**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.

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

**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 bonus material and security.
2. Manipulate the assembly parts to see if a noise is produced.
3. Remove the part (if necessary) and rectify.
4. Re-test 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, re-test 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 re-testing 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

Description
Creak from steering wheel.

Root Cause
Horn bar springs creaking in mountings.

Action
⚠️ **Warning:** Observe the safety precautions in JTIS section 501-20, Driver Air Bag Module SRO 76.73.39.
Apply Krytox ® grease to springs.

Affected VIN range
A00116 to A07460

ILLUSTRATION 1
Description
Creak from steering wheel.

Root Cause
Steering wheel securing lugs creaking.

Action
⚠️ Warning: Observe the safety precautions in JTIS section 501-20, Driver Air Bag Module SRO 76.73.39.
Fit anti-squeak tape under securing lugs.

Affected VIN ranges
A00116 to A05577
Description
Radio rattle.

Root Cause
Rear of radio not fully supported.

Action
Fit foam pad to transmission tunnel to support rear of radio.

Affected VIN range
A00116 to A01362

Description
A-post trim rattle.

Root Cause
A-post trim not fully secured.

Action
Add anti-squeak tape to a-post trim fixings to improve fit.

Affected VIN range
A00116 to A04021
Description
Creaking noise emanating from lower edge of navigation screen.

Root Cause
Fascia/surround rubbing against navigation screen.

Action
Fit anti-squeak tape to lower edge of navigation surround.

Affected VIN ranges
A00116 to A00809
Description
Center veneer creak.

Root Cause
Top edge of console veneer rubbing against dash.

Action
Fit anti-squeak pads to top edge of center veneer.

Affected VIN ranges
A00116 to A01362

Description
Fascia creak.

Root Cause
Excessive sealer or weld flash (from spot-weld) on front suspension turret mounting face.

Action
Remove excessive sealer or spot-weld flash.

Affected VIN range
A00116 to A06711
Description
Ticking noise from fascia.

Root Cause
Passenger air bag mounting bracket touching fascia.

Action
Fit felt pad between air bag mounting bracket and fascia.

Affected VIN range
A00116 to A07704

Description
Fascia rattle/knock.

Root Cause
Traction control pipe touching body.

Action
Fit foam pad between body and pipe.

Affected VIN range
A00116 to A04837

Description
Front door rattle.

Root Cause
Door handle cable release fouling door panel.

Action
Fit foam pad between door panel and release cable.

Affected VIN range
A00116 to A06849
AREA OF CONCERN: REAR OF VEHICLE

Description
Rear speaker rattle (non-premium Audio System).

Root Cause
Back of speaker touching body reinforcement bracket.

Action
Fit foam pad between rear of speaker and reinforcement bracket.

Affected VIN range
A00116 to A09443

Description
Ticking noise from rear quarter.

Root Cause
2 Spot-welds on rear sill too far rearwards.

Action
Dress down panel forward of spot-welds.

Affected VIN range
A00116 to A02253

FURTHER ASSISTANCE
In some cases it may not be possible to identify the cause of the noise, or it could have re-occurred.
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.

Warranty Information:
This bulletin is issued for information only.
Squeaks and Rattles Diagnostics

Under what conditions does the noise occur?

A

Known issue

Diagnosis is possible from the information supplied by the customer and previous knowledge of concerns.

Carry out remedial action to rectify the unwanted noise.

Roadtest to check success. (The roadtest is to be completed under the exact conditions the noise was first identified)

If it is successful return to the customer. If further investigation is required, follow Process B.

Unknown issue

Diagnosis is not possible from the information supplied by the customer.

Investigate any Technical Service Bulletins relevant to the concern.

Visual inspection of parts for security, fit and clearance.

Visual inspection of any accessory or additional items in vehicle.

Road test.

Establish diagnosis on basis of road test.

Carry out remedial action on basis of diagnosis.

Conduct further road test to verify results.

Return vehicle to customer.

B

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

<table>
<thead>
<tr>
<th>DEALER NAME</th>
<th>DEALER #</th>
<th>DATE</th>
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<table>
<thead>
<tr>
<th>ORIGINATOR</th>
<th>PHONE #</th>
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## VEHICLE INFORMATION

<table>
<thead>
<tr>
<th>VIN</th>
<th>MODEL CODE</th>
<th>DATE OF SALE</th>
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## CUSTOMER CONCERN

<table>
<thead>
<tr>
<th>DATE FIRST NOTICED</th>
<th>ROAD TESTED WITH CUSTOMER?</th>
<th>YES</th>
<th>NO</th>
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<table>
<thead>
<tr>
<th>DESCRIBE ACTIONS TAKEN TO DATE</th>
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</table>

<table>
<thead>
<tr>
<th>IS FURTHER ACTION REQUIRED?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
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</table>

## 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:

<table>
<thead>
<tr>
<th>CABIN ˚F</th>
<th>ENGINE ˚F</th>
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</table>

### VEHICLE STATE:

- ACCELERATING
- ROLLING / PITCHING
- STRESS
- DECELERATING
- TWISTING / FLEXING
- OTHER:

### TIRE PRESSURES:

<table>
<thead>
<tr>
<th>LH FRONT</th>
<th>RH FRONT</th>
<th>LH REAR</th>
<th>RH REAR</th>
</tr>
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</table>

## 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)

![Illustration of a car with areas of concern indicated](image-url)

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**THIS SPACE FOR JAGUAR CARS USE ONLY**

<table>
<thead>
<tr>
<th>PRODUCT INVESTIGATIONS ENGINEER</th>
<th>CASE REFERENCE</th>
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## FORM DISTRIBUTION

- JAGUAR PRODUCT INVESTIGATIONS
- VEHICLE SERVICE FILE