



V8 XJ Series

DATE 03/01

910-10

SERVICE

## TECHNICAL BULLETIN

### Squeaks & Rattles – Diagnostics – Repair Methods

MODEL 2000 MY  
V8 XJ Series

VIN Refer to text

#### Issue:

This bulletin has been issued to assist in the diagnostic process on a customer complaint basis only, relating to vehicles with squeaks and rattles issues.

#### BACKGROUND INFORMATION

Vehicle noise is inevitable when a vehicle is in use. Current development efforts are aimed at reducing noise levels created by components such as engine, driveline and tires, but, the quieter these become, the more evident any other unwanted noises will be.

Squeaks are generated through frictional contact of parts. The severity of the noise is a function of contact velocity, material properties, angle of contact etc.

Rattles are generated through part impact contact between two or more components. The severity of the noise is dependent upon velocity, clearance (between the components), local stiffness of components etc.

Listed below are descriptions of the types of noises from either a Squeak or Rattle.

#### Noise type      Description of noise

Creak	Metallic squeak - Like a seatback frame flexing, or two pieces of material against one another.
Squeak	High-pitched sound - Like rubbing a clean window.
Buzz	Low-pitched sound - usually associated with vibrations. Often metallic or hard plastic humming.
Click	Light sound - Like a ballpoint pen being clicked.
Knock	Heavy sound - Like a knock on a door.
Rattle	A sound suggesting looseness - Like marbles rolling round in a can.

#### Action:

To identify the source of the concern, first determine where the noise is generated. To assist with this, the customer can provide important information in helping diagnose the noise in question.

For all Squeaks and Rattles concerns and to ensure the correct root cause is identified and repaired, follow the Workshop Procedure below and see the Squeaks and Rattles Verification Process.

A Squeaks and Rattles Diagnostic Check sheet has been produced, that should be completed with the customer to help identify where the noise is, and under what conditions it happens.

## WORKSHOP PROCEDURE

**Note:** Before carrying out any repairs, check Technical Service Bulletins for any related issues.

If after checking the Diagnostic Check Sheet information the issue is known, investigate, repair and verify. (See Appendix 1 route **A**)

Once the area from which the noise is being generated has been identified, follow the procedure listed below. (See Appendix 1 route **B**)

1. Check the quality of fit, clearance or excess material and security.
2. Manipulate the assembly parts to see if a noise is produced.
3. Remove the part (if necessary) and rectify.
4. Retest the vehicle to verify fix.

If the noise is still present, consider the following questions:

- What information has the customer provided?
- What is the possible cause?
- What is the purpose and function of the component concerned?
- What type of testing can be done?
- How does it fit and what is it next to?
- What equipment is available to me?
- What is the remedial action?
- What raw materials do we have to rectify the component?

## ROAD TESTING

The Road Test should be conducted under the same conditions as described by the customer to identify the concern accurately.

The test is better conducted by two people. Whilst one concentrates on driving, the other can work on the component from which the noise is emanating.

**Note:** It is a good idea that the two people change places to compare impressions as appropriate.

Apply a load to see if the noise is affected. If the noise changes or is eliminated, retest without the item fitted. If the noise is no longer present, examine the part and treat with anti-rattle materials or refit as appropriate. (See Technical Service Bulletin 910-08 for Squeaks and Rattles Service Kits)

If the noise cannot be isolated, consider adjacent locations and investigate.

Removing parts and retesting should be undertaken to isolate the affected component.

## POSSIBLE AREAS OF CONCERN

The following tables depict areas around the vehicle that could possibly cause a Squeak or Rattle.

### AREA OF CONCERN: FRONT OF VEHICLE

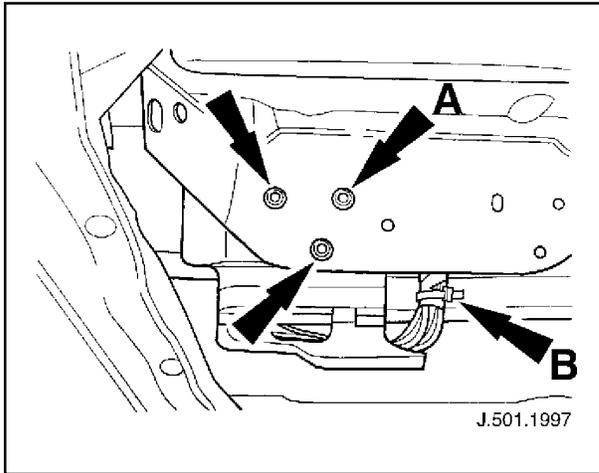


ILLUSTRATION 1

#### **Description:**

Instrument panel clicking.

#### **Root Cause:**

ECM ticking behind the glovebox due to the fixing nuts being loose.

#### **Action:**

Remove instrument panel glovebox and tighten nuts on ECM (see **A**, Fig. 1). Ensure tie strap is tight to air conditioning blower (see **B**, Fig. 1).

#### **Affected VIN range:**

F00103 – F02703

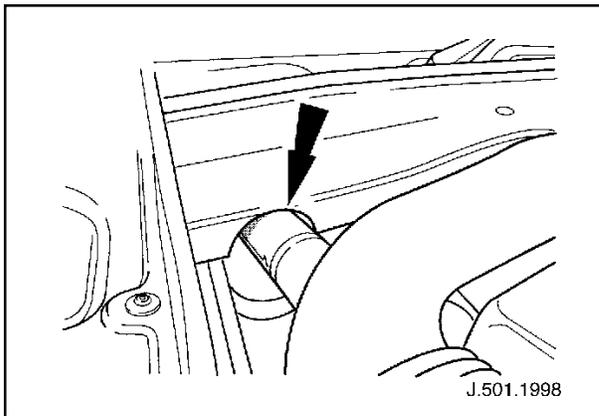


ILLUSTRATION 2

#### **Description**

Instrument panel rattle. (Supercharged only)

#### **Root Cause**

Foul condition between the center cover in the engine compartment and the air inlet pipe.

#### **Action**

Fit a pad to the underside of the center cover at foul condition.

#### **Affected VIN range**

F00103 – F08035

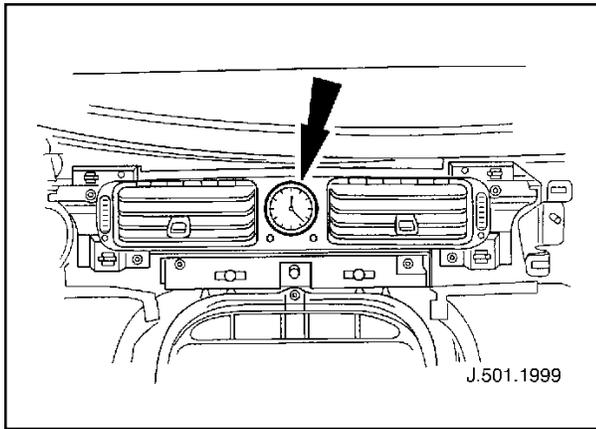


ILLUSTRATION 3

**Description**

Instrument panel buzz. (Jaguar clocks only)

**Root Cause**

Center vent clock buzz due to a tolerance stack-up issue.

**Action**

Remove the center veneer and vent, and then change the clock.

**Affected VIN range**

F00103 – F06538

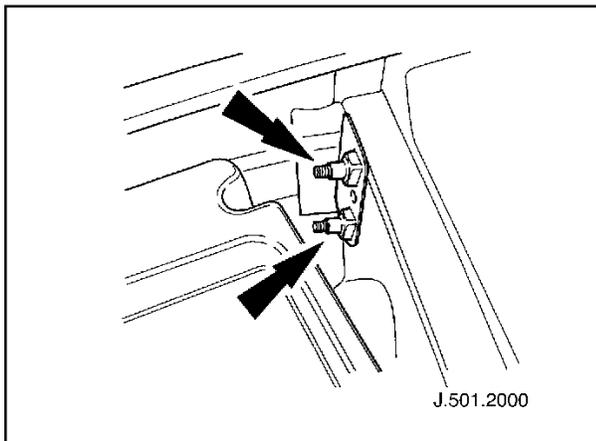


ILLUSTRATION 4

**Description**

Instrument panel creak

**Root Cause**

Fixings for the false bulkhead in the engine bay are cross-threaded.

**Action**

Replace the fixings (tap out when necessary).

**Affected VIN range**

F00103 – F04685

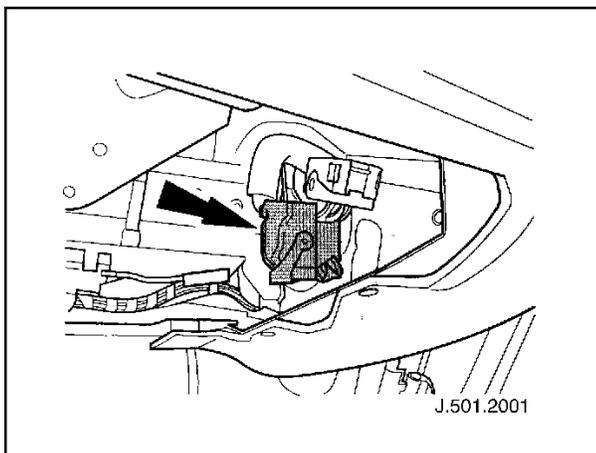


ILLUSTRATION 5

**Description**

Instrument panel rattle.

**Root Cause**

Lower a-post emanating from the unused navigation connector.

**Action**

Remove the instrument panel glovebox. Tape up the blue connector to the harness.

**Affected VIN range**

F00103 – F03942

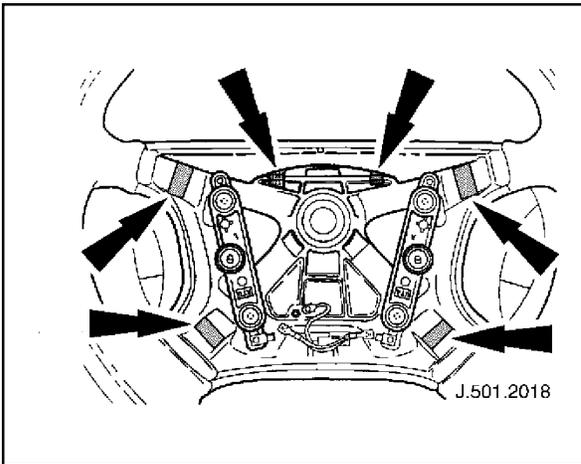


ILLUSTRATION 6

**Description**

Steering wheel creak.

**Root Cause**

Steering wheel creak when it is gripped and twisted. There is a foul between the rear of the airbag and the steering wheel.

**Action**

**▲ Warning:** Observe the safety precautions in JTIS section 501-20, Driver Air Bag Module SRO 76.73.39.

Remove the driver-side airbag and add anti-squeak tape to the steering wheel casting. (See arrows in Fig. 6)

**Affected VIN range**

F00103 – F07117

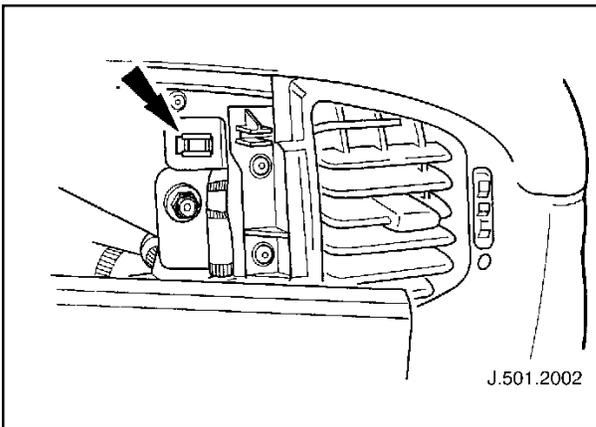


ILLUSTRATION 7

**Description**

Instrument panel rattle.

**Root Cause**

Instrument panel veneer clip is broken.

**Action**

Remove the airbag deployment door. Remove the broken clip debris and replace the clip.

**Affected VIN range**

F00103 – F19467

**AREA OF CONCERN: REAR OF VEHICLE**

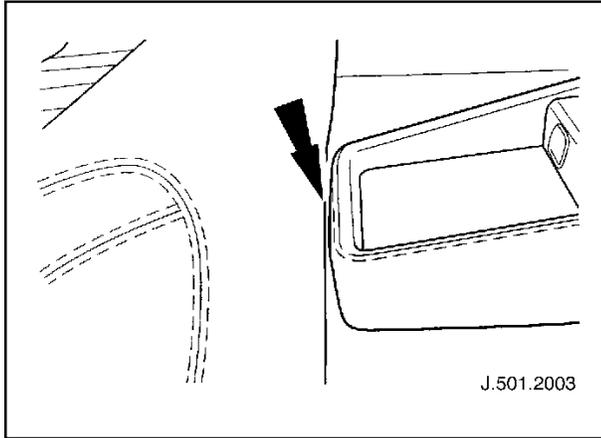


ILLUSTRATION 8

**Description**

Rear cushion creak/squeak.

**Root Cause**

Foul condition between the rear cushion and the console extension (short wheelbase only) while the rear cushion is occupied.

**Action**

Remove the console extension and apply Krytox<sup>®</sup> to the area of concern on the rear cushion.

**Affected VIN range**

F00103 – F01323

**AREA OF CONCERN: ROOF**

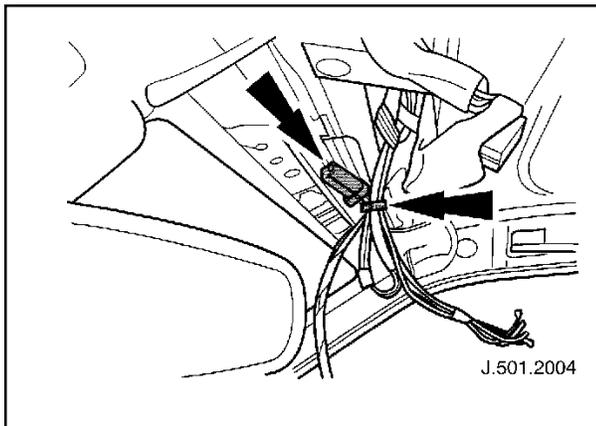


ILLUSTRATION 9

**Description**

Roof console rattle.

**Root Cause**

Unused telephone microphone connector rattling (Vehicles without cellular telephones fitted only).

**Action**

Remove the roof console. Strap the connector (blue) to the harness as close to the connector as possible.

**Affected VIN range**

F00103 – F05381

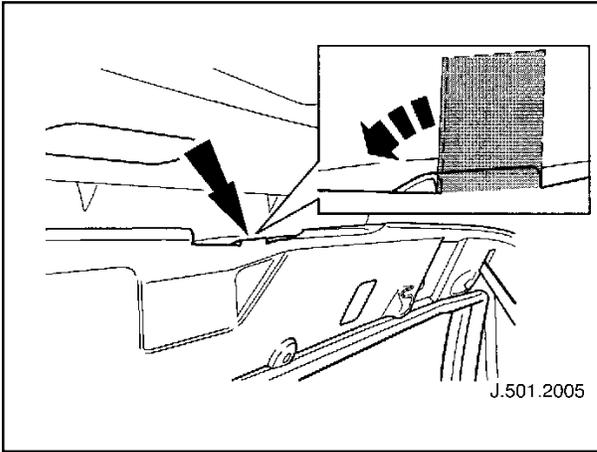


ILLUSTRATION 10

**Description**

Upper b/c-post clicking. (long wheelbase only)

**Root Cause**

Upper b/c-post, body-in-white tag not folded back.

**Action**

Lower the headlining in the problem area and fold back the tag.

**Affected VIN range**

F00103 – F05802

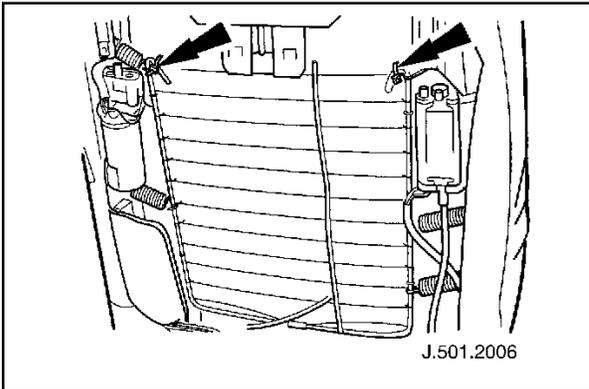


ILLUSTRATION 11

AREA OF CONCERN: SEATS

**Description**

Front seat clicking.

**Root Cause**

The front seat clicks when it is occupied, due to the front cushion zip straps not being cut off.

**Action**

Remove the front seat. Inspect under the seat for zip straps that are not trimmed and cut off excess material.

**Affected VIN range**

F00103 – F08611

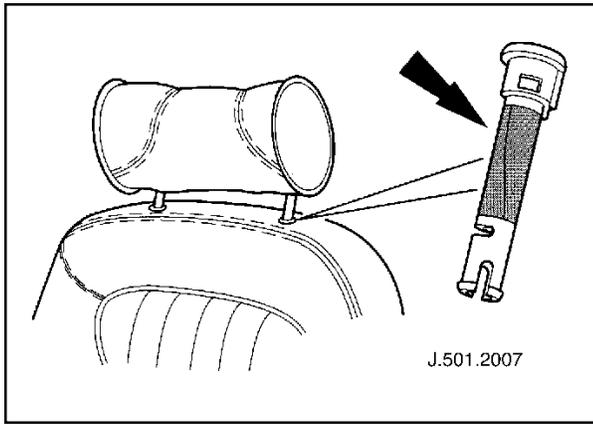


ILLUSTRATION 12

**Description**

Front seat rattle.

**Root Cause**

The headrest stem insert is loose in the seat frame.

**Action**

Remove the front seat back, headrest and headrest stem insert. Wrap tape around the insert and reinstall.

**Affected VIN range**

F00103 – F01649

AREA OF CONCERN: SIDES OF VEHICLE

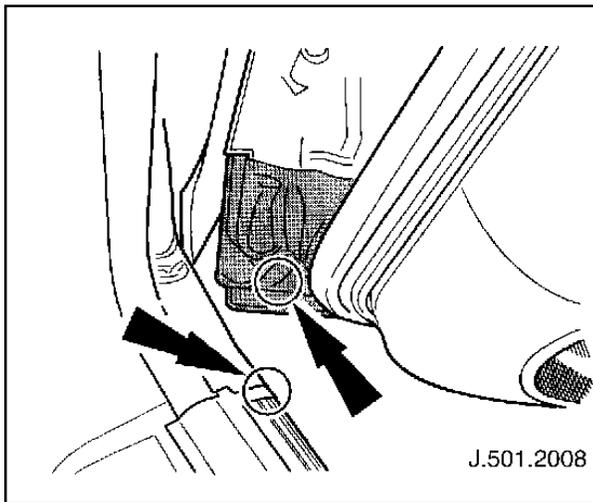


ILLUSTRATION 13

**Description**

Lower b/c-post creak (Long wheelbase only).

**Root Cause**

Creak in the rear door area, due to a foul condition between the door and the front edge of the tread plate.

**Action**

Open the rear door and look for a mark on the inner panel and apply flock tape to the marked area.

**Affected VIN range**

F00103 – F03659

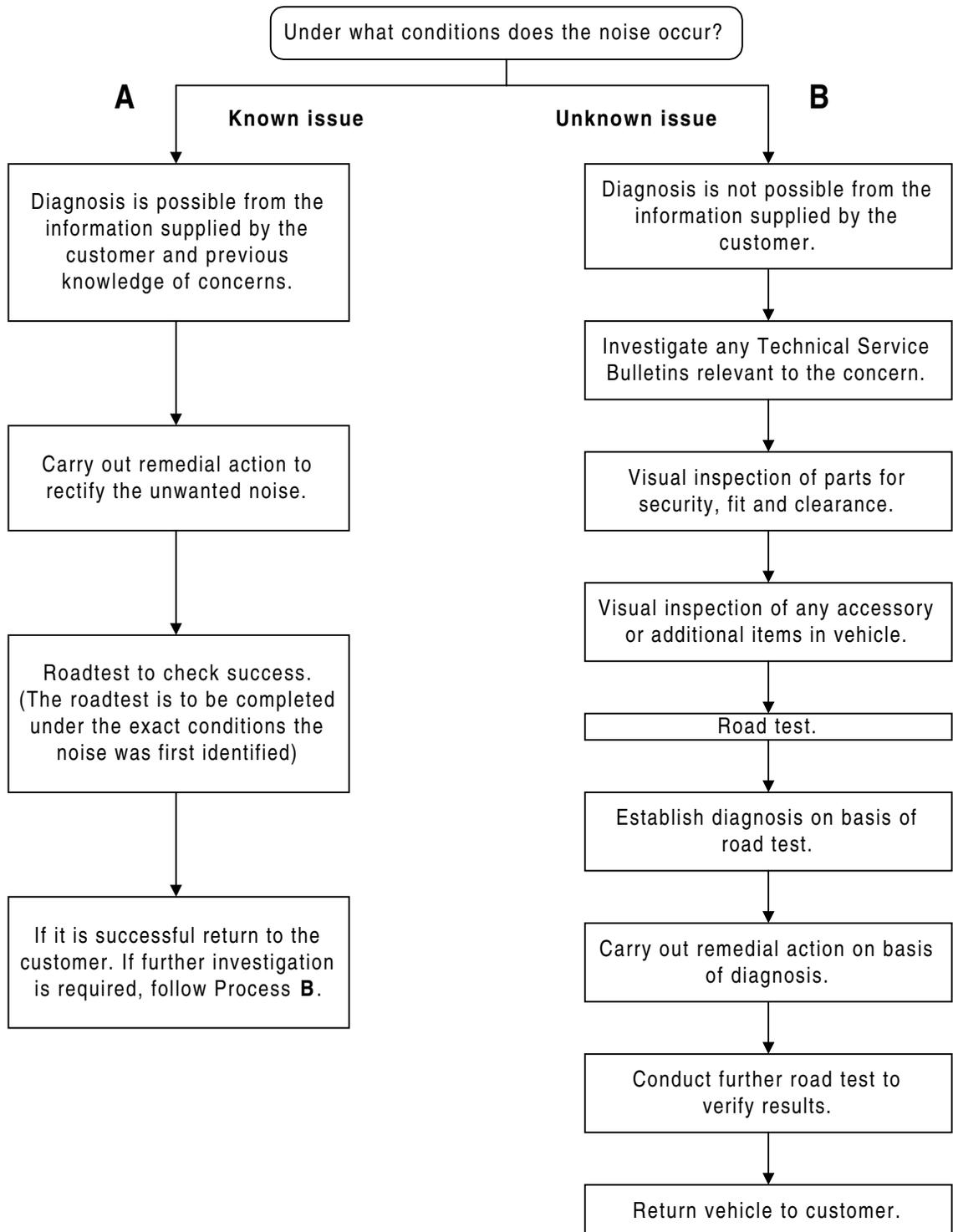
FURTHER ASSISTANCE

In some cases it may not be possible to identify the cause of the noise, or it could have reoccurred.

If this is the case, contact the Technical Hotline for assistance.

Please fax your completed Squeaks and Rattles Diagnostic Check Sheet to the Product Investigation Department at fax number 201-236-4410 and call the Technical Hotline at 1-888-524-3577 for assistance.

## Squeaks and Rattles Diagnostics



**Note:** If the road test does not provide cause, fax the Squeaks and Rattles Diagnostic check sheet to Technical Hotline and then contact for further assistance.

**DEALER INFORMATION**

DEALER NAME	DEALER #	DATE
ORIGINATOR	PHONE #	

**VEHICLE INFORMATION**

VIN	MODEL CODE	DATE OF SALE
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**CUSTOMER CONCERN**

DATE FIRST NOTICED \_\_\_\_\_ ROAD TESTED WITH CUSTOMER?  YES  NO

DESCRIBE ACTIONS TAKEN TO DATE \_\_\_\_\_

IS FURTHER ACTION REQUIRED?  YES  NO

**PROBLEM OCCURS UNDER THE FOLLOWING CONDITIONS:**

DRIVING CONDITIONS:  CITY / LOCAL  HIGHWAY  RURAL ROADS  OTHER:

VEHICLE SPEED (MPH) \_\_\_\_\_

ROAD CONDITIONS:  STRAIGHT  WINDING  UNDULATING  OTHER:

ROAD SURFACE:  SMOOTH PAVED  ROUGH PAVED  DIRT / GRAVEL  OTHER:

WEATHER CONDITIONS:  DRY  HUMID  RAIN  SNOW

OTHER: \_\_\_\_\_ AMBIENT TEMP. \_\_\_\_\_ °F

VEHICLE TEMPERATURE: CABIN \_\_\_\_\_ °F ENGINE \_\_\_\_\_ °F

VEHICLE STATE:  ACCELERATING  ROLLING / PITCHING  STRESS

DECELERATING  TWISTING / FLEXING  OTHER:

TIRE PRESSURES: LH FRONT \_\_\_\_\_ RH FRONT \_\_\_\_\_ LH REAR \_\_\_\_\_ RH REAR \_\_\_\_\_

**NOISE DETAILS**

TYPE OF NOISE:  CREAK  BUZZ  CLICK

SQUEAK  RATTLE  KNOCK

AREA OF CONCERN:  STRUCTURE  SUSPENSION  STEERING  RESTRAINTS

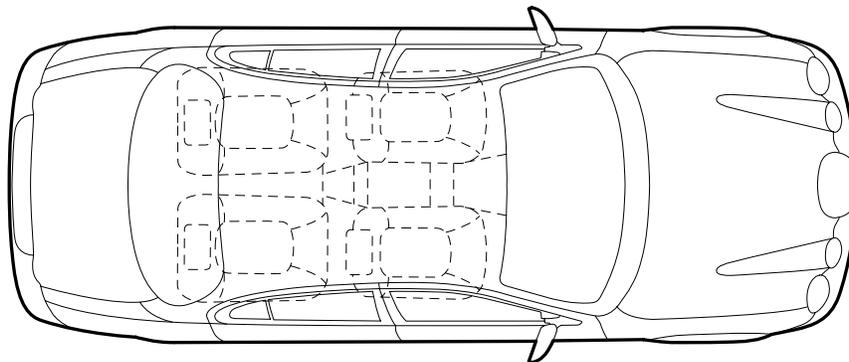
UNDERBODY  POWERTRAIN  ENG. COMPARTMENT  INTERIOR TRIM

FRONT OF VEHICLE  BRAKES  DOORS  CLOSURES

REAR OF VEHICLE  FUEL SYSTEM  INST. / FASCIA  ELECTRICAL

TOP OF VEHICLE  EXHAUST  SEATS  OTHER:

INDICATE THE APPROXIMATE AREA OF CONCERN ON THE ILLUSTRATION (S-TYPE SHOWN)



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