

## Hints and Tips: BMW

### INITIAL DRIVEABILITY

**MODELS AFFECTED:** 1982 633CSI/733i; 1983 533i/633CSI/733i; 1984 533i/633CSI/733i

**FAULT:** Hesitation /poor throttle response in first 5 to 10 min of operating after Starting a cold/warm engine at an ambient temperature above 75 deg f.

**CAUSE:** The new generation Montronic Control Unit was not sufficiently re-programmed to compensate for the removal of the external 560 ohm resistor.

**SOLUTION:** Installation of an external resistor in the NTC line.

### X53.OI HESITATES,STUMBLES AT IDLE

**MODELS AFFECTED:** E 53 ALL WITH M54B30 PRODUCED UP TO 8/00

**FAULT:** When turning the steering wheel at idle the X53.OI vehicles equipped with M54 engine may hesitate and stumble. No fault codes are stored in the DME.

**CAUSE:** DME/ECM calibration.

**SOLUTION:** Reprogram the DME with CD23(after loading CD23 update)

### THERMOSAT SOFTWARE & OXYGEN SENSOR/MISFIRE REPROGRAMMING

**MODELS AFFECTED:** E38-740i/IL with M62/M62TU produced 4/97-8/99

E39-540i/IA with M62/M62TU produced 4/97-8/99

**FAULT:** The check engine light is illuminated and stored in the Engine Control Module(ECM/DME) are one or all of the following fault codes due to a software error:

- FC 10-02 sensor pre catalyst (bank 1)
- FC 12-02 sensor post catalyst (bank 1)
- FC 18-02 sensor pre catalyst (bank 2)
- FC 20\_02 sensor post catalyst(bank 2)
- Various misfire faults

**CAUSE:** DME calibration software.

**SOLUTION:** Check the DME program number& if necessary the DME must be reprogrammed.

**Note:** When ever any of the previously listed faults are set, there is no need to replace the oxygen sensor(s) with this programming update.

### M5 CHECK ENGINE LIGHT ILLUMINATED

**MODEL EFFECTED:** E39 MS produced up to 2/00

**FAULTS:** -The OBDO2 readiness code will not set in the ECM/DME

-The check engine light is illuminated and or after starting the engine the temperature gauge goes to full hot .The DME may store the following fault codes:

-FC 232 Function check TEV (or these: FC 174/175 Fuel system diagnosis 1 or 2; FC 92/93: 02 sensor post cat bank 1 or 2 voltage monitoring).

-FC 105: Engine Temperature Plausibility. When this fault is set in the ECM/DME, the temperature gauge may go to full hot. To reset the temperature gauge to normal operation just cycle the key.

**CAUSE:** DME calibration.

**SOLUTION:** Reprogram the DME with CD210 or higher.

### ENGINE SPEED APPEARS TO HANG DURING SHIFTS

**MODELS AFFECTED:** E46-323i with M52 TU engine & manual trans produced 4/98-3/99

E39-528i/iT with M52 TU engine and manual trans produced 9/98-3/99

Z3- with M52TU engine and manual trans produced 8/98-3/99

**FAULTS:** -During shifts engine RPM momentarily hangs up.

-Gear change is not smooth 1-2&2-3 shifts.

**CAUSE:** -DME is not receiving the clutch depressed signal.

-When the clutch pedal is depressed the program within the ECM/DME doesn't allow the engine to speed to drop quickly.

**SOLUTION:** Check the DME is receiving the signal from the clutch switch and the DME may

need reprogramming.

### **SHUT-OFF VALVE FAULT CODE SET IN ECM/DME**

**MODEL AFFECTED:** MZ3-with 552 engine produced 2/98-9/98.

**FAULT:** The check engine light is on and the fault code: FC 253- shut-off valve, activated charcoal filter jammed shut is set in the ECM/DME.

**CAUSE:** Tank pressure sensor voltage threshold inside the DME program is too high.

**SOLUTION:** Check overall operation of the system, if no faults are found then the DME needs reprogramming.

### **MOTOR DRIVEN THROTTLE VALVE(MDK)**

**MODELS AFFECTED:** E 39-528i/iA with M52TU engine produced 9/98

E 46-323i/iA & 328i/iA with M52TU engine produced 6/98

Z3-Roadster with 2.5L/2.8L engine and Mcoupe with 2.8L Engine produced 9/98

**FAULT:** The check engine light is on and one or more of the following faults are Set in the ECM/DME:

**FAULT CODES:**

109(6D)-Plausibility of motor driven throttle valve

110(6E)-Signal, drivers wish sensor potentiometer 1.

111(6F)-Signal, drivers wish sensor potentiometer 2.

112(70)-Signal, throttle position sensor potentiometer 1.

113(71)-Signal, throttle position sensor potentiometer 2.

114(72)-Motor throttle valve final stage.

115(73)-Reference voltage, voltage regulator 1

116(74)-Reference voltage, voltage regulator 2

117(75)-Plausibility signal, drivers wish sensor potentiometer 1&2

118(76)-Plausibility signal, motor driven throttle valve sensor, potentiometers 1&2

119(77)-MDK throttle mechanical sticking.

120(78)-Pedal sensor, throttle valve potentiometer.

172(AC)-Signal, drivers wish sensor, potentiometers 1&2 short circuit.

173(AD)-Signal, throttle position sensor, potentiometers 1&2 short circuit.

175(AF)-Drivers wish sensor 1, adaptation.

176(BO)-Drivers wish sensor 2, adaptation.

169(A9)-Motor-drive throttle valve output stage cutoff after diagnosis fault.

170(AA)-Control unit self test, internal fault.

171(AB)-Plausibility motor driven throttle valve.

**CAUSE:** The faults above could be set due to the following:

- Break/open in the wiring from the DME to the throttle motor(MDK).
- The actuator or potentiometers inside the MDK could be contaminated.

**SOLUTION:** (If any of the faults listed are set)

- Using a breakout box check for an open or short to ground in the wiring from the DME to the MDK.
- If the wiring is intact then replace the MDK, then the adaptation values in the DME must be cleared. Failure to do this will result in reoccurring faults.
- Switch the ignition off for 30 seconds.
- Turn on the ignition and delete the DME adaptations and the fault code memory
- Press the accelerator pedal to wide open throttle(WOT)4 times

### **ENGINE CRANKS BUT DOES NOT START**

**MODEL AFFECTED:** Z3(E36/7) from 9/98 production

**FAULT:** Engine cranks but doesn't start. The fault code 209(decimal) or d1 (hex) (EWS/DME alignment) is set in the DME.

**CAUSE:** EWS 3D module SW version O5. has software error.

**SOLUTION:** EWS module to be removed which is located on the left side of the vehicle, below the instrument cluster, and replace with EWS 3D module SW version 06.(part no 61 35 4 101 593).Code the EWS module using DIS V16.0 or later.

### **REPROGRAMMING OF ECM MAY NOT BE POSSIBLE**

**MODELS AFFECTED:** E38-740i/iLA with M62 engine and DSC3 produced from 9/98

E39-540i/iA/iTA with M62 engine & DSC3 produced from 9/98

E39-528i/iA/iTA with M52 engine & DSC3 produced from 9/98

**FAULT:** Reprogramming procedure can not be performed. This error message is displayed: "Programming cannot be performed correctly! Test code 002400 repeat programming if necessary."

**CAUSE:** The communication path between the DIS/MODIC & DME and/or EGS Modules are disturbed by the DSC3 control module.

**SOLUTION:** Remove the power supply to the DSC3 module before beginning the programming operation. Remove the following fuses to do so:

MODEL	FUSE	LOCATION
E38-740	17	Engine compartment
E39-540i/iA/iTA	17.31	Glove box
E39-528i/iA/iTA	17.31	Glove box

### **INCREASE IDLE SPEED BY REPROGRAMMING ECM/DME(M5.2)**

**MODELS AFFECTED:** E38-740i/iLA with M62 engine prod 12/95-4/97

E39-540i/iA with M62 engine prod 3/96-4/97

**FAULT:** Engine seems to stumble & engine idle speed appears to be low especially with the A/C off, steering wheel turned fully to the right or left or when the reverse gear is selected with automatic transmission.

**CAUSE:** Increased load requirements from steering/transmission.

**SOLUTION:** Reprogram the DME control module using CD P15.0 OR higher. This will increase engine idling speed by approximately 100 RPM