

TECHNICAL INFORMATION

Electronic Air Conditioning – Digital Climate Control Option

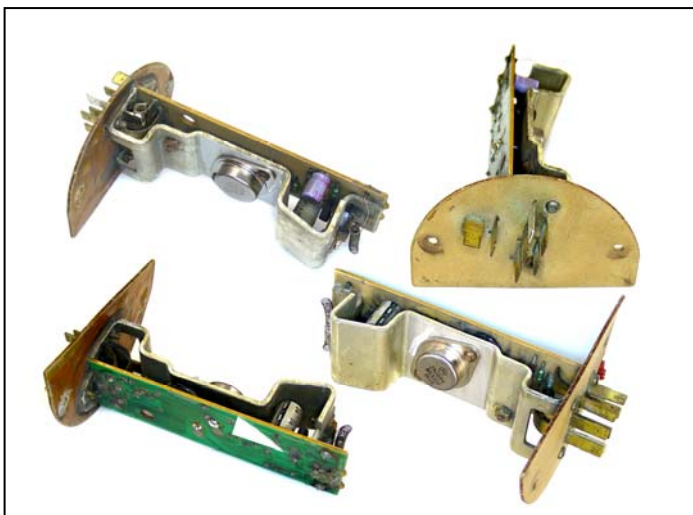
The Digital Climate Control option, also known as Electronic Air Conditioning, found on the 84-87 Buick Regal is prone to failure due to component failure and heat fatigue. This optional dash control (option C68) uses a “touch screen” technique to select various heat, defrost, blower and AC functions within the passenger compartment of the vehicle. Essentially, it works like the mechanical counterpart, except it uses electrical solenoids and air diverters which are controlled by the control head, digitally, through a microprocessor-based controller.

When the system fails, you will generally see certain symptoms, the most common ones being a “stuck” **air diverter door** or **temperature door** actuator, or the **Blower and A/C Clutch Control Module**. When the module fails, there are usually two symptoms associated with failure; the blower fan runs on high at all times, losing control of the blower speeds or the AC compressor clutch either stays on all the time, or does not operate. The troubleshooting procedure regarding this system is lengthy and beyond the scope of this article. This data, found in the factory service manual is available at www.installationinstructions.com/FYI/climatecontol87.pdf in downloadable PDF format.

This article deals primarily with the Blower and A/C Clutch Control Module located on the heater enclosure under the hood, secured by two screws. There are two connectors plugged into the module; one 5-terminal and one 2-terminal connector. These are situated in such a way as to retain moisture, causing a failure due to corrosion. Caspers has re-designed this module, Part Number 107146, with a different connection design to overcome this design flaw.

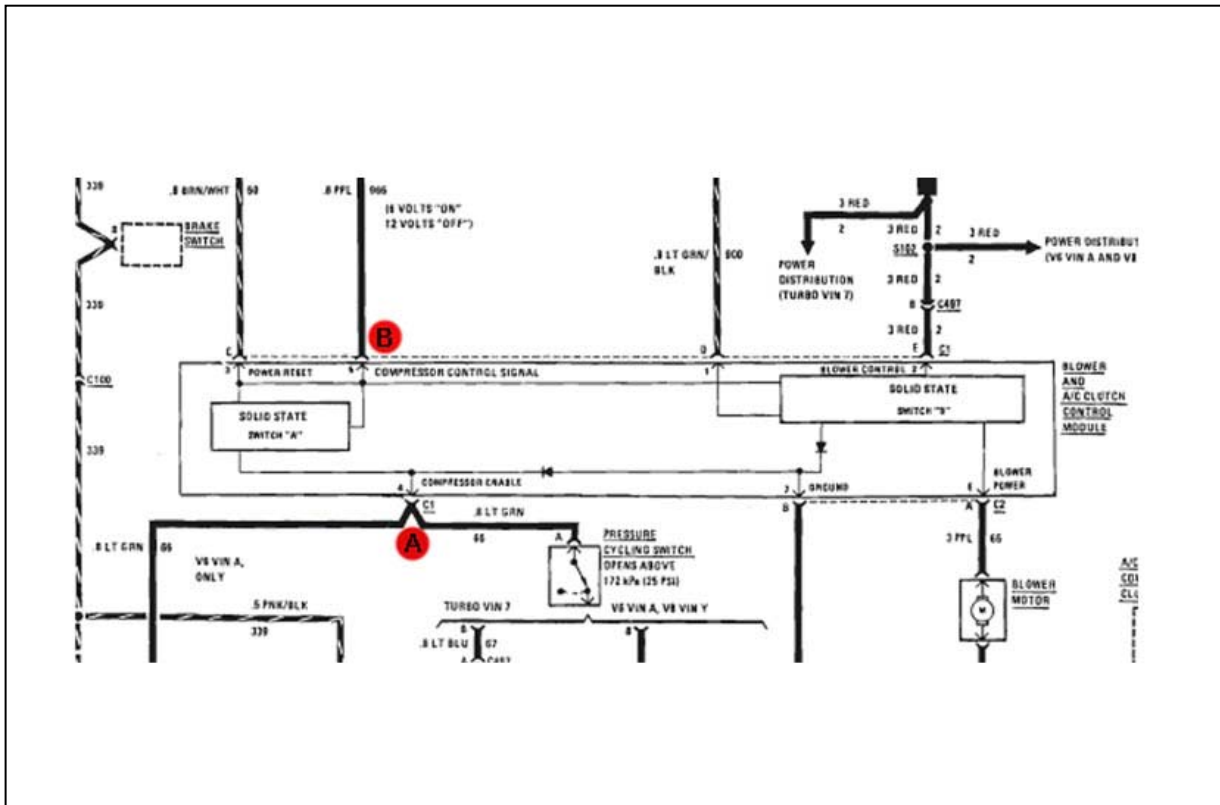
RIGHT: Control Head front and rear views

BELOW: Blower and AC Clutch Control Module



Upon removal of this module, you can clearly see the effects of corrosion and intense heat damage. The module uses high power transistors as a means to control the compressor clutch and the blower motor, and these transistors produce a great deal of heat in the process. The heat generated reduces the life of the component, causing component fatigue and electrical failure.

When using the service manual for troubleshooting, be aware of the incorrect pin assignments shown in the original schematic of the Module. The factory manual showed A and B of this wiring diagram incorrectly swapped. The correct designation is shown below in red:



Before installing the Caspers replacement module, inspect the original connector for signs of corrosion and overheating. Repair this connector before installing the new module as damaged terminals will not provide a proper connection. Contact cleaner is not adequate to restore a corroded terminal; replace the terminal when any signs of corrosion are evident. **The Caspers replacement module is supplied with a separate battery feeder that attaches directly to the battery, to overcome the design flaw of the original module – burned feeder terminal on the module.**

Shown below are two variations of GM control heads. These have been in use from 1983 thru 1988 on the B, C, G, E and X body cars and there are dozens of different part numbers in use. They are occasionally interchangeable; however, some functions (such as DEFROST) may not be functional on certain control heads. Be sure to locate the same part number when replacing the control head.

