

## 2016 Chevrolet Volt

### Advanced Vehicle Testing – Baseline Vehicle Testing Results



#### VEHICLE SPECIFICATIONS<sup>1</sup>

##### Vehicle Features

VIN: 1G1RC6S58GU114673  
 Class: Compact  
 Seatbelt Positions: 5  
 Type: PHEV  
 CARB<sup>2</sup>: TZEV  
 EPA Fuel Economy: 106  
 MPGe/42 MPG combined  
 (Electric/Gas)  
 On-Board Charger: 3.6 kW

##### Internal Combustion Engine

Model: L3A  
 Output: 75 kW @ 5,600 rpm  
 140 Nm @ 4,300 rpm  
 Configuration: Inline 4-Cylinder  
 Displacement: 1.5 L  
 Fuel Tank Capacity: 8.9 gal  
 Fuel Type: Regular Unleaded

##### Transmission

Type: Single Speed Automatic  
 (Electric Transaxle)

##### Electric Motors/Generators<sup>3</sup>

Type: Permanent Magnet AC  
 Synchronous  
 Maximum Power: 111 kW  
 MGA: 48 kW/MGB: 87 kW  
 Maximum Torque: 398 Nm  
 Generating Power: 45 kW

##### Battery

Manufacturer: LG Chem  
 Type: Lithium-Ion  
 Cathode Material: NMC-LMO  
 Number of Cells: 192  
 Cell Configuration: 96 Series / 2 Parallel  
 Nominal Cell Voltage: 3.75 V  
 Nominal System Voltage: 360 V  
 Rated Pack Capacity: 52 Ah  
 Pack Weight: 186 kg  
 Rated Pack Energy: 18.4 kWh  
 Pack Specific Energy: 101 Wh/kg  
 Pack-Level Energy Density: 119 Wh/L  
 Pack Location: Underneath Vehicle  
 Center  
 Cooling: Active – Liquid cooling

##### Weights

Design Curb Weight: 3,543 lb  
 Delivered Curb Weight: 3,522 lb  
 Distribution F/R: 60%/40%  
 GVWR: 4,404 lb  
 GAWR F/R: 2,377 lb/2,027 lb  
 Maximum Payload: 861 lb

##### Dimensions

Wheelbase: 106.1 in  
 Track F/R: 60.6 in/61.8 in  
 Length/Width: 180 in /71 in  
 Height: 56 in

##### Tires

Manufacturer: Michelin  
 Model: Energy Saver A/S  
 Size: 215/50 R17  
 Pressure F/R: 36 psi/36 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 a PZEV by the California Air Resources Board (CARB).
3. Vehicle has two separate electric motors; vehicle manufacturer naming convention is MGA and MGB respectively. Values are combined unless otherwise noted.

## CHARGE-DEPLETING PERFORMANCE STATISTICS<sup>1</sup>

TRACK TESTING <sup>2</sup>	DYNAMOMETER TESTING <sup>8</sup>																																																											
<p><b><u>Acceleration 0-60 mph<sup>3</sup></u></b>                      Measured Time: 8.4 s                      Performance Goal: ≤13.5 s                      Peak DC Power from Battery: 131.1 kW</p> <p><b><u>Maximum Speed</u></b>                      At ¼ Mile: 83.4 mph                      Maximum Speed<sup>4</sup>: 101.7 mph                      Performance Goal: ≥90 mph at 1-mile mark</p> <p><b><u>Braking from 60-0 mph at 100% SOC<sup>5</sup></u></b>                      Measured Time: 2.9 s                      Distance: 126 ft                      Peak DC Power into Battery: 29.3 kW</p> <p><b><u>Braking from 60-0 mph at 50% SOC<sup>5</sup></u></b>                      Measured Time: 2.9 s                      Distance: 129 ft                      Peak DC Power into Battery: 31.5 kW</p> <p><b><u>Deceleration 60-10 mph<sup>6</sup></u></b>                      Measured Time: 80.7 s                      Distance: 3,545 ft                      Peak DC Power into Battery: 12.4 kW                      Total DC Energy into Battery: 64.4 Wh</p> <p style="text-align: center;"><b><u>Regen on Demand Paddle<sup>7</sup></u></b></p> <p><b><u>Deceleration 60-10 mph<sup>6</sup></u></b>                      Measured Time: 13.6 s                      Distance: 700 ft                      Peak DC Power into Battery: 56.6 kW                      Total DC Energy into Battery: 143.6 Wh</p>	<p><b><u>Cycle Results<sup>9</sup></u></b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="width: 25%;">72 °F</th> <th style="width: 25%;">20 °F</th> <th style="width: 25%;">95°F + 850 W/m<sup>2</sup></th> </tr> </thead> <tbody> <tr> <td>UDDS (Cold Start)</td> <td>224.4 Wh/mi</td> <td>166.9 Wh/mi</td> <td>262.5 Wh/mi</td> </tr> <tr> <td>UDDS</td> <td>205.3 Wh/mi</td> <td>187.7 Wh/mi</td> <td>242.2 Wh/mi</td> </tr> <tr> <td>HWFET</td> <td>219.4 Wh/mi</td> <td>229.8 Wh/mi</td> <td>232.5 Wh/mi</td> </tr> <tr> <td>US06</td> <td>323.2 Wh/mi</td> <td>339.9 Wh/mi</td> <td>342.5 Wh/mi</td> </tr> </tbody> </table> <p style="text-align: center;"><b><u>Fuel Economy at Steady-State Speed, 0% Grade</u></b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">10 mph</th> <th style="width: 25%;">133.3 Wh/mi</th> <th style="width: 25%;">50 mph</th> <th style="width: 25%;">211.2 Wh/mi</th> </tr> </thead> <tbody> <tr> <td>20 mph</td> <td>129.9 Wh/mi</td> <td>60 mph</td> <td>264.5 Wh/mi</td> </tr> <tr> <td>30 mph</td> <td>148.4 Wh/mi</td> <td>70 mph</td> <td>324.2 Wh/mi</td> </tr> <tr> <td>40 mph</td> <td>173.5 Wh/mi</td> <td>80 mph</td> <td>390.8 Wh/mi</td> </tr> </tbody> </table> <p style="text-align: center;"><b><u>Duration of Passing Maneuver at Grade<sup>10</sup></u></b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="width: 25%;">0% Grade</th> <th style="width: 25%;">3% Grade</th> <th style="width: 25%;">6% Grade</th> </tr> </thead> <tbody> <tr> <td>35-55 mph</td> <td>3.7 s</td> <td>4.1 s</td> <td>4.7 s</td> </tr> <tr> <td>55-65 mph</td> <td>2.5 s</td> <td>2.9 s</td> <td>3.8 s</td> </tr> <tr> <td>35-70 mph</td> <td>7.7 s</td> <td>9.0 s</td> <td>10.8 s</td> </tr> <tr> <td>55-80 mph</td> <td>7.4 s</td> <td>9.2 s</td> <td>13.4 s</td> </tr> </tbody> </table> <p style="text-align: center;">Maximum Speed at 25% Grade from Stop: 49.3 mph</p>					72 °F	20 °F	95°F + 850 W/m <sup>2</sup>	UDDS (Cold Start)	224.4 Wh/mi	166.9 Wh/mi	262.5 Wh/mi	UDDS	205.3 Wh/mi	187.7 Wh/mi	242.2 Wh/mi	HWFET	219.4 Wh/mi	229.8 Wh/mi	232.5 Wh/mi	US06	323.2 Wh/mi	339.9 Wh/mi	342.5 Wh/mi	10 mph	133.3 Wh/mi	50 mph	211.2 Wh/mi	20 mph	129.9 Wh/mi	60 mph	264.5 Wh/mi	30 mph	148.4 Wh/mi	70 mph	324.2 Wh/mi	40 mph	173.5 Wh/mi	80 mph	390.8 Wh/mi		0% Grade	3% Grade	6% Grade	35-55 mph	3.7 s	4.1 s	4.7 s	55-65 mph	2.5 s	2.9 s	3.8 s	35-70 mph	7.7 s	9.0 s	10.8 s	55-80 mph	7.4 s	9.2 s	13.4 s
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1. Performance numbers based on "Normal" vehicle mode. Performance numbers are averages from multiple tests unless otherwise indicated. Electricity values are AC values unless otherwise indicated.
2. 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), for a test weight of 3,854 lb, distributed in a manner similar to the original curb loading of the vehicle. Track testing took place between April 12 and April 20, 2016 with a beginning vehicle odometer reading of 4,135 miles. The ambient temperatures ranged from 63 °F to 91 °F. No accessories were used except for headlights as required by track regulation. The results provided are from multiple runs unless otherwise indicated; if taken from a single run, the result is the maximum value over the set of runs.
3. The acceleration is measured from the point at which the vehicle begins to move. The peak power value was taken from a single run.
4. The maximum speed was reached before the one-mile mark.
5. Controlled braking on dry surface. The peak power into the battery value was taken from a single run.
6. 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 results were both taken from a single (but different) run.
7. The "Regen on Demand" paddle is a driver option to increase the strength of regenerative braking during deceleration. During this test the paddle was depressed for the entire run.
8. Dynamometer testing occurs after the track testing is complete. Dynamometer testing began on July 21, 2016, with the vehicle odometer reading 5,282 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 with the vehicle in Charge Sustaining mode and matched on the dynamometer were A: 32.25 lb, B: 0.4146 lb/mph, and C: 0.0069 lb/mph<sup>2</sup>.
9. 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/m<sup>2</sup> of solar load at 95 °F to simulate direct sunlight. The drive cycles include a hot start unless otherwise indicated. The conversion for Wh/mi to miles-per-gallon-of-gasoline-equivalent (MPGe) is to divide 33,700 Wh/gallon-of-gasoline-equivalent by the Wh/mi value.

10. 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.

## CONSTANT-SPEED RANGE AND CHARGE TESTING IN CHARGE-DEPLETING MODE<sup>1</sup>

	45 mph Test <sup>2</sup>	60 mph Test <sup>3</sup>	70 mph Test <sup>4</sup>
Average DC power out of battery at speed (kW):	8.7	16.5	22.8
<b>(A)</b> DC energy out of battery at set speed (kWh) <sup>5,7,9</sup> :	14.2	14.1	13.8
<b>(A+)</b> Total DC energy out of battery (kWh) <sup>5,7,9</sup> :	14.8	14.9	14.6
Battery capacity discharge at set speed (Ah):	39.6	39.9	39.3
<b>(B)</b> Range at set speed (mi) <sup>6,8,10</sup> :	74.4	52.1	42.7
<b>(C)</b> Pre-test charge AC energy from EVSE @ 240 V to onboard charger (kWh):	16.7	16.6	16.5
<b>(D)</b> Pre-test charge DC energy from onboard charger (kWh) <sup>11</sup> :	14.8	15.0	15.6
Pre-test charge duration (HH:MM):	05:06	05:18	05:06
AC electricity consumption rate (Wh/mi) <sup>12</sup> :	215	302	365
DC electricity consumption rate (Wh/mi) <sup>13</sup> :	191	271	323
<b>(A+/D)</b> Roundtrip DC Efficiency <sup>14</sup> :	100%	99%	94%
<b>(D/C)</b> On-Board Charger Efficiency <sup>15</sup> :	89%	90%	95%
<b>(A+/C)</b> Overall Trip Efficiency <sup>16</sup> :	89%	90%	88%

### NOTES:

1. See Note 1 and Note 2 on page 2. The vehicle is accelerated to the desired speed and then cruise control is used to maintain the speed. Range is considered reached when either (1) the vehicle transitions from charge-depleting (CD) mode to charge-sustaining (CS) mode or (2) the engine turns on, whichever occurs first. Battery temperature data were not collected for this vehicle.
2. During the 45 mph range test, the average ambient temperature was 73 °F (23 °C). During the pre-test charge, the average ambient temperature was 68 °F (20 °C).
3. During the 60 mph range test, the average ambient temperature was 84 °F (29 °C). During the pre-test charge, the average ambient temperature was 82 °F (28 °C).
4. During the 70 mph range test, the average ambient temperature was 90 °F (32 °C). During the pre-test charge, the average ambient temperature was 86 °F (30 °C).
5. In addition to the energy discharged from the battery during the 45 mph test, energy was discharged during the drive from test prep area to point at which vehicle test speed is achieved and maintained. After the range at 45 mph was completed, there is still ESS energy throughput during the drive to return the vehicle to the test prep area. The pre-test drive required 0.40 kWh while the post-test drive required 0.20 kWh, and these energy inputs can be added to the energy consumed during the range test **(A)** to obtain the total output from the battery (14.8 kWh, denoted as **(A+)**) that is used in the calculations discussed in Notes 13-15.
6. In addition to the range measured for the 45 mph test, the pre-test drive required 1.27 miles from test prep area to point at which vehicle test speed is achieved and maintained. After the range at 45 mph was completed, the post-test drive required an additional drive of 3.00 miles to return to the test prep area. These distances can be added to the distance traveled during the range test **(B)** to obtain the total distance traveled (78.7 miles). However, the energy consumption values consider only the distance traveled during the test at the specified speed, or value **(B)**.
7. In addition to the energy discharged from the battery during the 60 mph test, energy was discharged during the drive from test prep area to point at which vehicle test speed is achieved and maintained. After the range at 60 mph was completed, there is still ESS energy throughput during the drive to return the vehicle to the test prep area. The pre-test drive required 0.57 kWh while the post-test drive required 0.18 kWh, and these energy inputs can be added to the energy consumed during the range test **(A)** to obtain the total output from the battery (14.9 kWh, denoted as **(A+)**) that is used in the calculations discussed in Notes 13-15.
8. In addition to the range measured for the 60 mph test, the pre-test drive required 1.48 miles from test prep area to point at which vehicle test speed is achieved and maintained. After the range at 60 mph was completed, the post-test drive required an additional drive of 2.65 miles to return to the test prep area. These distances can be added to the distance traveled during the range test **(B)** to obtain the total distance traveled (56.2 miles). However, the energy consumption values consider only the distance traveled during the test at the specified speed, or value **(B)**.
9. In addition to the energy discharged from the battery during the 70 mph test, energy was discharged during the drive from test prep area to point at which vehicle test speed is achieved and maintained. After the range at 70 mph was completed, there is still ESS energy throughput during the drive to return the vehicle to the test prep area. The pre-test drive required 0.72 kWh while the post-test drive required 0.04 kWh, and these energy inputs can be added to the energy consumed during the range test **(A)** to obtain the total output from the battery (14.6 kWh, denoted as **(A+)**) that is used in the calculations discussed in Notes 13-15.
10. In addition to the range measured for the 70 mph test, the pre-test drive required 1.70 miles from test prep area to point at which vehicle test speed is achieved and maintained. After the range at 70 mph was completed, the post-test drive required an additional drive of 2.87 miles to return to the test prep area. These distances can be added to the distance traveled during the range test **(B)** to obtain the total distance traveled (47.2 miles). However, the energy consumption values consider only the distance traveled during the test at the specified speed, or value **(B)**.
11. This value includes the energy that charges the vehicle battery and may include auxiliary loads during charging, such as battery cooling or heating.
12. The AC electricity consumption rate is calculated by dividing the DC electricity consumption rate (in Wh/mi) by the Overall Trip Efficiency for that particular speed.
13. The DC electricity consumption rate is calculated by dividing the DC energy from the battery at the set speed **(A)** by the range at the set speed **(B)**.
14. Roundtrip DC Efficiency is calculated by dividing the DC energy out of the battery **(A+)** by the DC energy from the on-board charger **(D)**.
15. On-Board Charger Efficiency is calculated by dividing the DC energy from the on-board charger **(D)** by the AC energy from the EVSE **(C)**.
16. Overall Vehicle Efficiency is calculated by dividing the DC energy out of the battery **(A+)** by the AC energy from the EVSE **(C)**.

## CHARGE-SUSTAINING PERFORMANCE STATISTICS<sup>1</sup>

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<p><b><u>Acceleration 0-60 mph<sup>3</sup></u></b>                      Measured Time: 8.3 s                      Performance Goal: ≤13.5 s                      Peak DC Power from Battery: 99.5 kW</p> <p><b><u>Maximum Speed</u></b>                      At ¼ Mile: 89.2 mph                      Maximum Speed<sup>4</sup>: 101.7 mph                      Performance Goal: ≥90 mph at 1-mile mark</p> <p><b><u>Braking from 60-0 mph<sup>5</sup></u></b>                      Measured Time: 2.8 s                      Distance: 125 ft                      Peak DC Power into Battery: 34.5 kW</p> <p><b><u>Deceleration 60-10 mph<sup>6</sup></u></b>                      Measured Time: 82.7 s                      Distance: 3,676 ft                      Peak DC Power into Battery: 22.6 kW                      Total DC Energy into Battery: 50.3 Wh</p> <p style="text-align: center;"><b><u>Regen on Demand paddle<sup>7</sup></u></b></p> <p><b><u>Deceleration 60-10 mph<sup>6</sup></u></b>                      Measured Time: 13.7 s                      Distance: 711 ft                      Peak DC Power into Battery: 60.3 kW                      Total DC Energy into Battery: 139.1 Wh</p>	<p><b><u>Cycle Results<sup>9</sup></u></b></p> <table border="1" style="width: 100%; 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1. Performance numbers based on "Normal" vehicle mode. Performance numbers are averages from multiple tests unless otherwise indicated. Electricity values are AC values unless otherwise indicated.
2. 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), for a test weight of 3,854 lb, distributed in a manner similar to the original curb loading of the vehicle. Track testing took place between April 12 and April 20, 2016 with a beginning vehicle odometer reading of 4,135 miles. The ambient temperatures ranged from 63 °F to 91 °F. No accessories were used except for headlights as required by track regulation. The results provided are from multiple runs unless otherwise indicated; if taken from a single run, the result is the maximum value over the set of runs.
3. The acceleration is measured from the point at which the vehicle begins to move. The peak power value was taken from a single run.
4. The maximum speed was reached before the one-mile mark.
5. Controlled braking on dry surface. The peak power into the battery value was taken from a single run.
6. 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 results were both taken from a single (but different) run.
7. The "Regen on Demand" paddle is a driver option to increase the strength of regenerative braking during deceleration. During this test, the paddle was depressed for the entire run.
8. Dynamometer testing occurs after the track testing is complete. Dynamometer testing began on July 21, 2016, with the vehicle odometer reading 5.282 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 with the vehicle in Charge Sustaining mode and matched on the dynamometer were A: 32.25 lb, B: 0.4146 lb/mph, and C: 0.0069 lb/mph<sup>2</sup>.
9. 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/m<sup>2</sup> of solar load at 95 °F to simulate direct sunlight. This vehicle has climate options of "eco" and "MAX". The default setting, "eco", limits cabin heating/cooling to balance comfort with energy use. "MAX" provides the most cabin heating/cooling, but uses the most energy. The "eco" climate setting is always used unless otherwise indicated. The drive cycles include a hot start unless otherwise indicated. The conversion for Wh/mi to miles-per-gallon-of-gasoline-equivalent (MPGe) is to divide 33,700 Wh/gallon-of-gasoline-equivalent by the Wh/mi value.
10. Wh/mi data for steady-state fuel economy are not available due to acquisition system failure.
11. 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.
12. Test ended when vehicle speed stopped increasing.

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

## CUMULATIVE FUEL ECONOMY DYNAMOMETER PERFORMANCE STATISTICS<sup>1</sup>

UDDS			HWFET		
Miles	Cumulative Fuel Economy (mpg)	Cumulative Electricity Consumption Rate (Wh/mi)	Miles	Cumulative Fuel Economy (mpg)	Cumulative Electricity Consumption Rate (Wh/mi)
5	N/A <sup>2</sup>	249.1	5	N/A <sup>2</sup>	267.7
10	N/A <sup>2</sup>	230.1	10	N/A <sup>2</sup>	250.9
15	N/A <sup>2</sup>	216.1	15	N/A <sup>2</sup>	237.9
20	N/A <sup>2</sup>	216.5	20	N/A <sup>2</sup>	237.1
25	N/A <sup>2</sup>	213.1	25	N/A <sup>2</sup>	230.3
30	N/A <sup>2</sup>	210.1	30	N/A <sup>2</sup>	229.6
35	N/A <sup>2</sup>	209.7	35	N/A <sup>2</sup>	226.8
40	N/A <sup>2</sup>	208.4	40	N/A <sup>2</sup>	226.0
45	N/A <sup>2</sup>	206.6	45	N/A <sup>2</sup>	224.1
50	N/A <sup>2</sup>	207.0	50	N/A <sup>2</sup>	224.4
55	N/A <sup>2</sup>	206.8	55	N/A <sup>2</sup>	221.5
60	N/A <sup>2</sup>	204.9	60	N/A <sup>2</sup>	222.8
65	N/A <sup>2</sup>	205.5	65	N/A <sup>2</sup>	220.0
70	N/A <sup>2</sup>	205.7	70	N/A <sup>2</sup>	221.1
75	N/A <sup>2</sup>	204.1	75	622.3	204.1
80	N/A <sup>2</sup>	194.9	80	395.8	191.4
85	485.4	181.9	85	295.8	179.6
89.64	383.5	173.8	90	246.2	169.7
			92.33	231.3	165.0

**NOTES:**

- See Note 1 and Note 7 on page 5. Values for fuel economy and electricity consumption rate obtained from drive cycle data without accessories and using SAE J1711 methodology at 72 °F. The vehicle is driven on consecutive drive cycles, starting with a full charge in CD mode and continuing through the transition to CS mode and ending in CS mode, with fuel economy and electricity consumption rates calculated for each cycle. As the distances travelled and noted in the "Miles" column are during a drive cycle, the values have all been interpolated.
- No fuel is used in charge-depleting mode.
- During the consecutive UDDS cycles, the vehicle transitioned from CD to CS mode at 77.13 miles, after 10.4 UDDS cycles (the full UDDS cycle is 7.45 miles long). The Performance Goal is to complete two UDDS cycles or 14.90 miles in charge-depleting mode.
- The consecutive UDDS testing ended at 89.64 miles, after 12 consecutive cycles.
- During the consecutive HWFET cycles, the vehicle transitioned from CD to CS mode at 70.12 miles, after 6.8 HWFET cycles (the full HWFET cycle is 10.25 miles long). The Performance Goal is to complete two HWFET cycles or 20.50 miles in charge-depleting mode.
- The consecutive HWFET testing ended at 92.33 miles, after 9 consecutive cycles.

## CUMULATIVE FUEL ECONOMY DYNAMOMETER PERFORMANCE STATISTICS<sup>1</sup>

US06		
Miles	Cumulative Fuel Economy (mpg)	Cumulative Electricity Consumption Rate (Wh/mi)
5	N/A <sup>2</sup>	399.5
10	N/A <sup>2</sup>	354.7
15	N/A <sup>2</sup>	348.4
20	N/A <sup>2</sup>	343.1
25	N/A <sup>2</sup>	342.3
30	N/A <sup>2</sup>	338.9
35	N/A <sup>2</sup>	334.3
40	N/A <sup>2</sup>	333.2
45	N/A <sup>2</sup>	335.3
50	550.4	315.3
55	276.4	287.4
60	182.8	260.3
<b>64.18</b>	155.4	242.5

**NOTES:**

1. See Note 1 and Note 7 on page 5. Values for fuel economy and electricity consumption rate obtained from drive cycle data without accessories and using SAE J1711 methodology at 72 °F. The vehicle is driven on consecutive drive cycles, starting with a full charge in CD mode and continuing through the transition to CS mode and ending in CS mode, with fuel economy and electricity consumption rates calculated for each cycle. As the distances travelled and noted in the “Miles” column are during a drive cycle, the values have all been interpolated.
2. During the consecutive US06 cycles, the vehicle transitioned from CD to CS mode at 47.56 miles, after 5.9 US06 cycles (the full US06 cycle is 8.01 miles long). The Performance Goal is to complete two US06 cycles or 16.02 miles in charge-depleting mode.
3. The consecutive US06 testing ended at 64.18 miles, after 8 consecutive cycles.

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

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