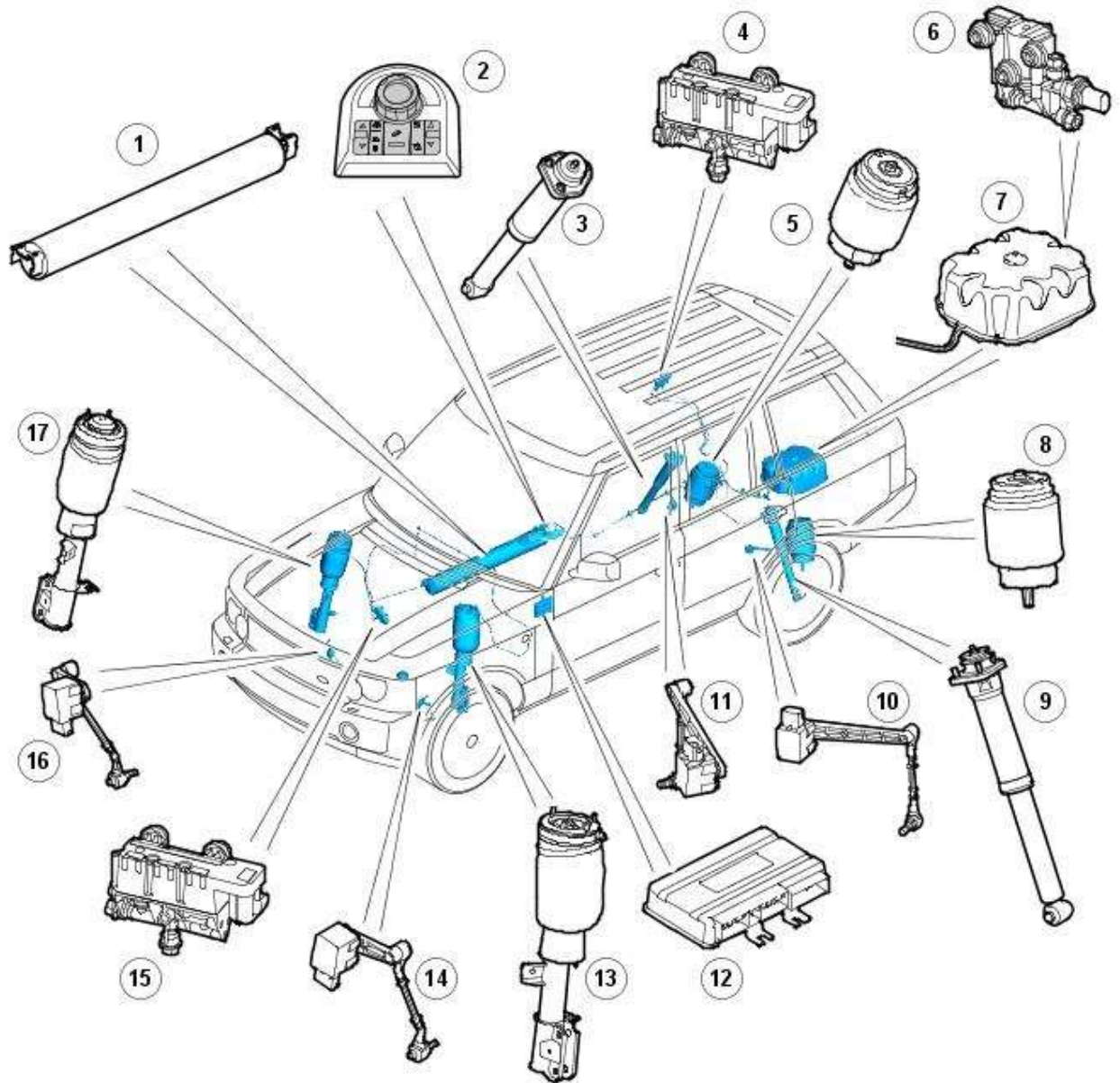


Vehicle Dynamic Suspension - Vehicle Dynamic Suspension

Description and Operation

AIR SUSPENSION COMPONENT LOCATION



E82088

Item	Part Number	Description
1	-	Reservoir
2	-	Control switch
3	-	Rear right-hand (RH) damper
4	-	Rear valve block
5	-	Rear RH air spring
6	-	Reservoir valve block
7	-	Compressor assembly
8	-	Rear left-hand (LH) air spring
9	-	Rear LH damper

10	-	Rear LH height sensor
11	-	Rear RH height sensor
12	-	Air suspension control module
13	-	Front LH strut assembly
14	-	Front LH height sensor
15	-	Front valve block
16	-	Front RH height sensor
17	-	Front RH strut assembly

GENERAL

The air suspension system is a four corner system which is fitted to all models.

The system is electronically controlled by an air suspension control module which controls the air supply unit, reacts to inputs from four height sensors and distributes air around the system via valve blocks.

The main air suspension system components are:

- Air suspension control module
- Air supply unit
- Four height sensors
- Three valve block assemblies
- Reservoir
- Air harness
- Two front struts incorporating air spring damper modules
- Two rear air spring modules.

The four corner air suspension system maintains the vehicle height under all operating conditions by controlling the mass of air in the air springs. The air suspension control module uses signals from the four height sensors to maintain the correct suspension height, irrespective of vehicle load. Additionally, the system allows the driver to request ride height changes to improve off-road performance or ease access or loading. The system automatically adjusts the ride height to improve the vehicle handling and dynamics when speed increases or decreases. This is achieved by operating pneumatic control valves to increase or decrease the mass of air in the air springs.

The air suspension system has three driver selectable, pre-determined ride heights and an automated high speed ride height. A driver interface indicates the selected ride height and height change movement. Additional information is also relayed to the driver via the instrument cluster message center and by audible warnings also transmitted by the instrument cluster.

Most height changes can only be made when the engine is running and the driver's and passenger doors are closed.

The air suspension can be controlled manually by the driver using either a switch on the floor console or a switch on the door to select the required height change.

The system will temporarily inhibit height adjustments when the vehicle is subject to cornering, heavy acceleration or heavy braking. The inhibit function prevents unsettling of the vehicle by reducing the effective spring rates.

Height changes are also restricted for safety reasons, when a door is opened and the vehicle is stationary for example.

The air suspension system fitted to Range Rover is controlled by the air suspension control module which is located behind the passenger side of the instrument panel. The control module is housed in a plastic bracket adjacent the 'A' pillar. The control module monitors the height of each corner of the vehicle via four height sensors, which are mounted in-board of each road wheel. The control module also performs an 'on-board diagnostic' function to perform 'health checks' on the system. If faults are detected, codes are stored in the control module and can be retrieved using the Land Rover approved diagnostic system.

The suspension geometry changes when moving from off-road to access heights. See the following table for data: