



- Author: Jesse Zacarias
- Subject: Intermittent failure to upshift
- Unit: 722.6
- Vehicle Application: 1998 Mercedes M320

Essential Reading

- Rebuilder
- Shop Owner
- Center Manager
- Diagnostician
- R & R

Are We Listening?

I heard a report recently on NPR (National Public Radio) that said, “Doctors are not good listeners; that is why a lot of unnecessary tests are done.”

When I heard that I said to myself, “That is true in our field too.” If we don’t listen well to the patient we may misdiagnose. Let me tell you about something that happened to me just recently that emphasizes this point. We had a customer sent to us by a local general-repair shop. He was a student here for the winter break visiting his family and was about to leave when he started to have transmission problems on his 1998 Mercedes M320.

When we asked what the problem was he simply said, “It won’t upshift at times.”

It was the first week of January and he needed the car to return to school by the following week. In short (no pun intended) he was short on time and cash.

When we talked with the patient (vehicle) this is what he said (see codes in **Figure 1**).

Now we heard “code 014” and thought of bad N2 and N3 speed sensors. We checked the TCM for signs of fluid contamination, since it is a common problem and in the Mercedes M Class the TCM is easily accessible. We found no signs of fluid contamination on the TCM, so we recommended replacement of the speed sensors, which are part of the circuit board; besides, the circuit board should always be replaced on models built before 2003.

After replacing the circuit board, circuit-board case connector, filter and fluid, we cleared the codes and drove the car for a long time. We did not want this

customer to have problems driving out of state. The vehicle performed great, so we released it to the customer. Within a couple of hours he returned. We have all had that awful gut feeling when a car returns that soon. Again we talked with the patient, and this is what he said (see codes in **Figure 2**)

continues page 6

1

Vehicle History

Back Activate Delete Attachments Print

Odometer/Mileage : 221441 First Name :
 Technician : Jesse Last Name : Lopez
 Vehicle Color : Gray License :
 Status : In Progress PostCode :

Vehicle ID

Year : 1998 Submodel :
 Make : Mercedes-Benz Engine :
 Model : 163.154 (M-SERIES) Other Vehicle ID

Data Display

Scanner - Codes - 1/4/2013 4:43:56 PM
 014 - RPM Comparison N2 To N3 Implausible
 097 - Fault Not Relevant Clear Diagnostic Trouble Code Memory
 109 - Speed Sensor N3 Y3G11
 110 - RPM Comparison N2 To N3 Implausible
 137 - Transfer Case Control CAN Communication Implausible

Attachments

98mz.pids
 mb2.pids
 m23.pids

Scanner - Codes - 1/5/2013 11:12:47 PM
 - No Codes Present

No Active Vehicle

(Please ignore the time; clock not set correctly)

2

Vehicle History

Back Activate Delete Attachments Print

Odometer/Mileage : 0 First Name :
 Technician : Last Name :
 Vehicle Color : License :
 Status : In Progress PostCode :

Vehicle ID

Year : 1998 Submodel :
 Make : MERCEDES-BENZ Engine :
 Model : ML320 Other Vehicle ID

Data Display

Scanner - Codes - 1/9/2013 3:10:38 AM
 013 - Speed Sensor N3 Y3G11
 109 - Speed Sensor N3 Y3G11
 110 - RPM Comparison N2 To N3 Implausible
 137 - Transfer Case Control CAN Communication Implausible
 147 - Gear Implausible Or Transmission Slipping

Attachments

Scanner - Codes - 1/10/2013 12:09:43 AM
 041 - Transfer Case Control CAN Communication Implausible
 097 - Fault Not Relevant Clear Diagnostic Trouble Code Memory

No Active Vehicle