Clio

8 Electrical equipment

88C AIRBAGS AND PRETENSIONERS

TEMIC AIRBAG
Vdiag No.: 10
Computer type No.: 04 - 06

V1 **Edition Anglaise**

1. SCOPE OF THIS DOCUMENT

This document presents the fault finding method applicable to all computers with the following specifications:

Vehicle(s): **CLIO II F 6** *Function concerned:* **AIRBAG**	*Computer name:* **TEMIC Airbag** *Computer type No.:* **04 - 06** *VDIAG No.:* **10**

2. PREREQUISITES FOR FAULT FINDING

Documentation type

Fault finding procedures (this document):
– Assisted fault finding (integrated into the **diagnostic tool**), Dialogys.

Wiring Diagrams:
– Visu-Schéma.

Type of diagnostic tools

CLIP + Set of adapters and borniers used for the **airbag wiring check** function, including the **30-track ELO** base type **adapter** with 7 shunts, coding D-H, TYCO, orange colour, part number **9-1393474-4**, **Elé 1830**.

Special tooling required

Special tooling required	
	Diagnostic tool
	Adapters **B32, B35**
Elé. 1641	Bornier **B55**
Elé. 1617	**(3/4)**
Elé. 1830	Computer bornier **30 tracks**
Elé. 1287	Airbag and pretensioner destruction tool

3. REMINDERS

Procedure

To run fault finding on the vehicle computers, switch on the ignition.

Connect the **diagnostic tool** and perform the required operations.

4. SAFETY INSTRUCTIONS

All operations on the airbag system must be carried out by qualified trained personnel.

Safety rules must be observed during any work on a component to prevent any material damage or personal injury:
– check the battery voltage to avoid incorrect operation of computer functions,
– use the appropriate tools,
– During any operation on the airbag system, it is essential to use the computer locking command to avoid any risk of accidental triggering (all the trigger lines will be inhibited).

WARNING:
During any operation on the airbag systems, it is essential to use the computer locking command to avoid any risk of accidental triggering (all the trigger lines will be inhibited).
The locked mode is indicated when the instrument panel warning light comes on.

Note:
If the operation is being performed following an impact that triggered the airbags, the computer cannot be locked until the unlocking command has been given.
After an impact that triggered the airbags, the faults stored in the computer cannot be cleared until the "Read impact context" command has been given, followed by the unlocking command.

Never measure the airbag trigger lines with any device other than the **XRBAG** or by the "Airbag wiring harness check" function on the **CLIP** and **NXR** tools.

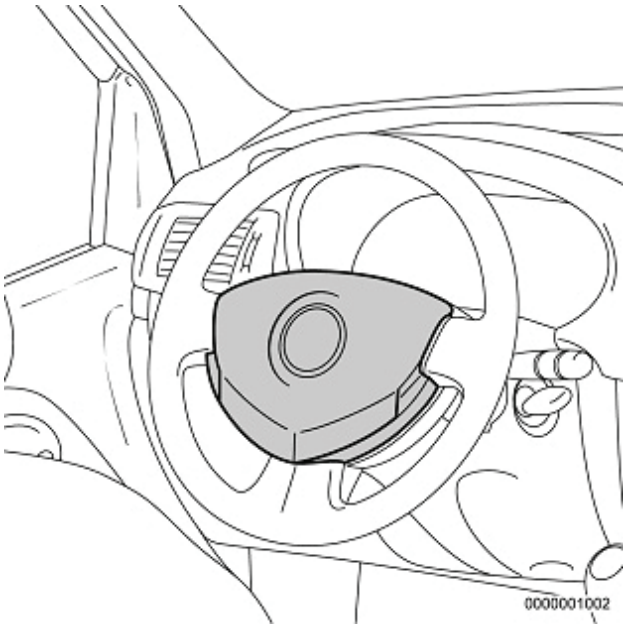
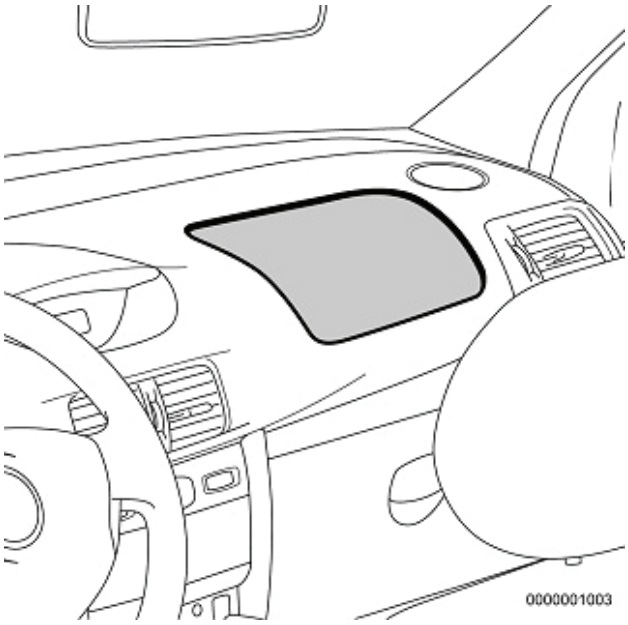
Before using a dummy ignition module, check that its resistance is between **1.8** Ω and **2.5** Ω.

Check that **the voltage supply to the computer does not drop below 10 V during the operation**.

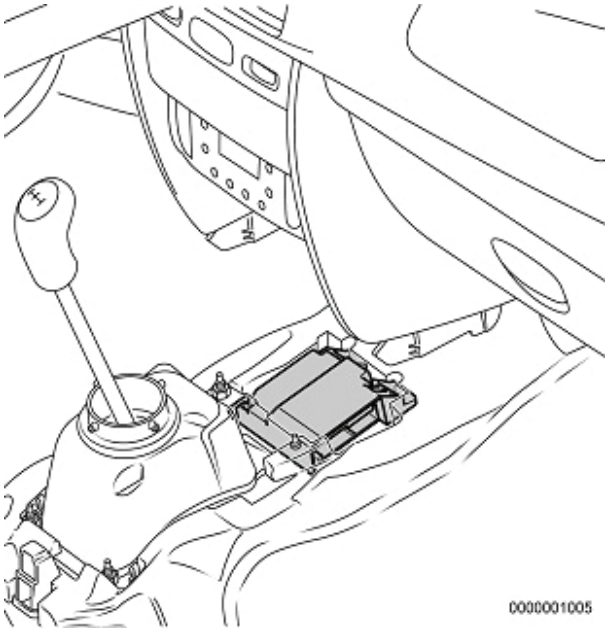
1. LIST OF COMPONENTS

Number	Description
1	Driver's frontal airbag
2	Passenger frontal airbag
3	Airbag computer
4	Pretensioner

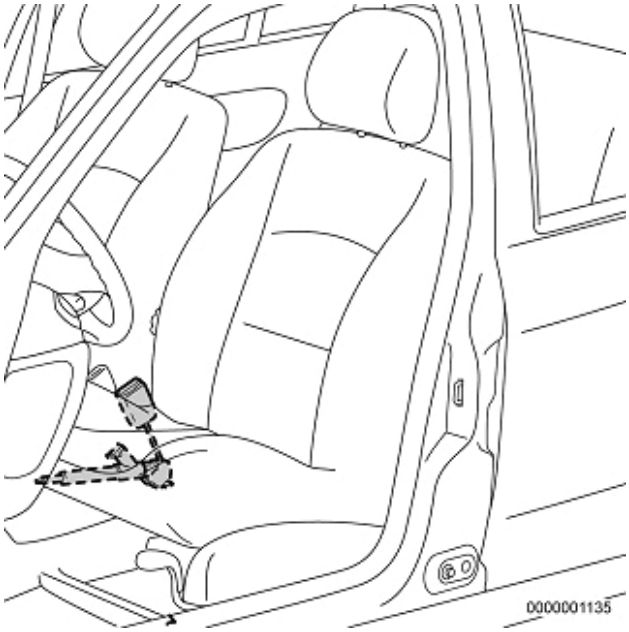
2. LOCATION OF COMPONENTS

1 - DRIVER'S FRONT AIRBAG	2 - PASSENGER FRONT AIRBAG
	

3 - AIRBAG COMPUTER



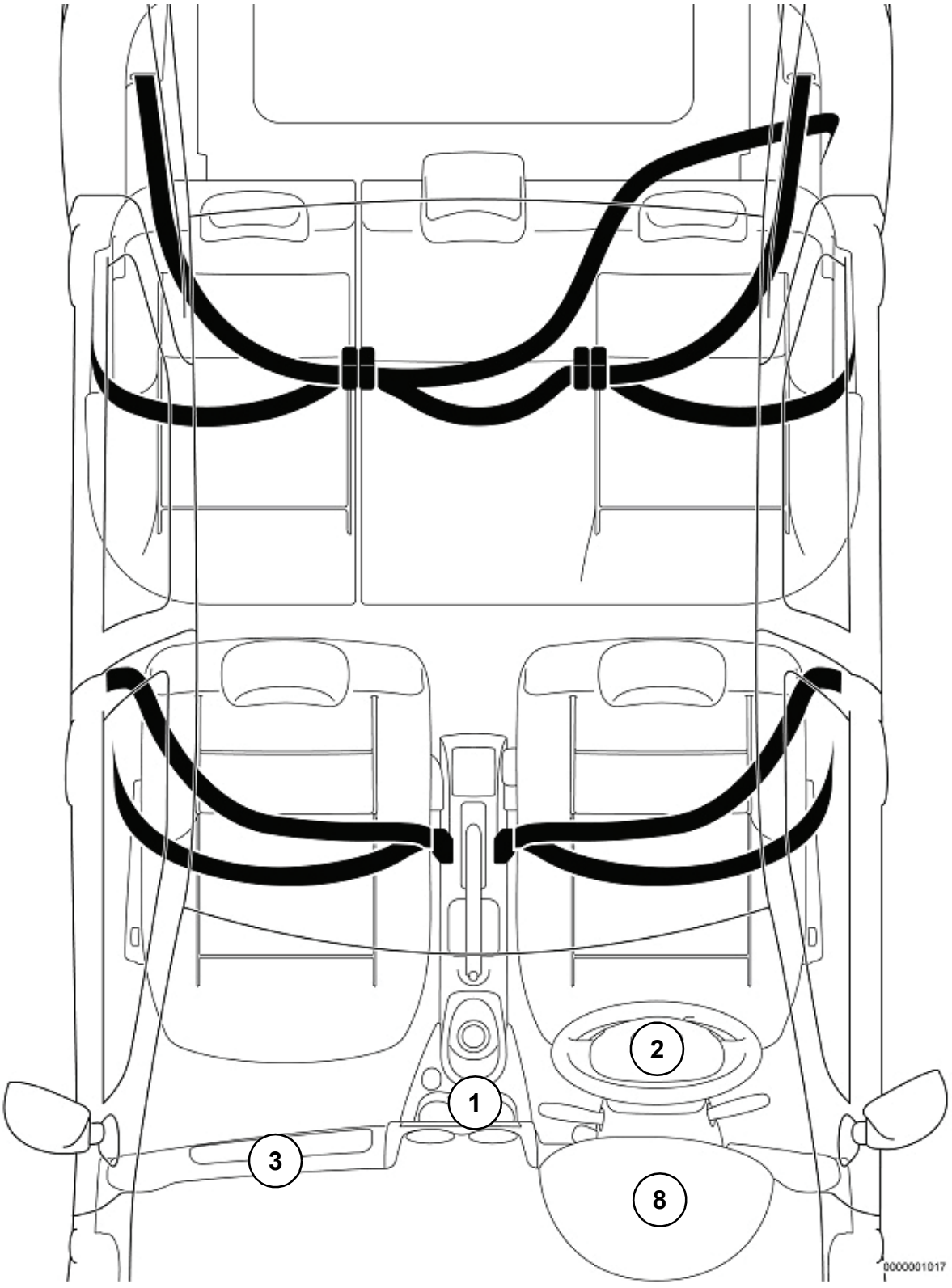
4 - PRETENSIONER



System outline

Symbol	Description
1	Airbag computer
2	Driver's frontal airbag
3	Front passenger frontal airbag
6	Driver's front seatbelt pretensioner
7	Passenger front seatbelt pretensioner
8	Instrument panel
15	Buzzer (audible warning function)

Passive Safety Architecture – Computer with 4 trigger lines.

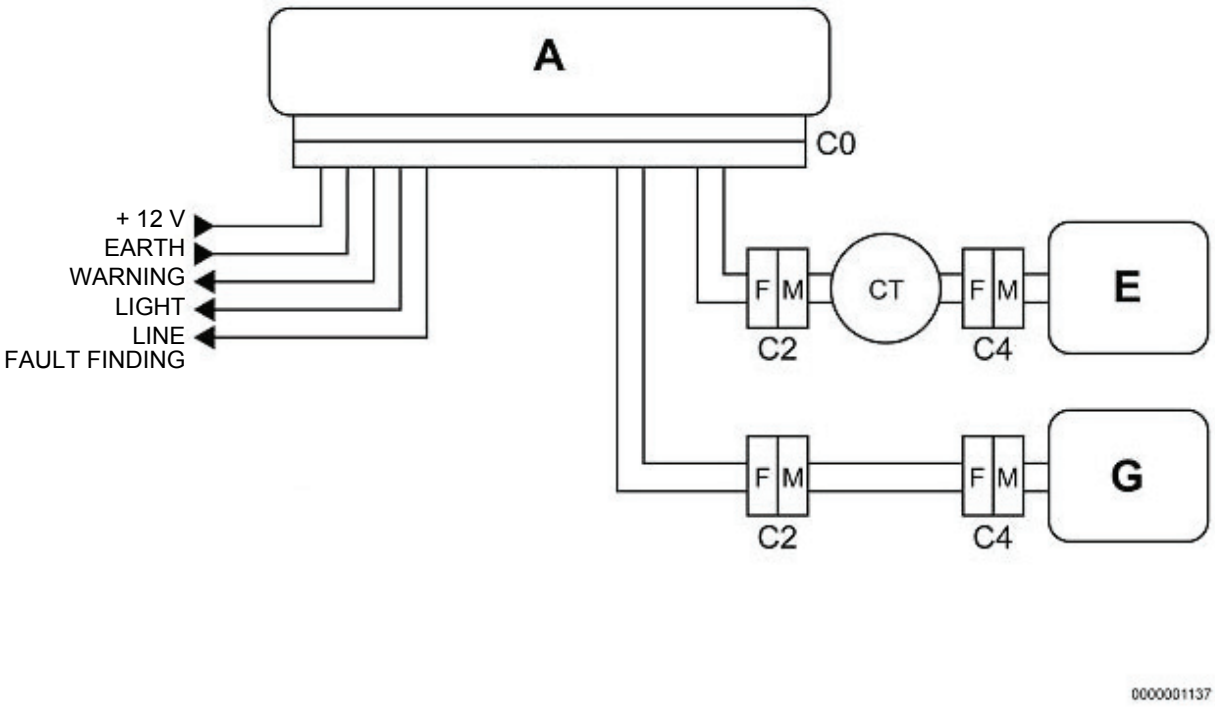


Driver's front airbag.
The role of the driver's front airbag is to protect the driver's head in case of frontal impact.

Passenger front air bag.
The role of the passenger front airbag is to protect the front passenger's head in case of frontal impact.

Airbag computer.
The role of the airbag computer is to take control of all of the vehicle's restraint devices intended to ensure occupant protection (driver, front and rear passengers).

FAULT FINDING - CONFIGURATION SHEET system with 4 trigger lines.



A	COMPUTER
E	DRIVER'S AIRBAG IGNITION MODULE
G	PASSENGER AIRBAG IGNITION MODULE
H	FRONT CHEST-LEVEL SIDE AIRBAG IGNITION MODULE
CT	ROTARY SWITCH
C0	30-TRACK AIRBAG COMPUTER CONNECTOR
C2	2-TRACK CONNECTORS
C4	

	DRIVER'S AND PASSENGER FRONT AIRBAGS	
	Measuring point	Correct value
Driver	C0, C2 and C4	**1.3** Ω to **5.2** Ω
Passenger	C0 and C4	**1.3** Ω to **5.2** Ω

The airbag computer monitors all of the vehicle's restraint devices intended to ensure occupant protection (driver, front and rear passengers).

The computer is designed to carry out the following functions:
– detection and confirmation of front longitudinal impacts and/or side impacts,
– corresponding activation of the pyrotechnic restraint devices (e.g.: pretensioner, airbag),
– management of the inhibiting function of the trigger lines and the lateral acceleration sensors,
– management and monitoring of the **Airbag fault** and **Airbag Off** warning lights on the instrument panel (wire connections),
– management of the warning lights for the SBR*,
– management of the audible function for the SBR*,
– management of the radio cut-off for the SBR*,
– activation of the **crash output** signal in the event of a crash (wire connection),
– management of the fault finding signals (signals provided by the fault manager in response to fault finding requests regarding internal faults or input - output fault finding).

Special notes:

1. Longitudinal impacts:

The detection of front or rear longitudinal impacts takes into account the signals from the internal accelerometers of the computer.

A frontal algorithm produces a characterisation of the impact using the sensor signals in order to initiate an adapted protection. It generates a **crash output** signal according to the type of impact in order to signal to the other computers that a crash was detected. The programs used by other computers that might use this signal are not part of the present functional description.

2. Side impacts:

A side algorithm produces a characterisation of the impact using the signals from the side sensors and the computer internal sensor in order to initiate a protection adapted to the side impact. It generates a **crash output** signal according to the type of impact in order to signal to the other computers that a crash was detected. On vehicle versions that do not have these side sensors, the airbag computer nevertheless can handle the side detection for the crash output. The programs used by other computers that might use this signal are not part of the present functional description.

SBR*: Seat Belt Reminder

3. Inhibition of passenger trigger lines:

This function is managed by the airbag computer.
The passenger front airbag is inhibited when **DF028 PASSENGER AIRBAG STATUS INDICATOR LIGHT CIRCUIT** or **DF193 PASSENGER AIRBAG LOCKING STATUS CHANGE** is **present** in the computer memory.

4. Seat belt locking monitoring:

This function is managed by the computer (warning light and audible signal):
– driver's seat belt buckled (contact open),
– driver's seat belt not buckled (contact closed).

5. Management and monitoring of the airbag warning lights:

The airbag computer controls and checks the status of the **Airbag fault** and **Airbag Off** warning lights on the instrument panel. These signals are exchanged via wire.

The **Airbag fault** warning light illuminates for **4 seconds** when the ignition is switched on **(+ after ignition)**, the time necessary for the system to be operational after the vehicle is started. It then remains off except under the following conditions:
– detection and recording of an airbag system fault (input - output fault, configuration fault),
– a crash has been detected and registered,
– if the computer is **crash locked** by a **diagnostic tool**,
– if the computer must be programmed or reprogrammed.

The **Airbag Off** warning light represents the actual inhibition status of the passenger airbags:
– **off** = active,
– **on** = passenger airbags inactive.

The 2 warning lights can be illuminated simultaneously.

SBR*: Seat Belt Reminder

6. "Crash output" signal activation.

It generates a **Crash output** signal according to the type of impact in order to signal to the other computers that a crash was detected.

The functionality described below is given for information and cannot in any case be considered as contractual.

Impact types	Customer complaints
Frontal	deactivation of automatic locking when driving, activation of the hazard warning lights, and unlocking of the steering column.
Rear	deactivation of automatic locking when driving, activation of the hazard warning lights, and unlocking of the steering column.
Side	deactivation of automatic locking when driving, activation of the hazard warning lights, and unlocking of the steering column.

7. Management of fault finding signals.

– fault finding of internal functions (self-test when switched on, verification of the configuration),
– fault finding of external functions (pyrotechnic ignition modules and sensors),
– fault finding of the supply,
– storage of faults identified when the vehicle is started, while the engine is running, or when the ignition is switched off,
– permanent storage of parameters relating to the crash algorithm and the signals obtained during a crash,
– permanent storage of system faults present before a crash,
– control of the warning lights and the crash output signal.

The airbag system components must be configured in accordance with the vehicle equipment criteria.

All the inputs and outputs of the airbag computer (ignition modules and sensors) are configurable independently of one another.

Any incorrect configuration is detected by the recording of the fault and the illumination of the Airbag fault warning light:
– "open circuit" fault if an ignition module (or sensor) is configured, but the component is not connected,
– "configuration" fault if an ignition module (or sensor) is unconfigured and the component is connected.

If necessary, a command can be issued to return to the default configuration (configuration of the computer as delivered).

CONFIGURATION/CONFIGURATION READING

-	To make it easier to configure the TEMIC AIRBAG computer, the **diagnostic tool** has automatic configuration commands for the trigger lines and sensors based on the equipment installed in the various models.
However, the commands in the following table allow each component of the system to be configured separately to adapt the computer configuration to the vehicle's actual equipment.	
-	The configuration reading commands (**LCxxx**) are used to display the current computer configuration in relation to the trigger lines and sensors installed in the vehicle.
-	The configuration commands (**CFxxx**) are used to adjust the computer configuration to the equipment actually installed in the vehicle.

– CONFIGURABLE FEATURES:

Trigger lines "WITH" or "WITHOUT"

Diagnostic tool title	Configuration reading	Configuration
DRIVER'S FRONTAL AIRBAG	**LC027**	**CF209**
PASSENGER FRONTAL AIRBAG	**LC028**	**CF210**
IMPACT SIGNAL CONNECTION	**LC029**	**CF211**
DRIVER'S FRONT BUCKLE PRETENSIONER	**LC064**	**CF265**
PASSENGER FRONT BUCKLE PRETENSIONER	**LC065**	**CF266**
PASSENGER AIRBAG INHIBITION WARNING LIGHT	**LC116**	**CF036**

Passenger airbag locking mode "WITH KEY" or "WITHOUT"

Diagnostic tool title	Configuration reading	Configuration
PASSENGER AIRBAG LOCK MODE	**LC060**	**CF248**

"LEFT" or "RIGHT-HAND" driving side

Diagnostic tool title	Configuration reading	Configuration
DRIVING SIDE	**LC088**	**CF291**

PARAMETER SETTINGS:

VP006: Lock computer.
This command should be used for any operation on the system. It inhibits all of the trigger lines.

VP007: Unlock computer
This command is used to unlock the computer when it is new or if it has been deactivated via command **VP006**.

VP010: Enter VIN.
This command is used to enter the VIN number into the computer.

SC004: Read impact context
Use this command during repair of the vehicle following impact. The command enables the list of trigger lines active and the system status upon impact to be accessed in the computer which is being replaced.

REPLACING A SYSTEM COMPONENT

Disconnect the battery before any removal or refitting of a pyrotechnic component (airbag module or pretensioners). The computer must always be locked before any operation on a system component.

REPLACING THE AIRBAG COMPUTER

Before replacing the computer, it is essential to contact the techline.

So that the failure of the returned computer can be analysed, the use of command **RZ001 Fault memory** when **DF001 Computer** is **present** or **stored** is officially prohibited.

The airbag computers are sold in locked mode to avoid all risk of accidental triggering (all ignition lines are inhibited).

The locked mode is indicated when the instrument panel warning light comes on.

Apply the following procedure when replacing an airbag computer:
– check that the ignition is switched off,
– replace the computer,
– modify the computer configuration if necessary,
– write the VIN to the computer using the **diagnostic tool** command **VP010 Write VIN**,
– switch off the ignition,
– carry out a check using the **diagnostic tool**,
– unlock the computer only if no fault is reported by the **diagnostic tool** and check that the warning light is off.

Tool fault	DTC code	Diagnostic tool title
DF001	**9080**	Computer
DF002	**9042**	Computer voltage supply
DF003	**9007**	Driver's frontal airbag circuit
DF004	**9005**	Passenger's frontal airbag circuit
DF028	**9041**	Passenger airbag status warning light circuit
DF034	**907E**	Computer locked
DF044	**9058**	Impact signal circuit
DF091	**9034**	Airbag locking switch circuit
DF165	**9040**	Airbag fault warning light circuit
DF183	**9029**	Driver's side front buckle pretensioner circuit
DF184	**902A**	Passenger side front buckle pretensioner circuit
DF193	**907C**	Passenger airbag locking status change.
DF194	**907F**	Computer to be replaced following impact
DF232	**9051**	Driver's seat belt buckle sensor circuit
DF233	**9052**	Passenger's seat belt buckle sensor circuit
DF234	**9053**	Passenger presence detection sensor circuit
DF242	**907B**	Left-hand/right-hand drive configuration
DF279	**9055**	Seat belt warning light circuit

DF001 PRESENT OR STORED	COMPUTER

NOTES	None.

Replace the airbag computer, component code **756** (see **MR 430, Mechanical, 88C, Airbag and pretensioners, Airbag computer: Removal - Refitting**).
If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

DF002 PRESENT OR STORED	COMPUTER SUPPLY VOLTAGE 1.DEF: Supply voltage too high 2.DEF: Supply voltage too low

NOTES	**Special notes:** Use **adapter Elé. 1830** when working on the computer connector.
	Use the CLIO II F 6 Wiring Diagrams Technical Note.

Carry out the necessary operations to obtain the correct airbag computer voltage, component code **756;** the supply voltage must be between **9 V ± 0.1 < X < 18 V ± 0.1**.

Check that the battery terminals are in good condition and properly tightened, component code **107**.
Carry out fault finding on the battery, component code **107** and the charge circuit (see **Technical Note 6014A, Checking the charging circuit**).

Check fuse **F22 (15 A)** in the passenger compartment fuse box, component code **1016** (see **MR 430, Mechanical, 81C, Fuses, Fuses: List and locations of components**).
With the ignition on, check for **+ 12 V** on connection **AP25** of the airbag computer, **component code 756**.
The computer supply voltage must be between: **10.5 V < X < 16 V**.

Check the connection and condition of the airbag computer connector, component code **756**.
If the connector is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the **insulation, continuity** and the **absence of interference resistance** on the following connection:

– **N** between component **756** and the **earth**.

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

AIRBAGTEMIC_V10_DF002

DF003 PRESENT OR STORED	DRIVER'S FRONTAL AIRBAG CIRCUIT CO: Open circuit CC: Short circuit CC.0: Short circuit to earth CC.1: Short-circuit on +12 volts. 1.DEF: Configuration 2.DEF: Short circuit between trigger lines

NOTES	If **1.DEF,** check and modify the computer configuration.
	Special notes: Never carry out any measuring procedures on the trigger lines with any tool other than the **CLIP** tool. Use **adapter Elé. 1830** when working on the computer connector.
	Use the CLIO II F 6 Wiring Diagrams Technical Note.

CO - CC	***NOTES***	None.

Lock the computer via the command **VP006 "Lock computer"**, using the **diagnostic tool**.
Switch off the ignition and remove the steering wheel airbag, component code **899** (see **MR 430, Mechanical, 88C, Airbag and pretensioners, Driver's front airbag: Removal - Refitting**).
Check that the steering wheel airbag is correctly connected.

Disconnect the airbag cushion and connect a dummy ignition module to the ignition module connector.
Switch on the ignition and carry out a check using the **diagnostic tool**.
If the fault becomes **stored**, replace the steering wheel airbag (see **MR 430, Mechanical, 88C, Airbag and pretensioners, Driver's front airbag: Removal - Refitting**).

With the ignition switched off, disconnect then reconnect the connector of the rotary contact underneath the steering wheel, component code **689**.

Check the connection and condition of the connector of the rotary switch underneath the steering wheel, component code **689**.
If the connector is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

AFTER REPAIR	Clear the computer fault memory. Switch off the ignition. Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer. Destroy the steering wheel airbag (component **1249**) if it has been replaced (tool **Elé. 1287**).

DF003 CONTINUED 1	

The **CLIP tool** must be used for checking resistance at **point C2** of the driver's airbag circuit.
If the obtained value is not correct, replace component **689** (see **MR 430, Mechanical, 84A, Controls - Signals, Rotary switch: Removal - Refitting**).

Reconnect component **689**, disconnect the airbag computer connector, component code **756** and fit **adapter Elé. 1830.**
The **CLIP** tool must be used to measure resistance on the **cable marked A** of **adapter Elé.** 1830.
Check the connection and condition of the airbag computer connector, component code 756.
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

If the value obtained is not correct, check the insulation, continuity and the absence of interference resistance on the following connections:

– **60AM** between components **689** and **756**
– **60AN** between components **689** and **756**

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the checks carried out have not shown the presence of a fault, check on the base of the airbag computer for the presence of the **seven shunt opening pins** of the computer connector.
Check the **connection** and **condition** of the airbag computer connector, component code **756** (locking system, connections, etc.).
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

AFTER REPAIR	Clear the computer fault memory. Switch off the ignition. Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer. Destroy the steering wheel airbag (component **1249**) if it has been replaced (tool **Elé. 1287**).

DF003 CONTINUED 2	

CC.0 - CC.1	***NOTES***	None.

Lock the computer via the command **VP006 "Lock computer"**, using the **diagnostic tool**. Switch off the ignition and remove the steering wheel airbag, component code **899** (see **MR 430 Mechanical, 88C, Airbag and pretensioner, Driver's front airbag: Removal - Refitting**). Check the condition and correct connection of the trigger line.
The **CLIP** tool must be used for measuring the insulation appropriate to the type of fault at **point C2** of the driver's frontal airbag circuit. If the value obtained is not correct, replace the rotary switch under the steering wheel, component code **689** (see **MR 430 Mechanical, 84A, Controls – Signal, Rotary switch: Removal - Refitting**).
Reconnect component **689**, disconnect the airbag computer connector, and fit **Elé**. 1830. It is essential to use the **CLIP** tool for measuring resistance on the **cable marked A** of the adapter. **Elé. 1830,** the resistance must be between: **1.3** Ω **< X < 5.2** Ω. Check the connection and condition of the airbag computer connector, component code **756**. If the connector is faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring

AFTER REPAIR	Clear the computer fault memory. Switch off the ignition. Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer. Destroy the steering wheel airbag (component **1249**) if it has been replaced (tool **Elé. 1287**).

DF003 CONTINUED 3	

If the value obtained is not correct, check the insulation, continuity and the absence of interference resistance on the following connections:

– **60AM** between components **689** and **756**
– **60AN** between components **689** and **756**

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

2.DEF	***NOTES***	**Special notes**: This fault corresponds to the detection of a short circuit between 2 trigger lines.
		Priorities when dealing with a number of faults : If another trigger line has fault **2.DEF**, first look for a short circuit between the circuits of the two ignition modules concerned.

Lock the computer via the command **VP006 "Lock computer"**, using the **diagnostic tool**.
If the faults are not multiple, identify the parameters of another trigger line involved in the short circuit in the screen.
Check the **insulation**, **continuity and the absence of interference resistance** of the following connections:

– **60AM** between components **689** and **756**
– **60AN** between components **689** and **756**

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

If the fault is still present, contact the Techline.

AFTER REPAIR	Clear the computer fault memory. Switch off the ignition. Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer. Destroy the steering wheel airbag (component **1249**) if it has been replaced (tool **Elé. 1287**).

DF004 PRESENT OR STORED	PASSENGER FRONTAL AIRBAG CIRCUIT CO: Open circuit CC: Short circuit CC.0: Short circuit to earth CC.1: Short-circuit on +12 volts. 1.DEF: Configuration 2.DEF: Short circuit between trigger lines

NOTES	If **1.DEF**, check and modify the computer configuration (see **Configuration**).
	Special notes: Never carry out any measuring procedures on the trigger lines with any tool other than the **CLIP** tool. Use **adapter Elé.** 1830 when working on the computer connector.
	Use the CLIO II F 6 Wiring Diagrams Technical Note.

CO - CC	***NOTES***	None.

Lock the computer via the command **VP006 "Lock computer"**, using the **diagnostic tool**.
Switch off the ignition and check the **connection** and the **condition** of the passenger frontal airbag connector, component code **861**.
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Fit **adapter Elé**. **1617 (3/4).**
It is essential to use the **CLIP tool** to measure the resistance on the **cable marked C** of **adapter Elé**. **1617 (3/4)**.

AFTER REPAIR	Reconnect the computer and component **861**. Switch on the ignition again. Clear the computer fault memory. Switch off the ignition. Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer. Destroy component **861** if it has been replaced (tool **Elé. 1287**).

DF004 CONTINUED 1	

If the value obtained is not correct, switch off the ignition and remove any necessary components in order to access the wiring of component **861** (see **MR 430, Mechanical, 88C, Airbag and pretensioner, Passenger's front airbag: Removal - Refitting**).
Disconnect component **861**, connect a dummy ignition module to the ignition module connector, then measure the resistance again on the **cable marked C** of **adapter Elé**. **1617 (3/4).**
If the value obtained is correct, replace component **861** (see **MR 430, Mechanical, 88C, Airbag and pretensioner, Passenger's front airbag: Removal - Refitting**).
If the value obtained remains incorrect, the wiring is faulty.
Check the **insulation**, **continuity and the absence of interference resistance** of the following connections:

– **60V** between components **861** and **756**,
– **60W** between components **861** and **756**.

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the obtained value is correct, reconnect the connectors of components **756** and **861**.
Disconnect the airbag computer connector, component code **756**.
Check the connection and condition of the airbag computer connector, component code **756**.
If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Fit **adapter Elé**. 1830.
The **CLIP tool** must be used to measure the resistance on the **cable marked B** of **adapter Elé. 1830.** The resistance must be between: **1.3 Ω < X < 5.2 Ω.**
If the value obtained is not correct, the wiring is faulty, check the **insulation**, **continuity and the absence of interference resistance** on the following connections:

– **60V** between components **861** and **756**
– **60W** between components **861** and **756**

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR	Reconnect the computer and component **861**. Switch on the ignition again. Clear the computer fault memory. Switch off the ignition. Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer. Destroy component **861** if it has been replaced (tool **Elé. 1287**).

DF004 CONTINUED 2	

CC.0 - CC.1	*NOTES*	None.

Lock the computer via the command **VP006 "Lock computer"**, using the **diagnostic tool**.
Switch off the ignition and check the connection and the condition of the passenger frontal airbag connector, component code **861**.
If the connector is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.
Fit **adapter Elé**. **1617 (3/4).**
The **CLIP** tool must be used to measure the insulation appropriate to the type of fault on the **cable marked C** on **adapter Elé**. **1617 (3/4)**.

If the value obtained is not correct, replace the wiring harness (C4/C2).

If the value obtained is correct, reconnect the connector of component **861**.
Disconnect the computer connector and check the connection and condition of the connector of component **861**.
If the connector is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

AFTER REPAIR	Reconnect the computer and component **861**. Switch on the ignition again. Clear the computer fault memory. Switch off the ignition. Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer. Destroy component **861** if it has been replaced (tool **Elé. 1287**).

DF004 CONTINUED 3	

Fit **adapter Elé**. 1830.
The **CLIP tool** must be used to measure the resistance on the **cable marked B** of **adapter Elé. 1830.** The resistance must be between: **1.3 Ω < X < 5.2 Ω.**

If the value obtained is not correct, the wiring is faulty, check the **insulation**, **continuity and the absence of interference resistance** on the following connections:

– **60V** between components **861** and **756**
– **60W** between components **861** and **756**

If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

2.DEF	***NOTES***	**Special notes**: This fault corresponds to the detection of a short circuit between 2 trigger lines.
		Priorities when dealing with a number of faults : If another trigger line has fault **2.DEF**, first look for a short circuit between the circuits of the two ignition modules concerned.

Lock the computer via the command **VP006 "Lock computer"**, using the **diagnostic tool**.
If the faults are not multiple, identify the parameters of another trigger line involved in the short circuit in the screen.
Check the **insulation**, **continuity and the absence of interference resistance** of the following connections:

– **60V** between components **861** and **756**
– **60W** between components **861** and **756**

If the connection or connections are faulty and if there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

If the fault is still present, contact the Techline.

AFTER REPAIR	Reconnect the computer and component **861**. Switch on the ignition again. Clear the computer fault memory. Switch off the ignition. Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer. Destroy component **861** if it has been replaced (tool **Elé. 1287**).

DF028 PRESENT OR STORED	PASSENGER AIRBAG STATUS WARNING LIGHT CIRCUIT CC.1: Short-circuit on +12 volts. CO.0: Open circuit or short circuit to earth

NOTES	**Special notes:** Use **adapter Elé.** 1830 when working on the computer connector.
	Use the CLIO II F 6 Wiring Diagrams Technical Note.

CC.1	***NOTES***	None.

Lock the computer via the command **VP006 "Lock computer"**, using the **diagnostic tool**.
Check the condition of the warning light bulb.
Check the **insulation**, **continuity and the absence of interference resistance** of the following connection:

– **60A** between components **247** and **756**.

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

DF028 CONTINUED	

CO.0	*NOTES*	None.

Warning light off under + after ignition feed

Lock the computer via the command **VP006 "Lock computer"**, using the **diagnostic tool**.
Check the condition of the airbag fault warning light.
Check the **insulation**, **continuity and the absence of interference resistance** of the following connection:

– **60A** between components **247** and **756**.

Check the presence of **+ 12 V** on the warning light.
If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

Warning light on under + after ignition feed

Lock the computer via the command **VP006 "Lock computer"**, using the **diagnostic tool**.
Disconnect the airbag computer and check for the presence, on the base, of the **7 pins** which open the connector shunts.
Check the **insulation**, **continuity and the absence of interference resistance** of the following connection:

– **60A** between components **247** and **756**.

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

DF034 PRESENT OR STORED	COMPUTER LOCKED 1.DEF: Computer locked

NOTES	None.

This fault allows display of the locked state of the computer.
When it is **present**, all the trigger lines are inhibited, preventing triggering of the airbags.
This fault is normally **present** in two cases:
– the computer is new (it is sold locked),
– the computer locking command using the **fault finding tool** was used during an operation on the vehicle.

If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

DF044 PRESENT OR STORED	IMPACT SIGNAL CIRCUIT CC.1: Short circuit to + 12 V CO: Open circuit or short circuit to earth

NOTES	There is no **impact signal circuit** on **CLIO II F 6**.

Use **LC029 Impact signal connection** to check that the computer configuration is **WITHOUT** (the computer is configured to **WITH** by default).
If this is not the case, configure the computer to **WITHOUT** using **CF211 Impact signal connection**.

If the fault is still present, contact the techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

AIRBAGTEMIC_V10_DF044

DF091 PRESENT OR STORED	AIRBAG LOCKING SWITCH CIRCUIT CC.0: Short circuit to earth CC.1: Open circuit or short-circuit on + 12 volts 1.DEF: Configuration 2.DEF: Consistency

NOTES	If **1.DEF,** check and modify the computer configuration.
	If **CC.0**, **CO.1**, or **2.DEF**, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

DF165 PRESENT OR STORED	AIRBAG FAULT WARNING LIGHT CIRCUIT CC.1: Short-circuit on +12 volts. CC.0: Open circuit or short circuit to earth

NOTES	**Special notes:** Use **adapter Elé. 1830** when working on the computer connector.

CC.1	***NOTES***	None.

Lock the computer via the command **VP006 "Lock computer"**, using the **diagnostic tool**.
Check the condition of the warning light bulb.

Check the **insulation, continuity** and the **absence of interference resistance** on the following connections:

– **60A** between components **756** and **247**.

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

CO.1	***NOTES***	None.

Warning light off under + after ignition feed

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

DF165 CONTINUED	

Lock the computer via the command **VP006 "Lock computer"**, using the **diagnostic tool**.
Check the condition of the airbag fault warning light on the instrument panel, component code **247**.
Check the **insulation, continuity** and the **absence of interference resistance** on the following connections:

– **60A** between components **756** and **247**.

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the checks carried out did not show the presence of a fault, disconnect the computer connector and fit **Elé. 1830**.
Use the **CLIP tool** function for testing the instrument panel warning light, component code **247**, using the **grey cable marked 1** of **adapter Elé**. **1830**.
If the warning light can be illuminated by the tool, replace the airbag computer, component code **756** (see **MR 430, Mechanical, 88C, Airbag and pretensioners, Airbag computer: Removal - Refitting**).
If not, repeat the checks described previously.

Warning light on under + after ignition feed

Lock the computer via the command **VP006**, using the **diagnostic tool**.
Disconnect the airbag computer and check for the presence, on the base, of the **7 pins** which open the connector shunts.
Check the **insulation, continuity** and the **absence of interference resistance** on the following connections:

– **60A** between components **756** and **247**,

If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

DF183 PRESENT OR STORED	DRIVER'S FRONT BUCKLE PRETENSIONER CIRCUIT CC: Short circuit CO: Open circuit CC.1: Short circuit to + 12 V CC.0: Short circuit to earth 1.DEF: Configuration 2.DEF: Short circuit between trigger lines

NOTES	If **1.DEF**, check and modify the computer configuration using configuration reading **LC064 Driver's front buckle pretensioner**, then modify it if it is inconsistent using the configuration **CF265 Driver's front buckle pretensioner**.
	If **CC**, **CO**, **CC.1**, **CC.0** or **2. DEF**, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

DF184 PRESENT OR STORED	DRIVER'S FRONT BUCKLE PRETENSIONER CIRCUIT CC: Short circuit CO: Open circuit CC.1: Short circuit to + 12 V CC.0: Short circuit to earth 1.DEF: Configuration 2.DEF: Short circuit between trigger lines

NOTES	If **1.DEF**, check and modify the computer configuration using configuration reading **LC065 Passenger front buckle pretensioner**, then modify it if it is inconsistent using the configuration **CF266 Passenger front buckle pretensioner**.
	If **CC**, **CO**, **CC.1**, **CC.0** or **2. DEF**, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

DF193 PRESENT OR STORED	PASSENGER AIRBAG LOCKING CHANGE OF STATUS

NOTES	**Special notes:** The vehicle user has **10 seconds** after switching on **+ after ignition feed** to inhibit the passenger airbag using the key. After this time, the computer will store this fault and light up the warning light on the instrument panel. Switching the ignition off and on restores system operation.

Set the locking switch to the desired position, switch the ignition off and wait for a few seconds. Switch on the ignition again and clear the computer fault memory using command **RZ001 Fault memory**.
If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

DF194 PRESENT OR STORED	COMPUTER TO BE REPLACED FOLLOWING IMPACT

NOTES	None.

Contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

AIRBAGTEMIC_V10_DF194

DF232 PRESENT OR STORED	DRIVER'S SEAT BELT BUCKLE SENSOR CIRCUIT CC.1: Short circuit to + 12 V 1.DEF: Configuration

NOTES	If **1.DEF,** check and modify the computer configuration.
	If **CC.1**, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

AIRBAGTEMIC_V10_DF232

DF233 PRESENT OR STORED	PASSENGER SEAT BELT BUCKLE SENSOR CIRCUIT CC.1: Short circuit to + 12 V 1.DEF: Configuration

NOTES	If **1.DEF,** check and modify the computer configuration.
	If **CC.1**, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

AIRBAGTEMIC_V10_DF233

DF234 PRESENT OR STORED	PASSENGER PRESENCE DETECTION SENSOR CIRCUIT CC.1: Short circuit to + 12 V 1.DEF: Configuration 2.DEF: Values outside of limits

NOTES	If **1.DEF,** check and modify the computer configuration.
	If **CC.1** or **2. DEF**, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

AIRBAGTEMIC_V10_DF234

DF242 PRESENT OR STORED	LEFT-HAND DRIVE/RIGHT-HAND DRIVE CONFIGURATION 1.DEF: Not or incorrectly done

NOTES	None.

1.DEF	***NOTES***	None.

This fault occurs because left-hand/right-hand drive has not been configured. Configure the computer using command **CF291 Driving side**. Read the configuration of the driving side using **LC088 Driving side** under the **Read configuration** heading.
If the fault is still present, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

AIRBAGTEMIC_V10_DF242

DF279 PRESENT OR STORED	DRIVER'S FRONT BUCKLE PRETENSIONER CIRCUIT CC.1: Short circuit to + 12 V CC.0: Short circuit to earth

NOTES	If **CC.1**, contact the Techline.

AFTER REPAIR	Carry out the check again using the **diagnostic tool** and, if there is no fault, unlock the computer.

AIRBAGTEMIC_V10_DF279

NOTES	Only carry out a conformity check after a **complete check** with the **diagnostic tool**. The values shown in this conformity check are given as a guide. **Application condition:** Engine **stopped, ignition on**.

FUNCTION: MAIN SCREEN

Parameter or status checked or action		Display and notes	Fault finding
ET144:	Fault **present** or **stored**.	**YES or NO** This status indicates if the computer has detected at least a **present** or a **stored** fault.	In the event of a fault, apply the interpretation of the fault concerned.
ET073:	Computer locked by tool.	**YES or NO** This status indicates whether or not the computer is locked.	In the event of a fault, apply the interpretation of DF034 **Computer locked**.
ET143:	Passenger airbag(s) locked.	**YES or NO** This status indicates the locking of the passenger trigger lines (passenger front airbag, passenger front chest-level airbag).	In the event of a fault, apply the interpretation of DF193 **Passenger airbag locking status change**.
ET076:	Computer in need of replacement.	**YES or NO** This status indicates whether the computer should be replaced or not.	In the event of a fault, apply the interpretation of **DF001 Computer** and **DF194 Computer to be replaced following impact**.
ET010:	Impact detected.	**YES or NO** This status indicates whether an impact has been detected by the computer.	In the event of a fault, apply the interpretation of **DF194 Computer to be replaced following impact**.

NOTES	Only carry out a conformity check after a **complete check** with the **diagnostic tool**. The values shown in this conformity check are given as a guide. **Application condition:** Engine **stopped, ignition on**.

FUNCTION: MAIN SCREEN (CONT.)

Parameter or status checked or action		Display and notes	Fault finding
ET074:	Fault warning light activated.	**YES or NO** This status permits a check on the request by the computer for the **airbag fault** indicator light to be lit or not.	In the event of a fault, apply the interpretation of **DF165 Airbag fault warning light circuit**.
ET072:	Passenger airbag status indicator light activated.	**YES or NO** This status permits a check on the request by the computer for the **passenger airbag** indicator light to be lit.	In the event of a fault, apply the interpretation of **DF028 Passenger airbag status indicator circuit.**
PR001:	Computer supply.	This parameter indicates the computer supply voltage. The voltage should be between **9 V < X < 14 V**.	In the event of a fault, apply the interpretation of **DF001 Computer**.

NOTES	Only carry out a conformity check after a **complete check** with the **diagnostic tool**. The values shown in this conformity check are given as a guide. **Application condition:** Engine **stopped, ignition on**.

FUNCTION: AIRBAG

SUB-FUNCTION: TRIGGERING

Parameter or status checked or action		Display and notes	Fault finding
PR013:	Driver's front airbag resistance.	The resistance should be between: **1.2 Ω < X < 5.8 Ω** This value could be **99.9**Ω if the vehicle is not fitted with the airbag in question (see vehicle equipment). These parameters indicate the impedance in ohms on trigger lines.	In the event of a fault, apply the interpretation of **DF003 Driver's front airbag circuit**.
PR014:	Passenger front airbag resistance.		In the event of a fault, apply the interpretation of **DF004 Passenger front airbag circuit**.
PR015:	Driver's pretensioner resistance.		In the event of a fault, apply the interpretation of **DF183 Driver's front buckle pretensioner circuit**.
PR016:	Passenger pretensioner resistance.		In the event of a fault, apply the interpretation of **DF004 Passenger front buckle pretensioner circuit**.

NOTES	Only carry out a conformity check after a **complete check** with the **diagnostic tool**. The values shown in this conformity check are given as a guide. **Application condition:** Engine **stopped, ignition on**.

FUNCTION: AIRBAG

SUB-FUNCTION: LOCK AIRBAGS

Parameter or status checked or action		Display and notes	Fault finding
ET073:	Computer locked by tool.	**YES or NO** This status indicates whether or not the computer is locked.	In the event of a fault, apply the interpretation of DF034 **Computer locked**.
ET143:	Passenger airbag(s) locked.	**YES or NO** This status indicates the locking of the passenger trigger lines (passenger front airbag, passenger front chest-level airbag).	In the event of a fault, apply the interpretation of DF193 **Passenger airbag locking status change**.
ET103:	Passenger airbag locking type.	This status indicates the inhibited trigger lines when the passenger airbag is inhibited (passenger front airbag, passenger front chest-level airbag, and passenger buckle pretensioner).	In the event of a fault, apply the interpretation of **DF091 Airbag locking switch circuit** and **DF193**.
PR147:	Airbag locking circuit impedance.	The resistance must be **100** Ω with the switch in the OFF position or 400 Ω with the switch in the ON position.	In the event of a fault, apply the interpretation of **DF091 Airbag locking switch circuit**.

Tool status	Diagnostic tool title
ET010	Impact detected
ET072	Passenger airbag status indicator light activated
ET073	Computer locked by tool
ET074	Command fault warning light
ET076	Computer to be replaced
ET103	Type of passenger airbag locking
ET143	Passenger airbag(s) locked
ET144	Fault present or in memory

Tool Parameter	Diagnostic tool title
PR001	Computer feed voltage
PR013	Driver's front airbag resistance
PR014	Passenger front airbag resistance
PR015	Driver’s pretensioner resistance
PR016	Passenger pretensioner resistance
PR147	Airbag locking circuit impedance

NOTES	**Only refer to the customer complaints after performing a complete check using the diagnostic tool.**

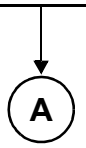
NO DIALOGUE WITH THE COMPUTER	→	**ALP1**

ALP1	No dialogue with the computer

NOTES	None.

Try to establish dialogue with a computer on another vehicle to check that **the diagnostic tool** is not faulty. If the **diagnostic tool** is not causing the fault and dialogue cannot be established with any other computer on the same vehicle, it may be that a faulty computer is disrupting fault finding line **HK**.
Use a process of successive disconnections to locate this computer.
Check the battery voltage, component code **107**, and perform the necessary operations to obtain the correct voltage between **10.5 V < X < 16 V**.

Check the presence and condition of the airbag computer supply fuse.
Check the connection and condition of the computer connector, component code **756** and the condition of its connections.
If the connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.
Check that the supply to the computer is correct:
– disconnect the airbag computer and use **adapter Elé. 1830** when working on the computer connector,
– check and ensure the presence of **+ after ignition** on connection **AP25** of component **756**.
If the connection(s) is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.



AFTER REPAIR	When communication is established, deal with any faults indicated.

AIRBAGTEMIC_V10_ALP1

ALP1 CONTINUED	

A

Check that the diagnostic socket, component code **225**, is correctly supplied on the following connections:
- **BP10** between components **225** and **1016 (+ before ignition feed**),
- **M** and **N** of component **225 (earths)**.

Check the **insulation, continuity** and the **absence of interference resistance** on the following connection:
- **HK** between components **225** and **756.**

If the connection(s) is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

If dialogue is still not established after these various checks, replace the airbag computer, component code **756** (see **Replacement of components**).

AFTER REPAIR	When communication is established, deal with any faults indicated.