Technical Service Bulletin

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Reissue

Please replace the previous edition of this bulletin.

This bulletin supersedes TSB LS204-012/2006 dated 12 September , which should either be destroyed or clearly marked to show it is no longer valid (e.g. with a line across the page).

Subject/Concern :	Front Suspension 'Thud' Due to Repeated Steering Input on Vehicles With Dynamic Response Only

Models :		
Range Rover Sport (LS)		VIN- range : 900290 Onwards

Markets : All

Section : 204-06

Summary :

This bulletin is for information only, to help in diagnosing a 'thud' from the suspension. A customer may report a concern of an under-car 'thud' from the front or rear suspension, or an under-car 'pulse'/'clicking' noise heard from the dynamic response valve block or pipe work, due to repeated left/right steering inputs. In some cases, it may be described as similar to the noise experienced in a domestic water system when a tap is turned off quickly (known as 'water hammer').

This Version has been issued for further clarification in the Subject/Concern and Summary.

Cause : The noise is a characteristic of the dynamic response system and is generated when there is a sudden change in oil flow in the dynamic response hydraulic circuit (most customers are unlikely to experience this issue). This is a result of 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.

Action : The noise is a characteristic of the dynamic response system; however, there are components in the system and associated systems that could influence the level of the noise. Should a customer express concern regarding the above, refer to the Service tips detailed in this bulletin to check the associated systems.

NOTE : Changing any of the dynamic response system components will not eliminate the noise. Visual inspection for problems and torque checks should be completed.

NOTE : 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. It may not be possible to achieve the same noise level on all vehicles.

NOTE : If no problems are found following the inspections below, it is likely that there is no fault with the system and the noise generated is simply the characteristic of the system. This bulletin may be printed and given to the customer for explanation purposes.

1 . Ensure that all dynamic response system connections are secure and problem free.

2 . Check the vehicle for other problems which could exaggerate the noise, such as:
    1 . Steering link integrity and fixing torque.
    2 . Stabilizer bar link integrity and fixing torque.
    3 . Stabilizer bar link foul conditions.
    4 . Stabilizer bar bush/bush clamp integrity and torque.
3 . Check the dynamic response system for:
    1 . Pipe work foul conditions to body or chassis.
    2 . Pipe work mounting clamp integrity and isolation.
    3 . Valve block to chassis foul condition.