TECHNICAL NOTE
EDITION ANGLAISE

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Twingo

Type: **X06 X**

S/Section: **88**

88 AUTOLIV ACU3.8 AIRBAG SPECIAL FEATURES FAULT FINDING

- Engine: **XXX**
- Gearbox: **XXX**

Basic manual: Technical Note 3435A

This Technical Note contains the special features of the fault finding strategy for the Autoliv ACU3.8 Vdiag 08 airbag fitted on the Twingo.

COMPUTER TYPE: ACU3.8
VDIAG No.: 08

FAULT FINDING - INTRODUCTION

This document introduces the special features of the fault finding strategy applicable on TWINGOs fitted with an AUTOLIV ACU 3.8 AIRBAG computer with VDIAG 08.

This "Special Features" Technical Note completes or replaces the information given in the fault finding strategy of the Technical Note "Generic fault finding". It should only be used for the vehicle concerned.

To carry out the fault finding strategy on this system, it is essential to have the following items available:

- **Technical Note "Generic fault finding",**
- **Technical Note "Fault finding special features" of the vehicle,**
- **the wiring diagram for the operation of the vehicle concerned,**
- **the tools listed under the heading "Special tooling required".**

Tooling required for operations on the airbag and seat belt pretensioner systems:

- Fault finding tools (except XR25).
- Collection of adapters and borniers for using the "Airbag and pretensioner wiring harness check" function on CLIP and NXR tools or the XRBAG for update N°6 (with the new orange 50 track adapter B52 at the base of the computer).
- Multimeter.

Reminders

During operations on the airbag/seat belt pretensioner systems it is vital that you lock the computer using the fault finding tool to prevent any risk of erratic triggering (all the ignition lines will be inhibited). The "locked" mode is signalled by the illumination of the instrument panel warning light.
Without the fault finding tool, switch off the ignition and remove the supply fuse from the system, then wait at least 2 seconds for the power reserve capacity to discharge.

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

Before using a dummy ignition module, ensure that its resistance is between 1.8 and 2.5 ohms.

Ensure during the operation that the voltage supply to the computer does not drop below 10 Volts.

FAULT FINDING - INTERPRETATION OF FAULTS

DF 063 **PRESENT**	"ISOFIX" sensor circuit CO : Open circuit CC.0 : Short circuit to earth CC.1 : Short circuit at 12 volts 1.DEF : Configuration 2.DEF : Coherence status of the 2 switches (ISOFIX locking)

NOTES	**Special notes:** Use the 50 track B52 adaptor to operate on the computer connector. Lock the computer using the fault finding command.

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

Consult the parameters **PR101** and **PR102**.

– Correct value with child seat: 100 ohms.
– Correct value without child seat: 400 ohms.

Which parameter is indicating an ISOFIX sensor circuit fault?

PR101

Fault on ISOFIX B sensor circuit.
Check the connection status on computer.
Check the status of the 50 track connector (locking system, connections, ...).
Check that the sensor is connected correctly and check the connections.
Ensure continuity and insulation of the connections between:
Bornier B52 **terminal 13** → sensor connector
Bornier B52 **terminal 14** → sensor connector

Replace the ISOFIX B sensor if the fault persists.

PR102

Fault on ISOFIX A sensor circuit.
Check the connection status on computer.
Check the status of the 50 track connector (locking system, connections, ...).
Check that the sensor is connected correctly and check the connections.
Ensure continuity and insulation of the connections between:
Bornier B52 **terminal 12** → sensor connector
Bornier B52 **terminal 37** → sensor connector

Replace the ISOFIX A sensor if the fault persists.

AFTERREPAIR	Reconnect the computer and the ISOFIX sensors then switch on the ignition again. Erase the computer memory then turn off the ignition. Carry out the check again using the tool and, if there is no fault, unlock the computer.

FAULT FINDING - INTERPRETATION OF FAULTS

DF 063 **PRESENT** CONT	

1.DEF	***NOTES***	None

This fault indicates a mismatch between the computer configuration and the vehicle equipment detected by the computer. The computer detects the presence of an element additional to its configuration or an incorrect configuration.

Modify the computer configuration using the "System elements configuration" command.

Correct configuration : With "ISOFIX function" and without "passenger airbag locking by key" or Without "ISOFIX function" and with "passenger airbag locking by key"

2.DEF	***NOTES***	None

Consult status **ET080** and **ET081**.

– "ISOFIX" child seat locked on front passenger seat: status **ACTIVE** confirmed
– "ISOFIX" child seat taken off front passenger seat: status **ACTIVE** confirmed

Which is the inconsistent status?

AND080	Replace the ISOFIX B sensor.
AND081	Replace the ISOFIX A sensor.

AFTERREPAIR	Reconnect the computer and the ISOFIX sensors then switch on the ignition again. Erase the computer memory then turn off the ignition. Carry out the check again using the tool and, if there is no fault, unlock the computer.

FAULT FINDING - INTERPRETATION OF FAULTS

DF 091 **PRESENT**	Airbag locking circuit breaker CO : Open circuit CC.0 : Short circuit to earth CC.1 : Short circuit at 12 volts 1.DEF : Configuration 2.DEF : Unstable switch status (key system locking)

NOTES	**Special notes:** Use the 50 track B52 adaptor to operate on the computer connector. Lock the computer using the fault finding command.

CO - CC.0 - CC.1 - 2.DEF	***NOTES***	None

Check the connection status on computer.
Check the status of the 50 track connector (locking system, connections, ...).
Check that the locking switch is correctly connected and check the connections.
Ensure continuity and insulation of the connections between:

Bornier B52 **terminal 12** ⟶ **track 3** locking switch connector
Bornier B52 **terminal 37** ⟶ **track 6** locking switch connector

Replace the locking switch if the fault persists.

1.DEF	***NOTES***	None

This fault indicates a mismatch between the computer configuration and the vehicle equipment detected by the computer. The computer detects the presence of an element additional to its configuration or an incorrect configuration.

Modify the computer configuration using the "System elements configuration" command.

Correct configuration : With "passenger airbag locking by key" and without "ISOFIX function"
Without "passenger airbag locking by key"and with "ISOFIX function"

AFTERREPAIR	Reconnect the computer and the locking switch, then switch on the ignition again. Erase the computer memory then turn off the ignition. Carry out the check again using the tool and, if there is no fault, unlock the computer.

FAULT FINDING - INTERPRETATION OF FAULTS

DF 093 PRESENT	"ISOFIX" sensor circuit impedance

NOTES	None

Consult the parameters **PR101** and **PR102**.

– Correct value with child seat: 100 ohms.
– Correct value without child seat: 400 ohms.

Which parameter is indicating an ISOFIX sensor circuit fault?

PR101

Fault on ISOFIX B sensor circuit.
Check the connection status on computer.
Check the status of the 50 track connector (locking system, connections, ...).
Check that the sensor is connected correctly and check the connections.
Ensure continuity and insulation of the connections between:
Bornier B52 **terminal 13** → sensor connector
Bornier B52 **terminal 14** → sensor connector

Replace the ISOFIX B sensor if the fault persists.

PR102

Fault on ISOFIX A sensor circuit.
Check the connection status on computer.
Check the status of the 50 track connector (locking system, connections, ...).
Check that the sensor is connected correctly and check the connections.
Ensure continuity and the insulation of the connections between:
Bornier B52 **terminal 12** → sensor connector
Bornier B52 **terminal 37** → sensor connector

Replace the ISOFIX A sensor if the fault persists.

AFTERREPAIR	Reconnect the computer and the ISOFIX sensors then switch on the ignition again. Erase the computer memory then turn off the ignition. Carry out the check again using the tool and, if there is no fault, unlock the computer.

FAULT FINDING - INTERPRETATION OF FAULTS

DF 157 **PRESENT**	Locking switch circuit impedance

NOTES	**PR122** switch in airbag active position: 100 ohms **PR122** switch in airbag neutralized position: 400 ohms

Check the connection status on computer.
Check the status of the 50 track connector (locking system, connections, ...).
Check that the locking switch is correctly connected and check the connections.
Ensure continuity and the insulation of the connections between:

Bornier B52 **terminal 13** → **track 3** locking switch connector
Bornier B52 **terminal 14** → **track 6** locking switch connector

Replace the locking switch if the fault persists.

AFTERREPAIR	Reconnect the computer and the locking switch, then switch on the ignition again. Erase the computer memory then turn off the ignition. Carry out the check again using the tool and, if there is no fault, unlock the computer.

FAULT FINDING - CHECKING CONFORMITY

NOTES	Only check the conformity after a full check using the fault finding tool.

Order	Function	Parameter / state checked or action	Display / notes	Diag
1	Fault finding tool dialogue		**ACU 3.8 AIRBAG**	**CHART 1**
2	Computer Conformity	**PR002** "Vehicle type"	Twingo **0**	**DF 094**
3	Computer configuration	Use of the "System elements configuration" command	Ensure that the computer configuration defined in the "Current" column corresponds to the vehicle equipment.	None.
4	Fault warning light operation Computer initialisation check.	Switch on the ignition	3 second illumination of the fault warning light when ignition is switched on	None.
5	"Passenger airbag status" warning light operation	With the ignition switched off, set the switch to "passenger's front airbag operational". Switch ignition on	The "passenger airbag status" warning light should not illuminate after the 3 second illumination of the fault warning light.	None.
		With the ignition switched off, set the switch to "passenger's front airbag neutralised". Switch ignition on	The "passenger airbag status" warning light should illuminate and remain illuminated after the 3 second illumination of the fault warning light.	