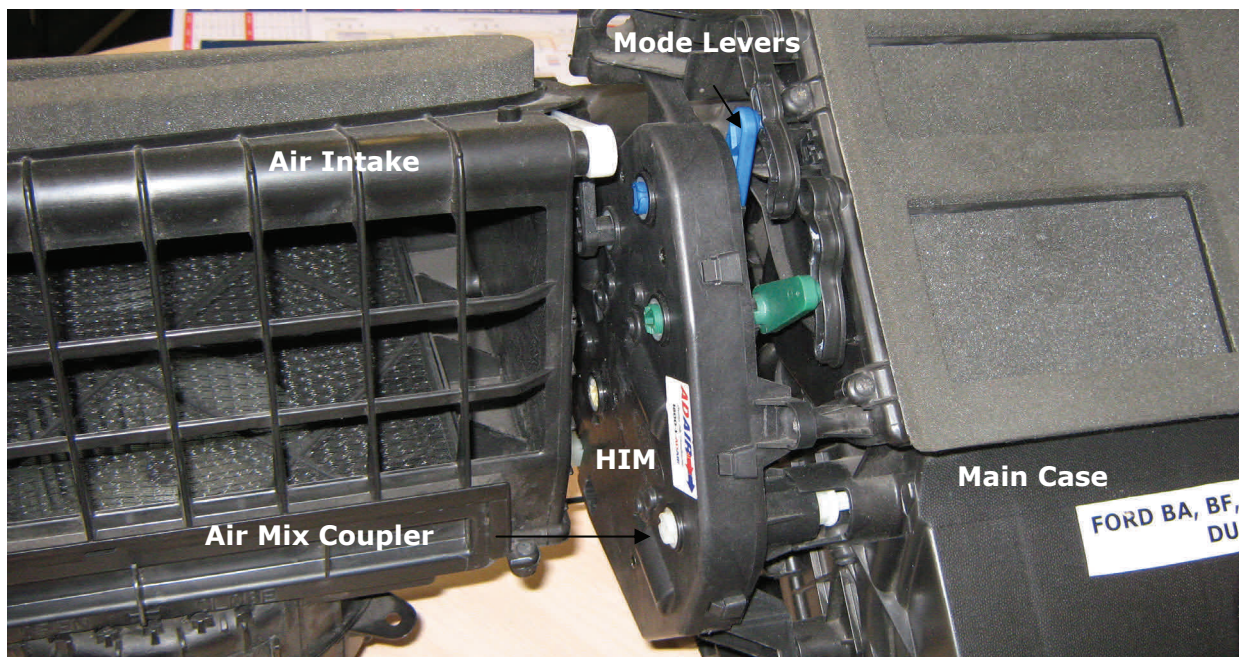




Subject:	Ford BA / BF / Territory HIM (HVAC Integrated Module) Part 1—Description.					TSB #:	38 8-10
						Date:	2/8/10
Initial Once Read:							

The "HVAC Integrated Module" (HIM) is a self contained electronic control module attached to the left side of the HVAC main unit and the air intake. The HIM consists of a number of small D.C. electric motors, electrical connectors, PCB and a blower motor control heat sink.

Small D.C. electrical motors operate plastic levers that are attached to the mode direction doors such as air intake, face, demist etc. Blower motor variable speeds are regulated by the HIM control circuit which includes a heat sink to dissipate generated heat by altering resistance.



The HIM is part of the high speed serial data circuit (Can Bus) which also includes the engine / transmission module (PCM), body control module (BEM), instrument cluster, heater / radio controls (ICC).

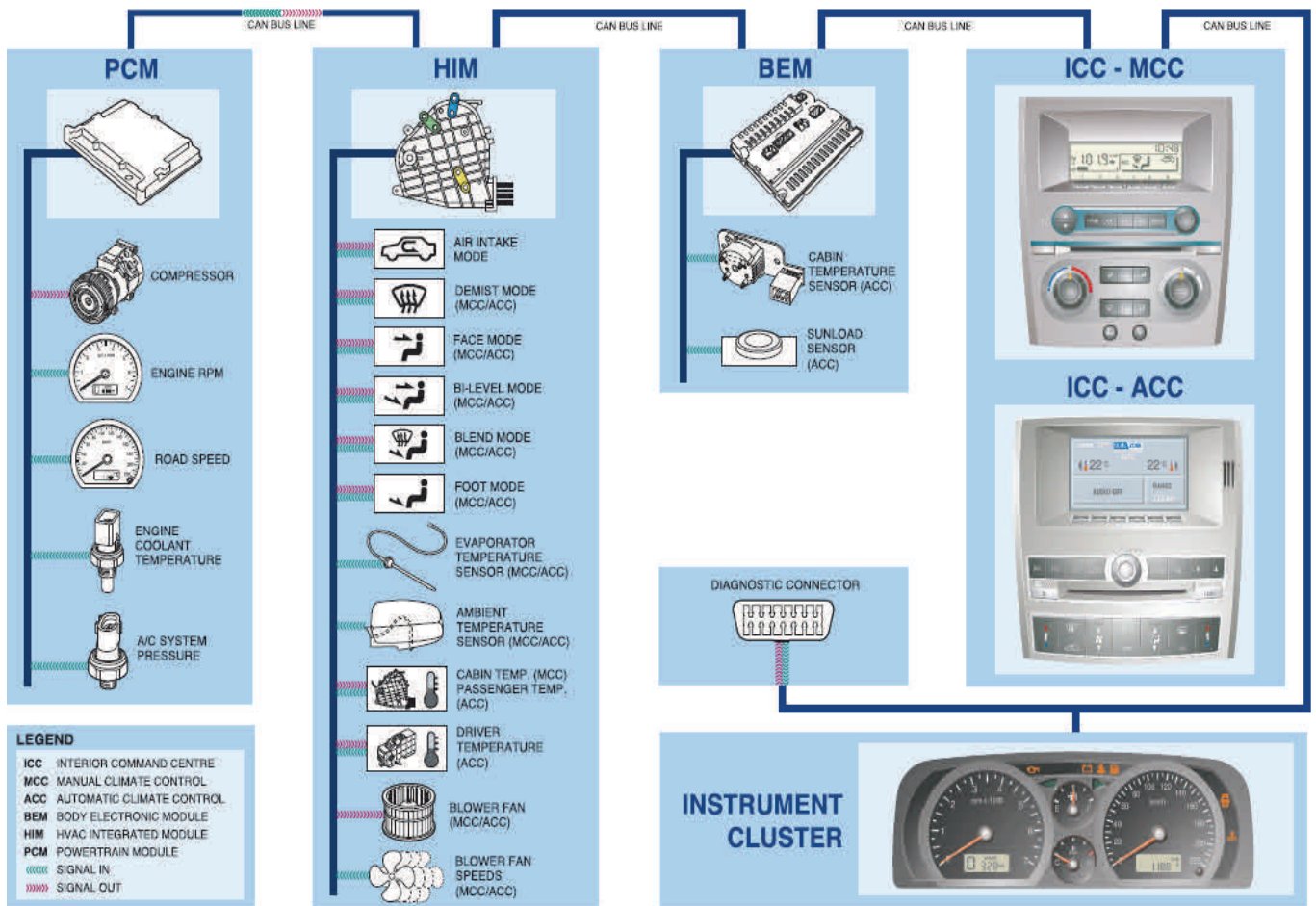
There are three (3) levels of HIM, heater only (HTR), standard manual (MCC) and automatic climate control (ACC). The ACC is dual zone (D.Z) independent temperature adjust left to right and the HTR / MCC are single zone (S.Z) same temperature left and right.



This type of Can data line is called the "daisy chain" which implies that if any of the modules has a communication issue the following module will not receive data. This is true of the HIM, in that if it fails or has a communication issue the engine may not operate as no data is provided to the PCM.

Neither the MCC or ACC have on board diagnostics and a scan tool is required to access the data information and DTC's. A new HIM module is provided in "plant mode" which means it only has the minimum amount of software to operate. The HIM will have to be gendered in MCC and ACC and have the minimum and maximum mode door stop positions set. In the "plant mode" on first ignition cycle you will hear the doors move, this is not the min / max door stop positions.

Data is sent and received between all the modules this includes engine (PCM) and other information for the HIM as part of the calculations required to maintain the desired customer settings. As an example the HIM requires engine coolant temperature, RPM, throttle position, refrigerant pressure and road speed information as a safety function for disengaging the compressor.



Courtesy of Air International Thermal Systems



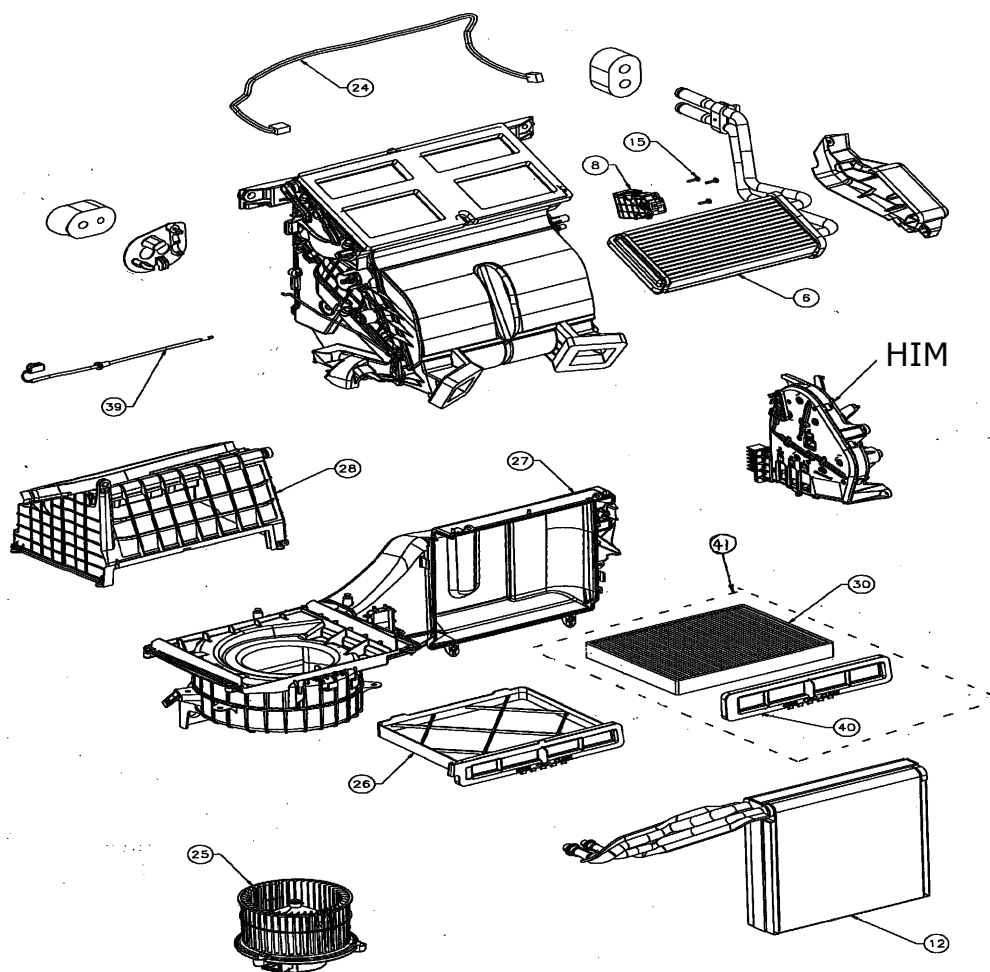
While a large proportion of information is fed to the HIM via the Can bus line, the HIM also has a number of sensors that report directly to it such as the cabin temperature sensor, sun load sensor, ambient temperature sensor and evaporator temperature sensor.

The HIM monitors and processes all the information provided to it to control, maintain and adjust the temperature, mode positions, compressor clutch relay, blower motor speeds, air intake position and ICC display. If an fault is present within the HIM / HVAC a diagnostic trouble code (DTC) in the HIM.

The crash pad would have to be removed to gain access to the HIM. Refrigerant recovering and coolant draining is not required when replacing a HIM.

TSB40 Part two (2) of FORD HIM (TSB38) will cover — HIM symptoms, characteristics, system causes and diagnostic hints.

Spare Parts Breakdown of the HVAC Assembly.



Courtesy of Air International Thermal Systems