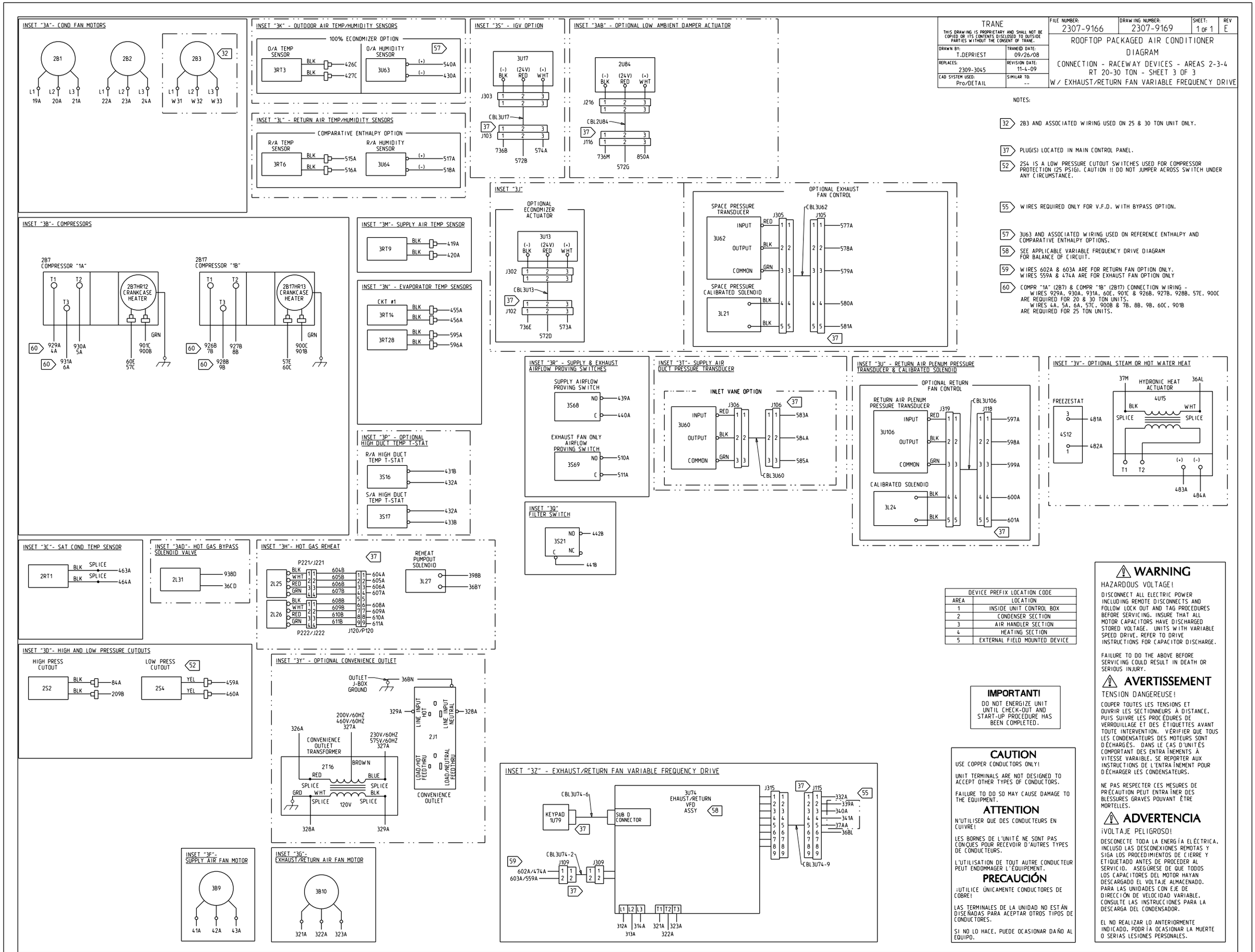
TRANE
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FILE NUMBER: 2307-9166
DRAWING NUMBER: 2307-9169
SHEET: 1 OF 1
REV E
DRAWN BY: T.DEPRIEST
TRANE® DATE: 09/26/08
REPLACES: 2309-3045
REVISION DATE: 11-4-09
CAD SYSTEM USED: Pro/DETAIL
SIMILAR TO: --
ROOFTOP PACKAGED AIR CONDITIONER DIAGRAM
CONNECTION - RACEWAY DEVICES - AREAS 2-3-4
RT 20-30 TON - SHEET 3 OF 3
W/ EXHAUST/RETURN FAN VARIABLE FREQUENCY DRIVE
INSET "3A"- COND FAN MOTORS
2B1
2B2
2B3
32
L1 L2 L3
19A 20A 21A
22A 23A 24A
W31 W32 W33
INSET "3K" - OUTDOOR AIR TEMP/HUMIDITY SENSORS
100% ECONOMIZER OPTION
O/A TEMP SENSOR
3RT3
BLK 426C
BLK 427C
O/A HUMIDITY SENSOR
57
3U63
(+) 540A
(-) 430A
INSET "3L" - RETURN AIR TEMP/HUMIDITY SENSORS
COMPARATIVE ENTHALPY OPTION
R/A TEMP SENSOR
3RT6
BLK 515A
BLK 516A
R/A HUMIDITY SENSOR
3U64
(+) 517A
(-) 518A
INSET "3S" - IGV OPTION
3U17
(-) BLK (24V) RED (+) WHT
J303
CBL3U17
37
J103
736B 574A
572B
INSET "3AB" - OPTIONAL LOW AMBIENT DAMPER ACTUATOR
2U84
(-) BLK (24V) RED (+) WHT
J216
CBL2U84
37
J116
736M 850A
572G
INSET "3B"- COMPRESSORS
2B7 COMPRESSOR "1A"
T1 T2 T3
2B7HR12 CRANKCASE HEATER
GRN
60 929A 4A
930A 5A
60 931A 6A
901C 900B
60E 57C
2B17 COMPRESSOR "1B"
T1 T2 T3
2B17HR13 CRANKCASE HEATER
GRN
60 926B 7B
927B 8B
60 928B 9B
900C 901B
57E 60C
INSET "3M"- SUPPLY AIR TEMP SENSOR
3RT9
BLK 419A
BLK 420A
INSET "3N" - EVAPORATOR TEMP SENSORS
CKT #1
3RT14
BLK 455A
BLK 456A
3RT28
BLK 595A
BLK 596A
INSET "3P" - OPTIONAL HIGH DUCT TEMP T-STAT
R/A HIGH DUCT TEMP T-STAT
3S16
431B
432A
S/A HIGH DUCT TEMP T-STAT
3S17
432A
433B
INSET "3J"
OPTIONAL ECONOMIZER ACTUATOR
3U13
(-) BLK (24V) RED (+) WHT
J302
CBL3U13
37
J102
736E 573A
572D
OPTIONAL EXHAUST FAN CONTROL
SPACE PRESSURE TRANSDUCER
3U62
INPUT RED
OUTPUT BLK
COMMON GRN
J305
CBL3U62
J105
577A
578A
579A
SPACE PRESSURE CALIBRATED SOLENOID
3L21
BLK
BLK
580A
581A
37
INSET "3R" - SUPPLY & EXHAUST AIRFLOW PROVING SWITCHES
SUPPLY AIRFLOW PROVING SWITCH
3S68
NO 439A
C 440A
EXHAUST FAN ONLY AIRFLOW PROVING SWITCH
3S69
NO 510A
C 511A
INSET "3T"- SUPPLY AIR DUCT PRESSURE TRANSDUCER
INLET VANE OPTION
3U60
INPUT RED
OUTPUT BLK
COMMON GRN
J306
J106
37
583A
584A
585A
CBL3U60
INSET "3U" - RETURN AIR PLENUM PRESSURE TRANSDUCER & CALIBRATED SOLENOID
OPTIONAL RETURN FAN CONTROL
RETURN AIR PLENUM PRESSURE TRANSDUCER
3U106
INPUT RED
OUTPUT BLK
COMMON GRN
J319
CBL3U106
J118
597A
598A
599A
CALIBRATED SOLENOID
3L24
BLK
BLK
600A
601A
37
INSET "3V"- OPTIONAL STEAM OR HOT WATER HEAT
FREEZESTAT
4S12
481A
482A
37M
HYDRONIC HEAT ACTUATOR
36AL
4U15
BLK WHT
SPLICE SPLICE
T1 T2
(+) (-)
483A
484A
INSET "3C"- SAT COND TEMP SENSOR
2RT1
BLK SPLICE 463A
BLK SPLICE 464A
INSET "3AD"- HOT GAS BYPASS SOLENOID VALVE
2L31
938D
36CD
INSET "3H"- HOT GAS REHEAT
37
P221/J221
2L25
BLK WHT RED GRN
604B 605B 606B 607B
604A 605A 606A 607A
2L26
BLK WHT RED GRN
608B 609B 610B 611B
608A 609A 610A 611A
P222/J222
J120/P120
REHEAT PUMPOUT SOLENOID
3L27
398B
36BY
INSET "3D"- HIGH AND LOW PRESSURE CUTOUTS
HIGH PRESS CUTOUT
2S2
BLK 84A
BLK 209B
LOW PRESS CUTOUT
52
2S4
YEL 459A
YEL 460A
INSET "3Y" - OPTIONAL CONVENIENCE OUTLET
OUTLET J-BOX GROUND
36BN
329A
328A
LINE INPUT HOT
LINE INPUT NEUTRAL
2J1
LOAD/HOT FEEDTHRU
LOAD/NEUTRAL FEEDTHRU
CONVENIENCE OUTLET
200V/60HZ 460V/60HZ 327A
230V/60HZ 575V/60HZ 327A
326A
CONVENIENCE OUTLET TRANSFORMER
2T16
BROWN
RED BLUE
SPLICE SPLICE
GRD WHT BLK
SPLICE SPLICE
120V
328A 329A
INSET "3F"- SUPPLY AIR FAN MOTOR
3B9
41A 42A 43A
INSET "3G"- EXHAUST/RETURN AIR FAN MOTOR
3B10
321A 322A 323A
INSET "3Z" - EXHAUST/RETURN FAN VARIABLE FREQUENCY DRIVE
CBL3U74-6
KEYPAD 1U79
37
SUB D CONNECTOR
3U74 EHAUST/RETURN VFD ASSY
58
J315
37
J115
55
332A
339A
340A
341A
37AA
36BL
CBL3U74-9
59
CBL3U74-2
J109
J309
602A/474A
603A/559A
37
L1 L2 L3
T1 T2 T3
312A 314A 321A 323A
313A 322A
INSET "3O" FILTER SWITCH
3S21
NO 442B
C NC
441B
NOTES:
32 2B3 AND ASSOCIATED WIRING USED ON 25 & 30 TON UNIT ONLY.
37 PLUG(S) LOCATED IN MAIN CONTROL PANEL.
52 2S4 IS A LOW PRESSURE CUTOUT SWITCHES USED FOR COMPRESSOR PROTECTION (25 PSIG). CAUTION !! DO NOT JUMPER ACROSS SWITCH UNDER ANY CIRCUMSTANCE.
55 WIRES REQUIRED ONLY FOR V.F.D. WITH BYPASS OPTION.
57 3U63 AND ASSOCIATED WIRING USED ON REFERENCE ENTHALPY AND COMPARATIVE ENTHALPY OPTIONS.
58 SEE APPLICABLE VARIABLE FREQUENCY DRIVE DIAGRAM FOR BALANCE OF CIRCUIT.
59 WIRES 602A & 603A ARE FOR RETURN FAN OPTION ONLY. WIRES 559A & 474A ARE FOR EXHAUST FAN OPTION ONLY
60 COMPR "1A" (2B7) & COMPR "1B" (2B17) CONNECTION WIRING - WIRES 929A, 930A, 931A, 60E, 901C & 926B, 927B, 928B, 57E, 900C ARE REQUIRED FOR 20 & 30 TON UNITS. WIRES 4A, 5A, 6A, 57C, 900B & 7B, 8B, 9B, 60C, 901B ARE REQUIRED FOR 25 TON UNITS.
DEVICE PREFIX LOCATION CODE
AREA LOCATION
1 INSIDE UNIT CONTROL BOX
2 CONDENSER SECTION
3 AIR HANDLER SECTION
4 HEATING SECTION
5 EXTERNAL FIELD MOUNTED DEVICE
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
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.
ATTENTION
N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.
L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'ÉQUIPEMENT.
PRECAUCIÓN
¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.
WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCK OUT AND TAG PROCEDURES BEFORE SERVICING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE. UNITS WITH VARIABLE SPEED DRIVE, REFER TO DRIVE INSTRUCTIONS FOR CAPACITOR DISCHARGE.
FAILURE TO DO THE ABOVE BEFORE SERVICING COULD RESULT IN DEATH OR SERIOUS INJURY.
AVERTISSEMENT
TENSION DANGEREUSE!
COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNEURS À DISTANCE. PUIS SUIVRE LES PROCÉDURES DE VERROUILLAGE ET DES ÉTIQUETTES AVANT TOUTE INTERVENTION. VÉRIFIER QUE TOUS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITÉS COMPORTANT DES ENTRAÎNEMENTS À VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS DE L'ENTRAÎNEMENT POUR DÉCHARGER LES CONDENSATEURS.
NE PAS RESPECTER CES MESURES DE PRÉCAUTION PEUT ENTRAÎNER DES BLESSURES GRAVES POUVANT ÊTRE MORTELLES.
ADVERTENCIA
¡VOLTAJE PELIGROSO!
DESCONECTE TODA LA ENERGÍA ELÉCTRICA, INCLUSO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASEGÚRESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON EJE DE DIRECCIÓN DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR.
EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.