

2015 Honda Accord Hybrid

Advanced Vehicle Testing – Baseline Vehicle Testing Results



VEHICLE SPECIFICATIONS¹

Vehicle Features

VIN: 1HGCR6F58FA006190

Class: Sedan

Seatbelt Positions: 5

Type: HEV

CARB²: LEV3-SULEV30

EPA Fuel Economy: 50/45/47 mpg
(City/Highway/Combined)

Engine

Model: 16-Valve DOHC i-VTEC[®]

Power: 105 kW @ 6,200 rpm

Torque: 165 Nm @ 3,500-6,000 rpm

Configuration: Inline 4-Cylinder

Displacement: 2.0 L

Fuel Tank Capacity: 15.8 US gal

Fuel Type: Regular Unleaded

Electric Motor

Type: PM AC Synchronous

Max. Power/Torque: 124 kW/306 Nm

Max. Motor Speed: 12,584 rpm

Battery

Manufacturer: Blue Energy

Type: Lithium-Ion

Number of Cells: 72

Cell Config.: 6 Modules, 12 Cells
Per Module, Connected In Series

Nominal Cell Voltage: 3.6 V

Nominal Sys. Voltage: 259.2 V

Rated Pack Capacity: 5.0 Ah

Rated Pack Energy: 1.3 kWh

Weight of Pack: 48.2 kg

Pack Specific Energy: 27.0 Wh/kg

Pack Energy Density: 21.0 Wh/L

(Approximate)

Pack Location: Trunk/Rear Seat

Cooling: Active - Air Cooled

Transmission

Type: Electronic Continuously

Variable Transmission (E-CVT)

Final Drive: 3.421

Weights

Design Curb Weight: 3,550 lb

Delivered Curb Weight: 3,568 lb

Distribution F/R: 60%/40%

GVWR: 4,542 lb

GAWR F/R: 2,414 lb/2,161 lb

Maximum Payload: 850 lb

Dimensions

Wheelbase: 109.3 in

Track F/R: 62.4 in/62.7 in

Length/Width: 192.2 in/72.8 in

Height: 57.5 in

Tires

Manufacturer: Michelin

Model: Energy Saver

Size: 225/50R17

Pressure F/R: 33 psi/33 psi

Spare Installed: N/A - Tire

Sealant and Inflator

NOTES:

1. Vehicle specifications were supplied by the manufacturer, measured, or derived from a literature review.
2. The vehicle was classified as an Advanced Technology Partial Zero Emission Vehicle (AT-PZEV) by the California Air Resources Board (CARB).

PERFORMANCE STATISTICS¹

TRACK TESTING²

Acceleration 0-60 mph³

Measured Time: 7.9 s

Performance Goal: ≤13.5 s

Peak DC Power from Battery: 56.2 kW

Maximum Speed

At ¼ Mile: 87.4 mph

Maximum Speed⁴: 114.5 mph

Performance Goal: ≥90 mph at one-mile mark

Braking 60-0 mph⁵

Measured Time: 3.7 s

Distance: 130 ft

Peak Power into Battery: 21.3 kW

Deceleration 60-10 mph⁶

Measured Time: 63.0 s

Distance: 2,958 ft

Peak DC Power into Battery: 25.3 kW

Total DC Energy into Battery: 92.6 Wh

DYNAMOMETER TESTING⁷

Cycle Results⁸

| | 72 °F | 20 °F | 95 °F + 850 W/m ² |
|-------------------|----------|----------|------------------------------|
| UDDS (Cold Start) | 55.0 mpg | 29.7 mpg | 41.1 mpg |
| UDDS | 61.2 mpg | 41.4 mpg | 49.5 mpg |
| HWFET | 62.8 mpg | 49.7 mpg | 57.7 mpg |
| US06 | 42.4 mpg | 37.1 mpg | 38.9 mpg |
| SC03 | | | 45.4 mpg |

Fuel Economy at Steady-State Speed, 0% Grade

| | | | |
|--------|----------|--------|----------|
| 15 mph | 93.9 mpg | 60 mph | 60.4 mpg |
| 30 mph | 96.9 mpg | 75 mph | 42.7 mpg |
| 45 mph | 72.4 mpg | | |

Duration of Passing Maneuver at Grade⁹

| | 0% Grade | 3% Grade |
|--|----------|----------|
| 35-55 mph | 4.3 s | 4.6 s |
| 55-65 mph | 3.6 s | 3.8 s |
| 35-70 mph | 7.9 s | 8.6 s |
| 55-80 mph | 7.8 s | 8.9 s |
| Maximum Speed at 25% Grade from Stop: 52.1 mph | | |

NOTES:

- Performance numbers based on "Normal" vehicle mode. Performance numbers are averages from multiple tests. The vehicle test weight was 3,900 lb.
- Vehicle track testing occurs when the vehicle has achieved its "break-in mileage" of between 4,000 to 6,000 miles, and at the delivered curb weight plus 332 ± 10 lb (including driver and test equipment), distributed in a manner similar to the original curb loading of the vehicle. Track testing took place on April 21, 2015 with the vehicle odometer reading of 4,250 miles. The ambient temperatures ranged from 62°F to 67 °F.
- The acceleration is measured from the point at which the vehicle begins to move. The acceleration and maximum speed results were averaged from six runs. The peak power into the battery value was taken from a single run.
- The maximum speed was reached before the one-mile mark.
- Controlled braking on dry surface. Results are averaged from six runs. The peak power into the battery value was taken from a single run.
- Coasting in drive on dry surface. Test run data were cut off when the vehicle reached 10 mph, as vehicle creep speeds are typically below this threshold. The peak power into the battery value and total energy into the battery value were both taken from a single run (where both were maximum values for the deceleration runs). The time and distance results are averaged from six runs.
- Dynamometer testing occurs after the track testing is complete. Dynamometer testing began on June 9, 2015, with the vehicle odometer reading 4,631 miles. A comprehensive explanation of the dynamometer facility and methodology can be found at <http://www.transportation.anl.gov/D3/>, titled "Chassis Dynamometer Testing Reference Document". The ABC coefficients derived from track coastdown testing and matched on the dynamometer were A: 19.80983 lb, B: 0.66306 lb/mph, and C: 0.008675 lb/mph².
- The Cycle Results table presents the fuel economy achieved by the vehicle on five EPA drive cycles at three different ambient temperatures: (1) 72 °F with vehicle climate-control off, (2) 20 °F with vehicle climate-control set to 72°F Auto, and (3) 95 °F with vehicle climate-control set to 72°F Auto. The vehicle is also subjected to 850 W/m² of solar load at 95 °F to simulate direct sunlight. The drive cycles include a hot start unless otherwise indicated.
- The passing maneuver value indicates the amount of time required for the vehicle to transition from the first to the second speed, at the specified grade.

Values in red indicate that the Performance Goal was not met.

As a production vehicle, this vehicle is assumed to meet all Federal Motor Vehicle Safety Standards (FMVSS) for Hybrid Electric Vehicles.

This information was prepared with the support of the U.S. Department of Energy (DOE) under Award No. DE-EE0005501. However, any opinions, findings, conclusions or recommendations expressed herein are those of the author(s) and do not necessarily reflect the views of the DOE.