

SUSPENSION SYSTEM – GENERAL INFORMATION

STEERING WHEEL VIBRATION/SHIMMY WHILE DRIVING

[G2414296]

GENERAL PROCEDURES

GENERAL EQUIPMENT

EQUIPMENT NAME
Jaguar Land Rover approved battery support unit
Jaguar Land Rover approved diagnostic equipment

CHECK



NOTES:

- Until flat-spots are removed, significant vibration/shimmy may be present. A road test is required to make sure temporary tire flat-spots are removed. For longer term flat-spots, a longer road test may be required. The road test should be completed on normal open roads (highway is optimal) to allow the highest speed that speed limits and road/traffic conditions safely allow.
- **All road tests must be performed with tire pressures at 29psi / 2.0bar / 200kPa.**
- **Make sure that the Inline diagnostic unit (IDU)2 noise, vibration and harshness (NVH) is fully charged before carrying out the diagnostic procedure.**
- **Make sure that the Inline diagnostic sensor (IDU)2 noise, vibration and harshness (NVH) sensor is paired through Bluetooth® to the JLR approved diagnostic equipment.**

1.

 NOTE:

MENA and China markets only: If the retailer is equipped with tire heaters, follow the manufacturers instructions to warm the tires prior to balancing the wheels and tires, if a customer has a steering vibration/shimmy concern:

1. Raise the vehicle using a suitable 2-Post ramp.
Refer to: Lifting (100-02, Description and Operation).
2. Install the tire heater to the tire.
3. Pull the tire heater together and secure with the velcro fastener.
4. Pull the toggles to tighten around the tire to form a good fit.
5. Repeat Steps above to the other tires.
6. Connect all the electrical connectors to the control box and run the tire heating process.
7. When the heating process is complete, remove the tire heaters and lower the vehicle.
8. Adjust tire pressures to the recommended (cold) settings.
Refer to: Specifications (204-04, Specifications).
9. Road test the vehicle for approximately 8 Km (5 miles), if possible road test the vehicle at speeds up to approximately 80 Km/h (50 mph).
10. If the amount of steering vibration/shimmy is considered unacceptable following the initial road test completed in the diagnostic procedure, continue with this procedure.

2.

If steering wheel vibration/shimmy is still present following the normal length PDI road test, continue to the diagnostic procedure below.

3.

 CAUTION:

Make sure that the Jaguar Land Rover-approved diagnostic tool is loaded with the latest level of software.

 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.

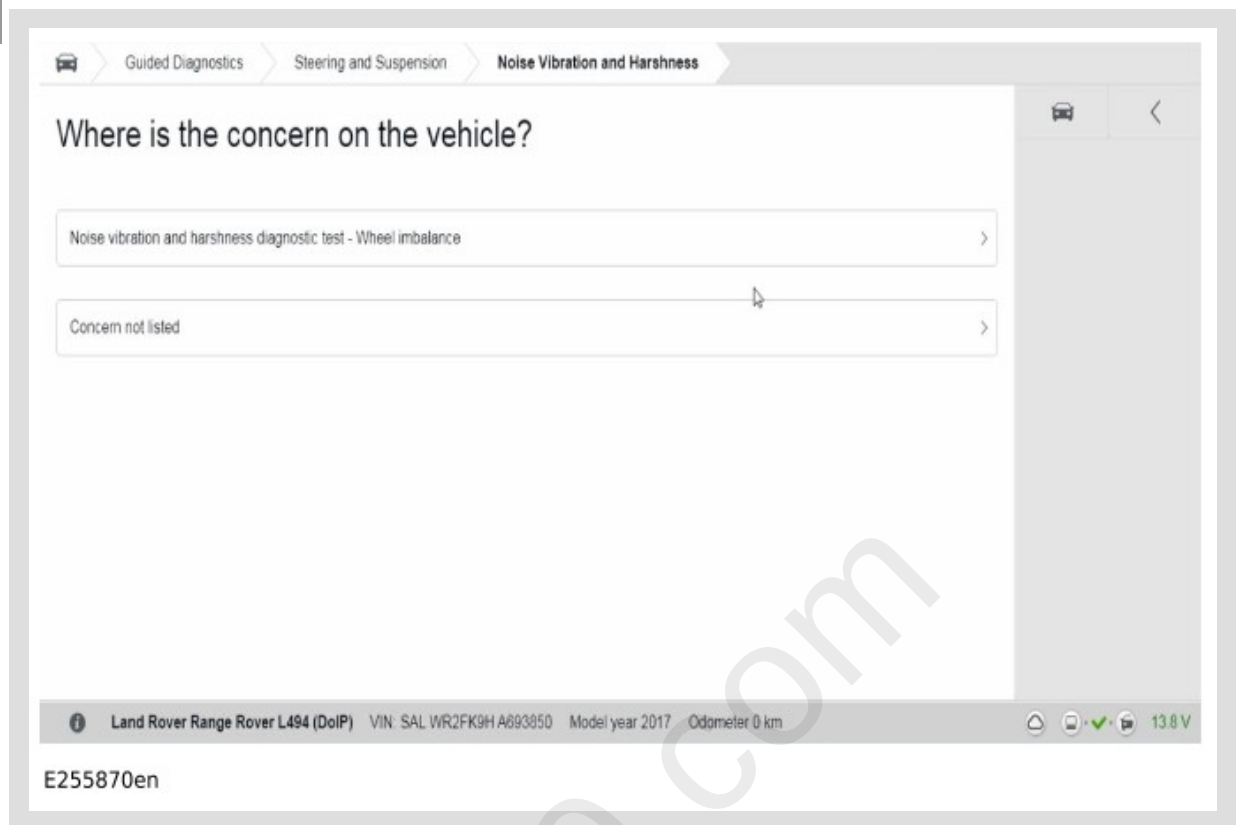
Connect the JLR approved battery support unit.

General Equipment: [Jaguar Land Rover approved battery support unit](#)

4. Connect the JLR approved diagnostic equipment to the vehicle and begin a new session.

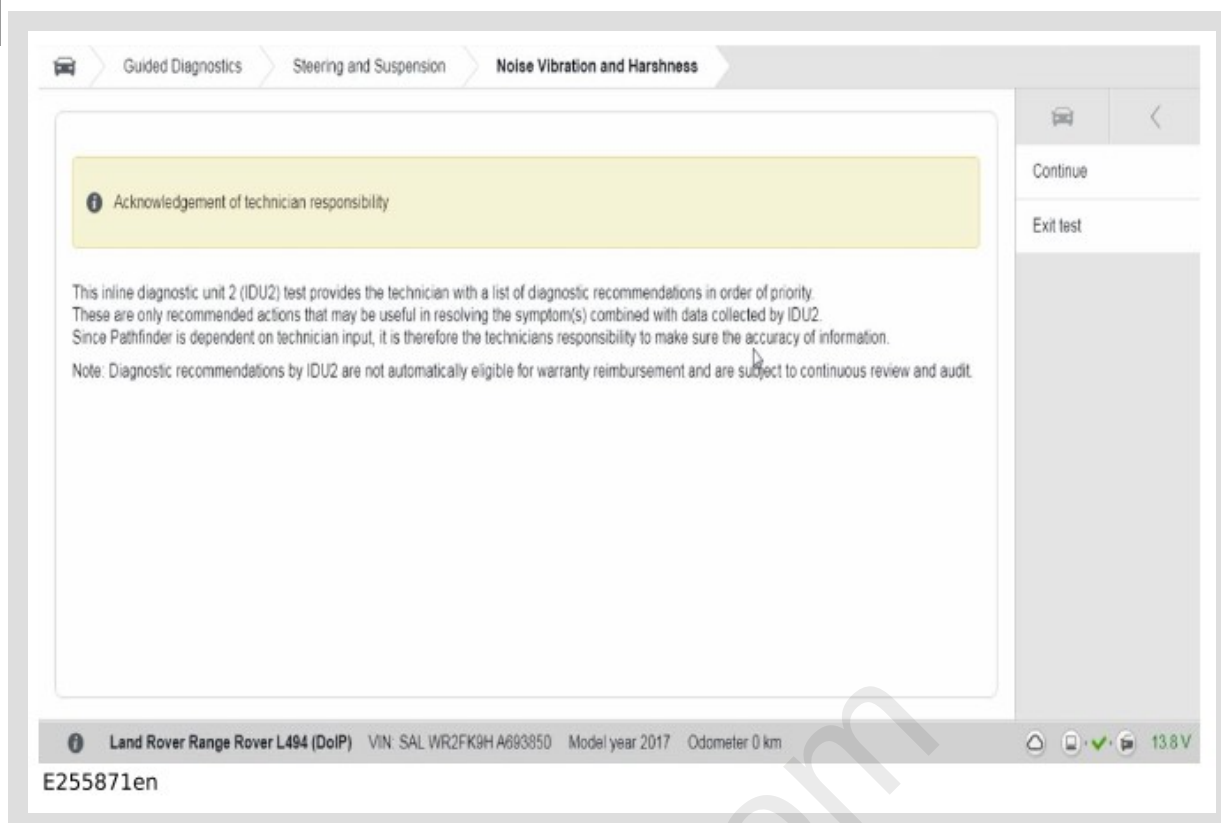
General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)

5.



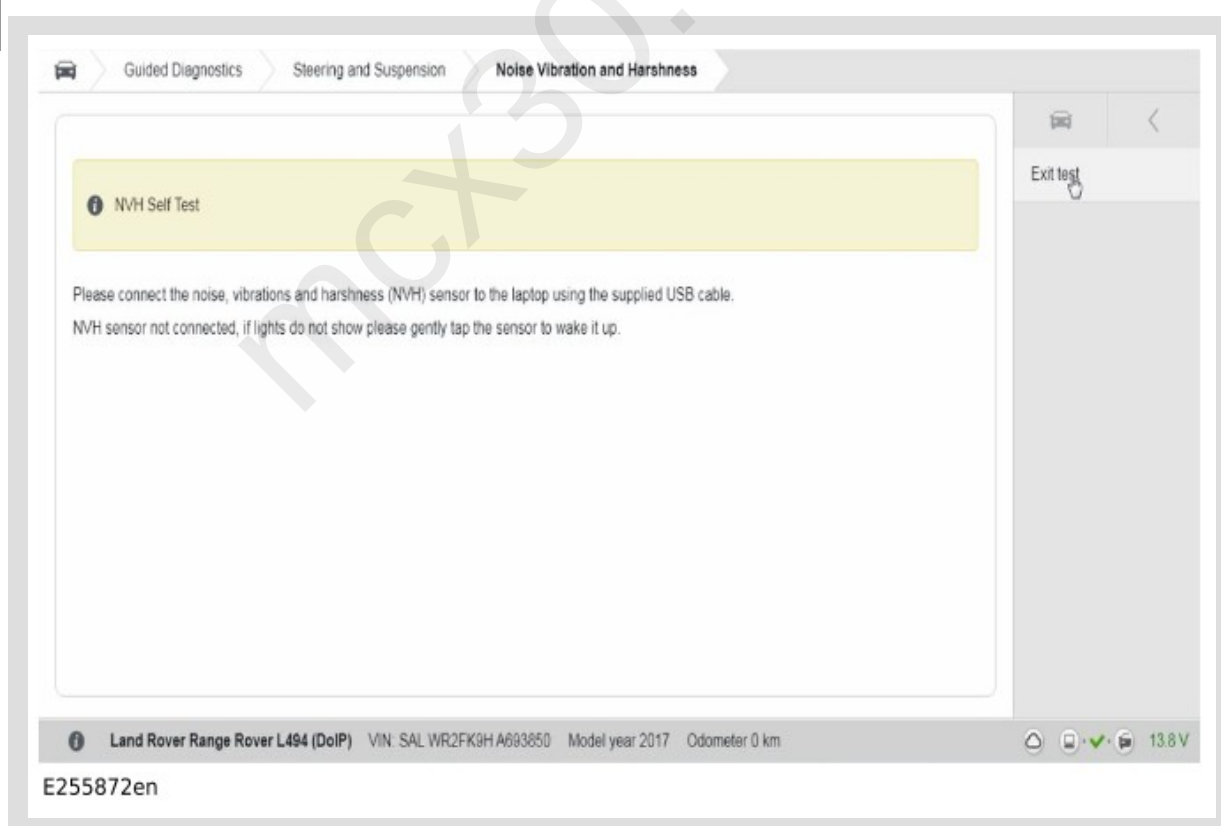
- Follow the JLR approved diagnostic equipment application:
- Guided diagnostics
- Steering and suspension
- Noise Vibration and Harshness (NVH) diagnostic test - Wheel Imbalance

6.



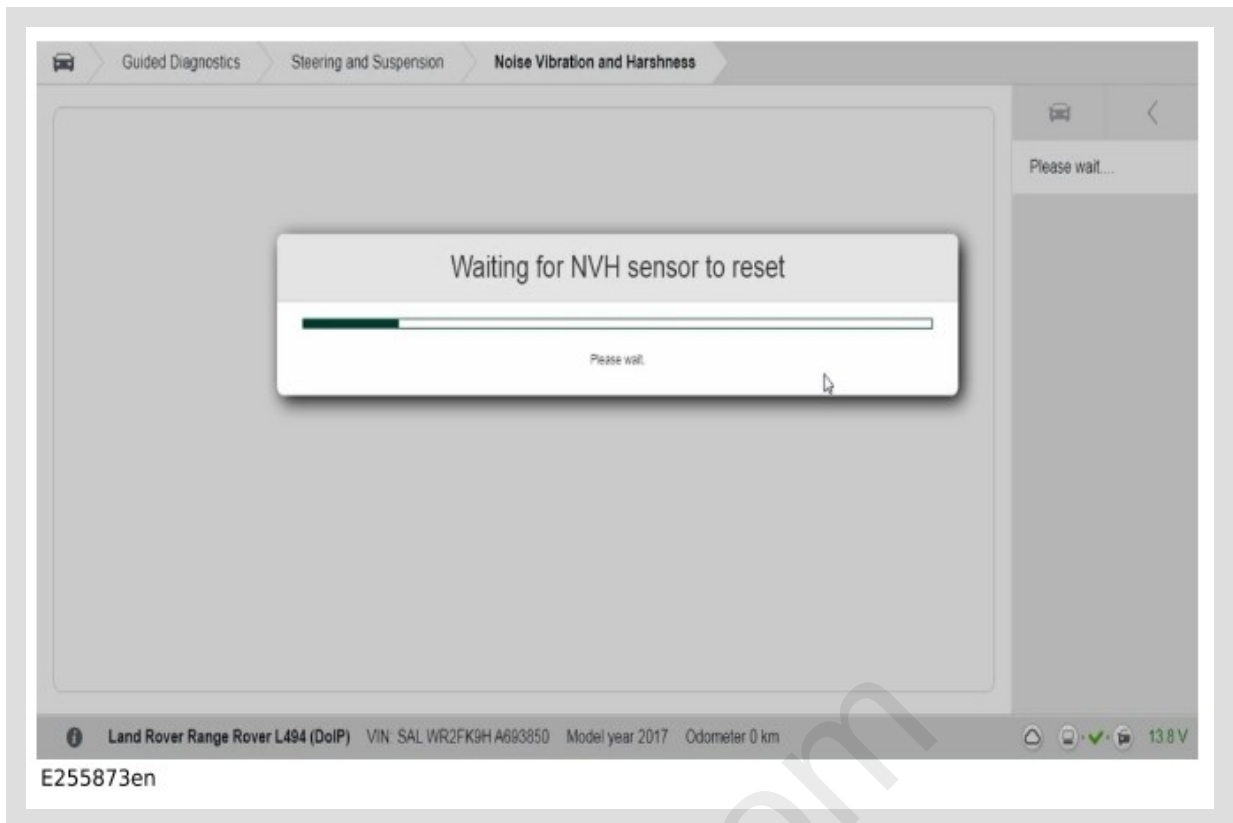
Follow the on-screen information and select 'Continue'.

7.



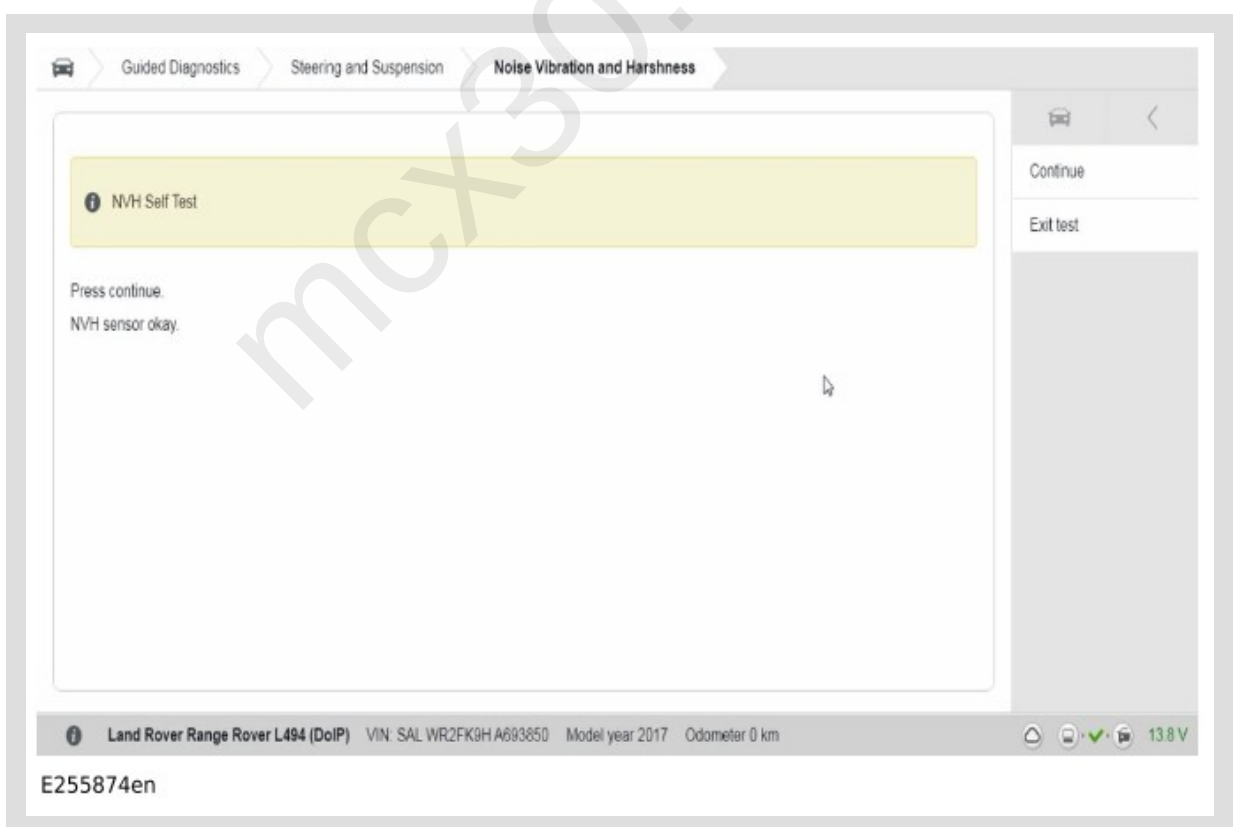
Connect the IDU2 NVH sensor to the JLR approved diagnostic equipment and complete the IDU2 NVH sensor self test/reset.

8.



Wait for the IDU2 NVH sensor self test/reset to complete.

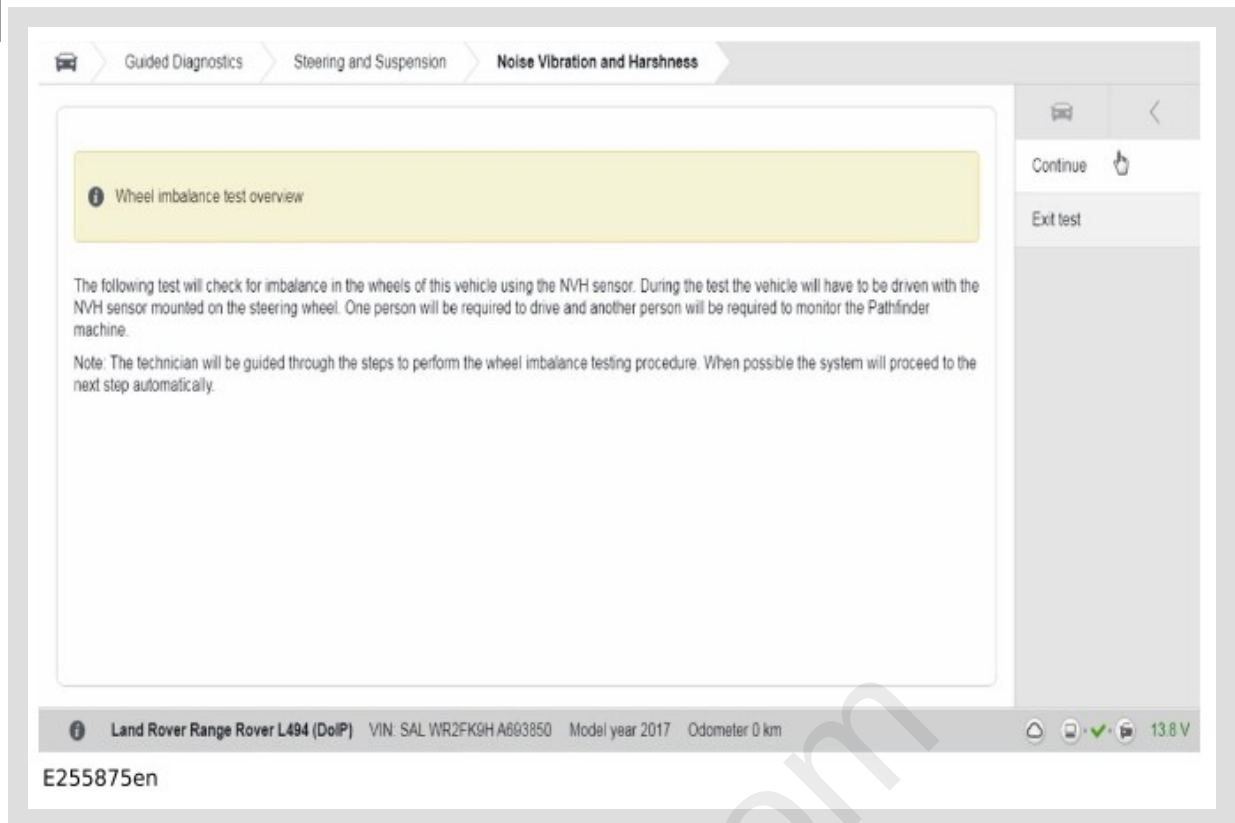
9.



Follow the on-screen information and select 'Continue'.

10.

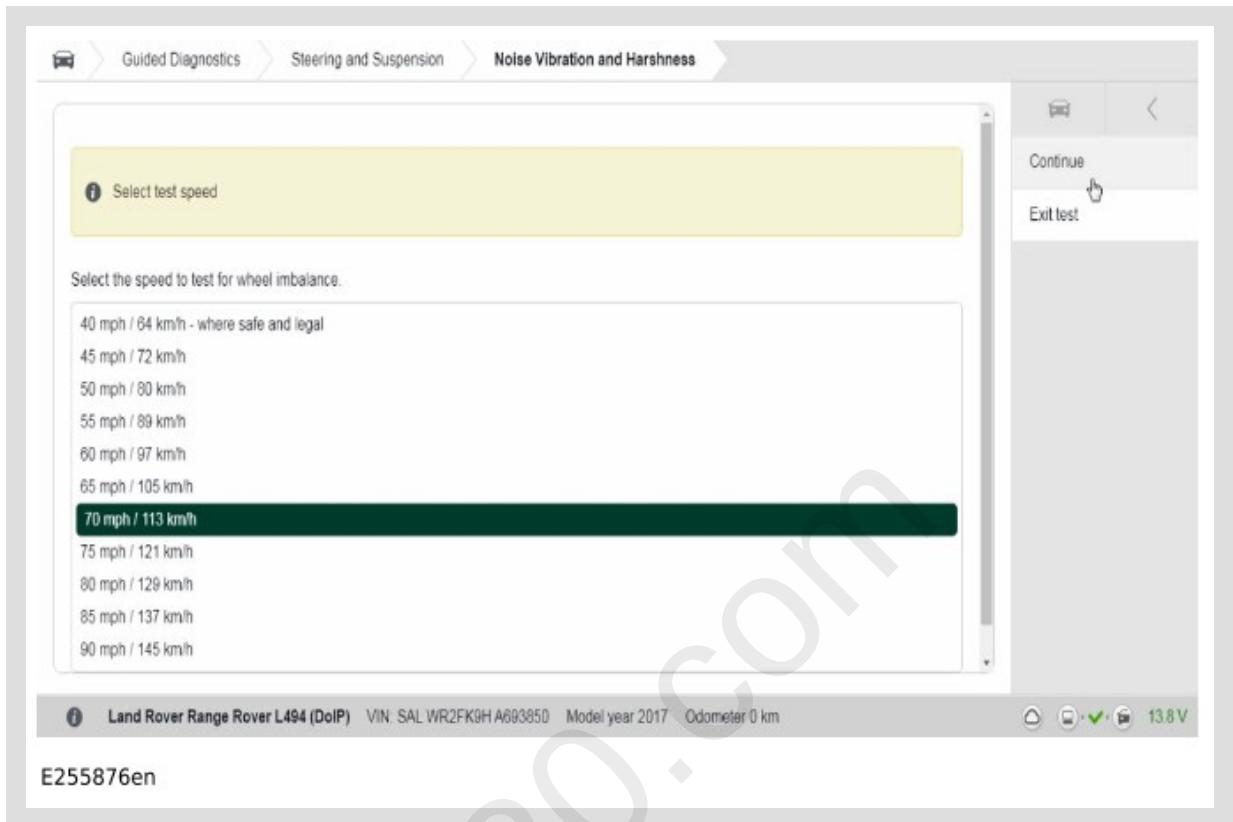
Disconnect the JLR approved battery support unit.



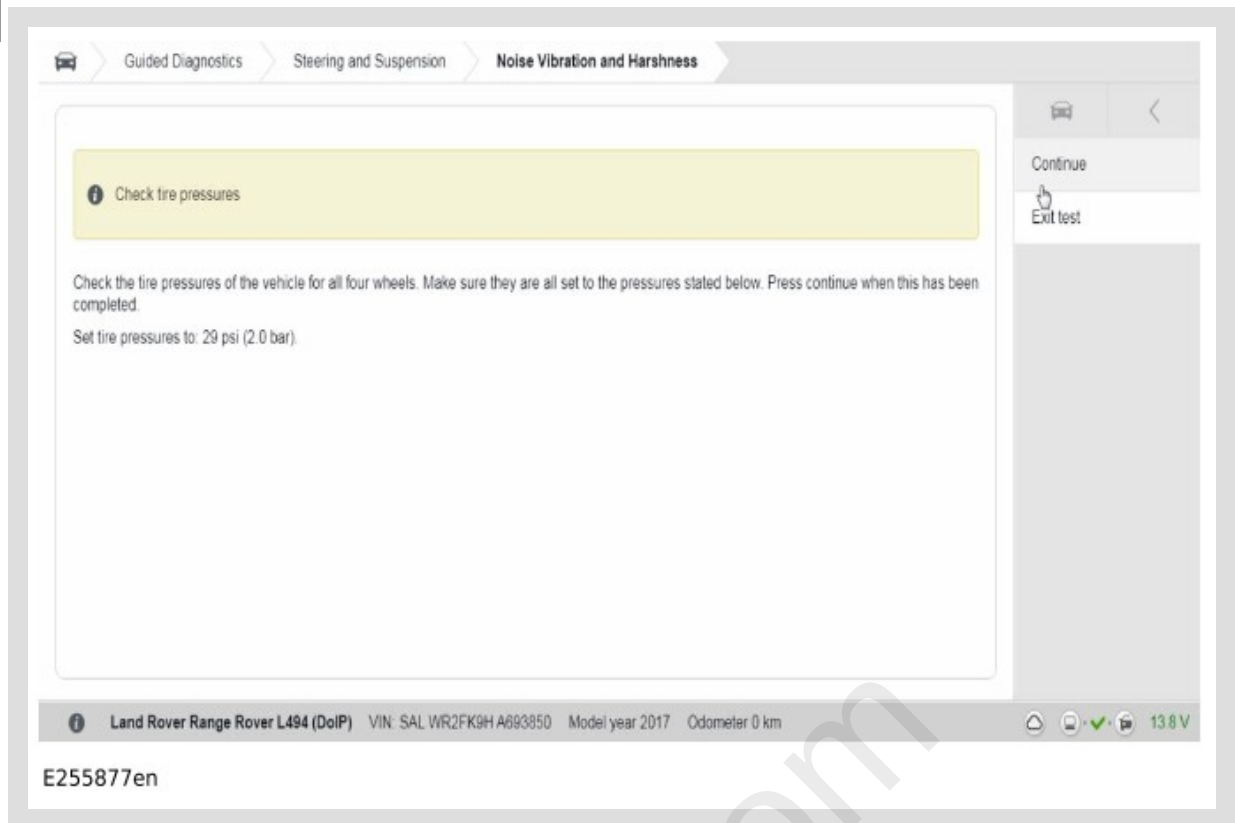
Follow the on-screen information and select 'Continue'.

**WARNING:**

Make sure that it is legal and safe to perform the wheel imbalance test at the speed required prior to carrying out the road test.



Select the speed that the customer has highlighted creates the vibration and select 'Continue'.

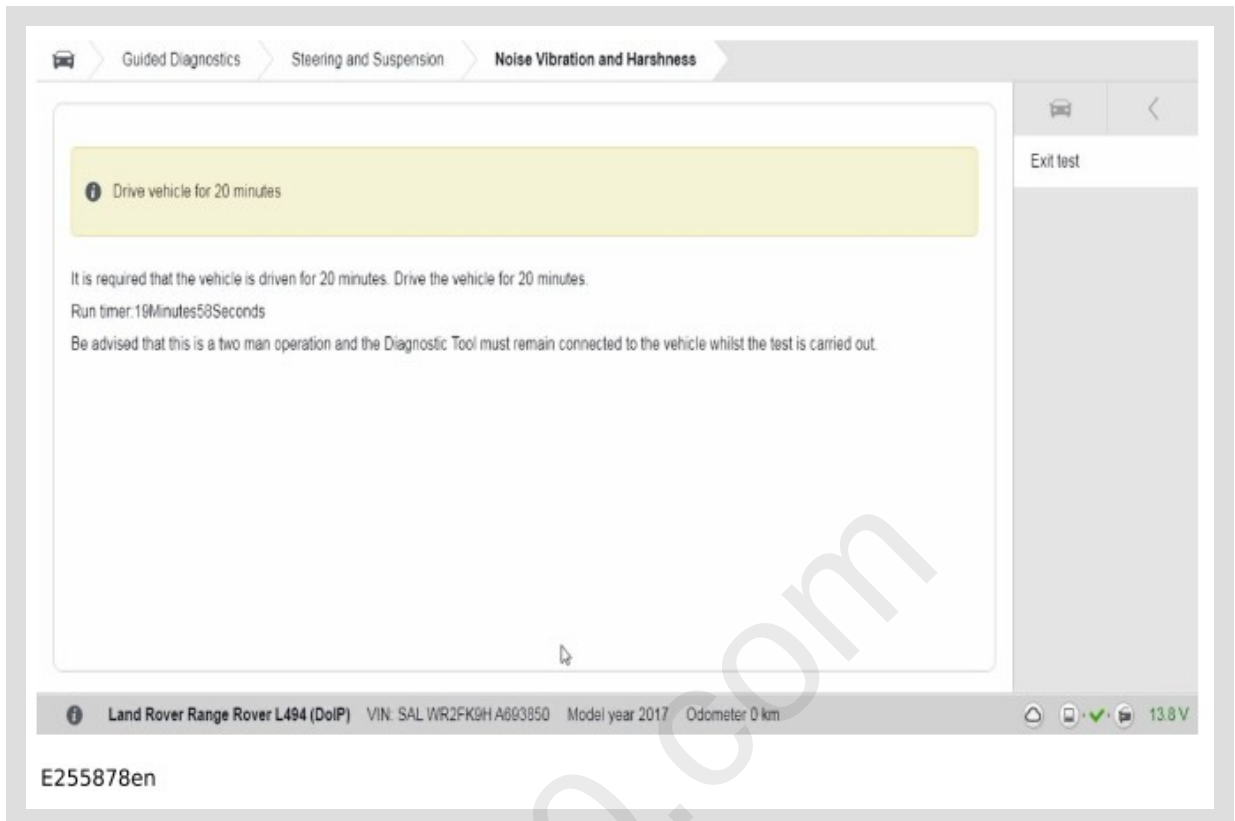


Follow the on-screen information and select 'Continue'.

14.

NOTE:

The IDU2 application will show the timer counting down.



Follow the on-screen information and road test the vehicle.

15.



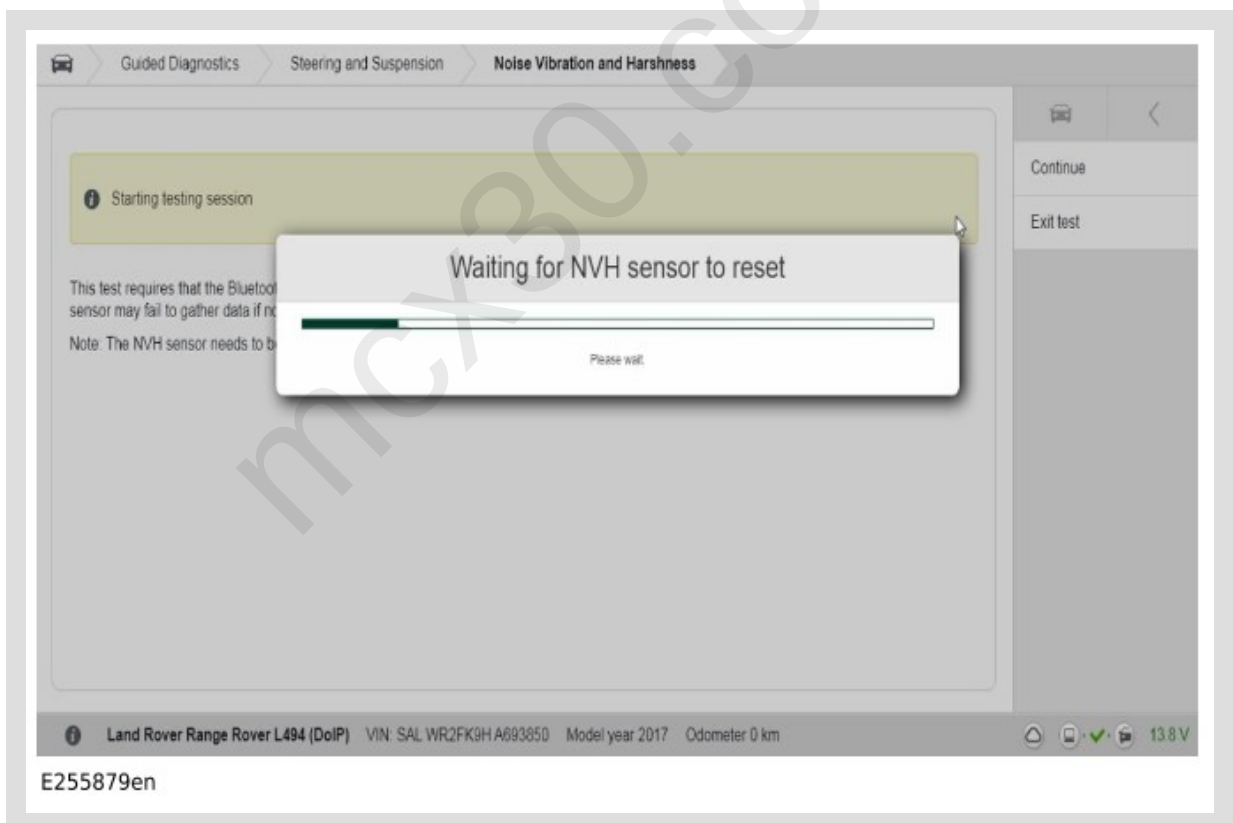
Install the IDU2 NVH sensor to the holder.

16.



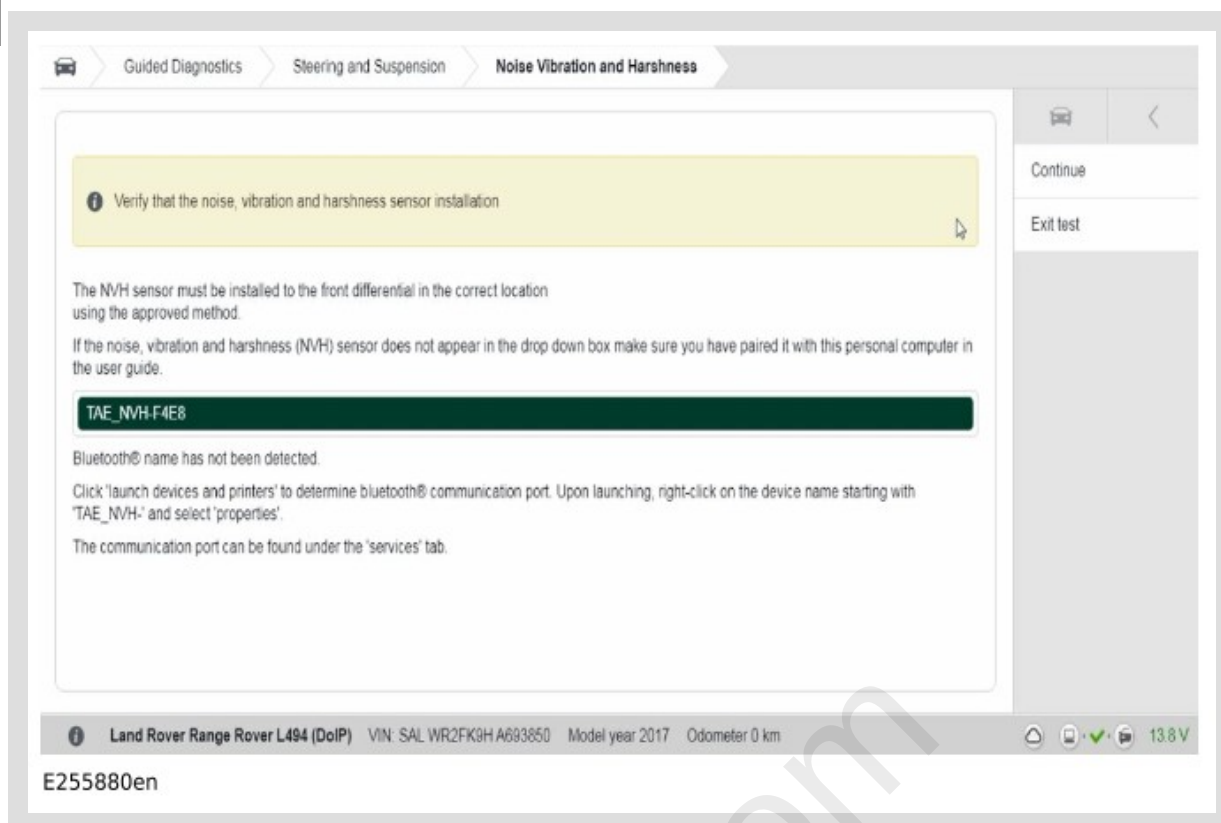
Install the IDU2 NVH sensor and holder assembly to the steering wheel in the orientation shown in the illustration.

17.



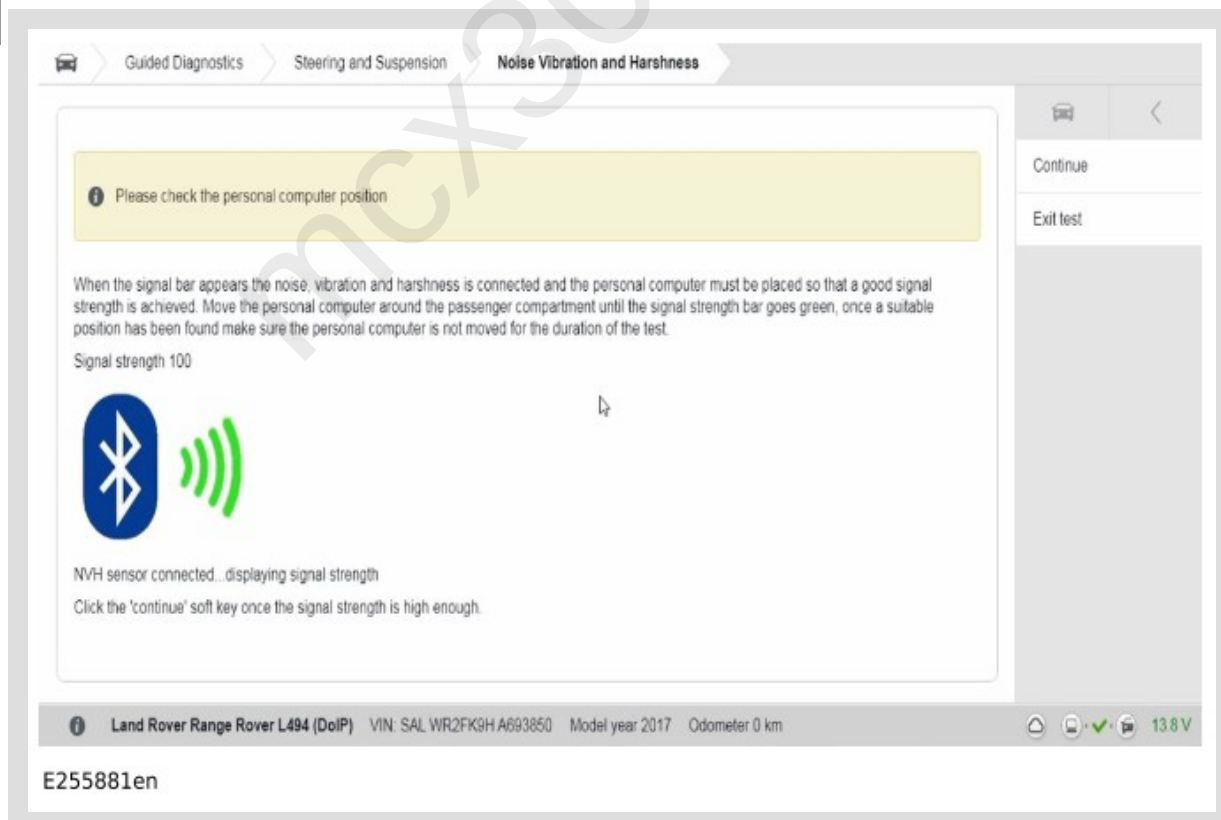
Wait for the IDU2 NVH sensor self test/reset to complete.

18.



Check the IDU2 NVH sensor number is seen on the display and select the correct number, then select 'Continue'.

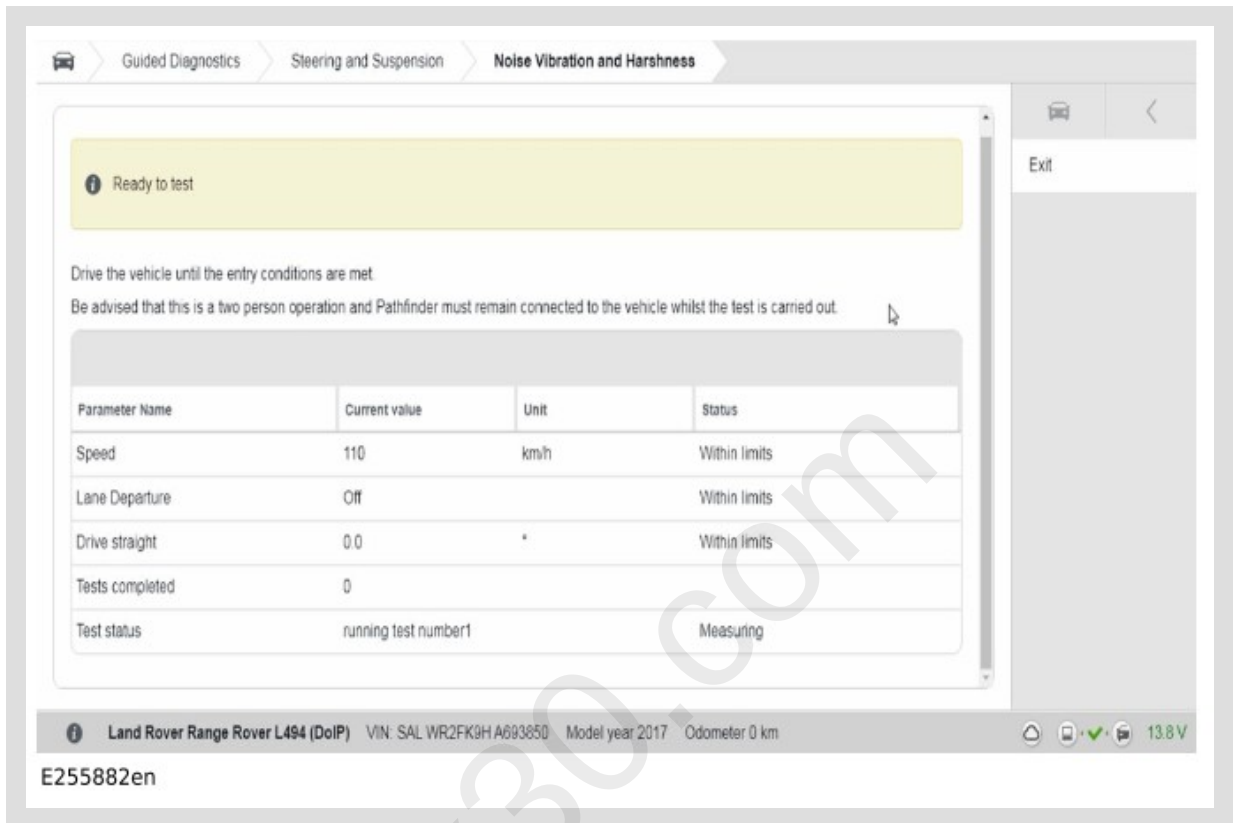
19.



The IDU2 NVH sensor will connect to the Jaguar Land Rover approved diagnostic equipment through Bluetooth®. Wait for the IDU2 NVH sensor to pair with the Jaguar Land Rover approved diagnostic equipment, then select 'Continue'.

NOTES:

- This step will require the aid of another technician.
- The application will perform 3 tests to calculate the average value, but must remain/driven 'Within limits' to register the values. The display will indicate the status of the vehicle.

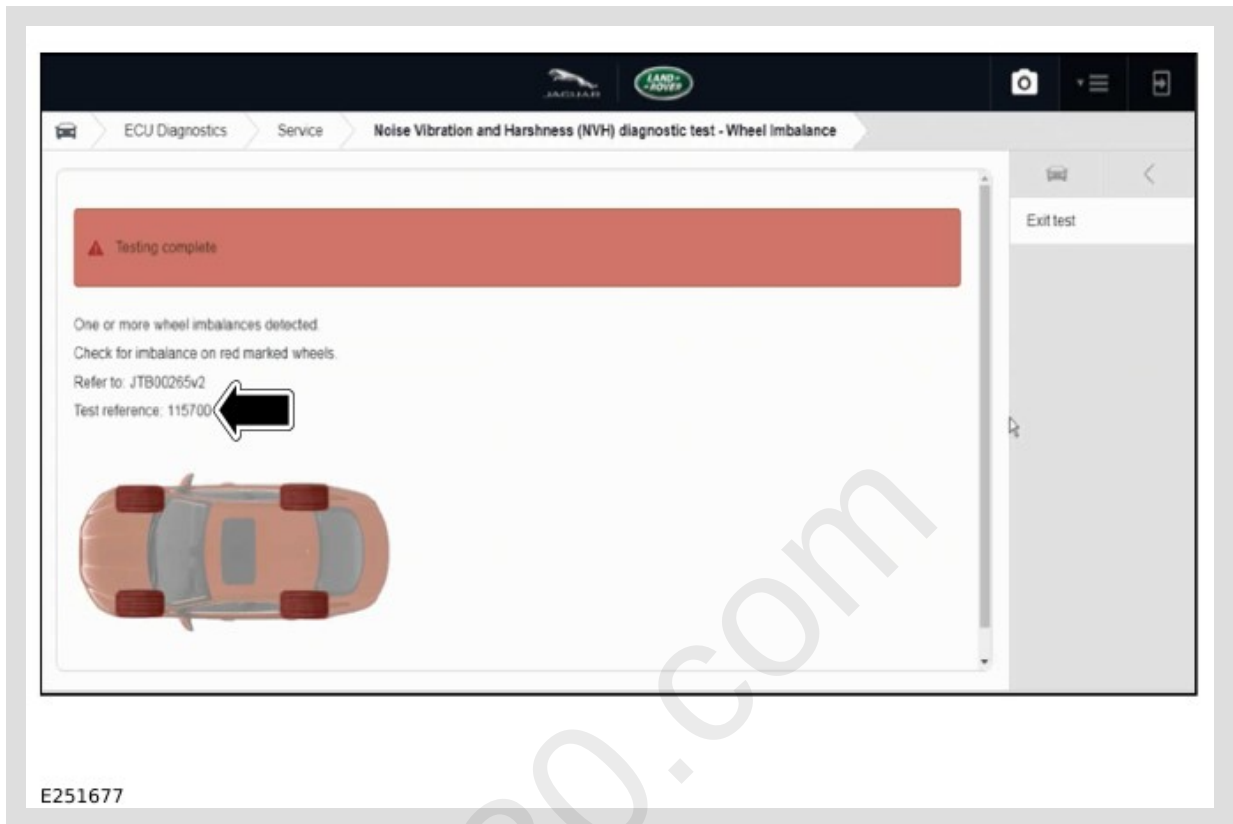


Drive the vehicle until all 3 tests have been completed and the screen has changed.

21.

NOTE:

This information must be added to the retailer verbatim of the claim, otherwise the claim will be rejected.



Make a record of the **'Test reference'** number produced at the end of the diagnostic test in the warranty claim submission.

22.

- If the amount of steering vibration/shimmy is considered acceptable following the initial road test completed in the diagnostic procedure. Return the vehicle to the customer with a full explanation of the situation/flat-spot scenario and how it can/does affect the drive of the vehicle until the wheels and tires reach normal operating temperature.
- If the amount of steering vibration/shimmy is considered unacceptable following the initial road test completed in the diagnostic procedure, balance the wheel and tyre(s) as necessary.
Refer to: [Wheel and Tire Assembly Balancing](#) (204-00 Suspension System - General Information, General Procedures).