



# TECHNICAL BULLETIN

No: LTB00198  
Issue: 1  
Date: 17 FEB 2009

CIRCULATE TO:

Service Mgr

X

Warranty

X

Workshop

X

Body Shop

X

Parts

**THIS BULLETIN REPLACES LS204-11  
CHANGES ARE HIGHLIGHTED WITH GRAY BACKGROUND**

## SECTION: 204

## **Suspension 'Thud' Due to Repeated Steering Input - Dynamic Response Vehicles Only - Inspection Procedure**

### AFFECTED VEHICLE RANGE:

Range Rover Sport (LS) with Dynamic Response *only*

VIN: 6A900126 - Onwards

Model Year: 2006 - Onwards

### CONDITION SUMMARY:

**Situation:** A customer may report a concern of an under-car 'thud' from the front or rear suspension, or an under-car 'pulse' / 'clicking' noise from the Dynamic Response valve block or hydraulic tubing, due to repeated left / right steering inputs. In some cases, the noise may be described as similar to 'water hammer', the noise experienced in a domestic water system when a faucet is turned off quickly.



**NOTE:** Changing any of the Dynamic Response system components will not eliminate the noise. Visual inspection for problems and torque checks must be completed.

The described noise is a characteristic of the Dynamic Response system and is generated when there is a sudden change in oil flow in the hydraulic circuit. This is a result of a direction control valve switching in response to driving inputs. The change in flow will be accompanied by a pressure pulse, which will be transmitted through the hydraulic and mechanical components associated with the system. The duration and amplitude of the pulse make it audible.

There are components of the Dynamic Response and associated systems that can influence the level of the noise.

**Action:** Should a customer express concern regarding the above, refer to the Inspection Procedure detailed in this bulletin to check the associated systems.

### PARTS:

No parts required; information purposes only.

### WARRANTY:

No warranty information provided; information purposes only.

*Normal warranty policy and procedures apply.*

NOTE: The information in Technical Bulletins is intended for use by trained, professional Technicians with the knowledge, tools, and equipment required to do the job properly and safely. It informs these Technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by 'do-it-yourselfers'. If you are not a Retailer, do not assume that a condition described affects your vehicle. Contact an authorized Land Rover service facility to determine whether this bulletin applies to a specific vehicle.



## **INSPECTION PROCEDURE**

### **CHECKING FOR PROBLEMS CAUSING DYNAMIC RESPONSE SYSTEM NOISE**

△ **NOTE:** The noise will not be eliminated by replacing Dynamic Response system components. The visual inspection and torque checks detailed below must be completed.

△ **NOTE:** It may not be possible to achieve the same noise level on all vehicles. The amplitude of the noise will vary from vehicle to vehicle due to natural variability, ambient and system temperature, component tolerances and Dynamic Response system hydraulic characteristics.

△ **NOTE:** Following inspections below, if no problems are found, it is likely that there is no fault with the system and the noise generated is simply the characteristic of the system. The customer may be informed of the noise characteristics generated by a hydraulic system pressure pulse.

1. Ensure that all Dynamic Response system connections are secure and problem free.
2. Inspect other vehicle components for any of the following conditions that could exaggerate the noise:
  - Steering linkage integrity and securing torque.
  - Stabilizer bar linkage integrity and securing torque.
  - Stabilizer bar linkage damage or contact to other components.
  - Stabilizer bar bushing and bushing clamp integrity and securing torque.
3. Inspect the Dynamic Response system components for any of the following conditions:
  - Pipe work damage or potential contact with the body or chassis.
  - Pipe work mounting clamp integrity and isolation.
  - Hydraulic valve block damage or potential contact with the chassis.