BMW Drivers Club
Italia

MENU TEST SEGRETO e36/Z3

il sistema è utlizzabile in altre BMW coeve e non (serie 3 E36, serie 5 E39, serie 7 E38 tra le altre).
Le differenze sono nei significati dei vari menu e nel punto di “accesso” al menu, così come è 15 per il prerestyling e 19 per il restyling (uguale a E46, per esempio).

MODALITA DI ACESSO AL MENU:

- tenere premuto il pulsante per l'azzeramento dei km (con la freccia rossa) mentre si gira la chiave in posizione "acceso" (pos 2)
- l’ OBC mostrerà la scritta test

- con il pulsante azzera km scorrete le varie funzioni fino alla 15 (pre restyling) o 19.0 (restyling)
- aspettate che il display mostri OFF_
- premete il pulsantino per mezzo secondo e quindi rilasciatelo. l’ esperienza sulla mia prerestyling mi dice che conviene a volte tenere premuto da 14, poi sul 15 non soffermarsi troppo, pena dover ripetere la procedura. Qualche tentativo dovrete farlo.

Se la procedura è fatta correttamente, tornerete al test 1 e le funzioni saranno sbloccate. Altrimenti riapparirano i km come normale.

La lista delle funzioni (in inglese) è riportata nelle pagine successive.
A parte il test di reset, gli altri mostrano solo test e dati, quindi non potete fare alcun danno.
Sono però molto utili per valutare i km effetivi, i giri del motore , la velocità e la temperatura effettivi, il funzionamento corretto del serbatoio...

Evitate ovviamente di usare il bc in movimento, poichè oltre a distrarre dover usare l’azzeramento dei km è estremamente pericoloso.

Al prossimo riavvio del’ auto, il display tornerà alle indicazioni consuete dei km e service interval.

1995 - 1998 E36/5 (318 ti)
1996 - 1998 E36/7 (Z3 roadster)
1997- 1998 E36 4 door/Coupe/Convertible/M3

The 318ti and Z3 clusters prior to 9/98 are not connected to the diagnostic link for troubleshooting. However they do incorporate several built in test values that can be accessed through the LCD matrix display.

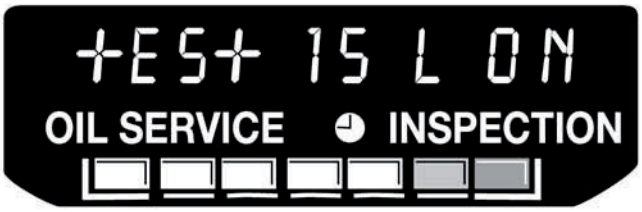
Starting with the 1997 model year production, the balance of the E36 line also has these test functions in addition to the diagnostic link for troubleshooting purposes. there are 15 different test functions that can be used to check various outputs of the cluster and the status of various input signals.

- Test functions **1-4** are unlocked tests and can be called up at any time for display.
- Test functions **5 -14** are locked and require unlocking the test mode before they can be displayed.
- Test functions **2-14** can be selected at any time when the cluster is unlocked, even when the vehicle is moving.
- Test function **15** is the lock/unlock function.

TEST FUNCTION SUMMARY

TEST NO. 15

LOCK/UNLOCK - Press and hold the mileage reset button while switching “ON” KL R. “tESt” appears in the digital display.



Pressing the reset button will scroll through the test functions until “tESt 15 L ON” is displayed.

Pressing and holding the reset button for three seconds will cause the display to cycle back and forth between ON/OFF. With “tESt L OFF” displayed any test function can now be accessed.

TEST NO. 01:

INSTRUMENT CLUSTER SELF TEST - All of the gauges are activated and the warming lamps are illuminated as an output test as described on the previous page. At the end of the test, the cluster exits the test mode.

TEST NO. 02

ENGINE DATA - This display is an “engine factor” value that is stored in the coding plug. The instrument cluster processor uses this factor in addition to the “TD” signal from the DME control module to process and display tachometer RPM based on the engine installed. For example:

- ENGINE FACTOR 2 = 4 CYLINDER
- ENGINE FACTOR 3 = 6 CYLINDER
- ENGINE FACTOR 4 = 8 CYLINDER

TEST NO. 03

SI ELAPSED DISTANCE - The total mileage in kilometers since the last reset. Which service is due at the next inspection (OIL SERVICE or INSPECTION).

TEST NO. 04

SI ELAPSED DAYS - No value for U S vehicles. Relates to Euro annual inspections.

TEST NO. 05

SI EVALUATION FACTORS - For engine speed and temperature thresholds being passed.

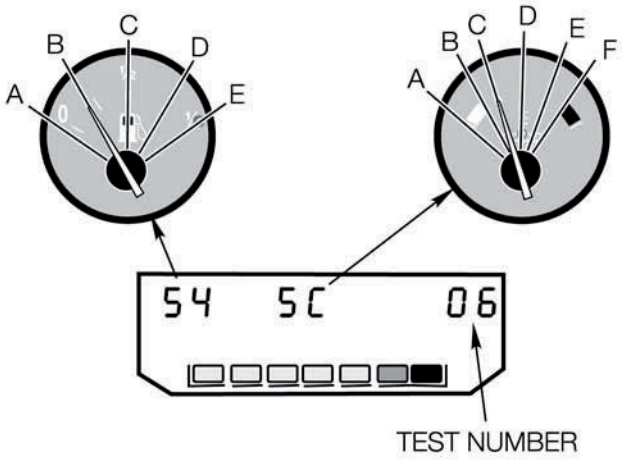
Display: n = 0 or 1. engine speed
t = 0 or 1. engine temperature

TEST NO. 06

FUEL LEVEL AND COOLANT TEMPERATURE - Display of hexadecimal codes in relation to gauge position.

FUEL GAUGE	HEX VALUE
• “A” (empty)	0d
• End of reserve	37
• “B”	54
• “C”	90
• “D”	c4
• “E” (full)	f0

ENGINE TEMP GAUGE	HEX VALUE
• “A”	ce
• “B”	6d
• “C”	5c
• “D” (center)	4f-23
• “E”	1e



TEST NO. 07

ENGINE SPEED - Display of current engine speed.

TEST NO. 08

ROAD SPEED - Display of current road speed in km/h.

TEST NO. 09

DISTANCE READING Test - 09 allows the total stored mileage to be updated if one of the storage components has to be replaced. This test step will be used if the manipulation dot is illuminated in the cluster display. The display will show the component with the lower mileage for example:

Display of: *012654 I* indicates that the mileage in the internal EEPROM is lower than the mileage stored in the coding plug.

Display of: *000325 E* indicates that the mileage in the external coding plug is lower than the total mileage stored in the internal EEPROM.

Pressing the reset button for 4 seconds will over write the lower mileage with the higher mileage and cancel the manipulation dot. The SI data will also be transferred at the same time.

TEST NO. 10

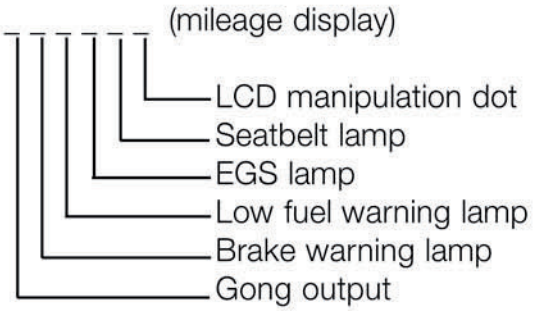
STATUS BITS (INPUT SIGNALS) - The status of digital inputs to the cluster are displayed as *0* or *1*.

Display: *0* = input low
1 = input high

TEST NO. 11

STATUS BITS (OUTPUT SIGNALS) - The status of digital outputs is displayed.

Display: *0* = output inactive
1 = output active



TEST NO. 12- NOT USED

TEST - 13

COUNTRY CODE OF CLUSTER - The display indicates the country version of the cluster. This cannot be changed in the workshop.

Display: *USA 02*

TEST NO. 14

SOFTWARE RESET - The reset must be carried out if any faults are present that are not plausible before any components are replaced. After the reset, the system will exit the TEST mode and the lock will be reactivated.

1999 E36/5 (318 ti)
1999 - 2002 E36/7 (Z3 coupe and roadster)

For model year 1999 the 318ti and the Z3 received an updated instrument cluster. In addition to the fault memory and diagnostic link the instrument cluster also contains 21 test functions similar to the base cluster of the E39/E53.

- Test functions 1 & 2 are always unlocked.

- Tests 3 through 21 are only accessible after unlocking the test function. Test 19 is the unlock function.

Test Function Summary

TEST 01. - Vehicle specific data including:

SubTests:

12345	**1.0** = VIN
4663	**1.1** = K-value
414061	**5_1.2** = Part number of cluster
029000	**1.3** = Coding/Diagnosis/Bus index
_2197	**1.4** = Manufacturing date (calendar week/year)
01_700	**1.5** = Hardware/software # of cluster (HW:01, SW:7.00)
FFF_04	**2_1.6** = Injection status, number of cylinders, engine factor
_02_00	**_1.7** = Can Index

TEST 02. Cluster System Test - activates the gauge drivers, indicators and LEDs to con firm function.

TEST 03. SIA data

Sub Tests:

1500	**3.0** = **Z3**-Consumption in liters since last SI reset. **318ti**-Distance in miles since last reset.
0	**3.1** = Periodic inspection days (not applicable for US).

TEST 04. - Momentary Consumption

Sub Tests:

0267	**4.0=** 26.7 liters/1000km
0073	**4.1=** 7.3 liters per hour

TEST 05. - Not used

TEST 06. - Fuel level sensor inputs in liters

Sub Tests:

237415 **6.0=** Fuel level averaged
- LH sensor input = 23.7 liters
- RH sensor Input = 41.5 liters

0652 **6.1=** Total tank level averaged = 65.2 liters

0667 **1_6.2** = Indicated value and tank phase
- 1 = both sensors OK
- 2 = one sensor fault
- 3 = implausible input

Note: Z3 only shows one sensor reading.

TEST 07. - Temperature and Speed

Sub Tests:

032	**7.0=** Coolant temp input 32°C
___	**7.1=** Not used
5283	**7.2=** Engine speed 5,283 RPM
058	**7.3=** Vehicle speed 58km/H

TEST 08. - Input values in HEX form

Sub Tests:

XXX **8.0 - 8.3 =** Hex code, Instrument cluster inputs

TEST 09. - Battery voltage

Sub Test:

125 **9.0=** KL30 12.5 volts

TEST 10. - Country Coding

Sub Test:
02 **10.0 =** USA

TEST 11. - Cluster code

Sub Test:
FFFF08 **11.0 =** Cluster code

TEST 12. - Not used

TEST 13. - GONG test

Sub Test:
9on9 **13.0 =** Activate gong by pressing button (gong response is delayed).

TEST 14. - Fault memory Hex code (not for diagnosis)

TEST 15. - Not Used

TEST 16. - Transfer of total stored mileage data

This step is used if the total mileage is to be transferred between the coding plug and the internal EEPROM of the cluster. This step extinguish the red manipulation dot after components have been replaced and restore normal data exchange between the two components.

Sub Test:
123459 **I_16.0 =** Memory location with lower stored mileage
I= internal EEPROM, E= external coding plug

COPY **_16.1 =** Copy from higher to lower memory location.

Note: 2 miles must accumulate on cluster before disconnecting battery, otherwise step 16 will have to be repeated to extinguish the manipulation dot.

TEST 17. - Time of day

Test 18. - Not Used

TEST 19. - LOCK/UNLOCK

Sub-Tests
L-ON...
L-OFF 19.0 =

Display changes from "L-ON" to "L-OFF" every second. To unlock test functions, press the cluster button **immediately** when it changes to "L-OFF".
Tests are automatically locked when exiting test functions.

TEST 20. - Average fuel consumption - correction factor

The factor follows previous systems, with adjustment range of 750 to 1250. The adjustment method is new for the base cluster. If adjustment is necessary, enter into test 20 using the cluster button.

The correction factor number is changed by using the sub-tests for the "ones, tenths and hundreds of the factor number. The digits will automatically scroll through 0-9 within each group (ones, tenths, hundreds).

Sub-Tests:

	20.0	**=** Press the button to reset display to 1000
XXX9	**20.1**	**=** Press the button when the correct "ones" position is attained.
XX5X	**20.2**	**=** Press the button when the correct "tenths" position is attained.
12XX	**20.3**	**=** Press the button when the correct "hundreds" position is attained.

TEST 21. - Software reset

Sub-Test:

reset	**21.0**	**=** Reset software