

FAULT FINDING INTRODUCTION

Fault finding – Customer complaints

01E

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ALP 1	Air inlet whistling noises
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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Preliminary step: determine the area concerned (if accessible).

With the engine running, reproduce the whistling noise and detect the cause by placing a hand (part by part) or using the noise diagnostic tool (see **Noise diagnostic tool - Use**) on components which may be causing the noise and examining the entire circuit.

Two possible scenarios can arise:

- scenario no. 1 - The area is identified: only apply the ALP to the suspect area.
- scenario no. 2 - The area is not identified: follow the ALP, applying it to the entire air circuit.

**Check with the engine not running.****Condition of the air circuit assembly**

The noise may be caused by:

- a damaged seal,
- a poorly fitted pipe,
- a damaged component.
- Check that all of the pipes are correctly clipped and/or fitted to each other, from one end of the circuit to the other.
- Check that the air filter unit, air resonators, air pipes and turbocharging air cooler are secured correctly.
- Check that the clips are tight enough.

not correct

Corrective action to be carried out:

In all cases, repair the air circuit, by fitting the pipes correctly and checking that the clips are correctly torque tightened using a release torque wrench preset to the recommended tightening torque.

correct

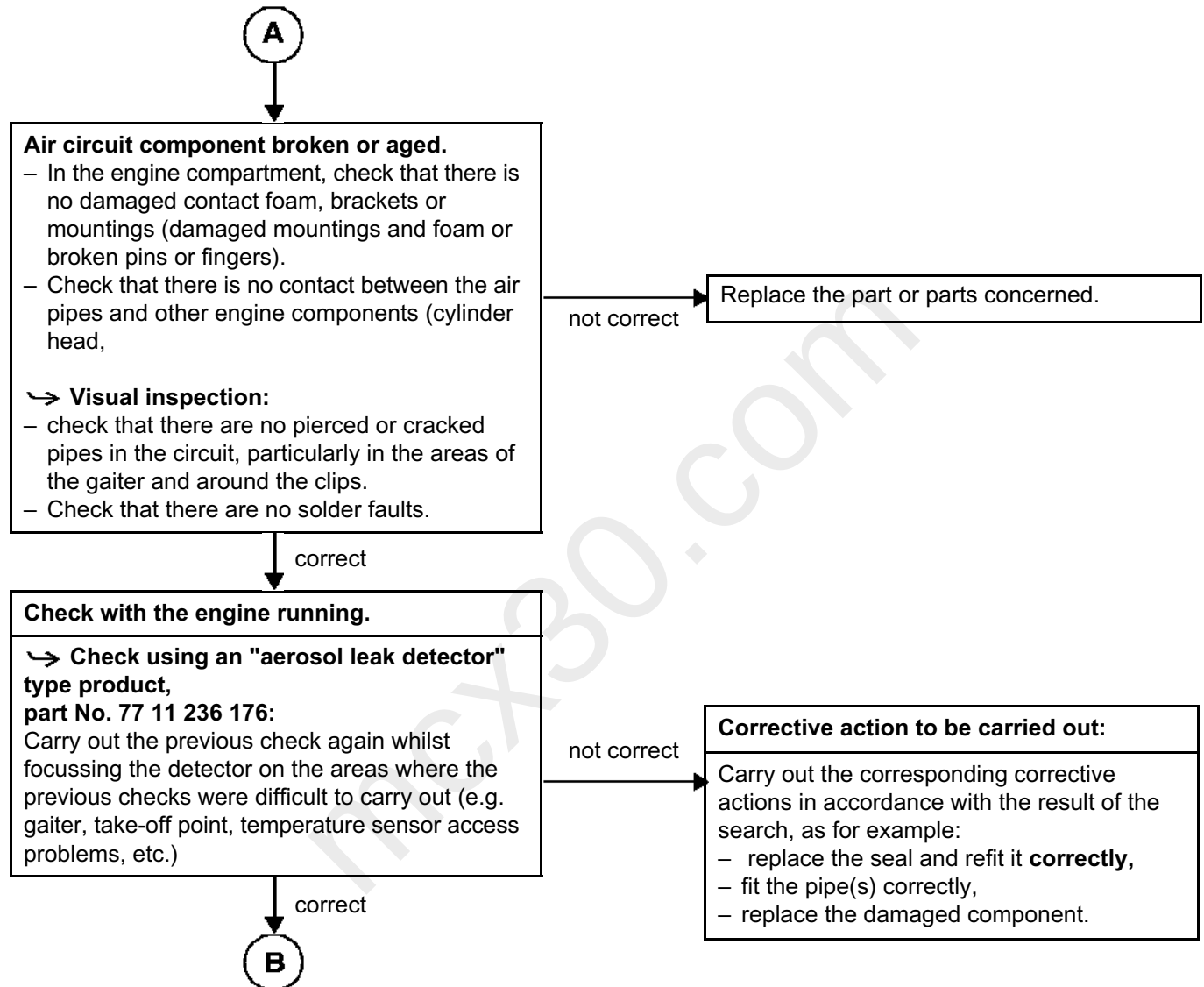


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Fault finding – Fault Finding Chart

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ALP 1 CONTINUED 1	Air inlet whistling noises
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ALP 1 CONTINUED 2	Air inlet whistling noises
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Checking the internal air circuit passages, with the air pipes removed
Check the internal air circuit passages, and in particular: ↳ Air filter: – air filter seal on the unit or its slide, – air filter not damaged, – air filter conformity (compare manufacturer's recommendations with the filter part number) ↳ Other internal passage or part: – resonator not blocked, – air pipe not blocked.

not correct

Corrective action to be carried out:
Replace the part or parts concerned.

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ALP 2	Air inlet humming noises
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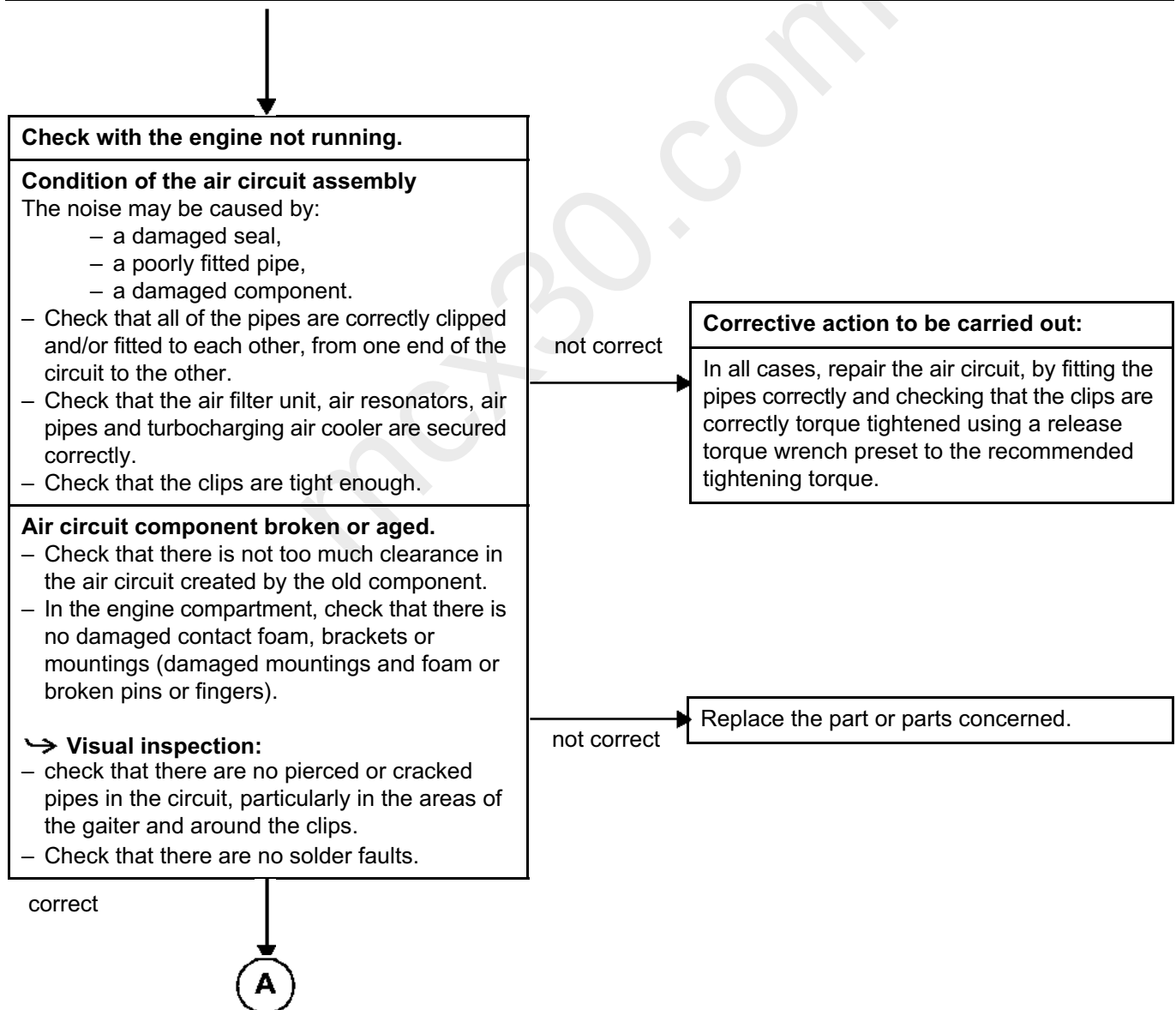
NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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Preliminary step: determine the area concerned (if accessible).

With the engine running, recreate the humming noise and locate the source by placing a hand (part by part) on the components which may be the cause and examining the entire circuit.

Two possible scenarios can arise:

- scenario no. 1 - The area is identified: only apply the ALP to the suspect area.
- scenario no. 2 - The area is not identified: follow the ALP, applying it to the entire air circuit.



ALP 2
CONTINUED

Air inlet humming noises

A

**Checking the internal air circuit passages,
with the air pipes removed**

Check the internal air circuit passages, and in particular:

➤ **Air filter:**

- air filter seal on the unit or its slide,
- air filter not damaged,
- air filter conformity (compare manufacturer's recommendations with the filter part number)

➤ **Other internal passage or part:**

- resonator not blocked,
- air pipe not blocked.

not correct

Corrective action to be carried out:

Replace the part or parts concerned.

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ALP 3	Crackling noises from the connecting hose or ball joint bracket (depending on version) (exhaust)
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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Preliminary step:

visually determine if the exhaust system has a ball joint bracket or a connecting hose (see vehicle MR, **19B EXHAUST**).

Check the tightening torques

With the vehicle raised on a lift, check that the torque wrench, which is preset to the recommended tightening torque, is released at the recommended tightening torque of the bracket (flat or ball joint) at the start of the exhaust system (see MR for vehicle, **19B EXHAUST, Catalytic converter: Removal - Refitting**).

Corrective action to be carried out:

Tighten to the recommended torque (see MR for vehicle, **19B EXHAUST, Catalytic converter: Removal - Refitting**).

Check the exhaust system manually ON A VEHICLE LIFT (engine stopped)

With the exhaust system cold, lightly knock the exhaust system by hand in several places (especially on the front axle subframe), without reaching its stops.

Note:

If the exhaust system is suspended from the subframe, remove the suspension mounting(s) in order to knock the pipe.

Replace the part causing the noise:

- **connecting hose:** either replace the part only, when sold separately; or the connecting hose and the part to which it is welded (e.g. catalytic converter).
- **ball joint bracket:** replace the "sealing ring / mounting bolt / mounting nuts (if fitted) / springs" assembly

no
crackling noise

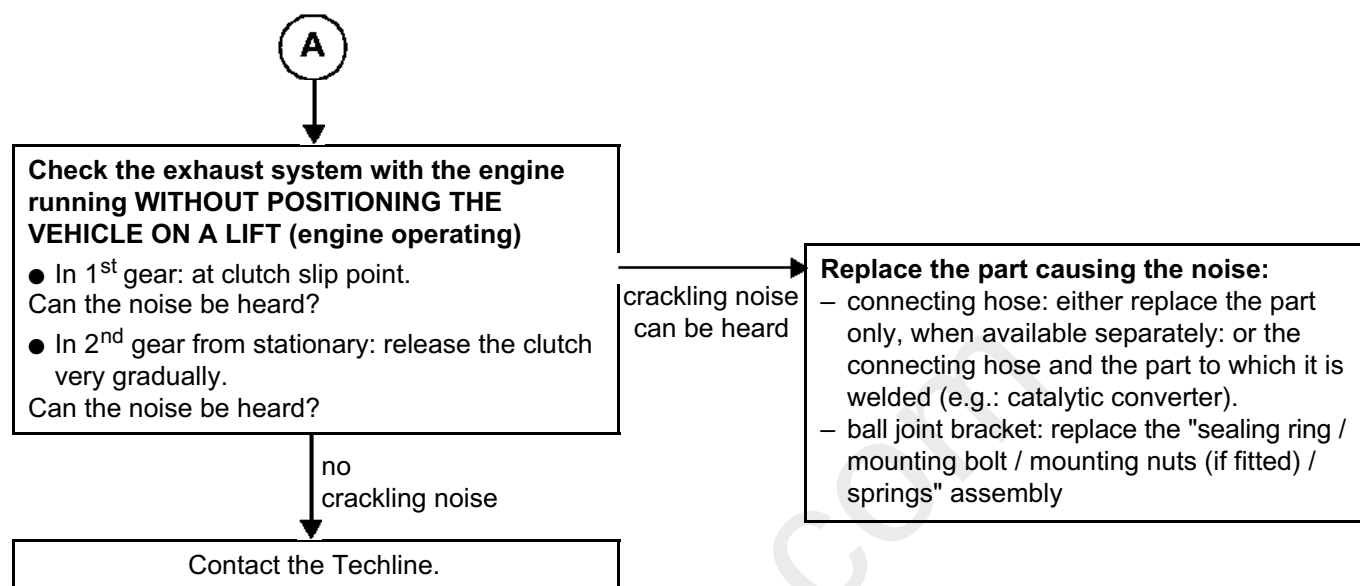


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Fault finding – Fault Finding Chart

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ALP 3 CONTINUED	Crackling noises from the connecting hose or ball joint bracket (depending on version) (exhaust)
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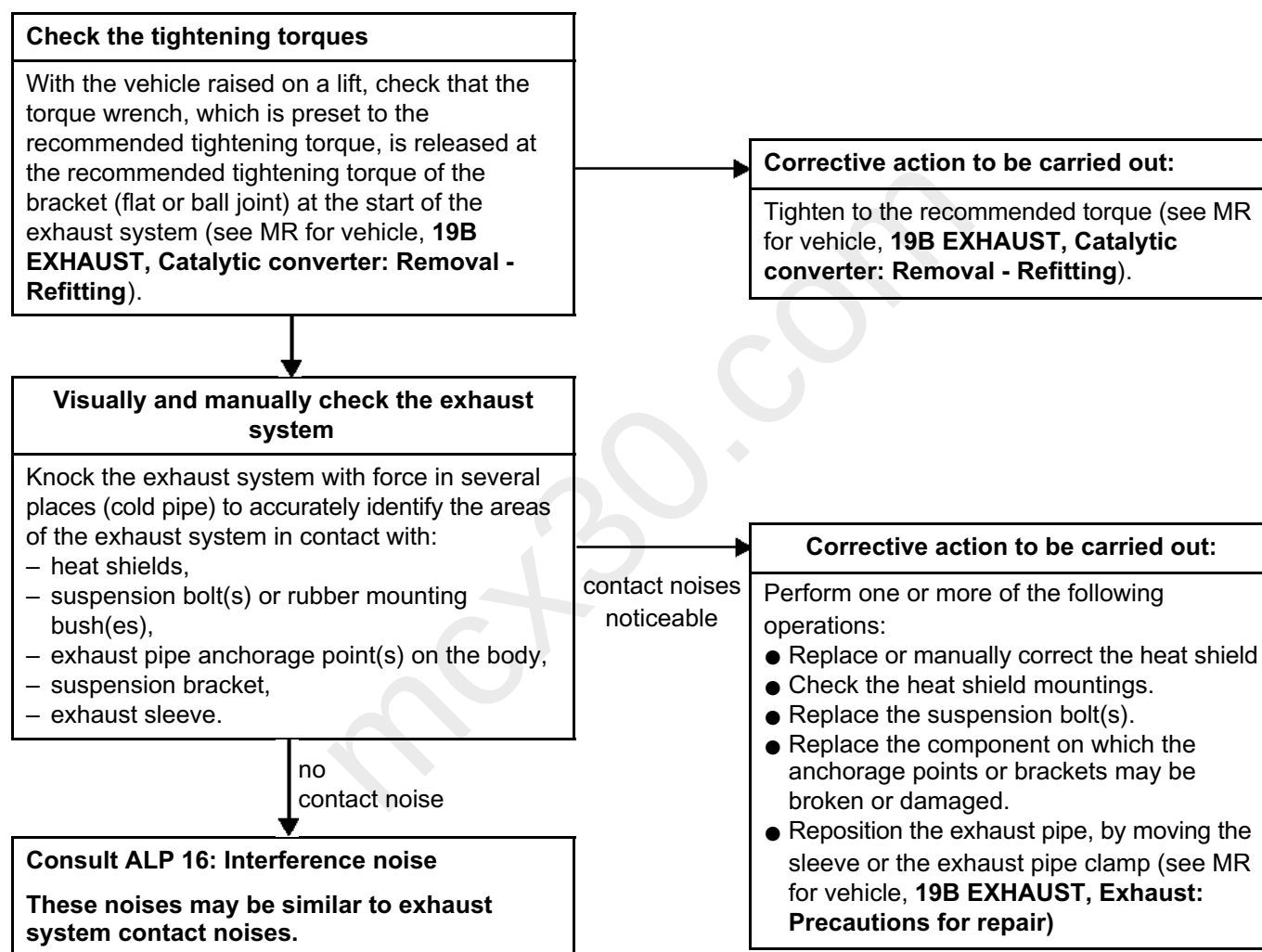
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ALP 4	Underbody contact noise (exhaust)
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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ALP 5	Exhaust leak noise
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DO NOT BLOCK the exhaust pipe output.
Remove the engine undertray.

Safety

Rules which **MUST** be respected when the engine is operating:

- heat-protective gloves must be worn when handling the hot exhaust
- connect an exhaust gas extractor



Check the exhaust system, which must only be carried out with the vehicle ON A LIFT, and the engine running

At idle speed (visual, aural and tactile inspection):

Wearing a heat-resistant glove, use one hand to lightly touch the exhaust system from the exhaust manifold to the exhaust tailpipe end.

More specifically, check:

- the seal on the exhaust manifold,
- the condition of the welds on the entire exhaust system,
- the exterior appearance of the exhaust system (impact, corrosion, cracks, welds, holes),
- the condition of the removable connections on the exhaust system (sleeves, clips and brackets)
- the presence of condensed water under the vehicle.

In certain cases and whenever possible in order to determine the leak, check the area in question using an "aerosol leak detector" type product, part no.77 11 236 176.

leak noises
noticeable

Corrective action to be carried out:

In all cases, only replace the suspect part (see MR for vehicle, **19B EXHAUST, Exhaust: Precautions for repair**)

no
leak noise

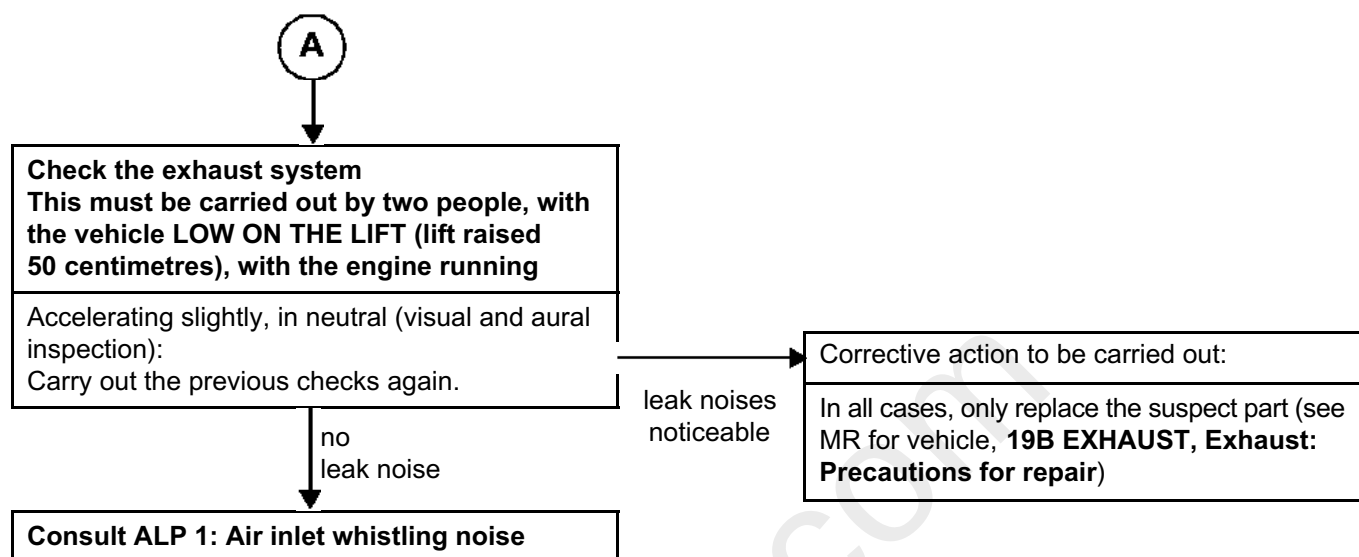


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Fault finding – Fault Finding Chart

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ALP 5 CONTINUED	Exhaust leak noise
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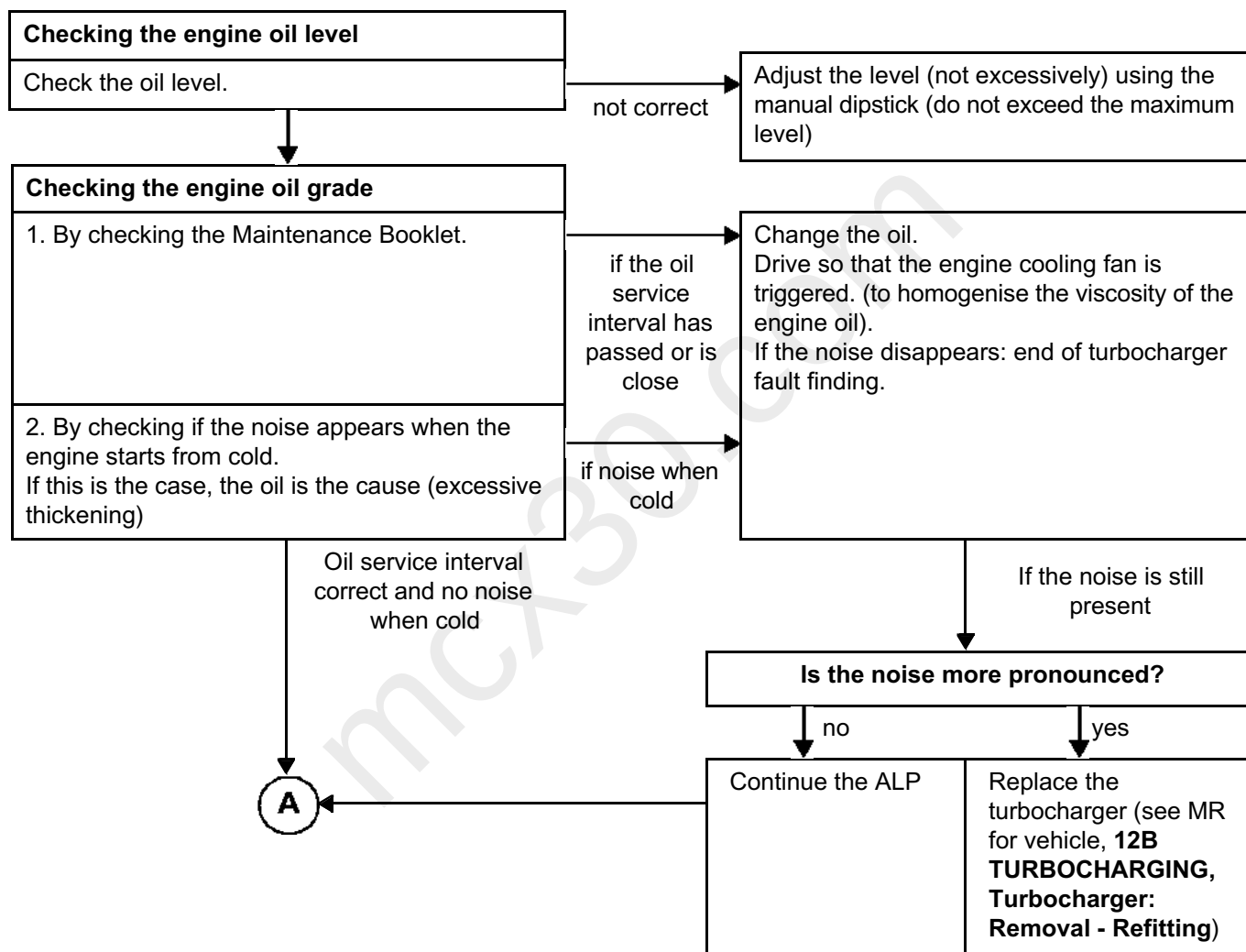
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ALP 6	Whistling noise from the turbocharger
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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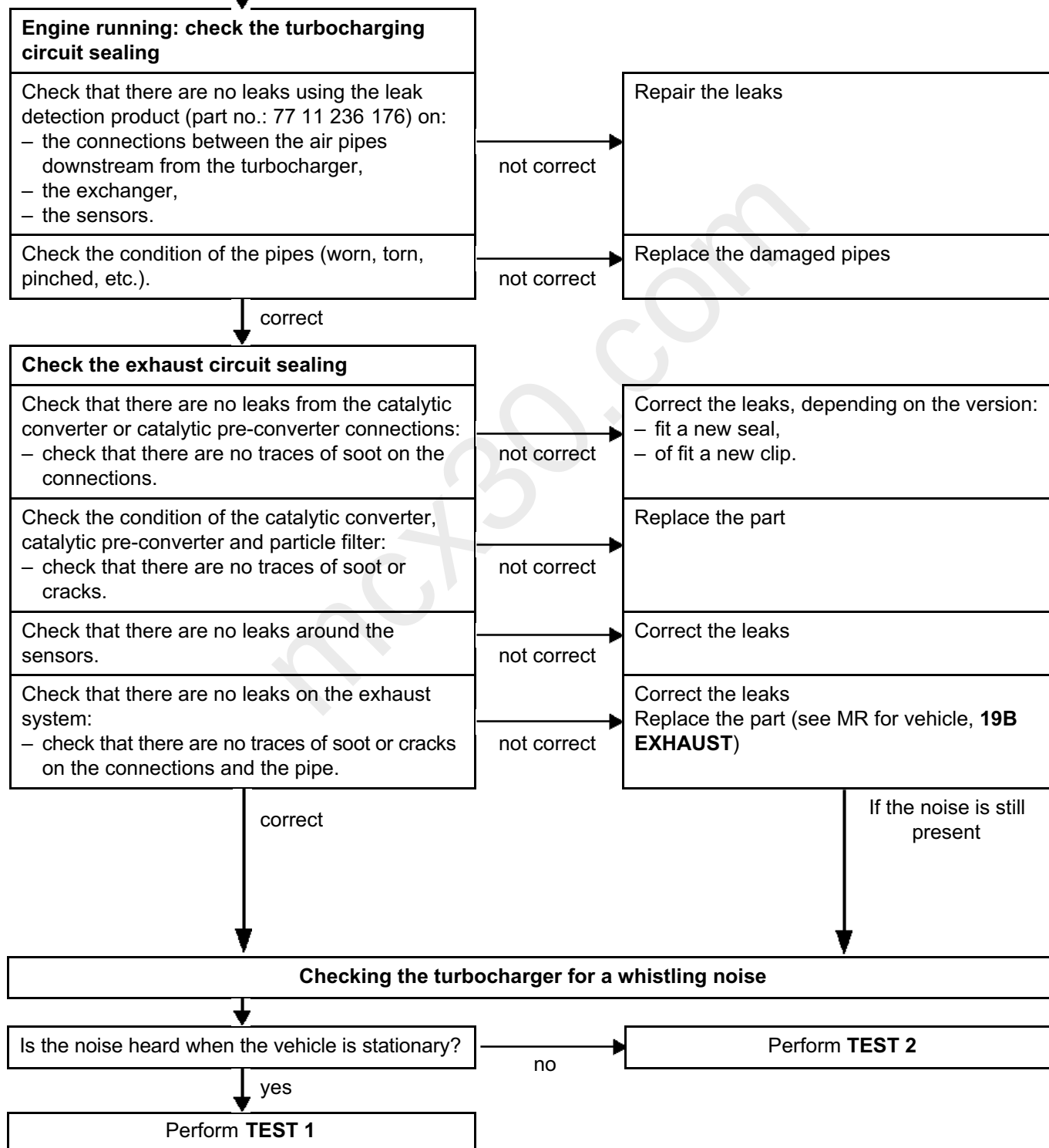
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Fault finding – Fault Finding Chart

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ALP 6 CONTINUED 1	Whistling noise from the turbocharger
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ALP 6 CONTINUED 2	Whistling noise from the turbocharger
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TEST 1

Configurations: vehicle stationary, **disengaged**, engine running and warm

Before the test, clearly identify the speed conditions under which the noise appears

A) For a vacuum-controlled turbocharger:

- Disconnect the pneumatic control on the turbocharger regulator.
- Clamp the pipe (e.g. using a set of hose clamps).
- Only for a turbocharger on G9T 710* engine: create a vacuum to control the regulator using a pressure-vacuum pump at a vacuum value of 0.6 bar (opening the pressure regulation valve).

B) For a pressure-controlled turbocharger:

- Disconnect the pneumatic control on the turbocharger regulator.
- Clamp the pipe (e.g. using a set of hose clamps).
- Create pressure to control the regulator using a pressure-vacuum pump at a maximum pressure value of 1.4 bar (opening the turbocharger by-pass valve).

These operations aim to lower the speed of the turbocharger which changes the conditions under which the noise appears.

** On the G9T 710 engine, the turbocharger controls are inverted.*

↓ If the noise changes

Replace the turbocharger (see MR for vehicle, **12B TURBOCHARGING, Turbocharger: Removal - Refitting**)

↓ If the noise does not change

The turbocharger is not the cause of the noise (end of turbocharger whistling fault finding)

TEST 2

Configurations: vehicle driving when warm

Before the test, clearly identify the speed conditions under which the noise appears

A) For a vacuum-controlled turbocharger:

- Disconnect the pneumatic control on the turbocharger regulator.
- Clamp the pipe (e.g. using a set of hose clamps).
- Only for a turbocharger on G9T 710* engine: create a vacuum to control the regulator using a pressure-vacuum pump at a vacuum value of 0.6 bar (opening the pressure regulation valve).

B) For a pressure-controlled turbocharger:

- Disconnect the pneumatic control on the turbocharger regulator.
- Clamp the pipe (e.g. using a set of hose clamps).
- Create pressure to control the regulator using a pressure-vacuum pump at a maximum pressure value of 1.4 bar (opening the turbocharger by-pass valve).

These operations aim to lower the speed of the turbocharger which changes the conditions under which the noise appears.

** On the G9T 710 engine, the turbocharger controls are inverted.*

↓ If the noise changes

Replace the turbocharger (see MR for vehicle, **12B TURBOCHARGING, Turbocharger: Removal - Refitting**)

↓ If the noise does not change

The turbocharger is not the cause of the fault (end of turbocharger whistling noise fault finding) **Consult the ALP: Whining noise in the drive train**

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Fault finding – Fault Finding Chart

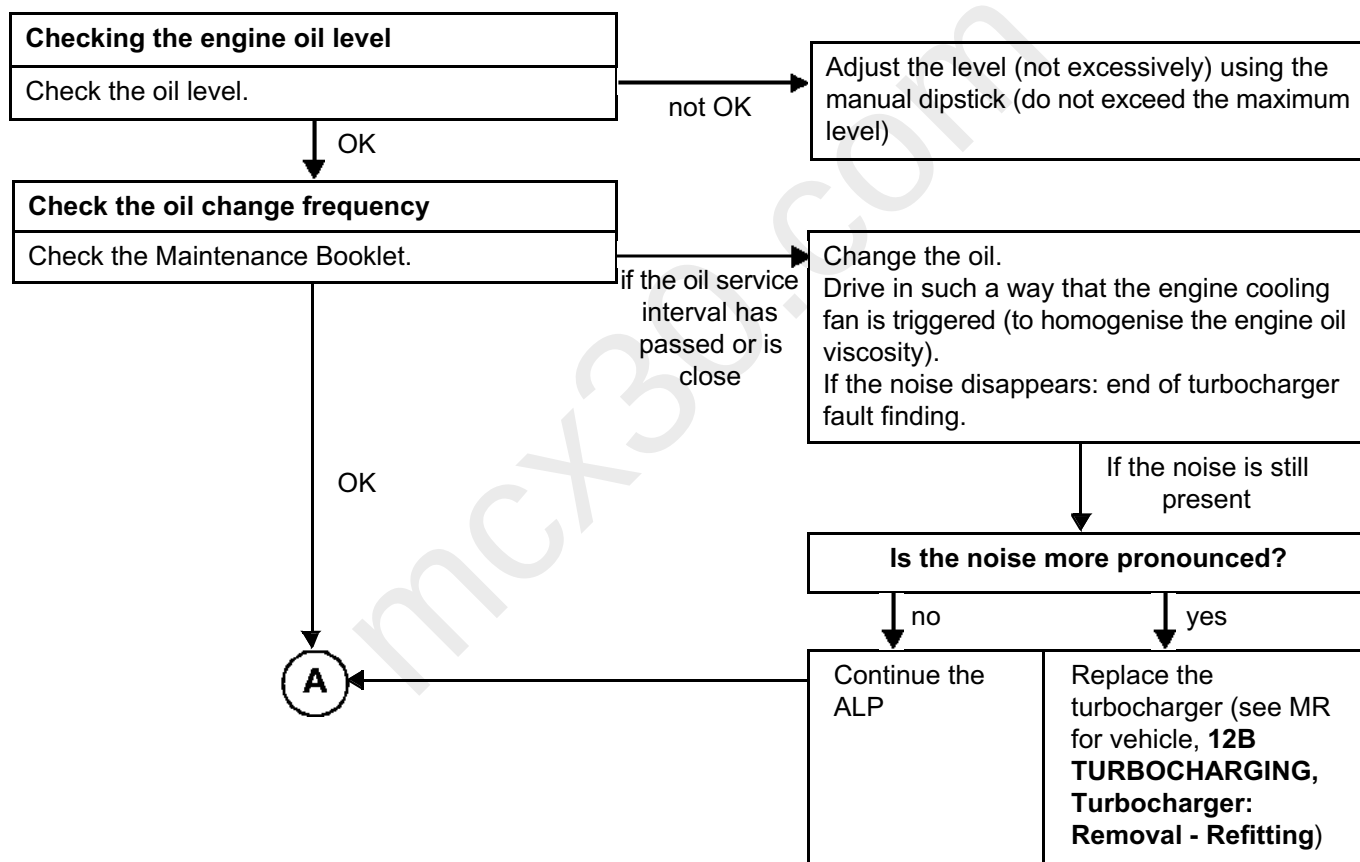
01E

ALP 7	Meowing noise from the turbocharger
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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IMPORTANT:

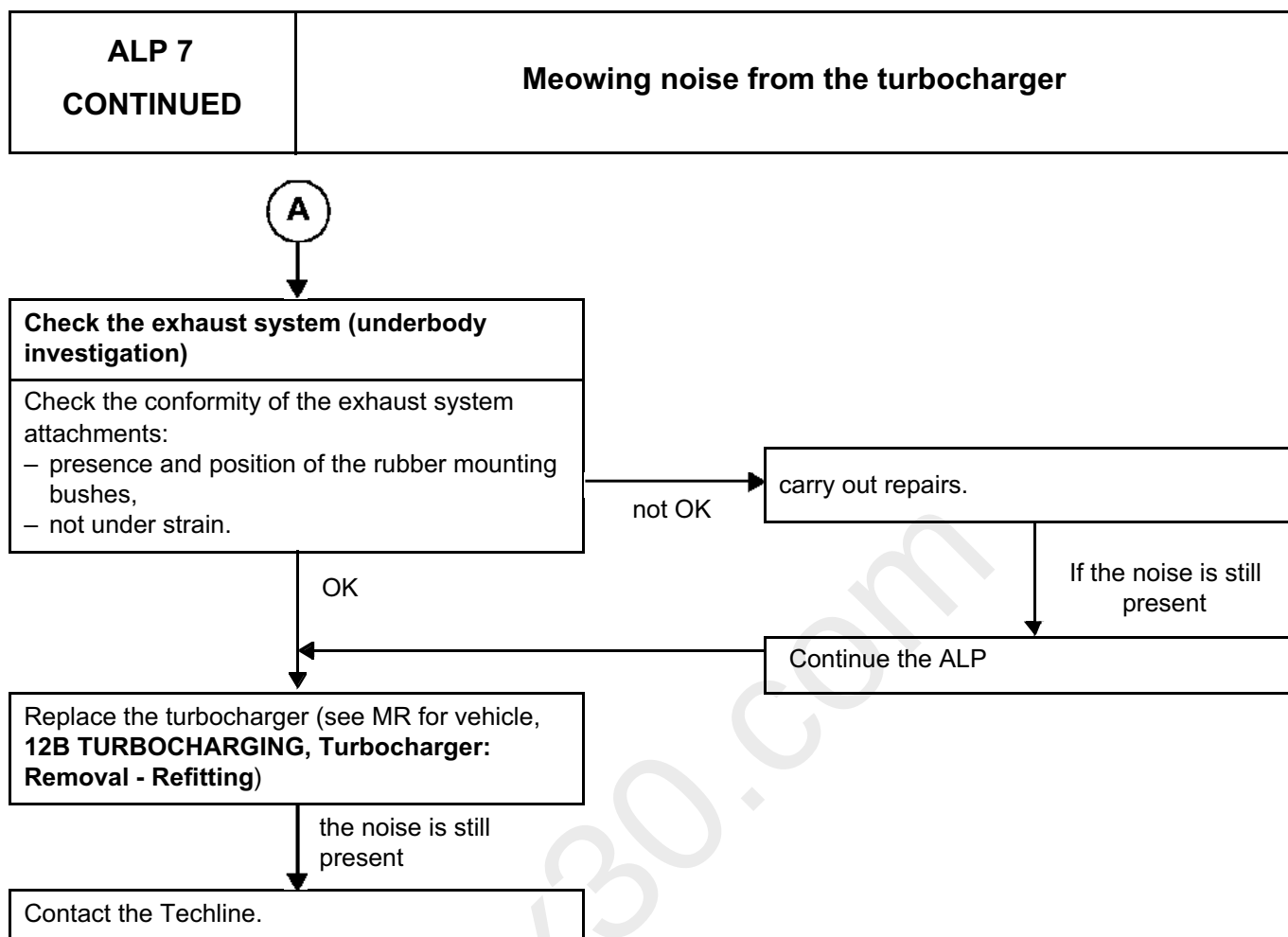
Consult the vehicle's history in the ICM database and check that the exhaust system has not been replaced (even partially) and that no work has been undertaken on the high pressure air circuit.
If this is the case, check that the operation was carried out correctly.



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FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

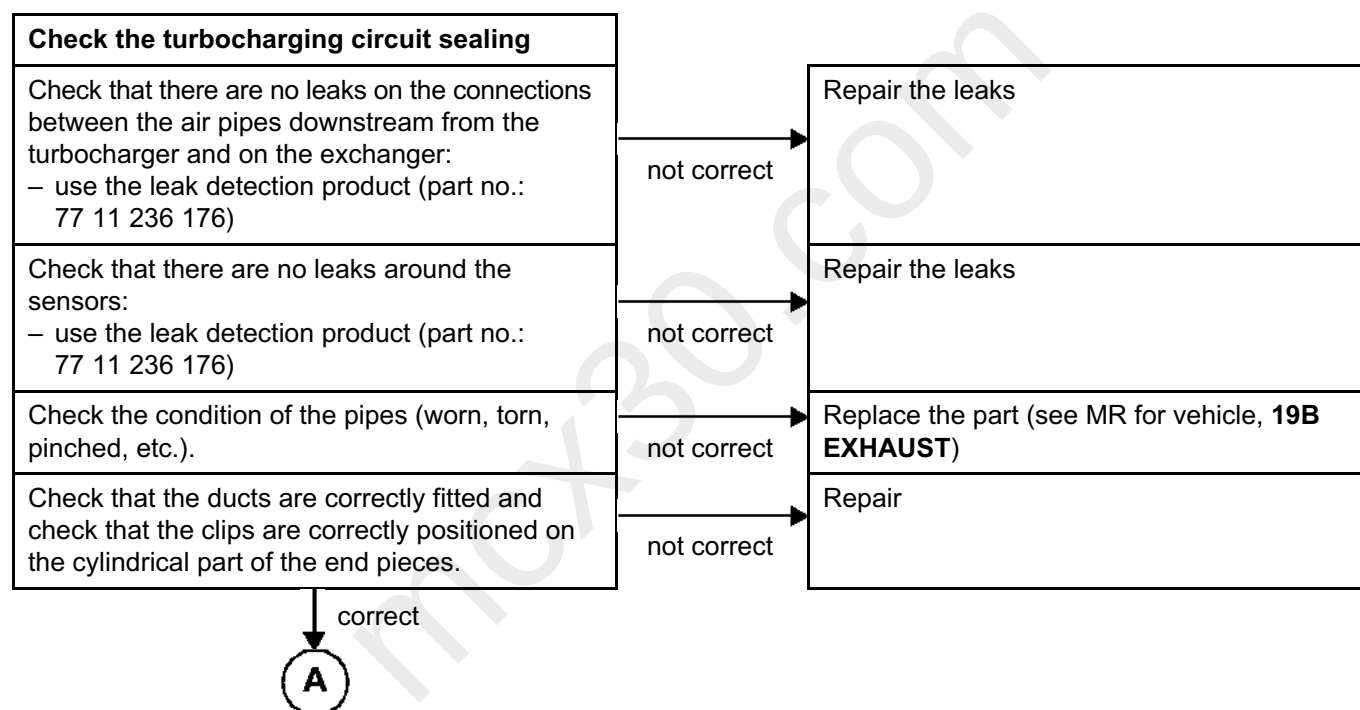
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ALP 8	Blowing noise from the turbocharger
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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IMPORTANT:

Consult the vehicle's history in the ICM database and check that the exhaust system has not been replaced (even partially) and that no work has been undertaken on the high pressure air circuit.
If this is the case, check that the operation was carried out correctly.



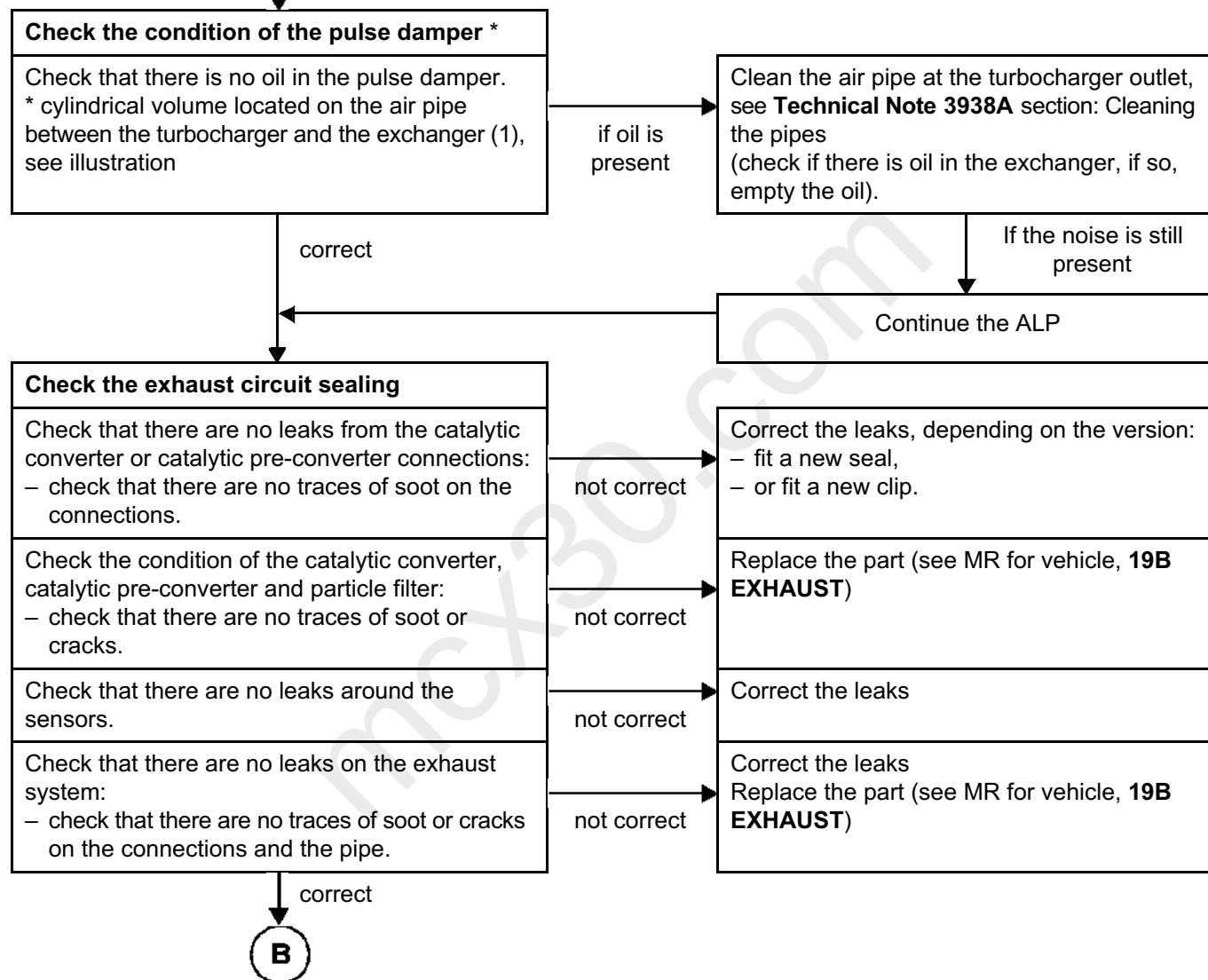
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ALP 8 CONTINUED 1	Blowing noise from the turbocharger
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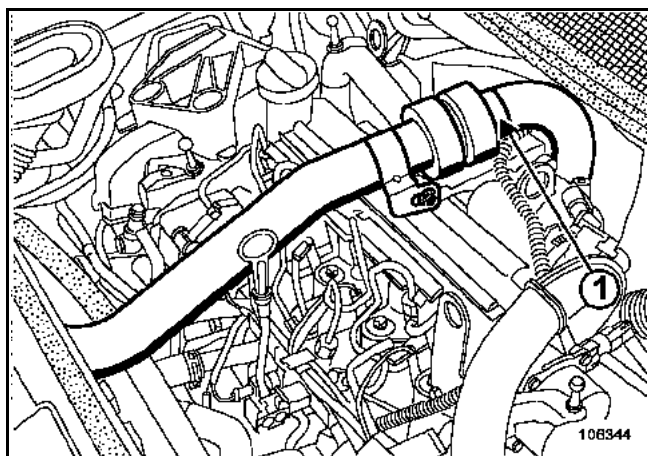


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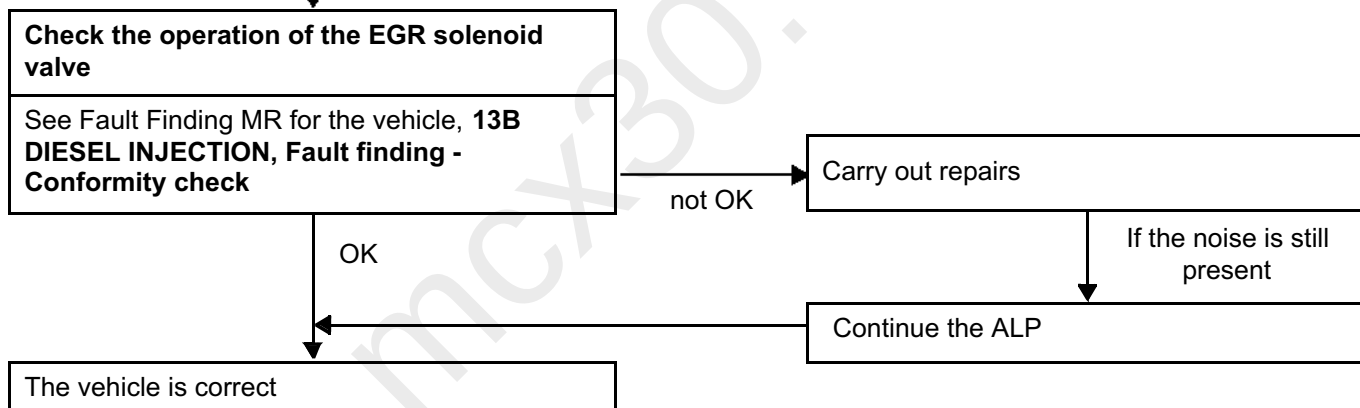
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ALP 8 CONTINUED 2	Blowing noise from the turbocharger
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B



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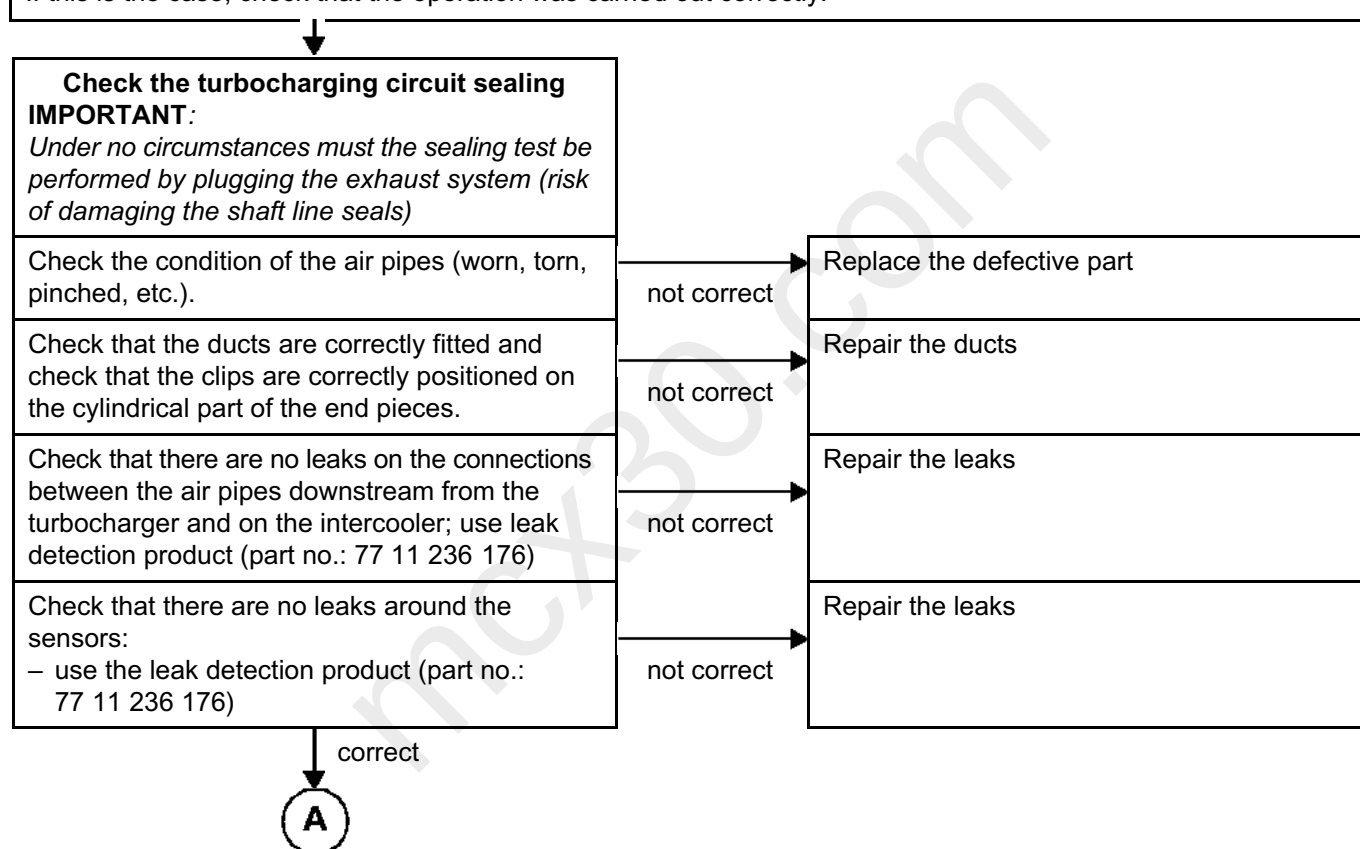
Fault finding – Fault Finding Chart

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ALP 9	Sighing noise from the turbocharger (diesel engine)
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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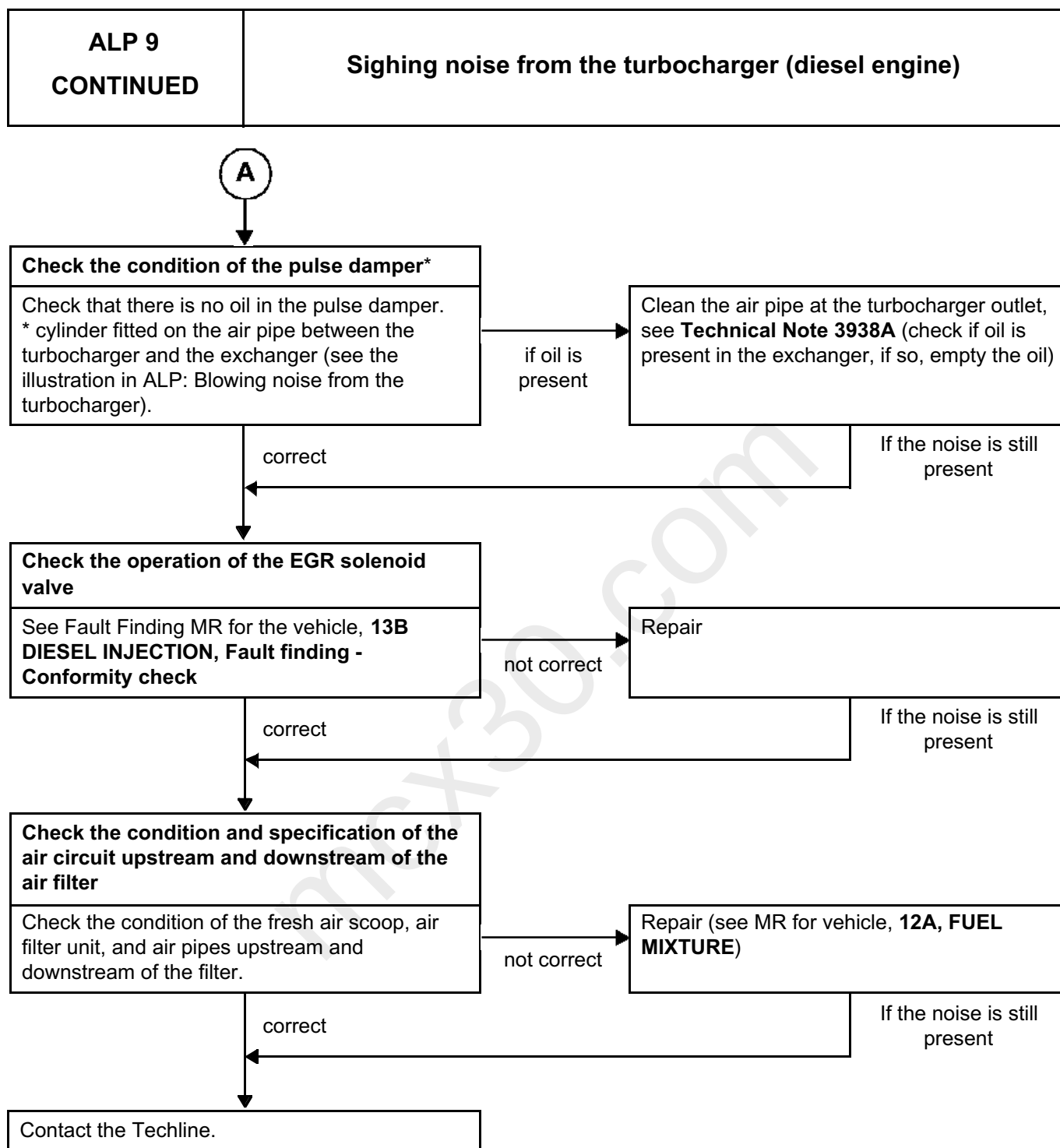
IMPORTANT: Consult the vehicle's history in the ICM database and check that the exhaust system has not been replaced (even partially) and that no work has been undertaken on the high pressure air circuit. If this is the case, check that the operation was carried out correctly.



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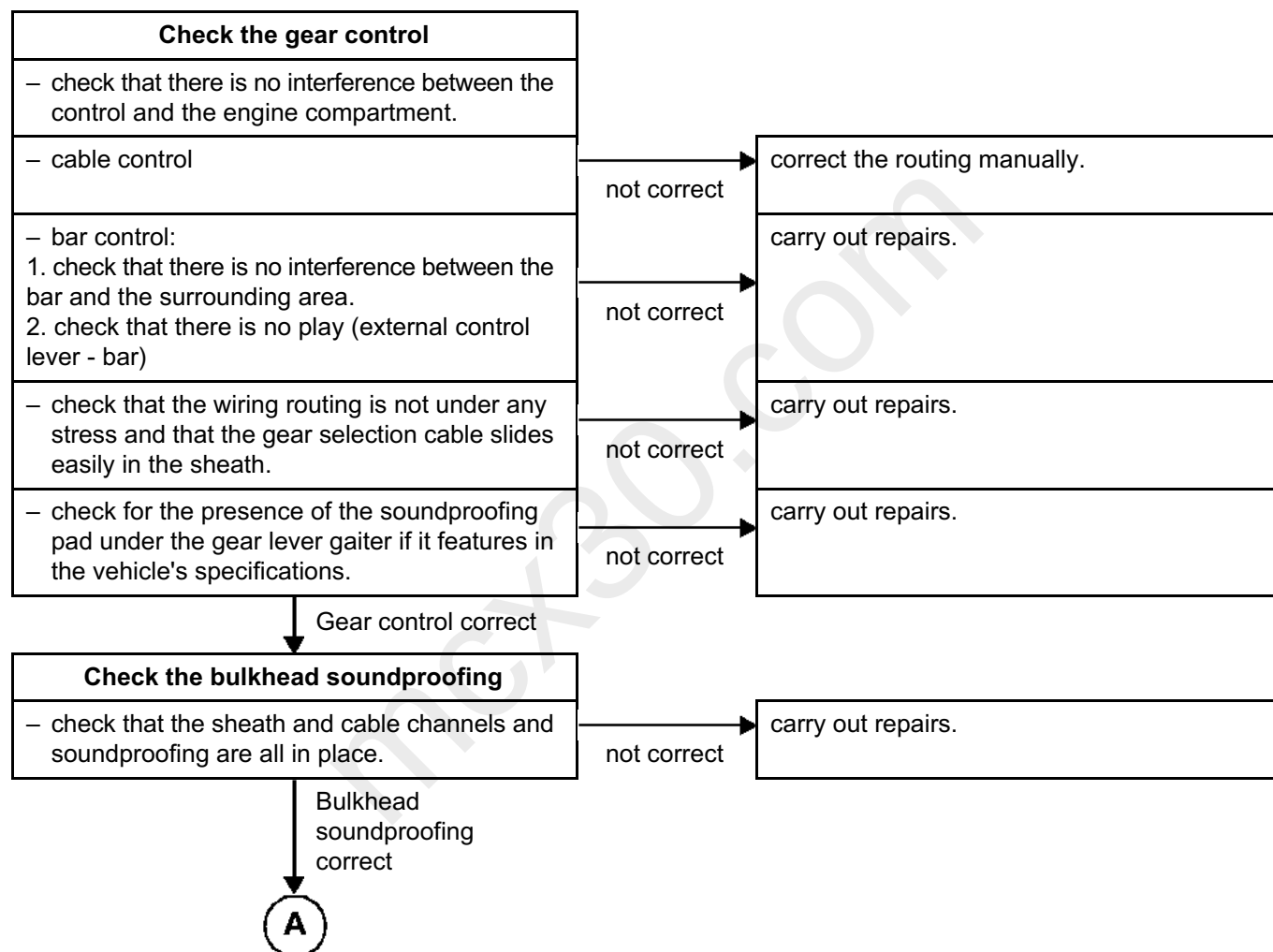
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Fault finding – Fault Finding Chart

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ALP 10	Noise when engaging/disengaging gear
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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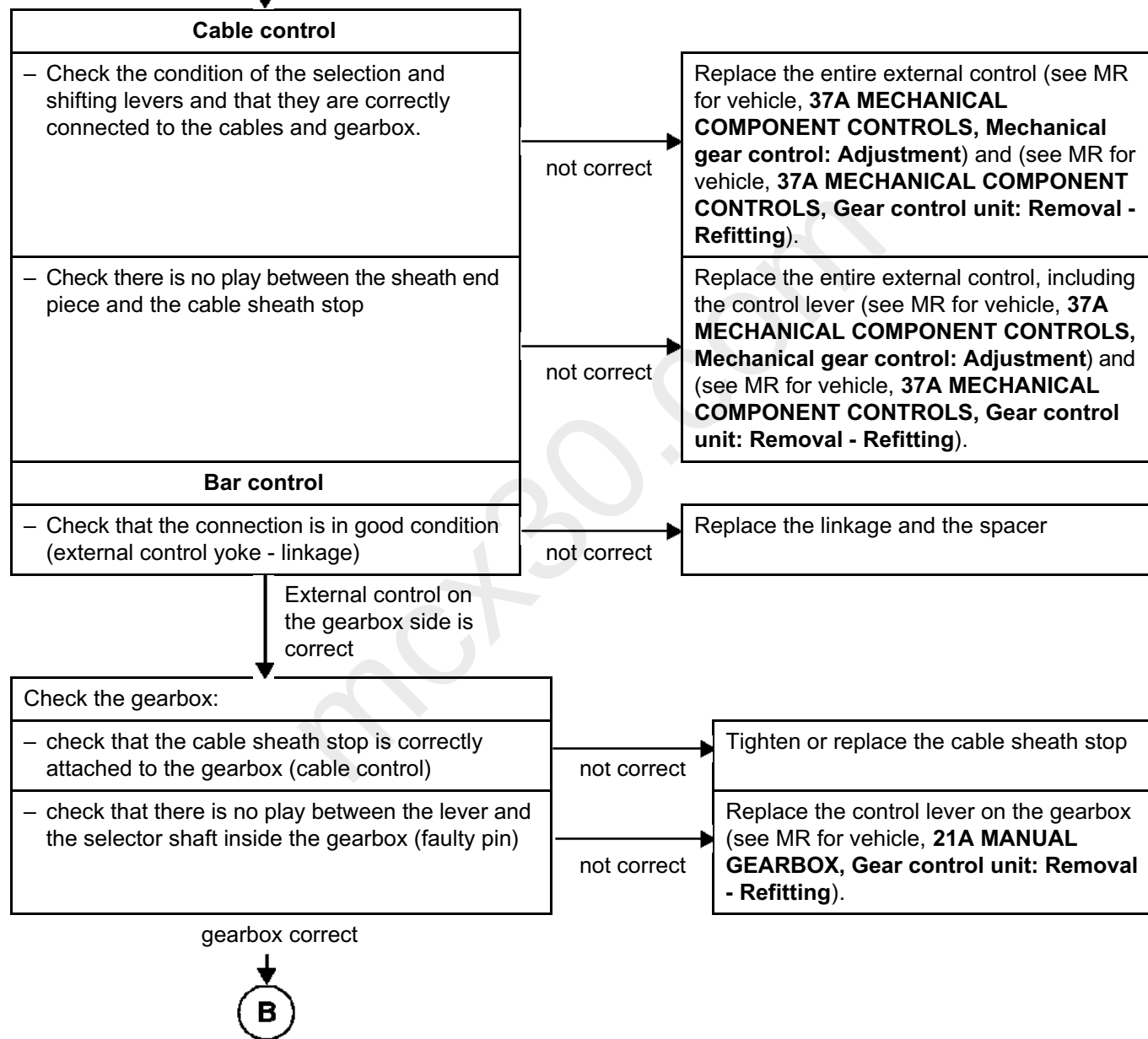
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ALP 10 CONTINUED 1	Noise when engaging/disengaging gear
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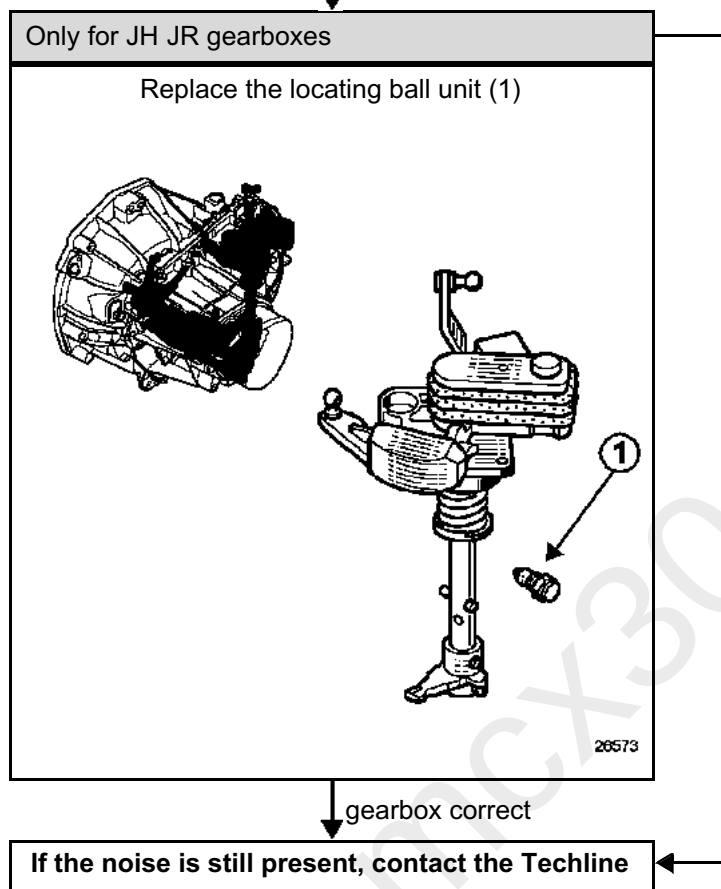
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ALP 10 CONTINUED 2	Noise when engaging/disengaging gear
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B



*	Gearbox	Technical Note No.
	PA6 - PK5 - PK6	Technical Note 6003A
	TL4	Technical Note 6019A
	ZF5 S 270 and ZF6 S 350	Technical Note 6016A
	PF6 - PK4	Technical Note 6021A
	JA3, JH1, JH3, JR5	Technical Note 6029A
	ND0	Technical Note 6034A

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ALP 11	Creaking noise when changing gear
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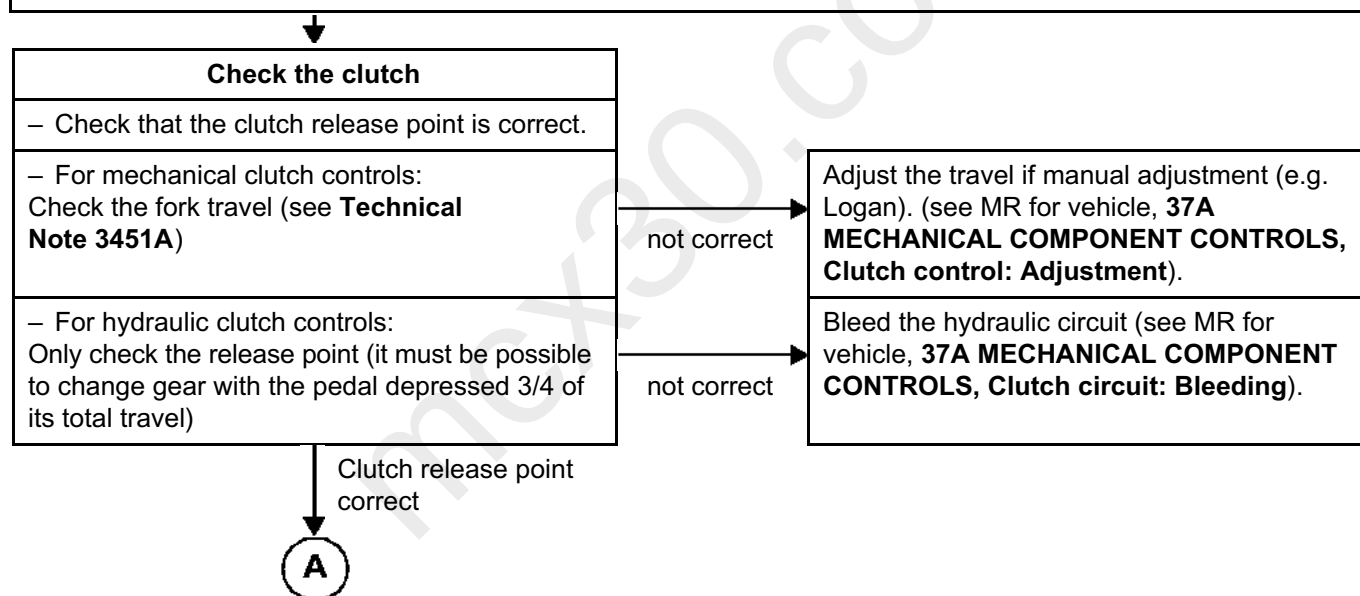
NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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Check that no vehicle mat is preventing the clutch from operating when changing gear.
Check that the gear control setting is correct (see MR for vehicle, **21A MANUAL GEARBOX, Manual gear control: Adjustment**).

WARNING

If creaking can be heard:

- **On EVERY gear ratio:** the customer may have complained previously about hard spots when selecting gear (cable clutches). Therefore it is ONLY the clutch which is concerned (see Technical Note 3451A)
- **When changing from Neutral / 1st or Neutral / Reverse:** start by checking the clutch and follow the ALP if the clutch is correct.
- **Other gears:** start DIRECTLY by checking the gearbox WITHOUT checking the clutch



FAULT FINDING INTRODUCTION

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ALP 11 CONTINUED 1	Creaking noise when changing gear
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A

Check the gearbox before removing it		Corrective action to be carried out:
– check that there are no leaks on the driveshaft side and/or joint face and/or gear control module (JB, JC gearbox).	not correct	Repair either: – By replacing the driveshaft seals if the leaks originate from the driveshafts (see MR for vehicle, 21A MANUAL GEARBOX, Differential output seal: Removal - Refitting) – By repairing the gearbox joint face sealing (see Technical Note for the gearbox*) – By replacing: the gearbox seal and selector shaft if the module is leaking (see Technical Note for JB-JC)
– check the gearbox oil level.	not correct	Adjust the oil level (using oil specified by the manufacturer).
– check the appearance of the oil Oil which is dark in colour is not a fault. Oil which smells burnt is caused by a hot gearbox (insufficient oil level or hard use). The presence of bronze-coloured rings is not a fault. The presence of particles of an aluminium colour is an indication that the gearbox is seriously damaged internally.	not correct	– Perform an oil change (using oil specified by the manufacturer). – If aluminium colour particles are present, replace the gearbox (see MR for vehicle, 21A MANUAL GEARBOX, Manual gearbox: Removal - Refitting)

B

FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

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ALP 11 CONTINUED 2	Creaking noise when changing gear
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B

Remove the gearbox – Check the clutch wear.	not correct	Corrective action to be carried out: Replace the whole clutch system. <i>Important: the synchronisation must be checked as this might have been damaged following clutch damage.</i>
Open the gearbox – Check the condition of the synchronisation, synchronisation springs, idle gear and synchroniser ring and the selector rod for the gear(s) concerned. (See MR for vehicle, 21A MANUAL GEARBOX, Manual gearbox: Check)	not correct	Corrective action to be carried out: Replace all of the components of the damaged gear(s) (pinion, hub, selector rod, synchroniser ring and synchronisation spring) (see Technical Note for the gearbox*)

*	<table> <tr> <th>Gearbox</th><th>Technical Note No.</th></tr> <tr> <td>PA6 - PK5 - PK6</td><td>Technical Note 6003A</td></tr> <tr> <td>TL4</td><td>Technical Note 6019A</td></tr> <tr> <td>ZF5 S 270 and ZF6 S 350</td><td>Technical Note 6016A</td></tr> <tr> <td>PF6 - PK4</td><td>Technical Note 6021A</td></tr> <tr> <td>JA3, JH1, JH3, JR5</td><td>Technical Note 6029A</td></tr> <tr> <td>ND0</td><td>Technical Note 6034A</td></tr> </table>	Gearbox	Technical Note No.	PA6 - PK5 - PK6	Technical Note 6003A	TL4	Technical Note 6019A	ZF5 S 270 and ZF6 S 350	Technical Note 6016A	PF6 - PK4	Technical Note 6021A	JA3, JH1, JH3, JR5	Technical Note 6029A	ND0	Technical Note 6034A
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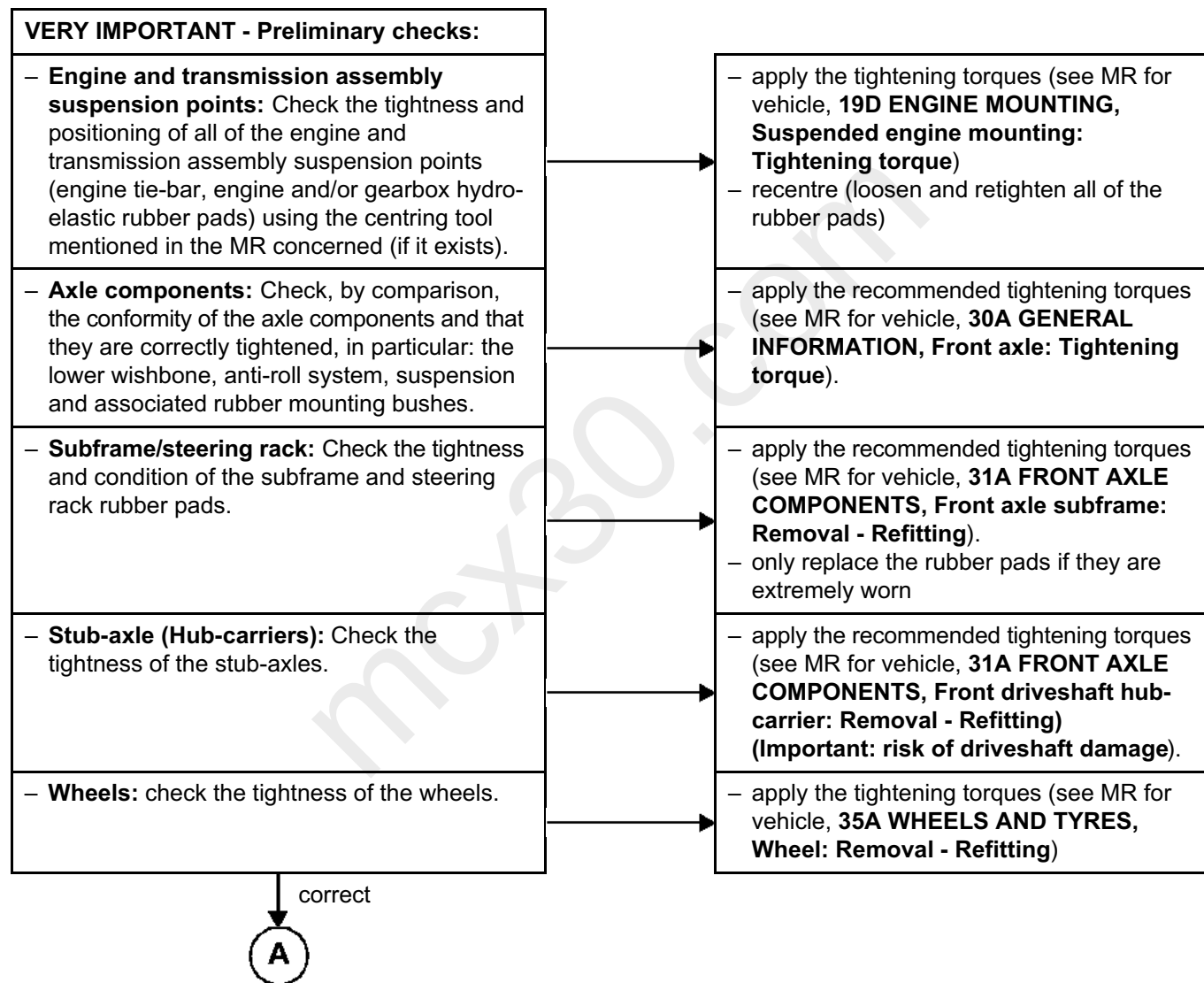
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Fault finding – Fault Finding Chart

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ALP 12	Banging during power take-up or torque inversion
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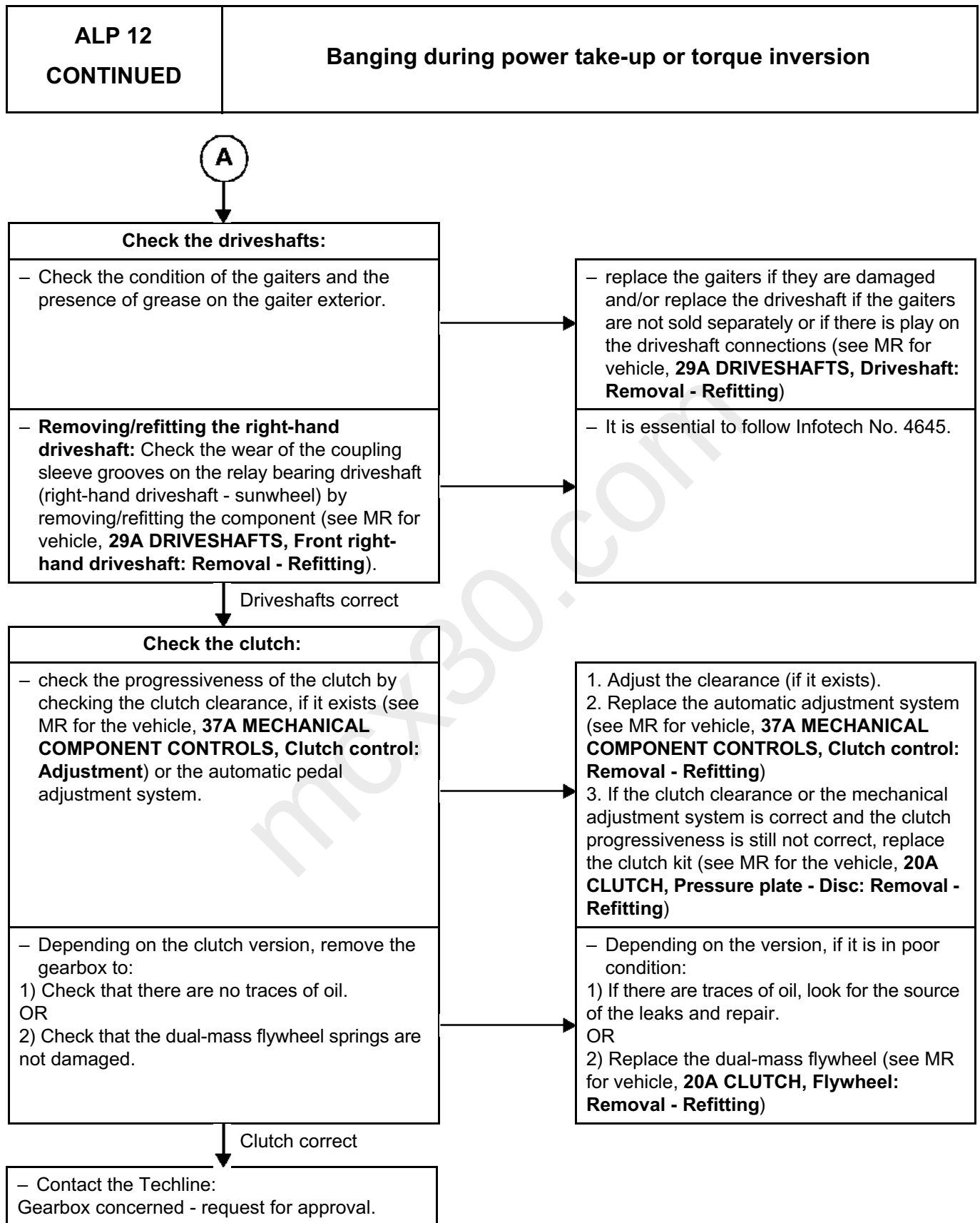
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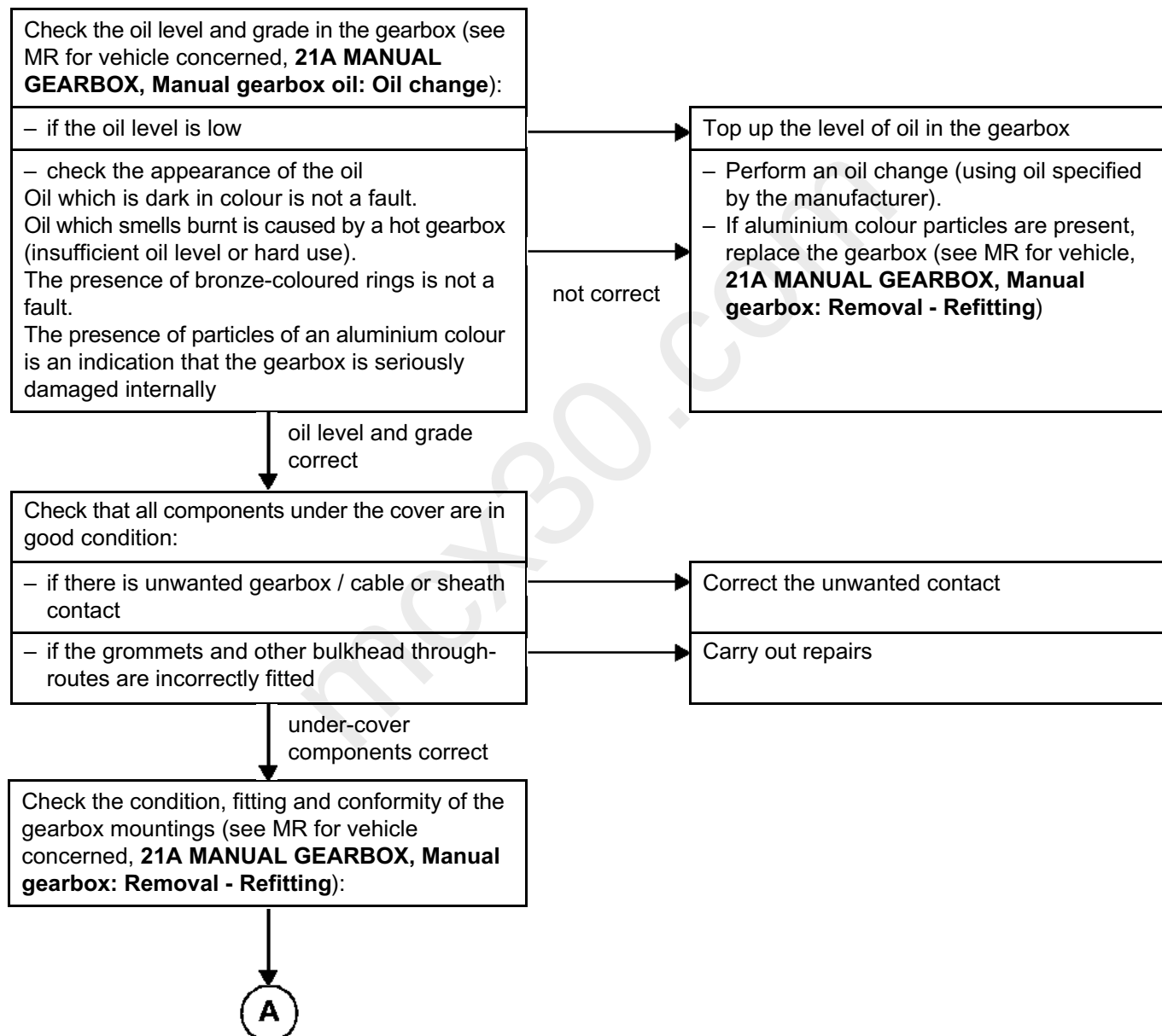
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ALP 13	Siren (drive train)
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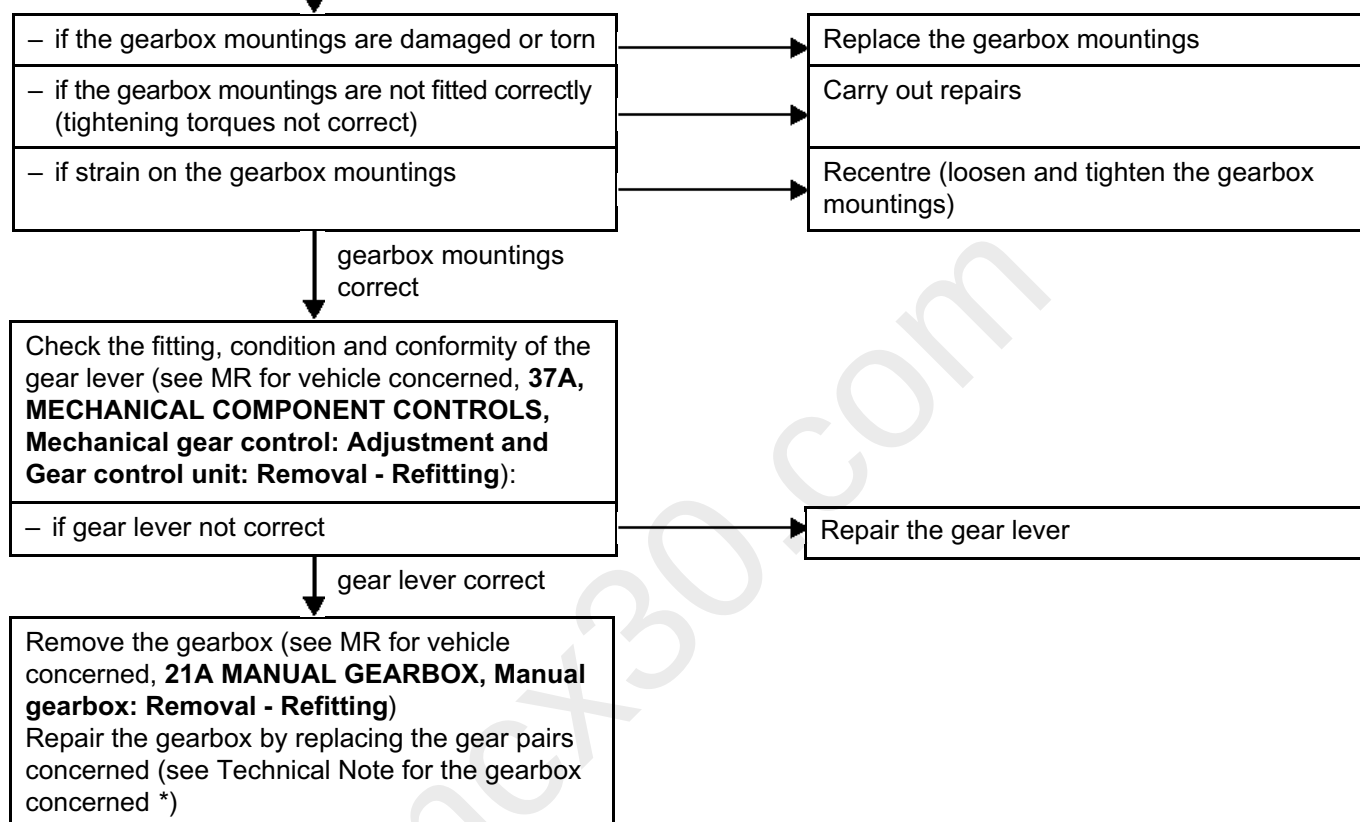
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Fault finding – Fault Finding Chart

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ALP 13 CONTINUED	Siren (drive train)
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*	Gearbox	Technical Note No.
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	TL4	Technical Note 6019A
	ZF5 S 270 and ZF6 S 350	Technical Note 6016A
	PF6 - PK4	Technical Note 6021A
	JA3, JH1, JH3, JR5	Technical Note 6029A
	ND0	Technical Note 6034A

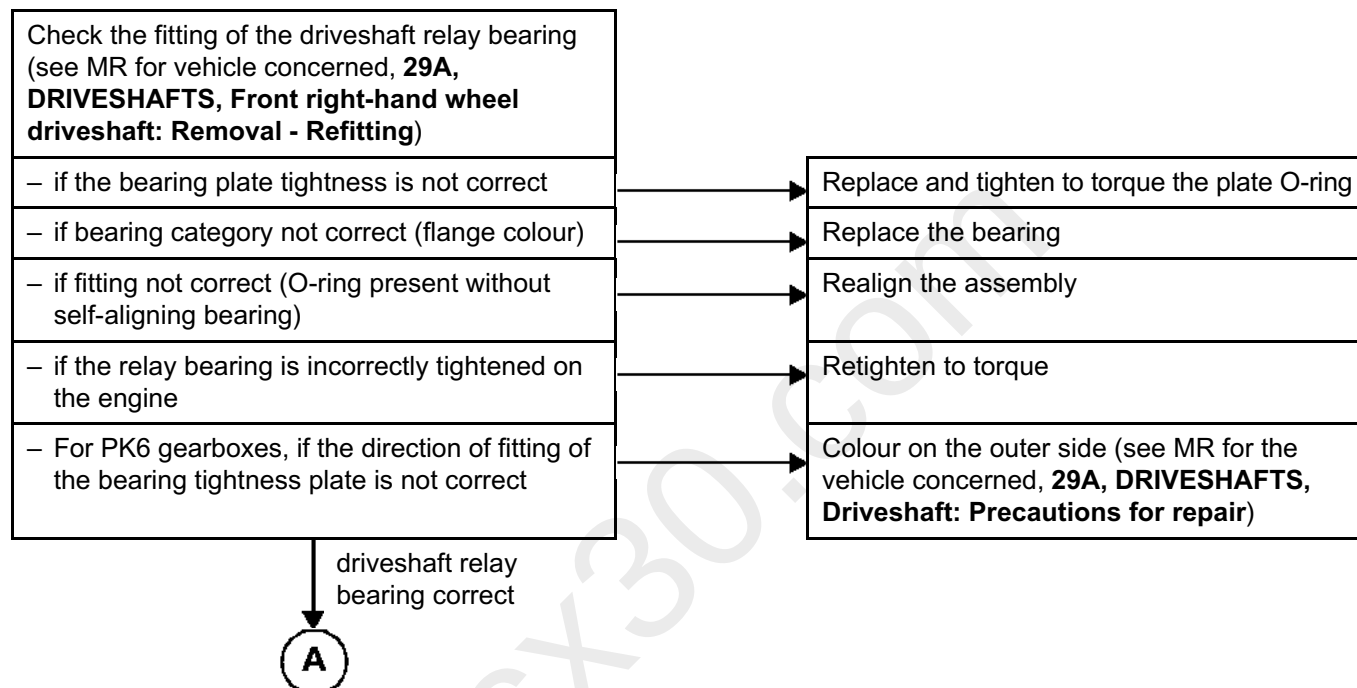
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ALP 14	Drive train murmuring
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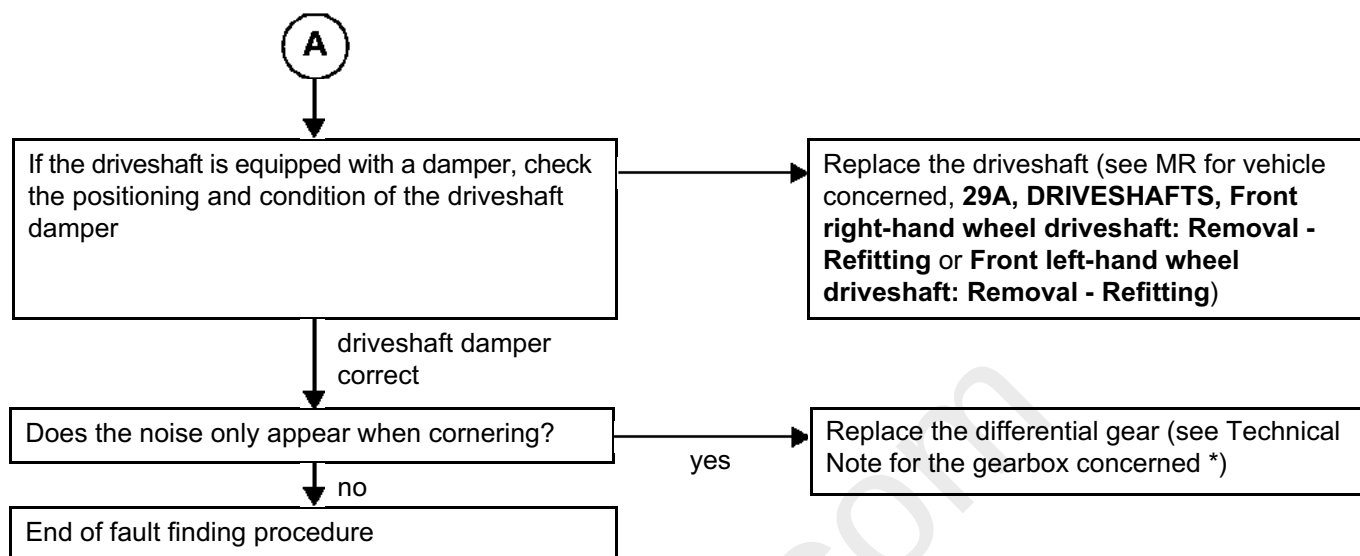


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ALP 14 CONTINUED	Drive train murmuring
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*	Gearbox	Technical Note No.
	PA6 - PK5 - PK6	Technical Note 6003A
	TL4	Technical Note 6019A
	ZF5 S 270 and ZF6 S 350	Technical Note 6016A
	PF6 - PK4	Technical Note 6021A
	JA3, JH1, JH3, JR5	Technical Note 6029A
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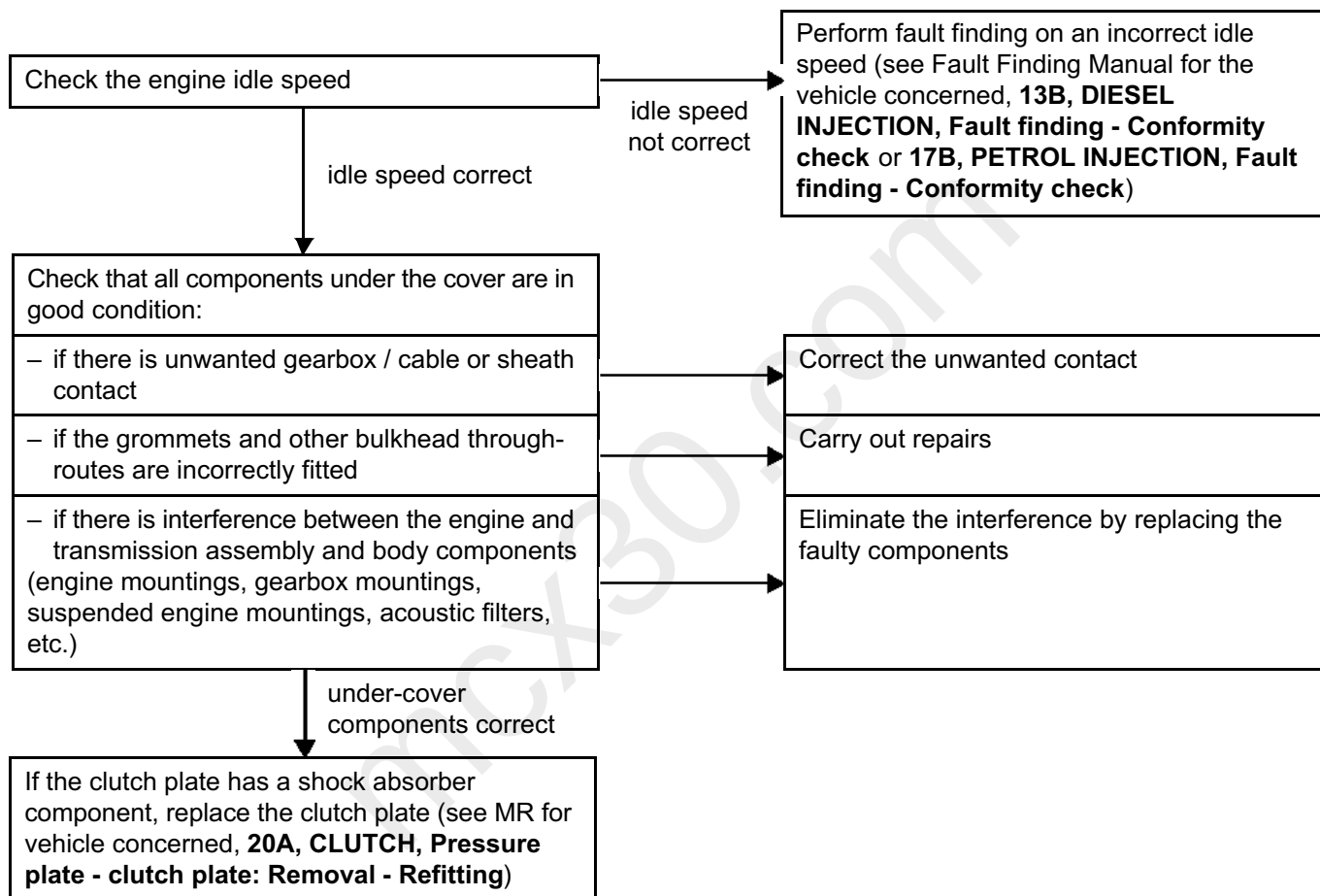
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ALP 15	Growling / noise in neutral (drive train)
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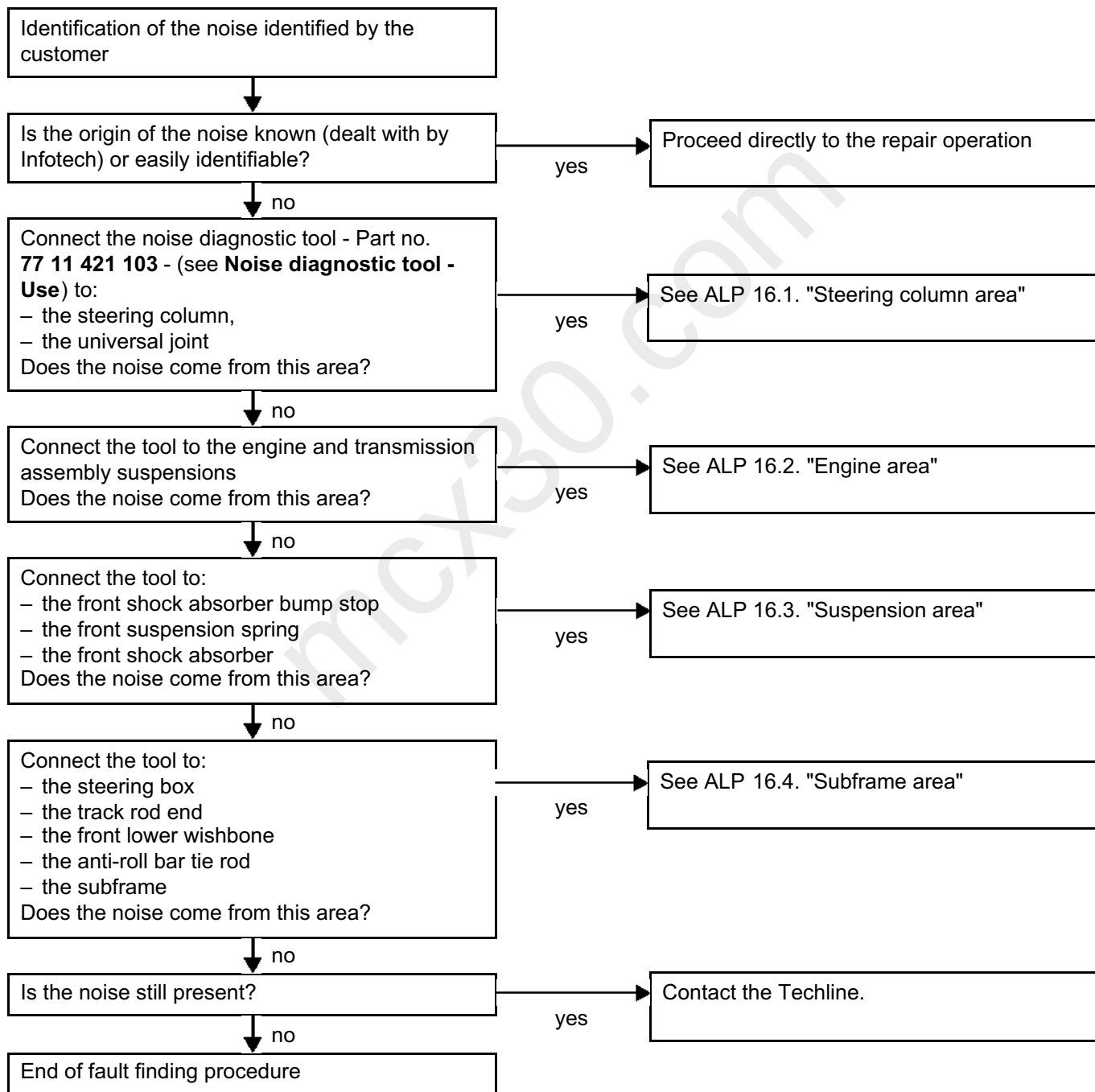
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ALP 16	Interference noise
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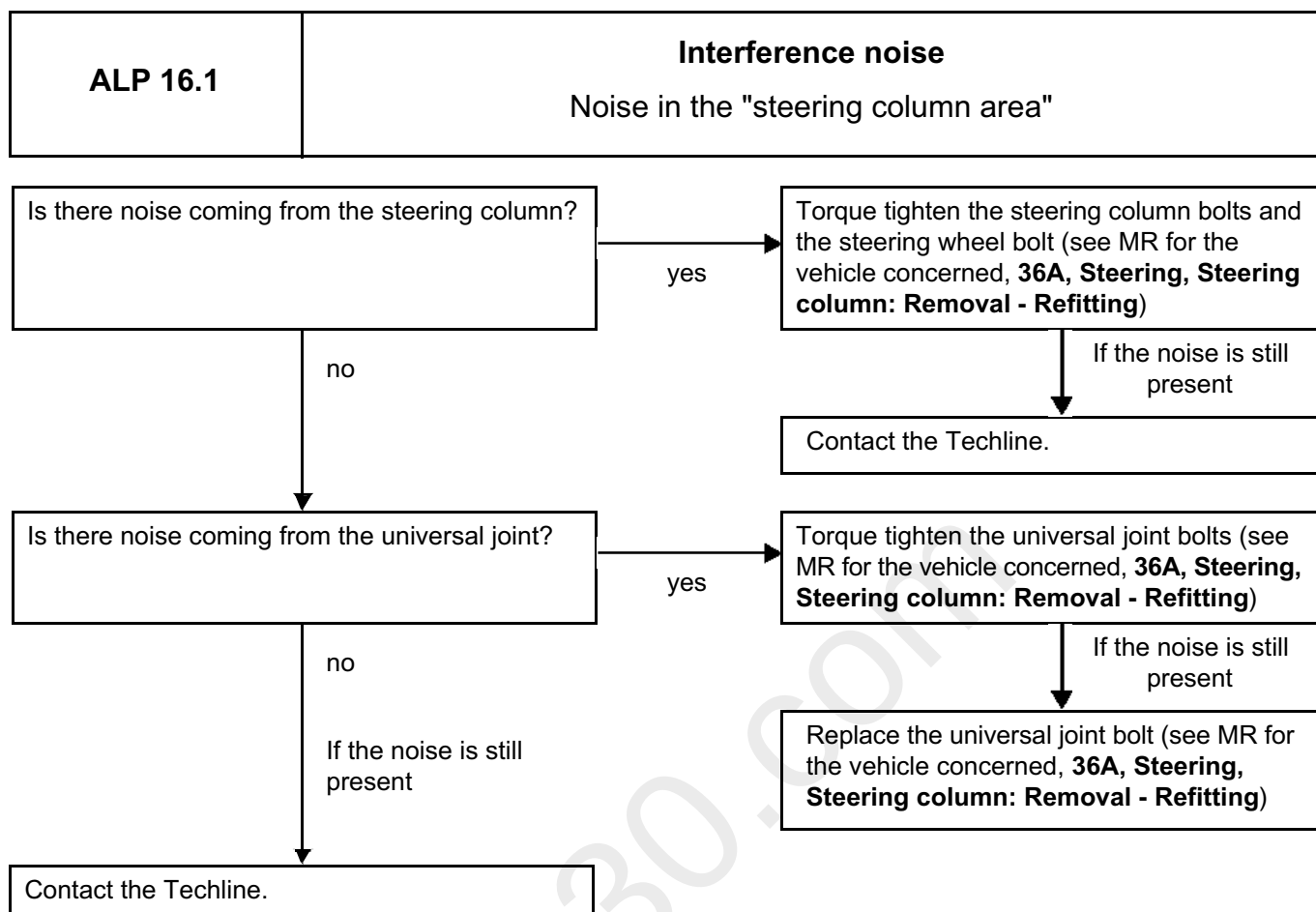
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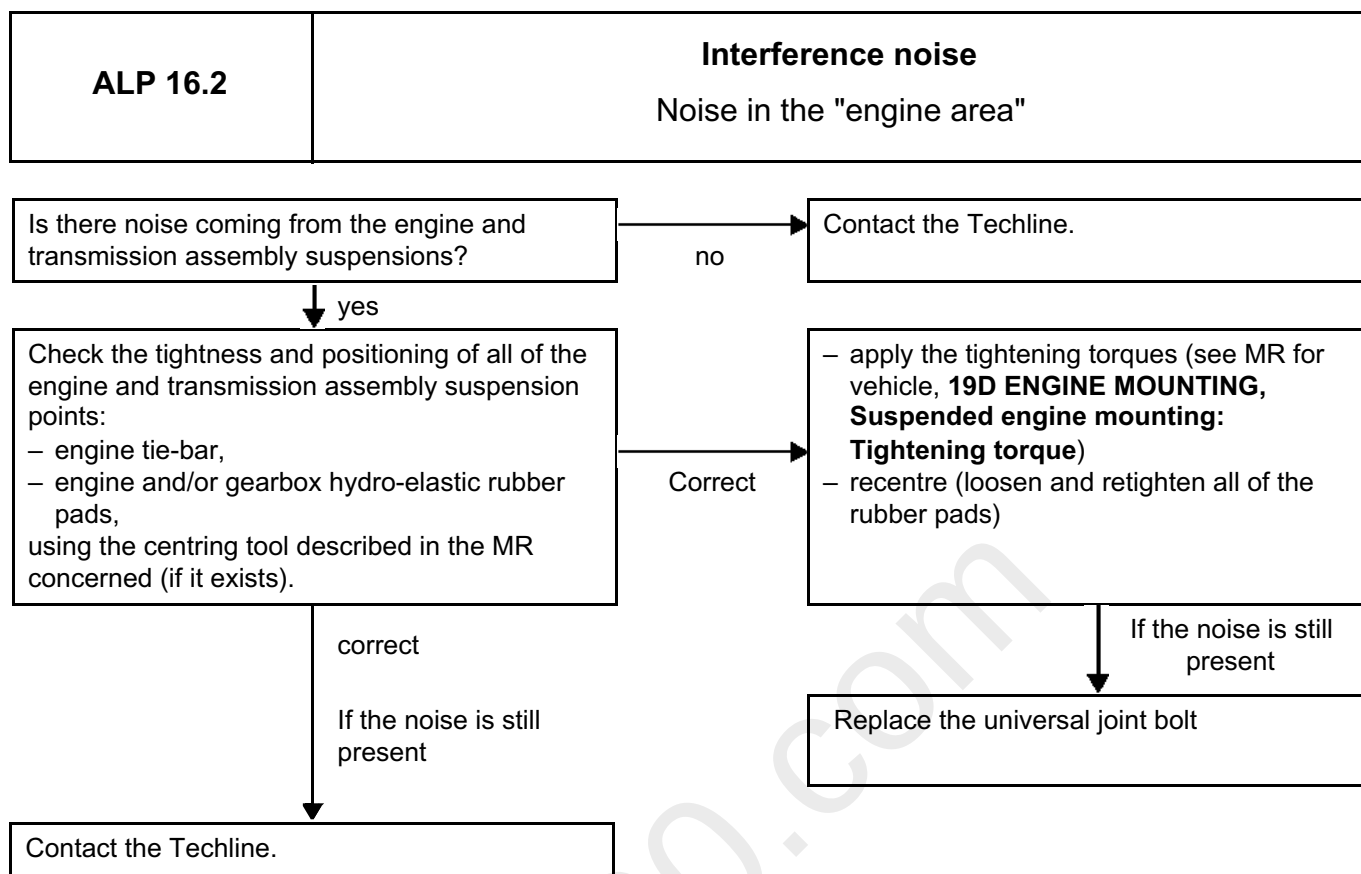
01E



FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

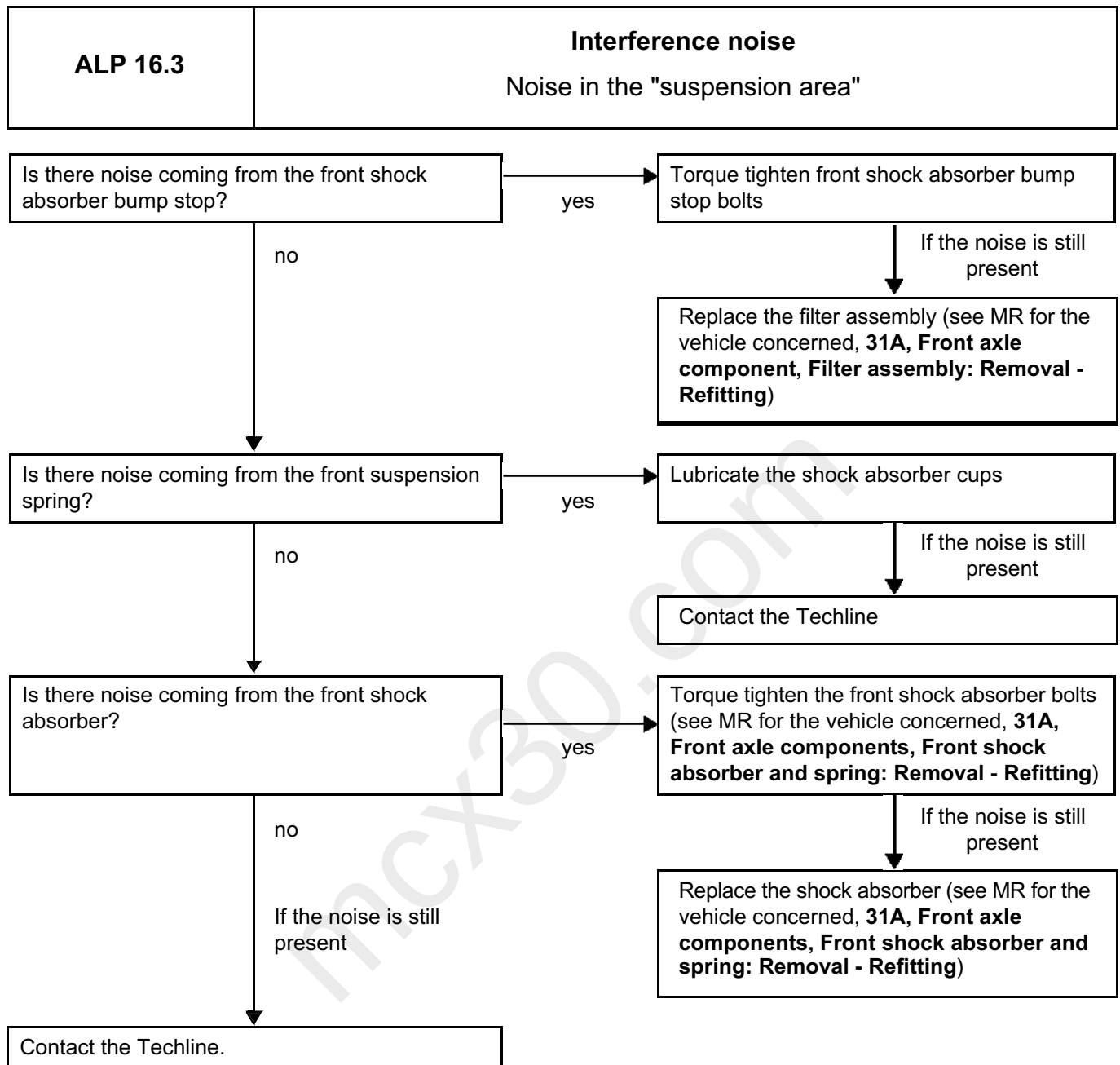
01E



FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

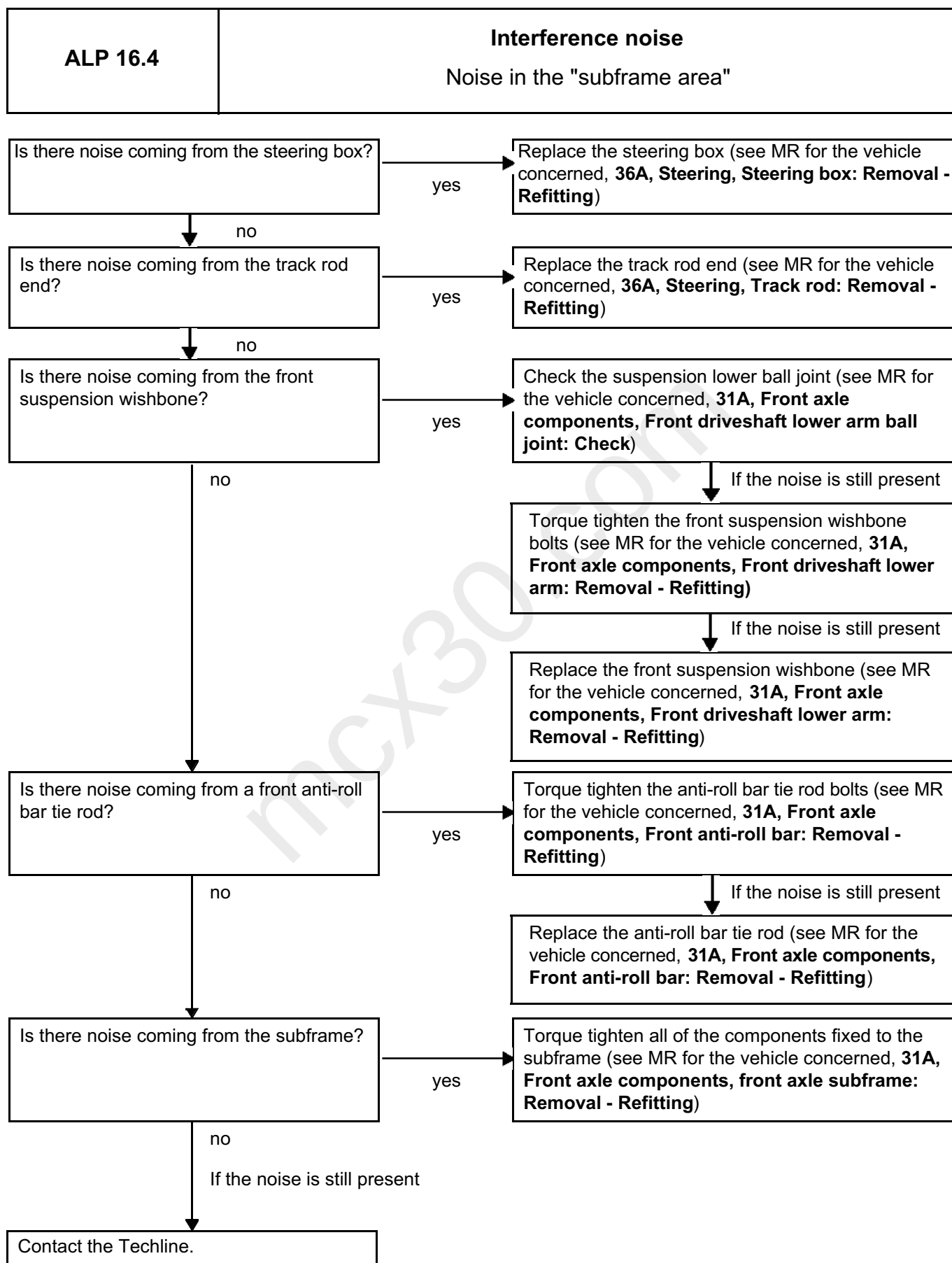
01E



FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E



FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 17	Crackling from the speakers
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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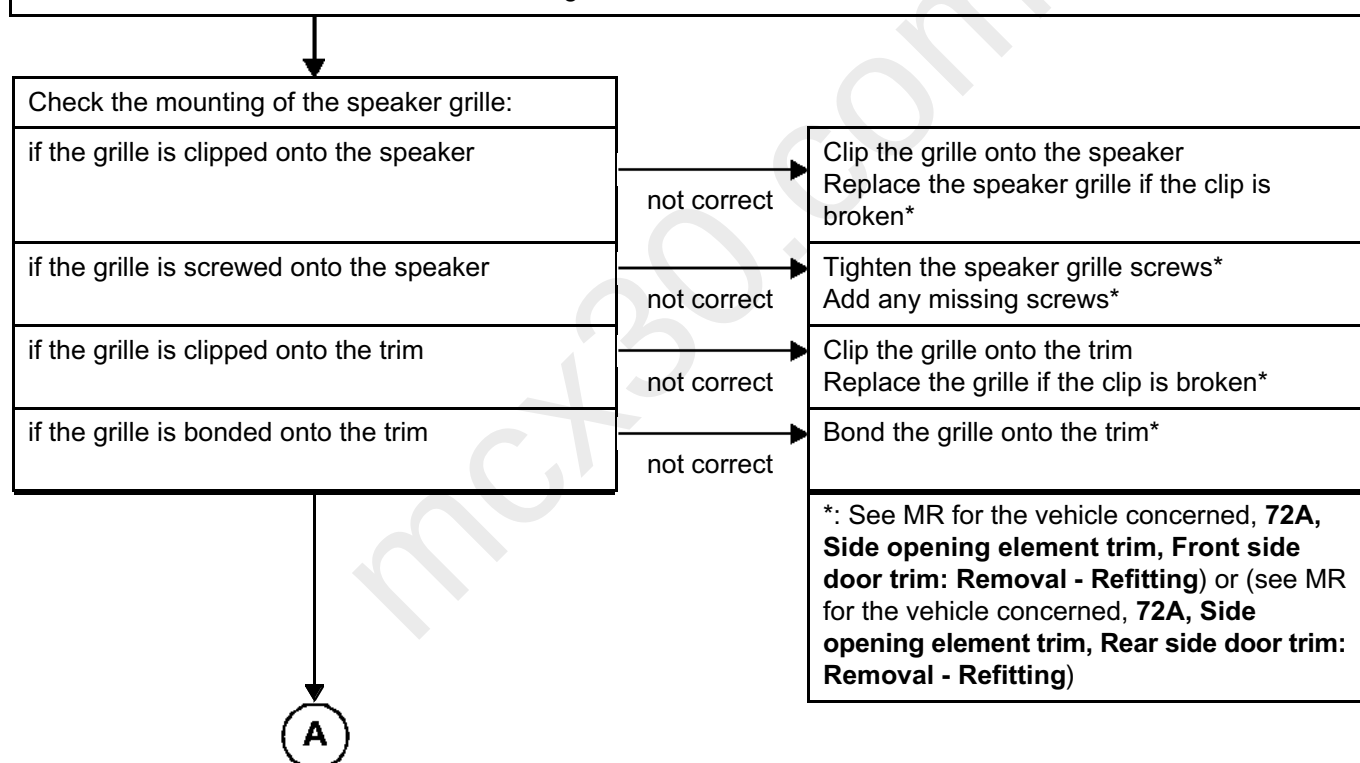
Ensure that there are no foreign bodies present in the passenger compartment.

Check that no parts are broken.

Switch on the sound system and adjust it as follows:

- volume slightly raised
- bass level set at MEDIUM
- treble level set at MEDIUM

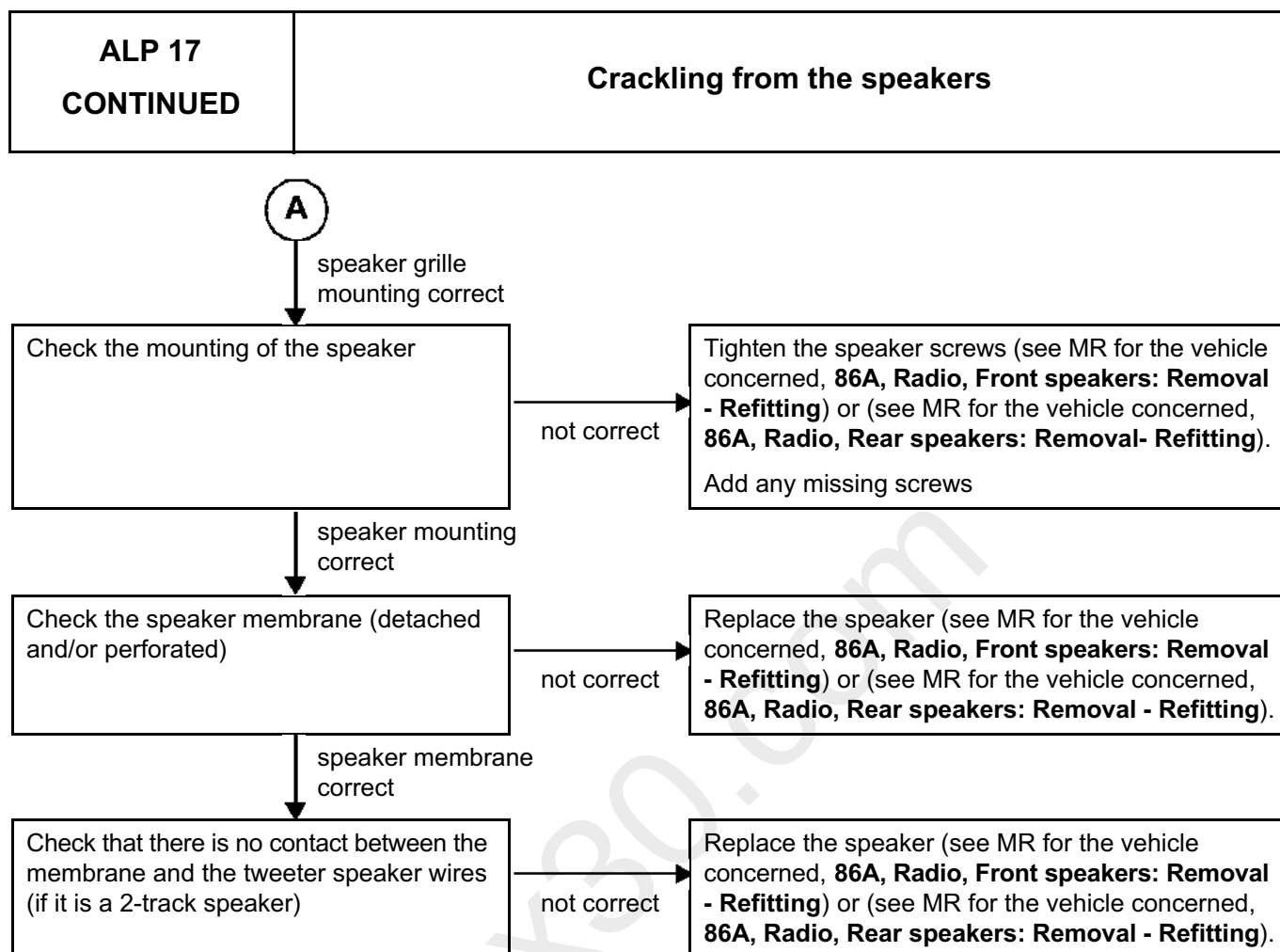
Insert a CD or audio cassette which has strong bass tones.



FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E



FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 18	Noise from the dashboard
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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Start by checking the following points:

● When stationary, engine not running.

- Empty all of the storage compartments in the dashboard and doors.
- Ensure that there are no foreign bodies present in the passenger compartment.
- Check that no parts are broken
- Test all of the storage compartment covers and flaps and air vent grilles (catches, hinges, play, etc.)
- Check all of the dashboard trims, visors and clipped front panels (tactile inspection that the parts are secure).
- Visually check for the presence of the bolts

? It is essential to replace all of the faulty components (fasteners, clips, air vent grilles).

● When stationary, engine running.

- Accelerate slightly to detect any vibration of the trims and front panels clipped onto the dashboard.
- Test the heating distribution at different speeds to detect any foreign bodies in the heating ducts (air vent vanes, dead leaves, etc.).

? It is essential to replace any faulty component (fasteners, clips, air vent grilles, etc.).

● Operational or road test in accordance with the customer complaint.

(Different speeds, cobbled surface, with or without ventilation or heating system, etc.).



When all of these checks have been carried out and the fault is still present, proceed to the following step

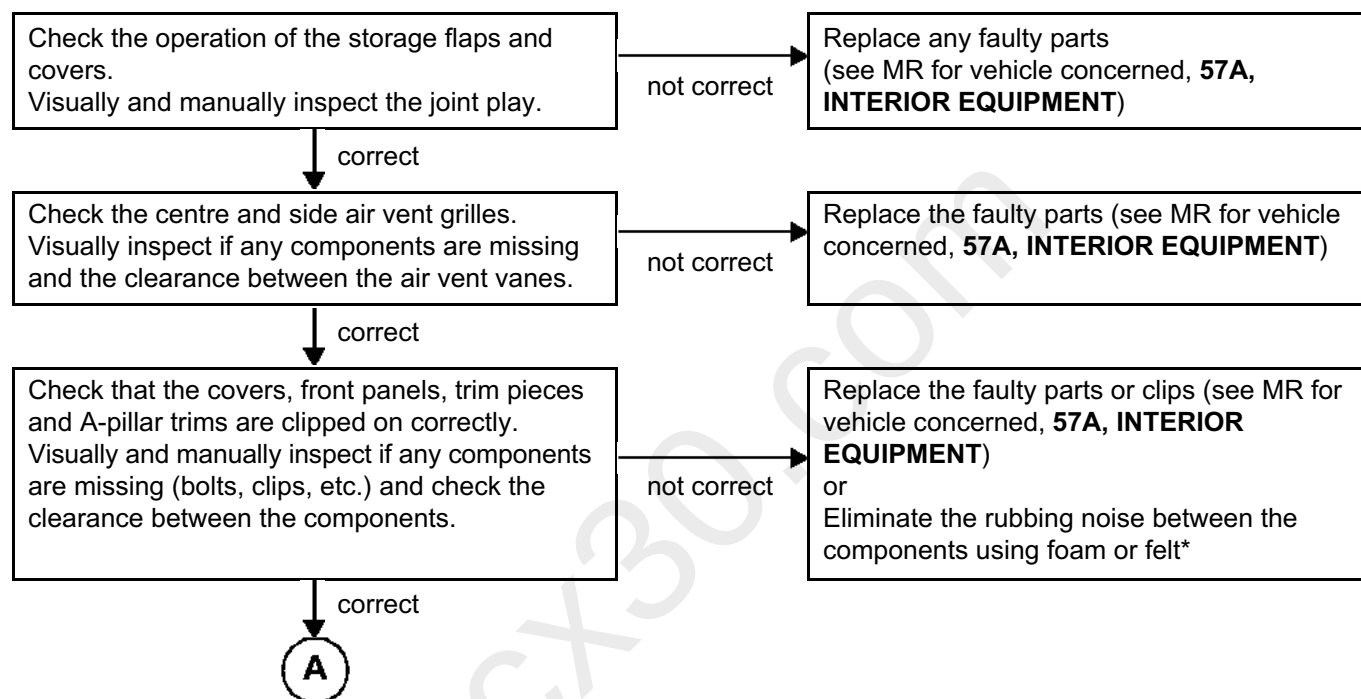
FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 18 CONTINUED 1	Noise from the dashboard
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Check that no parts are broken.
It is essential to consult the Repair Manual for the vehicle concerned in order to observe the safety advice and recommended tightening torques.
After each operation, carry out a vehicle test to check that the vehicle has been repaired.



- *adhesive foam: **77 05 042 163**
- *adhesive foam: **77 05 042 122**
- *adhesive felt: **82 00 281 967**

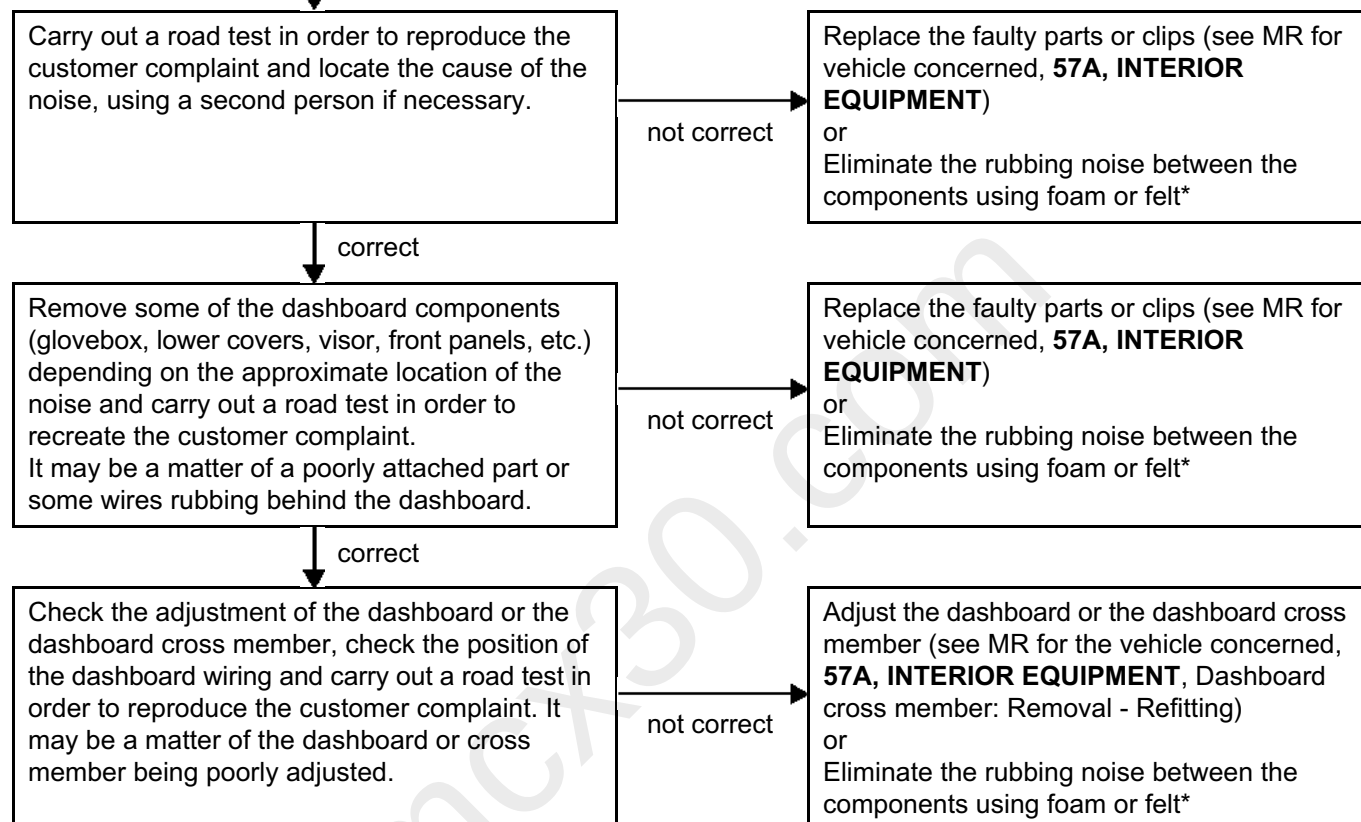
FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 18 CONTINUED 2	Noise from the dashboard
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A



- *adhesive foam: **77 05 042 163**
- *adhesive foam: **77 05 042 122**
- *adhesive felt: **82 00 281 967**

FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 18

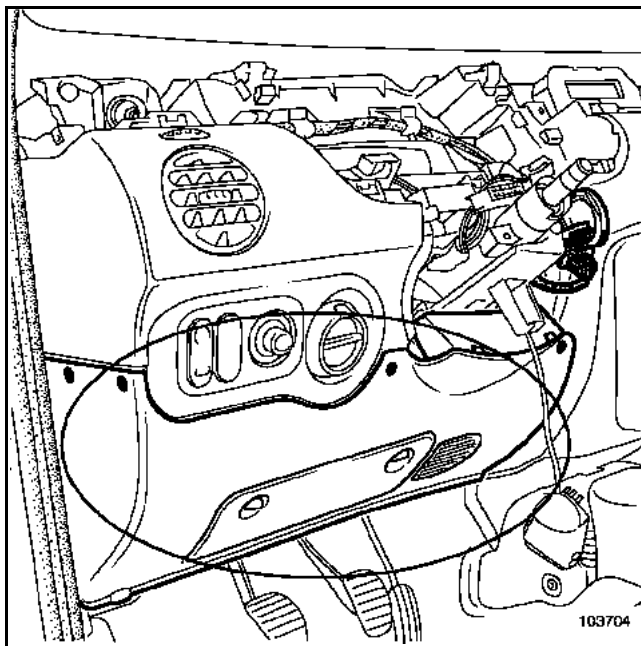
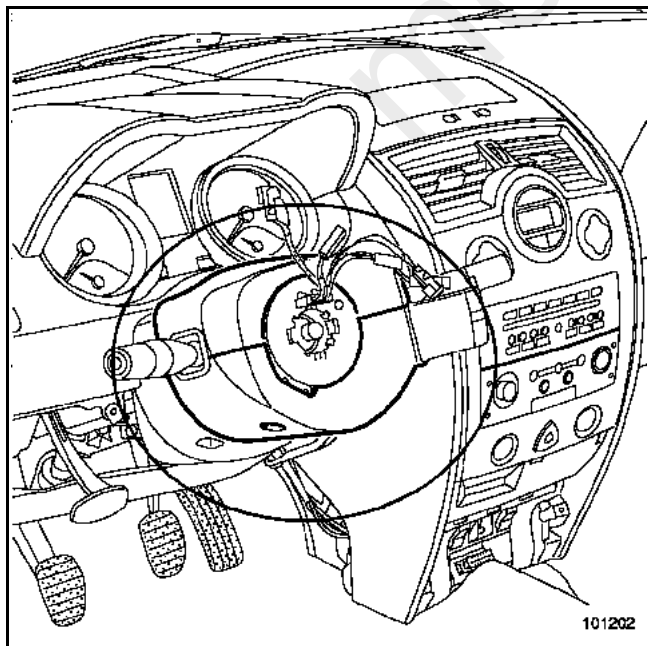
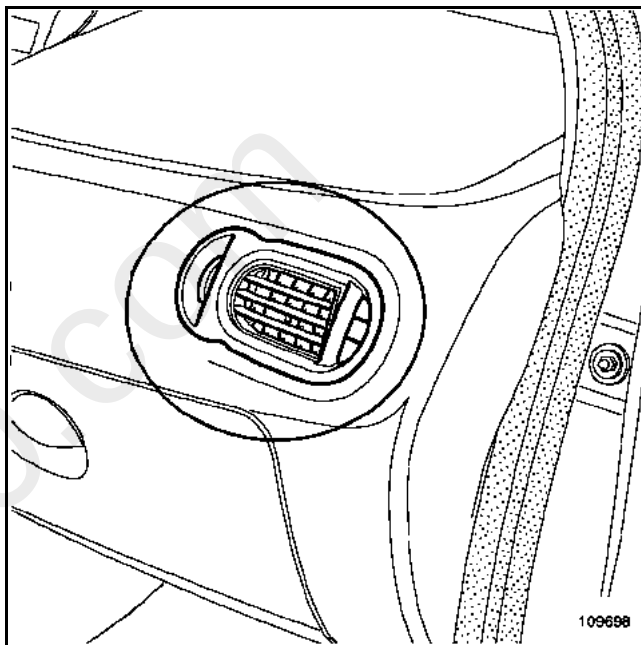
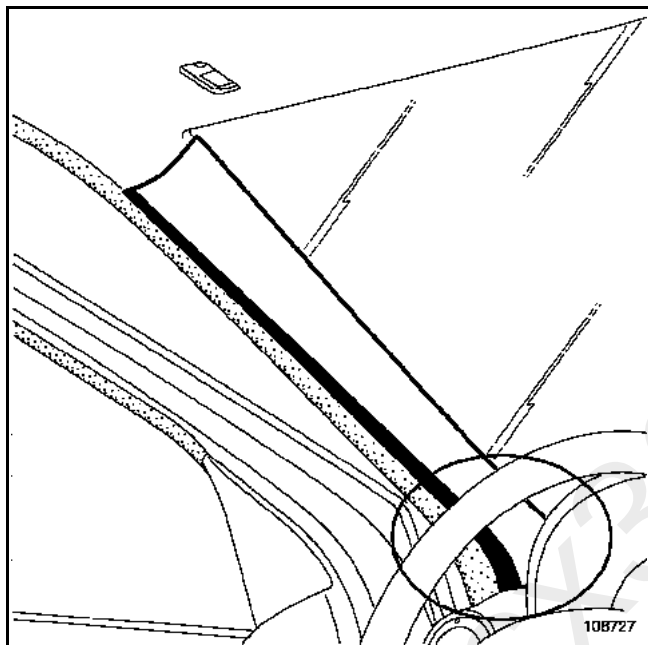
CONTINUED 3

Noise from the dashboard

IMPORTANT:

It is essential to consult the MR for the vehicles concerned in order to observe the safety advice related to airbag locking.

Any parts connected to the dashboard body, (clipped, fitted and screwed parts) could potentially create noise (see parts below).



FAULT FINDING INTRODUCTION

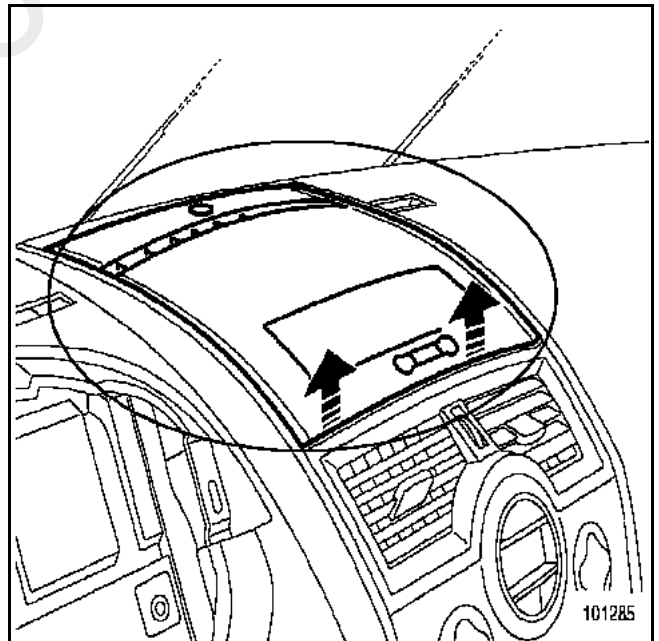
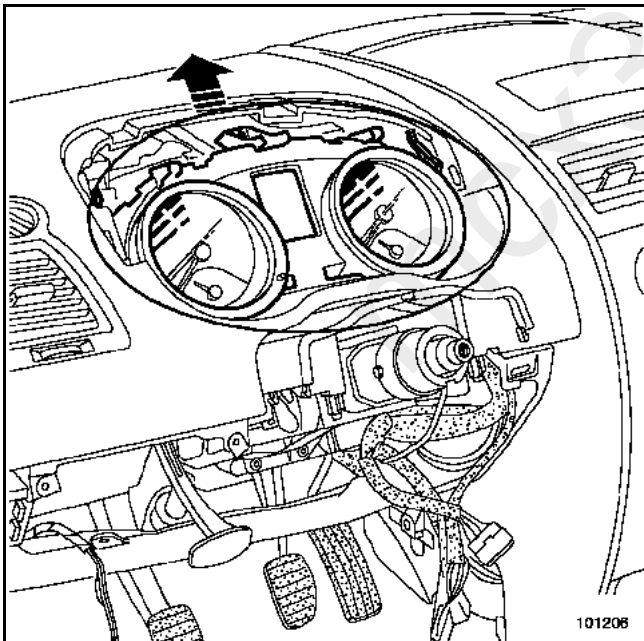
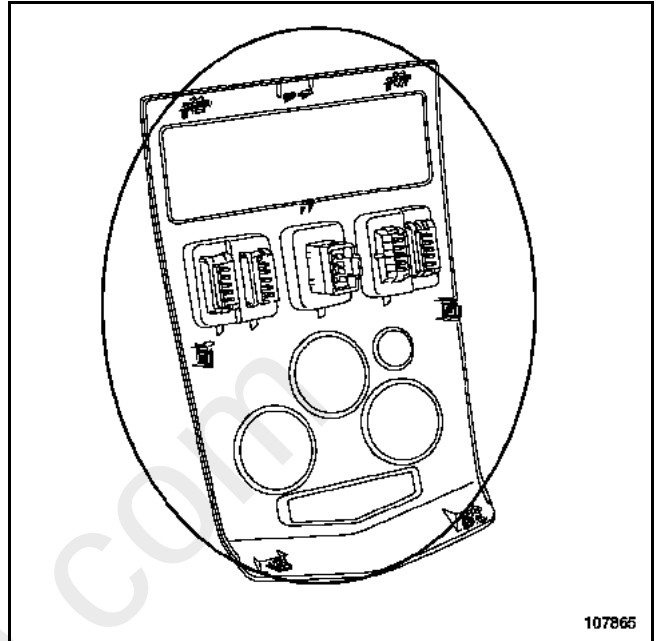
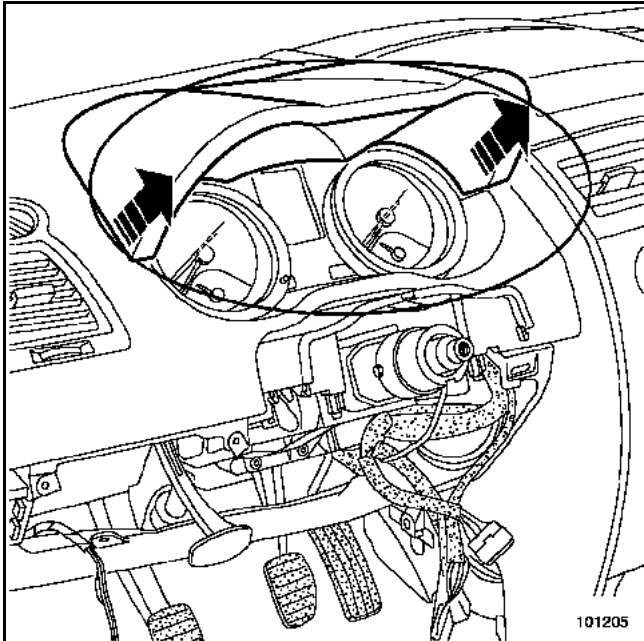
Fault finding – Fault Finding Chart

01E

ALP 18

CONTINUED 4

Noise from the dashboard



FAULT FINDING INTRODUCTION

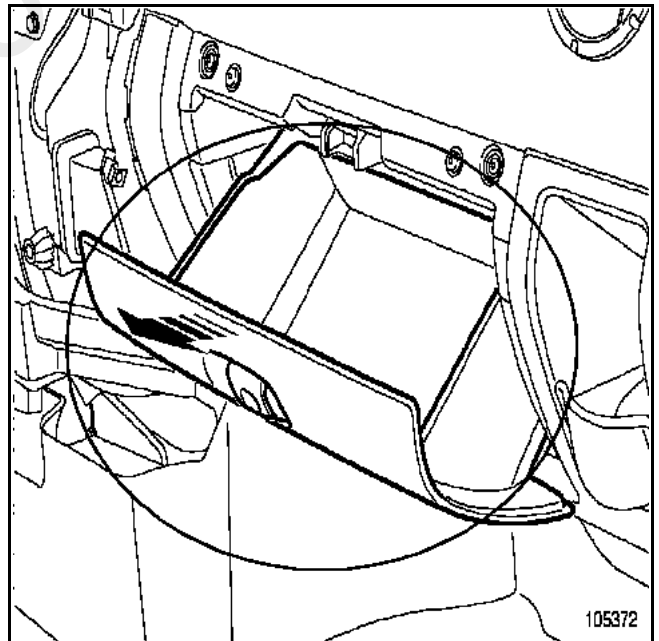
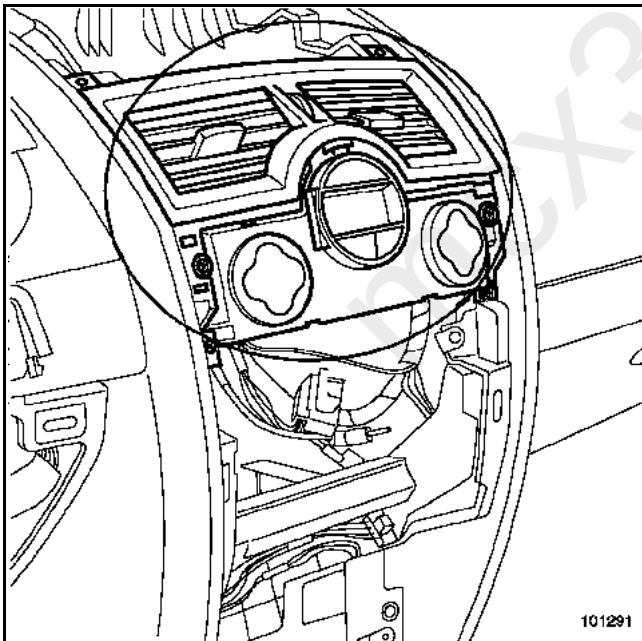
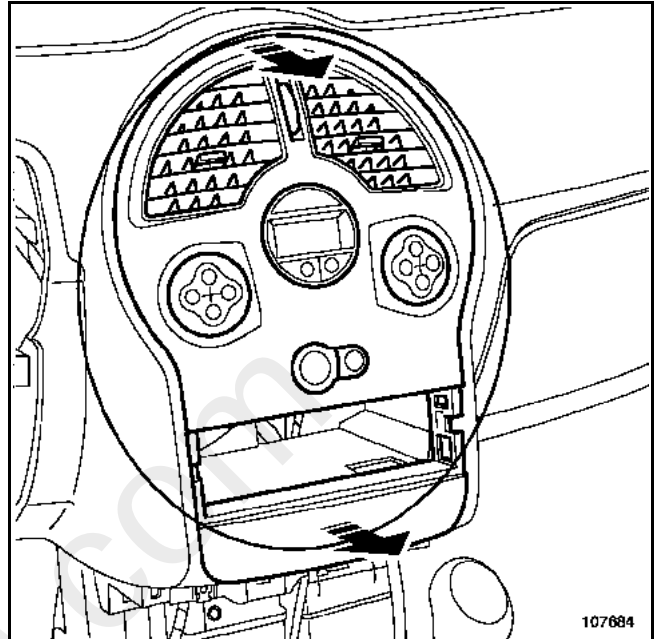
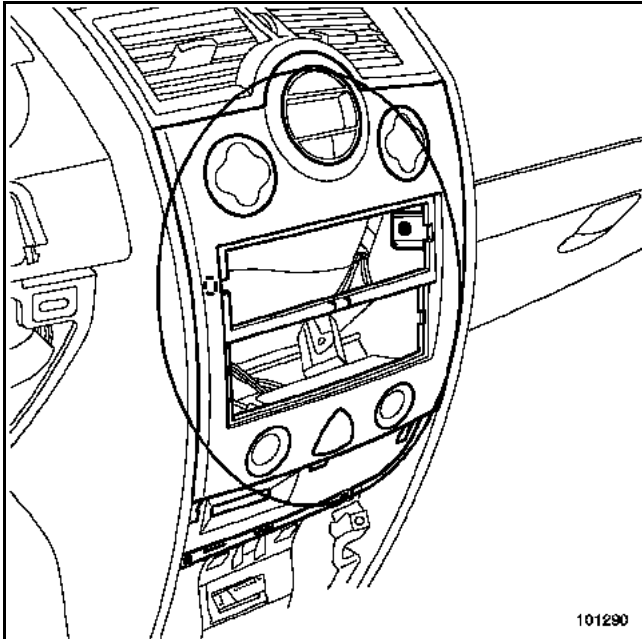
Fault finding – Fault Finding Chart

01E

ALP 18

CONTINUED 5

Noise from the dashboard



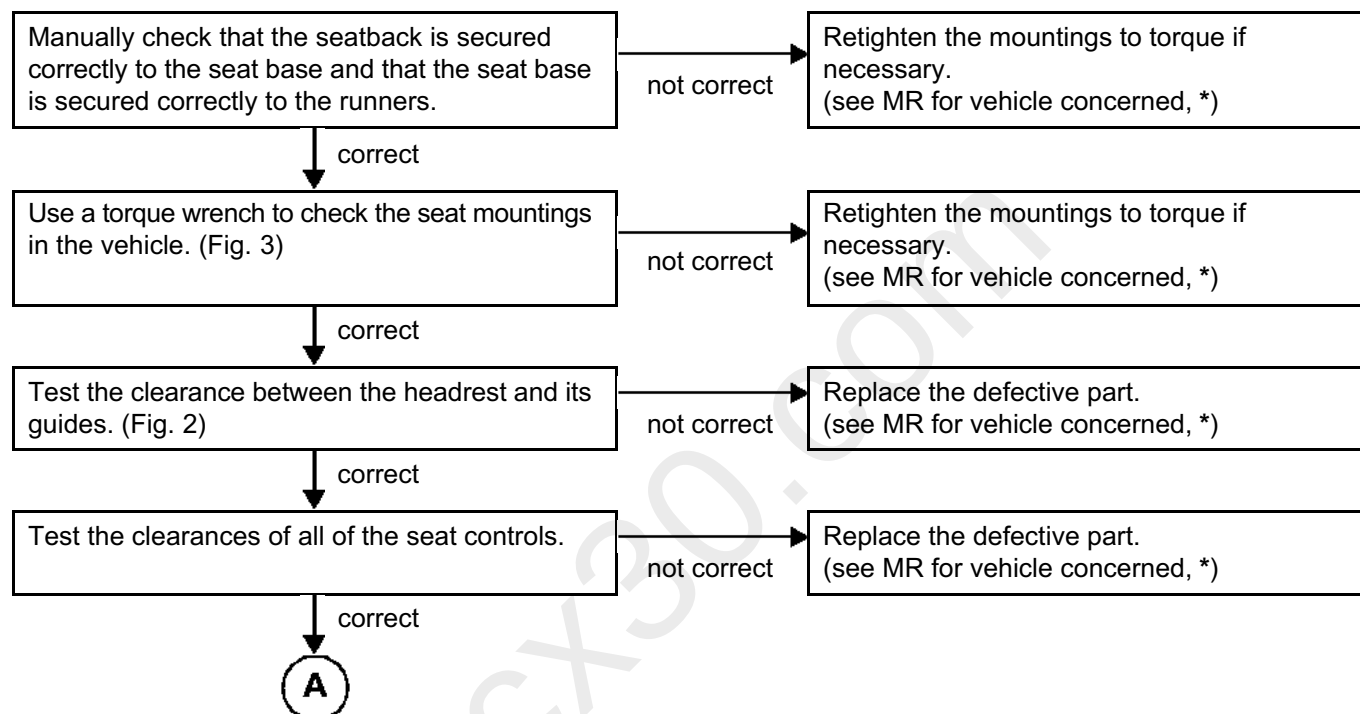
FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 19	Noise from the upholstery
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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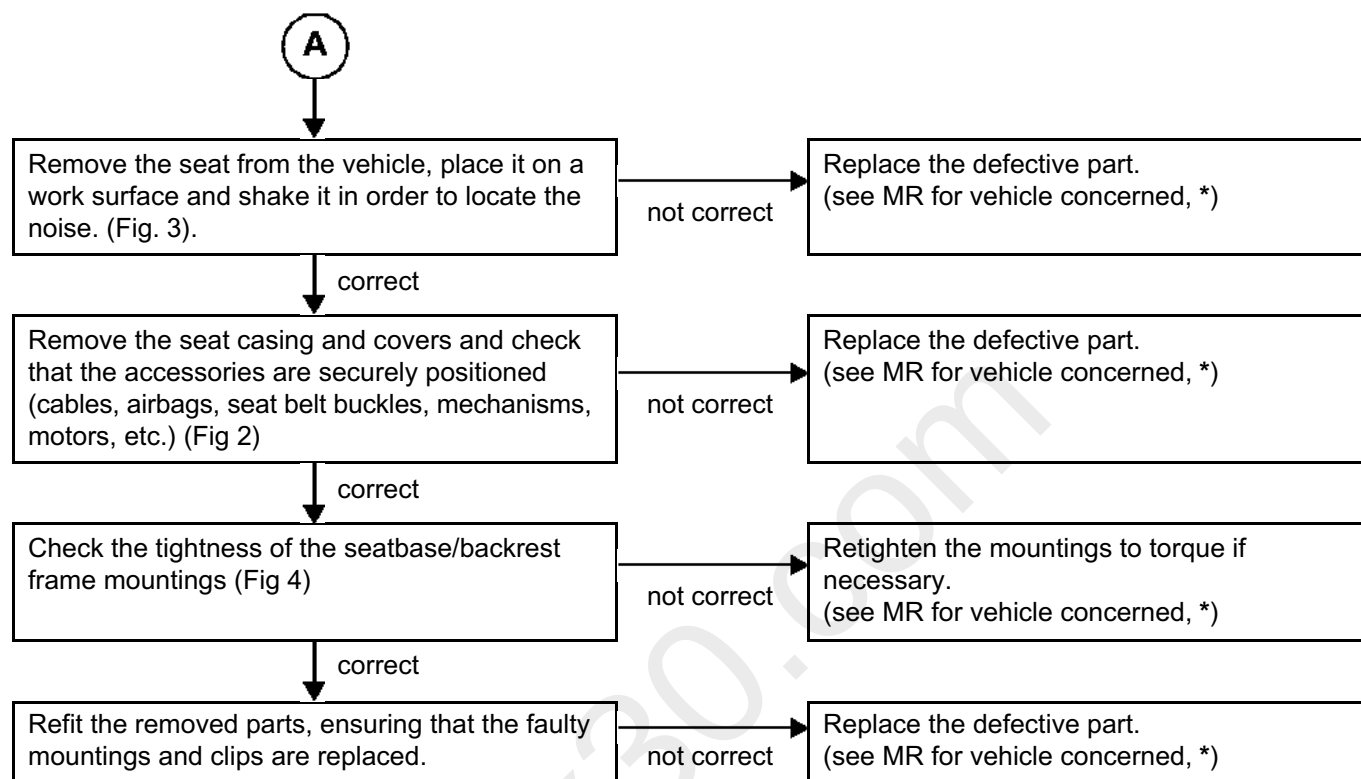
*
 75A, FRONT SEAT FRAMES AND RUNNERS
 76A, REAR SEAT FRAMES AND RUNNERS
 77A, FRONT SEAT TRIMS
 78A, REAR SEAT TRIMS

FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 19 CONTINUED 1	Noise from the upholstery
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*
75A, FRONT SEAT FRAMES AND RUNNERS
76A, REAR SEAT FRAMES AND RUNNERS
77A, FRONT SEAT TRIMS
78A, REAR SEAT TRIMS

FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

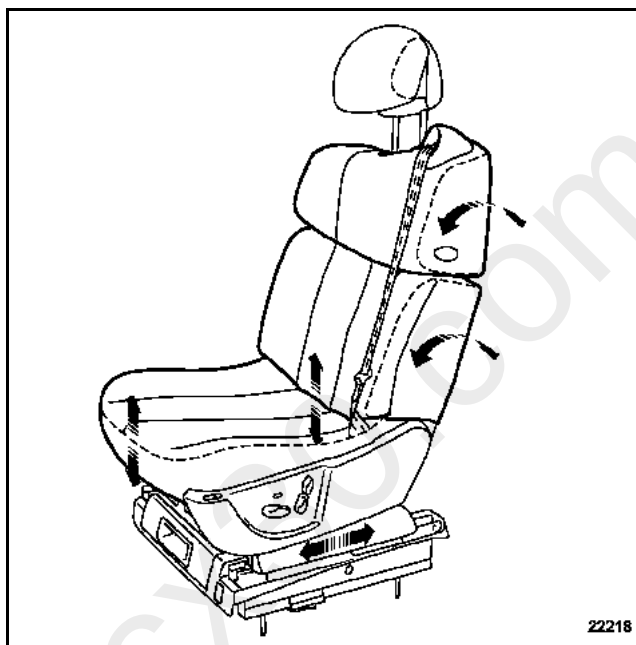
01E

ALP 19 CONTINUED 2	Noise from the upholstery
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Notes: before reading the ALP.

Fig. 1

Carry out an operational test on the seat

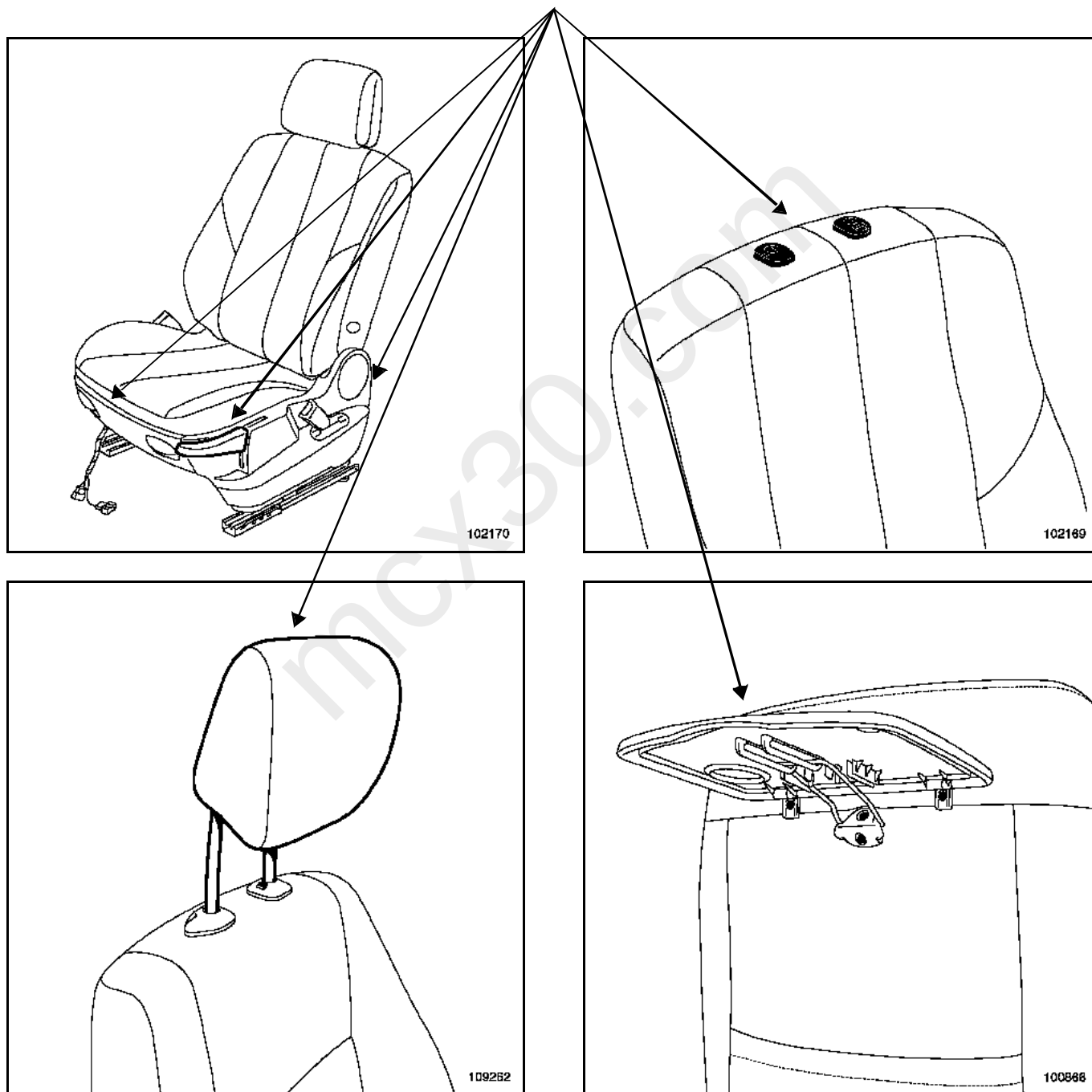


ALP 19
CONTINUED 3

Noise from the upholstery

Fig. 2

Check the resistance and mountings of the casings, control levers, headrest and guides, rear parcel shelf, etc.

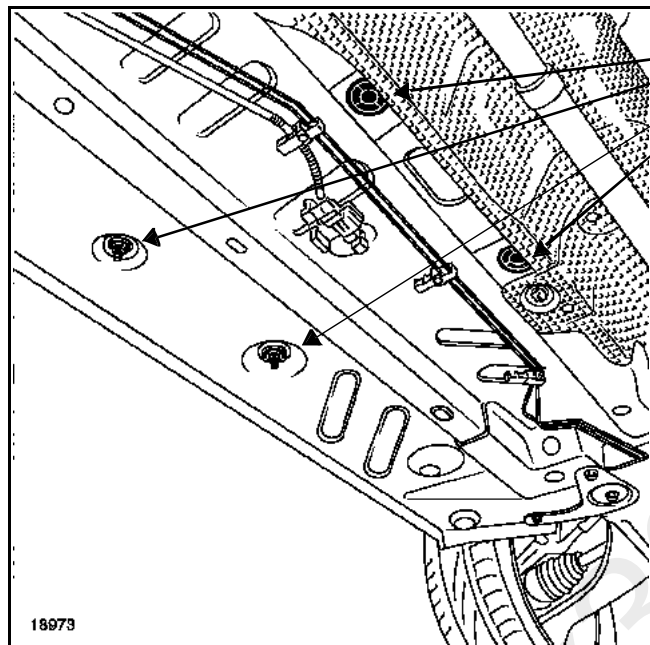


ALP 19
CONTINUED 4

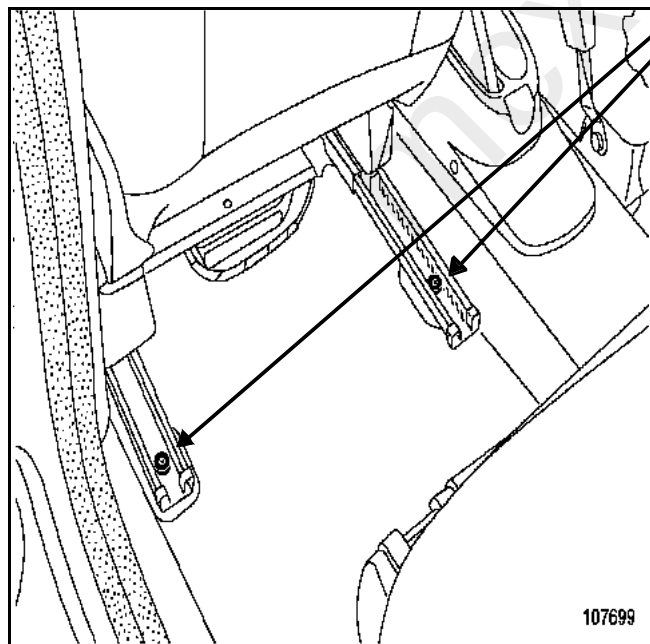
Noise from the upholstery

Fig. 3

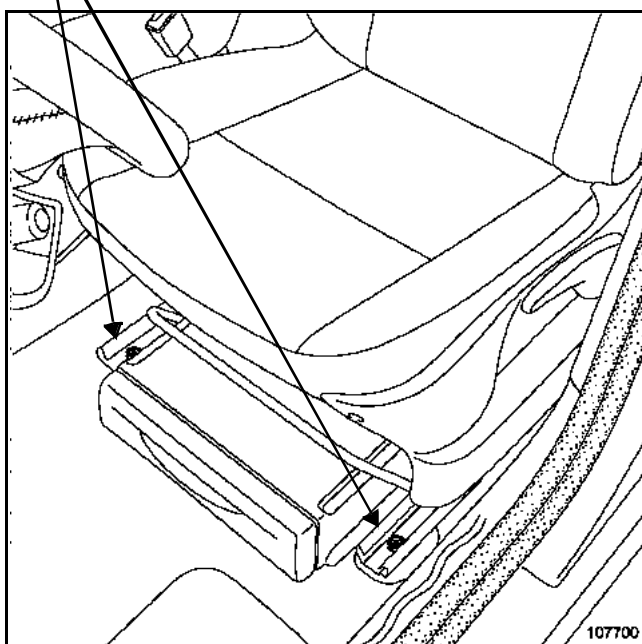
A seat can either be removed from underneath the vehicle or from the vehicle interior:



Mountings underneath the vehicle



Mountings inside the vehicle



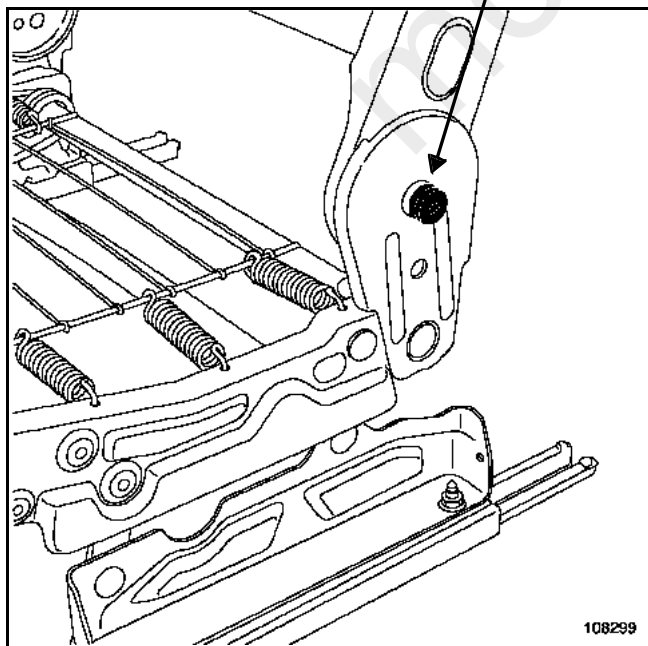
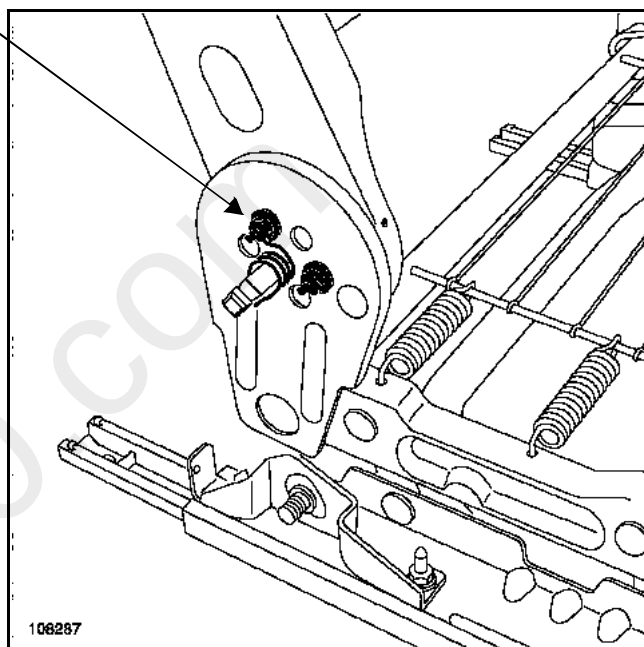
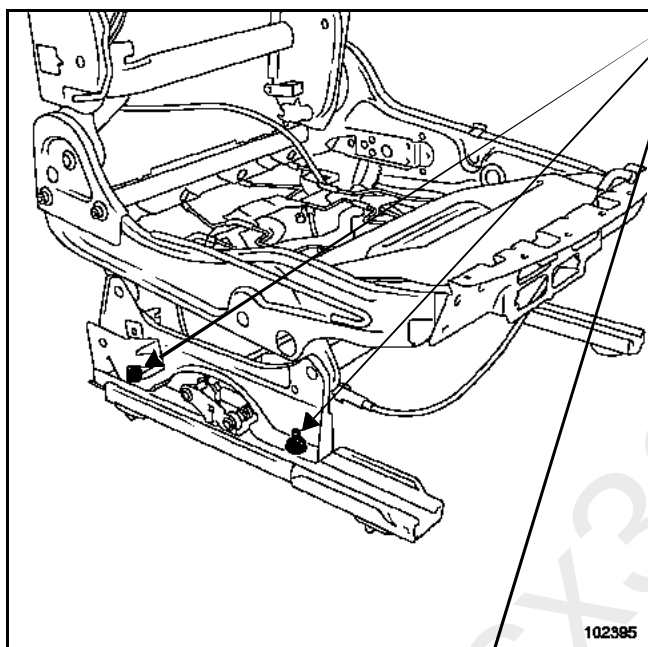
ALP 19
CONTINUED 5

Noise from the upholstery

Fig. 4

The frame mountings to be checked include:

Seat base/backrest frame mountings and runners/seat base mountings



Consult the MR in order to respect the recommended tightening torques.

FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 20	Noise when window is operated (squeaking/creaking)
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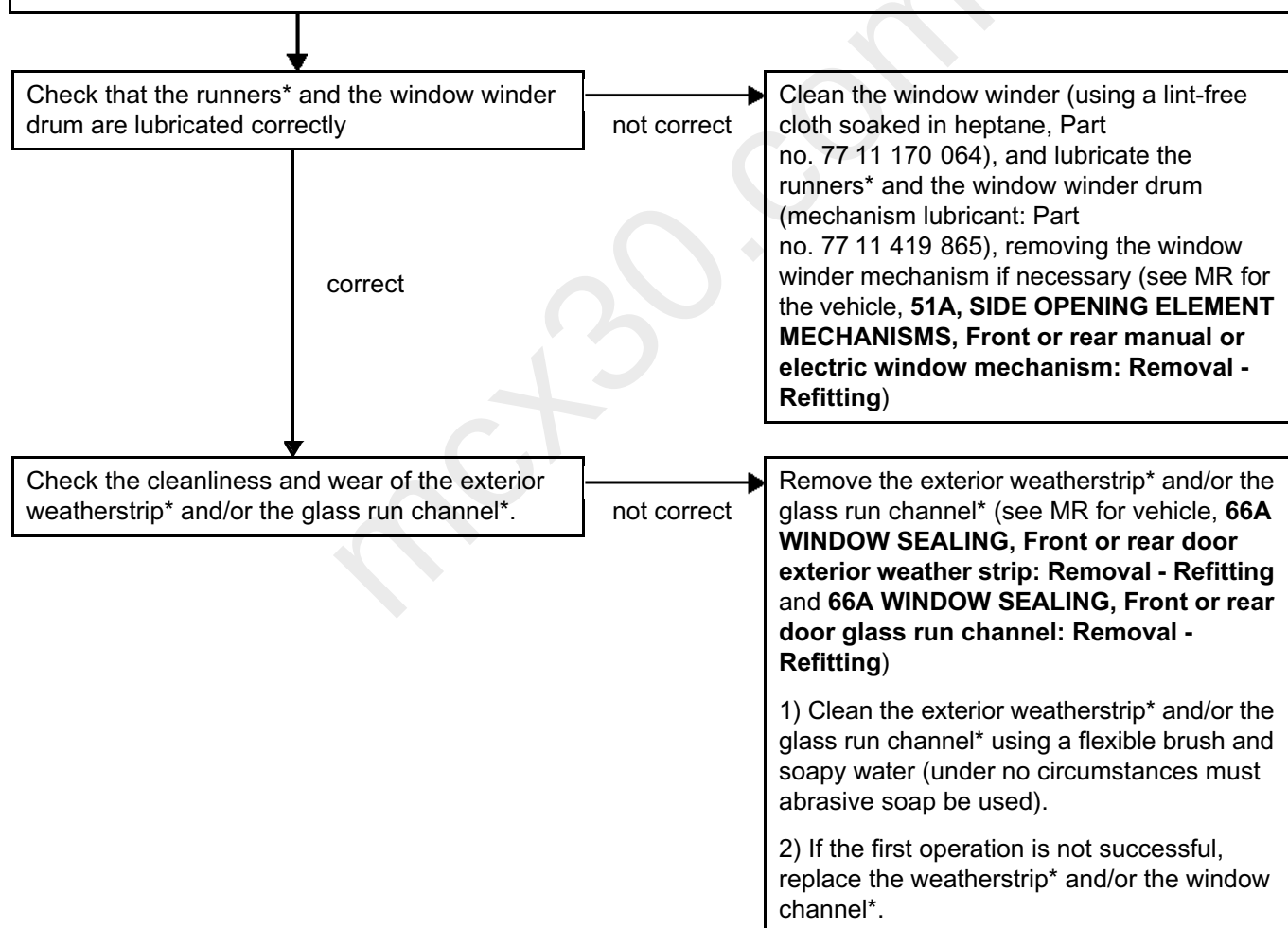
NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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Consult the ICM database and check the conformity of the vehicle.

Visually inspect the vehicle:

- exterior cleanliness,
- no foreign bodies present
- no parts are loose, damaged or broken.

After the operation, check that the operation was successful by performing an operational test or road test.



*: see the illustrations on the following page

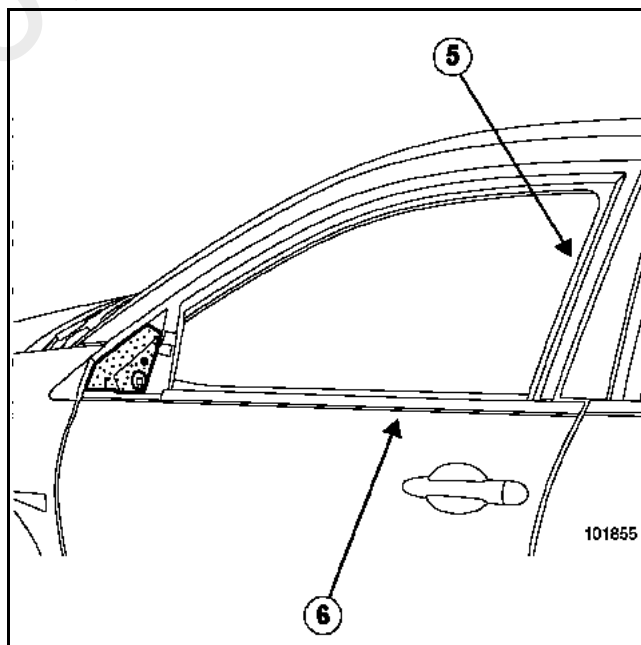
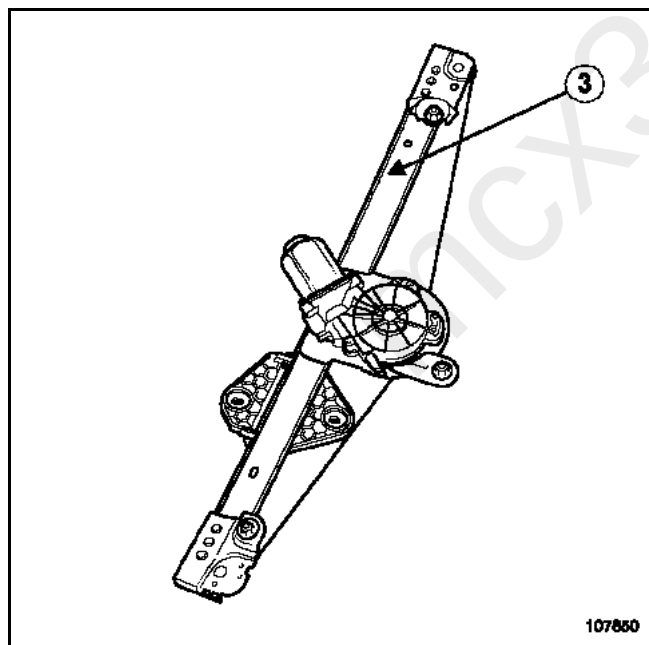
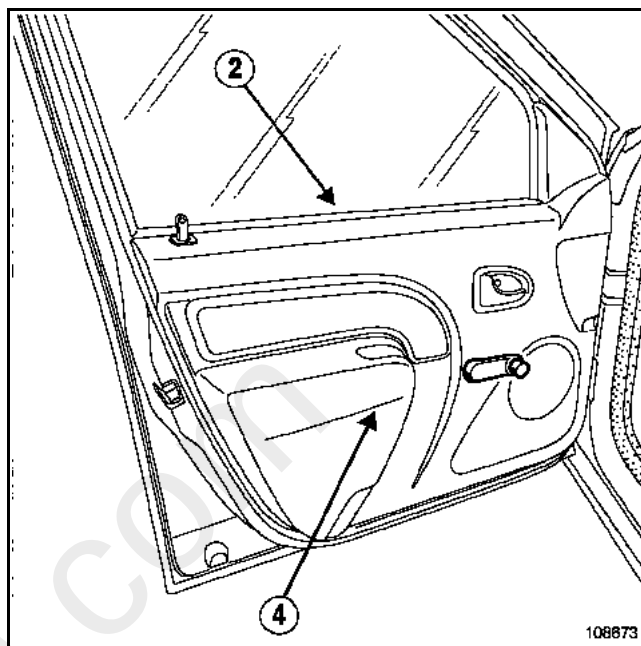
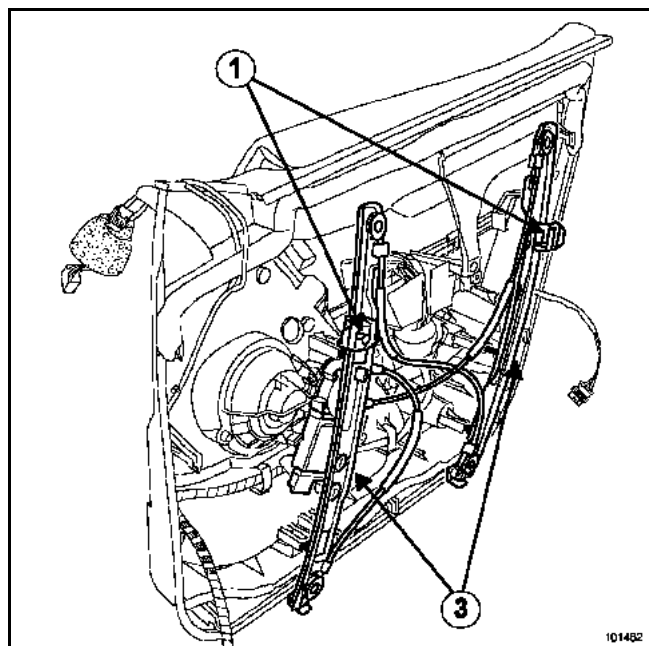
FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 20
CONTINUED

Noise when window is operated (squeaking/creaking)



- 1 Window winder sliders
- 2 Interior weatherstrip
- 3 Window winder mechanism runners

- 4 Interior door trim
- 5 Glass run channel
- 6 Exterior weatherstrip

FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 21	Noise when window is operated (scratching)
--------	--

NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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Consult the ICM database and check the conformity of the vehicle.

Visually inspect the vehicle:

- exterior cleanliness,
- no foreign bodies present
- no parts are loose, damaged or broken.

After the operation, check that the operation was successful by performing an operational test or road test.



Check that the internal section of the slide* is not damaged.

not correct

- 1) Use the CAR 1363 special tool to realign the damaged section.
- 2) If the first operation is not successful, replace the glass run channel*. (see MR for the vehicle, **66A WINDOW SEALING, Front or rear door glass run channel: Removal - Refitting**)

*: see illustrations in ALP: Noise when window is operated (squeaking / creaking)

FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 22	Noise from the window when closing the door (rattling)
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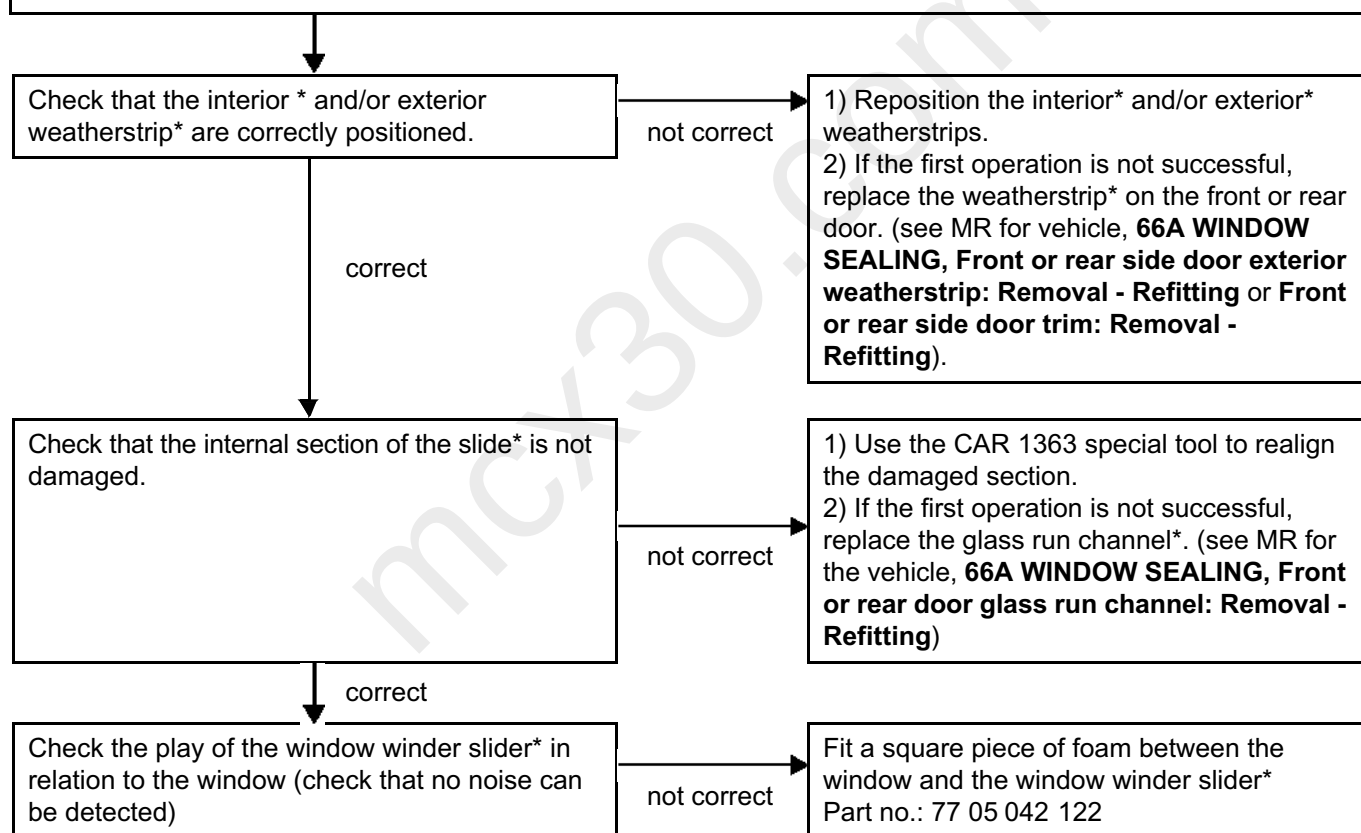
NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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Consult the ICM database and check the conformity of the vehicle.

Visually inspect the vehicle:

- exterior cleanliness,
- no foreign bodies present
- no parts are loose, damaged or broken.

After the operation, check that the operation was successful by performing an operational test or road test.



*: see illustrations in ALP: Noise when window is operated (squeaking / creaking)

FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 23	Sunroof chattering: jerky movement when opening/closing sunroof mobile panel
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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Consult the ICM database and check the conformity of the vehicle.

Check the tyre pressures.

Visually inspect the vehicle:

- exterior cleanliness,
- no foreign bodies in the sunroof side runners,
- no parts are broken.

After the operation, check that the operation was successful by performing an operational test or road test.

Check the operation of the mobile panel* by initialising the sunroof motor, with the vehicle's engine running (see fault finding MR for vehicle, **87D ELECTRIC WINDOW - SUNROOF, Electric sunroof: Initialisation**)

correct

Check the cleanliness of the side runners*

not correct

Clean the internal and external side runners* and, depending on the vehicle, only lubricate the internal side runners* or the external side runners* without removing the sunroof mobile panel (see MR for the vehicle, **52A NON-SIDE OPENING ELEMENT MECHANISMS, Sunroof mobile panel: Removal - Refitting**)

correct

Check the condition of the mobile panel linkages*

not correct

Remove the mobile panel* and replace the runners and/or the mobile panel linkages. (see MR for vehicle, **52A NON-SIDE OPENING ELEMENT MECHANISMS, Sunroof mobile panel: Removal - Refitting**)

correct

Check that the mobile panel* slides correctly (no jerky movement)

not correct

Replace the sunroof* motor. (see MR for vehicle, **52A NON-SIDE OPENING ELEMENT MECHANISMS, or 87D ELECTRIC WINDOWS - SUNROOF, Sunroof opening motor: Removal - Refitting**)

correct

Check the conformity of the sunroof* (damaged runners, operating mechanism, etc.)

not correct

Replace the sunroof*. (see MR for vehicle, **52A NON-SIDE OPENING ELEMENT MECHANISMS, Sunroof operating mechanism: Removal - Refitting**).

*: see the illustrations on the following page

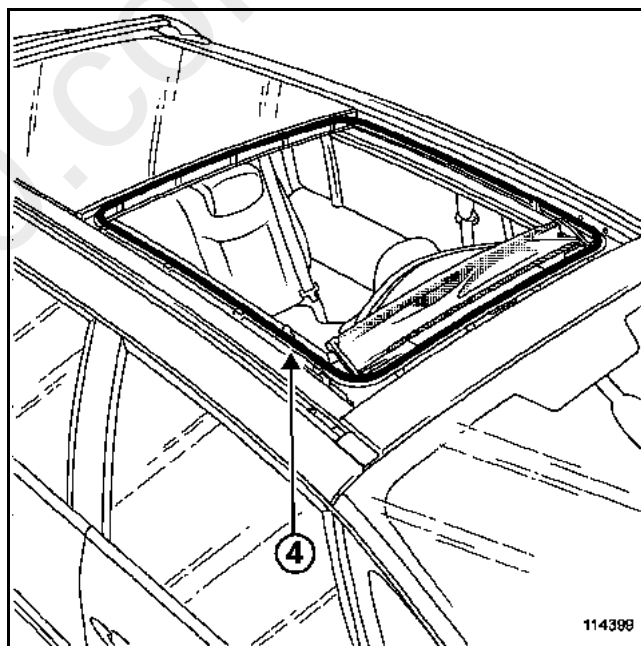
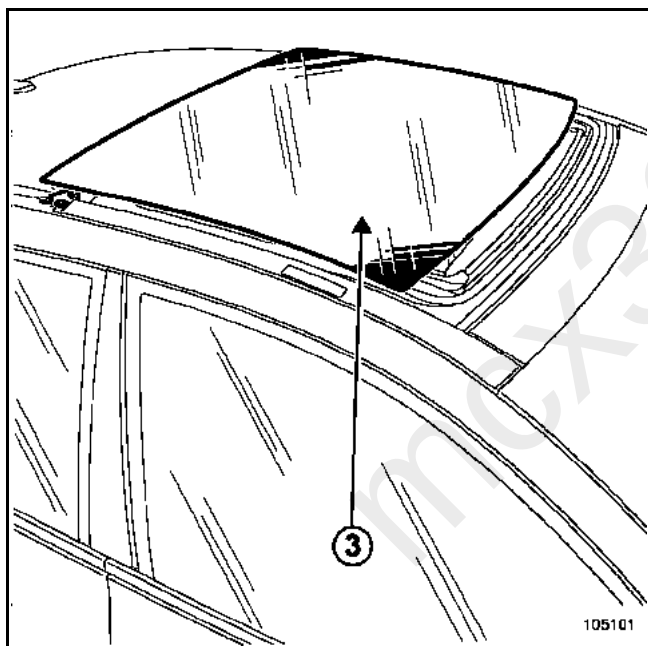
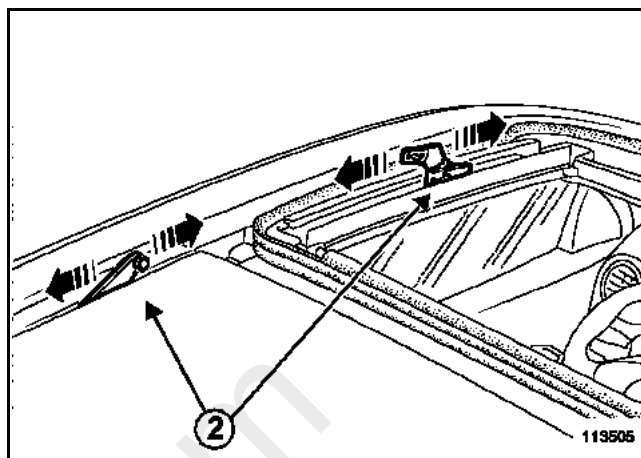
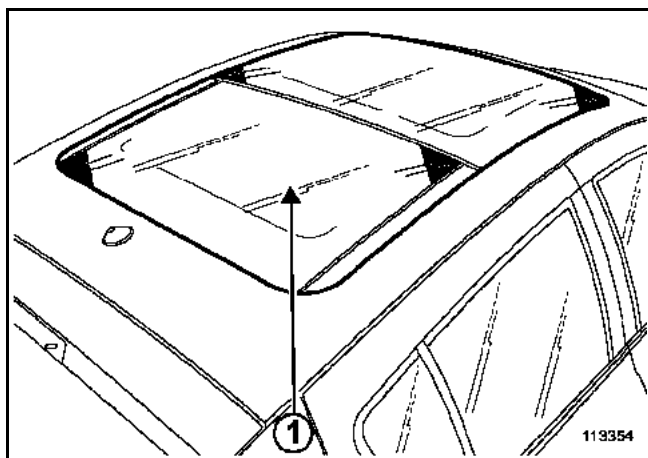
FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 23
CONTINUED 1

Sunroof chattering: jerky movement when opening/closing
sunroof mobile panel



- 1 Sunroof operating mechanism (sunroof assembly)
- 2 Linkages and side runners (position of sliding linkages)

- 3 Sunroof mobile panel
- 4 Seal

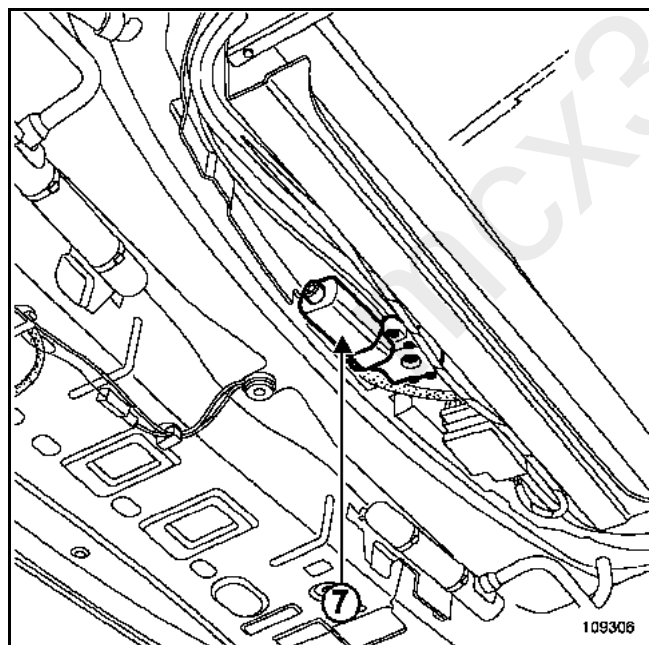
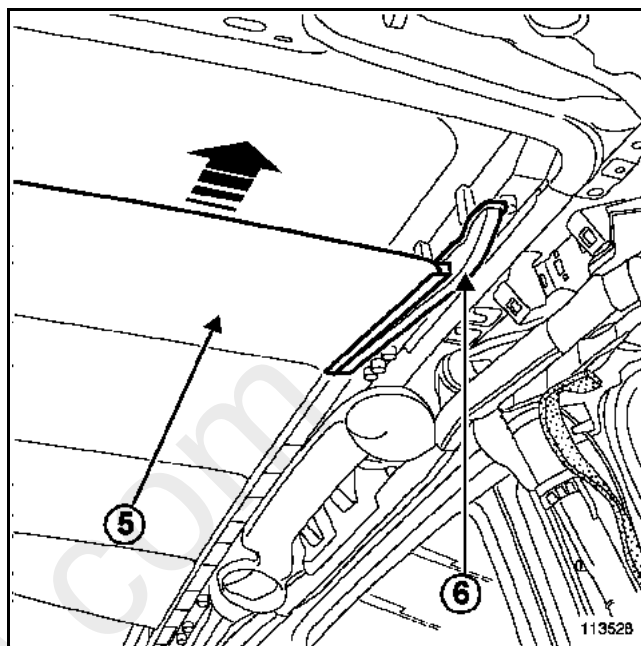
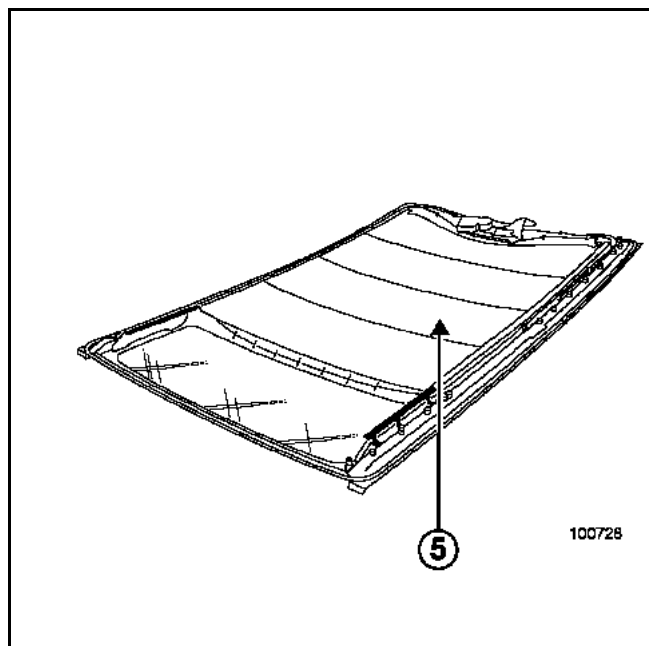
FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01

ALP 23
CONTINUED 2

Sunroof chattering: jerky movement when opening/closing
sunroof mobile panel



- 5 Sunroof blind (e.g. Espace IV)
- 6 Sunblind storage unit
- 7 Sunroof motor

FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 24	Sunroof creaking
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NOTES	Only consult this customer complaint after a complete check with the diagnostic tool.
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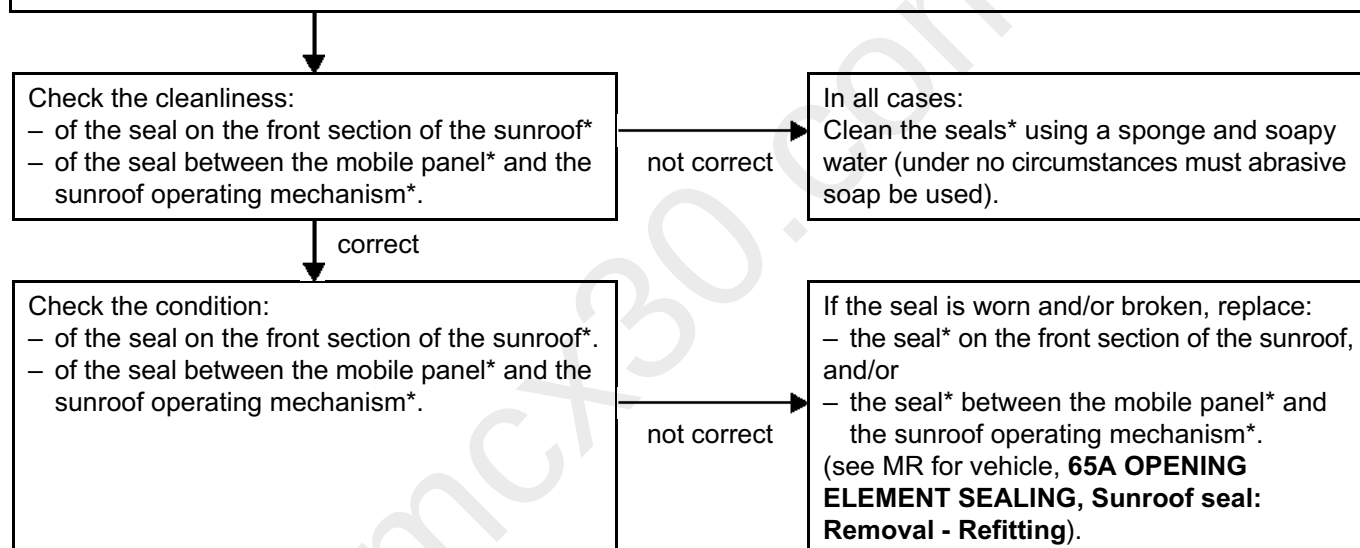
Consult the ICM database and check the conformity of the vehicle.

Check the tyre pressures.

Visually inspect the vehicle:

- exterior cleanliness,
- no foreign bodies in the sunroof side runners,
- no parts are broken.

After the operation, check that the operation was successful by performing an operational test or road test.



*: see the illustrations in ALP: Sunroof chattering

FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

ALP 25

Grating noise from the sunblind

NOTES

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

Consult the ICM database and check the conformity of the vehicle.

Check the tyre pressures.

Visually inspect the vehicle:

- exterior cleanliness,
- no foreign bodies in the sunroof side runners,
- no parts are broken.

After the operation, check that the operation was successful by performing an operational test or road test.

Remove the headlining (see MR for vehicle, **71A BODY INTERNAL TRIM, Headlining: Removal - Refitting**)

correct

Check the cleanliness of the side runners* and the sunblind storage units*.

not correct

Clean then lubricate the side runners* and the sunblind storage units* (see MR for vehicle, **52A NON-SIDE OPENING ELEMENT MECHANISMS, Sunroof blind: Removal - Refitting**).

correct

Check the condition of the sunblind side runners*.

not correct

Clean and lubricate the sunblind side runners* (see MR for vehicle, **52A NON-SIDE OPENING ELEMENT MECHANISMS, Sunroof blind: Removal - Refitting**).

*: see the illustrations in ALP: Sunroof chattering

FAULT FINDING INTRODUCTION

Fault finding – Fault Finding Chart

01E

CHART 26

Sunroof rattling

NOTES

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

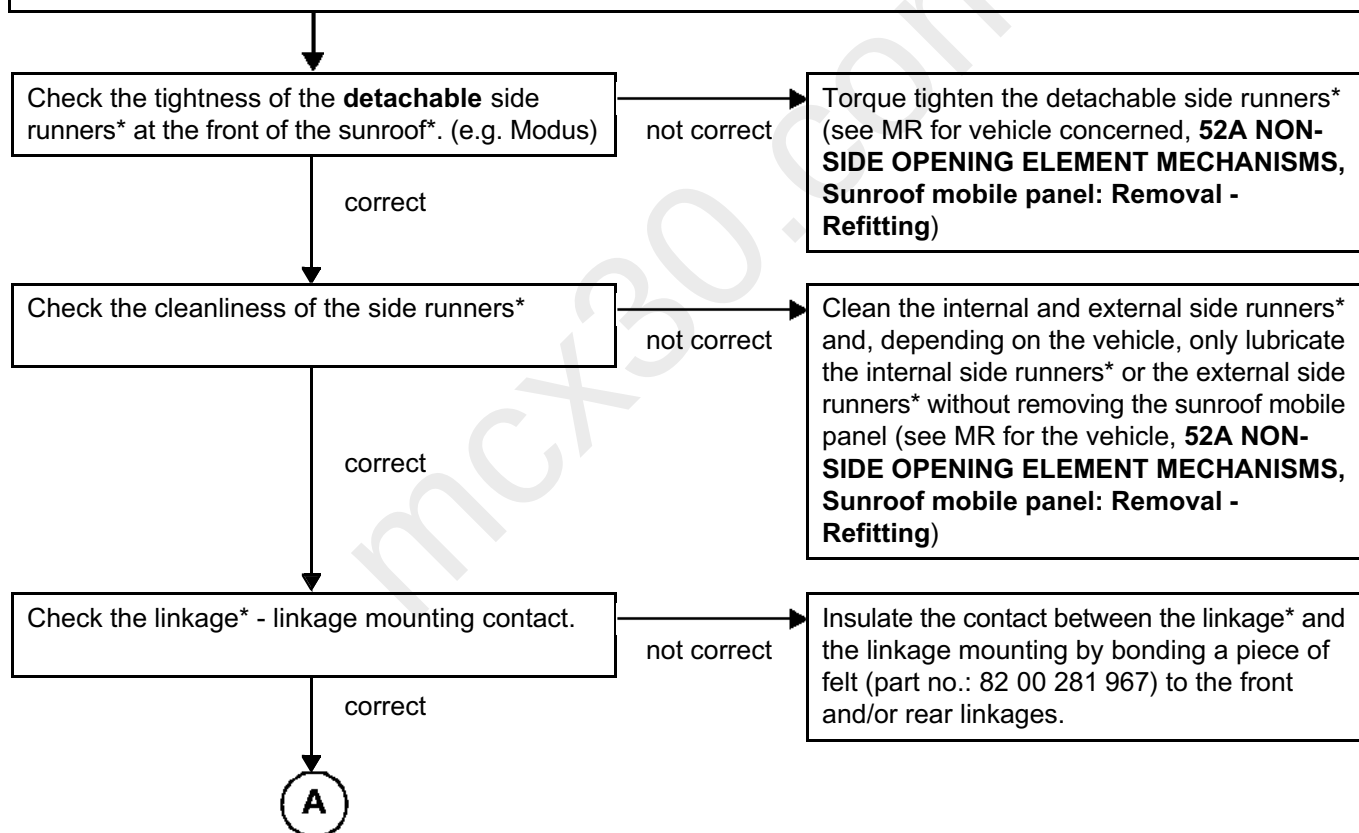
Consult the ICM database and check the conformity of the vehicle.

Check the tyre pressures.

Visually inspect the vehicle:

- exterior cleanliness,
- no foreign bodies in the sunroof side runners,
- no parts are broken.

After the operation, check that the operation was successful by performing an operational test or road test.



*: see the illustrations in ALP: Sunroof chattering