

TO: ALL SALES FORCE

#: BDTECB101

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SUBJECT: Chrysler SMEC/SBEC Connector Tightening Procedure.

This tech bulletin pertains to all Chrysler SMEC/SBEC controllers.

On occasion, installers or service advisors get complaints from customers regarding intermittent engine operation in vehicles utilizing a SMEC or SBEC engine controller that has been serviced or replaced.

Often, the technician follows up on the complaint by firing up the vehicle and quickly tapping the SMEC/SBEC housing, causing the vehicle to miss intermittently. The normal assumption is that of a faulty computer. This, however, may not be the source of the problem. Let's consider the connector.

The connector used in the SMEC/SBEC engine controller is a sixty (60) pin connector with a bolt boss in the center used to anchor the bolt retained in the vehicle wiring harness connector. The anchor bolt boss is the key to a good connection between the vehicle wiring harness and the electronic engine controller. If torqued down properly, the bolt in the wiring harness connector will snug down the connector creating a proper electrical connection between the vehicle wiring harness and the SMEC/SBEC controller. If under-tightened, a loose connection will exist, possibly causing erratic engine behaviour or intermittent operation. If over-tightened, the bolt may cause the boss to break away from the SMEC/SBEC connector, resulting in a poor connection. Figure 1 shows an illustration of two connectors, one above the other.

Over...

In Figure 1, you can see the good connector at the top of the illustration, directly above the defective connector.

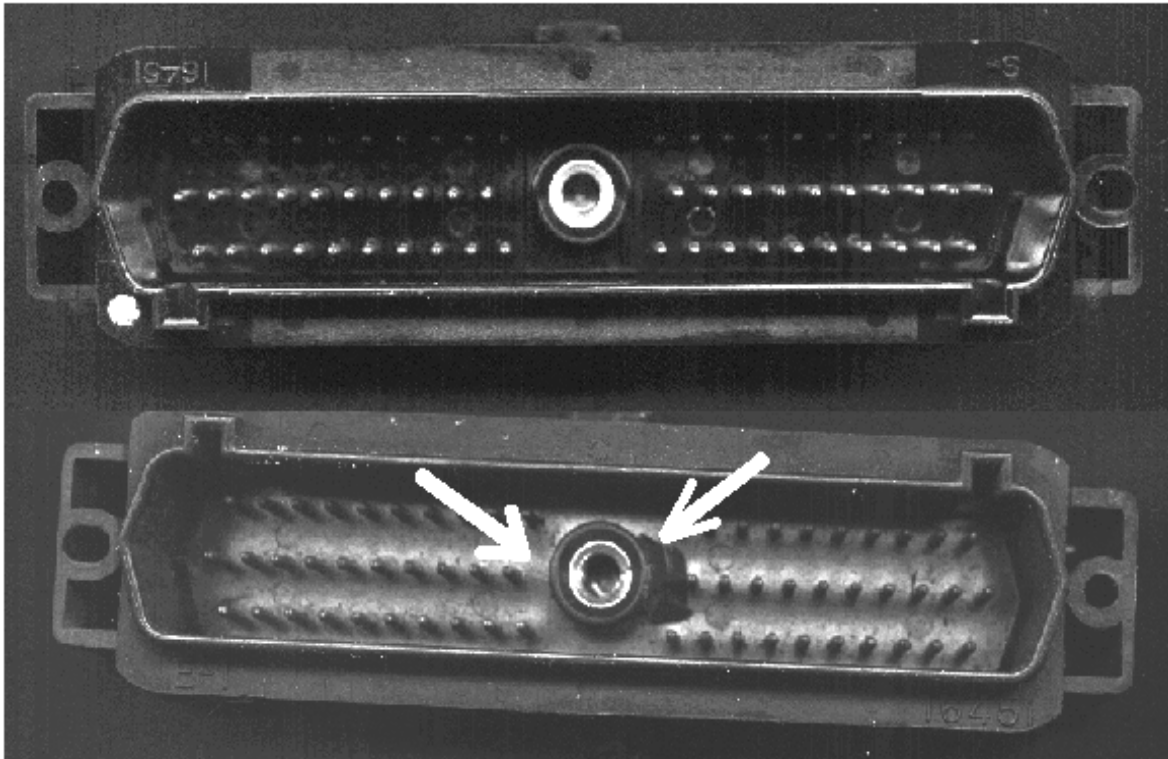


Figure 1.

The good connector at the top of the illustration is actually a revised new part that is used by Blue Streak Electronics to repair SMEC/SBEC computers with defective connectors. This new unit uses a reinforced bolt boss that is more durable than the original style connector assembly. The bottom connector in Figure 1 is a defective connector. The two white arrows indicate the typical areas of breakage. The white arrow on the left is indicating a hairline crack in the connector at the base of the bolt boss.

Over...

The arrow on the right points at the damaged plastic pulled up by the action of the bolt boss being pulled from the connector as a result of over-tightening. Although it is missing from the illustration, it must be noted that there is a rubber seal (typically orange in color) that must be removed from the connector in order to inspect the base of the bolt boss for any damage. The rubber seal is used to protect the electrical connectors from exposure to the elements. After removing the seal, inspect the base of the bolt boss for cracks or hairline fractures. If this area is damaged, it may be the source of the problem.

After determining the problem, re-install the SMEC/SBEC controller after cleaning the vehicle wiring harness connector of any dirt or debris and use a torque wrench to tighten the harness retaining bolt to 4 Nm (35 inch/pounds). DO NOT use a power tool for this procedure as it may cause damage to the connector.