

**VACUUM TROUBLE SHOOTING GUIDE
FOR EVANS TEMPCON HEATER-A/C SYSTEMS**

<u>PROBLEM</u>	<u>POSSIBLE CAUSES</u>	<u>REMEDY</u>
1. Air Flow Comes from Defrost Louvers regardless of mode selected	<ul style="list-style-type: none"> * Vacuum supply line to control panel has fallen off of vacuum reservoir. * Manifold Vacuum Supply Hose has fallen off at Vacuum Reservoir or at Manifold port. * Severe Leakage in Vacuum Supply Circuit. * Faulty Control Panel or Vacuum Harness. * Pinched Vacuum Lines 	<ul style="list-style-type: none"> * Ensure that Black Line of Vacuum Harness is pushed fully onto the corresponding port of the Vacuum Reservoir. * Ensure that both ends of the supply hose are firmly attached to their corresponding ports. * Examine Vacuum Supply Hose from manifold to Vacuum Ball and Black Supply Lead of Vacuum Harness from Vacuum Ball to Control Panel for cuts or pinching. Repair or replace as required. * Having checked above causes and finding no problem: Check for vacuum at the White, Yellow, Red, Green, and Blue Vacuum leads of the harness while changing through all operational modes. If no vacuum is detected, replace Vacuum Mode Switch and/or Harness. * Inspect Red, Green, White, and Yellow Vacuum lines for pinching or kinking. Repair/replace as required.
2. Air Flow is suddenly and momentarily diverted to defrost louvers while Driving.	<ul style="list-style-type: none"> * Leak in Vacuum Reservoir, Vacuum Hose from Manifold or Vacuum Reservoir. Check Valve. Inadequate Vacuum Supply 	<ul style="list-style-type: none"> * Measure Vacuum at the small port on the Reservoir with the engine running at idle. Turn the engine off and take note of the time for vacuum loss to 10 in. Of hg. If this time is shorter than 5 sec., inspect hose and reservoir for leaks. Repair/replace as required.

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

VACUUM TROUBLE SHOOTING GUIDE (Cont'd)

<u>PROBLEM</u>	<u>POSSIBLE CAUSES</u>	<u>REMEDY</u>
3. Air Flow comes from Face Louvers regardless of mode selected.	* Face Door of Air Box is Binding	* Inspect door for adequate clearance with top and bottom of Air Box, or any loose foam seals. Repair/replace as required.
	* Door/Vacuum Motor Linkage has come apart	* Re-assemble linkage. Check for proper operation.
	* Door/Vacuum Motor Linkage is binding.	* Inspect linkage for bind points. If necessary increase clearances with small file. Check for proper operation.
	* Faulty Control Panel	* With engine running, select Floor, Mix or Defrost Mode on the Control Panel. Remove the Yellow and White Vacuum Leads from the Vacuum Motor. If face door closes and vacuum is present at the Green and White leads, replace Control Panel Mode Switch.
4. Fresh Air/Recirc. Air Door does not operate. Air Flow modes operate correctly.	* Recirc. & Fresh Air Door(s) Binding.	* Inspect Door(s) for interference points with evaporator case, or any loose foam seals. Repair/replace as required.
	* Pinched Vacuum Line	* Inspect Blue Vacuum Line(s) for pinching or kinking. Repair/replace as required.
	* Door/Vacuum Motor Linkage has come apart.	* Re-assemble linkage. Check for proper operations.
	* Door/Vacuum Motor Linkage is Binding.	* Inspect Linkage for bind points. If necessary, increase clearances with a small file. Check for proper Operation.

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<u>PROBLEM</u>	<u>POSSIBLE CAUSES</u>	<u>REMEDY</u>
4. Cont'd	* Faulty Control Panel	* With engine running, position the Rotary Mode Selector to the "MAX A/C" setting. If vacuum is not present at the Blue Lead, replace the Rotary Mode Switch.
	* Faulty Vacuum Motor	* With engine running, position the Rotary Mode Selector to the "MAX A/C" setting. If vacuum is present at the Blue Lead, replace Vacuum Motor.
5. Inability to change air flow to Defrost mode. Floor and Face mode operate correctly.	* Defrost Door of Air Box is binding.	* Inspect door for adequate clearance with top and bottom of Air Box or any loose foam seals. Repair/replace as required.
	* Door/Vacuum Motor Linkage is binding.	* Inspect linkage for bind points. If necessary, increase clearance with a small file. Check for proper operation.
	* Faulty Control Panel	* With engine running, select Defrost mode on the Control Panel. Remove the Red and Green Vacuum Leads from Vacuum Motor. If door closes on the floor collars of the air box and there is vacuum present at the Red and Green Leads, Replace Mode Switch.
6. Inability to change air flow to Floor mode. Defrost and Face Mode operate correctly.	* Defrost/Floor Door binding.	* Inspect Door for adequate clearance with top and bottom of Air Box, or, for any loose foam seals. Repair/Replace as required.
	* Pinched Vacuum Line(s)	* Inspect Red and Green Vacuum Leads for pinching or kinking. Repair/Replace as required.

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VACUUM TROUBLE SHOOTING GUIDE (Cont'd)

<u>PROBLEM</u>	<u>POSSIBLE CAUSES</u>	<u>REMEDY</u>
6. Cont'd	* Door/Vacuum Motor Linkage has come apart.	* Re-assemble linkage. Check for proper operation.
	* Door/Vacuum Motor Linkage is binding.	* Inspect linkage for bind points. If necessary, increase clearances with a small file. Check for proper Operation.
	* Faulty Control Panel	* With engine running, select the Floor mode, If vacuum is not present at the Red and Green Leads, replace Mode Switch.
	* Faulty Vacuum Motor	* With the engine running, select the floor mode. If vacuum is present at the Red and Green Leads, replace Vacuum Motor.
7. Inability to obtain air flow from Face Louvers. Defrost and Floor Modes Operate Correctly.	* Face Door is Binding	* Inspect Door for adequate clearance with top and bottom of Air Box, or for any loose foam seals. Repair/replace as required.
	* Pinched Vacuum Line(s)	* Inspect Yellow and White Vacuum lines for pinching or kinking. Repair/replace as required.
	* Door/Vacuum Motor Linkage has come apart.	* Re-assemble linkage. Check for proper operation.
	* Door/Vacuum Motor Linkage is binding.	* Inspect linkage for bind points. If necessary, increase clearance with a small file. Check for proper operation.
	* Faulty Control Panel	* With engine running, select "MAX A/C" or "A/C" Mode. If vacuum is not present at Yellow & White Vacuum Lines, replace Mode Switch.

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<u>PROBLEM</u>	<u>POSSIBLE CAUSES</u>	<u>REMEDY</u>
7. Cont'd	<ul style="list-style-type: none">* Faulty Vacuum Motor* Yellow and White Vacuum Leads reversed on Bi-Level Vacuum Motor.	<ul style="list-style-type: none">* With the engine running, select "MAX A/C" or "A/C" mode. If vacuum is present at the Yellow and White Vacuum Lines, replace Vacuum Motor.* Switch Leads.
8. 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.
9. 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 Dark Green Vacuum Leads on Mix Motor.

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