

## 1. INTRODUCTION

The VS/AB Application Card, when used in conjunction with the Reset Unit from the VS333 System, provides the facility to locate the fault source of an illuminated airbag warning light and, having rectified the fault, to then extinguish the light.

## 2. AIR BAG SAFETY

**Important!** All work on vehicle restraint systems should be carried out by trained personnel.

- ❑ Explosive devices are subject to national laws which must be followed. These include requirements on storage and transportation.
- ❑ Observe component manufacturer's instructions for safety, handling and installation.
- ❑ Store removed explosive devices in a locked area away from other hazardous materials.
- ❑ Do not install accessories in the area of the drive/passenger/side airbags.
- ❑ Do not connect or disconnect any wiring with the ignition "ON". Switch off ignition and allow one minute for the system to discharge.
- ❑ During welding operations disconnect the vehicle battery or install a surge protection device. Remove airbag components when welding close to them. Connect welding ground as near to the work zone as possible.
- ❑ Do not expose systems to temperatures above 80°C.
- ❑ Use only diagnostic testers to diagnose faults. DO NOT use multimeters or test lamps etc.
- ❑ Disconnect all explosive devices before checking wiring with a multimeter.
- ❑ Read, understand and apply the safety instructions supplied with VS333 or VS333/AB.

**NOTE:** It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

**IMPORTANT:** No liability is accepted for incorrect use of this equipment.

**WARRANTY:** Guarantee is 12 months from purchase date, proof of which will be required for any claim.

**INFORMATION:** For a copy of our latest catalogue and promotions call us on 01284 757525 and leave your full name and address, including postcode.

### 3. APPLICATIONS

VEHICLE	YEAR	SYSTEM	ADAPTOR	SWITCH
<b>AUDI</b>				
A2	01-02	N/A	Multifit	A1
A3	96-02	N/A	Multifit	A1
A4	95-02	N/A	Multifit	A1
A6	91-96	N/A	VS333/13	N/A
A6	96-02	N/A	Multifit	A1
A8	94-96	N/A	VS333/13	N/A
A8	96-02	N/A	Multifit	A1
80	91-95	N/A	VS333/13	N/A
100	91-96	N/A	VS333/13	N/A
<b>BMW</b>				
3 Series E30	91-93	Driver Airbag 5WK4 060	VS333/11	N/A
3 Series E36	91-93	Driver Airbag 5WK4 060	VS333/11	N/A
3 Series E36	93-95	1 or 2 Airbags ZAE, BAE	VS333/11	N/A
3 Series E36	95-99	4 or 6 Airbags ZAE2, MRS, MRS2	VS333/11	N/A
3 Series E46	95-00	4 or 6 Airbags ZAE2, MRS, MRS2	VS333/11 or Multifit*	A6
5 Series E34	91-93	Driver Airbag 5WK4 060	VS333/11	N/A
5 Series E34	93-95	1 or 2 Airbags ZAE, BAE	VS333/11	N/A
5 Series E39	95-99	4 or 6 Airbags ZAE2, MRS, MRS2	VS333/11	N/A
5 Series E39	96-97	4 or 6 Airbags ZAE2, MRS, MRS2	Multifit	A6
7 Series E32	91-93	Driver Airbag 5WK4 060	VS333/11	N/A
7 Series E38	95-99	4 or 6 Airbags ZAE2, MRS, MRS2	VS333/11	N/A
7 Series E38	99-02	4 or 6 Airbags ZAE2, MRS, MRS2	Multifit	A6
8 Series E31	93-95	1 or 2 Airbags ZAE, BAE	VS333/11	N/A
8 Series E31	95-99	4 or 6 airbags ZAE2, MRS, MRS2	VS333/11	N/A

\* Depending upon vehicle connector.

<b>CITROËN</b>				
Berlingo	96-00	Airbag/Seat Belt	VS333/20 or Multifit*	K2
Relay	94-00	Airbag/Seat Belt	VS333/20 or Multifit*	K2
Saxo	96-00	Airbag/Seat Belt	VS333/20 or Multifit*	K2
Synergie	96-00	Airbag/Seat Belt/Side Airbags	VS333/20 or Multifit*	K2
Xantia	96-00	Airbag/Seat Belt/Side Airbags	VS333/20 or Multifit*	K2
Xsara	97-00	Airbag/Seat Belt/Side Airbags	VS333/20 or Multifit*	K2
XM	96-98	Airbag/Seat Belt	VS333/20 or Multifit*	K2
ZX	95-98	Airbag/Seat Belt	VS333/20 or Multifit*	K2

\* Depending upon vehicle connector.



6.5.3.	System: Airbag SDM
15	R. Airbag Squib Circuit High Resistance.
16	R. Airbag Squib Circuit Low Resistance.
17	R. Airbag Squib Circuit Open.
18	R. Airbag Squib Circuit Signal Low.
19	R. Airbag Squib Circuit Signal High.
21	L. Airbag Squib Circuit High Resistance.
22	L. Airbag Squib Circuit Low Resistance.
24	L. Airbag Squib Circuit Signal Low.
25	L. Airbag Squib Circuit High Resistance.
26	L. Airbag Squib Circuit Open.
29	R. Pretensioner Circuit Signal Low.
31	R. Pretensioner Circuit High Resistance.
32	R. Pretensioner Circuit Low Resistance.

6.5.3.	Continued
33	R. Pretensioner Circuit Signal High.
34	R. Pretensioner Circuit Open.
37	R. Low Pressure Sensor Circuit Signal Low or Short Circuit.
38	R. Low Pressure Sensor Circuit Signal High or Open Circuit.
41	L. Pretensioner Circuit High Resistance.
42	L. Pretensioner Circuit Low Resistance.
44	L. Pretensioner Circuit Open.
45	L. Pretensioner Circuit Signal Low.
46	L. Pretensioner Circuit Signal High.
51	Squib Circuits Activated (Crash).
53	Squib Circuits Activated With Malfunction.
61	Telltale Malfunction.
71	Replace Electronic Control Unit (ECU).

6.5.4.	System: Airbag 20
B0016 0	Passenger Airbag Squib Circuit Low Resistance.
B0016 2	Passenger Airbag Configuration Mismatch.
B0022 0	Driver Airbag Squib Circuit Low Resistance.
B0022 2	Driver Airbag Configuration Mismatch.
B0028 0	Passenger Side Airbag Squib Circuit Low Resistance.
B0028 2	Passenger Side Airbag Configuration Mismatch.
B0040 0	Driver Side Airbag Squib Circuit Low Resistance.
B0040 2	Driver Side Airbag Configuration Mismatch.
B0057 0	Passenger Pretensioner Circuit Low Resistance.
B0057 2	Passenger Pretensioner Configuration Mismatch.
B0064 0	Driver Pretensioner Circuit Low Resistance.
B0064 2	Driver Pretensioner Configuration Mismatch.
B0073 0	Driver Curtain Airbag Circuit Low Resistance.
B0073 2	Driver Curtain Airbag Configuration Mismatch.
B0086 0	Passenger Curtain Airbag Circuit Low Resistance.
B0086 2	Passenger Curtain Airbag Configuration Mismatch.
B1000 0	Replace Electronic Control Unit (ECU).
B1000 3	ECU Not Stable.
B1001 0	SOD (Seat Occupied Detection) Configuration Mismatch.
B	Body Code.
C	Chassis.
P	Power Train.
U	Communications.
INV	Invalid.
NOT	Not Present.
INT	Intermittent.
PRE	Present.
E.G.	DTC 1: B00222 NOT

VEHICLE	YEAR	SYSTEM	ADAPTOR	SWITCH
<b>MERCEDES</b>				
190/E (201)	88-93	Slow Codes	VS333/12	N/A
200/E (124)	88-95	Slow Codes	VS333/12	N/A
220/E (124)	88-95	Slow Codes	VS333/12	N/A
230/E (124)	88-95	Slow Codes	VS333/12	N/A
260/E (124)	88-95	Slow Codes	VS333/12	N/A
280/E (124)	88-95	Slow Codes	VS333/12	N/A
300/E (124)	88-95	Slow Codes	VS333/12	N/A
320/E (124)	88-95	Slow Codes	VS333/12	N/A
A-CLASS (168)	98-02	Fast Codes	Multifit	A11
C-CLASS (202)	93-02	Fast Codes	Multifit	A11
E-CLASS (210)	95-02	Fast Codes	Multifit	A11
<b>PEUGEOT</b>				
106	96-00	Airbag/Seat Belt	VS333/20 or Multifit*	K2
206	98-00	Airbag/Seat Belt/Side Airbags	VS333/20 or Multifit*	K2
306	96-00	Airbag/Seat Belt/Side Airbags	VS333/20 or Multifit*	K2
406	95-00	Airbag/Seat Belt/Side Airbags	VS333/20 or Multifit*	K2
605	97-00	Airbag/Seat Belt/Side Airbags	VS333/20 or Multifit*	K2
806	96-00	Airbag/Seat Belt/Side Airbags	VS333/20 or Multifit*	K2
Boxer	94-00	Airbag/Seat Belt	VS333/20 or Multifit*	K2
Expert	97-00	Airbag/Seat Belt	VS333/20 or Multifit*	K2
Partner	96-00	Airbag/Seat Belt	VS333/20 or Multifit*	K2
* Depending upon vehicle connector.				
<b>SEAT</b>				
ALHAMBRA	96-02	N/A	Multifit	A1
AROSA	97-02	N/A	Multifit	A1
CORDOBA	93-02	N/A	Multifit	A1
IBIZA	93-02	N/A	Multifit	A1
INCA	95-02	N/A	Multifit	A1
LEON	00-02	N/A	Multifit	A1
TOLEDO	94-02	N/A	Multifit	A1
<b>SKODA</b>				
FABIA	00-02	N/A	Multifit	A1
FELICIA	95-02	N/A	Multifit	A1
OCTAVIA	96-02	N/A	Multifit	A1

VEHICLE	YEAR	SYSTEM	ADAPTOR	SWITCH
<b>VAUXHALL/OPEL</b>				
ASTRA-F	94-98	Airbag S	Multifit	J7
ASTRA-G	98-02	Airbag SAB6	Multifit	J7
CALIBRA	93-97	Airbag SDM (5V)	VS333/19	N/A
CAVALIER	93-95	Airbag S	Multifit	J7
COMBO	01-02	Airbag 20	Multifit	F2
CORSA-B	94-99	Airbag S	Multifit	J7
CORSA-B	94-99	Airbag SAB6	Multifit	J7
CORSA-C	01-02	Airbag 20	Multifit	F2
FRONTERA-A	97-98	Airbag SDM (5V)	VS333/19	N/A
FRONTERA-B	99-02	Airbag SDM (5V)	VS333/19	N/A
MONTEREY	97-98	Airbag SDM (5V)	VS333/19	N/A
OMEGA-B	94-99	Airbag S	Multifit	J7
OMEGA-B	94-01	Airbag SAB6	Multifit	J7
TIGRA	95-99	Airbag S	Multifit	J7
VECTRA-A	93-95	Airbag S	Multifit	J7
VECTRA-B	95-99	Airbag SAB6	Multifit	J7
VECTRA-B	95-99	Airbag SAE4	Multifit	J7
VECTRA-B	95-99	Airbag	Multifit	J7
<b>VOLKSWAGEN</b>				
BEETLE	99-02	N/A	Multifit	A1
BORA	91-02	N/A	Multifit	A1
CADDY	93-95	N/A	Multifit	A1
CARAVELLE	93-95	N/A	Multifit	A1
CLASSIC	93-95	N/A	Multifit	A1
CORRADO	93-95	N/A	Multifit	A1
GOLF	91-02	N/A	Multifit	A1
JENTO	93-95	N/A	Multifit	A1
LUPO	93-95	N/A	Multifit	A1
PASSAT	98-02	N/A	Multifit	A1
POLO	93-02	N/A	Multifit	A1
SHARAN	96-02	N/A	Multifit	A1
TRANSPORTER	93-95	N/A	Multifit	A1

## 6.5. Vauxhall/Opel Airbag Fault Codes

### 6.5.1. System: Airbag S, Airbag SAB6

4	L. Airbag Squib Circuit Malfunction.
5	R. Airbag Squib Circuit Malfunction.
6	L. Pretensioner Circuit Malfunction.
7	R. Pretensioner Circuit Malfunction.
8	L. Side Airbag Squib Circuit Signal Low.
9	R. Side Airbag Squib Circuit Signal Low.
13	L. Airbag Squib Circuit Signal Low.
14	L. Pretensioner Circuit Signal Low.
15	L. Airbag Squib Circuit Signal High.
16	L. Pretensioner Circuit Signal High.
21	L. Squib Circuit Short To Ground.
22	L. Squib Circuit Short To Battery.
23	R. Airbag Squib Circuit Signal Low.
24	R. Pretensioner Circuit Signal Low.
25	R. Airbag Squib Circuit Signal High.
26	R. Pretensioner Circuit Signal High.
31	L. Airbag Squib Circuit High Resistance.
32	L. Airbag Squib Circuit Low Resistance.
33	R. Airbag Squib Circuit High Resistance.
34	R. Airbag Squib Circuit Low Resistance.
35	L. Pretensioner Circuit High Resistance.
36	L. Pretensioner Circuit Low Resistance.
37	R. Pretensioner Circuit High Resistance.
38	R. Pretensioner Circuit Low Resistance.
43	Telltale Signal High.
44	Telltale (Check Light) Signal Low Or Open Circuit.
48	Battery Voltage Low.

### 6.5.2. System: Airbag, Airbag SAE4

13	L. Airbag Squib Circuit Signal Low.
14	L. Pretensioner Circuit Signal Low.
15	L. Airbag Squib Circuit Signal High.
16	L. Pretensioner Circuit Signal High.
23	R. Airbag Squib Circuit Signal Low.
24	R. Pretensioner Circuit Signal Low.
25	R. Airbag Squib Circuit Signal High.
26	R. Pretensioner Circuit Signal High.
31	L. Airbag Squib Circuit High Resistance.
32	L. Airbag Squib Circuit Low Resistance.
33	R. Airbag Squib Circuit High Resistance.
34	R. Airbag Squib Circuit Low Resistance.
35	L. Pretensioner Circuit High Resistance.
36	L. Pretensioner Circuit Low Resistance.

## 6.5.1. Continued

49	Battery Voltage High.
51	ECU (Squib Code) Not Programmed.
52	Control Unit (Squib Code) Not Programmed.
53	Reprogram ECU (Squib Code).
55	Replace Electronic Control Unit (ECU).
56	Electronic Control Unit not Reusable.
65	R. Airbag Activated.
66	L. Airbag Activated.
67	Pretensioning Devices Activated.
68	L. Side Airbag Activated.
69	R. Side Airbag Activated.
71	L. Side Airbag Sensor Communication Circuit Malfunction.
72	L. Side Airbag Sensor Circuit Malfunction.
73	L. Side Airbag Sensor Signal High Or Circuit Open.
74	L. Side Airbag Sensor Signal Low (Signal Lead).
75	L. Side Airbag Squib Circuit Signal Low.
76	L. Side Airbag Squib Circuit Signal High.
77	L. Side Airbag Squib Circuit High Resistance.
78	L. Side Airbag Squib Circuit Low Resistance.
81	R. Side Airbag Sensor Communication Circuit Malfunction.
82	R. Side Airbag Sensor Circuit Malfunction.
83	R. Side Airbag Sensor Signal High Or Circuit Open.
84	R. Side Airbag Sensor Signal Low (Signal Lead).
85	R. Side Airbag Squib Circuit Signal Low.
86	R. Side Airbag Squib Circuit Signal High.
87	R. Side Airbag Squib Circuit High Resistance.
88	R. Side Airbag Squib Circuit Low Resistance.

## 6.5.2. Continued

37	R. Pretensioner Circuit High Resistance.
38	R. Pretensioner Circuit Low Resistance.
43	Telltale Signal High.
44	Telltale Signal Low Or Circuit Open/Telltale Malfunction.
48	System Voltage Signal Low.
49	System Voltage Signal High.
52	Control Unit (Squib Code) Not Programmed.
53	Squib Circuit Code Mismatch.
55	Replace Electronic Control Unit (ECU).
56	Pretensioning Devices Activated 3 Times.
66	Squib Circuits Activated (Crash).
67	Pretensioning Devices Activated.
78	Side Airbag Circuit Not Detected.

6.4.2. Fault & Status - System 1

Constant	Intermittent	Description
01	81	Signal at positive.
02	82	Signal at earth.
03	83	No signal.
04	84	Mechanical fault.
05	85	Input open.
06	86	Signal too great.
07	87	Signal too small.
08	88	Regulating limit exceeded.
0B	8B	Regulating limit not reached.
10	90	Signal outside tolerance.
11	91	Regulating difference.
12	92	Upper stop value.
13	93	Lower stop value.
14	94	Fault in basic setting.
19	99	Undefined switch condition.
1A	9A	Output open.
1B	9B	Faulty signal.
1C	9C	Short circuit to positive.
1D	9D	Short circuit to earth.

6.4.2. Continued

Constant	Intermittent	Description
1E	9E	Open/short circuit to positive.
1F	9F	Open/short circuit to earth.
20	A0	Resistance value too great.
21	A1	Resistance value too small.
22	A2	No fault type identified.
23	A3	(3 spaces).
24	A4	Open circuit.
25	A5	Defective.
26	A6	Output does not switch/short to positive.
27	A7	Output does not switch/short to negative.
29	A9	Blocked or no voltage.
2B	AB	Closed.
2C	AC	Short circuit.
2D	AD	Connector.
2E	AE	Leaking.
C0		Cannot be checked at present.
C1		Not authorized.

6.4.3. Fault & Status - Keyword 2000

	Description
00	No status.
01	Upper limit exceeded.
02	Lower limit not reached.
03	Mechanical fault.
04	No signal/no communication.
05	No/incorrect basic settings/adaptation.
06	Short to positive.
07	Short to earth.
08	Implausible signal.
09	Open/short circuit to earth.
0A	Open/short circuit to positive.

6.4.3. Continued

0B	Open circuit.
0C	Fault in electrical circuit.
0D	Read fault memory.
0E	Defective.
0F	Lower stop value.

Sporadic faults will be denoted by 'SP' after the fault code.

Faults will be displayed as follows:

DTC 1 : 02FB0B SP

i.e. Gas Pressure Sender (driver side) - G147. Sporadic open circuit.

DTC = Diagnostic Trouble Code.

## 4. CONNECTOR LOCATIONS

### 4.1. BMW

The BMW 20 pin, diagnostic connector socket (see below) is located in the engine bay, normally along the bulkhead, but exact locations can vary.

### 4.2. Citroën

The 30-pin connector (not shown) is located as follows:

Saxo (to 97) - Under dash, passenger's side.

Berlingo, Synergie - Under dash, driver's side.

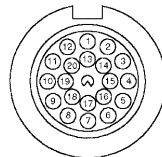
XM, Xantia (to 97) - Fascia fuse box.

The J1962 16-pin connector (see below) is located as follows:

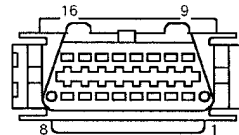
Saxo (97 on) - Under dash, passenger's side.

Berlingo - Under dash, driver's side.

Xsara, Xantia - Fascia fuse box.



BMW

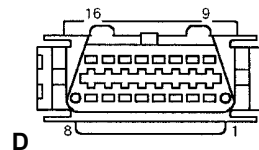
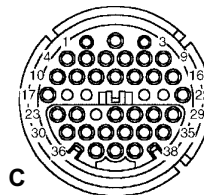
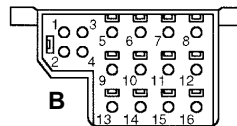
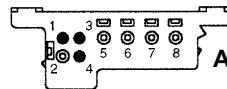


CITROËN

### 4.3. Mercedes

Mercedes vehicles generally use three exclusive types of diagnostic connector socket (see below), 8 pin (A), 16 pin (B) (use pin 6) and 32 pin (C). These connectors can be located in the engine bay, usually near the bulkhead.

The A-, C- and E-class use the standard J1962/OBDII connector (D), located under the steering column.



#### 4.4. Peugeot

The 30-pin connector (not shown) is located as follows:  
106 (to 97) - Under dash, passenger's side.  
806, Partner (to 97) - Under dash, driver's side.  
406 (to 97), 605 - Fascia fuse box.

#### 4.5. VAG

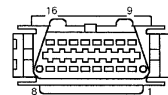
Volkswagen and Audi vehicles use two types of diagnostic connector - the J1962 16-pin connector (1) and the 2x2-pin ISO 9141 (2). Most vehicles use the former, located either in the centre console, under a removable plastic cover, or in the driver's footwell, underneath the steering column.

Audi A6 and 100 models use the ISO 9141 connectors, which are located in the engine compartment relay box.

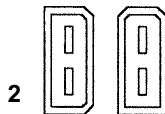
#### 4.6. Vauxhall/Opel

The J1962 16-pin diagnostic connector (1) is located in the passenger compartment fuse box or under a removable panel adjacent to the handbrake.

The J1962 16-pin connector (1) is located as follows:  
106 (97 on) - Under dash, passenger's side.  
206, 306, 806, Partner (97 on) - Under dash, driver's side.  
406 (97 on) - Fascia fuse box.



1



2

#### 6.3.3. SRS without Side Airbags

- 1 SRS Control Module (N2/2).
- 2 Driver Airbag Squib (R12/3).
- 3 L. front ETR Squib (R12/1).
- 4 R. front ETR Squib (R12/2).
- 5 Front Passenger Airbag Squib.
- 17 Voltage supply 15R (low voltage).

#### 6.3.3. Continued

- 19 SRS malfunction indicator lamp (A1e15).
- 20 Front Passenger Seat Occupation signal.
- 24 Driver Seat Belt Buckle Switch (Airbag/ETR) (S68/3).
- 25 Front Passenger Seat Belt Buckle Switch (Airbag/ETR) (S68/4). Squib circuit short circuit (in series).

#### 6.4. VAG Airbag Fault Codes

The faults are displayed as six digit fault codes.

Fault code 02FB03 is shown as 0.2 then F.B. then 03.

The first four digits define the faulty item and the last two digits the fault and status. From the lists below it can be seen that the gas pressure sender (02FB) has a constant no signal fault (03).

##### 6.4.1. Item Code

- 02 14 Supply voltage
- 02 22 Data Cable defective.
- 02 24 Voltage supply for fault memory.
- 02 4C Airbag Igniter-Driver Side-N95.
- 02 4D Igniter 1 for Airbag-Passenger Side-N131.
- 02 4E Igniter 2 for Airbag-Passenger Side-N132.
- 02 4F Belt Switch-Driver Side-E24.
- 02 50 Belt Switch-Passenger Side-E25.
- 02 51 Seat Contact Switch-Passenger Seat-F151.
- 02 52 Airbag Ignition Circuit.
- 02 53 Crash Data stored.
- 02 69 Airbag Delay Sender Left-G104.
- 02 6A Airbag Delay Sender Right-G105.
- 02 71 Speed Signal.
- 02 8E Belt Tensioner Igniter (D. side)-N153.
- 02 8F Belt Tensioner Igniter (P. side)-N154.
- 02 90 Seat Occupied Sensor-G128.
- 02 22 Data Cable defective.
- 02 E6 Main vehicle battery venting system.
- 02 E7 Battery ventilation sender-G146.
- 02 E9 Insulation monitoring.
- 02 EA Main vehicle battery cell failure.
- 02 EB Front battery temperature sender-G52.
- 02 EC Rear battery temperature sender-G53.
- 02 EE Fault lamp.
- 02 EF Main vehicle battery charge state display.
- 02 F2 Overheating warning lamp.
- 02 F9 Fault stored in engine control unit.
- 02 FB Gas pressure sender (driver's side)-G147.
- 02 FC Gas pressure sender (passenger side)-G148.

#### 6.4.1. Continued

- 03 2B System not ready for interrogation.
- 03 38 TCS warning lamp-K86.
- 03 51 S contact on ignition starter switch.
- 03 B1 Crash sensor-G190.
- 04 01 Fault Warning Lamp, activation defective.
- 04 14 Control unit incorrectly coded.
- 04 BB Rear belt tensioner igniter, driver side-N196.
- 04 BC Rear belt tensioner igniter, passenger side-N197.
- 04 BD Rear belt tensioner igniter, centre-N198.
- 04 BF Seat occupation sensor, driver side rear-G177.
- 04 C0 Seat occupation sensor, passenger side rear-G178.
- 04 C1 Side airbag igniter, driver side-N199.
- 04 C2 Side airbag igniter, passenger side-N200.
- 04 C3 Rear airbag igniter, driver side-N201.
- 04 C4 Rear airbag igniter, passenger side-N202.
- 04 C5 Crash sensor side airbag driver side-G179.
- 04 C6 Crash sensor side airbag passenger side-G180.
- 04 C7 Signal open central locking.
- 04 C8 Control unit does not match vehicle.
- 04 CA Crash data side airbag DS stored.
- 04 CB Crash data side airbag PS stored.
- 04 CC Airbag switch-off switch, passenger side-E224.
- 05 00 Airbag passenger side switched off.
- 05 29 Control unit for airbag-J234.
- 06 2A Passenger side airbag deactivated warning lamp-K145.
- 06 2B Seat occupation sender, passenger side-G128.
- 06 2C Child seat occupation sender, passenger side-G211.
- 06 2D Wrong component recognised.
- 06 2E Signal for coolant temp.
- 06 33 Igniter 2 for airbag driver side-N250.
- 06 34 Igniter for head airbag driver side-N251.
- 06 35 Igniter for airbag passenger side-N252.
- 06 36 Igniter for interruption battery-N253.
- 06 37 Warning lamp front airbag out, driver side-K144.
- 06 46 Battery monitoring signal.
- 06 48 Warning lamp test.

## 5. OPERATION

**Warning!** Ensure that you read, understand and apply the safety instructions in Section 2, those supplied with VS333 and any supplied by the vehicle manufacturer.

5.1. Insert the application card into the slot in the bottom of the reset unit.

**IMPORTANT! The card is fragile and must be handled with care. Hold the card at the raised end and insert, gold contact end first, with the contacts uppermost. Take care not to scratch the gold contacts.**

When correctly inserted, the end of the card will be flush with the unit casing with only the removal tape protruding.

**DO NOT** remove the application card whilst the unit is in use. The card should remain in the unit until another application card is to be used, in which case the cards may be changed only when the unit is **not** connected to a vehicle. Remove the card by gently pulling the tape.

Note: When first using a card the unit will take approximately 30 seconds to initialise, during which time the message *UPDATING WAIT* will be displayed. **Once the initialisation is completed that card cannot be used in any other unit.**

5.2. Connect the required lead to the unit and then, **with the vehicle ignition turned off**, connect to the vehicle's diagnostic connector (see Section 4 for location).

5.3. Select the vehicle make from the menu displayed.

5.4. Choose from the options displayed ('Read DTCs' or 'Clear DTCs'). DTC = Diagnostic Trouble Codes.

Note: Navigate using the unit buttons as follows:

- ↶ to go up
- ↷ to go down
- ✓ to continue
- ✱ to go back

If any DTCs are found, then the number of faults is displayed followed by the first fault code.

5.5. To view the next code move down (press ↷).

5.6. To view the previous code move up (press ↶).

5.7. To exit press ✱.

- 6.2.1. Continued
- 2C21 Intermittent fault - Supply Voltage.
  - 2C22 Intermittent fault - Supply Voltage.
  - 2C23 Intermittent fault - Supply Voltage.
  - 2C24 Intermittent fault - Supply Voltage.
  - 2C25 Intermittent fault - Supply Voltage.
  - 2C26 Intermittent fault - Supply Voltage.
  - 2C27 Intermittent fault - Supply Voltage.
  - 2C28 Intermittent fault - Control Unit (energy reserve).
  - 2C29 Intermittent fault - Control Unit (energy reserve).
  - 2C2A Intermittent fault - Control Unit (energy reserve).
  - 2C2B Intermittent fault - Control Unit (energy reserve).
  - 2C2C Intermittent fault - Control Unit (energy reserve).
  - 2C2D Intermittent fault - Control Unit (energy reserve).

### 6.3. Mercedes Benz Airbag Fault Codes

#### 6.3.1. Blink Codes (Slow Codes)

- 1 No fault detected in system.
- 2 Airbag Control Module.
- 3 Driver Airbag.
- 4 Front Passenger Airbag.
- 5 Driver Seat Belt Buckle.

#### 6.3.2. SRS with Side Airbags

- 1 SRS Control Module (N2/2).
- 2 SRS malfunction indicator lamp (A1e15).
- 3 Voltage Supply Circuit 15R (low voltage).
- 4 Driver Airbag Squib (R12/3).
- 5 L. front ETR Squib (R12/1).
- 6 R. front ETR Squib (R12/2).
- 7 Front Passenger Airbag Squib.
- 8 L. Side Airbag Squib (R12/9).
- 9 R. Side Airbag (R12/10).
- 16 Driver Seat Belt Buckle Switch (Airbag/ETR) (S68/3).
- 17 Front Passenger Seat Belt Buckle Switch (Airbag/ETR) (S68/4).
- 18 L. Side Airbag (A53) Harness fault.
- 19 L. Side Airbag (A53) Sensor defective.
- 20 L. Side Airbag (A53) Sensor defective.
- 21 R. Side Airbag (A54) Harness fault.
- 22 R. Side Airbag (A54) Sensor defective.
- 23 R. Side Airbag (A54) Sensor defective.

- 6.2.1. Continued
- 2C2E Intermittent fault - Control Unit (energy reserve).
  - 2C30 Intermittent fault - Control Unit.
  - 2C31 Intermittent fault - Control Unit.
  - 2C32 Intermittent fault - Control Unit.
  - 2C33 Intermittent fault - Control Unit.
  - 2C34 Intermittent fault - Control Unit.
  - 2C35 Intermittent fault - Control Unit.
  - 2C36 Intermittent fault - Control Unit.
  - 2C37 Intermittent fault - Control Unit.
  - 2C38 Intermittent fault - Control Unit.
  - 2C39 Intermittent fault - Control Unit.
  - 2C3A Intermittent fault - Control Unit.

#### 6.3.1. Continued

- 6 Front Passenger Seat Belt Buckle.
- 7 Front Passenger Airbag Resistor.
- 8 Voltage supply.
- 9 Warning Lamp defective.
- 10 Airbag Control Module was activated.

#### 6.3.2. Continued

- 24 Front Passenger Seat Occupation signal.
- 25 Front Passenger Seat Occupation signal.
- 26 Coded version not correct with ECU.
- 27 Front Passenger Seat Occupation recognition signal open/short circuit.
- 28 Front Passenger Seat Occupation recognition unit (B48) or improperly positioned child seat or electromagnetic interference near seat.
- 31 Front Passenger Seat Occupation recognition unit (B48) faulty.
- 32 L. Side Airbag (A53) Sensor communication interference.
- 33 R. Side Airbag (A54) Sensor communication interference.
- 34 Digital Crash Output, harness faulty (ARTHUR).
- 35 Analogue Crash Output, harness faulty.
- 36 Automatic Child Seat Recognition Warning Lamp.

## 6. FAULT CODES

### 6.1. BMW Airbag Fault Codes

#### 6.1.1. ZAE & BAE Fault Codes

- 1 Internal ECU fault.
- 2 Firing circuit, driver's airbag.
- 3 Firing circuit, belt tensioner, driver's side.
- 4 Firing circuit, belt tensioner, passenger's side.
- 5 Firing circuit, passenger's airbag.
- 6 Internal ECU fault.
- 7 Internal ECU fault.
- 12 Internal ECU fault.
- 13 Internal ECU fault.
- 14 Internal ECU fault.
- 15 Internal ECU fault.
- 16 Internal ECU fault.
- 17 Supply voltage.
- 18 Internal ECU fault.
- 19 Warning lamp.
- 20 Seat occupancy detector, passenger.
- 21 Pressure sensor, driver.
- 22 Pressure sensor, passenger.
- 23 Internal ECU fault.
- 24 Seat belt lock, driver.
- 25 Seat belt lock, passenger.
- 48 Internal ECU fault.
- 49 Internal ECU fault.

#### 6.1.2. ZAE II Fault Codes

- 1 Internal ECU Fault.
- 2 Failure Warning Lamp.
- 3 Voltage Supply Under Voltage.
- 4 Ignition Circuit for Driver Airbag.
- 5 Firing Circuit, Belt Tensioner, Driver's Side.
- 6 Firing Circuit, Belt Tensioner, Passenger's Side.

#### 6.1.3. MRS Fault Codes

- 1 Internal ECU Fault.
- 2 Failure Warning Lamp.
- 3 Voltage Supply.
- 4 Firing Circuit for Driver Airbag.
- 5 Firing Circuit, Belt Tensioner, Driver Side.
- 6 Firing Circuit, Belt Tensioner, Passenger Side.
- 7 Firing Circuit for Passenger Airbag.
- 8 Firing Circuit, Side Airbag, Left Side.
- 9 Firing Circuit, Side Airbag, Right Side.
- 16 Seat Belt Buckle Switch, Driver.
- 17 Seat Belt Buckle Switch, Passenger.

### 6.1.1. Continued

- 50 Internal ECU fault
- 51 Internal ECU fault.
- 52 Internal ECU fault.
- 53 Internal ECU fault.
- 54 Internal ECU fault.
- 55 Internal ECU fault.
- 56 Internal ECU fault.
- 57 Internal ECU fault.
- 58 Internal ECU fault.
- 59 Internal ECU fault.
- 60 Internal ECU fault.
- 61 Internal ECU fault.
- 62 Internal ECU fault.
- 63 Internal ECU fault.
- 65 Internal ECU fault.
- 67 Internal ECU fault.
- 68 Internal ECU fault.
- 69 Internal ECU fault.
- 70 Internal ECU fault.
- 71 Internal ECU fault.
- 72 Internal ECU fault.
- 73 Short circuit between the squibs.
- 76 Internal ECU fault.
- 77 Internal ECU fault.

### 6.1.2. Continued

- 7 Ignition Circuit for Passenger Airbag.
- 16 Seat Belt - Buckle Switch, Driver.
- 17 Seat Belt - Buckle Switch, Passenger.
- 24 Seat Occupation Recognition Sensor, Passenger.
- 25 Seat Occupation Recognition Sensor, Passenger.
- 26 Seat Occupation Recognition Sensor, Passenger.

### 6.1.3. Continued

- 18 Satellite, L. Sensor (for Side Airbag). Data line to satellite.
- 19 Satellite, L. Sensor (for Side Airbag), transmitting incorrect data.
- 20 Satellite, L. Sensor (for Side Airbag), transmitting incorrect data.
- 21 Satellite, R. Sensor (for Side Airbag). Data line to satellite.
- 22 Satellite, R. Sensor (for Side Airbag), transmitting incorrect data.
- 23 Satellite, R. Sensor (for Side Airbag), transmitting incorrect data.

6.1.3. Continued	
24	Seat - Occupation Recognition Passenger (showing fault type).
25	Seat - Occupation Recognition Passenger (showing number of times the fault occurred).
26	Seat - Occupation Recognition Passenger (with encoding data that does not match vehicle equipment).

6.1.4. MRS II Fault Codes	
1	Control ECU Fault.
2	Failure Warning Lamp.
3	Supply Voltage Low.
4	Driver's Airbag.
5	Belt Tensioner Driver's Side.
6	Belt Tensioner Passenger's Side.
7	Passenger Airbag.
8	Side Airbag, Front L. (Thorax).
9	Side Airbag, Front R. (Thorax).
10	Side Airbag, Rear L. (Thorax).
11	Side Airbag, Rear R. (Thorax).
12	Side Airbag, Head, Front L. (ITS).
13	Side Airbag, Head, Front R. (ITS).
14	Battery Disconnection.
15	Passenger Airbag, Stage 2/Firing Box, Belt Tensioner Rear.
16	Seat Belt Buckle Switch, Driver.
17	Seat Belt Buckle Switch, Passenger.
18	Sensor, Side Airbag, L., Data Line.
19	Sensor, Side Airbag, L., Parameter Fault.
20	Sensor, Side Airbag, L., Data Fault.
21	Sensor, Side Airbag, R., Data Line.
22	Sensor, Side Airbag, R., Parameter Fault.
23	Sensor, Side Airbag, R., Data Fault.
24	Seat Occupancy Detector, Passenger.
26	Seat Occupancy Detector, Passenger: Coding Data.
28	Child Seat Detector.
29	Child Seat Detector: Coding Data.
31	Child Seat Detector: Hardware.
32	Sensor, Side Airbag, L., Line Fault.
33	Sensor, Side Airbag, R., Line Fault.
53	Sensor, Side Airbag, L., Coding Data.
54	Sensor, Side Airbag, R., Coding Data.

6.1.3. Continued	
32	Satellite, L. Sensor (for Side Airbag), comms fault or open circuit.
33	Satellite, R. Sensor (for Side Airbag), comms fault or open circuit.

6.1.5. 5WK4 060 Fault Codes	
1	Crash Sensor closed once.
2	Crash Sensor closed more than once.
5	Crash Sensor closed permanently.
13	Two firing circuits short-circuited.
19	Crash Sensor Supply Wire, L., open circuit.
20	Crash Sensor Supply Wire, R., short circuit.
27	One Firing Circuit, short circuit to positive.
33	One Firing Circuit, short circuit to earth.
42	Resistance in Driver's Airbag Firing Circuit too low.
43	Resistance in Firing Circuit II (seat-belt tensioner or passenger's airbag) too low.
44	Resistance in Firing Circuit III (passenger's airbag or equivalent resistance) too low.
45	Resistance in the Driver's Airbag Firing Circuit too high.
46	Resistance in Firing Circuit II (seat-belt tensioner or passenger's airbag) too high.
47	Resistance in Firing Circuit III (passenger's airbag or equivalent resistance) too high.
49	Airbag Warning Light.
50	Diagnostic Unit faulty. Note: Any unknown fault was reported as: 'Internal fault in the diagnostic unit'.

## 6.2. CITROËN & PEUGEOT Airbag Fault Codes

6.2.1. Fault Codes	
0000	No Fault found.
150A	Permanent fault - Driver Module Trigger short circuit to positive.
150B	Permanent fault - Driver's Module Trigger short circuit to earth.
150C	Permanent fault - Driver Module Trigger open circuit.
150D	Permanent fault - Driver Module Trigger short circuit.
1512	Permanent fault - Passenger Module Trigger 1 or 2, short circuit to positive.
1513	Permanent fault - Passenger Module Trigger 1 or 2, short circuit to earth.
1514	Permanent fault - Passenger Module Trigger 1 open circuit.
1515	Permanent fault - Passenger Module Trigger 1 short circuit.
151C	Permanent fault - Passenger Module Trigger 2 open circuit.
151D	Permanent fault - Passenger Module Trigger 2 short circuit.
1522	Permanent fault - Seat Belt Trigger 1 or 2, short circuit to positive.
1523	Permanent fault - Seat Belt Trigger 1or 2, short circuit to earth.
1524	Permanent fault - Seat Belt Trigger 1 open circuit.
1525	Permanent fault - Seat Belt Trigger 1 short circuit.
152C	Permanent fault - Seat Belt Trigger 2 open circuit.
152D	Permanent fault - Seat Belt Trigger 1 short circuit.
160C	Permanent fault - Warning Lamp, Airbag, short circuit, open or short circuit to earth.
160D	Permanent fault - Warning Lamp, Airbag, short circuit to positive.
160F	Continuous operation control indicator light.
2108	Permanent fault - Supply Voltage.
250A	Intermittent fault - Driver Module Trigger short circuit to positive.
250B	Intermittent fault - Driver Module Trigger short circuit to earth.
250C	Intermittent fault - Driver Module Trigger open circuit.
250D	Intermittent fault - Driver Module Trigger short circuit.
2512	Intermittent fault - Passenger Module Trigger 1 or 2, short circuit to positive.
2513	Intermittent fault - Passenger Module Trigger 1 or 2, short circuit to earth.
2514	Intermittent fault - Passenger Module Trigger 1 open circuit.
2515	Intermittent fault - Passenger Module Trigger 1 short circuit.
251C	Intermittent fault - Passenger Module Trigger 2 open circuit.
251D	Intermittent fault - Passenger Module Trigger 2 short circuit.
251C	Intermittent fault - Passenger Module Trigger 2 open circuit.
251D	Intermittent fault - Passenger Module Trigger 2 short circuit.

6.2.1. Continued	
2522	Intermittent fault - Seat Belt Trigger 1 or 2, short circuit to positive.
2523	Intermittent fault - Seat Belt Trigger 1or 2, short circuit to earth.
2524	Intermittent fault - Seat Belt Trigger 1 open circuit.
2525	Intermittent fault - Seat Belt Trigger 1 short circuit.
252C	Intermittent fault - Seat Belt Trigger 2 open circuit.
252D	Intermittent fault - Seat Belt Trigger 1 short circuit.
1C09	Permanent fault - Control Unit.
1C0A	Permanent fault - Control Unit.
1C0B	Permanent fault - Control Unit.
1C0C	Permanent fault - Control Unit.
1C0D	Permanent fault - Control Unit.
1C11	Permanent fault - Control Unit.
1C19	Permanent fault - Control Unit.
1C1A	Permanent fault - Control Unit.
1C21	Permanent fault - Control Unit.
1C22	Permanent fault - Control Unit.
1C23	Permanent fault - Control Unit.
1C24	Permanent fault - Control Unit.
1C29	Permanent fault - Control Unit.
1C2A	Permanent fault - Control Unit.
1C2B	Permanent fault - Control Unit.
1C2C	Permanent fault - Control Unit.
1C2F	Permanent fault - Control Unit.
1C31	Permanent fault - Control Unit.
1C32	Permanent fault - Control Unit.
1C33	Permanent fault - Control Unit.
1C39	Permanent fault - Control Unit.
1C3A	Permanent fault - Control Unit.
1C41	Permanent fault - Control Unit.
2C09	Intermittent fault - Control Unit.
2C0A	Intermittent fault - Control Unit.
2C0B	Intermittent fault - Control Unit.
2C0C	Intermittent fault - Control Unit.
2C0D	Intermittent fault - Control Unit.
2C11	Intermittent fault - Control Unit.
2C18	Intermittent fault - Control Unit.
2C19	Intermittent fault - Control Unit.
2C1A	Intermittent fault - Control Unit.
2C1B	Intermittent fault - Control Unit.
2C1C	Intermittent fault - Control Unit.
2C1D	Intermittent fault - Control Unit.
2C1E	Intermittent fault - Control Unit.
2C1F	Intermittent fault - Control Unit.
2C20	Intermittent fault - Control Unit.