

Special Service Message

NOTE: A Special Service Message is a formal communication issued by Land Rover and carries the same importance of a Technical Service Bulletin. An SSM is a quick method of communicating "Need To Know" information to the technical service community. SSM's may be issued in advance of a technical bulletin or may be the only communication on a given topic. All information contained in Land Rover technical communications are intended for use by trained, professional technicians with the knowledge, tools, and equipment required to complete the procedure correctly and safely. It informs the Technicians of conditions that may occur on some vehicles, or provides information that could assist in correct vehicle and diagnostic service.

SSM 75163 - Air Conditioning operating Intermittently. (PHEV – Electric AC Compressor only)

Models : Defender/L663

Discovery Sport / L550

New Range Rover Evoque / L551

Range Rover / L405

Range Rover Sport / L494

Range Rover Velar / L560

Engineer : Shilvock Matthew

Date Last 08 DEC 2020 12:45:11

Updated :

Content : L494 PHEV – L405 PHEV 18MY,19MY and 20MY

L663 PHEV – 22MY

L560 PHEV - 21MY

L550 PHEV, L551 PHEV - 21MY

Note:

This failure mode can manifest intermittently. Correct diagnosis using the detailed procedure below can only be achieved when the vehicle / Air Conditioning system is inoperative.

Issue:

Electric Air Conditioning compressor can be inhibited as designed by a Low System Power Inhibit. This will cause Air Conditioning to operate intermittently causing no cabin cooling.

Cause:

The Low System Power Inhibit is set by the Vehicle Supervisory Controller (VSC) which is part of the Powertrain Control Module (PCM). The Inhibit is set when there is less than or equal to 500watts of power available to the Climate System. Climate Power will be cut resulting in the Electric Air Conditioning compressor being disabled. This is not a climate control issue and the fault will lie in another system.

Action:

Carry out an Autoscan DTC read with Pathfinder and check for any associated DTC's stored and refer to TOPIx. In particular HVAC module, PCM and all High Voltage modules. If a DTC is stored in HVAC then please refer to TOPIx and repair. If there are NO DTC's stored in HVAC module then please proceed to carry out the following Live data reads.

Live Data DID Reads -

9A51 – Electric AC Compressor Inhibits

9801 – AC Compressor Run In Status

988B – Climate Hybrid Component Status

98E1 – AC Compressor Inlet Pressure

9990 – AC System Pressure

Check results of DID 9A51 for any listed Electric AC Compressor Inhibits as shown below. If an Inhibit is shown as YES for Low System Power (See picture attached) then the issue is not HVAC and will require further diagnosis

& investigation.

Important Note:

The Low System Power inhibit will not be present when Air Conditioning is functional and operating correctly. When the Air Conditioning is in a failed state, the Electric Air Conditioning Compressor has been disabled due to Low System Power available and there is no Cabin Cooling the Low System Power inhibit MAY then be present and display YES as shown above.

When Live Data readings have been recorded, please create a .pdf file, raise a TA and attach the pdf to the TA documenting tests that have been conducted.

Diagnostic Procedure:

CAUTION: This procedure requires a minimum of Pathfinder version 305 or later.

NOTE:

- The Jaguar Land Rover (JLR) approved diagnostic equipment will read the Vehicle Identification Number (VIN) for the vehicle and automatically take the vehicle out of 'Transportation mode' if required.

Procedure:

1. Connect the JLR approved battery support unit.
2. Connect the JLR approved diagnostic equipment to the vehicle and begin a new session.

Follow the JLR approved diagnostic equipment prompts.

3. Replicate FAILED STATE with Air Conditioning inoperative.
4. Engine running in Power Mode 7 and 'READY' displayed in instrument cluster.
5. Select 'MAX AC' on climate control panel.
6. Select 'ECU Diagnostic'
7. Select 'HVAC Control Module (HVAC)'
8. Select 'Live Data'
9. Select the following 'DID's'

9A51 – Electric AC Compressor Inhibits
9801 – AC Compressor Run In Status
988B – Climate Hybrid Component Status
98E1 – AC Compressor Inlet Pressure
9990 – AC System Pressure

10. Create pdf file
11. When all of the tasks are complete, exit the session.
12. Disconnect the JLR approved diagnostic equipment and the JLR approved battery support unit.
13. Raise Technical Assist (TA)

A Technical Assistance (TA) should be submitted to Local Technical Support (LTS) documenting all of the above checks and results also attaching the pdf file of the DID results.

Version : 1

Attachments : [Low System Power Inhibit.pdf](#)