

## We're Steered in the Right Direction

Recently one of our subscribers called to share an experience he had on a 2006 Mazda 5. This vehicle was low on power steering fluid and had a leak from the power steering unit.

The power steering system issued on the Mazda 5 and Mazda 3 models is referred to as the Electric Hydraulic Power Assist Steering (EHPAS) system. The EHPAS unit is an electric power steering pump which is combined with a control module. The EHPAS control module receives vehicle speed and engine RPM inputs via the controller area network (CAN), and also has a direct input from a steering angle sensor. Using these inputs, the EHPAS module will energize the electric power steering pump motor when it determines power steering assist is needed. This system reduces engine load because it eliminates the load of a conventional belt-driven mechanical power steering pump. The EHPAS unit is located in a vulnerable location, as it is mounted in the right front of the vehicle in front of the wheel, and many of these units get damaged in front-end collisions.

Most of our cases like this come up after replacement of the EHPAS unit while at a collision repair center. Replacing the EHPAS unit seems like a pretty routine part replacement. However, if the proper steps are not taken prior to removing the EHPAS unit, you will end up with no power steering assist and an EHPAS warning light on. A scan tool will then retrieve a code B2477, indicating the EHPAS unit had not been configured.

The EHPAS control units come blank from the factory and need to be configured with vehicle specific information in order to function. No big deal if you have the factory scan tool to configure them, but a big deal if you don't. In this case, it added another \$140 to the total bill and the customer wasn't too happy. Before you replace one of these EHPAS units on a Mazda 5 or Mazda 3, take into account that it will need to be configured, and be sure to include the fees in your estimate.

**The configuration procedure begins prior to removing the original unit.** A scan tool retrieves the vehicle data out from the original unit and then installs that data into the new one after installation. Without the data from the original unit, the new unit has to be programmed using 'as built data' obtained from Mazda's website and this typically adds more to the cost of programming if you have to take it to a dealer to get it done.

If you have any questions, just give us a call.

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