# ELECTRICAL TROUBLESHOOTING GUIDE
# FOR EVANS TEMPCON DUAL ZONE HEATER – A/C SYSTEMS

| PROBLEM | POSSIBLE CAUSES | REMEDY |
|---|---|---|
| 1. A/C clutch does not operate; blower operates as it should. | • Faulty rotary mode selector switch. | • Check for switch continuity; replace if necessary. |
| | • Clutch circuit wires have fallen off of clutch terminals, thermostat, or pressure switch. | • Re-install clutch circuit wires as required. |
| | • Faulty A/C thermostat. | • Jump across thermostat terminals. If clutch engages, replace thermostat. |
| | • Faulty A/C pressure switch (make certain adequate refrigerant is contained in system) | • Ensure switch is tight on fitting.<br>• Jump across switch terminals (A/C thermostat and "comp" terminals for trinary switch). If clutch engages, replace switch |
| | • Faulty A/C clutch. | • With engine OFF, apply 12V+ supply directly to clutch terminals and listen for clutch engagement. Replace clutch if there is no engagement. |
| | • Faulty chassis circuitry (GM and Ford) | • Referring to Chassis A/C schematic, if voltage is read at point "A" when A/C switch is depressed and clutch engages when 12V+ power is applied directly to clutch terminal, problem is originating in chassis wiring. Refer to Chassis Manufacturer's service manual. |
| 2. HVAC accessory fuse blows when rotary mode selector switch is in any position except OFF, VENT, and FLOOR. | • Short circuit in clutch circuit wiring | • Inspect all associated wiring (see system schematic) from control panel to clutch. |
| | • Short circuit in clutch. | • With engine OFF apply an 8 amp fused 12V+ power supply directly to clutch terminals. If fuse blows, replace clutch. |
| 3. Blowers do not operate at any speed. | • Mode Selector switch in OFF position. | • Designed response. |
| | • Main harness leads (power or ground) disconnected at vehicle power supply or ground source. | • Check connections from HVAC fuse panel to vehicle power and ground sources. |

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

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| 3. Blowers do not operate at any speed. (Continued) | • Loose terminal(s) in fuse block relay cavities. | • Check terminals at Relays B and F to ensure they are locked into their cavities. |
| | • Connector disconnected from mode selector switch at main control panel. | • Install connector. |
| | • Faulty mode selector switch. | • With vehicle ignition switch in the ON position, rotate the mode selector switch to any position except OFF. Using a voltmeter, check for voltage at mode switch, circuit 012 red (see schematic). If no voltage is read, replace mode selector switch. |
| | • Improperly installed connectors. | • Inspect harness connections between main harness, fuse panel harness (split harness systems only), and base unit. Ensure terminals are seated in connector and that connectors are locked together. |
| 4. No blower speed on driver side. | • Blown fuse in HVAC fuse panel. | • Check continuity of fuse, position 6. Replace if blown. |
| | • Improperly installed connectors at blower switch or base unit connector. | • Check connector at main control panel blower switch and 8 pin connector at base unit. Check wire blocking in connector. |
| 5. No blower speed on passenger side. | • Blown fuse in HVAC fuse panel. | • Check continuity of fuse, position 5. Replace if blown. |
| | • Improperly installed connector to passenger blower switch, passenger resistor on base unit or passenger control harness to main harness. | • Check connector at passenger control panel blower switch, connector on resistor and 6 pin junction between passenger harness and main harness. |
| 6. Driver side blower does not operate on HIGH speed. | • Improperly installed connectors at blower switch or base unit connector. | • Check connector at main control panel blower switch and 8 pin connector at base unit. Check wire blocking in connector. |

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| 6. Driver side blower does not operate on HIGH speed. (continued) | • Improperly installed connectors between main harness and fuse panel harness (split harness systems only). | • Inspect harness connections between the main harness and the fuse panel harness. Ensure terminals are seated in the connector halves and that connectors are locked together. |
| | • Terminals loose at relay J in fuse panel. | • Pull relay J from fuse panel and check to see if terminals are properly seated in cavities. Repair if necessary. |
| | • Improperly installed connector at base unit. | • Check connection to base unit. Check wire blocking in connector. |
| 7. Passenger blower does not operate on HIGH speed. | • Improperly installed connectors at blower switch; main harness to passenger harness, fuse panel harness or base unit harness and resistor. | • Check harness connections. Ensure pins are seated in connectors and connectors are locked together. |
| | • Improperly seated terminals at relays E or G in HVAC fuse panel. | • Pull relays and check to ensure terminals are properly seated in correct cavities. |
| 8. Driver blower comes on/stays on HIGH speed when Mode selector is in any position except OFF. | • Circuits 004 (red) and 013 (red w/black trace) reversed, most likely at base unit connector. | • Check cavity positions of wires (see electrical schematic). |
| 9. Passenger blower switch controls driver side air speed when driver control is in OFF position. | • Circuits in wrong cavities at relay H in HVAC fuse panel; circuit 011 (green) switched with 013 (red). | • Check cavity positions of wires. Circuit 011 should be in cavity 30, 013 should be in cavity 87 (see schematic). |
| 10. Driver temperature dial does not control passenger side discharged air temperature in DRIVER OVERRIDE mode. | • Loose wire or defective relay at Relay D in HVAC fuse panel. | • Pull relay and check to ensure terminals are properly seated in correct cavities. Test relay for proper function; replace if defective. |
| 11. Driver blower control does not control passenger side discharged air speed in DRIVER OVERRIDE mode. | • Override switch disconnected. | • Check connection to override switch. |
| | • Open circuit (018 Purple) between override switch and relay H in HVAC fuse panel | • Check continuity of circuit (see schematic). Check terminals at relay to ensure they are locked into cavities. |

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