Figure 38-1  A partially melted electrical connector indicates that excessive current flow was present. The cause of the excessive current should be located and corrected before the engine is started.

Figure 38-2  Bell housing alignment dowel pins are used to ensure proper alignment between the engine block and the transmission.
TECH TIP: The Headless Bolt Trick
Sometimes parts do not seem to line up correctly. Try this tip the next time. Cut the head off of extra-long bolts that are of the same diameter and thread as those being used to retain the part, such as a transmission. SEE FIGURE 38–3.

Use a hacksaw to cut a slot in this end of the guide bolts for a screwdriver slot. Install the guide bolts; then install the transmission. Use a straight-blade screwdriver to remove the guide bolts after securing the transmission with the retaining bolts.

Figure 38–3 Headless long bolts can be used to help install a transmission to the engine.

Figure 38–4 The internal splines inside the torque converter must be properly aligned with all of the splines of the automatic transmission.
Figure 38-5: It is often easier to install all of the accessory drive belts before the engine is installed in the vehicle.

Figure 38-6: A fixture installed that is used as a place to attach the housing chain.

FREQUENTLY ASKED QUESTION

What Is Break-In Engine Oil?

Many years ago, vehicle manufacturers used straight weight such as SAE 30 nondetergent engine oil as break-in oil. Today, the engine oil recommended for break-in (running in) is the same type of oil that is recommended for use in the engine. No special break-in oil is recommended or used by the factory in new vehicles. Always use the specified viscosity oil as recommended by the vehicle manufacturer.
Even though the dash gauge may show normal operating temperature, a scan tool or an infrared pyrometer can also be used to verify proper coolant temperature.