Clio

8 Electrical equipment

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Electrical equipment

Contents

FAULT FINDING - INTRODUCTION

This document contains the general fault finding procedures applicable to the "Xenon light" computers of all **CLIO II** vehicles, all engine types.

The following are thus required for carrying out fault finding on this system:

- the Generic Fault Finding Technical Note,
- The Workshop Repair Manual for the vehicle concerned,
- the electrical circuit diagram of the function for the vehicle concerned,
- the tools listed under Special tooling required.

GENERAL APPROACH TO FAULT FINDING

– Use of one of the diagnostic tools to identify the system installed in the vehicle (reader for the "Xenon light" family of computers).

– Locate the Fault finding documents corresponding to the system identified.

– Take note of information contained in the introductory sections.

– Read the faults stored in the computer memory and use the Fault interpretation section of the documents.
Reminder: Each fault is interpreted for a particular type of storage (fault present, fault stored in memory, fault present or stored). The checks defined for handling each fault are therefore only to be performed if the fault shown by the diagnostic tool is interpreted in the document for its type of storage. The storage type should be considered when using the diagnostic tool after the ignition has been switched off and switched back on.
If a fault is interpreted when it is declared stored, the conditions for application of the fault finding procedure appear in the NOTES box. When these conditions are not satisfied, use the fault finding procedure to check the circuit of the faulty part since the fault is no longer present on the vehicle. Follow the same procedure when a fault is declared stored by the diagnostic tool but is only interpreted in the documentation for a present fault.

– Perform the conformity check (appearance of possible incorrect operations not yet stated by the system's self diagnosis procedure) and apply the associated fault finding strategy according to results.

– Confirm the repair (disappearance of the problem reported by the customer).

SPECIAL TOOLING REQUIRED FOR WORKING ON THE DISCHARGE BULB SYSTEM:

– Diagnostic tools: CLIP or NXR (only).
– Multimeter.
– Headlight beam adjuster.

FAULT FINDING - FAULT INTERPRETATION

DF001	COMPUTER DEF : Calibration of computer not carried out 1.DEF : Internal computer fault

NOTES	**Ignition on.**

DEF	Check the programming of the computer under the "reading the configuration" menu (engine type). **Verify that the conditions required for initialisation are fully met:** – Rear sensor within the correct height range (the vehicle should be in a horizontal plane under normal load conditions (luggage compartment empty)). The linkage of the sensor control should not be damaged. – Vehicle stopped. – Driver on board the vehicle. Clear the fault memory. – Enter command **AC010.** The computer performs the initialisation process: it stores the reference height and sets the actuators to the maximum rod extension position. Adjust the height of the lights following the method described in the help notes.
	If the fault reappears, replace the rear computer/sensor

1.DEF	Where the fault reappears as present following: – Clearing of the fault, – Switching the ignition off and on again. Replace the rear computer / sensor, following the removal and refitting methods defined in the repair manual, **Section 80.** Undertake configuration and calibration as defined in the "Help" section of these instructions.

AFTER REPAIR	Deal with any other possible faults. Delete any faults stored and adjust the height of the lights following the method described in the help notes. Switch off the ignition and carry out a road test followed by a test using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF015	COMPUTER SUPPLY VOLTAGE TOO LOW

NOTES	Conditions for applying the fault finding procedure to the fault stored: If the fault is declared present following: – Clearing of the fault memory and a delay of **30 seconds** with the engine running. – Ensure that the battery charge is correct and that the charge circuit is functioning correctly **(11 volts < operating voltage < 14.5 volts).** **– The computer shows a fault present if the supply voltage is below 9 V.**

Using a multimeter, measure the voltage at the xenon light computer terminal, **track 2 (+ after ignition feed)** and **track 1 (earth).** The voltage should be approximately the same as the battery voltage.
Check the condition of the connectors and that the electrical contacts are not oxidized.

If the voltage shown by the multimeter is in excess of **9 V**, replace the xenon light computer.

If the voltage shown by the multimeter is less than **9 V**, check the condition and continuity of the following lines:

Track 1 ⟶ **vehicle earth**
Track 2 ⟶ **fuse board**

Repair if necessary.

AFTER REPAIR	Deal with any other possible faults. Erase the stored faults. Switch off the ignition and carry out a road test followed by a test using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF009	REAR HEIGHT SENSOR CIRCUIT 1.DEF : Signal off limits 2.DEF : Signal inconsistent

NOTES	**Conditions for applying the fault finding strategy to the fault stored:** If the fault is declared present following: – Clearing the fault. – Switching the ignition off and on again.

1.DEF	The sensor is fitted with upper and lower stops, these faults can only occur following a violent impact to: – the rear axle, or – the sensor mounting. Ensure there is a mechanical connection between the sensor and the rear axle via the lever arm and the control lever. Repair if necessary. Verify that the control lever is in good condition. Replace if necessary. Check the condition of the rear sensor mounting. Replace if necessary. If the control lever is not deformed, and the mounting does not show signs of deformation, replace the rear sensor.

AFTER REPAIR	Deal with any other possible faults. Delete any faults stored and adjust the height of the lights following the method described in the help notes. Switch off the ignition and carry out a road test followed by a test using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF009	REAR HEIGHT SENSOR CIRCUIT 1.DEF : Signal off limits 2.DEF : Signal inconsistent

NOTES	**Conditions for applying the fault finding procedure to the fault stored:** If the fault is declared present following: – Clearing of the fault. – Switching the ignition off and on again. – Then running for more than **10 minutes**.

2.DEF	The sensor declares this fault present if the vehicle speed information is in excess of 4 km/h for more than **60 seconds** without any change in the sensor charge.
	Ensure there is a mechanical connection between the sensor and the rear axle via the lever arm and the control lever. Repair if necessary. Verify that the control lever is in good condition. Replace if necessary. Check the condition of the rear sensor mounting and its upper and lower stops. Replace if necessary. If the sensor shows no mechanical anomaly, change the rear computer / sensor.

AFTER REPAIR	Deal with any other possible faults. Delete any faults stored and adjust the height of the lights following the method described in the help notes. Switch off the ignition and carry out a road test followed by a test using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF019	DIPPED HEADLIGHTS INFORMATION CIRCUIT CO: open circuit

NOTES	Contact present.

CO	Check for the presence of a **+12 V** voltage (dipped headlights on) and an earth (dipped headlights off) on passenger compartment fuse F9. Repair if necessary.
	Ensure continuity between **track 6** of the xenon light computer and passenger compartment fuse F9. Repair if necessary.
	If the problem persists, replace the xenon light computer.

AFTER REPAIR	Deal with any other possible faults. Delete any faults stored and adjust the height of the lights following the method described in the help notes. Switch off the ignition and carry out a road test followed by a test using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF013	VEHICLE SPEED SIGNAL 1.DEF : Open circuit, short circuit at **+ 12 V** or fault with the ABS system. 2.DEF : Signal inconsistent

NOTES	Contact present.

1.DEF	Ensure insulation at the earth and the **+ 12 V** supply of the vehicle speed information line on **track 4**. Ensure continuity between **track 4** of the xenon light computer and the vehicle speed sensor box or the ABS system if fitted.
	If all the electrical consumers connected to the vehicle speed information system are faulty (e.g.: DAE, radio, instrument panel etc.), and the speed information line is working correctly, replace the vehicle speed sensor on the box or carry out a complete diagnostic sequence on the ABS system if fitted to the vehicle.
	If the problem persists, replace the xenon light computer.

2.DEF	This fault will be shown as present if there is an excessive frequency on the speed information line. Ensure continuity and the absence of interference resistance on the vehicle speed information line between **track 4** of the rear sensor / computer and the vehicle speed sensor box or the ABS system if fitted.
	If all the electrical consumers connected to the vehicle speed information system are faulty (e.g.: DAE, radio, instrument panel etc.), and the speed information line is working correctly, replace the vehicle speed sensor on the box or carry out a complete diagnostic sequence on the ABS system if fitted to the vehicle.
	If the problem persists, replace the xenon light computer.

AFTER REPAIR	Deal with any other possible faults. Delete any faults stored and adjust the height of the lights following the method described in the help notes. Switch off the ignition and carry out a road test followed by a test using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF005	CONTROL ELEMENT CIRCUIT CC.0 : Short circuit to earth CC.1 : Short circuit on **+ 12 V**

NOTES	Contact present.

CC.0	Disconnect the xenon light computer connector and the headlight adjustment motor connectors. Check the insulation to earth of the trip line of the headlights on **track 7** of the xenon light computer connector. If the insulation is not correct, rectify it.
	If the insulation is correct, reconnect the right headlight adjustment motor, then check the insulation as described above. If the insulation to earth is not correct, replace the adjustment motor.
	If the insulation is correct, reconnect the left headlight adjustment motor, then check the insulation as described above. If the insulation to earth is not correct, replace the adjustment motor.
	If the insulation is correct, replace the computer/rear height sensor.

AFTER REPAIR	Deal with any other possible faults. Delete any faults stored and adjust the height of the lights following the method described in the help notes. Switch off the ignition and carry out a road test followed by a test using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF005	CONTROL ELEMENT CIRCUIT CC.0 : Short circuit to earth CC.1 : Short circuit to **+ 12 V**

NOTES	Contact present.

CC.1	Disconnect the xenon light computer connector and the headlight adjustment motor connectors. Check the insulation of the **+ 12 V** of the trip line of the headlights on **track 7** of the xenon light computer connector. If the insulation is not correct, rectify it.
	If the insulation is correct, reconnect the right headlight adjustment motor, then recheck the insulation as described above. If the insulation to the **+ 12 V** is not correct, replace the adjustment motor.
	If the insulation is correct, reconnect the left headlight adjustment motor, then recheck the insulation as described above. If the insulation to the **+ 12 V** is not correct, replace the adjustment motor.
	If the insulation is correct, replace the computer/rear height sensor.

AFTER REPAIR	Deal with any other possible faults. Delete any faults stored and adjust the height of the lights following the method described in the help notes. Switch off the ignition and carry out a road test followed by a test using the diagnostic tool.

FAULT FINDING - CHECKING CONFORMITY

NOTES	Only carry out this conformity check after a **full check** with the diagnostic tool (the values shown in this conformity check are only given as a guide). **Conditions of implementation: contact present, dipped headlights on.**

Order	Function	Parameter or status Check or action	Display and notes	Fault finding
1	Height	PR 018: Rear height	X = rear height	The value should immediately change in line with the vehicle load. It will be equal to 10 after programming.
2		PR 005: Initial rear height	X= 10	The value is always equal to 10
3		PR 020: Position of the control elements	X = height of the headlights	The value should change in line with the vehicle load after a timed period of 10 seconds
4	Speed	PR 019: Vehicle speed	X = vehicle speed	The value should correspond to the vehicle speed.

FAULT FINDING - HELP

Help:

Having stored the reference position, it is necessary to adjust the height of the headlights using a regloscope in accordance with the values inscribed on the headlight.

The reference height is stored with the driver on board, while the adjustment is carried out with the vehicle unladen, with a full tank of the preferred fuel.

It is essential to adjust the regloscope correctly, otherwise strong glare may be caused.

FAULT FINDING - CUSTOMER COMPLAINTS

NOTES	Only consult this customer complaint after a complete check using the diagnostic tool.

CONTROL OF THE HEIGHT OF ONE OR BOTH HEADLIGHTS IS NOT OPERATIONAL ——— CHART 1

NO COMMUNICATION WITH THE COMPUTER ——— CHART 2

FAULT FINDING - FAULT FINDING CHARTS

CHART 1	CONTROL OF THE HEIGHT OF ONE OR BOTH HEADLIGHTS IS NOT OPERATIONAL

NOTES	– Ignition on. – Deal with any faults which may be present in the system before using this chart.

Disconnect the headlight adjustment motors. Check the presence of a **+ 12 V** supply on **track C1** of both motors. Repair if necessary.
Check the presence of an earth on **track A1** of both motors. Repair if necessary.
While measuring the voltage present between the trip line of the height adjustment motors (B1) and the earth, initiate control **AC012 "Check upper and lower position control element".** A voltage of around **10.5 V** should be present for **4 seconds** (lowering action). Then a voltage of around **1 V** should be present for **3 seconds** (raising action). If the voltage is correct, replace the headlight height adjustment motors. If there is no voltage present, check the continuity on the computer-controlled line between the two motors and the computer/rear height sensor; repair if necessary. If the trip line is functioning correctly except that no voltage is present on **tracks C1**, replace the rear height sensor.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 2	NO COMMUNICATION WITH THE COMPUTER

NOTES	None.

Try the diagnostic tool on another vehicle.
Check: – the connection between the diagnostic tool and the diagnostic socket (lead in good condition), – The motor and passenger compartment fuses.
Check for the presence of **+ 12 volts before ignition** on **track 16**, **+ 12 volts after ignition** on **track 1** and an **earth** on **tracks 4 and 5** of the diagnostic socket. Repair if necessary.
Check the insulation, continuity and absence of interference resistance of the connections between: Xenon light computer **track 2** ⟶ **+ after ignition** Xenon light computer **track 1** ⟶ **earth** Xenon light computer **track 5** ⟶ **track 7** of the diagnostic socket (line K) Repair if necessary.

AFTER REPAIR	**Check that the system is functioning correctly.**

IMMOBILISER
Fault finding - Introduction

This document describes the generic fault finding procedure applicable to all computers controlling the CLIO II immobiliser function, for all engines except F9Q.

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

- The electrical circuit diagram of the function for the vehicle concerned,
- The Workshop Repair Manual for the vehicle concerned,
- The tools listed under Special tooling required.

GENERAL APPROACH TO FAULT FINDING

- Use one of the diagnostic tools to identify the system fitted to the vehicle (to read the computer group, the program number, the Vdiag, etc.).

- Locate the Fault finding documents corresponding to the system identified.

- Take note of information contained in the introductory sections.

- Read the faults stored in the computer memory and use the Fault interpretation section of the documents.
  Reminder: Each fault is interpreted for a particular type of storage (fault present, fault stored in memory, fault present or stored). The checks defined for handling each fault are therefore only to be performed if the fault shown by the fault finding tool is interpreted in the document for its type of storage. The storage type should be considered when using the fault finding tool after the ignition has been switched off and switched back on.
  If a fault is interpreted when it is declared as stored, the conditions for application of the fault finding procedure appear in the NOTES box. When these conditions are not satisfied, use the fault finding procedure to check the circuit of the faulty part since the fault is no longer present on the vehicle. Follow the same procedure when a fault is declared stored by the diagnostic tool but is only interpreted in the documentation for a present fault.

- Perform the conformity check (appearance of possible incorrect operations not yet stated by the system's self diagnosis procedure) and apply the associated fault finding strategy according to results.

- Confirm the repair (disappearance of the problem reported by the customer).

- Use the fault finding strategy for each Customer complaint if the problem persists.

SPECIAL TOOLING REQUIRED:

- Diagnostic tool (except XR25).
- Bornier.
- Multimeter.

FUNCTIONAL SPECIFICATION

The immobiliser system is based on recognition of the key on each starting request by inductive connection between the transponder integrated into the key and the aerial of the transponder ring.

Authentication of the key is performed by detection of the correct code by the transponder ring while the vehicle is in protected status (immobiliser active).
After each switch-off of the ignition, the immobiliser is automatically activated after a delay of 10 seconds.

NOTE: for Belgium, the delay is one second.

OPERATION

– In this mode, transponder authentication is initiated by detection of the key by the transponder ring (+ after ignition).

– When the user puts his key into the ignition switch and switches on, the UCH asks for the key number via the transponder ring.

– In response to this request, the key gives its unique number to the UCH.

– If this response is recognised by the UCH (meaning that the key has been programmed into the UCH), the UCH sends the key a message (challenge).

– The key decodes the message. If the message is recognised, the key sends its response.
The UCH compares the response with the value stored in its memory.
If this response is recognised by the UCH, authentication is successful.
All the exchanges between the key and the UCH are coded.

– Once key authentication is successful, the UCH authorises operation of the engine management computer (exchange of an immobiliser code with the injection computer).

Recognition of keys in normal operation

	IMMOBILISER WARNING LIGHT
vehicle protected (without After Ignition)	warning light flashes at 1 Hertz
key recognised, injection protection lifted	warning light comes on permanently for 3 seconds then goes out
key recognised, injection protected or blank	warning light stays on after 3 seconds
key not recognised	warning light flashes at 4 Hertz

PROGRAMMING THE TRANSPONDER AND RADIO-FREQUENCY KEY

All the programming procedures carried out by After-Sales must be performed after entering the vehicle After-Sales code on the diagnostic tool.
– There is no number marked on the key.
– At the time of delivery, the vehicle does not have a label showing the code.

When working on this system, this repair code number may be requested from the local assistance network (see **Technical Note 3315E**).

When requesting the code number, it is essential to provide the vehicle's VIN as well as its production number. This allows the operator to identify the vehicle in order to provide the correct code.

– Spare keys are supplied **uncoded, without a number or metal insert.**

– The system can have up to four keys.
The remote control and the battery have no effect on the immobiliser, **only the transponder** enables the immobiliser function.

– **In the event of a key being stolen or lost, one or more of the vehicle's keys can be deallocated. The customer may also request deallocation. Keys can be reallocated to the same vehicle if necessary.**

WARNING
– It is impossible to replace two elements (UCH and keys) at the same time as it will not be possible to code these elements if either of them does not possess the original code of the vehicle in memory.

– There are three types of component on the vehicle

*** parts without codes**

– The transponder ring
Only this component can be transferred from one vehicle to another without any precautions.

*** coded parts**

– The injection computer
The injection computer receives codes from the UCH.
The programming is performed on insertion of the key without any intervention by the operator or the RENAULT agent. Programming a code into this component makes it unusable on another vehicle.

*** parts coded by an After-Sales procedure**

– The UCH and the keys
Fitting or introducing these new or blank parts on a vehicle is not sufficient to program a code. Until the After-Sales programming procedure has been performed, these parts will remain blank.
On the other hand, if the programming procedure is carried out, the parts are coded and therefore unusable on another vehicle.

PROGRAMMING PROCEDURE

Programming the UCH

The UCH programming procedure is performed using the diagnostic tool

– Enter into dialogue with the **Engine immobiliser** system.

– In the **"Command", "Specific command" menu,** select the **"SC027: UCH programming" command.**

– The tool displays **"Remove the key from the ignition switch".**

– The tool displays **"Please enter the After-Sales code".** With the ignition off, enter the After-Sales secret code (12 hexadecimal characters) and confirm it.

– If the code format is correct, the tool displays **"Insert a key which has already been programmed on the vehicle"**, and the programming procedure starts.

– The tool displays **"UCH programming completed, please start key programming procedure"**. The UCH is coded.
You must now enter key programming mode to allocate the other keys (maximum of four).
Several seconds may elapse before this message appears.

WARNING
The maximum time delay between operations is 5 minutes, otherwise the procedure is cancelled.
Once the UCH has been coded, it will be impossible to erase or program a new UCH code.

SPECIAL CASE

If the screen displays:

– **"The After-Sales code entered does not correspond to the key inserted. Verify that you have entered the code correctly and you have inserted a key belonging to the vehicle".**
The code read is incorrect or the UCH has already been coded on another vehicle, see ET110: Blank UCH. Check the code then try entering the data again.

– **"The UCH is not blank, please start the key programming procedure".**
The UCH is already coded on this vehicle.

– **"Check the After-Sales code"**: the format of the code entered is incorrect. Check, then try entering the data again.

– **"UCH programming failure, key not usable on this vehicle".**
The key code entered does not correspond to the present vehicle.

– **"The key inserted is blank. Please insert another key which has already been programmed on the vehicle".**
The key is blank, insert a key already coded on this vehicle.

– **"The injection computer code does not correspond to the key code. Ensure that the multiplex network is not faulty, and that the injection computer is working correctly and is not blank".**
The injection code is absent or does not correspond to the code entered.
  – Check the connection between the injection computer and the UCH.
  – Check that the computer is the correct one for the vehicle.

KEY PROGRAMMING PROCEDURE

IMPORTANT: in the event that not all the keys are available, it will be necessary to carry out a reprogramming procedure later with all the keys.

– Enter into dialogue with the **Engine immobiliser** system.

– In the **"Command" "Specific command" menu,** select the **"SC028: Card/key programming" command.**

– The tool displays **"Remove the key from the ignition switch".**

– The tool displays **"Please enter the After-Sales code".** With the ignition off, enter the After-Sales secret code (12 hexadecimal characters) and confirm it.

– If the code format is correct, the tool displays **"Insert a key which has already been programmed on the vehicle"** and the programming procedure starts.

– The tool displays **"Warning: the keys not inserted will no longer be active, restart the procedure to reprogram them"** : the programming procedure is in progress.

– The tool displays **"Insert the key in the ignition switch and switch on, then confirm".**
Switch on the ignition with a new or old key belonging to the vehicle, the screen displays **"1 key programmed"** : confirm, then **"Remove the key from the ignition switch".**

– The tool asks: **"Would you like to program another key?"**

– To allocate additional keys, switch on the ignition for a few seconds with the other vehicle keys to be programmed (four maximum), then confirm. The screen displays **"2, 3 or 4 keys programmed"** then **"remove the key from the ignition switch".**

WARNING
These must be old keys belonging to the vehicle or new **non-coded** keys.

– The tool displays **"Writing data to memory"** : the UCH is coded and the keys are assigned. Several seconds will elapse before the appearance of this message.

– **WARNING**: the maximum time delay between each operation is 5 minutes, otherwise the procedure will be cancelled and the tool will display the message **"Procedure interrupted: warning, the keys assigned to the vehicle are the ones assigned before starting the procedure. The keys inserted before interruption of the procedure are no longer blank and can only be assigned to this vehicle".** This message also appears if there is loss of dialogue with the UCH or loss of battery power.

NOTE: when only the UCH is replaced, there is no operation to perform on the injection computer, as it retains the same immobiliser code.

SPECIAL CASE

If the screen displays:

– **"The UCH is blank. Please start the UCH programming procedure"**: the UCH is blank. It is impossible to allocate keys to an uncoded UCH.

– **"Check the After-Sales code"**: the format of the code entered is incorrect. Check, then try entering the data again.

– If the key does not correspond to the vehicle UCH, the tool will display **"Procedure cancelled: warning, the keys allocated to the vehicle are the ones allocated before the procedure was started. The keys submitted before interruption of the procedure are no longer blank and can only be allocated to this vehicle".**

CODING THE INJECTION COMPUTER

The injection computer is delivered uncoded. It will therefore be necessary to program it with the immobiliser system code when it is fitted, in order to authorise starting of the vehicle.

Simply switch on the ignition for a few seconds without starting the engine. Switch the ignition off; the immobiliser will be activated after a few seconds (red immobiliser indicator light flashes).

WARNING

With this engine immobiliser, the vehicle keeps its immobiliser code for life.

In addition, this system does not have a security code.

Consequently, it is forbidden to carry out tests with injection computers borrowed from stores and subsequently returned.

The programmed code cannot be erased.

Pin-out and connections

There are 3 connectors, as follows:

Black 40-track P201 connector:

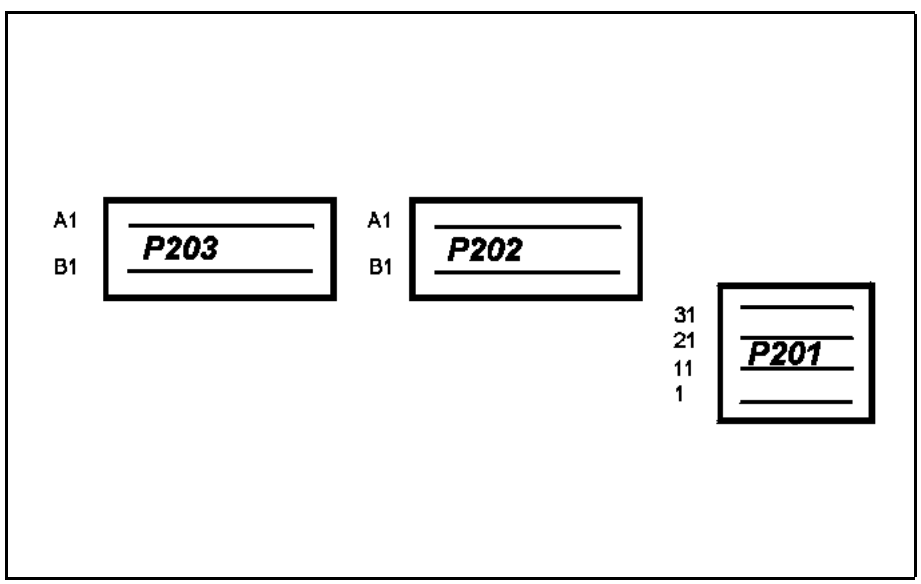
PIN	Signal
1	Side light relay output
2	Dipped beam input
3	Passenger side one-touch window lowering input
4	Passenger side one-touch window raising input
5	VERLOG LED output
6	Windscreen wiper sequencing input
7	+battery
8	Transporter line input
9	CAN L
10	CAN H
11	Dipped beam relay output
12	Main beam input
13	Rain sensor serial line
14	Starter relay output
15	Electric door locking LED output
16	Rear wiper park switch input
17	Windscreen wiper park switch input
18	K diagnostic line
19	CAN L
20	CAN H
21	Windscreen wiper high-speed input
22	Windscreen wiper low-speed input
23	Relay plate
24	Rear screen washer input
25	Windscreen washer input
26	Side light input
27	Left side indicator input
28	Right side indicator input
29	Hazard warning light input
30	Rear door switch input
31	Hazard warning light output
32	Reverse gear switch input
33	+ after ignition
34	Rear screen wiper input
35	Heated rear screen input
36	Electric door locking input
37	Driver one-touch window lowering input
38	Driver one-touch window raising output
39	Luggage compartment door switch input
40	Front door switch input

Clear 15-track P202 connector:

PIN	Signal
A1	Windscreen wiper high-speed output
A2	+ after ignition for rear screen wiper
A3	+ battery for lighting management
A4	+ after ignition for windscreen wiper
A5	Headlight 1 washer pump relay output
A6	+ battery for timed supply
A7	Headlight 2 washer pump relay output
A8	Courtesy light output
A9	Footwell light output
B1	Passenger side one-touch window raising output
B2	Driver side one-touch window lowering output
B3	+ battery for driver side one-touch window
B4	Earth
B5	Driver side one-touch window raising output
B6	Earth

Black 15-track P203 connector:

PIN	Signal
A1	+ battery for direction indicators
A2	Left hand direction indicator output
A3	Right hand direction indicator output
A4	Electric door locking output
A5	Main beam relay output
A6	Electric door unlocking output
A7	+ battery for electric door locking
A8	Rear screen wiper output
A9	Front wiper low speed output
B1	+ after ignition for heated rear window
B2	Heated rear screen output
B3	Electric window input
B4	+ after ignition electric window output
B5	Passenger side one-touch window lowering output
B6	+ battery for passenger side one-touch window



DF039 PRESENT OR STORED	UCH INTERNAL ELECTRICAL FAULT

NOTES	Fault declared present after ignition has been switched off. **Special notes**: if there is a fault stored check that whether there are any other faults present and clear them.

Replace the UCH.

AFTER REPAIR	Follow the instructions to confirm repair. Deal with any other possible faults. Clear the fault memory.

DF051 PRESENT OR STORED	STARTER RELAY CC.1 : short circuit to +12V

NOTES	Conditions for applying the diagnostic to stored faults. The fault is declared present after the starter has been actuated.

Check fuse **F37 (10A)** for the UCH supply.
Change it if necessary.

Check the connection and condition of the P201 40-track connector of the UCH.
Repair if necessary.

Check the connection and condition of the connector of the starter relay located beneath the engine compartment.
Repair if necessary.

Check the insulation against +12V of the connection between:

P201 40 track connector of the UCH **track 14** ⟶ **track 2** of the starter relay

Repair if necessary.

Ensure the continuity and insulation of the connections between:

ignition switch **track 6** ⟶ **track 3** of the starter relay
starter relay **track 5** ⟶ **starter**

Repair if necessary.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

DF067 PRESENT OR STORED	RING CONNECTION ---> DECODER 1.DEF : key code invalid 2.DEF : no communication from the ring or the transponder key

NOTES	Conditions for applying the fault finding procedure to the fault stored. The fault is declared present after the ignition has been switched on (+ after ignition feed). **Special notes in the event of stacked faults:** In the case of stacked fault DF067 ring connection ---> decoder and DF069 decoder connection ---> ring, give priority to fault DF069.

1.DEF	Check parameter PR065 number of transponder keys learned.
	Check status ET104 'key code valid', if 'key code valid' status is NO, reconfigure the keys using the diagnostic tool.
	Replace the key if necessary.

2.DEF	Check parameter PR065 number of transponder keys learned.
	Check status ET104 'key code valid', if 'key code valid' status is NO, reconfigure the keys using the diagnostic tool.
	Replace the key if necessary.
	Check the connection and condition of the transponder ring connector. Repair if necessary.
	Check the connection and condition of the P201 40-track connector of the UCH. Repair if necessary.
	Check the insulation, continuity and interference resistance of the connections between: P201 40 track connector of the UCH **track 8** → **track 4** transponder ring **earth** → **track 2** transponder ring fuse box **F28 (2A)** → **track 3** transponder ring Repair if necessary.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

DF069 PRESENT OR STORED	DECODER CONNECTION ---> RING CC.0 : short circuit to earth CC.1 : short circuit to +12V

NOTES	Conditions for applying the diagnostic to stored faults. The fault is declared present after the ignition has been switched on (+ after ignition feed). **Special notes in the event of stacked faults:** In the case of stacked fault DF067 ring connection ---> decoder and DF069 decoder connection ---> ring, give priority to fault DF069.

CC.0

Check the connection and condition of the transponder ring connector.
Repair if necessary.

Check the connection and condition of the P201 40-track connector of the UCH.
Repair if necessary.

Disconnect the transponder ring connector and ensure that the **+ 12v** supply is correct on **track 3** of the transponder ring.

Repair if necessary.

Check the continuity and insulation of the connection between:

fuse box **F28 (2A)** ⟶ **track 3** ring transponder

Repair if necessary.

CC.1

Check the UCH connections.
Repair if necessary.

Check the continuity of the connections between:

earth ⟶ **track 2** transponder ring

P201 40 track connector of the UCH **track 8** ⟶ **track 4** transponder ring

Repair if necessary.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

DF105 PRESENT OR STORED	IMMOBILISER WARNING LIGHT CC.0 : short circuit to earth CC.1 : short circuit to +12V

NOTES	Conditions for applying the fault finding procedure to the fault stored. The fault is declared present after the ignition has been switched on (+ after ignition feed).

Check the connection and condition of the instrument panel connector.
Repair if necessary.

Check the connection and condition of the P201 40-track connector of the UCH.
Repair if necessary.

Check the continuity and insulation of the connection between:

P201 40 track connector of the UCH **track 15** ⟶ **track 5** instrument panel 30 track connector
Repair if necessary.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

NOTES	Only perform this conformity check after a complete check with the diagnostic tool. The values indicated in this conformity check are given as examples. Test conditions: **engine stopped, ignition on.**

Order	Function	Parameter or status Check or action		Display and notes	Fault finding
1	power supply	**PR002:**	battery voltage	**12V < X < 12,5V**	**If there is a problem:** carry out a fault finding test on the charge circuit.
		ET154:	+12V present after ignition feed	**YES**	**In the event of a problem:**consult the fault finding procedure for status **ET154.**
2	engine immobiliser	**PR065:**	transponder key number learned	**2 keys** on leaving the factory, programming of up to **4 keys** by After Sales	**None.**
		ET103:	key code received	status **YES** after ignition switched on	**In the event of a problem:** consult the fault finding procedure for status **ET103.**
		ET104:	key code valid	status **YES** after ignition switched on	**In the event of a problem:** consult the fault finding procedure for status **ET104.**
		ET153:	immobiliser active	**NO**	**In the event of a problem:**consult the fault finding procedure for status **ET153.**
		ET167:	engine immobiliser indicator light	**OFF**	**In the event of a problem:** perform the **fault finding procedure** on the immobiliser indicator light fault **DF105.**

IMMOBILISER
Fault finding - Conformity check

NOTES	Only perform this conformity check after a complete check with the diagnostic tool. The values indicated in this conformity check are given as examples. Test conditions**: engine stopped, ignition on.**

Order	Function	Parameter or status Check or action	Display and notes	Fault finding
3	programming	**ET178:** UCH blank	**NO**	If the UCH blank status = **YES see programming procedure**.

STATUS TEST

It is possible when checking the specific status codes to determine a fault on the vehicle from the various types of information gained.

ET154: +12V present after ignition
ET103: key code received
ET104: key code valid
ET153: immobiliser active

If ET154 status active ET103 status YES ET104 status YES ET153 status NO	– Check the injection with the tool and check whether the injection computer is locked. – Check for problems on the multiplex network.
If ET154 status active ET103 status YES ET104 status NO ET153 status NO	– The coded key does not belong to the vehicle. – If the key does belong to the vehicle, carry out a reallocation of the keys. – If the key still does not work, replace the key.
If ET154 status active ET103 status NO ET104 status NO ET153 status NO	– The key is out of service or does not correspond to the make of vehicle.

ET154	PRESENCE OF +12V AFTER IGNITION

NOTES	None.

ET154 INACTIVE with ignition on

Check fuse **F37 (10A)** in the passenger compartment unit.
With the ignition on, use a multimeter to verify the presence of + 12 V at fuse holder **F37.**
Repair if necessary.

With the ignition on, use a multimeter to verify the presence of + 12 V on **track 33** of the P201 40-track connector of the UCH.
If voltage is present, replace the UCH.

If voltage is absent, ensure continuity and insulation against earth between **track 33 of the P201 40-track connector of the UCH and the 10A passenger compartment fuse.**
Repair if necessary.

ET154 ACTIVE with ignition off

With the ignition off, use a multimeter to verify the absence of + 12 V at passenger compartment fuse holder **F37.**
Repair if necessary.

If voltage is absent, replace the UCH.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

ET103	KEY CODE RECEIVED

NOTES	Ensure there are no present or stored faults. The status will be "YES" when the ignition is switched on (+ After ignition) with a valid key. If the status remains "NO", try with another key belonging to the vehicle before taking any other action.

ET103 NO: ignition on and key belonging to the vehicle

Verify that status ET154 "presence of +12 V after ignition" is active with ignition on.
Remove any metallic objects on the key-ring and try again.
Switch on the ignition with the key of another vehicle, changing the key inserts. If status "KEY CODE RECEIVED" changes to "YES", replace the vehicle key. If status "KEY CODE RECEIVED" stays "NO", replace the transponder ring.
If the problem persists, replace the UCH.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

ET104	KEY CODE VALID

NOTES	The status will be "YES" when the ignition is switched on (+ After ignition) with a valid key. If the status remains "NO", try with another key belonging to the vehicle before taking any other action.

ET104: NO despite presence of ignition and a key belonging to the vehicle

Verify that status ET154 "presence of +12 V after ignition" is active with ignition on.
Reallocate the keys with the After-Sales code. If the problem persists, replace the set of keys belonging to the vehicle.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

ET153	IMMOBILISER ACTIVE

NOTES	The immobiliser active status must change to **inactive** when + after ignition is switched on. The immobiliser status must be **active** when the key is not in the ignition switch.

ET153 ACTIVE despite the presence of a key in the ignition switch and + after ignition

Verify that there are no faults before dealing with this status.

Verify that status **ET154 "+ 12 V after ignition"** is definitely **ACTIVE** with ignition on.
Deal with status **ET154** if **"INACTIVE"** with ignition on.

Verify status **ET103 "key code received"** and status **ET104 "key code valid"** with ignition on.
If statuses **ET103** and **ET104** are **"YES",** carry out a fault finding procedure on the injection computer.

If status **ET103** is **"NO"** deal with this status first**.**
If status **ET103** is **"YES"** and status **ET104** is **"NO",** deal with **ET104** first.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

NOTES	**This customer complaint should only be investigated after a complete check has been run using the diagnostic tool.**

NO COMMUNICATION WITH THE UCH ——— **CHART 1**

THE STARTER MOTOR DOES NOT OPERATE ——— **CHART 2**

CHART 1	NO COMMUNICATION WITH THE UCH

NOTES	None.

Try the diagnostic tool on another vehicle.

Check:
– the connection between the diagnostic tool and the diagnostic socket (lead in good condition),
– the engine and passenger compartment fuses.

Check for the presence of **+ 12 volts before ignition** on **track 16**, **+ 12 volts after ignition** on **track 1** and **earth** on **tracks 4 and 5** of the diagnostic socket.
Repair if necessary.

Connect the bornier and check the **insulation, continuity and absence of interference resistance of the connections between:**

UCH P201 40-track connector **track 7** → fuse box
UCH P201 40-track connector **track 33** → **+ after ignition**
UCH P202 15-track connector **track B6** → **earth**
UCH P201 40-track connector **track 18** → **track 7** of the diagnostic socket (line K)

Repair if necessary.

AFTER REPAIR	Check using the diagnostic tool.

CHART 2	THE STARTER MOTOR DOES NOT OPERATE

NOTES	**Only consult this customer complaint after a complete check using the diagnostic tool.** **Check the bulbs.**

Check the **F37 (10A)** UCH supply fuse.
Change it if necessary.

Check the connection and condition of the UCH P201 40-track connector.
Repair if necessary.

Check the connection and condition of the starter motor relay connector in the engine compartment.
Repair if necessary.

Check the insulation to + 12V of the connection between:

UCH P201 40-track connector **track 14** ⟶ **track 2** starter motor relay

Repair if necessary.

Ensure the continuity and insulation of the connections between:

immobiliser switch **track 6** ⟶ **track 3** starter motor relay
starter motor relay **track 5** ⟶ **starter motor**

Repair if necessary.

AFTER REPAIR	Check using the diagnostic tool.

FAULT FINDING - INTRODUCTION

Integral self-diagnostic feature:

The Clio II instrument panel is fitted with an on-board self-diagnostic sequence. This allows the visual testing of the various indicator and warning lights controlled by the internal systems of the instrument panel.

Activation of all sectors of the automatic transmission display.

Activation of all sectors of the odometer and on-board computer (ADAC).

Activation of operation of all dial indicators.

Activation of all indicator lights controlled by the microprocessor.

Activation of the internal audible warning on the instrument panel.

– For models **without on-board computer**, transfer to diagnostic mode is obtained by pressing the reset button of the odometer for 5 seconds after ignition.

– For models **with on-board computer (ADAC),** transfer to diagnostic mode is obtained by pressing the scroll button of the ADAC unit after ignition.

IMPORTANT:

It is essential that a self-test of the instrument panel is carried out to check the correct functioning of the indicator and warning lights.

The computer-controlled warning lights covered by the self-test are: door status / injection coolant temperature criticality 2 / air bag / air bag off / de-icing / fuel level low / injection criticality 1 / preheating / pollution control / automatic transmission fault / STOP / SERVICE / cruise control / tyre pressure monitoring system / ABS system / trajectory adjustment / LPG.

The dual-coloured warning lights (amber/green) light up at the same time during the self-test; this is manifested by an abnormal warning light colour (speed limiter control warning light, LPG warning light).

If any warning light fails, the instrument panel must be replaced.

WARNING:

The warning lights controlled by means of a wire connection (classic control by a wire linking the warning light to the computer) are not tested by the instrument panel.

In order to test these, use a diagnostic tool (CLIP or NXR) and use the "test fault warning light" command mode of the computer controlling the warning light to be checked.

FAULT FINDING - INTRODUCTION

FAULT FINDING

Special notes:

The Clio II instrument panel controls part of its display by means of information collected via the multiplex network. This information is classified by a transmitter computer in each column and by a receiver warning light in each line of the **table in Appendix 1.**

The indicator and warning lights which are not shown in this table are dealt with in the **fault finding charts 9 to 33** (wiring fault finding information).

A fault with the multiplex network may be manifested in several symptoms:

1 The loss of a message from a computer due to a breakdown of the multiplex network between the node point (intersection of the network between all the computers) and the transmitter computer, or an internal failure of the transmitter computer.
This will manifested by the loss of several indications and the illumination of several warning lights **(see table in Appendix 2).**

2 The loss of a large part of the signals of the instrument panel conducted via the multiplex network, due to a breakdown of the multiplex network between the node point and the instrument panel (receiver) or an internal failure of the instrument panel. **(Fault finding chart 8)**

3 The loss of all of the data conducted via the multiplex network due to a short circuit of the network, manifested by a substantial instance of defect mode operation by all the computers connected to the networks.
For to carrying out an electrical conformity check on the multiplex network, refer to the relevant Section.

Configuring the instrument panel

– When the instrument panel is replaced it is configured automatically once the ignition is switched on. The UCH sends the configuration stored in the memory of the former instrument panel to the new instrument panel.

When the instrument panel is not configured, an "instrument panel not configured" fault (DF 130) will appear on the UCH.

1) In the event of a replacement of the instrument panel and the UCH at the same time, it will be necessary to take appropriate action using a diagnostic tool.

METHOD: **Ignition off**

– Connect the diagnostic tool and re-establish communication with the UCH **without switching the ignition on.**

– Configure the UCH (CF719).

– Switch the ignition on then off to implement the new parameters.

FAULT FINDING - INTRODUCTION

2) In the event of an alteration to the configuration of the instrument panel, it will be necessary to take appropriate action using a diagnostic tool.

METHOD: Ignition off

– Disconnect the battery for at least 1 minute then reconnect it.

– Connect the diagnostic tool and re-establish communication with the UCH **without switching the ignition on.**

– Configure the UCH (CF719).

– Switch the ignition on then off to implement the new parameters.

The configurable parameters on the instrument panel are:

– Petrol or diesel engine

– Presence or absence of LPG

– Presence or absence of trajectory correction system

– Presence or absence of tyre pressure monitoring system

– Presence or absence of clock

– Speed information generator (ABS system or sensor on the gearbox)

Configuration is carried out by a network diagnostic tool (Clip or NXR). The tool is connected to the UCH on line K and transmits the instrument panel configuration frame by means of the multiplex network.

In order to configure the instrument panel, access the configuration command mode with the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

Warning lights	
Door status	warning light no. 1
Coolant temperature + injection criticality 2	warning light no. 2
Air bag	warning light no. 3
Air bag deactivated	warning light no. 4
Heated rear screen	warning light no. 5
Fuel levellow	warning light no. 6
Preheating + injection criticality 1	warning light no. 7
Pollution control	warning light no. 8
Automatic transmission fault	warning light no. 9
STOP	warning light no. 10
SERVICE	warning light no. 11
Cruise control	warning light no. 12
Tyre pressure monitoring system	warning light no. 13
Trajectory correction system	warning light no. 14
Liquified petroleum gas (LPG)	warning light no. 15

Indicators	
Vehicle speed	indicator No. 1
Rev counter	indicator No. 2
Coolant temperature	indicator No. 3
On-board computer (ADAC) test mode	indicator No. 4
Automatic transmission ratio engaged	indicator No. 5
Gauge information (LPG)	indicator No. 6

Multiplex computer	
Liquified petroleum gas (LPG)	LPG
DPO automatic transmission	DPO
Sequential gearbox	Automatic gearbox
Air bag	Air bag
UCH	UCH
"Carminat" navigation aid system	Carminat
Trajectory correction system	ESP
Instrument panel	Instrument panel

FAULT FINDING - FAULT INTERPRETATION

Multiplex network fault finding

Producer / electrical consumer of the information used by the instrument panel:

Appendix 1	**Injection engine**												
Multiplex computer >	F4R	D4F	K9K	F9Q	K4(M/J)	LPG	DP0	Auto-matic gear-box	Air bag	UCH	Carminat	ESP	Instru-ment panel
warning light no. 1								2		1			2
warning light no. 2	1	1	1	1	1								2
warning light no. 3									1				2
warning light no. 4									1				2
warning light no. 5										1			2
warning light no. 6						1							2
warning light no. 7	1	1	1	1	1								2
warning light no. 8	1	1	1	1	1								2
warning light no. 9							1	1		2			2
warning light no. 10													2
warning light no. 11													2
warning light no. 12	1	1	1	1	1								2
warning light no. 13											2		2
warning light no. 14												1	2
warning light no. 15		2				1							2
indicator No. 1	2	2	2	2	2				2	2	2		1
indicator No. 2	1	1	1	1	1	2	2	2				2	2
indicator No. 3	1	1	1	1	1	2	2	2					2
indicator No. 4	1	1	1	1	1								2
indicator No. 5							1	1		2			2
indicator No. 6						1							2

(1) Transmitter computer **(2) Receiver computer**

WARNING:

In the event of a failure of an **indicator or warning light** on the instrument panel, consideration should be given to whether the data has been correctly transmitted on the multiplex network as it is transmitted along with several items of data in one message (frame).

Thus, either the instrument panel indicator is faulty, or the message is incorrect.

– The message may be incorrect because of faulty interpretation of the transmitter computer (e.g.: faulty coolant temperature sensor) or an internal fault in the transmitter computer.

– Using Table No. 1, isolate the computer transmitting the data and in the first instance carry out a **full fault finding sequence** on this before taking any action on the instrument panel.

FAULT FINDING - FAULT INTERPRETATION

Warning lights	
Door status	warning light no. 1
Coolant temperature + injection criticality 2	warning light no. 2
Air bag	warning light no. 3
Air bag deactivated	warning light no. 4
Heated rear screen	warning light no. 5
Fuel low level	warning light no. 6
Preheating + injection criticality 1	warning light no. 7
Pollution control	warning light no. 8
Automatic transmission fault	warning light no. 9
STOP	warning light no. 10
SERVICE	warning light no. 11
Cruise control	warning light no. 12
Tyre pressure monitoring system	warning light no. 13
Trajectory correction system	warning light no. 14
Liquified petroleum gas (LPG)	warning light no. 15

Indicators	
Vehicle speed	indicator No. 1
Rev counter	indicator No. 2
Coolant temperature	indicator No. 3
On-board computer (ADAC) test mode	indicator No. 4
Automatic transmission ratio engaged	indicator No. 5
Gauge information (LPG)	indicator No. 6

Multiplex computer	
Liquified petroleum gas (LPG)	LPG
DPO automatic transmission	DPO
Sequential gearbox	Automatic gearbox
Air bag	Air bag
UCH	UCH
"Carminat" navigation aid system	Carminat
Trajectory correction system	ESP
Instrument panel	Instrument panel

FAULT FINDING - FAULT INTERPRETATION

Defect mode and illumination of warning lights in the event of loss of communication with a transmitter computer:

Appendix 2	Injection engine										
Transmitter computer >	F4R	D4F	K9K	F9Q	K4M	LPG	DP0	Auto-matic gearbox	Air bag	UCH	ESP
FAULT FINDING CHART >	**1**	**1**	**1**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Warning lights											
warning light no. 1										2	
warning light no. 2	2	2	2	2	2						
warning light no. 3									1		
warning light no. 4									2		
warning light no. 5										2	
warning light no. 6											
warning light no. 7	3	3	3	3	3						
warning light no. 9	2	2	2	2	2						
warning light no. 10							1	1			
warning light no. 11	2	2	2	2	2						
warning light no. 12									1		
warning light no. 13	2	2	2	2	2						
warning light no. 14											
warning light no. 15	1	1	1	1	1						1
warning light no. 16		2				1					
Indicators											
indicator No. 2	0	0	0	0	0						
indicator No. 3	0	0	0	0	0						
indicator No. 4	t-d	t-d	t-d	t-d	t-d						
indicator No. 5							2	2			

(0) indicator not functioning (1) warning light on (2) warning light off (3) lit for 3 seconds + after ignition feed

WARNING:

The **loss of a message** is often manifested in the failure of **several indicators** and switching to defect mode by certain computers which use the missing data to function.

Check the multiplex network using a diagnostic tool (NXR or CLIP) or isolate the transmitter computer using Appendix 2.
To do this, draw up a list of the faulty indicators on the instrument panel and refer to the relevant fault finding chart shown in the column.

– A loss of the multiplex connection between the network node and the instrument panel will be interpreted by all the indicators and warning lights as operation in defect mode (combination of all the columns of Table 2), see **Fault finding chart 8.**

FAULT FINDING - CUSTOMER COMPLAINTS

Fault finding for the warning lights and indicators controlled by the multiplex network:

CHART 1	Coolant temperature gauge and / or rev counter at zero
	Message transmitted by: Injection computer
CHART 2	No LPG fuel gauge display and / or LPG warning light on
	Message transmitted by: LPG computer
CHART 3	Ratio engaged indicator not operational and / or automatic gearbox fault warning light on
	Message transmitted by: Automatic transmission computer
CHART 4	Ratio engaged indicator not operational and / or sequential gearbox fault warning light on
	Message transmitted by: sequential gearbox computer
CHART 5	Air bag and service fault warning light on
	Message transmitted by: Air bag computer
CHART 6	Door status indicator and / or de-icing indicator does not light up
	Message transmitted by: UCH
CHART 7	ESP fault warning light on and service warning light off 4 seconds after switching on the ignition
	Message transmitted by: ESP computer
CHART 8	ESP / SERVICE / air bag / automatic transmission (if present) / LPG (if present) warning light, coolant temperature and rev counter indicator at zero

FAULT FINDING - CUSTOMER COMPLAINTS

Fault finding for the warning lights and indicators controlled by wiring connections:

CHART 9	Faulty or inconsistent speedometer (information provided by the ABS system)
CHART 10	Faulty or inconsistent speedometer, information provided by the speed sensor on the box (F4R only)
CHART 11	No fuel level information from pointer receiver (tank not empty) with reserve warning light on
CHART 12	Fuel level receiver pointer remains at maximum, tank not full
CHART 13	Fuel level gauge stuck whatever the fuel level; reserve warning light off
CHART 14	Oil level indication absent or incorrect and SERVICE warning light on
CHART 15	Battery charge and stop warning lights stay on
CHART 16	Immobiliser warning light stays on
CHART 17	Immobiliser warning light stays off
CHART 18	Oil pressure and stop warning lights come on at the same time
CHART 19	Power-assisted steering (DAE) warning light stays on

FAULT FINDING - CUSTOMER COMPLAINTS

CHART 20	Power-assisted steering (DAE) warning light stays off
CHART 21	ABS warning light stays on
CHART 22	ABS warning light stays off
CHART 23	Indicator and indicator warning light stay on
CHART 24	Main beam headlight warning light stays on or off
CHART 25	Dipped beam headlight warning light stays on or off
CHART 26	Front fog lights warning light stays on or off
CHART 27	Rear fog lights warning light stays on or off
CHART 28	Safety belt warning light stays on
CHART 29	Parking brake warning light stays on with no illumination of STOP warning light
CHART 30	Brake and stop warning lights on
CHART 31	SERVICE warning light stays on
CHART 32	The instrument panel does not function
CHART 33	ADAC and trip meter reset to zero every time the ignition is switched off

FAULT FINDING - FAULT FINDING CHARTS

CHART 1	Coolant temperature gauge and / or rev counter at zero Pollution control and / or injection criticality 1 and / or criticality 2 indicator on
	Message transmitted by: Injection computer

First carry out a fault finding sequence on the multiplex network using the diagnostic tool.

Result: multiplex network OK

no → Consult the section in question.

yes

Carry out a full fault-finding sequence on the engine injection system.

Check the presence and correctness of the coolant temperature information.

(N.B.: Position of the coolant temperature gauge set between 80 and 105°C)

Is the information correct?

no → See injection fault finding.

yes

Replace the instrument panel.

FAULT FINDING - FAULT FINDING CHARTS

CHART 2	No LPG fuel gauge display and / or LPG warning light on
	Message transmitted by: LPG computer

First carry out a fault finding sequence on the multiplex network using the diagnostic tool.

Result: multiplex network OK

no → Consult the section in question.

yes ↓

Carry out a full fault-finding sequence on the LPG injection system.

Result: fault present

yes → See LPG fault finding.

no ↓

If there is no LPG on the vehicle, check the isolation of track 3 of the 15-track connector of the instrument panel.

Repair if necessary.

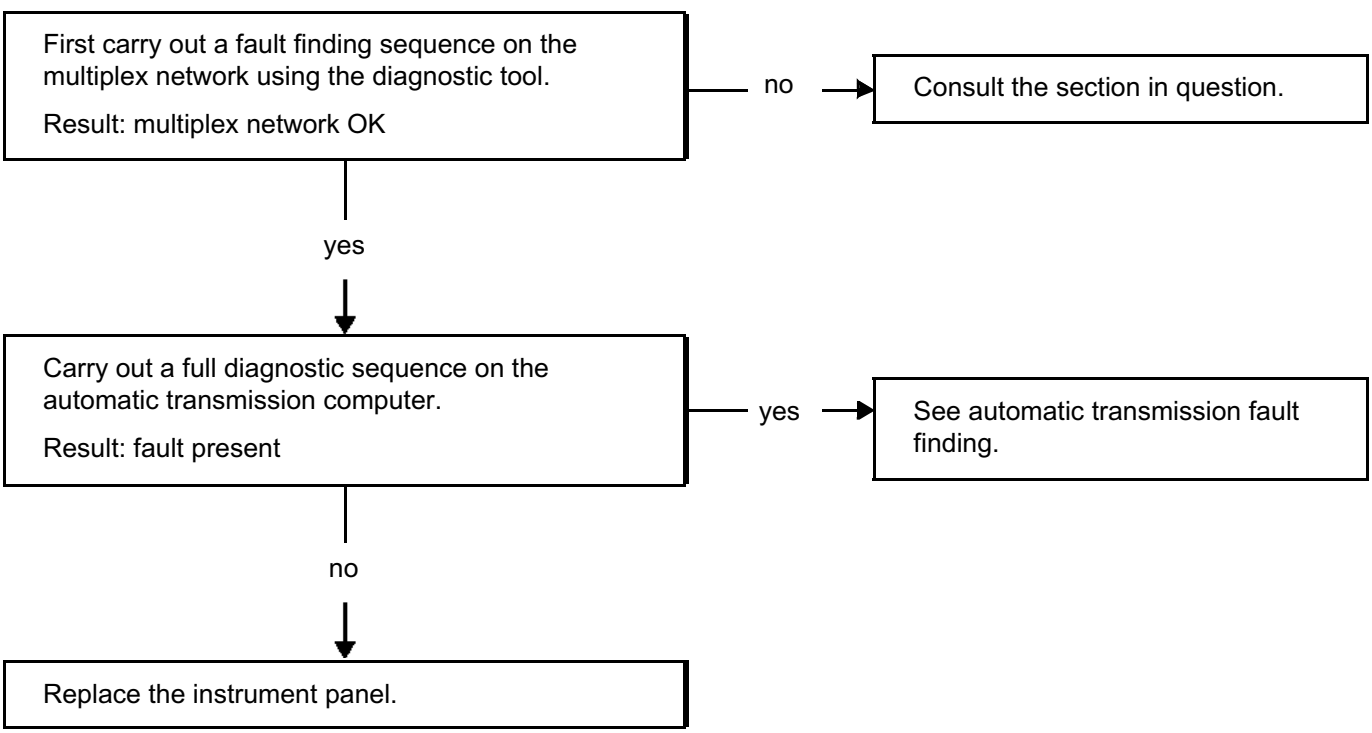
↓

If the problem persists,

replace the instrument panel.

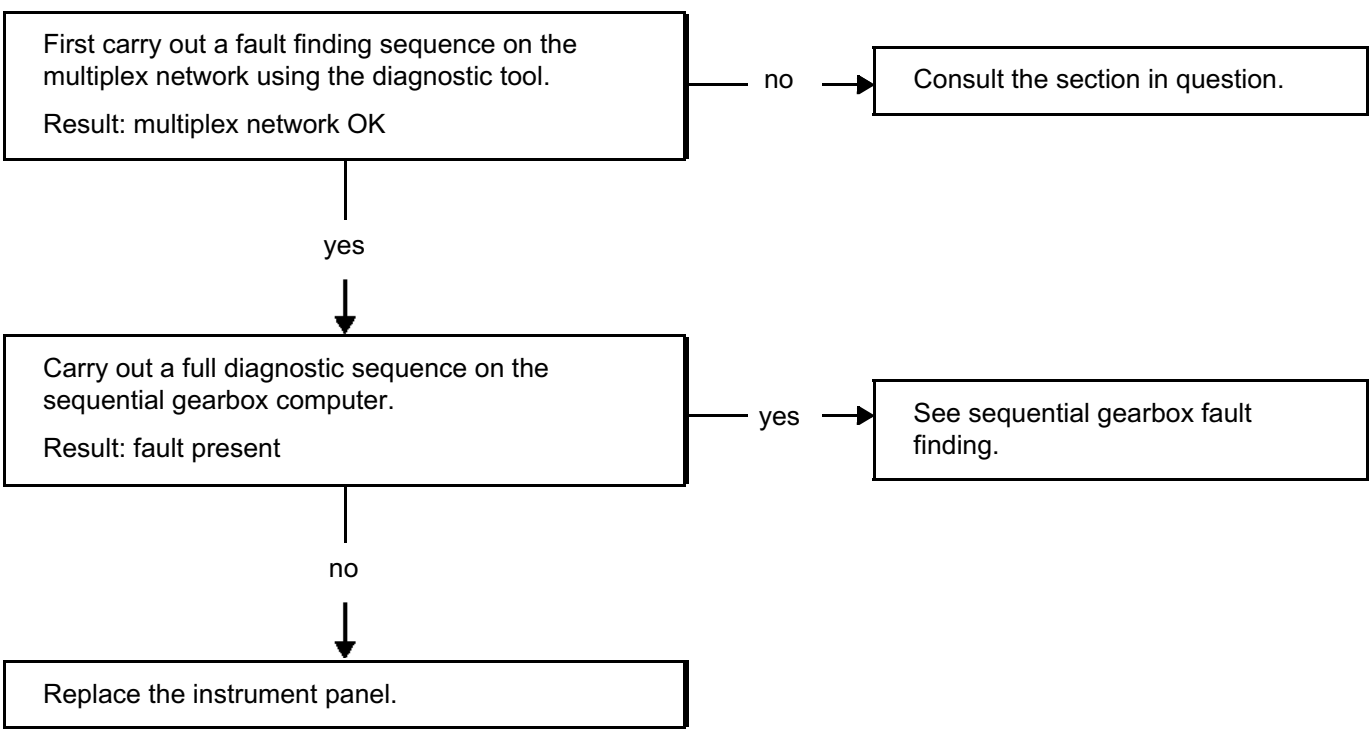
FAULT FINDING - FAULT FINDING CHARTS

CHART 3	Ratio engaged indicator not operational and / or automatic transmission fault warning light on
	Message transmitted by: automatic gearbox computer



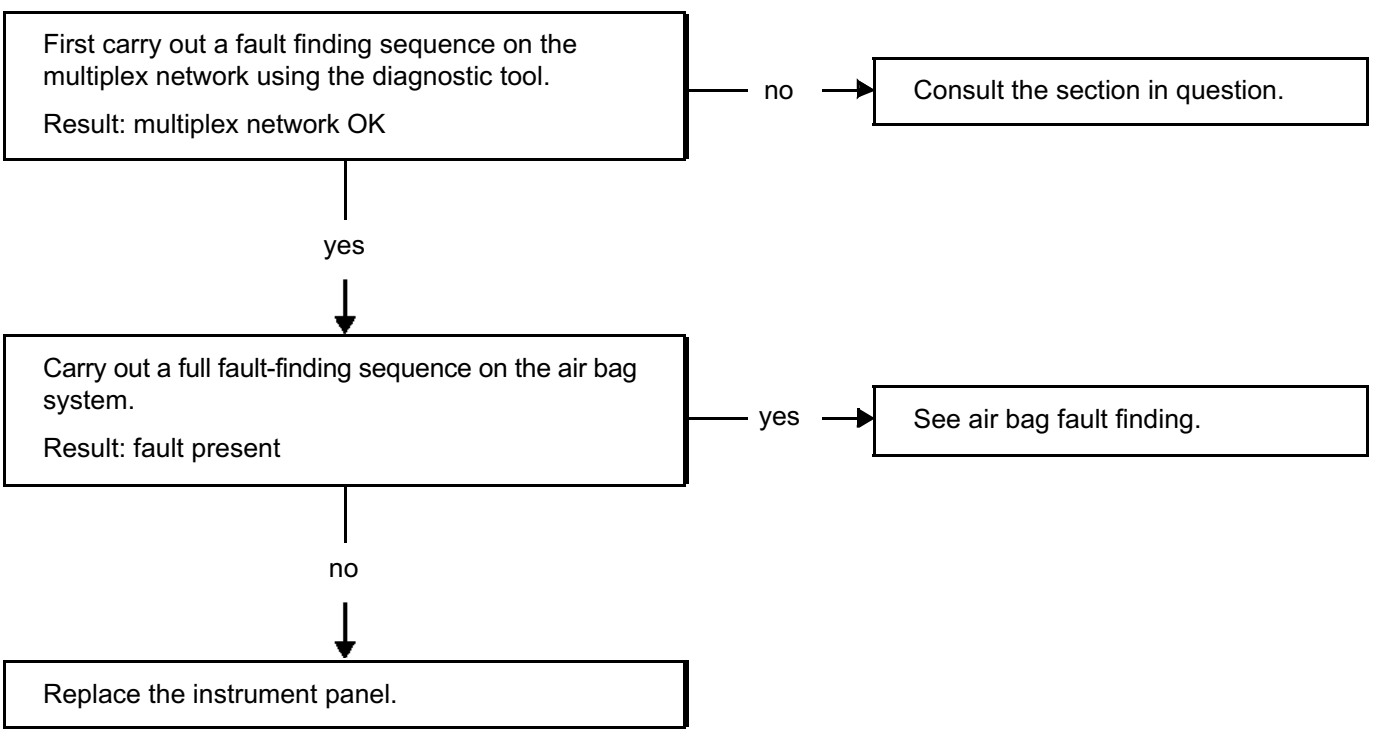
FAULT FINDING - FAULT FINDING CHARTS

CHART 4	Ratio engaged indicator not operational and / or sequential gearbox fault warning light on
	Message transmitted by: sequential gearbox computer



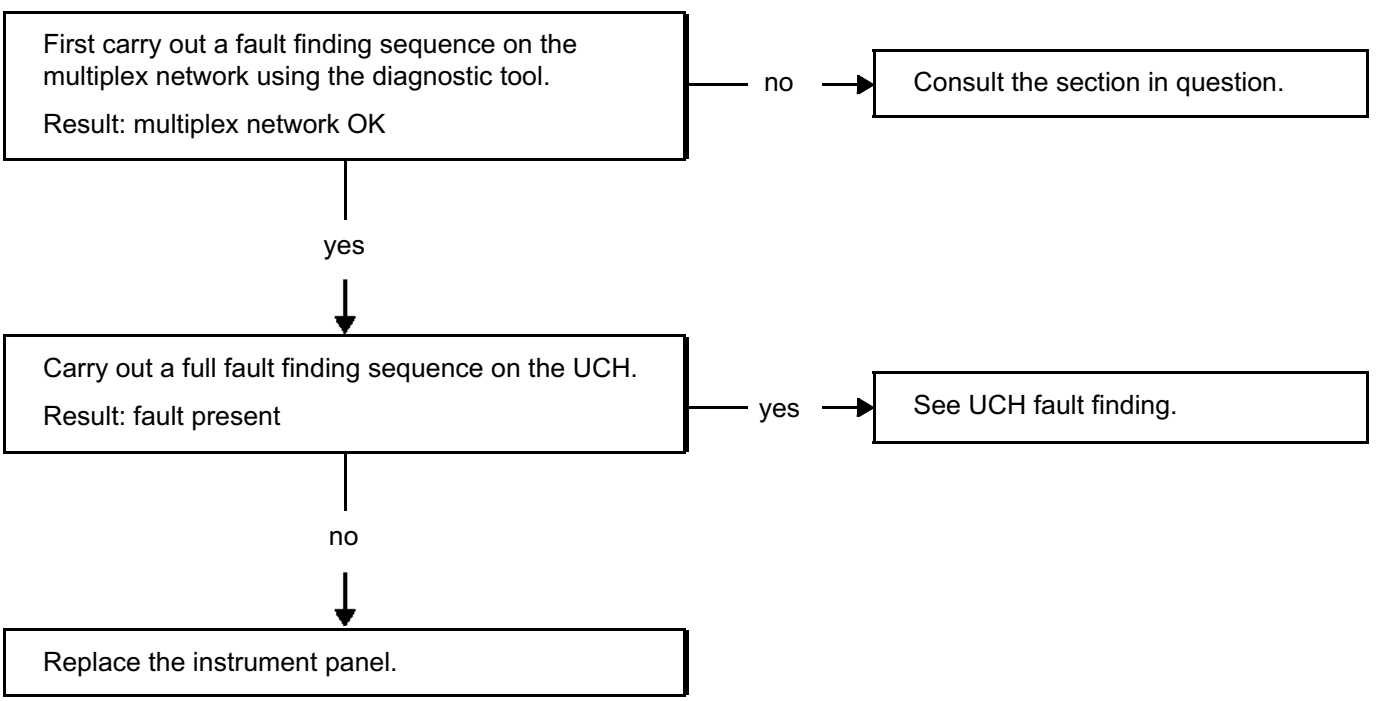
FAULT FINDING - FAULT FINDING CHARTS

CHART 5	Air bag and service fault warning light on
	Message transmitted by: air bag computer



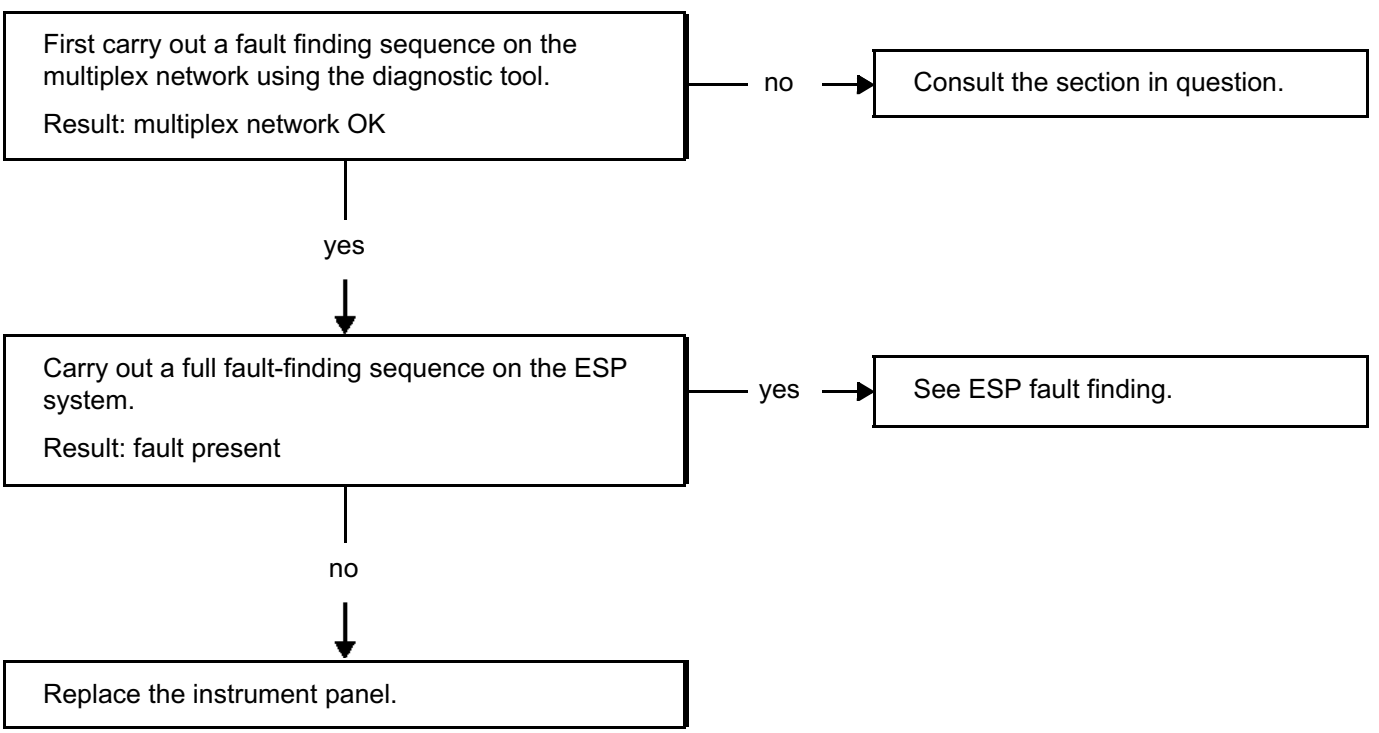
FAULT FINDING - FAULT FINDING CHARTS

CHART 6	Door status indicator and / or de-icing indicator does not light up
	Message transmitted by: UCH



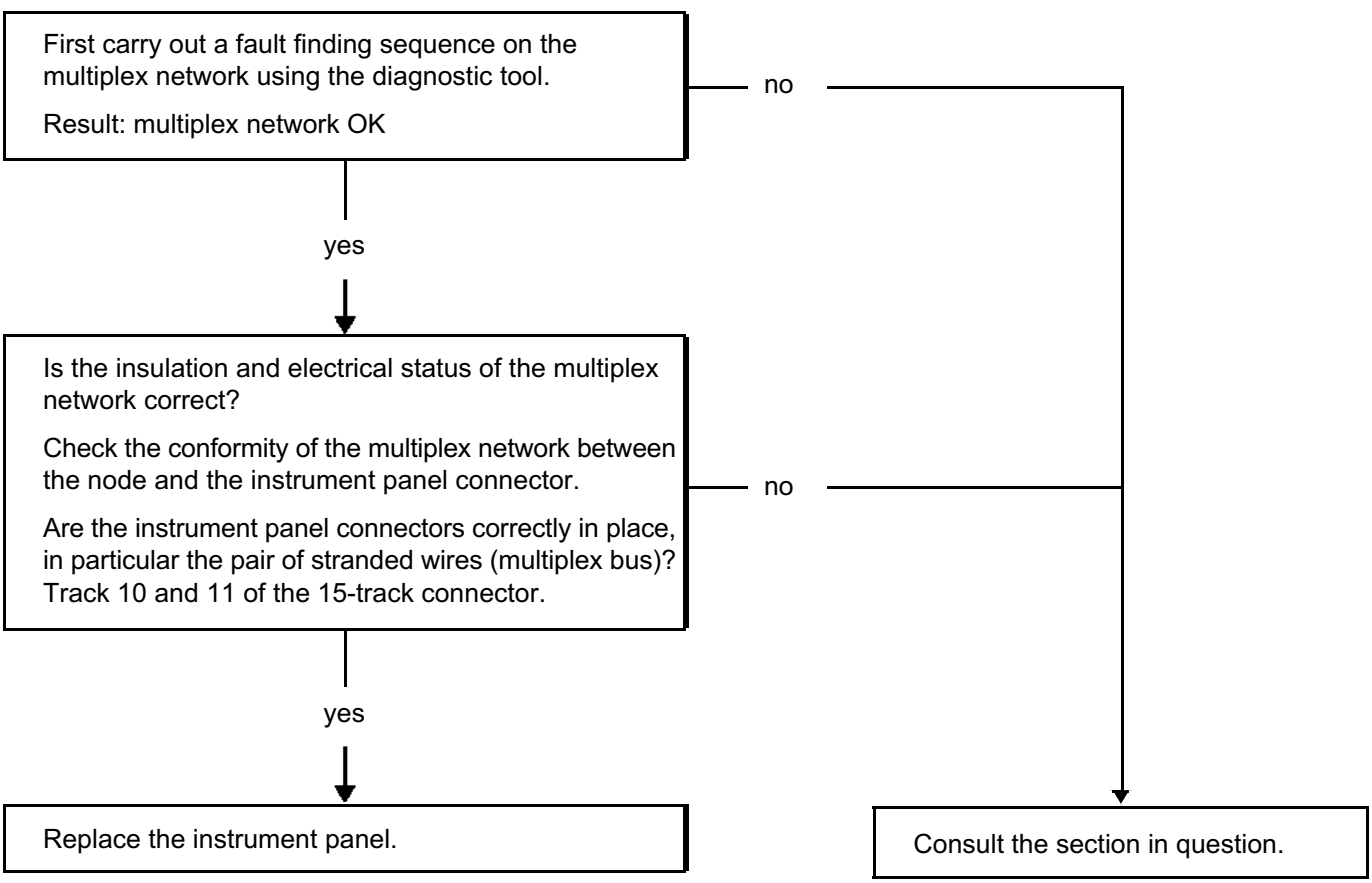
FAULT FINDING - FAULT FINDING CHARTS

CHART 7	ESP fault warning light on and service warning light off 4 seconds after switching on the ignition
	Message transmitted by: Trajectory correction system



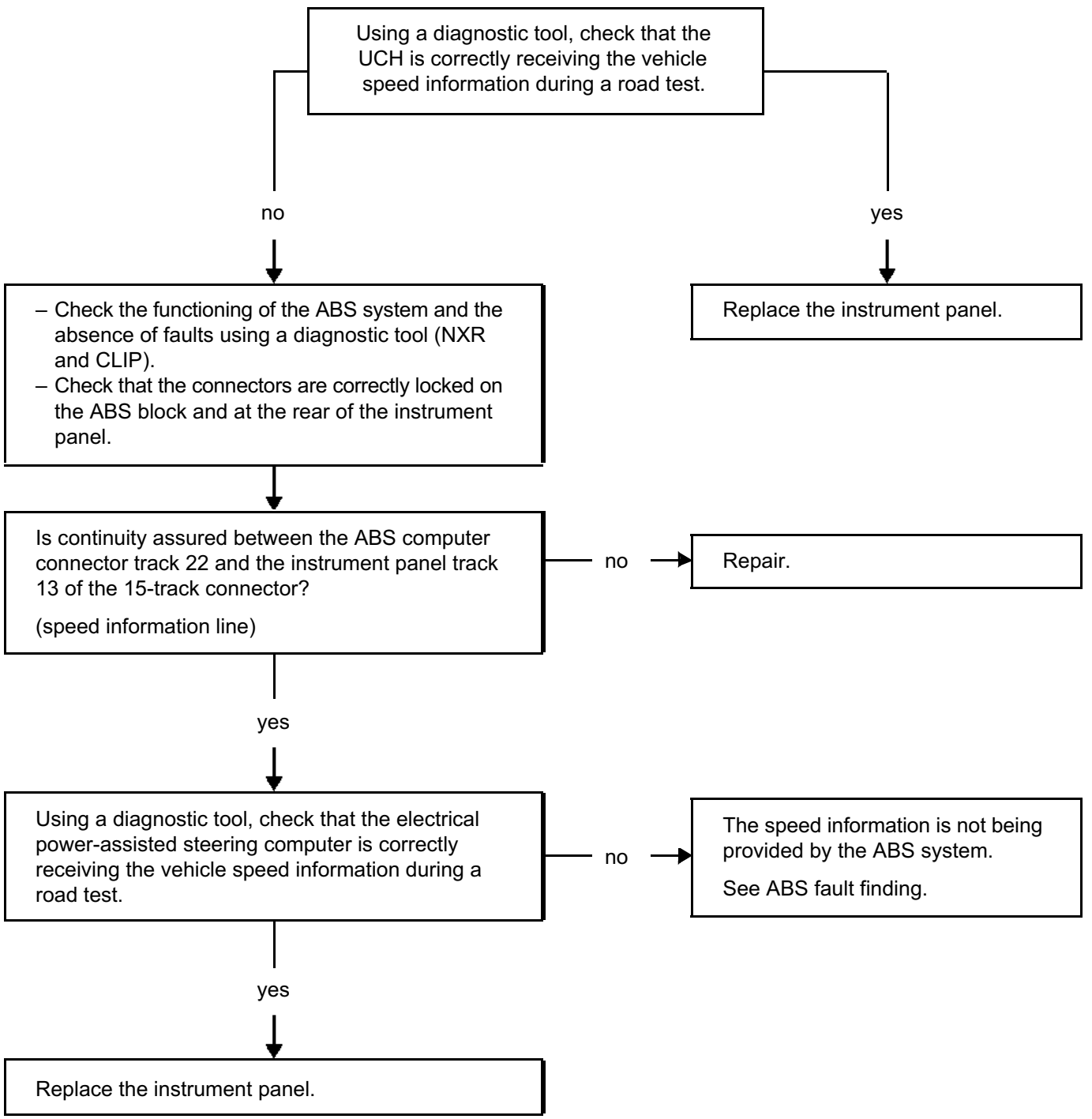
FAULT FINDING - FAULT FINDING CHARTS

CHART 8	ESP / SERVICE / air bag / automatic transmission (if present) / LPG (if present), injection criticality 1 / injection criticality 2 / pollution control warning light on Coolant temperature gauge and rev counter at zero



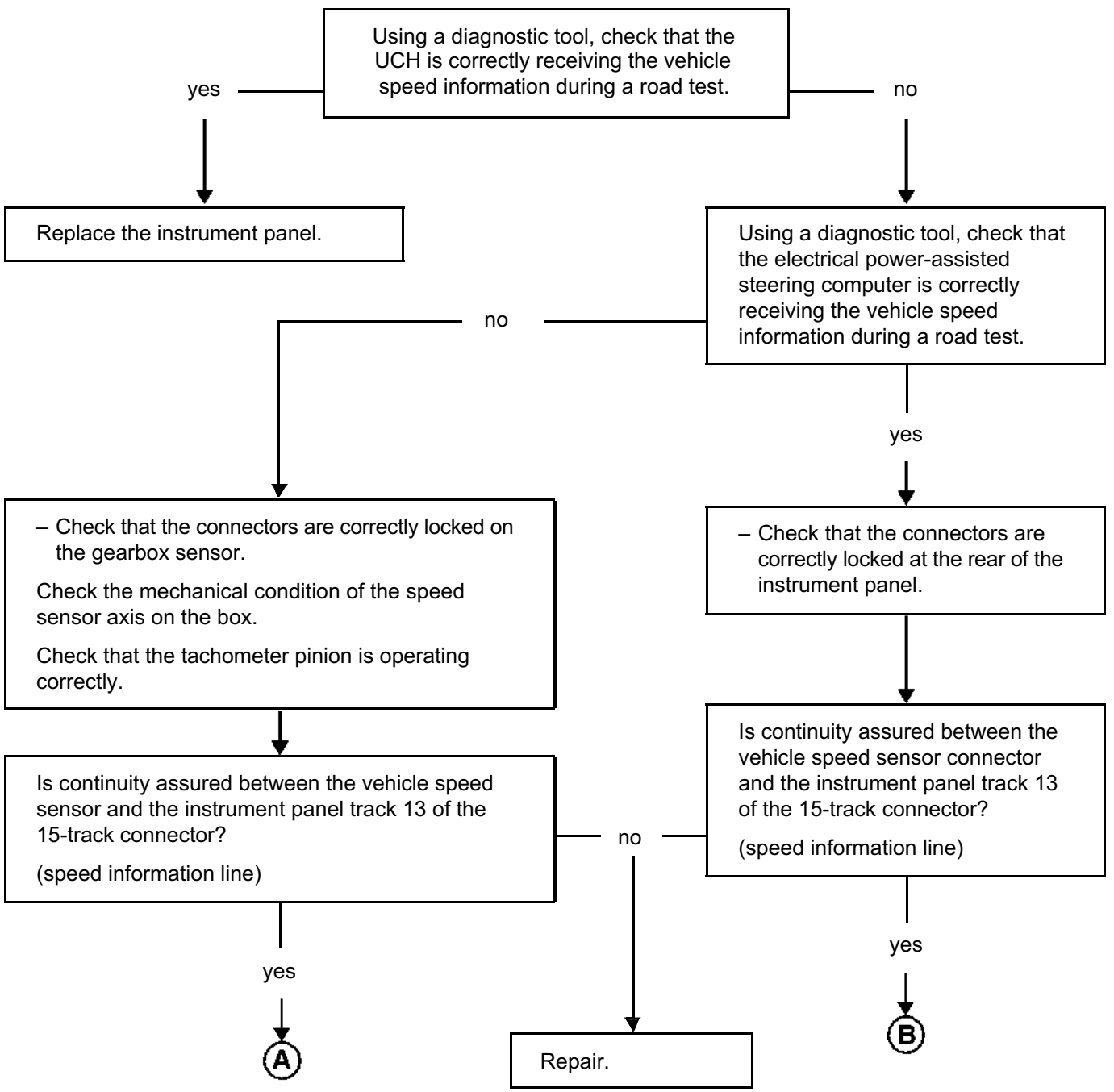
FAULT FINDING - FAULT FINDING CHARTS

CHART 9	Faulty or inconsistent speedometer (information provided by the ABS system)



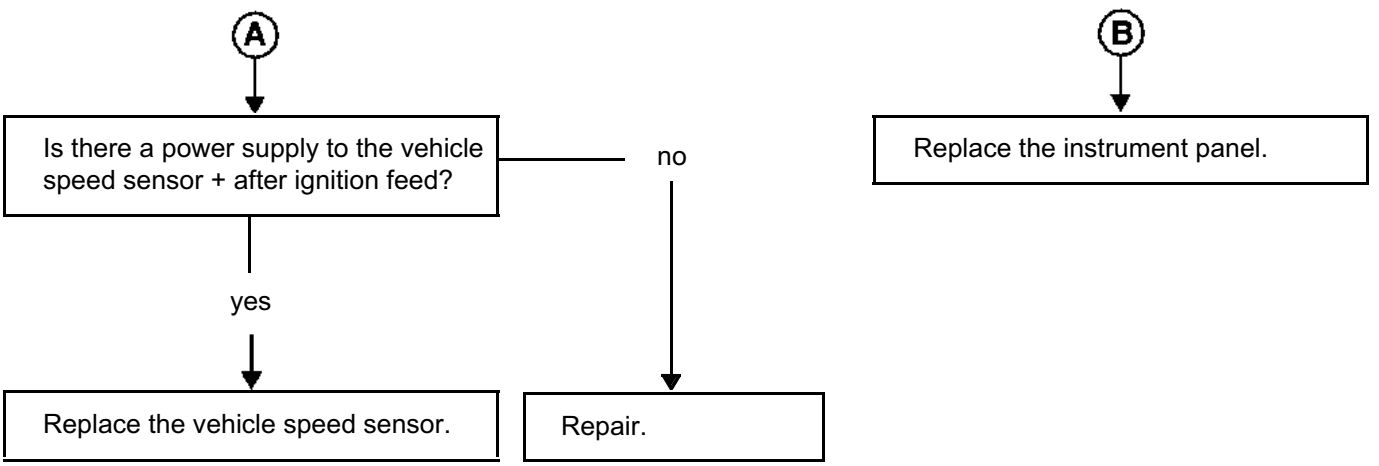
FAULT FINDING - FAULT FINDING CHARTS

CHART 10	Faulty or inconsistent speedometer, information provided by the speed sensor on the box (F4R only)



FAULT FINDING - FAULT FINDING CHARTS

CHART 10 CONTINUED	



FAULT FINDING - FAULT FINDING CHARTS

CHART 11	No fuel level information on pointer receiver (tank not empty) with reserve warning light on

Check the condition of the fuel gauge connector and the 30-track and 15-track connectors of the instrument panel.

Repair if necessary.

↓

Check the resistance of the fuel gauge at the tank level with the connector disconnected.

A resistance in excess of 350 ohms is considered an open circuit (CO) by the instrument panel.

Gauge OK ↓

Disconnect the connectors from the instrument panel and check the continuity of the fuel gauge electrical harness between:

– track 2 of the 15 track connector of the instrument panel and track A1 of the fuel gauge,

– track 22 of the 30 track connector of the instrument panel and track B1 of the fuel gauge.

Is this correct?

yes ↓

Replace the instrument panel.

no →

Repair.

CO ↓

Replace the fuel gauge.

FAULT FINDING - FAULT FINDING CHARTS

CHART 12	Fuel level receiver pointer remains at maximum (with ignition on), tank not full

CONDITION	If an anomaly is detected by the instrument panel, this triggers the illumination of warning light J in ADAC test mode, 100 seconds after switching on the ignition.

Check the condition of the fuel gauge connector and the 30-track and 15-track connectors of the instrument panel.

Repair if necessary.

↓

Check the resistance of the fuel gauge at the tank with the connector disconnected.

A resistance of less than 5 ohms is considered a short circuit (CC) by the instrument panel.

Gauge OK

↓

Disconnect the connectors from the instrument panel and check the insulation of the fuel gauge electrical harness between the earth and the + 12 volt supply:

– track 2 of the 15 track connector of the instrument panel > track A1 of the fuel gauge,

– track 22 of the 30 track connector of the instrument panel > track B1 of the fuel gauge.

Is this correct?

yes

↓

Replace the instrument panel.

no

↓

Repair.

CC

↓

Replace the fuel gauge.

FAULT FINDING - FAULT FINDING CHARTS

CHART 13	Fuel level gauge remains stuck whatever the fuel level; reserve warning light off

CONDITION	In the case of a test of the indicator with a gauge removed, it is necessary to switch the ignition off and then on between each change to enable the instrument panel to take a new measurement.

Check the resistance of the fuel gauge at the tank with the connector disconnected.

Using the table of values, compare the resistance of the fuel gauge with the actual level in the fuel tank.

Is there any inconsistency?

yes → Check that the gauge ballast slides correctly within the tank.

If the problems persists, replace the fuel gauge.

no → Disconnect the connectors from the instrument panel and check the continuity of the fuel gauge electrical harness between:

– track 2 of the 15 track connector of the instrument panel and track A1 of the fuel gauge,

– track 22 of the 30 track connector of the instrument panel and track B1 of the fuel gauge.

Check the insulation of these from the earth and the + 12 volt supply.

Is this correct?

yes → Replace the instrument panel.

no → Repair.

Resistance value of the fuel gauge:

proportion:	reserve	full
resistance	290	20

FAULT FINDING - FAULT FINDING CHARTS

CHART 14	Oil level indication absent or erroneous

CONDITION	The oil level indication will only be correct if the vehicle is on a flat surface; a measurement should be retaken after switching the ignition off for at least one minute.

Check for the presence of character (h) with the ADAC in test mode (if fitted).

(h) present

Remove the oil level sensor and check its resistance at the ambient temperature (the resistance should be between 5 and 16 ohms) and check the insulation from the earth.

Is this correct?

no

Replace the oil level sensor.

yes

Disconnect the connectors from the instrument panel and check the continuities and the insulation of the oil level gauge electrical harness:

– track 21 of the 30 track connector > track 1 of the oil level gauge,

– track 26 of the 30 track connector > track 2 of the oil level gauge,

Is this correct?

no

Repair.

yes

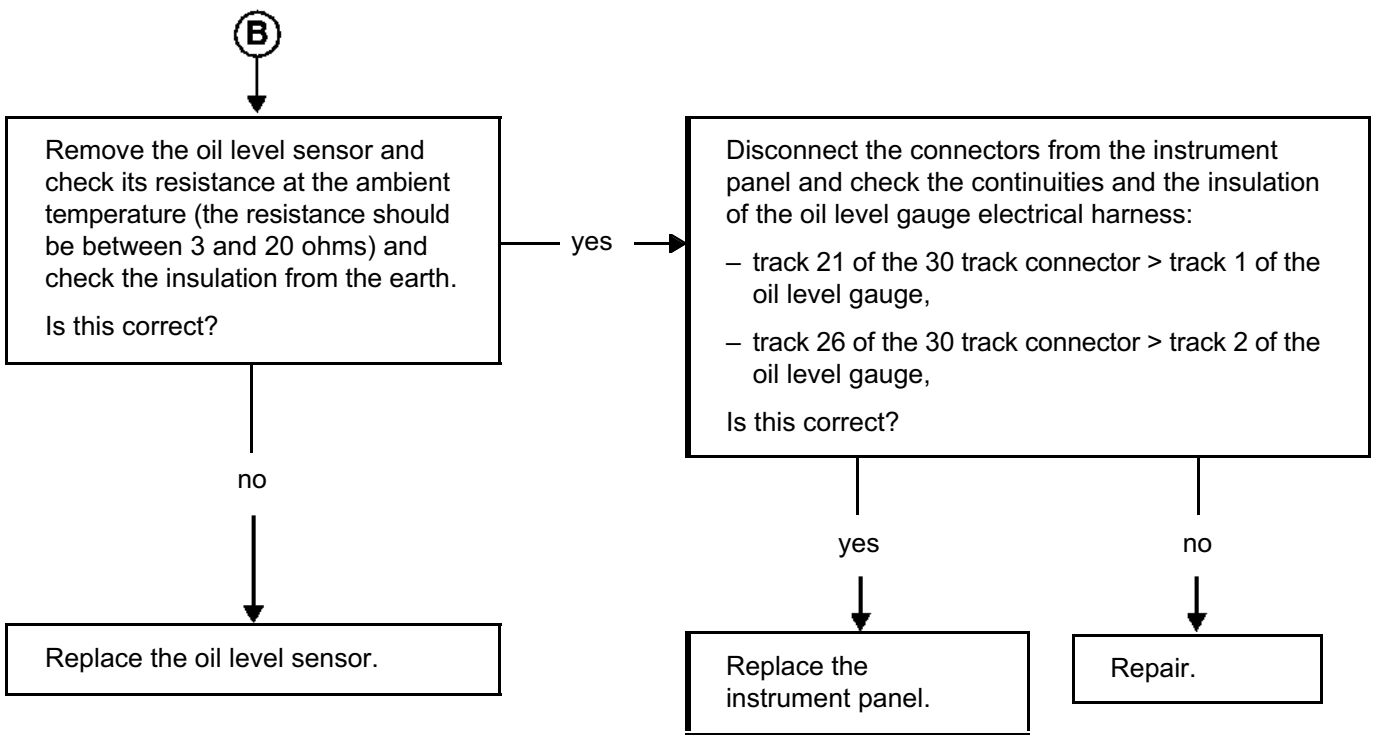
Replace the instrument panel.

(h) absent or no ADAC

(B)

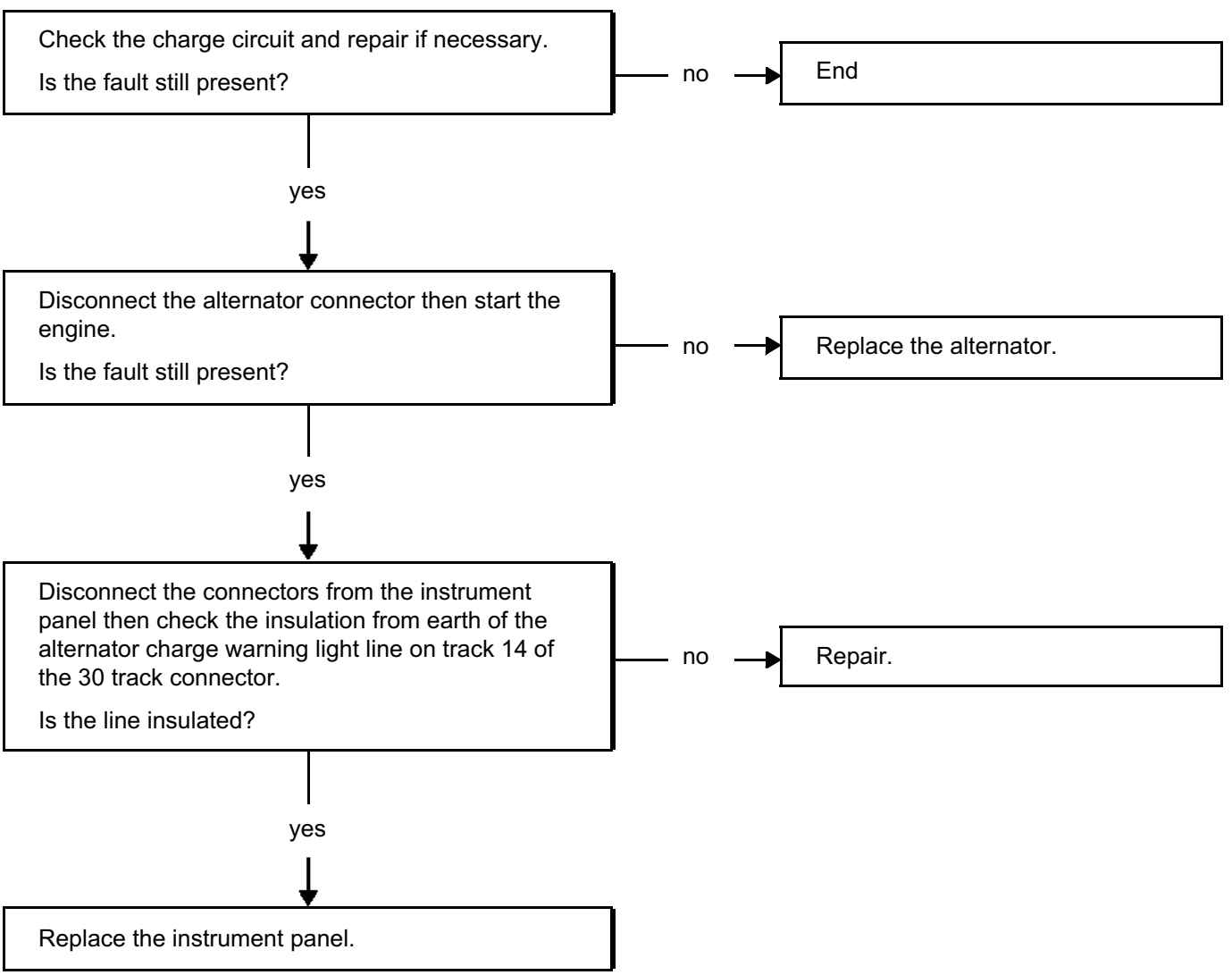
FAULT FINDING - FAULT FINDING CHARTS

CHART 14 CONTINUED	



FAULT FINDING - FAULT FINDING CHARTS

CHART 15	Battery charge and stop warning lights stay on



FAULT FINDING - FAULT FINDING CHARTS

CHART 16	Immobiliser warning light stays on

Carry out the fault finding sequence on the UCH.

Check that the "immobiliser warning light" status remains inactive with the engine running.

Is this correct?

no → See UCH fault finding.

yes ↓

Disconnect the UCH connector equipped with the control line for the immobiliser warning light (track 20 connector PE3).

Is the warning light still on?

no → Replace the UCH.

yes ↓

Disconnect the connectors from the instrument panel and check the insulation from earth of the command line of the immobiliser warning light.

Is this correct?

no → Repair.

yes ↓

Replace the instrument panel.

FAULT FINDING - FAULT FINDING CHARTS

CHART 17	Immobiliser warning light stays off

Check the condition of fuse F21.

Check the presence of a + 12 V supply on the F21 fuse.

Trigger the command and check the presence of an intermittent + 12 V (1 Hz) between the **track 20 connector PE3** of the UCH and fuse **F21 of the passenger compartment fuse box**.

Is the voltage absent?

yes → Replace the UCH.

no ↓

If there is a voltage present, check the continuity and insulation between **track 20 of the PE3 connector** of the UCH and **track 5 of the 30 track connector** of the instrument panel.

Is continuity ensured?

yes → Replace the instrument panel.

no ↓

Repair.

FAULT FINDING - FAULT FINDING CHARTS

CHART 18	Oil pressure and stop warning lights come on at the same time

CONDITION	The instrument panel only takes account of the information from the oil pressure switch in respect of an engine speed in excess of 1600 rpm.

Check the engine oil pressure using a pressure gauge and repair if necessary.

Is the fault still present?

no → End

yes ↓

Disconnect the pressure switch connector then start the engine.

Bring the engine speed to more than 1600 rpm.

Is the fault still present?

no → Replace the oil pressure switch.

yes ↓

Disconnect the connectors from the instrument panel then check the insulation from earth of the oil pressure pressure switch line on track 18 of the 30 track connector.

Is the line insulated?

no → Repair.

yes ↓

Replace the instrument panel.

FAULT FINDING - FAULT FINDING CHARTS

CHART 19	Power-assisted steering (DAE) warning light stays on

Carry out the diagnostic sequence on the electric power-assisted steering.

Is there a fault present?

yes → Repair.

no ↓

Disconnect the DAE (power-assisted steering) computer connector equipped with the DAE fault warning light line (track 11).

Is the warning light still on?

no → Replace the DAE computer.

yes ↓

Disconnect the connectors from the instrument panel and check the insulation from earth of the DAE fault warning light line.

– track 15 of 15 track connector > DAE electronic control unit track 11

Is this correct?

no → Repair.

yes ↓

Replace the instrument panel.

FAULT FINDING - FAULT FINDING CHARTS

CHART 20	Power-assisted steering (DAE) warning light stays off

Carry out the diagnostic sequence on the electric power-assisted steering.

Is there a fault present?

yes → Repair.

no

Disconnect the DAE (power-assisted steering) computer connector and the instrument panel connector.

Check the continuity and insulation from +12 V of the DAE fault warning light line

– track 15 of 15 track connector > DAE electronic control unit track 11

Is this correct?

no → Repair.

yes

Reconnect the instrument panel connector then connect track 11 of the DAE connector to earth.

Does the warning light come on?

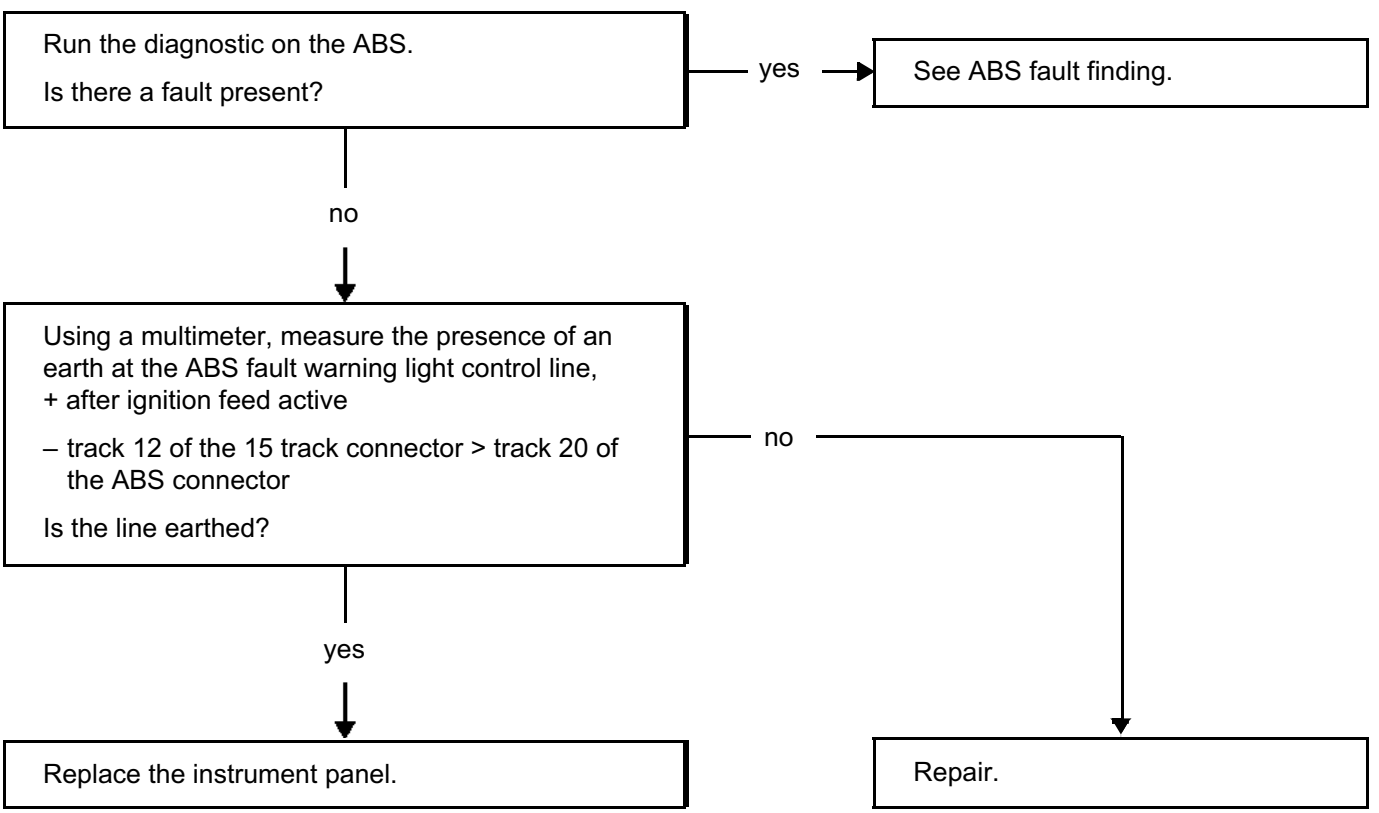
yes → Replace the DAE computer.

no

Replace the instrument panel.

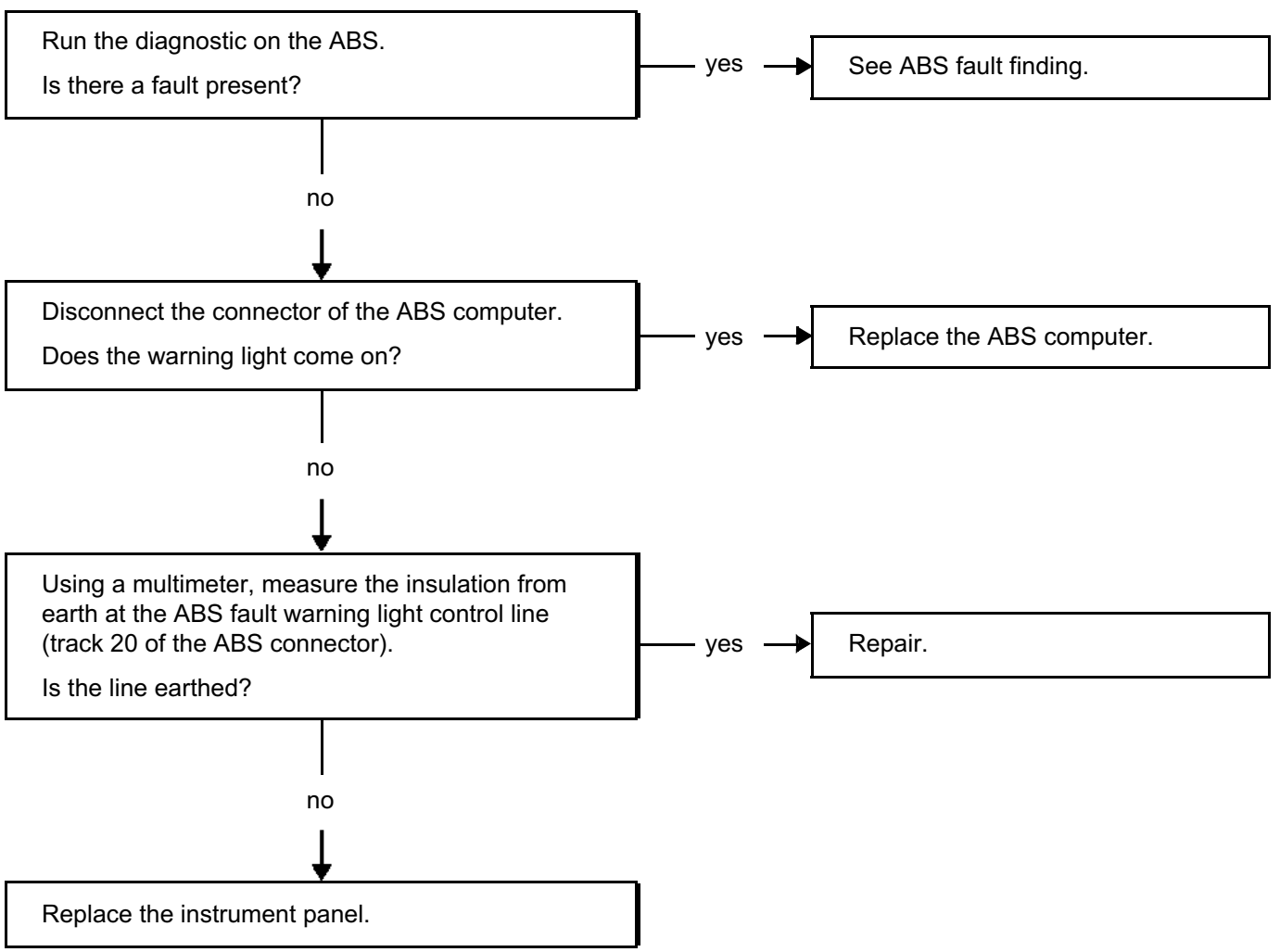
FAULT FINDING - FAULT FINDING CHARTS

CHART 21	ABS warning light stays on



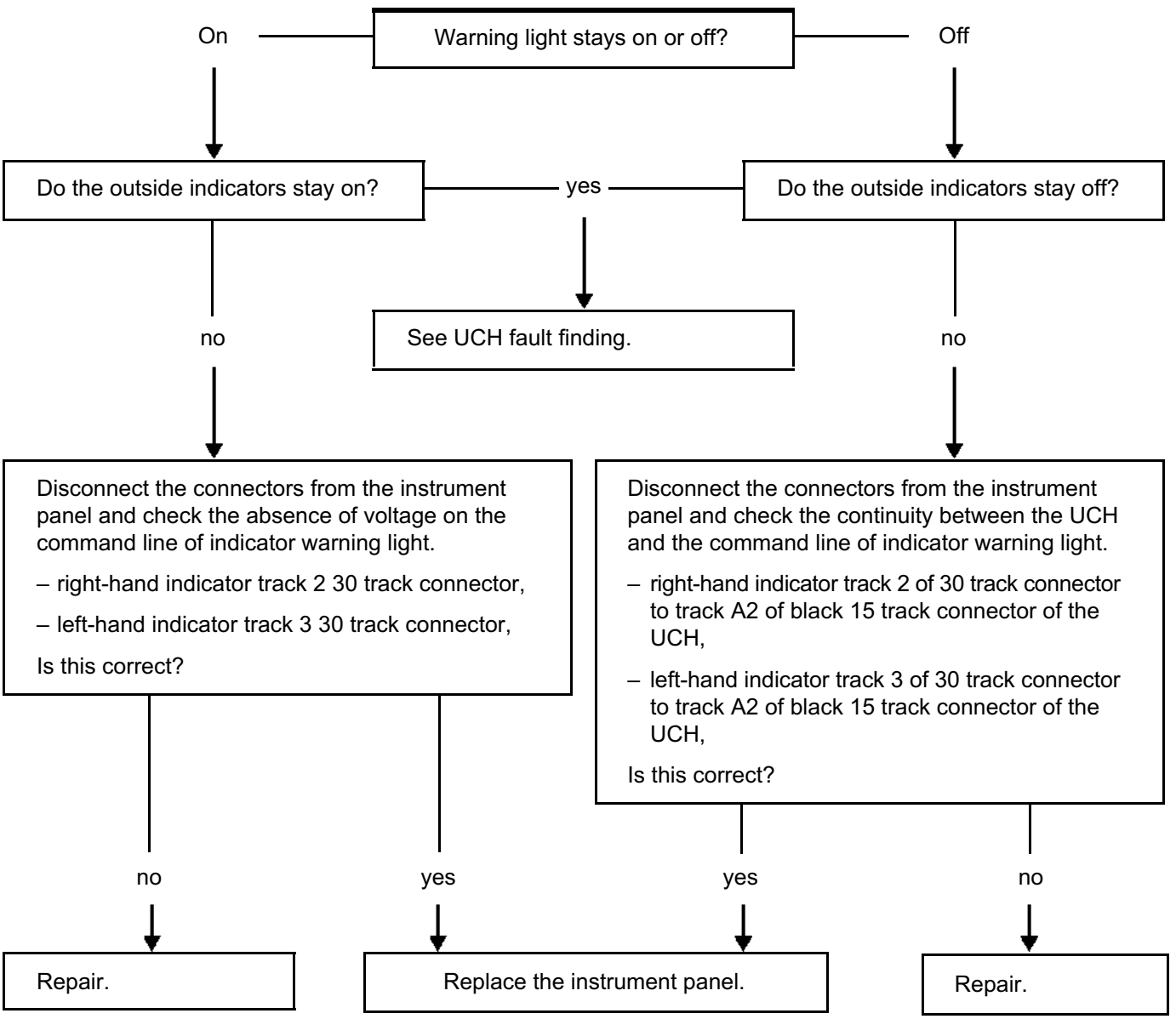
FAULT FINDING - FAULT FINDING CHARTS

CHART 22	ABS warning light stays off



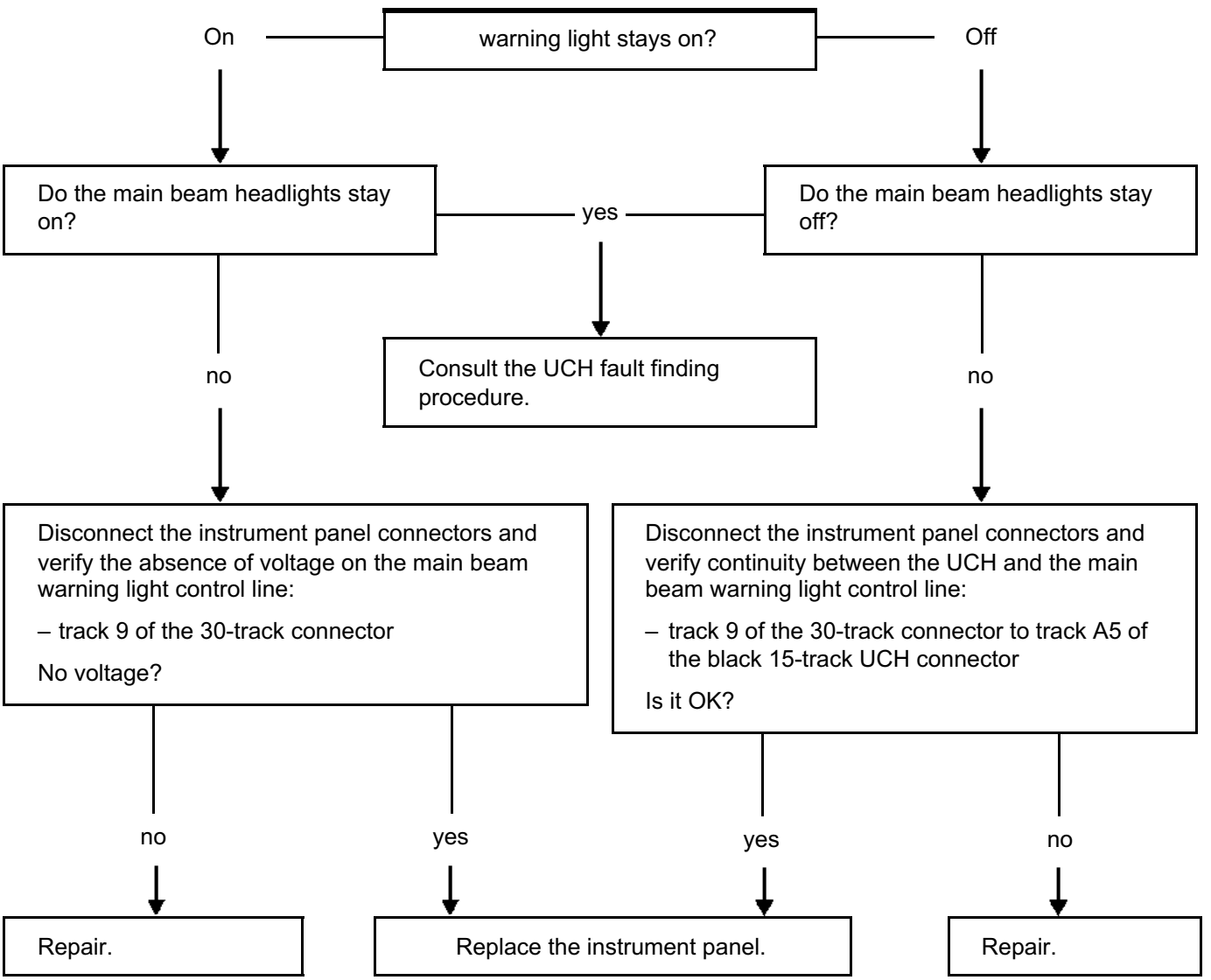
FAULT FINDING - FAULT FINDING CHARTS

CHART 23	Indicator warning light stays on or off



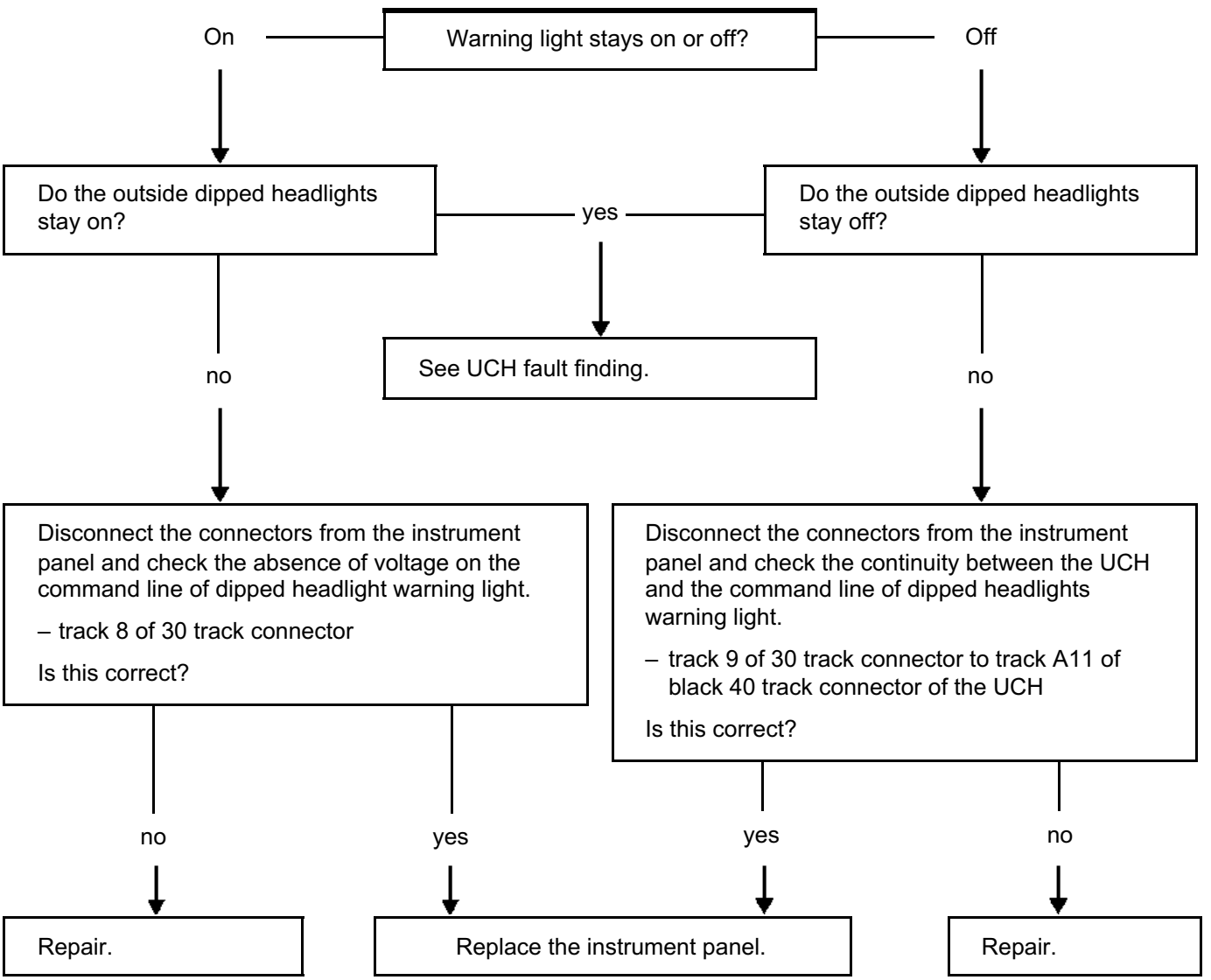
FAULT FINDING - FAULT FINDING CHART

CHART 24	Main beam warning light stays on or off



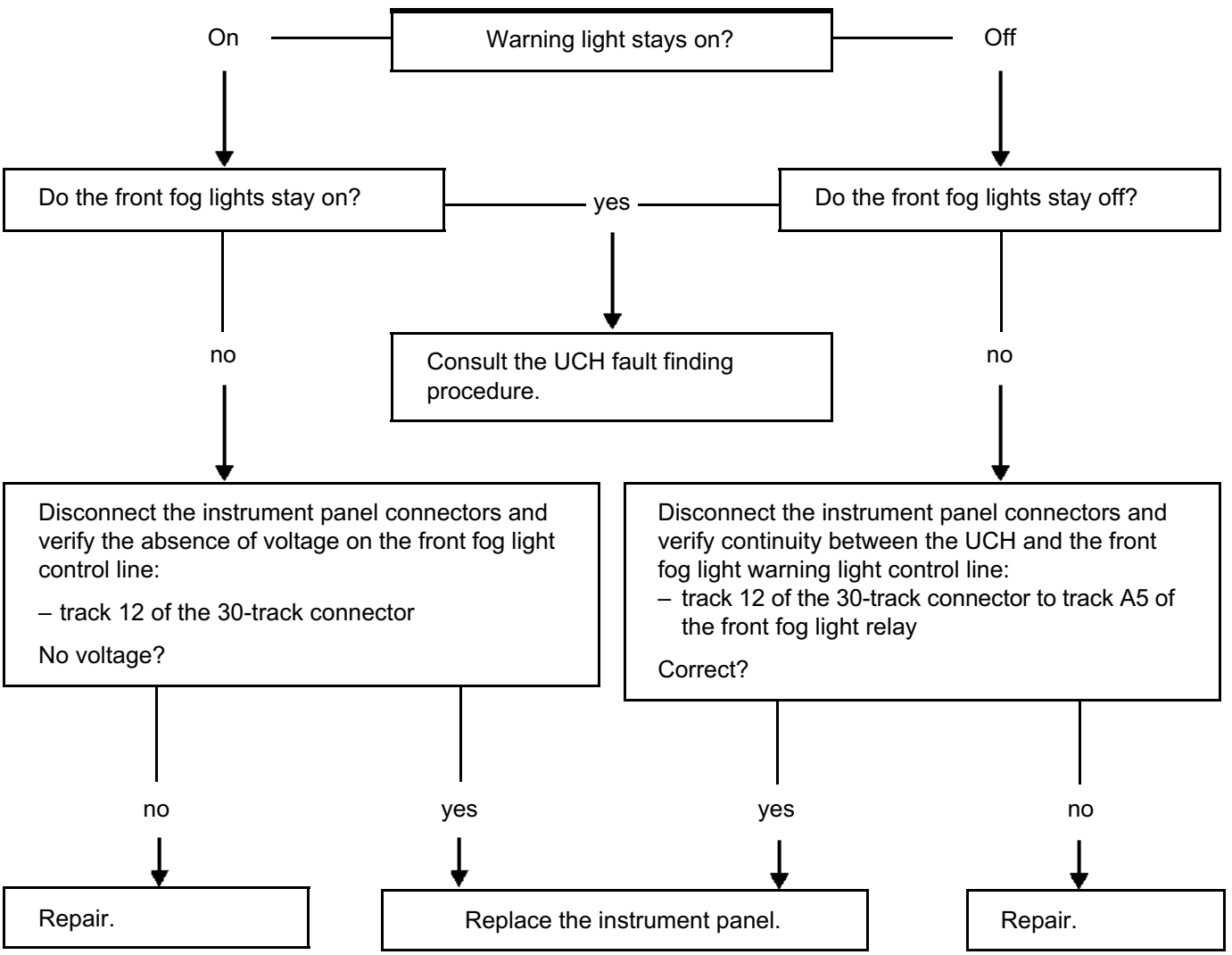
FAULT FINDING - FAULT FINDING CHARTS

CHART 25	Dipped beam headlight warning light stays on or off



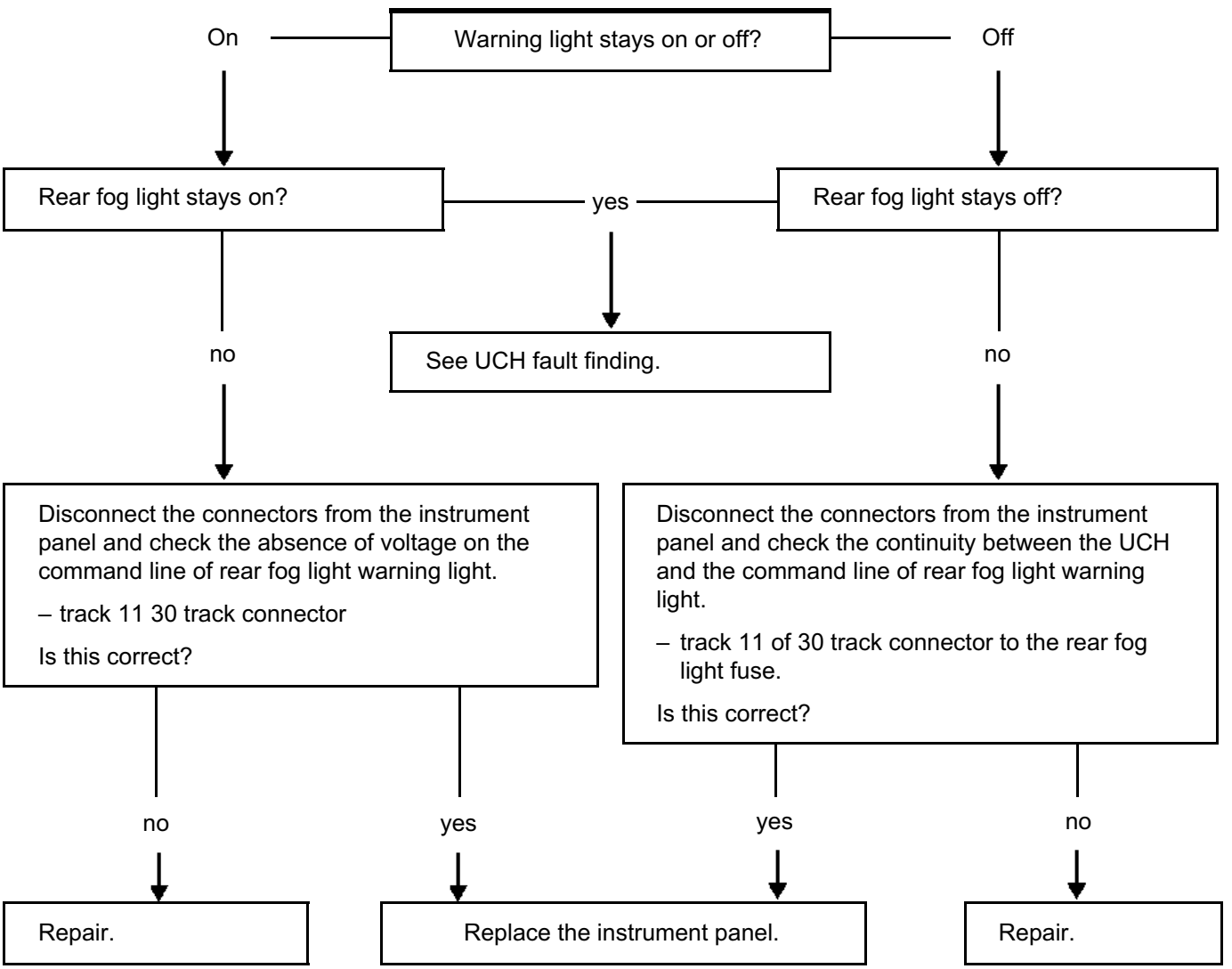
FAULT FINDING - FAULT FINDING CHART

CHART 26	Front fog light warning light stays on or off



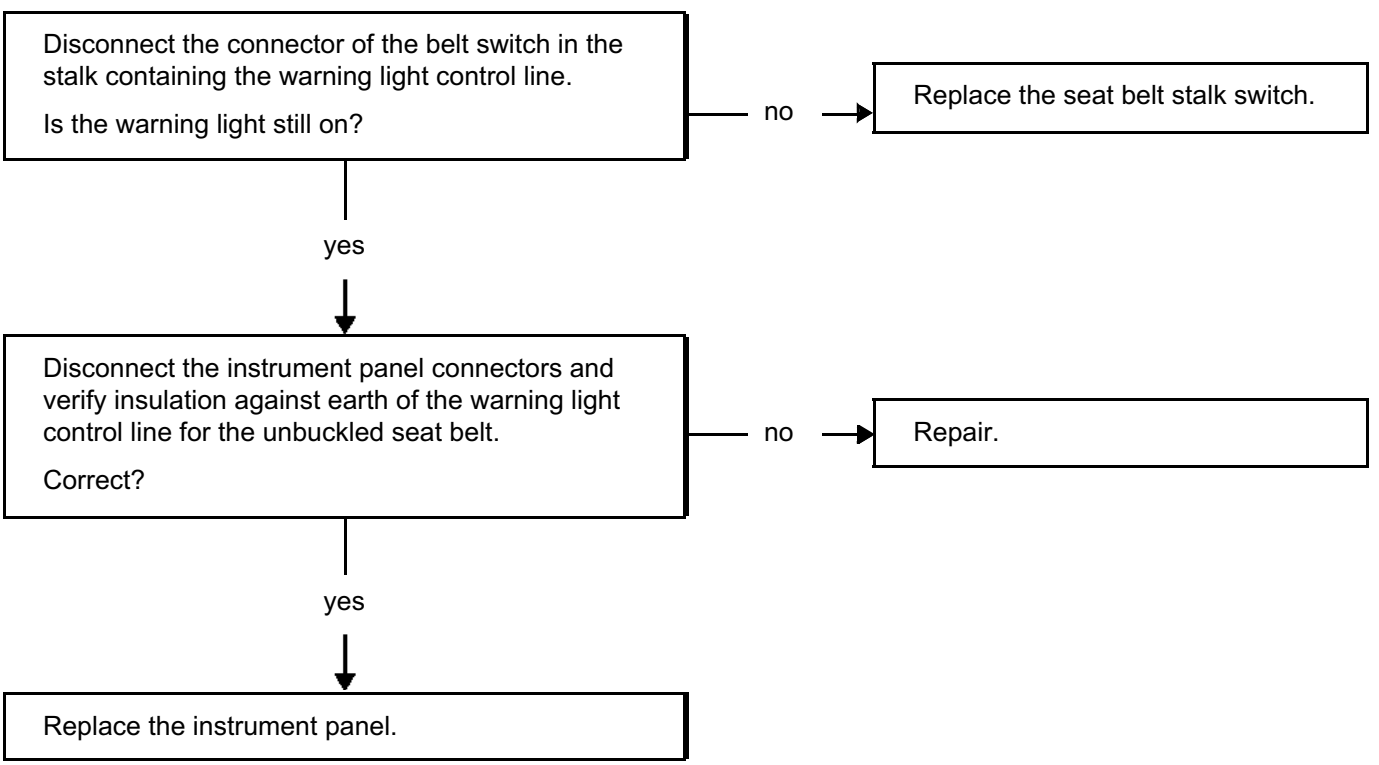
FAULT FINDING - FAULT FINDING CHARTS

CHART 27	Rear fog light warning light stays on or off



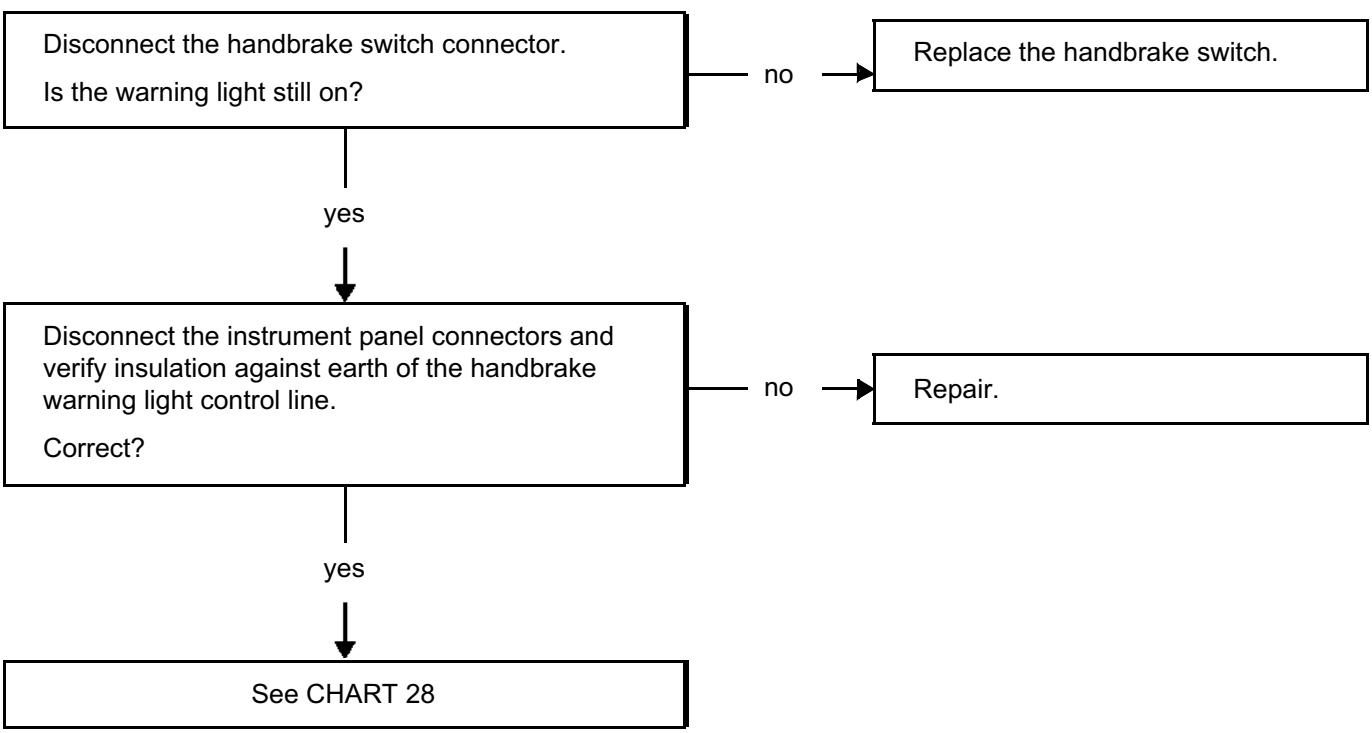
FAULT FINDING - FAULT FINDING CHART

CHART 28	Seat belt warning light stays on



FAULT FINDING - FAULT FINDING CHART

CHART 29	Brake fault warning light stays on with no lighting of STOP warning light



FAULT FINDING - FAULT FINDING CHART

CHART 30	Brake fault and STOP warning lights come on

Check the brake fluid level and top up if necessary.
Is the fault still present?
- no → Check for leakage from the hydraulic braking circuit.
- yes ↓

Disconnect the brake fluid level sensor connector and start the engine.
Is the fault still present?
- no → Replace the brake fluid level sensor.
- yes ↓

Perform the ABS fault finding procedure.
Is a fault still present?
- yes → Consult the ABS fault finding procedure.
- no ↓

Disconnect the instrument panel connectors then verify insulation against earth of the "brake fault" warning light control line: track 30 of the 30-track connector, and ABS: track 15 of the 15-track connector.
Is the line insulated?
- no → Repair.
- yes ↓

Replace the instrument panel.

FAULT FINDING - FAULT FINDING CHART

CHART 31	The SERVICE warning light stays on

In ADAC test mode (if ADAC fitted), verify absence of the oil level sensor fault (h).

(h) present → See CHART 15.

(h) absent or no ADAC

Using a diagnostic tool, check for presence of a wiper fault on the UCH.

Result: fault present

yes → Consult the UCH fault finding procedure.

no

Perform the ABS fault finding procedure.

Verify correct operation of the ABS fault warning light when + After ignition switched on.

Is a fault still present?

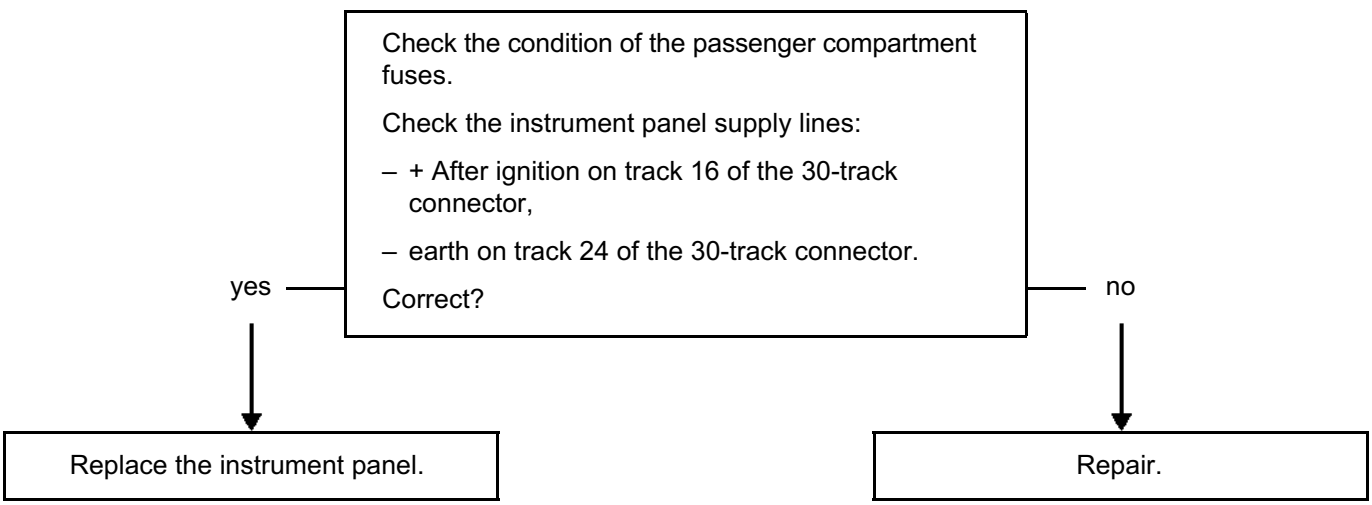
yes → Repair.

no

Replace the instrument panel.

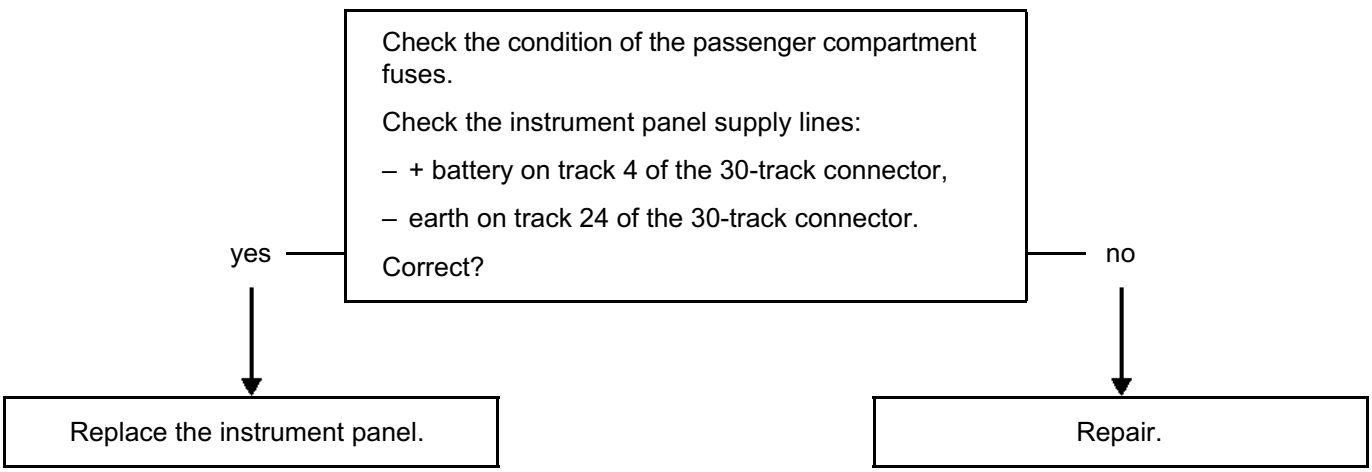
FAULT FINDING - FAULT FINDING CHART

CHART 32	The instrument panel does not function



FAULT FINDING - FAULT FINDING CHART

CHART 33	**ADAC and trip mileage recorder are reset to zero each time the ignition is switched off**



FAULT FINDING - INTRODUCTION

This document contains the general fault finding procedures applicable to all the computers for the UCH functions of all phase 2 CLIO II vehicles, all engine types except F9Q.

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

- The Workshop Repair Manual for the vehicle concerned,
- the electrical circuit diagram of the function for the vehicle concerned,
- the tools listed under Special tooling required.

GENERAL APPROACH TO FAULT FINDING:

- Use of one of the diagnostic tools to identify the system fitted to the vehicle (to read the computer group, the program number, the Vdiag, etc.).

- Locate the fault finding documents corresponding to the system identified.

- Take note of information contained in the introductory sections.

- Read the faults stored in the computer memory and use the Fault interpretation section of the documents.
  Reminder: Each fault is interpreted for a particular type of storage (fault present, fault stored in memory, fault present or stored). The checks defined for handling each fault are therefore only to be performed if the fault shown by the diagnostic tool is interpreted in the document for its type of storage. The storage type should be considered when using the diagnostic tool after the ignition has been switched off and switched back on.
  If a fault is interpreted when it is declared stored, the conditions for application of the fault finding procedure appear in the NOTES box. When these conditions are not satisfied, use the fault finding procedure to check the circuit of the faulty part since the fault is no longer present on the vehicle. Follow the same procedure when a fault is declared stored by the diagnostic tool but is only interpreted in the documentation for a present fault.

- Perform the conformity check (appearance of possible incorrect operations not yet stated by the system's self diagnosis procedure) and apply the associated fault finding strategy according to results.

- Confirm the repair (disappearance of the problem reported by the customer).

- Use the fault finding strategy for each Customer complaint if the problem persists.

SPECIAL TOOLING REQUIRED:

- diagnostic tool (except XR25),
- bornier,
- multimeter.

FAULT FINDING - INTRODUCTION

FUNCTIONS REQUIRED

UCH FEATURES REQUIRED	UCH basic	UCH top of range	wired-in relays
indicators and hazard warning lights	*	*	
interior lighting (timed) with radiofrequency locking	*	*	
supervisor type interior supply	*	*	*
control of audible signal integrated in the instrument panel	*	*	
side light input for lights on reminder buzzer	*	*	
overspeed function **(ARABIA)**	*		
front windscreen wiper low speed	*	*	*
front windscreen wiper high speed	*	*	*
variable timing allowed **(not if rain sensor present)**		*	
fixed pause input for front windscreen wiper	*	*	
rain sensor		*	
light sensor **(except cold countries)**		*	
automatic headlights		*	
rear screen wiper	*	*	*
rear fixed pause input	*	*	
reverse input	*	*	
heated rear screen timing	*	*	*
control of heated rear screen warning light by multiplex system			
control of door and window locking/unlocking	*	*	*
control of electric central door locking by radiofrequency	*	*	
door and window control when vehicle in motion	*	*	
unlocking on impact	*	*	
door locking warning light	*	*	
door open warning light by multiplex system to the instrument panel	*	*	
radiofrequency system (two key remote control)	*	*	
encoded transponder / engine immobiliser	*	*	
diagnostic function	*	*	
wired immobiliser warning light	*	*	
vehicle speed multiplex	*	*	
timed headlight washer **(cold countries) except Denmark**		*	
running lights **(cold countries)**	*	*	
one-touch driver / passenger electric windows	* / -	* / *	*
activation of factory-fitted alarm			
starter relay	*	*	
after ignition relay	*	*	*

FAULT FINDING - INTRODUCTION

UCH functions

WINDSCREEN WIPERS

Variable timing of front windscreen wiper

Only functions with ignition on and if the switch is on intermittent position; it is implemented at low speed.
A 5-position ISO selector (1 to 5), located on the wiper stalk, changes the resistance in series on the control line. The UCH should, as a result of this signal, vary the interval between two wipes, corresponding to the pause time between the two wipes.

Wiper interval as a result of the ring position.

Ring position	Interval between wipes
1 slow interval	14 seconds
2	10 seconds
3	6 seconds
4	3 seconds
5 fast interval	1 second

Timing of rear screen wiper

The rear screen wiper timer function is only operational with the ignition on and if the wiper stalk is in the "rear timing" position; the interval between two wipes is equal to 5 seconds.

Rear screen wiper timing is triggered by reverse gear.

The presence of + after ignition feed with reverse gear engaged and the front wiper control set to low or high speed or intermittent is equivalent to a rear wiper timing signal.
The absence of any one of these conditions will stop the timing.

The UCH remains in rear wiper timing mode for as long as reverse gear is selected.

Rain sensor

The rain sensor allows automatic operation of the wipers and the control of the wiper speeds as a result of the quantity of water on the windscreen.
A series connection controls the rain and light sensor. This sensor is implanted in the windscreen.

The sensor is activated by setting the wiper stalk to intermittent on position.
If the wiper stalk is already in the intermittent on position when the ignition is switched on, the rain sensor is blocked. The function is released again by resetting the wiper stalk to intermittent on position.
On the other hand, if the low speed or high speed commands are present when the ignition is switched on, these commands are accepted.

FAULT FINDING - INTRODUCTION

LIGHTING

Headlight washers

Functions for cold zones with the top of range UCH: the unit should ensure the timing of the headlight washer. It should only control them if the lights stalk is in the dipped headlights or main beam headlight position and if a headlight washer command is activated for a period of more than 0.5 seconds. The activation period of the headlight washer pump relay is 800 milliseconds. The pump should be activated in one direction then the other, alternate control.

Running lights

Functions for cold zones with the top of range UCH: When the lighting stalk is in the "park" position, the appearance of + after ignition feed implies illumination of the side lights and dipped headlights. The other functions are identical to the French version.

Light sensor

The light sensor enables the dipped headlights to be switched on as a reaction to the amount of light.

The branch is shared with the rain sensor.

It is possible to activate or deactivate the function by means of the lights stalk.

Two cycles of switching the side lights on and off in less than 4 seconds confirm the initiation or cancellation of the function by an audible signal.

The lights are only switched on automatically with the engine running.

FAULT FINDING - INTRODUCTION

Contacts and connections

The connectors, three in all, are as follows:

Black 40-track connector P201:

PIN	Signal
1	Side light relay output
2	Dipped headlight input
3	One-touch window lowering, passenger side, input
4	One-touch window raising, passenger side, input
5	VERLOG LED output
6	Windscreen wiper timing input
7	+battery
8	Transmitter line input
9	CAN L
10	CAN H
11	Relay code output
12	Main beam input
13	Rain sensor series line
14	Starter motor relay output
15	Central door locking LED output
16	Rear park position contact input
17	Front park position contact input
18	Diagnostic line K
19	CAN L
20	CAN H
21	Front high speed wiper input
22	Front low speed wiper input
23	Relay plate
24	Rear screen washer input
25	Front windscreen washer input
26	Side light input
27	Left side indicators input
28	Right side indicators input
29	Hazard light input
30	Rear door switch input
31	Hazard indicator light output
32	Reverse gear switch input
33	+ after ignition
34	Rear screen wiper input
35	Heated rear screen input
36	Central door locking input
37	One-touch window lowering, driver's side, input
38	One-touch window raising, driver's side, input
39	Luggage compartment door switch input
40	Front door switch input

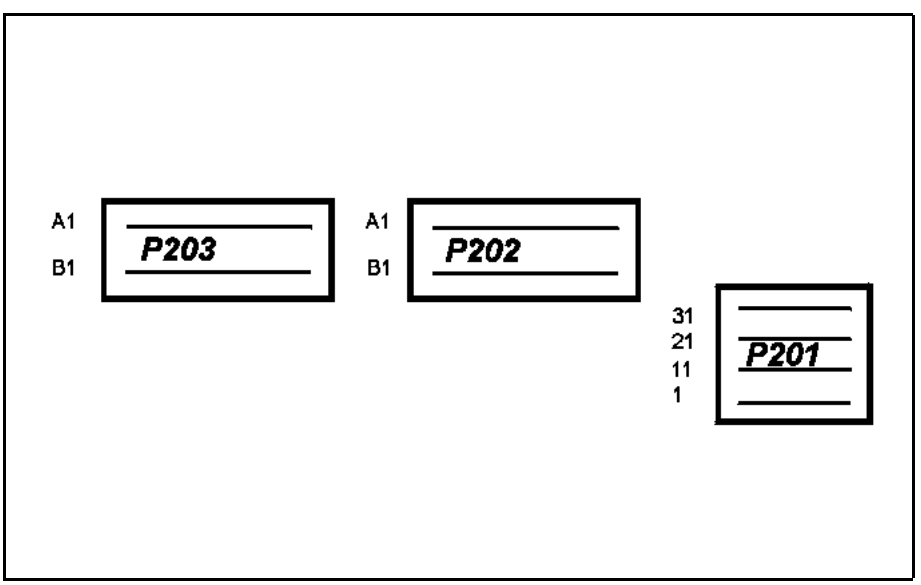
FAULT FINDING - INTRODUCTION

Crystal 15 track connector P 202:

PIN	Signal
A1	Front windscreen wiper high speed output
A2	+ after ignition supply for rear screen wiper
A3	+ battery feed for lighting system
A4	+ after ignition supply for windscreen wiper
A5	Headlight washer relay pump output 1
A6	+ battery feed for timed supply
A7	Headlight washer relay pump output 2
A8	Courtesy lights output
A9	Footwell light output
B1	One-touch window raising, passenger side, output
B2	One-touch window lowering, driver's side, output
B3	+ battery feed for one-touch window control, driver's side
B4	Earth
B5	Driver's one-touch window raising output
B6	Earth

Black 15 track connector P203:

PIN	Signal
A1	+ battery feed for indicators
A2	Left hand indicator output
A3	Right hand indicator output
A4	Central door locking closing output
A5	Main beam output
A6	Central door locking opening output
A7	+ battery feed for central door locking
A8	Rear screen wiper output
A9	Front wiper low speed output
B1	+ after ignition supply for LARC
B2 B	LARC output
B3	Electric window input
B4	Electric window output + after ignition feed output
B5	One-touch window lowering, passenger side, output
B6	+ battery feed for one-touch window control, passenger side



FAULT FINDING - FAULT INTERPRETATION

DF039 **PRESENT**	UCH INTERNAL ELECTRONIC FAULT

NOTES	Fault declared present after ignition has been switched off. Special features: if there is a fault stored check that whether there are any other faults present and clear them.

Replace the UCH.

AFTER REPAIR	Deal with any other possible faults. Clear the fault memory.

N° PROGRAMME: 3.9
AND ABOVE VDIAG No: 04

FAULT FINDING - FAULT INTERPRETATION

DF119 PRESENT OR STORED	WINDSCREEN WIPER PARK POSITION

NOTES	Condition for applying the fault finding strategy to the stored fault. The fault is declared as present following operation of the windscreen wiper. Intermittent operation of the windscreen wipers at low speed (timing not being followed).

Check whether the windscreen wiper or rear screen wiper park position status **ET005 is active** every time the wiper arm reaches the idle position then switches to inactive.

Check the connection and condition of the UCH connectors and replace the connector if necessary.

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

UCH P201 connector **track 17** → **track 1** windscreen wiper motor
earth → **track 5** windscreen wiper motor

Repair if necessary.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

PROGRAM No.: 3.9
AND 4.0 VDIAG No.: 04

FAULT FINDING - FAULT INTERPRETATION

DF120 PRESENT OR STORED	REAR SCREEN WIPER PARK POSITION

NOTES	Condition for applying the fault finding strategy to the stored fault. The fault is declared as present following operation of the windscreen wiper.

Check whether the windscreen wiper or rear screen wiper park position status **ET006 is active** every time the wiper arm reaches the idle position then switches to inactive.

Check the connection and condition of the UCH connectors and replace the connector if necessary.

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

UCH P201 40-track connector **track 16** → **track 2** rear screen wiper motor
earth → **track 3** rear screen wiper motor

Repair if necessary.

Check the motor.
Check the wiper attachment.
If necessary replace the wiper motor.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

FAULT FINDING - FAULT INTERPRETATION

DF128 PRESENT OR STORED	VEHICLE SPEED UNAVAILABLE

NOTES	None. Special note: in the event of a stored fault, check that there are no other faults present and clear the fault memory.

Is the vehicle speed information present on the instrument panel?

YES	Perform a fault finding procedure on the multiplex network, see section 88 "Multiplex network cabling".
NO	Perform a fault finding procedure on the air bag circuit. Repair if necessary.
	Perform a fault finding procedure on the ABS circuit and the instrument panel. Repair if necessary.

AFTER REPAIR	Deal with any other possible faults. Clear the fault memory.

FAULT FINDING - FAULT INTERPRETATION

DF130 PRESENT OR STORED	INCORRECT INSTRUMENT PANEL CONFIGURATION

NOTES	The fault is declared as present when the ignition is switched on. Special note: in the event of a stored fault, check that there are no other faults present and clear the fault memory.

Carry out an instrument panel configuration (see instrument panel information, section 83).

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

FAULT FINDING - FAULT INTERPRETATION

DF131 PRESENT OR STORED	ELECTRIC DOOR LOCK BUTTON CIRCUIT CC.0 : Short circuit to earth

NOTES	Application of the fault finding procedure to the stored fault. Fault declared as present on pressing the door locking button.

Verify that the locking button status **ET038 is active** when door locking is operated.
Verify that the locking button status **ET039 is active** when door unlocking is operated.

Check the connection and condition of the P201 40-track connector of the UCH and replace it if necessary.

Check the continuity and insulation of the following connections:

UCH P201 40-track connector **track 36** → **track B1** electric door locking button
earth → **track A2** electric door locking button

Repair if necessary.

If the problem persists, replace the UCH.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

FAULT FINDING - FAULT INTERPRETATION

DF132 PRESENT OR STORED	MAIN BEAM HEADLIGHT RELAY CONTROL CIRCUIT CC.1 : Short-circuit to + 12V

NOTES	**Vehicle fitted with running lights, rain sensor or light sensor** Condition for applying the fault finding strategy to the stored fault. The fault is declared as present following operation of the main beam headlights.

With the ignition on, verify the presence of +12 V at terminals **B3** and **B1** of the main running light relay.
If the relay has no supply, check the presence of +12 V at terminals **A3** and **A1** of the side running light relay.
If there is no supply to **track A3** check the following connection:

track A3 ⟶ **fuse box**

(See wiring diagram of the vehicle concerned).

Repair if necessary.

If the running light main relay is properly supplied, swap the running light main relay with the side running light relay. If the fault changes to stored, replace the relay.

If the fault is still present, check the insulation and continuity of the following connection:

track B2 ⟶ **track 5** UCH P203 15-track connector

Repair if necessary.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

FAULT FINDING - FAULT INTERPRETATION

DF133 PRESENT OR STORED	DIPPED BEAM HEADLIGHTS RELAY CONTROL CIRCUIT CC.1 : Short-circuit to + 12V

NOTES	**Vehicle fitted with running lights, rain sensor or light sensor** Condition for applying the fault finding strategy to the stored fault. The fault is declared as present following operation of the main beam headlights.

With the ignition on, verify the presence of +12 V at terminals **A3** and **A1** of the dipped running light relay.
If there is no supply to **track A3** check the following connection:

track A3 ⟶ **fuse box**

(See wiring diagram of the vehicle concerned).

Repair if necessary.

If the dipped running light relay is properly supplied, swap the dipped relay with the side running light relay. If the fault changes to stored, replace the relay.
If the fault is still present, check the insulation and continuity of the following connection:

track A2 ⟶ **track 11** UCH P201 40-track connector

Repair if necessary.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

FAULT FINDING - FAULT INTERPRETATION

DF134 PRESENT OR STORED	SIDE LIGHT RELAY CONTROL CIRCUIT CC.1 : Short-circuit to + 12V

NOTES	**Vehicle fitted with running lights, rain sensor or light sensor** Condition for applying the fault finding strategy to the stored fault. The fault is declared as present following operation of the side light control.

With the ignition on, verify the presence of +12 V at terminals **A3** and **A1** of the side running light relay.
If there is no supply to **track A3** check the following connection:

track A3 ⟶ **fuse box**

(See wiring diagram of the vehicle concerned).

Repair if necessary.

If the side running light relay is properly supplied, swap the side light relay with the dipped beam running light relay. If the fault changes to stored, replace the relay.
If the fault is still present, check the insulation and continuity of the following connection:

track A2 ⟶ **track 1** UCH P201 40-track connector

Repair if necessary.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

FAULT FINDING - FAULT INTERPRETATION

DF135 PRESENT OR STORED	HEADLIGHT WASHER 1 RELAY CONTROL CIRCUIT CC.1 : Short-circuit to + 12V

NOTES	Vehicle fitted with running lights or discharge bulbs. Application of the fault finding procedure to the stored fault. The fault is declared as present with the lighting stalk in dipped or main beam position during operation of the windscreen washer for more than 0.5 seconds.

Check the condition of the 20A direction indicator supply fuse (F33).

Check the connection and condition of the UCH P202 15-track connector and replace it if necessary.

Check the continuity and insulation of the following connections:

P202 15-track connector **track A5** → **track B2** headlight washer 1 relay
fuse box **(F33) 20A** → **tracks B5 and B1** headlight washer relay

Repair if necessary.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

FAULT FINDING - FAULT INTERPRETATION

DF136 PRESENT OR STORED	HEADLIGHT WASHER 2 RELAY CONTROL CIRCUIT CC.1 : Short-circuit to + 12V

NOTES	Vehicle fitted with running lights or discharge bulbs. Application of the fault finding procedure to the stored fault. The fault is declared as present with the lighting stalk in dipped or main beam position during operation of the windscreen washer for more than 0.5 seconds.

Check the condition of the 20A direction indicator supply fuse (F33).

Check the connection and condition of the UCH P202 15-track connector and replace it if necessary.

Check the continuity and insulation of the following connections:

P202 15-track connector **track A7** → **track A2** headlight washer 2 relay
fuse box **(F33) 20A** → **tracks A5 and A1** headlight washer relay

Repair if necessary.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

FAULT FINDING - FAULT INTERPRETATION

DF138 PRESENT OR STORED	RAIN SENSOR

NOTES	Application of the fault finding procedure to the stored fault. Fault declared present with wiper stalk in intermittent position. **Special note:**: service warning light (orange) comes on if the UCH does not detect the rain sensor. If the rain sensor is faulty, a fixed interval of 5 seconds is applied at low speed.

Check the insulation, continuity and absence of interference resistance of the connections between:

fuse box **F3 (15A)**	→	**track 1** rain sensor
earth	→	**track 2** rain sensor
UCH P201 40 track connector **track 13**	→	**track 3** rain sensor

Repair if necessary.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

FAULT FINDING - FAULT INTERPRETATION

DF145 PRESENT OR STORED	DOOR AND WINDOW LOCKING WARNING LIGHT CIRCUIT CC.0 : short circuit to earth CC.1 : short circuit to +12V

NOTES	Condition for applying the fault finding strategy on the stored fault. The fault is declared present following the warning light command.

Check that the door and window locking status indicator light **ET217 comes on** when the central door locking is actuated.

Check the connections and condition of the P201 40 track connector of the UCH and replace the connector if necessary.

Check the insulation and continuity of the connections:

UCH P201 40 track connector **track 15** → **track B3** electric door lock button
passenger compartment fuse box → **track B2** electric door lock button

Repair if necessary.

AFTER REPAIR	Follow the instructions. Deal with any other possible faults. Clear the fault memory.

FAULT FINDING - FAULT INTERPRETATION

DF146 PRESENT OR STORED	INDICATOR SUPPLY

NOTES	None.

Check the condition of the 15A fuse (F22) for the indicator supply.
Check the connections and condition of the P203 15 track connector of the UCH and replace the connector if necessary.
Check the insulation and continuity of the connection between: **15A** fuse box **(F22)** ⟶ **track A1** P203 15 track connector Repair if necessary.

AFTER REPAIR	Deal with any other possible faults. Clear the fault memory.

FAULT FINDING - CHECKING CONFORMITY

NOTES	Only perform this conformity check after a complete check with the diagnostic tool. The values indicated in this conformity check are given as examples. Test conditions: **engine stopped, ignition on.**

Order	Function	Parameter or status Check or action	Display and notes	Fault finding
1	Power supply	**PR002:** battery voltage	**12< X < 12.5 volts**	**if there is a problem:** carry out a fault finding test on the charge circuit.
		ET002: + 12V after ignition feed	**PRESENT**	**in the event of a problem:** consult the fault finding procedure for status **ET002**
		ET001: + 12V accessories	**PRESENT**	**None.**
		ET242: engine running	**NO**	**none**
2	Lighting	**ET020:** side light control	**ACTIVE** during side lights control	**if INACTIVE:** consult the fault finding procedure for status **ET020**
		ET029: right indicator control	**ACTIVE** during right indicator control	**if INACTIVE:** consult the fault finding procedure for status **ET029**
		ET028: left indicator control	**ACTIVE** during left indicator control	**if INACTIVE:** consult the fault finding procedure for status **ET028**
		ET022: hazard warning lights control	**ACTIVE** during hazard lights control	**if INACTIVE:** consult the fault finding procedure for status **ET022**
		ET231: low light detection	**NO**	**in the event of a problem:** consult the fault finding procedure for status **ET231**

FAULT FINDING - CHECKING CONFORMITY

NOTES	Only perform this conformity check after a complete check with the diagnostic tool. The values indicated in this conformity check are given as examples. Test conditions**: engine stopped, ignition on.**

Order	Function	Parameter or status Check or action	Display and notes	Fault finding
3	Wipers	**ET032:** front windscreen washer control	**ACTIVE** during front windscreen washer control	**if INACTIVE:** consult the fault finding procedure for status **ET032**
		ET035: windscreen wiper timing	**ACTIVE** with windscreen wiper control in intermittent position	**if INACTIVE:** consult the fault finding procedure for status **ET035**
		ET005: windscreen wiper fixed pause	**ACTIVE** with windscreen wiper control in intermittent position during each pause of the windscreen wipers	**in the event of a problem:** perform the **fault finding procedure** on the windscreen wiper fixed pause **DF119**
		ET051: windscreen wiper low speed control	**ACTIVE** with windscreen wiper control in low speed position	**if INACTIVE:** consult the fault finding procedure for status **ET051**
		ET052: windscreen wiper high speed control	**ACTIVE** with windscreen wiper control in high speed position	**if INACTIVE:** consult the fault finding procedure for status **ET052**

FAULT FINDING - CHECKING CONFORMITY

NOTES	Only perform this conformity check after a complete check with the diagnostic tool. The values indicated in this conformity check are given as examples. Test conditions: **engine stopped, ignition on.**

Order	Function	Parameter or status Check or action	Display and notes	Fault finding
3	Wipers (continued)	**ET031:** rear screen washer control	**ACTIVE** during rear screen washer control	**if INACTIVE:** consult the fault finding procedure for status **ET031**
		ET036: rear screen wiper intermittent facility	**ACTIVE**with rear screen wiper control in intermittent position	**if INACTIVE:** consult the fault finding procedure for status **ET036**
4	Opening elements	**ET192:** front door	**OPEN** when front door is open	**in the event of a problem:** consult the fault finding procedure for status **ET192**
		ET111: rear door	**OPEN** when rear door is open	**in the event of a problem:** consult the fault finding procedure for status **ET111**
		ET240: luggage compartment open	**YES** when luggage compartment is open	**in the event of a problem:** consult the fault finding procedure for status **ET240**
		ET217: door and window locking warning light	**ON** when opening elements are locked **OFF** when opening elements are unlocked	**in the event of a problem:** consult the fault finding procedure for status **ET217**

FAULT FINDING - CHECKING CONFORMITY

NOTES	Only perform this conformity check after a complete check with the diagnostic tool. The values indicated in this conformity check are given as examples. Test conditions: **engine stopped, ignition on.**

Order	Function	Parameter or status Check or action	Display and notes	Fault finding
4	Opening elements (continued)	**ET010:** valid radiofrequency key	**YES** status during locking or unlocking of the vehicle by remote control.	**in the event of a problem:** consult the fault finding procedure for status **ET010**
		ET193: RF frame received	**YES** status during locking or unlocking of the vehicle by remote control.	**in the event of a problem:** consult the fault finding procedure for status **ET193**
		ET012: source of last opening element command	**TRF** during locking with the remote control **EDL** during locking using the central door locking switch	None
		ET105: last opening element command	**UNLOCKING** **LOCKING**	None
5	Speed	**PR001:** vehicle speed	**X in Km/ h**	**in the event of a problem:** perform the **fault finding procedure** on the incorrect vehicle speed fault **DF129**
6	Switch	**ET008:** heated rear screen button	**ACTIVATED** when the rear screen heater is activated	**in the event of a problem:** consult the fault finding procedure for status **ET008**
		ET245: driver's window raiser push button	**LOWERING** **RAISING** **HALTED**	**in the event of a problem:** consult the fault finding procedure for status **ET245**

FAULT FINDING - CHECKING CONFORMITY

NOTES	Only perform this conformity check after a complete check with the diagnostic tool. The values indicated in this conformity check are given as examples. Test conditions: **engine stopped, ignition on.**

Order	Function	Parameter or status Check or action	Display and notes	Fault finding
6	Switch (continued)	**ET244:** passenger window raiser push button	**LOWERING** **RAISING** **HALTED**	**in the event of a problem:** consult the fault finding procedure for status **ET244**
		ET141: reverse gear engaged	**YES** **NO**	**in the event of a problem:** consult the fault finding procedure for status **ET141**

FAULT FINDING -STATUS INTERPRETATION

ET002	+12V after ignition feed

ET002 INACTIVE, ignition on

Check the passenger compartment fuse.
With the ignition on, use a multimeter to check the presence of a + 12 V supply at fuse port.
Repair if necessary.

With the ignition on, use a multimeter to check the presence of a + 12 V supply on track 33 of the 40 track connector of the UCH.
If there is a voltage present, replace the UCH.

If there is no voltage, ensure the continuity and insulation to earth between **track 33 of P201 40 track connector of the UCH and fuse F21 (SA) of the passenger compartment fuse box.**
Repair if necessary.

ET002 ACTIVE, ignition off

With the ignition off, use a multimeter to check the absence of a + 12 V supply at passenger compartment fuse port.
Repair if necessary.

If the is no voltage, replace the UCH.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET008	HEATED REAR SCREEN BUTTON

NOTES	There must be no faults present or stored. Switch on the ignition. Activate the heated rear screen and check that the heated rear screen status button is **ACTIVATED.**

ET008 HALT button activated

Check fuse F30 (30A) of the heated rear screen. Change it if necessary.
Check the connection and status of the connector for the heated screen button. Change it if necessary.
With the button pressed, use a multimeter to check the presence of an earth on **track 35** of P201 40 track connector of the UCH. Repair if necessary.
If there is no voltage, ensure the continuity and insulation between **track 35** of the P201 40 track connector and the heated screen button. Repair if necessary.
Replace the heated screen button.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET010	VALID RADIOFREQUENCY KEY

NOTES	Check that there are no faults present. Status declared is **YES** when the remote control is pressed. If the status declared is **NO** switch ignition off and on, and retry with another vehicle key.

If ET010 stays at NO: when the remote control is pressed

Resynchronise the keys switching the ignition on (+ after ignition feed).

If the problem persists and if **ET193 RF FRAME RECEIVED** status is shown as **YES**, replace the keys.
If the problem persists, replace the UCH.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET020	SIDE LIGHT CONTROL

NOTES	**Only on top of range UCH.** There must be no faults present or stored. Activate the side lights control. The status shown must be **ACTIVE.**

ET020 INACTIVE	Check the connection and condition of the light stalk connector. Change it if necessary.
	Check the connection and condition of the P201 40-track connector of the UCH. Replace the connector if necessary.
	Ensure the continuity and insulation of the connections between: UCH P201 40 track connector **track 26** ⟶ lights stalk **track B1** Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING -STATUS INTERPRETATION

ET022	HAZARD WARNING LIGHTS CONTROL

NOTES	There must be no faults present or stored. Activate the hazard warning light control. The status shown must be **ACTIVE.**

ET022 INACTIVE	Check the F22 **(15A)** fuse for the indicator supply. Change it if necessary.
	Check the connection and condition of the connector of the hazard warning light switch. Replace the connector if necessary.
	Ensure the continuity of the connections: hazard warning light switch **track 2** ⟶ **earth** Repair if necessary.
	Check the insulation, continuity and interference resistance of the connection: hazard warning light switch **track 3** ⟶ **track 29** of the UCH P201 40 track connector Repair if necessary.
	Check the operation of the hazard warning lights control.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET023	DIPPED HEADLIGHTS CONTROL

NOTES	**Only on top of range UCH.** There must be no faults present or stored. Activate the dipped headlights control. The status shown must be **ACTIVE.**

ET023 INACTIVE	Check the connection and condition of the light stalk connector. Change it if necessary.
	Check the connection and condition of the P201 40-track connector of the UCH. Change it if necessary.
	Ensure the continuity and insulation of the connections between: UCH P201 40 track connector **track 2** ⟶ lights stalk **track B4** Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET024	MAIN BEAM HEADLIGHT CONTROL

NOTES	**Only on top-of-the-range UCH.** There must be no present or stored faults. Operate the side light control. The status must be **ACTIVE.**

ET024 INACTIVE	Check the connection and condition of the lighting stalk connector. Replace it if necessary.
	Check the connection and condition of the UCH P201 40-track connector. Replace it if necessary.
	Ensure the continuity and insulation of the connection between: UCH P201 40-track connector **track 12** ⟶ stalk **track B7** Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET028 **ET029**	LEFT DIRECTION INDICATOR CONTROL RIGHT DIRECTION INDICATOR CONTROL

NOTES	There must be no present or stored faults. Switch on the ignition. Operate the left or right direction indicator. The status must be **ACTIVE.**

ET028 **or** **ET029** **INACTIVE**	Check the F22 direction indicator supply fuse (15A). Replace it if necessary.
	Check the connection and condition of the indicator stalk connector. Replace it if necessary.
	Ensure the continuity of the connection between: direction indicator stalk **track A6** ⟶ **earth** Repair if necessary.
	Disconnect the UCH P201 40-track connector while right or left indicator is operating. Ensure the continuity and insulation of the connections between: right indicator stalk **track A5** ⟶ **track 28** UCH P201 40-track connector left indicator stalk **track A7** ⟶ **track 27** UCH P201 40-track connector Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET031	REAR SCREEN WASHER CONTROL

NOTES	There must be no present or stored faults. Switch on the ignition. Put the windscreen wiper stalk in the rear screen wash position. The status must be **ACTIVE.**

ET031 **INACTIVE**	Check the **F13** fuse **(20A).** Replace it if necessary.
	Check the connection and condition of the windscreen wiper stalk connector. Replace it if necessary.
	Ensure the continuity and insulation of the connections between: UCH P201 40-track connector **track 24** → wiper stalk **track B1** **earth** → wiper stalk **track B5** **+ after ignition feed** → wiper stalk **tracks B4** and **A7** Repair if necessary.
	Check the correct operation of the washer pump, in particular the continuity and insulation of the following connections: pump **track 2** → **track A4** wiper stalk pump **track 1** → **track B1** wiper stalk Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET032	WINDSCREEN WASH CONTROL

NOTES	There must be no present or stored faults. Switch on the ignition. Put the windscreen wiper stalk in the rear screen wash position. The status must be **ACTIVE.**

ET032 INACTIVE	Check the **F4 fuse (20A).** Replace it if necessary.
	Check the connection and condition of the windscreen wiper stalk connector. Replace it if necessary.
	Ensure the continuity and insulation of the connections between: UCH P201 40-track connector **track 25** → wiper stalk **track A4** **earth** → wiper stalk **track B5** **+ after ignition feed** → wiper stalk **tracks B4** and **A7** Repair if necessary.
	Check the correct operation of the washer pump, in particular the continuity and insulation of the following connections: pump **track 2** → **track A4** wiper stalk pump **track 1** → **track B1** wiper stalk Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET034	POSITION OF PASSENGER SIDE ELECTRIC WINDOW BUTTON

NOTES	**Only on top-of-the-range UCH.** There must be no present or stored faults. Switch on the ignition. When the raise button is pressed the status must be **RAISE.** When the lower button is pressed the status must be **LOWER.** When there is no operation of the electric window button the status must be **RELEASED.**

Check the connection and condition of the UCH P201 40-track connector.
Replace it if necessary.

Check the connection and condition of the electric window switch connector.
Replace it if necessary.

Ensure the continuity and insulation of the connections between:

UCH 40-track connector **track 3**	→	**track A3** electric window switch connector
UCH 40-track connector **track 4**	→	**track B1** electric window switch connector
earth	→	**track A2** electric window switch connector

Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET035	WINDSCREEN WIPER INTERMITTENT WIPE

NOTES	There must be no present or stored faults. Switch on the ignition. Put the wiper stalk in the intermittent wipe position. The status must be **ACTIVE.**

ET035 **INACTIVE**	Check the **F4 fuse (20A).** Replace it if necessary.
	Check the connection and condition of the windscreen wiper stalk connector. Replace it if necessary.
	Ensure the continuity and insulation of the connections between: UCH P201 40-track connector **track 6** → wiper stalk **track A6** **earth** → wiper stalk **track B5** **+ after ignition feed** → wiper stalk **tracks B4** and **A7** Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET036	REAR SCREEN WIPER INTERMITTENT WIPE

NOTES	There must be no present or stored faults. Switch on the ignition. Engage reverse gear and operate the wiper (low speed, high speed or intermittent wipe). The status must be **ACTIVE.**

ET036 INACTIVE	Check the **F13 fuse (20A)**. Replace it if necessary.
	Verify + after ignition feed to the stalk at track **A7** and **B4.** Repair if necessary.
	Ensure the continuity and insulation of the connections between: UCH P201 40-track connector **track 34** → stalk **track B2** UCH P201 40-track connector **track 16** → rear screen wiper motor **track 2** Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET051	WINDSCREEN WIPER LOW SPEED CONTROL

NOTES	There must be no present or stored faults. Switch on the ignition. Switch the wiper stalk to the low speed position: the status should be **ACTIVE**

ET051 **INACTIVE**	Check the **F4 fuse (20A).** Repair if necessary.
	Verify + after ignition feed to the stalk at tracks **A7** and **B4.** Repair if necessary.
	Ensure the continuity and insulation of the connection between: UCH P201 40-track connector **track 22** ⟶ stalk **track A2** Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET052	WINDSCREEN WIPER HIGH SPEED CONTROL

NOTES	There must be no present or stored faults. Switch on the ignition. Switch the wiper stalk to the high speed position: the status should be **ACTIVE.**

ET052 **INACTIVE**	Check the **F4 fuse (20A).** Repair if necessary.
	Verify + after ignition feed to the stalk at tracks **A7** and **B4.** Repair if necessary.
	Ensure the continuity and insulation of the connection between: UCH P201 40-track connector **track 21** ⟶ stalk **track A1** Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET141	REVERSE GEAR ENGAGED

NOTES	There must be no present or stored faults. Switch on the ignition. With reverse gear engaged the status must be **ACTIVE.**

Manual gearbox	Check the connection and condition of the UCH P201 40-track connector. Replace it if necessary.
	Ensure the continuity and insulation of the connection between: UCH P201 40-track connector **track 32** ⟶ gear lever switch Repair if necessary.
Automatic gearbox	Perform a fault finding procedure on the multiplex network, see section 88 "Multiplex network cabling".

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET192 **ET111**	FRONT DOORS REAR DOORS

NOTES	Verify that no faults are present. Open the front and rear doors.

Verify that for each open door the corresponding status is ACTIVE or for each closed door the corresponding status is INACTIVE.
Check the connection of the door harness and the passenger compartment harness and the continuity and insulation between: the lock concerned and the UCH the lock concerned and earth **Repair if necessary** (see wiring diagram of the vehicle concerned).
Open the door, disconnect the lock and close the lock. Check the continuity between the earth input track and the UCH track. Pull the handle to open the lock and check that there is no longer continuity between the earth input track and the UCH track. In the event of a fault, replace the lock.
Check that the lock engages correctly in the striker plate.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET193	RF FRAME RECEIVED

NOTES	Verify that no faults are present. The status is declared as **YES** when the remote control unit is operated. If the status is declared as **NO**, switch the + after ignition feed off, then on again, and try again with another key belonging to the vehicle.

ET193 NO: when the remote control unit is operated.

Press the remote control button of another vehicle in the same family (CLIO II 07/01> or TRAFIC 09/01>) or blank key: Check that the status changes to **YES** when it is pressed.
if **status YES**, replace the remote control of the vehicle being serviced.
if **status NO**, replace **the UCH.**

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET217	DOOR LOCK WARNING LIGHT

NOTES	There must be no present or stored faults. Get inside the vehicle and lock the doors using the electric door lock button.

Verify that when the electric door lock button is pressed that the corresponding status is ON; if the status remains OFF, check the insulation, continuity and absence of interference resistance of the following connections:

UCH P201 40-track connector **track 15** → **track B3** door locking button
fuse box **F21 (5A)** → **track B2** door locking button

Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET231	TWILIGHT SENSOR

NOTES	**Only on top-of-the-range UCH.** There must be no present or stored faults. **The rain and twilight sensors are not separable.** Switch on the ignition. When the light level is low the status must be **YES.** Switch a light on in front of the twilight sensor: the status must change to **NO.**

Check the **F3 (15A)** fuse.
Repair if necessary.

Check the operation of the rain sensor by pouring water in front of it, with automatic intermittent wipe activated.
If the windscreen wipers come on, replace the sensor.

Check + after ignition feed to the rain sensor on track **A2.**
Repair if necessary.

Ensure the continuity and insulation of the connections between:

UCH P201 40-track connector **track 13** → rain sensor **track B2**
earth → rain sensor **track A3**

Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET240	LUGGAGE COMPARTMENT OPEN

NOTES	There must be no present or stored faults. Open the luggage compartment, the 'luggage compartment open' status must be **YES.** Close the luggage compartment, the 'luggage compartment open' status must be **NO.**

Verify that for each open door the corresponding status is ACTIVE or for each closed door the corresponding status is INACTIVE.

Check the connection of the rear harness and the passenger compartment harness.
Check the connection of the luggage compartment harness and the rear harness and the continuity and insulation between:

the luggage compartment lock **track 1** → **track 39** UCH P201 40-track connector
the luggage compartment lock **track 2** → **earth**

Repair if necessary (see wiring diagram of the vehicle concerned).

Open the luggage compartment, disconnect the lock and close it.
Verify continuity between **track 2** earth input and **track 1** of the UCH.
Pull the handle to open the lock and check that there is no longer continuity between the earth input track and the UCH track.
In the event of a fault, replace the lock.

Check that the lock engages correctly in the striker plate.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - STATUS INTERPRETATION

ET245	POSITION OF DRIVER SIDE ELECTRIC WINDOW BUTTON

NOTES	There must be no present or stored faults. Switch on the ignition. When the raise button is pressed the status must be **RAISE.** When the lower button is pressed the status must be **LOWER.** When there is no operation of the electric window button the status must be **RELEASED.**

Check the connection and condition of the electric window switch connector.
Replace it if necessary.

Check the connection and condition of the UCH P201 40-track connector.
Replace it if necessary.

Ensure the continuity and insulation of the connections between:

UCH 40-track connector **track 37**	→	**track 5** electric window switch white connector
UCH 40-track connector **track 38**	→	**track 6** electric window switch black connector
earth	→	**track 4** electric window switch black connector

Repair if necessary.

AFTER REPAIR	Repeat the fault finding procedure on the system. Deal with any other possible faults. Erase the stored faults.

FAULT FINDING - CUSTOMER COMPLAINTS

NOTES	**These customer complaints should only be investigated after a complete check has been run using the diagnostic tool.**

No communication with the UCH — **CHART 1**

Lighting

- **indicators do not operate** — **CHART 2**
- **side lights do not operate** — **CHART 3**
- **dipped headlights do not operate** — **CHART 4**
- **main beam headlights do not operate** — **CHART 5**
- **front fog lights do not operate** — **CHART 6**
- **rear fog lights do not operate** — **CHART 7**

Wipers, windscreen washers, de-icing

- **low speed front windscreen wipers do not operate** — **CHART 8**
- **high speed front windscreen wipers do not operate** — **CHART 9**
- **rear screen wiper does not operate** — **CHART 10**
- **heated rear screen does not operate** — **CHART 11**

FAULT FINDING - FAULT FINDING CHARTS

CHART 1	NO COMMUNICATION WITH THE UCH

NOTES	None.

Try the diagnostic tool on another vehicle.

Check:
– the connection between the diagnostic tool and the diagnostic socket (wiring in good condition),
– the engine and passenger compartment fuses.

Check for the presence of **+ 12 volts before ignition** on **track 16**, **+ 12 volts after ignition** on **track 1** and an **earth** on **tracks 4 and 5** of the diagnostic socket.
Repair if necessary.

Check the computer connections.

Connect the bornier and check the **insulation, continuity and interference resistance of the connections between**:

UCH P201 40 track connector **track 7** → fuse box
UCH P202 15 track connector **track B6** → **earth**
UCH P201 40 track connector **track 18** → **track 7** of the diagnostic socket (line K)

Repair if necessary.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 2	INDICATORS DO NOT OPERATE

NOTES	**Only consult this customer complaint after a complete check using the diagnostic tool.** **Check the bulbs.**

Check the condition of the fuses and change them if necessary.

Activate the hazard warning light control and check that the status signal **ET022 hazard warning lights control** is active; if not refer to the section on how to deal with this status signal.
Activate the RH or LH indicator and check that the RH and LH indicator control status signals **ET228** and **ET229 are active.**
If not, refer to the section on how to deal with these status signals.

Check the condition of the P203 15 track connector of the UCH.
Change it if necessary.

Ensure the continuity of the following connections:

UCH P203 15 track connector **track A2** → **LH indicator**
UCH P203 15 track connector **track A3** → **RH indicator**

Repair if necessary.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 3	SIDE LIGHTS DO NOT OPERATE

NOTES	**Only consult this customer complaint after a complete check using the diagnostic tool.** **Check the bulbs.** **Check the type of UCH installed in the vehicle (relayed or non-relayed lighting).**

Top of range UCH with relayed lighting

Activate the side lights control and check that the status signal **ET020 side lights control** is active; if not refer to the section on how to deal with this status signal.

Check fuses **F26 (10A) and F27 (10A)** for the side lights supply.
Change them, if necessary.

Check the continuity of the connection between:

lights stalk **track B1** → **track 26** of the UCH P201 40 track connector

Return to service condition if necessary

Activate control **AC100 side lights relay.**
Check that the relay is heard to operate correctly.

YES

Ensure the continuity of the connections between:

side light "running light" relay **track A5** → **fuse box** F26 and F27
fuse box **F26 and F27** → **side light harness**

See wiring diagram for the vehicle concerned.

Repair if necessary.

NO

Ensure the continuity of the connections:

UCH P201 40 track connector **track 1** → **track A2** side light "running light" relay

Repair if necessary.

Check that the relay is functioning correctly.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 3 CONTINUED	

NOTES	**Only consult this customer complaint after a complete check using the diagnostic tool.** **Check the bulbs.**

Basic UCH with non-relayed lighting	Check fuses **F26 (10A) and F27 (10A)** for the side lights supply. Change them, if necessary.
	Check the continuity connections between: lights stalk **track B1** → **fuse box** F26 and F27 fuse box **F26 and F27** → **side light harness** See wiring diagram for the vehicle concerned. Repair if necessary.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 4	DIPPED HEADLIGHTS DO NOT OPERATE

NOTES	**Only consult this customer complaint after a complete check using the diagnostic tool.** **Check the bulbs.**

Top of range UCH with relayed lighting

Activate the dipped headlights control and check that the status signal **ET023 dipped headlights control** is active; if not refer to the section on how to deal with this status signal.

Check fuses **F9 (10A) and F10 (10A)** for the dipped headights supply.
Change them, if necessary.

Check the continuity of the connection between:

lights stalk **track B4** → **track 2** of the UCH P201 40 track connector

Repair if necessary.

Activate control **AC098 dipped headlights relay.**
Check that the relay is heard to operate correctly.

YES

Ensure the continuity of the following connections:

dipped headlights relay **track A5** → **fuse box** F9 and F10
fuse box **F9 and F10** → **dipped headlights harness**

See wiring diagram for the vehicle concerned.

NO

Ensure the continuity of the connections:

UCH P201 40 track connector **track 11** → **track A2** dipped headlight "running light" relay

Repair if necessary.

Check that the relay is functioning correctly.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 4 CONTINUED	

NOTES	**Only consult this customer complaint after a complete check using the diagnostic tool.** **Check the bulbs.**

Basic UCH with non-relayed lighting	Check fuses **F9 (10A) and F10 (10A)** for the dipped headights supply. Change them, if necessary.
	Check the continuity connections between: lights stalk **track B4** → **fuse box** F9 and F10 fuse box **F9 and F10** → **side light harness** See wiring diagram for the vehicle concerned. Repair if necessary.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 5	MAIN BEAM HEADLIGHTS DO NOT OPERATE

NOTES	**Only consult this customer complaint after a complete check using the diagnostic tool.** **Check the bulbs.**

Top of range UCH with relayed lighting

Activate the main beam headlights control and check that the status signal **ET024 main beam headlights control** is active; if not refer to the section on how to deal with this status signal.

Check fuses **F11 (10A) and F12 (10A)** for the main beam headights supply.
Change them, if necessary.

Check the continuity of the connection between:

lights stalk **track B7** → **track 12** of the UCH P201 40 track connector

Repair if necessary.

Activate control **AC099 main beam headlights relay.**
Check that the relay is heard to operate correctly.

YES

Ensure the continuity of the following connections:

main running light relay **track B5** → **fuse box** F11 and F10
fuse box **F11 and F12** → **dipped headlights harness**

See wiring diagram for the vehicle concerned.

NO

Ensure the continuity of the connections:

UCH P203 15 track connector **track A5** → **track B2** main running light

Repair if necessary.

Check that the relay is functioning correctly.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 5 CONTINUED	

NOTES	**Only consult this customer complaint after a complete check using the diagnostic tool.** **Check the bulbs.**

Basic UCH with non-relayed lighting	Check fuses **F11 (10A) and F12 (10A)** for the main beam headights supply. Change if necessary.
	Check the continuity of the connections between: lights stalk **track B7** → **fuse box** F11 and F12 fuse box **F11 and F1 2** → **main beam headlight harness** See wiring diagram for the vehicle concerned. Repair if necessary.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 6	FRONT FOG LIGHTS DO NOT OPERATE

NOTES	**Only consult this customer complaint after a complete check using the diagnostic tool.** **Check the bulbs.**

Check fuse **F18 (20A)** and replace if necessary.

Front fog lights activated.
Check the + after ignition feed of the front fog light relay on **track A1.**
Repair if necessary.

Ensure the continuity and insulation of the connections between:

earth → **track A2** front fog light relay
supply fuse (F18) → **track A3** front fog light relay
front fog lights → **track A5** front fog light relay

Replace the relay if necessary.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 7	REAR FOG LIGHTS DO NOT OPERATE

NOTES	**Only consult this customer complaint after a complete check using the diagnostic tool.** **Check the bulbs.**

Check fuse **F23 (15A)** and replace if necessary.

Ensure the continuity and insulation of the connections between:

lights stalk **track A3** → **fuse box** F23
fuse box **F23** → rear fog lights

Repair if necessary.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 8	LOW SPEED FRONT WINDSCREEN WIPERS DO NOT OPERATE

NOTES	**Check the fault.** **Only consult this customer complaint after a complete check using the diagnostic tool.**

Switch on the ignition.
Activate control **AC064 low speed front windscreen wipers** and check operation of the front windscreen wipers.
Are the wipers operating?

YES	Check the + after ignition feed of the stalk, track **A7.** Repair if necessary.
	Ensure the continuity and insulation of the connections between: wiper stalk **track A2** ⟶ **track 22** UCH P201 40 track connector Repair if necessary.
NO	Check fuse **F4 (20A).** Repair if necessary.
	Check the + after ignition feed of the stalk tracks **A7** and **B4.** Repair if necessary.
	Check the + after ignition feed of the stalk **track A4** UCH P202 15 track connector. Repair if necessary.
	Ensure the continuity and insulation of the connections between: wiper stalk **track A2** ⟶ **track 22** UCH P201 40 track connector Repair if necessary.
	Ensure the continuity and insulation of the connections between: UCH P203 15 track connector **track A9** ⟶ **track 3** front windscreen wiper motor **earth** ⟶ **track 5** front windscreen wiper motor Repair if necessary.
	Check that the motor operates correctly.
	Check that the wiper mechanism and motor are not jammed. Repair if necessary.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 9	HIGH SPEED FRONT WINDSCREEN WIPERS DO NOT OPERATE

NOTES	**Check the fault.** **Only consult this customer complaint after a complete check using the diagnostic tool.**

Activate control **AC065 high speed front windscreen wipers** and check operation of the front windscreen wipers.
Are the wipers operating?

YES	Check the + after ignition feed of the stalk, track **A7.** Repair if necessary.
	Ensure the continuity and insulation of the connections between: wiper stalk **track A1** → **track 21** UCH P201 40 track connector Repair if necessary.
NO	Check fuse **F4 (20A).** Repair if necessary.
	Check the + after ignition feed of the stalk tracks **A7** and **B4.** Repair if necessary.
	Check the + after ignition feed of the stalk **track A4** UCH P202 15 track connector. Repair if necessary.
	Ensure the continuity and insulation of the connections between: wiper stalk **track A1** → **track 21** UCH P201 40 track connector Repair if necessary.
	Ensure the continuity and insulation of the connections between: UCH P202 15 track connector **track A1** → **track 4** front windscreen wiper motor **earth** → **track 5** front windscreen wiper motor Repair if necessary.
	Check that the motor operates correctly.
	Check that the wiper mechanism and motor are not jammed. Repair if necessary.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 10	REAR SCREEN WIPER DOES NOT OPERATE

NOTES	**Check the fault.** **Only consult this customer complaint after a complete check using the diagnostic tool.**

Switch on the ignition.
Activate control **AC029 rear screen wiper** and check operation of the rear windscreen wiper.
Is the wiper operating?

YES	Check the + after ignition feed of the stalk, track **B4.** Repair if necessary.
	Ensure the continuity and insulation of the connections between: wiper stalk **track B2** → **track 34** UCH P201 40 track connector Repair if necessary.
NO	Check fuse **F3 (15A).** Repair if necessary.
	Check the + after ignition feed of the stalk tracks **A7** and **B4.** Repair if necessary.
	Check the + after ignition feed of the stalk **track A2** UCH P202 15 track connector. Repair if necessary.
	Ensure the continuity and insulation of the connections between: wiper stalk **track B2** → **track 34** UCH P201 40 track connector Repair if necessary.
	Ensure the continuity and insulation of the connections between: UCH P203 15 track connector **track A8** → **track 1** rear wiper motor **earth** → **track 3** rear wiper motor Repair if necessary.
	Check that the motor operates correctly.
	Check that the wiper mechanism and motor are not jammed. Repair if necessary.

AFTER REPAIR	**Check that the system is functioning correctly.**

FAULT FINDING - FAULT FINDING CHARTS

CHART 11	HEATED REAR SCREEN DOES NOT OPERATE

NOTES	**Only consult this customer complaint after a complete check using the diagnostic tool.**

Activate the heated rear screen control.
And check that status signal **ET008 heated rear screen button** is **activated.**
If not, refer to the section on how to deal with this status signal.

Check fuse **F30 (30A).**
Repair if necessary.

Activate control **AC043 heated rear screen.**
Is the relay heard to operate correctly?

YES

Ensure the continuity and insulation of the connections between:

UCH P203 15 track connector **track B2** → heated rear screen
earth → heated rear screen

Repair if necessary.

NO

Replace the UCH.

AFTER REPAIR	**Check that the system is functioning correctly.**

DESCRIPTION OF THE FAULT FINDING PHASES

DEFINITION OF THE MULTIPLEX NETWORK

The multiplex network consists of a twisted pair of wires connected to several vehicle computers.
These two wires are called CAN H and CAN L (connections 133 B and 133 C).
Two of the computers on the network contain an internal resistance of 120 ohms between the two wires: these computers are the injection computer and the UCH.

More than 200 data items are passed through this network. They are transmitted by some computers and used by others.
For example: the injection computer sends the engine speed, the instrument panel computer displays it.

TESTING THE MULTIPLEX NETWORK:

NOTES	Switch on the ignition and wait 10 seconds before starting the test.

This step is the essential starting point for any computer diagnostic.

It ensures that the network is correctly connected at the terminals of each computer and that the information is correctly sent to it and received by it.

The network test is the only function which can be selected after the choice of vehicle type.
After the network test, the other functions become accessible once more.

0 - Failure of the test

It is possible that the network test cannot be carried out.
To perform the test, the tool interrogates the **air bag** and **UCH** computers to find out the topology version (layout) of the network and the computers present on the network of the vehicle under repair.

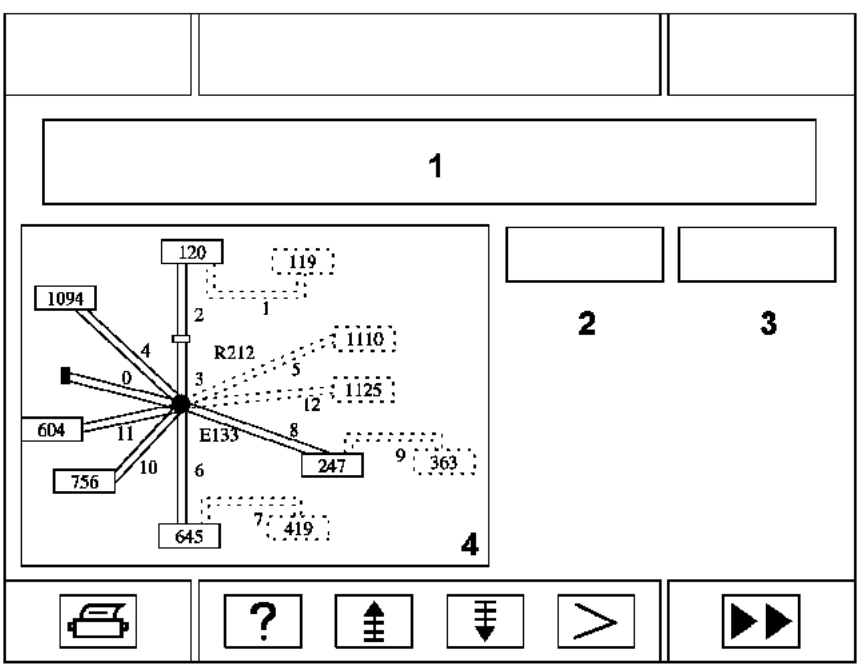
If no configuration is detected, check the supply lines to the computers (in particular the air bag and UCH), and, after checking and repairing the supply lines if necessary, refer to the "Multiplex network out of order" fault finding procedure.

If the configurations are inconsistent between the computers, the tool asks the user to reconfigure the computers. Refer to the "**Network configuration**" section.

1 - Result of the test

The tool displays a diagram of the network showing the faulty, not diagnosed and good segments (see screen below).

A segment is the length of the CAN H and CAN L twisted pair connecting two components (computer, cable joint, or connection).



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1: Result of the test
2 and 3: list of the faulty segments and/or computers not recognised
4: diagram of the network:

green segment: segment functional **red segment: faulty segment** **black segment: segment not diagnosed**	**green computer: present and recognised** **red computer: recognised but not present** **white computer: not diagnosable**

FAULT FINDING - INTRODUCTION

2 - Handling faulty segments

a) All the segments are faulty or not diagnosed:

The tool offers two screens: one with a diagram of the network with the faulty segments and the other with a diagram of the network and the computers not recognised (incorrect specification), not detected (have not responded to the tool), or not diagnosable (diagnosis not possible with the tool but present on the multiplex network).
You can switch from one diagram to the other at any time.

If all the segments are faulty and no computer has responded, there is a problem with the power supply to the computers.

Deal with the faults as described in the section:
"MULTIPLEX NETWORK OUT OF ORDER".

b) Only a few segments are faulty

The tool offers two screens:
One with the network diagram showing the faulty segments and the other with the network diagram showing the computers not recognised (computers not meeting the specification) not detected (not responding to the tool) or not diagnosable.
You can switch from one diagram to the other at any time.

If there is a computer not recognised or not detected at the ends of the faulty segments, first check the power supply lines and the specification of the computers by performing a diagnosis of the computer.

Deal with the faults as described in the section:
"MULTIPLEX SEGMENT FAULT".

3 - Absence of faults, or segments which cannot be diagnosed:

If no fault is reported by the diagnostic tool, it is advisable to refer to the **"SEGMENT NOT DIAGNOSED"** section to make sure that these segments are functioning correctly.

FAULT FINDING - MULTIPLEX NETWORK OUT OF ORDER

NOTES	First check that the computers have a power supply. Switch off the ignition, remove the key, verify that the side lights are off, and wait 1 minute. Take the measurements via the diagnostic socket of the vehicle.

Finding the fault type	***NOTES***	Use the diagram of the multiplex network of the vehicle (diagram of the diagnostic socket).

Measure the resistance between tracks 6 and 14 of the diagnostic socket.

What is the resistance?

0 ohms	The two lines are short-circuited. Refer to the section **"Help with finding network short circuits".**
Between 60 and 130 ohms	For track 6 and track 14, measure continuity to earth and the voltage. Establish which track is short-circuited to earth or to battery +. Refer to the section **"Help with finding network short circuits".**
Open circuit	Disconnect the injection computer and verify that both tracks of the multiplex network are continuous with the diagnostic socket:

YES	Check the resistance between the 2 network tracks at the injection computer. If the resistance is not approximately 120 ohms, replace the computer.
NO	Choose the tracks of another computer as a reference (e.g. UCH) and repeat the measurement. If you get the same result, the CAN cable joints may be damaged. In this case, check the continuity of the whole multiplex network. If the cable joints are damaged, replace the passenger compartment harness.

AFTER REPAIR	Perform another multiplex network test. Clear the stored faults on all the computers connected to the network. Deal with any other possible faults. The immobiliser LED may be on. In this case, leave the ignition on for 30 seconds, switch it off, and wait at least 1 minute. Turn the ignition on again, the light should go out. If it does not, refer to the injection computer fault finding procedure.

FAULT FINDING - MULTIPLEX SEGMENT FAULT

NOTES	**First check that the computer at the end of the segment has a correct power supply (earth, battery +, + accessories or + after ignition feed).** **Always check the computer specification.** **Care:** the tool may not be able to precisely identify the faulty segment. It will suggest several in order of failure probability. **Start by handling the first segment.**

Disconnect the ends of the segment.
(If one of the ends is a cable joint, the two wires cannot be disconnected.
In this case, disconnect a computer located at the end of a good segment, starting from the cable joint, for example: On Board Diagnostic socket)
Verifier the continuity of both tracks (see help table on the next page).
Check the condition of the connectors.
Reconnect and try again.
Has the fault been rectified?

NO

Are there other faulty segments?

YES — Deal with the other faulty segments using the same procedure.

NO — First replace the computer at the end of the segment having the highest probability of being faulty.
If in doubt, always replace the computers with an impedance LAST (UCH and injection).

AFTER REPAIR	Perform another multiplex network test. Clear the stored faults on all the computers connected to the network. Deal with any other possible faults. The immobiliser LED may be on. In this case, leave the ignition on for 30 seconds, switch it off, and wait at least 1 minute. Turn the ignition on again, the light should go out. If it does not, refer to the injection computer fault finding procedure.

FAULT FINDING - SEGMENT NOT DIAGNOSED

NOTES	**On this vehicle, the only segments which cannot be diagnosed are:** – the diagnostic socket segment – the steering wheel angle sensor segment – the Central Communication Unit (if information system / multimedia option fitted) **If there are others, verify that all the computers have been correctly identified.** **Reminder: the instrument panel is not diagnosable and does not have a K line but is nevertheless present on the multiplex network.**

To test the other segments, simply switch on the ignition and open the driver's door.
It must be shown as open on the central display.
Refer to the appropriate section of the Information/Navigation system.
In the event of a fault, refer to the **"multiplex segment fault"** section.

AFTER REPAIR	Clear the fault memory. Follow the instructions to confirm repair. Deal with any other possible faults.

FAULT FINDING - HELP WITH FINDING NETWORK SHORT CIRCUITS

NOTES	**Use the diagram of the multiplex network of the vehicle (diagram of the diagnostic socket).** Switch off the ignition, remove the ignition key. Verify that the side lights are off. Wait 1 minute. In the event of a short-circuit to battery +, leave the battery connected.

The procedure consists of gradually disconnecting the network components and isolating the faulty section.

Disconnect the grey passenger compartment - engine connection (R 67)
- Check the condition of the connector connections on the engine side and the connector connections on the passenger compartment side.
- Check whether the fault has disappeared on the passenger compartment side and engine side.
- Carry out the same steps for the **passenger compartment - engine and ABS connector (R107).**

Which is the faulty section?

After each disconnection:
- Check whether the fault has disappeared (in which case, replace the computer).
- Check the condition of the connectors and clips and their insulation.
- Reconnect.

engine	The recommended order of disconnecting engine management computers is as follows: – First disconnect the automatic gearbox or LPG computer. – Disconnect the injection computer and identify the faulty section: injection - automatic gearbox or LPG injection - passenger compartment connection
passenger compartment	The recommended order of disconnecting passenger compartment computers is as follows: Disconnect: The instrument panel. The Central Communication Unit (if the option is fitted). The steering wheel angle sensor. The air bag. The UCH.

FAULT FINDING - HELP WITH FINDING NETWORK SHORT CIRCUITS

If the fault has not disappeared, check the condition of the harness.

If the fault is not visible, **replace the harness.**

		Input			Output		
		Connector	CAN H	CAN L	Connector	CAN H	CAN L
Injection D7F, F4P, F4R	S 2000	Black	A4	A3			
Injection K4M, K4J	Sirius 34	Black	A27	A57	Black	A26	A25
Injection D4F	5 NR	Black	J4	H3	Black	J3	K9
LPG injection	Sagem 4C	Brown	A2	A1			
Injection K9K	LVCR	Black	A4	A3			
Injection F9Q	EDC15VM+	Black	A7	A6			
Automatic gearbox	DP0	Black	38	39			
Sequential gearbox	Sequential gearbox	Black	45	33			
ABS/ESP	ESP 5.7	Black	24	40			
Carminat		Black	6	7			
Steering wheel angle sensor		Black	3	2			
air bag	AB 8.2	Grey	1	26			
UCH	Sagem	Brown	20	19	Brown	10	9
Instrument panel	Sagem	Red	10	11			
R67 connector	Terminal block	Black	8	9			
R107 connector	Terminal block	Black	13	12			

AFTER REPAIR	Perform another multiplex network test. Clear the stored faults on all the computers connected to the network. Deal with any other possible faults. The immobiliser warning light may be on. In this case, leave the ignition on for 30 seconds, switch it off, and wait at least a minute. Turn the ignition on again, the light should go out. If it does not, refer to the injection computer diagnostic.

NETWORK CONFIGURATION INCONSISTENT:

NOTES	**On this vehicle, the computers containing the configuration are:** **– the UCH** **– the air bag** **The configuration is entered with the ignition on.** **It is run automatically during a network test, when the tool detects a fault on one of the computers.** **It can be run from the network test result screens (button at bottom right of screen).**

The tool displays the two configurations: the UCH and the air bag.

Select the computer to be modified.

The tool displays the configuration of the other computer at the same time.
(see screen on next page)

The steps are as follows:
– choice of network topology version

this is the multiplex network diagram version. This version is incremented with each development change of the multiplex network harness for this vehicle.
This information is available in the world vehicle database or in the other computer.

– Choice of computers present on the network

There are at least:
– the air bag,
– injection,
– the UCH,
– the instrument panel (computer not diagnosable by the tool).

+ the vehicle options:
– the "Navigation or Information System" Central Communication Unit (computer not diagnosable by the tool),
– the automatic gearbox or sequential gearbox,
– LPG,
– the ABS if ESP fitted,
– the steering wheel angle sensor (computer not diagnosable by the tool).

WARNING: If a computer is connected to the multiplex network and is not configured in the two computers (air bag and UCH), it will not be checked during the multiplex network test.

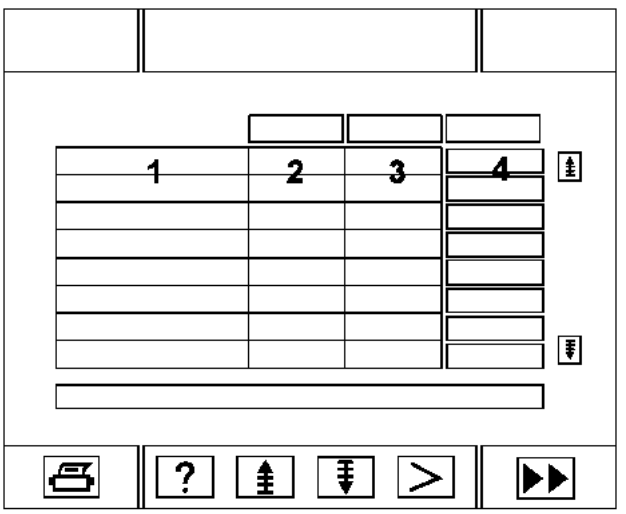
To make a computer present in the configuration, it is necessary to cause a configuration inconsistency by declaring the instrument panel as absent in the air bag computer, then repeating the test.

The tool will report a configuration error and display a list of all the computers available for the vehicle type.

Correct the configuration by declaring the instrument panel as present in the air bag computer, then declare the missing computer as present in the air bag computer, then in the UCH.

Repeat the multiplex network test.

CONFIGURATION SCREEN



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Above is a view of the empty configuration screen
In column (1), a list of the possible computers and the topology version.
In column (2), the existing configuration in the computer not selected.
In column (3), the existing configuration in the computer selected.
In column (4), the desired configuration for the computer selected.

AFTER REPAIR	Deal with any other possible faults.

FAULT FINDING - INTRODUCTION

This document contains the general fault finding procedures applicable all the BOSCH AB8.2E AIR BAG computers with VDIAG 10 fitted to Clio II vehicles.

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

- **the wiring diagram of the function on the vehicle concerned,**
- **the tools listed under the heading Special tooling required.**

GENERAL APPROACH TO FAULT FINDING:

- **Use of one of the diagnostic tools to identify the system fitted to the vehicle (to read the computer group, the program number, the Vdiag, etc.).**

- **Locate the Fault finding documents corresponding to the system identified.**

- **Take note of information contained in the introductory sections.**

- **Read the faults stored in the computer memory and use the Fault interpretation section of the documents. Reminder: Each fault is interpreted for a particular type of storage (fault present, fault stored in memory, fault present or stored). The checks defined for handling each fault are therefore only to be performed if the fault shown by the diagnostic tool is interpreted in the document for its type of storage. The storage type should be considered when using the diagnostic tool after the ignition has been switched off and switched back on.**
  If a fault is interpreted when it is declared stored, the conditions for application of the fault finding procedure appear in the NOTES box. When these conditions are not satisfied, use the fault finding procedure to check the circuit of the faulty part since the fault is no longer present on the vehicle. Follow the same procedure when a fault is declared stored by the diagnostic tool but is only interpreted in the documentation for a present fault.

- **Carry out the conformity check (appearance of possible faults not yet identified by the system's auto-diagnostic procedure) and apply the relevant fault finding strategies according to the results.**

- **Confirm the repair (disappearance of the problem reported by the customer).**

- **Use the fault finding strategy for each Customer complaint if the problem persists.**

Special tooling required for operations on the air bag and seat belt pretensioner systems:

- Diagnostic tools (except XR25).
- Collection of adaptors and borniers for use with the "Checking air bags and pretensioners electrical harnesses" function of tools CLIP and NXR or the latest update of XRBAG containing the new **B54 50 track** adaptor, the **Elé. 1617 8 track** adaptor, the **10 track** adaptor of the rotary switch.
- Multimeter.
- **Modifying the series of new air bag ignition module connectors entails modifying the dummy ignition module.**

LOCAL MODIFICATION OF THE DUMMY IGNITION MODULE:

- **Remove the ignition module from its red support and remove one of the two brown locking notches.**

FAULT FINDING - INTRODUCTION

Reminders

During operations on the air bag/seat belt pretensioner systems it is vital that you lock the computer using the diagnostic tool to prevent any risk of accidental triggering (all the ignition lines will be inhibited). The locked mode is signalled when the instrument panel warning light comes on.
Without the diagnostic 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 air bag or pretensioner ignition lines with any device other than the XRBAG or by the "Air bag and pretensioner wiring harness check" function on the CLIP and NXR tools.

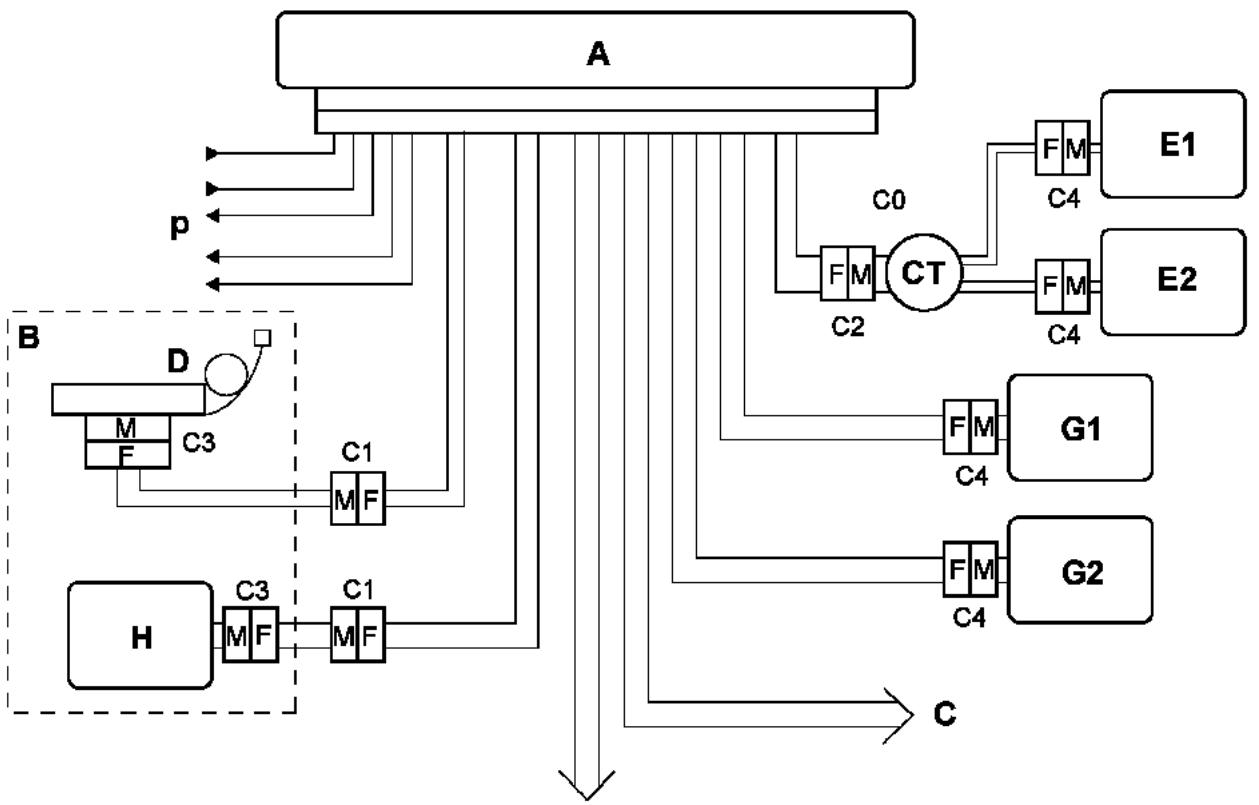
Before using a dummy ignition module, ensure that its resistance is between 1.8 and 2.5 ohms.

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

FAULT FINDING - INTRODUCTION

FAULT FINDING - SYSTEM CONFIGURATION DIAGRAM (FRONT part)

Front and chest air bags + front pretensioners.

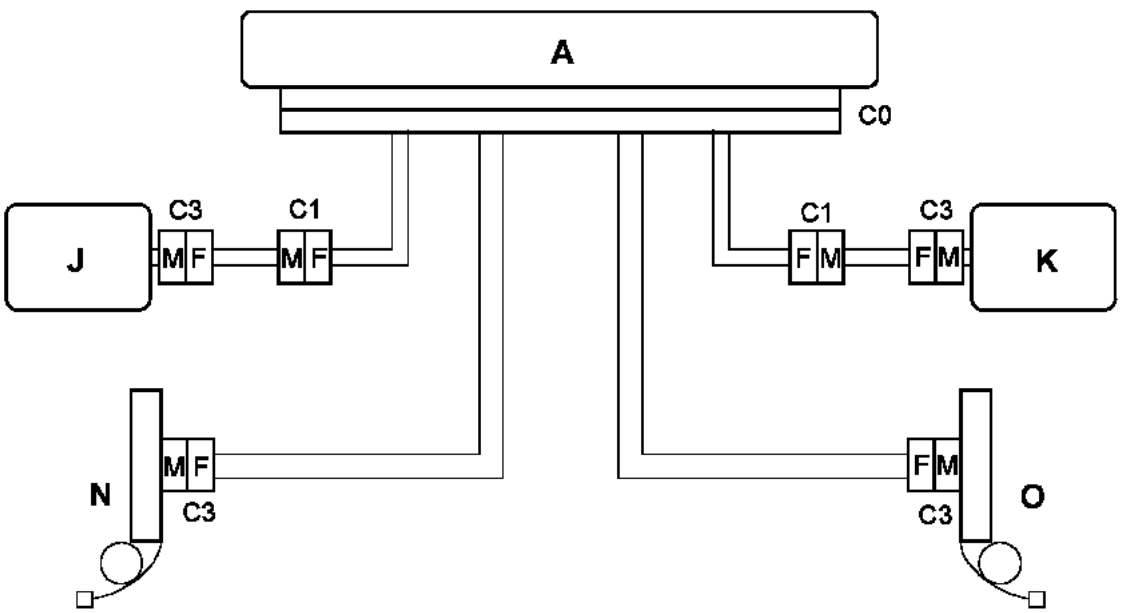


To rear wiring

FAULT FINDING - INTRODUCTION

FAULT FINDING - SYSTEM CONFIGURATION DIAGRAM (REAR part)

Side (curtain) air bags + rear seat belt retractors in central unit.



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A	Central unit	**J/K**	Curtain air bag ignition modules
B	Driver's seat	**N/O**	Rear seat belt retractors
C	Front passenger's seat	**CT**	Rotary switch
D	Buckle pretensioner		+ 12 volts/Earth
E	Driver's front air bag ignition module	**P**	Warning light/Diagnostic lines
G	Passenger's front air bag ignition module		Impact sensors/Impact information
H	Front side air bag ignition module		

	FRONT AIR BAGS	
	Measuring point	Correct value
Driver	C0, C2 and C4	1.8 - 7.3 ohms
Passenger	C0 and C4	0.8 - 4.8 ohms
	SIDE AIR BAGS AND PRETENSIONERS	
	Measuring point	Correct value
	C0, C1 and C3	0.8 - 4.8 ohms

Correct insulation value: display > = 100 h or 9999 flashing.

Bosch AB8.2E 1.0 air bag

FAULT FINDING - FAULT INTERPRETATION

DF001 PRESENT	COMPUTER 1.DEF : Internal electronic fault.

NOTES	**Special notes:** None.

Replace the computer (consult the "Help" section for this operation).

AFTER REPAIR	None.

FAULT FINDING - FAULT INTERPRETATION

DF002 **PRESENT**	Computer supply voltage 1.DEF : Voltage too low 2.DEF : Voltage too high 3.DEF : Excessive micro-break

NOTES	**Special notes:** Use the B54 adaptor to work on the computer connector (**cable 1**).

1.DEF - 2.DEF - 3.DEF	***NOTES***	None.

Carry out the operations necessary to obtain the correct computer power supply:
10.5 volts ± 0.1 <correct voltage < 16 volts ± 0.1.

– Battery charge check.
– Charging circuit check.
– Check the tightening and the condition of the battery terminals.
– Check the computer earth.
– Check the condition of the computer and that it is locked.

AFTER REPAIR	Deal with any faults detected by the diagnostic tool. Clear the computer memory, then switch the ignition off and re-test with the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF028 **PRESENT**	Passenger's air bag status warning light circuit 1.DEF : Fault finding performed by the instrument panel.

NOTES	**Special notes:** None.

Apply the fault finding procedure relevant to this fault in the instrument panel fault finding information section.

AFTER REPAIR	Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer.

FAULT FINDING - FAULT INTERPRETATION

DF034 **PRESENT**	Computer locked 1.DEF : Locking by diagnostic tool.

NOTES	**Special notes:** None.

Using the diagnostic tool actuate control **VP007** to unlock the air bag computer.

AFTER REPAIR	Erase the computer memory then switch off the ignition. Check again using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF060 **PRESENT**	Multiplex network

NOTES	None.

Apply the fault finding procedure for the multiplexed network.

AFTER REPAIR	Erase the computer memory then switch off the ignition. Check again using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF062 **PRESENT**	Configuration of side sensors.

NOTES	None.

This fault indicates an inconsistency between the computer configuration and the vehicle equipment detected by the computer. The computer has detected the presence of an element additional to its configuration.
Carry out a reading of the configuration under the heading "READING THE CONFIGURATION".
Modify the computer configuration, adapting it to the equipment level of the vehicle.

AFTER REPAIR	Erase the computer memory then switch off the ignition. Check again using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF065 PRESENT	Driver's seat position sensor circuit. CO.1 : Open circuit of short circuit to 12 volts CC.0 : Short circuit to earth 1.DEF : Signal detection off limits, above or below

NOTES	**Special notes:** Use the B54 50 track adapter to work on the computer connector.

CO.1 - CC.0 - 3.DEF	***NOTES***	None.

Lock the computer using the command on the diagnostic tool.
Check the connections on the **grey 16 track** connector under the seat (**tracks A2 and B2**). Repair if necessary.
Disconnect the **grey 16 track** connector under the seat, measure the resistance between **tracks A2** and **B2** with the seat in fully forward and reclined positions.

In the fully forward position, the resistance is approximately: **400 ohms**
In the fully back position, the resistance is approximately: **100 ohms**

Are the values correct?

NO

Check the connection and the condition of the sensor connectors.
Check and ensure the continuity and insulation of the connections between:

Track A2 → **Track A1 Sensor connector**
Track B2 → **Track A2 Sensor connector**

If the checks are correct, replace the seat position sensor.

YES

Check the wiring again on the seat connector (**track A2 and B2**) as well as on the 50 track connector (**tracks 19 and 20**).

Disconnect the computer connector and fit the B54 50 track control adapter.
Check and ensure the continuity and insulation of the connections between:

Computer **Track 19** → **Track A2** 16 track connector under the seat
Computer **Track 20** → **Track B2** 16 track connector under the seat

If the value obtained is incorrect, the wiring is faulty between the computer and the seat connector (C0/C1). Replace the wiring if necessary.

AFTER REPAIR	Reconnect the computer, the seat position sensor, and the under-seat connector, then switch on the ignition. Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer.

FAULT FINDING - FAULT INTERPRETATION

DF068 PRESENT	Passenger's front side air bag circuit CC : Short circuit CO : Open circuit CC.1 : Short circuit to 12 volts CC.0 : Short circuit to earth 1.DEF : Short circuit between ignition lines

NOTES	**Processing priority in event of stacked faults:** In the event of 1.DEF short circuit between 2 ignition lines, follow the procedure below and that for the second fault, to localise the short circuit.
	Special notes: Never carry out measuring operations on ignition lines using any tool other than CLIP, NXR or XRBAG. Use the B54 adaptor to work on the computer connector (**Cable F**).

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

Lock the computer.
Disconnect the brown **2 track** connector underneath the passenger seat and check the connections on the connector.
CLIP, NXR or XRBAG must be used for measuring the resistance at **point C1**.
Is the value obtained correct?

NO	Check the seat connector connections. Remove the trim from the passenger seat and check that the side air bag ignition module is connected correctly.
	Disconnect the air bag ignition module for the side air bag module, connect a dummy ignition module to the ignition module connector then re-measure the resistance at **point C1**. – If the value obtained is correct, replace the passenger's front side air bag module. – If the value obtained is still incorrect, replace the wiring between points **C1/C3** (seat wiring).
YES	Check the wiring again on the seat connector as well as on the 50 track connector (**tracks 9 and 34**).
	Reconnect the under-seat connector. Disconnect the computer connector and fit the **B54 50 track adapter**. The Clip, NXR or XRBAG tool MUST be used for checking resistance on the wire marked **F** on the adapter. – If the fault persists, the wiring is faulty between the computer and the passenger seat (**C0/C1**). Replace the wiring if necessary.
AFTER REPAIR	Reconnect the computer and the ignition module of the passenger's front side air bag module then switch on the ignition. Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the side air bag module if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF068 CONTINUED	

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

Lock the computer.
Disconnect the brown **2 track** connector underneath the passenger seat and check the connections on the connector.
CLIP, NXR or XRBAG must be used for measuring the insulation appropriate to the type of fault at point **C1**.
Is the value obtained correct?

NO

Check the seat connector connections.
Remove the trim from the passenger seat and check that the side air bag ignition module is connected correctly.

Disconnect the ignition module from the side air bag module, connect a dummy ignition module to the ignition module connector and measure the insulation appropriate to the type of fault again at point **C1**.
– If the value obtained is correct, replace the passenger's front side air bag module.
– If the value obtained is still incorrect, replace the wiring between points **C1/C3** (seat wiring).

YES

Check the wiring again on the seat connector as well as on the 50 track connector (**tracks 9 and 34**).

Reconnect the under-seat connector.
Disconnect the computer connector and fit the **B54 50 track adapter**. The Clip, NXR or XRBAG tools MUST be used for measuring the insulation appropriate to the type of fault on the **wires marked F** on the adapter.
– If the fault persists, the wiring is faulty between the computer and the passenger seat (**C0/C1**).
Replace the wiring if necessary.

AFTER REPAIR

Reconnect the computer and the ignition module of the passenger's front side air bag module then switch on the ignition. Erase the computer memory then switch off the ignition.
Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer.
Destroy the side air bag module if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF071 **PRESENT**	Driver's front air bag circuit 2 CC : Short-circuit CO : Open circuit CC.1 : Short-circuit to 12 volts CC.0 : Short-circuit to earth 1.DEF : Short-circuit between ignition lines

NOTES	**Processing priority in the event of multiple faults:** In the case of 1.DEF Short-circuit between 2 ignition lines, use the following approach and that for the second fault to locate the short-circuit.
	Special notes: Never carry out measuring operations on ignition lines using any tool other than CLIP, NXR or XRBAG. Use the B54 adapter to work on the computer connector (**Cable D**).

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

Lock the computer using the command on the diagnostic tool. Switch off the ignition and remove the steering wheel air bag. Check that it is correctly connected.
Disconnect the **green** connector on the steering wheel cushion and connect 1 dummy ignition module to the igniter connector. Switch on the ignition and carry out a check using the diagnostic tool. Replace the air bag if the fault has become stored (fault no longer stated as present).
With the ignition switched off, disconnect and reconnect the connector of the rotary switch under the steering wheel. Check the connection wiring if the fault has become stored (fault no longer stated as present).
Fit the 10-track control adapter to the rotary switch (point C2 **tracks 9 and 10**). The CLIP, NXR or XRBAG tool MUST be used for measuring the resistance on **cable A**. If the value obtained is incorrect, replace the rotary switch under the steering wheel.
Reconnect the rotary switch under the steering wheel, disconnect the computer and check the connector wiring (**tracks 5 and 30**). Fit the **B54 50-track adapter**. The CLIP, NXR or XRBAG tool MUST be used for measuring the resistance at **cable D** of the adapter. If the value obtained is incorrect, the wiring is faulty between the computer and the rotary switch connector (C0/C2). Replace the wiring if necessary.

AFTER REPAIR	Reconnect the computer and the ignition modules of the steering wheel air bag, then switch on the ignition. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the driver's front air bag module if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF071 **PRESENT** CONTINUED	

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

Lock the computer using the command on the diagnostic tool. Switch off the ignition and remove the steering wheel air bag. Check the condition of the ignition line wires.
Fit the 10-track control adapter to the rotary switch (point C2 **tracks 9 and 10**). The CLIP, NXR or XRBAG tool MUST be used for correctly measuring the insulation for the type of fault on **cable A.** If the value obtained is incorrect, replace the rotary switch under the steering wheel.
Reconnect the rotary switch under the steering wheel, disconnect the computer and check the connector wiring (**tracks 5 and 30**). Fit the **B54 50-track adapter**. The CLIP, NXR or XRBAG tool MUST be used for correctly measuring the insulation for the type of fault on **cable D** of the adapter. If the value obtained is incorrect, the wiring is faulty between the computer and the rotary switch connector (C0/C2). Replace the wiring if necessary.

AFTER REPAIR	Reconnect the computer and the ignition modules of the steering wheel air bag, then switch on the ignition. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the driver's front air bag module if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF072 **PRESENT**	Driver's front air bag circuit 1 CC : Short-circuit CO : Open circuit CC.1 : Short-circuit to 12 volts CC.0 : Short-circuit to earth 1.DEF : Short-circuit between ignition lines

NOTES	**Processing priority in the event of multiple faults:** In the case of 1.DEF Short-circuit between 2 ignition lines, use the following approach and that for the second fault to locate the short-circuit.
	Special notes: Never carry out measuring operations on ignition lines using any tool other than CLIP, NXR or XRBAG. Use the B54 adapter to work on the computer connector (**Cable C**).

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

Lock the computer using the command on the diagnostic tool. Switch off the ignition and remove the steering wheel air bag. Check that it is correctly connected.
Disconnect the **orange** connector on the steering wheel cushion and connect 1 dummy ignition module to the igniter connector. Switch on the ignition and carry out a check using the diagnostic tool. Replace the air bag if the fault has become stored (fault no longer stated as present).
With the ignition switched off, disconnect then reconnect the connector of the rotary switch under the steering wheel. Check the wiring if the fault has become stored (fault no longer stated as present).
Fit the **10-track** control adapter to the rotary switch (point C2 **tracks 6 and 7**). The CLIP, NXR or XRBAG tool MUST be used for measuring the resistance on **cable B**. If the value obtained is incorrect, replace the rotary switch under the steering wheel.
Reconnect the rotary switch under the steering wheel, disconnect the computer and check the connector wiring (**tracks 4 and 29**). Fit the **B54 50-track adapter**. The CLIP, NXR or XRBAG tool MUST be used for checking the resistance on **cable C** of the adapter. If the value obtained is incorrect, the wiring is faulty between the computer and the rotary switch connector (C0/C2). Replace the wiring if necessary.

AFTER REPAIR	Reconnect the computer and the ignition modules of the steering wheel air bag, then switch on the ignition. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the driver's front air bag module if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF072 **PRESENT** CONTINUED	

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

Lock the computer using the command on the diagnostic tool. Switch off the ignition and remove the steering wheel air bag. Check the condition of the ignition lines.
Fit the **10-track** control adapter to the rotary switch (point C2 **tracks 6 and 7**). The CLIP, NXR or XRBAG tool MUST be used for correctly measuring the insulation for the type of fault on **cable B.** If the value obtained is incorrect, replace the rotary switch under the steering wheel.
Reconnect the rotary switch under the steering wheel, disconnect the computer and check the connector wiring (**tracks 4 and 29**). Fit the **B54 50-track adapter**. The CLIP, NXR or XRBAG tool MUST be used for correctly measuring the insulation for the type of fault on **cable C** of the adapter. If the value obtained is incorrect, the wiring is faulty between the computer and the rotary switch connector (C0/C2). Replace the wiring if necessary.

AFTER REPAIR	Reconnect the computer and the ignition modules of the steering wheel air bag, then switch on the ignition. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the driver's front air bag module if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF074 **PRESENT**	Passenger front air bag circuit 2 CC : Short-circuit CO : Open circuit CC.1 : Short-circuit to 12 volts CC.0 : Short-circuit to earth 1.DEF : Short-circuit between ignition lines

NOTES	**Processing priority in the event of multiple faults:** In the case of 1.DEF Short-circuit between 2 ignition lines, use the following approach and that for the second fault to locate the short-circuit.
	Special notes: Never carry out measuring operations on ignition lines using any tool other than CLIP, NXR or XRBAG. Use the B54 adapter to work on the computer connector (**Cable B**).

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

Lock the computer using the command on the diagnostic tool. Switch off the ignition and remove the passenger air bag. Check that it is correctly connected.
Disconnect the **green** connector on the passenger air bag and connect 1 dummy ignition module to the igniter connector. Switch on the ignition and carry out a check using the diagnostic tool. Replace the air bag if the fault has become stored (fault no longer stated as present).
If the value is incorrect: Disconnect the computer and check the connector wiring (**tracks 3 and 28**). Fit the **B54 50-track adapter**. The CLIP, NXR or XRBAG tool MUST be used for measuring the resistance on **cable B** of the adapter. If the value obtained is incorrect, the wiring is faulty between the computer and the passenger air bag connectors (C0/C4). Replace the wiring if necessary. If the value obtained is correct, check the computer wiring again.

AFTER REPAIR	Reconnect the computer and the connectors of the passenger air bag module then switch on the ignition. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the passenger's front air bag module if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF074 **PRESENT** CONTINUED	

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

Lock the computer using the command on the diagnostic tool. Switch off the ignition and remove the passenger air bag. Check that it is correctly connected.
Disconnect the **green** connector on the passenger air bag and connect 1 dummy ignition module to the igniter connector. Switch on the ignition and carry out a check using the diagnostic tool. Replace the air bag if the fault has become stored (fault no longer stated as present).
If the value is incorrect: Disconnect the computer and check the connector wiring (**tracks 3 and 28**). Fit the **B54 50-track adapter**. The CLIP, NXR or XRBAG tool MUST be used for correctly measuring the insulation for the type of fault on **cable B** of the adapter. If the value obtained is incorrect, the wiring is faulty between the computer and the passenger air bag connectors (C0/C4). Replace the wiring if necessary. If the value obtained is correct, check the computer wiring again.

AFTER REPAIR	Reconnect the computer and the connectors of the passenger air bag module then switch on the ignition. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the passenger's front air bag module if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF075 **PRESENT**	Passenger front air bag circuit 1 CC : Short-circuit CO : Open circuit CC.1 : Short-circuit to 12 volts CC.0 : Short-circuit to earth 1.DEF : Short-circuit between ignition lines

NOTES	**Processing priority in the event of multiple faults:** In the case of 1.DEF Short-circuit between 2 ignition lines, use the following approach and that for the second fault to locate the short-circuit.
	Special notes: Never carry out measuring operations on ignition lines using any tool other than CLIP, NXR or XRBAG. Use the B54 adapter to work on the computer connector (**Cable A**).

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

Lock the computer using the command on the diagnostic tool. Switch off the ignition and remove the passenger air bag. Check that it is correctly connected.
Disconnect the **orange** connector on the passenger air bag and connect 1 dummy ignition module to the igniter connector. Switch on the ignition and carry out a check using the diagnostic tool. Replace the air bag if the fault has become stored (fault no longer stated as present).
If the value is incorrect: Disconnect the computer and check the connector wiring (**tracks 2 and 27**). Fit the **B54 50-track adapter**. The CLIP, NXR or XRBAG tool MUST be used for measuring the resistance on **wire A** of the adapter. If the value obtained is incorrect, the wiring is faulty between the computer and the passenger air bag connectors (C0/C4). Replace the wiring if necessary. If the value obtained is correct, check the computer wiring again.

AFTER REPAIR	Reconnect the computer and the connectors of the passenger air bag module then switch the ignition on. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the passenger's front air bag module if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF075 **PRESENT** CONTINUED	

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

Lock the computer using the command on the diagnostic tool. Switch off the ignition and remove the passenger air bag. Check that it is correctly connected.
Disconnect the **orange** connector on the passenger air bag and connect 1 dummy ignition module to the igniter connector. Switch on the ignition and carry out a check using the diagnostic tool. Replace the air bag if the fault has become stored (fault no longer stated as present).
If the value is incorrect: Disconnect the computer and check the connector wiring (**tracks 2 and 27**). Fit the **B54 50-track adapter**. The CLIP, NXR or XRBAG tools MUST be used for correctly measuring the insulation for the type of fault on **wire A** of the adapter. If the value obtained is incorrect, the wiring is faulty between the computer and the passenger air bag connectors (C0/C4). Replace the wiring if necessary. If the value obtained is correct, check the computer wiring again.

AFTER REPAIR	Reconnect the computer and the connectors of the passenger air bag module then switch the ignition on again. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the passenger's front air bag module if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF077 PRESENT	Driver's side air bag circuit CC : Short-circuit CO : Open circuit CC.1 : Short-circuit to 12 volts CC.0 : Short-circuit to earth 1.DEF : Short-circuit between ignition lines

NOTES	**Processing priority in the event of multiple faults:** In the case of 1.DEF Short-circuit between 2 ignition lines, use the following approach and that for the second fault to locate the short-circuit.
	Special notes: Never carry out measuring operations on ignition lines using any tool other than CLIP, NXR or XRBAG. Use the B54 adapter to work on the computer connector (**Cable E**).

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

Lock the computer.
Disconnect the brown **2-track** connector under the driver's seat and check the connector wiring.
The CLIP, NXR or XRBAG tool MUST be used for measuring the resistance at **point C1**.
Is the value obtained correct?

NO	Check the seat connector wiring. Remove the trim from the driver's seat and check that the side air bag ignition module is correctly connected.
	Disconnect the side airbag ignition module, connect a dummy ignition module to the igniter connector then repeat measurement of the resistance at **point C1**. – If the value obtained is correct, replace the driver's side air bag module. – If the value obtained is still incorrect, replace the wiring between **points C1 and C3** (seat wiring).
YES	Repeat the check of the seat connector wiring and the 50-track connector wiring (**tracks 8 and 33**).
	Reconnect the under-seat connector. Disconnect the computer connector and fit the **50-track B54 adapter**. The CLIP, NXR or XRBAG tool MUST be used for measuring the resistance on the **wire marked E** on the adapter. – If the fault persists, the wiring is faulty between the computer and the driver's seat (**C0/C1**). Replace the wiring if necessary.

AFTER REPAIR	Reconnect the computer and the ignition module of the driver's side air bag module then switch on the ignition. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the side air bag module if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF077 **PRESENT** CONTINUED	

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

Lock the computer.
Disconnect the brown **2-track** connector under the driver's seat and check the connector wiring.
The CLIP, NXR or XRBAG tool MUST be used for correctly measuring the insulation for the type of fault at point **C1**.
Is the value obtained correct?

NO	Check the seat connector connections. Remove the trim from the driver's seat and check that the side air bag ignition module is correctly connected.
	Disconnect the igniter module from the side air bag module, connect a dummy ignition module to the igniter connector and repeat the measurement of the insulation for the type of fault at point **C1**. – If the value obtained is correct, replace the driver's side air bag module. – If the value obtained is still incorrect, replace the wiring between **points C1 and C3** (seat wiring).
YES	Repeat the check of the seat connector wiring and the 50-track connector wiring (**tracks 8 and 33**).
	Reconnect the under-seat connector. Disconnect the computer connector and fit the **50-track B54 adapter** . The CLIP, NXR or XRBAG tools MUST be used for correctly measuring the insulation for the type of fault on the **wire marked E** on the adapter. – If the fault persists, the wiring is faulty between the computer and the driver's seat **(C0/C1)**. Replace the wiring if necessary.

AFTER REPAIR	Reconnect the computer and the igniter of the driver's side air bag module then switch on the ignition. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the chest air bag module if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF091 **PRESENT**	Air bag locking switch circuit CO.1 : Open circuit or Short-circuit to + 12 Volts CC.0 : Short-circuit to earth 1.DEF : Detection of signal outside tolerance

NOTES	**Special notes:** Use the B54 50-track adaptor to operate on the computer connector. Lock the computer using the command on the diagnostic tool.

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

Check the condition of the computer connections.
Check the condition of the 50-track connector (locking system, wiring, ...).
Check that the locking switch is correctly connected and check its wiring.
Ensure continuity and insulation of the connections between:

Bornier B54 **terminal 21** → **track 6** locking switch connector
Bornier B54 **terminal 22** → **track 3** locking switch connector

Replace the locking switch if the fault persists.

AFTER REPAIR	Reconnect the computer and the locking switch, then switch on the ignition. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer.

FAULT FINDING - FAULT INTERPRETATION

DF165 **PRESENT**	Air bag fault warning light circuit 1.DEF : Diagnostic routine performed by the instrument panel.

NOTES	**Special notes:** None.

For this fault, apply the associated fault finding procedure found in the instrument panel fault finding information.

AFTER REPAIR	Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer.

FAULT FINDING - FAULT INTERPRETATION

DF177 PRESENT	Driver side rear inertia reel circuit. CC : Short-circuit CO : Open circuit CC.1 : Short-circuit to 12 volts CC.0 : Short-circuit to earth 1.DEF : Short-circuit between ignition lines

NOTES	**Processing priority in the event of multiple faults:** In the case of 1.DEF Short-circuit between 2 ignition lines, use the following approach and that for the second fault to locate the short-circuit.
	Special notes: Never carry out measuring operations on ignition lines using any tool other than CLIP, NXR or XRBAG. Use the B54 adapter to work on the computer connector (**Cable K**).

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

Lock the computer.
Switch off the ignition and verify that the **white 2-track** connector of the driver side rear pyrotechnic inertia reel is correctly connected (situated below the rear parcel shelf attachments, behind the rear wing soundproofing).
Disconnect the white 2-track connector and check its wiring.
The CLIP, NXR or XRBAG tools MUST be used for measuring the resistance at **point C1** of the driver side rear pyrotechnic inertia reel.
If the value obtained is incorrect, the driver side rear pyrotechnic inertia reel is faulty.
Replace the driver side rear pyrotechnic inertia reel.

If the value obtained is correct, reconnect the white 2-track connector.
Disconnect the computer connector and check its wiring (**tracks 16 and 41**).
Fit the **B54 50-track adapter**. The CLIP, NXR or XRBAG tool MUST be used for checking the resistance on **line K** of the adapter.
If the value obtained is incorrect, the wiring is faulty between the computer and the white 2-track intermediate connector (**C0/C1**).
Replace the wiring.

AFTER REPAIR	Reconnect the computer and the inertia reel, then switch the ignition on again. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the pyrotechnic inertia reel if it has been replaced (tool **Ele. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF177 CONTINUED	

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

Lock the computer.
Switch off the ignition and verify that the **white 2-track** connector of the driver side rear pyrotechnic inertia reel is correctly connected (situated below the rear parcel shelf attachments, behind the rear wing soundproofing).
Disconnect the white 2-track connector and check its wiring.
The Clip, NXR or XRBAG tools MUST be used for correctly measuring the insulation for the type of fault at **point C1** of the driver side rear pyrotechnic inertia reel.
If the value obtained is incorrect, the driver side rear pyrotechnic inertia reel is faulty.
Replace the driver side rear pyrotechnic inertia reel.

If the value obtained is correct, reconnect the white 2-track connector.
Disconnect the computer connector and check its wiring (**tracks 16 and 41**).
Fit the **B54 50-track adapter**. The CLIP, NXR or XRBAG tools must be used for correctly measuring the insulation for the type of fault on **cable K** of the adapter.
If the value obtained is incorrect, the wiring is faulty between the computer and the white 2-track intermediate connector (**C0/C1**).
Replace the wiring.

AFTER REPAIR	Reconnect the computer and the inertia reel, then switch the ignition on. Clear the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the pyrotechnic inertia reel if it has been replaced (tool **Elé. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF178 PRESENT	Rear passenger side seat belt retractor circuit CC : Short circuit CO : Open circuit CC.1 : Short circuit to 12 volts CC.0 : Short circuit to earth 1.DEF : Short circuit between ignition lines

NOTES	**Processing priority in event of stacked faults:** In the event of 1.DEF short circuit between 2 ignition lines, follow the procedure below and that for the second fault, to localise the short circuit.
	Special notes: Never carry out measuring operations on ignition lines using any tool other than CLIP, NXR or XRBAG. Use the B54 adaptor to work on the computer connector (**Cable L**).

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

Lock the computer.
Switch off the ignition and check that the **white 2 track** connector of the rear passenger side seat belt retractor is correctly connected (located below the rear parcel shelf fixings, behind the rear wing soundproofing).
Disconnect the white 2 track connector and check its connections with the connector.
The Clip, NXR or XRBAG tools MUST be used for checking resistance at **point C1 of** the rear passenger side seat belt retractor.
If the value obtained is incorrect, the rear passenger side seat belt retractor wiring is faulty.
Replace the rear passenger side seat belt retractor.

If the value obtained is correct, reconnect the white 2 track connector.
Disconnect the computer connector and check the wiring on the connector (**tracks 42 and 17**).
Fit the **B54 50 track** adaptor. CLIP, NXR or XRBAG must be used for checking the resistance on the **L line** of the adapter.
If the value obtained is incorrect, the wiring is faulty between the computer and the white 2 track intermediate union (**C0/C1**).
Replace the wiring.

AFTER REPAIR	Reconnect the computer and the seat belt retractor, then switch on the ignition again. Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the seat belt retractor if it has been replaced (tool **Elé. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF178 CONTINUED	

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

Lock the computer.
Switch off the ignition and check that the **white 2 track** connector of the rear passenger side seat belt retractor is correctly connected (located below the rear parcel shelf fixings, behind the rear wing soundproofing).
Disconnect the white **2 track connector** and check its connections with the connector.
The Clip, NXR or XRBAG tool MUST be used for measuring the insulation appropriate to the type of fault at **point C1** of the rear passenger side seat belt retractor.
If the value obtained is incorrect, the rear passenger side seat belt retractor wiring is faulty.
Replace the rear passenger side seat belt retractor.

If the value obtained is correct, reconnect the white 2 track connector.
Disconnect the computer connector and check the wiring on the connector (**tracks 42 and 17**).
Fit the **B54 50 track** adaptor. CLIP, NXR or XRBAG must be used for measuring the insulation appropriate to the type of fault on the **L line** of the adapter.
If the value obtained is incorrect, the wiring is faulty between the computer and the white 2 track intermediate union (**C0/C1**).
Replace the wiring.

AFTER REPAIR	Reconnect the computer and the seat belt retractor, then switch on the ignition again. Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the seat belt retractor if it has been replaced (tool **Elé. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF179 PRESENT	Driver's side front side sensor circuit. CC : Short circuit 1.DEF : No signal

NOTES	**Special notes:** Use the B54 50 track adapter to work on the computer connector.

CC	***NOTES***	None.

Lock the computer using the command on the diagnostic tool.
Check that the driver's side sensor is connected correctly and check its wiring.
Check the condition of the wiring on the computer (**tracks 12 and 13**).
Check the condition of the 50 track connector (locking system, wiring, etc.).
Ensure continuity and insulation of the connections between:

Bornier B54 **terminal 12** → **track 2** sensor connector
Bornier B54 **terminal 13** → **track 1** sensor connector

Also check the insulation between these connections.

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

Replace the driver's side sensor.

AFTER REPAIR	Reconnect the computer and the driver's side sensor then switch on the ignition again. Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer.

FAULT FINDING - FAULT INTERPRETATION

DF180 PRESENT	Passenger side front side sensor circuit. CC : Short circuit 1.DEF : No signal

NOTES	**Special notes:** Use the B54 50 track adapter to work on the computer connector.

CC	***NOTES***	None.

Lock the computer using the command on the diagnostic tool.
Check that the passenger's side sensor is connected correctly and check its wiring.
Check the condition of the wiring on the computer (**tracks 37 and 38**).
Check the condition of the 50 track connector (locking system, wiring, etc.).
Ensure continuity and insulation of the connections between:

Bornier B54 **terminal 37** → **track 2** sensor connector
Bornier B54 **terminal 38** → **track 1** sensor connector

Also check the insulation between these connections.

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

Replace the passenger's side sensor.

AFTER REPAIR	Reconnect the computer and the passenger's side sensor then switch on the ignition again. Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer.

FAULT FINDING - FAULT INTERPRETATION

DF183 PRESENT	Driver's side front buckle pretensioner circuit. CC : Short circuit CO : Open circuit CC.1 : Short circuit to 12 volts CC.0 : Short circuit to earth 1.DEF : Short circuit between ignition lines

NOTES	**Processing priority in event of stacked faults:** In the event of 1.DEF short circuit between 2 ignition lines, follow the procedure below and that for the second fault, to localise the short circuit.
	Special notes: Never carry out measuring operations on ignition lines using any tool other than CLIP, NXR or XRBAG. Use the B54 adaptor to work on the computer connector (**Cable G**).

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

Lock the computer.
Switch off the ignition and check that the ignition module of the driver's seat buckle pretensioner is correctly connected.
Disconnect the ignition module of the pretensioner and connect a dummy ignition module to the ignition module connector.
Switch on the ignition and carry out a check using the diagnostic tool.
Replace the driver's seat buckle pretensioner if the fault becomes stored (fault no longer declared present).

Reconnect the pretensioner.
Disconnect the **grey 16 track** connector beneath the driver’s seat and check the connections of the connector (**track A7 and A8**).
Fit the **8 track adaptor** to the wiring harness at point **C1**.
CLIP, NXR or XRBAG must be used for measuring resistance on **cable D** of the adapter.
If the value obtained is incorrect, the wiring is faulty between the **grey 16 track** union and the driver’s seat buckle pretensioner (**C1/C3**). Replace the wiring if necessary.

Reconnect the 16 track connector.
Disconnect the computer and check the wiring on the connector (**tracks 10 and 35**).
Fit the B54 50 track adaptor. CLIP, NXR or XRBAG must be used for measuring the resistance on **cable X** of the adaptor.
If the value obtained is incorrect, the wiring is faulty between the computer and the passenger seat buckle pretensioner (**C0/C1**).
Replace the wiring.

AFTER REPAIR	Reconnect the computer and the pretensioner, then switch on the ignition again. Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the pretensioner if it has been replaced (tool **Elé. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF183 CONTINUED	

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

Lock the computer.
Switch off the ignition and check that the ignition module of the driver's seat buckle pretensioner is correctly connected.
Disconnect the ignition module of the pretensioner and connect a dummy ignition module to the ignition module connector.
Switch on the ignition and carry out a check using the diagnostic tool.
Replace the driver's seat buckle pretensioner if the fault becomes stored (fault no longer declared present).

Reconnect the pretensioner.
Disconnect the **grey 16 track** connector beneath the driver's seat and check the connections of the connector (**track A7 and A8**).
Fit the **8 track adaptor** to the wiring harness at point **C1**.
CLIP, NXR or XRBAG must be used for measuring the insulation appropriate to the type of fault on **cable D** of the adapter.
If the value obtained is incorrect, the wiring is faulty between the **grey 16 track** union and the driver's seat buckle pretensioner (**C1/C3**). Replace the wiring if necessary.

Reconnect the 16 track connector.
Check the wiring again on the **grey 16 track intermediate connector (tracks A7 and A8)** and on the 50 track connector **(tracks 10 and 35**).
Fit the B54 50 track adaptor. The CLIP, NXR or XRBAG tools must be used for measuring the insulation suited to the fault type on **cable G** of the adaptor.
If the fault persists the wiring is faulty between the computer and the **grey 16 track** intermediate union (**C0/C1**).
Replace the wiring.

AFTER REPAIR	Reconnect the computer and the pretensioner, then switch on the ignition again. Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the pretensioner if it has been replaced (tool **Elé. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF184 PRESENT	Passenger side front buckle pretensioner circuit. CC : Short circuit CO : Open circuit CC.1 : Short circuit to 12 volts CC.0 : Short circuit to earth 1.DEF : Short circuit between ignition lines

NOTES	**Processing priority in event of stacked faults:** In the event of 1.DEF short circuit between 2 ignition lines, follow the procedure below and that for the second fault, to localise the short circuit.
	Special notes: Never carry out measuring operations on ignition lines using any tool other than CLIP, NXR or XRBAG. Use the B54 adaptor to work on the computer connector (**Cable L**).

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

Lock the computer.
Switch off the ignition and check that the ignition module of the passenger's seat buckle pretensioner is correctly connected.
Disconnect the ignition module of the pretensioner and connect a dummy ignition module to the ignition module connector.
Switch on the ignition and carry out a check using the diagnostic tool.
Replace the passenger's seat buckle pretensioner if the fault becomes stored (fault no longer declared present).

Reconnect the pretensioner.
Disconnect the **grey 16 track** connector beneath the passenger seat and check the connections of the connector (**tracks A7 and A8**).
Fit the **8 track adaptor** to the wiring harness at point **C1**.
CLIP, NXR or XRBAG must be used for measuring resistance on **cable D** of the adapter.
If the value obtained is incorrect, the wiring is faulty between the **grey 16 track** union and the passenger seat buckle pretensioner (**C1/C3**). Replace the wiring if necessary.

Reconnect the 16 track connector.
Disconnect the computer and check the wiring on the connector (**tracks 11 and 36**).
Fit the B54 50 track adaptor. CLIP, NXR or XRBAG must be used for measuring the resistance on **cable H** of the adaptor.
If the value obtained is incorrect, the wiring is faulty between the computer and the passenger seat buckle pretensioner (**C0/C1**).
Replace the wiring.

AFTER REPAIR	Reconnect the computer and the passenger seat buckle pretensioner, then switch on the ignition again. Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the pretensioner if it has been replaced (tool **Elé. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF184PRESENT CONTINUED	

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

Lock the computer.
Switch off the ignition and check that the ignition module of the passenger's seat buckle pretensioner is correctly connected.
Disconnect the ignition module of the pretensioner and connect a dummy ignition module to the ignition module connector.
Switch on the ignition and carry out a check using the diagnostic tool.
Replace the passenger seat buckle pretensioner if the fault becomes stored (fault no longer declared present).

Reconnect the pretensioner.
Disconnect the **grey 16 track** connector beneath the passenger seat and check the connections of the connector (**tracks A7 and A8**).
Fit the **8 track adaptor** to the wiring harness at point **C1**.
CLIP, NXR or XRBAG must be used for measuring the insulation appropriate to the type of fault on **cable D** of the adaptor.
If the value obtained is incorrect, the wiring is faulty between the **grey 16 track** union and the passenger seat buckle pretensioner (**C1/C3**). Replace the wiring if necessary.

Reconnect the 16 track connector.
Check the wiring again on the **grey 16 track** intermediate connector **(tracks A7 and A8**) and on the 50 track connector **(tracks 11 and 36**).
Fit the B54 50 track adaptor. The CLIP, NXR or XRBAG tools must be used for measuring the insulation suited to the fault type on **cable H** of the adaptor.
If the fault persists the wiring is faulty between the computer and the **grey 16 track** intermediate union (**C0/C1**).
Replace the wiring.

AFTER REPAIR	Reconnect the computer and the passenger seat buckle pretensioner, then switch on the ignition again. Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer. Destroy the pretensioner if it has been replaced (tool **Elé. 1287**).

FAULT FINDING - FAULT INTERPRETATION

DF187 **PRESENT**	Configuration of ignition lines

NOTES	None.

This fault indicates an inconsistency between the computer configuration and the vehicle equipment detected by the computer. The computer has detected the presence of an element additional to its configuration.
Carry out a reading of the configuration under the heading "READING THE CONFIGURATION".
Modify the computer configuration, adapting it to the equipment level of the vehicle.

AFTER REPAIR	Erase the computer memory then switch off the ignition. Check again using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF188 **PRESENT**	Configuration of locking passenger air bag

NOTES	**Special notes:** None.

This fault indicates an inconsistency between the computer configuration and the vehicle equipment detected by the computer. The computer has detected the presence of an element different from its configuration.
Carry out a reading of the configuration under the heading "READING THE CONFIGURATION".
Modify the computer configuration, adapting it to the equipment level of the vehicle.

AFTER REPAIR	Erase the computer memory then switch off the ignition. Check again using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF189 **PRESENT**	Configuration of seat position sensors

NOTES	None.

This fault indicates an inconsistency between the computer configuration and the vehicle equipment detected by the computer. The computer has detected the presence of an element additional to its configuration.
Carry out a reading of the configuration under the heading "READING THE CONFIGURATION".
Modify the computer configuration, adapting it to the equipment level of the vehicle.

AFTER REPAIR	Erase the computer memory then switch off the ignition. Check again using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF191 **PRESENT**	Fault warning light consistency

NOTES	**Special notes:** None.

This fault indicates an inconsistency between the status of the warning light and the command from the air bag computer.
Consult the fault finding procedure relevant to this fault in the instrument panel fault finding information section.

AFTER REPAIR	Erase the computer memory then switch off the ignition. Check again using the diagnostic tool.

FAULT FINDING - FAULT INTERPRETATION

DF192 **PRESENT**	Passenger's air bag status warning light consistency 1.DEF : Inconsistency.

NOTES	**Special notes:** None.

This fault indicates an inconsistency between the status of the warning light and the command from the air bag computer.
Consult the fault finding procedure relevant to this fault in the instrument panel fault finding information section.

AFTER REPAIR	Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer.

FAULT FINDING - FAULT INTERPRETATION

DF193 **PRESENT**	Change of status of passenger air bag locking

NOTES	**Special features:** The vehicle user has 10 seconds after switching on + after ignition feed to block the passenger air bag with 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 again will block this fault.

Set the locking switch to the desired position, switch the ignition off and wait for a few seconds.
Switch the ignition back on and clear the computer memory.

AFTER REPAIR	Erase the computer memory then switch off the ignition. Carry out the check again using the diagnostic tool and, if there are no faults, unlock the computer.

FAULT FINDING - FAULT INTERPRETATION

DF194 PRESENT	Computer to be replaced following impact 1.DEF : Locking following impact

NOTES	None.

Replace the air bag computer (consult the Help section for this operation).

AFTER REPAIR	None.

FAULT FINDING - CHECKING CONFORMITY

NOTES	Only perform this conformity check after a complete check with the diagnostic tool.

Order	Function	Parameter/status checked or action	Display and notes	Fault finding
1	diagnostic tool dialogue	-	Air bag AB 8. 2E	Chart 1
2	Computer conformity	Vehicle type parameter	CLIO II Phase II 06	DF001
3	Computer configuration	Use of "READING THE CONFIGURATION" commands	Ensure that the computer configuration defined corresponds to the vehicle equipment.	None
4	Warning light operation Computer initialisation check.	Switch on the ignition	The warning light comes on for 3 seconds when the ignition is switched on	DF165

FAULT FINDING - HELP

Replacing the air bag computer

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

The locked mode is signalled when the air bag fault warning light lights up on the instrument panel.

Follow this procedure when replacing an air bag computer:

– Ensure that the ignition is switched off.
– Replace the computer.
– Modify the computer configuration if necessary.
– Switch off the ignition.
– Carry out a check using the diagnostic tool.
– Unlock the computer only if no faults are indicated by the diagnostic tool.

DEFINITION OF TRIGGERING LINES:

L1: Driver's side front air bag Circuit 1. **(Cable C of the B54)**

L2: Driver's side front air bag Circuit 2. **(Cable D of the B54)**

L3: Passenger side front air bag Circuit 1. **(Cable A of the B54)**

L4: Passenger side front air bag Circuit 2. **(Cable B of the B54)**

L5: Driver's side front buckle pretensioner circuit. **(Cable G of the B54)**

L6: Passenger side front buckle pretensioner circuit. **(Cable H of the B54)**

L7: Rear driver's side seat belt retractor circuit. **(Cable K of the B54)**

L8: Rear passenger side seat belt retractor circuit. **(Cable L of the B54)**

L9: Driver's side front side air bag circuit. **(Cable E of the B54)**

L10: Passenger side front side air bag circuit. **(Cable F of the B54)**

FAULT FINDING - FAULT FINDING CHARTS

CHART 1	ABSENCE OF DIALOGUE WITH THE AIR BAG COMPUTER

NOTES	None.

Try to establish dialogue with a computer on another vehicle to make sure that the diagnostic tool is not faulty.
If the 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 diagnostic line **K**.
Disconnect the computers one at a time to locate the fault.
Check the battery voltage and carry out any operations necessary to obtain a correct voltage (10.5 volts < battery voltage < 16 volts).

Check the presence and condition of the air bag computer supply voltage fuse.
Check the computer connector and the condition of its wiring.
Check that the computer is correctly supplied:
– Disconnect the air bag computer and fit the **B54 50 track adaptor** (**Cable 1**).
– Check and ensure the presence of **+ after ignition feed** between the terminals marked **earth** and **+ after ignition feed.**

Check that the diagnostic socket is correctly supplied:
– **+ before ignition feed on track 16**.
– **Earth** on **tracks 4 and 5**.
Check the continuity and insulation of the lines of the diagnostic socket/air bag computer connection:
– Between the terminal marked **K** and **track 7** of the diagnostic socket.

If dialogue is still not established after these various checks, replace the air bag computer (refer to the Help section for this operation).

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