TWINGO

8 Electrical equipment

83A INSTRUMENT PANEL

Vdiag No.: 04 08

V5 **Edition Anglaise**

1. SCOPE OF THIS DOCUMENT

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

Vehicle(s): **New Twingo**

Function concerned: **Instrument panel**

Name of computer: **Instrument panel**
3 levels:
- **Entry Level version**
- **Mid Level version**
- **Top of the range version**

Vdiag No.: **04, 08**

2. PREREQUISITES FOR FAULT FINDING

Documentation type

Fault finding procedures (this manual):
– Assisted fault finding (integrated into the diagnostic tool), Dialogys.
Wiring Diagrams:
– Visu Schéma (CD-ROM), paper.

Type of diagnostic tools

– **CLIP**

Special tooling required

Special tooling required	
	Multimeter
Elé. 1681	Universal bornier

3. REMINDERS

Procedure

To run fault finding on the vehicle computers, switch on the ignition. Proceed as follows:
– turn the ignition key to APC,
– connect the **diagnostic tool** and perform the required operations.

To cut off the + after ignition feed, proceed as follows:
– disconnect the diagnostic tool,
– turn the ignition key to OFF,
– verify that the forced + after ignition feed has been switched off by checking that the computer warning lights on the control panel have gone out.

Faults

Faults are declared as either present or stored (depending on whether they appeared in a certain context and have disappeared since, or whether they remain present but have not been diagnosed within the current context).

The present or stored status of faults should be taken into consideration when the diagnostic tool is switched on after the + after ignition feed (without any system components being active).

For a present fault, apply the procedure described in the Interpretation of faults section.

For a stored fault, note the faults displayed and apply the instructions in the Notes section.

If the fault is confirmed when applying the instructions in the Notes section, the fault is present. Deal with the fault

If the fault is not confirmed, check:
- the electrical lines which correspond to the fault,
- the connectors on these lines (corrosion, bent pins, etc.),
- the resistance of the component detected as faulty,
- the condition of the wires (melted or split insulation, wear).

Conformity check

The aim of the conformity check is to check data that does not produce a fault on the diagnostic tool because the data is inconsistent. Therefore, this stage is used to:

- carry out fault finding on faults that do not have a fault display, and which may correspond to a customer complaint.
- check that the system is operating correctly and that there is no risk of a fault recurring after repairs.

This section gives the fault finding procedures for statuses and parameters and the conditions for checking them.

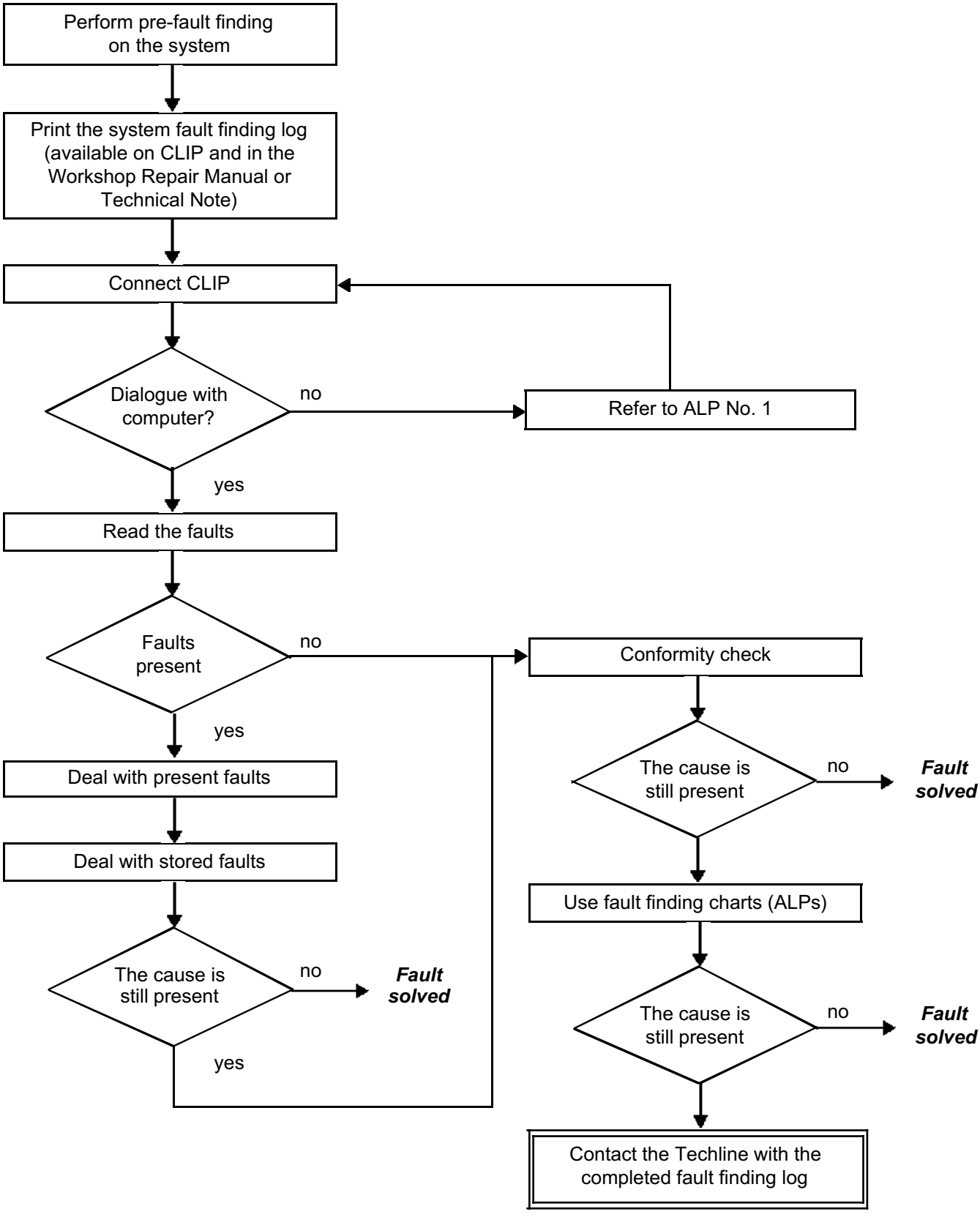
If a status is not behaving normally or a parameter is outside the permitted tolerance values, consult the corresponding fault finding page.

Customer complaints - Fault finding chart

If the test with the diagnostic tool is OK but the customer complaint is still present, the fault should be treated by customer complaints.

A summary of the overall procedure to follow is provided on the following page in the form of a flow chart.

4. FAULT FINDING PROCEDURE



4. FAULT FINDING PROCEDURE (CONTINUED)

Wiring check

Fault finding problems
Disconnecting the connectors and/or manipulating the wiring harness may temporarily remove the cause of a fault.
Electrical measurements of voltage, resistance and insulation are generally correct, especially if the fault is not present when the analysis is made (stored fault).

Visual inspection
Look for damage under the bonnet and in the passenger compartment.
Carefully check the fuses, insulators and wiring harness routing.
Look for signs of oxidation.

Tactile inspection
While manipulating the wiring harness, use the diagnostic tool to note any change in fault status from stored to present.
Make sure that the connectors are properly locked.
Apply light pressure to the connectors.
Twist the wiring harness.
If there is a change in status, try to locate the source of the fault.

Inspection of each component
Disconnect the connectors and check the appearance of the clips and tabs, as well as the crimping (no crimping on the insulating section).
Make sure that the clips and tabs are properly locked in the sockets.
Check that no clips or tabs have been dislodged during connection.
Check the clip contact pressure using an appropriate model of tab.

Resistance check
Check the continuity of entire lines, then section by section.
Look for a short circuit to earth, to the + 12 V feed or with another wire.

If a fault is detected, repair or replace the wiring harness.

5. FAULT FINDING LOG

IMPORTANT

IMPORTANT
Any fault on a complex system requires thorough fault finding with the appropriate tools. The FAULTFINDING LOG, which should be completed during the procedure, enables you to keep track of the procedure which is carried out. It is an essential document when consulting the manufacturer.

IT IS THEREFORE ESSENTIAL THAT THE FAULT FINDING LOG IS FILLED OUT EVERY TIME IT IS REQUESTED BY TECHLINE OR THE WARRANTY RETURNS DEPARTMENT

You will always be asked for this log:

- when requesting technical assistance from Techline,
- for approval requests when replacing parts for which approval is mandatory,
- to be attached to monitored parts for which reimbursement is requested. The log is needed for warranty reimbursement, and enables better analysis of the parts removed.

6. SAFETY INSTRUCTIONS

Safety rules must be observed during any work on a component to prevent any damage or injury:

- check the battery voltage to avoid incorrect operation of computer functions,
- Use the proper tools.

Three models are available:

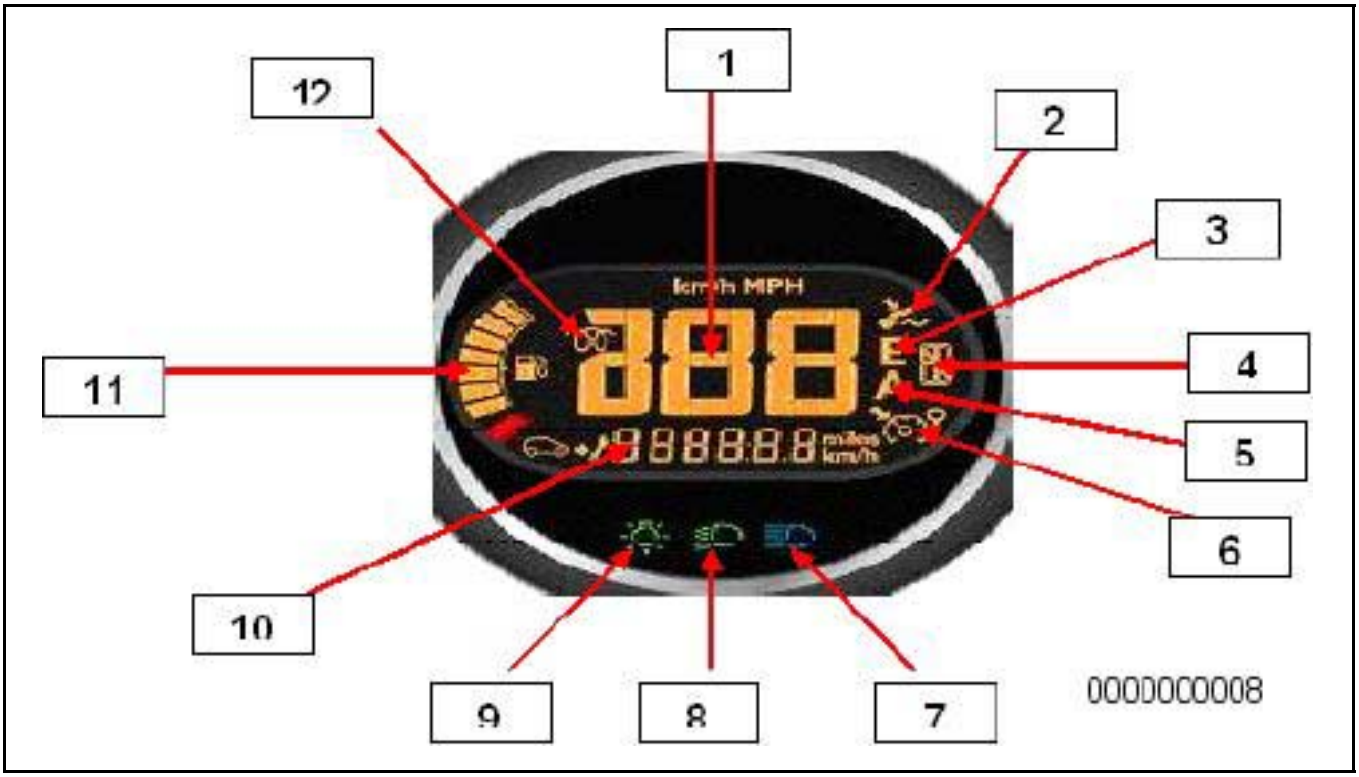
Entry level version: Multifunction display + Warning light display and a clock in place of the multimedia display. The clock function is available on the trip computer.

Mid-range version: Multifunction display + Warning light display + Multimedia display. The clock function is available on the multimedia display.

Top of the range version: Multifunction display + Warning light display + Multimedia display. The clock function is available on the multimedia display.

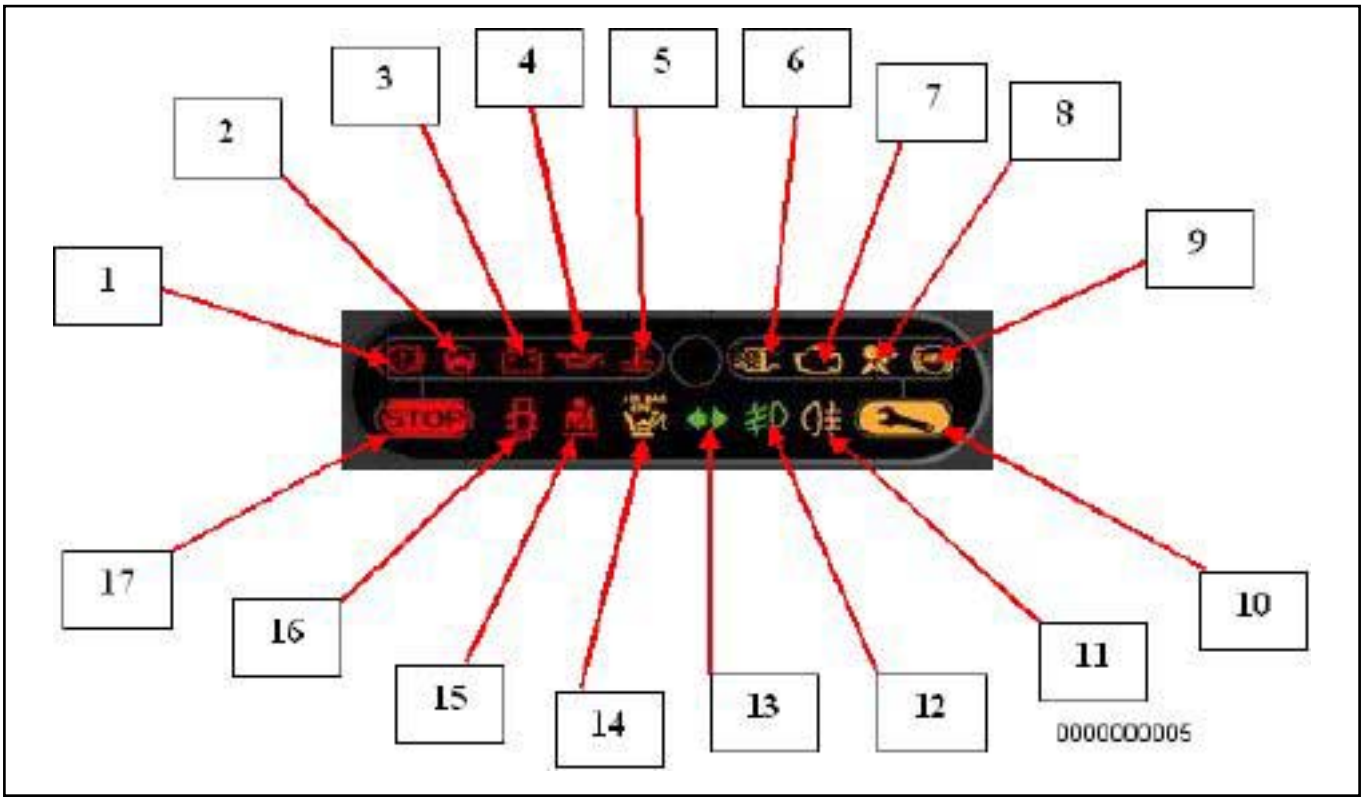
1	**Multifunction display:** **Rev counter/Fuel gauge** **Multifunction line/Sequential gearbox indicator/Cruise control-Speed limiter indicator** **Diesel preheating symbol**
2	**Warning light display**
3	**Multimedia display** **On mid-range and top of the range**

1 Rev counter/Fuel gauge:

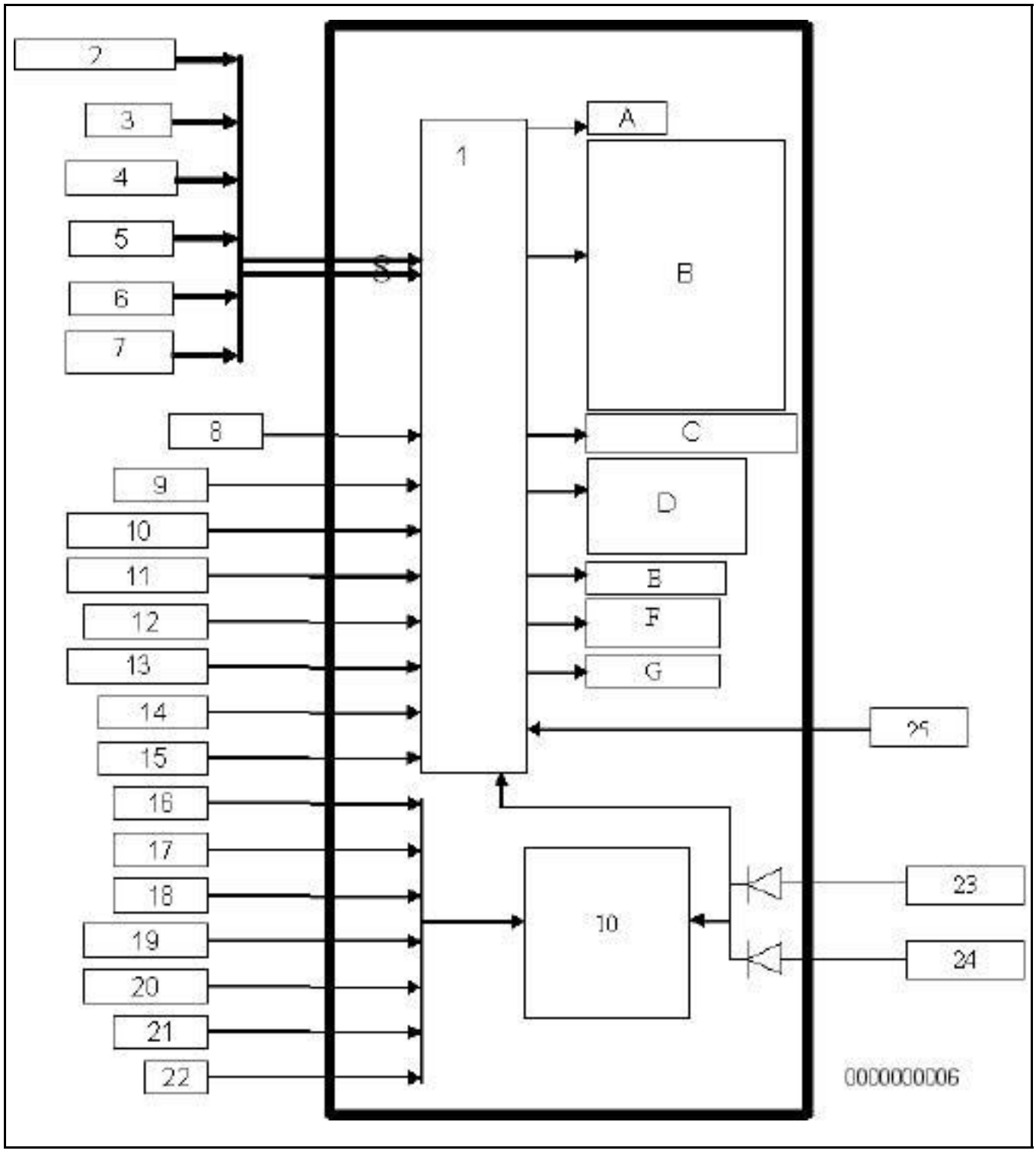


1	Current speed display	**7**	Main beam indicator light
2	Depress brake pedal symbol	**8**	Dipped headlight indicator light
3	“Economy” mode symbol	**9**	Side lights indicator light
4	Sequential gear engaged	**10**	Multifunction display
5	“Automatic” mode symbol	**11**	Fuel level gauge
6	Cruise control/Speed limiter symbol	**12**	Diesel preheating symbol

2 Warning light display:



1	Brake warning light	**10**	“Service” warning light
2	Major electric power-assisted steering fault warning	**11**	Rear fog lights indicator light
3	Battery charge warning light	**12**	Front fog lights indicator light
4	Oil pressure warning light	**13**	Direction indicator light
5	Coolant temperature warning light	**14**	Passenger airbag disconnection warning light
6	Particle filter warning light record (Not used on the New Twingo)	**15**	Seat belt reminder indicator light
7	On board diagnostics warning light	**16**	Door(s) open warning light (Not present in the New Twingo)
8	Airbag fault warning light	**17**	“Stop” warning light
9	ABS warning light		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Multiplex network:

1	Instrument panel computer
2	ABS or vehicle speed circuit
3	Sequential gearbox
4	Airbag
5	Rev counter
6	Injection computer
7	UCH

Input signals:

8	+ after ignition feed
9	Lighting dimmer
10	Fuel sender
11	Trip computer scroll button
12	Parking brake
13	Oil pressure
14	EPAS
15	Brake fluid level
16	Side light
17	Code
18	Headlight
19	Front fog light
20	Rear fog light
21	Battery supply
22	Earth
23/24	Left-hand and right-hand indicators
25	Clock setting buttons (on entry level version)

Output signals:

A	**Buzzer**
B	**Controlled warning lights:** – Seat belt reminder light – Brake warning light – Battery charge warning light – Oil pressure warning light – Coolant temperature warning light – Airbag fault warning light
C	Fuel level display function
D	**On-board computer** – Odometers – Distance/time before service. – Cruise control and speed limiter – Clock (on entry level version) – Exterior temperature display
E	Sequential gearbox display
F	Backlighting Dimmer
G	Speedometer
H	**Direct warning lights:** – Side light indicator light – Dipped headlight indicator light – Headlight indicator light – Front fog light indicator light – Rear fog light indicator light – Direction indicator light

The instrument panel provides the following functions:

– Illumination of the direction indicator light:

The dual direction indicator light comes on if the driver has manipulated the indicator switch to inform of a change in direction.

– Illumination of the light indicator lights:

– The side light indicator light comes on when the side lights are switched on.
– The dipped headlights indicator light comes on when the dipped headlights are switched on.
– The main beam headlights indicator light comes on when the main beam headlights are switched on.
– The front fog light indicator light comes on when the front fog lights are switched on.
– The rear fog light indicator light comes on when the rear fog lights are switched on.

– Side lights reminder buzzer:

– The “side lights reminder” buzzer sounds when the driver's or passenger's door is opened, with the APC off and the side lights on, to warn the driver that the lights are still on.

– Operation of the “automatic headlighting activation - deactivation or automatic locking when driving” buzzer:

– The “connection” warning sound is emitted by the instrument panel buzzer when the “automatic headlighting” or “automatic locking when driving” functions are activated.

– The “disconnection” warning sound is emitted by the instrument panel buzzer when the “automatic headlighting” or “automatic locking when driving” functions are deactivated.

– “Overspeed function - Arabia” buzzer operation:

Warns the driver that the speed threshold has been exceeded, depending on the country and the equipment.

– Fuel level gauge:

The fuel level gauge informs the driver of the fuel level remaining in the tank using a bargraph. It also indicates a low fuel level using a “fuel level low” warning consisting of a flashing red square.

– Speed display:

The speed display informs the driver of the current vehicle speed in km/h or miles/h depending on the “distance units” configuration.

If the “Service” warning light and " - - " light up in place of the vehicle speed, refer to the “Service warning light illumination” insert.

– Multifunction display:

The multifunction display centralises the following information:

- Mileometer,
- Trip mileage.
- Distance/time before service
- Cruise control/Speed limiter (depending on configuration)
- Clock (entry level version)
- Exterior temperature (depending on configuration)

It is possible to shift from one piece of information to another in the order above, simply by pressing the “Trip computer” button located on the end of the windscreen washer control.

– Mileometer and trip mileage:

Respectively indicates the total distance travelled by the vehicle since it was manufactured and the distance travelled since the trip mileage was last reset.
The distance travelled is displayed in “km” or “miles” depending on the configuration.

– Distance/time before service:

Shown on the multifunction display, indicates the distance to be travelled before the next service.

If the “Service” warning light and “Distance/time before service” warning light come on simultaneously, refer to the “Service warning light illumination” insert.

– "Cruise control/speed limiter" symbol display:

The Cruise control or Speed limiter symbol comes on when the system is switched on and is also displayed with the selected reference speed on the multifunction display in km/h or miles/h, depending on the configuration.

If the "Service" warning light and "Cruise control/Speed limiter" symbol(s) come on simultaneously, refer to the "Service warning light illumination" insert.

– Clock:

Displays the time.

– External temperature indicator:

Informs the driver of the external temperature.

– Illumination of the "Brake" warning light:

Illumination of the "brake" warning light indicates the following statuses to the driver:

- Fixed illumination: Parking brake engaged/Test phase when vehicle under + after ignition feed.
- Fixed illumination + 5 seconds buzzer: Parking brake engaged when driving.
- Flashing: Calibration of the electronic braking distribution.

If the "Stop" warning light and "Brake" warning light come on simultaneously, refer to the "Stop warning light illumination" insert.

– Illumination of the "seat belt reminder" warning light:

Illumination of the "seat belt reminder" warning light indicates the following statuses to the driver:

- Fixed illumination: Seat belt reminder.
- Flashing + "Moderate seat belt reminder buzzer" signal:
  Seat belt reminder + 12 mph (20 km/h).
- Flashing + "Loud seat belt reminder buzzer" signal + Radio cut off:
  Seat belt reminder following the seat belt reminder warning + 12 mph (20 km/h).

– Illumination of the “battery charge” warning light:

Illumination of the “battery charge” warning light indicates the following statuses:

- Fixed illumination for three seconds when the + after ignition feed is switched on: Warning light test phase by the instrument panel.
- Flashing: Low voltage.

If the “Stop” warning light and “Battery charge” warning light come on simultaneously, refer to the “Stop warning light illumination” insert.

– Illumination of the “Oil pressure warning” warning light:

The “Oil pressure warning” warning light always comes on with the “Stop” warning light and the “Stop” buzzer sounds. This warning light indicates a pressure fault in the engine lubrication circuit and indicates potential engine damage.
This warning light comes on for 3 seconds when the + after ignition feed is activated (Test phase).

– Illumination of the “Coolant temperature warning” warning light:

The “coolant temperature warning” warning light always comes on with the “Stop” warning light and the “Stop” buzzer sounds. This warning light indicates that the cooling circuit temperature is too high, and there is a risk of the engine overheating and engine damage.
This warning light comes on for 3 seconds when the + after ignition feed is activated (Test phase).

– Illumination of the “ABS” warning light:

Illumination of the “ABS” warning light indicates the following statuses to the driver:

- Rapid flashing: ABS not configured.
- Slow flashing: ABS in configuration phase.

This warning light comes on for 3 seconds when the + after ignition feed is activated (Test phase).

If the “Service” warning light and “ABS” warning light come on simultaneously, refer to the “Service warning light illumination” insert.

– Illumination of the “Particle filter” warning light:

Illumination of the “Particle filter” warning light indicates a minor particle filter fault to the driver.

If the “Service” warning light and “Particle filter” warning light come on simultaneously, refer to the “Service warning light illumination” insert.

The New Twingo does not currently have a particle filter.

– Illumination of the “Major Electric Power-Assisted Steering fault warning” warning light:

Illumination of the “major electric power-assisted steering fault warning” warning light is requested by the electric power-assisted steering up to 1 second after the engine is started.

If the “Stop” warning light and “Stop buzzer” are activated simultaneously, refer to the “Stop warning light illumination” insert.

– Illumination of the “OBD” warning light

If the “OBD” warning light and “Service” warning lights come on simultaneously, refer to the “Service warning light illumination” insert.

– Illumination of the “airbag fault” warning light:

Illumination of the “Airbag fault” warning light indicates an airbag warning light test phase by the instrument panel.

If the “Service” warning light and “Airbag fault” warning light come on simultaneously, refer to the “Service warning light illumination” insert.

– Illumination of the “Passenger airbag disconnection” warning light:

Illumination of the “Passenger airbag disconnection” warning light indicates deactivation of the front passenger airbag.

– Illumination of the “Sinusoid” warning light:

Illumination of the “Sinusoid” warning light indicates the following statuses to the driver:

- Fixed illumination 3 seconds after + after ignition feed: Test phase by the instrument panel.
- Fixed illumination (If sequential gearbox configuration): Sequential gearbox overheating warning.
- Fixed illumination + buzzer (If sequential gearbox configuration): Increased sequential gearbox overheating warning.
- Water in diesel fuel warning.
- Level 1 injection fault.

If the “Service” warning light and “Sinusoid” warning light come on simultaneously, refer to the “Service warning light illumination” insert.

– Illumination of the “Stop” warning light:

Illumination of the “Stop” warning light alone characterises a warning light test phase by the instrument panel.

Outside of this condition, the “Stop” warning light is always associated with a “Stop” buzzer and another warning light to indicate a fault.

“Stop” warning light + “Stop” buzzer:

– **Major injection fault warning.**

“Stop” warning light + “Stop” buzzer + “Brake” warning light:

– **Brake circuit fault.**
– **Electronic Braking Distribution fault.**

“Stop” warning light + “Stop” buzzer + “Battery charge” warning light:

– **Battery charge warning.**

“Stop” warning light + “Stop” buzzer + “Oil pressure warning” warning light:

– **Oil pressure warning.**

“Stop” warning light + “Stop” buzzer + “Coolant temperature warning” warning light:

– **Coolant temperature warning.**

“Stop” warning light + “Stop” buzzer + “Major electric power-assisted steering fault warning” warning light:

– **Major electric power-assisted steering fault warning.**

– Illumination of the “Service” warning light:

Illumination of the “Service” warning light alone characterises a warning light test phase by the instrument panel.

Illumination of this warning light can be accompanied by other warnings:

“Service” warning light + “ - - ” on the speed display:
- **Vehicle speed circuit fault warning.**

“Service” warning light + 3 dashes in place of the set speed + Disappearance of the symbol:
- **Cruise control fault warning.**

“Service” warning light + 3 dashes in place of the cruising speed + Disappearance of the symbol:
- **Speed limiter fault warning.**

“Service” warning light + “Distance/time before service” symbol flashing + “- - - - -” in place of the Distance/time before service value:
- **“Distance/time before service” warning exceeded in time (NOT used on the New Twingo).**

“Service” warning light + “Distance/time before service” symbol flashing + “0” displayed on the multifunction display:
- **“Distance/time before service” warning exceeded in distance.**

“Service” warning light + “ESP” warning light (located on the rev counter):
- **ESP fault warning.**
- **ESP in regulation with fault warning.**

“Service” warning light alone:
- **ESP present but rev counter not detected**. The instrument panel no longer detects the multiplexed rev counter signal even though it is configured with ESP; the rev counter may be faulty.

“Service” warning light + “ABS” warning light:
- **ABS fault warning.**

“Service” warning light + “Particle filter” warning light:
- **“Major particle filter fault” warning.**

The New Twingo does not currently have a particle filter.

“Service” warning light + “OBD” warning light:
- **“Combustion misfire” warning.**

“Service” warning light + “OBD” warning light flashing:
- **“Destructive combustion misfire” warning.**

“Service” warning light + “Airbag fault warning” warning light:
- **“Airbag fault” warning.**

“Service” warning light + “Sinusoid” warning light:
- **“Minor injection fault” warning.**
- **“Water in diesel fuel” warning** (on diesel configuration only).
- **“Sequential gearbox fault” warning** (on sequential gearbox configuration only).

1. UNIT CONFIGURATIONS:

Procedure to be applied: Copy the values measured whilst reading LCXXX or consult ICM*.

Configuration reading number	Configuration number	Control	Specification
LC029	**CF149**	Gearbox type	– Manual gearbox – Sequential gearbox
LC049	**CF138**	Type of fuel	– PETROL – DIESEL
LC051	**CF140**	Distance unit	– KM – MILES
LC061	**CF150**	Cruise control/speed limiter	– WITH – NONE
LC052	**CF141**	Overspeed function - Arabia	– WITH – NONE
LC064	**CF158**	Seat belt reminder buzzer	– STATUS 1 – STATUS 2 – STATUS 3
LC011	**CF038**	Dimmer present	– YES – NO
LC094	**CF180**	External temperature	– ABSENT – PRESENT
LC098	**CF181**	Electric power-assisted steering	– WITH – NONE
LC053	**CF142**	Electronic stability program (ESP)	– ABS/without ESP – With ABS/ESP – Without ABS/ESP
LC106	**CF198**	OCS	– WITH – NONE

2. PARAMETER SETTINGS:

VP002	Enter VIN	
VP016	Oil service and odometer (miles-km)	This command is used to enter the oil service interval and frequency and odometry in miles or km. Only use this command if replacing the instrument panel.

***ICM (Shared World Information): available on Renault Net**

1. REPLACING, PROGRAMMING OR REPROGRAMMING THE INSTRUMENT PANEL

1 - Introduction to replacement operation

IMPORTANT
Before replacing the instrument panel, note the following parameters in the odometry sub-functions:

In Km:

- **PR007 OIL SERVICE INTERVAL: CURRENT VALUE IN KM**
- **PR025 ODOMETRY IN KM**
- **PR005 OIL CHANGE FREQUENCY IN KM**

In Miles:

- **PR023 OIL SERVICE INTERVAL: CURRENT VALUE IN MILES**
- **PR026 ODOMETRY IN MILES**
- **PR024 OIL CHANGE FREQUENCY IN MILES**

2 - Configuration reading

Before replacing the instrument panel, note the configurations available in the configuration reading menu or consult ICM* then carry out the after replacement procedure.

2 - After replacing the instrument panel

- **VP002 WRITE VIN**
- **VP016 OIL SERVICE AND ODOMETRY MILES - KM**
- Carry out the configuration and parameter setting operations previously displayed.

*ICM (Shared World Information): available on Renault Net

Tool fault	Associated DTC	Diagnostic tool title
DF007	9402	Fuel sender circuit
DF009	9407	Oil pressure sensor circuit
DF018	9405	Instrument panel
DF019	9404	Battery voltage

DF007 PRESENT OR STORED	FUEL SENDER CIRCUIT CO : Open circuit CC : Short circuit 1.DEF : Internal electronic fault 2.DEF : Battery undervoltage

NOTES	1.DEF: Contact **Techline**. 2.DEF: Carry out fault finding on the charging circuit **(see Technical Note 6014A, Checking the charging circuit).**
	Conditions for applying the fault finding procedure to stored faults: **The fault is declared present after waiting for 1 second,** with the ignition on, then stored after 60 seconds.
	Special note: Check the consistency between the instrument panel display and parameter **PR041 Filtered fuel level**.

CO **CC**	***NOTES***	**Special note:** CO: The fault is declared present if the fuel sender resistance is greater than **350 Ω.** CC: The fault is declared present if the fuel sender resistance is less than **5 Ω.**

Manipulate the wiring harness between the instrument panel and the fuel sender in order to produce a change in fault status (Present → Stored).
Look for possible damage to the wiring harness, and check the **connection and condition** of the fuel sender and its connections.
Look for possible damage to the wiring harness, check the **connection and condition** of the **instrument panel** connector.
If there is a repair method (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**) repair the connector, otherwise replace the wiring.

Check the **30A** fuse of the **positive protected battery, component code 1033.**

Measure the **resistance** between **connections 41A and 41B** of the fuel sender.
Replace the fuel sender if the **resistance** value is not: **260 Ω fuel tank in reserve**
38 Ω fuel tank full
(see MR 411, 19C, Tank, fuel sender: Removal - Refitting).

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

DF007 CONTINUED	

Check for **+ 12 V** on the **following connections**:
Connection BP17 between component **236** and component **1033**
Connection 3N between component **236** and component **833.**

Check the **insulation and continuity** of the following connections:
Connection BP17 between component **1033** and component **236**
Connection 3N between component **236** and component **833**
Connection 41A between component **833** and component **247**
Connection 41B between component **833** and component **247**
Connection MF between component **833** and the vehicle earth.

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

If the fault persists, contact the **Techline**.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

DF009 PRESENT	OIL PRESSURE SENSOR 1.DEF: Signal incoherent

NOTES	**Special note:** This check must be carried out with the engine stopped.

1.DEF	***NOTES***	The fault is declared present if the oil pressure sensor is not detected as closed when the engine is stopped.

Top up the oil level before starting the check.
Look for any damage to the wiring harness and check the **condition and connection** of the oil pressure switch and its connections. Look for possible damage to the wiring harness, check the **connection and condition** of the **instrument panel** connector. If there is a repair method (**see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**) repair the connector, otherwise replace the wiring.
Check **the insulation** and **continuity** of the following connection: **Connection 28A** between component **205** and component **247**. If there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the wiring, otherwise replace it.
If the fault is still present, contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

DF018 PRESENT OR STORED	INSTRUMENT PANEL 1.DEF: Internal electronic fault 2.DEF: Feed voltage too low

NOTES	None.

1.DEF	***NOTES***	**Contact the Techline.**

2.DEF	***NOTES***	Refer to the interpretation of fault **DF019 Battery voltage**.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

DF019 PRESENT OR STORED	BATTERY VOLTAGE 1.DEF: Battery undervoltage 2.DEF: Battery voltage too high 3.DEF: Impossible measurement

NOTES	3.DEF: Impossible measurement related to an internal computer fault. Contact the **Techline**.

1.DEF **2.DEF**	***NOTES***	**Special notes:** 1.DEF: The battery fault is declared present if the battery voltage is **less than 5.5 V**. 2.DEF: The battery fault is declared present if the battery voltage is **greater than 16 V**.

Check **fuses F12 (5A)** and **F8 (15A)** of component **1016**

Manipulate the wiring harness between the instrument panel and the battery in order to produce a change in fault status (Present → Stored).
Look for any harness damage, and check **the connection and condition** of the battery and its connections.
Look for possible damage to the wiring harness, check the **connection and condition** of the **instrument panel** connector.
If there is a repair method (**see Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**) repair the connector, otherwise replace the wiring.

Check the **condition of the battery** and the charging circuit **(see Technical Note 6014A, Checking the charging circuit).**
Check the **condition** of the vehicle **earths**.

Check for **+ 12 V** on **connection BP49** of component **247**.

If there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the wiring, otherwise replace it.

With the ignition on, check for **+ 12 V** on **connection AP43** of component **247.**

If there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the wiring, otherwise replace it.

Check for **earth** on **connection MAN** of component **247.**

If there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the wiring, otherwise replace it.

If the fault persists, contact the **Techline**.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

NOTES	Only carry out this conformity check after a **complete check** with the **diagnostic tool**. The values shown in this conformity check are given as a guide. Application conditions: **Vehicle with + after ignition feed activated, engine stopped.**

MAIN SCREEN

Function	Parameter or status checked or action		Display and notes		Fault finding
Instrument panel lighting.	**ET004**	Side lights control	**Side lights on**	**ACTIVE**	In the event of a fault, consult the interpretation of status **ET004 Side lights switch**
			Side lights off	**INACTIVE**	

SUB-FUNCTION: DISPLAY

Function	Parameter or status checked or action		Display and notes		Fault finding
Instrument panel lighting	**ET004:**	Side lights control	**Side lights on**	**ACTIVE**	In the event of a fault, consult the interpretation of status **ET004 Side lights switch.**
			Side lights off	**INACTIVE**	
Direction indicator signal	**ET245:**	Direction indicators	**Activated**	**ACTIVE**	In the event of a fault, refer to the interpretation of status **ET245 Indicators**.
			In rest position	**INACTIVE**	
Fault signal	**ET248:**	Stop warning light activated by the system	1 - Injection 2 - Coolant temperature 3 - Oil pressure 4 - Brake fluid level 5 - Electronic Braking Distribution 6 - Electric power-assisted steering 7 - Battery charge		See the interpretation of **ET248 STOP warning light activated by the system**.

NOTES	Only carry out this conformity check after a **complete check** with the **diagnostic tool**. The values shown in this conformity check are given as a guide. Application conditions: **Vehicle with + after ignition feed activated, engine stopped.**

SUB-FUNCTION: DISPLAY (CONTINUED)

Function	Parameter or status checked or action	Display and notes		Fault finding
Fault signal	**ET249:** Service warning light activated by the system	1 - Multiplex line communication 2 - Injection 3 - Water present in diesel fuel 4 - Sequential gearbox 5 - Vehicle speed circuit 6 - Cruise control/speed limiter 7 - ESP 8 - ABS 9 - Oil change interval 10- Particle filter 11- Airbag 12- OBD		See the interpretation of **ET249 SERVICE warning light activated by the system**
Parking brake signal	**ET097:** Parking brake	**Automatic parking brake on**	**APPLIED**	In the event of a fault, consult the interpretation of status **ET097 Parking brake**
		Parking brake released	**RELEASED**	
Minimum brake fluid level signal	**ET019:** Minimum brake fluid level	**Minimum brake fluid reservoir level**	**YES**	In the event of a fault, consult the interpretation of status **ET019 Minimum brake fluid level**.
		Normal brake fluid reservoir level	**NO**	
Oil pressure present signal	**ET096:** Oil pressure contact	**Engine running**	**OPEN**	**In the event of a fault, consult the interpretation of fault DF009 "oil pressure sensor"**
		Engine stopped	**CLOSED**	

NOTES	Only carry out this conformity check after a **complete check** with the **diagnostic tool**. The values shown in this conformity check are given as a guide. Application conditions: **Vehicle with + after ignition feed activated, engine stopped.**

SUB-FUNCTION: DISPLAY (CONTINUED)

Function	Parameter or status checked or action	Display and notes	Fault finding
Instrument panel warning light operation check	**AC009:** Instrument panel warning lights	**Illumination of all of the warning lights simultaneously on the display**	**Important: This command causes the Airbag system stored fault to occur again** (see **88C Airbag and pretensioners).** **– Before running the command:** **Deal with all of the Airbag faults.** (see **88C, Airbag and pretensioners).** **– After running the command:** **Clear the Airbag system stored faults.** **If one or more warning lights do not come on, contact Techline.**
Backlighting operation check	**AC010:** Lighting	**Gradual illumination of the instrument panel backlighting**	**WITHOUT**
Instrument panel buzzer check	**AC006:** Buzzer	**Instrument panel buzzer operation**	**– If the buzzer is faulty, contact Techline.**

SUB-FUNCTION: TRIP COMPUTER

Function	Parameter or status checked or action	Display and notes		Fault finding
ADAC* button status signal	**ET030:** ADAC* scroll button	**Button depressed**	**DEPRESSED**	In the event of a fault, consult the interpretation of status **ET030 ADAC* scroll button**.
		Button released	**RELEASED**	
Clock setting button status signal	**ET095:** Clock setting button	**Button depressed**	**DEPRESSED**	Contact the **Techline**.
		Button released	**RELEASED**	

*ADAC: Trip Computer

NOTES	Only carry out this conformity check after a **complete check** with the **diagnostic tool**. The values shown in this conformity check are given as a guide. Application conditions: **Vehicle with + after ignition feed activated, engine stopped.**

SUB-FUNCTION : GAUGING

Function	Parameter or status checked or action	Display and notes	Fault finding
Fuel sender operation check	**PR040:** Current fuel level	The current fuel level depends on the vehicle body movements.	In the event of a fault, consult the interpretation of fault **DF007 Fuel sender circuit**.
Filtered fuel level check	**PR041:** Filtered fuel level	The filtered fuel level is independent of the variations created by the vehicle body movements.	In the event of a fault, consult the interpretation of parameter **PR041 Filtered fuel level**.
Fuel sender resistance check	**PR002:** Fuel sender unit resistance	The fuel sender resistance depends on the fuel level. In reserve: **260 Ω** Full: **38 Ω**	**If R < 5 Ω or R> 350 Ω: Faulty fuel sender.** In the event of a fault, consult the interpretation of fault **DF007 Fuel sender circuit**.

NOTES	Only carry out this conformity check after a **complete check** with the **diagnostic tool**. The values shown in this conformity check are given as a guide. Application conditions: **Vehicle with + after ignition feed activated, engine stopped.**

SUB FUNCTION: ODOMETRY IN KM

Function	Parameter or status checked or action	Display and notes	Fault finding
Check the general distance travelled by the vehicle in km	**PR025:** Odometry in km	Displays the vehicle distance in km.	WITHOUT
Check the distance before oil service in km	**PR005:** Distance to next oil service: current value in km	Displays the distance remaining in kms before the recommended oil service.	WITHOUT
Check the interval between each oil service in km	**PR007:** Oil change frequency in km.	Initial oil service interval in km.	WITHOUT

SUB FUNCTION: ODOMETRY IN MILES

Function	Parameter or status checked or action	Display and notes	Fault finding
Check the general distance travelled by the vehicle in miles	**PR026:** Odometer in miles	Displays the vehicle distance in miles.	WITHOUT
Check the distance before oil service in miles	**PR023:** Oil service interval: current value in miles	Displays the distance remaining in miles before the recommended oil service.	WITHOUT
Check the interval between each oil service in miles	**PR024:** Oil change frequency in miles.	Initial oil service interval in miles.	

Tool status	Diagnostic tool title	Specification
ET004	Side lights control	Inactive/Active
ET019	Minimum brake fluid level	Yes/No
ET030	ADAC* scroll button	Released/Pressed
ET095	Clock setting button	Released/Pressed
ET097	Parking brake	Engaged/Released
ET245	Direction indicators	Inactive/Active
ET248	Stop warning light activated by the system	1 : Injection 2 : Coolant temperature 3 : Oil pressure 4 : Brake fluid level 5 : Electronic Braking Distribution 6 : Electric power assisted steering 7 : Battery charge
ET249	Service warning light activated by the system	1 : Multiplex line communication 2 : Injection 3 : Water present in diesel fuel 4 : Sequential gearbox 5 : Vehicle speed circuit 6 : Cruise control/speed limiter 7 : ESP 8 : ABS 9 : Oil service interval 10 : Particle filter 11 : Airbag 12 : OBD

*ADAC: Trip Computer

ET004	SIDE LIGHTS SWITCH

NOTES	**Special notes:** – Only perform these tests if the statuses do not correspond with the system programming functions. – Side lights on.

INACTIVE	***NOTES***	If the status becomes “INACTIVE”, apply the following fault finding procedure.

Check fuse **F43 (10A)** of the **passenger compartment fuse box, component code 1016**.

Check the connection and condition of the connector of component **247**.

If the connector is faulty and there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.

Check the **+ 12 V** supply to **connection LPG of component 247**.

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

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

Connection **LPG** between component **1016** and component **247.**
Connection **MAN35** of component **247**.

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

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ET019	MINIMUM BRAKE FLUID LEVEL

NOTES	There must be no present or stored faults. Check the brake fluid level in the reservoir.

If the brake fluid is at the maximum level and **ET019 MINIMUM BRAKE FLUID LEVEL** is “YES”:

Disconnect the connector on component **207**.

If status **ET019 MINIMUM BRAKE FLUID LEVEL** becomes NO, replace component **207**.

Check the earth insulation of:
connection 30A between component **247** and component **207**.

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

If the brake fluid is at the minimum level and **ET019 MINIMUM BRAKE FLUID LEVEL** is “NO”:

Disconnect the connector on the **Brake fluid minimum level sensor, component code 207**.

Check for continuity between connection **30A** and connection **MAS** of the **Brake fluid minimum level sensor, component code 207**.
If there is no continuity, replace the **Brake fluid minimum level sensor, component code 207**.

Check for continuity:

On connection **30A** between component **207** and component **247**.
On connection **MAS** between component **207** and the vehicle earth.

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

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ET030	ADAC* SCROLL BUTTON

NOTES	Vehicle under + after ignition feed.

"RELEASED" STATUS button pressed	Check the condition and connection of the **instrument panel connector, component code 247**.
	Press and hold the Trip Computer button and check the continuity between **connection MAM** and **connection 47K** of component **145**. If there is no continuity, replace component **145 (see MR 411, Mechanical, 84A, Controls - Signals, Wiper switch: Removal - Refitting)**.
	Check the continuity and insulation to **+ 12 V** on: **Connection 47K** between component **145** and component **247**. If there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the wiring, otherwise replace it.
	Check the earth and insulation to **+ 12 V** of: – Connection MAN between component **145** and the chassis earth. – Connection MAN between component **145** and the chassis earth. If there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the wiring, otherwise replace it.

*ADAC: Trip Computer

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ET097	PARKING BRAKE

NOTES	**Special notes:** Only apply the checks if the APPLIED and RELEASED statuses are not consistent with the lever position: – APPLIED when the lever is released, – RELEASED when the lever is applied.

APPLIED STATUS when lever is released	Check the connection and condition of the connector of component **156**. If there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the connector, otherwise replace the wiring. **Remove component 156 and check that there is no continuity in "Parking brake released" position'**, otherwise replace component **156**. Check the connection and condition of the connector of component **247**. If there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the connector, otherwise replace the wiring. **With the lever released**, check that there is no continuity on the following connection: **Connection 27A** between component **156** and the vehicle earth. **With the lever released**, check the **earth insulation** of: **Connection 27A** between component **156** and component **247**. If there is a repair method (**see Technical Note 6015A Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ET097 CONTINUED	

RELEASED STATUS when the lever has been pulled up	Check the connection and condition of the connector of component **156**. **Remove the handbrake switch and check the continuity is correct with the "Parking brake applied" position.** Check the connection and condition of the connector of component **247**. If there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the connector, otherwise replace the wiring. **With the lever pulled**, check for continuity on: **Connection 27A** between component **156** and the vehicle earth. **With the lever pulled**, check the continuity of: **Connection 27A** between component **156** and component **247**. If there is a repair method (**see Technical Note 6015A Repairing electrical wiring, Wiring: Precautions for repair**), repair the wiring, otherwise replace it.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ET245	INDICATORS

NOTES	**Check for the absence of faults on the indicators in the UCH field before starting fault finding.** Vehicle under + after ignition feed.

If the indicator lights are not displayed or are inconsistent with the position of the control, carry out the following fault finding procedure.

If status **ET245 INDICATORS** is INACTIVE and the control is activated:

Check that the connector of component **247** is in good condition and correctly connected.

If there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the connector, otherwise replace the wiring.

Check the continuity of:

Connection 64C between component **645** and component **247** (left-hand indicator)
Connection 64D between component **645** and component **247** (right-hand indicator)

If there is a repair method (**see Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**) repair the wiring, otherwise replace it.

If the fault is still present, contact the **Techline**.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ET248	STOP WARNING LIGHT ACTIVATED BY THE SYSTEM

If the **STOP WARNING LIGHT** is illuminated, check for faults and check the conformity of the systems concerned.

1 : Injection
2 : Coolant temperature
3 : Oil pressure
Perform fault finding on the injection system:
– Petrol: See **17B, Petrol injection**,
– Diesel: See **13B, Diesel injection**.

4 : Brake fluid level
See the interpretation of **ET019 MINIMUM BRAKE FLUID LEVEL.**

5 : Electronic Braking Distribution
Carry out fault finding on the ABS/ESP system (see **38C, Anti-lock braking system**).

6 : Electric power assisted steering
Carry out fault finding on the EPAS system (see **36B, Power-assisted steering**).

7 : Battery charge
Carry out fault finding on the charging circuit (see **Technical Note 6014A, Checking the charging circuit**).

If there are **no faults**, carry out a **multiplex network check** (see **88B, Multiplex**).

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ET249	SERVICE WARNING LIGHT ACTIVATED BY THE SYSTEM

If the **SERVICE WARNING LIGHT** is illuminated, check for faults and check the conformity of the systems concerned.

1 : Multiplex line communication
Check the multiplex network (see **88B, Multiplex**)

2 : Injection
3 : Water present in diesel fuel
Perform fault finding on the injection system:
– Petrol: See **17B, Petrol injection**,
– Diesel: See **13B, Diesel injection**.

4 : Sequential gearbox
Carry out fault finding on the sequential gearbox (see **23A, Sequential gearbox**).

5 : Vehicle speed circuit
Carry out fault finding on the ABS/ESP system (see **38C, Anti-lock braking system**).

6 : Cruise control/speed limiter
Perform fault finding on the injection system:
– Petrol: See **17B, Petrol injection**,
– Diesel: See **13B, Diesel injection**.

7 : ESP
8 : ABS
Carry out fault finding on the ABS/ESP system (see **38C, Anti-lock braking system**).

9 : Oil service interval
Perform fault finding on the injection system:
– Petrol: See **17B, Petrol injection**,
– Diesel: See **13B, Diesel injection**.

10 : Particle filter
Perform fault finding on the injection system:
– Petrol: See **17B, Petrol injection**,
– Diesel: See **13B, Diesel injection**.

11 : Airbag
Carry out fault finding on the Airbag system (see **88C, Airbag and pretensioners**).

12 : OBD
Perform fault finding on the injection system:
– Petrol: See **17B, Petrol injection**,
– Diesel: See **13B, Diesel injection**.

If there are **no faults**, carry out a **multiplex network check (see 88B, Multiplex).**

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

Tool parameter	Diagnostic tool title
PR041	Filtered fuel level

PR041	Filtered fuel level

NOTES	In the event of a fuel sender fault, check for the presence of **DF007 FUEL SENDER** first.

This value is used to display the fuel level, i.e. the number of illuminated squares on the instrument panel.

Reference table displaying the filtered fuel level (**PR041**) in relation to the number of illuminated squares.

- **0l to 5l**: reserve square
- **5l to 8l**: 1 square
- **8l to 12l**: 2 squares
- **12l to 18l**: 3 squares
- **18l to 25l**: 4 squares
- **25l to 32l**: 5 squares
- **32l to 37l**: 6 squares
- **37l to full**: 7 squares

IMPORTANT
Once a square is no longer lit, it can not be relit except by adding fuel to the tank or running command **VP020 UPDATE FUEL LEVEL DISPLAY**.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

Tool command	Diagnostic tool title
VP020	Update fuel level display
RZ001	Fault memory

VP020	**UPDATE FUEL LEVEL DISPLAY**

This command is used for updating the fuel level display.
Once the command has been run, **PR040 CURRENT FUEL LEVEL** and **PR041 FILTERED FUEL LEVEL** must produce equivalent values.
In the event of a fault, refer to the interpretation of fault **DF007 Fuel sender circuit**.

RZ001	**FAULT MEMORY**

This command is used to clear the **instrument panel** system faults.

NOTES	Only refer to the customer complaints after a complete check **using the diagnostic tool**
	Carry out fault finding **on the multiplex network.**
	Carry out fault finding **on the instrument panel.**

NO COMMUNICATION WITH THE INSTRUMENT PANEL **THE INSTRUMENT PANEL DOES NOT LIGHT UP**	**ALP 1**
THE FUEL LEVEL INDICATOR DOES NOT DISPLAY FULL	**ALP 2**
ADDITION OF FUEL NOT REGISTERED (NOT FULL)	**ALP 3**
DISPLAY JAMMED WHEN DRIVING (NOT MECHANICAL)	**ALP 4**
FAULT WITH NO WARNING GIVEN BY WARNING LIGHT (NO ADDITION OF FUEL SINCE THE FAULT)	**ALP 5**
FAULT WITH NO WARNING GIVEN BY WARNING LIGHT (ADDITION OF FUEL SINCE THE FAULT)	**ALP 6**
FAULT WITH DELAYED WARNING	**ALP 7**

ALP 1	NO COMMUNICATION WITH THE INSTRUMENT PANEL. The instrument panel does not light up.

NOTES	Only consult this customer complaint after a complete check with the **diagnostic tool**.
	See **Wiring diagram Technical Note, New Twingo**.

Test the **diagnostic tool** on another vehicle which is in perfect working order.
Check that the sensor's green indicator light comes on.
If communication with the second vehicle is impossible, follow the instructions in the **CLIP diagnostic tool test** section.
If dialogue with the first vehicle is possible, follow the instructions in the **Vehicle check** section.

DIAGNOSTIC TOOL CHECK	Check the **cleanliness** and **condition** of the contacts of the diagnostic socket, component code **225** connected to the vehicle. Check the **condition** of the cable from the diagnostic socket to the sensor and the **cleanliness** and **condition** of the connections. Check the sensor connections. Check the **condition** of the cable from the **CLIP** tool to the sensor as well as the **condition** and **cleanliness** of the connections. Check the **cleanliness** and **condition** of the **CLIP** socket. If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.
	If the fault is still present, contact Techline.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 1 CONTINUED 1	

VEHICLE CHECK	Check the **cleanliness** and **condition** of the contacts of the diagnostic socket, component code **225** connected to the vehicle. Check the **condition** of the cable from the diagnostic socket to the sensor and the **cleanliness** and **condition** of the connections. Check the sensor connections. Check the **condition** of the cable from the sensor to the **CLIP** tool and the **cleanliness** and **condition** of the connections. Check the **cleanliness** and **condition** of the **CLIP** socket. If the connector or connectors are faulty and if there is a repair procedure (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring. If the fault is still present, contact Techline.
	Check the **condition** and connection of the instrument panel connector, component code **247**. If the connector is faulty and there is a repair method (see **Technical Note 6015A, Repairing electrical wiring, Wiring: Precautions for repair**), repair the connector, otherwise replace the wiring.
	Check instrument panel supply fuse **MIN (5 A)**, component code **247** on the passenger compartment fuse box, component code **1016** and the **condition** and **cleanliness** of the contacts.
	Check the instrument panel **after ignition** supply fuse **MIN (15 A)**, component code **247** on the passenger compartment fuse box, component code **1016**, and the **condition** and **cleanliness** of the contacts.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 1 CONTINUED 2	

NOTES	Vehicle under + after ignition feed.

VEHICLE CHECK	
	Use the Universal bornier to check the following connections on the vehicle diagnostic socket, component code **225**: **BP19 "+ protected battery feed"** of component **225**. • **MAN** (if left-hand drive) of component **225**. • **MAM** (if right-hand drive) of component **225**. • **NAM, the earth** of component **225**. If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.
	Check the **earth** of connection **MAN** of the instrument panel, component code **247**.
	If **the earth MAN** is poor, check the **insulation** to **+ 12 V** and check the **continuity** of the following connection: • **MAN** of component **247**. If the connection is faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.
	Check for **+ 12 V** on connection **AP43** and connection **BP49** of the instrument panel, component code **247**. If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.
	If there is no **+ 12 V**, check the **insulation** to **earth** and the **continuity** of the following connections: • **AP43** between components **247** and **1016**, • **BP49** between components **247** and **1016**. If the connection or connections are faulty and there is a repair procedure (see **Technical Note 6015A, Electrical wiring repair, Wiring: Precautions for repair**), repair the wiring, otherwise replace the wiring.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 2	The fuel level indicator does not display full

NOTES	The fuel tank must be filled with the ignition switched off (advise the customer to remove the key).
	Ideally the customer must fill the tank with at least **15 litres**.
	See **Wiring diagram Technical Note, New Twingo**.

Ask the customer if the tank is filled up under the following conditions:
– the customer filled the tank up to the 3rd cut-out
– the customer has changed filling station
– the customer filled the tank in a flat-level station (not on a slope).

Did the customer fill the tank while observing all of these conditions?

NO → Ask the customer to return just after having filled the tank under the conditions mentioned above.

YES ↓

(A)

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 2 CONTINUED 1	

(A)

YES

With the ignition off, disconnect the fuel sender connector, component code **833** and then check the resistance using a multimeter.
The value should be: **38 Ω**.

Is the value measured less than 38 Ω?

NO → Replace the fuel sender, component code **833** (see **MR 411, Mechanical, 19C, Fuel tank, Sender: Removal - Refitting**).

If the fault is still present, contact Techline.

YES

Compare the value measured to the value supplied by the **CLIP tool**.

Is the value measured and the value provided by the CLIP tool the same as or approximately ± 5 Ω?

NO → (C)

YES

(B)

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 2 CONTINUED 2	

(C)

NO

Check the **continuity**, **insulation and absence of interference resistance** on the following connections:
- **41A** between components **247** and **833**,
- **41B** between components **247** and **833**.

Are the checks correct?

NO → (D)

YES

Measure the resistance of the sender and the wiring using a multimeter via the connector, on the instrument panel side.

Is the value measured and the value provided by the CLIP tool the same as or approximately ± 5 Ω?

YES → Contact the Techline.

NO

Replace the instrument panel, component code **247** (see **MR 411, Mechanical, 83A, Instrument panel, Instrument panel: Removal - Refitting**).

Is the fault still present?

NO → The problem disappears.

YES

(B)

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 2 CONTINUED 3	

D

NO

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

Is the fault still present? — YES → B

NO

The problem disappears.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 2 CONTINUED 4	

B

YES

Use the **CLIP tool** to check that the needle or digital display type indicators are working correctly using parameter **VP020 Fuel level display update**.

Is the result of the check correct? — YES → Contact the Techline.

NO

If the needle or display indicator test is incorrect, replace the instrument panel, component code **247** (see **MR 411, Mechanical, 83A, Instrument panel, Instrument panel: Removal - Refitting**).

Is the fault still present? — NO → The problem disappears.

YES

Contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 3	Addition of fuel not registered (not full)

NOTES	Only consult this customer complaint after a full check with the **diagnostic tool**.

Consult the interpretation of **ALP2 The fuel level indicator does not display full**.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 4	Display jammed when driving (not mechanical)

NOTES	Only consult this customer complaint after a full check with the **diagnostic tool**.
	For economical driving, the blocks on the display may remain illuminated or the needle may remain jammed up to **120 miles (200 kms)**.

Check that there is no mechanical jamming.
If the fault is on the block at the top of the display or the needle is jammed at full: check that the customer has travelled a sufficient amount of **Km (miles)** for the block at the top of the display to go out or for the needle to move from the full section.
Check that the customer has not exceeded **3** filler cut-outs when filling the tank with fuel.
If the fault is still present or if the needle or the display is jammed in any position other than full, contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 5	Fault with no warning given by warning light (no addition of fuel since the fault)

NOTES	Put the vehicle in **+ after ignition**.
	See **Wiring diagram Technical Note, New Twingo**.

Check the instrument panel warning lights, component code **247**.

Does the fuel warning light illuminate for 3 seconds when + after ignition is switched on?

NO → Replace the instrument panel, component code **247** (see **MR 411, Mechanical, 83A, Instrument panel, Instrument panel: Removal - Refitting**).

YES ↓

Record the resistance value provided by the **CLIP tool**.

Compare the value from the **CLIP tool** with **the warning resistance**, which should be **260 Ω.**

Is this value above or equal to 260 Ω?

YES → Contact the Techline.

NO ↓

Rock the vehicle and check whether the resistance changes by **± 5 Ω**.

Is there a change in the resistance value?

YES → Contact the Techline.

NO ↓

(A)

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

TDB_V04_ALP5/TDB_V08_ALP5

ALP 5 CONTINUED 1	

(A)

NO

With the ignition off, disconnect the fuel sender connector, component code **833** and then check the resistance using a multimeter.

Is the measured value above or equal to 260 Ω?

NO → Replace the sender, component code **833** (see **MR 411, Mechanical, 19C, Fuel tank, Sender: Removal - Refitting**).

YES

Compare the value measured to the value supplied by the **CLIP tool**.

Is the value measured and the value provided by the CLIP tool the same as or approximately ± 5 Ω?

NO → (B)

YES

Contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 5 CONTINUED 2	

B

NO

Check the **continuity**, **insulation and absence of interference resistance** on the following connections:
- **41A** between components **247** and **833**,
- **41B** between components **247** and **833**.

Are the checks correct? — NO → C

YES

D

C

NO

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

Is the fault still present? — YES → D

NO

The problem disappears.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 5 CONTINUED 3	

D

YES

Measure the resistance of the sender and the wiring via the connector, on the instrument panel side.

Is the value measured and the value provided by the CLIP tool the same as or approximately ± 5 Ω?

YES → Contact the Techline.

NO

Replace the instrument panel, component code **247** (see **MR 411, Mechanical, 83A, Instrument panel, Instrument panel: Removal - Refitting**).

Is the fault still present?

YES → Contact the Techline.

NO

The problem disappears.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 6	Fault with no warning given by warning light (addition of fuel since the fault)

NOTES	Put the vehicle in **+ after ignition**.
	See **Wiring diagram Technical Note, New Twingo**.

Check the instrument panel warning lights, component code **247**.

Does the fuel warning light illuminate for 3 seconds when + after ignition is switched on?

NO → Replace the instrument panel, component code **247** (see **MR 411, Mechanical, 83A, Instrument panel, Instrument panel: Removal - Refitting**).

YES ↓

With the ignition off, disconnect the fuel sender connector, component code **833** and then check the resistance using a multimeter.
Compare the value measured to the value supplied by the **CLIP tool**.

Is the value measured and the value provided by the CLIP tool the same as or approximately ± 5 Ω?

NO → B

YES ↓

Contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

TDB_V04_ALP6/TDB_V08_ALP6

ALP 6 CONTINUED 1	

(B)

NO

Check the **continuity**, **insulation and absence of interference resistance** on the following connections:
- **41A** between components **247** and **833**,
- **41B** between components **247** and **833**.

Are the checks correct? — NO → (D)

YES

(E)

(D)

NO

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

Is the fault still present? — YES → Contact the Techline.

NO

The problem disappears.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 6 CONTINUED 2	

E

YES

Measure the resistance of the sender and the wiring via the connector, on the instrument panel side.

Is the value measured and the value provided by the CLIP tool the same as or approximately ± 5 Ω?

YES → Contact the Techline.

NO

Replace the instrument panel, component code **247** (see **MR 411, Mechanical, 83A, Instrument panel, Instrument panel: Removal - Refitting**).

Is the fault still present?

NO → The problem disappears.

YES

Contact the Techline.

AFTER REPAIR	Deal with any faults displayed by the **diagnostic tool**. Clear the computer memory. Carry out a road test followed by another check with the **diagnostic tool**.

ALP 7	Fault with delayed warning

NOTES	Only consult this customer complaint after a full check with the **diagnostic tool**.

Ask the customer the distance travelled since the warning appeared until the fault occurred.

Did the fault take place after travelling more than 30 miles (50 Kms)?

YES → Explain to the customer that the guaranteed distance is **30 miles (50 kms)** from the warning.

NO ↓

Has the customer added any fuel since the fault?

YES → See **ALP6 Fault with no warning given by warning light (addition of fuel since the fault)**.

NO ↓

See **ALP5 Fault with no warning given by warning light (no addition of fuel since the fault)**.

AFTER REPAIR	Repeat the conformity check from the start.