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2005.0 RANGE ROVER SPORT (LS), 204-05

# VEHICLE DYNAMIC SUSPENSION

## DIAGNOSIS AND TESTING

## PRINCIPLE OF OPERATION

For information on the operation of the system, refer to relevant section 204-05 - Vehicle Dynamic Suspension of the workshop manual.

## INSPECTION AND VERIFICATION

1. Verify the customer concern.
1. Confirm which, if any, warning lights and/or messages were displayed on the instrument cluster. For a list of messages, Refer to the relevant section of the workshop manual.
1. Visually inspect for obvious mechanical or electrical faults.

### Visual inspection

| MECHANICAL  | ELECTRICAL  |
|---|---|
| <ul style="list-style-type: none"><li>▪ Air leakage</li><li>▪ Air springs</li><li>▪ Reservoir</li><li>▪ Compressor</li><li>▪ Compressor air filter</li><li>▪ Pipework and unions</li><li>▪ Sensor installation</li><li>▪ Valve block(s)</li></ul> | <ul style="list-style-type: none"><li>▪ Battery</li><li>▪ Fuse(s)</li><li>▪ Wiring harness physical damage or water ingress</li><li>▪ Loose or corroded electrical connectors</li><li>▪ Air suspension control switch</li><li>▪ Controller area network (CAN) circuits</li><li>▪ Sensors</li><li>▪ Valve block(s)</li><li>▪ Air suspension control module</li></ul> |

1. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.
1. Use the approved diagnostic system or a scan tool to retrieve any diagnostic trouble codes (DTCs) before moving onto the symptom chart or DTC index.
  - Make sure that all DTCs are cleared following rectification.

## SYMPTOM CHART

| SYMPTOM                    | POSSIBLE MESSAGE   | POSSIBLE OTHER WARNINGS   | POSSIBLE CAUSES   | ACTION  |
|----------------------------|--|---|---|---|
| Vehicle on bump stops      | <ul style="list-style-type: none"> <li>▪ Suspension fault</li> </ul> | <ul style="list-style-type: none"> <li>▪ Two chimes repeated regularly<br/>Red indicator permanently illuminated</li> </ul> | <ul style="list-style-type: none"> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Air leak(s)</li> <li>▪ Vehicle in transportation mode</li> <li>▪ System not calibrated or calibration corrupt</li> <li>▪ Implausible articulation symptoms detected</li> <li>▪ Failure of multiple height sensors</li> <li>▪ Air suspension control module failure</li> </ul>           | <p>Visually inspect the wiring harness and connectors for water ingress. Visually inspect the system for air leakage. Check the system mode and calibration using the approved diagnostic system. Check for implausible articulation symptoms, i.e. height sensor or linkage fault, deflated air spring, under inflated tire etc. Note implausible articulation symptoms may be caused by an un-calibrated height sensor. Check for height sensor DTCs and refer to the DTC index. Refer to the warranty policy and procedures manual if a module is suspect.</p>   |
| Vehicle does not sit level | <ul style="list-style-type: none"> <li>▪ Suspension fault</li> </ul> | <ul style="list-style-type: none"> <li>▪ Two chimes repeated regularly<br/>Red indicator permanently illuminated</li> </ul> | <ul style="list-style-type: none"> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Air leak(s)</li> <li>▪ Calibration corrupt</li> <li>▪ cross-link valve fault</li> <li>▪ Height sensor fault</li> <li>▪ Reservoir valve stuck open</li> <li>▪ Exhaust valve stuck closed</li> <li>▪ Corner valves stuck open</li> <li>▪ Air suspension control module failure</li> </ul> | <p>Visually inspect the wiring harness and connectors for water ingress. Visually inspect the system for air leakage and refer to the guided diagnostic routine on the approved diagnostic system. Check the system calibration using the approved diagnostic system. For front and rear cross link valve tests refer to the guided diagnostic routine on the approved diagnostic system. Check for height sensor DTCs and refer to the DTC index. For reservoir and exhaust valve tests refer to the guided diagnostic routine on the approved diagnostic system. Check for corner valve DTCs and refer to the DTC index. Refer to the warranty policy and procedures manual if a module is suspect.</p> |

|   |   |  |  |   |
|---|---|--|--|---|
| Vehicle sits too low  | <ul style="list-style-type: none"> <li>▪ Suspension fault</li> <li>▪ Hill descent control (HDC) fault, system not available</li> <li>▪ Dynamic stability control (DSC)</li> </ul> | <ul style="list-style-type: none"> <li>▪ Two chimes, amber indicator permanently illuminated</li> <li>▪ One chime</li> <li>▪ DSC amber indicator permanently illuminated</li> <li>▪ ABS indicator permanently illuminated</li> </ul> | <ul style="list-style-type: none"> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Air leak(s)</li> <li>▪ Air suspension compressor temperature sensor fault</li> <li>▪ Inlet air filter blockage /restriction</li> <li>▪ Air suspension compressor fault</li> <li>▪ Exhaust valve stuck/sticking</li> <li>▪ Air suspension control module lost communication with ABS module</li> <li>▪ ABS fault.</li> <li>▪ Air suspension control module failure</li> </ul> | Visually inspect the wiring harness and connectors for water ingress. Visually inspect the system for air leakage. For air compressor temperature sensor, inlet air filter, exhaust valve and air compressor tests refer to the guided diagnostic routine on the approved diagnostic system. For Air suspension control module lost communication with ABS module, refer to the lost communication codes statement at the end of this table. Check for ABS DTCs, Refer to the relevant section of the workshop manual. Refer to the warranty policy and procedures manual if a module is suspect. |
| Vehicle sits too high   | <ul style="list-style-type: none"> <li>▪ Suspension fault</li> </ul>  | <ul style="list-style-type: none"> <li>▪ Two chimes, amber indicator permanently illuminated</li> </ul>  | <ul style="list-style-type: none"> <li>▪ Reservoir valve stuck open</li> <li>▪ Exhaust valve stuck closed</li> <li>▪ Corner valves stuck open</li> <li>▪ Air suspension control module failure</li> </ul>  | For reservoir valve and exhaust valve tests refer to the guided diagnostic routine on the approved diagnostic system. Check for corner valve DTCs and refer to the DTC index. Refer to the warranty policy and procedures manual if a module is suspect.  |
| System detects extended mode unnecessarily when lowering          | <ul style="list-style-type: none"> <li>▪ -</li> </ul>   | <ul style="list-style-type: none"> <li>▪ -</li> </ul>  | <ul style="list-style-type: none"> <li>▪ Crossed gallery and air spring pipes</li> <li>▪ Incorrect valve block installed to front or rear</li> <li>▪ Damage or blockage in air harness</li> </ul>  | Refer to the guided diagnostic routine on the approved diagnostic system.   |
| Vehicle leans /tilts after being left over-night or for some days | <ul style="list-style-type: none"> <li>▪ -</li> </ul>   | <ul style="list-style-type: none"> <li>▪ -</li> </ul>  | <ul style="list-style-type: none"> <li>▪ Leaking air spring(s)</li> <li>▪ Leak from corner valve to gallery</li> </ul>   | Refer to the guided diagnostic routine on the approved diagnostic system.   |

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|--|---|---|--|---|
|  |   |   | <ul style="list-style-type: none"> <li>Exhaust valve stuck open</li> </ul>                         |   |
| After vehicle left over-night or for some days system regularly indicates "Suspension vehicle raising slowly" when first driving off | <ul style="list-style-type: none"> <li>Suspension vehicle raising slowly</li> </ul> | <ul style="list-style-type: none"> <li>-</li> </ul> | <ul style="list-style-type: none"> <li>Leaking air spring(s)</li> <li>Leaking reservoir</li> </ul> | Refer to the guided diagnostic routine on the approved diagnostic system. |

## DTC INDEX

### NOTES:

- Generic scan tools may not read the codes listed, or may read only 5-digit codes. Match the 5 digits from the scan tool to the first 5 digits of the 7-digit code listed to identify the fault (the last 2 digits give extra information read by the manufacturer-approved diagnostic system).
- Intermittent faults may cause DTCs to be logged, however some DTCs may be cleared during an ignition off, ignition on cycle. Carry out a road test (if safe to do so), check the functionality of the system and retrieve any DTCs **before** turning the ignition off.

| DTC     | DESCRIPTION              | POSSIBLE CAUSES   | ACTION  |
|---------|--------------------------|---|---|
| B1A8455 | Car Configuration Data   | <ul style="list-style-type: none"> <li>Data does not match that expected for VIN range/Air suspension incorrectly configured</li> </ul>   | Configure the car configuration file (CCF) using the approved diagnostic system. Clear the DTC and test for normal operation. |
| C112201 | Steering Isolation Valve | <ul style="list-style-type: none"> <li>Servotronic steering valve disconnected</li> <li>Servotronic steering valve circuit(s) high resistance or short circuit to ground</li> </ul> | Refer to the guided diagnostic routine for this code on the approved diagnostic system.                                       |

|         |   |  |   |
|---------|---|--|---|
|         |   | <ul style="list-style-type: none"> <li>▪ Servotronic steering valve fault</li> </ul>   |   |
| C11231C | Steering Isolation Valve Supply Circuit | <ul style="list-style-type: none"> <li>▪ Servotronic steering valve supply circuit high resistance</li> <li>▪ Servotronic steering valve supply circuit short circuit to ground</li> <li>▪ Servotronic steering valve supply circuit short circuit to power</li> <li>▪ Servotronic steering valve fault</li> </ul> | Refer to the guided diagnostic routine for this code on the approved diagnostic system.   |
| C112F72 | Air Spring Valve                        | <ul style="list-style-type: none"> <li>▪ Repeated or frequent level activity in the down direction</li> <li>▪ Corner valve stuck open</li> <li>▪ Corner valve leak to gallery</li> </ul>   | Refer to the approved diagnostic system for corner valve checks.  |
| C113066 | Air Spring Air Supply                   | <ul style="list-style-type: none"> <li>▪ Repeated or frequent level activity in the up direction</li> <li>▪ Air spring leak</li> <li>▪ Air harness leak</li> <li>▪ Exhaust valve stuck open</li> <li>▪ Corner valve leak to gallery</li> </ul>   | Visually inspect the system for air leakage. Refer to the guided diagnostic routine for this code on the approved diagnostic system.  |
| C11307A | Air Spring Sir Supply                   | <ul style="list-style-type: none"> <li>▪ Unable to lift vehicle</li> <li>▪ Detached air pipe</li> <li>▪ Loose or burst air pipe</li> <li>▪ Excessive air spring leak</li> <li>▪ Height sensor stuck</li> </ul>   | Visually inspect the system for an excessive air leak. Check the height sensor linkage(s) for damage/restrictions. Visually inspect the air harness for evidence of melting, crushing, kinking or collapsing. Refer to the guided diagnostic routine for this code on the approved diagnostic system. |

|         |                       |   |  |
|---------|-----------------------|---|--|
|         |                       | <ul style="list-style-type: none"> <li>▪ Height sensor failure</li> <li>▪ Blockage in air harness</li> </ul>  |  |
| C113192 | Air Spring Air Supply | <ul style="list-style-type: none"> <li>▪ Unable to pressurize gallery</li> <li>▪ Insufficient pressure from compressor</li> <li>▪ Detached air pipe</li> <li>▪ Loose or burst air pipe</li> <li>▪ Reservoir valve block pipes incorrectly installed (unions reversed)</li> <li>▪ Pressure sensor fault</li> </ul> | Visually inspect the system for air leakage. Check the reservoir valve block pipes for correct routing and installation.   |
| C1A001C | Control Module        | <ul style="list-style-type: none"> <li>▪ A momentary low voltage event occurred</li> <li>▪ Low battery voltage</li> <li>▪ One or more control valve supplies intermittent short circuit to ground</li> </ul>  | Check the battery charge, condition and circuit. Refer to the guided diagnostic routine for this code on the approved diagnostic system.   |
| C1A001D | Control Module        | <ul style="list-style-type: none"> <li>▪ Isolation switch current monitor</li> <li>▪ One or more valve supplies short circuit to ground</li> <li>▪ Rear valve block disconnected</li> <li>▪ Air suspension control module failure</li> </ul>  | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.   |
| C1A0049 | Control Module        | <ul style="list-style-type: none"> <li>▪ Water ingress to valve wiring harness or connector(s)</li> <li>▪ Valve supply circuit(s) short circuit to power</li> <li>▪ Air suspension control module</li> </ul>  | Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |

|         |                          |  |   |
|---------|--------------------------|--|---|
|         |                          | internal electrical failure  |   |
| C1A0053 | Control Module           | <ul style="list-style-type: none"> <li>▪ This is not a fault, the system has been deflated using the diagnostic routine</li> </ul>   | Carry out Air suspension deflation exit routine using the approved diagnostic system or the routine listed at the end of this section.  |
| C1A0054 | Control Module           | <ul style="list-style-type: none"> <li>▪ Air suspension control module not calibrated</li> <li>▪ Air suspension control module has been set into manufacturing, calibration or tight tolerance mode</li> </ul>   | If the problem is found during pre-delivery inspection, check that the air suspension control module (RLM) is NOT in manufacturing mode, calibration mode or tight tolerance mode using the approved diagnostic system. Configure the RLM to customer mode if necessary (tight tolerance mode and manufacturing mode can be set /cleared by starting then ending the suspension geometry set process from IDS menu. Refer to the relevant Technical Service Bulletin). Clear the DTC and test for normal operation. Only if the DTC re-occurs, should the system be calibrated using the approved diagnostic system. Clear the DTC and test for normal operation. |
| C1A0119 | LED                      | <ul style="list-style-type: none"> <li>▪ Switch pack LED circuit, short circuit to power</li> <li>▪ One or more LEDs short circuit to each other</li> </ul>  | Refer to the guided diagnostic routine for this code on the approved diagnostic system.   |
| C1A031C | Left Front Height Sensor | <ul style="list-style-type: none"> <li>▪ Left-hand front height sensor signal voltage out of range</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage disconnected</li> <li>▪ Height sensor linkage damaged /bent</li> <li>▪ Height sensor disconnected</li> <li>▪ Height sensor linkage toggled (now operating in reverse direction)</li> <li>▪ Height sensor bracket damaged /bent</li> </ul> | Visually inspect the wiring harness and connectors for water ingress. For height sensor linkage, mounting and circuit tests refer to the guided diagnostic routine on the approved diagnostic system. Check the height sensor bracket condition and security. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.                                   |



|         |                          |   |  |
|---------|--------------------------|---|--|
|         |                          | <ul style="list-style-type: none"> <li>▪ Height sensor incorrectly installed</li> <li>▪ Height sensor installed on wrong side of vehicle</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Incorrect height calibration</li> <li>▪ Air suspension control module failure</li> </ul>  |  |
| C1A0326 | Left Front Height Sensor | <ul style="list-style-type: none"> <li>▪ Left-hand front height sensor signal voltage stuck whilst vehicle is driven</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage disconnected</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Air suspension control module failure</li> </ul> | Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.   |
| C1A0329 | Left Front Height Sensor | <ul style="list-style-type: none"> <li>▪ Left-hand front height sensor signal invalid</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage damaged /bent</li> <li>▪ Height sensor bracket damaged /bent</li> </ul>   | Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the height sensor bracket condition and security. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. |

|         |                          |  |  |
|---------|--------------------------|--|--|
|         |                          | <ul style="list-style-type: none"> <li>▪ Height sensor incorrectly installed</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Incorrect height calibration process</li> </ul>  |  |
| C1A0392 | Left Front Height Sensor | <ul style="list-style-type: none"> <li>▪ Left-hand front height sensor height changing slower than expected</li> <li>▪ Suspension prevented from moving</li> <li>▪ Height sensor incorrectly installed</li> <li>▪ Air spring leak</li> <li>▪ Air harness leak</li> <li>▪ Blocked /damaged air harness</li> <li>▪ Blocked /damaged gallery pipe</li> <li>▪ Corner valve stuck closed</li> <li>▪ Front or rear valve block pipes incorrectly installed (unions reversed)</li> <li>▪ Reservoir valve block pipes incorrectly installed (unions reversed)</li> <li>▪ Reservoir valve stuck open</li> <li>▪ Exhaust valve stuck closed</li> <li>▪ Corner valve air leak</li> <li>▪ Pressure sensor fault</li> </ul> | <p>Check that the vehicle is free of obstructions. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check for an air spring leak. Check the air harness for evidence of melting, crushing, kinking or collapsing. Check the front and rear valve block pipes for correct routing and installation. Check the reservoir valve block pipes for correct routing and installation. Refer to the approved diagnostic system for corner, reservoir and exhaust valve checks. Check the corner valve for leaks.</p> |

|         |                           |   |  |
|---------|---------------------------|---|--|
|         |                           | <ul style="list-style-type: none"> <li>▪ Height sensor failure</li> </ul>   |  |
| C1A041C | Right Front Height Sensor | <ul style="list-style-type: none"> <li>▪ Right-hand front height sensor signal voltage out of range</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage disconnected</li> <li>▪ Height sensor linkage damaged /bent</li> <li>▪ Height sensor disconnected</li> <li>▪ Height sensor linkage toggled (now operating in reverse direction)</li> <li>▪ Height sensor bracket damaged /bent</li> <li>▪ Height sensor incorrectly installed</li> <li>▪ Height sensor installed on wrong side of vehicle</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Incorrect height calibration</li> <li>▪ Air suspension control module failure</li> </ul> | <p>Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the height sensor bracket condition and security. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.</p> |
| C1A0426 | Right Front Height Sensor | <ul style="list-style-type: none"> <li>▪ Right-hand front height sensor signal voltage stuck whilst vehicle is driven</li> <li>▪ Water ingress to wiring harness or connectors</li> </ul>   | <p>Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.</p>  |

|         |                           |  |   |
|---------|---------------------------|--|---|
|         |                           | <ul style="list-style-type: none"> <li>▪ Height sensor linkage disconnected</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Air suspension control module failure</li> </ul>  |   |
| C1A0429 | Right Front Height Sensor | <ul style="list-style-type: none"> <li>▪ Right-hand front height sensor signal invalid:</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage damaged /bent</li> <li>▪ Height sensor bracket damaged /bent</li> <li>▪ Height sensor incorrectly installed</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Incorrect height calibration process</li> </ul> | Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the height sensor bracket condition and security. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system.  |
| C1A0492 | Right Front Height Sensor | <ul style="list-style-type: none"> <li>▪ Right-hand front height sensor height changing slower than expected</li> <li>▪ Suspension prevented from moving</li> <li>▪ Height sensor incorrectly installed</li> <li>▪ Air spring leak</li> <li>▪ Air harness leak</li> </ul>  | Check that the vehicle is free of obstructions. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check for an air spring leak. Check the air harness for evidence of melting, crushing, kinking or collapsing. Check the front and rear valve block pipes for correct routing and installation. Check the reservoir valve block pipes for correct routing and installation. |

|         |                         |   |  |
|---------|-------------------------|---|--|
|         |                         | <ul style="list-style-type: none"> <li>▪ Blocked /damaged air harness</li> <li>▪ Blocked /damaged gallery pipe</li> <li>▪ Corner valve stuck closed</li> <li>▪ Front or rear valve block pipes incorrectly installed (unions reversed)</li> <li>▪ Reservoir valve block pipes incorrectly installed (unions reversed)</li> <li>▪ Reservoir valve stuck open</li> <li>▪ Exhaust valve stuck closed</li> <li>▪ Corner valve air leak</li> <li>▪ Pressure sensor fault</li> <li>▪ Height sensor failure</li> </ul> | <p>Refer to the approved diagnostic system for corner, reservoir and exhaust valve checks. Check the corner valve for leaks.</p>   |
| C1A051C | Left Rear Height Sensor | <ul style="list-style-type: none"> <li>▪ Left-hand rear height sensor signal voltage out of range</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage disconnected</li> <li>▪ Height sensor linkage damaged /bent</li> <li>▪ Height sensor disconnected</li> <li>▪ Height sensor linkage toggled (now operating in reverse direction)</li> <li>▪ Height sensor bracket damaged /bent</li> <li>▪ Height sensor incorrectly installed</li> </ul>                            | <p>Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the height sensor bracket condition and security. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.</p> |

|         |                         |  |  |
|---------|-------------------------|--|--|
|         |                         | <ul style="list-style-type: none"> <li>▪ Height sensor installed on wrong side of vehicle</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Incorrect height calibration</li> <li>▪ Air suspension control module failure</li> </ul>  |  |
| C1A0526 | Left Rear Height Sensor | <ul style="list-style-type: none"> <li>▪ Left-hand rear height sensor signal voltage stuck whilst vehicle is driven</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage disconnected</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Air suspension control module failure</li> </ul> | Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.   |
| C1A0529 | Left Rear Height Sensor | <ul style="list-style-type: none"> <li>▪ Left-hand rear height sensor signal invalid</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage damaged /bent</li> <li>▪ Height sensor bracket damaged /bent</li> <li>▪ Height sensor incorrectly installed</li> </ul>  | Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the height sensor bracket condition and security. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. |

|         |                         |  |   |
|---------|-------------------------|--|---|
|         |                         | <ul style="list-style-type: none"> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Incorrect height calibration process</li> </ul>   |   |
| C1A0592 | Left Rear Height Sensor | <ul style="list-style-type: none"> <li>▪ Left-hand rear height sensor height changing slower than expected</li> <li>▪ Suspension prevented from moving</li> <li>▪ Height sensor incorrectly installed</li> <li>▪ Air spring leak</li> <li>▪ Air harness leak</li> <li>▪ Blocked /damaged air harness</li> <li>▪ Blocked /damaged gallery pipe</li> <li>▪ Corner valve stuck closed</li> <li>▪ Front or rear valve block pipes incorrectly installed (unions reversed)</li> <li>▪ Reservoir valve block pipes incorrectly installed (unions reversed)</li> <li>▪ Reservoir valve stuck open</li> <li>▪ Exhaust valve stuck closed</li> <li>▪ Corner valve air leak</li> <li>▪ Pressure sensor fault</li> <li>▪ Height sensor failure</li> </ul> | <p>Check that the vehicle is free of obstructions. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be re-calibrated. Calibrate the system using the approved diagnostic system. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check for an air spring leak. Check the air harness for evidence of melting, crushing, kinking or collapsing. Check the front and rear valve block pipes for correct routing and installation. Check the reservoir valve block pipes for correct routing and installation. Refer to the approved diagnostic system for corner, reservoir and exhaust valve checks. Check the corner valve for leaks.</p> |

|         |                          |  |  |
|---------|--------------------------|--|--|
| C1A061C | Right Rear Height Sensor | <ul style="list-style-type: none"> <li>▪ Right-hand rear height sensor signal voltage out of range</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage disconnected</li> <li>▪ Height sensor linkage damaged /bent</li> <li>▪ Height sensor disconnected</li> <li>▪ Height sensor linkage toggled (now operating in reverse direction)</li> <li>▪ Height sensor bracket damaged /bent</li> <li>▪ Height sensor incorrectly installed</li> <li>▪ Height sensor installed on wrong side of vehicle</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Incorrect height calibration</li> <li>▪ Air suspension control module failure</li> </ul> | <p>Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the height sensor bracket condition and security. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.</p> |
| C1A0626 | Right Rear Height Sensor | <ul style="list-style-type: none"> <li>▪ Right-hand rear height sensor signal voltage stuck whilst vehicle is driven</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage disconnected</li> <li>▪ Height sensor harness wiring</li> </ul>   | <p>Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.</p>  |



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|         |                          | <p>short circuit to ground, short circuit to power or high resistance</p> <ul style="list-style-type: none"> <li>▪ Height sensor failure</li> <li>▪ Air suspension control module failure</li> </ul>   |  |
| C1A0629 | Right Rear Height Sensor | <ul style="list-style-type: none"> <li>▪ Right-hand rear height sensor signal invalid</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage damaged /bent</li> <li>▪ Height sensor bracket damaged /bent</li> <li>▪ Height sensor incorrectly installed</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Incorrect height calibration process</li> </ul> | <p>Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the height sensor bracket condition and security. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system.</p>  |
| C1A0692 | Right Rear Height Sensor | <ul style="list-style-type: none"> <li>▪ Right-hand rear height sensor height changing slower than expected</li> <li>▪ Suspension prevented from moving</li> <li>▪ Height sensor incorrectly installed</li> <li>▪ Air spring leak</li> <li>▪ Air harness leak</li> <li>▪ Blocked /damaged air harness</li> </ul>   | <p>Check that the vehicle is free of obstructions. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check for an air spring leak. Check the air harness for evidence of melting, crushing, kinking or collapsing. Check the front and rear valve block pipes for correct routing and installation. Check the reservoir valve block pipes for correct routing and installation. Refer to the approved diagnostic system for corner, reservoir and exhaust valve checks. Check the corner valve for leaks.</p> |

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|         |                    | <ul style="list-style-type: none"> <li>▪ Blocked /damaged gallery pipe</li> <li>▪ Corner valve stuck closed</li> <li>▪ Front or rear valve block pipes incorrectly installed (unions reversed)</li> <li>▪ Reservoir valve block pipes incorrectly installed (unions reversed)</li> <li>▪ Reservoir valve stuck open</li> <li>▪ Exhaust valve stuck closed</li> <li>▪ Corner valve air leak</li> <li>▪ Pressure sensor fault</li> <li>▪ Height sensor failure</li> </ul>   |   |
| C1A0762 | Cross Articulation | <ul style="list-style-type: none"> <li>▪ Cross articulation too large whilst vehicle is driven</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage damaged /bent</li> <li>▪ Height sensor linkage loose /disconnected</li> <li>▪ Height sensor bracket damaged /bent</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor removed and reinstalled without being recalibrated</li> <li>▪ New height sensor installed without calibration</li> </ul> | Follow the process detailed in the relevant special service message (SSM). Check the condition and security of the height sensor bracket(s). Check the height sensor for correct fitment and fixings torque. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. |

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|         |  | <ul style="list-style-type: none"> <li>▪ Incorrect height calibration</li> <li>▪ Height sensor failure</li> </ul>  |   |
| C1A081C | Pressure Sensor Supply                   | <ul style="list-style-type: none"> <li>▪ Pressure sensor supply voltage out of range</li> <li>▪ Pressure sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Pressure sensor failure</li> <li>▪ Air suspension control module failure</li> </ul>   | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.  |
| C1A091C | Pressure Sensor Signal                   | <ul style="list-style-type: none"> <li>▪ Pressure sensor signal voltage out of range</li> <li>▪ Pressure sensor disconnected</li> <li>▪ Pressure sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Pressure sensor failure</li> <li>▪ Air suspension control module failure</li> </ul>   | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.  |
| C1A1064 | Pressure Fluctuates When System Inactive | <ul style="list-style-type: none"> <li>▪ Reservoir and air spring pipes incorrectly installed to front or rear valve block (unions reversed)</li> <li>▪ Corner valve stuck open</li> <li>▪ Pressure sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Pressure sensor failure</li> </ul> | Check the reservoir and air spring pipes for correct routing and installation. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |

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|         |  | <ul style="list-style-type: none"> <li>▪ Air suspension control module failure</li> </ul>   |  |
| C1A1164 | Pressure Fluctuates When System Inactive           | <ul style="list-style-type: none"> <li>▪ Reservoir and air spring pipes incorrectly installed to front or rear valve block (unions reversed)</li> <li>▪ Corner valve internal leak</li> <li>▪ Reservoir valve internal leak</li> <li>▪ Pressure sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Pressure sensor failure</li> </ul>  | Check the reservoir and air spring pipes for correct routing and installation. For corner valve, reservoir valve, pressure sensor and circuit tests refer to the guided diagnostic routine for this code on the approved diagnostic system.      |
| C1A1364 | Pressure Does Not Decrease When Venting Gallery    | <ul style="list-style-type: none"> <li>▪ Exhaust valve stuck closed</li> <li>▪ Exhaust valve does not hold minimum retention pressure</li> <li>▪ Gallery pipe blocked/damaged</li> <li>▪ Pressure sensor fault</li> <li>▪ Air suspension exhaust silencer blocked/restricted</li> <li>▪ Air suspension exhaust pipe blocked/damaged</li> <li>▪ Reservoir valve block pipes incorrectly installed (unions reversed)</li> </ul> | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the Air suspension exhaust pipe and silencer for blockage/restriction. Check the reservoir valve block pipes for correct routing and installation. |
| C1A1864 | Pressure Increase Too Rapid When Filling Reservoir | <ul style="list-style-type: none"> <li>▪ Reservoir valve stuck closed</li> <li>▪ Reservoir pipe blocked/damaged</li> <li>▪ Reservoir port blocked/restricted</li> <li>▪ Pressure sensor fault</li> </ul>  | Refer to the guided diagnostic routine for this code on the approved diagnostic system.  |

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| C1A2064 | Pressure Increase Too Slow When Filling Reservoir | <ul style="list-style-type: none"> <li>▪ Compressor fault</li> <li>▪ Reservoir pipe air leak</li> <li>▪ Reservoir air leak</li> <li>▪ Gallery pipe air leak</li> <li>▪ Intake filter blocked/restricted</li> <li>▪ Intake pipe blocked/restricted</li> <li>▪ Air suspension intake silencer blocked/restricted</li> <li>▪ Corner valve stuck open</li> <li>▪ Pressure sensor fault</li> </ul> | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the Air suspension intake pipe and silencer for blockage/restriction.                      |
| C1A2464 | No Temperature Increase When Compressor Requested | <ul style="list-style-type: none"> <li>▪ Air compressor cylinder head temperature sensor disconnected</li> <li>▪ Air compressor cylinder head temperature sensor detached from cylinder head</li> <li>▪ Air compressor cylinder head temperature sensor fault</li> <li>▪ Air compressor fault</li> </ul>  | Check the security of the compressor cylinder head temperature sensor and electrical connection. Refer to the guided diagnostic routine for this code on the approved diagnostic system. |
| C1A2467 | No Temperature Increase When Compressor Requested | <ul style="list-style-type: none"> <li>▪ Temperature takes too long to read after suitable compressor runtime</li> <li>▪ Air compressor cylinder head temperature sensor disconnected</li> <li>▪ Air compressor cylinder head temperature sensor fault</li> <li>▪ Air compressor disconnected</li> </ul>  | Check the security of the compressor cylinder head temperature sensor and electrical connection. Refer to the guided diagnostic routine for this code on the approved diagnostic system. |

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|         |                            | <ul style="list-style-type: none"> <li>▪ Air compressor ground circuit high resistance</li> <li>▪ Air compressor fault</li> </ul>  |  |
| C1A2616 | Temperature Sensor Circuit | <ul style="list-style-type: none"> <li>▪ Temperature sensor voltage out of range</li> <li>▪ Air compressor cylinder head temperature sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Air suspension control module failure</li> </ul>  | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.   |
| C1A2712 | Compressor Circuit         | <ul style="list-style-type: none"> <li>▪ Compressor voltage present when compressor not requested</li> <li>▪ Air compressor harness wiring short circuit to power</li> <li>▪ Air compressor relay fault</li> <li>▪ Air suspension control module failure</li> </ul>  | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.   |
| C1A2714 | Compressor Circuit         | <ul style="list-style-type: none"> <li>▪ Compressor voltage present when compressor requested</li> <li>▪ Air suspension control module supply (COMP_V) fuse in battery junction box (BJB) failed</li> <li>▪ Air supply relay /air compressor supply fusible link in BJB failed /not installed</li> <li>▪ Air compressor harness wiring short circuit to ground or high resistance</li> </ul> | Check/renew fuses as necessary. Refer to the electrical guides. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |

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|         |                                  | <ul style="list-style-type: none"> <li>▪ Air compressor relay failure</li> <li>▪ Air suspension control module failure</li> </ul>  |  |
| C1A2729 | Compressor Circuit               | <ul style="list-style-type: none"> <li>▪ Compressor relay control voltage signal invalid</li> <li>▪ Air compressor harness wiring short circuit to power</li> <li>▪ Air compressor relay fault</li> <li>▪ Air suspension control module failure</li> </ul>   | DTC C1A2712 will be set first. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.  |
| C1A2864 | Wrong Number of LEDs Illuminated | <ul style="list-style-type: none"> <li>▪ Wrong number of LEDs illuminated on switch pack</li> <li>▪ Air suspension control module supply (BATTERY) fuse in battery junction box (BJB) failed</li> <li>▪ Switch pack harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ LED circuit short circuit to power</li> <li>▪ One or more LEDs short circuit to each other</li> <li>▪ Switch pack failure</li> <li>▪ Air suspension control module failure</li> </ul> | Check/renew fuse as necessary. Refer to the electrical guides. Refer to the electrical guides and check the switch pack and LED wiring circuits. Renew/repair as necessary. Refer to the warranty policy and procedures manual if a module is suspect. |
| C1A2992 | Switch Activation Too Long       | <ul style="list-style-type: none"> <li>▪ Ride height change switch activation too long</li> <li>▪ Switch pressed for more than 255 seconds</li> <li>▪ Switch pack harness wiring</li> </ul>  | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.   |

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|         |                                    | <p>short circuit to ground, short circuit to power or high resistance</p> <ul style="list-style-type: none"> <li>▪ Switch pack failure</li> <li>▪ Air suspension control module failure</li> </ul>   |   |
| C1A3064 | Both Switches Pressed At Same Time | <ul style="list-style-type: none"> <li>▪ Raise and lower switches activated at same time</li> <li>▪ Air suspension control module supply (BATTERY) fuse in battery junction box (BJB) failed</li> <li>▪ Switch pack harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Switch pack failure</li> <li>▪ Air suspension control module failure</li> </ul> | Check/renew fuse as necessary. Refer to the electrical guides. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |
| C1A3101 | Left Front Corner Valve            | <ul style="list-style-type: none"> <li>▪ Left-hand front corner valve, general electrical failure</li> <li>▪ Front valve block disconnected</li> <li>▪ Front valve block harness wiring short circuit to ground or high resistance</li> <li>▪ Left-hand front corner valve failure</li> <li>▪ Air suspension control module failure</li> </ul>   | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.  |
| C1A3201 | Right Front Corner Valve           | <ul style="list-style-type: none"> <li>▪ Right-hand front corner valve, general electrical failure</li> </ul>  | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.  |



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|         |                         | <ul style="list-style-type: none"> <li>▪ Front valve block disconnected</li> <li>▪ Front valve block harness wiring short circuit to ground or high resistance</li> <li>▪ Right-hand front corner valve failure</li> <li>▪ Air suspension control module failure</li> </ul>  |  |
| C1A3301 | Left Rear Corner Valve  | <ul style="list-style-type: none"> <li>▪ Left-hand rear corner valve, general electrical failure</li> <li>▪ Rear valve block disconnected</li> <li>▪ Rear valve block harness wiring short circuit to ground or high resistance</li> <li>▪ Left-hand rear corner valve failure</li> <li>▪ Air suspension control module failure</li> </ul>   | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |
| C1A3401 | Right Rear Corner Valve | <ul style="list-style-type: none"> <li>▪ Right-hand rear corner valve, general electrical failure</li> <li>▪ Rear valve block disconnected</li> <li>▪ Rear valve block harness wiring short circuit to ground or high resistance</li> <li>▪ Right-hand rear corner valve failure</li> <li>▪ Air suspension control module failure</li> </ul> | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |
| C1A3501 | Reservoir Valve         | <ul style="list-style-type: none"> <li>▪ Reservoir valve general electrical failure</li> </ul>   | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |

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|         |                        | <ul style="list-style-type: none"> <li>▪ Reservoir valve block disconnected</li> <li>▪ Reservoir valve block harness wiring short circuit to ground or high resistance</li> <li>▪ Reservoir valve block failure</li> <li>▪ Air suspension control module failure</li> </ul>   |  |
| C1A3601 | Exhaust Valve          | <ul style="list-style-type: none"> <li>▪ Exhaust valve, general electrical failure</li> <li>▪ Exhaust valve disconnected</li> <li>▪ Exhaust valve harness wiring short circuit to ground or high resistance</li> <li>▪ Exhaust valve failure</li> <li>▪ Air suspension control module failure</li> </ul>                          | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |
| C1A3701 | Front Cross-Link Valve | <ul style="list-style-type: none"> <li>▪ Front cross-link valve general electrical failure</li> <li>▪ Front valve block disconnected</li> <li>▪ Front valve block harness wiring short circuit to ground or high resistance</li> <li>▪ Front cross-link valve failure</li> <li>▪ Air suspension control module failure</li> </ul> | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |
| C1A3801 | Rear Cross-Link Valve  | <ul style="list-style-type: none"> <li>▪ Rear cross-link valve general electrical failure</li> <li>▪ Rear valve block disconnected</li> <li>▪ Rear valve block harness wiring</li> </ul>  | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |

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|         |                                  | <ul style="list-style-type: none"> <li>short circuit to ground or high resistance</li> <li>▪ Rear cross-link valve failure</li> <li>▪ Air suspension control module failure</li> </ul>  |  |
| C1A5501 | Ignition Switch Input Circuit    | <ul style="list-style-type: none"> <li>▪ Ignition switch input circuit; ignition on while wake-up off or ignition off while engine running</li> <li>▪ Ignition switch input circuit short circuit to ground, short circuit to power or high resistance</li> </ul>   | Refer to the guided diagnostic routine for this code on the approved diagnostic system.  |
| C1A681C | Left Front Height Sensor Supply  | <ul style="list-style-type: none"> <li>▪ Left-hand front height sensor supply circuit voltage out of range</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Air suspension control module failure</li> </ul>  | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |
| C1A691C | Right Front Height Sensor Supply | <ul style="list-style-type: none"> <li>▪ Right-hand front height sensor supply circuit voltage out of range</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Air suspension control module failure</li> </ul> | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |

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| C1A701C | Left Rear Height Sensor Supply     | <ul style="list-style-type: none"> <li>▪ Left-hand rear height sensor supply circuit voltage out of range</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Air suspension control module failure</li> </ul>   | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.  |
| C1A711C | Right Rear Height Sensor Supply    | <ul style="list-style-type: none"> <li>▪ Right-hand rear height sensor supply circuit voltage out of range</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Air suspension control module failure</li> </ul>  | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.  |
| C1A721C | Left Front Height Sensor Mechanism | <ul style="list-style-type: none"> <li>▪ Left-hand front height sensor signal voltage out of range (mechanical)</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage disconnected</li> <li>▪ Height sensor linkage damaged /bent</li> <li>▪ Height sensor disconnected</li> <li>▪ Height sensor linkage toggled (now operating in reverse direction)</li> <li>▪ Height sensor bracket damaged /bent</li> </ul> | Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the height sensor bracket condition and security. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |

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|         |                                     | <ul style="list-style-type: none"> <li>▪ Height sensor incorrectly installed</li> <li>▪ Incorrect height calibration</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Air suspension control module failure</li> </ul>  |  |
| C1A731C | Right Front Height Sensor Mechanism | <ul style="list-style-type: none"> <li>▪ Right-hand front height sensor voltage out of range (mechanical)</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage disconnected</li> <li>▪ Height sensor linkage damaged /bent</li> <li>▪ Height sensor disconnected</li> <li>▪ Height sensor linkage toggled (now operating in reverse direction)</li> <li>▪ Height sensor bracket damaged /bent</li> <li>▪ Height sensor incorrectly installed</li> <li>▪ Incorrect height calibration</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Air suspension control module failure</li> </ul> | Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the height sensor bracket condition and security. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be re-calibrated. Calibrate the system using the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |

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| C1A741C | Left Rear Height Sensor Mechanism  | <ul style="list-style-type: none"> <li>▪ Left-hand rear height sensor signal voltage out of range (mechanical)</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage disconnected</li> <li>▪ Height sensor linkage damaged /bent</li> <li>▪ Height sensor disconnected</li> <li>▪ Height sensor linkage toggled (now operating in reverse direction)</li> <li>▪ Height sensor bracket damaged /bent</li> <li>▪ Height sensor incorrectly installed</li> <li>▪ Incorrect height calibration</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Air suspension control module failure</li> </ul> | <p>Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the height sensor bracket condition and security. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.</p> |
| C1A751C | Right Rear Height Sensor Mechanism | <ul style="list-style-type: none"> <li>▪ Right-hand rear height sensor signal voltage out of range (mechanical)</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Height sensor linkage disconnected</li> <li>▪ Height sensor linkage damaged /bent</li> </ul>   | <p>Visually inspect the wiring harness and connectors for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Check the height sensor bracket condition and security. Check the height sensor for correct installation and torque of fixings. If any height sensor fixings are slackened or found to be loose, or a height sensor has been changed, the vehicle ride height must be recalibrated. Calibrate the system using the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect.</p> |

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|         |                            | <ul style="list-style-type: none"> <li>▪ Height sensor disconnected</li> <li>▪ Height sensor linkage toggled (now operating in reverse direction)</li> <li>▪ Height sensor bracket damaged /bent</li> <li>▪ Height sensor incorrectly installed</li> <li>▪ Incorrect height calibration</li> <li>▪ Height sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Height sensor failure</li> <li>▪ Air suspension control module failure</li> </ul> |   |
| C1B1862 | Supply Voltage X-Ref Check | <ul style="list-style-type: none"> <li>▪ Inconsistent battery voltages received by Air suspension control module</li> <li>▪ Air suspension control module supply circuit(s) short circuit to ground</li> <li>▪ Air suspension control module supply circuit(s) high resistance</li> <li>▪ Air suspension control module failure</li> </ul>  | Refer to the guided diagnostic routine for this code on the approved diagnostic system. |
| C1B1903 | Door Status Signal         | <ul style="list-style-type: none"> <li>▪ Door status signal, pulse width modulated failures</li> <li>▪ Incorrect software loaded to Air suspension control module</li> <li>▪ Central junction box to Air suspension module harness wiring short</li> </ul>  | Refer to the guided diagnostic routine for this code on the approved diagnostic system. |

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|         |   | <p>circuit to ground, short circuit to power or high resistance</p> <ul style="list-style-type: none"> <li>▪ Central junction box fault</li> </ul>  |  |
| C1B211C | Compressor Brush Card Temperature Sensor Circuit    | <ul style="list-style-type: none"> <li>▪ Compressor brush card temperature sensor circuit, voltage out of range</li> <li>▪ Compressor brush card temperature sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Compressor brush card temperature sensor failure</li> <li>▪ Air suspension control module failure</li> </ul> | Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |
| U007388 | Control Module Communication Bus 'A' Off            | <ul style="list-style-type: none"> <li>▪ CAN bus connections short circuit to each other</li> </ul>   | Refer to the Network Communications section of the workshop manual.  |
| U010087 | Lost Communication With ECM/PCM "A"                 | <ul style="list-style-type: none"> <li>▪ CAN bus fault</li> <li>▪ ECM disconnected</li> <li>▪ ECM not configured</li> <li>▪ ECM failure</li> </ul>  | Refer to the Network Communications section of the workshop manual.  |
| U010187 | Lost Communication With Transmission Control Module | <ul style="list-style-type: none"> <li>▪ CAN bus fault</li> <li>▪ Transmission control module (TCM) disconnected</li> <li>▪ TCM not configured</li> <li>▪ TCM failure</li> </ul>  | Refer to the Network Communications section of the workshop manual.  |
| U010287 | Lost Communication                                  | <ul style="list-style-type: none"> <li>▪ CAN bus fault</li> </ul>   | Refer to the Network Communications section of the workshop manual.  |



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|         | With Transfer Box Control Module                        | <ul style="list-style-type: none"> <li>▪ Transfer box control module disconnected</li> <li>▪ Transfer box control module not configured</li> <li>▪ Transfer box control module failure</li> </ul>                                   |   |
| U012287 | Lost Communication With Vehicle Dynamics Control Module | <ul style="list-style-type: none"> <li>▪ CAN bus fault</li> <li>▪ ABS module disconnected</li> <li>▪ ABS module not configured</li> <li>▪ ABS module failure</li> </ul>   | Refer to the Network Communications section of the workshop manual. |
| U012687 | Lost Communication With Steering Angle Sensor Module    | <ul style="list-style-type: none"> <li>▪ CAN bus fault</li> <li>▪ SASM disconnected</li> <li>▪ SASM not configured /calibrated</li> <li>▪ SASM failure</li> </ul>   | Refer to the Network Communications section of the workshop manual. |
| U012887 | Lost Communication With Park Brake Control Module       | <ul style="list-style-type: none"> <li>▪ CAN bus fault</li> <li>▪ Park brake module disconnected</li> <li>▪ Park brake module not configured</li> <li>▪ Park brake module failure</li> </ul>  | Refer to the Network Communications section of the workshop manual. |
| U013387 | Lost Communication With Active Roll Control Module      | <ul style="list-style-type: none"> <li>▪ CAN bus fault</li> <li>▪ Vehicle dynamic suspension system module disconnected</li> <li>▪ Vehicle dynamic suspension system module not configured</li> <li>▪ ABS module failure</li> </ul> | Refer to the Network Communications section of the workshop manual. |
| U013687 | Lost Communication With                                 | <ul style="list-style-type: none"> <li>▪ CAN bus fault</li> </ul>   | Refer to the Network Communications section of the workshop manual. |

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|         | Differential Control Module - Rear                                    | <ul style="list-style-type: none"> <li>▪ Electronic rear differential control module disconnected</li> <li>▪ Electronic rear differential control module not configured</li> <li>▪ Electronic rear differential control module failure</li> </ul>   |  |
| U015587 | Lost Communication With Instrument Panel Cluster (IPC) Control Module | <ul style="list-style-type: none"> <li>▪ CAN bus fault</li> <li>▪ Instrument cluster disconnected</li> <li>▪ Instrument cluster not configured</li> <li>▪ Instrument cluster failure</li> </ul>   | Refer to the Network Communications section of the workshop manual.  |
| U030055 | Internal Control Module Software Incompatibility                      | <ul style="list-style-type: none"> <li>▪ Incorrect software loaded</li> <li>▪ CAN wiring to instrument cluster high resistance</li> <li>▪ Incorrect instrument cluster CAN configuration</li> </ul>   | Configure the Air suspension control module and instrument cluster as necessary using the approved diagnostic system.  |
| U040186 | Invalid Data Received From ECM/PCM A                                  | <ul style="list-style-type: none"> <li>▪ Engine management system fault</li> </ul>  | Refer to the Network Communications section of the workshop manual.  |
| U041686 | Invalid Data Received From Vehicle Dynamics Control Module            | <ul style="list-style-type: none"> <li>▪ Warnings and Messages: <ul style="list-style-type: none"> <li>▪ Warning - Two Chimes</li> <li>▪ Displayed message - SLOW DOWN OR VEHICLE WILL LOWER</li> </ul> </li> <li>▪ Subsequent Warning &amp; Message <ul style="list-style-type: none"> <li>▪ Warning - One Chime.</li> <li>▪ Message - SUSPENSION LOWERED</li> </ul> </li> </ul> | Refer to the Network Communications section of the workshop manual. Check for ABS system DTCs and repair as necessary. |

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|         |  | <ul style="list-style-type: none"> <li>▪ Meaning - Vehicle has lowered to Access height because of failure of another vehicle system</li> <li>▪ ABS fault</li> </ul>  |  |
| U041786 | Invalid Data Received From Park Brake Control Module           | <ul style="list-style-type: none"> <li>▪ Park brake fault</li> </ul>  | Refer to the Network Communications section of the workshop manual.  |
| U042886 | Invalid Data Received From Steering Angle Sensor Module (SASM) | <ul style="list-style-type: none"> <li>▪ SASM not configured /calibrated</li> <li>▪ SAS fault</li> </ul>  | Check the security of the electrical connection. Configure/calibrate the SAS using the approved diagnostic system. Refer to the Network Communications section of the workshop manual. |
| U043486 | Invalid Data Received From Active Roll Control Module          | <ul style="list-style-type: none"> <li>▪ Vehicle dynamic suspension system fault</li> </ul>   | Refer to the Network Communications section of the workshop manual.  |
| U1A1387 | Lost Communication With All Terrain Control Module             | <ul style="list-style-type: none"> <li>▪ Lost communication with all terrain optimization switch</li> <li>▪ CAN bus fault</li> <li>▪ Terrain optimization switch disconnected</li> <li>▪ Terrain response module not configured</li> <li>▪ Terrain response module failure</li> </ul> | Refer to the Network Communications section of the workshop manual.  |
| U1A1449 | CAN Initialization Failure                                     | <ul style="list-style-type: none"> <li>▪ Internal electronic failure</li> </ul>   | Refer to the Network Communications section of the workshop manual.  |
| U1A3562 | VIN Data   | <ul style="list-style-type: none"> <li>▪ VIN from instrument cluster does not match VIN at time of calibration</li> <li>▪ Air suspension control module has been swapped with another vehicle</li> </ul>  | Configure the instrument cluster using the approved diagnostic system.   |

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|         |                   | <ul style="list-style-type: none"> <li>▪ Instrument cluster not configured</li> </ul>   |   |
| U200067 | Motor Temperature | <ul style="list-style-type: none"> <li>▪ Temperature sensor voltage takes too long to read after suitable compressor runtime</li> <li>▪ Compressor brush card temperature sensor harness wiring short circuit to ground, short circuit to power or high resistance</li> <li>▪ Compressor brush card temperature sensor failure</li> <li>▪ Compressor fault</li> </ul> | Refer to the guided diagnostic routine for this code on the approved diagnostic system.   |
| U200701 | Valve(s)          | <ul style="list-style-type: none"> <li>▪ Valve circuit short circuit to ground</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Valve harness wiring short circuit to ground or high resistance</li> <li>▪ Air suspension control module failure</li> </ul>  | DTC C1A001D will be set first. Visually inspect the wiring harness and connectors between the Air suspension control module and the control valves for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. |
| U200711 | Valve(s)          | <ul style="list-style-type: none"> <li>▪ Valve circuit short circuit to ground when system is inactive</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Valve harness wiring short circuit to ground or high resistance</li> <li>▪ Air suspension control module failure</li> </ul>  | Visually inspect the wiring harness and connectors between the Air suspension control module and the control valves for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system.                                |
| U200719 | Valve(s)          |   | Refer to the guided diagnostic routine for  |

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|         |          | <ul style="list-style-type: none"> <li>▪ Valve circuit current above threshold</li> <li>▪ Valve supply circuit(s) intermittent short circuit to ground or high resistance</li> <li>▪ Valve failure</li> <li>▪ Air suspension control module failure</li> </ul>   | this code on the approved diagnostic system.  |
| U200767 | Valve(s) | <ul style="list-style-type: none"> <li>▪ Valve signal incorrect after event</li> <li>▪ Water ingress to wiring harness or connectors</li> <li>▪ Valve supply circuit(s) short circuit to ground, short circuit to power or high resistance</li> <li>▪ Air suspension control module failure</li> </ul> | Visually inspect the wiring harness and connectors between the Air suspension control module and the control valves for water ingress. Refer to the guided diagnostic routine for this code on the approved diagnostic system. Refer to the warranty policy and procedures manual if a module is suspect. |

## AIR SUSPENSION DEFLATION EXIT ROUTINE

1. Key on, engine off.

1. Key off.

1. Press and release raise switch.

1. Press and release lower switch.

1. Key on, engine off.

1. Key on, engine running.

1. Press and release raise switch twice.

1. Press and release lower switch twice.

1. Press and release raise switch.

