

Trouble shooting your Arctic Breeze 12 volt air conditioning system

NOTE: This battery disconnect will automatically disengage the AC system when battery voltage drops below 12 volts and will automatically restart the system when battery voltage reaches 12.5 volts for a period of 15 to 30 seconds.

Nothing works, not even blower

1	Check the voltage.	Exceeds 12.5 volts	Go to step 2
		Battery voltage low.	Recharge batteries
2	Check system breaker	Was disconnected	Reset
		Was engaged.	Go to step 3
3	Check 7.5 amp ATO fuse inside condenser\ compressor box.(remove from fuse holder has RED wire)	Fuse was blown.	Replace fuse, and check blower operation.
		Fuses OK.	Go to step 4.
4	With a 12 volt test light check for power available in/out of the 7.5 amp ATO	No power at fuse	-check battery connections -ensure 12.5 volts available -check power in/out of breaker -may have faulty small relay -may have faulty battery disconnect switch See wiring diagram or dealer
		Test light indicates power	Go to step 5
5	Disconnect 4 prong weather-pack connector at back of compressor box and check for power on the red wire coming out of the compressor box	Test light indicates power	Wire may have become disconnected at blower switch or faulty ground
		No power on red wire	If power at fuse but no power at red wire on weather-pack connector, then wire must be broken. Repair and try again.

Blower works but compressor does not start.

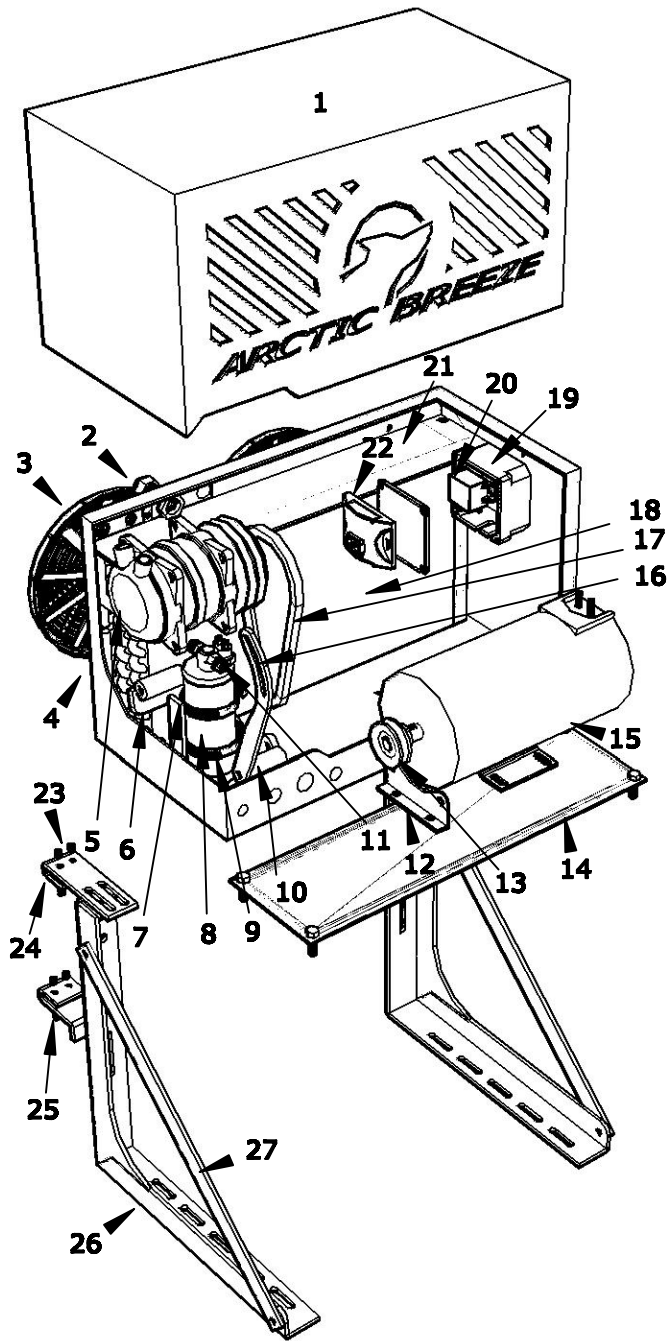
1	Turn thermostat knob all the way clockwise to max cold position. The compressor and condenser fans should start to operate.	Yes they do.	Check to ensure both condenser fans operate.
		No, the compressor does not start.	Go to step 2.
2	Check 20 amp fuse for condenser fans.	Fuse was blown.	Replace fuse and check system operation.
		Fuses OK.	Go to step 3.
3	Check for 12 volt power at the binary switch, located on dryer.	Yes, 12 volt in and out of switch.	Go to step 4.
		12 volt found on one side only.	System may be low/empty of refrigerant or may have faulty binary switch. If system is low, find and repair leak.
4	Check for 12 volt power and proper ground at small wires of the 75 amp relay. Relay should click as evaporator blower is turned on and off.	Relay has power and clicks, but compressor still does not start. Note: condenser fans should also engage the same time as comp.	Compressor motor may be faulty or require new brushes. Check all cable connections to ensure good contact and 12v power present.
		Relay does not click but 12 volt is available on small white wire and ground is ok.	Check to ensure good ground available.
			Relay may be faulty ----- replace it.

Everything runs, but the system does not blow cold air.

1	Check to ensure the coils are both clean, evap coil located in cab and condenser coil located in compressor box.	Both coils are clean and have lots of air flow.	Go to step 2.
		Coils require cleaning.	Clean the coils and try again.
2	Check system over for refrigerant leaks. Some refrigerant may have leaked out.	Found leaks.	Repair and refill.
		No leaks found.	Check pressures and feel return line temperature. Should be cold.
3	Check belt tension to ensure compressor is operating at proper speed.	Yes, the belt is tight.	
		Belt may have been slipping.	Replace and tension belt.

ARCTIC BREEZE™.

12 VOLT TRUCK A/C SYSTEM CONDENSER AND COMPRESSOR



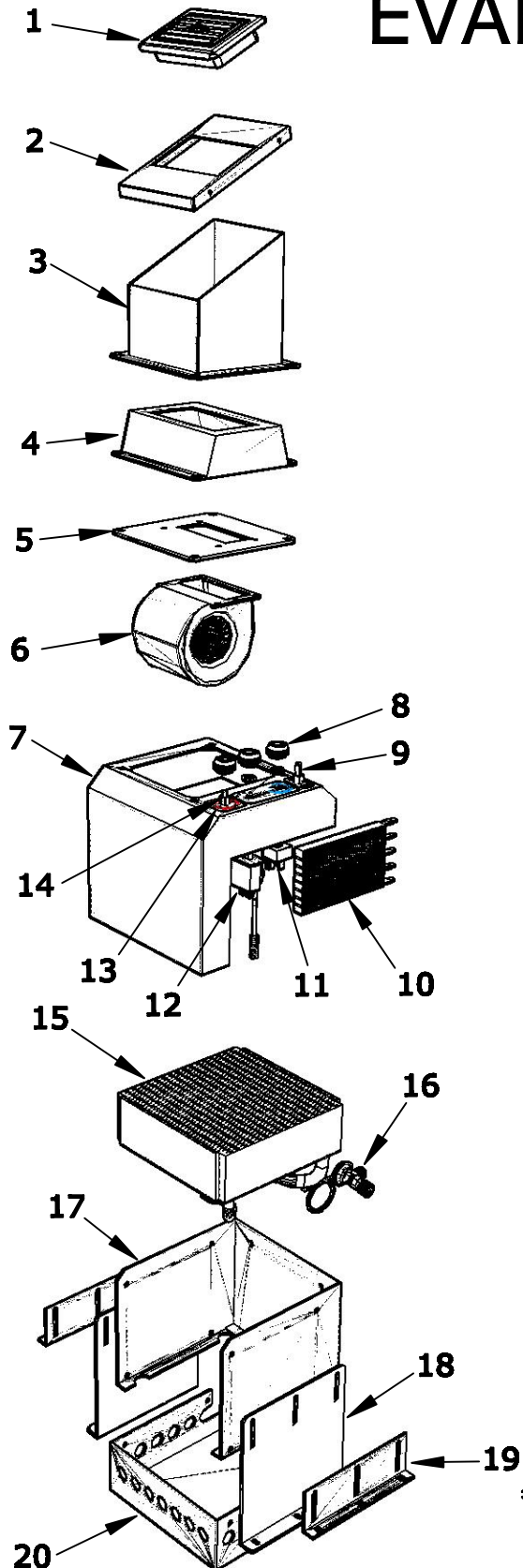
#	DESCRIPTION	PART#
1	COND./COMP. BOX LID	520-12VDC-7
2	COMPRESSION FTG.	421-690
3	POWER FAN	430-040-DFW
4	COND./COMP. BOX	520-12VDC-8-2
5	COMPRESSOR	520-1307
6	COMPRESSOR BRKT.	520-12VDC-100
7	DRIER BRKT.	520-12VDC-15
8	RECEIVER DRIER	523-037-9
9	DRIER CLAMPS	420-393
10	ADJUSTER SPACER	438-265
11	BINARY SWITCH	412-154
12	SUPPORT BRACKET	520-12VDC-26
13	PULLEY	425-AK25
14	COMPRESSOR PLATE	520-12VDC-23
15	12VDC MOTOR	415-1000
16	ADJUSTER BRKT.	520-12VDC-9
17	V-BELT	4L-200W
18	CONDENSER	420-908A
19	RELAY BOX	300-340
20	12VDC 75AMP RELAY	412-077
21	CONDENSER PLATE	520-12VDC-16
22	LOW VOLTAGE DISCONNECT	413-610
23	SET SCREWS	302-516-516N
24	FRAME CLAMPS TOP	520-12VDC-12B
25	FRAME CLAMPS BOTTOM	520-12VDC-12
26	FRAME BRKT.	520-12VDC-17
27	BRKT SUPPORT	520-12VDC-24
ITEMS NOT SHOWN		
28	#6 HOSE OUT COND.	635-038-12V-13
29	#6 HOSE OUT DRIER	635-038-12V-5
30	#8 HOSE	635-138-12V-29
31	#10 HOSE	635-238-12V-40
32	80 AMP. CIRCUIT BREAKER	433-080
33	EVAP HARNESS	318-002-241
34	BATTERY LEADS	308-000-180
35	INTERNAL HARNESS	308-001-09
36	COND. HARNESS	308-002-66
37	COND. FAN HARNESS	314-004-32

AUG. 24, 2011

ARCTIC BREEZE™

12 VOLT TRUCK A/C SYSTEM

EVAPORATOR



#	DESCRIPTION	PART #
1	DIRECTIONAL LOUVER	411-110
4	AIR PLENUM (SLEEPER)	520-12VDC-35
5	BLOWER PLATE	520-12VDC-42
6	BLOWER	401-854A
7	EVAP. BOX	520-12VDC-1
8	FAN KNOB	411-058
	SNOWFLAKE KNOB	411-064
	HEAT INDICATOR KNOB	411-055
* 9	HEAT / A/C TOGGLE	412-123
10	HEAT ELEMENT	430-975
* 11	BLOWER SWITCH	412-102
12	A/C THERMOSTAT	111-051
13	A/C DECAL	413-228-12
	HEAT / A/C DECAL	413-228-10
	HEAT DECAL	413-228-8
* 14	HEAT THERMOSTAT	413-154
* 15	A/C COIL	411-300
16	EXPANSION VALVE	514-410
17	EVAP. COVER	520-12VDC-2
18	MOUNTING BRKT. (SHORT)	520-12VDC-14

* = ITEMS FOR OPTIONAL HEAT

PARTS FOR DAY CAB ONLY

#	DESCRIPTION	PART #
2	LOUVER PLATE	520-12VDC-40
3	AIR PLENUM (DAY CAB)	520-12VDC-38
18	MOUNTING BRKT. (TALL)	520-12VDC-25
20	DRAIN PAN	520-12VDC-11

PARTS NOT SHOWN

	PROTECTIVE SLEEVING	300-691
	3/4" SPLIT WIRE LOOM	300-700
	1" SPLIT WIRE LOOM	300-701
*	8 GA TERMINAL ENDS	300-127
	6 GA TERMINAL ENDS	300-123

