

MEGANE

3 Chassis

35B TYRE PRESSURE MONITOR

Program No.: OB20

Vdiag No.: 44 - 48 - 4C - 4D - 4F - 50

EDITION 5

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EDITION ANGLAISE

"The repair procedures given by the manufacturer in this document are based on the technical specifications current when it was prepared.

The methods may be modified as a result of changes introduced by the manufacturer in the production of the various component units and accessories from which his vehicles are constructed."

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TYRE PRESSURE MONITOR

ABBREVIATIONS

35B

Program no.: 0B20
Vdiag No: 44-48-4C-4D-4F-50

ABBREVIATIONS	MEANING OF ABBREVIATION
ABS	Anti-lock braking system
ALP	Fault finding chart
APC	After ignition
AVC	Before ignition
BVA	Automatic gearbox
BVM	Manual gearbox
BVR	Sequential gearbox
CAN	Controller Area Network
AC	Air conditioning
CD	Compact disc
PAS	Power assisted steering (hydraulic)
EPAS	Electric power assisted steering
DVD	Digital versatile disc
DTC	Fault finding code
EGR	Exhaust gas recirculation
ESP	Electronic Stability Program
GMV	Motor-driven fan assembly
CNG	Compressed natural gas
LPG	Liquefied petroleum gas
HLE	High yield strength
MAG	Metal active gas (for welding steel)
MIG	Metal inert gas (for welding aluminium)
MR	Workshop repair manual
TN	Technical Note
OBD	On board diagnostics
SER	Resistance welding
SSPP	Tyre pressure monitoring system
THLE	Very high yield strength
TM	Labour time
UCH	Passenger compartment unit
UPC	Protection and switching unit
UCT	Roof control unit
UHLE	Ultra high yield strength
VIN	Vehicle identification number

TYRE PRESSURE MONITOR

Fault finding - Introduction

35B

Program no.: 0B20
Vdiag No: 44-48-4C-4D-4F-50

1. SCOPE OF THIS DOCUMENT

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

Vehicle(s): **MEGANE II**

Function concerned: **TYRE PRESSURE
MONITOR SYSTEM**

Name of computer: **UCH**

Program No.: **0B20**

Vdiag No: **44 - 48 - 4C - 4D - 4F - 50**

2. PREREQUISITES FOR FAULT FINDING

Documentation type

Fault finding procedures (this document):

- Assisted fault finding (integrated into the diagnostic tool), Dialogys.

Wiring Diagrams:

- Visu-Schéma (CD-ROM).

Type of diagnostic tools

- **CLIP**

Special tooling required

SPECIAL TOOLING REQUIRED	
	Multimeter
Elé. 1681	Universal bornier
Ms. 1607	Valve exciter
	Pressure gauge
	Tyre inflation system

3. RECAP

Procedure

To run fault finding on the vehicle's computers, switch on the ignition in fault finding mode (forced + after ignition feed).

Proceed as follows:

- Renault card in the card reader (keyless vehicle scenario 1, standard, not hands-free and scenario 2, top of the range, hands-free),
- hold down the Start button (more than 5 seconds) outside starting conditions,
- connect the diagnostic tool and perform the required operations.

Note:

The left-hand and right-hand xenon bulb computers are powered when the dipped headlights are lit. Fault finding procedures can only be carried out on them after the ignition has been switched on in fault finding mode (forced + after ignition) and the dipped headlights are lit.

To **cut off + after ignition**, proceed as follows:

- disconnect the diagnostic tool,
- press the Start button twice briefly (less than 3 seconds),
- Ensure that the + after ignition feed has been cut off by checking that the computer indicator lights on the instrument panel have gone out.

Faults

The present status of faults must be considered when using the diagnostic tool after switching on + after ignition feed (without activating any system components).

Present faults must be dealt with according to the procedure specified in the **Interpretation of faults** section.

On the tyre pressure monitor system, there is no stored fault.

Conformity check

The aim of the conformity check is to check data that does not produce a fault on the diagnostic tool when 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**.

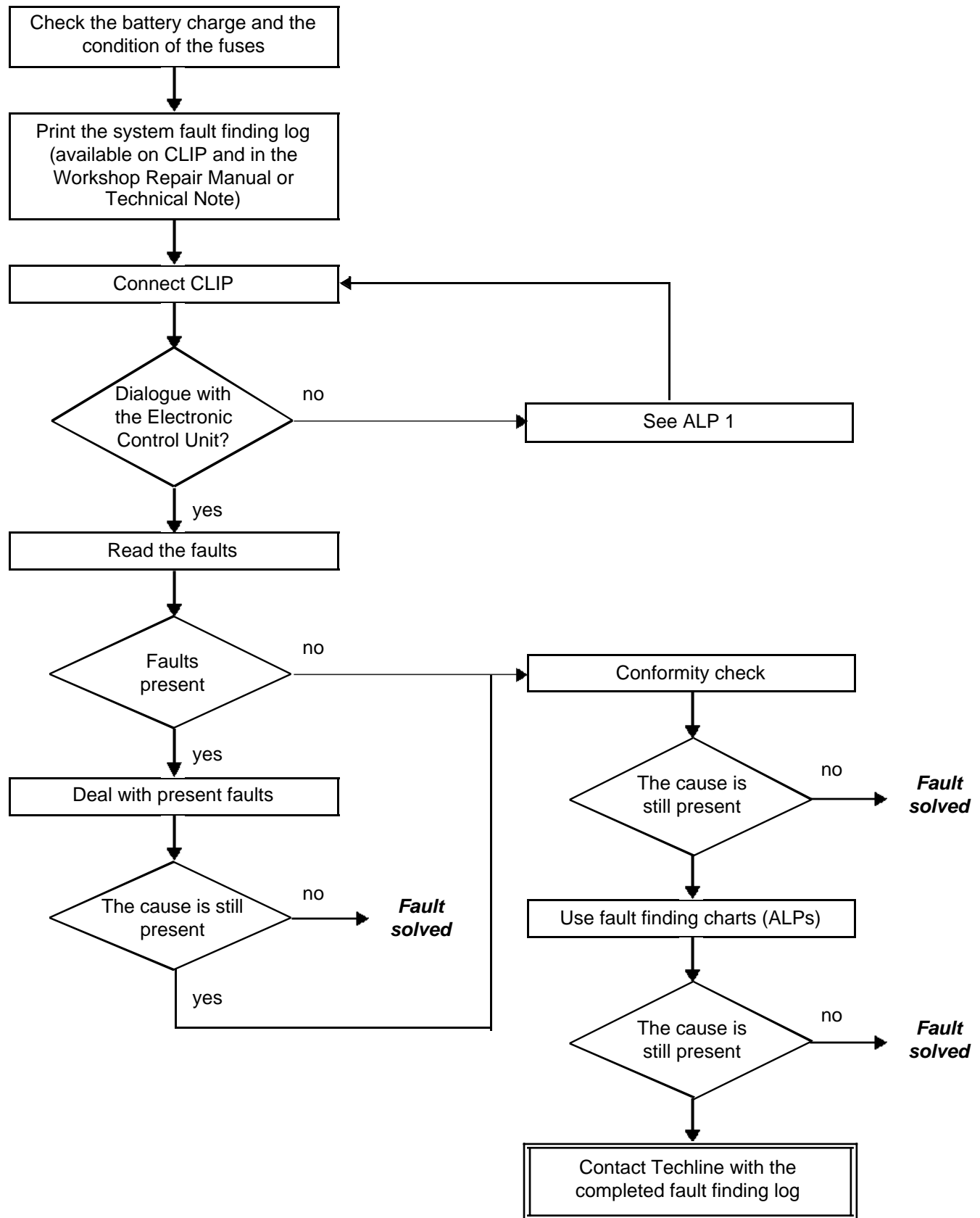
4. FAULT FINDING PROCEDURE

Procedure to be carried out before entering fault finding mode with the tool

- Are the faulty wheels equipped with valves fitted with pressure sensors, or were they so at the time of the fault?
- Check the position of the wheels on the vehicle (wheel sensor colour code). Put the wheels back in position and program the codes of the four wheel sensors if the wheels are not in their original position.
- Check the wheel pressures with a pressure gauge. Do they match the pressures specified on the door or in the driver's handbook?

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



5. FAULT FINDING LOG



IMPORTANT!

IMPORTANT

Any fault on a complex system call for thorough fault finding with the appropriate tools. The FAULT FINDING LOG, which should be completed during the fault finding procedure, ensures a record is kept of the procedure carried out. It is an essential document when consulting the manufacturer.

IT IS THEREFORE MANDATORY TO FILL OUT A FAULT FINDING LOG FOR EACH FAULT FINDING PROCEDURE.

You will always be asked for this log:

- when requesting technical assistance from the Techline.
- For certification requests when replacing parts that must be certified.
- 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 ADVICE

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

- Make sure the battery is properly charged to avoid damaging the computers with a low load.
- Use the appropriate tools.

FAULT FINDING LOG

System: Tyre Pressure Monitor

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List of monitored parts: Computer, valves, receivers

● Administrative identification

Date	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Log completed by	<input type="text"/>
VIN	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Engine	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Diagnostic tool	<input type="text"/> CLIP <input type="text"/>
Revision	<input type="text"/> <input type="text"/> <input type="text"/>

● Customer complaint

<input type="text"/> 1798	No pressure display	<input type="text"/> 1797	Tyre pressure monitor warning light permanently lit	<input type="text"/> 1796	Faulty display
<input type="text"/> 1794	Tyre pressure monitor warning light flashes	<input type="text"/> 1795	Puncture warning light lit	<input type="text"/> 1793	Wheels disappear from the display
Other	Your comments: (specify the tyre affected by the customer complaint)				

● Conditions under which the customer complaint occurs

<input type="text"/> 001	When cold	<input type="text"/> 002	When hot	<input type="text"/> 003	When stationary
<input type="text"/> 004	Intermittently	<input type="text"/> 005	While driving	<input type="text"/> 009	Sudden fault
<input type="text"/> 011	When the ignition is switched on				
Other	Your comments:				

● Documentation used in fault finding

Fault finding procedure used	
Type of fault finding manual:	Workshop Repair Manual <input type="checkbox"/> Technical Note <input type="checkbox"/> Assisted fault finding <input type="checkbox"/> Fault Finding Chart followed: no...
Fault finding manual No.:	
Wiring diagram used	
Wiring Diagram Technical Note No.:	
Other documentation	
Title and/or part number:	



RENAULT

FD 23
Fault finding log

FAULT FINDING LOG

System: Tyre Pressure Monitor

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● Computer identification and parts exchanged for the system

Part 1 part no.	
Part 2 part no.	
Part 3 part no.	
Part 4 part no.	
Part 5 part no.	

To be read with the Diagnostic tool (Identification screen):

Computer part no.	
Supplier No.	
Program No.	
Software version	
Calibration No.	
VDIAG	

● Faults read with diagnostic tool before operation

Fault no.	Present	Stored	Fault name	Specification

● Conditions under which fault occurs

Status or parameter no.	Parameter name	Value	Unit

● System-specific information

Description:

● Additional information

What other parts were replaced?

What factors led you to replace the part(s)?

For Laguna II, Vel Satis and Espace IV vehicles, has trigger threshold command VP 017 been correctly executed?

How many miles ago did this fault occur?

What is the size of the wheel rims and the size of the tyres?

Which step in the fault finding procedure lead you to replace the part?



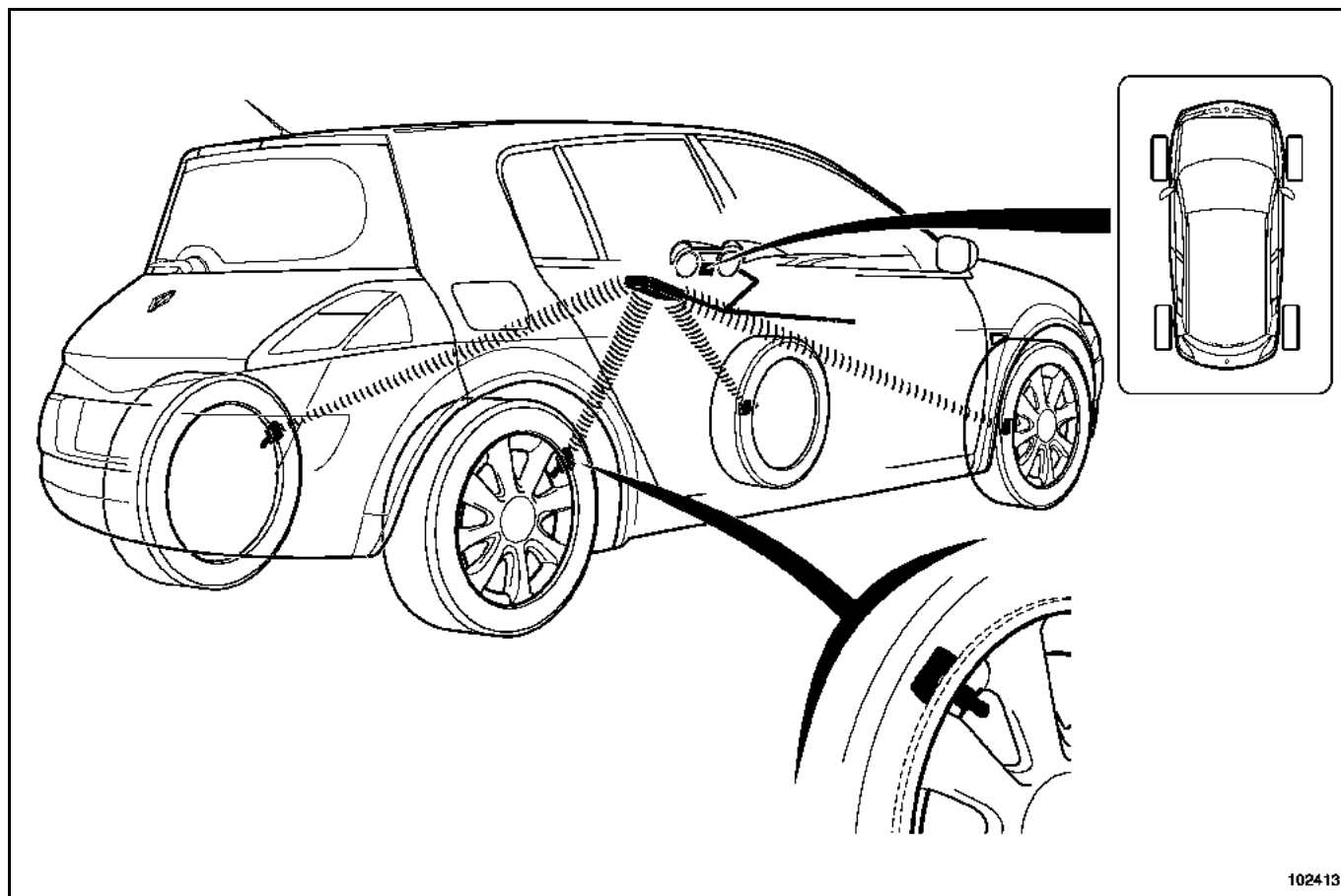
RENAULT

FD 23
Fault finding log

SYSTEM COMPOSITION

The tyre pressure monitor system consists of the following components:

- four sensors (one on each wheel but not on the spare wheel),
- a computer (UCH),
- an instrument panel display for the driver.



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WARNING

It is forbidden to install PAX System tyres on a vehicle without PAX System tyres as standard.
In the MEGANE II family, PAX System tyres can only be installed on the 5-seat SCENIC II.

SYSTEM OPERATION

- The valves are activated approximately one minute after the vehicle has been running at a speed above **12 mph (20 km/h)**.
- During driving, the valves emit signals every minute.
- The valves remain activated for **15 min** after the vehicle stops, then switch to standby mode.
- In standby mode, the valves emit signals only if they detect a pressure difference between two successive measurements exceeding **68 mbar** or if the pressure difference since last emitting exceeds **68 mbar** (due to tyre cooling).
- The tyres are considered to be cold when the vehicle speed has been zero for **1h 45 min**.
- The minimum time for detection of a leak is approximately **15 minutes**.
- The message **Inflate tyres for motorway** is displayed only if the vehicle travels at more than **102 mph (170 km/h)** (as an indication) for **3 minutes** and the pressure on at least one of the tyres is **400 mbar** less than the recommended pressure at low speed. This message is inactive if the tyres are inflated to motorway pressure, irrespective of the vehicle speed.
- Warning thresholds:
 - **over-inflation when cold** = recommended pressure + **700 mbar**
 - **over-inflated while warm** = recommended pressure + **850 mbar**
 - **under-inflated** = recommended pressure - **400 mbar**
 - **very under-inflated** = recommended pressure - **600 mbar**
 - **imbalance** = difference in pressure between the left-hand and right-hand wheels on the same axle greater than **500 mbar**
- Information messages displayed for the driver:
 - **Puncture: change tyre** + STOP warning light + wheel concerned fills in on the instrument panel display + buzzer.
 - **Readjust tyre pressure** + the wheel concerned fills in on the instrument panel display.
 - **Inflate tyres for highway** + four wheels fill in on the instrument panel display.
 - **Tyre sensor inoperative** + the wheel concerned is cleared.
 - **Electronic fault** + SERVICE warning light + the four wheels concerned disappear from the instrument panel display.
 - No display of the tyre inflation pressure on the instrument panel on MEGANE II.

VALVE - WHEEL MATCHING

Whenever wheels are swapped over, reprogram the new valve positions in the UCH by means of the diagnostic tool.

The coloured rings will then have to be placed back in the location marked on the label on the driver's door.

Ring colours:

- Front left-hand: green
- Front right-hand: yellow
- Rear left-hand: red
- Rear right-hand: black

WINTER AND SUMMER TYRES

On leaving the factory, the summer wheel set is configured in the UCH, but customers can fit their vehicle with a winter set (winter wheels = wheel rims + sensors + special tyres).

The first time a set of winter wheels is fitted, program the codes of the four valves. Thereafter, whenever the set of tyres is changed, recognition is automatic without having to touch the UCH.

Establishing communication between the UCH and the CLIP diagnostic tool:

- Connect the wire to the diagnostic socket and switch on the ignition.
- Switch on the diagnostic tool.
- Select the vehicle type and carry out the multiplex network test.
- Select the **Tyre** function.
- Then follow the fault finding procedure described previously.

IMPORTANT **REPLACING A UCH**

In the event that a UCH is replaced, configure the UCH **with tyre pressure monitor** and program the four wheel sensors in the new UCH using procedure **SC002, Program the four valve codes**.

See Section **87B, UCH**, for configuration of the other equipment managed by the UCH.

REPLACING THE UCH COMPUTER

Switch off the ignition before replacing the UCH.

After replacing the UCH, configure the new computer for the equipment and options installed in the vehicle.

- Configure the UCH **WITH** or **WITHOUT** the Tyre Pressure Monitor System function by using command **CF023 Tyre pressure monitor function** under **SC008 Type of UCH**.
- Enter the recommended pressures with command **VP005 Enter recommended pressures**.
- Program the four valve codes with command **SC002 Program the four valve codes**.

The configuration is described under the **Configuration and programming** section.

For other computer configurations (see **87B, Passenger Compartment Connection Unit**).

REPLACING ONE OR MORE VALVES

Program the UCH with the code for the new valve by running command **SC002 Programming the four valve codes** described under the **Configuration and programming** section.

N.B.: Program all four valve codes even after replacing only one valve.

REPLACING THE INSTRUMENT PANEL

After replacing the instrument panel, configure it for the equipment installed in the vehicle.

In the instrument panel, configure the function for the tyre pressure monitoring system **WITH** or **WITHOUT** using command **CF145 Tyre pressure monitor** (see **83A, Instrument panel**).

SC002:
Programming the four valve codes**IMPORTANT**

Any repairs that involve replacing a wheel sensor require knowledge of the recommendations outlined in MR 364 section 35.

- Inflate the four tyres to **3.8 bar**.
- Using the diagnostic tool, establish dialogue with the UCH.
- Select the **Repair mode** menu.
- Select the **Programming** menu.
- Select line **SC002 Programming the four valve codes** under the **Tyres** function.
- The stored codes and valve sets detected are displayed.
- Select the **Valve set selection** menu, then **Summer** or **Winter**.
- Confirm to display the **Valve programming conditions** table.
- Confirm by selecting **next**, which brings up the **search for valve code** menu.
- Excite each valve by holding the exciter against the tyre just below the valve in question.
- Start with the front left-hand wheel.
- Wait for the new code to appear on the screen before moving on to the next valve.
- Program the codes in the following order:
Front left-hand → Front right-hand → Rear right-hand → Rear left-hand
- **Click on the "Confirm" button to transmit the codes to the UCH.**
- Inflate the tyres to the recommended pressures.
- Carry out a road test driving at a speed > **12 mph (20 km/h)** for **10 minutes**.
- Make sure no message appears on the instrument panel.

IMPORTANT

Whenever wheels are swapped over, reprogram the UCH with the new valve positions by using the diagnostic tool to program the valve codes.

The coloured rings will then have to be placed back in the location marked on the label on the driver's door.

**SC001:
READ THE VALVE SET AND STORED CODES**

- Select the **Repair mode** menu.
- Select the **Programming** menu.
- Select line **SC001 Read the valve set and stored codes** under the **Tyres** function.

**VP005:
ENTER RECOMMENDED PRESSURES**

To enter the recommended pressures correctly, use the values specified by the manufacturer and found in the Workshop Repair Manual or driver's handbook **for the vehicle with the tyres installed on the vehicle**, or indicated on the label on the driver's door.

- Select the **Repair mode** menu.
- Select the **other parameters** menu.
- Select line **VP005 Enter recommended pressures**.
- Enter the type of vehicle: "Long monospace" or "other".
- Enter the recommended pressures at the keyboard.
- Confirm the pressures.
- Click on **Finish** to end the procedure.

Check the recommended pressures in memory:

- Select the **Statuses/Parameters** menu.
- Select the **Tyre management** menu.
- Read parameters **PR009 to PR012**.

If there is a fault, repeat the operation from the beginning.

IMPORTANT

If the recommended pressure is incorrect or if the pressure entered is outside the permitted tolerance values for the type of vehicle chosen, the following error message will appear: **Procedure failed: incorrect format or pressure value outside authorised range**.

CF023:
TYRE PRESSURE MONITOR FUNCTION
(in programming command SC008 UCH type)

WRITING THE CONFIGURATION WITH OR WITHOUT TYRE PRESSURE MONITOR:

- Select the **Repair mode** menu.
- Select the **Programming** menu.
- Select line **SC008 UCH type** then line **CF023 Tyre pressure monitor function**, then **with** or **without**.
- Confirm the selection.
- Make sure the configuration has been properly stored by checking the **Read configuration** menu at line **LC017: Tyre pressure monitor function**.

IMPORTANT:

CONFIGURATION INCONSISTENCY BETWEEN THE INSTRUMENT PANEL AND UCH

- 1st case: – The instrument panel detects the tyre pressure monitor system programmed in the UCH but not its configuration. The message **ELECTRONIC FAULT** then appears, the **four wheels disappear** on the instrument panel display, and the **SERVICE** warning light comes on.
- 2nd case: – The instrument panel detects that the tyre pressure monitor is properly configured but the UCH fails to respond to any requests from the instrument panel (not configured in UCH). The message **TYRE SENSOR INOPERATIVE** appears, the **four wheels disappear** from the instrument panel display and the **SERVICE** warning light comes on.

INSTRUMENT PANEL CONFIGURATION

CF145: TYRE PRESSURE MONITOR

- After the multiplex network test, select **Instrument panel**.
- Select **Repair mode**.
- Select **Write configuration**.
- Select line **CF145 Tyre pressure monitor**, then **with** or **without**.
- Confirm the selection.
- Make sure the configuration has been properly stored by checking the **Read configuration** menu at line **LC056: Tyre pressure monitor**.

NOTES

Only check the conformity after a complete check with the diagnostic tool.
Test conditions: Engine switched off, ignition on, tyres inflated to correct pressure.

Order	Sub-function	Parameter or Status checked or Action	Display and notes	Fault finding
1	Tyre receiver	<p>ET040: Tyre pressure monitoring system</p> <p>ET037: Tyre pressure appropriate for the speed</p> <p>PR008: Vehicle speed</p> <p>ET036: Wheel pressure imbalance</p> <p>ET045: Radio frequency signal received</p>	<p>ACTIVE</p> <p>YES, if the pressure is appropriate for the vehicle speed.</p> <p>X = 0 (in mph (km/h))</p> <p>NONE, if the pressure of the two front axle tyres and two rear axle tyres is balanced (pressure difference between two tyres of the same axle < 0.5 bar).</p> <p>NO</p>	<p>– If status ET040 is OUT OF SERVICE, consult the fault finding procedure for status ET040.</p> <p>– If status ET037 is NO, consult the fault finding procedure for status ET037.</p> <p>If the vehicle speed signal is incorrect, carry out fault finding on the ABS.</p> <p>Readjust the pressure.</p> <p>– FRONT, if the pressures of the two front tyres are not balanced.</p> <p>– REAR, if the pressures of the two rear tyres are not balanced.</p> <p>– FRONT/REAR, if the pressures of the two front axle tyres and the two rear axle tyres are not balanced, consult the fault finding procedure for status ET036.</p> <p>– Status ET045 becomes YES when the receiver integrated into the UCH receives a signal. To check whether the receiver is functioning normally, carry out a door locking request with the card and check that the status switches to YES.</p>

NOTES

Only perform this conformity check after a complete check with the diagnostic tool.
Test conditions: Engine switched off, ignition on, tyres inflated to correct pressure.

Order	Sub-function	Parameter or Status checked or Action	Display and notes	Fault finding
1 (continued)	Tyre receiver	<p>ET032: Front left-hand wheel valve signal</p> <p>ET033: Front right-hand wheel valve signal</p> <p>ET034: Rear right-hand wheel valve signal</p> <p>ET035: Rear left-hand wheel valve signal</p> <p>PR003: Front left-hand wheel pressure</p> <p>PR004: Front right-hand wheel pressure</p> <p>PR005: Rear right-hand wheel pressure</p> <p>PR006: Rear left-hand wheel pressure</p> <p>PR019: Front left-hand tyre temperature</p> <p>PR020: Front right-hand tyre temperature</p> <p>PR021: Rear right-hand tyre temperature</p> <p>PR022: Rear left-hand tyre temperature</p>	<p>OK, if the valve sends the right signal and the pressure is correct.</p> <p>X = Tyre pressure</p> <p>X = Tyre air temperature</p>	<p>Check that the tyre pressures are those recommended in the Workshop Repair Manual Section 35 Specifications. In the event that statuses ET032 to ET035 are not OK, consult the fault finding procedure for statuses ET032 to ET035.</p> <p>If X = 0 bar, consult the fault finding procedure for parameters PR003 to PR006</p> <p>Ensure that the recommended pressure values (PR009 to PR012) are correct for the vehicle.</p> <p>Following a battery cut-off, it is normal that all temperature values should be 50 °C and pressure values 0 bar. Carry out a road test so that the sensors emit their true temperature and pressure values.</p> <p>It may be that the temperatures of all the tyres are not strictly the same, depending on the load distribution and whether or not they are exposed to sunlight.</p>

NOTES

Only perform this conformity check after a complete check with the diagnostic tool.
Test conditions: Engine switched off, after ignition feed on, tyres inflated to correct pressure.

Order	Sub-function	Parameter or Status checked or Action	Display and notes	Fault finding
2	Tyre management	PR009: Front axle low speed recommended pressure	X = Recommended pressure.	Make sure the values entered are actually the recommended ones by comparing them with those specified in Section 35: Specifications of the Workshop Repair Manual. If they are not, write the recommended pressures with command VP005 : Write recommended pressures in the Help section of this note.
		PR010: Rear axle low speed recommended pressure		
		PR012: Front axle high speed recommended pressure		
		PR011: Rear axle high speed recommended pressure		
		PR014: Left/right-hand imbalance threshold	0.5 bar	None
		PR015: Low under-inflation threshold	- 0.4 bar	
		PR059: Puncture report threshold	- 0.6 bar	
		PR017: Cold over-inflation threshold	0.7 bar	
		PR018: Warm over-inflation threshold	0.8 bar	

NOTES

Only perform this conformity check after a complete check with the diagnostic tool.
Test conditions: Engine switched off, after ignition feed on, tyres inflated to correct pressure.

Order	Sub-function	Parameter or Status checked or Action	Display and notes	Fault finding
3	Tyre display	<p>ET039: Stop warning light request</p> <p>ET016: Buzzer activation request</p>	<p>INACTIVE</p> <p>INACTIVE, if the Tyre pressure monitor system functions normally and tyre pressure is correct.</p>	<p>ACTIVE, if a puncture is detected.</p> <p>There is a buzzer activation request for all severity level 1 warnings (puncture). The buzzer emits a single beep when a fault occurs.</p> <p>STATUS 1: request for buzzer activation when a puncture is detected.</p> <p>STATUS 2: request for buzzer activation to warn the driver that the vehicle speed is too high when the vehicle has one or more punctured tyres. This information is only valid on vehicles fitted with PAX System tyres.</p>

ET032 ET033 ET034 ET035	<u>FRONT LEFT-HAND WHEEL VALVE SIGNAL</u> <u>FRONT RIGHT-HAND WHEEL VALVE SIGNAL</u> <u>REAR RIGHT-HAND WHEEL VALVE SIGNAL</u> <u>REAR LEFT-HAND WHEEL VALVE SIGNAL</u>
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NOTES	<p>Before carrying out any operation, apply the fault finding procedure (see Introduction).</p> <p>Special note: If a wheel is equipped with a tyre pressure sensor, precautions must be taken when removing/refitting tyres. Failure to take the precautions specified in Section 35 of the Workshop Repair Manual could result in the sensor being damaged, and potential operating faults in the tyre pressure monitor system.</p>
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OK: Absent: Over-inflated: Punctured: Under-inflated:	<p>The sensor is operating correctly and the pressure is correct.</p> <p>The UCH is not receiving the signal from the sensor.</p> <p>The sensor sends a "tyre over-inflated" signal.</p> <p>The sensor sends a "tyre severely under-inflated" signal (pressure - 0.6 bar) or a rapid pressure loss signal.</p> <p>The sensor sends a "tyre under-inflated" signal.</p>
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STEP 1

Start by checking the tyre inflation and if necessary restore to the recommended pressure.

Next, to ensure that the wheel sensors are functioning properly, at each conformity check, make sure all sensors really are transmitting. Do this by creating a tyre leak and making sure its status changes:

Original status = over-inflated	deflate	Final status = OK or punctured or under-inflated
Original status = punctured or under-inflated	inflate	Final status = OK or over-inflated

STEP 2

IMPORTANT

Wait 90 seconds before checking the change of status.

- If the original status is: **over-inflated** or **under-inflated**
See ALP 2 and 3 "Pressure adjustment".
- If the original status is: **flat**
See ALP 6 "Puncture: Change tyre".
- If the original status is: **absent**
See ALP 4 and 5 "Sensor inoperative".

If the status does not change, replace the sensor on the tyre concerned following the instructions and the code programming procedure for the four valves **SC002 Program the four valve codes** (Configurations and programming).

AFTER REPAIR	<p>Deal with any other possible faults.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>
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SSPP_V44_ET032/SSPP_V48_ET032/SSPP_V4C_ET032/SSPP_V4D_ET032/SSPP_V4F_ET032/SSPP_V50_ET032/
SSPP_V44_ET033/SSPP_V48_ET033/SSPP_V4C_ET033/SSPP_V4D_ET033/SSPP_V4F_ET033/SSPP_V50_ET033/
SSPP_V44_ET034/SSPP_V48_ET034/SSPP_V4C_ET034/SSPP_V4D_ET034/SSPP_V4F_ET034/SSPP_V50_ET034/
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TYRE PRESSURE MONITOR

Fault finding - Interpretation of statuses

35B

Program no.: 0B20
Vdiag No: 44-48-4C-4D-4F-50

ET036	<u>TYRE PRESSURE IMBALANCE</u>
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NOTES	Before carrying out any operation, apply the fault finding procedure (see Introduction). None
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Note:

The threshold of imbalance between the left-hand and right-hand wheels on the same axle is **500 mbar**.

Using a pressure gauge, check that the inflation pressure of the tyres fitted on the vehicle indeed corresponds to the pressures noted on the door, in the driver's handbook or in Workshop Repair Manual **364, Section 35A**, and if not readjust the pressures. Ensure the correct balance of the pressures or axle(s) concerned.

If the fault is still present, contact your Techline.

AFTER REPAIR	Deal with any other possible faults. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.
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ET037	<u>TYRE PRESSURE APPROPRIATE FOR THE SPEED</u>
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NOTES	<p>Before carrying out any operation, apply the fault finding procedure (see Introduction).</p> <p>NO: If the vehicle speed is greater than 102 mph (170 km/h) (as an indication) for more than 3 minutes and the pressure on at least one of the tyres is 400 mbar or more below "motorway" pressure.</p> <p>YES: if the vehicle speed is below 102 mph (170 km/h) (as an indication) or if the pressure of the four tyres corresponds to the pressure of parameters PR011 and PR012 High speed recommended pressure, whatever the speed.</p>
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<p>Make sure that the tyre pressures are at the recommended motorway pressure (see MR 364 35A, or driver's handbook), and reinflate the tyres if necessary.</p> <p>Check that the pressures entered (PR009 to PR012) match the manufacturer's specifications.</p> <p>If the pressures entered do not correspond to the manufacturer's values, write the recommended pressures using procedure VP005 Write recommended pressures (see Configuration and programming).</p> <p>If status ET037 remains NO, contact your Techline.</p>
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AFTER REPAIR	<p>Deal with any other possible faults.</p> <p>Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.</p>
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TYRE PRESSURE MONITOR

Fault finding - Interpretation of statuses

35B

Program no.: 0B20
Vdiag No: 44-48-4C-4D-4F-50

ET040	<u>TYRE PRESSURE MONITOR SYSTEM</u>
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NOTES	Before carrying out any operation, apply the fault finding procedure (see Introduction). Check that no fault is present.
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ACTIVE: If the four wheel valves transmit their signal and the signal is correctly received by the UCH.
INOPERATIVE: If a component is faulty or incorrectly configured.

In the event that status **ET040** is **inoperative**:

Check the configuration reading menu to ensure that configuration LC017 Tyre pressure monitor function has been properly stored in the UCH. If it has not, to start configuration select command CF023 Tyre pressure monitor function in the programming menu, found in SC008 UCH type .
Check that there is no ABS fault.
Check status ET045 RF signal received to make sure the receiver aerial is working properly by requesting central door locking with the card.
If, after performing all these checks, no anomaly has been found, and status ET040 is still Inoperative , contact your Techline.

AFTER REPAIR	Deal with any other possible faults. Switch off the ignition and carry out a road test followed by a test with the diagnostic tool.
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PR003 PR004 PR005 PR006	<u>FRONT LEFT-HAND WHEEL PRESSURE</u> <u>FRONT RIGHT-HAND WHEEL PRESSURE</u> <u>REAR RIGHT-HAND WHEEL PRESSURE</u> <u>REAR LEFT-HAND WHEEL PRESSURE</u>
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NOTES	<p>There must be no faults present.</p> <p>Carry out this fault finding procedure after finding a discrepancy between these parameters on the display.</p>
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When communication is established, the default value of the parameters is displayed (0 bar). By creating a leak or using a road test, force each valve to transmit to discover the actual pressure levels measured by the sensors during the fault finding procedure.

In all cases, check that the pressures displayed on the diagnostic tool actually match the pressure-gauge readings (to within **0.2 bar**).

If the pressures are different, there are two possible scenarios:

1st case: The parameters still display **0 bar**.

This means that the wheel valve codes do not correspond to the wheel set programmed into the UCH. (When the UCH receives the valve codes, it will not recognise them because they do not correspond to the wheel set codes already programmed, i.e. the codes it expects). To rectify this:

Start the programming procedure with command **SC002 Program the four valve codes** (see **Configurations and programming**).

2nd case: Parameters **PR003** to **PR006** display incorrect values (other than **0 bar**)

If the pressures differ, there is a fault on the valve. Replace the faulty valve. Follow the programming procedure: **SC002 Program the four valve codes** (see **Configurations and programming**).

After programming, repeat the fault finding procedure from the beginning.

AFTER REPAIR	Repeat the check from the start.
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SSPP_V44_PR003/SSPP_V48_PR003/SSPP_V4C_PR003/SSPP_V4D_PR003/SSPP_V4F_PR003/SSPP_V50_PR003/
SSPP_V44_PR004/SSPP_V48_PR004/SSPP_V4C_PR004/SSPP_V4D_PR004/SSPP_V4F_PR004/SSPP_V50_PR004/
SSPP_V44_PR005/SSPP_V48_PR005/SSPP_V4C_PR005/SSPP_V4D_PR005/SSPP_V4F_PR005/SSPP_V50_PR005/
SSPP_V44_PR006/SSPP_V48_PR006/SSPP_V4C_PR006/SSPP_V4D_PR006/SSPP_V4F_PR006/SSPP_V50_PR006

PR009 PR010 PR011 PR012	<u>FRONT AXLE RECOMMENDED LOW SPEED PRESSURE</u> <u>REAR AXLE RECOMMENDED LOW SPEED PRESSURE</u> <u>REAR AXLE RECOMMENDED HIGH SPEED PRESSURE</u> <u>FRONT AXLE RECOMMENDED HIGH SPEED PRESSURE</u>
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NOTES	<p>There must be no present or stored faults.</p> <p>Carry out this fault finding procedure after detecting a discrepancy between the manufacturer's recommended pressure levels and the readings stored in the UCH memory.</p> <p>Warning:</p> <p>Use Workshop Repair Manual 364 or the pressure label attached to the driver's door to obtain the recommended pressures for the tyres actually installed on the vehicle.</p>
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If, after comparing with the manufacturer's data (see MR **364; 35A**) the recommended pressures stored in memory in the UCH do not conform, then program the recommended pressures with command **VP005 Enter recommended pressures** (see **Configurations and programming**).

If the recommended pressures cannot be entered properly, contact your Techline.

AFTER REPAIR	Repeat the check from the start.
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SSPP_V44_PR009/SSPP_V48_PR009/SSPP_V4C_PR009/SSPP_V4D_PR009/SSPP_V4F_PR009/SSPP_V50_PR009/
SSPP_V44_PR010/SSPP_V48_PR010/SSPP_V4C_PR010/SSPP_V4D_PR010/SSPP_V4F_PR010/SSPP_V50_PR010/
SSPP_V44_PR011/SSPP_V48_PR011/SSPP_V4C_PR011/SSPP_V4D_PR011/SSPP_V4F_PR011/SSPP_V50_PR011/
SSPP_V44_PR012/SSPP_V48_PR012/SSPP_V4C_PR012/SSPP_V4D_PR012/SSPP_V4F_PR012/SSPP_V50_PR012

Program no.: 0B20
Vdiag No: 44-48-4C-4D-4F-50

NO DIALOGUE WITH THE UCH COMPUTER

ALP 1

"ADJUST TYRE PRESSURE" MESSAGE LIGHTS UP FOR 1 WHEEL

ALP 2

"ADJUST TYRE PRESSURE" MESSAGE LIGHTS UP FOR 2 WHEELS

ALP 3

"TYRE SENSOR INOPERATIVE" MESSAGE LIGHTS UP

with disappearance of a single wheel warning light

ALP 4

with disappearance of the four wheel warning lights

ALP 5

"PUNCTURE - CHANGE TYRE" MESSAGE LIGHTS UP

ALP 6

ALP 1	No dialogue with the UCH computer
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NOTES	None
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<p>Try the diagnostic tool on another vehicle. Make sure the tool version is more recent than CD-ROM No. 32.</p>									
<p>Check:</p> <ul style="list-style-type: none">– the connection between the diagnostic tool and the diagnostic socket (connection and cable in good condition),– the power supply to the computer,– the engine and passenger compartment fuses.									
<p>Make sure the CLIP sensor is properly fed by tracks 16 (+ 12 V) and 4 and 5 (earth) of the diagnostic socket, displayed by the two red warning lights on the sensor lighting up.</p> <p>Make sure that the CLIP sensor is connected to the computer's USB port.</p> <p>Make sure that the CLIP sensor is communicating properly with the vehicle's computers; this can be seen by the two green diodes on the sensor lighting up.</p>									
<p>Check the following tracks on the diagnostic socket:</p> <table><tr><td>track 1</td><td>————→</td><td>+ After ignition feed</td></tr><tr><td>track 16</td><td>————→</td><td>+ battery feed</td></tr><tr><td>tracks 4 and 5</td><td>————→</td><td>Earth</td></tr></table> <p>Repair if necessary.</p>	track 1	————→	+ After ignition feed	track 16	————→	+ battery feed	tracks 4 and 5	————→	Earth
track 1	————→	+ After ignition feed							
track 16	————→	+ battery feed							
tracks 4 and 5	————→	Earth							
<p>Check the continuity, insulation and absence of interference resistance on lines:</p> <p>CAN H (diagnostic socket track 6) CAN L (diagnostic socket track 14)</p>									
<p>With a multimeter, make sure that the voltages at the diagnostic socket terminals are:</p> <ul style="list-style-type: none">- 2.5 V between CAN H (track 6) and the earth (tracks 4 and 5)- 2.5 V between CAN L (track 14) and the earth (tracks 4 and 5)									
<p>If dialogue with the UCH still has not been established after all the checks, contact your Techline.</p>									

AFTER REPAIR	<p>Check that no faults are still present. Check that the system is operating correctly.</p>
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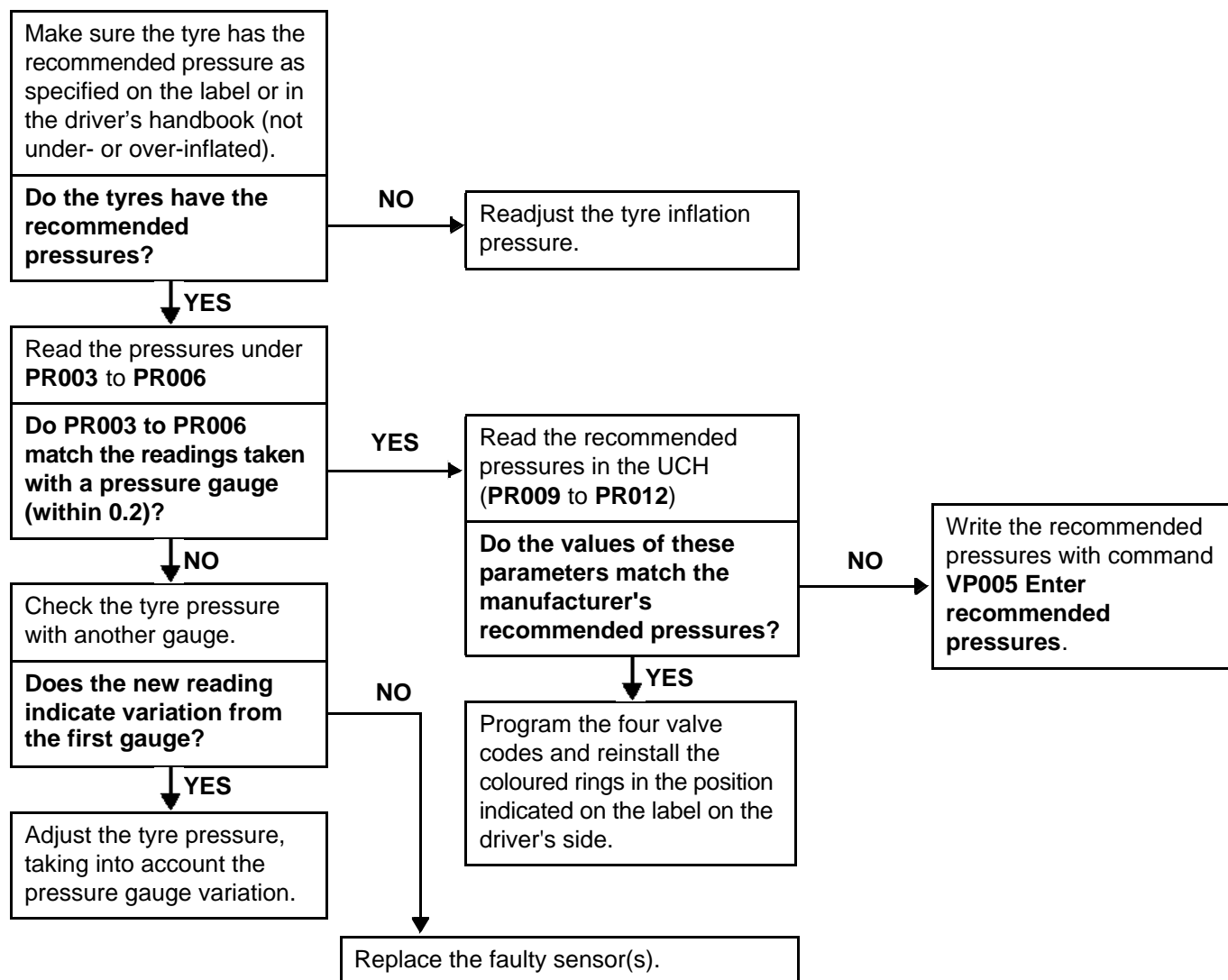
ALP 2

**"Adjust tyre pressure" message lights up
(the wheel concerned fills in on the display)**

N.B.: In Vdiag 44 vehicles, the Service warning light comes on with the instrument panel message.

NOTES

Check that all the faulty tyres are fitted with tyre pressure monitor valves.



AFTER REPAIR

Carry out a complete check with the diagnostic tool.

ALP 3

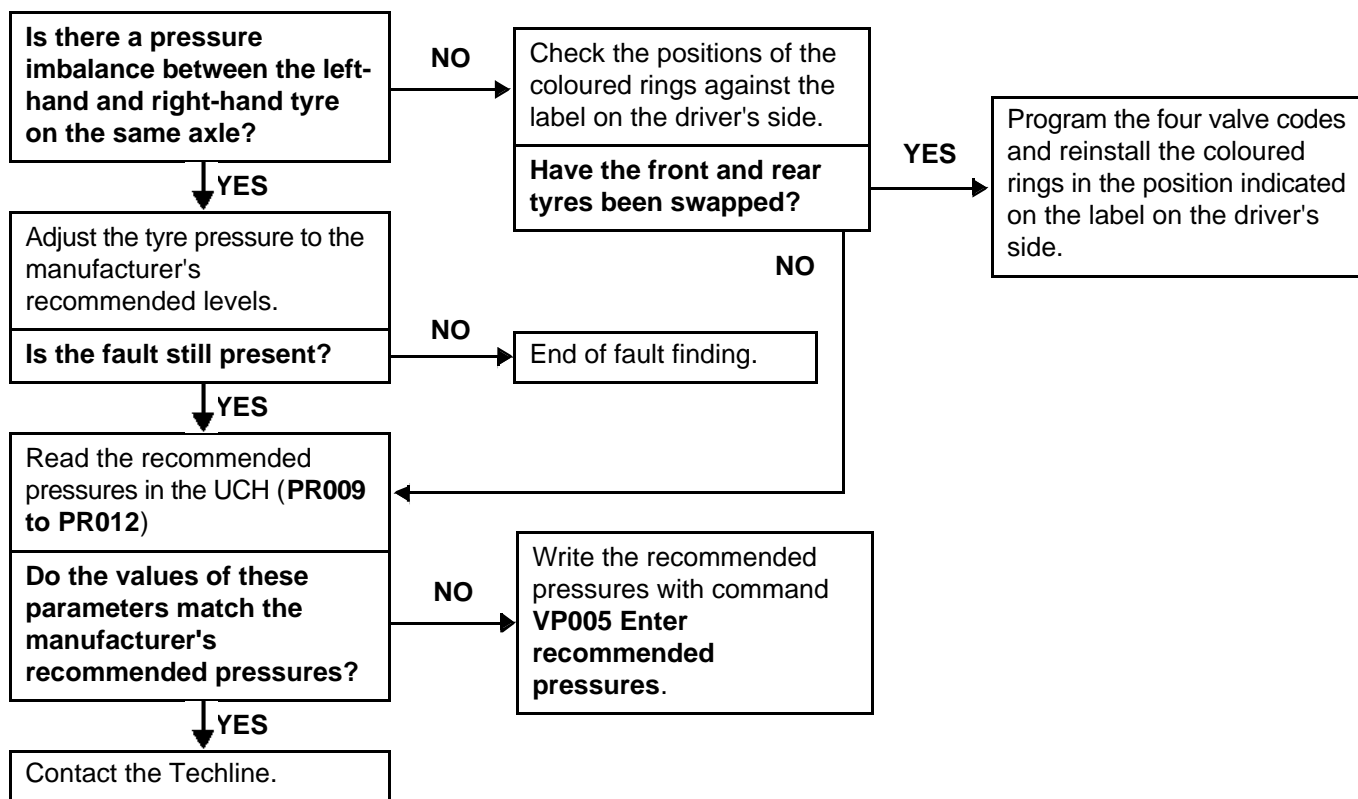
**"Adjust tyre pressure" message lights up
(two wheels fill in on the display)2**

Note:

In Vdiag 44 vehicles, the Service warning light comes on with the instrument panel message.

NOTES

Check that all the faulty tyres are fitted with tyre pressure monitor valves.



AFTER REPAIR

Carry out a complete check with the diagnostic tool.

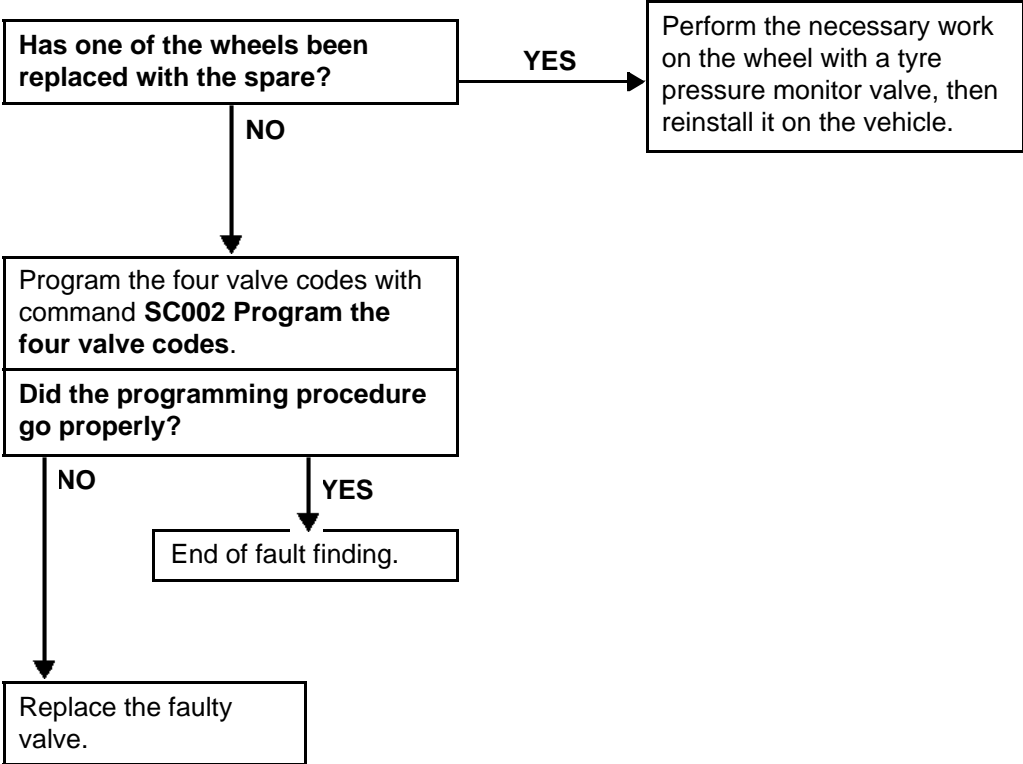
Program no.: 0B20
Vdiag No: 44-48-4C-4D-4F-50

ALP 4

"Tyre sensor inoperative" message lights up
(wheel symbol disappears)

NOTES

Check that all the faulty tyres are fitted with tyre pressure monitor valves.

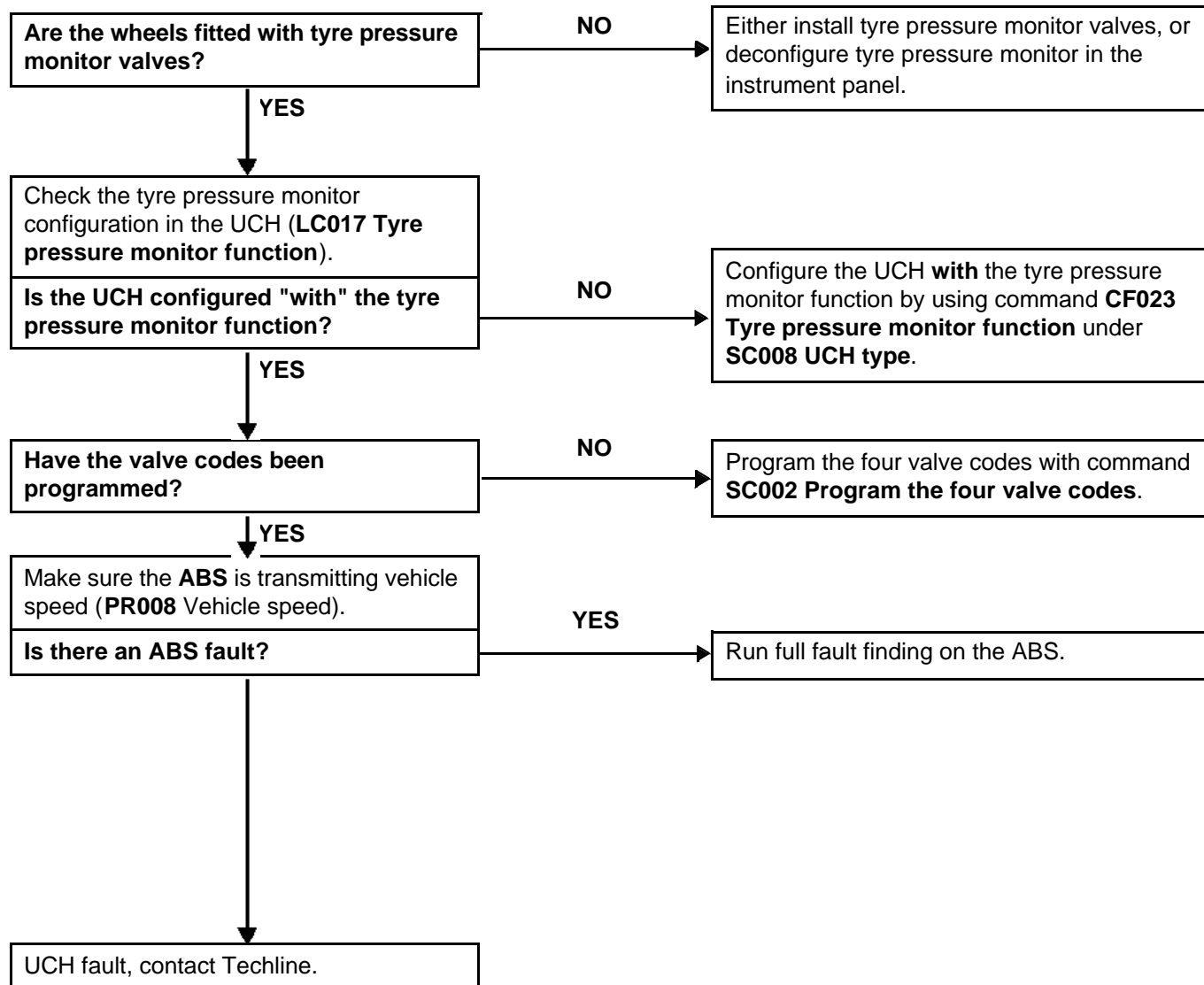


AFTER REPAIR

Carry out a complete check with the diagnostic tool.

ALP 5	"Tyre sensor inoperative" message lights up (four wheel symbols disappear)
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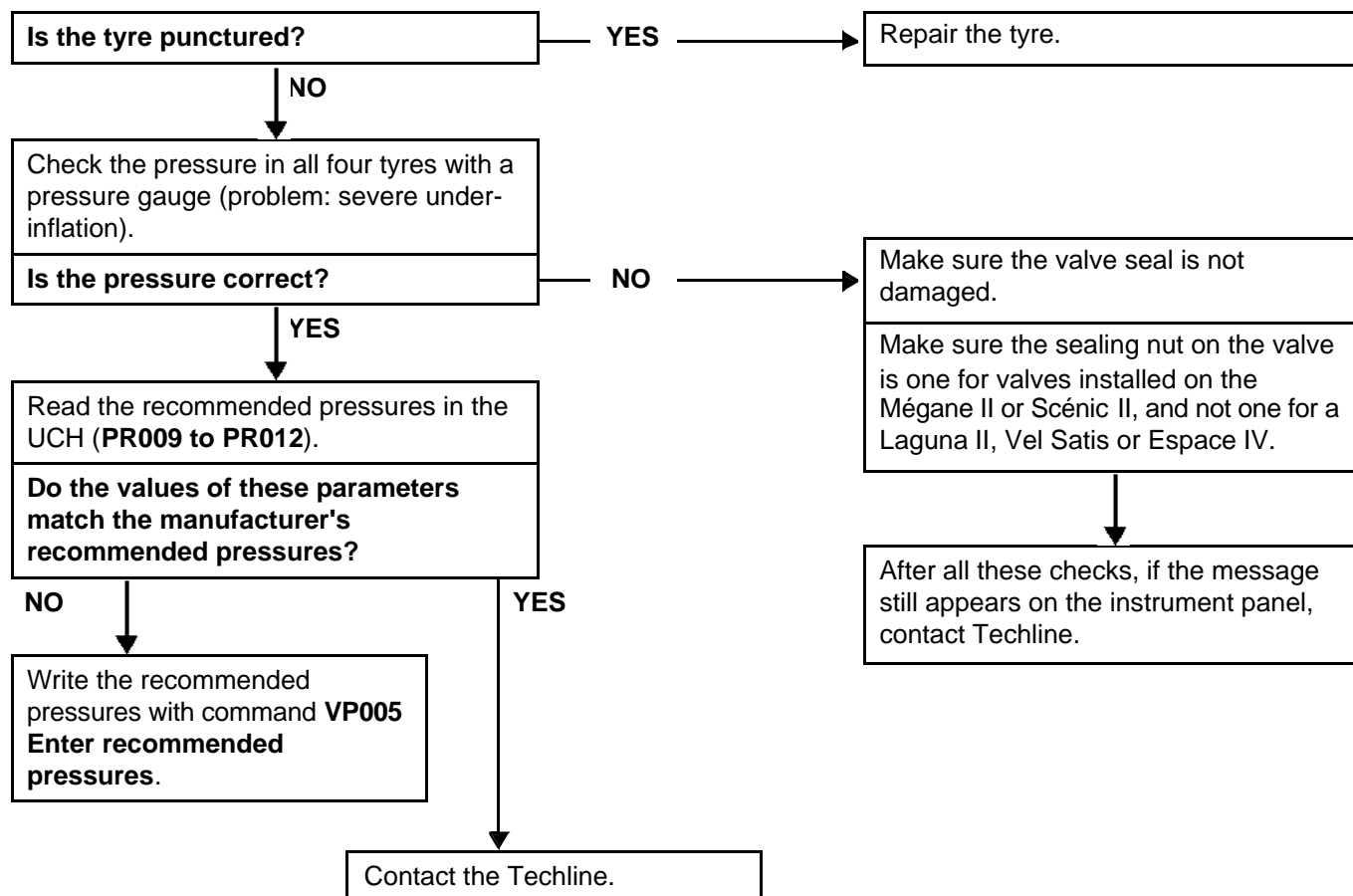
NOTES	Check that all the wheels are fitted with tyre pressure monitoring valves.
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AFTER REPAIR	Carry out a complete check with the diagnostic tool.
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ALP 6	"Puncture: change tyre" message lights up (the wheel fills in on the display)
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NOTES	None
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AFTER REPAIR	Carry out a complete check with the diagnostic tool.
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