

This Service Information bulletin supersedes S.I. 12 07 99 **dated February 1999.**

**NEW** designates changes to this revision

## **SUBJECT**

### **Motor Driven Throttle Valve (MDK)**

## **MODEL**

E39 – 528i/iA with M52TU engine produced 9/98 –

E46 – 323i/iA & 328i/iA with M52TU engine produced 6/98 –

Z3 roadster with 2.5L/2.8L engine and M coupe with 2.8L engine produced 9/98  
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## **SITUATION**

Customer complains that the "Check Engine" lamp is illuminated and one or more of the following faults are set in the Engine Control Module (ECM/DME):

**NEW** Fault Code 109 (6D) - Plausibility of motor driven throttle valve

**NEW** Fault Code 110 (6E) - Signal, drivers wish sensor potentiometer 1

**NEW** Fault Code 111 (6F) - Signal, drivers wish sensor potentiometer 2

**NEW** Fault Code 112 (70) - Signal, throttle position sensor, potentiometer 1

**NEW** Fault Code 113 (71) - Signal, throttle position sensor potentiometer 2

**NEW** Fault Code 114 (72) - Motor throttle valve final stage

**NEW** Fault Code 115 (73) - Reference voltage, voltage regulator 1

**NEW** Fault Code 116 (74) - Reference voltage, voltage regulator 2

**NEW** Fault Code 117 (75) - Plausibility signal, drivers wish sensor potentiometer 1 and 2

**NEW** Fault Code 118 (76) - Plausibility signal, motor driven throttle valve sensor, potentiometers 1 and 2

**NEW** Fault Code 119 (77) - MDK throttle mechanical sticking

**NEW** Fault Code 120 (78) - Pedal Sensor, throttle valve potentiometer

**NEW** Fault Code 172 (AC) - Signal, drivers wish sensor, potentiometers 1 and 2, short circuit

**NEW** Fault Code 173 (AD) - Signal, throttle position sensor, potentiometers 1 and 2 short circuit

**NEW** Fault Code 175 (AF) - Driver"s wish sensor 1, adaptation

**NEW** Fault Code 176 (B0) - Driver"s wish sensor 2, adaptation

along with either:

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

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

Fault Code 171 (AB) - Plausibility motor driven throttle valve

## **CAUSE**

The above listed faults may set as a result of the following:

1. Break/open in the wiring from the DME to the throttle motor (MDK).
2. Contamination of the actuator or potentiometers within the MDK.

## **PROCEDURE**

If any of the above listed faults are set perform the following:

1. Using a breakout box check the wiring from the DME to the MDK for open or short to ground.
2. **NEW** If the wiring is correct then the MDK should be replaced. Important: After MDK motor replacement, the DME adaptation values must be cleared. Failure to clear the adaptation values will result in reoccurring faults.
3. **NEW** Switch off the ignition off for 30 seconds.
4. **NEW** Turn on the ignition and delete DME adaptations and fault code memory.
5. **NEW** Press the accelerator pedal to wide open throttle (WOT) four times.

## PARTS INFORMATION

Part Number	Description	Quantity
Throttle Housing Assembly	13 54 1 433 414	1

## WARRANTY INFORMATION

Parts and labor will be reimbursable under the terms of the applicable BMW Emissions or New Vehicle Limited Warranty.

**Defect Code:** 13 54 91 96  
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Labor Operation: 13 54 031 Replacing complete throttle assembly

Labor Allowance: E46 - 11 FRU  
E39 - 12 FRU  
Z3 - 12 FRU

OR Associated Work

Labor Operation: +13 54 533 Replacing complete throttle assembly

Labor Allowance: E46 - 10 FRU  
E39 - 10 FRU  
Z3 - 10 FRU

Note: The following explanations will spell out the correct use of the work times.

**Main Work:** Use this labor operation number when the only repair performed is the listed warranty repair.

OR

Use this labor operation number when other repairs or services are performed along with the listed warranty repair.

**+Associated Work:** Under no circumstances should both labor operation numbers be claimed. Attempts to claim both times will result in an unnecessary delay in claim processing and payment.