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Blue vs. Gray Connectors During Diagnosis

When performing electrical diagnostics involving the fuel injection ECM on 1995 through 1997 Legacy and Impreza vehicles, pay particular attention to the color of the connector that mates to the engine control module. Some will be gray and some will be blue. The connectors are not the same and the pin terminal locations that correspond to the related systems in the car are different.

An example of where this could cause confusion would be diagnosing a TCM Code 23 (engine speed signal) on a 1996 Legacy vehicle. Looking in the 1996 Supplement Manual, you find that there is no Troubleshooting Section 3-2. This means the transmission control system has not changed since 1995 and is, therefore, not included in the Supplement. Opening the 1995 Service Manual, you will see that in Troubleshooting Section 3-2, the circuit pertaining to Trouble Code 23 consists simply of one wire from the ECM to the TCM. However, since this is a 1995 Manual, the pin terminal connection for the ECM referred to in the diagnostic flow charts is B84, pin 33, which is correct for only the gray connector of a 1995 ECM, not the blue connector on the 1996 vehicle you are working on. Referring to the engine control module (ECM) I/O (input/output) chart (Sec. 2-7, page 68-70) in the 1996 Legacy Service Manual Supplement, we find that the correct pin location for the engine speed signal for a 1996 blue connector is B84, pin terminal 64.

Without taking the extra step of looking in the 1996 Manual, we obviously would have ended up checking the wrong wire at the ECM and coming to the wrong diagnostic conclusion. To minimize the possibility for error, always double check the connector colors before attempting to locate the pertinent pins.