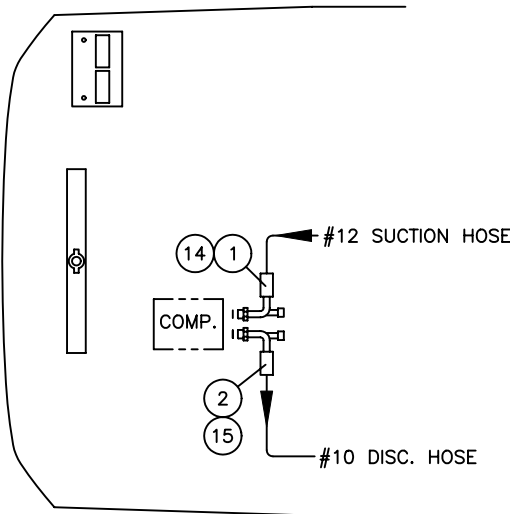


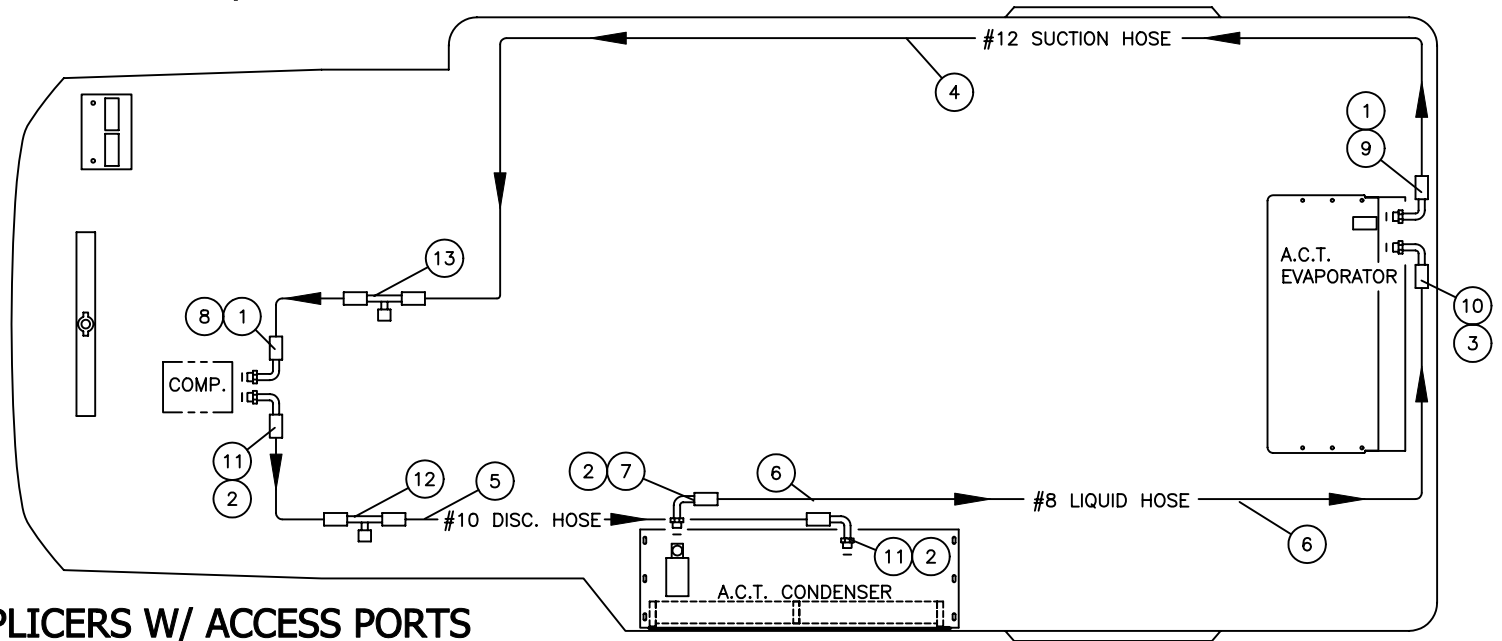


AMERICAN COOLING TECHNOLOGY, Inc.
 715 WILLOW SPRINGS LANE
 YORK, PA 17402
 FAX: (717) 767-3658
 (717) 767-2775

PIPING DIAGRAM
EZ-3,35,4,5,55 W/CS SERIES COND
W/EZ-CLIP FITTINGS AND HOSE
DWG NO. 510-008-EZ



COMP FTGS W/ ACCESS PORTS



SPLICERS W/ ACCESS PORTS

IT	QTY	ACT P/N	SIZE	DESCRIPTION
1	2	ORG-058	-	O-RING,5/8 DIA, R-134a
2	3	ORG-012	-	O-RING,1/2 DIA, R-134a
3	1	ORG-038	-	O-RING,3/8 DIA, R-134a
4	A/R	HSE-012-EZ	-	HOSE, REFRIGERANT, #12
5	A/R	HSE-010-EZ	-	HOSE, REFRIGERANT, #10
6	A/R	HSE-008-EZ	-	HOSE, REFRIGERANT, #8
7	1	FTG-124-EZ	-	FTG,90 DEG FOR 1/2" X#8 HOSE
8	1	FTG-103-EZ	-	FTG,90 DEG,5/8 FOR X #12 HOSE
9	1	FTG-101-EZ	-	FTG,90 DEG,5/8 MOR X #12 HOSE
10	1	FTG-100-EZ	-	FTG,90 DEG,3/8 MOR X #8 HOSE
11	2	FTG-102-EZ	-	FTG,90 DEG,1/2 FOR X #10 HOSE
12	1	FTG-107-EZ	-	FTG,SPLICER,#10 X #10 W/R134A HIGH SIDE SERVICE PORT
13	1	FTG-108-EZ	-	FTG,SPLICER,#12 X #12 W/R134A LOW SIDE SERICE PORT
14	1	FTG-115-EZ	-	FTG,90DEG FOR 5/8"X#12 W/R134A L/S PORT
15	1	FTG-114-EZ	-	FTG,90DEG FOR 1/2"X#10 W/R134A H/S PORT
16				

REFRIGERANT AND OIL CHARGING PROCEDURE FOR R-134a

The following steps must be followed to ensure optimum system performance and maximum compressor life:

1. All refrigeration work is to be performed by qualified technician with proper certification.
2. Always wear adequate eye protection when working with refrigerant.
3. Leak check the entire a/c system with nitrogen only (not compressed air).
4. Nitrogen purge the system prior to evacuation.
5. Evacuate the system to 500 microns, Isolate Vacuum pump & wait 5 minutes, Read micron-gauge (Not rise more than 500 microns).
6. Add correct oil and refrigerant according to the charge chart.

CAUTION:

1. When leak checking with nitrogen, pressure not to exceed 250 PSIA
2. Use of refrigerant oil other than the type and amount specified by the A.C.T. oil selection chart will void warranty.
3. Never add oil or liquid refrigerant to the suction side of system.
4. Consult the A.C.T. service department with any questions at 877-228-4247.

Refrigerant and Oil Charge Chart

Please consult A.C.T. in regards to charge/oil amounts for any Eberspächer Rooftop A/C system

Evaporator	Condenser	Oil Amount	R-134a AMOUNT
EV-10, EZ-3, EZ-30, EZ-35, ID-23	CS-2, CS-22*	6 oz.	4 lbs.
EV-1, EV-2, EV-20, EZ-4, EZ-5, EZ-55, EZ-6, EZ-7, EV-8	CS-2, CS-2L, CR-2	7.5 oz.	5 lbs.
EV-1, EV-2, EV-20, EZ-4, EZ-5, EZ-55, EZ-6, EZ-7, EV-8	CS-3, CS-3L, CR-3 CS-32	9 oz.	6 lbs.
RTS-75	RTS-75	9.5 oz.	6.25 lbs.
EZ-9	DUAL CS-2, DUAL CR-2	7.5 oz. (ea. system)	5 lbs. (ea. system)
EZ-9	DUAL CS-3, CS-32 DUAL CR-3, CS-32	9 oz. (ea. system)	6 lbs. (ea. system)
EZ-9	SINGLE CS-3, CS-32 SINGLE CR-3, CS-32	9 oz.	6 lbs. <i>SEE NOTE 4</i>
EZ-91 or EV-96 w/ #12 or #16 SUCTION HOSE	SINGLE CS-3, CS-32 SINGLE CR-3, CS-32	9 oz.	6 lbs.
ANY A.C.T. EVAPORATOR	CR-4 DUAL OR SINGLE CIRCUIT	Consult A.C.T.	Consult A.C.T.
Tie-in evaporator to above system		1.5-2.25 oz.	1-1.5 lbs.
*CS-22 with tie-in evaporator - Consult A.C.T.			

NOTE:

1. All refrigerant oil must be the exact oil specified by the compressor manufacturer. (See chart below)
2. Refrigerant amounts are approximate. Use the sight glass to top off the charge. Additional oil may be necessary at 1.5 oz. of oil for each additional pound of refrigerant or 2 oz. of oil for each additional pound of refrigerant if there is a suction accumulator.
3. The condenser sight glass will be free of bubbles when the unit is properly charged. Note: Some flash gas may occur at engine idle.
4. The a/c system must be piped according to the appropriate A.C.T. piping diagram.

Oil Selection Chart

Compressor Manufacturer	Oil Type	Viscosity	ACT Part No.
Valeo, Que, Sanden	PAG	46 @ 40°C.	PAG-046-2
Transit Style Compressor	Consult A.C.T.		

Please contact the American Cooling Technology Service Department with any questions, Toll Free: 877-228-4247.

WIRING DIAGRAM

EZ-5 W/CS SERIES COND

DWG NO. 510-005

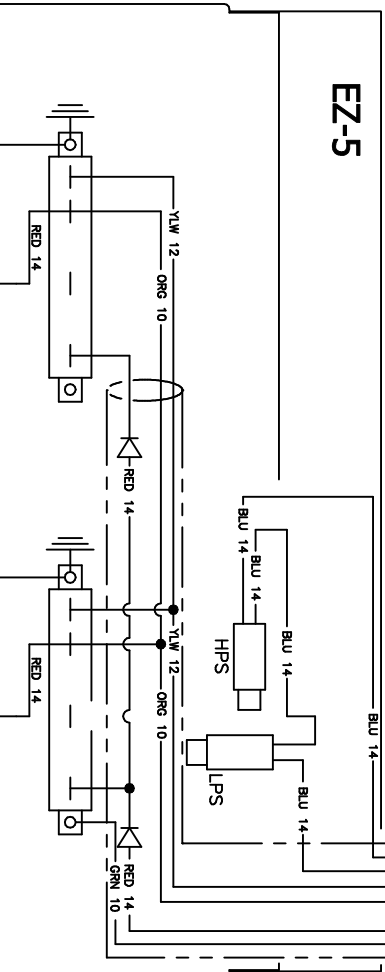
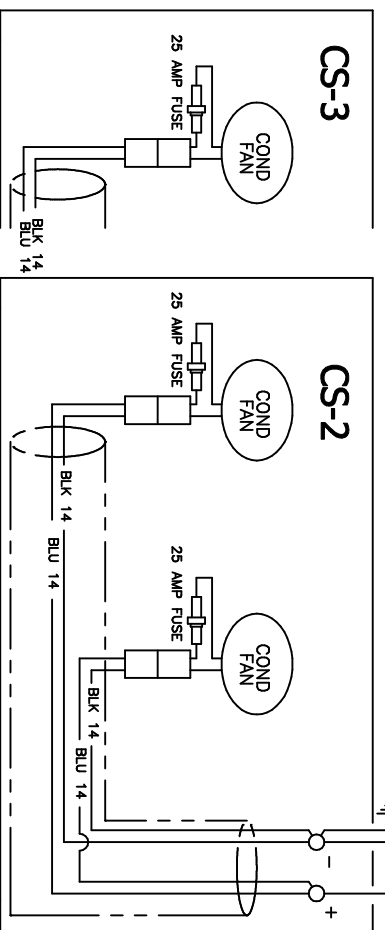
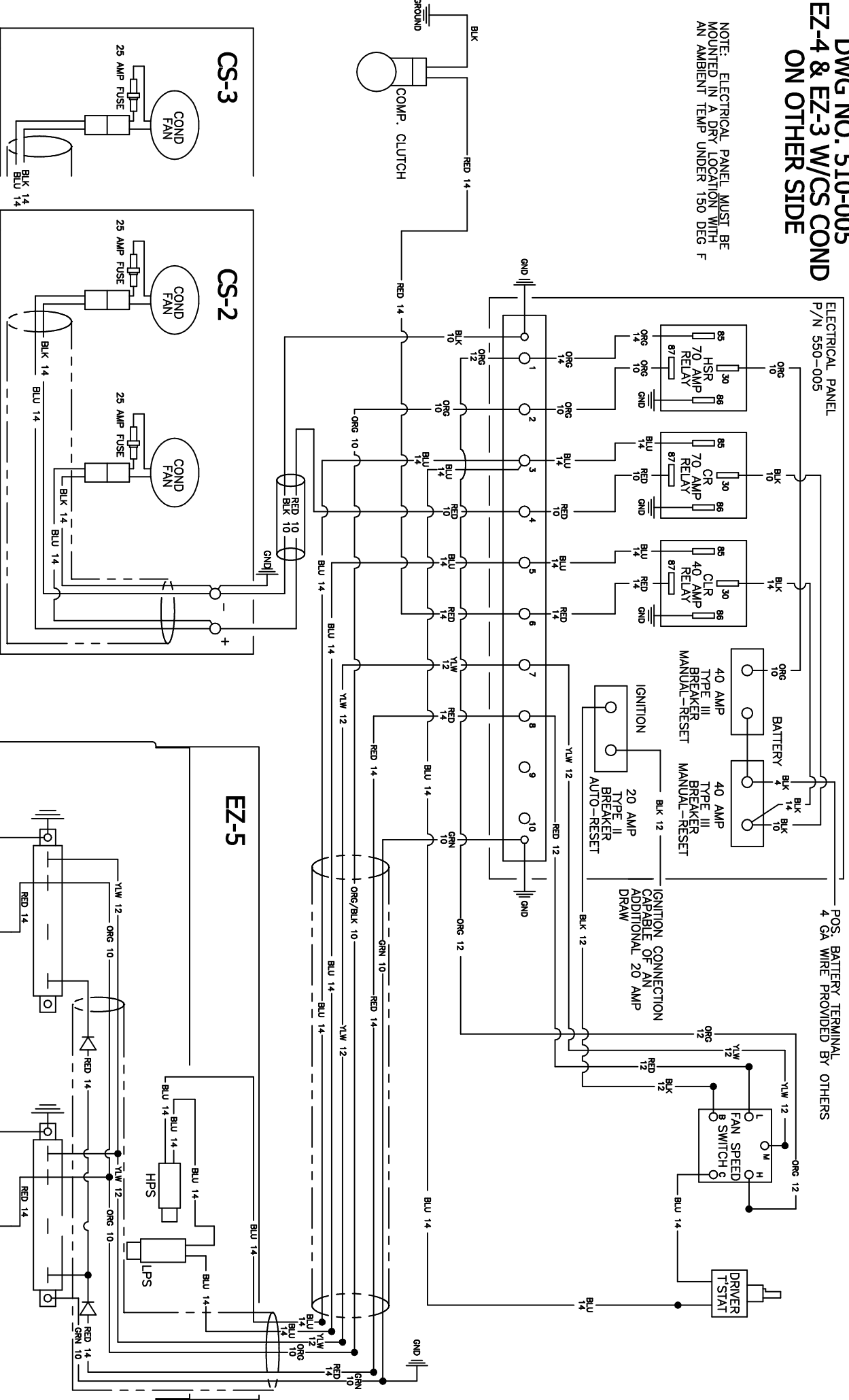
EZ-4 & EZ-3 W/CS COND

ON OTHER SIDE

NOTE: ELECTRICAL PANEL MUST BE MOUNTED IN A DRY LOCATION WITH AN AMBIENT TEMP UNDER 150 DEG F

ELECTRICAL PANEL
P/N 550-005

POS. BATTERY TERMINAL
4 GA WIRE PROVIDED BY OTHERS



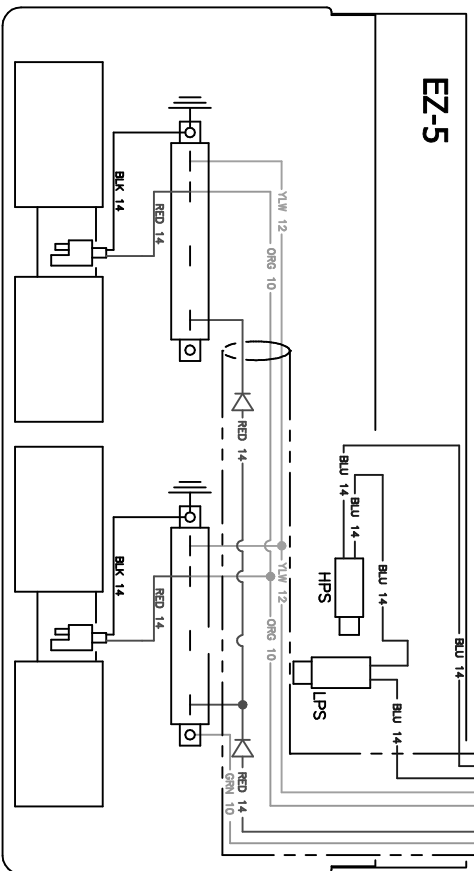
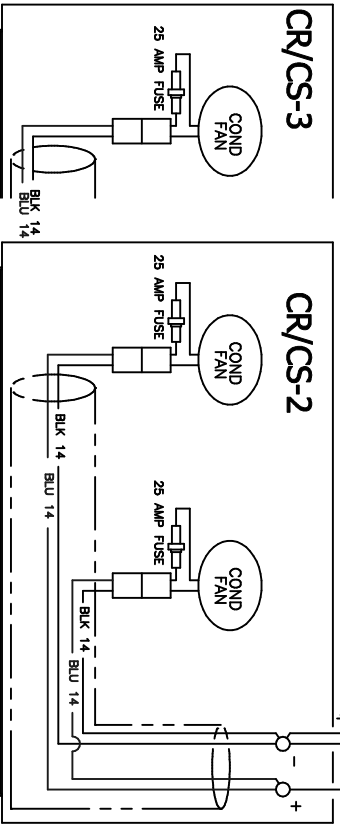
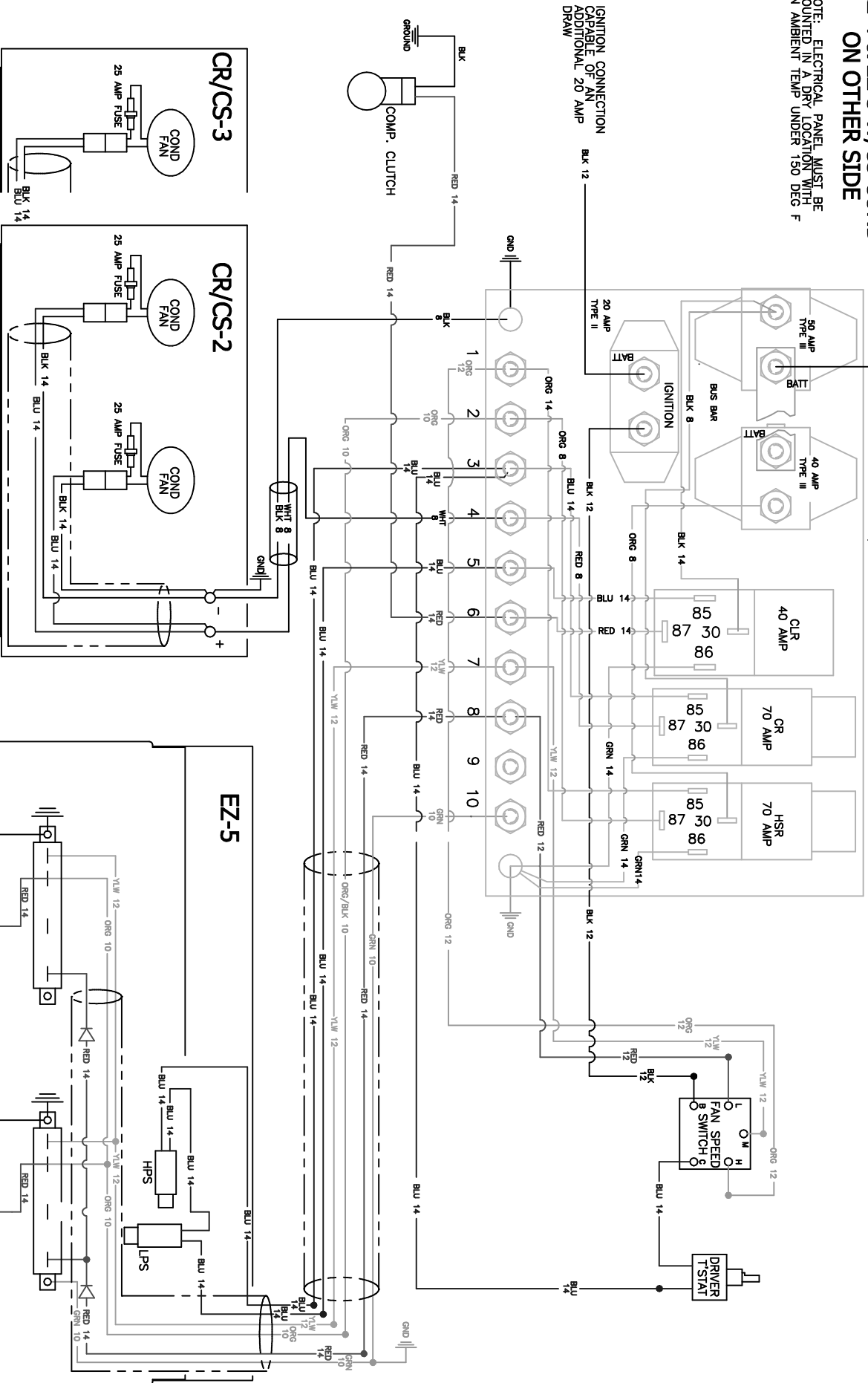
AMERICAN COOLING TECHNOLOGY, Inc.
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WIRING DIAGRAM
EZ-5 W/CS SERIES COND
DWG NO. 510-005-8
EZ-4 & EZ-3 W/CS COND
ON OTHER SIDE

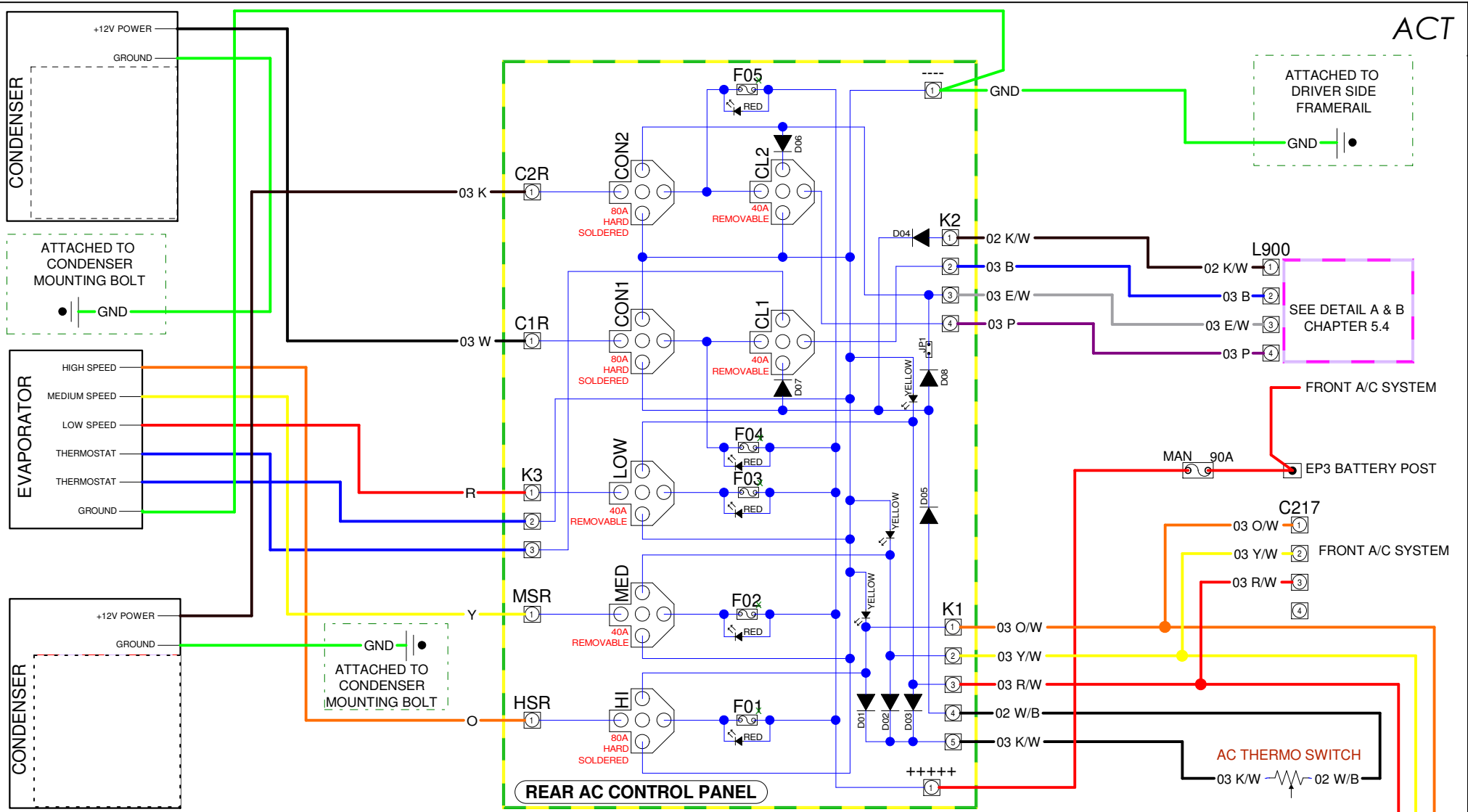
NOTE: ELECTRICAL PANEL MUST BE MOUNTED IN A DRY LOCATION WITH AN AMBIENT TEMP UNDER 150 DEG F

ELECTRICAL PANEL
P/N 550-005-8

POS. BATTERY TERMINAL
4 GA WIRE PROVIDED BY OTHERS



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▽ - CRITICAL CONTROL ITEM

TERMINALS C2R, C1R, MSR AND HSR MUST BE TORQUED TO 4 ± 1 FT. LBS. POWER AND GROUND POSTS MUST BE TORQUED TO 10 ± 1 FT. LBS.

NOTE:
1. TERMINAL POSITIONS ON PRINTED CIRCUIT CARD ARE USING SILK SCREEN MARKINGS NOT ACTUAL TERMINAL POSITIONS.

APPLICATIONS:
ACT for All Chassis

TITLE:
REAR A/C SYSTEM

CHAPTER:
ACT

SHEET:
2

NOTE: ELECTRICAL PANEL MUST BE MOUNTED IN A DRY LOCATION WITH AN AMBIENT TEMP UNDER 150 DEG F

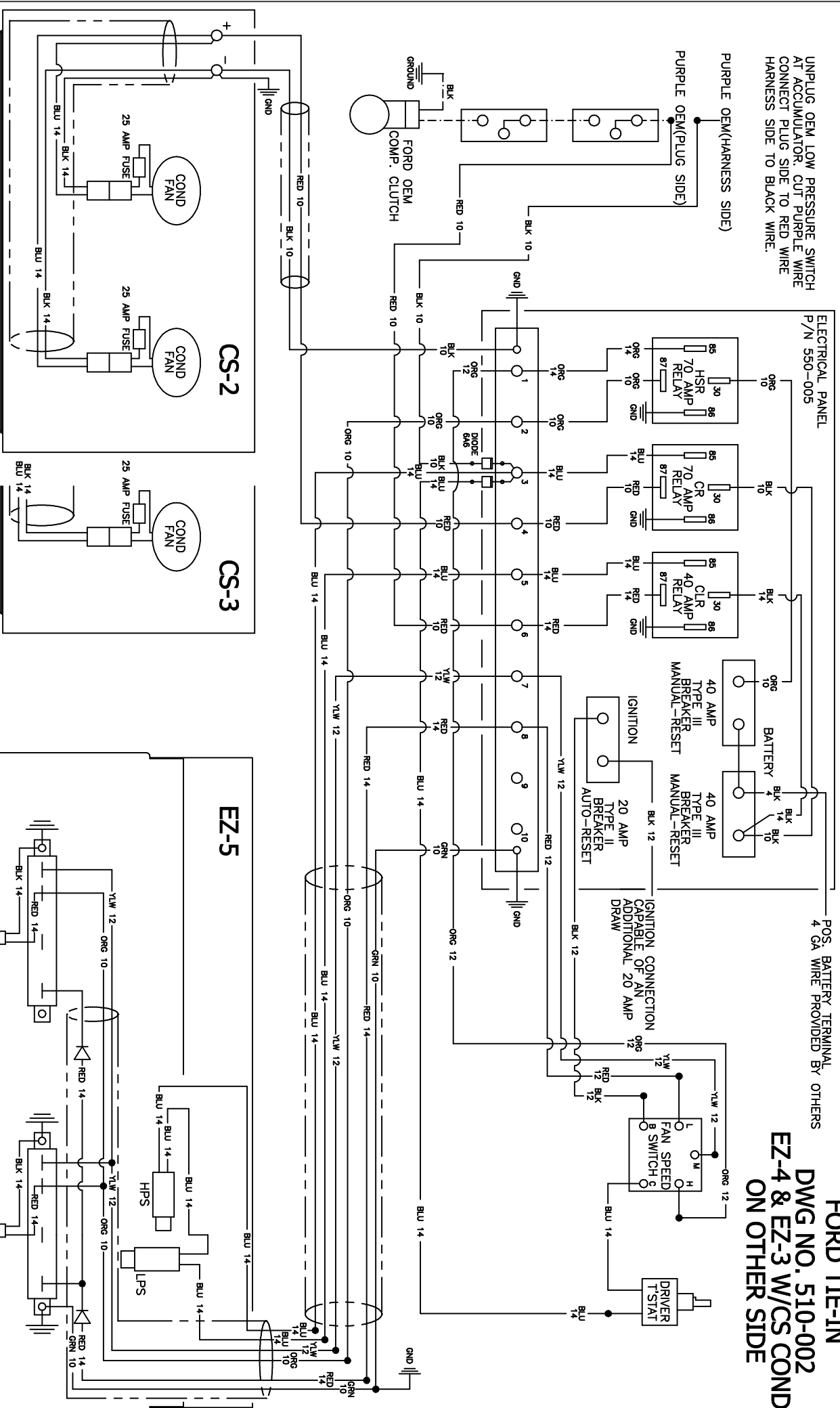
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POS. BATTERY TERMINAL 4 GA WIRE PROVIDED BY OTHERS

UNPLUG OEM LOW PRESSURE SWITCH AT ACCUMULATOR. CUT PURPLE WIRE HARNES SIDE TO BLACK WIRE.

PURPLE OEM(HARNES SIDE)

PURPLE OEM(PLUG SIDE)



WIRING DIAGRAM
EZ-5 W/CS SERIES COND
FORD TIE-IN
DWG NO. 510-002
EZ-4 & EZ-3 W/CS COND
ON OTHER SIDE

AMERICAN COOLING TECHNOLOGY, Inc.

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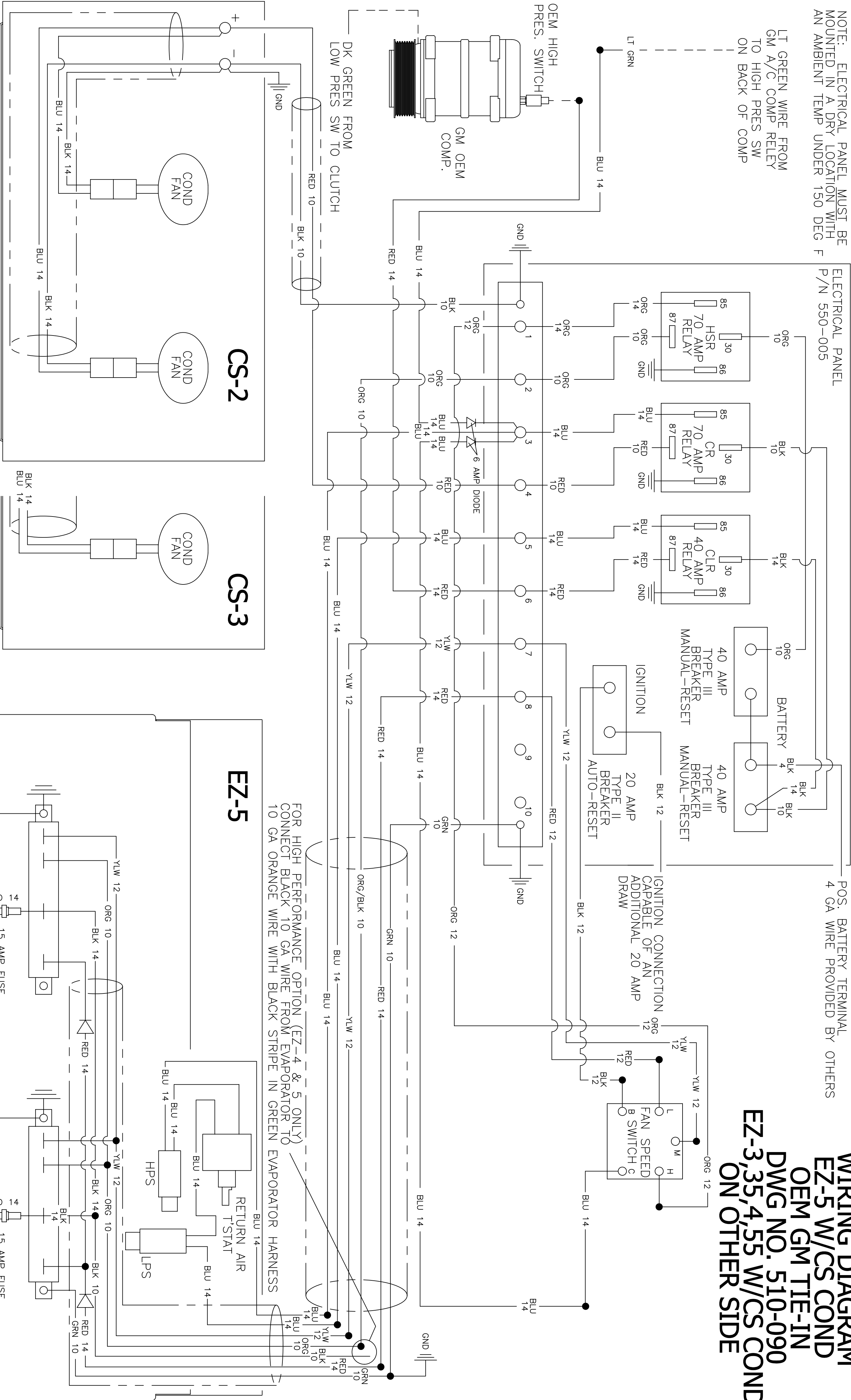
NOTE: ELECTRICAL PANEL MUST BE MOUNTED IN A DRY LOCATION WITH AN AMBIENT TEMP UNDER 150 DEG F

LT GREEN WIRE FROM GM A/C COMP RELAY TO HIGH PRES SW ON BACK OF COMP

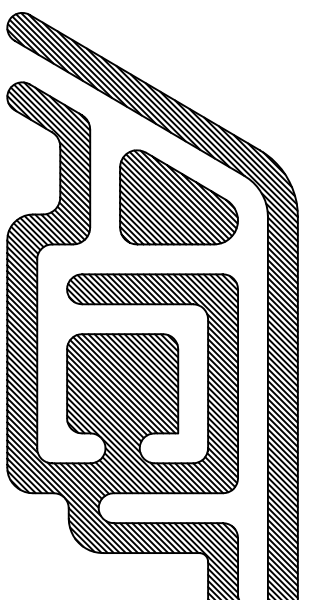
ELECTRICAL PANEL P/N 550-005

POS. BATTERY TERMINAL 4 GA WIRE PROVIDED BY OTHERS

WIRING DIAGRAM
EZ-5 W/CS COND
OEM GM TIE-IN
DWG NO. 510-090
EZ-3,35,4,55 W/CS COND
ON OTHER SIDE



FOR HIGH PERFORMANCE OPTION (EZ-4 & 5 ONLY) CONNECT BLACK 10 GA WIRE FROM EVAPORATOR TO 10 GA ORANGE WIRE WITH BLACK STRIPE IN GREEN EVAPORATOR HARNESS



AMERICAN COOLING TECHNOLOGY, Inc.
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EMIGSVILLE, PA 17318-0308
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(717) 767-2775

**AMERICAN COOLING TECHNOLOGY
BUS AIR CONDITIONING PREVENTATIVE MAINTENANCE WORK SHEET**

DATE:		TECHNICIAN:	
CUSTOMER:		MILEAGE:	
BUS I.D.#:		V.I.N.:	

Inspection Schedule	
Annually	= A
Seasonal	= S
Monthly	= M

UNDER HOOD INSPECTION	PASS	FAIL	ACTION	Inspection
CHECK COMPRESSOR MOUNTING HARDWARE				A
CHECK BELT(S) TENSION(S)				M
CHECK FITTINGS - TIGHT; NO OIL DEPOSITS				S
CHECK REFRIGERANT HOSES - SECURE; NO CHAFING				S
CHECK COMPRESSOR CLUTCH AIR GAP AND CONDITION				S
IF A/C SYSTEM MALFUNCTION CHECK HEAD PRESSURES				S
RECORD SYSTEM HEAD PRESSURES			HIGH SIDE LOW SIDE	S

CONDENSER INSPECTION				
CLEAN AND INSPECT COIL ASSEMBLY				S
CHECK FAN MOTOR CONDITION AND OPERATION				S
CHECK CONDENSER MOUNTING HARDWARE				A
CHECK ELECTRICAL CONNECTIONS - POSITIVE AND GROUND				S
INSPECT CONDENSER METAL HOUSING				A
CHECK MOISTURE INDICATOR AT SIGHT GLASS (DRY)			IF DRIER INDICATES "WET", CHANGE FILTER DRIER	S / M
CHECK REFRIGERANT LEVEL AT SIGHT GLASS (CLEAR)				S

EVAPORATOR INSPECTION				
REPLACE / CLEAN RETURN AIR FILTER				S / M
CHECK BLOWER THREE SPEED OPERATION				S
CHECK FOR VIBRATION				A
CHECK EVAPORATOR MOUNTING HARDWARE				A
CLEAN EVAPORATOR DRAIN PAN				S
CHECK CONDENSATE DRAIN OPERATION				S
INSPECT CONDENSATE INSULATION TAPE ON TXV FITTINGS				A
INSPECT AIR OUTLET LOUVERS				A
CLEAN COVER AND RETURN AIR GRILL				S

GENERAL INSPECTION				
CHECK CONNECTIONS AT A/C ELECTRICAL CONTROL PANEL				S
CHECK FAN SPEED SWITCH OPERATION				S
CHECK THERMOSTAT OPERATION				S
LEAK TEST ALL FITTINGS AND HOSES (LOW REFRIGERANT)				S



WARRANTY LABOR RATE ALLOWANCE

ACT WARRANTY PROCESS		
CODE	DESCRIPTION	LABOR RATE
A - 1	Diagnosis - Includes :	
	Identifying Necessary Repairs -Obtain ACT Unit Serial Number	.50 hr
	Contact ACT For Warranty Authorization Number	

COMPRESSOR		
CODE	DESCRIPTION	LABOR RATE
C - 1	R & R Compressor	1.00 hr
C - 2	R & R Compressor Mt. Bracket	1.50

CONDENSER		
CODE	DESCRIPTION	LABOR RATE
CS-1	R & R Condenser Motor	.25 hr
CS-2	R & R Condenser Motor In Line Fuse	.25
CS-3	R & R Filter-drier	.25
CS-4	R & R Condenser Coil	2.00
CS-5	R & R Condenser Assembly	1.00

EVAPORATOR		
CODE	DESCRIPTION	LABOR RATE
EZ-1	R & R Evaporator Drain Pan	.50 hr
EZ-2	R & R Evaporator Blower Assembly	.50
EZ-3	R & R Evaporator Blower Resistor	.25
EZ-4	R & R Evaporator Blower In Line Fuse	.25
EZ-5	R & R High / Low Pressure Switch	.25
EZ-6	R & R Expansion Valve	.50
EZ-7	R & R Evaporator Thermostat	.25
EZ-8	R & R Evaporator Coil	2.00
EZ-9	R & R Evaporator Assembly	1.00

ELECTRICAL		
CODE	DESCRIPTION	LABOR RATE
E - 1	R & R Any Circuit Breaker	.25 hr
E - 2	R & R Any Relay	.25
E - 3	R & R Fan Speed Switch	.25
E - 4	R & R Thermostat Switch	.25

FITTINGS / REFRIGERANT		
CODE	DESCRIPTION	LABOR RATE
F - 1	R & R Any Hose Fitting	.25 hr
F - 2	R & R Any O-Ring	.25
F - 3	Install Hose Splice	.25
F - 4	Refrigerant Recovery Evacuation and Recharge	1.00
F - 5	Refrigerant Allowance R134a Price Per lb NOT To Exceed	\$ 9.00 per Lb.
F - 6	Flush System	1.00

Contact the American Cooling Technology Service Department for warranty authorization. No warranty will be allowed without prior authorization. A.C.T. assumes no responsibility for installation related repairs. In determining warranty coverage, please contact American Cooling Technology's Service Department at 877-228-4247.



O-ring Torque Chart

The following chart shows the torque that must be used in each pilot O-ring fitting with ACT products.

Size	Tube OD	Steel Tubing	Aluminum Tubing	Copper Tubing	Thread
4	¼" (.250")	30-35 Lbs-Ft	5-7 Lbs-Ft	8 Lbs-Ft	7/16"
6	3/8" (.250")	30-35 Lbs-Ft	11-13 Lbs-Ft	12 Lbs-Ft	5/8"
8	1/2" (.500")	30-35 Lbs-Ft	15-20 Lbs-Ft	17 Lbs-Ft	3/4"
10	5/8" (.625")	30-35 Lbs-Ft	21-27 Lbs-Ft	23 Lbs-Ft	7/8"
12	3/4" (.750")	30-35 Lbs-Ft	28-33 Lbs-Ft	30 Lbs-Ft	1-1/16"