INDEPENDENT

# BATTERY CERTIFICATE

AVILOO
BATTERY DIAGNOSTICS

CERTIFICATE NUMBER: EBB39D36-6E0A-4D3B-9D89-374BDAF0DE7E

## VEHICLE

**BRAND:** Nissan
**MODEL:** Leaf ZE1 - 40 kWh

**MILEAGE:** 12,107 mi
**VIN:** 1N4AZ1BV4SC562905
**DATE AND TIME:**
10/16/26, 9:30 AM

**EXECUTED BY:** Reds Auto and Truck

## RESULTS

Independent
**STATE OF HEALTH (SOH)**

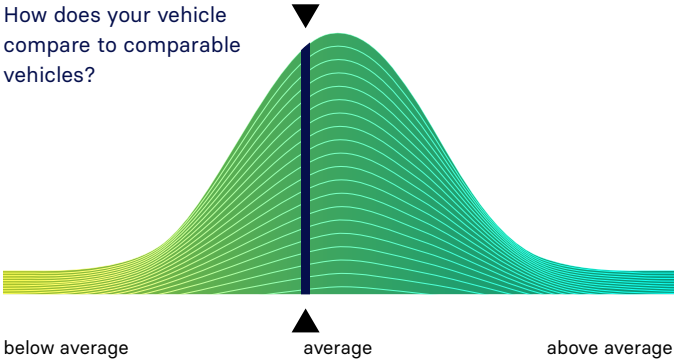
**94.2 %**

**ENERGY** 37kWh | 39kWh

**WLTP RANGE** 158mi | 168mi

## RATING

**BENCHMARKING**
How does your vehicle compare to comparable vehicles?




## CHECKS

- Battery Management System (BMS) ✓
- Battery Sensor ✓
- Battery Measurements ✓
- Battery Cell Voltages ✓
- Vehicle Communication ✓

SCAN FOR DETAILS

## EVALUATION

### GOOD HEALTH - NO ABNORMALITIES DETECTED

Based on the detailed battery diagnostics performed with the AVILOO FLASH Test, we hereby certify that the drive battery of this vehicle is in good condition.

The drive battery is therefore officially AVILOO Certified.

Dr. Marcus Berger, CEO

THIS BATTERY IS TESTED AND AVILOO CERTIFIED
AVILOO CERTIFIED

**EXECUTED BY:**

RED'S AUTO AND TRUCK
EST 1974
LONGMONT, CO

## ENERGY

| | Gross | Net (Nominal) | Usable |
|---|---|---|---|
| Current: | 37.7kWh | 36.7kWh | 32.5kWh |
| New: | 40.0kWh | 39.0kWh | 34.5kWh |

## SENSORS

| | |
|---|---|
| Voltage Sensor | ✓ |
| Current Sensor | ✓ |
| Temperature Sensors | ✓ |
| Cell Voltage Sensors | ✓ |

## RANGE

| | WLTP | Typical |
|---|---|---|
| Current: | 158mi | 126mi |
| New: | 168mi | 133mi |

## BMS

| | Value | Status |
|---|---|---|
| BMS State of Charge (SoC)*: | 60% | |
| SoC calculation accuracy: | | ✓ |
| BMS State of Health (SoH)*: | 94% | |
| SoH calculation accuracy: | | ✓ |

## EXECUTION PROTOCOL

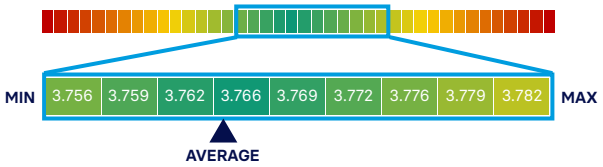
| AVILOO Box connected. | 09:30:03 |
|---|---|
| FLASH Test started. | ✓ |
| Vehicle detected. | ✓ |
| Data acquisition started. | ✓ |
| Data acquisition completed. | ✓ |
| Data analysis started. | ✓ |
| Data analysis completed. | ✓ |

## MEASUREMENTS

| | Min | Max | Delta | Status |
|---|---|---|---|---|
| Battery Temperature | 46.4F | 46.4F | 0.0F | ✓ |
| Cell Voltage | 3.756V | 3.782V | 26mV | ✓ |
| Pack Voltage | 361.6V | | | |
| Average Current | -2.0A | | | |

## CELL VOLTAGES DIAGRAM

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - 20 | 3.775 | 3.772 | 3.775 | 3.772 | 3.773 | 3.769 | 3.772 | 3.772 | 3.771 | 3.771 | 3.771 | 3.775 | 3.764 | 3.768 | 3.765 | 3.762 | 3.764 | 3.761 | 3.762 | 3.762 |
| 21 - 40 | 3.769 | 3.764 | 3.764 | 3.767 | 3.760 | 3.761 | 3.762 | 3.771 | 3.764 | 3.765 | 3.758 | 3.765 | 3.768 | 3.761 | 3.765 | 3.761 | 3.760 | 3.764 | 3.765 | 3.764 |
| 41 - 60 | 3.767 | 3.760 | 3.760 | 3.762 | 3.765 | 3.762 | 3.760 | 3.767 | 3.768 | 3.765 | 3.756 | 3.764 | 3.757 | 3.769 | 3.757 | 3.769 | 3.776 | 3.776 | 3.778 | 3.775 |
| 61 - 80 | 3.767 | 3.768 | 3.769 | 3.765 | 3.762 | 3.775 | 3.761 | 3.765 | 3.764 | 3.769 | 3.772 | 3.772 | 3.761 | 3.760 | 3.762 | 3.758 | 3.764 | 3.772 | 3.771 | 3.776 |
| 81 - 96 | 3.761 | 3.782 | 3.773 | 3.767 | 3.762 | 3.765 | 3.758 | 3.772 | 3.765 | 3.772 | 3.762 | 3.769 | 3.769 | 3.764 | 3.769 | 3.773 | | | | |




*The values shown here were read directly from the vehicle's battery management system (BMS) and are calculated and provided by the vehicle manufacturer. The State of Health (SoH) displayed corresponds to the value reported by the BMS and is CARA-certified.

**DISCLAIMER:** The test result includes the currently calculated state of health (SoH) of the drive battery. The determination is based on data provided by the vehicle. These are evaluated by AVILOO's algorithms using statistical and analytical models. Manipulation of the data in the control unit leads to an incorrect result. The indicated SoH has a technically induced fluctuation range (deviation) of no more than 3% in at least 95% of reference measurements. It should be noted that this tolerance applies to the SoH determination at the cell level and not to the SoH of the entire battery. This is because the state of charge of individual cells may vary, which can negatively affect the current SoH of the battery. However, this can be compensated by the Battery Management System (BMS) or during a calibration. The result reflects the condition of the battery at the time of the test. No conclusions can be drawn about the future state of health of the battery from this. Statements about mechanical damage or external influences are not part of this diagnosis.

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AVILOO Inc. | 4949 S Syracuse St Ste 550 | 80237 Denver, CO | United States | help.usa@aviloo.com