

Part 1/OBD

Revision List

Test Group ; HNSXV0000LLB

<u>Revision Date</u>	<u>Revision Page (*; New page)</u>	<u>Description of Revision</u>
12/15/16	None	

Application For Certification Part1

Individual application for 2017 Model Year

Durability Group : HNSXEEVNN100
Evaporative / Refueling Family : N.A.
Test Group : HNSXV0000LLB
Test Group Description : BEV (Battery Electric Vehicle)
Federal LDV / California PC
Exhaust Emission Standard : Federal Tier3 Bin0 (Tier3 Compliant) / California ZEV
Evaporative Emission Standard : N.A.
Vehicles Covered : NISSAN LEAF (50 States)
Vehicles Run (Mfr) : KME401-00 (UDDS TN:GNSX10034856)
: KME401-00 (HWY TN:GNSX10034857)
(EPA) : KME401-00 (UDDS TN:GNSX10035635)
: KME401-00 (HWY TN:GNSX10035636)
Issue Date : September 19, 2016
Response Requested By : October 31, 2016
For Questions, Contact : Satoshi Watanabe Telephone No. 248-488-4654

NISSAN MOTOR CO., LTD

Part1
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SEC5

5. Test Group Description

Test Group Name	Fuel	Sales area	Vehicle Class	Emission St'd Class
HNSXV0000LLB	Electricity	50S	LDV (Fed) / PC (Cal)	Tier3 Bin0/ CFV ZEV, ILEV(Fed) ZEV(Cal)

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SEC6

6. Test Vehicle Description

Vehicle Class	Model Covered	Engine Code	Motor Model	Transmission	ETW (lbs)	GVWR (lbs)	Axle Ratio	Tire	
								Size	Type
LDV (Fed)/ PC (Cal)	LEAF	EVAA4	EM57	Auto (Fixed single Speed)	3625	4343	8.193	P205/55R16	All Season
					3750			P215/50R17	All Season
		EVAA5			3625			P205/55R16	All Season

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SEC7

7. Test Results

<u>Test Loc.</u>	<u>Test Number</u>	<u>Mode</u>	<u>Sales Area</u>	<u>Official Test (marked by X)</u>	<u>Certification Level</u>
Mfr	GNSX10034856	UDDS All-Electric Range Test	50 states		Refer to the Certification Summary Information Report
Mfr	GNSX10034857	Hwy All-Electric Range Test	50 states		
EPA	GNSX10035635	UDDS All-Electric Range Test	50 states	X	
EPA	GNSX10035636	Hwy All-Electric Range Test	50 states	X	

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Certification Summary Information Report

Manufacturer	Nissan Motor Co., Ltd.	Manufacturer Code	NSX						
Test Group	HNSXV0000LLB	Evaporative/Refueling Family	--						
Certificate Number	--	CARB Executive Order #	--						
Certificate Issue Date	--	Certificate Revision Date	--						
Certificate Effective Date	--	Conditional Certificate	--						
CSI Revision #	--	CSI Submission/Revision Date	08/10/2016 08:34:38 PM						
Model Year	2017								
Test Group Information									
CSI Type	New	Running Change Reference Number	--						
GHG Exempt Status	Not Exempt								
Drive Sources and Fuel(s)									
Drive Source #1:	Electric Motor								
	<table border="1"> <thead> <tr> <th>Fuel</th> <th>Basic Fuel Metering System</th> <th>Lean Burn Strategy Indicator</th> </tr> </thead> <tbody> <tr> <td>Electricity</td> <td>--</td> <td>--</td> </tr> </tbody> </table>			Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator	Electricity	--	--
Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator							
Electricity	--	--							
Hybrid Indicator	No								
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes						
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	Yes						
Fuel Cell Indicator	No	EPA Vehicle Class	LDV						
Federal Clean Fuel Vehicle	Yes	Federal Clean Fuel Vehicle Standard	ZEV						
Federal Clean Fuel Vehicle ILEV	Yes	California Partial Zero Emissions Vehicle Indicator	No						
Durability Group Name	HNSXEEVNN100	Durability Group Equivalency Factor	5.0						
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA						
Complies with HD GHG 2b/3 regulations?	No								
Introduction into Commerce Date	--	CAP2000 Conditional Certificate?	N/A						
Independent Commercial Importer?	--	Alternative Fuel Converter Certificate?	--						
SFTP Federal Composite Compliance Identifier	Not Applicable	SFTP Tier 2 Composite CO Option	No						
SFTP LEV-III Composite Compliance Indicator	No								
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	HNSXV01.8R1A						
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group OBD Deficiencies	0						
OBD Deficiencies Comments	This vehicle is exempted from OBD requirement because this vehicle is BEV.								
Mfr Test Group Comments	Durability Group Equivalency Factor is not available because this vehicle is BEV.(5.0 is a dummy)								
Mfr Exhaust / Evap Standards Comments	--								

Certification Summary Information Report

Test Group	HNSXV0000LLB	Evaporative/Refueling Family	--
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Models Covered by this Certificate

Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Nissan Motor Co., Ltd.	1 - NISSAN	25 - LEAF	Federal	2-Wheel Drive, Front	Automatic	1	Yes
Nissan Motor Co., Ltd.	1 - NISSAN	25 - LEAF	California + CAA Section 177 states	2-Wheel Drive, Front	Automatic	1	Yes

Engine Description

Hybrid Type	Hybrid Description
Engine Type	Mfr Engine Description
Engine Block Arrangement	Mfr Engine Block Arrangement Description
Camless Valvetrain Indicator	Oil Viscosity/Classification
Number of Cylinders/Rotors	

After Treatment Device(s) (ATD)

Mfr After Treatment Device (ATD) Comments	--
Direct Ozone Reduction (DOR) Device	--
Mfr Emission Control Device Comments	--

Official Test Numbers

Test Group	Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Electricity		--	--	--	--	--	--	--	--	--	--

Official Charge Depleting Test Numbers

Test Group Fuel	UDDS	Highway
Electricity	GNSX10035635	GNSX10035636

Certification Summary Information Report

Test Group	HNSXV0000LLB	Evaporative/Refueling Family	--
Hybrid Electric Vehicle And Fuel Cell Information			
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if Other	--
Battery Type	Lithium Ion	Number of Battery Packs	1
Total Voltage of Battery Packs	360	Battery Energy Capacity	83
Battery Specific Energy	102.0	Battery Charger Type	On-Board
Number of Capacitors	--	Capacitor Rating (In Farads)	--
Mfr Capacitor Comments	--		
Hydraulic System Description	--		
Regenerative Braking Type	Electrical Regen Brake		
Regenerative Braking Source	Front Wheels	Driver Controlled Regenerative Braking	No
Mfr Regenerative Braking Description	--		
Drive Motor(s)/Generator(s)	1		
Motor/Generator Type 1	DC Permanent Magnet, brushless	Rated Motor/Generator Power	80
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--
Mfr Hybrid Electric/ Electric Vehicle Comments	--		

Certification Summary Information Report

Test Group	HNSXV0000LLB		Evaporative/Refueling Family	--						
Emission Data Vehicle Information										
Vehicle ID / Configuration	KME401 / 0		Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	GNSXV0000LLB		Original Evaporative/Refueling Family	--						
Original Test Vehicle Model Year	2016									
Vehicle Model										
Represented Test Vehicle Make	NISSAN		Represented Test Vehicle Model	NISSAN LEAF SV						
Leak Family Details										
Leak Family Identifier	--		Leak Family Name	--						
Drive Sources and Fuel System Details										
	<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Electric Motor</td> <td>Electricity</td> </tr> </tbody> </table>		Drive Source and Fuel#	Drive Source	Fuel	1	Electric Motor	Electricity		
Drive Source and Fuel#	Drive Source	Fuel								
1	Electric Motor	Electricity								
Hybrid Indicator	No		Multiple Fuel Combustion	--						
Multiple Fuel Storage	--		Rechargeable Energy Storage System Indicator	Yes						
Fuel Cell Indicator	No		Rechargeable Energy Storage System, if 'Other'	--						
Rechargeable Energy Storage System	Battery(s)									
Off-board charge Capable Indicator	Yes		Odometer Correction Factor	0.956						
Odometer Correction -- Initial	20									
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor									
Odometer Correction Units	Miles									
Engine Code	EVAA2		Rated Horsepower	107						
Displacement (liters)	99.999		Air Aspiration Method, if 'Other'							
Air Aspiration Method	Naturally Aspirated		Air Aspiration Device Configuration	--						
Number of Air Aspiration Devices	--		Drive Mode While Testing	2-Wheel Drive, Front						
Charge Air Cooler Type	--		Aged Emission Components	4,000 (mi)						
Shift Indicator Light Usage	Not equipped		Equivalent Test Weight (pounds)	3750						
Curb Weight (lbs)	3422		N/V Ratio	112.5						
GVWR (lbs)	--									
Axle Ratio	8.19		# of Transmission Gears	1						
Transmission Type	Auto(Fixed Single Speed)		Creeper Gear	No						
Transmission Lockup	Yes									
Dynamometer Coefficients:										
	Target Coefficients			Set Coefficients						
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients			
City/Highway/Evap	29.92	0.076	0.02195	14.18	-0.1031	0.02154	11.8			
Emission Control Device Comments					Displacement is entered as a dummy.					

Certification Summary Information Report

Test Group	HNSXV0000LLB	Evaporative/Refueling Family	--
Manufacturer Test Vehicle Comments	--		

Certification Summary Information Report

Test Group	HNSXV0000LLB	Evaporative/Refueling Family	--
Test #	GNSX10035635	Test Procedure	81 - Charge Depleting UDDS
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity
Test Date	03/11/2015	Fuel	Electricity
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	NISSAN MOTOR CO., LTD.		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	1452	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	No
PHEV/EV TEST INFO			
Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	31.7807
Charge Depleting Range (Calculated miles)	166.41	Charge Depleting Range (Actual miles)	166.41
Equivalent All Electric Range (miles)	166.41		
Number of Charge Depleting Bags/Phases Conducted	1		
Charge Depleting Bag/Phase			
Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result	
1	Actual Distance Driven (miles)	166.41	
2	Average System Voltage	0	
3	CH4 - Methane	0	
4	Carbon Monoxide	0	
5	Carbon-Related Exhaust Emissions	0	
6	Drive Trace Absolute Speed Change Rating	99.99	
7	Drive Trace Energy Economy Rating	99.99	
8	Drive Trace Inertia Work Ratio Rating	99.99	
9	Integrated Amp-hours	0	
10	Manufacturer Fuel Economy	176.5	
11	Nitrous Oxide	0	
12	Non-methane Hydrocarbon	0	
13	Non-methane organic gas (California)	999.999	
14	Optional Carbon-Related Exhaust Emissions	0	
15	System End State of Charge Watt-hours	0	
16	System Start State of Charge Watt-hours	0	

Certification Summary Information Report

Test Group		HNSXV0000LLB		Evaporative/Refueling Family				--				
Manufacturer Test Comments		This is official EPA confirmatory test results inputted by manufacturer on behalf of EPA. Test Lab ID is entered as a dummy. AC Energy(kWh/100mile):19.0978 , Net Vehicle DC energy consumption [DC Wh/mile]:166, Charge Time[sec]:20733, Total distance (mile):166.410 Test procedure used MCT(SAE J1634 Oct.2012).										
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	120,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Certification Summary Information Report

Test Group	HNSXV0000LLB	Evaporative/Refueling Family	--
Test #	GNSX10035636	Test Procedure	84 - Charge Depleting Highway
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity
Test Date	03/11/2015	Fuel	Electricity
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	NISSAN MOTOR CO., LTD.		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	1452	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	No
PHEV/EV TEST INFO			
Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	31.7807
Charge Depleting Range (Calculated miles)	136.408	Charge Depleting Range (Actual miles)	136.408
Equivalent All Electric Range (miles)	136.408		
Number of Charge Depleting Bags/Phases Conducted	1		
Charge Depleting Bag/Phase			
Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result	
1	Actual Distance Driven (miles)	136.408	
2	Average System Voltage	0	
3	CH4 - Methane	0	
4	Carbon Monoxide	0	
5	Carbon-Related Exhaust Emissions	0	
6	Drive Trace Absolute Speed Change Rating	99.99	
7	Drive Trace Energy Economy Rating	99.99	
8	Drive Trace Inertia Work Ratio Rating	99.99	
9	Integrated Amp-hours	0	
10	Manufacturer Fuel Economy	144.7	
11	Nitrous Oxide	0	
12	Non-methane Hydrocarbon	0	
13	Non-methane organic gas (California)	999.999	
14	Optional Carbon-Related Exhaust Emissions	0	
15	System End State of Charge Watt-hours	0	
16	System Start State of Charge Watt-hours	0	

Certification Summary Information Report

Test Group		HNSXV0000LLB		Evaporative/Refueling Family				--				
Manufacturer Test Comments		This is official EPA confirmatory test results inputted by manufacturer on behalf of EPA. Test Lab ID is entered as a dummy. AC Energy(kWh/100mile):23.2983, Net Vehicle DC energy consumption [DC Wh/mile]:202, Charge Time[sec]:20733, Total distance (mile):136.408 Test procedure used MCT(SAE J1634 Oct.2012).										
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	120,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
Fuel Properties												

Certification Summary Information Report

Test Group		HNSXV0000LLB			Evaporative/Refueling Family			--		
Consolidated List of Standards										
Exhaust Standards										
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			California ZEV		
Fuel		Electricity			Test Procedure			California fuel 3-day exhaust		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
120,000 miles	CO	--	--	--	--	--	--	--	0.0	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			California ZEV		
Fuel		Electricity			Test Procedure			Charge Depleting Highway		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
120,000 miles	CREE	--	--	--	--	--	--	0	999.999	
Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 0		
Fuel		Electricity			Test Procedure			California fuel 3-day exhaust		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
120,000 miles	CO	--	--	--	--	--	--	--	0.0	
Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 0		
Fuel		Electricity			Test Procedure			Charge Depleting Highway		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
120,000 miles	CREE	--	--	--	--	--	--	0	999.999	

Certification Summary Information Report

Test Group	HNSXV0000LLB		Evaporative/Refueling Family			--			
Cert Region	Federal		Cert/In-Use Code			Cert			
Vehicle Class	LDV/Passenger Car		Standard Level			Federal Tier 3 Bin 0			
Fuel	Electricity		Test Procedure			Charge Depleting UDDS			
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	--	--	--	0	999.999
Cert Region	California + CAA Section 177 states		Cert/In-Use Code			Cert			
Vehicle Class	LDV/Passenger Car		Standard Level			California ZEV			
Fuel	Electricity		Test Procedure			Charge Depleting UDDS			
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	--	--	--	0	999.999

Certification Summary Information Report

Test Group	HNSXV0000LLB	Evaporative/Refueling Family	--
Glossary			
Useful Life			
4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		
Emission Name			
HC-TOTAL	Total Hydrocarbon	METHANOL	CH3OH - Methanol
CO	Carbon Monoxide	N2O	Nitrous Oxide
CO2	Carbon dioxide	SPITBACK	Spitback Hydrocarbon in grams
CREE	Carbon-Related Exhaust Emissions	AMP-HRS	Integrated Amp-hours
OPT-CREE	Optional Carbon-Related Exhaust Emissions	START-SOC	System Start State of Charge Watt-hours
NOX	Nitrogen Oxide	END-SOC	System End State of Charge Watt-hours
PM	Particulate Matter	ACT-DISTANCE	Actual Distance Driven (miles)
PM-COMP	SFTP Composite Particulate Matter	AS-VOLT	Average System Voltage
HC-NM	Non-methane Hydrocarbon	CO2 BAG 1	Bag 1 Carbon Dioxide
OMHCE	Organic material Hydrocarbon Equivalent	CO2 BAG 2	Bag 2 Carbon Dioxide
OMNMHCE	Organic material non-methane HC equivalent	CO2 BAG 3	Bag 3 Carbon Dioxide
NMOG	Non-methane organic gas (California)	CO2 BAG 4	Bag 4 Carbon Dioxide
HCHO	Formaldehyde	NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides
H3C2HO	Acetaldehyde	NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	DT-IWRR	Drive Trace Inertia Work Ratio Rating
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	DT-ASCR	Drive Trace Absolute Speed Change Rating
CO-COMP	SFTP Composite Carbon Monoxide	DT-EER	Drive Trace Energy Economy Rating
ETHANOL	C2H5OH - Ethanol	COMB-CREE	Combined Carbon-Related Exhaust Emissions
FE BAG 1	Bag 1 Fuel Economy	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions
FE BAG 2	Bag 2 Fuel Economy	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only
FE BAG 3	Bag 3 Fuel Economy	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only
FE BAG 4	Bag 4 Fuel Economy	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only
MFR FE	Manufacturer Fuel Economy	LEAK-DIA	Effective Leak Diameter (inches)
HC	Hydrocarbon for Running Loss and ORVR	LEAK-GAS CAP	Gas Cap Leakage (cc/min)
METHANE	CH4 - Methane		
Certification Region			
CA	California + CAA Section 177 states	FA	Federal
Exhaust Emission Standard Level			
B1	Federal Tier 2 Bin 1	L3ULEV340	California LEV-III ULEV340
B2	Federal Tier 2 Bin 2	L3ULEV250	California LEV-III ULEV250
B3	Federal Tier 2 Bin 3	L3ULEV200	California LEV-III ULEV200
B4	Federal Tier 2 Bin 4	L3SULEV170	California LEV-III SULEV170
B5	Federal Tier 2 Bin 5	L3SULEV150	California LEV-III SULEV150

Certification Summary Information Report

Test Group	HNSXV0000LLB	Evaporative/Refueling Family	
B6	Federal Tier 2 Bin 6	L3LEV630	California LEV-III LEV630
B7	Federal Tier 2 Bin 7	L3ULEV570	California LEV-III ULEV570
B8	Federal Tier 2 Bin 8	L3ULEV400	California LEV-III ULEV400
B9	Federal Tier 2 Bin 9	L3ULEV270	California LEV-III ULEV270
B10	Federal Tier 2 Bin 10	L3SULEV230	California LEV-III SULEV230
B11	Federal Tier 2 Bin 11	L3SULEV200	California LEV-III SULEV200
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	T3B160	Federal Tier 3 Bin 160
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	T3B125	Federal Tier 3 Bin 125
L2	California LEV-II LEV	T3B110	Federal Tier 3 Transitional Bin 110
L2OP	California LEV-II LEV Optional	T3B85	Federal Tier 3 Transitional Bin 85
U2	California LEV-II ULEV	T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover
S2	California LEV-II SULEV	T3B70	Federal Tier 3 Bin 70
ZEV	California ZEV	T3B50	Federal Tier 3 Bin 50
OT	Other	T3B30	Federal Tier 3 Bin 30
T1	Federal Tier 1	T3B20	Federal Tier 3 Bin 20
PZEV	California PZEV	T3B0	Federal Tier 3 Bin 0
L2LEV160	California LEV-II LEV160	HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395
L2ULEV125	California LEV-II ULEV125	HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340
L2SULEV30	California LEV-II SULEV30	HDV2B250	Federal Tier 3 HD Class 2b Bin 250
L2LEV395	California LEV-II LEV395	HDV2B200	Federal Tier 3 HD Class 2b Bin 200
L2ULEV340	California LEV-II ULEV340	HDV2B170	Federal Tier 3 HD Class 2b Bin 170
L2LEV630	California LEV-II LEV630	HDV2B150	Federal Tier 3 HD Class 2b Bin 150
L2ULEV570	California LEV-II ULEV570	HDV2B0	Federal Tier 3 HD Class 2b Bin 0
L3LEV160	California LEV-III LEV160	HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630
L3ULEV125	California LEV-III ULEV125	HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570
L3ULEV70	California LEV-III ULEV70	HDV3B400	Federal Tier 3 HD Class 3 Bin 400
L3ULEV50	California LEV-III ULEV50	HDV3B270	Federal Tier 3 HD Class 3 Bin 270
L3SULEV30	California LEV-III SULEV30	HDV3B230	Federal Tier 3 HD Class 3 Bin 230
L3SULEV20	California LEV-III SULEV20	HDV3B200	Federal Tier 3 HD Class 3 Bin 200
L3LEV395	California LEV-III LEV395	HDV3B0	Federal Tier 3 HD Class 3 Bin 0
Transmission Type Code			
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual
A	Automatic	OT	Other
AM	Automated Manual	SA	Semi-Automatic
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)
Drive System Code			
4	4-Wheel Drive	P	Part-time 4-Wheel Drive
F	2-Wheel Drive, Front	A	All Wheel Drive
R	2-Wheel Drive, Rear		

Certification Summary Information Report

Test Group	HNSXV0000LLB	Evaporative/Refueling Family	--
Additional Terms and Acronyms			
AFC	Alternative Fuel Converter	ICI	Independent Commercial Importer
CSI	Certificate Summary Information	ORVR	Onboard Refueling Vapor Recovery
DF	Deterioration Factor	SIL	Shift Indicator Light
Evap	Evaporation, Evaporative	Trans	Transmission

SEC9,10

9. OBD System Description

Refer to the confidential section

10. Description of Alternate-fueled Vehicles

Refer to the confidential section

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Issue Date : Refer to cover page

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SEC11(2)

11. AECD Description

(2) General Relation between Sensed Parameters and Controlled Parameters

Refer to the confidential section

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Issue Date : Refer to cover page

Revision Date :

12. Description of Vehicles Covered by Certificate and Test Parameter

(3) List of Certified Vehicles

Durability Group : HNSXE EVNN100
 Test Group : HNSXV0000LLB

[Vehicle Identification]

Carline	Trim Line	Trans./OD	Engine Code	Fuel	ETW (lbs)	Sales Area	SIL	Battery Capacity(kWh)	Vehicle Class
LEAF	S	Auto (Fixed single Speed)	EVAA4 EVAA5 EVAA4	Electricity	3625 3750	50S	N.A.	30	LDV (Fed) PC (Cal)
	SL								
	SV								

[Propulsion system]

-Motor

Model	Type	Rated Power (kW)	Rated Torque (Nm)	Maximum Speed (rpm)	Number of Motor per vehicle	Drive type	Type	Modulation
EM57	DCPM	80 @3008-10000rpm	254 @0-3008rpm	10500	1	2-wheel Drive, front	DC/AC 3phase	PWM

-Traction Inverter

-Battery

Refer to the confidential section. Sec16(12) -1

-Regenerative Braking

Type	Braking Source	Driver controlled Regen Braking
Electrical Regen. Brake	Front Wheels	None

-Standard Charger (Level 1)

Type	Input Voltage(V)
Conductive On-board	100-240 (<30A, AC50/60Hz) (EVAA4) 100-240 (<18A, AC50/60Hz) (EVAA5)

[Other system]

-Climate control system

The climate control system equipped with electric motor-driven compressor/ Heat-Pump(SV,SL) + Air PTC heater system
 The system uses HFC134a refrigerant and operates on 12volts DC/ 345 volts AC.
 The vehicle are also equipped with a "pre-conditioning" system that turns on air conditioning system before passengers enter the car.
 The vehicle is not equipped with a fuel-fired heating system.

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12. Description of Vehicles Covered by Certificate and Test Parameter

(4) Test Parameter

Durability Group : HNSXEEVNN100
 Test Group : HNSXV0000LLB

Carline	Trim Line	Trans.	ETW (lbs)	Tire		Axle Ratio	N/V Ratio	TRLHP	Coastdown Time (sec.)	Single Roll Dyno Terms			Shift Schedule ID		Test Proc	Cooling Fan Config	Special Test Proc
				Size	Type					A	B	C	City	Hwy			
LEAF	S	Auto	3625	P205/55R16	All Season	8.193	114.7	11.8	18.93	30.14	0.0716	0.02206	FTA	HWA	N.A.	*1	*2, *3
	SL	(Fixed single	3750	P215/50R17	All Season	8.193	112.5	11.8	19.65	29.92	0.0760	0.02195	FTA	HWA	N.A.	*1	*2, *3
	SV	Speed)	3750	P215/50R17	All Season	8.193	112.5	11.8	19.65	29.92	0.0760	0.02195	FTA	HWA	N.A.	*1	*2, *3

*1: One centered front fan, in down position.

*2: Set in maintenance mode. Refer to SEC16(11)

*3: If EV system starts, "READY" lamp in the meter illuminate, push the VDC CANCEL SWITCH within 10 seconds always.

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12. Description of Vehicles Covered by Certificate and Test Parameter

(4) Test Parameter

Testing Related Information

-Charging procedure

- 1) Push the start button twice without brake pedal on to wake up the vehicle system
- 2) Move the shift lever to the "P" position.
- 3) Push the start button once to shut off the vehicle system.
- 4) To open the charge port access door, push the release switch.
- 5) Remove the charge connector from holster. All of the indicator display lamps come on and then go off.
- 6) Fully insert the charge connector into the charge port. When the charge connector is set correctly, vehicle answer one beep.
- 7) Charging begins automatically. The "CHG" indicator display comes on.
- 8) When the batteries are fully charged; the indicator display SOC meter lamps all come on and the "CHG" lamp goes off.
- 9) Remove the charge coupler from the charge port. Make sure to firmly secure the charge coupler in its holster.
- 10) Close the charge port access door on vehicle.

-Load setting for dyno procedure

- 1) With no depressing the brake pedal, push the "START" switch twice. The vehicle is set in "IGN-ON" condition, not "Ready" condition.
- 2) Shift into "N" position with depressing the brake.
- 3) Start the Load Set
- 4) When the load set is finished, push the "START" switch once to shut off vehicle system

-Safe handling of battery system Information

When working on high voltage cable, wear antistatic boots and insulated gloves. And remove the Shut Down switch.

If high voltage battery is damaged, there is a risk of short circuit to vehicle body due to leakage of electrolyte, and it is necessary to beware of electric shock.

When damaged, the battery may emit white fumes (vaporized electrolyte) due to short circuit.

- > If this happens, cool the battery with hose streams.
- > Since electrolyte is flammable, fire sources are prohibited.
- > Electrolyte liquid and vapor are not toxic, but must not be directly inhaled in large quantities.

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12. Description of Vehicles Covered by Certificate and Test Parameter

(4) Test Parameter

Testing Related Information

-System Warning Device Information




This EV has 3 indicating devices for warnings specific to EV.

"FAIL" as warning device for the existence of a vehicle malfunction, and the impossibility of vehicle running .

"CAUTION" as warning device for the existence of a vehicle malfunction and the possibility of vehicle running .

"FAIL" and "CAUTION" are same indicator behavior. The difference is run or not.

"SLOW DOWN" which is marked with the figure of TURTLE as warning device for the lowering of acceleration performance.

TYPE		FAIL	CAUTION	SLOW DOWN
Symbol				
	Traveling	IMPOSSIBLE	POSSIBLE	POSSIBLE
	Repair	Required	Required	Not-required
	Acceleration performance	Impossible to run	Depend upon condition	SLOW DOWN
	User's responsibility	Repair	Repair	Charging or Cooling the Vehicle

-Emergency procedures

When an accident happens:

- > Stop the car to the safe place.
- > Turn key off
- > Rescue injured persons if there any.
- > Please call emergency (911).
- > Please call the LEAF customer support center of Nissan.

HNSXV0000LLB

Issue Date : Refer to cover page

Revision Date :

14. Request for Certification

Request for Certificate to ARB

Test Group : HNSXV0000LLB
Exhaust emission control system number : 1 of 1
Evaporative/Refueling Family : N.A.
Carline : LEAF

Nissan Motor Co., Ltd requests that ARB issue a 2017 model year certificate of conformity for the above specified test group and evaporative/refueling family combination more fully described in this application. This combination complies with the following applicable emission standard:

Federal : X
California & 177 States : X

This combination complies with all applicable regulations contained within 40 CFR Part86, the application is current as of this date. The exhaust and evaporative/refueling emission test results support this request for certificate.



Kazuhiro Murata
Manager
Regulation and Homologation Department

HNSXV0000LLB

Issue Date : Refer to cover page

Revision Date :

14. Request for Certification

Request for Certificate to EPA

Test Group : HNSXV0000LLB
Exhaust emission control system number : 1 of 1
Evaporative/Refueling Family : N.A.
Carline : LEAF

Nissan Motor Co., Ltd requests that EPA issue a 2017 model year certificate of conformity for the above specified test group and evaporative/refueling family combination more fully described in this application. This combination complies with the following applicable emission standard:

Federal : X
California & 177 States : X

This combination complies with all applicable regulations contained within 40 CFR Part86, the application is current as of this date. The exhaust and evaporative/refueling emission test results support this request for certificate.



Kazuhiro Murata
Manager
Regulation and Homologation Department

HNSXV0000LLB

Issue Date : Refer to cover page

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SEC15(1)

15. Other Information

(1) Fee Filing Form

Refer to the attached Fee Filing Form

HNSXV0000LLB

Issue Date : Refer to cover page

Revision Date :

US EPA Fee Form

General Information

Date:

Process Code:

Manufacturer Code:

Manufacturer Name:

Manufacturer Contact

Name:

Email Address:

Phone:

Calendar Year complete application submitted to EPA:

Engine Family / Evaporative Family / Test Group:

Certificate Request Type (Industry Sector Code)

- On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (Federal) (A, B, D, J, T, V)
- On-Highway HDE Dyno Cert (Federal) (E, H)
- On-Highway LD ICI, MDPV ICI, HDV ICI (A, B, D, J, T, V)
- On-Highway Motorcycle (C)
- On-Highway HDV Evap (F)
- On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (California-Only) (A, B, D, J, T, V)
- On-Highway HDE Dyno Cert (California-Only) (E, H)
- Nonroad CI (L)
- Nonroad SI (B, S)
- Locomotive (G, K)
- All Nonroad Recreational, excluding Marine engines (X, Y)
- All Marine (Including IMO) (M, N, W)
- Component Certification for Evaporative Emissions (P)

IMO Name (Required for dual US/IMO Marine Only):

ICI VIN Number (Required for ICIs Only):

Do you qualify for a Reduced Fee (RF)?

What is the total number of vehicles, engines, or units covered?:

What is the aggregate total retail value of the vehicles, engines or units covered?:

Payment Information

Amount Owed:

Payment Type:

Comments:

Application For Certification Part2

Individual application for 2017 Model Year

Durability Group : HNSXEEVNN100
Evaporative / Refueling Family : N.A.
Test Group : HNSXV0000LLB
Test Group Description : BEV (Battery Electric Vehicle)
Federal LDV / California PC
Exhaust Emission Standard : Federal Tier3 Bin0 (Tier3 Compliant) / California ZEV
Evaporative Emission Standard : N.A.
Vehicles Covered : NISSAN LEAF (50 States)
Issue Date : December 15, 2016
For Questions, Contact : Satoshi Watanabe Telephone No. 248-488-4654

NISSAN MOTOR CO., LTD

Part2
TABLE OF CONTENTS

Section	Title	Application	
		General	Individual
1	Part Number		X
2	Calibration Information		X
3	Detailed Description of Vehicles Covered by Certificate and Test Parameter		
	(1) Updated List of Certified Vehicles		X
	(2) Updated Test Parameter		X
	(3) Basic Information about Engine Code		X
4	Final US Sales	X	
5	Service Manuals, Service bulletins	X	
6	California ARB Information		
	(1)-1. Long-Term Emission System Defect Warranty Parts List		X
	(1)-2. High-Cost Warranty Parts List		X

SEC1

1. Part numbers for LEAF

Carline	Engine Code	Vehicle Controller	Motor Controller	Charger Controller	Battery Controller	Main Battery
LEAF	EVAA4	DEV00-001 (without TCU), DEV00-002 (with TCU)	291A0 3NF?	292C0 4NP2?, 292C0 4NP3?	293A0 4NP4, 293A0 4NR6, 293A0 4NN6	295B0 4NP2, 295B0 4NP5, 295B0 4NR2, 295B0 4NN1
	EVAA5			292C0 4NP0?, 292C0 4NP1?		

* The parts with plural establishment have the same calibration and performance, even though the parts manufactures are different.

** The figures and numbers in the place of the mark ? are variable according to lot number and production date.

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Issue Date : Refer to cover page

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2. Calibration Information (for LEAF)

All electric operations are controlled by electric control module.
Calibration is identified parts number.

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Issue Date : Refer to cover page

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SEC3

3. Detailed Description of Vehicles Covered by Certificate and Test Parameter

(1) Updated List of Certified Vehicles

Refer to the Individual application, Sec. 12 in Part1

(2) Updated Test Parameter

Refer to the Individual application, Sec. 12 in Part1

(3) Basic Information about Engine Code

Model Name	Engine Code	Motor		Battery	
		Model	Controller	Type	Measured amount of discharged energy(1/3c)(kWh)
LEAF	EVAA4 EVAA5	EM57	291A0 3NF?	Lithium Ion	30

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Issue Date : Refer to cover page

Revision Date :