

TRANE

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DRAWN BY: D.SHERRELL ©TRANE DATE: 18-MAY-2017

REPLACES:

REVISION DATE:

SIMILAR TO:

50712057

SHEET 1 OF 3

REV A

SCHEMATIC

RTAC AFD RETROFIT

3 COMPRESSOR UNIT

DEVICES, DESCRIPTIONS & DESIGNATIONS

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LEGEND		
DEVICE DESIGNATION	LINE NUMBER	DESCRIPTION
1B1	21	PANEL VENTILATION FAN
1CB1	7	HACR CIRCUIT BREAKER, CIRCUIT 1
1CB2	13	HACR CIRCUIT BREAKER FOR AFD CIRCUIT1
1F15	17	CONTROL POWER TRANSFORMER SECONDARY FUSE, 115 VOLT CIRCUIT
1F16, 1F17	15,16	CONTROL POWER TRANSFORMER SECONDARY FUSE, LOW VOLTAGE CIRCUIT
1K9	20,24,45	START CONTACTOR, COMPRESSOR 1B
1K9	24	CONDENSER FAN CONTACTOR, CIRCUIT 1
1K10	27	CONDENSER FAN CONTACTOR, CIRCUIT 1
1K11	30	CONDENSER FAN CONTACTOR, CIRCUIT 1
1K12	33	CONDENSER FAN CONTACTOR, CIRCUIT 1
1K13	34	CONDENSER FAN CONTACTOR, CIRCUIT 1
1K14	10	CONDENSER FAN CONTACTOR, CIRCUIT 1
1K20	21,23,39,43,47	RELAY, AFD CIRCUIT 1 STATUS
1K30	36,40	RELAY, HIGH PRESSURE CUTOUT CIRCUIT 1
1SW1	7	DISCONNECT SWITCH FOR CUSTOMER POWER WIRING, CIRCUIT 1
1T1	15	CONTROL POWER SUPPLY TRANSFORMER
1T9	107	POTENTIAL VOLTAGE TRANSFORMER, UNDER/OVER VOLTAGE
1TB1	7	TERMINAL BLOCK FOR CUSTOMER POWER WIRING, CIRCUIT 1
1TB5	VARIOUS LOCATIONS	FACTORY CONTROL WIRING TERMINAL STRIP
1TS4	21	VENTILATION FAN OFF/ON TEMPERATURE CONTROL SWITCH (CONTROL PANEL 1)
1U15	21	QUAD RELAY OUTPUT, FAN CONTROL, CIRCUIT 1
1U30	45	CONTROL MODULE, UC800
1U1	12,37	AFD, CIRCUIT 1
1U19	106	STARTER MODULE, COMPRESSOR 1B
2F15	78	CONTROL POWER TRANSFORMER SECONDARY FUSE, 115 VOLT CIRCUIT
2F16	76	CONTROL POWER TRANSFORMER SECONDARY FUSE, LOW VOLTAGE CIRCUIT
2F17	77	CONTROL POWER TRANSFORMER SECONDARY FUSE, LOW VOLTAGE CIRCUIT
2CB1	67	HACR CIRCUIT BREAKER, CIRCUIT 2
2CB2	74	HACR CIRCUIT BREAKER FOR AFD CIRCUIT2
2K20	81,97,102	RELAY, AFD CIRCUIT 2 STATUS
2K30	98,99	RELAY, HIGH PRESSURE CUTOUT CIRCUIT 2
2K9	83	CONDENSER FAN CONTACTOR, CIRCUIT 2
2K10	86	CONDENSER FAN CONTACTOR, CIRCUIT 2
2K11	89	CONDENSER FAN CONTACTOR, CIRCUIT 2
2K12	92	CONDENSER FAN CONTACTOR, CIRCUIT 2
2SW1	67	DISCONNECT SWITCH FOR CUSTOMER POWER WIRING, CIRCUIT 2
2T1	75	CONTROL POWER SUPPLY TRANSFORMER
2TB1	67	TERMINAL BLOCK FOR CUSTOMER POWER WIRING, CIRCUIT 2
2TB5	VARIOUS LOCATIONS	FACTORY CONTROL WIRING TERMINAL STRIP
2U1	73,95	AFD CIRCUIT 2
2U15	47	QUAD RELAY OUTPUT, FAN CONTROL, CIRCUIT 2
3B20	47	MOTOR, FAN, AFD ENCLOSURE CIRCUIT 1
3B1	14	MOTOR, COMPRESSOR 1A, CIRCUIT 1
3HR1	22	COMPRESSOR 1A HEATER CIRCUIT 1
3HR2	23	OIL SEPARATOR HEATER CIRCUIT 1
3L7	43	OIL LINE VALVE COMPRESSOR 1A
3LB	45	OIL LINE VALVE COMPRESSOR 1B
3PS1	36	HIGH PRESSURE CUTOUT SWITCH, COMPRESSOR 1A
3T2	12	CHOKES, CIRCUIT 1
3TS1	47	VENTILATION TEMPERATURE SWITCH, AFD ENCLOSURE CIRCUIT 1
4B20	102	MOTOR, FAN, AFD ENCLOSURE CIRCUIT 2
4B1	76	MOTOR, COMPRESSOR 2A, CIRCUIT 2
4HR1	81	COMPRESSOR 2A HEATER CIRCUIT 2
4HR2	82	OIL SEPARATOR HEATER CIRCUIT 2
4PS1	95	HIGH PRESSURE CUTOUT SWITCH, COMPRESSOR 2A
4T2	12	CHOKES, AFD CIRCUIT 2
4TS1	102	VENTILATION TEMPERATURE SWITCH, AFD ENCLOSURE CIRCUIT 2
6RT4	115	COMPRESSOR DISCHARGE TEMPERATURE SENSOR, COMPRESSOR 1A
6RT5	118	COMPRESSOR DISCHARGE TEMPERATURE SENSOR, COMPRESSOR 2A

GENERAL & FLAG NOTES

NOTES:

- 1 WIRING FOR 460V UNIT SHOWN. SEE INSET "A" FOR CONTROL POWER TRANSFORMER WIRING FOR OTHER VOLTAGES.
- 2 FOR LOW AND WIDE AMBIENT OPTION, 1K9 IS NOT PRESENT. SEE INSET "C"
- 3 WIRING FOR 460V UNIT SHOWN. SEE INSET "D" FOR CONTROL POWER TRANSFORMER WIRING FOR OTHER VOLTAGES.
- 4 FOR LOW AND WIDE AMBIENT OPTION, 2K9 IS NOT PRESENT. SEE INSET "F"
- 5 CONTROLS & ASSOCIATED WIRING ARE USED ONLY WHEN THE CONTROL PANEL VENTILATION FAN IS PROVIDED.
- 6 FOR LOW & WIDE AMBIENT OPTION HEATERS & THERMOSTAT REQUIRED.
- 7 REFER TO EXISTING UNIT SCHEMATICS FOR SPECIFIC CONNECTION DETAIL.
- 8 OIL SOLENOIDS MAY NOT BE INSTALLED ON SOME UNITS, REFER TO EXISTING UNIT CONFIGURATION.
- 9 UNDER/OVER VOLTAGE DETECTION MUST BE MOVED FROM STARTER MODULE 1U14 TO STARTER MODULE 1U19, COMPRESSOR 1B.
- 10 DISCHARGE TEMPERATURE SENSORS MUST BE INSTALLED ON COMPRESSORS WITH AFD DRIVE, 1A AND 2A.
- 11 COMPONENTS SPECIFIC TO AFD RETROFIT KIT.

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 A DISTANCE. PUIS SUIVRE LES PROCEDURES DE VERROUILLAGE ET DES ETIQUETTES AVANT TOUTE INTERVENTION. VÉRIFIER QUE TOUTS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITES 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, INCLUIDO 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.

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.

PRECAUCIÓN

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'EQUIPEMENT.

ATTENTION

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.

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