

VACUUM SYSTEM TROUBLESHOOTING GUIDE FOR EVANS TEMPCON DUAL ZONE HVAC SYSTEMS

PROBLEM	POSSIBLE CAUSES	REMEDY
<p>1. Driver Temperature Dial does not control passenger side discharged air temperature in DEFROST mode.</p>	<ul style="list-style-type: none"> • Defective mode selector switch. • Loose connector or terminal on vacuum relays. 	<ul style="list-style-type: none"> • Disconnect vacuum lines from vacuum relays. If vacuum is present on either line in DEFROST mode, replace mode switch. • Check connections on relays. Ensure terminals are seated and locked into terminal cavities.
<p>2. Air flow comes from defrost outlets regardless of mode selected.</p>	<ul style="list-style-type: none"> • Vacuum supply line to control panel mode selector switch disconnected from vacuum reservoir. • Manifold vacuum supply Hose has become disconnected at the vacuum reservoir or manifold port. • Severe leakage in the vacuum supply circuit.. • Faulty mode selector switch or vacuum harness. • Pinched vacuum lines. 	<ul style="list-style-type: none"> • Ensure that the black line on the vacuum harness is fully pushed onto the corresponding port of the vacuum reservoir. • Ensure that both ends of the supply hose are firmly attached to their corresponding ports. • Examine the vacuum supply hose from the manifold to the vacuum reservoir and the black supply line of the vacuum harness from the vacuum reservoir to the mode selector switch for cuts or pinching. Repair or replace as required. • Check vacuum at white, yellow, red, green, and blue vacuum lines on vacuum harness while changing through all operational modes. If no vacuum is detected, replace mode switch and/or harness. • Inspect red, green, white, and yellow vacuum lines for pinching or kinking. Repair/replace as required.
<p>3. Air flow is suddenly and momentarily diverted to defrost outlets while driving.</p>	<ul style="list-style-type: none"> • Leak in vacuum reservoir, vacuum hose, from manifold to vacuum reservoir. Check Valve. Inadequate vacuum supply. 	<ul style="list-style-type: none"> • Measure vacuum at the small port on the vacuum reservoir with the engine running at idle. Turn the engine off and take note of the time for vacuum loss to 10 in./hg. If this time is shorter than 5 seconds, inspect hose and reservoir for leaks. Repair/replace as required.

NOTE: FOLLOW DIAGNOSIS PROCEDURE IN "REMEDY" COLUMN IN THE ORDER LISTED.

VACUUM SYSTEM TROUBLESHOOTING GUIDE FOR EVANS TEMPCON DUAL ZONE HVAC SYSTEMS

PROBLEM	POSSIBLE CAUSES	REMEDY
<p>4. Air flow comes from panel (face) outlets regardless of mode selected.</p>	<ul style="list-style-type: none"> • Face door of air box is binding. • Door-vacuum motor linkage has come apart. • Door or vacuum motor linkage is binding. • Faulty mode selector switch. 	<ul style="list-style-type: none"> • Inspect door for adequate clearance with top and bottom of air box Or any loose foam seals. Repair or replace as required. • Re-assemble linkage. Check for proper operation. • Inspect linkage for bind points. If necessary, increase clearances with small file. Check for proper operation. • With engine running, select FLOOR, MIX, or DEFROST mode on the control panel. Remove the yellow and white lines from the vacuum motor. If face door closes and vacuum is present at the yellow and white leads, replace the mode selector switch.
<p>5. Fresh Air – Recirc Air door does not operate. Air flow modes operate correctly.</p>	<ul style="list-style-type: none"> • Recirc and Fresh Air door binding. • Pinched vacuum line. • Door-vacuum motor linkage has come apart. • Door or vacuum motor linkage is binding. • Faulty mode selector switch. • Faulty Vacuum Motor 	<ul style="list-style-type: none"> • Inspect door for interference points with evaporator case, or any loose seals. Repair or replace as required. • Inspect blue vacuum line for pinching or kinking. Repair or replace as required. • Re-assemble linkage. Check for proper operation. • Inspect linkage for bind points. If necessary, increase clearances with small file. Check for proper operation. • With engine running, position the mode selector switch in the MAX A/C position. If vacuum is not present at the blue vacuum line, replace the mode selector switch. • With engine running, position the mode selector switch in MAX A/C. If vacuum is present at blue lead, replace vacuum motor.

NOTE: FOLLOW DIAGNOSIS PROCEDURE IN "REMEDY" COLUMN IN THE ORDER LISTED.

VACUUM SYSTEM TROUBLESHOOTING GUIDE FOR EVANS TEMPCON DUAL ZONE HVAC SYSTEMS

PROBLEM	POSSIBLE CAUSES	REMEDY
<p>6. Inability to change air flow to DEFROST mode. FLOOR and FACE mode operate correctly.</p>	<ul style="list-style-type: none"> • Defrost door on air distribution box is binding. • Door or vacuum motor linkage is binding. • Faulty mode selector switch. 	<ul style="list-style-type: none"> • Inspect door for adequate clearance with top and bottom of air box or any loose foam seals. Repair or replace as required. • Inspect linkage for bind points. If necessary, increase clearances with small file. Check for proper operation. • With engine running, select DEFROST mode on control panel. Remove the red and green vacuum lines from the vacuum motor. If the door closes on the floor collars of the air box and there is vacuum present on both lines, replace the mode selector switch.
<p>7. Inability to change air flow to FLOOR mode. DEFROST and FACE modes operate correctly.</p>	<ul style="list-style-type: none"> • Defrost/Floor door binding. • Pinched vacuum line(s) • Door-vacuum motor linkage has come apart. • Door or vacuum motor linkage is binding. • Faulty mode selector switch. • Faulty Vacuum Motor 	<ul style="list-style-type: none"> • Inspect door for adequate clearance with top and bottom of air box, or for any loose foam seals. Replace or repair as required. • Inspect red and green vacuum leads for pinching or kinking. Repair or replace as required. • Re-assemble linkage. Check for proper operation. • Inspect linkage for bind points. If necessary, increase clearances with small file. Check for proper operation. • With engine running, select FLOOR mode on control panel. Remove the red and green vacuum lines from the vacuum motor. If vacuum is not present at red and green lines, replace mode selector switch. • With engine running, select FLOOR mode on control panel. Remove the red and green vacuum lines from the vacuum motor. If vacuum is present at

NOTE: FOLLOW DIAGNOSIS PROCEDURE IN "REMEDY" COLUMN IN THE ORDER LISTED.

VACUUM SYSTEM TROUBLESHOOTING GUIDE FOR EVANS TEMPCON DUAL ZONE HVAC SYSTEMS

PROBLEM	POSSIBLE CAUSES	REMEDY
7. Inability to change air flow to FLOOR mode. DEFROST and FACE modes operate correctly. (continued)		red and green lines, replace mode selector switch.
8. Inability to obtain air flow from face outlets. DEFROST and FLOOR modes operate correctly.	<ul style="list-style-type: none"> • Face door is binding. • Pinched vacuum line(s) • Door-vacuum motor linkage has come apart. • Door or vacuum motor linkage is binding. • Faulty mode selector switch. • Faulty Vacuum Motor • Yellow and white vacuum lines reversed on bi-level vacuum motor. 	<ul style="list-style-type: none"> • Inspect door for adequate clearance with top and bottom of air box, or for any loose foam seals. Repair or replace as required. • Inspect yellow and white vacuum leads for pinching or kinking. Repair or replace as required. • Re-assemble linkage. Check for proper operation. • Inspect linkage for bind points. If necessary, increase clearances with small file. Check for proper operation. • With engine running, select MAX A/C or A/C mode. If vacuum is not present at yellow and white vacuum lines, replace mode selector switch. • With engine running, select MAX A/C or A/C mode. If vacuum is present at yellow and white vacuum lines, replace vacuum motor. • Switch vacuum lines.
9. Inability to obtain bi-level air flow. Other modes operate correctly.	<ul style="list-style-type: none"> • Refer to "POSSIBLE CAUSES" list for Problem # 7. 	<ul style="list-style-type: none"> • Refer to "Remedy" list for problem # 7. High probability of reversed yellow and white vacuum leads on bi-level motor.
10. Inability to obtain mix (FLOOR/DEFROST) air flow. Other modes operate correctly.	<ul style="list-style-type: none"> • Refer to "POSSIBLE CAUSES" list for Problem # 5 and # 6. 	<ul style="list-style-type: none"> • Refer to "Remedy" list for problem # 5 and # 6. High probability of reversed red and green vacuum leads on mix motor.

NOTE: FOLLOW DIAGNOSIS PROCEDURE IN "REMEDY" COLUMN IN THE ORDER LISTED.