

RV P

RV Products

A Division of AIRXCEL, Inc.

SERVICE MANUAL

FOR

6535 SERIES TWO TON HIGH EFFICIENCY

PACKAGED HEAT PUMPS

Wirebox

Evaporator Bulkhead

Outdoor Coil

Compressor 2

Outdoor Blower

Indoor Blower

Indoor Coil

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		30
8.		
9.		
od of		
10.		
11.		

12.

A. 6535-3451 Coleman-mach Series Thermostat B. 6535-3351

Coleman-mach Series Thermostat Heat Pump

Operation Sequence Cooling Mode. Heat Pump

Operation Sequence Heating Mode Wirebox

Component Checkout..

A. Wirebox Component Checkout 6535 (-) Series. B.

Wirebox Component Checkout 6535 (A) Series Service

Problems And Possible Solutions.

Electrical Diagnostic Flow Charts...

A. Cooling Mode Operation..

A.1 No Cooling; Cooling Mode (Green L.E.D. Light Circuit) A.2

No Indoor Blower Low Speed; Cooling Mode A.3 No Indoor

Blower High Speed; Cooling Mode. A.4 Compressor #1

Checkout; Cooling Mode. A.5 Compressor #2 Checkout; Cooling Mode.

B. Heating Mode Operation....

B.1 No Heating; Electric Heat Mode (Green L.E.D. Light Circuit) B.2 No Indoor Blower; Electric Heat Mode...

B.3 Compressor #1 Checkout; Electric Heat Mode. B.4 Compressor #2 Checkout; Electric Heat Mode.

B.5 No Reversing Valve Operation Electric Heat Mode ..

C. Outdoor Blower Motor; Heating or Cooling Mode ..

C.1 No Outdoor Blower Low Speed.

C.2 No Outdoor Blower High Speed

.

13.

14.

Wiring Diagram - 6535 (-) Series .

Wiring Diagram - 6535 (A) Series..

1. WARNINGS

IMPORTANT NOTICE

These instructions are for the use of qualified individuals specially trained and experienced in installation of this type equipment and related system components.

Installation and service personnel are required by some states to be licensed. PERSONS NOT QUALIFIED SHALL NOT INSTALL NOR SERVICE THIS EQUIPMENT.

SHOCK HAZARD

TO PREVENT THE POSSIBILITY OF SEVERE PERSONAL INJURY, DEATH, OR EQUIPMENT DAMAGE DUE TO ELECTRICAL SHOCK, ALWAYS BE SURE THE POWER SUPPLY TO THE APPLIANCE IS DISCONNECTED BEFORE DOING ANY WORK ON THE APPLIANCE, THIS CAN NORMALLY BE ACCOMPLISHED BY SWITCHING THE BREAKER FOR THE AIR CONDITIONER TO OFF,

DISCONNECTING ALL EXTERNAL ELECTRICAL CONNECTIONS AND CORDS, SWITCHING ON BOARD ELECTRICAL GENERATORS AND INVERTOR TO OFF, AND REMOVING THE CABLE FROM EACH POSITIVE TERMINAL ON ALL STORAGE AND STARTING BATTERIES.

CAREFULLY FOLLOW ALL INSTRUCTIONS AND WARNINGS IN THIS BOOKLET TO AVOID DAMAGE TO THE EQUIPMENT, PERSONAL INJURY OR FIRE.

WARNING

Improper installation may damage equipment, can create a hazard and will void the warranty.

The use of components not tested in combination with these units will void the warranty, may make the equipment in violation of state codes, may create a hazard and may ruin the equipment.

2

2. ACCESSIBILITY OF APPLIANCE

The accessibility of this appliance will vary from one installation to another. It shall be left to the service technicians.

judgement, the best method of attaining access to perform service.

3. UNIT DIMENSIONS AND SPECIFICATIONS

PACKAGE HEAT PUMP MODEL NUMBER BREAKDOWN FOLLOWS:

6

5 3

5

Model Series

Revision
Letter

X 7 1

6 - Panasonic Compressor(s)
7- Sanyo Compressor(s) 8 -
Tecumseh Compressor(s)

4. UNIT SPECIFICATIONS AND IDENTIFICATION

6535-871			
MODEL NUMBER			
FOR OUTDOOR USE		X	
		SERIAL NUMBER	
		UP	
USE THERMOSTAT 6535*3451 ELECTRICAL RATINGS: 115 VAC, 60 HZ, 1 PHASE			
CIRCUIT #1		CIRCUIT #2	
8.8	RLA	RLA	8.8
		COMPRESSOR	
54.0	LRA	1450-214 MOTOR	LRA
		THERMALLY PROTECTED	54.0
10.3	BCSC		BCSC
			10.3
3.4	FLA	I.D. BLOWER	FLA
		MOTOR DATA HORSEPOWER 1/3	N/A
		O.D. BLOWER	
2.8	FLA	MOTOR DATA HORSEPOWER 1/3	

			FLA	3.7
19.0	AMP	MINIMUM CIRCUIT CAPACITY AMP		16.6
		MAXIMUM OVERCURRENT		
20	AMP		AMP	20
		PROTECTIVE DEVICE		
30.75	OZ.	R-22 CHARGE WEIGHT	OZ.	30.75
		MINIMUM EXTERNAL STATIC PRESSURE .4 IN H ₂ O		
#12	0' - 25'	MIN. SUPPLY	0' - 25'	#12
		CONDUCTOR GAUGE		
#10	25' - 40'	UTILISER DES FILS (COPPER)		
		D'ALIMENTATION EN	25-40'	#10
#8	40' - 63'	CURVE	40'-63'	#8

3

SUPPLY ATR
DISCHARGE

CONTROL
WIRING
ENTRY

ma

5. UNIT DEPICTION FIGURES

20
%

COMPRESSOR
CABINET
DOOR

SUPPORT RAIL
SUGGESTED
LOCATIONS

POWE
R
WIRING
ENERGY

CONDENSER AIR
DISCHARGE

ELECTRIC

BOX DODR

FIGURE 1

EVAPORATO
R COIL

24-3
20

54-

CONDENSE
R
COIL

FIGURE 2

CONDENSATE DRAIN
OPENING

6. GENERAL INFORMATION

This packaged heat pump mounts below the floor of the vehicle. The innovative design makes it possible to maintain a smooth, free-flowing roof line for the vehicle. It also relocates all noise and condensate drainage off the roof to below the floor of the vehicle.

The heat pump contains a dual compressor system. It combines the capacity of two roof mounted units into one highly efficient and compact package.

Each compressor is connected to a separate refrigeration circuit. The system can be operated with a single compressor when the air conditioning requirement is low, or with two compressors when maximum performance is required.

This heat pump operates a two-stage system. The first compressor and refrigeration circuit is referred to as "1st Stage". The second compressor and refrigeration circuit is referred to as "2nd Stage". First and second stage will operate as indicated below.

1st stage (the first compressor and refrigeration circuit), will operate when:

- 1) The thermostat is demanding cooling or electric heating,
- 2) The vehicle is being powered by either shore line or the on-board generator.

2nd stage (the second compressor and refrigeration circuit), will operate when:

- 1) The thermostat senses room temperature that is 2 degrees or higher than the setpoint temperature on the thermostat.

Switching and control of 1st and 2nd stage cooling is automatic. When the cooling demand does not require that both systems operate, stage two will shut down leaving stage one in operation. **Heat operation always energizes both stages,**

however, only stage one operates if power is not available to circuit #2.

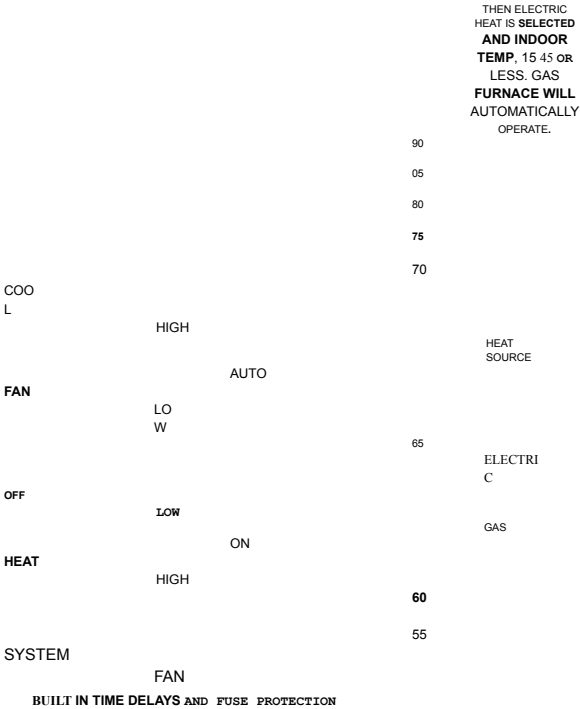
7. THERMOSTAT SPECIFICATIONS

8.8.8.

Coleman

-

Mach



7A.

SET TEMP. RANGE: THERMOSTAT - 6535-3451 COLEMAN-MACH SERIES THERMOSTAT

DISPLAY TEMPERATURE:

SCALE:

DISPLAY FORMAT:

RESOLUTION:

ACCURACY:

SAMPLING RATE:

POWER SOURCE:

OPERATING TEMPERATURE:

OUTPUT LOAD:

SAFEGUARDS:

55 TO 90 DEGREES F.

-20 TO 160 DEGREES F.

DEGREES FAHRENHEIT

LIQUID CRYSTAL DISPLAY

ONE DEGREE F.

+ 2% OF DISPLAY TEMPERATURE RANGE

EVERY 30 SECONDS

12 VDC NON-REGULATED, NON-FILTERED + 2 VOLTS

-10 TO +55 DEGREE C.

40 mA MINIMUM TO 1.5 AMP MAXIMUM FOR EACH OUTPUT

STATIC ELECTRICITY PROTECTION TO END USER AFTER INSTALLATION

ANTI-STATIC PACKAGING TO BE USED FOR SHIPMENT

SPIKE PROTECTION TO 400 VDC ON R+ TERMINAL

CONFORMAL COATING ON P.C. BOARD PROTECTION FROM MOISTURE

5

DEFAULT MODE:

WHEN THE THERMOSTAT IS SWITCHED TO HEAT AND ELECTRIC HEAT IS SELECTED ON THE SUB-BASE, AND THE OUTDOOR TEMPERATURE FALLS TO A POINT AT WHICH THE HEAT PUMP SHUTS DOWN (USUALLY BETWEEN 25 - 40 DEGREES), THE SUB-BASE WILL AUTOMATICALLY ALSO CALL FOR GAS FURNACE OPERATION IF THE INDOOR TEMPERATURE DROPS TO 45 DEGREES. GAS FURNACE OPERATION WILL SHUT OFF AT 60 DEGREES. THE USER SHOULD SWITCH THE SUB-BASE TO GAS HEAT IF THIS OCCURS.

6535-3451 Thermostat Operation

The heat pump is operated from the wall mounted thermostat.

This thermostat will also operate the 12VDC furnace connected to this thermostat.

Identification and operational descriptions for all thermostat switches and display are listed below:

1.

2.

Liquid Crystal Display - The display will be visible any time the system is in operation. The display will remain visible while the thermostat is on and powered.

System Switch - The system switch has four positions to control the operation of the heating and air conditioning systems. They are as follows:

COOL - When in the cool position, 1st and 2nd stage cooling will cycle from the cooling system setpoint. Blower operation will be controlled by the position of the Cooling Fan Switch.

HEAT - When in the heat position, the heating system will cycle from the heating system setpoint. Heat will be by electricity (heat pump) or gas as selected on sub-base. The gas heating blower will operate per the heating system manufacturer specifications.

OFF - When in the off position, no thermostat or system operation will occur.

FAN - When in the fan position, the **cooling** blower will operate continuously at high speed.

3.

Cooling Fan Switch - The fan switch has four positions from which to control the operation of the cooling blower. The fan switch controls operation of the cooling blower only after the system switch is placed into the COOL position. With the system switch in any other position, the fan switch will have

4.

no effect on the operation of the cooling blower. Fan switch positions and their resulting function are listed below:

HIGH AUTO - When in the high automatic position, the cooling blower operates at high speed and cycles off and on with the 1st stage compressor. 2nd stage cooling will cycle on and off as needed having no effect on cooling blower operation.

LOW AUTO - When in the low automatic position, the cooling blower operates at low speed and cycles off and on with the 1st stage compressor. 2nd stage cooling will cycle on and off as needed having no effect on cooling blower operation.

LOW ON - When in the low on position, the cooling blower operates continuously at low speed. Stage 1 and Stage 2 compressors cycle on and off as needed.

HIGH ON - When in the high on position, the cooling blower operates continuously at high speed. Stage 1 and Stage 2 compressors cycle on and off as needed.

During heat pump operation, the blower operates at high speed with heat demand.

Heat Source Switch - The heat source switch has two positions to control the operation of the heating systems. They are as follows:

ELECTRIC - When in the electric heat position, the heat pump will cycle from the heating system setpoint. Gas heat default is as described above in the thermostat specifications

GAS - When in the gas heat position, the furnace will cycle from the heating system setpoint.

6

WHT
TO FURNACE CONTROL

HEAT
30 SEC
002 DELAY ON FO
MAKE

6535-3451 Thermostat Wiring

SYSTEM SWITCH

1st STAGE
COOL

FAN
SWITCH

II
AUTO

www.Btu
G

O
COOL
FAN
OFF

6535-3451
WALL THERMOSTAT/
SUB-BASE

HEAT 2nd STAGE
COOL

LO
LO
HI
}
O
N

F

3
Freeze
Switch
& Exclusion
Relay

R

+12 VDC

1

FY
Freeze
Switch
& Exclusion
Relay

Y2

30 SEC
DELAY ON
WAKE

2 MIN
DELAY ON
BREAK

6

Coolin
g
Compresso
r #2

Y1 Cooling
Compresso
r #1

B
Neg
12
VDC

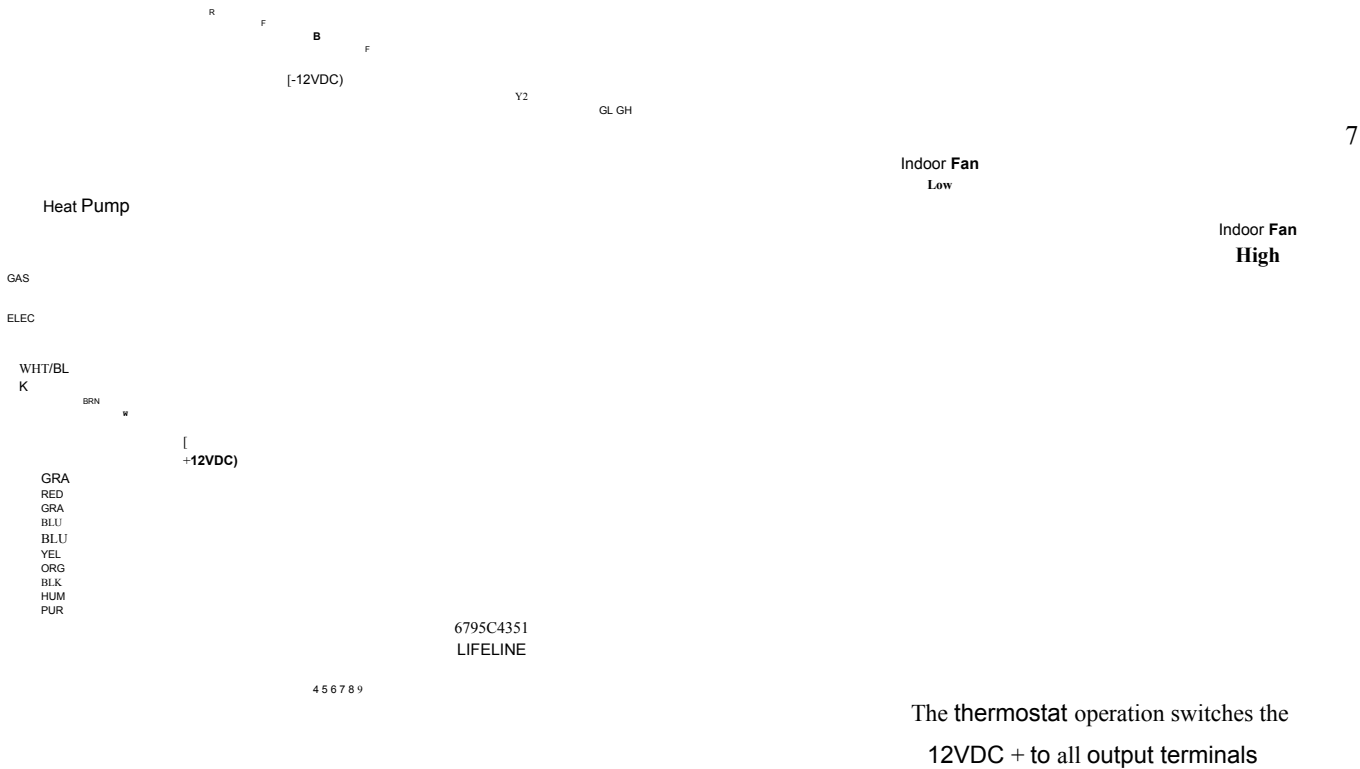
2 MIN
DELAY ON
BREAK

30 SEC
DELAY ON
WAKE

GL

W

GH



The thermostat operation switches the 12VDC + to all output terminals

7B. THERMOSTAT - 6535-3351 COLEMAN-MACH SERIES THERMOSTAT

SET
ROO
M

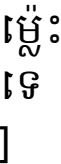
DIFF

88

Coleman-Mach

TRUEAIR
RESIDENTIAL CENTRAL
HEATING & AIR CONDITIONING

#



#

Gas Heat

FAN MODE

THERMOSTAT

FAN SPEED

6335-3351 THERMOSTAT OPERATION

The display indicates room temperature and the word ROOM is shown on the LCD until the temperature selector is pressed; at which time the display temporarily indicates the setpoint temperature and the word SET is shown on the LCD. Each time the UP arrow is pressed, the setpoint will increase. Each time the DOWN arrow is pressed, the setpoint will decrease. Once the temperature selector button is no longer pressed for a few seconds, the room temperature will again be displayed, and the word ROOM will be displayed on the LCD.

In electric heat mode, if the heat pump is unable to satisfy the thermostat, DIFF will flash on the thermostat LCD when 2nd

stage heating is required to satisfy the thermostat,

In gas heat mode, the gas furnace will provide the only source of heat and the heat pump is locked out.

NOTE

The temperature displays in degrees Fahrenheit as a factory set default (See Figure 2). To display in degrees Celsius, move the jumper marked "F" and "C" to bridge between middle pin and position "C".

7

6535-3351 Heat Pump Thermostat Example To Bring On Gas Furnace as 2nd Stage Heat

Setpoint

70

Indoor Temp.

70+

69

71

69

65

71

69

65

71

69

71

!!!

69

65

71

!!!

69

71

Operation

No functions occur

Heat Pump turns on (Primary heat source)

Heat Pump turns off (Thermostat satisfied)

Heat Pump turns on

Gas Furnace turns on (Heat Pump not able to satisfy Thermostat) (First strike for 2nd stage heat counter)

Heat Pump and Gas Furnace turn off (Thermostat satisfied)

Heat Pump turns on

Gas Furnace turns on (Heat Pump is again unable to satisfy Thermostat), (2nd stage heat counter reaches 3rd strike and Heat Pump is locked out for 2 hours), **2nd stage** heat counter is reset **if Heat Pump is running** for **more than 20 minutes and does not call for 2nd stage** heat

Gas Furnace turn off (Thermostat satisfied)

Gas Furnace turns on (Becomes Primary heat source)

Gas Furnace turns off (Thermostat Satisfied)

After 2 hour lockout

Heat Pump turns on (Resumes as Primary heat source)

Gas Furnace turns on (Becomes primary heat source) (Heat Pump is locked out for another 2 hours) Gas Furnace turns off (Thermostat Satisfied)

After 2 hour lockout

Heat Pump turns on (Resumes as primary heat source)

Heat Pump turns off (Thermostat satisfied)

(2nd stage heat counter is reset any time Heat Pump satisfies thermostat setpoint and does not need Gas Furnace)

The word "DIFF" will flash on LCD when 2nd stage heat is operating. There is a 30 second delay between Stage 1 and Stage 2. Heat pump operation. There is also a 3 minute anti-short cycle delay time of 3 minutes for cooling.

6535-3351 Thermostat Wiring

(WHP) HEAT PUMP	WHITE/BLACK
(GH) COOLING HIGH FAN	BLACK
(B) 12 VDC NEGATIVE	BLUE
(F) FREEZE SWITCH	GRAY
	(4)
	(7)
(R) 12 VDC POSITIVE	RED
(F) FREEZE SWITCH	GRAY
	(2)(5) 8
	(3) (6
	)
	(9
	)
(Y1) COMPRESSOR ONE	YELLOW
(Y2) COMPRESSOR TWO	ORANGE
(GL) COOLING LOW FAN	PURPLE
(R) 12 VDC POSITIVE	
(B) 12 VDC NEGATIVE	
(W) GAS FURNACE	RED
	BLUE
	2
	WHITE

3

0

0

8

The thermostat operation switches the
12VDC + to all output terminals

6535-335 2-stage Heat Pump Thermostat Operation Table

	Mode Switch	Fan Mode Switch	Fan Speed Switch	Calling	Operation
1	Cool	Auto	Lo	No	No functions occur in this mode
2	Cool	Auto	Lo	Stage 1	
3	Cool	Auto	Lo	Stage 2 2° Above Set	
4	Cool	On	Lo		
5	Cool	On	Lo		
6	Cool	On	Lo		
7	Cool	Auto	Hi		
8					

	Cool	Auto	Hi		
9	Cool	Auto	Hi		
10	Cool	On	Hi		
11	Cool	On	Hi	1° Above Set	
				No	
				Stage 1 1° Above Set	
				Stage 2 2° Above Set	
				No	
				Stage 1 1° Above Set	
				Stage 2 2° Above Set	
				No	
				Stage 1 1° Above Set	
				ID fan low, compressor #1 and OD blower low cycle as needed	
				ID fan low, compressors #1 & #2 and OD blower high cycle as needed	
				ID fan low continuous	
				ID fan low continuous, compressor #1 and OD blower low cycle as needed	
				ID fan low continuous, compressors #1 & #2 and	

OD blower high cycle as needed

No functions occur in this mode

ID fan high, compressor #1 and OD blower low cycle as needed

ID fan high, compressors #1 & #2 and OD blower high cycle as needed

ID fan high continuous

ID fan high continuous, compressor #1 and OD blower low cycle as needed

ID fan high continuous, compressors #1 & #2 and OD blower high cycle as needed

12

Cool

On

Hi

Stage
2

2° Above Set

13

Off

Auto

Lo or Hi

No

No functions occur in this mode

14

Off

On

Lo

No

ID fan low continuous

15

Off

On

Hi

No

ID fan high continuous

16

Gas Heat

Auto or On

Lo or Hi

No

No functions occur in this mode

17

Gas Heat

Auto or On

Lo or Hi

Stage
1

Heater will be energized to run

18

Gas Heat



8. A TYPICAL COOLING CYCLE OF THE HEAT PUMP

Begins with a **call** from the wall thermostat for High or Low **fan** (customer choice).

Indoor **fan** starts on the selected speed.

Within a few seconds the thermostat will call for cooling.

Compressor 1 starts.

Outdoor fan starts 2 seconds later (Low Speed).

1 minute later the thermostat calls for second stage cool (subject to 2 degree temp. differential).

Compressor 2 starts, the outdoor fan goes off (subject to available 115 volt power supply).

Outdoor fan starts again 2 seconds later (High Speed).

Both systems operate to satisfy the thermostat.

Both compressors shut off at setpoint temperature.

When the thermostat calls for cooling again it will start by calling for stage one only.

If the heat pump is unable to keep up with the load, stage 2 will start again when the indoor temperature is 2 degrees above the setpoint.

9. A TYPICAL HEATING CYCLE OF THE HEAT PUMP (Electric Heat Mode)

Begins with a call from the wall thermostat for Electric Heat.

Indoor fan starts on High Speed.

Both reversing valves switch to heat mode.

Compressor 1 starts.

Outdoor fan starts 2 seconds later (Low Speed).

30 seconds later the Heat Pump circuit board will energize the Compressor Relay #2.

Compressor 2 starts, the outdoor fan goes off (subject to available 115 volt power supply).

Outdoor fan starts again 2 seconds later (High Speed).

Both systems operate to satisfy the thermostat.

Both compressors shut off at set point temperature.

If the Heat Pump is unable to maintain the coach temperature, the thermostat will automatically cycle the furnace on. The new True-Air Thermostats (Electric Heat Mode) will call for second stage (Furnace) heating operation anytime the temperature inside the coach is more than 5 degrees cooler than the customers chosen setpoint temperature. It is entirely possible the furnace and the heat pump may both operate at the same time to satisfy the thermostat.

Thermister Ignored If "W"
Is Not Energized. Opens
At 18° ±3°F, Closes At 38°
±3°F (Actual Coil
Temperature)

T14 & T15 - Cooling Freeze Thermister
Ignored If "W" Is Energized. Opens
At 28° ± 3°, Closes At 55°43° (Actual
Coil Temperature)

Green L.E.D. Light Indicator
System 1 Line Power OK. Freeze
Sensor Circuit Is Closed. 12 VDC From
Thermostat OK.

Exclusion Relay Energized From
System 1. 115V Power Closes "FF" Circuit
To Thermostat Unless Freeze Sensor Is Open,

T3A & T3B - 12 VDC (-) From B On
Thermostat

T2 - 12 VDC (+) From "Y!" In Cooling
Mode. "W" In Heating Mode On
Thermostat To Compressor #1 Relay

T10 - 12 VDC(+) From Y2 In Cooling
Mode & "W" In Heating Mode On
Thermostat To Compressor #2 Relay

Indoor Blower High 12 VDC Coil, 1
Pole Relay Energized From "GH"
On Thermostat In Cooling Mode.
Energized From "W" On
Thermostat In Heating Mode. Makes
Circuit #1 To High Speed Motor Tap.

Indoor Blower High 12 VDC Coil, 1
Pole Relay Energized From "GL" On
Thermostat Cooling Mode. Not
Energized In Heating Mode.

Start
Capacitor

LED 2 O.D. Blower High. Red Light Indicates System #2
Compressor Relay Has Made And Outdoor Blower
Running On High Speed System #2 Power.

O.D.
Blower
Low

O.D.
Blower
High

*Rev.
Valve
Relat

-See T3A

Fan
Capacito
r

AN

Compressor
Run Capacitor

°
Compressor #1 Relay. 12 VDC
Coil Makes Circuit #1 To Compressor
#1

Compressor #2 Relay. 12 VDC
Coil Makes Circuit #2 To
Compressor #2

LED 1 O.D. Blower Low. Red Light Indicates #1
Compressor Relay Has Made And O.D. Blower
Operation Low Speed System #1

High Pressure
Switch Manual Reset

T4 - (L1) Power From System Compressor
Energizes O.D. Blower Relay Low Speed On
Terminal Board

T11 115V Line (L1) Power Output To O.D.
Blower Low Speed System #1

T5 - System #1 Common Lead (L1) To O.D.
Blower Relay Low Speed Through Normally
Closed Contactor On Switching Relay

T13 - Power Lead Output To O.D. Blower High Or
Low Speed

T8 - System #2 Common (L2) Power To
Switching Relay And To Blower Relay
High Speed.

T19 Reversing Valve Common For 1st & 2nd
Stage Valves (L2)

T18 - Reversing Valve (L1) 115V VAC For
1st* 2nd Stage Valves. Energized In The Heat
Mode.

T12 - 115V Line (L1) Power Output To
O.D. Blower High Speed System #2,

T9 - Energizes O.D. Blower High Speed Relay
And Switching Relay Power Comes From
Compressor #2 Relay.

115V Supply Terminal Board

Supply
Ground
Terminal

Supply
Ground
Terminal

Notes: The drawing above depicts a typical control box for the 6535 "-" Model Heat Pump

only.

Heat Pump control boxes beginning with the “A” model do not have a high pressure switch,

The Heat Pump Printed Circuit Board has changed from time to time, the terminal designations and board components as noted above may have changed locations on the board. *Use the above drawing only as a reference.*

T15 & T14 Cooling
Freeze Thermister Ignored
If "W" Is Energized.
Opens At 28 Degrees
±3, Closes At 55
Degrees
±3.

Green LED Light
Indicator - System 1
Line Power OK. Freeze
Sensor Circuit Closed. 12
VDC Thermostat OK.

Exclusion Relay
Energized From System
1. 115V Power Closes "FF"
Circuit To Thermostat Unless
Freeze Sensor Is Open.

T17 & T16 - Heat Freeze
Thermister Ignored If "W"
Is Not Energized. Opens
At 18 Degrees, Closes At
38 Degrees.

OUTDO
OR

COIL
SENS
OR

T12 115V Line Power
Output To O.D. Blower
High System #2

T9 - Energizes O.D.
Blower High Speed
Relay
And Switching
Relay. Power Comes
From Compressor #2
Relay.

Output To O.D.
Blower Low **Speed**
System #1.

T4L1 Power From System
Compressor
Energizes O.D.
Blower Relay Low
Speed.

OUTDO
OR
BLOWE
R

HIGH
OUT

COMP 2
CONTA
CT

IN
OUTDO
OR
BLOW
ER

LOW
OUT

COMP
I

CONTA
CT IN

LED O.D. Blower High.
Red Light Indicates
System #2 Compressor
Relay Has
Made

LED OD. Blower Low. Red
Light Indicates System
#1 Relay Has Made.

INDO
OR

COIL
SENS
OR

T17
T16
S11
714

10B.

Power Load Output To O.D. Blower High Or Low Speed

WIREBOX COMPONENT CHECKOUT

6535 "A" Model Printed Circuit Board

THERMOS
TAT

D
O
O
G

HI

LO
W
TEMP OK

AC DC

16
TIB
T3A
TIO

T3B

T13

Te

15

T19

T3A & B - 12 VDC (-) From "B"
On Thermostat.

BLU
E

COMP
2
COIL

ORAN
GE

BLU
E

COUP
I

COIL

YELLO
W]

COIL

RE
V

VALV
E

T10-12 VDC (+)
From Y2 In
Cooling Mode
And **"W"** In Heating
Mode On
Thermostat To
Compressor #2.

T2 - 12 VDC (+)
From
Y1 In Cooling
Mode
And **"W"** In Heat Mode
On Thermostat **To**
Compressor #1
Relay

T18 - Reversing Valve
(LI) 115 VAC For 1st
And **2nd** Stage
Valves. Energized In
The Heat Mode.

OU
T

INDO
OR

T7 - Indoor Blower Low

BLOW
ER

LO
W
OU
T

12 VDC Coil
Energized From "GL"
On
Thermostat. Cooling
Mode Not Energized
In Heating Mode.

ACI IN

BLAC
K

INDO
OR
BLOW
ER

HIG

H
OUT

T1-(L1) Incoming
Power From Circuit 1.

T6 - Indoor Blower High Energized From "GH" Or Thermostat Cooling Mode And "W" On Heat Mode.

T8 - System #2 Common
(L2) Power To Switching
Relay And To Blower
Relay High Speed.

T5 System #1 Common
Lead To O.D. Blower Relay
Low Speed Thru
Normally Closed
Contactor On Switching
Relay.

T19 - Reversing Valve
Common For 1st And 2nd
Stage Valves (L2).

11. SERVICE PROBLEMS AND POSSIBLE SOLUTIONS

COOLING MODE

Problems

1. **Nothing Runs - Cooling Mode**
2. **IDFM* Runs, No Compressor, No ODFM***
- 3.

4.

5.

6.

IDFM* Runs, ODFM* Runs, No Compressor

IDFM* Runs, Compressor Runs, No ODFM*

**Compressor Runs, ODFM* Runs, No
IDFM***

**Compressor, ODFM*, IDFM* Runs, Insufficient
Cooling**

**Compressor, ODFM*, IDFM* Runs, Unit
Is Heating While In Cool Mode**

Possible Solutions

**No A/C Voltage, No 12 VDC, Thermostat, Wiring, P.C.
Board, High Pressure Switch Open**

Cooling Freeze Thermister - (Insufficient Indoor Air Flow), Thermostat, Wiring, Compressor, Contactor, P.C. Board

**Insufficient Voltage To Unit, Run Capacitor, Start Device,
Overload, Wiring, Compressor**

Run Capacitor, Fan Motor, P.C. Board, Wiring, Fuse On Motor Black Wire

**Thermostat, Run Capacitor, Wiring, Fan Motor, P.C.
Board,**

**Air Flow Restriction, High Ambient Temperature,
Undersized Refrigeration System, Very Little Or No
Refrigerant Charge, Compressor**

Thermostat, Wiring, P.C. Board, Reversing Valve

HEATING MODE

Problems

1. **Nothing Runs - Heat Mode**

2.

3.

4.

5.

6.

7. **IDFM* Runs, No Compressor, No ODFM***

IDFM* Runs, ODFM* Runs, No Compressor

IDFM* Runs, Compressor Runs, No ODFM*

Compressor Runs, ODFM* Runs, No IDFM*

Compressor Runs, ODFM* Runs, IDFM* Runs, Insufficient Heating

Compressor, ODFM*, IDFM*, Unit Is Cooling While In Heat Mode

*** IDFM Indoor Fan Motor ***

ODFM – Outdoor Fan Motor

Possible Solutions

No A/C Voltage, No 12 VDC, Thermostat, Sub-base, Wiring, P.C. Board, High Pressure Switch Open

Heating Freeze Thermister, Low Outdoor Ambient

Conditions, Wiring, Compressor, Contactor, P.C. Board

Insufficient Voltage To Unit, Run Capacitor, Start Device,
Overload, Wiring, Compressor

Run Capacitor, Fan Motor, Wiring, P.C. Board, Fuse On Motor Black Wire

Run Capacitor, Fan Motor, Wiring, P.C. Board

Air Flow Restriction, Low Ambient Temperature,
Undersized Refrigeration System, Very Little Or No
Refrigerant Charge, Compressors

Wiring, P.C. Board, Reversing Valve

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12. ELECTRICAL DIAGNOSTIC FLOW CHARTS

6535 SERIES

With the use of these flow charts, you will be able to quickly identify a non-working problem. Determine if the problem is high or low voltage and then solve the problem.

IMPORTANT NOTICE

When using a jumper wire to diagnose a low voltage problem, Never Short Any Positive Terminal to Ground or the Terminal Marked "B". Serious thermostat Or P.C. Board damage may

occur.

To use these flow charts, start at the top left corner. Check what is indicated in that box. If the answer to what is indicated is No, work horizontally until you find the problem. When the answer is Yes or OK, work the chart downward until you locate the problem. Do Not Move Downward on any chart until all preceding steps have been confirmed good. Do Not start in the middle of any chart without knowing everything previous (upward on the chart) is OK or you may replace the wrong part.

! WARNING - SHOCK

HAZARD

To prevent the possibility of severe **personal injury, death, or equipment damage due to electrical shock**, always be sure the power supply to the **appliance** is disconnected before doing **any work on the appliance**. This can normally be accomplished by switching the breaker for the air conditioner **to off**, disconnecting all external electrical connections and cords, switching on board electrical generators and INVERTOR **to off**, and removing the cable from each positive terminal **on all storage and starting batteries**.

DANGER

SOME DIAGNOSTIC TESTING MAY BE DONE ON ENERGIZED CIRCUITS. ELECTRICAL SHOCK CAN OCCUR IF NOT TESTED PROPERLY. TESTING TO BE DONE BY QUALIFIED TECHNICIANS ONLY

Refer to Indoor
Low Checkout - NO
Cool Mode

Indoor Blower

Green L.E.D. Light|
ON
On PC Board

Thermostat Call

Low
High
NO
Refer to Indoor
High Checkout -

Comp.
#1

NO

Cool Mode

Refer To #1
Checkout -
Cool Mode

2 Second Delay
O.D. Blower **Low**

OD Blower Low LED

NO

Refer to Checkout
No Green L.E.D.
Light - Cool Mode

O.D. Blower
Low

NO

Refer to Outdoor
Blower Low

Compressors

1 Minute Thermostat
Time Delay

NO
Comp.
#2

Refer to #2
Operation -
Cool Mode

OD Blower Low Off 2 Second Delay Then

O.D. Blower High

OD Blower High LED

O.D. Blower NO
High

Refer to Outdoor
Blower High

12A.1 No Cooling; Cooling Mode

No Green L.E.D. light

F/FY Circuit Open to The Thermostat

Rare Occasions Have Occured Where The Green L.E.D. Light is ON and the F/FY Circuit is Open, Thus Preventing Compressor Operation. To Verify This Possibility, Temporarally Bridge Across the F & FY Terminals at the Thermostat or at the P.C. Board. Replace the Board if the Green Light is ON and the Jumper Completes the Open Circuit Initiating Compressor Operation.

Restore 115 VAC Power To #1
Circuit

Green L.E.D. Light
Z O
N

YES

Is The Indoor
Motor Running?

NO

115 VAC To Circuit #1
High Voltage Board

NO

Y
E
S

IF VOLTAGE IS OK

The Freeze Switch May Be
Open. Use Jumper Wire
Across Cool Thermister
Terminals T15 & T14

YES

If Green Light Comes On, Remove
Jumper Wire, Reattach Thermister. Check The
Indoor Coil For Freeze Situation. Warm Coil
Temperature Above 60°F.

N o

If Green L.E.D. Will Still Not Remain On After Coil
Temperature Is OK, Check Thermister For
Continuity. (Caution: It May Have A Very High
Resistance). Replace Thermister If Open.

Check 12 VDC To Pin
Connectors R&B In P.C. Board

NO 12
VOLTS

Check High Pressure Switch.
Manually Reset If Necessary. Be
Sure To Correct High Head
Pressure Problem With Unit.

Replace P.C. Board If All the
Above Checks Out OK And Green Light
Does Not Come On.

R (+) & B(-) At The Thermostat

Check for 12 VDC To

NO

Restore 12 VDC To
Thermostat

Y
E
S

Check All Pin Connectors At
Thermostat, Lifeline And P.C.
Board. Replace Defective Parts
As Necessary

★ Outdoor Thermister Is Ignored In The Cooling Mode When "Y" Is Energized

Note: The green light on the board has some new functions on the 6535 "A" model. If the light is on solid,

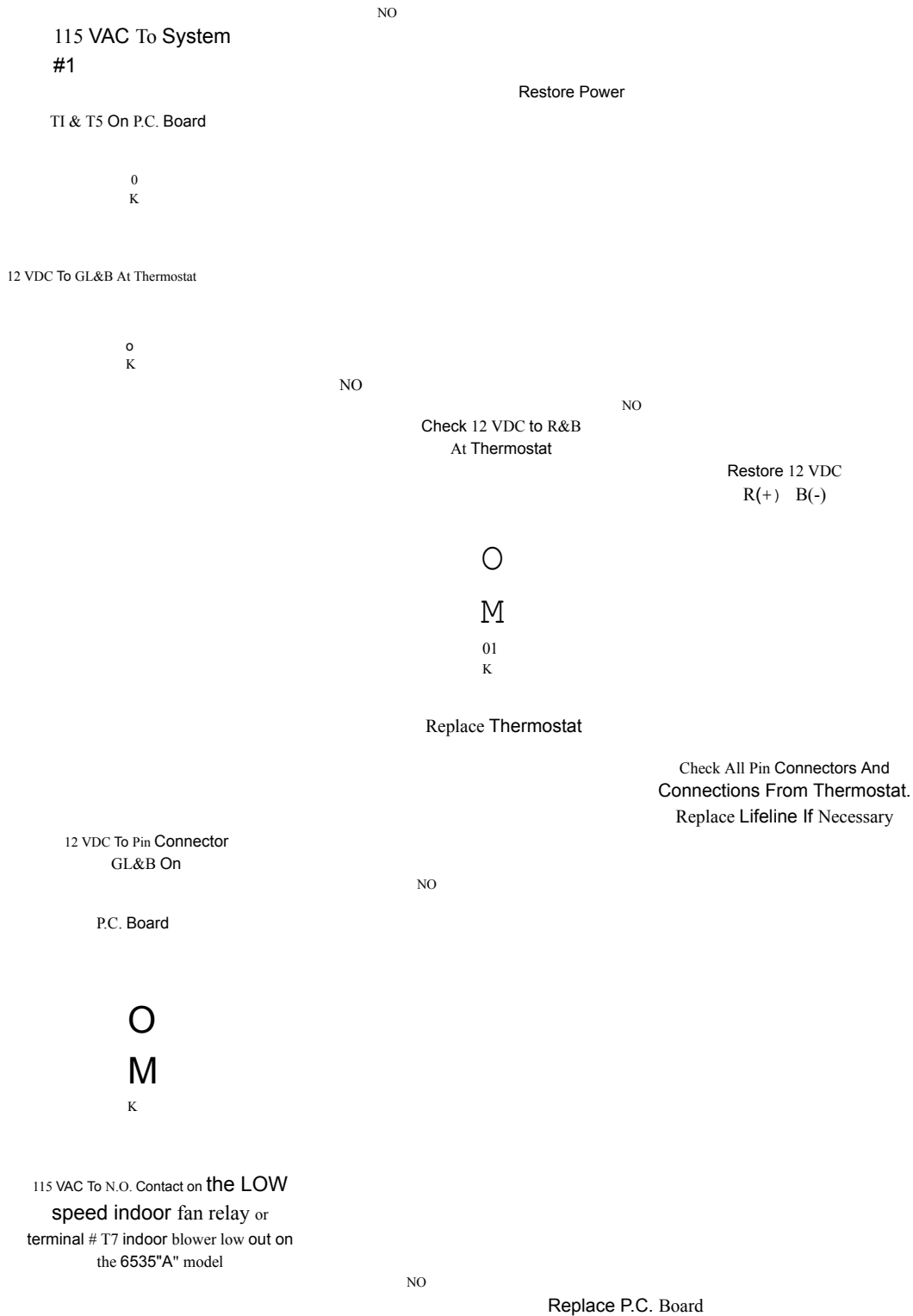
everything is OK. If the light is blinking slowly, the unit is in a 3 minute time delay. If the light

is blinking fast, there is either no line voltage to Circuit 1 or one of the thermisters are open. If the light is not on at all there is no 12VDC power to the thermostat or the PC Board.

12A.2 No Indoor Blower Low Speed; Cooling Mode

Thermostat Set To Low Cool

Note: All operating functions **subject** to thermostat time delays.



K

Check Wiring To Motor. Check
Capacitor And Motor Windings For
Open Or Ground. Reconnect
Wires Or Replace Capacitor Or
Motor As Necessary.

Important
Notice:

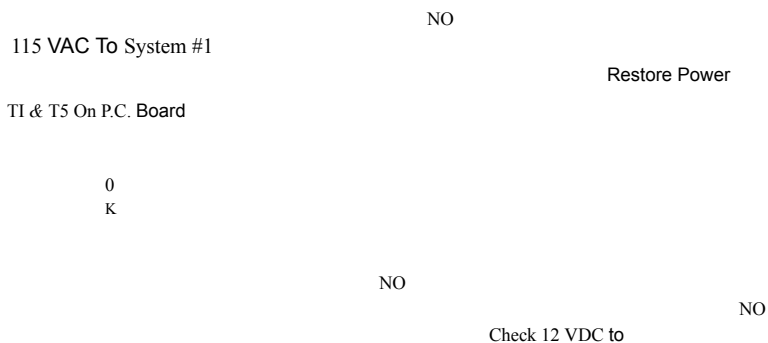
If the unit is equipped with a high pressure switch and this switch opens, it Opens the 12 VDC (-) negative circuit from the thermostat to **the** P.C. Board and all heat pump functions are dead. Be sure to correct the root problem causing the high head pressure. If **any** heat pump function operates, the switch is OK.

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12A.3 No Indoor Blower High Speed; Cooling Mode

Thermostat Set To High Cool

Note: All operating functions subject to thermostat time delays.



12 VDC To GH & B At Thermostat

R&B At Thermostat

Restore 12 VDC
R(+) B(-)

OM

K
o|

O
M
K

Replace Thermostat

Check All Pin Connectors And
Connections From Thermostat.
Replace Lifeline If Necessary

12 VDC To Pin
Connector GH & B

NO

On P.C. Board

O
M

115 VAC To N.O. Contact on the
HIGHspeed indoor fan relay or
terminal #T6 indoor blower high out
on the 6535 "A" model

O K
OM

Check Wiring To Motor. Check
Capacitor And Motor Windings
For Open Or Ground. Reconnect
Wires Or Replace Capacitor Or
Motor As Necessary.

NO

Replace P.C.
Board

Important
Notice:

If the unit is equipped with a high pressure switch and this switch opens, it Opens the 12 VDC (-) negative circuit from the thermostat to the P.C. Board and all heat pump functions are dead. Be sure to correct the root problem causing the high head pressure. If any heat pump function operates, the switch is OK.

18

12A.4 Compressor #1 Checkout; Cooling Mode

Thermostat Calling For Cooling

Note: All operating functions subject to thermostat time delays

115 VAC To System #1 Also To
TI & TS On P.C. Board

O
M

12 VDC To Y1 & B On Thermostat
(Remember Time Delays)

NO

Check All Pin Terminals

And Connectors To
Thermostat.
Replace Lifeline If
Necessary.
OM

K

NO
12 VDC To Pin Connectors

Replace Relay
If 12 VDC Is Present
And

NO

Relay Will Not Close
Or
If Relay If
Welded.

Reconnect Wires Or
Replace
Components As
Necessary.

NO

Y & B On P.C. Board,
Also to T2 & T3

NO

Restore Power

Temporarily
Bridge
across the
Green L.E.D.
Light Circuit,
F & FY
Terminals

OK

Is 12 VDC Now Persent
at Y1 & B At The
Thermostat

NO

OX

K

Green L.E.D.
Light On

Check Compressor #1
Relay Operation

Refer To Checkout
Procedures For No Green
L.E.D. Light,
F/FY Circuit

Repair or Replace
Parts as Necessary to
Restore Operation
of The Green Light
Circuit

O
X
o
K

Check Compressor #1
Start Device. Check For
Proper
Wiring To Compressor.
Check
Compressor Run
Capacitor. Check Motor
Windings For Open Or Ground.

Replace The Thermostat

Important
Notice:

If the unit is equipped with a high pressure switch and this switch opens, it opens the 12 VDC (-) negative circuit from the thermostat to the P.C. Board and all heat pump functions are dead. Be sure to correct the root problem causing the high head pressure. If any heat pump function operates, the switch is OK.

19

12A.5 Compressor #2 Checkout; Cooling Mode

Thermostat Calling For Cooling

Note: All operating functions subject to thermostat time delays

Check 115 VAC To Circuit #2 And
To Compressor #2 Relay

NO

O
M

Restore 115 VAC

NO

System #1 Compressor Operating

See Compressor
#1 Checkout

o
K

12 VDC To Y2&B At Thermostat

Important
Notice:

Note:

o
K

NO

12 VDC To Pin Connectors

NO

Y2&B On P.C. Board. Also
To Terminals T10 & T3

0
K

Check Compressor #2
Relay Operation

NO

O K

Check Compressor Start Device.
Check For Proper Wiring To
Compressor #2. Check Compressor
Run Capacitor. Check Compressor
Motor Windings For Open Or Ground.

Replace Thermostat If System #2
Should Be Calling And Is Not
According To Operation Manual.

Check All Pin Terminals And
Connections From Thermostat.
Replace Lifeline If Necessary.

Replace Relay If 12 VDC Is
Present And Relay Won't
Close Or If Relay Is Welded

NO

Reconnect Wiring Or
Replace Components As
Necessary

If the unit is equipped with a high pressure switch and this switch opens, it Opens the 12 VDC (-) negative circuit from the thermostat to the P.C. Board and all heat pump functions are dead. Be sure to correct the root problem causing the high head pressure. If any heat pump function operates, the switch is OK.

Some **coach** manufacturers connect their energy management systems in series with the 12VDC call for compressor #2. This is usually done between the output Terminals on the P.C. Board and the Compressor #2 relay coil.

20

12B. HEAT PUMP OPERATION SEQUENCE

HEATING MODE

Green L.E.D. Light
ON

NO

On PC Board

Refer To Checkout. No
Green L.E.D. Light,

Thermostat Call

Indoor Blower

High
Fan

N

Refer To I.D. Blower
Checkout

Compressor
S

Compressor #1

Heat Mode

N

2 Second Delay
O.D. Blower Low

NO

ZO

Refer To
Reversing Valve
Checkout

Refer To Compressor #2
Checkout Heat Mode

21

30 Second Delay On Make And
Compressor #2 Is Energized

OD Blower Low Off 2
Second Delay O.D.
Blower High

O.D. Blower High L.E.D.

O.D. Blower High
Speed

No

Refer To O.D. Blower
High
Checkout

12B.1 No Heating; Electric Heat Mode
(Green L.E.D. Light Circuit)
F/FY Circuit Open to The Thermostat

YES

Green L.E.D. Light

No

115 VAC To Circuit #1 High
Voltage Board

Y

Rare Occasions Have Occured Where The Green L.E.D. Light is ON and the F/FY Circuit is Open, Thus Preventing Compressor Operation. To Verify This Possibility, Temporarally Bridge Across the F & FY Terminals at the Thermostat or at the P.C. Board. Replace the Board if the Green Light is ON and the Jumper Completes the Open Circuit Initiating Compressor Operation.

NO

Restore 115 VAC Power
To Circuit #1

E
S

Use Jumper Wire Across
Heat Thermister Terminals
T17 & T16

NO LIGHT

Check 12 VDC To Pin Connectors R &
B On P.C.
Board.

Y

X

E S

YES

N

ZO

Replace P.C. Board If All The
Above Checks Out OK And
Green Light Does Not Come On.

Check For 12 VDC To R(+) & B (-) At The Thermostat

Y

XES

If Green Light Comes On, Check The
Outdoor Coil For Freeze Situation. Warm
Coil Temperature Above 45°F.

NO

N

ZO

o

If Green L.E.D. Will Still Not Remain On
After Coil Temperature Is OK, Check
Thermister For Continuity. (Caution: It
May Have A Very High
Resistance.) Replace Thermister If

Open.

Restore 12 VDC To Thermostat.

Check All Pin Connectors At
Thermostat, Lifeline And P.C.
Board. Replace Defective Parts As
Necessary.

* Indoor Thermister Is Ignored When "W" Is Energized.

Note:

The green light on the board has **some** new functions on the 6535 "A" model. If the light is on solid, everything is OK. If the light is **blinking slowly**, the unit is in a 3 minute time **delay**. If the light is **blinking fast**, there is either no line voltage to Circuit 1 or one of the thermisters are open. If the light is **not** on at all there is no 12VDC power to the thermostat or the PC Board.

Important
Notice:

If the unit is equipped with a high pressure switch and this switch opens, it Opens the 12 VDC (-) negative circuit from the thermostat to the P.C. Board and all heat pump functions are dead. Be sure to correct the root problem causing the high head pressure. If any heat pump function operates, the switch is OK.

22

12B.2 No Indoor Blower; Electric Heat Mode

Note: Only High Fan Speed Is Energized In The Heating Mode.
All Operating Functions Subject To Thermostat Time Delays.

NO

115 VAC To System 1

Restore Power

T1 & T5 On P.C. Board

0 K

NO

NO

12 VDC To W & B
At Thermostat

Check 12 VDC To R&B At
Thermostat.

Restore 12 VDC.

K
O
M

12 VDC To Pin Connector W & B
On P.C. Board

NO

O
M

K

Replace Thermostat

Check All Pin Connectors And
Connectors From Thermostat.
Replace Lifeline If Necessary.

115 VAC To N.O. Contact on the
High Speed indoor fan
relay or terminal #T6 indoor
blower out on the 6535 "A" model

NO

Replace P.C. Board

o
K

Check Wiring To Motor. Check
Capacitor And Motor
Windings For Open Or
Ground

Reconnect Wires Or
Replace Capacitor

Or Motor As
Necessary

Important
Notice:

If the unit is equipped with a high pressure switch and this switch opens, it Opens the 12 VDC (-) negative circuit from the thermostat to the P.C. Board and all heat pump functions are dead. Be sure to correct the root problem causing the high head pressure. If any heat pump function operates, the switch is OK.

23

12B.3 Compressor #1 Checkout; Electric Heat Mode

Note: All Operating Functions Subject To Thermostat And P.C. Board Time Delays. Thermostat or Sub-base Must Be In The Electric Mode.

YES

Is The Outdoor Fan
Motor Running?

N
O

115 VAC To Circuit #1, Also T1 & T5
On The P.C. Board

NO

Restore 115 VAC Power.

Y
E
S

Check For 12 VDC Between W & B
At The Pin Connector On The P.C.
Board

NO

Check For 12 VDC Between
White/Black Striped Wire
From the Thermostat or
Sub-base (Pin Position #8)
& the B (Blue) Terminal On
The Thermostat (Position
#4)

YES

NO

Y

N

Is The Green L.E.D. Light On?

Y
E

N
O

Open Wire In The

Thermostat and/or Sub-base Switch
Must Be In Electric Position And The
Inside Of Vehicle Must Be Above
45°F.

Refer To Heat Freeze
Thermister Checkout

Lifeline Between
Thermostat And Unit

Check For 12 VDC

N
O

Between T2 & T3 On The
P.C. Board.

NO

Replace P.C.
Board

YES

Y
E
S

Check For 12 VDC Between
W(White) & B(Blue) Wires
On The Thermostat.

Check For 12 VDC At
Compressor #1
Relay Coil

Y

X
E
S

N

NO

Open Wire Or Bad
Connection Between P.C. Board
And Relay

Check For 115 VAC Between The
N.O. Position On Compressor
Relay #1 And The White Wire
On Circuit #1 High Voltage
Terminal
Board.

Y
E
S

Replace
Sub-base

Y
E
S

ZO

N

OZ

Check For 12 VDC Between
R(Red) & B(Blue) Wires
On the Thermostat.

N

Restore 12 VDC To The
Thermostat.

NO

Replace
Relay

Replace Thermostat

Check Compressor #1 Start Device Check
For Proper Wiring To The Compressor
Check Compressor Run Capacitor
Check Motor Windings For Open Or Ground

224

Important
Notice:

12B.4 Compressor #2 Checkout; Electric Heat Mode

Note: All Operating Functions Subject To Thermostat And P.C. Board Time Delays. Thermostat or Sub-base Must Be In The Electric Mode.

Is Compressor #1 Running?

NO

Refer To
Compressor #1 Heat
Checkout

YES

Check For 115 VAC To
System #2

NO

Restore 115 VAC To A/C
System #2

YES

Check For 12 VDC
Between T10 & T3 On
P.C. Board

NO

Replace P.C.
Board

YES

Check Compressor
#2 Relay Operation

NO

Replace Relay If 12 VDC Is
Present And Relay Won't
Close Or If Relay Is Welded

YES

ES

Check Compressor Start Device.
Check For Proper Wiring To
Compressor #2. Check Compressor
Run Capacitor. Check Compressor
Motor Windings For Open Or Ground.

NO

Reconnect Wiring Or Replace
Components As Necessary.

If the unit is equipped with a high pressure switch and this switch opens, it Opens the 12 VDC (-) negative circuit from the thermostat to the P.C. Board and all heat pump functions are dead. Be sure to correct the root problem causing the high head pressure. If any heat pump function operates, the switch is OK.

Note:

Some coach manufacturers connect their energy management systems in series with the 12VDC call for compressor #2. This is usually done between the output Terminals on the P.C. Board and the Compressor #2 relay coil.

25

12B.5 No Reversing Valve Operation Electric Heat Mode

Note: All Operating Functions Subject To Thermostat And P.C. Board Time Delays.
Thermostat and/or Sub-base Must Be In The Electric Mode.

Note: If the Compressors or Fan Motors are not Running, Refer To Proper Checkouts.

Thermostat In Heat Position

o|
K

Check 115 VAC Between T18 &
T19

NO

Check 12 VDC Between W&B

O

M

ZO

N

K

Replace
P.C. Board

Reversing Solenoid Coil Open
Or Valve Is Stuck

Refer To Compressor
Checkout Heat Mode

Important Notice:

Note:

If the unit is equipped with a high pressure switch and this switch opens, it **Opens** the 12 VDC (-) negative circuit from the thermostat to the P.C. Board and all heat pump functions are dead. Be sure to correct the root problem causing the high head pressure. If any heat pump function operates, the switch is OK.

Reversing Valve Solenoid Is Energized In The Electric Heat Mode Once The Reversing Valve Solenoid Has Energized, The P.C. Board Locks The Valve **Into An Energized Position Until The Wall Thermostat Is Placed In The Cool Position And Actually Has A Demand For Cooling,**

12C. OUTDOOR BLOWER MOTOR; HEATING OR COOLING MODE

12C.1 No Outdoor Blower Low Speed

Outdoor Blower System #1
Red L.E.D. Low Speed

ZO

N

Check for 115 VAC To Terminal T4
& T5 On P.C. Board. This is Line
Power From Compressor #1
Relay.

NO

Refer To Compressor #1
Checkout

OM

115 VAC To T11 & T13 On P.C.
Board

NO

Replace P.C.
Board

o
K

Check Wiring To O.D. Blower.

Check Capacitor. Check
Motor For Ground Or Open.

Rewire To Motor Or
Replace Components
As Necessary.

27

12C. OUTDOOR BLOWER MOTOR; HEATING OR COOLING MODE

12C.2 No Outdoor Blower High Speed

Outdoor Blower System #2
Red L.E.D.
High Speed

N

ZO

Check for 115 VAC To Terminals T8 & T9 On P.C.
Board. This is Line Power From
Compressor #2 Relay.

NO

Refer To Compressor #2
Checkout

OM

115 VAC To T12 & T13 On P.C. Board

NO

Replace P.C. Board

o
K

Check Fuse On Motor Black
Wire If Equipped.

Bad Fuse

If
No
Fuse

Check Wiring To O.D.
Blower. Check Capacitor.
Check Motor For Open
Or Ground.

Remove O.D. Motor Leads, Red And Black Wires
From P.C. Board And Check P.C. Board For 115 VAC To
Both Motor Speeds At The Same Time: T12 &
T13 High Speed, T11 & T13 Low Speed.

Replace Fuse If Only
T12 & T13 High Speeds
Are Energized.

Replace P.C. Board And
Fuse If Both High And Low
Speeds Are Powered From
The P.C. Board.

WIRE TO
M

O
M

K

Rewire To Motor Or Replace
Components As Necessary.

28

EH

OUTDOO
R FREEZE
SWITCH

13. WIRING DIAGRAM - 6535 (-) SERIES

WHT
HEAT
THERM
.
COOL
THERM

COUP
RELAY

COUP 2
RELAY

BLU
BU

YEL
ORG

CAPACITOR
7.5/370

2-STAGE WALL
THERMOSTAT **ASSEMBLY**

°
BLU
TEL
THE

VHNUHMMMN

300

1 D. HIGH
BLOWER

N.O

30 SEC,
DELAY

700
N.O
TH
1 D. LOW
BLOWER

5 SEC.
DELAY

000

AC-16

FUSE

O

6795C4351
LIFELINE

2 SEC.
DELAY
ON MAKE

000

-N-

PRINTED
CIRCUIT

CONTROL
BOARD

2 SEC.
DELA
Y
ON MAKE

COMP.

BLK

BLOWE
R LOW

RED

O

RED
.E.D.:

L.E.D.

BLOWER COUMON

BAC-1 W

AC-2 Wi

COMP 20

SLOWE
R HIGH

REV.
VALVE

OR
G

BU

2
(BLK)

BLK
0

* 000
114
THE
DRG
OF
YEL

BLK

●

0

0

0

●

RED

WHT
WHT

INDOOR FREEZE
BRN/PHT

WHT CIRCUIT #1

BLK
BLK
BLK

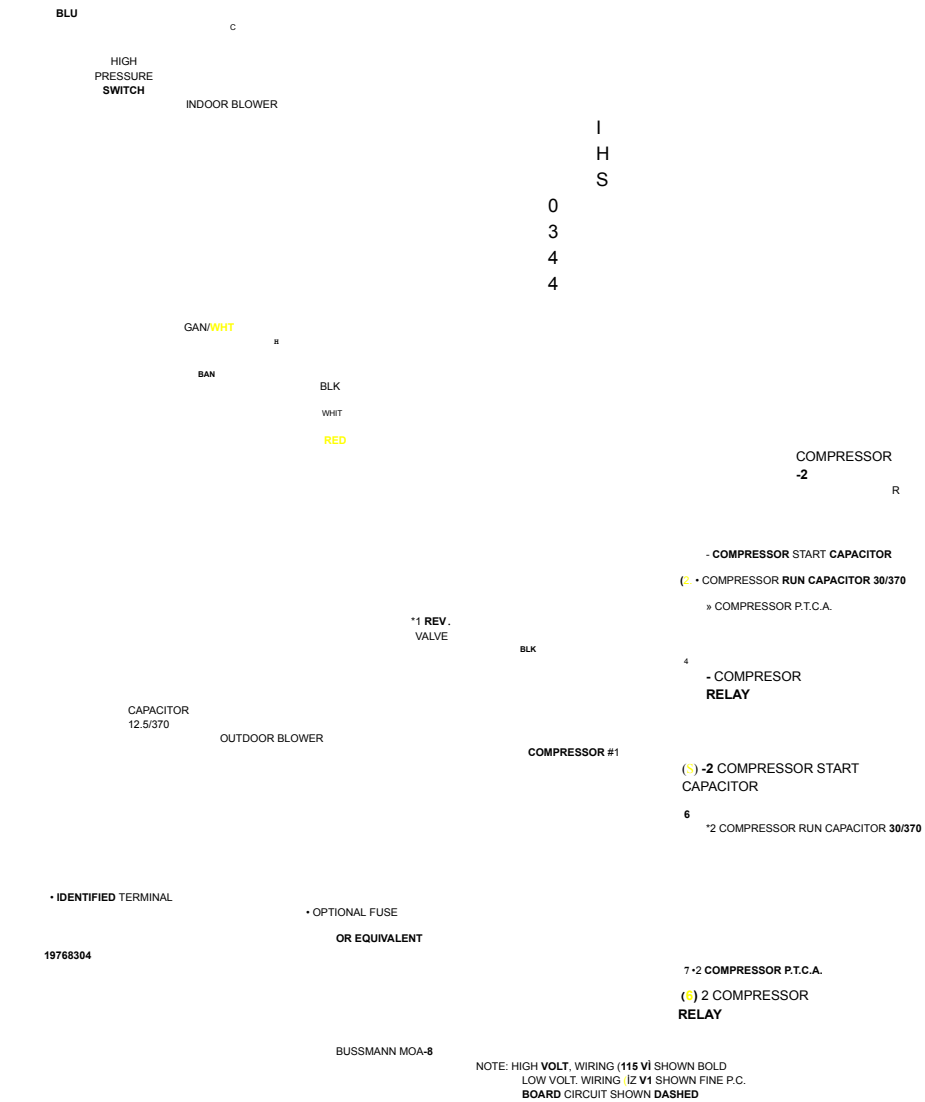
BLK WHT
CIRCUIT #2

HIGH VOLT
TERM. BOARD

2 REV. VALVE
PUR
YEL

SWITCH
BLU
L
RED
H
BLK
THE

OR
G



14. WIRING DIAGRAM - 6535 (A) SERIES

FROM 2-STAGE WALL

INDOOR COIL SENSOR

OUTDOOR
COIL
SENSOR

2205530)
TILLY
FREE P COMPRES561

WHI
WHT

INDO
OR
COIL
SENSOR IN

THERMOSTAT

1
0
0
0
2
0
/
3
)
|
|
|

真庭

3

3
8
4

2
1
-

ELEC KEAT

00000000

ASSEMBLY

- COMPRESSOR START CAPACITOR
- COMPRESSOR RUN CAPACITOR 30/570
- COMPRESSOR P.T.C.A.
- * COMPRESSOR RELAY
- #2 COMPRESSOR START CAPACITOR
- #2 COMPRESSOR AUN CAPACITOR 30/370
- 2 COMPRESSOR P.T.C.R.
- 2 COMPRESSOR RELAT

BLU
E

2
4
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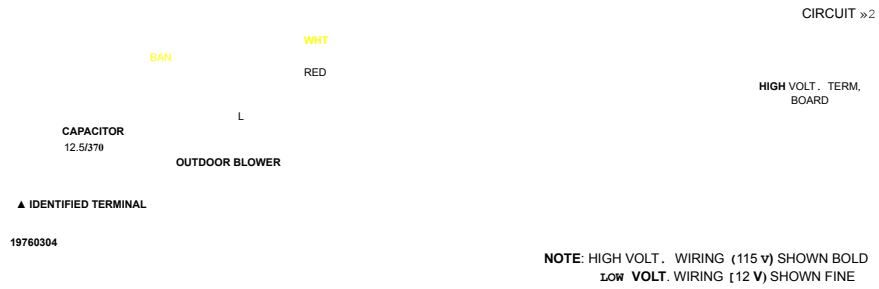
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