488	CONDENSER AND ABSORBER WATER PUMP MOTOR STARTER	3
489	SOLUTION PUMP RUNNING STATUS RELAY	3
490	MACHINE MANUAL RESET ALARM STATUS RELAY	3
491	UNIT WARNING STATUS RELAY	3
492	MACHINE AUTOMATIC RESET ALARM STATUS RELAY	3
493	HEAD RELIEF REQUEST STATUS RELAY	3
494	MAXIMUM CAPACITY STATUS RELAY	6
495	SMULTANEOUS HEAT HOT WATER PUMP MOTOR STARTER	6
496	TRACER CONTROLLED RELAY	6
497	TOWER TEMPERATURE LOW RELAY	6
498	4 TO 2 PIPE CONVERSION RELAY	6
499	TRACER TEMP SENSOR	6
500	UNIT EXTERNAL AUTO STOP SWITCH	3
501	UNIT EMERGENCY STOP SWITCH	3
502	VENTILATION COORDINATION SWITCH	3
503	CHILLED WATER FLOW SWITCH	3
504	CONDENSER AND ABSORBER WATER FLOW SWITCH	3
505	BURNER NAT GAS/OIL OR LP GAS FUEL SELECT INPUT SWITCH	4
506	SMULTANEOUS HTS-CLS UNIT FUNCTION SELECT "N" SWITCH	6
507	SMULTANEOUS HTS-CLS UNIT FUNCTION SELECT "Y" SWITCH	6
508	SMULTANEOUS HEAT HOT WATER FLOW SWITCH	6

THIS DRAWING IS PROPRIETARY AND SHALL NOT BE COPIED OR ITS CONTENTS DISCLOSED TO OUTSIDE PARTIES WITHOUT THE WRITTEN CONSENT OF THE TRANE COMPANY

WARNING

HAZARDOUS VOLTAGE
DISCONNECT ALL ELECTRIC POWER
INCLUDING REMOTE DISCONNECTS
BEFORE SERVICING.

FAILURE TO DISCONNECT POWER
BEFORE SERVICING CAN CAUSE
SERIOUS PERSONAL INJURY OR DEATH.

AVERTISSEMENT

VOLTAGE HASARDIEUX
DECONNECTEZ TOUTES LES SOURCES
ELECTRIQUES INCLUANT LES
DISCONNECTEURS REMOTE A DISTANCE
AVANT D'INTERVENIR L'ENTRETIEN.

FAUTE DE DECONNECTER LA SOURCE
ELECTRIQUE AVANT D'INTERVENIR
L'ENTRETIEN PEUT ENTRAINER DES
BLESSES CORPORELLES SEVERES
OU LA MORT.

CAUTION

USE COPPER CONDUCTORS ONLY.
UNIT TERMINALS ARE NOT DESIGNED
TO ACCEPT OTHER TYPES OF
CONDUCTORS.

FAILURE TO DO SO MAY CAUSE
DAMAGE TO THE EQUIPMENT.

DEVICE PREFIX CODE:

- 1 = MAIN UNIT CONTROL PANEL
- 3 = BURNER CONTROL PANEL
- 4 = UNIT MOUNTED DEVICE
- 5 = REMOTE MOUNTED DEVICE
- 6 = CUSTOMER PROVIDED DEVICE